COURTROOM
1 MUNICIPAL PLAZA
BEACON, NY 12508

Len Warner
Karen Quiana
Kevin Byrne
Donna Francis
J. Randall Williams
David Jensen
Chair John Gunn

April 8, 2025
7:00 PM
Planning Board Agenda

The Planning Board will meet in the Municipal Center Courtroom at 7:00 p.m. A work session will take place at 7:00 p.m. for a training workshop, discussion of agenda items and/or topics of interest to the Planning Board. The regular meeting will begin immediately thereafter, but no later than 7:30 p.m.

Approval of March 11, 2025, minutes

Regular Meeting

1. Continue public hearing for SEQRA and Site Plan Approval and continue review of applications for Site Plan and Subdivision Approval, Mixed-Use Commercial and Residential, 45 Beekman Street, High Street, and High Street, submitted by Beekman Arts Center LLC and Bay Ridge Studios LLC.
2. Continue public hearing and continue review of application for Site Plan Approval, Mixed-Use Commercial and Residential, 291 Main Street, submitted by Telephone Building Beacon, LLC.
3. Public hearing and continue review of applications for Amended Special Use Permit and Amended Site Plan, hotel and restaurant, 1113 Wolcott Avenue, submitted by Prophecy Theater, LLC.
4. Public hearing and continue review of application for Subdivision Approval, Residential, 74 Anderson Street, submitted by Sadhna Gupta.
5. Continue review of applications of Site Plan Approval and Special Use Permit, hotel and restaurant, 1064 Wolcott Avenue, submitted by JMARKMNG, LLC.
6. Review of application for Site Plan Approval, accessory apartment, 10 Ackerman Street, submitted by Rachel Hutami.

Architectural Review

1. Certificate of Appropriateness - 181-183 Main Street; Facade
2. Certificate of Appropriateness - 232 Main Street; Facade
3. Certificate of Appropriateness - 139 Main Street; Sign
4. Certificate of Appropriateness - 432 Main Street; Facade

5. Certificate of Appropriateness - 288 Main Street; Facade

Miscellaneous Business

1. Consider request for two (2) 90-day extensions of Subdivision and Site Plan Approval, 2 1/2 story mixed-use building, 152-158 Fishkill Avenue, submitted by 152-158 Fishkill LLC.
2. City Council request to review proposed Local Law to amend Chapter 223 concerning accessory apartment requirements.

City of Beacon Planning Board Agenda
04/08/2025

Title:

Continue public hearing for SEQRA and Site Plan Approval and continue review of applications for Site Plan and Subdivision Approval, Mixed-Use Commercial and Residential, 45 Beekman Street, High Street, and High Street, submitted by Beekman Arts Center LLC and Bay Ridge Studios LLC.

ATTACHMENTS

45 Beekman PB 4.8.25 Supplemental Submission cvr ltr.pdf

45 Beekman PB 4.8.25 Exhibit A - Colliers response to comments.pdf

45 Beekman PB 4.8.25 Attachment 1 - Site Plan Colliers and Aryeh Siegel Architect rev 3.25.25.pdf

45 Beekman PB 4.8.25 Attachment 2 - Architectural Plan Set Aryeh Siegel Architect rev 3.25.25.pdf

45 Beekman PB 4.8.25 Attachment 3 -SWPPP by Colliers 3.25.25.pdf

45 Beekman PB 4.8.25 Rev Traffic & Parking Study by Colliers 11.28.23, rev 6.24.24.pdf

45 Beekman PB 4.8.25 PH public comment Lerman.pdf

45 Beekman PB 4.8.25 PH public comment Rubin.pdf

Lanc & Tully 45 Beekmam 04-03-25 review.pdf

45 Beekman St-High St - FEAF Part 3 (4900-8717-7254.1).pdf

45 Beekman - SEQRA Negative Declaration - CLEAN (4912-9637-5091.1).pdf

45 Beekman PB 4.8.25 PH public comment Zellinger.pdf

45 Beekman PB 4.8.25 Supplemental Submission SHPO ltr 4.7.25 (6401195.1).pdf

KARC Review PB_45 Beekman_2025.04.08.pdf

CUDDY +FEDER LLP

300 Westage Business Center, Suite 380
Fishkill, New York 12524
T 845 896 2229
F 845 896 3672
cuddyfeder.com

Taylor M. Palmer, Esq.
tpalmer@cuddyfeder.com

March 25, 2025

VIA E-MAIL AND HAND DELIVERY

Hon. John Gunn
and Members of the Planning Board
City of Beacon
1 Municipal Plaza
Beacon, New York 12508

Re: Application for Site Plan & Subdivision Approval for Proposed Mixed-Use Development
Supplemental Submission –SEQR & Site Plan Public Hearing and Full Plan Set
Property: 45 Beekman Street, High Street, & High Street Beacon, New York
Tax Parcel IDs: (5955-19-706012, 5954-26-689990 & 5954-26-781983)

Dear Chairman Gunn and Members of the Planning Board:

On behalf of Beekman Arts Center LLC and Bay Ridge Studios LLC (the "Applicants"), the owners of the above-referenced Premises, we respectfully submit this letter in furtherance of an Application for Site Plan and Subdivision Approval (the "Application"), proposing to redevelop the Premises by constructing two (2) new mixed-use buildings on the Property (the "Project").

As this Board is aware, at the February 11, 2025 meeting, the Planning Board opened and continued the Public Hearing for this matter's Site Plan Application and State Environmental Quality Review Act ("SEQR") review, which hearing is was continued at the Board's March 11th meeting to the April 8th meeting Agenda. At the March 11, 2025 meeting, the Board reviewed draft SEQR findings and Environmental Assessment Form ("EAF") Parts II and III.

MINOR SITE PLAN AND ARCHITECTURAL PLAN REFINEMENTS & RESPONSES TO OUTSTANDING COMMENTS:

To further assist the Planning Board in its continued review, the Applicants have prepared revised Site Plan and Architectural Plan Sets in response to comments made by this Board and its consultants at and in advance of the February 11th meeting date. *See* enclosed Site Plan Set prepared by Colliers Engineering and Design, P.C. ("Colliers") dated January 30, 2024, last revised March 25, 2025 & Architectural Plan Set prepared by Aryeh Siegel, Architect, dated November 28, 2023, last revised March 25, 2025. It is worth noting that a full (19-Sheet) Site Plan Set prepared by Colliers was most recently provided to the Board on January 2, 2025 in its comprehensive SEQR submission.
The enclosed Site Plan Sheets have been adjusted to include minor updates related to sewer lines

and proposed lighting. *See also* **Exhibit A** – Colliers Response to City Engineer & Planner Comments. The Site Plan sheets also show that a proposed drainage structure at the rear of the property has been shifted ten (10) feet from an existing retaining wall, which change has been input in response to the City Engineer's comment at the last Board meeting.

The enclosed Architectural Plan Set Sheets similarly reflect updates to the proposed lighting and include a rendering showing the existing utility pole and lines along North Avenue (Route 9D). *See* Architectural Plan Sheets A-106. Additional renderings showing views from the rear of the Premises are also included in the Set, as further detailed below. *See* Architectural Plan Sheets A-107.

As this Board is aware, portions of the discussions at the last Board meeting involved the Linkage District standards relative to streetscape improvements and design materials. The streetscape improvements include several benches, bicycle racks, and sculpture and seating areas. The Project also incorporates ample landscaping facing the streetscape, particularly between the proposed Buildings, as shown by a new rendering included in this submission. *See* Architectural Plan Sheets A-107. These improvements have been reviewed in depth with this Board's Architectural Review Board Subcommittee in prior meetings and meet the intent of the Linkage District standards. The façade materials primarily include brick, with additional metal components focused around the tower in response to prior Planning Board comments. The Applicants' understanding of the Code and prior precedent indicate that the proposed metal components (i.e. as long as it's not "sheet metal" or "aluminum") are not prohibited and will be seeking a determination from the Building Department confirming same. Nonetheless, in the event it is determined to be prohibited, it can be replaced with Hardie board that has a similar glossy finish.

THE PROJECT'S DESIGN, MASSING, SIZE, AND SCALE IS CONSISTENT WITH THE SURROUNDING BUILT ENVIRONMENT & IT WILL NOT CAUSE ANY POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS TO ANY SURROUNDING HISTORIC RESOURCES:

In response to comments provided at the Planning Board's recent public hearings, the Applicants are providing the information below relative to the Project's design and its relation to the surrounding built environment and historical resources.

The City of Beacon is historically an industrial city with a variety of simple factory worker houses, expansive, brick factory buildings, and larger Victorian properties for wealthier industrialists. In recent years, the City has undergone an economic renaissance bolstered by new mixed use,

residential, commercial, and civic developments and redevelopments. Many of these developments are located in the immediate vicinity of the Project site. They include high-density multi-family residential developments at The View, West End Lofts, and River Ridge Views (and the approved Beacon Commons), mixed and retail uses along the City's Main Street, and civic uses such as City Hall and the recently completed Fire House. All of these developments have contributed to Beacon's ongoing renewal and revitalization process that is establishing the surrounding area as an active and pedestrian-friendly neighborhood with a flexible mix of uses. Images of these uses are included below to demonstrate visual similarity and consistency with the Project's design, massing, size, and scale. It is worth noting that comparisons are drawn based on design, not the underlying use, as that distinction is an irrelevant consideration.

City of Beacon Fire House on North Avenue (Route 9D)
Approx. 0.1 miles from the Premises:

City of Beacon City Hall on Wolcott Avenue (Route 9D) & Beekman Street[1]
Approx. 0.1 miles from the Premises:

West End Lofts on Wolcott Avenue (Route 9D) (1-2 Liam Drive)
Approx. 0.15 miles from the Premises:

[1] Image taken from Google Street View.

The View at 30 Beekman Street
Approx. 0.18 miles from the Premises:

1154 North Avenue (Route 9D)
Approx. 0.06 miles from the Premises:

1158 North Avenue (Route 9D)
Approx. 0.05 miles from the Premises:

As detailed in these images, the Project's materials, colors, details, and proportions to these existing buildings and reinforce the civic nature of the surrounding area. The selected brick color and green accents are similar to the historic facades of nearby buildings on Main Street and along North Avenue (Route 9D) and Beekman Street. The general configuration of the long horizontal mass recalls numerous factory buildings throughout the City and shifting the face of the building closer to the sidewalk reinforces the Main Street streetscape and brings a sense of continuity to this area of the City. While the building design refers to traditional elements and materials found around Beacon, this project takes a modern approach to the façade design and how traditional elements are arrayed throughout the buildings, similar to the newer residential developments along Route 9D and Beekman Street. In this way, the Project evinces Beacon's unique urban character in a manner that is compatible with the surrounding area.

The Project design will not introduce any visual elements that diminish the integrity of historic features of nearby properties and it will not impact the ability of the nearby historic properties to convey their historic significance. No elements are proposed that would be out of character with the dense urban setting of the Premises and certain elements have been incorporated to pay

homage to the nearby historic resources. Furthermore, the existing topography and existing and proposed landscaping will limit visibility of the Project site from surrounding resources.

The surrounding resources include the High Street - Tompkins Avenue Historic District, which is eligible for listing in the State and National Registers of Historic Places. This District, located above and behind the Project site, consists of several Victorian single-family homes.

The proposed High Street Building design incorporates gabled roofs and dormers in conformance with the design of the nearby Victorian residences. The corner towers at both proposed buildings are intended to evoke the turrets found in several of the surrounding residences. Projecting window bays in the new buildings further relates to similar details found in Victorian residential architecture. The first-floor arcades recall the rhythm of the residential porches, and the tall vertically oriented windows at the apartments call to mind the proportions of the windows in the Victorian houses as well as Main Street buildings. The brick is detailed with step backs and corbels to further align with the historic use of brick in the area. *See* enclosed Renderings in the Architectural Plan Set. The Project components are consistent within the surrounding built environment and will not detract from the surrounding historic resources.

Moreover, the higher elevation of the nearby residences in relation to the Project site help to maintain the visual integrity of their current viewsheds and reinforce the ability of the residences to continue to convey its historical importance. The elevation from the nearest residences is much higher than the Premises. *See* enclosed cross-sections in the Architectural Plan Set. It is also worth noting that the Project does not impact any views *of* the surrounding residences, which are primarily only visible from High Street and Tompkins Avenue. Additionally, as this Board is aware, the Project design was revised to shift the buildings further away from these residences and closer to Beekman Street.

Furthermore, views of the Project site from nearby residences are currently screened by existing trees, and the proposed landscaping will further obscure direct views between the properties. The enclosed Architectural Plan Set Sheet A-107 includes new renderings that depict the Project site from the adjacent properties up on High Street with and without the landscaping incorporated in the Project. There are predominantly deciduous trees that exist along the slope of the northwestern boundary of the project site, of which about half will remain after construction of the project. 20 and 22 High Street share a boundary with the project (northwestern side) and only a small portion of 24 High Street shares a boundary with the project site along its northern side. 16 High Street shares its southern boundary with the project site and an existing stone retaining

wall generally runs along this same shared boundary. Existing, mature vegetation adjacent to 16 High Street is on the neighbor's property and will remain. There are no existing mature trees on the Premises adjacent to this same location. The proposed landscaping adjacent to the same areas described above includes a robust replanting schedule. This includes a continuous row of mixed evergreen trees, Junipers, Arborvitae, Spruce, and Pines installed at a height of 5-8 feet, to provide year-round screening of the adjacent site improvements which includes surface parking areas. Also within this replanted area are proposed deciduous canopy trees such as Maple, Oak, and Honeylocust species.

INDEX OF ENCLOSURES & CONCLUSION:

In support of this Application, enclosed please find five (5) copies of the following document:

Exhibit A: Response to Comments Memorandum prepared by Colliers Engineering and Design, P.C., dated March 25, 2025, providing responses to the City Engineering Consultant Lanc & Tully's memorandum dated March 5, 2025, and the City Planning Consultant, KARC Planning Consultants Memoranda dated March 6, 2025.In further support of this Application, we respectfully submit five (5) copies of the following additional enclosures: [2]

[2] Note: Pursuant to the Applicants' recent correspondence with City consultants, a copy of the previously submitted Revised Traffic & Parking Study, prepared by Colliers Engineering & Design P.C. dated November 28, 2023, last revised June 24, 2024, is included in the digital submission. No revisions have been made to this document since its original submission. In response to public comments regarding transportation in the immediate area, we would note that the Adaptive Traffic Signal system along Route 9D between Beekman Street and the I-84 interchange has been activated by the NYSDOT. After initial activation, the system goes through a calibration period whereas additional data is collected by the system it becomes better at adjusting the traffic signal timings and along the corridor and also becomes better at anticipating surges in traffic on a daily basis. For example, as additional data is collected it can better anticipate surges in traffic that occur from vehicles entering and/or departing the train station in the morning and evening peaks. It is likely that after initial activation some increases in delays are experienced, but over time these should dissipate. It is also noted that Mayor Lee Kyriacou discussed the activation of this adaptive system at the March 17, 2025 and noted improvements in traffic flow along Route 9D both based on anecdotal experience and data that has been provided to the City from NYSDOT. Furthermore, the improvements that are proposed to be completed at the Route 9D/Beekman Street intersection at part

- Site Plan Set entitled "Preliminary Site Plan", prepared by Colliers Engineering and Design, P.C. and Aryeh Siegel, Architect, dated January 30, 2024, last revised March 25, 2025 numbered and titled as follows (unless otherwise noted):
    - Sheet 1 of 19 – Cover Sheet.
    - Sheet 2 of 19 – Existing Conditions & Site Demolition Plan.
    - Sheet 3 of 19 – Tree Removal Plan.
    - Sheet 4 of 19 – Dimension Plan.
    - Sheet 5 of 19 – Grading Plan (Overall).
    - Sheet 6 of 19 – Grading Plan (West).
    - Sheet 7 of 19 – Grading Plan (East).
    - Sheet 8 of 19 – Utility Plan (West).
    - Sheet 9 of 19 – Utility Plan (East).
    - Sheet 10 of 19 – Soil Erosion & Sediment Control Plan.
    - Sheet 11 of 19 – Soil Erosion & Sediment Control Details.
    - Sheet 12 of 19 – Landscape Plan.
    - Sheet 13 of 19 – Lighting Plan.
    - Sheet 14 of 19 – Construction Details.
    - Sheet 15 of 19 – Construction Details.
    - Sheet 16 of 19 – Construction Details.
    - Sheet 17 of 19 – Construction Details.
    - Sheet 18 of 19 – Construction Details.
    - Sheet 19 of 19 – Construction Details.

of the Project, as detailed in the Revised Traffic & Parking Study, will modify the traffic signal phasing to give vehicles exiting Beekman Street a "split phase" such that there will be no opposing traffic coming from Church Street during this phase. This improvement, which has been reviewed by NYSDOT, is projected to further reduce delays for vehicles exiting Beekman Street.

- Architectural Plan Set entitled "Site Plan Application", prepared by Aryeh Siegel, Architect, dated November 28, 2023, last revised March 25, 2025, numbered and titled as follows (unless otherwise noted):
    - Sheet 1 of 7 - Building Plans – Beekman Street (A-101).
    - Sheet 2 of 7 - Building Plans – Beekman Street (A-102).
    - Sheet 3 of 7 - Building Plans – High Street. (A-103).
    - Sheet 4 of 7 - Site Section Diagram (A-104).
    - Sheet 5 of 7 - Site Section Diagram (A-105).
    - Sheet 6 of 7 - Elevations (A-106).
    - Sheet 7 of 7 - Elevations 2 (A-107).
- Stormwater Pollution Prevention Plan ("SWPPP") prepared by Colliers Engineering and Design, P.C., dated March 25, 2025, revised since December 31, 2024 to reference and comply with the new General Permit for Construction Activity (GP-0-25-001) including the new GI Worksheets and General Permit Appendix.[3]

We look forward to appearing at the Board's April 8th meeting, at which time we respectfully request that the Board consider adopting a SEQR Negative Declaration for the Project and then closing the Site Plan and SEQR Public Hearings on the Project. Should the Board adopt SEQR findings for the Project, we would respectfully request the Board refer this matter to the Zoning Board of Appeals for review of the requested area variance relief for the Project; and that the Board also consider setting the additional Public Hearing on the Subdivision component of the Application.

Should this Board or City Staff have any questions or comments with regard to the foregoing, please do not hesitate to contact us. Thank you in advance for your consideration of this matter.

Very truly yours,

Taylor M. Palmer

[3] Note: Consistent with the Applicants' prior submissions, one (1) hard copy of the SWPPP has been provided for the City's records.

Enclosures
cc: Jennifer L. Gray, Esq.
John Russo, P.E., Lanc & Tully Engineering & Surveying, P.C.
Natalie Quinn, KARC Planning Consultants, Inc.
Bryan Murphy, City of Beacon Building Inspector
Creighton Manning Engineering, LLP
Aryeh J. Siegel Architect
Colliers Engineering and Design, P.C.

555 Hudson Valley Avenue Suite 101
New Windsor, New York 12553
Main: 877 627 3772

Colliers Engineering & Design

March 25, 2025

John Gunn, Chairman
City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

45 Beekman Street & High Street – Mixed-Use Project
Parcels: 5954-26-689990 & 781983 and 5955-19-706012
City of Beacon, Dutchess County, NY
Project No. 23010468A

Dear Chairman Gunn and the Members of the Planning Board,

Below please find our responses to the comment letter received from Lanc & Tully Engineering and Surveying dated March 5, 2025, and KARC Planning Consultants, Inc., dated March 6, 2025. The comments have been repeated for clarity. Please note that any comments not specifically responded to remain open.

Lanc & Tully Engineering and Surveying dated 3/5/25:

Survey Plans:

Comment 1. The "Sanitary Sewer & Utilities Survey" plan should include a legend to define the following terms TFC, TFA, MMC, TFI, RTJ, and MSA, that appear on this plan. Applicant notes final updated plans will be provided once other pending utility investigations are completed.

Response 1: A legend has been added to the Existing Conditions and Site Demolition Plan (Sheet 2) which defines the terms listed above (these are referenced from the above noted Survey Map).

Sheet 8 & 9 of 19:

Comment 2. The plans still show the sanitary sewer continuing from SMH-14 to SMH-12. Based upon recent discussions with the City's Water & Sewer Superintendent, this interconnection is blocked, as the sewer is conveyed south from SMH-14 to SMH-8 on the south side of Beekman Street. This in conjunction with the findings of the sewer lateral connections just north of SMH-13 as mentioned in Comment No. 1 above, may allow for the applicant to remove the existing sewer collection running across the site, as well as reducing the amount of new sewer main and manholes (213 feet of main and 2 manholes) to be installed as part of the project. Applicant's consultant notes that plan revisions will be provided upon the results of the dye-testing for the neighboring parcels.

Colliers Engineering & Design

It is further recommended that the sewer line between SMH-14 and SMH-12 be removed, since this line is inactive, in turn allowing for the water line to run straight into the site without having to provide vertical separation at the abandoned sewer line.

Response 2: **As requested above, the abandoned sewer line has been removed from the Site Plans and the location of the proposed water line has been adjusted accordingly. Refer to Sheet 2 and 9.**

Comment 4. It is recommended that the invert for storm pipe P-7 be set higher than the invert out pipe of P-21 in structure MH S-8, or the invert elevation of the outlet pipe (P-21) be lowered, so as to avoid water surcharging or backing up into the drain line from the bio-retention area, especially the 6" underdrain line.

Response 4: **Please confirm that pipe modification made to the Site Plans submitted on 2/25/2025 has addressed this concern. No further revisions have been made on the attached Site Plans.**

Stormwater Pollution Prevention Plan:

Comment 3. As the new General Permit for Construction Activity (GP-0-25-001) was recently released, the applicant's engineer shall ensure that the SWPPP complies with all requirements of the new regulations.

Response 3: **The SWPPP has been updated to reference and comply with the new General Permit for Construction Activity (GP-0-25-001) including the new GI Worksheets and General Permit Appendix. See attached updated copy of the SWPPP.**

KARC Planning Consultants, Inc., dated March 6, 2025:

Comments & Recommendations:

Comment 1. Site Plan. The applicant is requesting SEQRA findings from the Board and is seeking the preparation of a resolution for site plan approval. It is recommended that the Board require the applicant to submit a comprehensive site plan set for review. While various excerpts of the site plan have been submitted over the past 12 months, a complete and consolidated submission would facilitate a more thorough and efficient review by the Board and its consultants.

Response 1: **As requested, a complete set of the project Site Plans has been provided with this submission.**

Comment 1a. Lighting Plan: The applicant has indicated proposed exterior building-mounted lighting on sheet A101. The proposed building-mounted lighting should be incorporated into the proposed lighting plan as part of the full site plan set.

Response 1a: The Lighting Plan (Sheet 13) in the attached Site Plan set has been revised to include the proposed Beekman Building wall sconces and Arcade ceiling lights.

If you have any questions regarding the above project responses, please feel free to call me at (845) 875-4952. We look forward to the continued discussions with the Board on this project at the next available meeting.

Sincerely,

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.

Justin Dates, RLA
Geographic Discipline Leader

cc: File

R:\Projects\2023\23010468A\Correspondence\OUT\250325_JED Comment Response-FINAL.docx

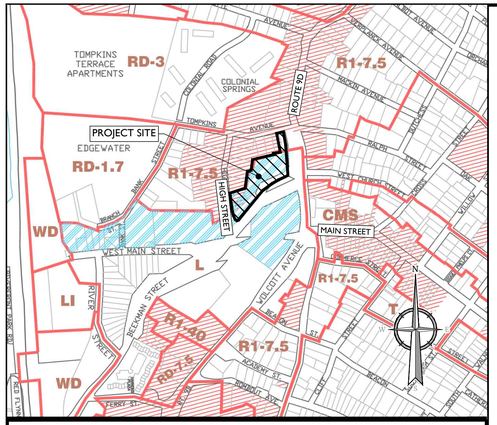
PRELIMINARY SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS: 5955-19-706012, 5954-26-689990, 5954-26-781983

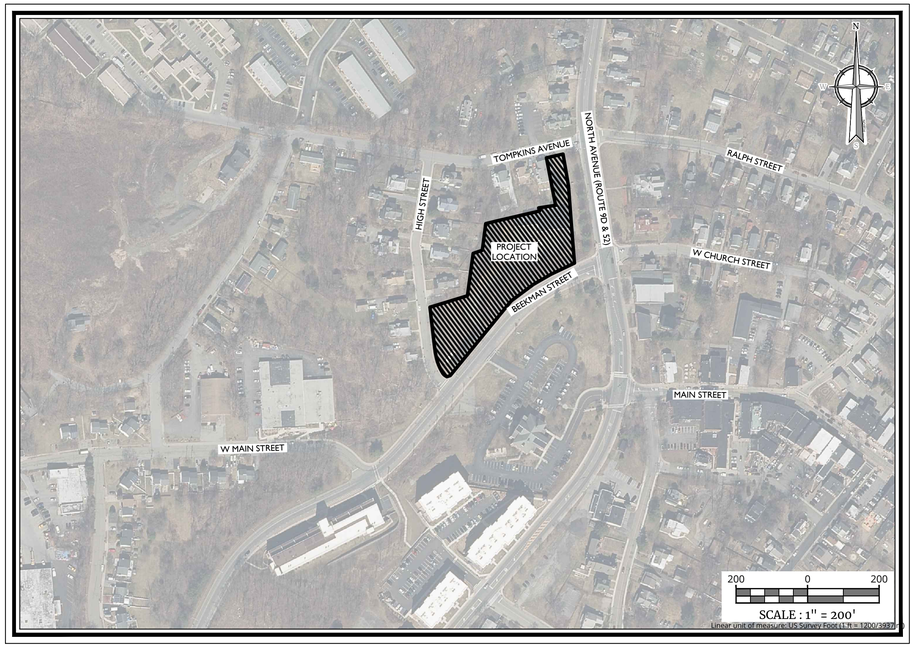
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE



ZONING MAP

SCALE: 1" =500'

SOURCE: CITY OF BEACON ZONING MAP



LOCATION MAP

SOURCE: NEW YORK STATE G.I.S. CLEARINGHOUSE

INDEX OF SHEETS

SHT. No.	DESCRIPTION	LATEST REVISION
1	COVER SHEET	3/25/2025
2	EXISTING CONDITIONS & SITE DEMOLITION PLAN	3/25/2025
3	TREE REMOVAL PLAN	3/25/2025
4	DIMENSION PLAN	3/25/2025
5-7	GRADING PLANS	3/25/2025
8-9	UTILITY PLANS	3/25/2025
10	SOIL EROSION & SEDIMENT CONTROL PLAN	3/25/2025
11	SOIL EROSION & SEDIMENT CONTROL DETAILS	3/25/2025
12	LANDSCAPE PLAN	3/25/2025
13	LIGHTING PLAN	3/25/2025
14-19	CONSTRUCTION DETAILS	3/25/2025

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

GENERAL INFORMATION

1. THE SUBJECT PROPERTIES ARE KNOWN BY THE FOLLOWING TAX IDS: 5955-19-706012, 5954-26-689990, 5954-26-781983 AS SHOWN ON THE DUTCHESS COUNTY TAX MAP OF THE CITY OF BEACON, DUTCHESS COUNTY, NEW YORK, TAX YEAR 2023.
2. THE PROPERTY IS LOCATED IN THE L (LINKAGE) ZONING DISTRICT AND IN THE R1-7.5 (RESIDENTIAL) CONTAINS A TOTAL TRACT AREA OF 2.06 ACRES.

OWNERS/APPLICANTS: BEEKMAN ARTS CENTER LLC (TAX ID: 5955-19-706012)
268 MAIN STREET
BEACON, NY 12508

BAY RIDGE STUDIOS LLC (TAX ID: 5954-26-781983 & 5954-26-689990)
268 MAIN STREET
BEACON, NY 12508

3. BOUNDARY AND TOPOGRAPHICAL MAPPING IS TAKEN FROM A SURVEY TITLED "BOUNDARY SURVEY OF THE LANDS OF BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC" PREPARED BY JONATHAN N. MILLEN NY, P.L.S. (LICENSE NO. 050746) OF AUTOMATED CONSTRUCTION ENHANCED SOLUTIONS, INC., DATED NOVEMBER 03, 2023 AND REVISED TO JUNE 06, 2024.
4. THIS SET OF PLANS IS NOT DEPICTING ENVIRONMENTAL CONDITIONS OR A CERTIFICATION/WARRANTY REGARDING THE PRESENCE OR ABSENCE OF ENVIRONMENTALLY IMPACTED SITE CONDITIONS. COLLIERS ENGINEERING & DESIGN HAS PERFORMED NO EXPLORATORY OR TESTING SERVICES, INTERPRETATIONS, CONCLUSIONS OR OTHER SITE ENVIRONMENTAL SERVICES RELATED TO THE DETERMINATION OF THE POTENTIAL FOR CHEMICAL, TOXIC, RADIOACTIVE OR OTHER TYPE OF CONTAMINANTS AFFECTING THE PROPERTY AND THE UNDERSIGNED PROFESSIONAL IS NOT QUALIFIED TO DETERMINE THE EXISTENCE OF SAME. SHOULD ENVIRONMENTAL CONTAMINATION OR WASTE BE DISCOVERED, THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LAWS AND REGULATIONS.
5. THIS IS A SITE DEVELOPMENT PLAN AND UNLESS SPECIFICALLY NOTED ELSEWHERE HERON, IS NOT A SURVEY.
6. NO 100 YEAR FLOOD PLAINS ARE KNOW TO EXIST ON THE SITE PER THE FLOOD INSURANCE RATE MAP 36027C0463E DATED 05/02/2012, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
7. DO NOT SCALE DRAWINGS AS THEY PERTAIN TO ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS, STRUCTURES, ETC. THEY ARE SCHEMATIC ONLY, EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.
8. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL APPROVALS REQUIRED HAVE BEEN OBTAINED, ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND THE DRAWINGS HAVE BEEN STAMPED "ISSUED FOR CONSTRUCTION". THIS SHALL INCLUDE APPROVAL OF ALL CATALOG CUTS, SHOP DRAWINGS AND/OR DESIGN CALCULATIONS AS REQUIRED BY THE PROJECT OWNER AND/OR MUNICIPAL ENGINEER.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY, INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAINING REQUIRED.
10. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL 811 TO REQUEST A UTILITY MARKOUT.
11. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED IN ACCORDANCE WITH MS4'S GP-0-24-001. PRESENT AT THE MEETING SHALL BE THE MS4 OPERATOR, CONTRACTOR(S) RESPONSIBLE FOR IMPLEMENTING THE SWPPP FOR CONSTRUCTION ACTIVITY, AND QUALIFIED STORMWATER INSPECTOR FOR THE PROJECT.
12. UPON COMPLETION OF PROJECT CONSTRUCTION, AN AS-BUILT SURVEY SHALL BE PREPARED OF THE PROJECT. THE AS-BUILT SURVEY SHALL INCLUDE THE LOCATION, SIZE, AND MATERIAL OF ALL UTILITIES INSTALLED ON THE PROJECT SITE.
13. INFORMATION HEREON INCORPORATES THE CONTENT IN THE FOLLOWING REPORTS:
    - "PRELIMINARY STORMWATER POLLUTION PREVENTION PLAN (PRELIMINARY SWPPP)" PREPARED FOR BEEKMAN ARTS CENTER LLC & BAYRIDGE STUDIOS LLC PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED JANUARY 30, 2024.
    - "TRAFFIC & PARKING STUDY" PREPARED FOR BEEKMAN ARTS CENTER LLC & BAYRIDGE STUDIOS LLC PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED NOVEMBER 28, 2023 AND REVISED TO JUNE 24, 2024.

SITE NOTES

1. BUILDING FOOTPRINT DIMENSIONS SHOWN HEREON ARE APPROXIMATE. FINAL BUILDING FOOTPRINT DIMENSIONS FOR EACH BUILDING SHALL BE FURNISHED ON THE INDIVIDUAL ARCHITECTURAL PLANS AT THE TIME OF APPLICATION FOR A BUILDING PERMIT. ALL STRUCTURES SHALL CONFORM TO THE APPROVED BULK ZONING REQUIREMENTS.
2. CURBS SHALL BE DEPRESSED FLUSH WITH PAVEMENT, AND ACCESSIBLE RAMPS INSTALLED WHERE SIDEWALKS AND CROSSWALKS INTERSECT SAME. DETECTABLE WARNINGS SHALL BE INCLUDED ON ACCESSIBLE RAMPS.
3. TRAFFIC SIGNAGE AND STRIPING SHALL CORRESPOND TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. REFUSE AND RECYCLABLES SHALL BE STORED WITHIN OUTSIDE SCREENED TRASH ENCLOSURES AS NOTED ON THE PLANS, AND PICKED UP BY PRIVATE WASTE DISPOSAL HAULER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL WASTE MATERIALS IN ACCORDANCE WITH GOVERNING REGULATIONS AND AGENCIES.
6. THERE SHALL BE NO ON-SITE BURIAL OF CONSTRUCTION MATERIALS, TREE BRANCHES, STUMPS, OR OTHER DELETERIOUS MATERIALS.
7. MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
    A. NEW YORK STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", 2018; AS SUPPLEMENTED.
    B. CURRENT PREVAILING MUNICIPAL, COUNTY, AND/OR STATE AGENCY SPECIFICATIONS, STANDARDS, CONDITIONS, AND REQUIREMENTS.
    C. CURRENT PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
    D. CURRENT MANUFACTURER SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

UTILITY NOTES

1. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTIONS, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS, AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE UNDER SIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER MATERIALLY FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGNS HEREON INAPPROPRIATE OR INEFFECTIVE.
2. UTILITY RELOCATIONS SHOWN HEREON, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANY/AUTHORITIES.
3. STORM SEWERS SHALL BE CLASS III (OR HIGHER IF NOTED) REINFORCED CONCRETE PIPE (RCP) WITH "O" RING GASKETS OR INTERNALLY PRELUBRICATED GASKET (TYLOX SUPERSEAL OR EQUIVALENT. ADS N-12 HIGH DENSITY POLYETHYLENE PIPE (HDPE), AS NOTED ON THE PLAN, OR APPROVED EQUAL. PROPER PIPE COVERAGE SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. PIPE LENGTHS SHOWN HEREON ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. WATER SERVICE SHALL BE PROVIDED FROM THE CITY OF BEACON. THE PROJECT SHALL CONNECT TO THE MUNICIPAL SYSTEM VIA THE EXISTING WATER MAINS IN TOMPKINS AVENUE AND HIGH STREET SUBJECT TO THE APPLICABLE REGULATIONS AND THE APPROVAL OF THE MUNICIPALITY & THE DUTCHESS COUNTY DEPARTMENT OF HEALTH.
5. SANITARY SEWER SERVICE SHALL BE PROVIDED BY CONNECTION TO THE EXISTING CITY OF BEACON SANITARY MAIN LOCATED IN HIGH STREET.
6. ALL WATER MAINS SHOULD BE SEPARATED FROM SANITARY SEWER LINES BY A MINIMUM HORIZONTAL DISTANCE OF 10 FEET. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN ENCASED IN CONCRETE OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE MUNICIPALITY.
7. AT THE CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN (SEWER SERVICE LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT). IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE WATER LINE SHALL BE ENCASED IN CONCRETE.
8. GAS, ELECTRIC, LIGHTING, CABLE TELEVISION, AND ELECTRICAL SERVICE PLANS, IF REQUIRED, SHALL BE PREPARED BY THE RESPECTIVE UTILITY COMPANIES THAT SERVICE THE AREA PRIOR TO SITE CONSTRUCTION AND SHALL BE INSTALLED PER ORDINANCE OR LOCAL UTILITY COMPANIES REQUIREMENTS.
9. ALL UTILITY CONNECTION LOCATIONS MUST BE CONFIRMED WITH THE GOVERNING AUTHORITY & WITH A TEST PIT BY THE CONTRACTOR PRIOR TO INSTALLATION.
10. UTILITY INSTALLATION WITHIN THE NYSDOT RIGHT-OF-WAY TO BE COORDINATED WITH THE APPLICABLE NYSDOT PERMIT PLANS.

THESE GENERAL NOTES SHALL APPLY TO ALL SHEETS IN THIS SET.

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REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:04-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-COVER

SHEET TITLE: COVER SHEET

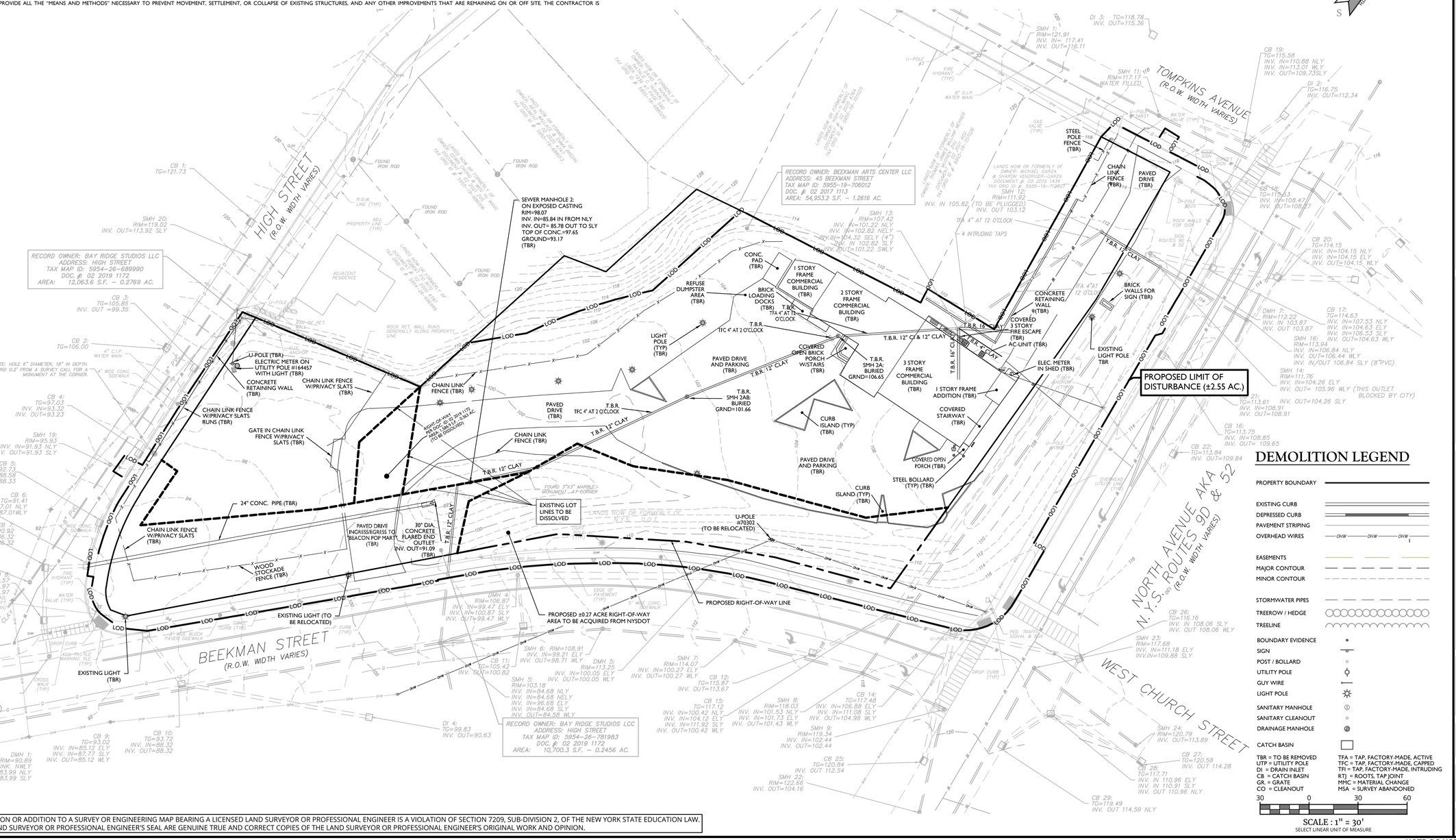
SHEET NUMBER: 01 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIC 1400

2023\23010468A\Engineering\Site Plans\C-COVER.dwg|C-01 COVER By: KYLE SHALLOW

DEMOLITION NOTES:

1. THIS PLAN REFERENCES THE FOLLOWING DOCUMENTS AND INFORMATION:
   A. BOUNDARY AND TOPOGRAPHICAL MAPPING IS TAKEN FROM A SURVEY TITLED "BOUNDARY SURVEY OF THE LANDS OF BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC" PREPARED BY JONATHAN N. MILLEN NY, P.L.S. (LICENSE NO. 050746) OF AUTOMATED CONSTRUCTION ENHANCED SOLUTIONS, INC., DATED NOVEMBER 03, 2023.
2. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (29 U.S.C. 651 ET SEQ.) AND THE NEW YORK PROTECTION OF UNDERGROUND FACILITIES ACT (DIG SAFE LAW, 16 NYCRR PART 753) AS AMENDED.
3. THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR SHALL ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE IN DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
4. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMING THE WORK OF THIS PROJECT SHALL BE RAISED WITH ENGINEER, IN WRITING AND RESPONDED TO BY ENGINEER, IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY.
5. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR/TO:
   A. OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND OTHER PUBLIC AGENCIES HAVING JURISDICTION.
   B. NOTIFYING, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL DEPARTMENT OF PUBLIC WORKS, 72 HOURS PRIOR TO START OF WORK.
   C. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
   D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR SHALL BE REQUIRED TO CALL THE BOARD OF PUBLIC UTILITIES ONE CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT IN ADVANCE OF ANY EXCAVATION.
   E. LOCATING AND PROTECTING ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
   F. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
   G. ARRANGING FOR AND COORDINATING WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE THE UTILITY ENGINEER AND OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.
   H. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES. WORK REQUIRED TO BE DONE "OFF-PEAK" SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
   I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL WORK AND NOTIFY THE OWNER AND ENGINEER OF THE DISCOVERY OF SUCH MATERIALS.
6. COLLIERS ENGINEERING & DESIGN IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
7. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION. SUCH REPAIRS SHALL BE PERFORMED AT THE CONTRACTOR'S SOLE EXPENSE.
8. THE CONTRACTOR SHALL NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE UNLESS IT IS IN STRICT ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, AND/OR UNDER THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
9. CONTRACTOR SHALL BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL SHALL BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS, AND SHALL BE SUFFICIENTLY COMPACTED TO SUPPORT NEW IMPROVEMENTS AND IN COMPLIANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. BACKFILLING SHALL OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES, AND SHALL BE DONE SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE.
10. EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND ALL APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
11. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AS WELL AS FEDERAL, STATE AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHT-OF-WAY.
12. CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
13. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE AND/OR LIMIT OF DISTURBANCE, WITHOUT WRITTEN PERMISSION OF THE OWNER AND ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION.
14. THE CONTRACTOR SHALL USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
15. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
16. CONTRACTOR IS RESPONSIBLE FOR SITE JOB SAFETY, WHICH SHALL INCLUDE BUT NOT LIMITED TO THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING AND OTHER APPROPRIATE SAFETY ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITY.
17. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION AS TO THE MEANS AND METHODS TO BE USED TO ACCOMPLISH THAT WORK. ALL MEANS AND METHODS UTILIZED ARE TO BE IN STRICT ACCORDANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
18. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES. THE CONTRACTOR SHALL MAINTAIN RECORDS TO DEMONSTRATE PROPER DISPOSAL ACTIVITIES, TO BE PROVIDED TO THE OWNER UPON REQUEST.
19. CONTRACTOR SHALL MAINTAIN A RECORD SET OF PLANS UPON WHICH IS INDICATED THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT SHALL BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER, AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK.
20. CONTRACTOR IS RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS, PAVEMENT, DRAINAGE STRUCTURES, ETC. WHICH ARE TO REMAIN. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING DAMAGE DONE TO THE AFOREMENTIONED ITEMS. THE REPAIR SHALL RESTORE SUCH TO A CONDITION EQUIVALENT TO OR BETTER THAN THE EXISTING CONDITIONS AND IN ACCORDANCE WITH ALL APPLICABLE CODES.
21. TREE CLEARING AND REMOVAL SHALL OCCUR BETWEEN OCTOBER 1ST TO MARCH 31ST, TO MITIGATE POTENTIAL IMPACTS TO THE INDIANA BAT.


HIGH STREET (R.O.W. WIDTH VARIES)
BEEKMAN STREET (R.O.W. WIDTH VARIES)
TOMPKINS AVENUE (R.O.W. WIDTH VARIES)
NORTH AVENUE AKA N.Y.S. ROUTES 9D & 52 (R.O.W. WIDTH VARIES)
WEST CHURCH STREET
RECORD OWNER: BAY RIDGE STUDIOS LLC
ADDRESS: HIGH STREET
TAX MAP ID: 5954-26-689990
DOC. #: 02 2019 1172
AREA: 12,063.6 S.F. – 0.2769 AC.
RECORD OWNER: BEEKMAN ARTS CENTER LLC
ADDRESS: 45 BEEKMAN STREET
TAX MAP ID: 5955-19-706012
DOC. # 02 2017 1113
AREA: 54,953.2 S.F. – 1.2616 AC.
RECORD OWNER: BAY RIDGE STUDIOS LCC
ADDRESS: HIGH STREET
TAX MAP ID: 5954-26-781983
DOC. #: 02 2019 1172
AREA: 10,700.3 S.F. – 0.2456 AC.
PROPOSED LIMIT OF DISTURBANCE (±2.55 AC.)
EXISTING LOT LINES TO BE DISSOLVED
PROPOSED ±0.27 ACRE RIGHT-OF-WAY AREA TO BE ACQUIRED FROM NYSDOT
PROPOSED RIGHT-OF-WAY LINE
SEWER MANHOLE 2: ON EXPOSED CASTING RIM=98.07 INV. IN=85.84 IN FROM NLY INV. OUT= 85.78 OUT TO SLY TOP OF CONC.=97.65 GROUND=93.17 (TBR)
CHAIN LINK FENCE W/PRIVACY SLATS (TBR)
CHAIN LINK FENCE (TBR)
STEEL POLE FENCE (TBR)
WOOD STOCKADE FENCE (TBR)
24" CONC. PIPE (TBR)
30" DIA. CONCRETE FLARED END OUTLET INV. OUT=91.09 (TBR)
PAVED DRIVE INGRESS/EGRESS TO "BEACON POP MART" (TBR)
U-POLE (TBR) ELECTRIC METER ON UTILITY POLE #164457 WITH LIGHT (TBR)
CONCRETE RETAINING WALL (TBR)
GATE IN CHAIN LINK FENCE W/PRIVACY SLATS (TBR)
CHAIN LINK FENCE RUNS (TBR)
U-POLE (TO BE RELOCATED)
EXISTING LIGHT (TO BE RELOCATED)
EXISTING LIGHT (TBR)
CONC. PAD (TBR)
REFUSE DUMPSTER AREA (TBR)
BRICK LOADING DOCKS (TBR)
1 STORY FRAME COMMERCIAL BUILDING (TBR)
2 STORY FRAME COMMERCIAL BUILDING (TBR)
3 STORY FRAME COMMERCIAL BUILDING (TBR)
1 STORY FRAME ADDITION (TBR)
COVERED 3 STORY FIRE ESCAPE (TBR)
AC-UNIT (TBR)
COVERED OPEN BRICK PORCH W/STAIRS (TBR)
COVERED STAIRWAY (TBR)
COVERED OPEN PORCH (TBR)
CONCRETE RETAINING WALL W/SHED (TBR)
BRICK WALLS FOR SIGN (TBR)
EXISTING LIGHT POLE TBR
ELEC. METER IN SHED (TBR)
PAVED DRIVE AND PARKING (TBR)
CHAIN LINK FENCE (TBR)
CURB ISLAND (TYP) (TBR)
STEEL BOLLARD (TYP) (TBR)
PAVED DRIVE (TBR)
T.B.R. 4" CLAY
T.B.R. 12" CLAY
T.B.R. 17" CLAY
T.B.R. 16" CLAY
T.B.R. 8" CLAY
T.B.R. 14" CLAY
T.B.R. 16" CLAY
T.B.R. 12" CLAY & 12" CLAY
T.B.R. SMH 2A: BURIED GRND=106.65
T.B.R. SMH 2AB: BURIED GRND=101.66
T.B.R. TFA 4" AT 12 O'CLOCK
T.B.R. TFC 4" AT 2 O'CLOCK
T.B.R. TFA 4" AT 7 O'CLOCK
LIGHT POLE (TYP) (TBR)
U-POLE #70302 (TO BE RELOCATED)
SMH 1: RIM=121.91 INV. IN= 117.41 INV. OUT=116.11
SMH 11: RIM=117.17 WATER FILLED
SMH 12: RIM=111.92 (TO BE PLUGGED) INV. OUT 103.12
SMH 13: RIM=107.42 INV. IN=101.22 NLY INV. IN=102.82 NELY INV. IN=104.32 SELY (4") INV. IN 102.82 SLY INV. OUT=101.22 SWLY
INV. IN 105.82 (TO BE PLUGGED)
4 INTRUDING TAPS
DI 3: TG=118.78 INV. OUT=115.36
CB 19: TG=115.58 INV. IN=110.88 NLY INV. IN=113.01 WLY INV. OUT=109.73SLY
DI 2: TG=116.75 INV. OUT=112.34
CB 18: TG=115.53 INV. IN=108.47 INV. OUT=108.27
CB 20: TG=114.15 INV. IN=104.15 NLY INV. IN=104.15 ELY INV. OUT=104.15 WLY
DMH 7: RIM=112.22 INV. IN 103.87 INV. OUT 103.87
CB 17: TG=114.63 INV. IN=107.53 NLY INV. IN=104.63 ELY INV. IN=106.53 SLY INV. OUT=104.63 WLY
SMH 16: RIM=113.94 INV. IN=106.84 NLY INV. OUT=106.44 WLY INV. IN/OUT 106.84 SLY (8"PVC)
SMH 14: RIM=111.76 INV. IN=104.26 ELY INV. OUT= 105.96 WLY (THIS OUTLET BLOCKED BY CITY)
21: TG=113.61 INV. IN=108.91 INV. OUT=108.91
INV. OUT=104.26 SLY
CB 16: TG=113.75 INV. IN=108.85 INV. OUT= 109.65
CB 22: TG=113.84 INV. OUT=109.84
CB 26: TG=116.16 INV. IN 108.06 SLY INV. OUT 108.06 WLY
SMH 23: RIM=117.68 INV. IN=111.18 ELY INV.=109.88 SLY
CB 27: TG=120.58 INV. OUT 114.28
CB 28: TG=117.71 INV. IN 110.96 ELY INV. IN 110.91 SLY INV. OUT 110.96 NLY
CB 29: TG=119.49 INV. OUT 114.59 NLY
SMH 24: RIM=120.79 INV. OUT=113.89
SMH 20: RIM=119.02 INV. OUT=113.92 SLY
CB 1: TG=121.73
CB 3: TG=105.85 INV. OUT =99.35
CB 2: TG=106.00
CB 4: TG=97.03 INV. IN=93.32 INV. OUT=93.23
SMH 19: RIM=95.93 INV. IN=91.93 NLY INV. OUT=91.93 SLY
CB 5: TG=92.73 INV. IN=88.58 INV. OUT=88.33
CB 6: TG=91.41 INV. IN=87.01 NLY INV. OUT=87.01WLY
CB 7: TG=90.92 INV. IN=86.32 INV. OUT=86.32
SMH 18: RIM=91.79 INV. IN=86.79 NLY INV. IN=86.79 SLY
CB 8: TG=90.57 INV. IN= 85.97 INV. OUT=85.97
SMH 3: RIM=89.82 INV. IN=80.82 NLY INV. OUT=80.82 SLY
CB 23: TG=88.69 INV. IN= 80.09
CB 9: TG=93.02 INV. IN=85.12 ELY INV. IN=87.77 SLY INV. OUT=85.12 WLY
CB 10: TG=93.72 INV. IN=88.32 INV. OUT=88.32
DMH 1: RIM=90.89 INV. IN=UNK. NWLY INV. IN=83.99 NLY INV. OUT=83.99 SLY
CB 11: TG=105.42 INV. OUT=100.82
SMH 5: RIM=103.18 INV. IN=84.68 NLY INV. IN=84.68 NELY INV. IN=96.68 ELY INV. IN=84.68 SLY INV. OUT=84.58 WLY
DMH 4: RIM=106.87 INV. IN=99.47 ELY INV. IN=100.87 SLY INV. OUT=99.47 WLY
SMH 6: RIM=108.91 INV. IN=99.21 ELY INV. OUT=98.71 WLY
DMH 5: RIM=113.25 INV. IN=100.05 ELY INV. OUT=100.05 WLY
DI 4: TG=99.83 INV. OUT=90.63
SMH 7: RIM=114.07 INV. IN=100.27 ELY INV. OUT=100.27 WLY
CB 12: TG=115.87 INV. OUT=113.67
CB 15: TG=117.12 INV. IN=100.42 NLY INV. IN=104.12 ELY INV. IN=111.92 SLY INV. OUT=100.42 WLY
SMH 8: RIM=118.03 INV. IN=101.53 NLY INV. IN=101.73 ELY INV. OUT=101.43 WLY
CB 14: TG=117.48 INV. IN=106.88 ELY INV. IN=111.08 SLY INV. OUT=104.98 WLY
SMH 9: RIM=119.34 INV. IN=102.44 INV. OUT=102.44
CB 25: TG=120.84 INV. OUT 112.54
SMH 22: RIM=122.66 INV. OUT=104.16
CHAIN LINK FENCE W/PRIVACY SLATS RUNS (TBR)
RIGHT-OF-WAY PER DOC. 02 2019 1172 (TO BE DISSOLVED)
FOUND IRON ROD
FOUND 3"X3" MARBLE MONUMENT AT CORNER
LANDS NOW OR FORMERLY OF NYS D.O.T.
LANDS NOW OR FORMERLY OF OWNER: BAY RIDGE STUDIOS LLC TAX MAP ID: 5954-26-689990 DOC. # 02 2019 1172
LANDS NOW OR FORMERLY OF OWNER: BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC TAX MAP ID: 5955-19-706012 DOC. # 02 2017 1113
LANDS NOW OR FORMERLY OF OWNER: MICHAEL GARZA & SHARON VENDRIGER-GARZA DOCUMENT # 02 2015 1434 TAX ORDID #: 5955-19-712007
LANDS NOW OR FORMERLY OF OWNER: BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC TAX MAP ID: 5955-19-706012 DOC. # 02 2017 1113
ADJACENT RESIDENCE
ROCK RET. WALL RUNS GENERALLY ALONG PROPERTY LINE
NOTE: HOLE 6" DIAMETER, 18" IN DEPTH. FOUND 0.2' FROM A SURVEY CALL FOR A MONUMENT AT THE CORNER.
4" C.I.P. WATER MAIN
4' WIDE CONC. SIDEWALK
8" D.I.P. WATER MAIN
GAS VALVE (TYP)
WATER VALVE (TYP)
FIRE HYDRANT (TYP)
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DEMOLITION NOTES:

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
1	9"	BRADFORD PEAR
2	23"	RED OAK
3	14"	WHITE PINE
4	19"	RED OAK
5	13"/9"	WHITE PINE
6	19.5"	RED OAK
7	8"	BRADFORD PEAR
8	7.5"	WHITE PINE
9	10"/8"	WHITE PINE
10	15.5"	RED OAK
11	7"	BRADFORD PEAR
12	18"	NORWAY MAPLE
13	15"	NORWAY MAPLE
14	26"	BLACK LOCUST
15	24"/18"	BLACK LOCUST
16	6"	BLACK CHERRY
17	20"	BLCK LOCUST
18	6"	BLACK LOCUST
19	6"	BLACK WALNUT
20	20"	NORWAY MAPLE
21	16"	NORWAY MAPLE
22	6"/8"	NORWAY MAPLE
23	15"	NORWAY MAPLE
24	8"	BLACK LOCUST
25	23"	NORWAY MAPLE
26	6"	NORWAY MAPLE

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
27	7"	NORWAY MAPLE
28	7"	NORWAY MAPLE
29	6"/7"	NORWAY MAPLE
30	23"	BIGTOOTH ASPEN
31	23"	BIGTOOTH ASPEN
32	11"	NORWAY MAPLE
33	12"	BOX ELDER
34	12"	NORWAY MAPLE
35	8"	MULBERRY
36	6"	NORWAY MAPLE
37	6"	NORWAY MAPLE
38	6"	NORWAY MAPLE
39	12"	RED OAK
40	6"	BOX ELDER
41	6"/8"	NORWAY MAPLE
42	6"	NORWAY MAPLE
43	12"	RED OAK
44	6"/6"	NORWAY MAPLE
45	6"/6"/7"	NORWAY MAPLE
46	14"	RED OAK
47	6"	NORWAY MAPLE
48	6"	NORWAY MAPLE
49	12"	BLACK CHERRY
50	11"/17"	BLACK LOCUST
51	8"	BLACK LOCUST
52	8"	NORWAY MAPLE

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
53	8"	BLACK LOCUST
54	9"	NORWAY MAPLE
55	16"	BLACK WALNUT
56	15"/11"/11"	BLACK LOCUST
57	6"	NORWAY MAPLE
58	13"	BLACK LOCUST
59	16"	CATALPLA
60	14"/14"/14"	SYCAMORE
61	6"	CATALPLA
62	15"	RED OAK
63	15"	WHITE PINE
64	16"	LITTLELEAD LINDEN
65	14"	WHITE PINE
66	11"	WHITE PINE
67	17"	LITTLELEAF LINDEN
68	11"	WHITE PINE
69	10"	WHITE PINE
70	17"	LITTLELEAF LINDEN
71	11"	WHITE PINE
72	15"	LITTLELEAF LINDEN
73	15"	WHITE PINE
74	16"	LITTLELEAF LINDEN
75	10"	WHITE PINE
76	16"	LITTLELEAF LIDNEN
77	18"	LITTLELEAF LINDEN
78	24"/20"	NORWAY SPRUCE

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
79	18"	BRADFORD PEAR
80	30"	NORWAY MAPLE
81	13"	CATALPA
82	6"	NORWAY MAPLE
83	6"/8"	NORWAY MAPLE
84	24"	NORWAY MAPLE
85	12"	NORWAY MAPLE
86	10"	NORWAY MAPLE
87	10"	BRADFORD LOCUST
88	17"	NORWAY MAPLE
89	6"	NORWAY MAPLE
90	30"	NORWAY MAPLE
91	6"	NORWAY MAPLE
92	24"	NORWAY MAPLE
93	12"/14"	NORWAY MAPLE
94	10"	NORWAY MAPLE
95	31"	NORWAY MAPLE

PLAN NOTE

1. IDENTIFICATION OF EXISTING TREE SPECIES AND LOCATION CONDUCTED BY COLLIERS ENGINEERING & DESIGN, JUNE 2024.
2. CONTRACTOR TO STAKE-OUT L.O.D. ALONG THE NORTHERN SIDE OF THE PROJECT SITE AND EXISTING TREES IN CLOSE PROXIMITY TO THE L.O.D. SHALL BE REVIEWED FOR POTENTIAL PRESERVATION.

LEGEND

- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN

SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Site Plans\C-DEMO.dwg|C-03 TREE REMOVAL By: KYLE SHALLOW

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS

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Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

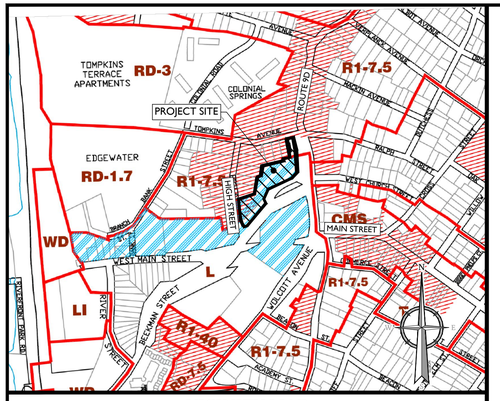
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING, CT, DBA NJ DOING BUSINESS AS DBA CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER: 23010468A	DRAWING NAME: C-DEMO		

SHEET TITLE:
TREE REMOVAL PLAN

SHEET NUMBER:
03 of 19



VICINITY MAP
SCALE: 1" = 500'
SOURCE: CITY OF BEACON ZONING MAP

ZONING DISTRICT:

L: (LINKAGE DISTRICT)
USE PERMITTED BY RIGHT: RETAIL
USE PERMITTED BY RIGHT: OFFICE
USE PERMITTED BY RIGHT: MULTIFAMILY DWELLING
-IF THE BUILDING FACES THE NORTH SIDE OF BEEKMAN STREET BETWEEN ROUTE 9D AND WEST MAIN STREET
-SUBJECT TO A REQUIREMENT THAT ANY DWELLING UNIT SHALL ONLY BE LOCATED ON THE UPPER STORIES OR AT LEAST 50 FEET BEHIND THE FACADE IN THE REAR PORTION OF THE GROUND FLOOR

HDLO: (HISTORIC DISTRICT AND LANDMARK OVERLAY ZONE)

TABLE OF BULK REQUIREMENTS

L - LINKAGE DISTRICT

MINIMUM	REQUIRED	PROVIDED	REMARKS
LANDSCAPED AREA	15%	35.5%	OK
LOT AREA	N/A	N/A	OK
LOT AREA PER UNIT	N/A	N/A	OK
LOT WIDTH	N/A	N/A	OK
LOT DEPTH	75 FT.	143 FT.	OK
FRONT YARD SETBACK	0 FT.	1 FT.	OK
SIDE YARD SETBACK	0 FT.	N/A	OK
REAR YARD SETBACK	25 FT.	46.7 FT.	OK
DISTANCE BETWEEN BUILDINGS SAME LOT	N/A	N/A	OK
MAXIMUM			
BUILDING HEIGHT	4 STORIES AND 48 FT.	4 STORIES AND ≤48 FT.	OK
BUILDING COVERAGE	N/A	N/A	OK
UNITS PER BUILDING	N/A	N/A	OK
FRONT YARD SETBACK	20 FT.	19.6 FT.	OK
SIDE YARD SETBACK	30 FT.	N/A	OK

ZONING DISTRICT:

R1-7.5: (ONE FAMILY RESIDENTIAL DISTRICT (7,500 SF/DWELLING))
NO USE PROPOSED IN R1-7.5 DISTRICT

TABLE OF BULK REQUIREMENTS

R1-7.5 - ONE FAMILY RESIDENTIAL DISTRICT

MINIMUM	REQUIRED	PROVIDED	REMARKS
LANDSCAPED AREA	15%	NO STRUCTURE PROPOSED IN R1-7.5 DISTRICT	OK
LOT AREA	7,500 SF		OK
LOT AREA PER UNIT	7,500 SF		OK
LOT WIDTH	75 FT.		OK
LOT DEPTH	100 FT.		OK
FRONT YARD SETBACK	15 FT.		OK
SIDE YARD SETBACK	10 FT.		OK
REAR YARD SETBACK	25 FT.		OK
DISTANCE BETWEEN BUILDINGS SAME LOT	N/A		OK
WELL-DESIGNED AND LANDSCAPED RECREATION OR USABLE OPEN SPACE AREA IN REAR YARD	100 SF PER DWELLING UNIT		OK
MAXIMUM			
BUILDING HEIGHT	2.5 STORIES AND 35 FT.		OK
BUILDING COVERAGE	30%		OK
UNITS PER BUILDING	N/A		OK
FRONT YARD SETBACK	35 FT.		OK
SIDE YARD SETBACK	N/A		OK

PARKING REQUIREMENTS:

MAXIMUM PERMITTED:

RESIDENTIAL:
1 SPACE PER UNIT
64 DWELLING UNITS = 64 SPACES

RETAIL:
3 SPACES PER 1,000 SF OF GFA
13,671 SF OF RETAIL SPACE = 42 SPACES

TOTAL MAXIMUM PARKING PERMITTED = 106 SPACES

PROVIDED

TOTAL PARKING PROVIDED = 91 SPACES
(BASED ON SHARED PARKING ANALYSIS)

LOADING REQUIREMENTS:

REQUIRED

RETAIL:
1 SPACE FOR THE FIRST 7,500 SF OF GFA AND 1 SPACE FOR EACH ADDITIONAL 10,000 SF OF GFA OR MAJOR PORTION THEREOF, EXCEPT THAT NO BERTHS SHALL BE REQUIRED FOR BUILDINGS OF LESS THAN 5,000 SQUARE FEET OF GFA

BUILDING 1: 10,566 SF OF RETAIL SPACE = 1 LOADING SPACE
BUILDING 2: 4,326 SF OF RETAIL SPACE = 0 LOADING SPACES

PROVIDED

TOTAL LOADING SPACES PROVIDED:
EAST BLDG: = 1 LOADING SPACE
WEST BLDG: = 1 LOADING SPACE

LEGEND

EXISTING		PROPOSED
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE	CURB	FACE
BACK		BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	ROADWAY SIGNS	
	ZONING BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	LIGHT POLE	
	FLUSH CURB	FC
	SIGN	

OWNERS/APPLICANTS:

BEEKMAN ARTS CENTER LLC (TAX ID: 5955-19-706012)
268 MAIN STREET
BEACON, NY 12508

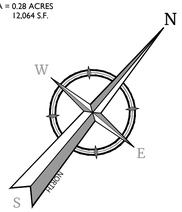
BAYRIDGE STUDIOS LLC (TAX ID: 5954-26-781983 & 5954-26-689990)
268 MAIN STREET
BEACON, NY 12508

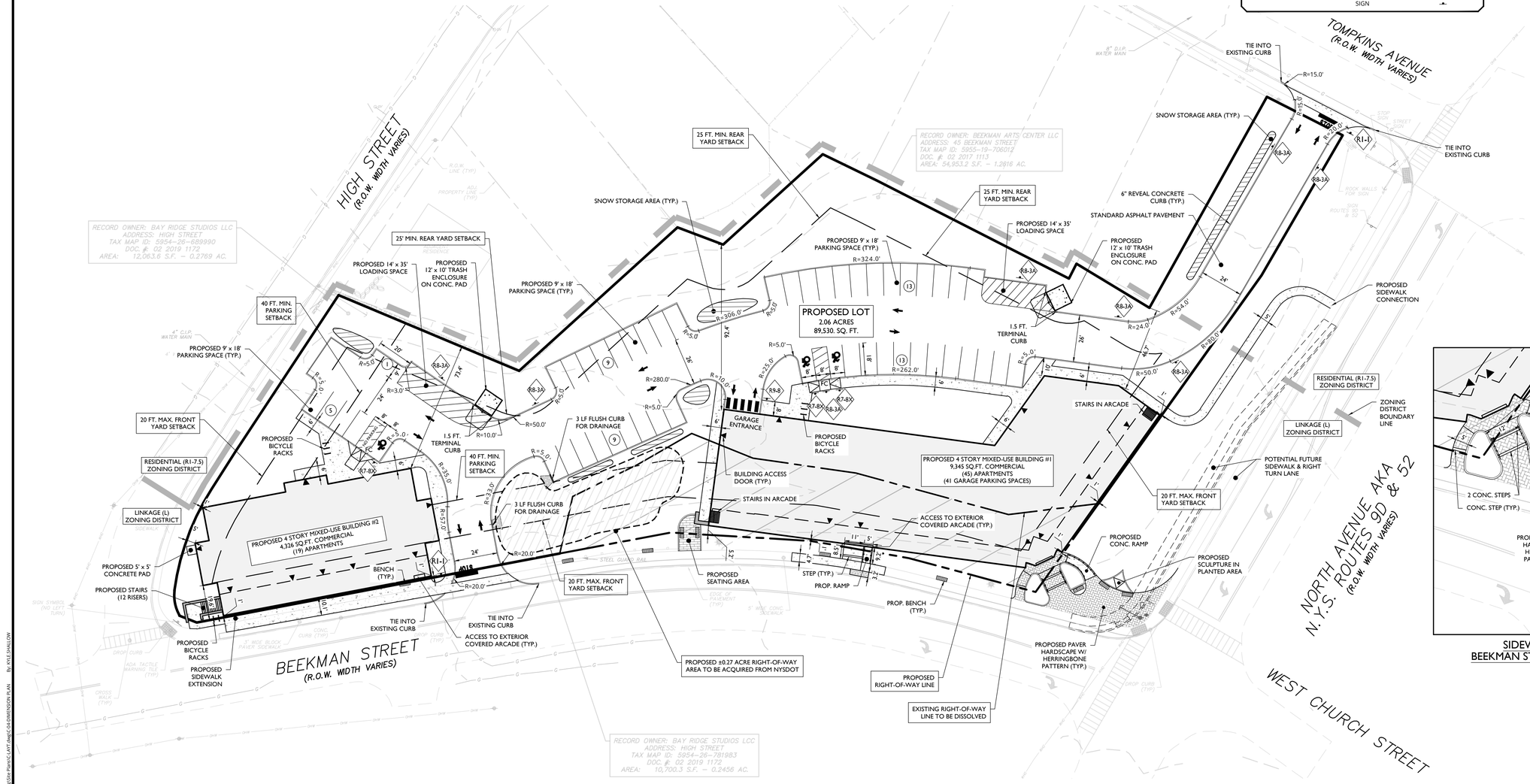
TAX LOTS:

5955-19-706012
AREA = 1.26 ACRES
54,953 S.F.

5954-26-781983
AREA = 0.25 ACRES
10,700 S.F.

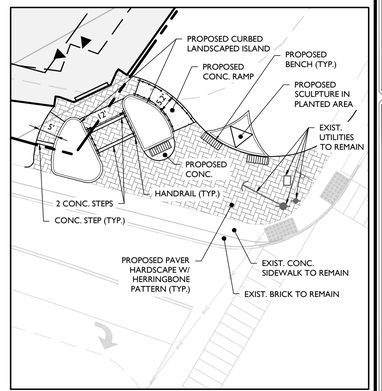
5954-26-689990
AREA = 0.28 ACRES
12,064 S.F.





SIGN LEGEND:

STOP	R1-1
ACCESSIBLE PARKING	R7-8X
NO PARKING	R8-3A
PEDESTRIAN CROSSWALK	R9-8



SIDEWALK ENTRANCE AT
BEEKMAN STREET AND NYS ROUTE 9D

SCALE: 1' = 20'

30 0 30 60
SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

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AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:	DRAWING NAME:		
23010468A	C-LAYT		

SHEET TITLE:
DIMENSION PLAN

SHEET NUMBER:
04 of 19

2023\23010468A\Engineering\Site Plans\C-LAYT.dwg|C-04-DIMENSION PLAN By: KYLE.SHALLOW

GRADING NOTES:

1. PROPOSED GRADE ELEVATIONS SHOWN AT BUILDING LINE ARE GROUND ELEVATIONS.
2. PROPOSED SPOT ELEVATIONS IN PAVEMENT AREAS ARE TOP OF FINISHED PAVEMENT.
3. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATION.
4. LANDSCAPED AND LAWN AREAS THAT ARE COMPACTED DURING CONSTRUCTION SHALL BE RESTORED PER THE NYS DEC DEEP-RIPPING AND DECOMPACTION MANUAL. (SEE SWPPP APPENDIX 12)

ADA INSTRUCTIONS TO CONTRACTOR:

1. CONTRACTOR SHALL EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA ACCESSIBLE COMPONENTS FOR THE SITE. THESE COMPONENTS, AS CONSTRUCTED, MUST COMPLY WITH THE LATEST ADA STANDARDS FOR ACCESSIBLE DESIGN. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EGRESS, SHALL COMPLY WITH THESE ADA CODE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

   (NOTE: THIS LIST IS NOT INTENDED TO CAPTURE EVERY APPLICABLE FEDERAL, STATE AND LOCAL RULE AND REGULATION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE LAW, WHETHER OR NOT STATED SPECIFICALLY HEREIN):

   A. PARKING SPACES AND PARKING AISLES - SLOPE SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

   B. CURB RAMPS- SLOPES SHALL NOT EXCEED 1:12 (8.3%).

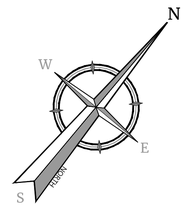
   C. LANDINGS -SHALL BE PROVIDED AT EACH END OF RAMPS, SHALL PROVIDE POSITIVE DRAINAGE, AND SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

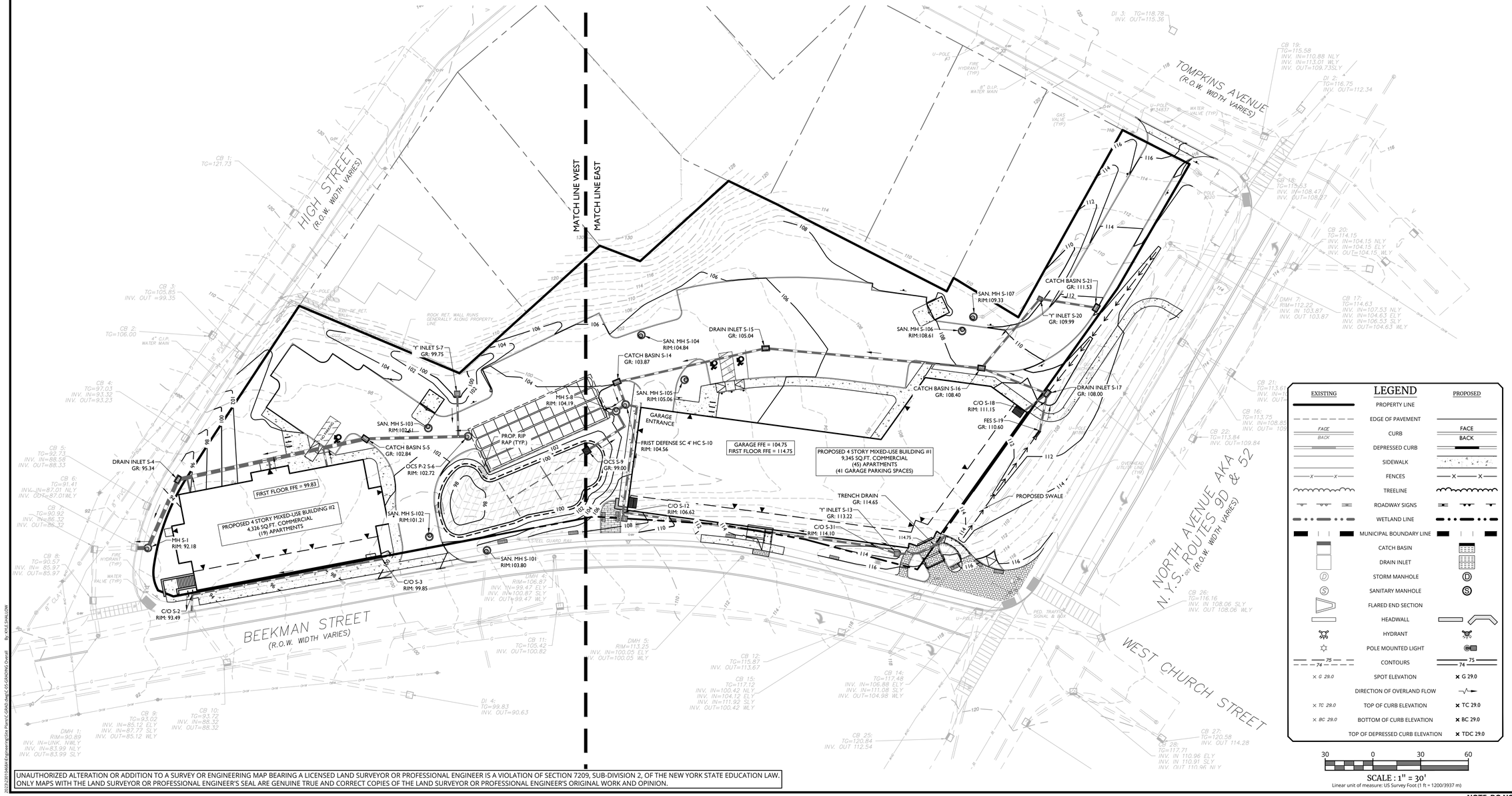
   D. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE - SHALL PROVIDE A 36 INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL. (CAR OVERHANGS CANNOT REDUCE THIS MINIMUM WIDTH), THE SLOPE SHALL BE NO GREATER THAN 1 :20 (5.0%) IN THE DIRECTION OF TRAVEL, AND SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN CROSS SLOPE.

   E. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), AN ADA RAMP WITH A MAXIMUM SLOPE OF 1:12 (8.3%), FOR A MAXIMUM DISTANCE OF 30 FEET, SHALL BE PROVIDED. THE RAMP SHALL HAVE ADA HAND RAILS AND "LEVEL" LANDINGS ON EACH END THAT ARE SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE.

   F. DOORWAYS - SHALL HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NORMALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA SHALL BE NO LESS THAN 60 INCHES (5 FEET) LONG, EXCEPT WHERE OTHER WISE PERMITTED BY ADA STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS (SEE APPLICABLE CODE SECTIONS).

2. IT IS RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE OFFICIAL PRIOR TO COMMENCING WORK.





LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

30 0 30 60

SCALE : 1" = 30'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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-	-	-	-

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER:	DRAWING NAME:
23010468A	C-GRAD

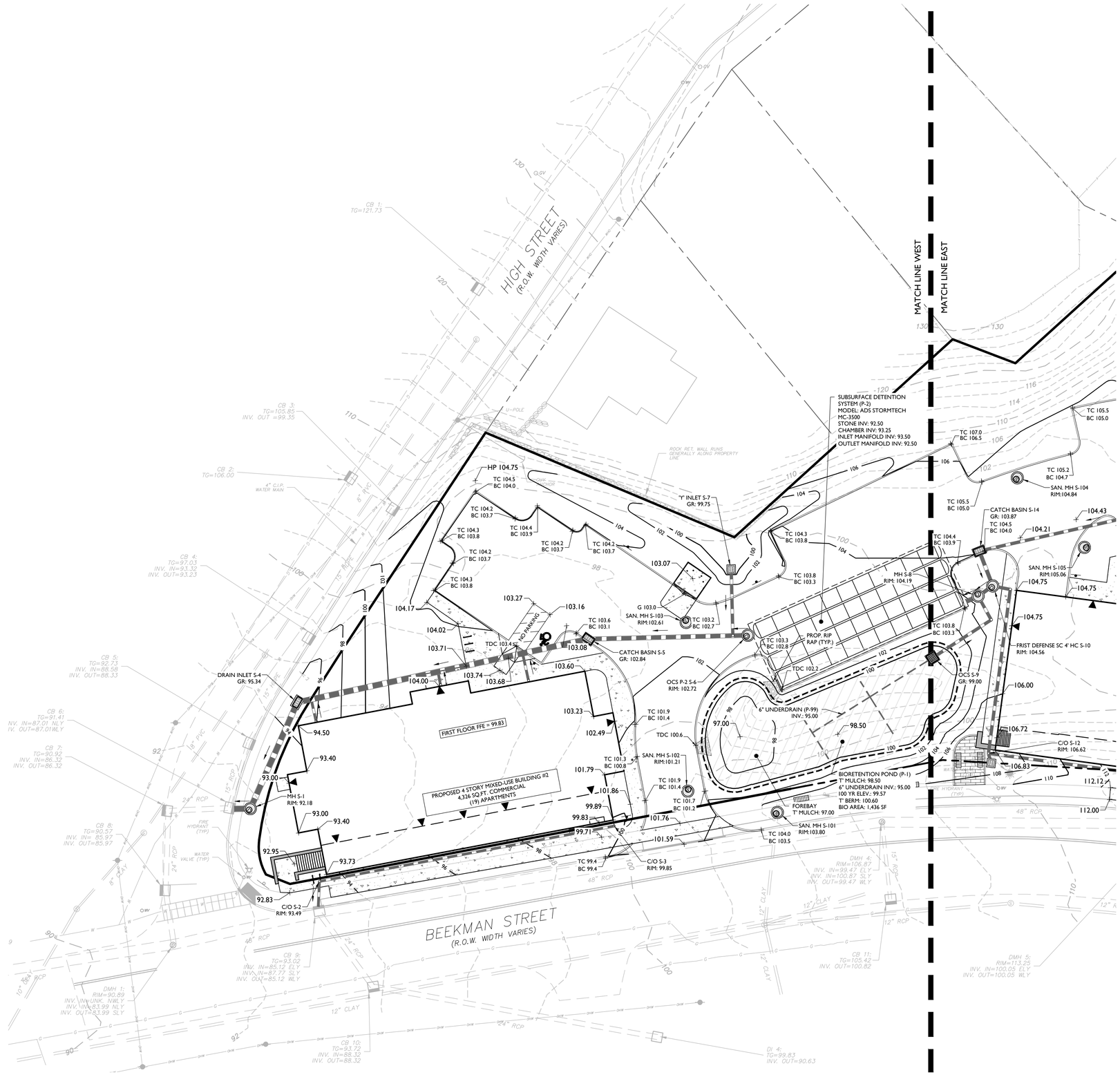
SHEET TITLE:

GRADING PLAN (OVERALL)

SHEET NUMBER:

05 of 19

2023\23010468A\Engineering\Site Plans\C-GRAD.dwg|C_C05-GRADING Overall By: KYLE SHALLOW



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2023\23010468A\Engineering\Site Plans\C-GRAD.dwg\C-08-GRADNG WEST By: KYLE SHALLOW

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
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75 / 74	CONTOURS	75 / 74
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	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

20 0 20 40

SCALE : 1" = 20'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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SHEET TITLE:
GRADING PLAN (WEST)

SHEET NUMBER:
06 of 19

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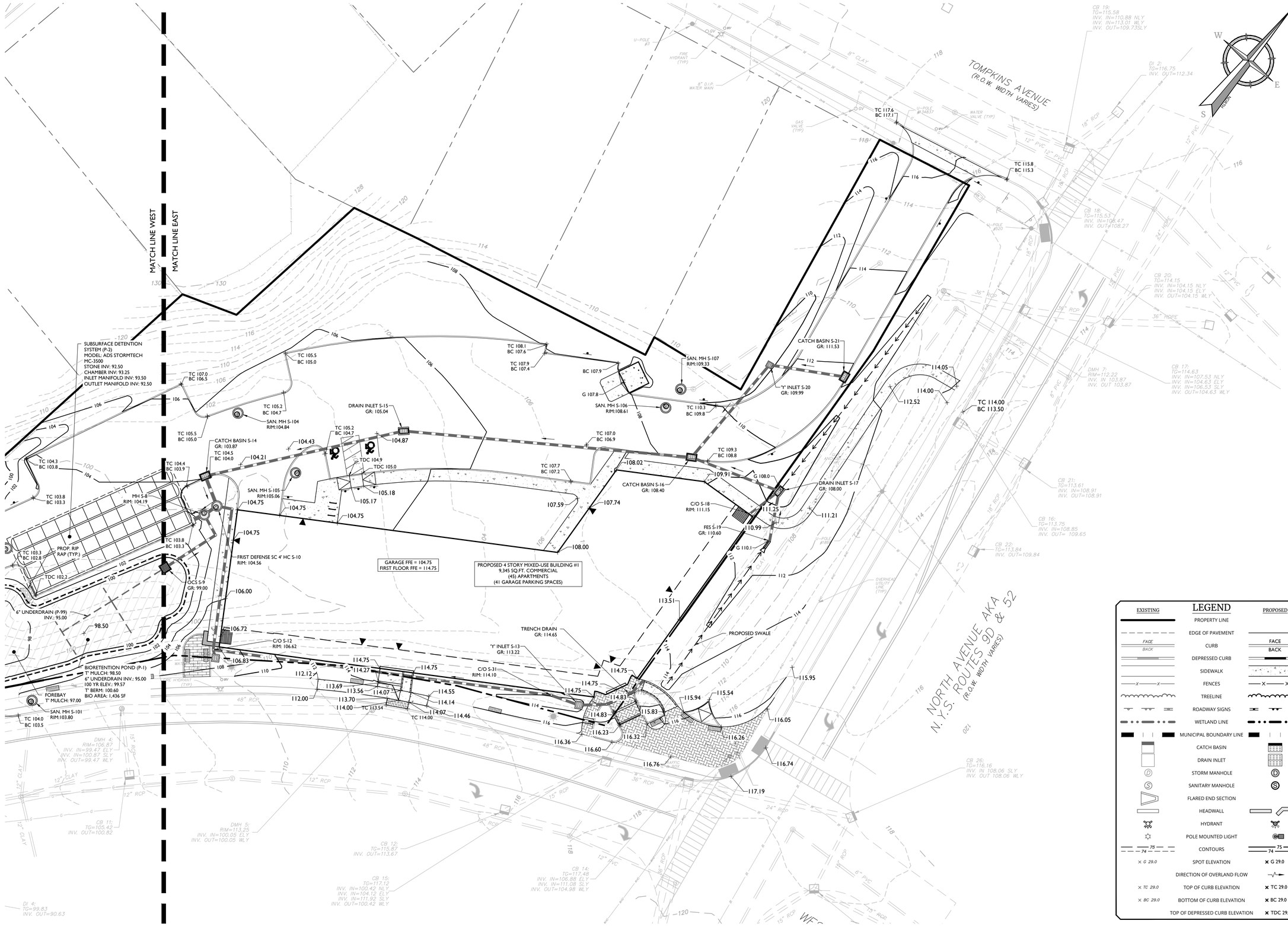

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FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
(D)	STORM MANHOLE	(D)
(S)	SANITARY MANHOLE	(S)
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

20 0 20 40

SCALE : 1" = 20'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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REGISTERED LANDSCAPE ARCHITECT — STATE OF NEW YORK

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
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AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:	DRAWING NAME:		
23010468A	C-GRAD		

SHEET TITLE:

GRADING PLAN (EAST)

SHEET NUMBER:

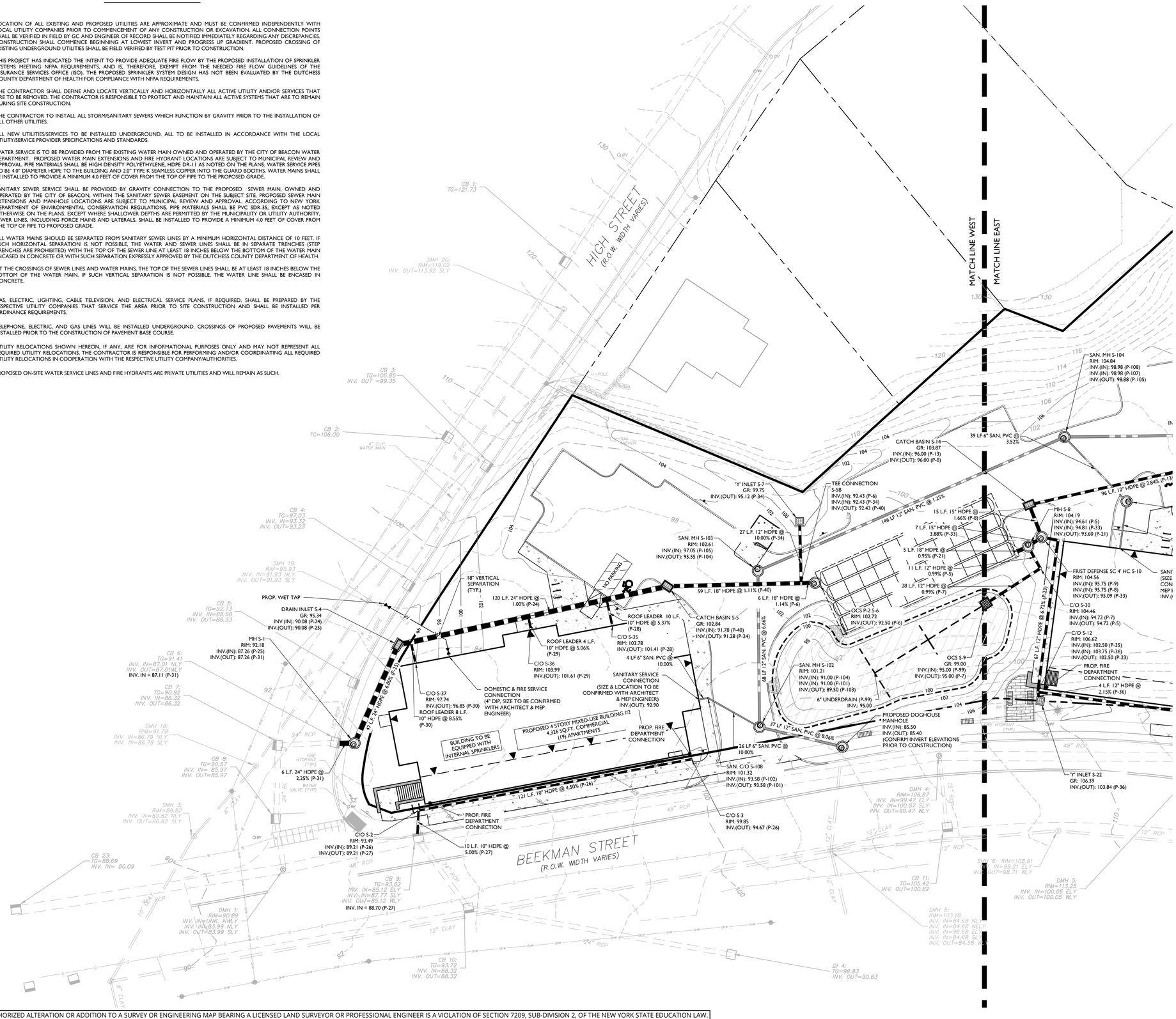
07 of 19

2023\23010468A\Engineering\Site Plans\C-GRAD.dwg|C-07-GRADING EAST
By: KYLE SHALLOW

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

UTILITY NOTES

1. LOCATION OF ALL EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. ALL CONNECTION POINTS SHALL BE VERIFIED IN FIELD BY GC AND ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY REGARDING ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT LOWEST INVERT AND PROGRESS UP GRADIENT. PROPOSED CROSSING OF EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO CONSTRUCTION.
2. THIS PROJECT HAS INDICATED THE INTENT TO PROVIDE ADEQUATE FIRE FLOW BY THE PROPOSED INSTALLATION OF SPRINKLER SYSTEMS MEETING NFPA REQUIREMENTS, AND IS, THEREFORE, EXEMPT FROM THE NEEDED FIRE FLOW GUIDELINES OF THE INSURANCE SERVICES OFFICE (ISO). THE PROPOSED SPRINKLER SYSTEM DESIGN HAS NOT BEEN EVALUATED BY THE DUTCHESS COUNTY DEPARTMENT OF HEALTH FOR COMPLIANCE WITH NFPA REQUIREMENTS.
3. THE CONTRACTOR SHALL DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICES THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE TO REMAIN DURING SITE CONSTRUCTION.
4. THE CONTRACTOR TO INSTALL ALL STORM/SANITARY SEWERS WHICH FUNCTION BY GRAVITY PRIOR TO THE INSTALLATION OF ALL OTHER UTILITIES.
5. ALL NEW UTILITIES/SERVICES TO BE INSTALLED UNDERGROUND. ALL TO BE INSTALLED IN ACCORDANCE WITH THE LOCAL UTILITY/SERVICE PROVIDER SPECIFICATIONS AND STANDARDS.
6. WATER SERVICE IS TO BE PROVIDED FROM THE EXISTING WATER MAIN OWNED AND OPERATED BY THE CITY OF BEACON WATER DEPARTMENT. PROPOSED WATER MAIN EXTENSIONS AND FIRE HYDRANT LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL. PIPE MATERIALS SHALL BE HIGH DENSITY POLYETHYLENE, HDPE DR-11 AS NOTED ON THE PLANS. WATER SERVICE PIPES TO BE 4.0" DIAMETER HDPE TO THE BUILDING AND 2.0" TYPE K SEAMLESS COPPER INTO THE GUARD BOOTHS. WATER MAINS SHALL BE INSTALLED TO PROVIDE A MINIMUM 4.0 FEET OF COVER FROM THE TOP OF PIPE TO THE PROPOSED GRADE.
7. SANITARY SEWER SERVICE SHALL BE PROVIDED BY GRAVITY CONNECTION TO THE PROPOSED SEWER MAIN, OWNED AND OPERATED BY THE CITY OF BEACON, WITHIN THE SANITARY SEWER EASEMENT ON THE SUBJECT SITE. PROPOSED SEWER MAIN EXTENSIONS AND MANHOLE LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL, ACCORDING TO NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION REGULATIONS. PIPE MATERIALS SHALL BE PVC SDR-35, EXCEPT AS NOTED OTHERWISE ON THE PLANS. EXCEPT WHERE SHALLOWER DEPTHS ARE PERMITTED BY THE MUNICIPALITY OR UTILITY AUTHORITY, SEWER LINES, INCLUDING FORCE MAINS AND LATERALS, SHALL BE INSTALLED TO PROVIDE A MINIMUM 4.0 FEET OF COVER FROM THE TOP OF PIPE TO PROPOSED GRADE.
8. ALL WATER MAINS SHOULD BE SEPARATED FROM SANITARY SEWER LINES BY A MINIMUM HORIZONTAL DISTANCE OF 10 FEET. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN ENCASED IN CONCRETE OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE DUTCHESS COUNTY DEPARTMENT OF HEALTH.
9. AT THE CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE WATER LINE SHALL BE ENCASED IN CONCRETE.
10. GAS, ELECTRIC, LIGHTING, CABLE TELEVISION, AND ELECTRICAL SERVICE PLANS, IF REQUIRED, SHALL BE PREPARED BY THE RESPECTIVE UTILITY COMPANIES THAT SERVICE THE AREA PRIOR TO SITE CONSTRUCTION AND SHALL BE INSTALLED PER ORDINANCE REQUIREMENTS.
11. TELEPHONE, ELECTRIC, AND GAS LINES WILL BE INSTALLED UNDERGROUND. CROSSINGS OF PROPOSED PAVEMENTS WILL BE INSTALLED PRIOR TO THE CONSTRUCTION OF PAVEMENT BASE COURSE.
12. UTILITY RELOCATIONS SHOWN HEREON, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANY/AUTHORITIES.
13. PROPOSED ON-SITE WATER SERVICE LINES AND FIRE HYDRANTS ARE PRIVATE UTILITIES AND WILL REMAIN AS SUCH.



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2023\23010468A\Engineering\Site Plans\C-UTIL.dwg\C-08 UTILITY By: KYLE SHALLOW

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
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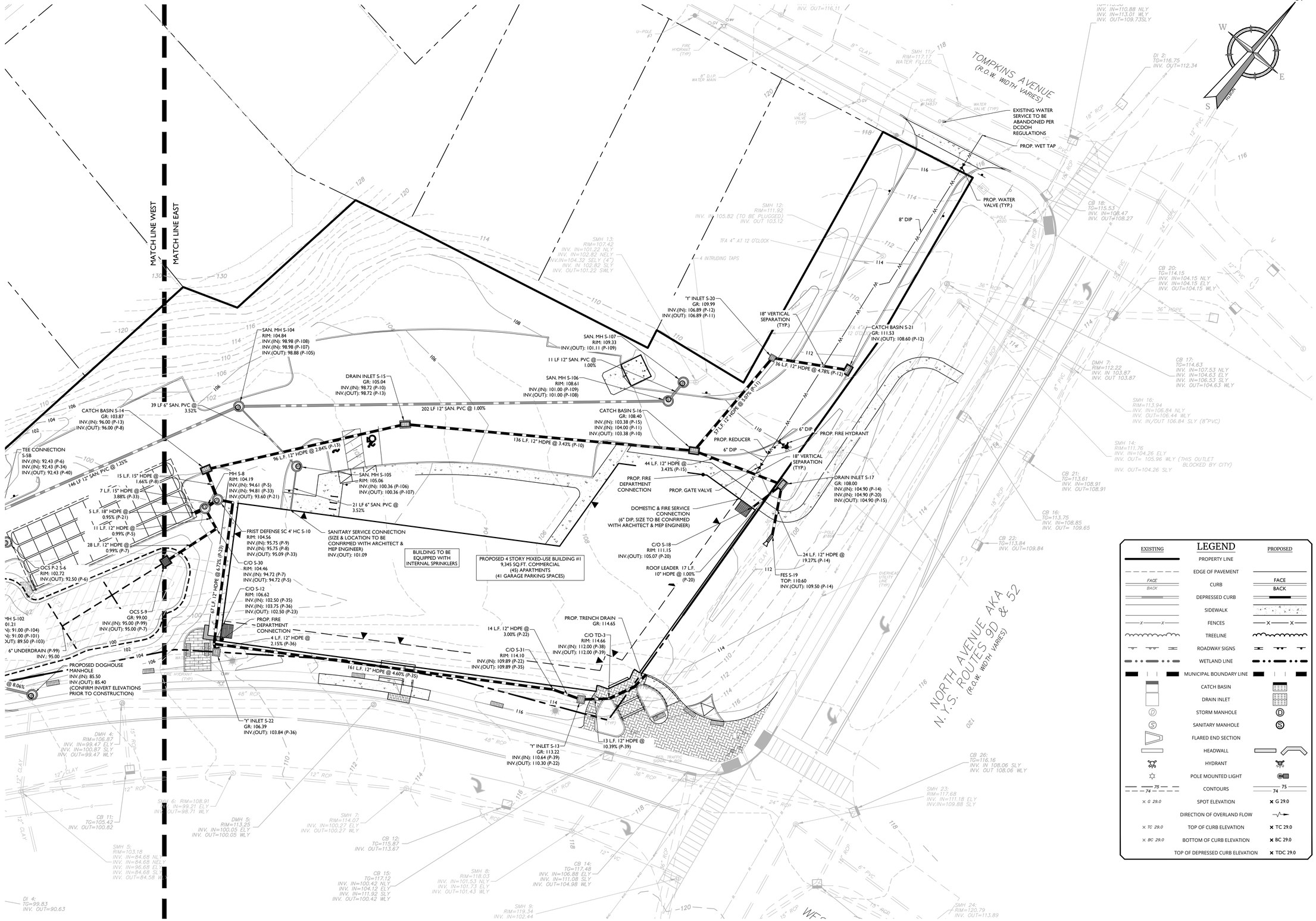
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-UTIL

SHEET TITLE: UTILITIES PLAN (WEST)

SHEET NUMBER: 08 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIC



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
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23010468A	C-UTIL

SHEET TITLE:
UTILITIES PLAN (EAST)

SHEET NUMBER:
09 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIO

GENERAL SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN FOURTEEN (14) DAYS FOR DISTURBANCES LESS THAN FIVE (5) ACRES AND SEVEN (7) DAYS FOR DISTURBANCES GREATER THAN FIVE (5) ACRES, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
3. PERMANENT VEGETATION TO BE SEEDED ON ALL EXPOSED AREAS WITHIN FIVE (5) DAYS AFTER FINAL GRADING. MULCHING IS REQUIRED ON ALL SEEDING. WHEN HYDROSEEDING, MULCH SHALL NOT BE INCLUDED IN THE TANK WITH THE SEED.
4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE 2016 NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL OR AS AMENDED.
5. A SUBBASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUBBASE SHALL BE INSTALLED WITHIN FIVE (5) DAYS OF THE PRELIMINARY GRADING.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION CONTINUES (I.E. SLOPES GREATER THAN 3:1).
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A STONE PAD, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
9. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF TWENTY-FOUR (24) INCHES OF SOIL HAVING A PH OF 5 OR MORE.
10. AT THE TIME THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER.
11. CONDUIT OUTLET PROTECTION MUST BE REVIEWED & SUPPLEMENTED AT ALL OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
12. UNFILTERED DEWATERING IS NOT PERMITTED. TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STATE STANDARDS.
13. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
14. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAY WILL BE REMOVED IMMEDIATELY.
15. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION AND SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
16. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMITS OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN.
17. CONCRETE WASHOUT, DUMPSTER, & STAGING AREA LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED AT THE PRE-CONSTRUCITON MEETING. THEY SHALL BE PLACED IN THE PROXIMITY OF THE CONSTRUCTION ENTRANCE AND STAGING AREAS AND SHALL BE USED PRIOR TO EXITING THE PROJECT SITE. THE LOCATION SHALL BE IN A PRACTICAL, CLEARLY DELINEATED, AREA AND BE MAINTAINED THROUGHOUT CONSTRUCTION.
18. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
19. ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE PROPERTY OWNER, AND SHALL BECOME THEIR RESPONSIBILITY.
20. PAVEMENT AREAS ARE TO BE KEPT CLEAN AT ALL TIMES.
21. DURING CONSTRUCTION, ANY ADDITIONAL CONTROL MEASURES AS DEEMED NECESSARY TO PREVENT EROSION OR CONTROL SEDIMENT BEYOND THOSE MEASURES SHOWN ON THE APPROVED PLAN SHALL BE INSTALLED OR EMPLOYED AT THE DIRECTION OF THE MUNICIPAL ENGINEER.
22. ALL TEMPORARY, STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED, WHEN ALL CONSTRUCTION ACTIVITY IDENTIFIED IN THE SWPPP HAS BEEN COMPLETED, ALL AREAS OF DISTURBANCE HAVE ACHIEVED FINAL STABILIZATION** AND ALL POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE SWPPP AND ARE OPERATIONAL.
23. BOTTOM AND BERM ELEVATIONS OF TEMPORARY SEDIMENT BASINS TO BE REVIEWED WITH THE CONTRACTOR BASED ON THEIR PROPOSED CONSTRUCTION SEQUENCE FOR THE PROJECT.

CONSTRUCTION SEQUENCE

- INSTALL CONSTRUCTION ENTRANCES.
- STAKE LIMITS OF DISTURBANCE AND ORANGE CONSTRUCTION FENCE.
- INSTALL PERIMETER SILT FENCING ON DOWNHILL AREAS AS SHOWN ON PLAN.
- INSTALL SEDIMENT PONDS. INSTALL TEMPORARY SWALES TO DIRECT ALL OPEN SOIL AREA DISTURBANCE TO SEDIMENT PONDS, AS NECESSARY. LOCATIONS AND SIZE OF THE EROSIONS AND SEDIMENT CONTROL PRACTICES ARE NOTED ON THE PLAN. THESE MAY VARY DEPENDING ON THE CONTRACTOR'S SCHEDULE AND APPROACH BUT 3,600 CF OF STORAGE MUST BE PROVIDED AT A MINIMUM PER ACRE OF UPSTREAM DISTURBANCE. SEDIMENT TRAPS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS AND DETAILS. SEDIMENT TRAPS AND BASINS SHALL BE SIZED IN ACCORDANCE WITH THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL MANUAL.
- SEDIMENT POND RESTORATION: WHEN TEMPORARY STRUCTURES HAVE SERVED THEIR INTENDED PURPOSE AND THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, THE EMBANKMENT AND RESULTING SEDIMENT DEPOSITS ARE TO BE LEVELED OR OTHERWISE DISPOSED OF. SEDIMENT CAN BE DISPOSED OF BY EXPORTING IT OFF SITE FOR DISPOSAL OR BE USED AS FILL IN LAWN AREAS. SEDIMENT PONDS IN FUTURE OPEN SPACE OR LAWN AREAS MAY BE PUMPED DRY, GRADED, AND BACKFILLED. SEDIMENT PONDS IN PAVED OR STRUCTURAL AREAS MUST HAVE THE BASIN MATERIAL AND TRAPPED SEDIMENTS REMOVED, SAFELY DISPOSED OF, AND BACKFILLED WITH STRUCTURAL FILL. SEDIMENT PONDS IN LOCATIONS OF FUTURE STORMWATER PONDS MUST HAVE THE TRAPPED SEDIMENT REMOVED LEAVING THE BASIN AREA OPEN FOR THE DEVELOPMENT OF THE FINAL STORMWATER POND.
- ROUGH GRADE PROPOSED DRIVEWAY/ROAD.
- DISTURBED SOILS SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICAL. MATERIALS STORED IN STOCKPILES SHALL BE CORDONED OFF WITH SILT FENCE PER THE APPROPRIATE SPECIFICATIONS AND DETAILS. THE OPERATOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- CONSTRUCT ROADS, DRIVES, BUILDINGS, PARKING AREAS AND INSTALL DRAINAGE SYSTEMS.
- TOPSOIL/HAYSEED LAWN AREAS.
- THE PROJECT SITE MUST MEET FINAL STABILIZATION CRITERIA PRIOR TO REMOVING ALL EROSION AND SEDIMENT CONTROL DEVICES AND CLOSING OUT THE PROJECT. LITTER AND CONSTRUCTION DEBRIS SHALL BE REMOVED AS PRACTICAL THROUGHOUT THE LIFE OF THE PROJECT.
- UPON FINAL STABILIZATION BEING MET, THE CONTRACTOR SHALL CLEAR DRAINAGE PIPES AND STRUCTURES OF ANY SEDIMENT WHICH MAY HAVE ACCUMULATED. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED, AS MAY BE NECESSARY, REQUIRED AND/OR REQUESTED BY AUTHORITIES, TO PREVENT THE INCIDENTAL DISCHARGE OF SILT LADEN RUNOFF FROM ENTERING A WATER COURSE OR A DRAINAGE SYSTEM. THE GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES STATES THAT IT IS UNLAWFUL FOR ANY PERSON TO CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS.
- ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED, AS MAY BE NECESSARY, REQUIRED AND/OR REQUESTED BY AUTHORITIES, TO PREVENT THE INCIDENTAL DISCHARGE OF SILT LADEN RUNOFF FROM ENTERING A WATER COURSE OR A DRAINAGE SYSTEM. THE GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES STATES THAT IT IS UNLAWFUL FOR ANY PERSON TO CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS.

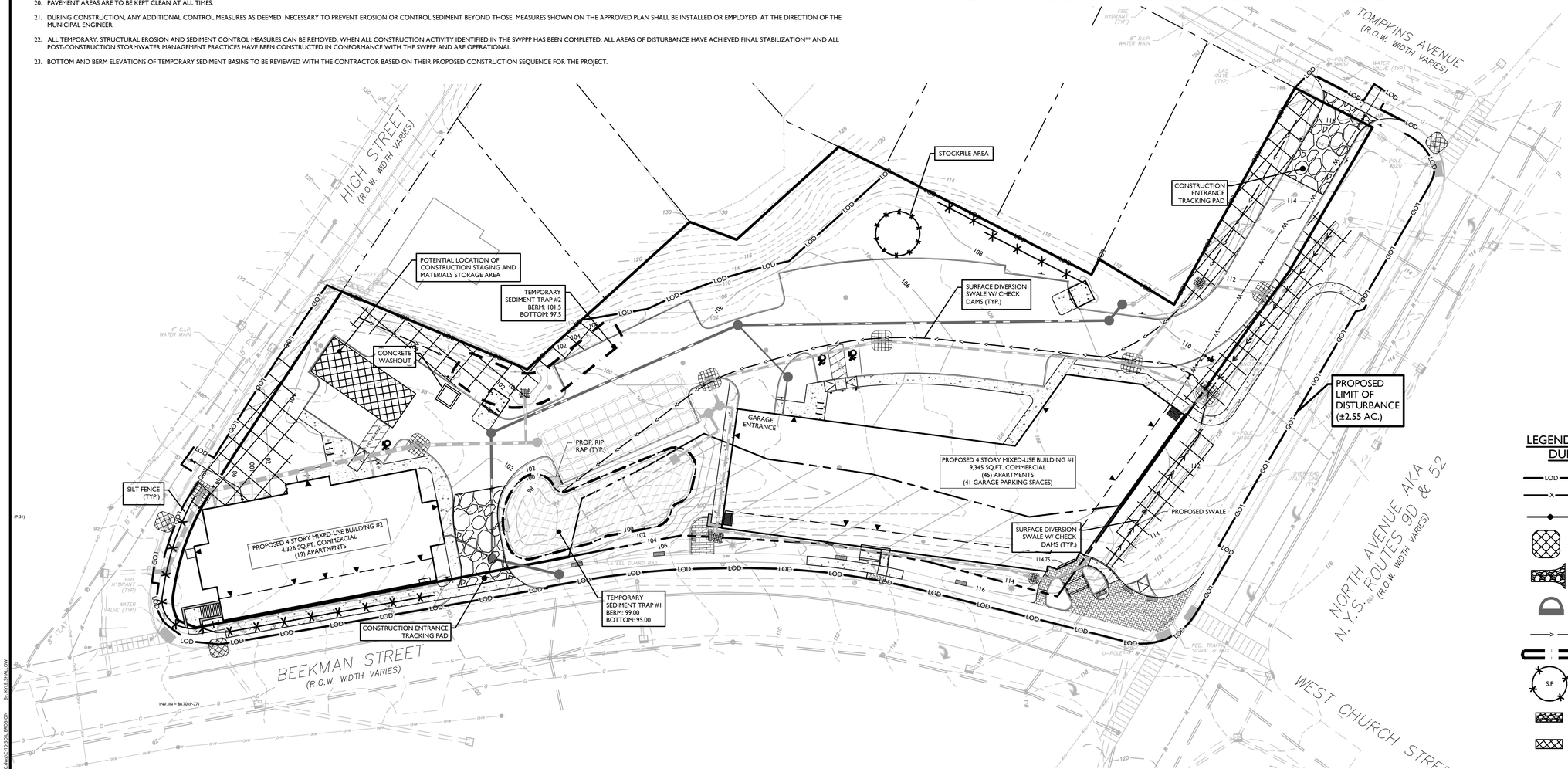
**FINAL STABILIZATION - MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.

MAINTENANCE PLAN DURING CONSTRUCTION:

INSPECTION AND MAINTENANCE SHALL BE PERFORMED IN CONFORMANCE WITH GP-0-20-001 OR AS AMENDED. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED AND INSTALLED FOR THE PROJECT. THE SEDIMENT TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 25% OF ITS' CAPACITY. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES APPROXIMATELY 6" DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. ALL SEEDED AREAS WILL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE LANDSCAPE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

MAINTENANCE AGREEMENT NOTE:

THE OWNER/APPLICANT SHALL ENTER INTO AN ENFORCEABLE MAINTENANCE AGREEMENT WITH THE MUNICIPALITY (IF AN MS4 COMMUNITY). RELATED TO MAINTENANCE OF STORMWATER FACILITIES. THE OWNER/APPLICANT IS RESPONSIBLE TO PERFORM ALL REQUIRED MAINTENANCE BOTH DURING CONSTRUCTION AND LONG-TERM. THE NATURE OF THE AGREEMENT IS TO ALLOW THE MUNICIPALITY TO PERFORM MAINTENANCE AT THEIR OPTION SHOULD THE OWNER/APPLICANT FAIL TO ADEQUATELY MAINTAIN THE SYSTEM AS DETERMINED BY THE MUNICIPAL ENGINEER. MAINTENANCE OF THE STORMWATER SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED SWPPP AND DETAIL SHEETS.



LEGEND FOR EROSION CONTROL DURING CONSTRUCTION

- LOD — CONSTRUCTION LIMIT LINE
- x — SILT FENCE
- ORANGE CONSTRUCTION FENCE
- STORM INLET SEDIMENT TRAP
- STABILIZED CONSTRUCTION ENTRANCE
- SEDIMENT TRAP OUTLET
- TEMPORARY SWALE
- TEMPORARY SEDIMENT BASIN
- S.P — MATERIAL STOCKPILE
- CHECK DAM
- SLOPE MATTING

30 0 30 60

SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

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NEW YORK REGISTERED LANDSCAPE ARCHITECT
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SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
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5954-26-781983

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DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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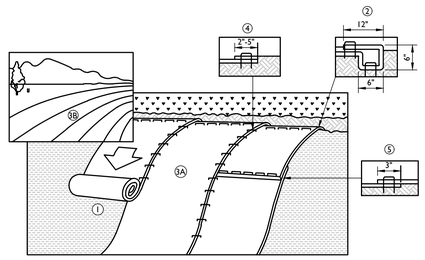
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER:	DRAWING NAME:
23010468A	C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

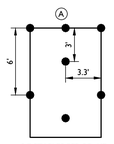
SHEET NUMBER:
10 of 19

2023\23010468A\Engineering\Site Plans\C-SESC.dwg|C-10-SOIL EROSION By: KYLE SHALLOW

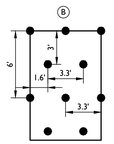


SLOPE INSTALLATION

STAPLES PATTERN GUIDE
6.67' WIDE ROLLS



0.7 STAPLES PER SQ. YD.



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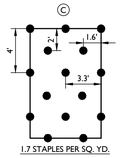

1.7 STAPLES PER SQ. YD.

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
   * WHEN USING MATTING WITH SEED, DO NOT SEED THE AREA. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECPS BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY STEP BY STEP ACROSS THE SLOPE TAMPERING IT DOWN ALONG THE WAY. RECP'S SHALL UNROLL WITH APPROPRIATE SIDE TIGHTLY AGAINST THE SOIL SURFACE. RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKESSHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAKED WITH APPROXIMATELY 2" TO 5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
6. MATTING SHALL BE 100% BIODEGRADABLE
   * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

EROSION MATTING DETAIL

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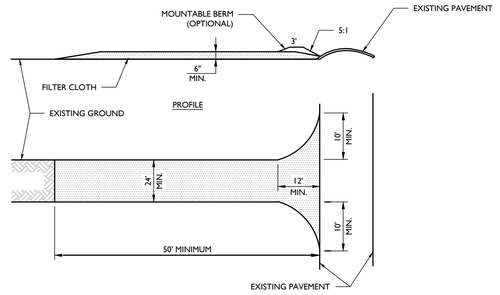

PLAN VIEW

NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. LENGTH: NOT LESS THAN 50 FEET. THICKNESS: NOT LESS THAN (6) INCHES.
2. WIDTH - 24'
3. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTING BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
6. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

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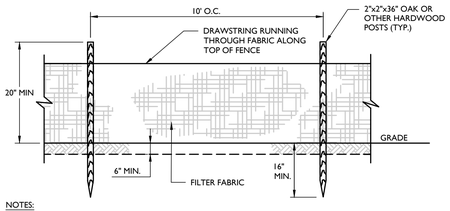

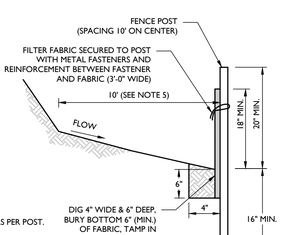

NOTES:

1. GEOTEXTILE TO BE FASTENED SECURELY TO FENCE POST BY USING WIRE TIES OR HOG RINGS. USE 3 FASTENERS PER POST.
2. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
3. ALL SILT FENCE TO BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR AS REQUIRED. MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
4. WHEN TWO SECTIONS OF FILTER FABRIC ARE JOINED, THEY SHALL BE OVER-WRAPPED BY SIX INCHES AND FOLDED.
5. FILTER FABRIC TO BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
6. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
7. IF SPACE PERMITTED, LOCATE SILT FENCE 10' AWAY FROM TOE OF SLOPE IF THE SLOPE IS STEEPER THAN 1:1.

STANDARD SILT FENCE DETAIL

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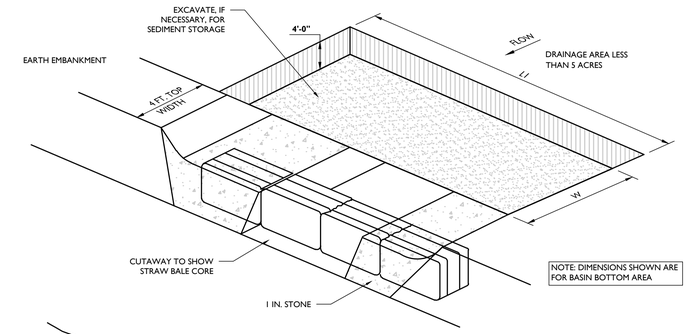

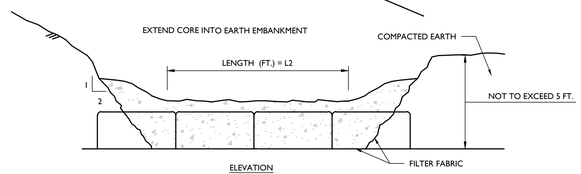

ELEVATION

TO BE INSTALLED PRIOR TO GRADING OR FILLING IN THE DRAINAGE AREA THEY ARE TO PROTECT. TRAPS THAT ARE TO FUNCTION DURING BUILDING CONSTRUCTION MUST NOT BE LOCATED WITHIN 20 FEET OF A PROPOSED BUILDING FOUNDATION. WHILE TRAPS SHOULD BE SITED TO MAXIMIZE STORAGE BENEFIT, THEY SHOULD NOT BE LOCATED IN WETLANDS OR WETLAND BUFFER AREAS, OR IN EXISTING WATERCOURSES.

SEE EROSION AND SEDIMENT CONTROL PLAN FOR LOCATIONS.

INSTALLATION NOTES:

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS WELL.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER SIZED STONES, ROCKS, ORGANIC MATERIAL AND OTHER QUESTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
6. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
7. ALL CUT AND FILL SLOPES SHALL BE 1 : 2 OR FLATTER.
8. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.

SIZING CALCULATIONS

NOTE:

1. 3,600 CUBIC FEET OF STORAGE REQUIRED PER ACRE OF DISTURBANCE.

*THIS IS THE MINIMUM AMOUNT OF SEDIMENT TRAPS, ADDITIONAL MAY BE REQUIRED BASED UPON OTHER ON-SITE CONDITIONS AND CONTRACTOR SCHEDULE AND PHASING ACTIVITIES.

STONE OUTLET SEDIMENT TRAP DETAIL

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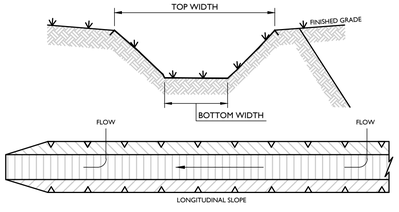
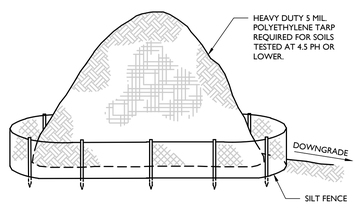


PLAN

VEGETATED SWALE					
SWALE	BOTTOM WIDTH	SIDE SLOPE	LONGITUDINAL SLOPE	DEPTH	LENGTH
1R	2.0 FT	50%	2.00%		506'

VEGETATIVE SWALE DETAIL



NOTES:

1. ALL STOCKPILES SHALL NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY.

TOPSOIL STOCKPILE DETAIL

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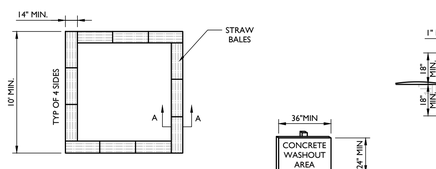

DETAIL NOTES:

1. FACE SIGN TOWARDS NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FT. MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES.

NOTES:

1. CONCRETE WASHOUTS ARE REQUIRED ON ALL CONSTRUCTION SITES INVOLVING CONCRETE AND STUCCO USE.
2. THE CONTRACTOR SHALL REQUIRE ALL CONCRETE DRIVERS TO UTILIZE THE CONCRETE WASHOUTS ONSITE.
3. WASHOUT FACILITIES SHALL BE LOCATED AT LEAST 50 FEET AWAY FROM STORM SEWER DRAIN INLETS, GUTTERS, OPEN DITCHES, AND WATER COURSES.
4. APPROPRIATE STONE SHOULD COVER PATHS TO CONCRETE WASHOUT.
5. THE NUMBER OF CONCRETE WASHOUTS DEPENDS ON THE EXPECTED DEMAND FOR STORAGE CAPACITY. LARGE SITES WITH EXTENSIVE CONCRETE WORK SHALL BE PLACED AT MULTIPLE LOCATIONS FOR USE BY CONCRETE TRUCK DRIVERS.
6. CONCRETE WASHOUT AREAS SHALL BE IDENTIFIED BY POSTING SIGNS ONSITE.
7. CONCRETE WASHOUTS ARE TO BE INSPECTED DAILY BY THE CONTRACTOR FOR LEAKS OR TEARS IN PLASTIC LINER.
8. REMOVE AND DISPOSE OF ALL MATERIAL WHEN THE WASHOUT HAS BEEN FILLED TO 75% CAPACITY.
9. PRIOR TO ANY RAINFALL, ALL CONCRETE WASHOUTS ARE TO BE CLEANED OUT OR COVERED.
10. ONCE THE MATERIAL HAS BEEN CLEANED OUT OF THE CONCRETE WASHOUT FACILITY, THE FACILITY MUST BE INSPECTED FOR REPAIR, RECONSTRUCTION OR REPLACEMENT. ALL PLASTIC LINING SHALL BE REMOVED AND REPLACED.
11. PRE-FABRICATED OR ONSITE FABRICATED CONCRETE WASHOUTS MAY BE USED.
12. OPTIONS FOR ONSITE CONCRETE WASHOUTS:
    A. DIG A PIT AND LINE WITH 10 MIL PLASTIC SHEETING.
    B. CREATE AN ABOVE-GROUND STRUCTURE FROM STRAW BALES OR SANDBAGS WITH 10 MIL PLASTIC LINING.

CONCRETE WASHOUT DETAIL

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Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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PROJECT NUMBER:	DRAWING NAME:
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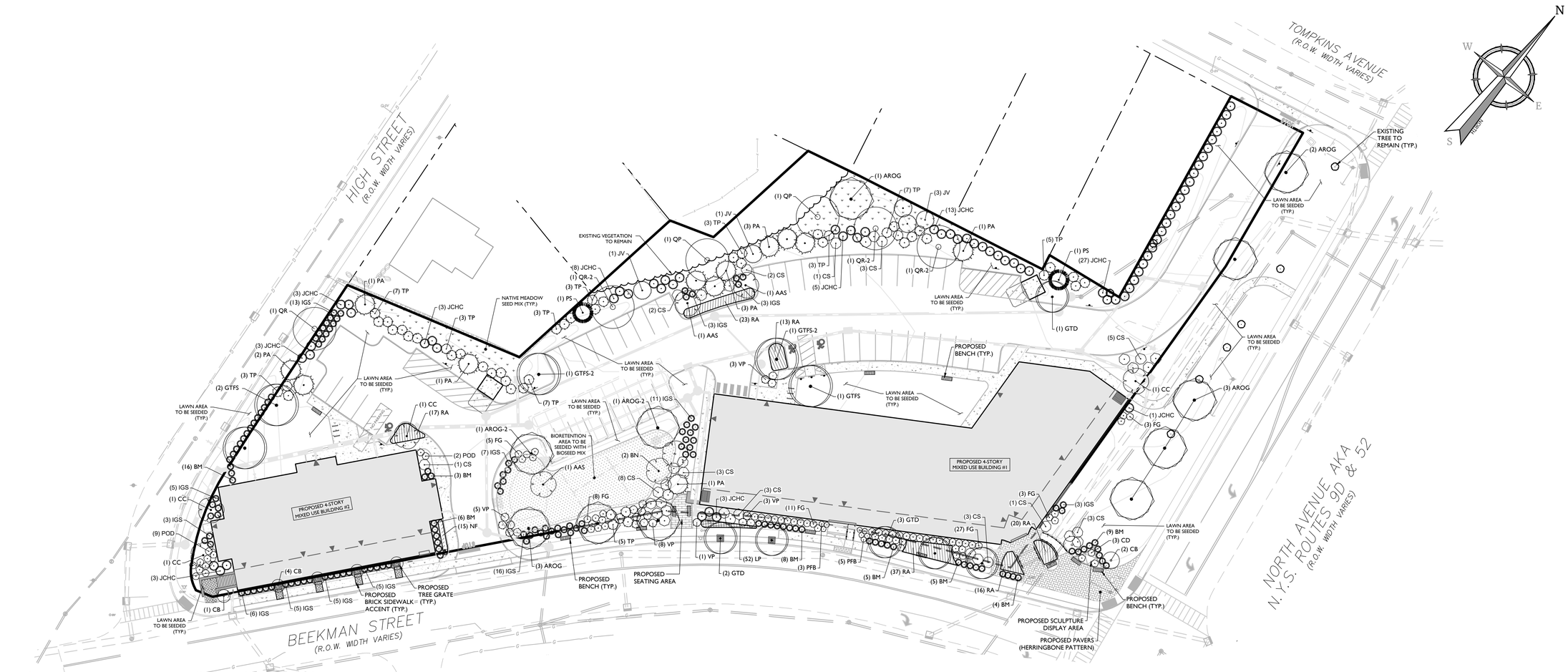
11 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION



SITE PLANTING SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
AROG	9	Acer rubrum 'Octobor Glory'	October Glory Red Maple	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
AROG-2	2	Acer rubrum 'October Glory'	October Glory Red Maple	B & B	3"-3-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
GTD	6	Gleditsia triacanthos 'Draves'	Street Keeper Honeylocust	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
GTFS	3	Gleditsia triacanthos 'Skyline'	Skyline Honey Honeylocust	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
GTFS-2	2	Gleditsia triacanthos 'Skyline'	Skyline Honey Honeylocust	B & B	3"-3-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
QP	2	Quercus palustris	Pin Oak	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
QR	1	Quercus rubra	Red Oak	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
QR-2	3	Quercus rubra	Red Oak	B & B	3"-3-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	**REMARKS**
JV	5	Juniperus virginiana	Eastern Red Cedar	B & B	6-8` Ht.	DENSE / TYP. SPECIES HABIT
PA	12	Picea abies	Norway Spruce	B & B	6-8` Ht.	DENSE / TYP. SPECIES HABIT
PS	2	Pinus strobus	Eastern White Pine	B & B	6-8` Ht.	DENSE / TYP. SPECIES HABIT
ORNAMENTAL TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	**REMARKS**
AAS	3	Amelanchier alnifolia	Serviceberry	B & B	6-7` Ht.	MULTISTEM / TYP. SPECIES HABIT
BN	2	Betula nigra	River Birch	B & B	6-7` Ht.	MULTISTEM / TYP. SPECIES HABIT
CB	7	Carpinus betulus 'Frans Fontaine'	Frans Fontaine Hornbeam	B & B	1-3/4"-2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
CC	4	Cercis canadens	Eastern Redbud	B & B	6-7` Ht.	STRAIGHT LEADER/SYM. BRANCHING
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	**REMARKS**
CD	3	Cotoneaster dammeri 'Coral Beauty'	Coral Beauty Cotoneaster	CONT	18" - 24" SPREAD	TYPICAL SPECIES HABIT
CS	35	Cornus sericea	Red Twig Dogwood	CONT	24" - 30"	TYPICAL SPECIES HABIT
BM	44	Buxus microphylla var. japonica 'Winter Gem'	Winter Gem Boxwood	CONT	18" - 24"	TYPICAL SPECIES HABIT
FG	57	Fothergilla gardenii	Dwarf Fothergilla	CONT	18" - 24"	TYPICAL SPECIES HABIT
IGS	85	Ilex glabra `Shamrock`	Inkberry	CONT	18" - 24"	TYPICAL SPECIES HABIT
JCHC	64	Juniperus chinensis 'Hetzii Columnaris'	Hetzi Column Juniper	CONT	6-8` Ht.	TYPICAL SPECIES HABIT
PFB	11	Potentilla fruticosa	Bush Cinquefoil	CONT	18" - 24"	TYPICAL SPECIES HABIT
POD	11	Physocarpus opulifolius 'Diabolo'	Diabolo Ninebark	CONT	24" - 30"	TYPICAL SPECIES HABIT
RA	126	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	CONT	12" - 18" SPREAD	TYPICAL SPECIES HABIT, 3.5' O.C.
TP	49	Thuja x plicata 'Green Giant'	Green Giant Arborvitae	CONT	5-6' Ht.	TYPICAL SPECIES HABIT
VP	20	Viburnum prunifolium	Blackhaw Viburnum	CONT	24" - 30"	TYPICAL SPECIES HABIT
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**SPACING**	
LP	52	Liriope platyphylla	Liriope Grass	SPS	18" o.c.	
NF	15	Nepeta x faassenii	Catmint	1 gal.	24" o.c.	

PLAN NOTE

1. THIS PLAN IS TO BE USED FOR LANDSCAPE PURPOSES ONLY. REFER TO DETAIL SHEETS FOR GENERAL NOTES AND LANDSCAPE DETAILS.

PARKING AREA TREES

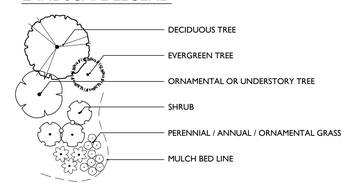
REQUIRED: ONE (1) TREE (MIN. 3" CALIPER) PER EIGHT (8) PARKING SPACES
47 PARKING SPACES / 8 = 6 TREES

PROVIDED: 7 TREES (COMPLIES)

LANDSCAPE NOTES

1. LOCATIONS OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES IS APPROXIMATE AND MAY VARY DUE TO THE LOCATIONS OF SITE IMPROVEMENTS AND/OR BUILDING.
2. FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE PROJECT LANDSCAPE ARCHITECT.
3. ALL AREAS WITHIN THE PLANTING BED LIMITS SHALL BE MULCHED WITH 3" OF SHREDDED HARDWOOD BARK MULCH.
4. PROPOSED LAWN AREAS AROUND BUILDINGS SHALL BE STABILIZED WITH SEED. SEED MIXTURE #1 TO BE USED ON NORTHERN & WESTERN LAWN AREAS AND SEED MIXTURE #2 TO BE USED ON SOUTHERN & EASTERN LAWN AREAS.
5. ANY PROPOSED IRRIGATION DESIGN AND/OR SYSTEM WILL BE DETERMINED IN THE FIELD BY THE IRRIGATION CONTRACTOR.
6. ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK.
7. NO SUBSTITUTIONS OF PLANT MATERIALS ARE TO BE MADE WITHOUT THE WRITTEN CONSENT OF THE OWNER AND PROJECT LANDSCAPE ARCHITECT.
8. ALL VEGETATION SHOWN ON THIS PLAN WILL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION THROUGHOUT THE DURATION OF THE PROPOSED USE.

LANDSCAPE LEGEND



NOTE:
1. LANDSCAPE SYMBOLS ON THE PLAN VARY AND MAY DEVIATE FROM THE LANDSCAPE LEGEND SYMBOLS SHOWN ABOVE.

LAWN SEED MIX

NATIVE MEADOW MIX

BIORETENTION SEED MIX

30 0 30 60

SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

2023\23010468A\Engineering\Site Plans\C-LAND.dwg\C-12 LANDSCAPE By: KYLE SHALLOW

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REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
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6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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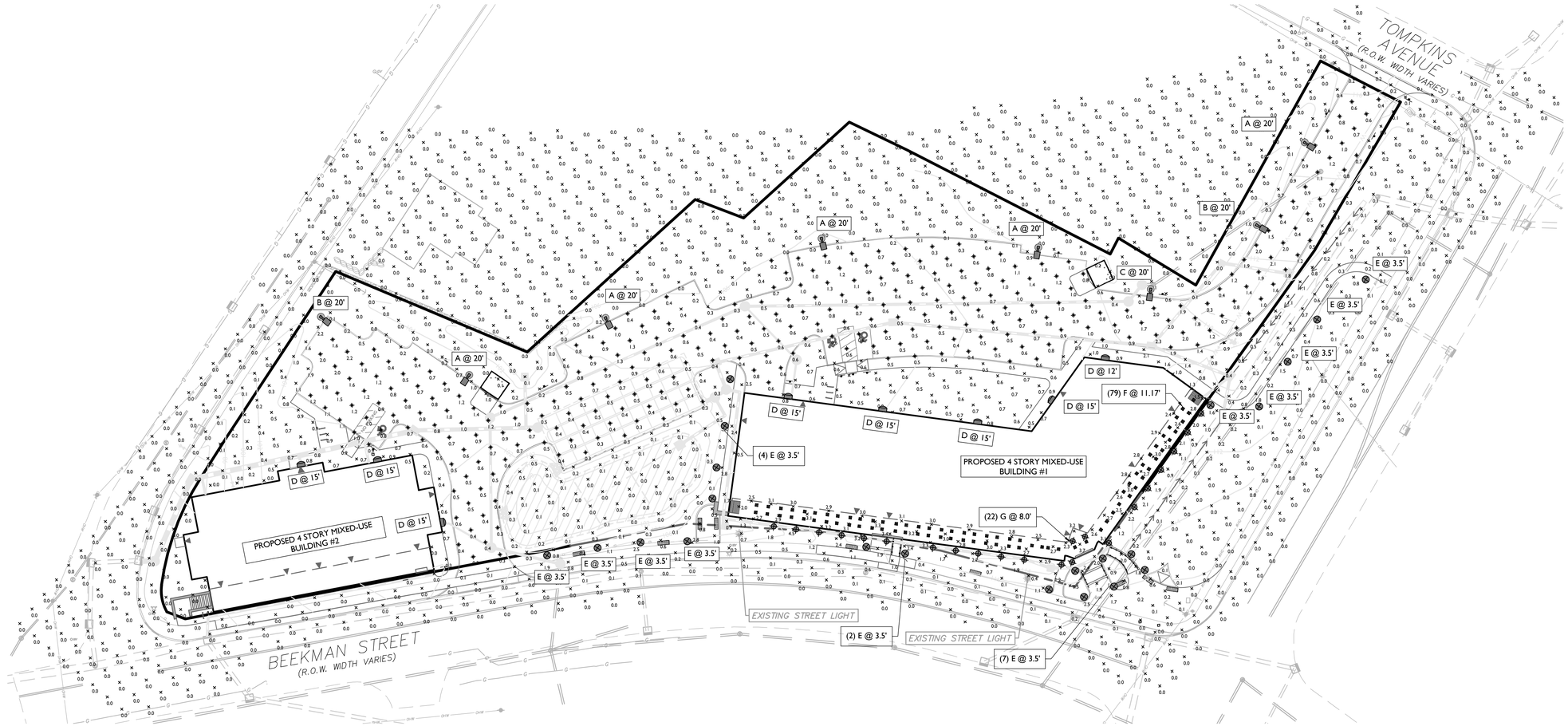
AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:		DRAWING NAME:	
23010468A		C-LAND	

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
12 of 19



LUMINAIRE SCHEDULE

KEY	QTY.	DESCRIPTION	ARRANGEMENT	MTG. HT.	LUMENS/LAMP	COLOR TEMPERATURE	CRI	LLF	CATALOG #
A	5	LITHONIA LIGHTING D-SERIES SIZE 0 LED AREA LUMINAIRE	SINGLE	20'	4,044	3000K	80	0.9	DSX0 LED-P2-30K-80CRI-BLC4-MVOLT-SPA-DBLXD-PER5
B	2	LITHONIA LIGHTING D-SERIES SIZE 0 LED AREA LUMINAIRE	SINGLE	20'	3,951	3000K	80	0.9	DSX0 LED-P2-30K-80CRI-LCCO-MVOLT-SPA-DBLXD-PER5
C	1	LITHONIA LIGHTING D-SERIES SIZE 0 LED AREA LUMINAIRE	SINGLE	20'	3,951	3000K	80	0.9	DSX0 LED-P2-30K-80CRI-RCCO-MVOLT-SPA-DBLXD-PER5
D	8	LITHONIA LIGHTING D-SERIES SIZE 1 LED WALL LUMINAIRE	SINGLE (WALL PACK)	12',15'	1,357	3000K	80	0.9	DSXW1 LED-10C-350-30K-T4M-MVOLT-PE-DBLXD
E	22	LITHONIA LIGHTING RADEAN BOLLARD LED SITE LUMINAIRE	SINGLE (BOLLARD)	3.5'	532	3000K	80	0.9	RADB LED-P2-30K-ASY-MVOLT-BTT-BCF-DBLXD
F*	79	TROY RLM - LAGUNA OUTDOOR PENDANT LIGHT	SINGLE-CEILING MOUNT (ARCADE)	11.17'	738	3000K	80	0.9	7721401057325
G*	22	CESAR AMP WALL SCONCE	SINGLE-WALL SCONCE	8'	2357	2700K	90	0.9	CESAR-AMP-L-DWN-1L-927-FM-HFX-BK

* REFER TO FINAL ARCHITECTURAL PLANS FOR FIXTURE DETAILS.

CALCULATION SUMMARY

DESCRIPTION	CALC. TYPE	UNITS	AVG.	MAX.	MIN.	AVG. / MIN.
PARKING, DRIVE & SIDEWALK (EXCLUDES ARCADE)	ILLUMINANCE	FC	0.9	4.5	0.3	3.0:1

LIGHTING NOTES:

1. THIS PLAN IS TO BE USED FOR LIGHTING PURPOSES ONLY.
2. POLES AND FIXTURES AS SUPPLIED BY:
   FIXTURES - LITHONIA LIGHTING
   POLE - HOLOPHANE
   BOLLARD FIXTURES - HYDREL
3. LAMPS ARE TO BE LEDs. A LIGHT LOSS FACTOR (LLF) WAS USED AS SHOWN IN THE LUMINARIES SCHEDULE.
4. FIXTURES AND POLES ARE TO BE BLACK.
5. POLE MOUNTED FIXTURES SHALL BE PLACED A MINIMUM OF TWO (2) FEET BEHIND CURBS, EDGE OF PAVEMENT OR RETAINING WALLS IN CAR PARKING AREAS.
6. PROPOSED LIGHT FIXTURE LOCATIONS ARE CRITICAL TO PROVIDE THE LIGHTING LEVELS DEPICTED ON THIS PLAN. THE LIGHTING CONTRACTOR SHALL FIELD VERIFY FIXTURE LOCATIONS PRIOR TO INSTALLATION. IF ADJUSTMENT TO ANY LIGHT FIXTURE LOCATION IS REQUIRED DUE TO FINAL CONSTRUCTION OF UTILITIES AND SITE IMPROVEMENTS, THE LIGHTING CONTRACTOR SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
7. LIGHTING SHOWN ON PLAN DEPICTS AVERAGE MAINTAINED FOOTCANDLE LEVELS AT GRADE.
8. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
9. ELECTRICAL PLANS FOR WIRING LAYOUT BY OTHERS.
10. POLE BASE INSTALLATION SHALL INCLUDE A SUPPLEMENTARY GROUND ROD AND WIRE LEAD TO BASE FOR POWER CONNECTION. DETAILS PER PROJECT ELECTRICAL ENGINEER.
11. ALL LIGHTING FIXTURES WILL BE DARK SKY COMPLIANT.

LIGHTING LEGEND:

- SINGLE FIXTURE POLE LIGHT
- WALLPACK
- BOLLARD LIGHT
- WALL SCONCE
- CEILING FIXTURE
- *0.0 LIGHT LEVEL AT GRADE (IN FOOTCANDLES)

30 0 30 60
SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

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2023\23010468A\Engineering\Site Plans\C-LGHT.dwg|C-13 LIGHTING By: KYLE SHALLOW

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Colliers Engineering & Design
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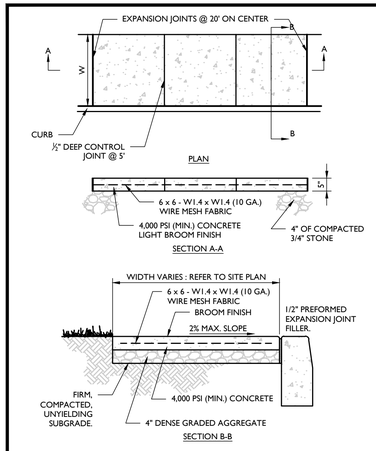
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	XXXXXX	XXXXXX

PROJECT NUMBER: 23010468A
DRAWING NAME: C-LGHT

SHEET TITLE: LIGHTING PLAN

SHEET NUMBER: 13 of 19

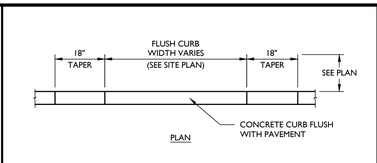


NOTES:

1. A PREFORMED, BITUMINOUS EXPANSION JOINT 1/2" THICK, 4" WIDE AND EXTENDING THE FULL WIDTH OF THE SIDEWALK (UNBROKEN) SHALL BE INSTALLED.
2. ½" DEEP CONTROL JOINTS INSTALLED AT AN INTERVAL OF EVERY 5'.
3. JOINT FILLER SHALL CONFORM TO AASHTO M-33. SURFACE OF CONCRETE SHALL BE BROOM FINISH. ROUND EDGES USING AN EDGING TOOL WITH A 1/4" RADIUS.
4. CONCRETE SIDEWALK SHALL BE CONSTRUCTED PER THE LATEST ADA REQUIREMENTS.

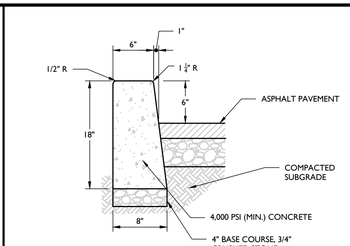
REINFORCED CONCRETE SIDEWALK (NEXT TO CURB) DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1800 | 07/01/19



CONCRETE FLUSH CURB DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1300 | 07/01/19

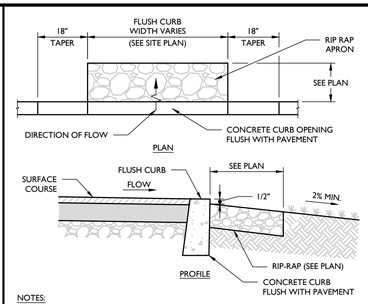


NOTES:

1. PREFORMED BITUMINOUS FIBER EXPANSION JOINTS, 1/2" THICK AT 20' MAX. INTERVALS ALONG THE CURB. PROVIDE CONTROL JOINTS @ 10 FEET MAX. BETWEEN EXPANSION JOINTS.

CONCRETE CURB (ASPHALT PAVEMENT) DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1000 | 07/01/19

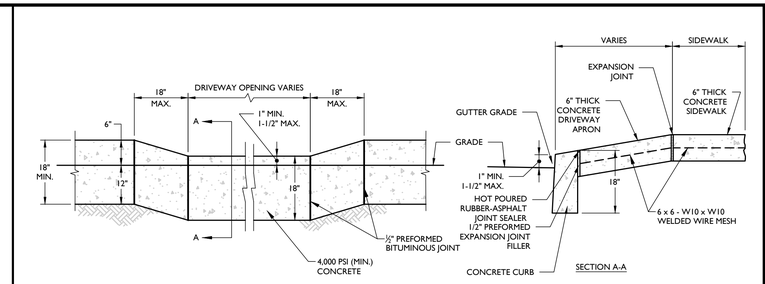


NOTES:

1. FLUSH CURB FOR OVERLAND FLOW TO BE USED AT DESIGNATED LOCATIONS ONLY AS SHOWN ON SITE PLANS.
2. CONTRACTOR SHALL ENSURE THAT THERE IS POSITIVE DRAINAGE FROM THE PAVEMENT TO THE GRASSED AREA.

FLUSH CURB FOR DRAINAGE DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1400 | 07/01/19

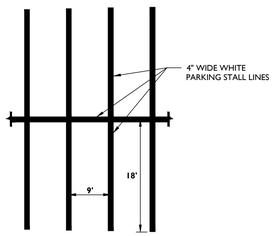


NOTES:

1. DEPRESSED VERTICAL CURB AT DRIVEWAY AND RAMP AREAS SHALL BE FULL DEPTH OF 18".

DEPRESSED CONCRETE CURB AT DRIVEWAY DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1700 | 07/01/19



TYPICAL PARKING STALL STRIPING DETAIL

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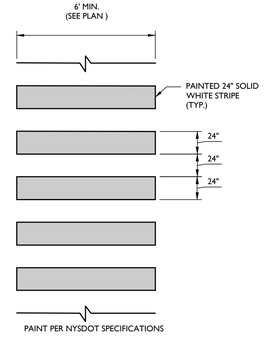

PEDESTRIAN CROSSWALK DETAIL

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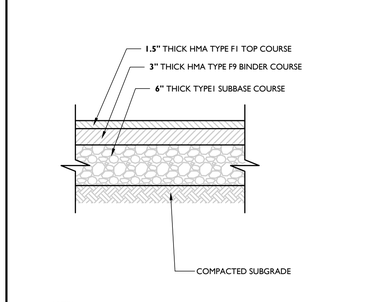
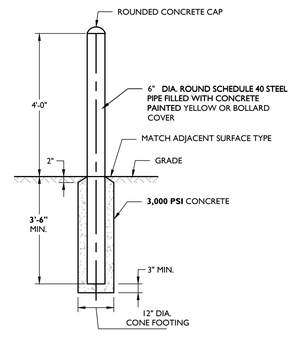


NOTES:

1. PAVEMENT TYPES TO BE IN ACCORDANCE WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS.

ON-SITE STANDARD ASPHALT PAVEMENT DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1000 | 07/01/19



BOLLARD DETAIL

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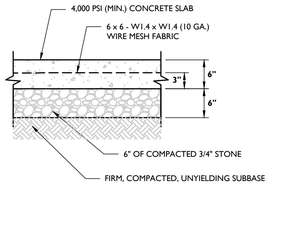
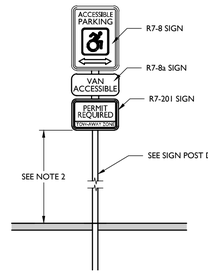


TRASH ENCLOSURE CONCRETE PAD DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-2100 | 07/01/19

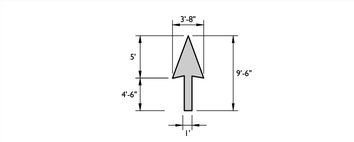


NOTES:

1. INSTALL SIGN WHERE NOTED ON PLAN.
2. THE BOTTOM OF THE LOWEST SIGN SHALL BE MOUNTED 60" ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN THE SIGN IS PARALLEL TO THE SIDEWALK AND 72" ABOVE THE PARKING LOT OR SIDEWALK WHEN THE SIGN IS PERPENDICULAR TO THE SIDEWALK.

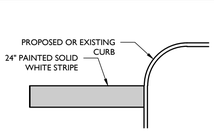
ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-2200 | 07/01/19



STRAIGHT PAVEMENT ARROW DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-1200 | 07/01/19



TYPICAL STOP BAR DETAIL

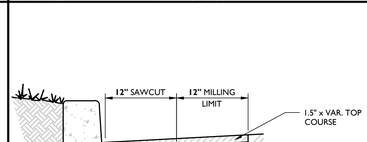
NOT TO SCALE | MCNY-SITE-MRKG-1100 | 07/01/19

NOTES:

1. 4.0' ON CENTER
2. 4" YELLOW AT 45 DEGREES
3. WIDTH TO BE CONFIRMED WITH LOCAL JURISDICTIONAL ENTITY.

FIRE ZONE / LOADING AREA STRIPING DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-2100 | 07/01/19



NOTE:

1. IF PAVEMENT THICKNESS IS FOUND TO BE THICKER THAN THAT SPECIFIED, THE DEPTH OF PAVEMENT SHALL MEET THAT AS EXISTS IN THE ROADWAY

SAWCUT AND PAVEMENT RESTORATION DETAIL

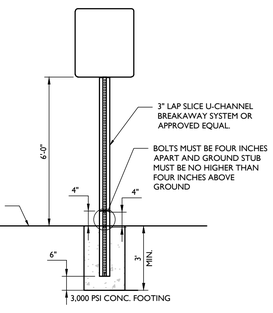
NOT TO SCALE | MCNY-SITE-PVMT-2800 | 07/01/19

30" x 30"

COLORS:
LEGEND = WHITE (RETROREFLECTIVE)
BACKGROUND = RED (RETROREFLECTIVE)

R1-1 SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R1-1 | 12/01/20

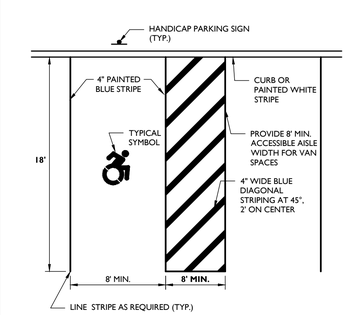


NOTE:

1. ALL SIGNS SHALL CONFORM TO THE CURRENT MANUAL ON "UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS AND CURRENT MUNICIPAL SPECIFICATIONS FOR COLOR, DESIGN AND EXACT WORDING.

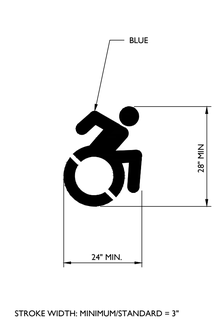
BREAKAWAY SIGN POST DETAIL

NOT TO SCALE | MCCM-SITE-SIGN-6102 | 07/01/19



ACCESSIBLE PARKING LINE STRIPE STALL DETAIL

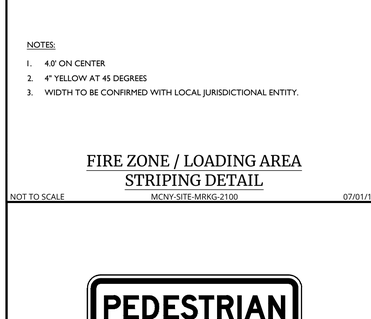
NOT TO SCALE | MCNY-SITE-MRKG-1801 | 07/01/19



STROKE WIDTH: MINIMUM/STANDARD = 3"

ACCESSIBLE SYMBOL DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-2000 | 07/01/19

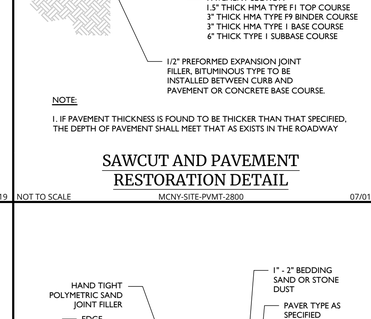


36" x 18"

COLORS:
LEGEND = BLACK
BACKGROUND = WHITE (RETROREFLECTIVE)

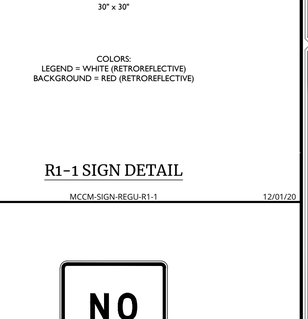
R9-8 SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R9-8 | 01/01/23



TYPICAL STANDARD PAVER SECTION DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-2600 | 07/01/19



24" x 30"

COLORS:
LEGEND = RED (RETROREFLECTIVE)
BACKGROUND = WHITE (RETROREFLECTIVE)

R8-3a SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R8-3A | 01/01/23

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REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Date: 2025.03.25 10:08:24-04'00'

LICENSED LANDSCAPE ARCHITECT — STATE OF NEW YORK

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

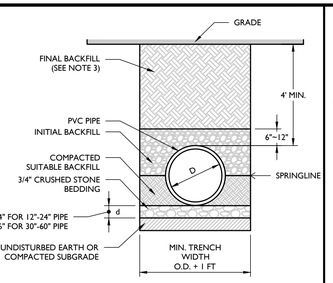
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER:	DRAWING NAME:
23010468A	C-DTLS

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
14 of 19

By: KYLE.SHALLOW
2023\23010468A\Engineering\Site Plans\C-DTLS.dwg|C-14-DETAILS

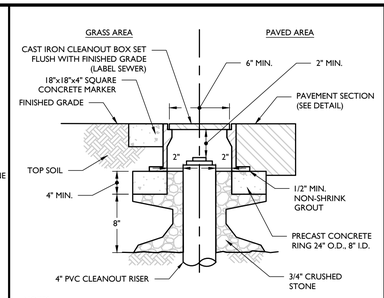


NOTES:

1. ALL PVC GRAVITY PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.
2. GRAVITY SANITARY PIPE SHALL BE PVC SDR 35 PER ASTM D3034 OR AS REQUIRED BY THE GOVERNING AUTHORITY.
3. INITIAL & FINAL BACKFILL MATERIAL SHALL BE SITE SOILS FREE OF LARGE STONES. CLEAN FILL, OR ITEM 4.

PVC SANITARY PIPE BEDDING (GRAVITY) DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-2803 | 07/01/19

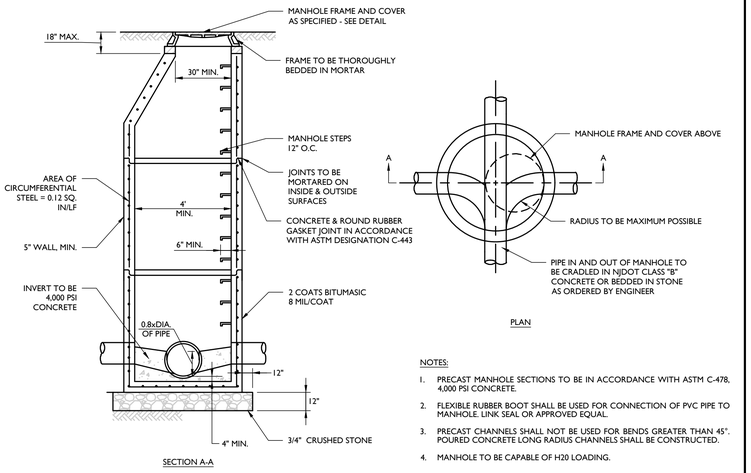


NOTES

1. ALL PVC CLEANOUTS TO HAVE CAST IRON FRAME AND COVER PROTECTION BOX. DESIGN FOR H20 LOADING.

CLEANOUT PROTECTION BOX DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1600 | 07/01/19

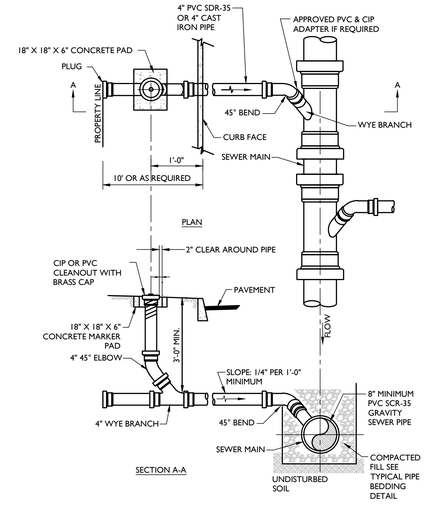


NOTES:

1. PRECAST MANHOLE SECTIONS TO BE IN ACCORDANCE WITH ASTM C-478, 4,000 PSI CONCRETE.
2. FLEXIBLE RUBBER BOOT SHALL BE USED FOR CONNECTION OF PVC PIPE TO MANHOLE. LINK SEAL OR APPROVED EQUAL.
3. PRECAST CHANNELS SHALL NOT BE USED FOR BENDS GREATER THAN 45°. POURED CONCRETE LONG RADIUS CHANNELS SHALL BE CONSTRUCTED.
4. MANHOLE TO BE CAPABLE OF H20 LOADING.

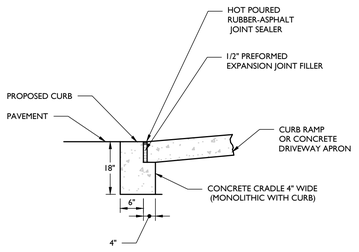
SANITARY PRECAST MANHOLE DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1000 | 07/01/19



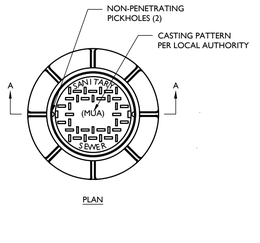
SANITARY SEWER LATERAL & CLEANOUT DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1601 | 07/01/19



ADA FLUSH CURB AND CRADLE DETAIL

NOT TO SCALE | MCNY-SITE-HADA-2300 | 07/01/19

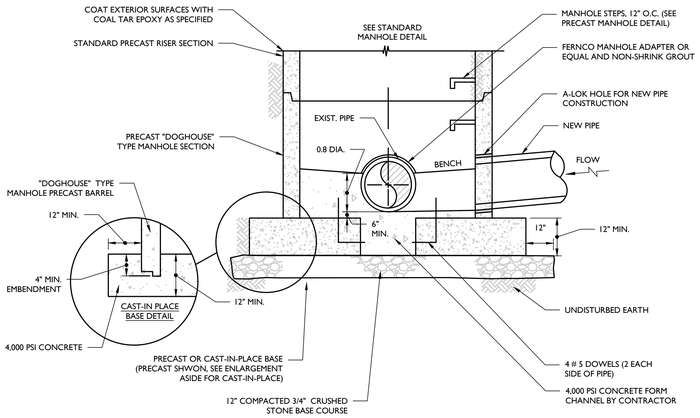


NOTES:

1. MANHOLE FRAME AND COVER SHALL BE CAMPBELL FOUNDRY PATTERN # **1012B** WITH FLOW-SEAL COVER OR APPROVED EQUAL OR AS OTHERWISE REQUIRED BY JURISDICTIONAL AUTHORITY.
2. MANHOLE FRAME AND COVER TO BE HEAVY DUTY, CONFORMING TO ASTM SPECIFICATION A-48 CLASS 30-B WITH SHOP COAT OF ASPHALTIC PITCH.
3. IN EASEMENTS AND REMOTE AREAS, COVER LOCKING DEVICES OF BRONZE AND KEY SHALL BE PROVIDED.
4. WATERTIGHT MANHOLE FRAME AND COVER SHALL BE PATTERN # **6548** AS MANUFACTURED BY CAMPBELL FOUNDRY COMPANY OR APPROVED EQUAL.

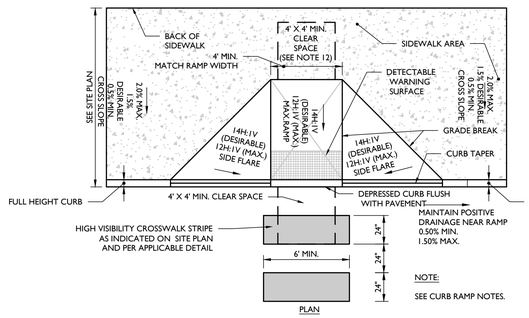
SANITARY MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1001 | 07/01/19



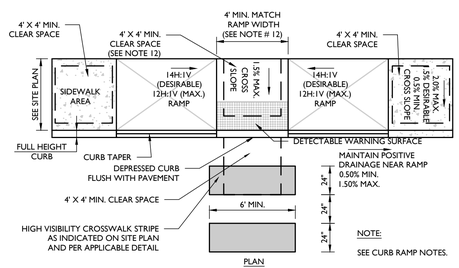
DOGHOUSE MANHOLE DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1100 | 07/01/19



CURB RAMP TYPE 1 DETAIL

NOT TO SCALE | MCNY-SITE-HADA-1000 | 07/01/19



CURB RAMP TYPE 7 DETAIL

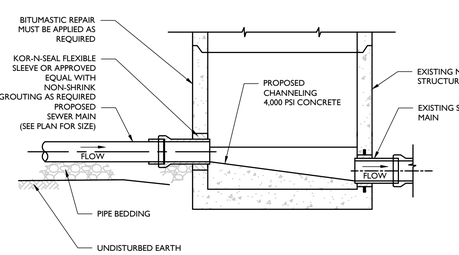
NOT TO SCALE | MCNY-SITE-HADA-1600 | 07/01/19

NOTES:

1. CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF EACH CURB RAMP FOR SUBMISSION AND APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
2. LANDING AREA, APPROACH SIDEWALK TRANSITIONS AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
3. CURB AT RAMP OPENING (FLUSH CURB) TO BE FLUSH WITH ROADWAY PAVEMENT.
4. CROSSWALKS AND PAVEMENT MARKINGS TO BE INSTALLED AS DENOTED ON SITE PLAN.
5. MAXIMUM RAMP SLOPE MAY BE 12H:1V UPON APPROVAL OF ENGINEER. RAMP SLOPES SHOWN ARE THE PREFERRED SLOPE. SIDE FLARE SLOPES MAY BE 10H:1V UPON APPROVAL OF THE ENGINEER.
6. MINIMUM RAMP CROSS-SLOPE SHALL BE 0.50%. THE MAXIMUM RAMP CROSS-SLOPE MAY BE 2.00% UPON APPROVAL OF THE ENGINEER. CROSS-SLOPES SHOWN IN THE DETAILS ARE THE PREFERRED SLOPES TO MAINTAIN A LEVEL OF CONSTRUCTION TOLERANCE.
7. ACCESSIBLE RAMPS SHALL BE INSTALLED PURSUANT WITH THE CURRENT UNITED STATES ACCESS BOARD ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES AND THE ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE AND OTHER APPLICABLE LOCAL AND STATE STANDARDS IN EFFECT AT THE DATE OF CONSTRUCTION.
8. DEVIATIONS FROM THE CURB RAMP DETAILS REQUIRE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
9. THE RAMP SURFACE SHALL HAVE A NON-SLIP, HAND BROOMED FINISH.
10. CONCRETE EXPANSION JOINTS SHALL HAVE A FIRM SURFACE WITH 1/4" BEVELED CONCRETE EDGES. THE JOINT SURFACE SHALL NOT BE MORE THAN 1/4" BELOW THE ADJOINING CONCRETE SURFACE.
11. CURB RAMP MUST BE WHOLLY CONTAINED WITHIN THE CROSSWALK CROSSING.
12. THE CLEAR SPACE SHALL BE INCREASED TO 5 FEET WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF THE SIDEWALK.
13. THE MAXIMUM SEPARATION BETWEEN THE BACK OF CURB AND DETECTABLE WARNING SURFACE SHALL NOT EXCEED 5 FEET. THE MAXIMUM SEPARATION AREA MAY BE WITHIN THE 4' X 4' CLEAR SPACE.
14. SEE SEPARATE DETAILS FOR "DETECTABLE WARNING SURFACE" AND "CURB RAMP SECTIONS".
15. WHERE SIDE FLARES ARE NOT REQUIRED, PROVIDE AN 18" CURB TAPER TO THE FLUSH CURB.
16. ALL CURB RAMP FLUSH CURB SHALL BE MADE WITH CONCRETE CURB CRADLE, REGARDLESS OF THE CURB MATERIAL USED THROUGHOUT THE SITE.

CURB RAMP NOTES

MCNY-SITE-HADA-2500 | 07/01/19



NOTES:

1. CONSTRUCTION OF THE NEW SEWER MAIN SHALL NOT IMPEDE THE OPERATION OF THE EXISTING SEWER.
2. WHERE NEW PIPE IS TO BE CONNECTED INTO AN EXISTING MANHOLE, THE CONTRACTOR SHALL CORE DRILL ALL HOLES INTO MANHOLE AND SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY FOR CHANNEL AND BENCH RECONSTRUCTION TO CHANNEL FLOW INTO EXISTING SEWER.
3. PIPE SHALL BE SEALED USING KOR-N-SEAL MANHOLE ADAPTERS OR APPROVED EQUAL, AND NON-SHRINK GROUT.
4. EXISTING BENCH SHALL BE CHIPPED AND CUT AWAY TO ALLOW FOR NEW CHANNEL TO BE CONSTRUCTED AND TO PROVIDE GOOD, SOUND SURFACE FOR BONDING WITH NEW CONCRETE CHANNEL AND BENCH. REMOVE ALL LOOSE MATERIALS AND CLEAN INSIDE OF THE STRUCTURE.
5. THE CONCRETE USED TO CONSTRUCT BENCHES AND CHANNELS SHALL BE 4,000 PSI CONCRETE APPLY EPOXY BONDING AGENT PRIOR TO POURING CONCRETE.
6. ANY DAMAGE TO THE EXISTING MANHOLE CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR.

CONNECTION TO EXISTING MANHOLE DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-2000 | 07/01/19

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20252912406\Engineering\Site Plans\C-DTLS.dwg|C-15 DETAILS By: KYLE SHALLOW

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
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8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER:	DRAWING NAME:
23010468A	C-DTLS

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
15 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIO

WATER NOTES:

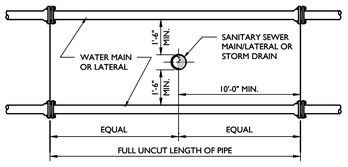
1. ALL METHODS, MATERIALS, FITTINGS, DEVICES, DIMENSIONAL REQUIREMENTS AND PROCEDURES NECESSARY TO COMPLETE THE WORK SHOWN HEREON SHALL MEET THE APPROPRIATE CURRENT AWWA SPECIFICATIONS IN EFFECT AS WELL AS ALL REQUIREMENTS DEEMED APPLICABLE BY THE MUNICIPALITY OR ANY OTHER GOVERNMENTAL BODY HAVING JURISDICTION OVER SAID WORK.
2. ALL WATER MAIN PIPE SHALL BE DUCTILE IRON (DIP).
3. ALL PIPE FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE AWWA SPECIFICATION C153/A21.53-00.
4. ALL GATE VALVES SHALL BE "MUELLER", RESILIANT-SEATED GATE VALVES WITH MECHANICAL JOINT CONNECTIONS. OPENING SHALL BE LEFT (CCW) AND OPERATION SHALL BE BY 2" SQUARE WRENCH NUT. MINIMUM WORKING PRESSURE SHALL BE 250 PSI. GATE VALVES ARE TO BE IN ACCORDANCE WITH LATEST REVISION OF AWWA SPECIFICATION C509.
5. ALL VALVE BOXES SHALL BE EXTENSION TYPE BY MUELLER SET ON BRICKS AND POSITIONED PERPENDICULAR TO THE PIPE AND ON COMPACTED BACKFILL.
6. ALL CHANGES IN PIPE LINE DIRECTION, BOTH HORIZONTAL AND VERTICAL SHALL BE TIE-RODDED AND THRUST BLOCKED WITH CONCRETE AGAINST UNDISTURBED EARTH AS DIRECTED BY THE ENGINEER.
7. FLUSH OUT ALL WATER MAINS AND APPURTENANCES AS DIRECTED BY THE MUNICIPALITY UNTIL THE WATER RUNS CLEAN AND FREE OF RUST AND DIRT. PRESSURIZE ALL LINES AND APPURTENANCES FOR FORTY-EIGHT (48) HOURS, OR AS DIRECTED BY THE MUNICIPALITY, TO REVEAL ANY LEAKS OR BROKEN PIPE. THIS SHALL ALL BE DONE EITHER AS A TOTAL PROJECT OR BETWEEN VALVED SECTIONS AS DIRECTED BY THE TOWN. IF PRESSURE TESTING REVEALS ANY LEAKS OR DIFFICULTIES THE CONTRACTOR SHALL PROMPTLY UNCOVER THE LEAK OR BROKEN PIPE AND IMMEDIATELY REPAIR AND RETEST SAME. THIS SHALL BE REPEATED AS MANY TIMES AS MAY BE REQUIRED TO DEMONSTRATE A TIGHT LINE TO THE SATISFACTION OF THE TOWN. THE NEW WATER MAIN AND APPURTENANANCES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C-600. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY.
8. THE MUNICIPAL ENGINEER MUST BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO PRESSURE TESTING.
9. ALL WATER LINES AND APPURTENANCES SHALL BE DISINFECTED TO THE SATISFACTION OF THE MUNICIPALITY, AND IN ACCORDANCE WITH THE STANDARDS OF THE OCDOH. THIS SHALL ALSO BE DONE IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C651. A MINIMUM OF TWO (2) BACTERIAL TESTS TAKEN TWENTY-FOUR (24) HOURS APART ARE REQUIRED. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY.
   AS PER AWWA C651, LATEST REVISION, WATER MAIN DISINFECTION PROCEDURE SHALL, GENERALLY, BE AS FOLLOWS, EXCLUDING THE TABLET METHOD:
   A. INSPECTING MATERIALS TO BE USED TO ENSURE THEIR INTEGRITY.
   B. PREVENTING CONTAMINATING MATERIALS FROM ENTERING THE WATER MAIN DURING STORAGE, CONSTRUCTION, OR REPAIR AND NOTING POTENTIAL CONTAMINATION AT THE CONSTRUCTION SITE.
   C. REMOVING, BY FLUSHING OR OTHER MEANS, THOSE MATERIALS THAT MAY HAVE ENTERED THE WATER MAIN.
   D. CHLORINATING ANY RESIDUAL CONTAMINATION THAT MAY REMAIN, AND FLUSHING THE CHLORINATED WATER FROM THE MAIN.
   E. PROTECTING THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW CAUSED BY HYDROSTATIC PRESSURE TEST AND DISINFECTION PROCEDURES.
   F. DOCUMENTING THAT AN ADEQUATE LEVEL OF CHLORINE CONTACTED EACH PIPE TO PROVIDE DISINFECTION.
   G. DETERMINING THE BACTERIOLOGICAL QUALITY BY LABORATORY TEST AFTER DISINFECTION.
   H. FINAL CONNECTION OF THE APPROVED NEW WATER SERVICE TO THE ACTIVE DISTRIBUTION SYSTEM.

THE CONTINUOUS-FEED METHOD SHALL BE IMPLEMENTED FOR CHLORINATION, AS DESCRIBED IN AWWA C651, LATEST REVISION. AFTER CHLORINATION, THE CONTRACTOR SHALL FLUSH THE MAINS AS PER FINAL FLUSHING REQUIREMENTS OF AWWA C651, LATEST REVISION. WHEN CUTTING INTO OR REPAIRING AN EXISTING MAIN, DISINFECTION PROCEDURES SHALL BE OBSERVED AS DETAILED IN DISINFECTION PROCEDURES WHEN CUTTING INTO OR REPAIRING EXISTING MAINS OF AWWA C651, LATEST REVISION.

VERIFICATION SHALL BE ACCOMPLISHED VIA BACTERIOLOGICAL TESTS. AFTER FINAL FLUSHING AND BEFORE THE NEW WATER MAIN IS CONNECTED TO THE DISTRIBUTION SYSTEM, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN AT LEAST 24 HR APART, SHALL BE COLLECTED FROM THE NEW MAIN. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1,200 FT OF THE NEW WATER MAIN, PLUS ONE SET FROM THE END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH. SAMPLES SHALL BE TESTED FOR BACTERIOLOGICAL (CHEMICAL AND PHYSICAL) QUALITY IN ACCORDANCE WITH STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, AND SHALL SHOW THE ABSENCE OF COLIFORM ORGANISMS AND THE PRESENCE OF A CHLORINE RESIDUAL. SAMPLES FOR BACTERIOLOGICAL ANALYSIS SHALL BE COLLECTED IN STERILE BOTTLES TREATED WITH SODIUM THIOSULFATE, AS REQUIRED BY STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER. NO HOSE OR FIRE HYDRANT SHALL BE USED IN THE COLLECTION OF SAMPLES. THERE SHOULD BE NO WATER IN THE TRENCH UP TO THE CONNECTION FOR SAMPLING. THE SAMPLING PIPE MUST BE DEDICATED AND CLEAN AND DISINFECTED AND FLUSHED PRIOR TO SAMPLING. A CORPORATION COCK MAY BE INSTALLED IN THE MAIN WITH A COPPER-TUBE GOOSENECK ASSEMBLY. AFTER SAMPLES HAVE BEEN COLLECTED, THE GOOSENECK ASSEMBLY MAY BE REMOVED AND RETAINED FOR FUTURE USE. IF SAMPLES RESULTS FROM THE LAB INDICATE A MEASURED HPC GREATER THAN 500 COLONY-FORMING UNITS (CFU) PER ML, FLUSHING SHOULD BE RESUMED AND ANOTHER COLIFORM AND HPC SET OF SAMPLES SHOULD BE TAKEN UNTIL NO COLIFORMS ARE PRESENT AND THE HPC IS LESS THAN 500 CFU/ML THE RECORD OF COMPLIANCE SHALL BE THE BACTERIOLOGICAL TEST RESULTS CERTIFYING THAT THE WATER SAMPLED FROM THE NEW WATER MAIN IS FREE OF COLIFORM BACTERIA CONTAMINATION AND IS EQUAL TO OR BETTER THAN THE BACTERIOLOGIC WATER QUALITY IN THE DISTRIBUTION SYSTEM.

ALL OTHER REQUIREMENTS OF AWWA C651, LATEST REVISION, SHALL BE OBSERVED.

10. WATER SERVICE SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER MAIN OR SERVICE.
11. ALL WATER MAINS SHOULD BE SEPARATED FROM SANITARY SEWER LINES BY A MINIMUM HORIZONTAL DISTANCE OF 10 FEET. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN ENCASED IN CONCRETE OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH.
12. AT THE CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE WATER LINE SHALL BE ENCASED IN CONCRETE.
13. WATER TIGHT PLUGS ARE TO BE INSTALLED IN THE ENDS OF PIPES WHEN WORK IS NOT IN PROGRESS.
14. LEAKAGE AND HYDROSTATIC PRESSURE TESTING SHALL BE PERFORMED AT 1.5 TIMES THE WORKING PRESSURE.
15. THE MAXIMUM DEFLECTION ALLOWED ALLOWED AT PIPE JOINTS SHALL BE LIMITED TO 80% OF THAT ALLOWED BY AWWA OR IN ACCORDANCE WITH THE MUNICIPALITY. FOR AWWA ALLOWABLE JOINT DEFLECTIONS SEE LATEST REVISION OF AWWA SPECIFICATION C600.
16. CONSTRUCTION MUST CONFORM TO ALL ORDINANCES.
17. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING WATER AND OTHER UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
18. CONTRACTOR TO CALL UNDERGROUND MARK-OUT PRIOR TO COMMENCEMENT OF CONSTRUCTION AT 1-800-962-7962 FOR COMPLETE UTILITIES MARK-OUT.
19. CONTRACTOR TO CONTACT MUNICIPAL WATER DEPARTMENT AT LEAST 2 DAYS PRIOR TO CONSTRUCTION.
20. ALL IMPROVEMENTS SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK AND CERTIFICATION SHALL BE PROVIDED TO THE MUNICIPALITY THAT THE SUBJECT IMPROVEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS.
21. CONTRACTOR TO NOTIFY ENGINEER OF ANY DEVIATION FROM THE HORIZONTAL OR VERTICAL ALIGNMENTS WITH REGARDS TO EXISTING UTILITIES.
22. ANY BACKFLOW PREVENTION DEVICE(S) DETERMINED TO BE REQUIRED BY THE WATER SUPPLIER WILL BE DESIGNED BY OTHERS IN ACCORDANCE WITH OCDOH REQUIREMENTS AND THAT APPLICATION FOR ANY SUCH BACKFLOW PREVENTION DEVICE SHALL BE SUBMITTED TO THE OCDOH FOR REVIEW AND APPROVAL UNDER SEPARATE COVER.
23. A CERTIFIED AS-BUILT MAP OF THE WATER SYSTEM IMPROVEMENTS SHALL BE PROVIDED TO THE MUNICIPALITY'S WATER DEPARTMENT BY A LICENSED DESIGN PROFESSIONAL.

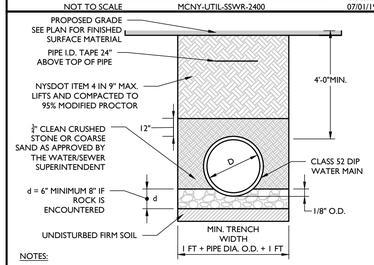


NOTE :
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE ENGINEER.

SANITARY/STORM SEWER-WATER MAIN SEPARATION DETAIL

MOD: 04/23/21

NOT TO SCALE MCNY-UTIL-SSWR-2400 07/01/19



NOTES:
1. ALL PIPE SYSTEMS AND BACKFILL SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600.
2. WATER MAIN PIPE SHALL BE CEMENT LINED DUCTILE IRON PIPE (DIP) PRESSURE CLASS 150, THICKNESS CLASS 52 WITH ASPHALTIC EPOXY TYPE COATING & TYTON JOINTS.
3. MAXIMUM ALLOWABLE DEFLECTION AT PIPE JOINTS SHALL BE LIMITED TO 80% OF THE VALUES PUBLISHED IN AWWA C600, LATEST REVISION.
4. IF ROCK IS ENCOUNTERED, THE EXCAVATION SHALL BE CARRIED 8" BELOW THE BOTTOM OF THE PIPE.

DIP WATER PIPE BEDDING DETAIL

MOD: 07/28/21

NOT TO SCALE MCNY-UTIL-WATR-1900 07/01/19

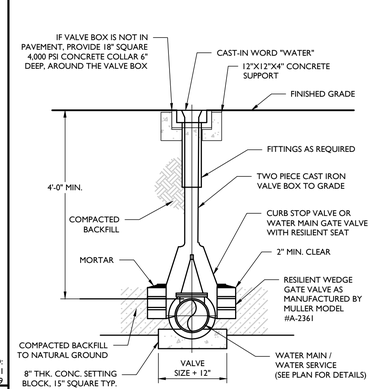
PIPE SIZE IN INCHES	NUMBER AND SIZE OF RODS REQUIRED AND PIPE LENGTH IN FEET TO BE RESTRAINED								
	90° TEE OR DEAD END PLUG			45° BEND			22½° BEND		
	No.	SIZE	L*	No.	SIZE	L*	No.	SIZE	L*
4	2	¾"	28'	2	¾"	6'	2	¾"	3'
6	2	¾"	40'	2	¾"	8'	2	¾"	4'
8	4 or 2	¾" or ⅞"	52'	2	¾"	10'	2	¾"	5'
10	4	¾"	63'	2	¾"	12'	2	¾"	6'
12	4	⅞"	74'	2	¾"	14'	2	¾"	7'
14	4	1"	86'	2	¾"	16'	2	¾"	8'
16	4	1"	96'	2	¾"	18'	2	¾"	9'

L* = LENGTH OF PIPE TO BE RESTRAINED IS FOR EACH SIDE OF BEND

NOTES:
1. USE OF MECHANICAL JOINT RETAINER GLANDS SHALL PROVIDE A THRUST RESTRAINT SYSTEM EQUIVALENT TO THAT LISTED IN THE TABLE FOR CLAMPS AND RODS.
2. LENGTHS ARE BASED ON THE FOLLOWING CRITERIA: 150 PSI MAXIMUM PRESSURE AND 4'-6" OF COVER. TABLE IS FOR USE WITH HDPE OR PVC PIPE ONLY. IF TEST CONDITIONS ARE MORE SEVERE OR LARGER PIPES ARE PROPOSED, THEN SPECIAL COMPUTATIONS MUST BE PROVIDED BY LICENSED PROFESSIONAL ENGINEER.

JOINT RESTRAINT SCHEDULE DETAIL

NOT TO SCALE HDPE PVP JOINT RESTRAINT 03/23/23

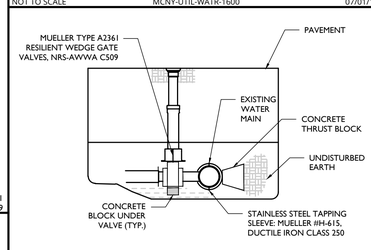


NOTES:
1. ALL VALVES TO INCLUDE MEGA-LUG RETAINER GLANDS AND BE RODDED BACK TO THE ADJACENT TEE IN THE WATER MAIN. INLINE VALVES NEED NOT BE RODDED. CONTRACTOR TO UTILIZE ¾" ON CENTER GALVANIZED STEEL RODS WITH MALLEABLE IRON NUTS AT 108° SPACING.
2. WATER MAIN VALVES FOR FOUR INCH THROUGH FOURT-EIGHT INCH SHALL BE RESILIENT WEDGE GATE VALVES AS MANUFACTURED BY MULLER, MODEL #A-2361. VALVES SHALL BE PROVIDED WITH AN EXTENSION SERVICE BOX TO GRADE.
3. MAIN LINE VALVES TO BE SPACED NO FURTHER THAN 500' APART IN COMMERCIAL DISTRICTS AND 800' IN OTHER DISTRICTS.

WATER VALVE BOX DETAIL

MOD: 09/09/22

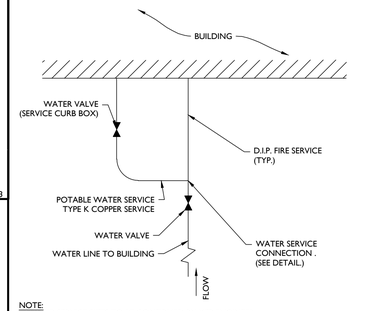
NOT TO SCALE MCNY-UTIL-WATR-1600 07/01/19



NOTES:
1. MEGA LUGS TO BE USED ON ALL MECHANICAL JOINT FITTINGS.
2. MULLER STAINLESS STEEL, MECHANICAL JOINT TAPPING SLEEVE MODEL #H-615 AND VALVE, MODEL A2361 IS TO BE USED IN ALL CASES, ALL HARDWARE INCLUDING, BUT NOT LIMITED TO NUTS, BOLTS, ECT SHALL BE STAINLESS STEEL.
3. CONCRETE BLOCK SHALL BE UNDER VALVE.

WET TAP DETAIL

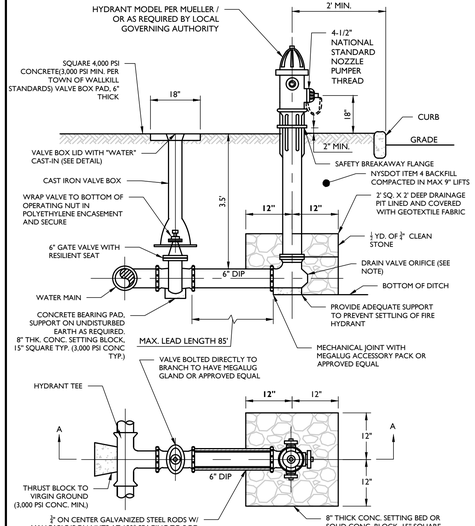
NOT TO SCALE WET TAP 07/01/19



NOTE:
1. WATER SERVICE SIZES TO BE CONFIRMED BY MEP ENGINEER.
2. VALVING MUST BE ARRANGED SO THAT POTABLE WATER IS TERMINATED IF FIRE PROTECTION LINE IS TURNED OFF.

FIRE PROTECTION & SERVICE CONNECTION TO BUILDING DETAIL

NOT TO SCALE

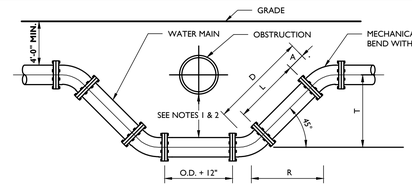


NOTES:
1. HYDRANT SHALL BE MUELLER SUPER CENTURION MODEL A-423 INCLUDING INTEGRAL MULLER "STORZ" CONNECTION ON THE NOZZLE. DESIGN WITH THE FOLLOWING SPECIFICATIONS.
   A. SAFETY COUPLED STANDPIPE.
   B. 6" MECHANICAL JOINT INLET CONNECTION
   C. TWO 2-1/2" NATIONAL STANDARD THREAD HOSE NOZZLES.
   ONE 4-1/2" NATIONAL STANDARD THREAD STEAMER NOZZLE, FACING THE ROAD.
   D. HYDRANT OPERATORS AND HYDRANT NOZZLE CAP NUTS SHALL BE IN ACCORDANCE WITH AWWA#AND STANDARD C502.
   E. HYDRANT HOSE CAPS SHALL BE ATTACHED BY MEANS OF CHAINS.
   F. HYDRANT BARRELS SHALL BE PAINTED - RED, BONNETS - YELLOW, AND NOZZLE CAPS - BLACK TO INDICATE THE AVAILABLE FIRE FLOW OR AS IN ACCORDANCE WITH THE LOCAL REQUIREMENTS.
   G. HYDRANTS SHALL OPEN COUNTER CLOCKWISE.
2. STANDPIPE (BREAK-AWAY) COUPLING SHALL NOT EXCEED A MAXIMUM OF 2 INCHES FROM THE TOP OF THE CURB TO THE BOTTOM OF COUPLING.
3. THE DRAIN VALVE SHALL BE CLEAR OF ANY OBSTRUCTIONS, AND 3/4" CLEAN GRAVEL BE PLACED FROM THE BOTTOM OF THE HYDRANT TO A POINT 6" ABOVE THE HYDRANT LATERAL PIPE.
4. THRUST BLOCKS SHALL BE MADE OF 4,000 PSI CONCRETE, PROVIDED BEHIND THE HYDRANT SHOE.
5. BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH THE LOCAL JURISDICTION.
6. GATE VALVE SHALL BE T.W.W. 6" U.S. PIPE METROSEAL 250 R/S (RESILIENT SEALED) MECHANICAL JOINT END (RIGHT HAND).
7. WATER LATERAL SHALL BE 6" DUCTILE IRON CEMENT LINED CLASS 52 PIPE.
8. TIE ROD SHALL BE 3/4" DIAMETER TIE ROD WITH EYE BOLTS - TWO REQUIRED (SIDE VIEW SHOWN). RESTRAIN ALL JOINTS ON HYDRANT TEE, VALVE, AND HYDRANT LEAD.
9. HYDRANT TEE SHALL BE U.S. PIPE CATALOG #LU592 TRIM.TYTE DUCTILE IRON. MECHANICAL JOINT ON AN T.W.W. APPROVED SUBSTITUTE.
10. HYDRANT SPACING MAY RANGE FROM 350' TO A MAX OF 600'
11. HYDRANTS SHALL BE DRY-BARREL HYDRANTS, TYPE MULLER SUPER CENTURION IN ACCORDANCE WITH AWWA C502. HYDRANTS SHALL HAVE A MAIN VALVE SIZE OPENING OF 5" NOMINAL, ONE FOUR-AND-ONE-HALF INCH NST PUMPER NOZZLE TWO TWO-AND-ONE-HALF-INCH NST HOSE NOZZLES. A ONE-AND-ONE-HALF-INCH PENTAGON OPERATING NUT AND A SIX-INCH MECHANICAL JOINT INLET SHOW CONNECTION WITH ACCESSORIES.
12. ALL TEES, VALVES AND FITTINGS TO INCLUDE RESTRAINT IN THE FORM OF MEGA-LUG RETAINER GLANDS AND RODS.
13. WHEN HIGH GROUND WATER IS ENCOUNTERED WITHIN 2 FEET OF THE HYDRANT BOWL, THE WEEP HOLE IS TO REMAIN PLUGGED AND APPROPRIATELY WORDED SIGNAGE SHALL BE PERMANENTLY SECURED TO THE HYDRANT SPECIFYING THAT THE HYDRANT IS TO BE PUMPED DRY AFTER USE TO PREVENT DAMAGE DUE TO FREEZING TEMPERATURES.

FIRE HYDRANT (VALVE IN GRASS) DETAIL

MOD: 01/09/23

NOT TO SCALE MCNY-UTIL-WATR-1000 07/01/19



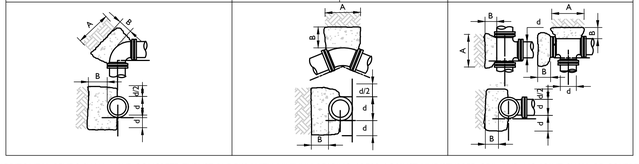
MECHANICAL JOINTS			
ANGLE	D =	R =	L =
45°	T x 1.414	T x 1.000	D-2A
22.5°	T x 2.613	T x 2.414	D-2A
11.25°	T x 5.126	T x 5.027	D-2A

NOTES:
1. WATER MAIN MAY CROSS ABOVE OBSTRUCTION IF **4'-0"** MINIMUM COVER IS MAINTAINED ABOVE THE WATER MAIN AND FINISH GRADE.
2. MINIMUM VERTICAL SEPARATION BETWEEN SANITARY OR STORM SEWER TO WATER MAIN SHALL BE 18" IF THE HORIZONTAL SEPARATION IS LESS THAN 10'. BETWEEN WATER MAIN AND OTHER UTILITIES, THE MINIMUM VERTICAL SEPARATION SHALL BE 12".
3. WATER MAIN SHALL BE SIZE AND MATERIAL SPECIFIED ON THE PLAN, WITH MECHANICAL JOINT OR PUSH-ON AND ALL FITTINGS BE CAST IRON MECHANICALLY JOINT.
4. OFFSETS MAY BE SUBSTITUTED FOR A "T" OF UP TO 24" IF APPROVED BY THE ENGINEER.
5. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS OR OTHER POINTS OF PIPE DIRECTION CHANGE.
6. TIE RODS SHALL BE UTILIZED TO RESTRAIN PIPE JOINTS IF THRUST BLOCK IS NOT USED. DETAILS OF THE TIE ROD ASSEMBLY SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. TIE RODS SHALL BE SUFFICIENT TO RESTRAIN THE THRUST DEVELOPED AT 100 PSI WORKING PRESSURE. MEGALUG RESTRAINT ALSO ACCEPTABLE IN PLACE OF TIE RODS.

WATER CROSSING UNDER UTILITY DETAIL

NOT TO SCALE MCNY-UTIL-WATR-1300 07/01/19

d	A	B	A	B	A	B	A	B
6"	30"	24"	24"	18"	18"	12"	27"	21"
8"	42"	30"	30"	24"	24"	18"	36"	27"
12"	66"	42"	45"	33"	33"	24"	48"	42"
16"	84"	48"	51"	39"	39"	30"	60"	48"
24"	102"	75"	78"	60"	60"	39"	108"	108"
30"	136"	84"	97"	64"	71"	44"	112"	120"
90° BENDS			45° BEND		22½° & 11¼° BENDS		TEE & PLUG	



NOTES:
1. ALL HORIZONTAL BENDS SHALL HAVE CONCRETE THRUST BLOCKS WITH MINIMUM BEARING AREAS AGAINST UNDISTURBED SOIL AND NO JOINT SHALL BE COVERED WITH CONCRETE.
2. TWO FORMS OF RESTRAINTS ARE REQUIRED ON ALL BENDS, OFFSETS, DEAD ENDS AND/ OR TEMPORARY DEAD ENDS FOR FUTURE EXPANSION. HYDRANTS WILL REQUIRE HYDRANTS WILL REQUIRE ADDITIONAL RESTRAINTS IN ACCORDANCE WITH "TYPICAL FIRE HYDRANT ASSEMBLY" DETAIL.
3. RESTRAINTS APPROVED FOR USE ARE THRUST BLOCKS, MEGA LUG RETAINER, GLANDS, TIE RODS AND FIELD LOCK GASKETS.
4. BEARING AREAS ARE BASED UPON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY OF 0.5 TONS PER SQUARE FOOT. FOR A LESSER SOIL BEARING CAPACITY THESE AREAS SHALL BE INCREASED ACCORDINGLY.
5. THRUST BLOCKS SHALL BE POURED DIRECTLY AGAINST TRENCH WALLS AND SHALL BE 4,000 PSI CONCRETE (3,000 PSI MIN.).
6. DETAILS FOR SUPPORTS AND BRACING FOR VERTICAL BENDS FOR 12" DIAMETER OR LARGER SHALL BE APPROVED BY THE AUTHORITY PRIOR TO CONSTRUCTION.

THRUST BLOCKS DETAIL

NOT TO SCALE MCNY-UTIL-WATR-1400 07/01/19

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:	DRAWING NAME:		
23010468A	C-DTLS		

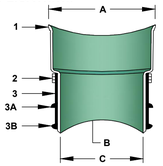
SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
16 of 19

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2025\25010468A\Engineering\Site Plans\C-DTLS.dwg C-16-DETAILS By: KYLE SHALLOW

CORRUGATED HDPE/PP BELL GRAVITY APPLICATIONS



A. BELL END ACCEPTS CORRUGATED HDPE/PP DUAL WALL PIPE--ADS/HANCOR INC. SPECIFICATIONS IN 4", 6", 8", 10", 12", 15", 18", 21", 24", AND 30" SIZES.

B. CURVATURE VARIES WITH MAINLINE DIAMETERS.

C. SPIGOT END PVC SDR 35, ASTM D3034 DIAMETERS: 4", 6", 8", 10", 12", 15", 18", 21", 24" AND 30"

PART	PART NAME
1	HUB ADAPTOR
2	SECURING CLAMP*
3	RUBBER SLEEVE (AVAILABLE IN NITRILE AND EPDM BY SPECIAL ORDER)
3A	UPPER SEGMENT**
3B	LOWER SEGMENT***
4	(NOT SHOWN) ADS/HANCOR INC. SUPPLIES VALLEY GASKET

MATERIALS
PVC SDR 26 ASTM D3034
BAND SS #301
SCREW SS #305
HOUSING SS #301
ASTM F477

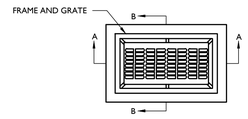
* OPTIONAL: #316 STAINLESS STEEL BAND, SCREW AND HOUSING
** DISTANCE BETWEEN 4A AND 4B WILL VARY BY PRODUCT TYPE
*** WILL NOT APPEAR ON RUBBER SLEEVES FOR CONCRETE OR CLAY PIPE

NOTE: RECOMMENDED METHOD OF CUTTING HOLE IS WITH HOLE SAW FOR PVC AND OTHER PLASTICS, AND DIAMOND BIT FOR CONCRETES, CLAY, FRP AND D.I. (SEE INSTALLATION INSTRUCTIONS. HOLE SAWS ARE AVAILABLE FOR PURCHASE OR RENT.)

INSERTA TEE SIZE		HOLE DIAMETER	
4"	(100 mm)	4 ½"	(114 mm)
6"	(150 mm)	6 ½"	(165 mm)
8"	(200 mm)	8 ¾"	(222 mm)
10"	(250 mm)	10 ⅞"	(276 mm)
12"	(300 mm)	12 ⅞"	(327 mm)
15"	(375 mm)	15 ¹³⁄₁₆"	(402 mm)
18"	(450 mm)	19 ¾"	(503 mm)
21"	(525 mm)	22 ⅝"	(573 mm)
24"	(600 mm)	25 ⅜"	(643 mm)
30"	(750 mm)	32 ¹⁷⁄₃₂"	(826 mm)

INSERTA TEE DETAIL

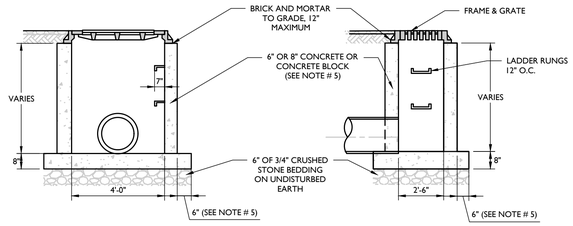
NOT TO SCALE — GNRL-DTLS-STND-GRID — MOD: 09/11/19, 7/01/19



PLAN

NOTES:

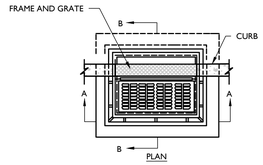
1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. MINIMUM DIFFERENCE IN INVERTS TO BE 0.1 FEET
2. THIS INLET SHALL BE CONSTRUCTED OF PRECAST CONCRETE OR SOLID CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR, THE INSIDE WALLS JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT BY M.A. INDUSTRIES, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY **# 3408** OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THEN 12' THE WALLS SHOULD BE EITHER 8" THICK CONCRETE OR 8" SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE 4,000 PSI.
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.



SECTION A-A — SECTION B-B

SINGLE DRAIN INLET DETAIL

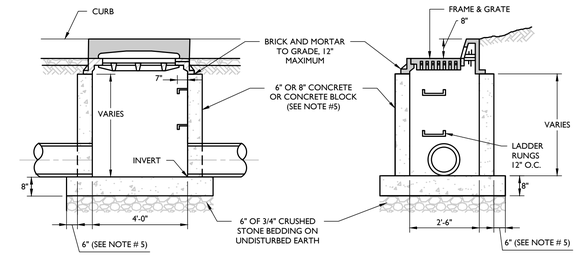
NOT TO SCALE — MCNY-UTIL-STRM-1000 — 07/01/19



PLAN

NOTES:

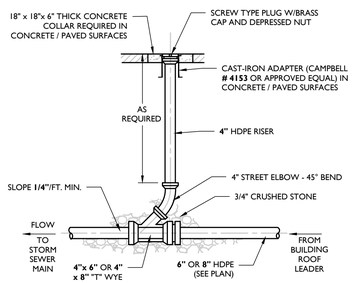
1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. MINIMUM DIFFERENCE IN INVERTS TO BE 0.1 FEET.
2. THIS INLET SHALL BE CONSTRUCTED OF PRECAST CONCRETE OR SOLID CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR. THE INSIDE WALL JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT BY M.A. INDUSTRIES, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, 12" O.C. OR APPROVED EQUIVALENT.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY **# 2617**, OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THAN 12' THE WALLS SHOULD BE 8" THICK CONCRETE OR SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE 4,000 PSI.
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.



SECTION A-A — SECTION B-B

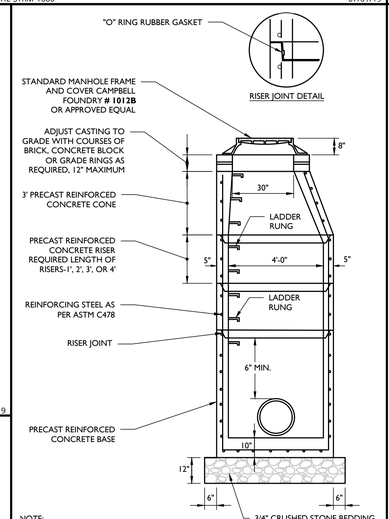
SINGLE CATCH BASIN DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1100 — 07/01/19



ROOF LEADER CLEANOUT DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1900 — 07/01/19

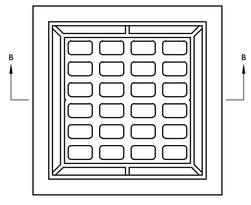


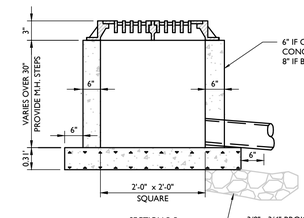
NOTE:

1. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
2. ALL CONCRETE TO BE 4,000 PSI.

PRECAST CONCRETE STORM MANHOLE 4' DIA. DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1600 — 07/01/19





SECTION B-B

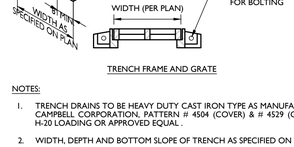
3/8" - 3/4" BROKEN STONE BASE IF DIRECTED BY THE ENGINEER

GENERAL CONSTRUCTION NOTES:

1. FOOTER TO BE CONCRETE.
2. INVERT TO BE 4000 PSI CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. FRAME AND GRATE TO BE **#3193** AS MANUFACTURED BY CAMPBELL FOUNDRY CO., OR APPROVED EQUAL.
5. PROVIDE 3/4" DIAMETER W.I. LADDER RUNGS, 12" O.C. (IF OVER 30" DEEP)
6. EXTERIOR OF ALL CONCRETE SHALL HAVE 2 COATS OF KOPPERS BITUMASTIC #5, OR EQUAL.
7. ALL WORK SHALL BE WATERTIGHT. NOT FOR USE IN PAVED AREAS.

YARD INLET DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1400 — 07/01/19

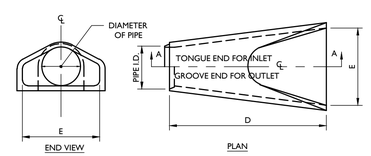


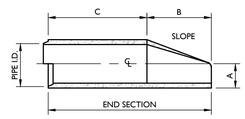
NOTES:

1. TRENCH DRAINS TO BE HEAVY DUTY CAST IRON TYPE AS MANUFACTURED BY CAMPBELL CORPORATION, PATTERN # 4504 (COVER) & # 4529 (GRATE) FOR H-20 LOADING OR APPROVED EQUAL .
2. WIDTH, DEPTH AND BOTTOM SLOPE OF TRENCH AS SPECIFIED ON THE PLANS.
3. MINIMUM BOTTOM SLOPE = 0.50%

HEAVY DUTY TRENCH DRAIN DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1700 — 07/01/19





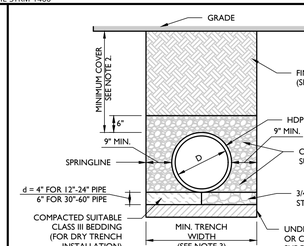
PIPE INNER DIA.	WALL THICK	A	B	C	D	E	SLOPE
12"	2"	4"	24"	48 7/8"	72 7/8"	30"	3:1
15"	2 1/4"	6"	27"	46"	73"	30"	3:1
18"	2 1/2"	9"	27"	46"	73"	36"	3:1
24"	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3:1
30"	3 1/2"	12"	54"	19 3/4"	73 3/4"	60"	3:1
36"	4"	15"	63"	34 3/4"	97 3/4"	72"	3:1
42"	4 1/2"	21"	63"	35"	98"	78"	3:1
48"	5"	24"	72"	26"	98"	84"	3:1
54"	5 1/2"	27"	65"	35"	100"	90"	2.4:1
60"	6"	30"	60"	39"	99"	96"	2:1
66"	6 1/2"	32"	78"	21"	99"	102"	2:1
72"	7"	34"	78"	21"	99"	108"	2:1

NOTES:

1. REINFORCING IN THE "C" PORTION SHALL BE THE SAME AS SPECIFIED FOR CONCRETE PIPE ASTM C76 AND AASHTO M170 CLASS III FOR THE SIZE OF CONNECTING PIPE.
2. ALL CONCRETE SHALL BE 4,000 PSI.
3. VARIATIONS IN MANUFACTURING DIMENSIONS SHALL BE AS CALLED FOR IN ASTM C76 AND AASHTO M170.
4. PIPE END SECTION CONNECTION SHALL MATCH JOINTS OF STANDARD PIPE DETAILS.

CONCRETE FLARED END SECTION DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-2200 — 07/01/19



NOTES:

1. ALL PIPE SYSTEMS AND BACKFILL SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.
2. MINIMUM COVER FOR HDPE PIPES IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR UP TO 60" DIAMETER PIPE. PIPE COVER IS MEASURED FROM TOP OF PIPE TO THE BOTTOM OF FLEXIBLE PAVEMENT, OR TO THE TOP OF RIGID PAVEMENT, OR TO THE GROUND SURFACE.
3. MINIMUM TRENCH WIDTH PER MANUFACTURER'S RECOMMENDATIONS.
4. SUITABLE AND FINAL BACKFILL MATERIAL SHALL BE SITE SOILS FREE OF LARGE STONES. CLEAN FILL, OR ITEM 4.

HDPE STORM PIPE BEDDING DETAIL

NOT TO SCALE — 07/01/19

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

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REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-DTLS

SHEET TITLE: CONSTRUCTION DETAILS

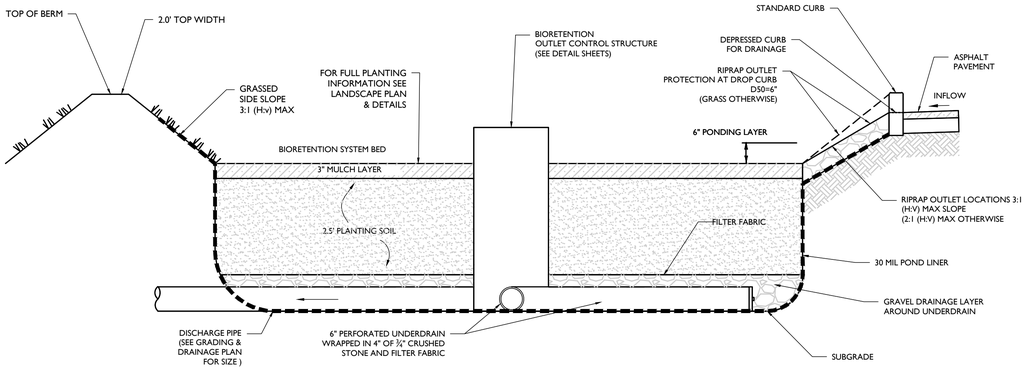
SHEET NUMBER: 17 of 19

2023\23010468A\Engineering\Site Plans\C-DTLS.dwg, C-17 DETAILS, By: KYLE.SHALLOW

BIORETENTION ELEVATIONS					
SYSTEM	OUTLET NAME	OUTLET SIZE	BED ELEVATION	100 YR PEAK ELEVATION	TOP OF BERM ELEVATION
P-1	OCS S-8	4'X4'	98.50	99.57	100.60

PLANTING SOIL NOTE:

THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME. SOILS SHOULD FALL WITHIN THE SM, OR ML CLASSIFICATIONS OD THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5"/HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER, AND BRUSH OR SEED FROM NOXIOUS WEEDS. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED (TAMPED LIGHTLY WITH A DOZER OR BACKHOE BUCKET). THE SPECIFIC CHARACTERISTICS ARE AS FOLLOWS:



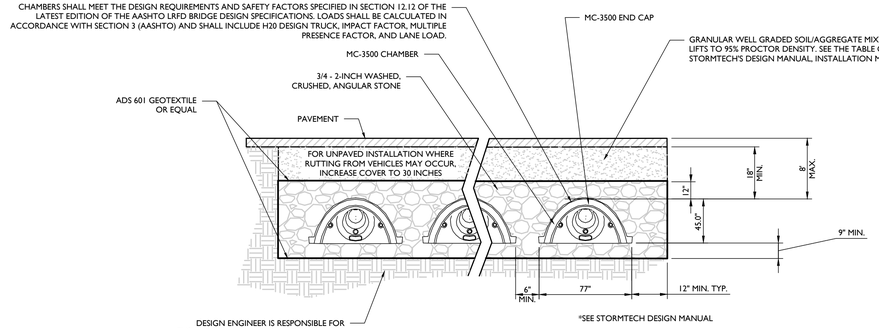
NOTES:

1. SEE PLAN FOR DROP CURB LOCATIONS AND BIORETENTION AREA CONFIGURATION.
2. PLANTING SOIL TO BE IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOUND WITHIN THE PROJECT SWPPP.

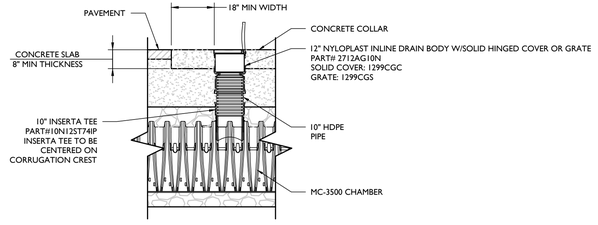
BIORETENTION SYSTEM CROSS SECTION DETAIL

NOT TO SCALE MCNY-UTIL-STMW-24001 07/01/19

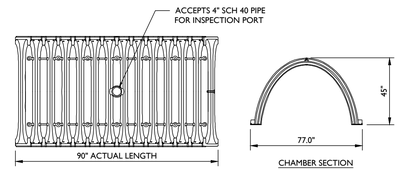
CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND SAFETY FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. LOADS SHALL BE CALCULATED IN ACCORDANCE WITH SECTION 3 (AASHTO) AND SHALL INCLUDE H20 DESIGN TRUCK, IMPACT FACTOR, MULTIPLE PRESENCE FACTOR, AND LANE LOAD.



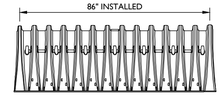
SYSTEM SECTION



STORMTECH STORM CHAMBER INSPECTION PORT DETAIL



CHAMBER SECTION



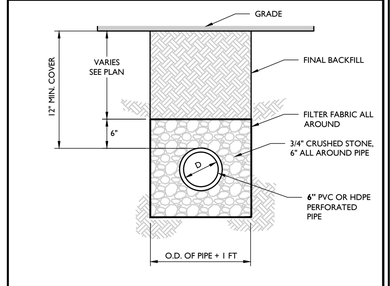
STORMTECH MC-3500 STORM CHAMBER DETAIL
N.T.S.

STORMTECH NOTES:

1. CHAMBERS SHALL BE STORMTECH MC-3500 OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MADE FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.
6. THE STONE USED FOR FILLING THE SUBSURFACE SYSTEM MUST BE CLEAN WASHED STONE FREE OF ALL SEDIMENT, FINES, AND DUST. THE CONTRACTOR MAY BE REQUIRED TO WASH THE STONE ON SITE UNTIL IT IS CLEAN TO THE TOUCH LEAVING NO RESIDUE BEHIND PRIOR TO PLACEMENT IN THE SYSTEM FOOTPRINT.
7. THE PROPOSED SUBSURFACE STORMWATER SYSTEM BOTTOM MUST BE PROTECTED FROM STORM RUNOFF AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE INFILTRATION CAPACITY OF THE VIRGIN SOIL IS NOT COMPROMISED.
8. VEHICLE TRAFFIC MUST AVOID THE CHAMBER FOOTPRINT DURING CONSTRUCTION.
9. CONTRACTOR MUST SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW & APPROVAL.
10. END STONE TO BE 6" MIN. BEYOND END OF CHAMBER CAPS WITH 12" MIN. SIDE STONE TO PROVIDE MIN.

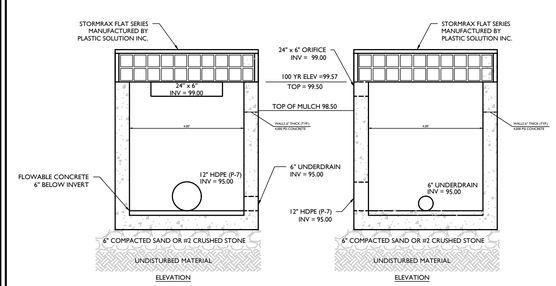
STORMTECH SUBSURFACE DETAIL

NOT TO SCALE MCNY-UTIL-STMW-3500 MOD: 01/20/21 07/01/19

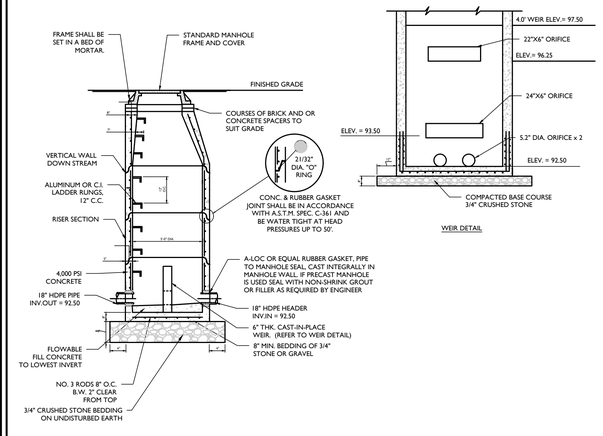


UNDERDRAIN DETAIL

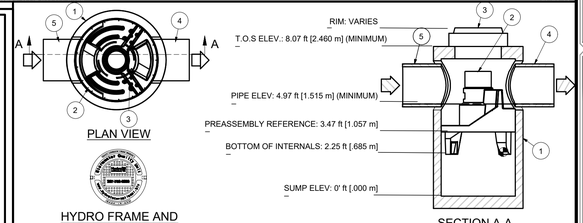
NOT TO SCALE MCNY-UTIL-STRM-2400 07/01/19



BIORETENTION BASIN P-1 OUTLET CONTROL STRUCTURE (S-9) DETAIL



OUTLET CONTROL STRUCTURE (S-6) DETAIL



HYDRO FRAME AND COVER (INCLUDED) GRADE RINGS BY OTHERS AS REQUIRED

NOTE: ADDITIONAL HEIGHT MAY BE REQUIRED DEPENDING ON PIPE SIZE

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 18.0 cfs (510 l/s)
2. Min Sediment Storage Capacity: 0.7 cu. yd. (0.5 cu. m.)
3. Maximum Inlet/Outlet Pipe Diameters: 24 in. (600 mm)
4. The Treatment System Shall Use An Induced Vortex To Separate Pollutants From Stormwater Runoff.
5. For More Product Information Including Regulatory Acceptances, Please Visit https://hydro-int.com/en/products/first-defense

GENERAL NOTES:
1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 24".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plans).
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	48	1200	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	24 (MAX)	600 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	24 (MAX)	600 (MAX)	INLET PIPE (BY OTHERS)

4' DIAMETER FIRST DEFENSE STORMWATER SEPARATOR

MOD: 09/25/20 07/01/19

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Site Plans\C-DTLS.dwg|C-18 DETAILS By: KYLE SHALLOW

Colliers Engineering & Design

www.colliersengineering.com

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Doing Business as MASER CONSULTING

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN
FOR
BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC
TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

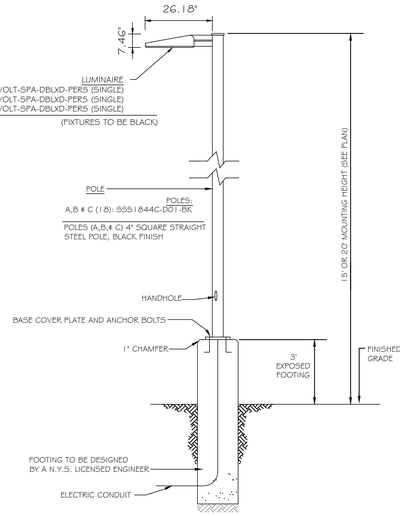
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-DTLS

SHEET TITLE: CONSTRUCTION DETAILS

SHEET NUMBER: 18 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

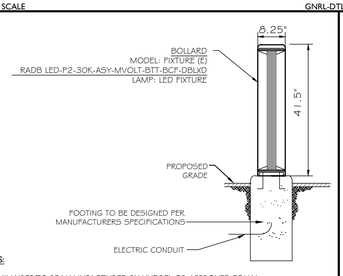


NOTES:

1. LUMINAIRES TO BE MANUFACTURED BY LITHONIA LIGHTING AND POLES BY HOLOPHANE (MANUFACTURER TO CONFIRM POLE SIZE) OR APPROVED EQUAL.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
3. FOOTING TO BE DESIGNED, SIGNED, AND SEALED BY A N.Y.S. LICENSED ENGINEER.
4. *VOLTAGE TO BE CONFIRMED BY ELECTRICIAN CONTRACTOR.
5. PROPOSED POLES HEIGHT TO BE MODIFIED IN FIELD TO MEET DESIGN. (AS REQUIRED)

POLE MOUNTED FIXTURE DETAIL

NOT TO SCALE | GNRL-DTLS-LGHT | 09/21/23

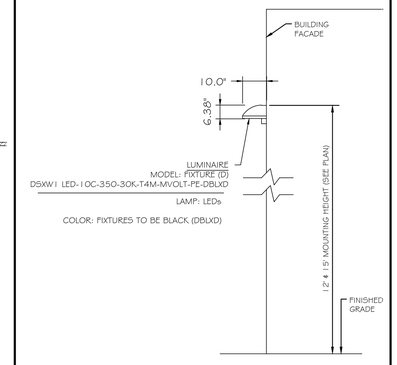


NOTES:

1. LUMINAIRES TO BE MANUFACTURED BY HYDREL OR APPROVED EQUAL.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
3. FOOTING TO BE DESIGNED PER MANUFACTURERS SPECIFICATIONS.
4. * - VOLTAGE TO BE PROVIDED BY ELECTRICIAN.

BOLLARD LIGHT DETAIL

NOT TO SCALE | GNRL-LGHT-DETL | 01/25/2024



NOTES:

1. LUMINAIRES TO BE MANUFACTURED BY LITHONIA LIGHTING OR APPROVED EQUAL.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
3. *VOLTAGE TO BE CONFIRMED BY ELECTRICIAN CONTRACTOR.

WALL MOUNTED FIXTURE DETAIL

NOT TO SCALE | GNRL-DTLS-LGHT | 09/21/23

1. THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
2. THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND VERIFY LOCATION OF ALL UTILITIES ON SITE PRIOR TO CONSTRUCTION.
3. ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
4. NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARD TO SIZE, SPECIES, OR VARIETY WITHOUT WRITTEN PERMISSION OF THE LANDSCAPE CONSULTANT. WRITTEN PROOF OF PLANT MATERIAL UNAVAILABILITY MUST BE DOCUMENTED.
5. THE LOCATION OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE FINAL LOCATION OF ALL PLANT MATERIAL, AND PLANTING BED LINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
6. ALL STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. ALL PLANT MATERIAL LOCATED WITHIN SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30" ABOVE THE ELEVATION OF THE ADJACENT CURB. ALL STREET TREES PLANTED IN SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED TO NOT HAVE BRANCHES BELOW 10'-0".
7. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
8. ALL PLANT MATERIAL SHALL BE PROPERLY INSTALLED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. CUT AND REMOVE JUTE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL. WIRE BASKETS AND NOT JUTE BURLAP SHALL BE COMPLETELY REMOVED PRIOR TO BACKFILLING THE PLANT PIT.
9. BRANCHES OF DECIDUOUS TREES SHALL BE PRUNED BACK BY NO MORE THAN ONE QUARTER (1/4) TO BALANCE THE TOP GROWTH WITH ROOTS AND TO PRESERVE THEIR CHARACTER AND SHAPE. THE CENTRAL LEADER OF TREE SHALL NOT BE PRUNED.
10. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOPSOIL, PEAT MOSS AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH CRUSHED STONE OR UNTIL FREE DRAINING.
11. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT NURSERY.
12. OPTIMUM PLANTING TIME: DECIDUOUS - APRIL 1 TO JUNE 1 & OCTOBER 15 TO NOVEMBER 30, CONIFEROUS - APRIL 1 TO JUNE 1 & SEPTEMBER 1 TO NOVEMBER 1. PLANTING OUTSIDE OF THE OPTIMUM DATES SHALL NOT BE CONDUCTED WITH OUT PRIOR APPROVAL FROM THE LANDSCAPE CONSULTANT.
13. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS. WATERING AMOUNTS SHOULD BE ADJUSTED AS RAIN EVENTS OCCUR. WATERING AFTER THE INITIAL 4 WEEKS SHALL BE ADJUSTED BASED ON SEASONAL CONDITIONS. WATERING SHALL NOT TAKE PLACE DURING THE HOTTEST POINT OF THE DAY.
14. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR TWO YEARS AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED BY A TREE OF SIMILAR SIZE AND SPECIES AT NO EXPENSE TO THE OWNER.
15. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 12" OF TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS SHALL BE CONDUCTED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED. SOIL PH SHOULD BE 5.5-6.5.
16. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH SEED AS INDICATED ON THE LANDSCAPE PLANS. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH THE GENERAL SEEDING NOTES ON THIS SHEET. ALL DISTURBED LAWN AREAS SHALL BE TOPSOILED, LIMED, FERTILIZED AND FINE GRADED PRIOR TO LAWN INSTALLATION.
17. ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED HARDWOOD BARK MULCH.
18. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
19. ALL PLANTING DEBRIS (WIRE, TWINE, RUBBER HOSE, BACKFILL ETC.) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. PROPERTY IS TO BE LEFT IN A NEAT ORDERLY CONDITION IN ACCORDANCE WITH ACCEPTED PLANTING PRACTICES.

GENERAL PLANTING NOTES

NOT TO SCALE | GNRL-PLNT-NOTE | 01/29/24

1. TEMPORARY SEEDING: REFER TO SOIL EROSION AND SEDIMENT CONTROL PLANS.
2. PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE OR APPROVED EQUAL; OPTIMUM SEEDING DATES ARE BETWEEN APRIL 1 AND MAY 31; AND AUGUST 16 AND OCTOBER 15. SEEDING OUTSIDE OF THE OPTIMUM DATES SHALL NOT BE CONDUCTED WITH OUT PRIOR APPROVAL. PERMANENT SEEDING TO BE APPLIED BY RAKING OR DRILLING INTO THE SOILS AT THE RATE GIVEN ABOVE.

TURF MIX

-TALL FESCUE, 'STINGRAY' (34%)
-TALL FESCUE, RAPTOR III (33%)
-HARD FESCUE, 'RIDU' (33%)

SEEDING RATE: 7-10 LBS./1,000 S.F. MIN

BIORETENTION AREA SEED MIXTURE
(NEW ENGLAND WETLAND PLANTS, INC. - NEW ENGLAND WETMIX, OR APPROVED EQUAL)

SPECIES LIST:

- FOX SEDGE, (CAREX VULPINIOIDEA)
- BLUNT BROOM SEDGE (CAREX SCOPARIA)
- LURID SEDGE (CAREX LURIDA)
- HOP SEDGE (CAREX LUPULINA)
- FOWL BLUEGRASS (POA PALUSTRIS)
- BEGGAR TICKS (BIDENS FRONDOSA)
- GREEN BULRUSH (SCIRPUS ATROVIRENS)
- SWAMP MILKWEED (ASCLEPIAS INCARNATA)
- FRINGED SEDGE (CAREX CRINITA)
- NEW YORK IRONWEED (VERONIA NOVEBORACENSIS)
- SOFT RUSH (JUNCUS EFFUSUS)
- STARVED/CALICO ASTER (ASTER LATERIFLORUS)
- BLUE FLAG (IRIS VERSICOLOR)
- AMERICAN MANNAGRASS (GLYCERIA GRANDIS)
- SQUARE STEMMED MONKEY FLOWER (MIMULUS RINGENS)
- SPOTTED JOE PYE WEED (EUPATORIUM MACULATUM)

SEEDING RATE: 18 LBS PER ACRE.

NATIVE UPLAND WILDLIFE FORAGE & COVER MEADOW MIX
(ERNST CONSERVATION SEEDS - ERNMX-123, OR APPROVED EQUAL)

SPECIES LIST:

- BIG BLUESTEM, (ANDROPOGON GERARDII)	34.4%
- SWITCHGRASS (PANICUM)	27.0%
- VIRGINIA WILDRYE (ELYMUS VIRGINICUS)	21.0%
- INDIANGRASS (SORGHASTRUM NUTANS)	9.0%
- PARTRIDGE PEA (CHAMAECRISTA FASCICULATA)	3.0%
- BLACKEYED SUSAN (RUDBECKIA HIRTA)	3.0%
- OXEYE SUNFLOWER (HELIOPSIS HELIANTHOIDES)	1.5%
- PLAINS COREOPSIS (COREOPSIS TINCTORIA)	0.5%
- SHOWY TICKTREFOIL (DESMODIUM CANADENSE)	0.4%
- COMMON MILKWEED (ASCLEPIAS SYRIACA)	0.1%
- WILD BERGAMOT (MONARDA FISTULOSA)	0.1%

SEEDING RATE: 20 LBS PER ACRE

3. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE IN COMPLIANCE WITH THE LATEST NYSDEC REGULATIONS. THIS INCLUDES, BUT LIMITED TO:
   1. NO FERTILIZER SHALL BE APPLIED BETWEEN DEC. 1 AND APRIL 1 IN ANY YEAR.
   2. SHALL NOT BE APPLIED WITHIN 20 FEET OF A WATER BODY.
   3. ONLY LAWN FERTILIZER WITH LESS THAN 0.67% BY WEIGHT PHOSPHATE CONTENT MAY BE APPLIED.
   (A SOIL TEST PRIOR TO FERTILIZER APPLICATION IS RECOMMENDED.)
4. IF SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 4.
5. MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL. MULCH WILL BE SPREAD AT RATES PER NYSDEC STANDARDS AND ANCHORED WITH A MULCH ANCHORING TOOL OR LIQUID MULCH BINDER, AND SHALL BE PROVIDED ON ALL SEEDLINGS. HYDROMULCH SHALL ONLY BE USED DURING OPTIMUM GROWING SEASONS.
6. AS NEEDED, WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
7. REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
8. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.

GENERAL SEEDING NOTES

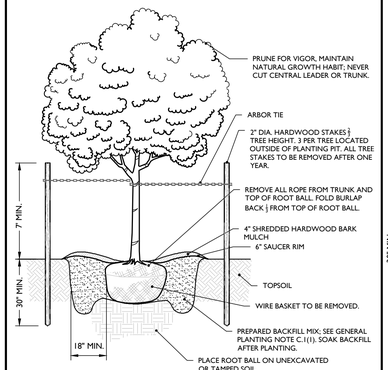
NOT TO SCALE | GNRL-SEED-NOTE | 01/29/24

PLANT DETAIL NOTES

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT. MULCH SHALL NOT TOUCH THE TREE TRUNK.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.
3. WIRE BASKETS AND NON-JUTE BURLAP MUST BE ENTIRELY REMOVED FROM THE ROOT BALL. JUTE BURLAP MUST BE REMOVED FROM THE TOP 1/3 OF THE ROOT BALL.
4. DEPTH OF PLANT PIT SHALL BE INCREASED BY 12" WHEREVER POOR SOIL CONDITIONS OCCUR, WITH THE ADDITION OF LOOSE AGGREGATE.
5. CONTRACTOR SHALL PARTIALLY FILL WITH WATER A REPRESENTATIVE NUMBER OF PITS IN EACH AREA OF THE PROJECT PRIOR TO PLANTING TO DETERMINE IF THERE IS ADEQUATE PERCOLATION. IF PIT DOESN'T PERCOLATE, MEASURES MUST BE TAKEN TO ASSURE PROPER DRAINAGE BEFORE PLANTING.
6. PLANTING MUST BE GUARANTEED FOR TWO FULL GROWING SEASONS FROM THE TIME OF FINAL ACCEPTANCE BY THE LANDSCAPE CONSULTANT. CONTRACTOR SHALL REMOVE ALL WRAPPING AT THE END OF GUARANTEE PERIOD OR SOONER PER PROJECT LANDSCAPE ARCHITECT.
7. BACKFILL MIXTURE TO BE SPECIFIED BASED UPON SOIL TEST AND CULTURAL REQUIREMENTS OF PLANT.
8. PRUNE DAMAGED AND CONFLICTING BRANCHES MAINTAINING NORMAL TREE SHAPE. NEVER CUT CENTRAL TRUNK OR LEADER.

PLANT DETAIL NOTES

NOT TO SCALE | PLNT-NOTE | 01/29/24

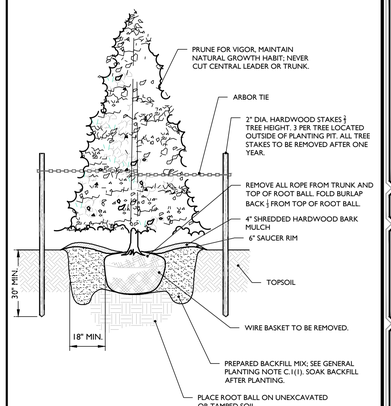


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

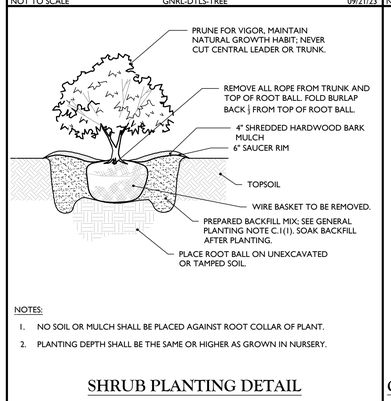


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

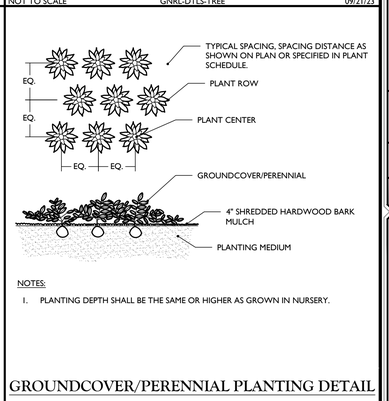


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

SHRUB PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

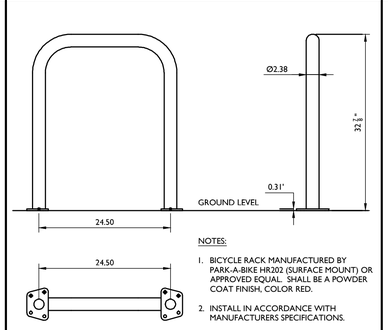


NOTES:

1. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

GROUNDCOVER/PERENNIAL PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

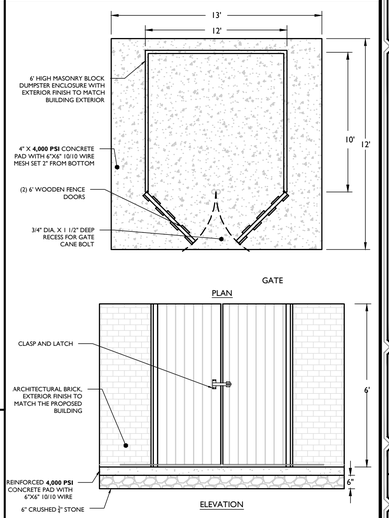


NOTES:

1. BICYCLE RACK MANUFACTURED BY PARK-A-BIKE HR202 (SURFACE MOUNT) OR APPROVED EQUAL. SHALL BE A POWDER COAT FINISH, COLOR RED.
2. INSTALL IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

INVERTED 'U' BICYCLE RACK DETAIL

NOT TO SCALE | MCCM-SITE-FNCE-2401 | 07/01/19



NOTES:

1. GATE TO REMAIN CLOSED WHEN NOT IN USE. HINGES TO INCLUDE SELF-CLOSING MECHANISM.

MASONRY TRASH ENCLOSURE (10' X 12') DETAIL

NOT TO SCALE | GNRL-DTLS-STND-GRID | 01/30/24

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:24-04'00'

STATE OF NEW YORK

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:	DRAWING NAME:		
23010468A	C-DTLS		

SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER:

19 of 19

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Site Plans\C-DTLS.dwg|C-19-DETAILS By: KYLE SHALLOW

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	01/29/24	REVISED PER PLANNING BOARD COMMENTS	AJS
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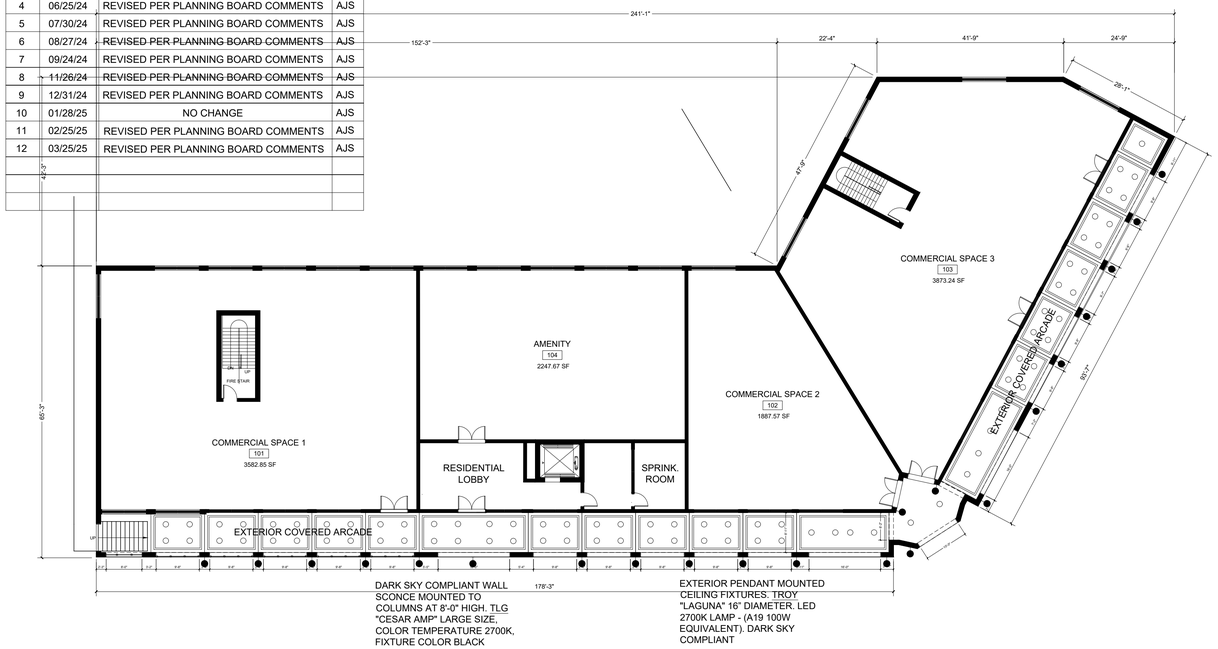
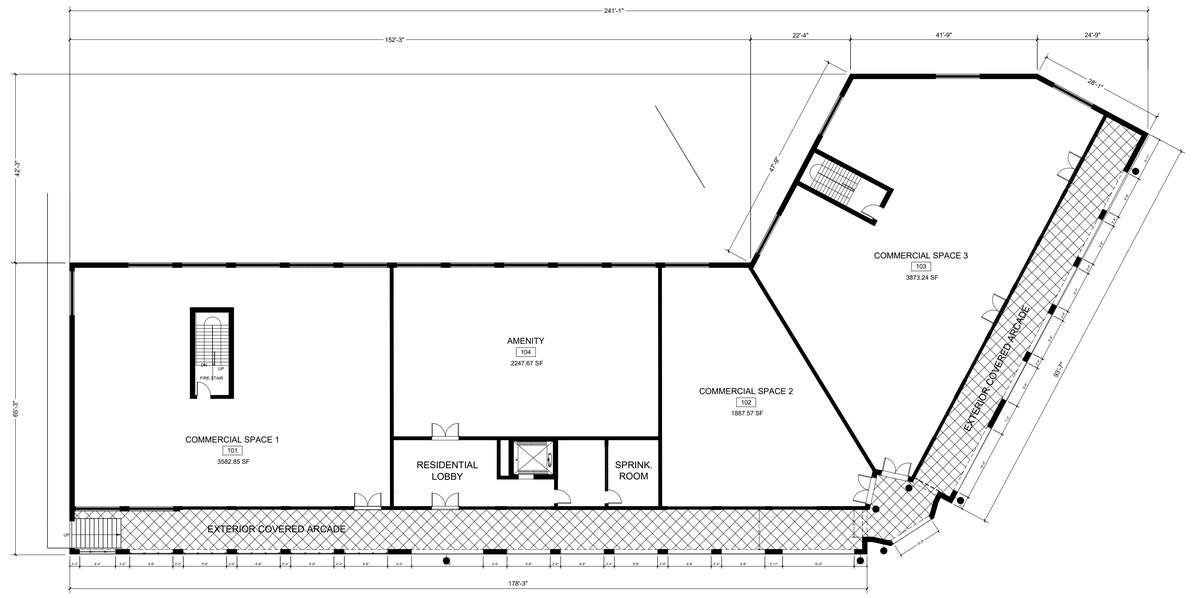
12	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS



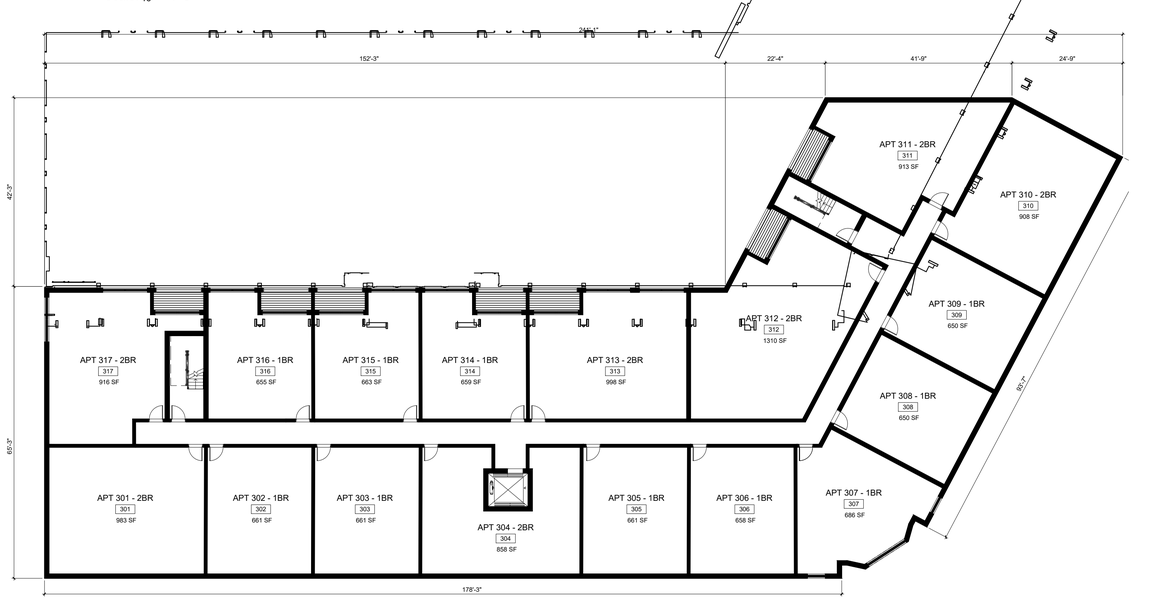
1st Floor Reflected Ceiling Plan at Arcade

Scale: $\frac{1}{16}$" = 1'-0"



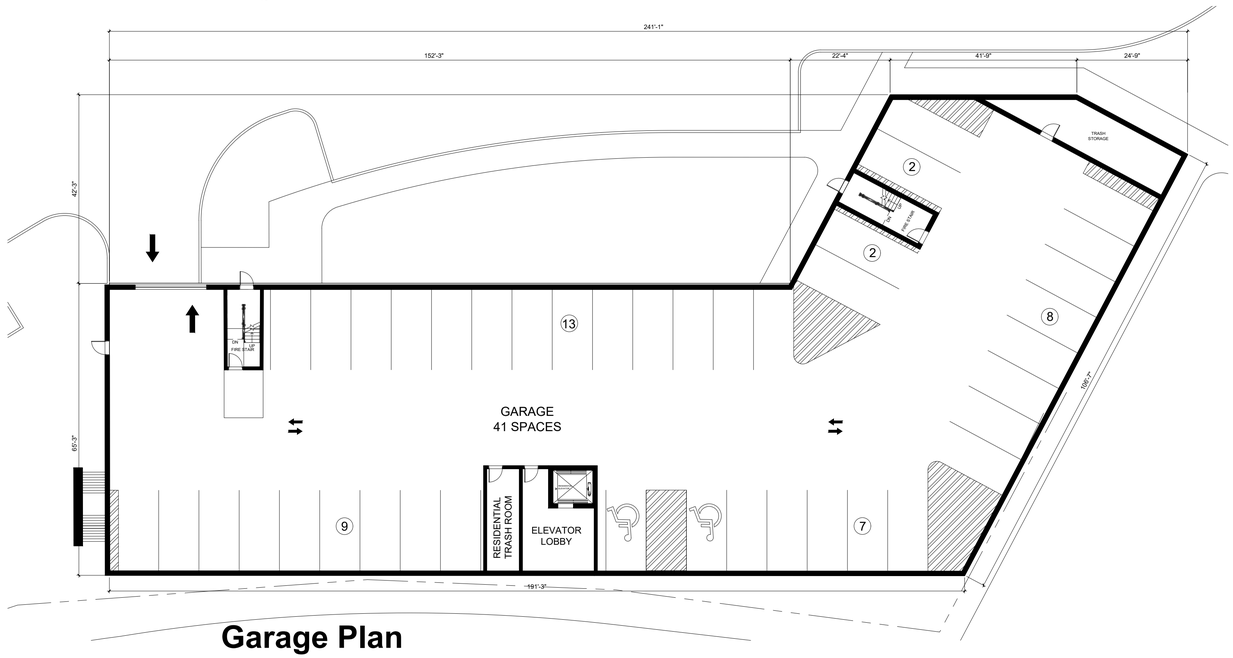
1st Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



2nd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



Garage Plan

Scale: $\frac{1}{16}$" = 1'-0"

Site Plan Application

Sheet A-101 - Building Plans - Beekman Street

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1/16" = 1'-0"
November 28, 2023

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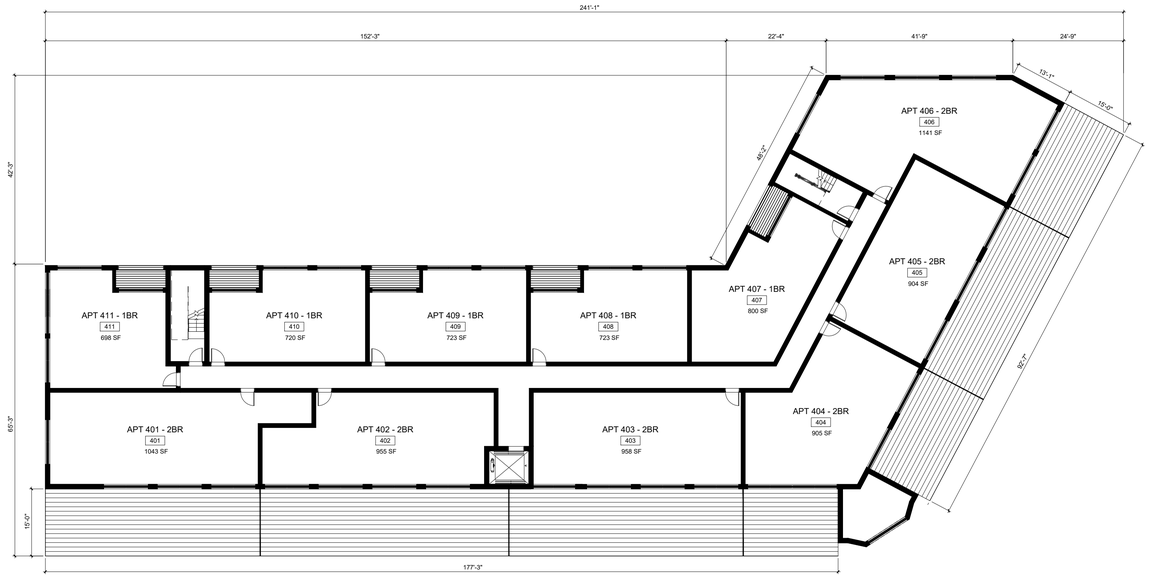
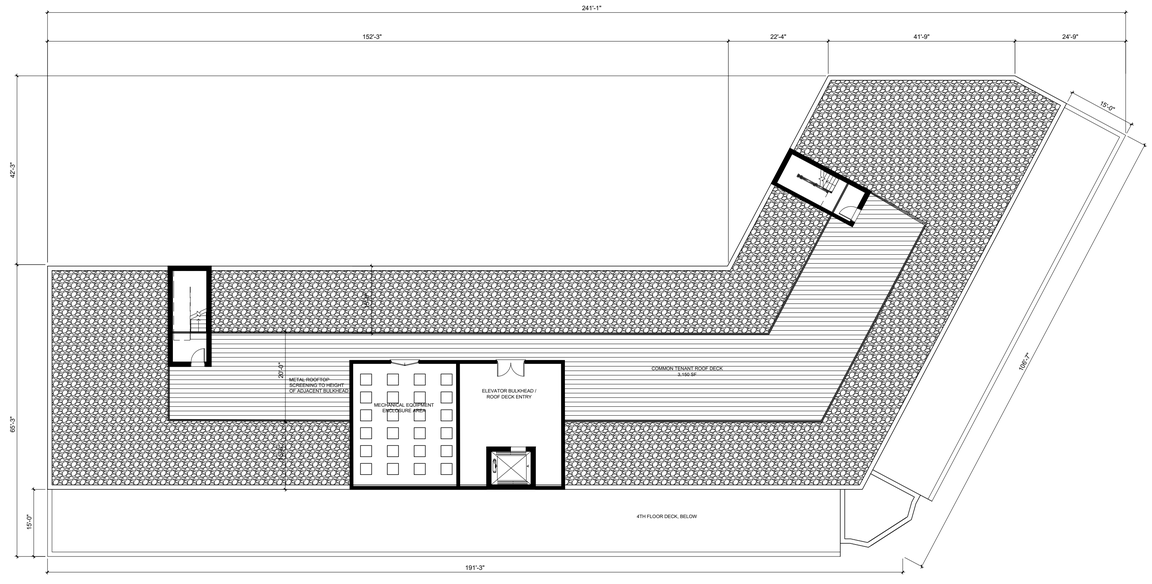
12	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS



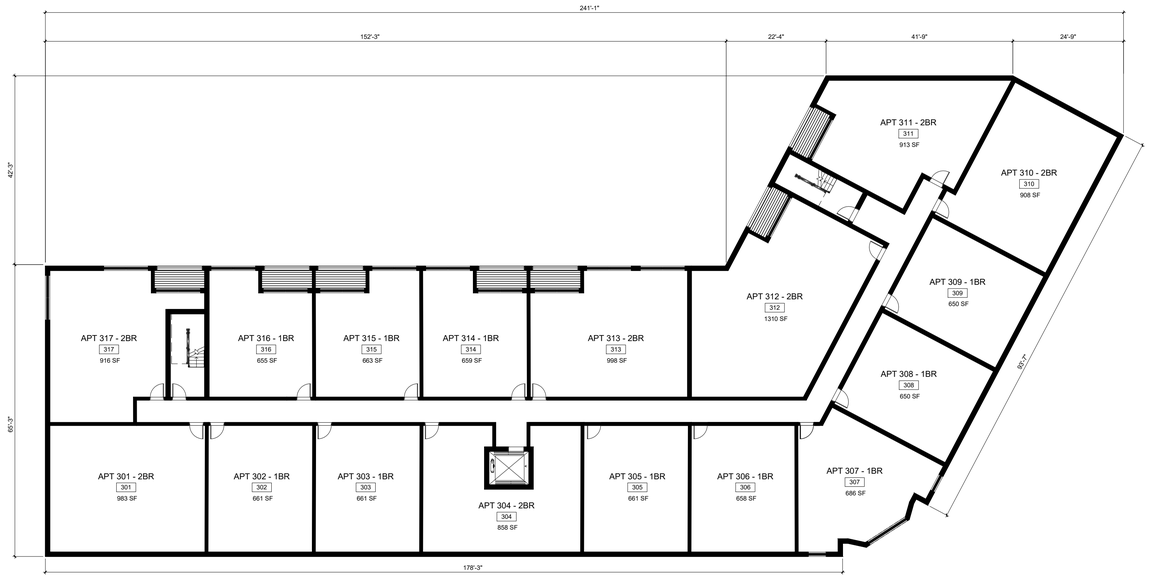
4th Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



Roof Plan

Scale: $\frac{1}{16}$" = 1'-0"



3rd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"

Site Plan Application

Sheet A-102 - Building Plans - Beekman Street

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1/16" = 1'-0"
November 28, 2023

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
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6	08/27/24	REVISED PER PLANNING BOARD COMMENTS	AJS
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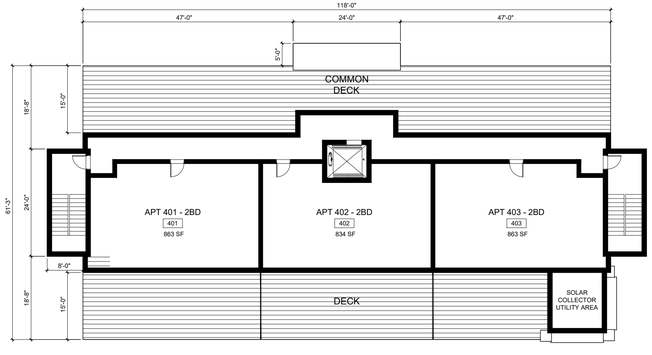
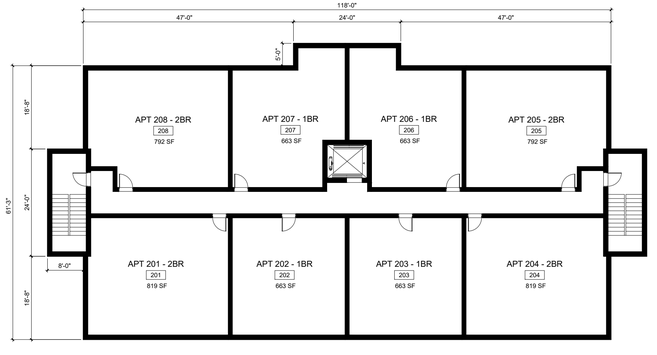


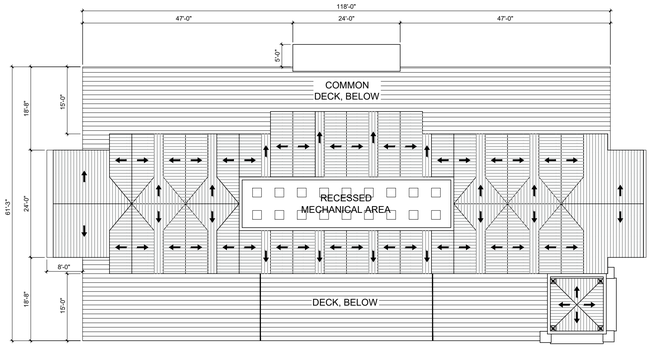
4th Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



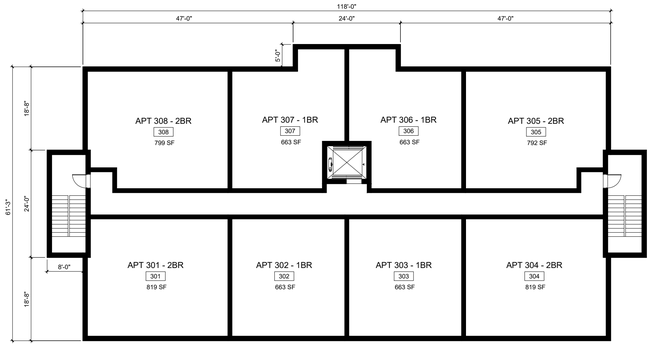
2nd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



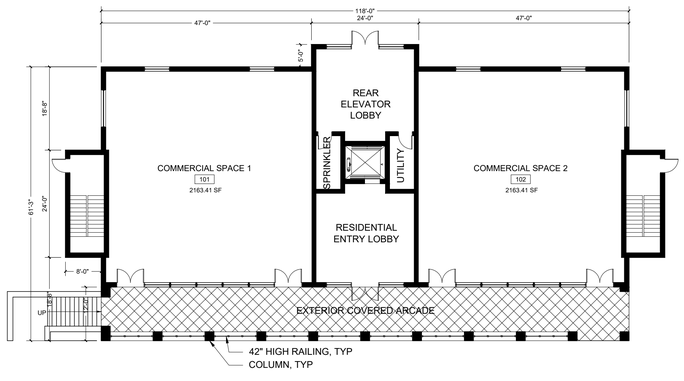
Roof Plan

Scale: $\frac{1}{16}$" = 1'-0"



3rd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



1st Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"

Site Plan Application

Sheet A-103 - Building Plans - High Street

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1/16" = 1'-0"
November 28, 2023

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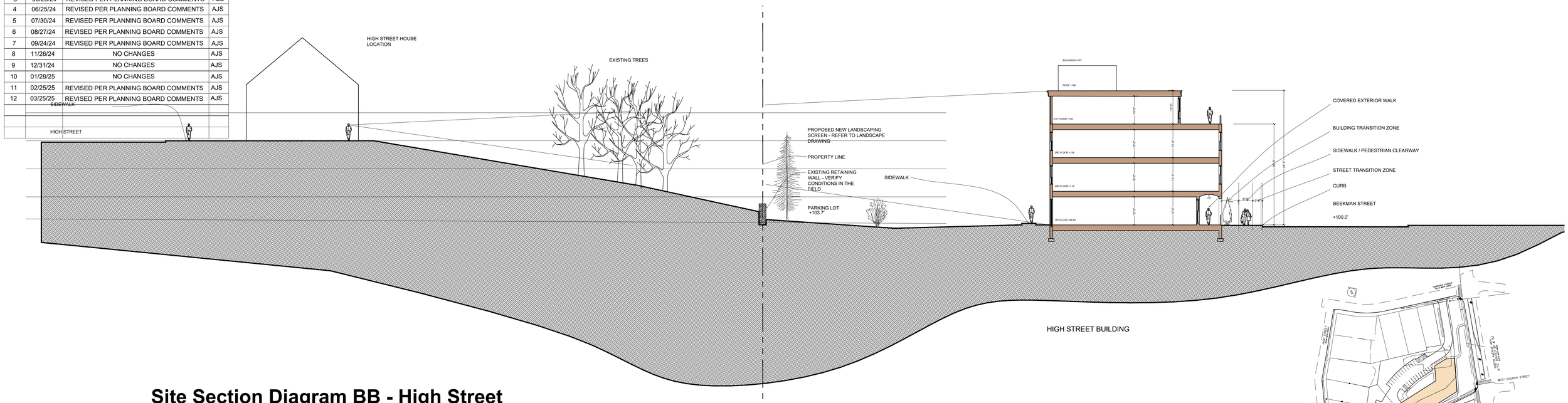
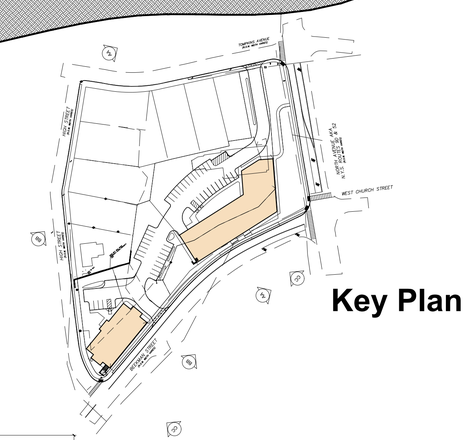
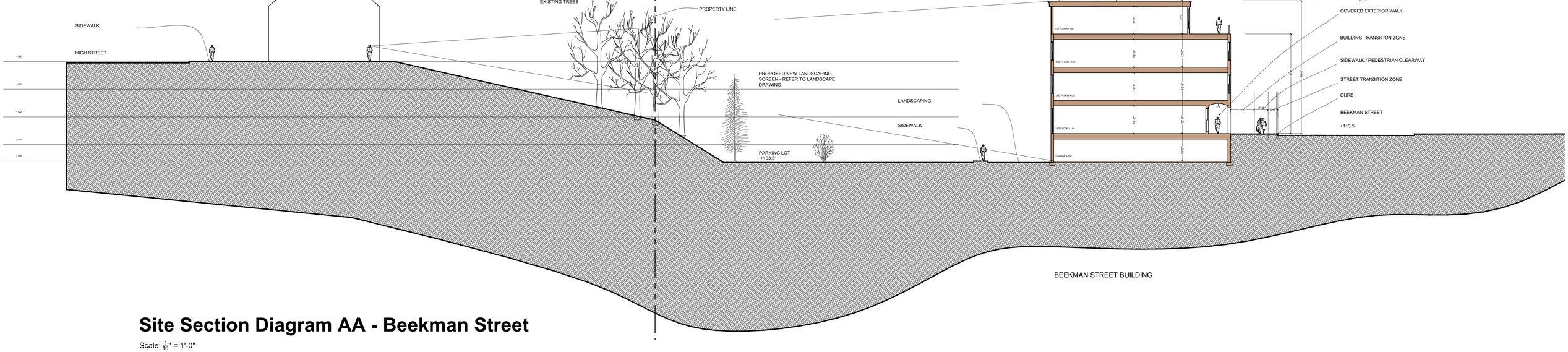


Site Section Diagram BB - High Street

Scale: $\frac{1}{16}$" = 1'-0"



Key Plan



Site Section Diagram AA - Beekman Street

Scale: $\frac{1}{16}$" = 1'-0"

Site Plan Application

Sheet A-104 - Site Section Diagram

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1/16" = 1'-0"
November 28, 2023

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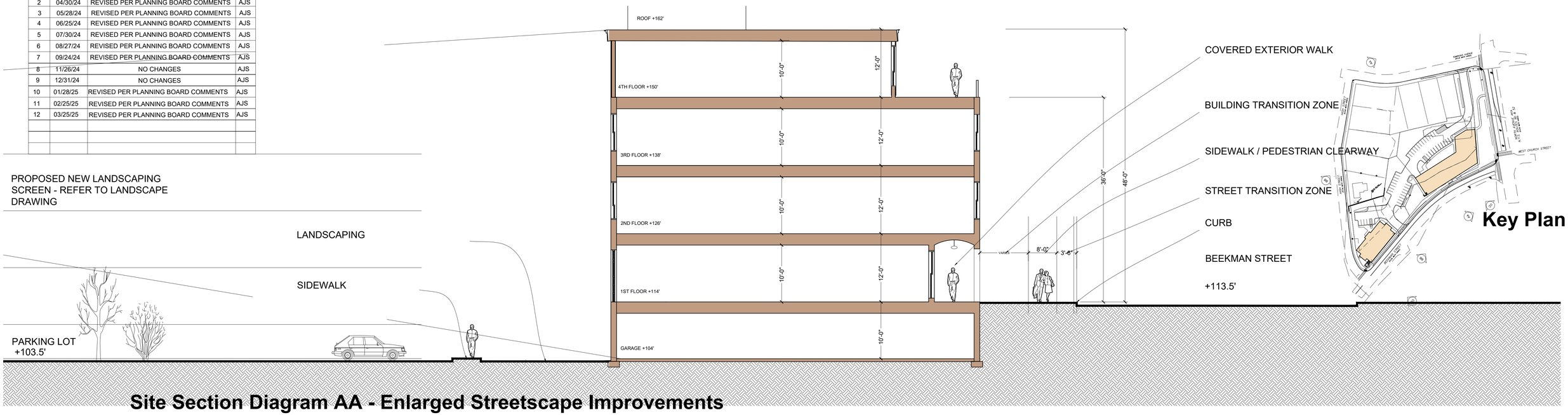
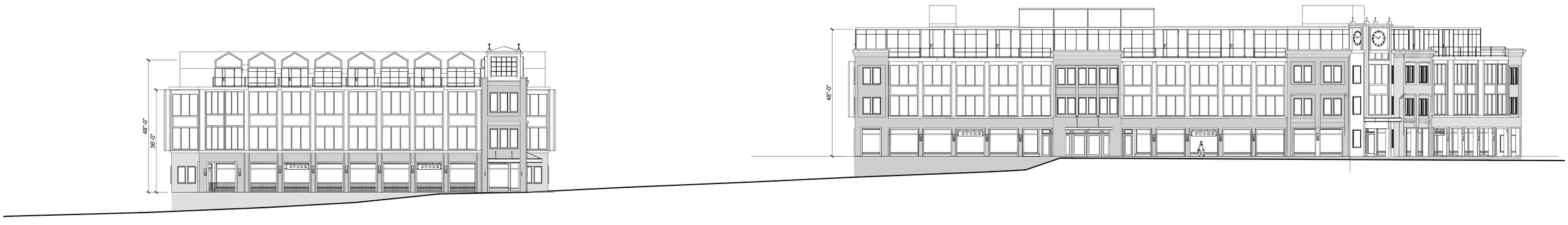


Site Section Diagram AA - Enlarged Streetscape Improvements

Scale: $\frac{1}{8}$" = 1'-0"



Site Section Diagram CC - At Sidewalk Along Beekman Street

Scale: $\frac{1}{16}$" = 1'-0"

NOTE: THE ELEVATIONS SHOWN IN THE SITE SECTION DIAGRAM ARE SCHEMATIC, AND ARE MEANT TO SHOW THE GENERAL SCALE OF THE BUILDING IN RELATION TO THE SIDEWALK FROM BEEKMAN STREET.

Site Plan Application

Sheet A-105 - Site Section Diagram

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

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Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
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555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1/16" = 1'-0"
November 28, 2023

1 Beekman Street Building - Elevation
Scale: 1/16" = 1'-0"

PERFORATED METAL EQUIPMENT SCREEN
COLOR: LIGHT GRAY

4th FLOOR METAL PANEL & WINDOW TRIM
COLOR: LIGHT GRAY

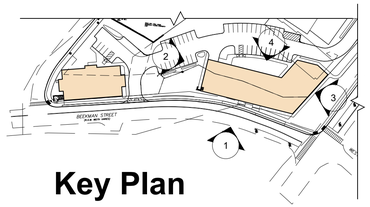
CORNICE & TRIM
COLOR: CHARCOAL GRAY

BRICK: GLEN GARY 53DD MIX
W/ MORTAR COLOR 'G601'

METAL PANEL & METAL TRIM
COLOR: BENJAMIN MOORE HC-462

DOUBLE GLAZED INSULATED
CASEMENT WINDOWS
ALUMINUM FRAMING COLOR:
BENJAMIN MOORE HC-462

METAL AND GLASS STOREFRONT
COLOR: MEDIUM GRAY



Key Plan

2 Beekman Street Building - Elevation
Scale: 1/16" = 1'-0"

3 Beekman Street Building - Elevation
Scale: 1/16" = 1'-0"

4 Beekman Street Building - Elevation
Scale: 1/16" = 1'-0"

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9	12/31/24	NO CHANGES	AJS
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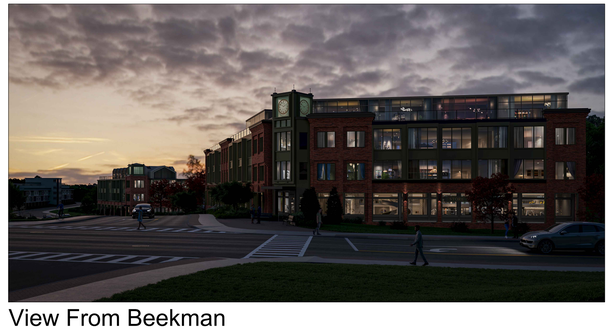
11	02/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS
12	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

View From Beekman

View From Beekman

View From Beekman



View From Beekman

Site Plan Application

Sheet A-106 - Elevations 1

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
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268 Main Street
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84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
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New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1/16" = 1'-0"
November 28, 2023

PERFORATED METAL EQUIPMENT SCREEN
COLOR: LIGHT GRAY

4th FLOOR METAL PANEL & WINDOW TRIM
COLOR: LIGHT GRAY

CORNICE & TRIM
COLOR: CHARCOAL GRAY

BRICK: GLEN GARY 53DD MIX
W/ MORTAR COLOR 'G601'

METAL PANEL & METAL TRIM
COLOR: BENJAMIN MOORE HC-462

DOUBLE GLAZED INSULATED
CASEMENT WINDOWS
ALUMINUM FRAMING COLOR:
BENJAMIN MOORE HC-462

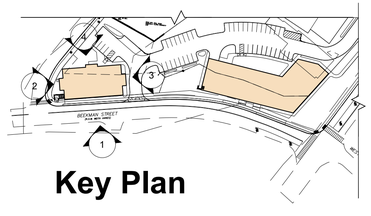
METAL AND GLASS STOREFRONT
COLOR: MEDIUM GRAY

1 High Street Building - Elevation
Scale: 1/16" = 1'-0"

2 High Street Building - Elevation
Scale: 1/16" = 1'-0"

3 High Street Building - Elevation
Scale: 1/16" = 1'-0"

4 High Street Building - Elevation
Scale: 1/16" = 1'-0"



Key Plan

View From High Street (With Landscaping)

View From High Street (Without Landscaping)

View at Corner

View From Beekman

View From Beekman

View From Beekman

REVISIONS:			
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2	04/30/24	REVISED PER PLANNING BOARD COMMENTS	AJS
3	05/28/24	REVISED PER PLANNING BOARD COMMENTS	AJS
4	06/25/24	REVISED PER PLANNING BOARD COMMENTS	AJS
5	07/30/24	REVISED PER PLANNING BOARD COMMENTS	AJS
6	08/27/24	REVISED PER PLANNING BOARD COMMENTS	AJS
7	09/24/24	REVISED PER PLANNING BOARD COMMENTS	AJS
8	11/26/24	NO CHANGES	AJS
9	12/31/24	NO CHANGES	AJS
10	01/28/25	REVISED PER PLANNING BOARD COMMENTS	AJS
11	02/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS
12	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

Site Plan Application

Sheet A-107 - Elevations 2

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1/16" = 1'-0"
November 28, 2023

Colliers
Engineering
& Design

Stormwater Pollution Prevention Plan

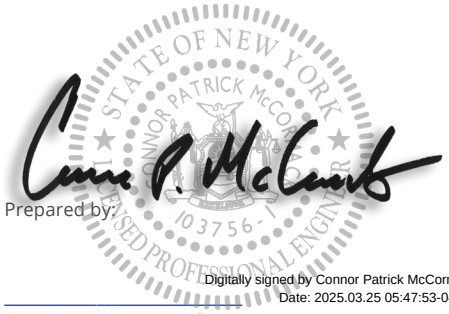
March 25, 2025

45 Beekman Street Mixed-Use Development
City of Beacon, Dutchess County, New York

Prepared for:

Beekman Arts Center LLC &
Bay Ridge Studios LLC
268 Main Street
Beacon, NY 12508

Prepared by:



Digitally signed by Connor Patrick McCormack
Date: 2025.03.25 05:47:53-04'00'

Connor P. McCormack, P.E.
New York State
Professional Engineer
License No. 103756

Colliers Engineering & Design
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Main: 845.564.4495
Colliersengineering.com

Project No. 23010468A

Colliers Engineering & Design

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Appendix 8 – NRCS Hydrologic Soil Mapping
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Appendix 11 – Contractor Certification Form
Appendix 12 – NYSDEC Deep-Ripping & Decompaction Manual
Appendix 13 – NOAA Precipitation Data
Appendix 14 – Erosion and Sediment Control Plans
Appendix 15 – NJ CAT Certification – First Defense

EXECUTIVE SUMMARY

Project Name:	Owner Name and Address:
45 Beekman Street Mixed-Use Development City of Beacon Dutchess County New York	Beekman Arts Center LLC & Bay Ridge Studios LLC 268 Main Street Beacon, NY 12508
Project Location:	**Project Engineer and Firm:**
45 Beekman Street City of Beacon, Dutchess County , NY 12508 Tax lots: 5955-19-706012, 5954-26-689990, 5954-26-781983	Connor P. McCormack, P.E. Colliers Engineering & Design 555 Hudson Valley Avenue, Ste 101 New Windsor, NY 12553 (845) 564-4495
MS4 Contact:	**Contractor Name and Address:**
City of Beacon (NYR20A040) 1 Municipal Plaza Beacon, NY 12508	TBD

Figure 1: Project Location Aerial

INTRODUCTION

The project site is in the city of Beacon, Dutchess County, New York, bounded by North Avenue (Rt 9D), Beekman Street, High Street, and Tompkins Avenue. The property is comprised of tax lots 5955-19-706012, 5954-26-689990, & 5954-26-781983 and is located within the Linkage (L) Zoning District and has a total lot area 77,717 square feet, or 1.79 acres. The existing site is partially developed with an existing art studio, driveways, and parking lot. The balance of the site is maintained by lawn and woods.

The applicant proposes to redevelop the site with two (2) 4-story mixed-use buildings with ground floor commercial space and multi-family residential units. The project will include off-street surface and garage parking facilities (91 total spaces) using existing driveway connections to Tompkins Avenue and Beekman Street. The site improvements also include water and sanitary sewer service connections to City of Beacon mains, stormwater management features necessary to support the development, and landscaping and lighting improvements.

To meet the stormwater requirements, (1) one bioretention basin, (1) one subsurface detention system, and (1) hydrodynamic separator is proposed on site. These stormwater features have been designed in accordance with the July 31, 2024 New York State Stormwater Management Design Manual and local municipal requirements.

Due to the size of the project, coverage under the State Pollutant Discharge Elimination System General Permit (SPDES GP 0-25-001), administered by New York State Department of Environmental Conservation (NYSDEC), is required.

STORMWATER MANAGEMENT GOALS

The Stormwater Pollution Prevention Plan (SWPPP) has been prepared in compliance with the New York State Department of Environmental Conservation (NYSDEC), State Pollutant Discharge Elimination System (SPDES) and The General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-25-001 (See ***Appendix 4***). The SWPPP is a plan for controlling runoff and pollutants from a site during and after construction activities. The principal objective of this document is to comply with the SPDES Permit for construction activities by planning and implementing the following practices:

- Reduction or elimination of erosion and sediment loading to water bodies during and after construction.
- Control of the impact of stormwater runoff on the water quality of the receiving waters.
- Control of the peak rate of runoff during and after construction.
- Maintenance of stormwater controls during and after completion of construction.

Classification & Standards

The activities associated with this project are eligible for coverage under this permit. Using the General Permit guidelines for coverage, a summary of classification and requirements is provided below:

Project Type:

- *Commercial developments.*
- *Multi-family residential developments.*

Classification: ***Appendix B***, Table 2, of the GP-0-25-001 "Construction activities that require the preparation of a SWPPP that includes Post Construction Stormwater Practices".

The following guidance documents, in addition to various resources located on the NYS Department of Environmental Conservation website, were used in the preparation of this SWPPP.

- The New York State Stormwater Management Design Manual, by New York State Department of Environmental Conservation, July 31,2024.
- New York Standard Specifications for Erosion and Sediment Control, by New York State Department of Environmental Conservation, November 2016.

The SWPPP is intended to be a *'living'* document and should be revised and updated whenever site conditions dictate. Any proposed modifications shall be reviewed by the owner/operator prior to incorporation in the SWPPP and implementation at the project site. The certifying engineer of this SWPPP document shall be notified of any proposed modifications to this document. Modifications shall be in accordance with the NYSDEC technical standards.

METHODOLOGY

1. The watersheds are divided into subareas, by topography, soils, and land use. A summary of the watershed areas, composite curve numbers, and travel times are shown in Table 1.
2. Rainfall depths used for this analysis were taken from NOAA Atlas 14 data for the 100, 10, and 1-year 24-hour storms as directed in the NYSSMDM.
3. Topographical mapping is taken from a survey titled "Topographic Contour Survey of the lands Beekman Arts Center, LLC & Bayridge Studios, LLC", prepared by Jonathan N. Millen, LLS; Dated 11/3/2023 and supplemented with best available mapping.
4. The required water quality volume (WQv) was calculated in accordance with Section 4.2 and Chapter 9 (redevelopment) of the NYSSMDM. This is also the required RRv as per Section 4.3 of the NYSSMDM.
5. The provided RRv was calculated with the Green Infrastructure (GI) Worksheets, Version 1.6, provided by NYSDEC. The worksheets are included in ***Appendix 3***.
6. As this project is defined as re-development with an increase in impervious areas, the study shows mitigation of the proposed impervious areas as required per the NYSSMDM.
7. The peak flows from the watersheds in the existing condition are computed using the runoff curve numbers taken from TR-55 to determine undeveloped peak runoff and runoff hydrographs at the design points. The existing peak flows are presented in the report.
8. In the post-development condition, the peak flows from the proposed development are computed using the runoff curve numbers taken from TR-55. The watersheds are adjusted for the proposed improvements and grading of the site. The runoff flows are hydraulically routed for updated travel times, diversions, and new storage structures, as necessary. The resulting proposed peak flows at the design point are presented in the report.

9. Erosion and sediment control plans and details have been included with the site plans. A full Erosion & Sediment Control Plan (plans and construction sequencing) designed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (aka the "bluebook") has been included in the ***Appendix*** of this document.
10. Maps indicating the various drainage conditions are enclosed in this report. Schematic diagrams of the flow models in the existing and proposed conditions are included in the HydroCAD output within ***Appendix 2***.
11. A Notice of Intent (NOI) for GP-0-23-001 has been included in the ***Appendix*** of this report.

DISCUSSION

Discussion of Design Points

The Project has one (1) design point, studied to mitigate stormwater peak flow and provide the required water quality requirements. The design point and drainage area were limited, wherever possible to the area of the proposed project site. The design point evaluated in this report is described as follows:

Design Point 1 is located at a storm drain at the northern corner of Beekman Street and High Street. It receives runoff from the project site, the surrounding rights-of-way, and the surrounding properties to the north and west of the project site. The runoff enters the design point via storm pipes either from other inlets on High Street or from the flared outlet section located on the project site along Beekman Street.

Table 1: Watershed Characteristics

Existing Conditions			
WS Name	**Area**	**CN**	**Tc (min)**
WS 1	4.348	76	15.4
Totals	4.348	-	-
Proposed Conditions			
WS Name	**Area**	**CN**	**Tc**
PWS-1	0.602	80	6.0
PWS-2	0.621	72	6.0
PWS-3	0.121	98	6.0
PWS-4	0.257	98	6.0
PWS-5	2.099	75	6.0
PWS-6	0.178	98	6.0
PWS-7	0.015	91	6.0
PWS-8	0.388	85	6.0
PWS-9	0.068	85	6.0
Totals	4.348	-	-

Soil Types

Soil data for this project was obtained from the NRCS Web Soil Survey (WSS) as operated by the USDA Natural Resources Conservation Service (NRCS) (See ***Appendix 8***)

One (1) soil designation is identified within the project site. The project site consists entirely of Dutchess-Cardigan complex, undulating, rocky (DwB). A further detailed description of the soil characteristics and properties can be found in ***Appendix 8*** of this report***.***

Hydrologic Soil Group (HSG)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four (4) groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long duration storms. The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D and C/D). Conservatively, dual-class soil groups are considered "D" soils.

Table 2: Hydrologic soil groups

HSG	Soil (abbreviation)
B	DwB

Soil Boring and Infiltration Testing

Project specific soil testing has not yet been conducted as part of the preliminary stormwater designs. The required stormwater testing shall be conducted to confirm the existing soil conditions within the proposed basin locations. The final SWPPP and stormwater design shall be adjusted as necessary based on forthcoming soil testing.

Redevelopment.

As defined in Chapter 9 of the NYSSMDM, redevelopment activity is disturbance and reconstruction of existing impervious surfaces. This includes impervious surfaces removed within the last five (5) years. Redevelopment is distinguished from new development in that new development refers to construction on land where there had not been previous construction. Redevelopment specifically applies to constructed areas with impervious surface.

According to the Design Manual, Redevelopment of previously developed sites is encouraged from a watershed protection standpoint because it often provides an opportunity to conserve natural resources in less impacted areas by targeting development to areas with existing services and infrastructure. At the same time, redevelopment provides an opportunity to correct existing problems and reduce pollutant discharges from older developed areas that were constructed without effective stormwater pollution controls.

Site constraints associated with pre-developed project sites are another factor that makes it more difficult to provide standard stormwater practices (SMPs). The biggest constraints encountered on this site are primarily the presence of highly compacted and poorly drained soils. Chapter 9 of the NYSSMDM sets forth alternative design criteria for certain redevelopment projects because the technical standards contained elsewhere in the Manual were primarily intended for new development projects and compliance with those standards may present a challenge to some redevelopment projects.

All of the new development is located within the watershed's tributary to design point 1, therefore the net increase in impervious surface (0.31 acres) has been treated in these watersheds. A breakdown of the change in impervious areas for the project has been included below.

Table 3: Redevelopment Impervious Cover Comparison

Existing Tributary Impervious Area (Acres)	Proposed Tributary Impervious Area (Acres)	Net Change in Tributary Impervious Area (Acres)	Percent Change in Tributary Impervious Area
1.90	2.21	0.31	16%

Section 9.2.1 of the NYSSMDM details the sizing criteria for both water quantity and water quality control practices. If redevelopment results in no increase or a reduction of impervious area or changes to hydrology that increase the discharge rate, the one-, ten-, and hundred-year criteria will not be necessary. This consideration does not mean that quality or existing quantity controls may be neglected in planned designs. Since there are no existing quality or quantity controls on site, they cannot be neglected; therefore, the proposed design incorporates practices ensuring the reduction of peak flow rates for all criteria at all design points.

Because the project is considered "redevelopment with an increase in the impervious area", the water quality design will utilize two sets of design criteria. The 0.31 acres of additional impervious area will be considered new development. A Bioretention basin within underdrains has been decided to provide WQv for this "new development" (see table 5). The remaining impervious area shall be treated as redevelopment. As outlined in Section 9.2.1.B.IV of the design manuals. **The redevelopment water quality requirement shall be designed to treat 75% of the water quality volume from the impervious area within the LOD (1.469 Acres).**

The project has been designed to treat the required redevelopment water quality volume using an alternative treatment practice, a hydrodynamic separator. The hydrodynamic separator is a rate-based practice but has been designed to capture and treat the required impervious area outlined below:

- Required redevelopment treatment area = 75% * 1.469 acres = 1.102 acres
- Provided redevelopment treatment area = 1.1259 acres (impervious area from watersheds PWS-3, PWS-4, PWS-5 & PWS-9)

The sizing information for the hydrodynamic separator has been included later in this report.

Zero-Net Increase:

The proposed storm water improvements for the site provide the required channel protection (CPv), overbank flood protection (Qp), and extreme flood protection (Qf). Peak flows have been reduced at the selected design point in the proposed condition for the 100, 10, and 1-year storms. These peak flow reductions can also be found in Table 4 below.

Table 4: Existing and Proposed Peak Flow Summary

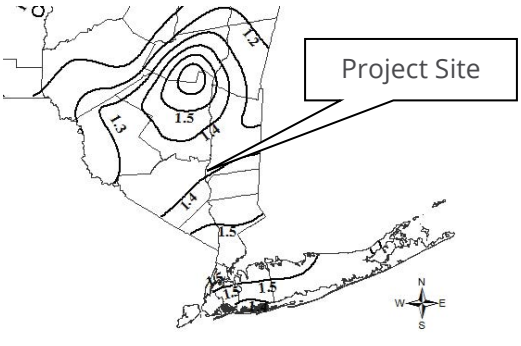
	Storm Events	Existing	Proposed	Diff.	Percent
DP 1	1	2.47	2.41	-0.06	-2.43%
	10	9.68	9.68	-0.00	-0.00%
	100	19.50	19.47	-0.03	-0.15%

*Peak Flows in Cubic Feet per second (CFS)

As is evident in the table above, attenuation of the peak flows by diversion, site planning, and the utilization of SMP's with RRv capacity have effectively reduced or maintained the peak discharge while providing the required water quality, which will be further discussed below.

Water Quality Volume (WQv):

The Water Quality Volume (WQv) is designed to improve water quality. The design captures and treats 90% of the average annual stormwater runoff volume. The WQv is directly related to the impervious cover created at a site. The 90% rainfall event value (P) used in the calculations (1.40") is shown below in the portion of Figure 4.1 from Section 4.2, pages 4-3 in the NYSSMDM.



90% Rule:

$WQ_v = [(P)(R_v)(A)] /12$
$Rv = 0.05+0.009(I)$
I = Impervious Cover (Percent)
Minimum Rv = 0.2
P = 90% Rainfall Event Number (See Figure 4.1)
A = site area in acres

Colliers Engineering & Design determined the impervious area for each watershed in the proposed condition. The Runoff Coefficient "Rv" in the computation of Water Quality Volume WQv is

dependent on the percent impervious cover. As per Section 4.2 of the NYSSMDM, 100% of the water quality volume shall be treated.

Table 5: Required Water Quality Calculation

Watershed	Area (A) Acres	90% Rainfall Event Number (P) Inches	Impervious Area treated Acres	Percent Impervious (I) %	Runoff Coefficient Rv	Required WQv Cf	Provided WQv Cf
PWS-1	0.60	1.40	0.31	52%	0.52	1,570*	1,570

* The required WQv is based on the 0.31 Acres of new impervious area.

The total required water quality volume per NYSDEC standards is based on the proposed increase in impervious area (new development) 0.31 acres, is 1,570 Cf or 0.036 Ac-ft. As shown in table 5 above, the current design provides the required Water quality volume.

Runoff Reduction Volume

The runoff reduction volume (RRv) is designed to reduce the stormwater volume leaving the site by capturing an amount equal to the computed water quality volume and infiltrating it onsite. However, for sites that cannot reduce runoff in an amount equal to the water quality volume, a minimum RRv is allowed if the project demonstrates acceptable limitations. The minimum RRv requirement (in acre-feet) was calculated as follows:

RRv_{min} = [(P)($\bar{R}$v)(S)(Aic)]/12 where,
I = Percent Impervious Cover (must be 100%)
P = 90% rainfall event = 1.4
$\bar{R}$v = 0.05+ [(0.009) (I)] = 0.95
S = Hydrologic Soil Group Reduction Factor = 0.40 (100% HSG B)
Aic = Total Area of new impervious cover (acres) = 0.31

$$RRv_{min} = \frac{[(P)(\bar{R}v)(S)(Aic)]}{12} = \frac{[(1.4)(0.95)(0.40)(0.31)]}{12} = 0.014 \text{ Acre-ft} = \mathbf{599\ ft^3}$$

Runoff from the new development impervious area has been treated by bioretention basins. Within these proposed practices, the entire WQv has not been reduced using standard SMPs with RRv capacity. The RRv and for each proposed practice is included in Table 6 below. Supporting calculations are provided in ***Appendix 3***.

Table 6 –RRv Volumes Provided

Watershed	Treatment Practice	RRv Provided (CF.)
PWS-1	Bioretention Basin (F-5)	632

The proposed development requires a minimum runoff reduction of 541 cf (0.012 Ac-Ft) to be reduced and total water quality to be treated for the proposed improvements. The proposed design exceeds the minimum requirement, providing an RRv of 632 cf (0.058 Ac-ft) and meets the requirement set forth by the NYSDEC requirements. This aspect of the design has been met.

Runoff Reduction Volume (RRv) through Site Planning:

The application of site planning and green infrastructure to reduce water quality volume with runoff reduction practices can either reduce the required water quality volume to be treated; or can completely account for the required water quality volume. The summary of this analysis can be found below. The combination of practices provided on site exceeds the minimum required water quality and runoff reduction for the proposed development.

The basic premise of runoff reduction is to recognize the water quality benefits of certain practices by allowing for a reduction in the water quality treatment volume. Runoff reduction is first achieved through better site design during the planning stages and has been implemented in the planning and design of this project as described in this report.

In accordance with Section 5.2 "Planning for Green Infrastructure: Reduction of Impervious Cover" of the NYSDEC Stormwater Management Design Manual, the proposed site plan has been designed to meet the planning techniques as follows:

Table 7: Green Infrastructure Site Planning

Preservation of undisturbed Areas	
Delineate and place into permanent conservation undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.	The extent of the clearing was limited to meet the user's needs. The project site is within the city and most of the site has been disturbed for construction in the past.
Preservations of Buffers	
Define, delineate and preserve naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.	Not applicable for this project.
Reduction of Clearing & Grading	

Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	The clearing limit was minimized using maximum allowable slopes and retaining walls to meet grade where applicable.
Locating Development in Less Sensitive Areas	
Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	The project is classified as redevelopment and there are no environmentally sensitive areas on site.
Open Space Design	
Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	Open areas are proposed on site.
Soil Restoration	
Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of post construction practices.	Compacted soils located in open areas without shallow existing utilities will be tilled in order to restore the original properties of the soil prior to seeding. (*see* ***Appendix 11***)
Roadway Reduction	
Minimize roadway widths and lengths to reduce site impervious area.	Roadway widths were reduced wherever possible to meet the end users needs and for emergency vehicle access.
Sidewalk Reduction	
Minimize sidewalk lengths and widths to reduce site impervious area.	Sidewalks added where needed to adequately and safely serve the pedestrian needs of the facility.
Driveway Reduction	
Minimize driveway lengths and widths to reduce site impervious area.	The proposed driveways have been minimized wherever possible.
Cul-de-Sac Reduction	
Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	N/A no Cul-de-Sacs are proposed.
Building Footprint Reduction	

Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	The building were designed to meet the potential end user's needs.
Parking Reduction	
Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, minimizing stall dimensions, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	The parking spaces were limited to what is required by local municipal code and the end users needs.

Green Infrastructure Techniques (GITs):

After considering the reductions through Site Planning mentioned above, RRv remains to be treated through GITs and/or Standard SMPs. Chapter 5 of the NYSSMDM outlines the various Green Infrastructure Techniques that can be implemented on-site to achieve runoff reduction. The GI Worksheets included in the ***Appendix*** of this report provide the calculations for the Green Infrastructure Techniques chosen to treat the Runoff Reduction Volume for this project. Below is a brief description of each Green Infrastructure Technique along with a discussion regarding the feasibility of each technique with respect to this project.

Table 8: Green Infrastructure Feasibility

Conservation of Natural Areas	
Retain the pre-development hydrologic and water quality characteristics of undisturbed natural areas, stream and wetland buffers by restoring and/or permanently conserving these areas on a site.	There are no natural areas on the project site. it is located at the center of the City of beacon and is surrounded on all sides with development.
Sheetflow to Riparian Buffers or Filter Strips	
Undisturbed natural areas such as forested conservation areas and stream buffers or vegetated filter strips and riparian buffers can be used to treat and control stormwater runoff from some areas of a development project.	Not applicable for this project.
Vegetated Open Swale	
The natural drainage paths, or properly designed vegetated channels, can be used instead of constructing underground storm sewers or concrete open channels to increase time of	Vegetated open swales were used to divert clean runoff around the site, towards the design point.

concentration, reduce the peak discharge, and provide infiltration.	
Tree Planting/Tree Box	
Plant or conserve trees to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. Trees can be used for applications such as landscaping, stormwater management practice areas, conservation areas and erosion and sediment control.	Tree planting has been proposed through the site but has not been quantified as a stormwater mitigation.
Disconnection of Rooftop Runoff	
Direct runoff from residential rooftop areas and upland overland runoff flow to designated pervious areas to reduce runoff volumes and rates.	Based on the site of the proposed building this is not a recomendded pratice.
Stream Daylighting for Redevelopment Projects	
Stream Daylight previously-culverted/piped streams to restore natural habitats, better attenuate runoff by increasing the storage size, promoting infiltration, and help reduce pollutant loads.	This strategy is not applicable to the project.
Rain Garden	
Manage and treat small volumes of stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression.	There are a few green locations proposed throughout the development but rain gardens have not been proposed on site.
Green Roof	
Capture runoff by a layer of vegetation and soil installed on top of a conventional flat or sloped roof. The rooftop vegetation allows evaporation and evapotranspiration processes to reduce volume and discharge rate of runoff entering conveyance system.	The structural design and use of the proposed buildings do not allow for this technique.
Stormwater Planter	
Small landscaped stormwater treatment devices that can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve quality.	Landscaping in green areas and planted beds are proposed throughout the development, but planters have not been proposed for treatment. No credit has been taken in the SWPPP.

Rain Tank or Cistern	
Capture and store stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities.	This practice has not been used for the proposed development.
Porous Pavement	
Pervious types of pavements that provide an alternative to conventional paved surfaces, designed to infiltrate rainfall through the surface, thereby reducing stormwater runoff from a site and providing some pollutant uptake in the underlying soils.	Due to maintenance concerns and the redevelopment classification of the site, this practice was not proposed.

The bioretention basins account for the runoff reduction as required. The site has been designed to meet the required water quality requirements without accounting for the pretreatment volume tributary to the proposed basins.

Soil restoration efforts, including mechanical decompaction and compost amendment in accordance with Section 5.1.6 and Table 5.3 of the NYSSMDM, are proposed for areas to be disturbed for improvements that will not be impervious at the final buildout.

Refer to Tables 7 and 8 above for the decision-making matrices utilized here. The design for the project utilized standard SMPs with RRv capacity to attain the required minimum runoff reduction volume and water quality for new construction and redevelopment, respectively. NYSDEC Green Infrastructure (GI) worksheets can be found in ***Appendix 3*** summarizing calculations.

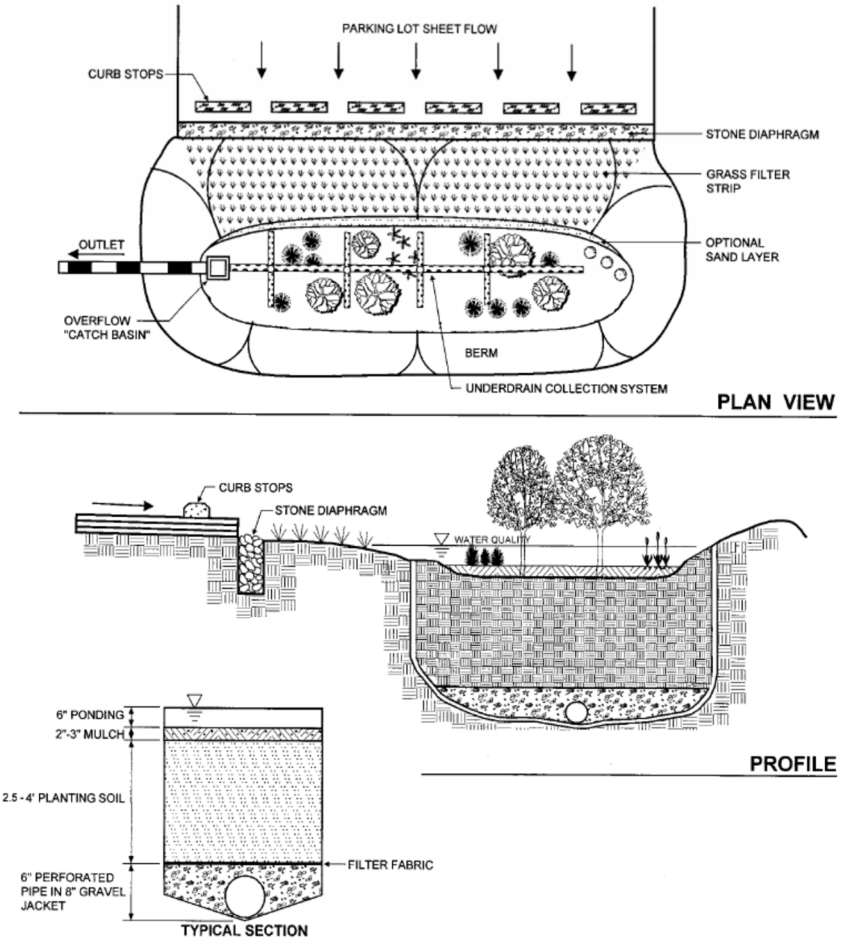
Bioretention Basin with Underdrain (No Infiltration):

The proposed development causes an increase in impervious cover. As such the runoff must be mitigated for water quality. One of the SMPs utilized for the proposed development is the use of bioretention with a proposed underdrain (F-5). Runoff from the development is proposed to be routed to a bioretention basin to provide runoff reduction capacity as well as water quality treatment volume. The basins are proposed with a 3-inch mulch layer, 2.5 feet of soil media, and a 12-inch drainage layer with a 6-inch underdrain which ultimately connects to an outlet control structure and discharges downstream to provide WQv. Bioretention soils shall meet the design criteria outlined in Appendix H of the NYSSMDM; soil deep ripping and de-compaction shall be in accordance with the NYSDEC guidelines found in the Appendix.

The sizing calculation for the bioretention system was completed in accordance with the design requirements set forth in Section 6.4.4 of the NYSSMDM. Flush curbs with rip rap leading to a forebay with a storage volume of 701 CF have been provided in all locations for pre-treatment of the sheet flow from the paved areas.

The stage/storage information of the bioretention areas can be found in the HydroCAD output within the Appendix of this report. The NYSDEC GI worksheet for runoff reduction and water quality treatment can be found in the Appendix for RRv capacity calculations (See NYSDEC GI worksheet). A summary of the water quality provided in these facilities can be found in Table 6.

Figure 6.19 Bioretention (F-5)



StormTech Subsurface Detention Chamber:

The StormTech MC-3500 is a subsurface resin chamber that allows the storage of large volumes at reasonable depths. One underground system has been designed to the west of the proposed building #1. Sizing for these systems include the standard 9" stone base to increase storage capacity for the given footprint and can be found in the HydroCAD output. The system has been designed to provide detention only and no credit is taken for infiltration of stormwater. The calculations shown include the volume within the chambers and stone voids (StormTech assumes a porosity of 40%).

Hydrodynamic Separator (Swirl Chamber):

The applicant proposes to install a hydrodynamic separator to provide water quality for the redevelopment portions of the site. Hydrodynamic separators are devices that move water in a circular, centrifugal manner to accelerate the separation and deposition of primary sediment from the water. They are suitable for the removal of coarse particles, oils, and fuels over small drainage areas. The NYSDEC refers to the New Jersey Department of Environmental Protection for a list of Stormwater Manufactured Treatment Devices which have received Interim Certification (included in the Appendix). One of the products on the list is the Hydro International First Defense unit.

Sizing of the First Defense system (an alternative stormwater practice) requires the application of a "rate-based" sizing approach for water quality treatment. In the "rate-based" approach, the device should be sized to treat the peak rate of runoff from the WQv storm; utilizing the WQv storm precipitation depth, the peak runoff for each tributary area can then be determined, and the associated devices sized appropriately. HydroCAD was used to determine the water quality flow rate for treatment sizing of the First Defense system. The table below lists the water quality storm event, its associated flowrate for the treatment structure, the tributary catchments, and the appropriately sized First Defense system capacity which provides in excess of the required flow, for the location shown on the plans

Table 1. First Defense® High Capacity Design Criteria.

First Defense® High Capacity Model Number	Diameter	Typical TSS Treatment Flow Rates			Peak Online Flow Rate	Maximum Pipe Diameter[1]	Oil Storage Capacity	Typical Sediment Storage Capacity[2]	Minimum Distance from Outlet Invert to Top of Rim[3]	Standard Distance from Outlet Invert to Sump Floor
		NJDEP Certified	106µm	230µm						
	(ft / m)	(cfs / L/s)	(cfs / L/s)	(cfs / L/s)	(cfs / L/s)	(in / mm)	(gal / L)	(yd^3 / m^3)	(ft / m)	(ft / m)
FD-3HC	3 / 0.9	0.84 / 23.7	0.3 / 8.77	0.53 / 15.0	15 / 424	18 / 457	125 / 473	0.4 / 0.3	2.0 - 3.5 / 0.6 - 1.0	3.71 / 1.13
FD-4HC	4 / 1.2	1.50 / 42.4	0.7 / 20	1.2 / 34	18 / 510	24 / 600	191 / 723	0.7 / 0.5	2.3 - 3.9 / 0.7 - 1.2	4.97 / 1.5
FD-5HC	5 / 1.5	2.34 / 66.2	1.3 / 37.9	2.2 / 62.2	20 / 566	24 / 609	300 / 1135	1.1 / .84	2.5 - 4.5 / 0.7 - 1.3	5.19 / 1.5
FD-6HC	6 / 1.8	3.38 / 95.7	2.2 / 63	3.8 / 108	32 / 906	30 / 750	496 / 1,878	1.6 / 1.2	3.0 - 5.1 / 0.9 - 1.6	5.97 / 1.8
FD-8HC	8 / 2.4	6.00 / 169.9	5.1 / 144	8.6 / 243	50 / 1,415	48 / 1219	1120 / 4239	2.8 / 2.1	3.0 - 6.0 / 0.9 -1.8	7.40 / 2.2

[1]Contact Hydro International when larger pipe sizes are required.
[2]Contact Hydro International when custom sediment storage capacity is required.
[3]Minimum distance for models depends on pipe diameter.

The First Defense treatment system has the capacity of bypassing high flow rates internally as well as controlling flow through the treatment chamber so as to avoid wash-out of previously captured pollutants. The HydroCAD output can be found in the Appendix of this report. Specifications for the First Defense Systems can also be found in the appendix of this report along with certification from NYSDEC that it is an accepted proprietary device. The NJCAT testing certification is also included within the Appendix.

Table 9: Swirl Chamber Sizing Calculations

Proposed First Defense System	90% Rainfall Event Number (P) Inches	Tributary Catchment Areas (WS-#)	Required Water Quality Flow, cfs	Hydro International First Defense Model	Treatment Capacity, cfs
S-10 (4' Dia)	1.4	PDA-1C	0.6	FD-4HC	1.50

Stormwater Conveyance & Pipe Capacity

The storm pipes and structures were designed to convey flows from the 25-year storm event per New York State standards. Drainage areas to each drainage structures were delineated, and the land uses within the drainage area were calculated. The design information, along with the proposed pipe sizes, material, slopes and inlet capacities were entered into the HydroFlow Storm sewer program to analyze the capacity of the storm conveyance system. It should be noted that this program uses the rational method for calculation while the HydroCAD program uses TR-55.

EROSION & SEDIMENT CONTROL

General Erosion Control Plan:

Construction operations shall be carried out in such a manner that erosion will be controlled and sediment migration minimized. Federal, State, and Local laws concerning pollution reduction will be followed. The control practices indicated in the attached Erosion & Sediment Control Plans shall be installed and used on this project.

In the event control practices not contained within the attached Erosion & Sediment Control Plans are required due to unforeseen/unknown existing conditions this SWPPP document contains applicable Erosion and Sediment Control details in ***Appendix 14*** as a reference. Details in ***Appendix 14*** are considered, as needed, and are not part of the construction documents for bidding purposes.

The list of measures and practices below are contained in the attached Erosion and Sediment Control Plans and shall be installed and maintained per the most current edition of the New York Standard Specifications for Erosion and Sediment Control Handbook. All erosion control measures implemented shall be in accordance with the construction sequence schedule as described in Section VIII of this narrative.

Temporary Measures

- *Silt Fence* – Silt fence shall be placed at a minimum along the toe of all fill areas or any location where surface sheet flow could be expected in accordance with temporary soil erosion and sediment control plans serving to reduce runoff velocity and effect deposition of transported sediment load. Where silt fence ends, the end shall turn and run perpendicular

to contours for a length of ten (10) feet, or for a difference in elevation of two (2) feet, whichever comes first.

- *Mulching* – Mulching of all disturbed surfaces will be mandatory. Hydroseeding with mulch only mixes will be the preferred method.
- *Stabilized Construction Access* - A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately. When necessary, wheels must be cleaned to remove sediment prior to entrance onto public right-of-ways. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

- *Concrete Washout Station* - A temporary concrete washout station is to be used near the entrance to the site. The station will have a depth of 24 inches and shall be a minimum of 10 feet by 10 feet. The station shall be lined with a 10mil waterproof plastic membrane. Tools or equipment that were used for concrete work will be cleaned here before leaving the site.

Permanent Measures

- *Topsoil, Seed & Mulch* – Final vegetative stabilization shall be used at all locations where the ground has been disturbed and impervious covers are not specified. Mulch shall be applied with, or immediately after seeding.
- *Rock outlet protection*- Stone riprap is to be placed at the outlet end of the culverts beneath the flared end section to slow down the flow of the runoff and reduce erosion.
- *-site grading and retaining walls* – The site grading has been designed to reduce the steep slopes on site, reducing the possibility of erosion due to runoff.

Maintenance and Inspection of Measures

All temporary and permanent soil erosion and sediment measures shall be maintained by the contractor during the life of the project. The contractor shall have a *trained contractor,* as defined in the GP-0-25-001 (See ***Appendix 4***), on site at all times. The *trained contractor* shall be responsible for the day-to-day construction and maintenance of all erosion and sediment control measures.

All temporary measures (silt fence, inlet protection, etc.) and permanent measures (landscaping) shall be inspected by the *Qualified Inspector* every seven (7) calendar days. The *Qualified Inspector* role and inspection requirements are outlined in Part IV.C of the GP-0-25-001 (See ***Appendix 4***). All inspections are required to be completed within one calendar day. Any comments, suggestions or corrective actions the *Qualified Inspector* notes shall be addressed by the contractor within 24 hours of the inspection.

Construction Sequence:

The construction sequence for the proposed development will be as follows:

- Schedule a pre-construction meeting at least 1 week prior to any construction site disturbance or equipment staging. At a minimum, the pre-construction meeting shall consist of the Cities Representatives including the Engineer as well as Contractors, Project Managers and Foreman.
- Install construction entrance.
- Stake limits of disturbance and orange construction fence for wetland protection.
- Install perimeter silt fencing on downhill areas as shown on plan.
- Install sediment ponds. Install temporary swales to direct all open soil area disturbance to sediment ponds, as necessary. Locations and size of the erosions and sediment control practices are noted on the plan. these may vary depending on the contractor's schedule and approach but 3,600 cf of storage must be provided at a minimum per acre of upstream disturbance. Sediment traps shall be installed in accordance with the plans and details. Sediment traps and basins shall be sized in accordance with the New York standards and specifications for erosion and sediment control manual.
- Rough grade the site to allow for the construction of the northern retaining wall. Once complete, the proposed driveway/road and building footprint shall be rough graded. The building foundation and wall shall be installed to stabilize the center of the phase 1 construction as soon as practicable.
- Disturbed soils shall be temporarily stabilized as soon as practical. Materials stored in stockpiles shall be cordoned off with a silt fence per the appropriate specifications and details. The operator shall initiate stabilization measures as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than (14) days after the construction activity in that portion of the site has temporarily or permanently ceased.
- Utilities shall be installed. (non-pressure utilities shall be installed prior to watermain)
- Construct roads, drives, buildings, parking areas and install drainage systems.
- Topsoil/hay/seed lawn areas.
- When upstream drainage areas have been stabilized, the bioretention media, plantings and mulch can be installed and the sediment ponds can be removed. The phase 1 construction

- The project site must meet final stabilization criteria prior to removing all erosion and sediment control devices and closing out the project. Litter and construction debris shall be removed as practical throughout the life of the project.

    - *Final Stabilization* means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock riprap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

- Upon final stabilization being met, the Contractor shall clear drainage pipes and structures of any sediment which may have accumulated. Additional erosion control measures shall be installed, as may be necessary, required and/or requested by authorities, to prevent the incidental discharge of silt laden runoff from entering a water course or a drainage system. The general permit for stormwater discharges from construction activities states that it is unlawful for any person to cause or contribute to a violation of water quality standards.

- Additional erosion control measures shall be installed, as may be necessary, required and/or requested by authorities, to prevent the incidental discharge of silt laden runoff from entering a water course or a drainage system. The general permit for stormwater discharges from construction activities states that it is unlawful for any person to cause or contribute to a violation of water quality standards.

For additional, general Erosion and Sediment Control notes including seeding, please refer to the Erosion and Sediment Control Plans.

Good Housekeeping

Good housekeeping practices are inexpensive, relatively easy to implement, and are often effective in preventing stormwater contamination. Specific activities that should be completed by the contractor are listed below:

Spill Inventory

The materials or substances listed below are expected to be present on-site during construction:

- Concrete
- Fertilizers
- Piping
- Paints (enamel & latex)
- Treated and non-treated wood
- Seed
- Tar
- Petroleum-based products
- Reinforcing steel
- Cleaning solvents
- Masonry block
- Paving materials

Material Management Practices

The following are the material management practices that shall be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff:

- Products shall be kept in original containers unless they are not resealable.

- Original labels and material safety data sheets (MSDS) shall be retained; they contain important product information.
- An effort shall be made to store only enough products required to do the job.
- All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure and/or on non-porous blacktop.
- Products shall be kept in their original containers with the original manufacturer's label.
- Substances shall not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all a product shall be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal shall be followed.
- The contractor's site superintendent shall inspect daily to ensure proper use and disposal of materials on site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices shall be followed for spill prevention and cleanup.

- Spills, of any size, of toxic or hazardous material and/or petroleum products shall be reported to the NYSDEC and Central Hudson's Environmental Affairs division.
- Manufacturer's recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the locations of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite. Equipment and materials shall include but not be limited to brooms, dust pans, mops, rags, gloves, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills shall be cleaned up immediately after discovery.
- The spill area shall be kept well ventilated, and personnel shall wear appropriate PPE to prevent injury from contact with a hazardous substance.
- The spill prevention plan shall be adjusted to include measures to prevent toxic or hazardous material spills from recurring and how to clean up the spill. A description of the spill, what caused it, and the cleanup measures shall also be included.

The contractor's site superintendent is responsible for the day-to-day site operations and shall be the spill prevention and cleanup coordinator.

Product Specific Practices

The following product specific practices shall be followed onsite.

- Petroleum Products – All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers that are clearly labeled. Any asphalt substances used on site shall be applied according to manufacturer's recommendations.
- Fertilizers – Fertilizers shall be applied only in the minimum amounts recommended by the manufacturer. Use only fertilizers that have five (5) or fewer parts phosphorous. Once

applied, fertilizers shall be worked into the soil to limit exposure to stormwater. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.

- Paints – All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the storm sewer system but shall be properly disposed of according to the manufacturer's instructions or state and local regulations.
- Concrete Trucks – Concrete trucks shall not be allowed to wash out or discharge surplus concrete or drum wash water on the site, unless in approved clean-out areas.
- Waste Disposal – All waste materials shall be collected and stored in a securely lidded metal dumpster rented from a licensed solid waste management company. The dumpster shall meet all local and any State solid waste management regulations. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster shall be emptied as necessary, and the trash shall be hauled to a NYSDEC permitted landfill. No construction waste materials shall be buried onsite. All personnel shall be instructed regarding the correct procedure for waste disposal.
- Hazardous Waste – All hazardous waste materials shall be disposed of in a manner specified by local or State regulations or the manufacturer. Site personnel shall be instructed in these practices.
- Sanitary Waste – All sanitary waste shall be collected from the portable units by a licensed sanitary waste management contractor, as required by local regulation and as required to protect public health and safety.
- Recyclable Waste – All recyclable waste (cardboard, wood, etc.) shall be collected and recycled on a weekly schedule.

Responsible Parties

Implementation of SWPPP

The owner/operator is responsible for implementing the provisions of the SWPPP and ensuring that the appropriate contractors and subcontractors on the site provide certification in accordance with the provisions of the GP-0-25-001.

The owner/operator is also responsible for having *Trained Contractor* and *Qualified Inspector* inspect the active construction site in accordance with section 6.3 of this report and all provisions for inspections defined in the GP-0-25-001, (See ***Appendix 10)*** A *Trained Contractor* cannot conduct *Qualified Inspector* site inspections unless they meet the *Qualified Inspector* qualifications listed in appendices of the GP-0-25-001.

Inspection Requirements

The owner/operator is responsible for implementing inspections of all erosion and sediment control measures. To do so, the owner/operator shall have a *Qualified Inspector* inspect the site in

accordance with the guidelines of Part IV of the GP-0-25-001. A sample inspection template is provided in this document (See ***Appendix 9***).

The owner/operator shall maintain a record of all inspection reports in a site logbook. The site logbook shall be kept on site and be made available to the permitting authority upon request. The owner/operator shall also retain a copy of this SWPPP document at the construction site during the life of the project.

End of Project – Termination of Permit

Final Inspection

Prior to filing the Notice of Termination (NOT), or at the end of the permit term, the owner/operator shall have a Qualified Inspector perform a final site inspection. The inspector shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods. Final stabilization means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80% has been established on all unpaved areas and areas not covered by permanent structures.

Notice of Termination (NOT)

When the site has been finally stabilized, the owner/operator must submit a Notice of Termination (NOT) form to terminate coverage under SPDES General Permit GP-0-25-001. The permittee must identify all the permanent stormwater management structures that have been constructed. In addition, a manual describing the operation and maintenance practices that will be necessary for the structures(s) to function as designed after the site is stabilized must be developed and in place. The permittee must also certify that the permanent structure(s) have been constructed in conformance with this document. A copy of NOT is provided in this document (see ***Appendix 6***).

Record Keeping

The owner/operator shall retain copies of SWPPP, any reports submitted in conjunction with this permit, and records of all data used to complete the NOI & NOT for a period of at least five (5) years from the date that the site is finally stabilized. A topographic as-built shall be provided for the stormwater facilities, as well as a certification letter being provided to the City of Beacon by the project engineer certifying that the stormwater facilities were constructed in accordance with the SWPPP and plans.

SUMMARY OF PROPOSED STORMWATER IMPROVEMENTS

The proposed project falls under the New York State definition of redevelopment with an increase in impervious area, requiring coverage under the General permit. The site runoff has been attenuated for peak flows in the peak design storms. The proposed development has been designed

to treat the required water quality through SMP's with RRv capacity, and Alternative practices. The design utilizes DEC approved practices that help maintain the existing hydrology.

CONCLUSION

As the storm water pollution prevention plan meets the water quality requirements for a new and redevelopment portion of the project, and meets peak flow mitigation to the applicable standards, there should be no adverse impacts due to storm water, on-site or off-site, as a result of the proposed site improvements.

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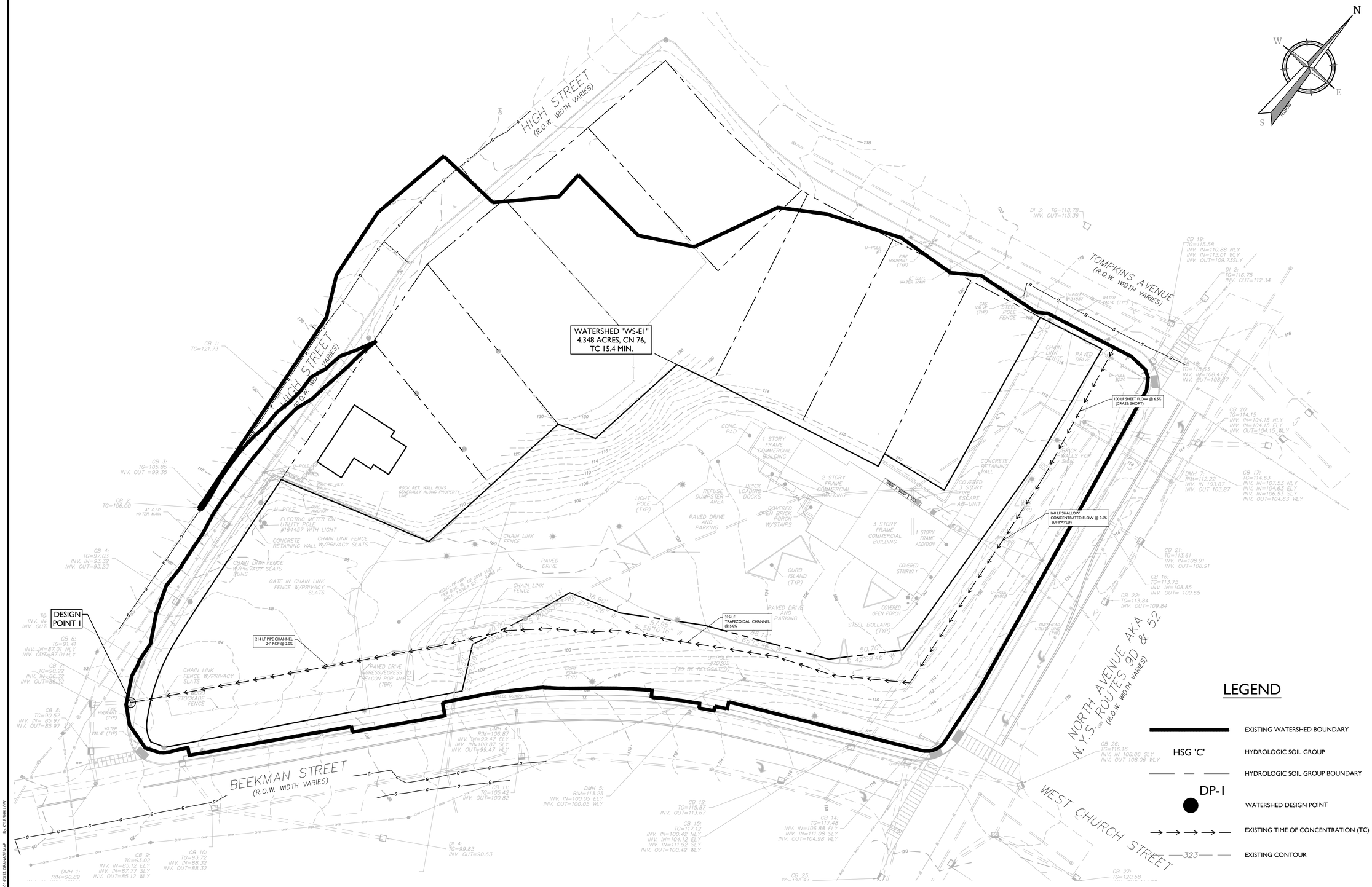
APPENDIX 1

WATERSHED MAPS



UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Drainage Maps\C-DRNG.dwg|C-01 EXIST. DRAINAGE MAP By:KYLE.SHALLOW

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS.
2	7/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS.

WATERSHED MAP

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
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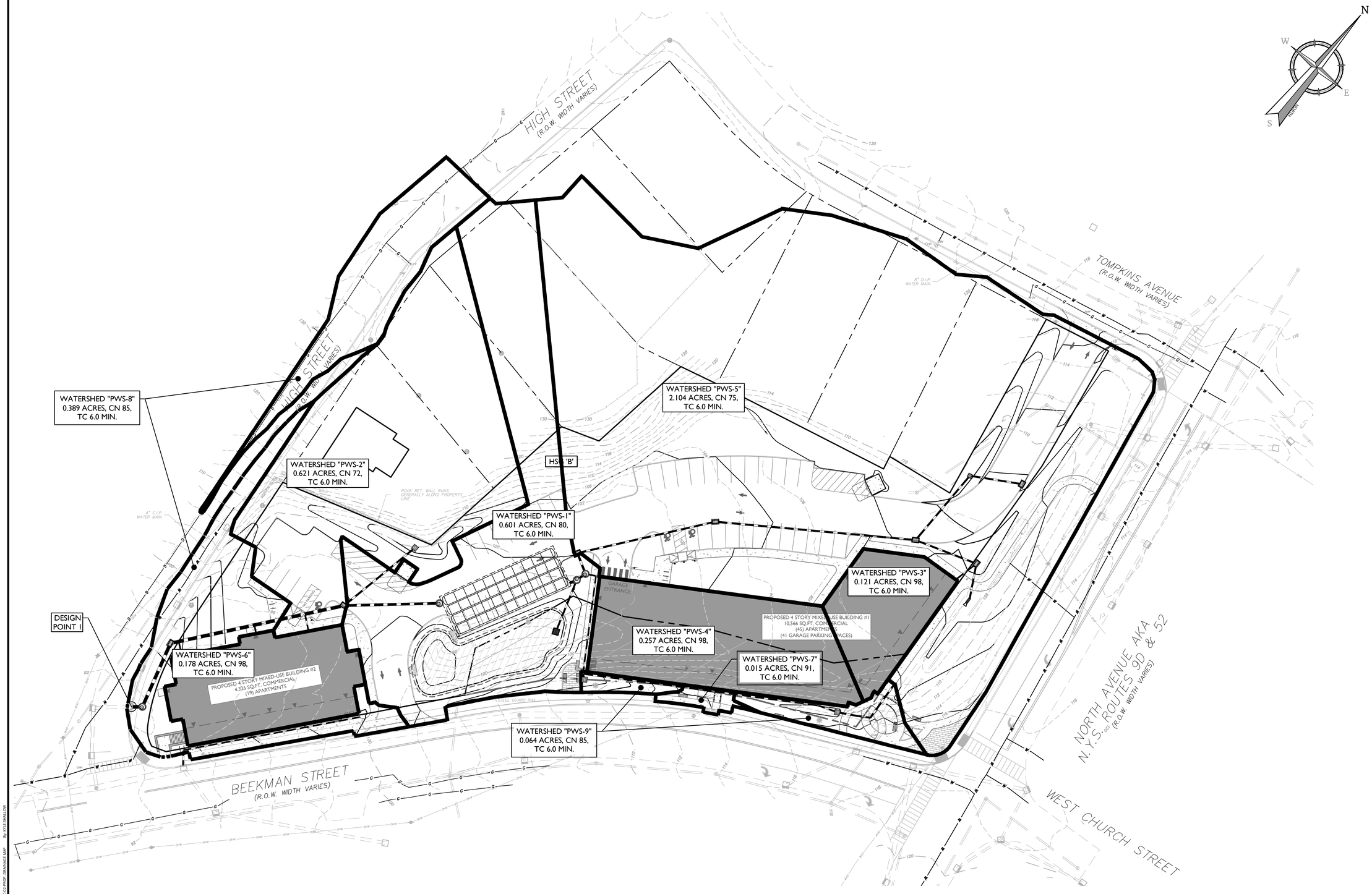
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-DRNG

SHEET TITLE:
EXISTING DRAINAGE MAP

SHEET NUMBER:
01 of 02

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



30 0 30 60

SCALE : 1" = 30'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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2023\23010468A\Engineering\Drainage Maps\C-DRNG.dwg\C-02 PROP. DRAINAGE MAP By: KATE SHALLOW

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REV	DATE	DRAWN BY	DESCRIPTION
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WATERSHED MAP

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

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CITY OF BEACON
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/30/2024	KAS	CPM

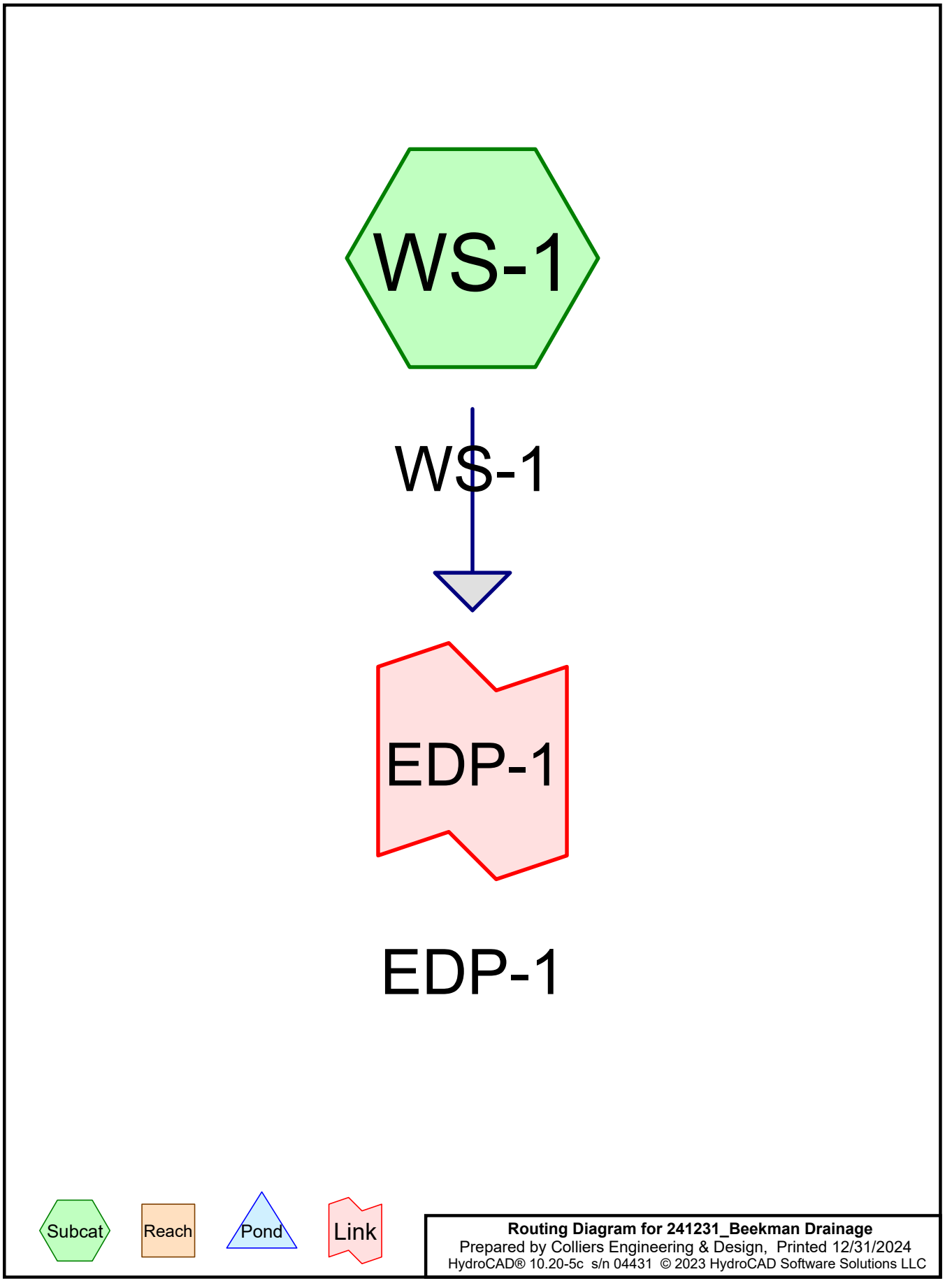
PROJECT NUMBER: 23010468A
DRAWING NAME: C-DRNG

SHEET TITLE:
PROPOSED DRAINAGE MAP

SHEET NUMBER:
02 of 02

APPENDIX 2

HYDROCAD MODEL OUTPUT


WS-1
WS-1
EDP-1
EDP-1
Subcat
Reach
Pond
Link
Routing Diagram for 241231_Beekman Drainage
Prepared by Colliers Engineering & Design, Printed 12/31/2024
HydroCAD® 10.20-5c s/n 04431 © 2023 HydroCAD Software Solutions LLC

Summary for Subcatchment WS-1: WS-1

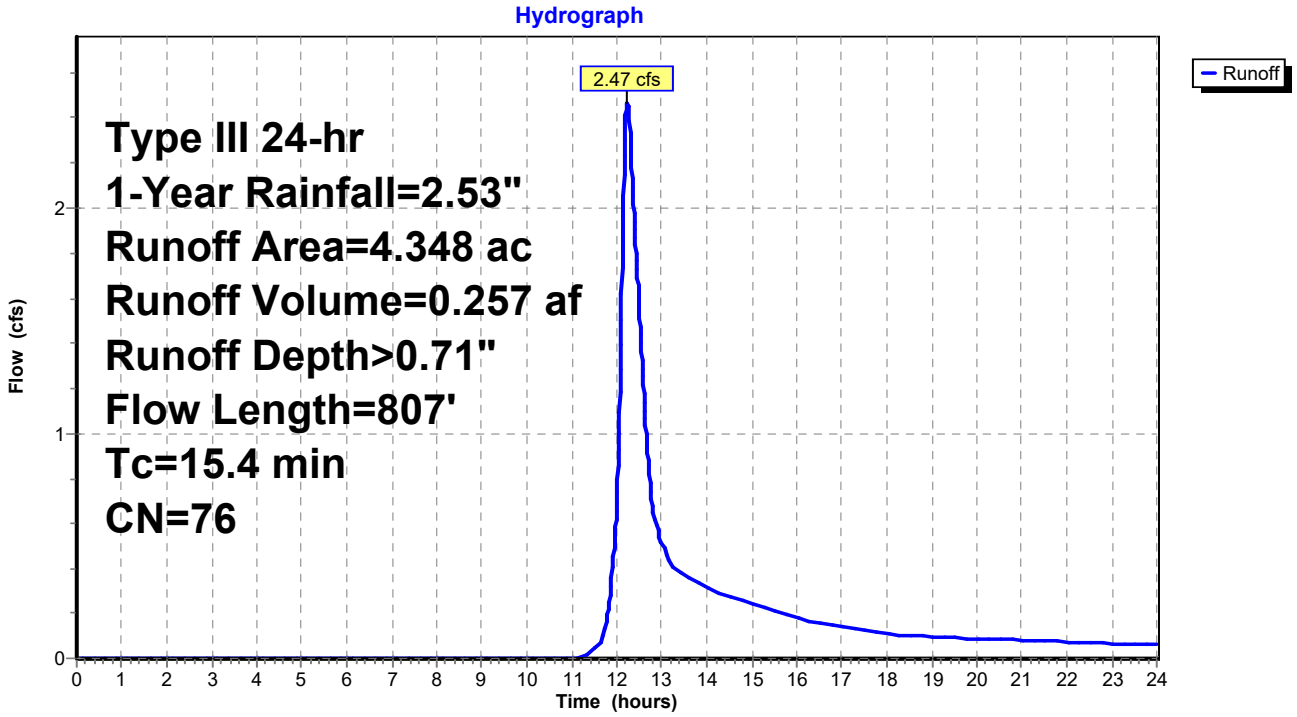
Runoff = 2.47 cfs @ 12.23 hrs, Volume= 0.257 af, Depth> 0.71"
Routed to Link EDP-1 : EDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
1.895	98	Paved parking, HSG B
0.963	55	Woods, Good, HSG B
1.490	61	>75% Grass cover, Good, HSG B
4.348	76	Weighted Average
2.453		56.42% Pervious Area
1.895		43.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	100	0.0650	0.27		**Sheet Flow, grass: short** Grass: Short n= 0.150 P2= 3.15"
2.2	168	0.0060	1.25		**Shallow Concentrated Flow, unpaved** Unpaved Kv= 16.1 fps
6.7	325	0.0500	0.81	0.19	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=0.10' Z= 5.0 & 2.0 '/' Top.W=2.70' n= 0.080 Earth, long dense weeds
0.3	214	0.0200	11.03	34.66	**Pipe Channel, RCP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
15.4	807	Total			

Subcatchment WS-1: WS-1

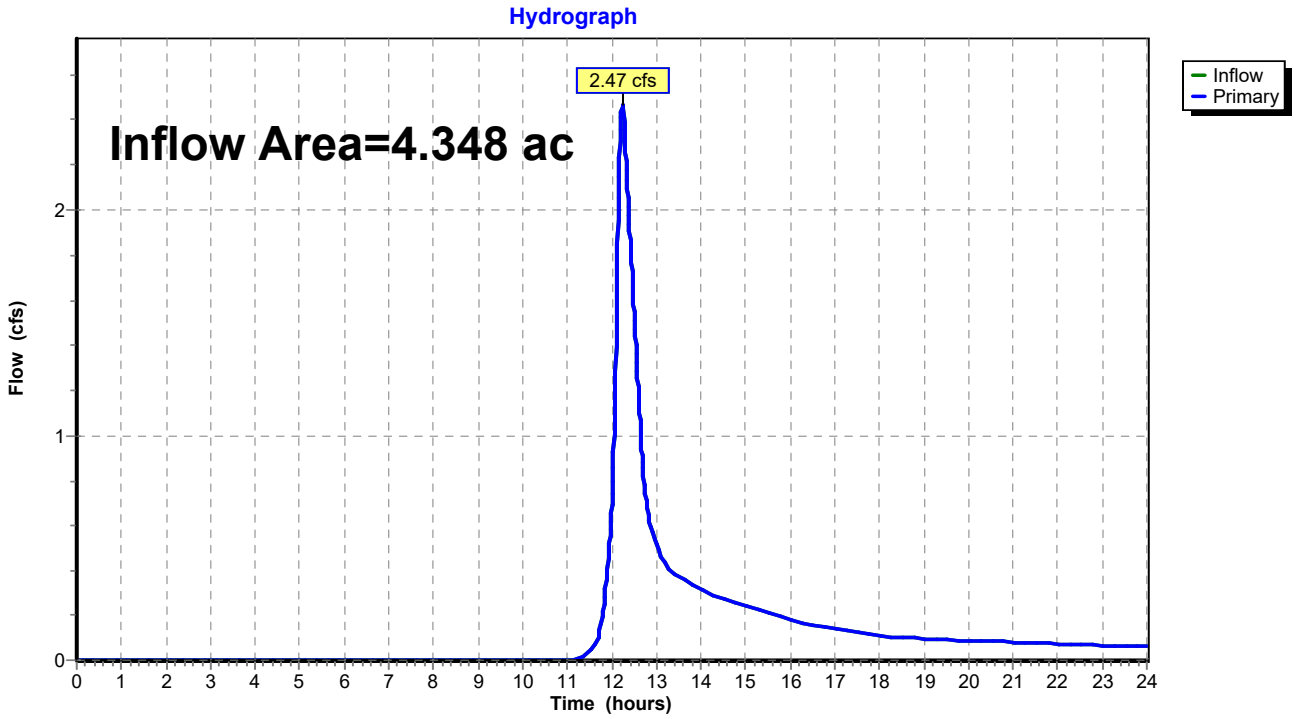


Summary for Link EDP-1: EDP-1

Inflow Area = 4.348 ac, 43.58% Impervious, Inflow Depth > 0.71" for 1-Year event
Inflow = 2.47 cfs @ 12.23 hrs, Volume= 0.257 af
Primary = 2.47 cfs @ 12.23 hrs, Volume= 0.257 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link EDP-1: EDP-1



Summary for Subcatchment WS-1: WS-1

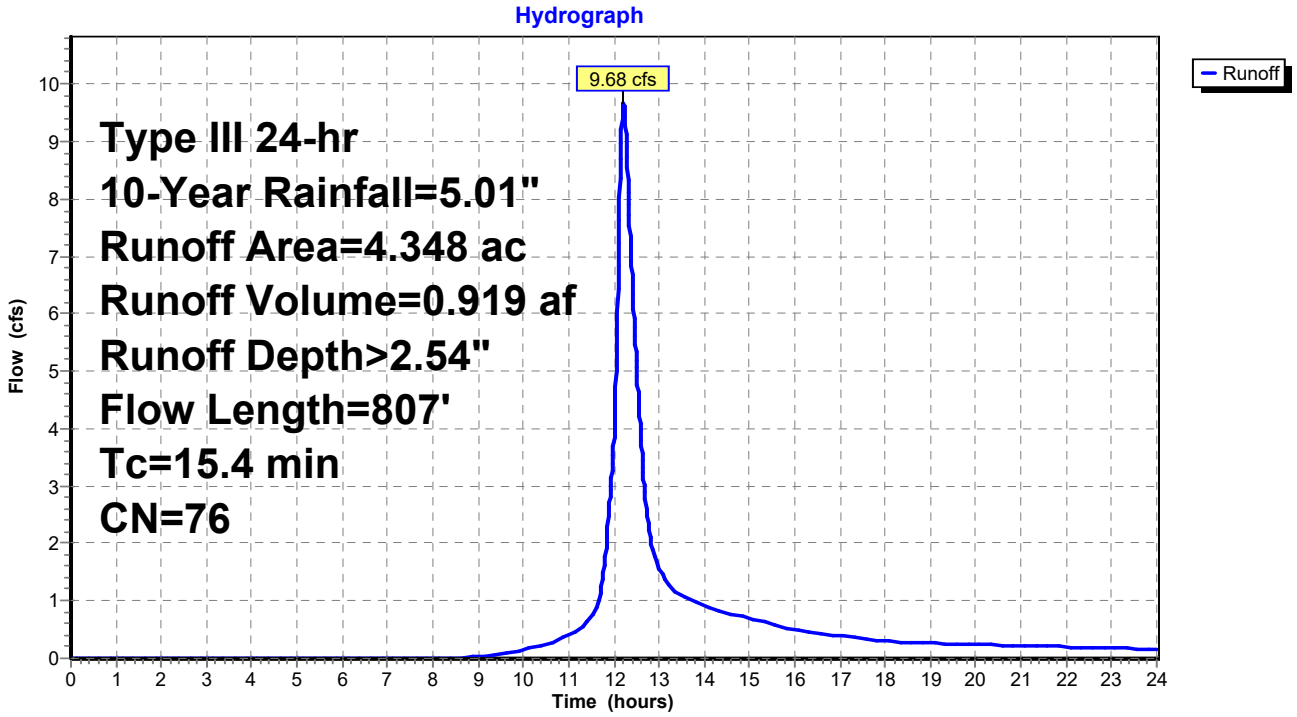
Runoff = 9.68 cfs @ 12.21 hrs, Volume= 0.919 af, Depth> 2.54"
Routed to Link EDP-1 : EDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
1.895	98	Paved parking, HSG B
0.963	55	Woods, Good, HSG B
1.490	61	>75% Grass cover, Good, HSG B
4.348	76	Weighted Average
2.453		56.42% Pervious Area
1.895		43.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	100	0.0650	0.27		**Sheet Flow, grass: short** Grass: Short n= 0.150 P2= 3.15"
2.2	168	0.0060	1.25		**Shallow Concentrated Flow, unpaved** Unpaved Kv= 16.1 fps
6.7	325	0.0500	0.81	0.19	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=0.10' Z= 5.0 & 2.0 '/' Top.W=2.70' n= 0.080 Earth, long dense weeds
0.3	214	0.0200	11.03	34.66	**Pipe Channel, RCP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
15.4	807	Total			

Subcatchment WS-1: WS-1

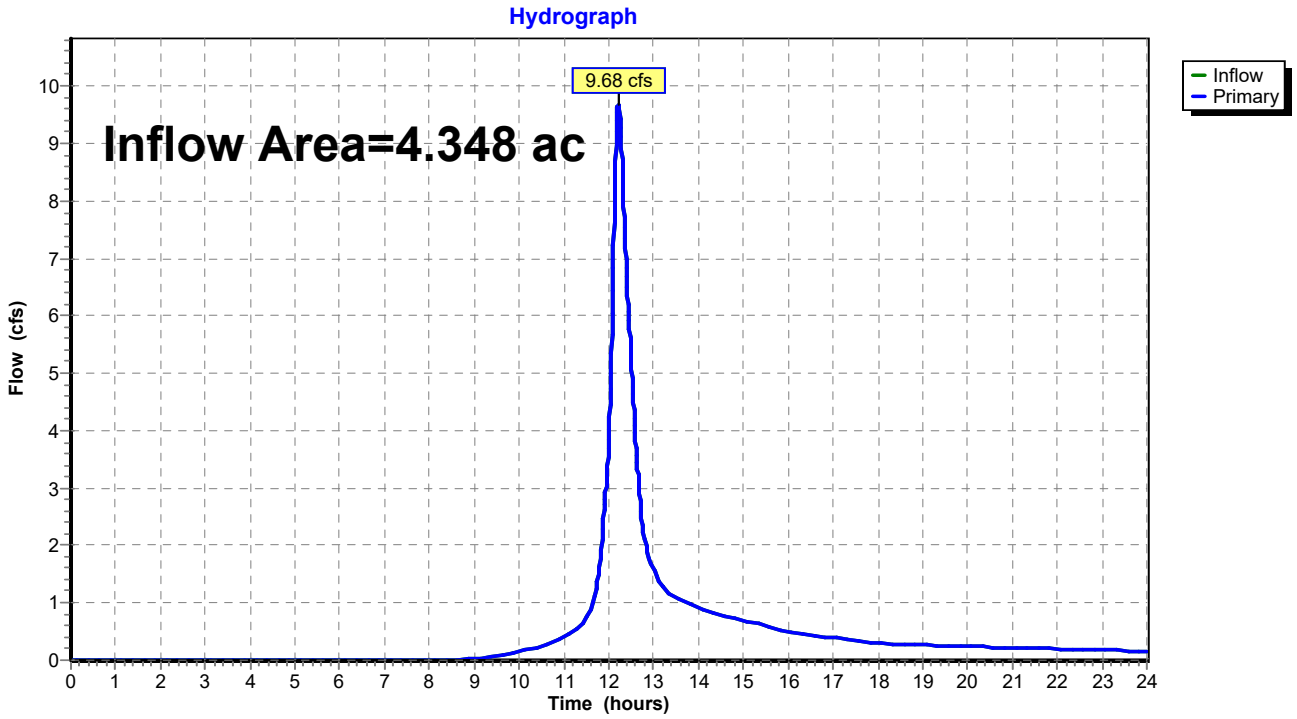


Summary for Link EDP-1: EDP-1

Inflow Area = 4.348 ac, 43.58% Impervious, Inflow Depth > 2.54" for 10-Year event
Inflow = 9.68 cfs @ 12.21 hrs, Volume= 0.919 af
Primary = 9.68 cfs @ 12.21 hrs, Volume= 0.919 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link EDP-1: EDP-1



Summary for Subcatchment WS-1: WS-1

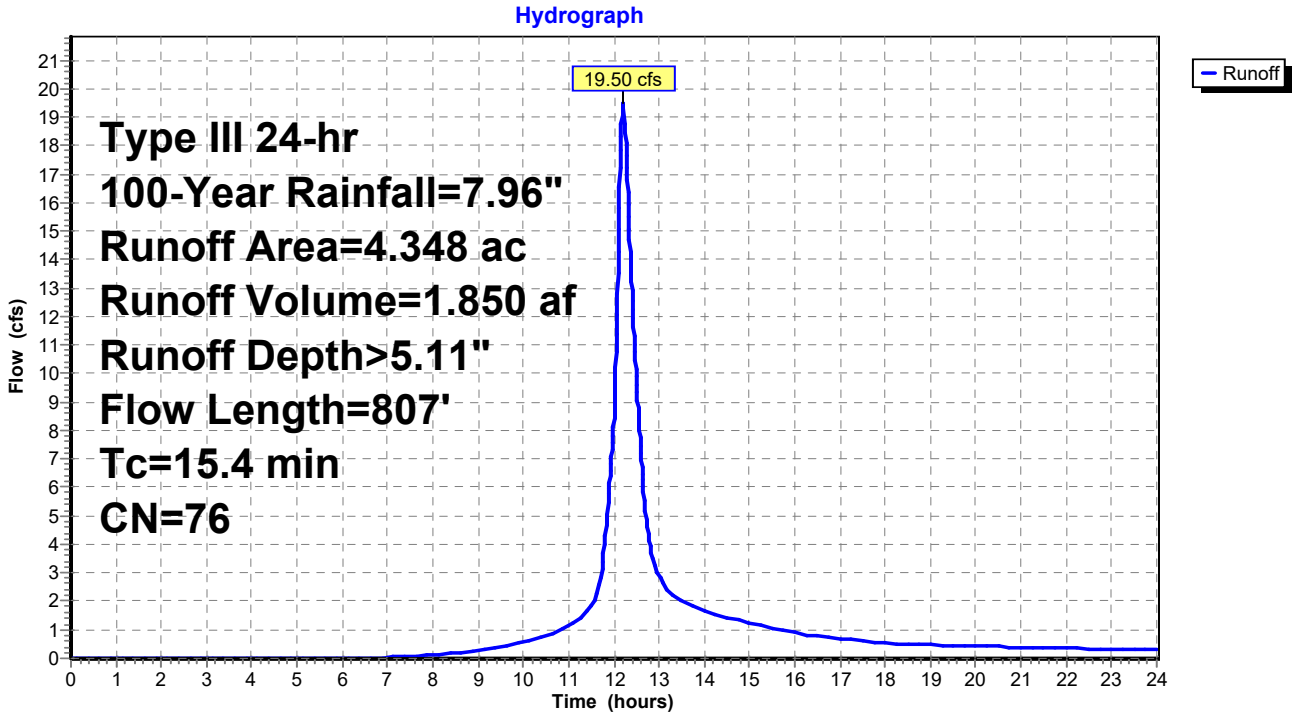
Runoff = 19.50 cfs @ 12.20 hrs, Volume= 1.850 af, Depth> 5.11"
Routed to Link EDP-1 : EDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
1.895	98	Paved parking, HSG B
0.963	55	Woods, Good, HSG B
1.490	61	>75% Grass cover, Good, HSG B
4.348	76	Weighted Average
2.453		56.42% Pervious Area
1.895		43.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	100	0.0650	0.27		**Sheet Flow, grass: short** Grass: Short n= 0.150 P2= 3.15"
2.2	168	0.0060	1.25		**Shallow Concentrated Flow, unpaved** Unpaved Kv= 16.1 fps
6.7	325	0.0500	0.81	0.19	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=0.10' Z= 5.0 & 2.0 '/' Top.W=2.70' n= 0.080 Earth, long dense weeds
0.3	214	0.0200	11.03	34.66	**Pipe Channel, RCP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
15.4	807	Total			

Subcatchment WS-1: WS-1

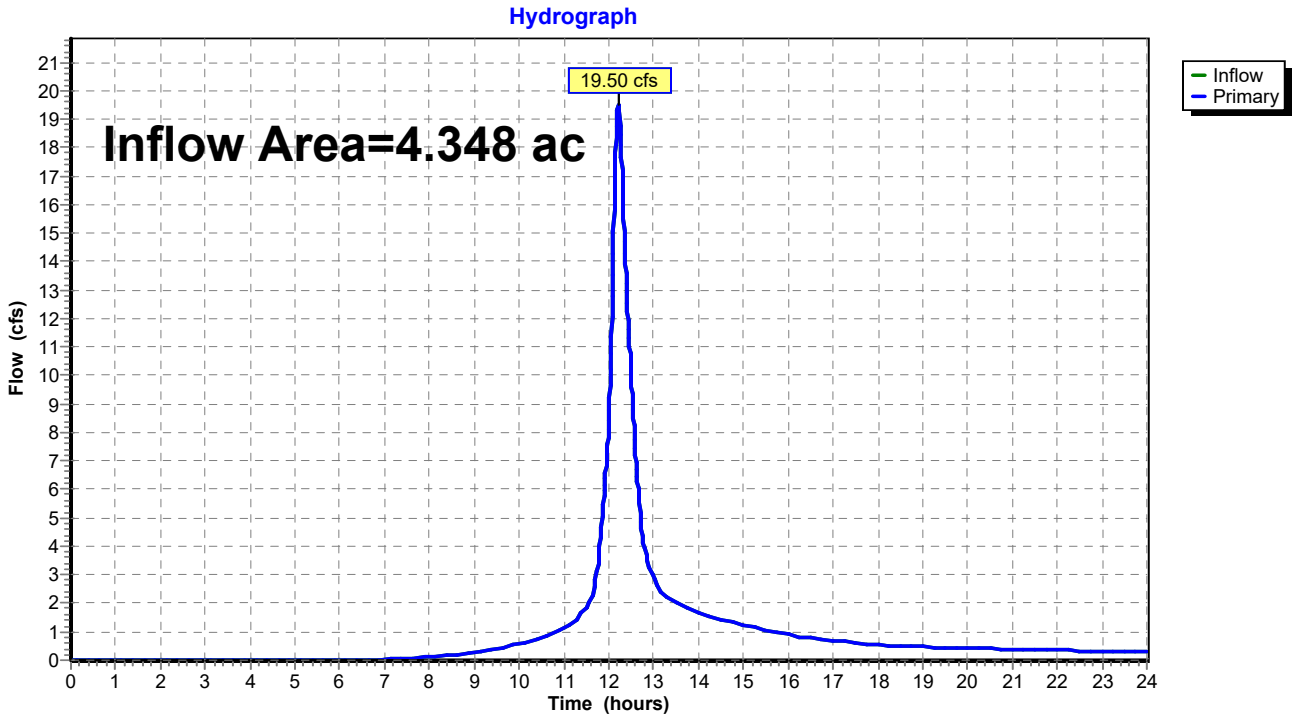


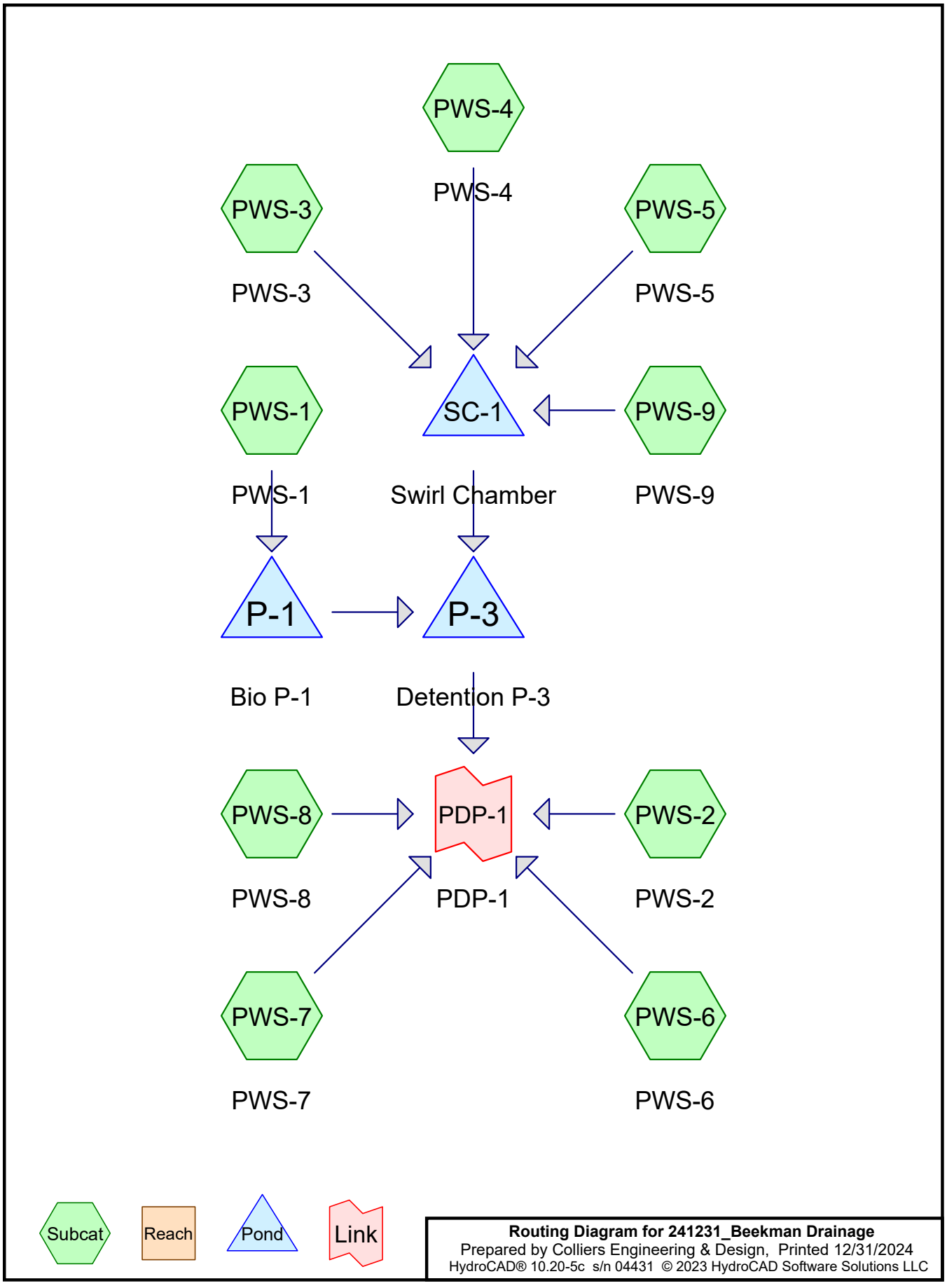
Summary for Link EDP-1: EDP-1

Inflow Area = 4.348 ac, 43.58% Impervious, Inflow Depth > 5.11" for 100-Year event
Inflow = 19.50 cfs @ 12.20 hrs, Volume= 1.850 af
Primary = 19.50 cfs @ 12.20 hrs, Volume= 1.850 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link EDP-1: EDP-1




PWS-4
PWS-4
PWS-3
PWS-5
PWS-3
PWS-5
PWS-1
SC-1
PWS-9
PWS-1
Swirl Chamber
PWS-9
P-1
P-3
Bio P-1
Detention P-3
PWS-8
PDP-1
PWS-2
PWS-8
PDP-1
PWS-2
PWS-7
PWS-6
PWS-7
PWS-6
Subcat
Reach
Pond
Link
Routing Diagram for 241231_Beekman Drainage
Prepared by Colliers Engineering & Design, Printed 12/31/2024
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Summary for Subcatchment PWS-1: PWS-1

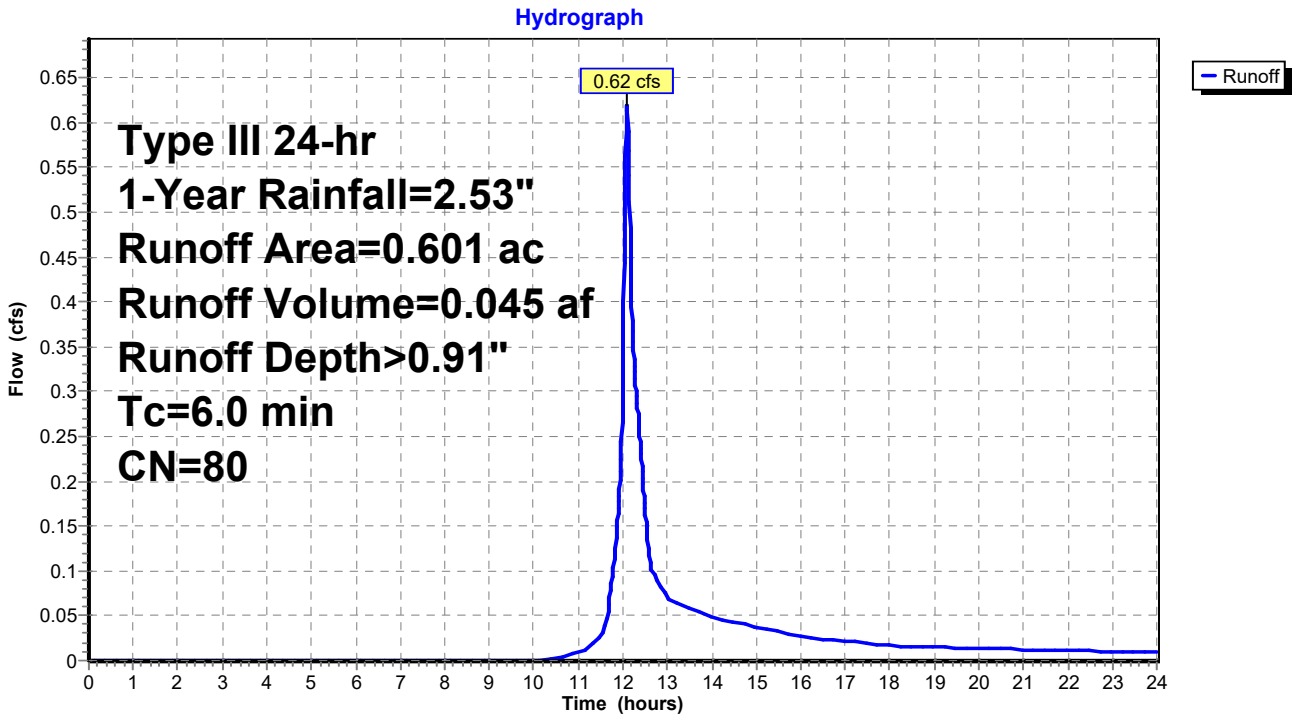
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.045 af, Depth> 0.91"
Routed to Pond P-1 : Bio P-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.312	98	Paved parking, HSG B
0.260	61	>75% Grass cover, Good, HSG B
0.029	55	Woods, Good, HSG B
0.601	80	Weighted Average
0.289		48.09% Pervious Area
0.312		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-1: PWS-1



Summary for Subcatchment PWS-2: PWS-2

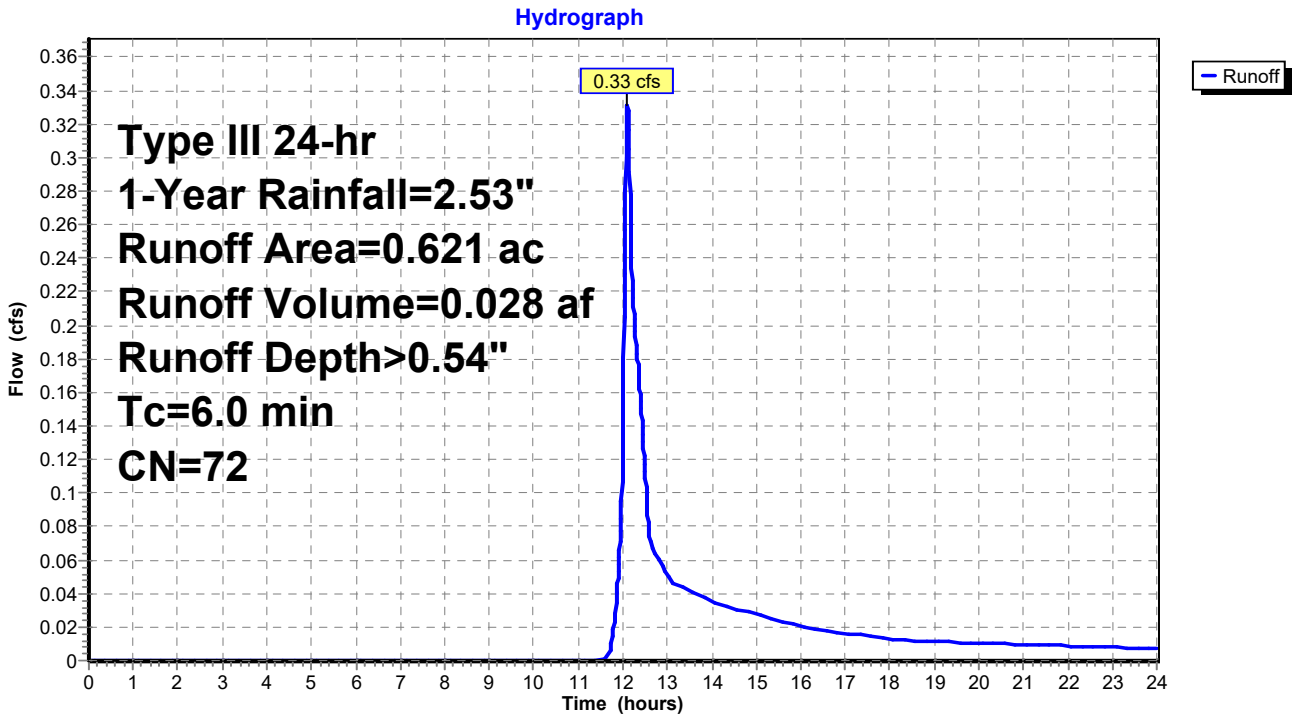
Runoff = 0.33 cfs @ 12.10 hrs, Volume= 0.028 af, Depth> 0.54"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.191	98	Paved parking, HSG B
0.356	61	>75% Grass cover, Good, HSG B
0.074	55	Woods, Good, HSG B
0.621	72	Weighted Average
0.430		69.24% Pervious Area
0.191		30.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-2: PWS-2



Summary for Subcatchment PWS-3: PWS-3

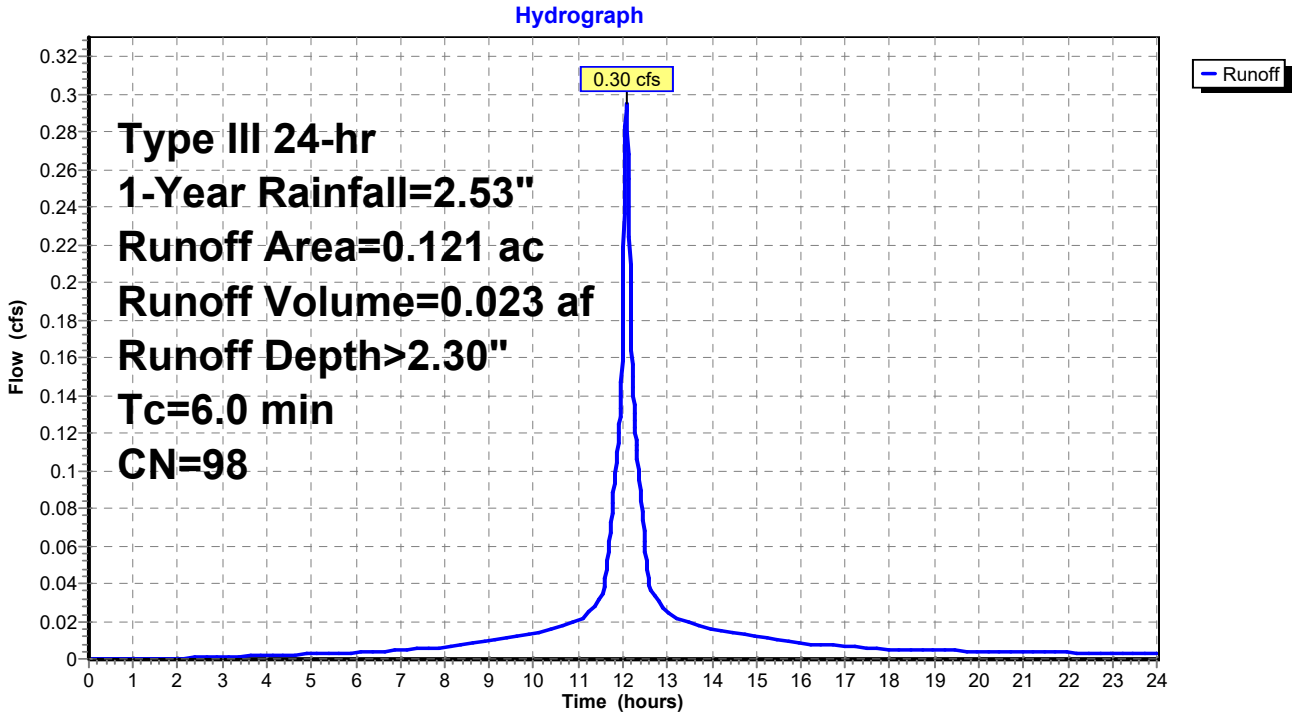
Runoff = 0.30 cfs @ 12.08 hrs, Volume= 0.023 af, Depth> 2.30"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.121	98	Roofs, HSG B
0.121		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-3: PWS-3



Summary for Subcatchment PWS-4: PWS-4

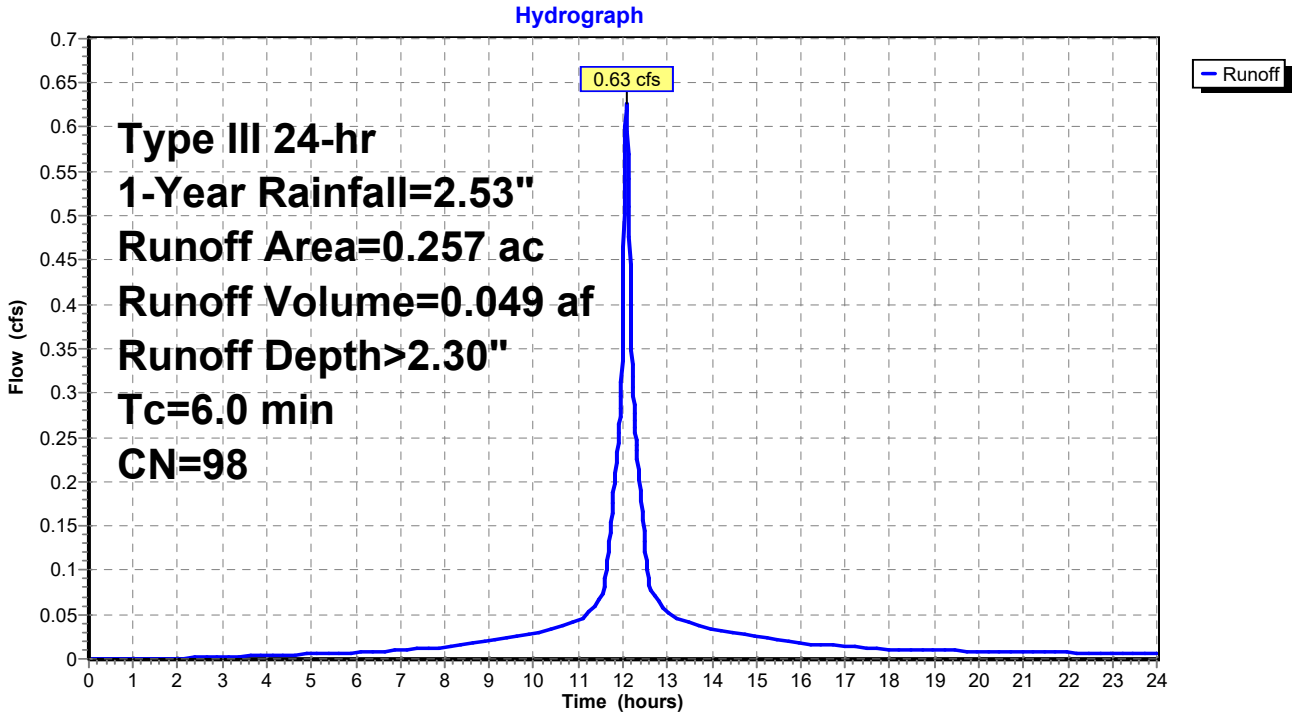
Runoff = 0.63 cfs @ 12.08 hrs, Volume= 0.049 af, Depth> 2.30"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.257	98	Roofs, HSG B
0.257		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-4: PWS-4



Summary for Subcatchment PWS-5: PWS-5

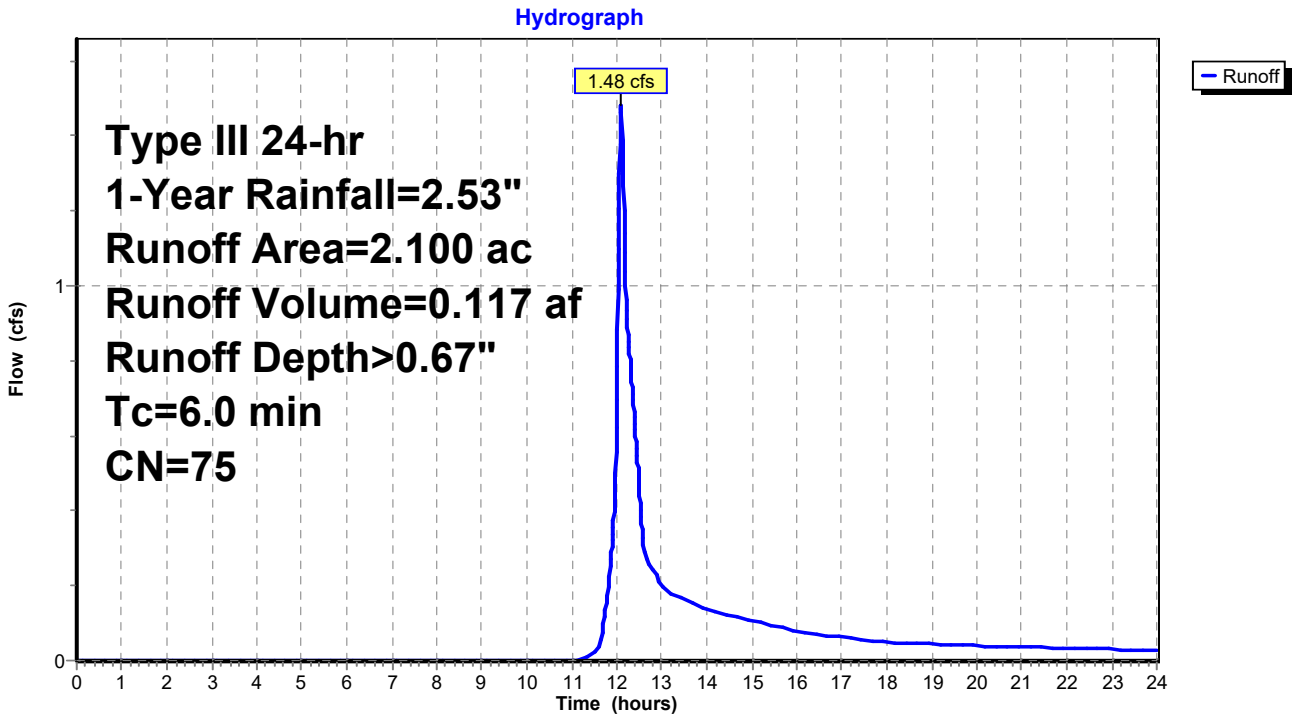
Runoff = 1.48 cfs @ 12.10 hrs, Volume= 0.117 af, Depth> 0.67"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.838	98	Paved parking, HSG B
0.993	61	>75% Grass cover, Good, HSG B
0.269	55	Woods, Good, HSG B
2.100	75	Weighted Average
1.262		60.10% Pervious Area
0.838		39.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-5: PWS-5



Summary for Subcatchment PWS-6: PWS-6

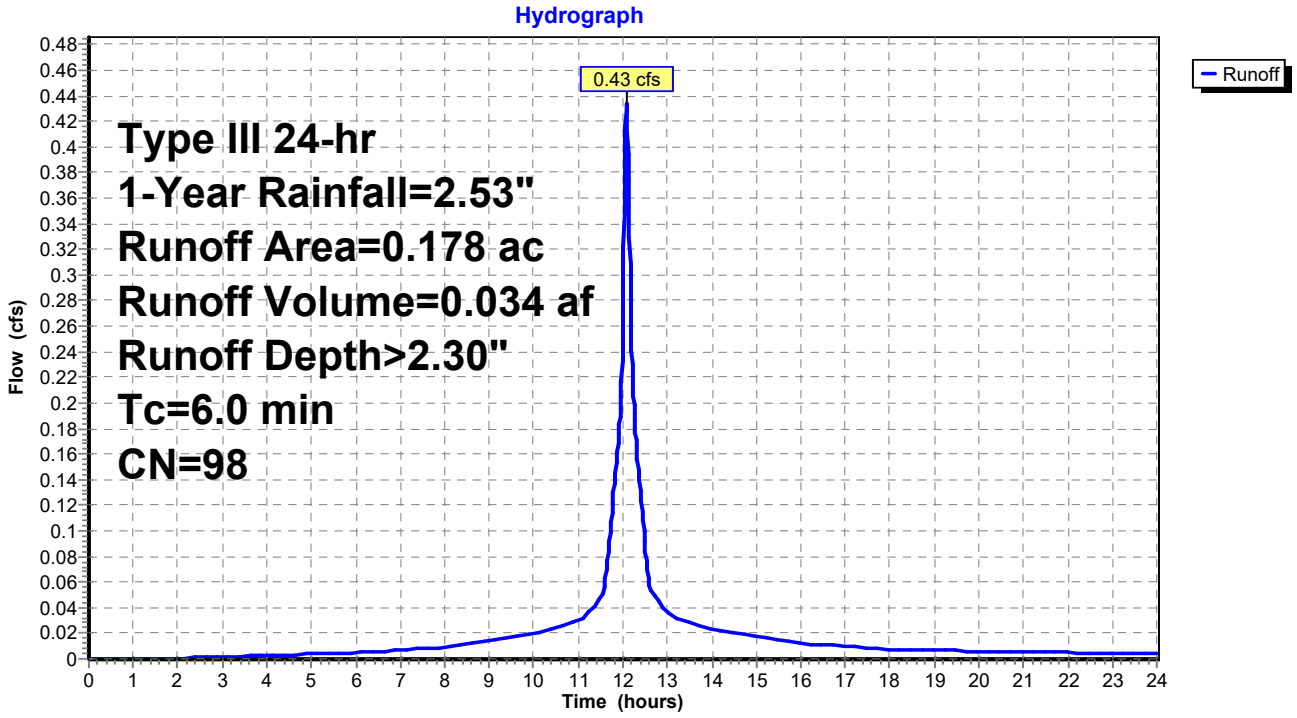
Runoff = 0.43 cfs @ 12.08 hrs, Volume= 0.034 af, Depth> 2.30"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.178	98	Roofs, HSG B
0.178		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-6: PWS-6



Summary for Subcatchment PWS-7: PWS-7

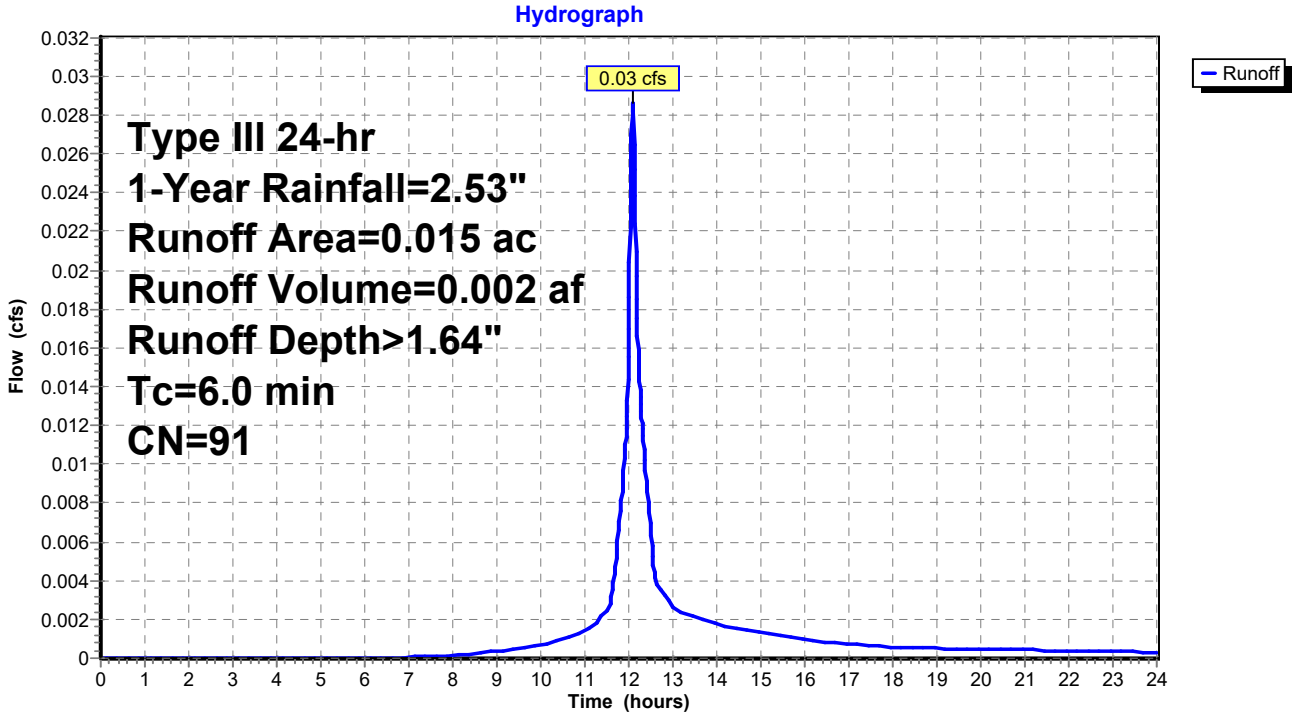
Runoff = 0.03 cfs @ 12.09 hrs, Volume= 0.002 af, Depth> 1.64"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.012	98	Paved parking, HSG B
0.003	61	>75% Grass cover, Good, HSG B
0.015	91	Weighted Average
0.003		20.00% Pervious Area
0.012		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-7: PWS-7



Summary for Subcatchment PWS-8: PWS-8

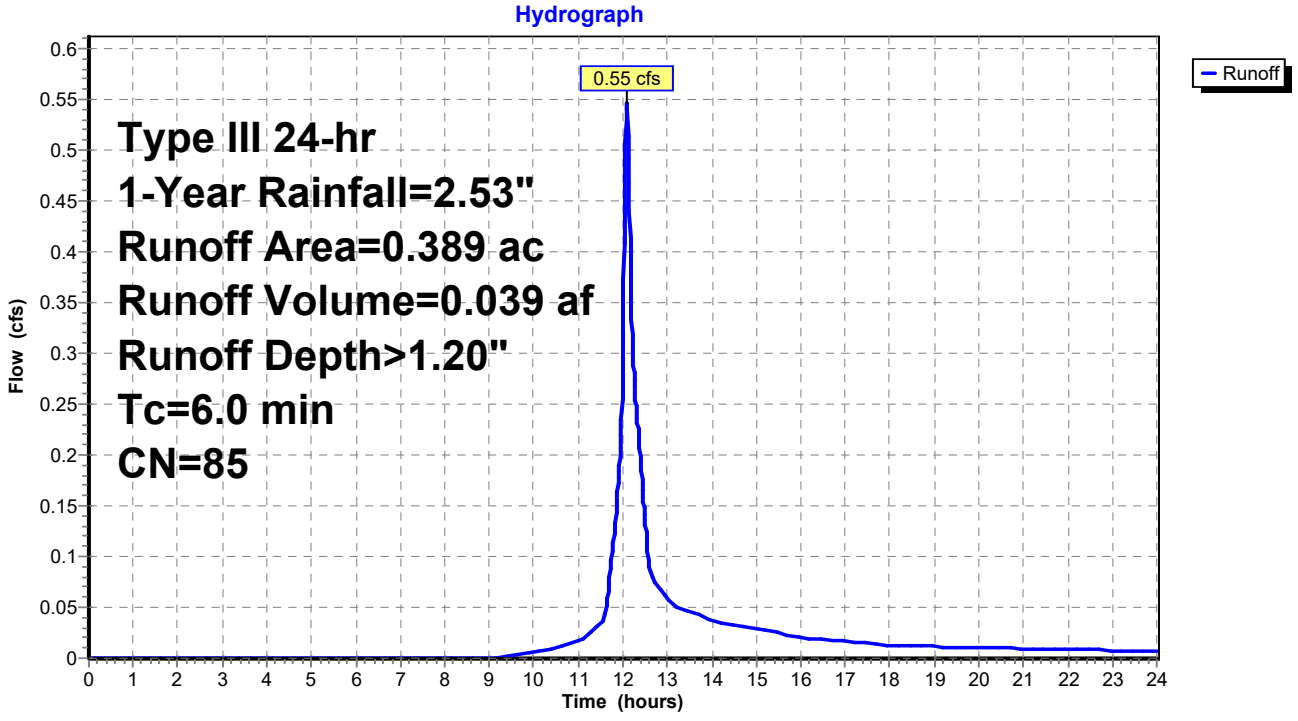
Runoff = 0.55 cfs @ 12.09 hrs, Volume= 0.039 af, Depth> 1.20"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.252	98	Paved parking, HSG B
0.137	61	>75% Grass cover, Good, HSG B
0.389	85	Weighted Average
0.137		35.22% Pervious Area
0.252		64.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-8: PWS-8



Summary for Subcatchment PWS-9: PWS-9

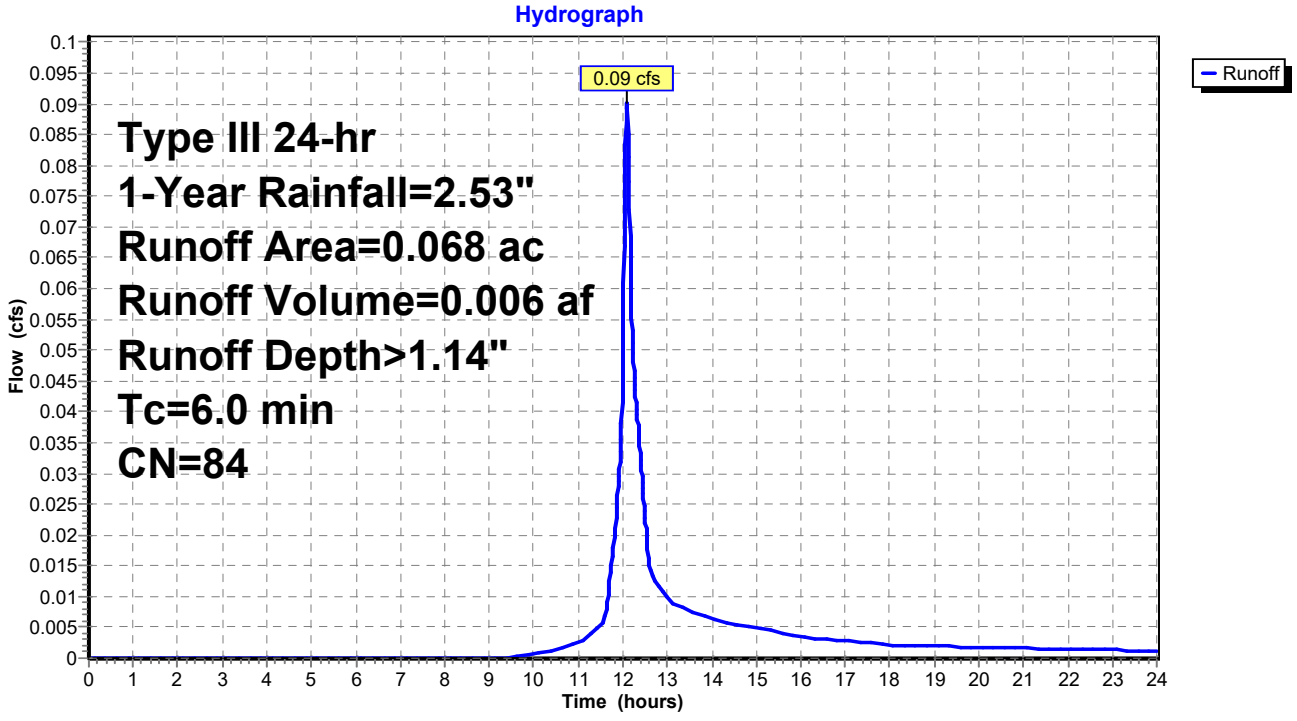
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 1.14"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.53"

Area (ac)	CN	Description
0.043	98	Paved parking, HSG B
0.025	61	>75% Grass cover, Good, HSG B
0.068	84	Weighted Average
0.025		36.76% Pervious Area
0.043		63.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-9: PWS-9



Summary for Pond P-1: Bio P-1

Inflow Area = 0.601 ac, 51.91% Impervious, Inflow Depth > 0.91" for 1-Year event
Inflow = 0.62 cfs @ 12.09 hrs, Volume= 0.045 af
Outflow = 0.04 cfs @ 14.57 hrs, Volume= 0.018 af, Atten= 93%, Lag= 148.6 min
Primary = 0.04 cfs @ 14.57 hrs, Volume= 0.018 af
Routed to Pond P-3 : Detention P-3

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 99.04' @ 14.57 hrs Surf.Area= 2,504 sf Storage= 1,239 cf

Plug-Flow detention time= 324.5 min calculated for 0.018 af (41% of inflow)
Center-of-Mass det. time= 192.2 min (1,047.0 - 854.8)

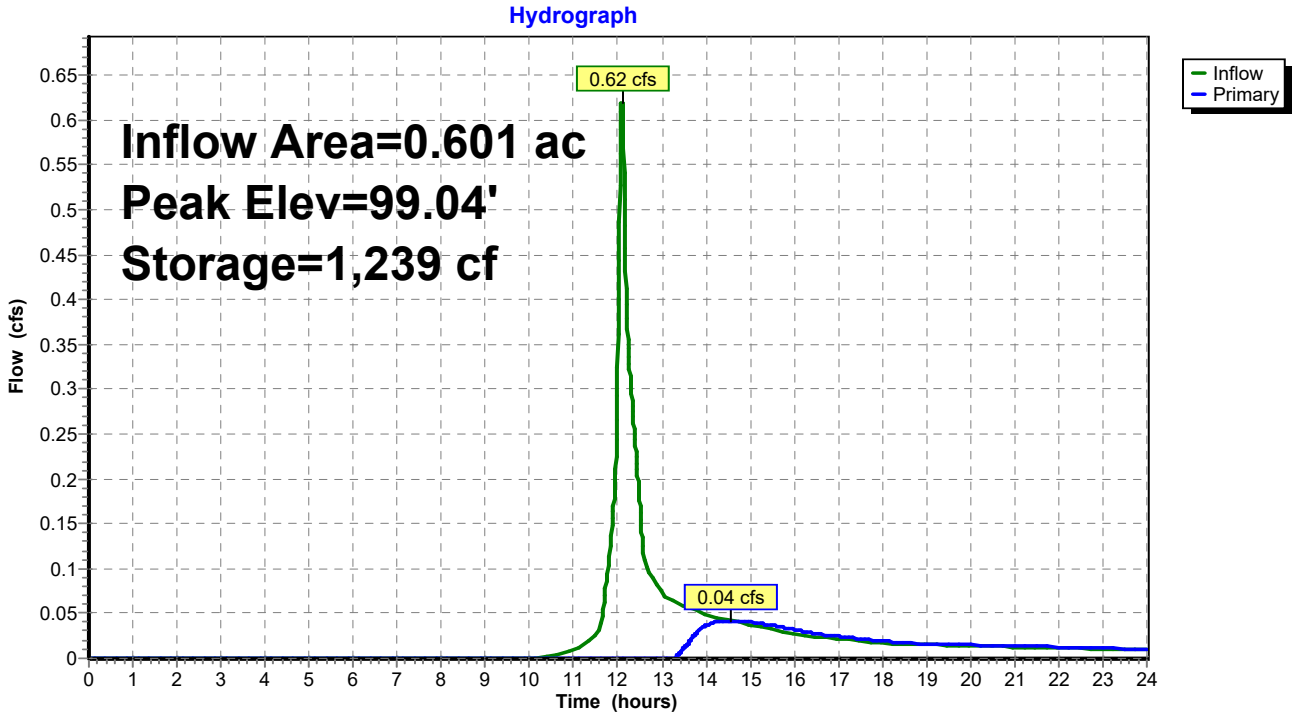
Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	5,726 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	2,102	0	0
99.50	2,849	2,476	2,476
100.50	3,652	3,251	5,726

Device	Routing	Invert	Outlet Devices
#1	Device 3	99.00'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 3	99.50'	**14.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	95.00'	**12.0" Round Culvert** L= 38.0' Ke= 0.500 Inlet / Outlet Invert= 95.00' / 94.61' S= 0.0103 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.04 cfs @ 14.57 hrs HW=99.04' (Free Discharge)
└**3=Culvert** (Passes 0.04 cfs of 7.11 cfs potential flow)
├**1=Broad-Crested Rectangular Weir** (Weir Controls 0.04 cfs @ 0.55 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-1: Bio P-1



Summary for Pond P-3: Detention P-3

Inflow Area = 3.147 ac, 49.92% Impervious, Inflow Depth > 0.82" for 1-Year event
Inflow = 2.48 cfs @ 12.09 hrs, Volume= 0.214 af
Outflow = 1.23 cfs @ 12.29 hrs, Volume= 0.212 af, Atten= 50%, Lag= 11.5 min
Primary = 1.23 cfs @ 12.29 hrs, Volume= 0.212 af
Routed to Link PDP-1 : PDP-1

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 93.47' @ 12.29 hrs Surf.Area= 0.058 ac Storage= 0.028 af

Plug-Flow detention time= 18.8 min calculated for 0.212 af (99% of inflow)
Center-of-Mass det. time= 13.1 min (862.6 - 849.5)

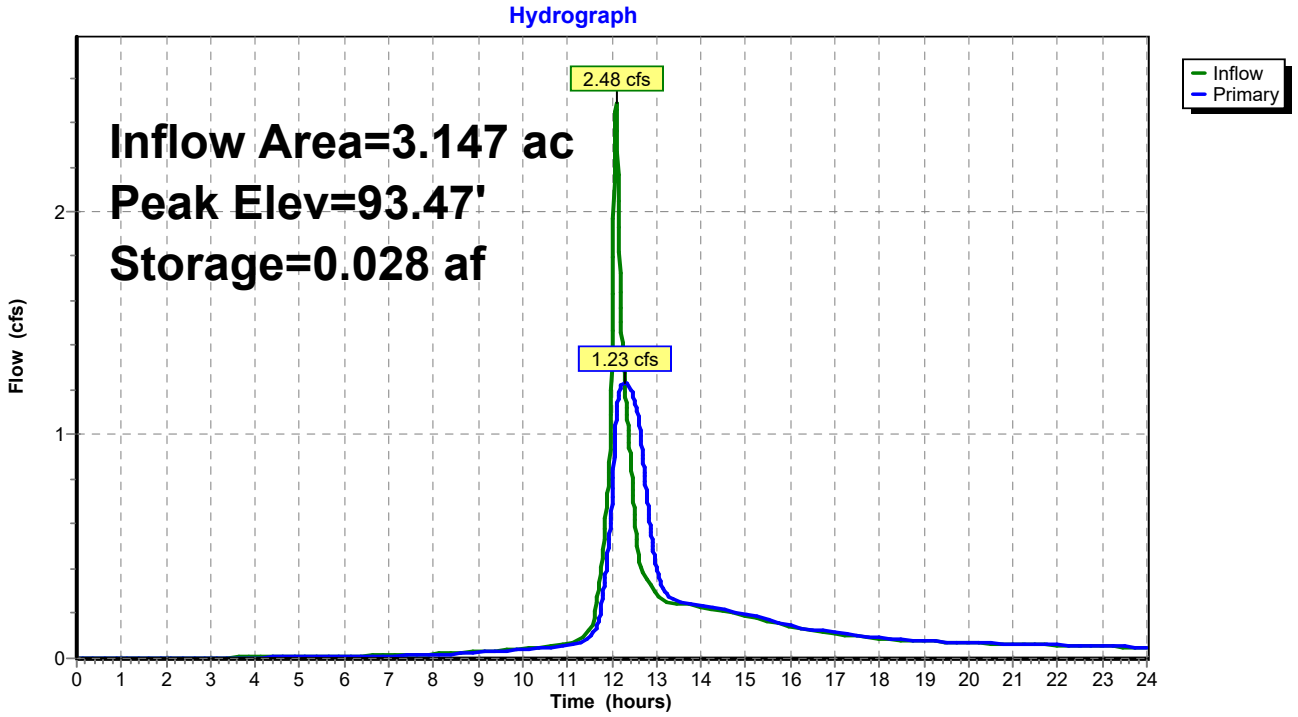
Volume	Invert	Avail.Storage	Storage Description
#1A	92.50'	0.082 af	**29.92'W x 84.57'L x 5.50'H Field A** 0.319 af Overall - 0.114 af Embedded = 0.206 af x 40.0% Voids
#2A	93.25'	0.114 af	**ADS_StormTech MC-3500 d +Cap**x 44 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 44 Chambers in 4 Rows Cap Storage= 14.9 cf x 2 x 4 rows = 119.2 cf
		0.196 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.50'	**18.0" Round Culvert** L= 45.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 92.50' / 92.00' S= 0.0111 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	92.50'	**5.2" Vert. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	93.50'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	96.25'	**22.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	97.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.23 cfs @ 12.29 hrs HW=93.47' (Free Discharge)
└**1=Culvert** (Passes 1.23 cfs of 4.05 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 1.23 cfs @ 4.18 fps)
├**3=Orifice/Grate** (Controls 0.00 cfs)
├**4=Orifice/Grate** (Controls 0.00 cfs)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-3: Detention P-3

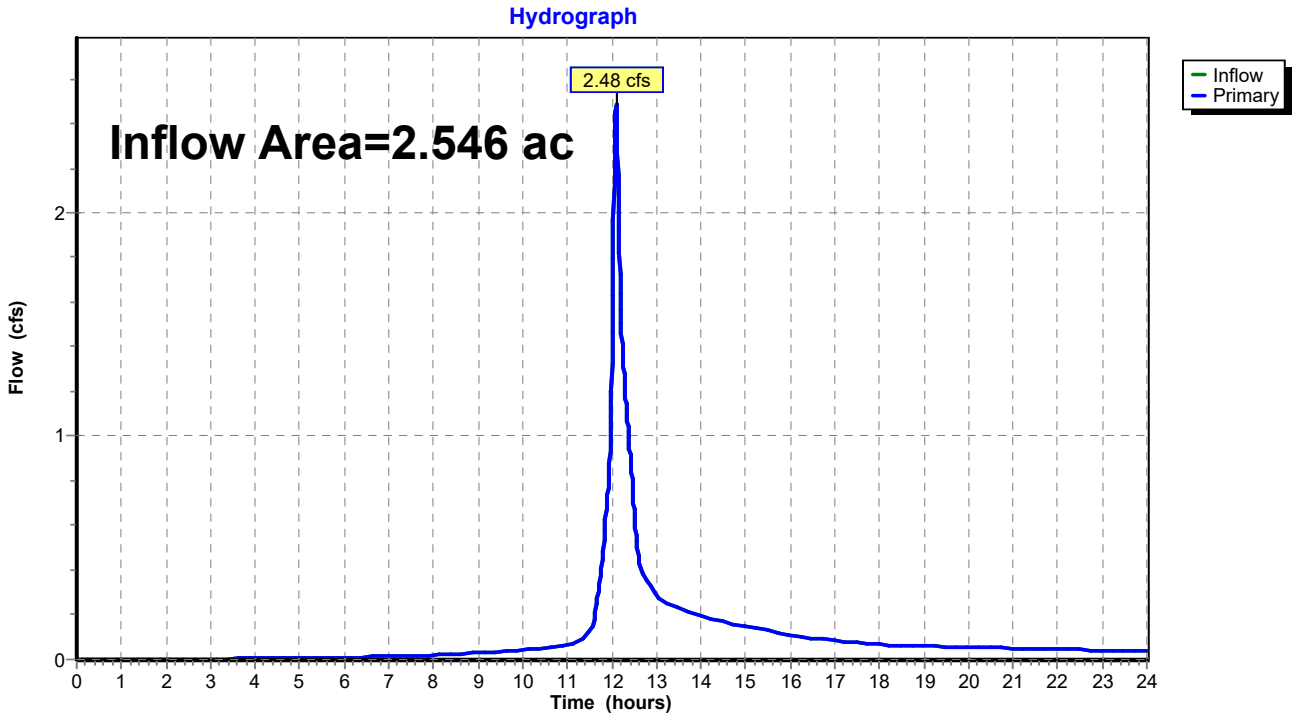


Summary for Pond SC-1: Swirl Chamber

Inflow Area = 2.546 ac, 49.45% Impervious, Inflow Depth > 0.92" for 1-Year event
Inflow = 2.48 cfs @ 12.09 hrs, Volume= 0.196 af
Primary = 2.48 cfs @ 12.09 hrs, Volume= 0.196 af, Atten= 0%, Lag= 0.0 min
Routed to Pond P-3 : Detention P-3

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond SC-1: Swirl Chamber

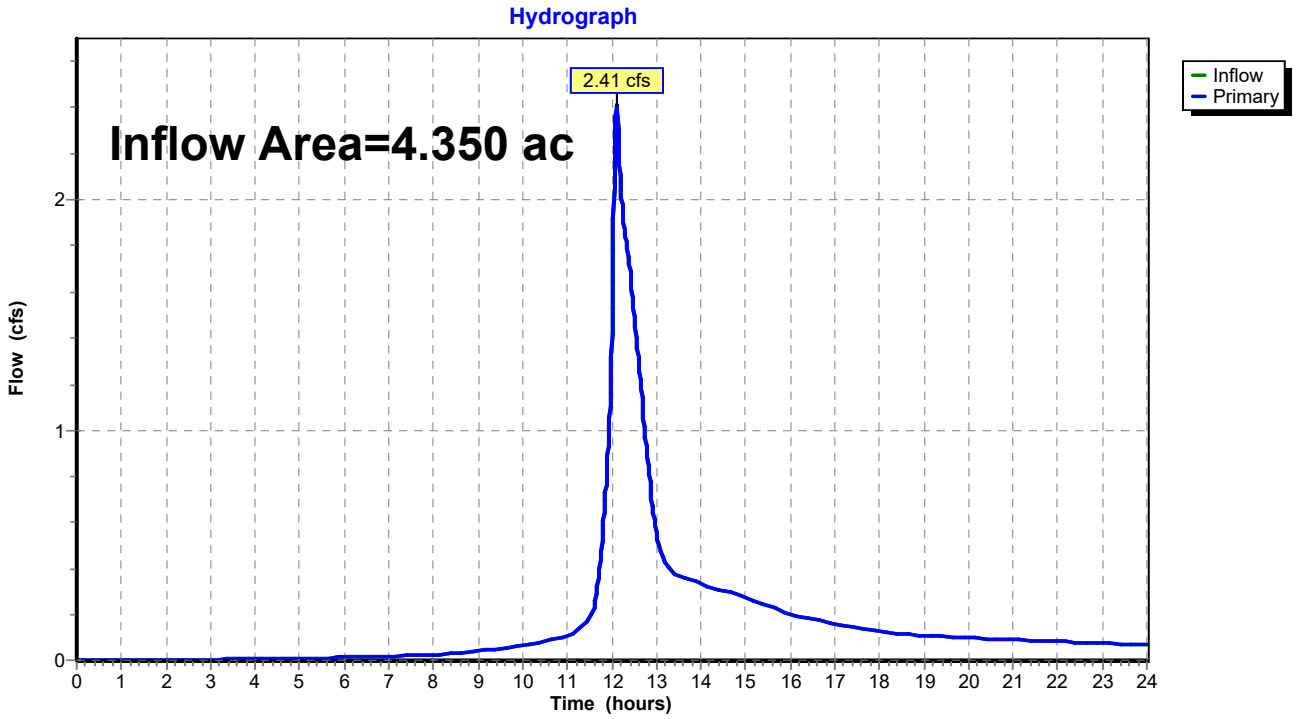


Summary for Link PDP-1: PDP-1

Inflow Area = 4.350 ac, 50.67% Impervious, Inflow Depth > 0.87" for 1-Year event
Inflow = 2.41 cfs @ 12.10 hrs, Volume= 0.315 af
Primary = 2.41 cfs @ 12.10 hrs, Volume= 0.315 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link PDP-1: PDP-1



Summary for Subcatchment PWS-1: PWS-1

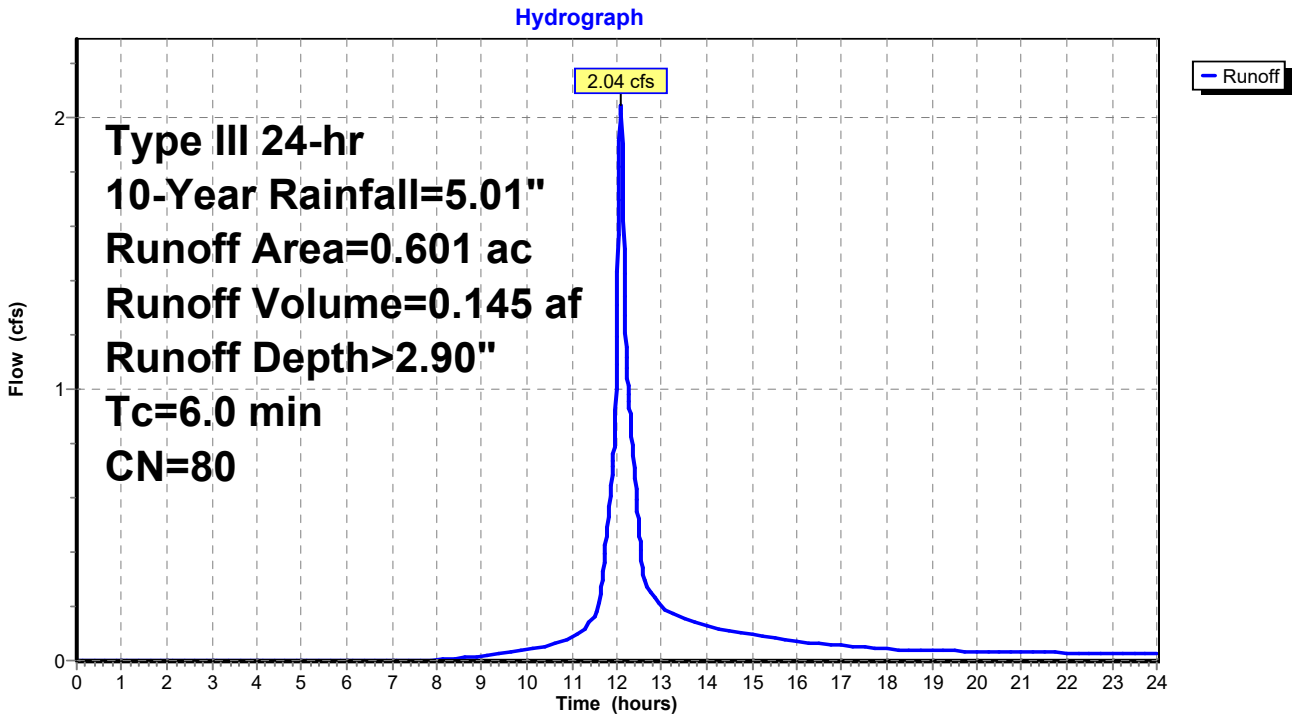
Runoff = 2.04 cfs @ 12.09 hrs, Volume= 0.145 af, Depth> 2.90"
Routed to Pond P-1 : Bio P-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.312	98	Paved parking, HSG B
0.260	61	>75% Grass cover, Good, HSG B
0.029	55	Woods, Good, HSG B
0.601	80	Weighted Average
0.289		48.09% Pervious Area
0.312		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-1: PWS-1



Summary for Subcatchment PWS-2: PWS-2

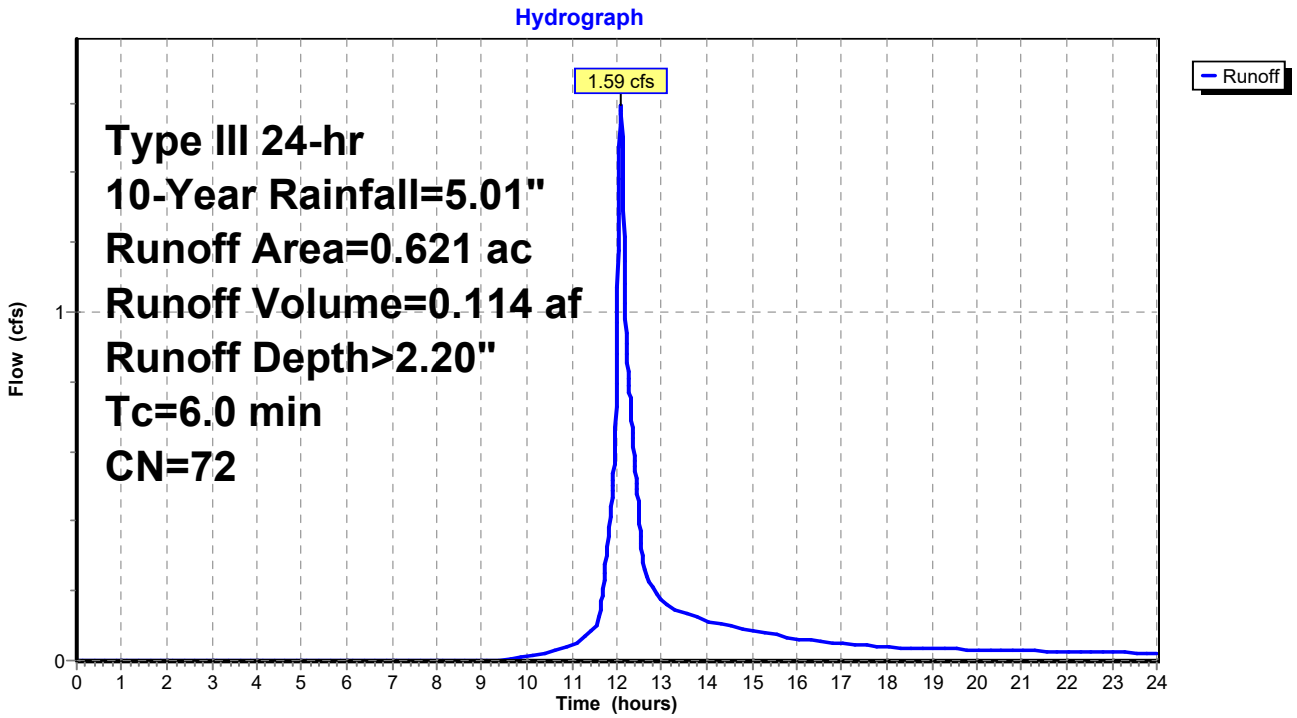
Runoff = 1.59 cfs @ 12.09 hrs, Volume= 0.114 af, Depth> 2.20"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.191	98	Paved parking, HSG B
0.356	61	>75% Grass cover, Good, HSG B
0.074	55	Woods, Good, HSG B
0.621	72	Weighted Average
0.430		69.24% Pervious Area
0.191		30.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-2: PWS-2



Summary for Subcatchment PWS-3: PWS-3

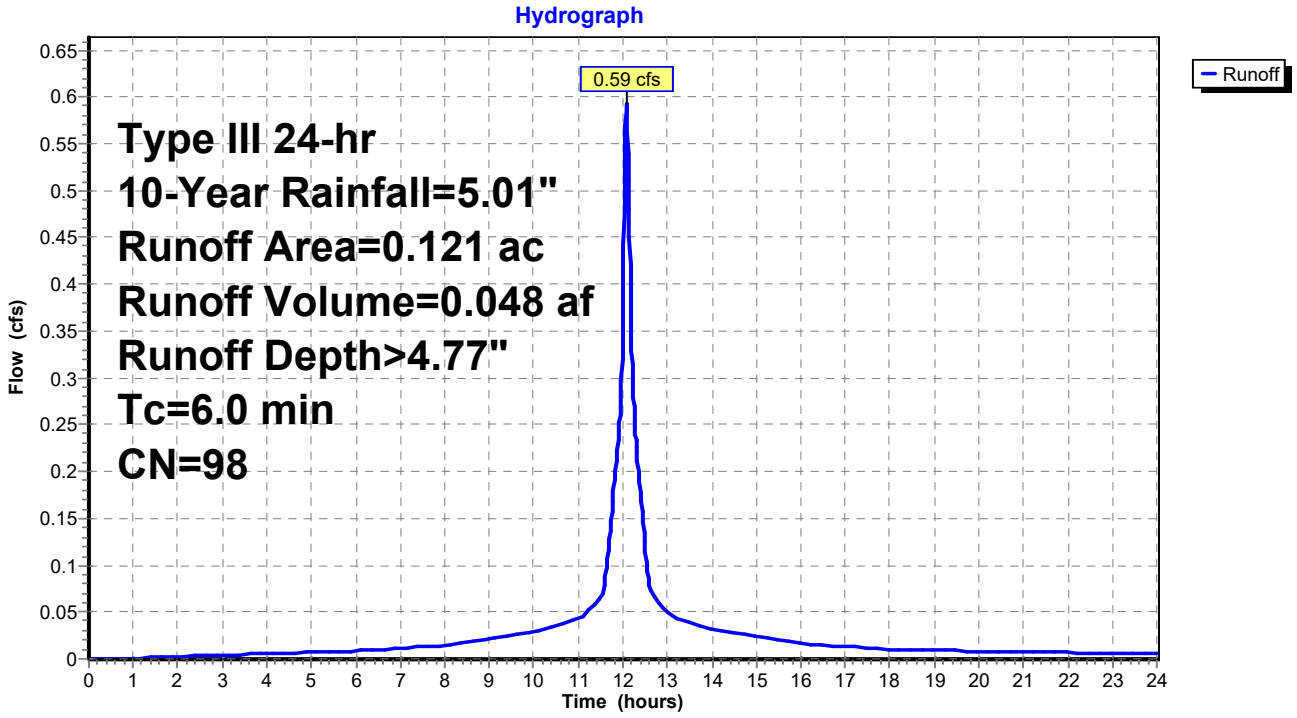
Runoff = 0.59 cfs @ 12.08 hrs, Volume= 0.048 af, Depth> 4.77"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.121	98	Roofs, HSG B
0.121		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-3: PWS-3



Summary for Subcatchment PWS-4: PWS-4

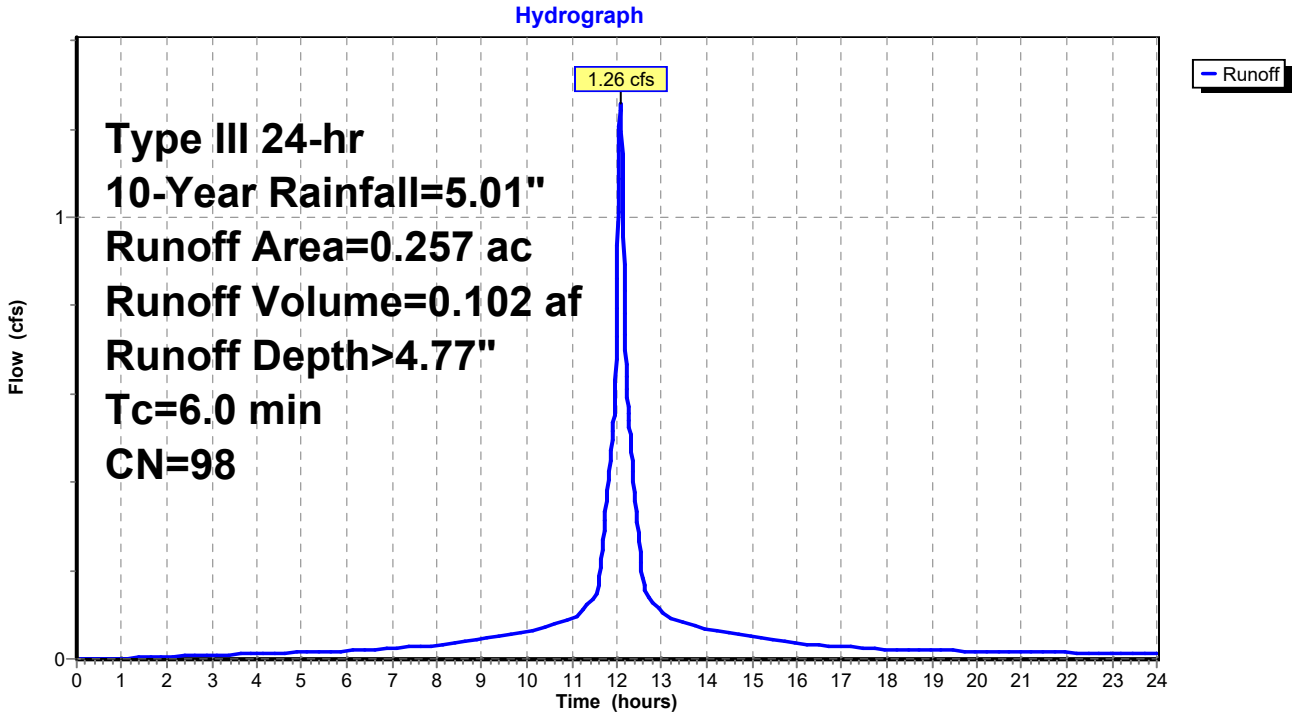
Runoff = 1.26 cfs @ 12.08 hrs, Volume= 0.102 af, Depth> 4.77"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.257	98	Roofs, HSG B
0.257		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-4: PWS-4



Summary for Subcatchment PWS-5: PWS-5

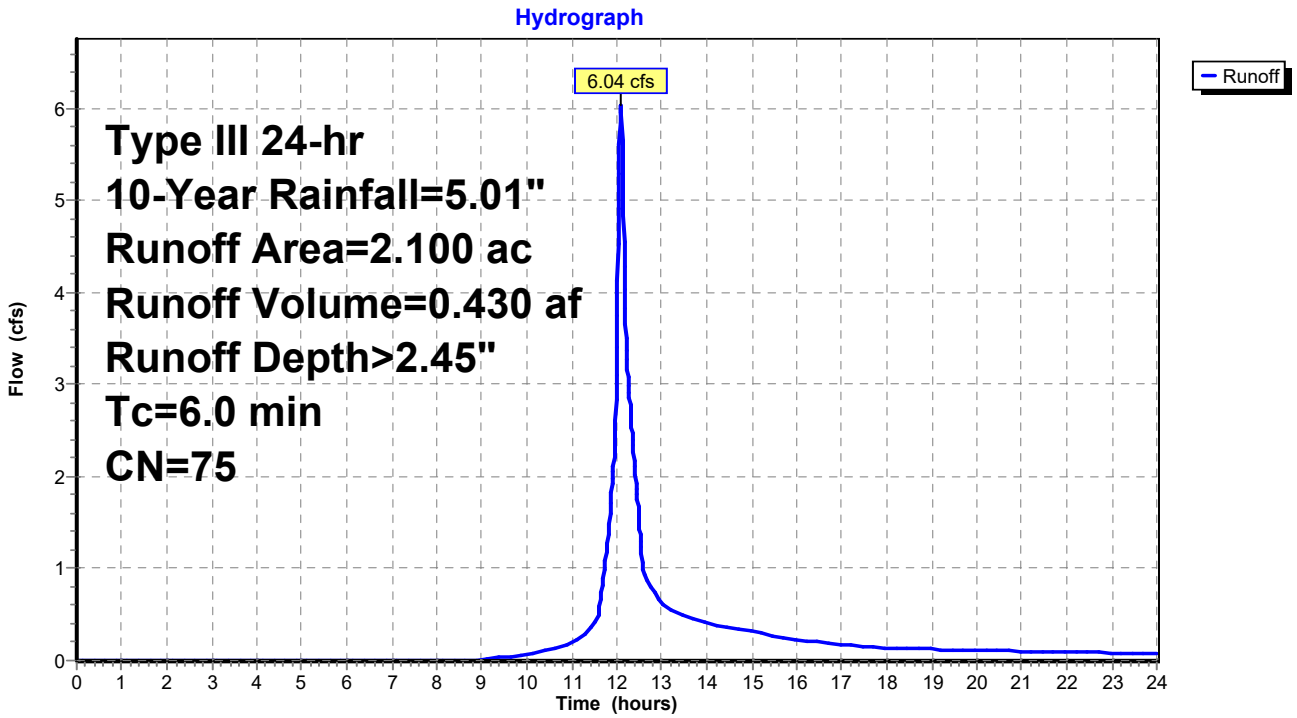
Runoff = 6.04 cfs @ 12.09 hrs, Volume= 0.430 af, Depth> 2.45"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.838	98	Paved parking, HSG B
0.993	61	>75% Grass cover, Good, HSG B
0.269	55	Woods, Good, HSG B
2.100	75	Weighted Average
1.262		60.10% Pervious Area
0.838		39.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-5: PWS-5



Summary for Subcatchment PWS-6: PWS-6

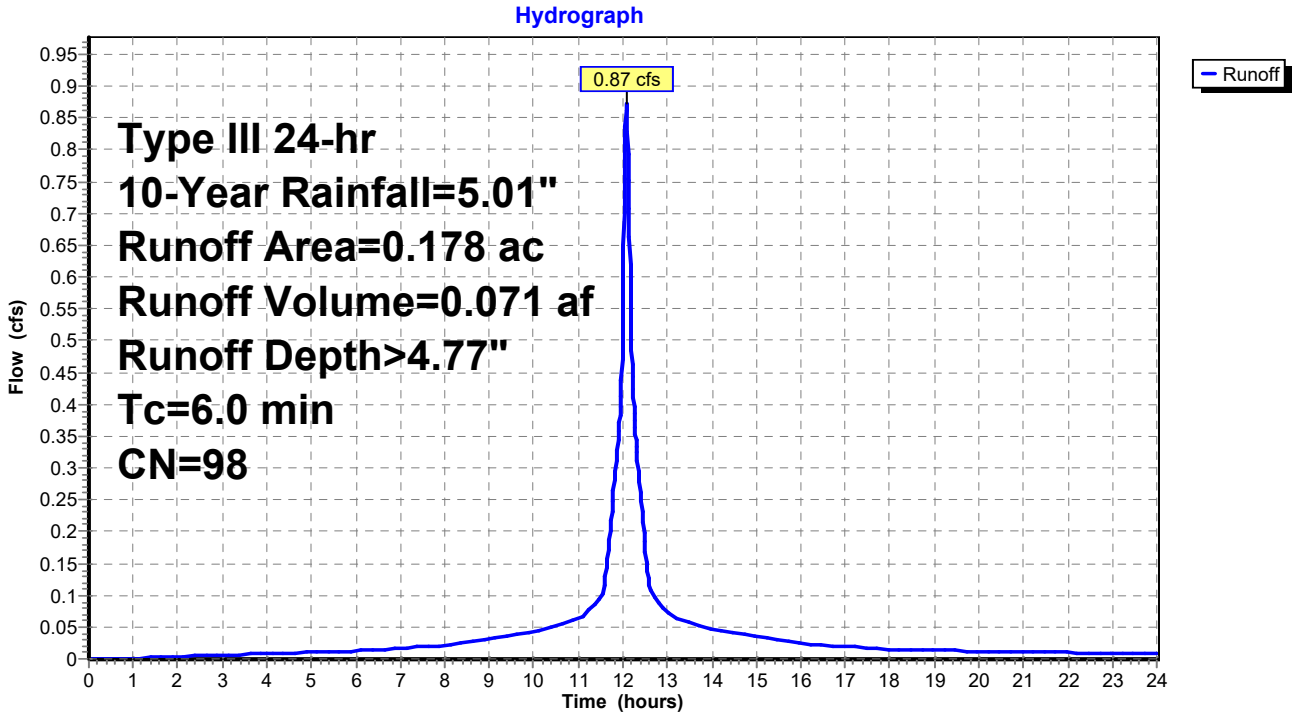
Runoff = 0.87 cfs @ 12.08 hrs, Volume= 0.071 af, Depth> 4.77"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.178	98	Roofs, HSG B
0.178		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-6: PWS-6



Summary for Subcatchment PWS-7: PWS-7

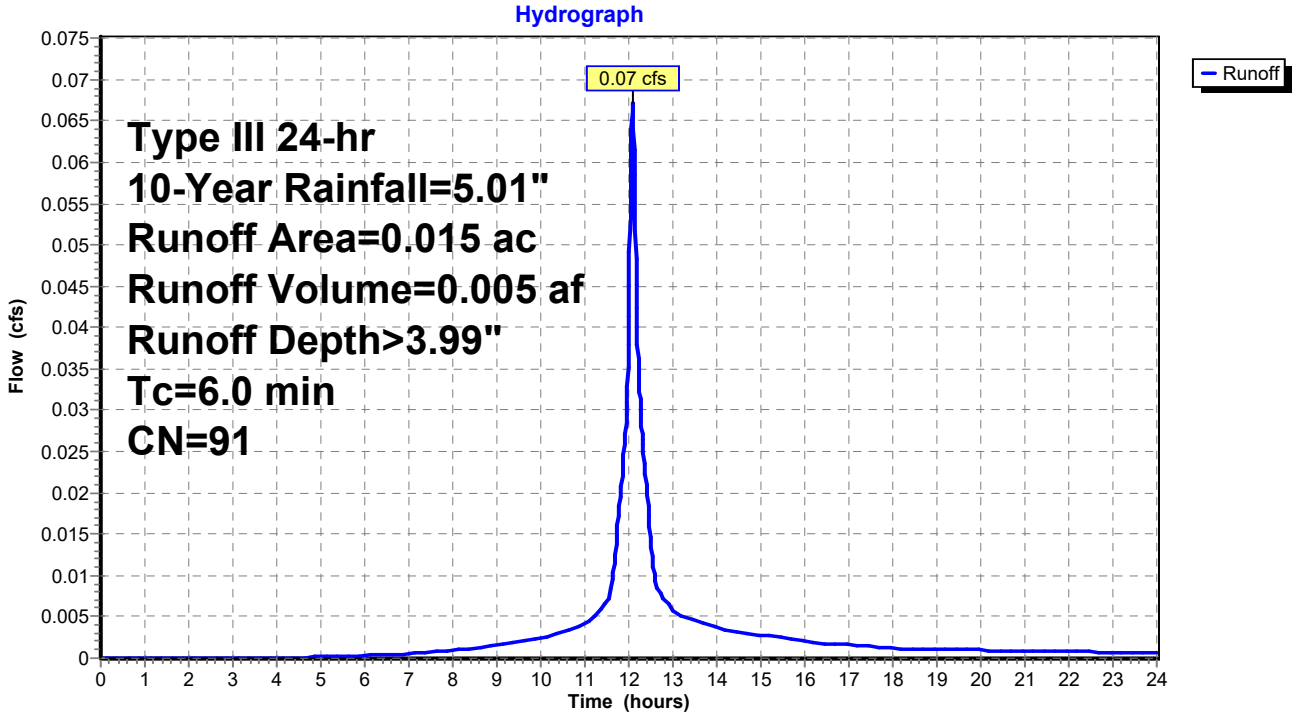
Runoff = 0.07 cfs @ 12.08 hrs, Volume= 0.005 af, Depth> 3.99"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.012	98	Paved parking, HSG B
0.003	61	>75% Grass cover, Good, HSG B
0.015	91	Weighted Average
0.003		20.00% Pervious Area
0.012		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-7: PWS-7



Summary for Subcatchment PWS-8: PWS-8

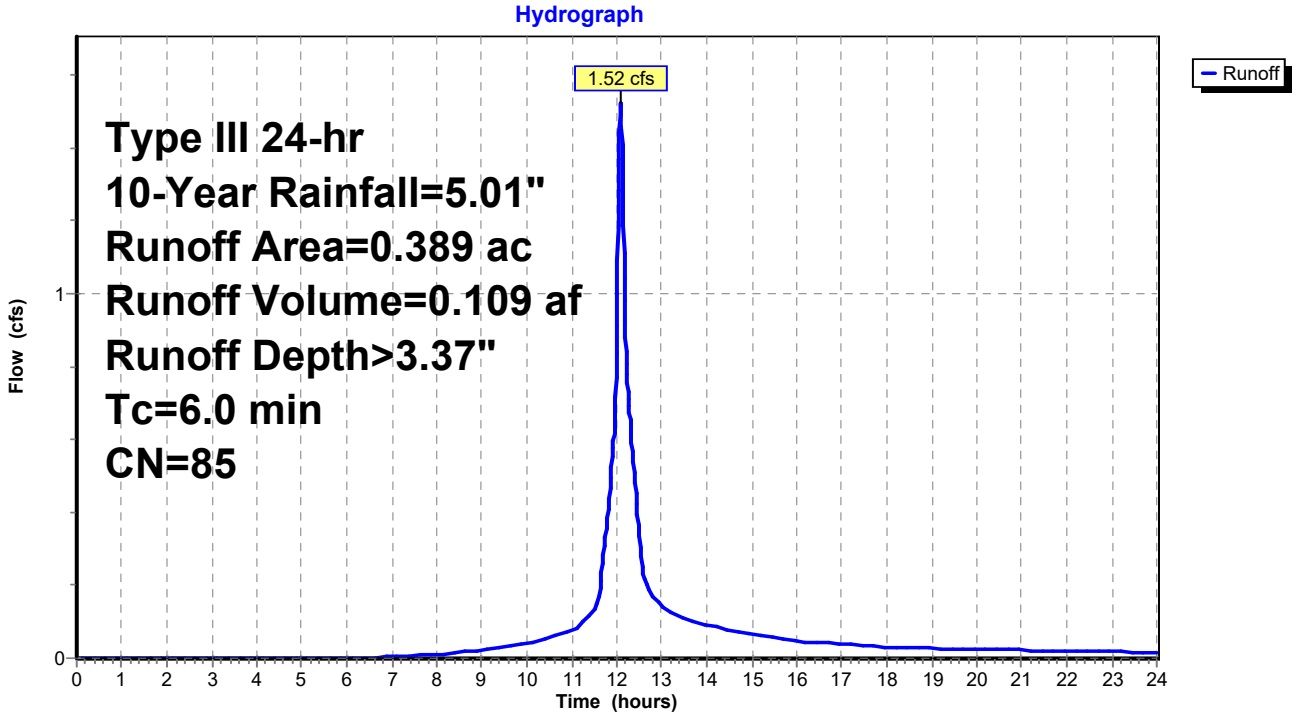
Runoff = 1.52 cfs @ 12.09 hrs, Volume= 0.109 af, Depth> 3.37"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.252	98	Paved parking, HSG B
0.137	61	>75% Grass cover, Good, HSG B
0.389	85	Weighted Average
0.137		35.22% Pervious Area
0.252		64.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-8: PWS-8



Summary for Subcatchment PWS-9: PWS-9

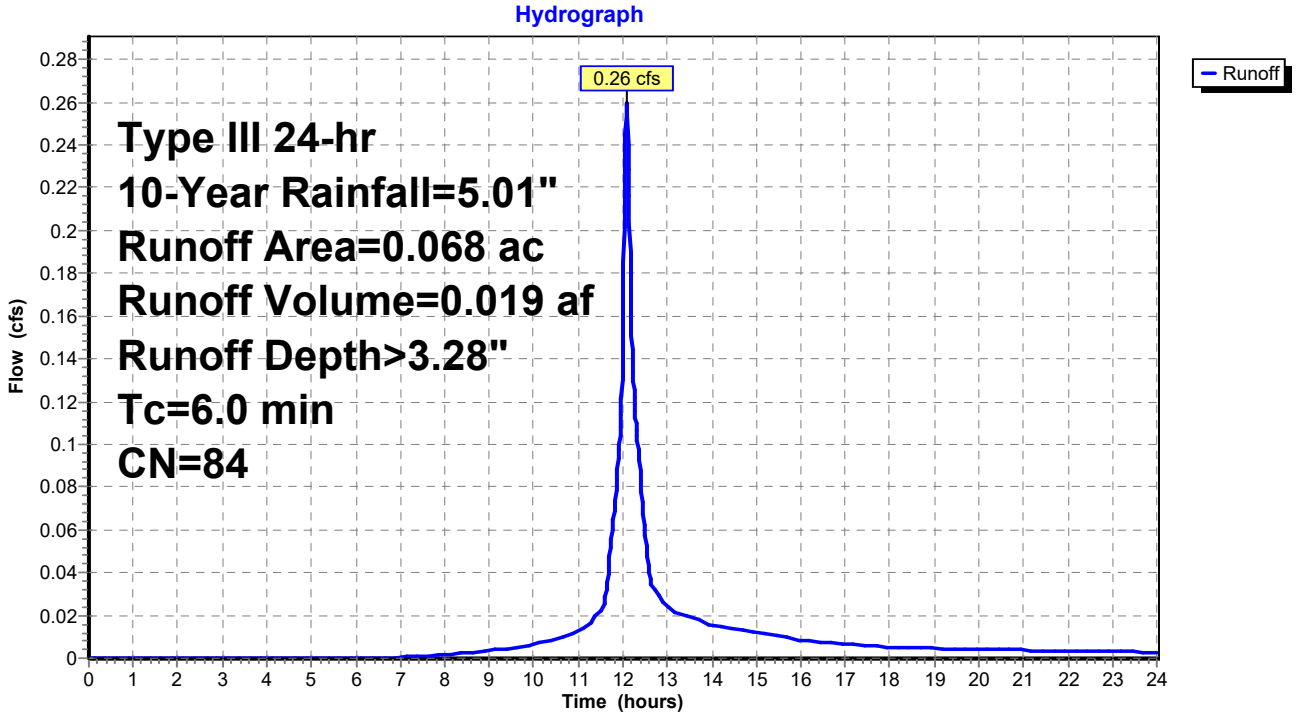
Runoff = 0.26 cfs @ 12.09 hrs, Volume= 0.019 af, Depth> 3.28"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.01"

Area (ac)	CN	Description
0.043	98	Paved parking, HSG B
0.025	61	>75% Grass cover, Good, HSG B
0.068	84	Weighted Average
0.025		36.76% Pervious Area
0.043		63.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-9: PWS-9



Summary for Pond P-1: Bio P-1

Inflow Area = 0.601 ac, 51.91% Impervious, Inflow Depth > 2.90" for 10-Year event
Inflow = 2.04 cfs @ 12.09 hrs, Volume= 0.145 af
Outflow = 1.18 cfs @ 12.21 hrs, Volume= 0.117 af, Atten= 42%, Lag= 7.1 min
Primary = 1.18 cfs @ 12.21 hrs, Volume= 0.117 af
Routed to Pond P-3 : Detention P-3

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 99.35' @ 12.21 hrs Surf.Area= 2,734 sf Storage= 2,047 cf

Plug-Flow detention time= 123.9 min calculated for 0.117 af (81% of inflow)
Center-of-Mass det. time= 49.2 min (870.2 - 821.0)

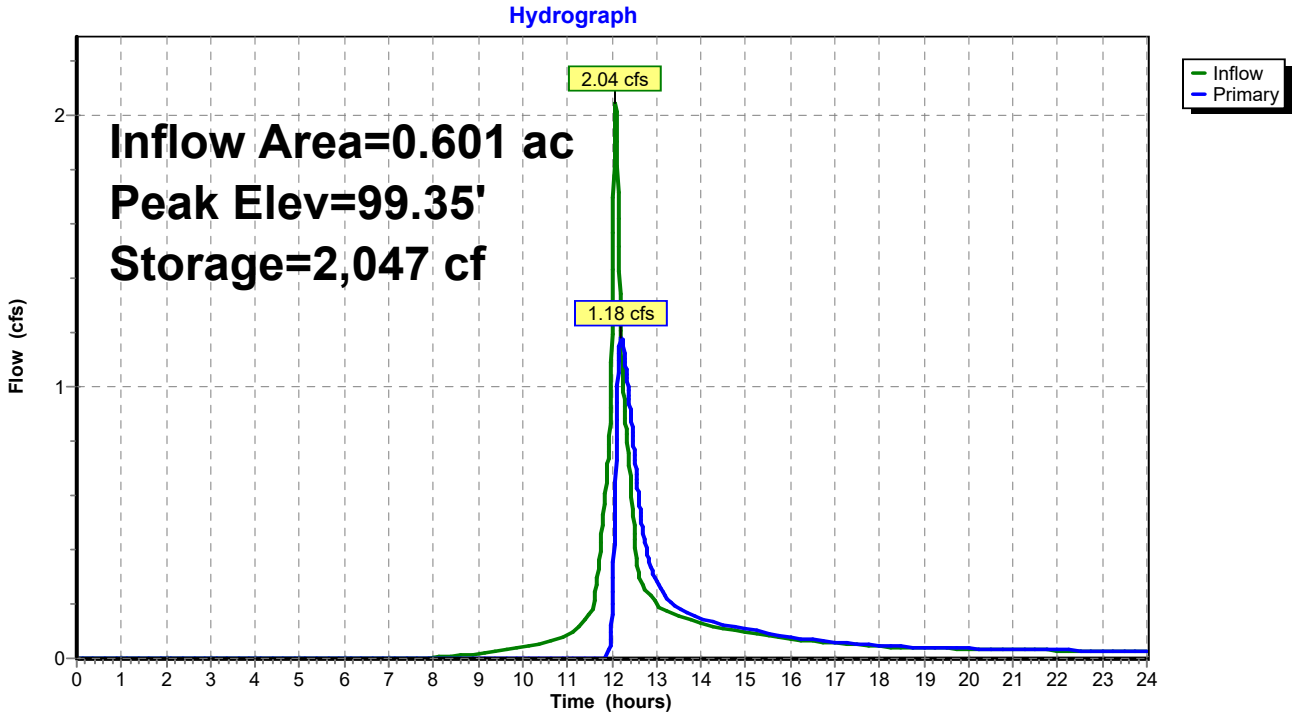
Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	5,726 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	2,102	0	0
99.50	2,849	2,476	2,476
100.50	3,652	3,251	5,726

Device	Routing	Invert	Outlet Devices
#1	Device 3	99.00'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 3	99.50'	**14.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	95.00'	**12.0" Round Culvert** L= 38.0' Ke= 0.500 Inlet / Outlet Invert= 95.00' / 94.61' S= 0.0103 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.18 cfs @ 12.21 hrs HW=99.35' (Free Discharge)
└**3=Culvert** (Passes 1.18 cfs of 7.42 cfs potential flow)
├**1=Broad-Crested Rectangular Weir** (Weir Controls 1.18 cfs @ 1.70 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-1: Bio P-1



Summary for Pond P-3: Detention P-3

Inflow Area = 3.147 ac, 49.92% Impervious, Inflow Depth > 2.73" for 10-Year event
Inflow = 8.89 cfs @ 12.09 hrs, Volume= 0.716 af
Outflow = 6.39 cfs @ 12.19 hrs, Volume= 0.712 af, Atten= 28%, Lag= 5.4 min
Primary = 6.39 cfs @ 12.19 hrs, Volume= 0.712 af
Routed to Link PDP-1 : PDP-1

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 94.60' @ 12.19 hrs Surf.Area= 0.058 ac Storage= 0.082 af

Plug-Flow detention time= 13.3 min calculated for 0.712 af (99% of inflow)
Center-of-Mass det. time= 10.4 min (831.5 - 821.2)

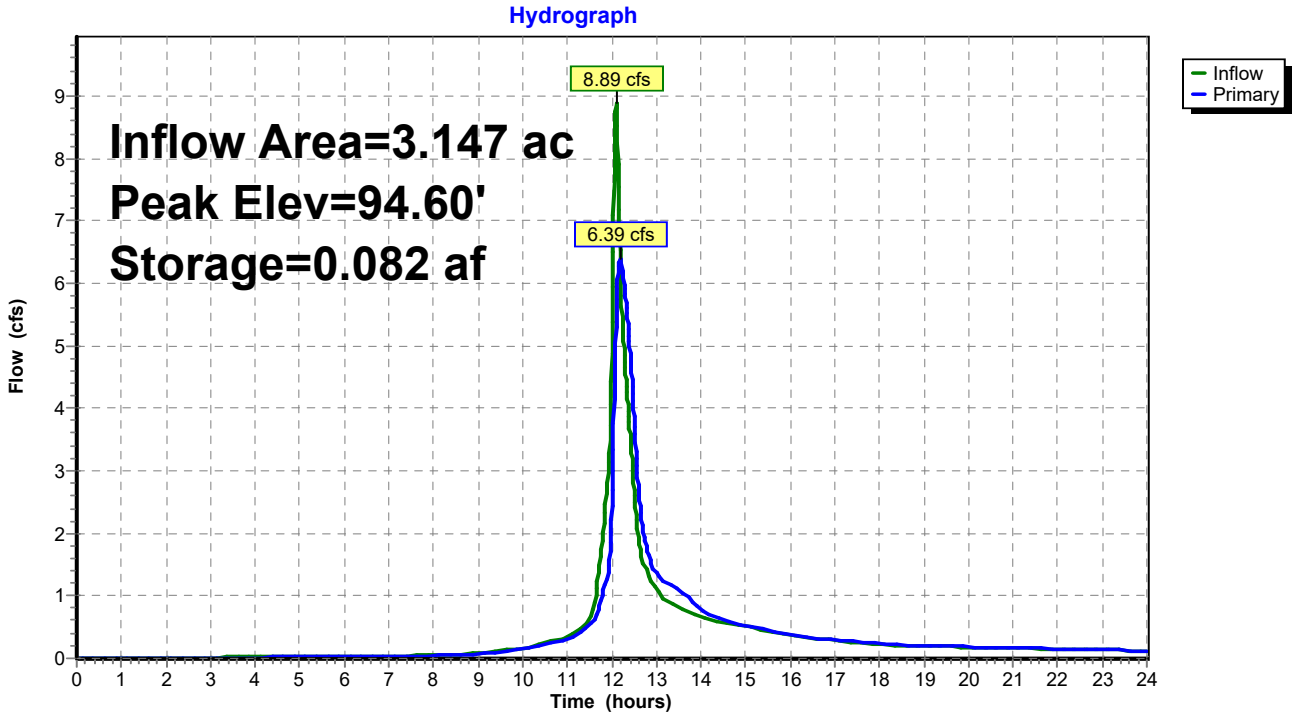
Volume	Invert	Avail.Storage	Storage Description
#1A	92.50'	0.082 af	**29.92'W x 84.57'L x 5.50'H Field A** 0.319 af Overall - 0.114 af Embedded = 0.206 af x 40.0% Voids
#2A	93.25'	0.114 af	**ADS_StormTech MC-3500 d +Cap**x 44 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 44 Chambers in 4 Rows Cap Storage= 14.9 cf x 2 x 4 rows = 119.2 cf
		0.196 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.50'	**18.0" Round Culvert** L= 45.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 92.50' / 92.00' S= 0.0111 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	92.50'	**5.2" Vert. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	93.50'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	96.25'	**22.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	97.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=6.38 cfs @ 12.19 hrs HW=94.60' (Free Discharge)
└**1=Culvert** (Passes 6.38 cfs of 9.90 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 1.95 cfs @ 6.61 fps)
  ├**3=Orifice/Grate** (Orifice Controls 4.43 cfs @ 4.43 fps)
  ├**4=Orifice/Grate** (Controls 0.00 cfs)
  └**5=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Pond P-3: Detention P-3

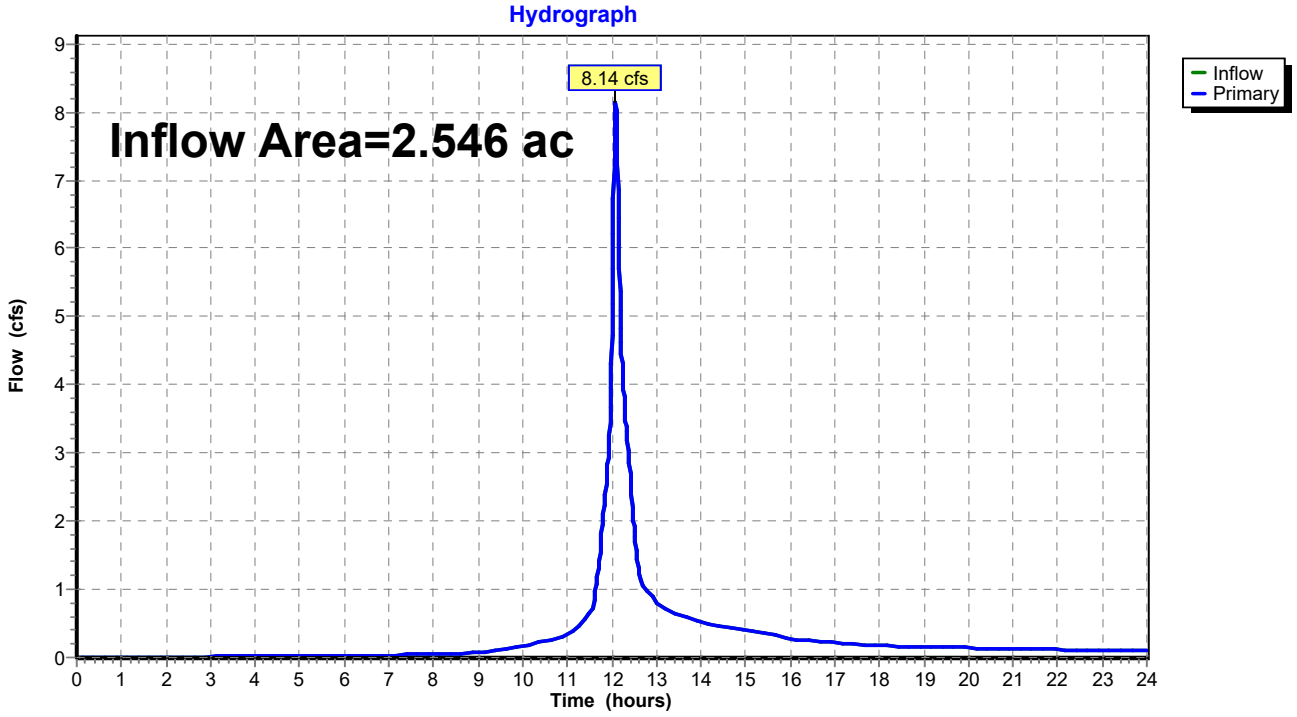


Summary for Pond SC-1: Swirl Chamber

Inflow Area = 2.546 ac, 49.45% Impervious, Inflow Depth > 2.82" for 10-Year event
Inflow = 8.14 cfs @ 12.09 hrs, Volume= 0.598 af
Primary = 8.14 cfs @ 12.09 hrs, Volume= 0.598 af, Atten= 0%, Lag= 0.0 min
Routed to Pond P-3 : Detention P-3

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond SC-1: Swirl Chamber

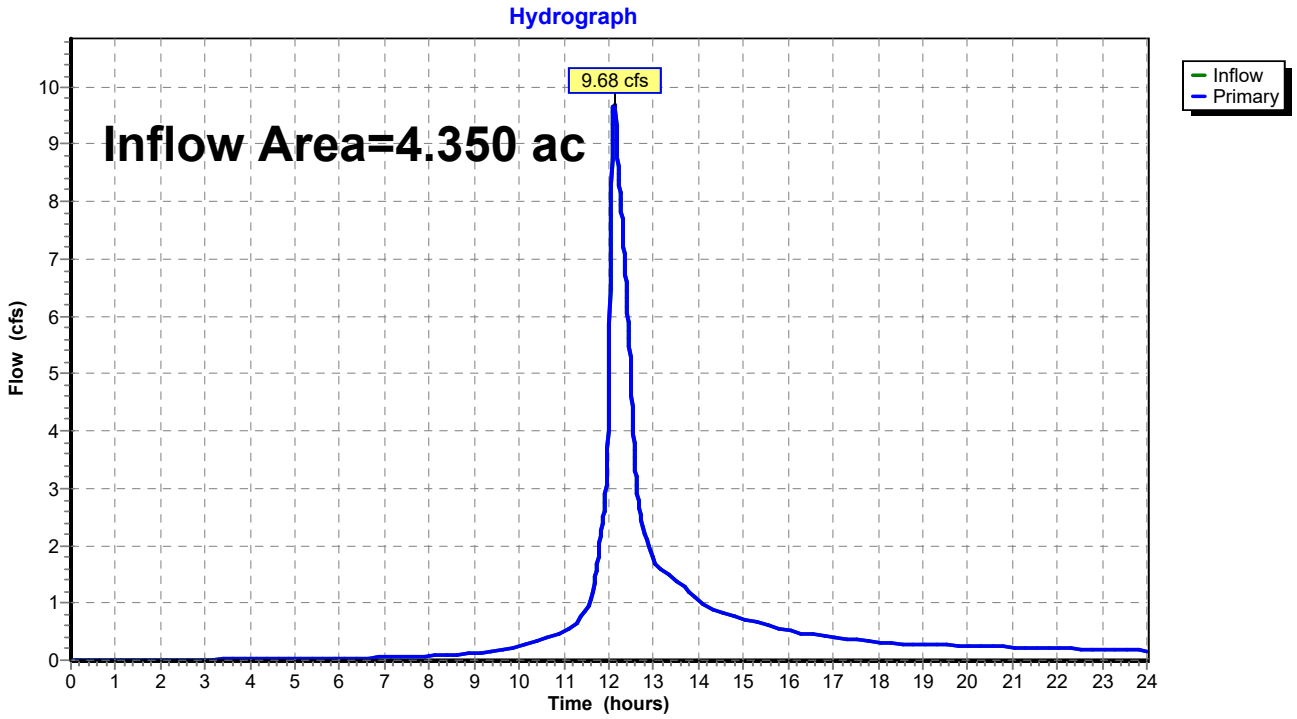


Summary for Link PDP-1: PDP-1

Inflow Area = 4.350 ac, 50.67% Impervious, Inflow Depth > 2.79" for 10-Year event
Inflow = 9.68 cfs @ 12.12 hrs, Volume= 1.011 af
Primary = 9.68 cfs @ 12.12 hrs, Volume= 1.011 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link PDP-1: PDP-1



Summary for Subcatchment PWS-1: PWS-1

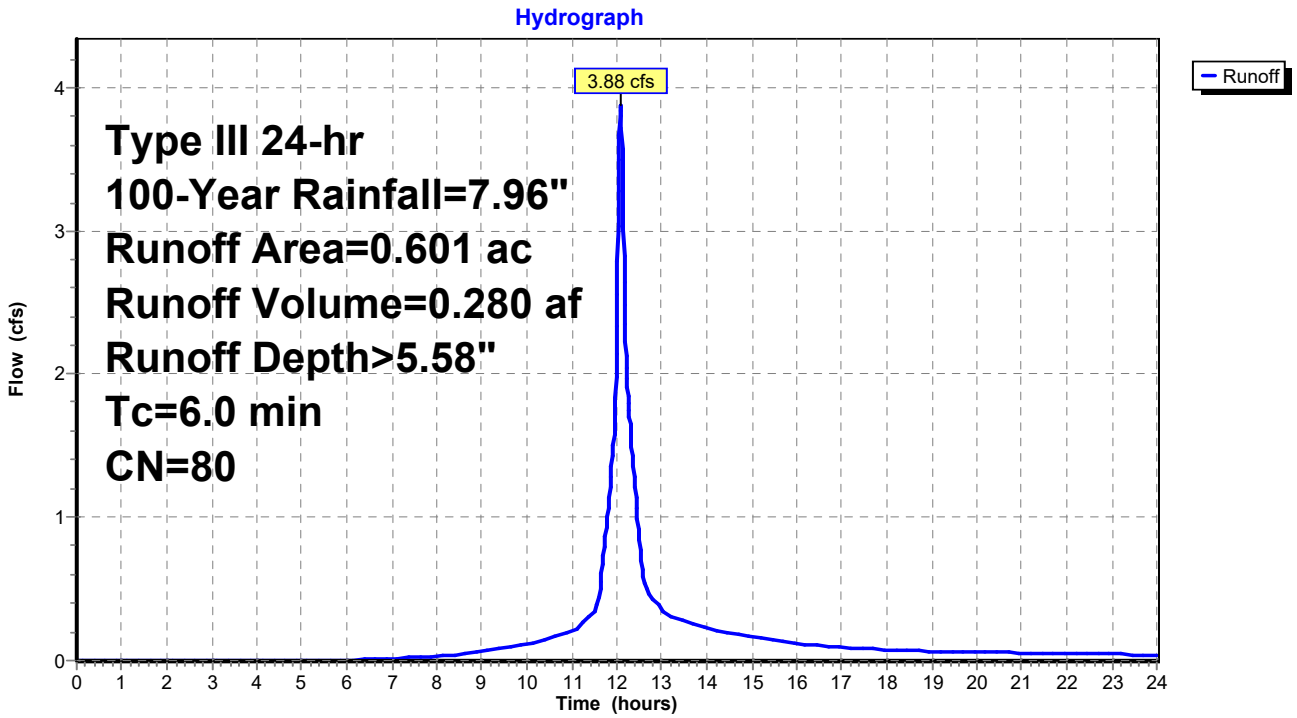
Runoff = 3.88 cfs @ 12.09 hrs, Volume= 0.280 af, Depth> 5.58"
Routed to Pond P-1 : Bio P-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.312	98	Paved parking, HSG B
0.260	61	>75% Grass cover, Good, HSG B
0.029	55	Woods, Good, HSG B
0.601	80	Weighted Average
0.289		48.09% Pervious Area
0.312		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-1: PWS-1



Summary for Subcatchment PWS-2: PWS-2

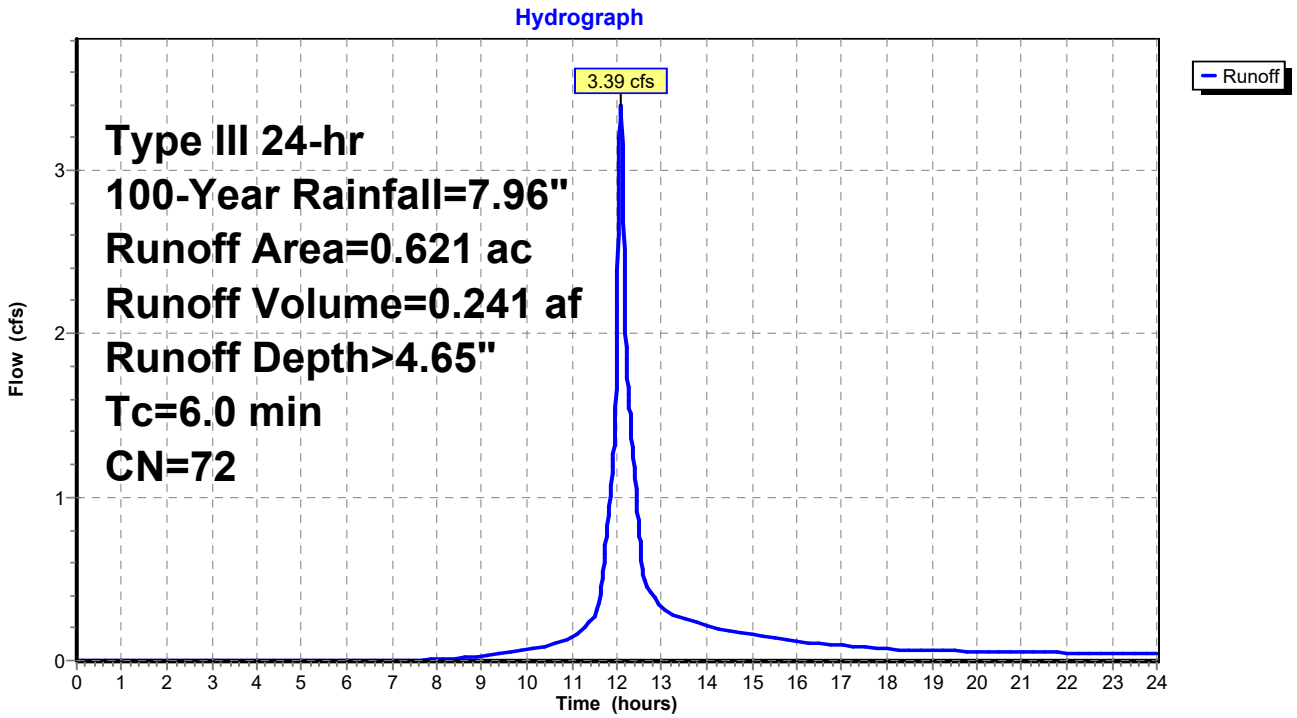
Runoff = 3.39 cfs @ 12.09 hrs, Volume= 0.241 af, Depth> 4.65"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.191	98	Paved parking, HSG B
0.356	61	>75% Grass cover, Good, HSG B
0.074	55	Woods, Good, HSG B
0.621	72	Weighted Average
0.430		69.24% Pervious Area
0.191		30.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-2: PWS-2



Summary for Subcatchment PWS-3: PWS-3

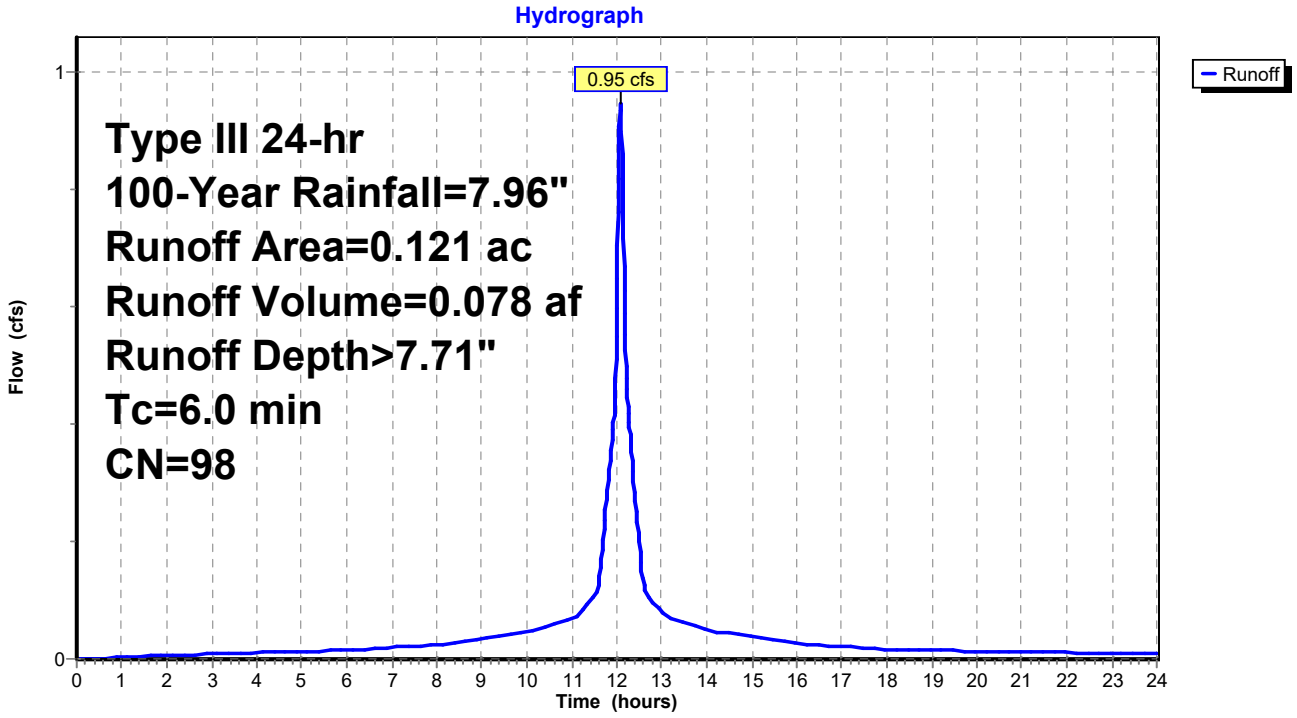
Runoff = 0.95 cfs @ 12.08 hrs, Volume= 0.078 af, Depth> 7.71"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.121	98	Roofs, HSG B
0.121		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-3: PWS-3



Summary for Subcatchment PWS-4: PWS-4

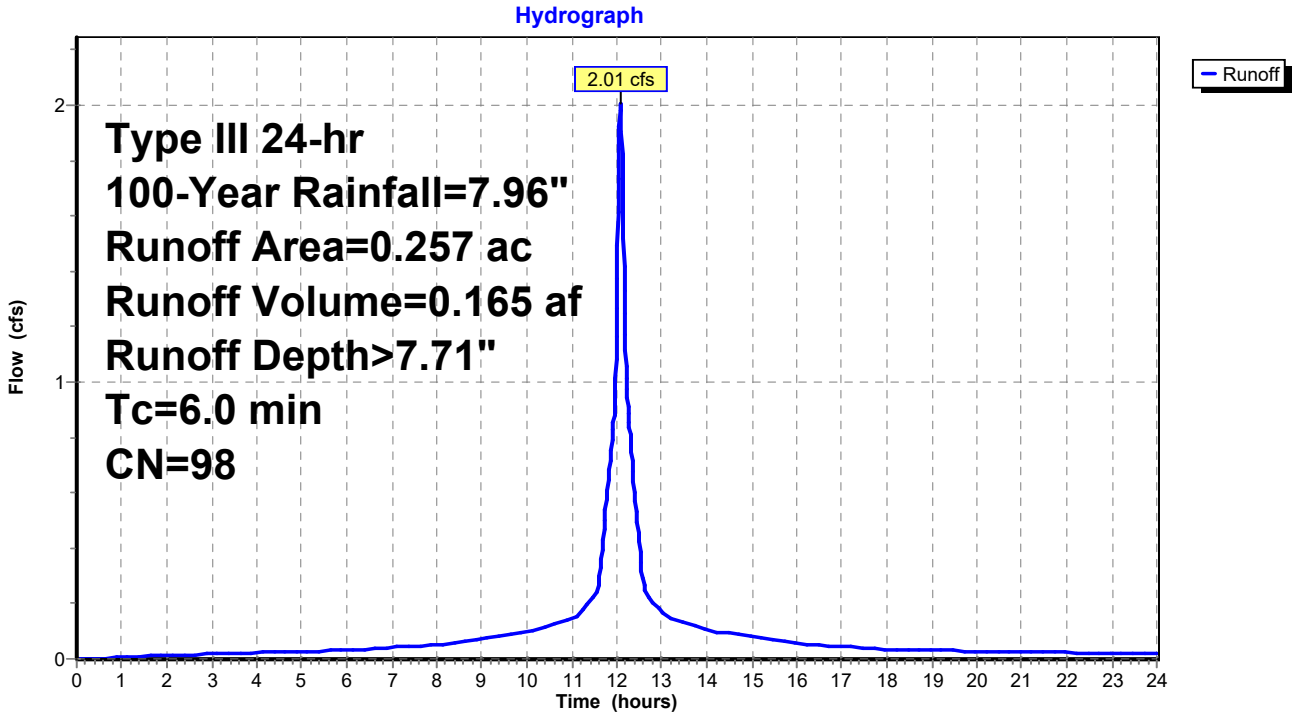
Runoff = 2.01 cfs @ 12.08 hrs, Volume= 0.165 af, Depth> 7.71"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.257	98	Roofs, HSG B
0.257		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-4: PWS-4



Summary for Subcatchment PWS-5: PWS-5

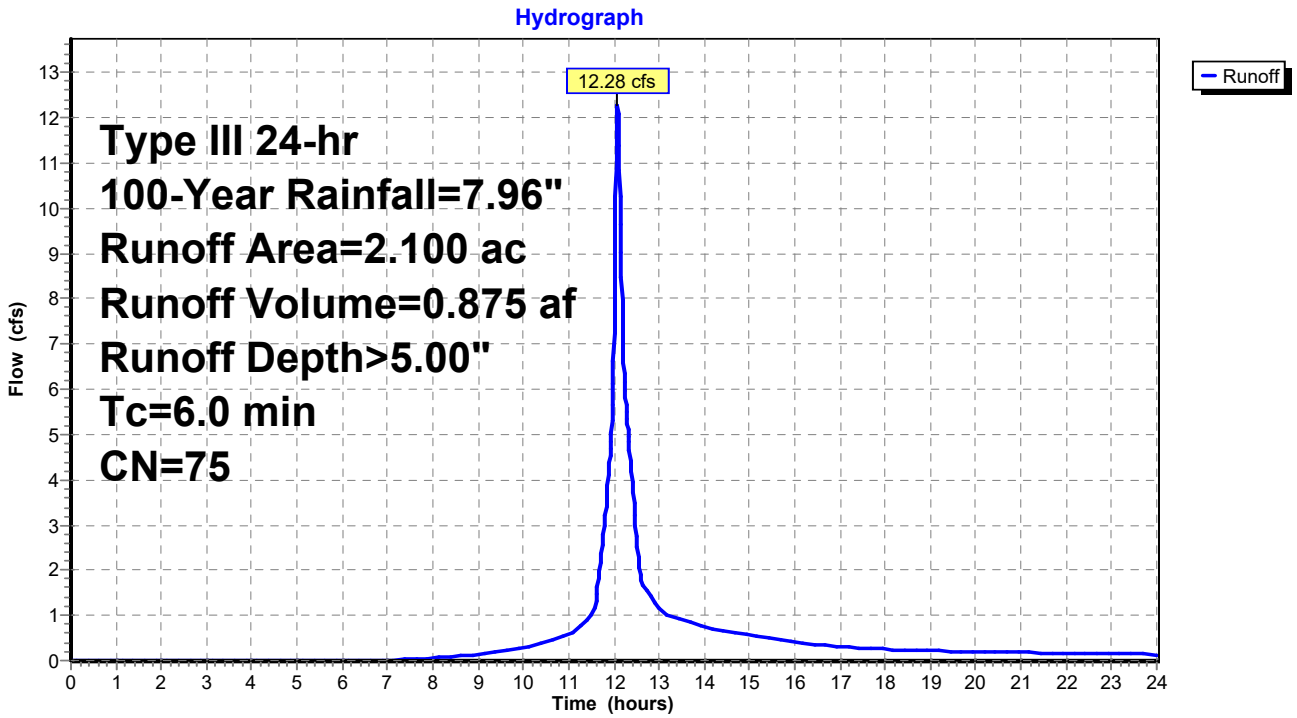
Runoff = 12.28 cfs @ 12.09 hrs, Volume= 0.875 af, Depth> 5.00"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.838	98	Paved parking, HSG B
0.993	61	>75% Grass cover, Good, HSG B
0.269	55	Woods, Good, HSG B
2.100	75	Weighted Average
1.262		60.10% Pervious Area
0.838		39.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-5: PWS-5



Summary for Subcatchment PWS-6: PWS-6

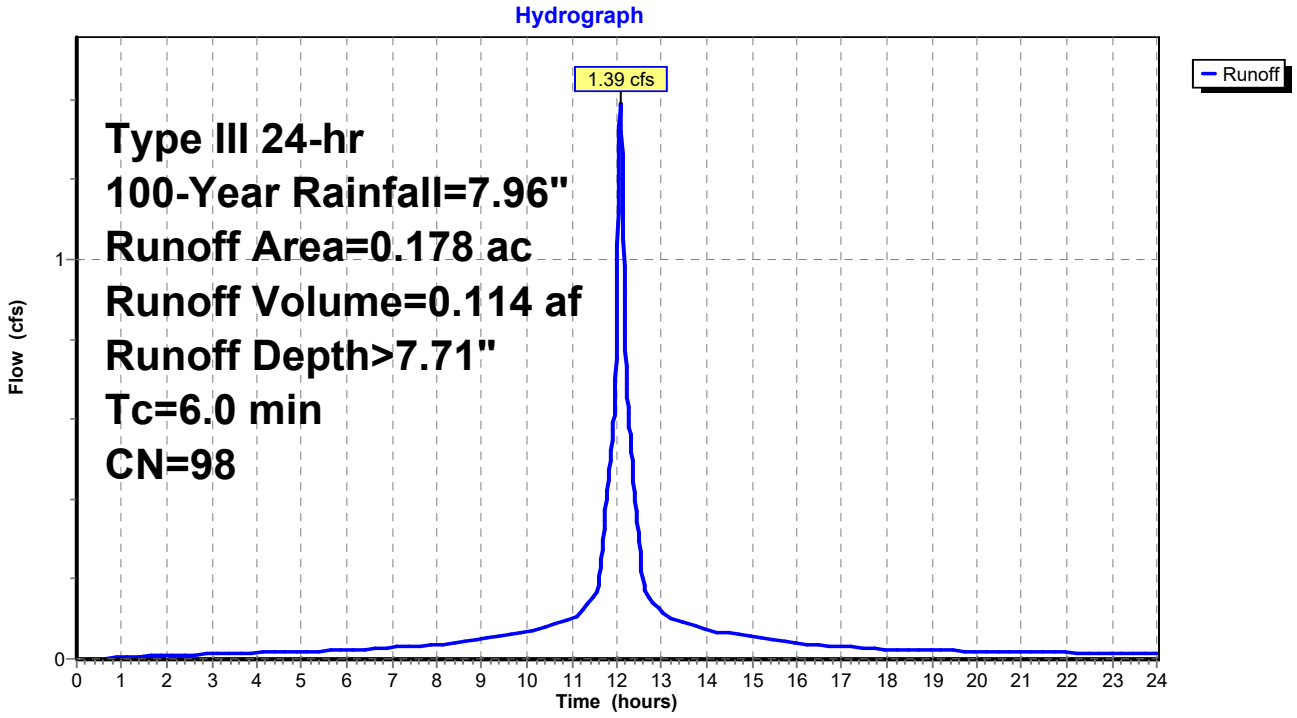
Runoff = 1.39 cfs @ 12.08 hrs, Volume= 0.114 af, Depth> 7.71"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.178	98	Roofs, HSG B
0.178		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-6: PWS-6



Summary for Subcatchment PWS-7: PWS-7

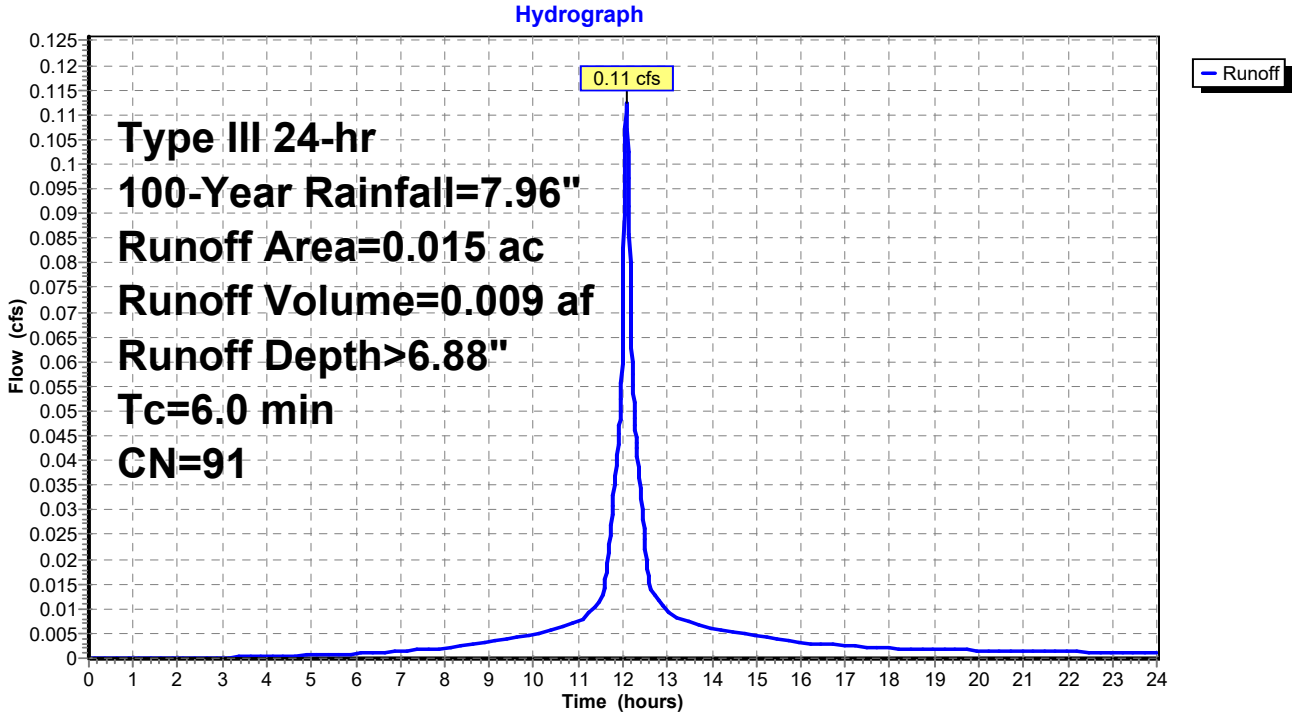
Runoff = 0.11 cfs @ 12.08 hrs, Volume= 0.009 af, Depth> 6.88"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.012	98	Paved parking, HSG B
0.003	61	>75% Grass cover, Good, HSG B
0.015	91	Weighted Average
0.003		20.00% Pervious Area
0.012		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-7: PWS-7



Summary for Subcatchment PWS-8: PWS-8

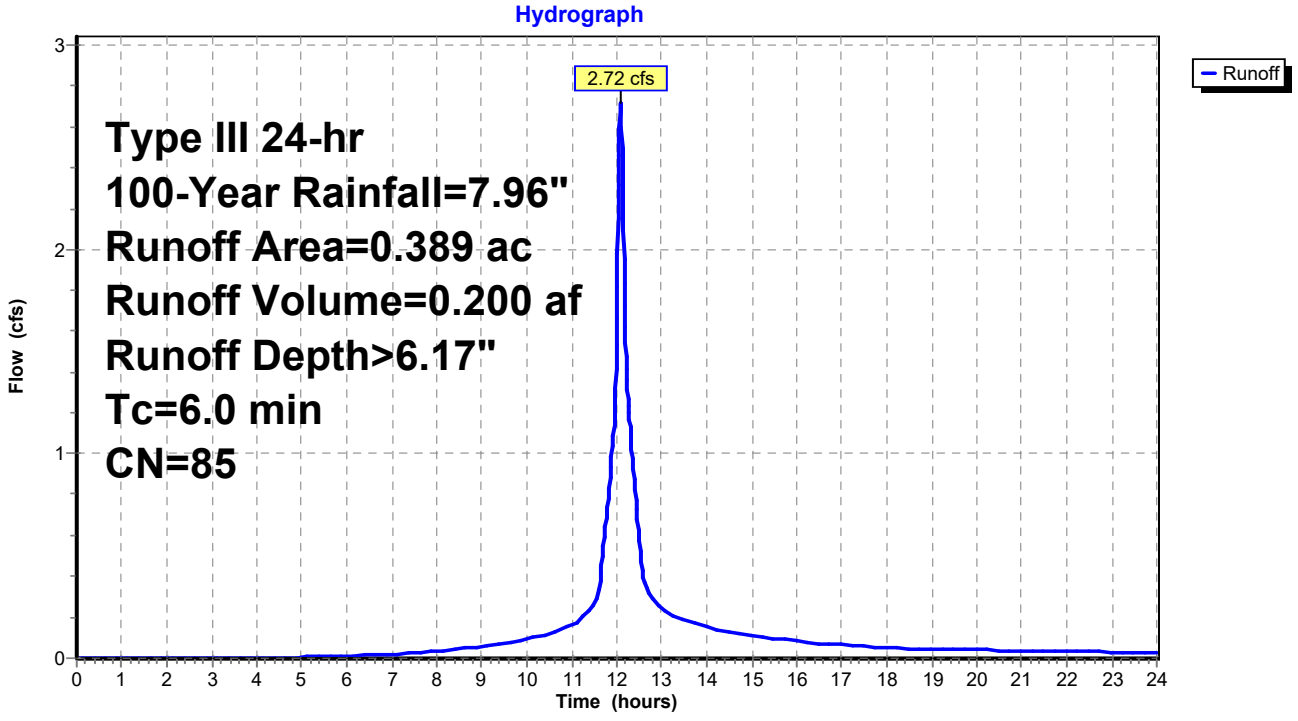
Runoff = 2.72 cfs @ 12.09 hrs, Volume= 0.200 af, Depth> 6.17"
Routed to Link PDP-1 : PDP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.252	98	Paved parking, HSG B
0.137	61	>75% Grass cover, Good, HSG B
0.389	85	Weighted Average
0.137		35.22% Pervious Area
0.252		64.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-8: PWS-8



Summary for Subcatchment PWS-9: PWS-9

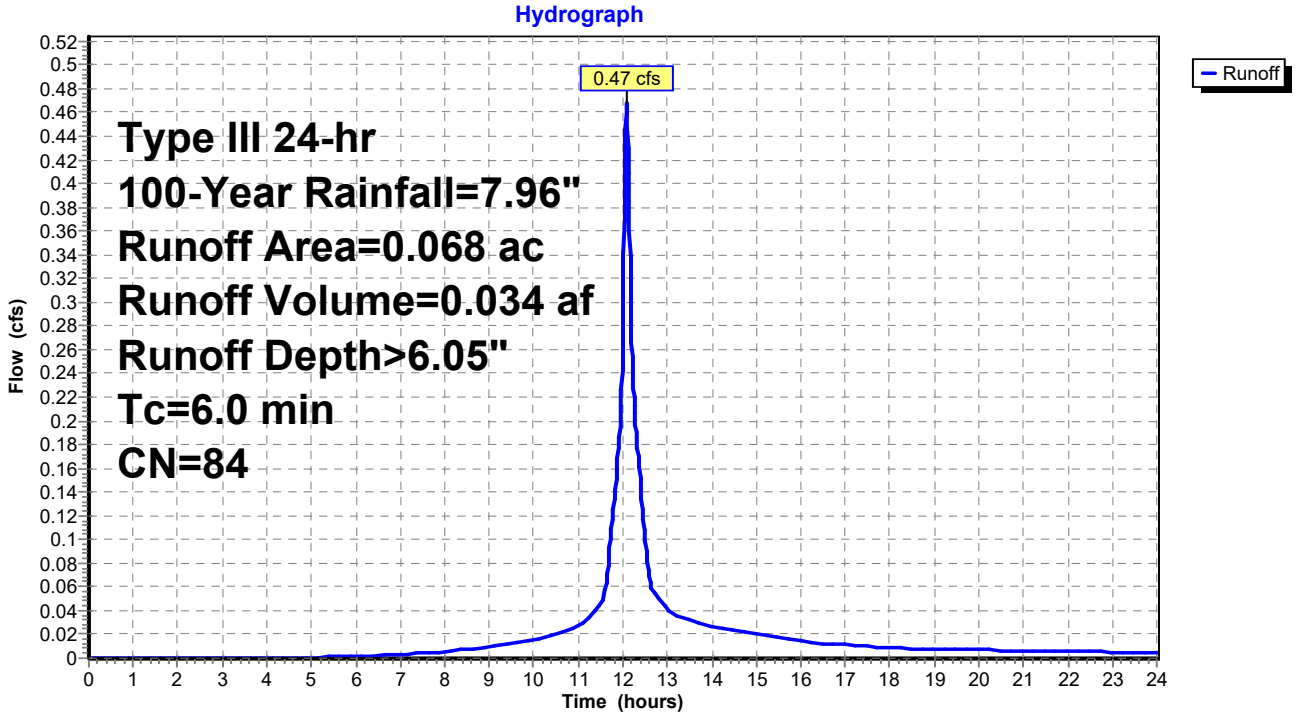
Runoff = 0.47 cfs @ 12.09 hrs, Volume= 0.034 af, Depth> 6.05"
Routed to Pond SC-1 : Swirl Chamber

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.96"

Area (ac)	CN	Description
0.043	98	Paved parking, HSG B
0.025	61	>75% Grass cover, Good, HSG B
0.068	84	Weighted Average
0.025		36.76% Pervious Area
0.043		63.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PWS-9: PWS-9



Summary for Pond P-1: Bio P-1

Inflow Area = 0.601 ac, 51.91% Impervious, Inflow Depth > 5.58" for 100-Year event
Inflow = 3.88 cfs @ 12.09 hrs, Volume= 0.280 af
Outflow = 3.33 cfs @ 12.13 hrs, Volume= 0.251 af, Atten= 14%, Lag= 2.9 min
Primary = 3.33 cfs @ 12.13 hrs, Volume= 0.251 af
Routed to Pond P-3 : Detention P-3

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 99.57' @ 12.13 hrs Surf.Area= 2,904 sf Storage= 2,673 cf

Plug-Flow detention time= 84.4 min calculated for 0.251 af (90% of inflow)
Center-of-Mass det. time= 35.7 min (838.2 - 802.4)

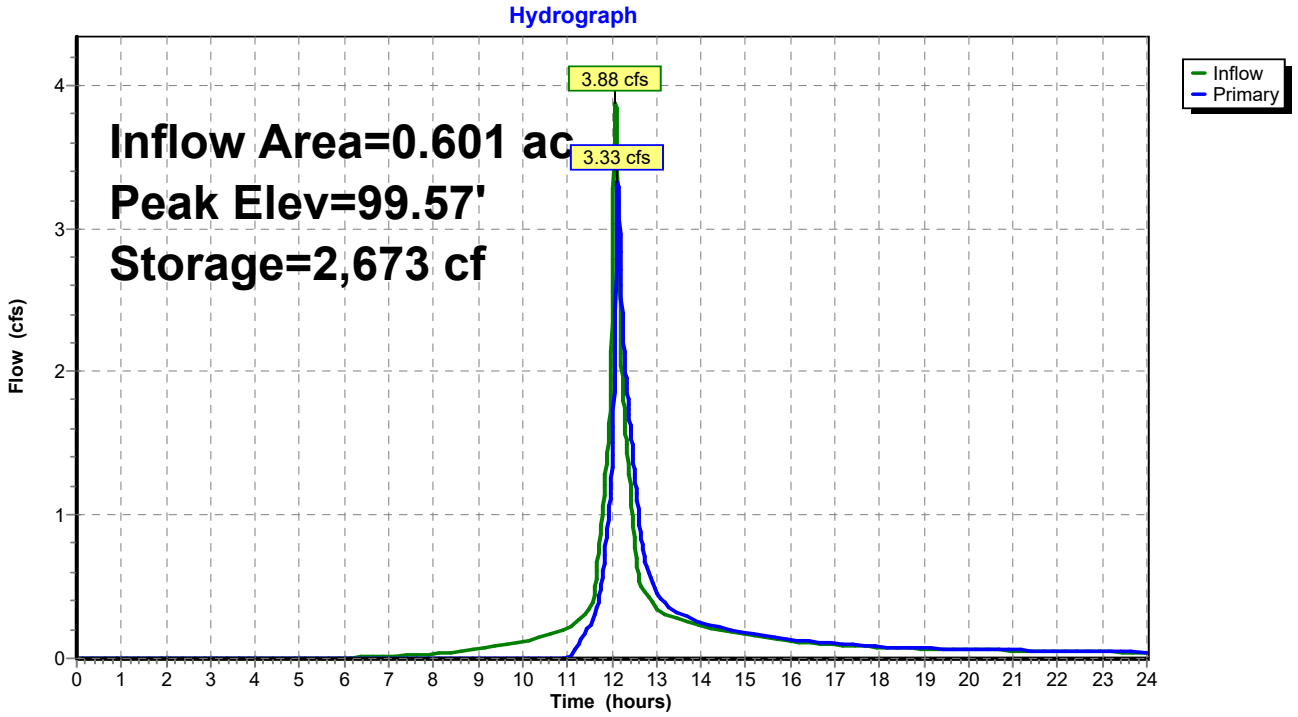
Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	5,726 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	2,102	0	0
99.50	2,849	2,476	2,476
100.50	3,652	3,251	5,726

Device	Routing	Invert	Outlet Devices
#1	Device 3	99.00'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 3	99.50'	**14.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	95.00'	**12.0" Round Culvert** L= 38.0' Ke= 0.500 Inlet / Outlet Invert= 95.00' / 94.61' S= 0.0103 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.32 cfs @ 12.13 hrs HW=99.57' (Free Discharge)
└**3=Culvert** (Passes 3.32 cfs of 7.63 cfs potential flow)
├**1=Broad-Crested Rectangular Weir** (Weir Controls 2.62 cfs @ 2.30 fps)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.70 cfs @ 0.73 fps)

Pond P-1: Bio P-1



Summary for Pond P-3: Detention P-3

Inflow Area = 3.147 ac, 49.92% Impervious, Inflow Depth > 5.35" for 100-Year event
Inflow = 18.46 cfs @ 12.10 hrs, Volume= 1.403 af
Outflow = 13.90 cfs @ 12.17 hrs, Volume= 1.399 af, Atten= 25%, Lag= 4.4 min
Primary = 13.90 cfs @ 12.17 hrs, Volume= 1.399 af
Routed to Link PDP-1 : PDP-1

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 96.85' @ 12.17 hrs Surf.Area= 0.058 ac Storage= 0.169 af

Plug-Flow detention time= 12.2 min calculated for 1.399 af (100% of inflow)
Center-of-Mass det. time= 10.1 min (815.0 - 804.9)

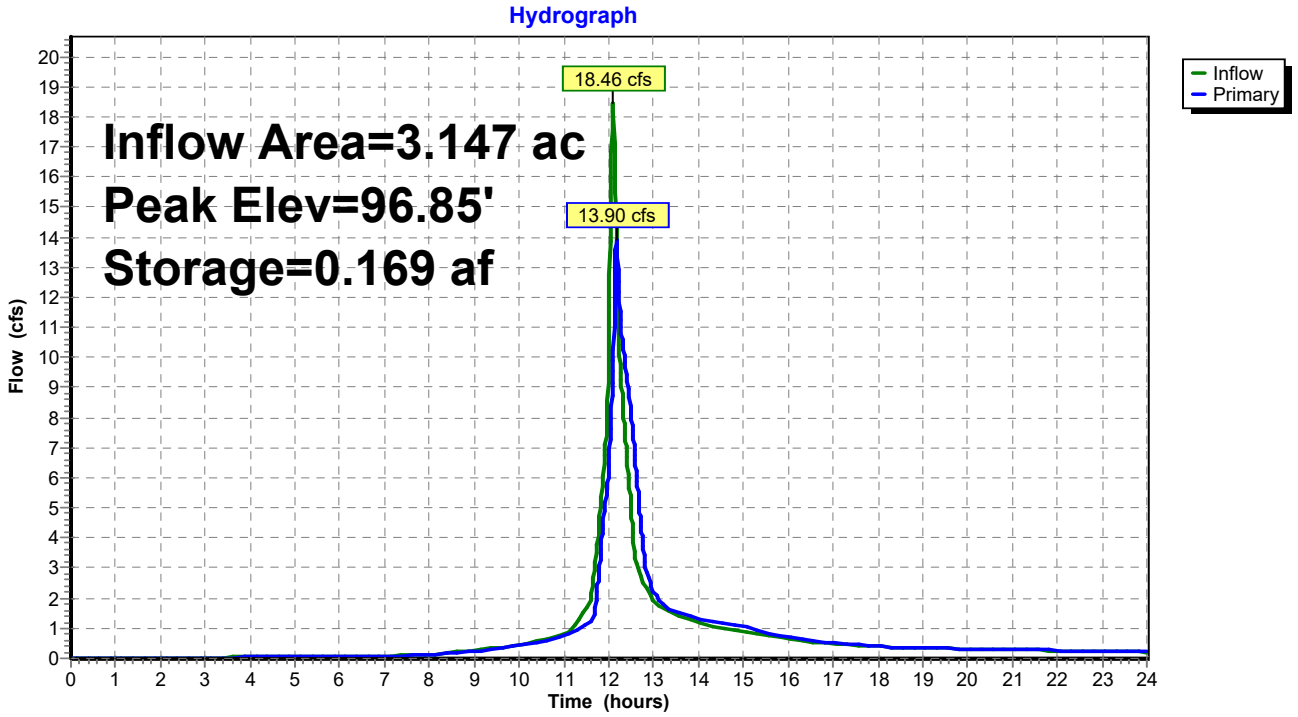
Volume	Invert	Avail.Storage	Storage Description
#1A	92.50'	0.082 af	**29.92'W x 84.57'L x 5.50'H Field A** 0.319 af Overall - 0.114 af Embedded = 0.206 af x 40.0% Voids
#2A	93.25'	0.114 af	**ADS_StormTech MC-3500 d +Cap**x 44 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 44 Chambers in 4 Rows Cap Storage= 14.9 cf x 2 x 4 rows = 119.2 cf
		0.196 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.50'	**18.0" Round Culvert** L= 45.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 92.50' / 92.00' S= 0.0111 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	92.50'	**5.2" Vert. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	93.50'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	96.25'	**22.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	97.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=13.90 cfs @ 12.17 hrs HW=96.85' (Free Discharge)
└**1=Culvert** (Passes 13.90 cfs of 16.14 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 2.89 cfs @ 9.79 fps)
├**3=Orifice/Grate** (Orifice Controls 8.47 cfs @ 8.47 fps)
├**4=Orifice/Grate** (Orifice Controls 2.54 cfs @ 2.77 fps)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-3: Detention P-3

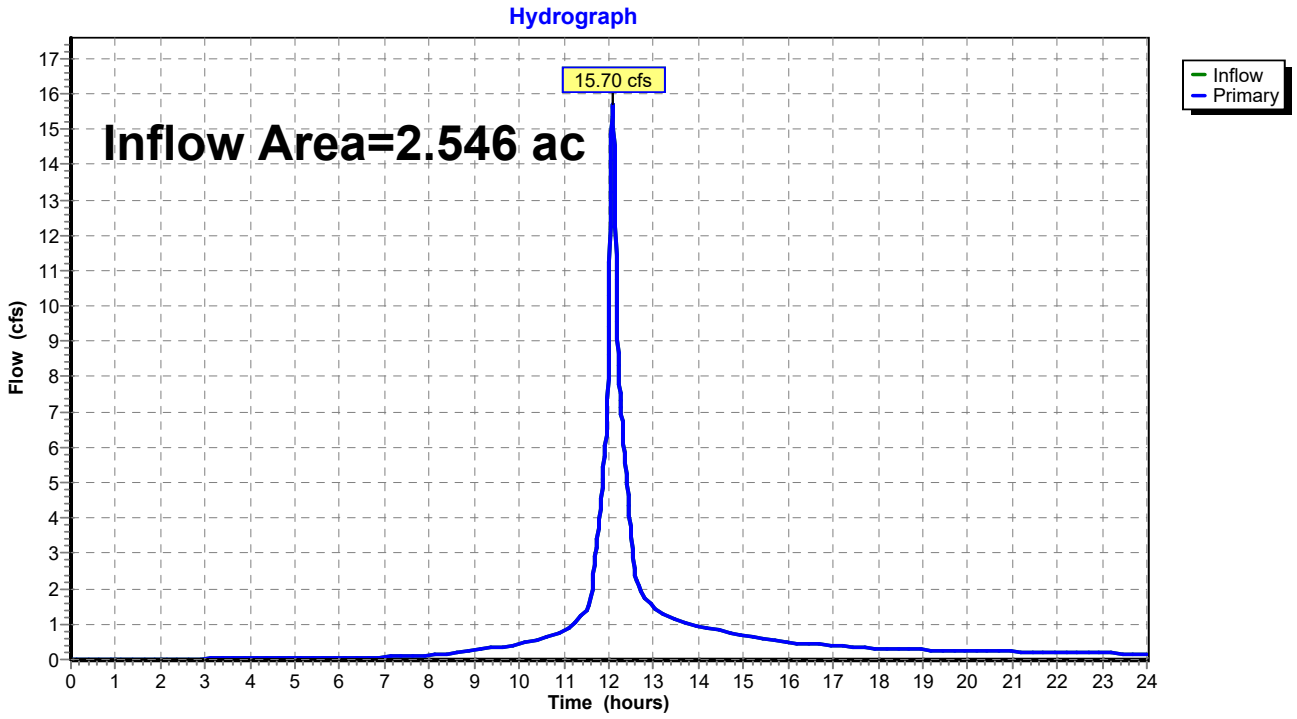


Summary for Pond SC-1: Swirl Chamber

Inflow Area = 2.546 ac, 49.45% Impervious, Inflow Depth > 5.43" for 100-Year event
Inflow = 15.70 cfs @ 12.09 hrs, Volume= 1.152 af
Primary = 15.70 cfs @ 12.09 hrs, Volume= 1.152 af, Atten= 0%, Lag= 0.0 min
Routed to Pond P-3 : Detention P-3

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond SC-1: Swirl Chamber

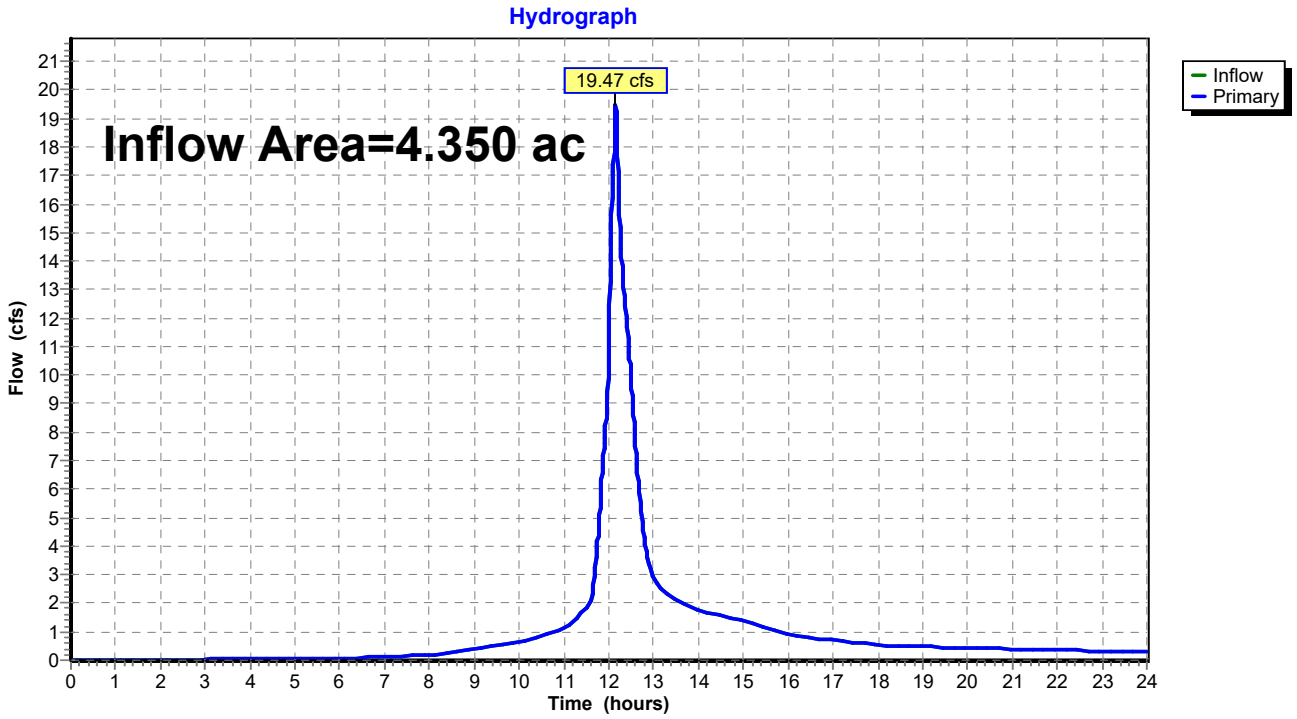


Summary for Link PDP-1: PDP-1

Inflow Area = 4.350 ac, 50.67% Impervious, Inflow Depth > 5.41" for 100-Year event
Inflow = 19.47 cfs @ 12.15 hrs, Volume= 1.963 af
Primary = 19.47 cfs @ 12.15 hrs, Volume= 1.963 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link PDP-1: PDP-1



APPENDIX 3

NYSDEC GREEN INFRASTRUCTURE WORKSHEETS

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal?					No	
What is the nature of this construction project?			Redevelopment with increase in impervious area			
Design Point:	1					
P=	1.40	inches	*Enter 90% Rainfall Event as P*			
Calculate Required WQv						
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**SMP Description**
1	0.60	0.31	52	0.52	1,570	Filtration Bioretention
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Total	0.60	0.31	52	0.52	**1570**	**Required WQv**

Filtration Bioretention (F-5)

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
1	0.60	0.31	52	0.52	1,570	1.40	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	2	TBD, liner to be installed if not met.
Enter depth to bedrock (ft)	2	TBD, liner to be installed if not met.
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.25	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	5	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	714	sf	
Enter Provided Filter Area	Af	1436	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	3159.2	cf	

Calculate Runoff Reduction			
RRv Provided	**1,264**	***cf***	
WQv Treated	306	cf	This is the portion of the WQv that is not reduced in the practice.

APPENDIX 4

DRAFT SPDES GENERAL PERMIT GP 0-25-001

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

C*onstruction activities* constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:

    a. one or more acres; or

    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or

    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.

        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or

        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or

        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or

        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:

    a. already covered by a different SPDES permit; or

    b. covered under a different SPDES permit that was denied, terminated, or revoked; or

    c. identified in an expired individual SPDES permit that was not renewed; or

    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:

    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or

    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.

4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:

    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

        i. 1-5 acres of disturbance - 20 feet; or

        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

    a. obtain all such necessary permits; or

    b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

    a. For linear transportation and linear utility project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb two or more acres of *steep slope*.

    b. For all other project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

    a. Wastewater from washout of concrete; and

    b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

    c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

    d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

    e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

    a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

    i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

    ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

    iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

    i. meets all other eligibility requirements of Part I.A.; and

    ii. will occur in NYSDEC's Regions 3-9; and

    iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

    iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

    a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

    b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

        i. for all eNOIs:

            1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

b. The written Request to Disturb Greater Than Five Acres must include:

i. The SPDES permit identification number (Permit ID); and

ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

    a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

    b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

    c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

    d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

    e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

    f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

        i. the revised area of disturbance and/or *impervious area(s)*; and

        ii. the revised SMP information, if applicable; and

        iii. a narrative description of what has changed; and

        iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

    Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

    a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

        i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s; and

        ii. Control *stormwater discharge*s, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

        iii. *Minimize* the amount of soil exposed during *construction activity*; and

        iv. *Minimize* the disturbance of *steep slope*; and

        v. *Minimize* sediment *discharge*s from the site; and

        vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharge*s, unless *infeasible*; and

        vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

   In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

   1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

   2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

   3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

    a. The owner or operator must consider:

        i. the following physical risks due to climate change:

            (i) increasing temperature; and

            (ii) increasing precipitation; and

            (iii) increasing variability in precipitation, including chance of drought; and

            (iv) increasing frequency and severity of flooding; and

            (v) rising sea level; and

            (vi) increasing storm surge; and

            (vii) shifting ecology.

        ii. for each of the following:

            (i) overall site planning; and

            (ii) location, elevation, and sizing of:

                a. control measures and practices; and

                b. conveyance system(s); and

                c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

   a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

   b. SMPs must be designed in conformance with the *performance criteria*:

      i. in the DM; or

      ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

      iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

(i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

(ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

(iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

(iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

    i. begin implementing corrective actions within one business day; and

    ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

    i. begin the engineering design process within five business days; and

    ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

    a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

   a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

   b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

   c. all areas of disturbance that have not achieved *final stabilization*; and

   d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

   e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

iii. Total area that has achieved *temporary stabilization*; and

iv. Total area that has achieved *final stabilization*; and

k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

m. Identification and status of all corrective actions that were required by previous inspection; and

n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

   i. all soil disturbance activities have ceased; and

   ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

   iii. all temporary, structural erosion and sediment control measures have been removed; and

   iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

   v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

    a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

    b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

    c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

    d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

    a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

g. the *discharge* is in violation of section 17-0501 of the ECL; and

h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

   i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

   ii. the size of the *discharge(s)*; and

   iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

   iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

    a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

        (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

        Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

    b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

    1. the chief executive officer of the agency; or

    2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

    c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

    I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint source*s, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

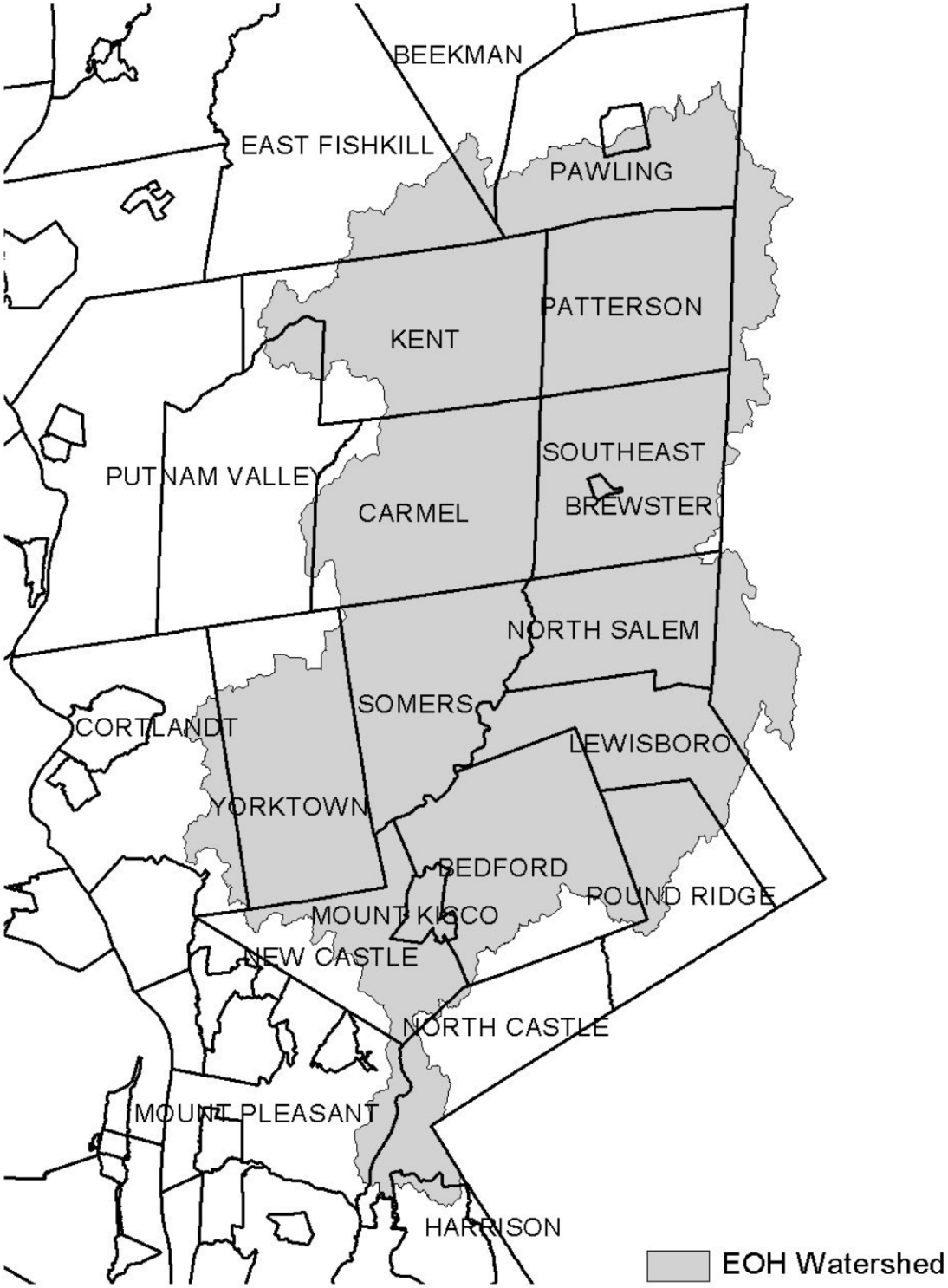


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

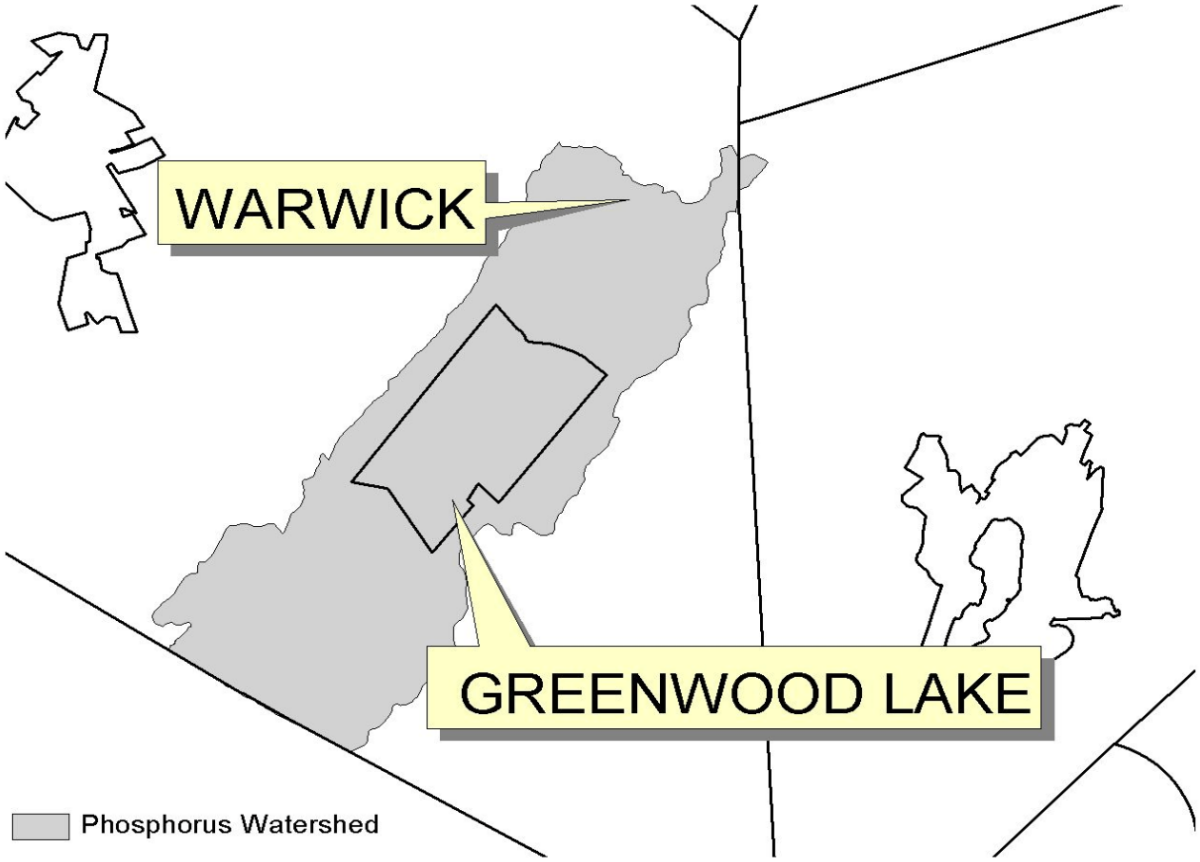


Figure 4 - Oscawana Lake Watershed

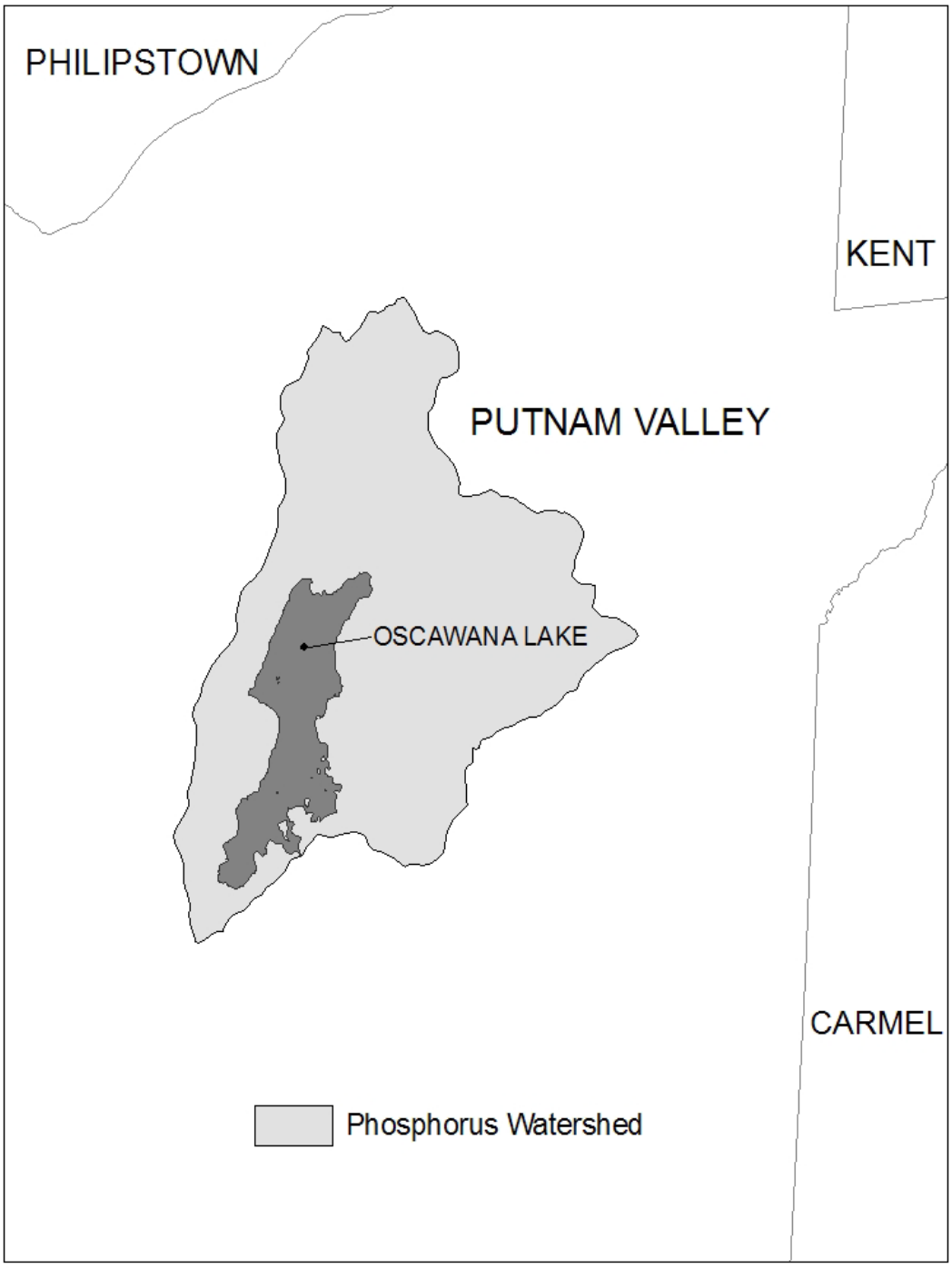
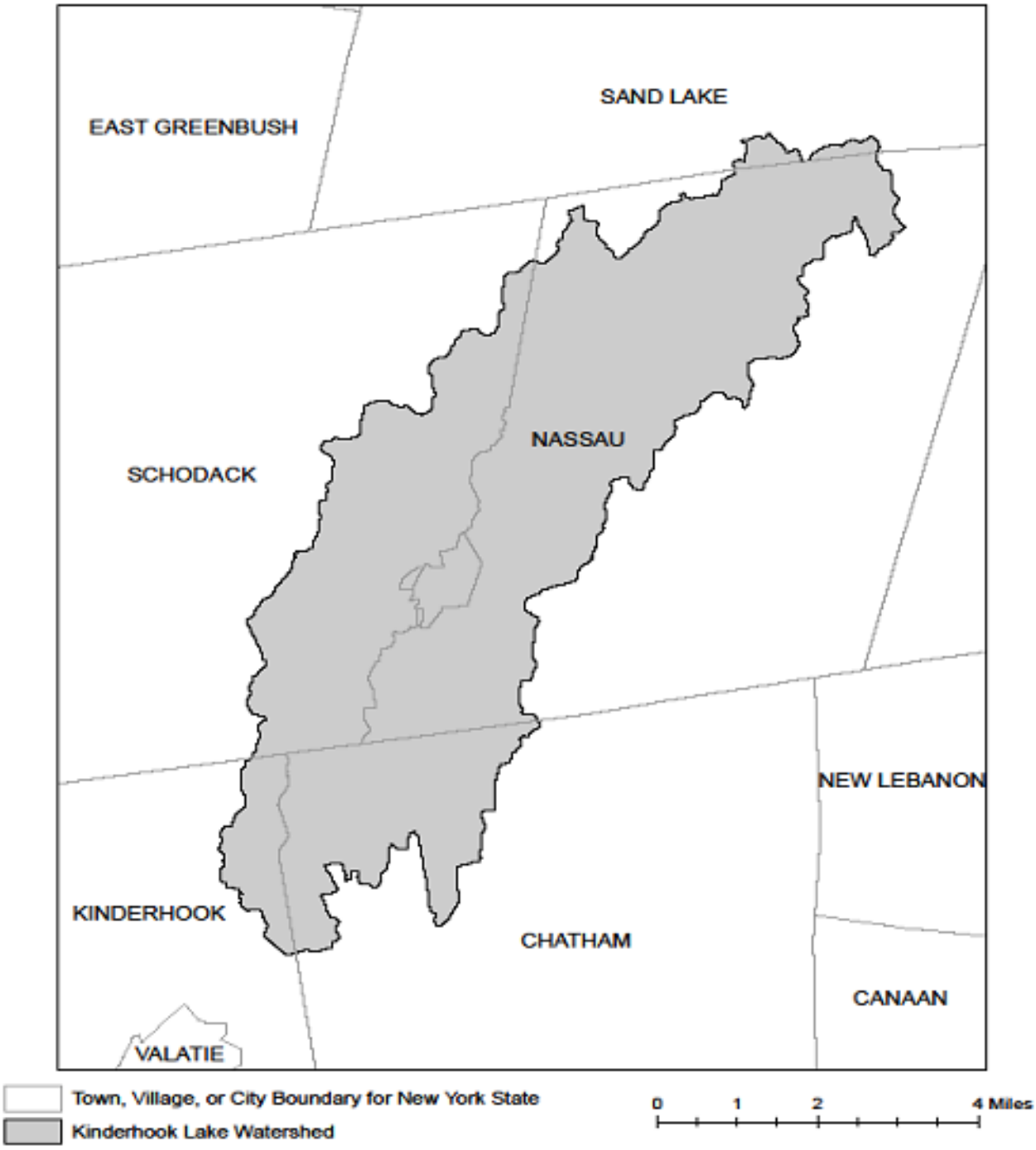


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature | Date

Revised: January 2025

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

(NYSDEC - MS4 SWPPP Acceptance Form - January 2025)

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval
8. SWPPP Reviewed by:
9. Title/Position: /
10. Date Final SWPPP Reviewed and Accepted:
11. Acceptance/Approval Expiration Date:
IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity
12. Name of MS4: *CITY OF NEW YORK*
13. MS4 SPDES Permit Identification Number: *NY-0287890*
14. Contact Person:
15. Street Address: *59-17 Junction Blvd. 9th Floor*
16. City/State/Zip: *Flushing, NY 11373*
17. Telephone Number:

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

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V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).

Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Conditions of Acceptance/Approval and Additional Information

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

APPENDIX 5

DRAFT NOTICE OF INTENT (NOI)

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
Beekman Arts Center, LLC & Bay Ridge Studios, LLC

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Hassen

Owner/Operator Contact Person First Name
Nidal

Owner/Operator Mailing Address
268 Main Street

City
Beacon

State
NY

Zip
12508-

Phone (Owner/Operator)
845-838-0984

Fax (Owner/Operator)

Email (Owner/Operator)
nidalhassen7@gmail.com

FED TAX ID
--
(not required for individuals)

Project Site Information

Project/Site Name
45 Beekman Street Mixed-Use Development

Street Address (NOT P.O. BOX)
45 Beekman Street

Side of Street
● **North** ○ **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
City of Beacon

State: NY
Zip: 12508-
County: Dutchess
DEC Region: 3

Name of Nearest Cross Street
North Avenue

Distance to Nearest Cross Street (Feet)
0

Project In Relation to Cross Street
○ **North** ○ **South** ○ **East** ● **West**

Tax Map Numbers
Section-Block-Parcel
5955-19-706012

Tax Map Numbers
5954-26-689900
& 5954-26-781983

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting): 73° 58' 43" W

Y Coordinates (Northing): 41° 30' 34" N

2. What is the nature of this construction project?

○ **New Construction**

● **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ● COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ● MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
2.6	2.6	1.9	2.2

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ● **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D
0 %	100 %	0 %	0 %

7. Is this a phased project? ○ **Yes** ● **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date 6/1/25 TBD - **End Date** 6/1/26

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

Hudson River via municipal storm sewer

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ● River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-15-002? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? ○ **Yes** ● **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ● **No**
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ◉ **Yes** ○ **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

City of Beacon

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ **Yes** ◉ **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ◉ **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ◉ **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ **Yes** ◉ **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ◉ **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ◉ **Yes** ○ **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ◉ **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer
Colliers Engineering & Design

Contact Name (Last, Space, First)
McCormack Connor

Mailing Address
555 Hudson Valley Avenue

City
New Windsor

State Zip
NY 12553-

Phone
845-875-4949

Fax
- -

Email
connor.mccormack@collierseng.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name
Connor

MI
P

Last Name
McCormack

Signature

Date
12/31/2024

25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ● Stabilized Construction Entrance
- ● Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ● Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ● Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ● Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ● Temporary Swale
- ● Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ● Grade Stabilization Structure
- ● Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ● Rock Outlet Protection
- ○ Streambank Protection

Other

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ● **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ● **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ● **Roadway Reduction**
- ● **Sidewalk Reduction**
- ● **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ● **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ● All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

0.036 **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)		and/or	
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or	
○ Tree Planting/Tree Pit (RR-3)		and/or	
○ Disconnection of Rooftop Runoff (RR-4)		and/or	
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			
○ Rain Garden (RR-6)			
○ Stormwater Planter (RR-7)			
○ Rain Barrel/Cistern (RR-8)			
○ Porous Pavement (RR-9)			
○ Green Roof (RR-10)			
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			
○ Infiltration Basin (I-2)			
○ Dry Well (I-3)			
○ Underground Infiltration System (I-4)			
● Bioretention (F-5)			0.31
○ Dry Swale (O-1)			
Standard SMPs			
○ Micropool Extended Detention (P-1)			
○ Wet Pond (P-2)			
○ Wet Extended Detention (P-3)			
○ Multiple Pond System (P-4)			
○ Pocket Pond (P-5)			
○ Surface Sand Filter (F-1)			
○ Underground Sand Filter (F-2)			
○ Perimeter Sand Filter (F-3)			
○ Organic Filter (F-4)			
○ Shallow Wetland (W-1)			
○ Extended Detention Wetland (W-2)			
○ Pond/Wetland System (W-3)			
○ Pocket Wetland (W-4)			
○ Wet Swale (O-2)			

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
● Hydrodynamic	1.26
○ Wet Vault	
○ Media Filter	
○ Other	

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name: First Defense

Manufacturer: Hydro International

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

0.015 **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ● **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

0.014 **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

● **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

0.022 **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). 0.036

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ● **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required . **acre-feet**

CPv Provided . **acre-feet**

36a. The need to provide channel protection has been waived because:

● Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development . **CFS**

Post-development . **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development . **CFS**

Post-development . **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- (●) Site discharges directly to tidal waters or a fifth order or larger stream.
- ( ) Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? (●) **Yes** ( ) **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

Beekman Arts Center, LLC &
Bay Ridge Studios, LLC

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP
- ○ Other
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ● **No**
If Yes, Indicate Size of Impact. .

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ● **Yes** ○ **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ○ **Yes** ○ **No**
TBD

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name: Nidal

MI:

Print Last Name: Hassen

Owner/Operator Signature:

Date: / /

APPENDIX 6

DRAFT NOTICE OF TERMINATION (NOT)

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ____ ____ ____ ____ ____ ____

I. Owner or Operator Information

1. Owner/Operator Name: Beekman Arts Center, LLC & Bay Ridge Studios, LLC

2. Street Address: 268 Main Street

3. City/State/Zip: Beacon, NY 12508

4. Contact Person: Nidal Hassen | 4a. Telephone: 845 838 0984

4b. Contact Person E-Mail: nidalhassen7@gmail.com

II. Project Site Information

5. Project/Site Name: 45 Beekman Street Mixed-Use Development

6. Street Address: 45 Beekman Street

7. City/Zip Beacon, NY 12508

8. County: Dutchess

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ____ ____ ____ ____ ____ ____
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

APPENDIX 7

MS4 ACCEPTANCE FORM

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Beekman Arts Center, LLC & Bay Ridge Studios, LLC
2. Contact Person:	Nidal Hassen
3. Street Address:	268 Main Street
4. City/State/Zip:	Beacon, NY 12508
II. Project Site Information	
5. Project/Site Name:	45 Beekman Street Mixed-Use Development
6. Street Address:	45 Beekman Street
7. City/State/Zip:	Beacon, NY 12508
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4:	
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Contact Person:	
14. Street Address:	
15. City/State/Zip:	
16. Telephone Number:	

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

APPENDIX 8

NRCS HYDROLOGIC SOIL MAPPING

Map Scale: 1:1,110 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dutchess County, New York
Survey Area Data: Version 20, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	B	1.9	100.0%
Totals for Area of Interest			**1.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX 9

APPENDIX H – CONSTRUCTION SITE LOG BOOK

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

CONSTRUCTION SITE LOG BOOK

Table of Contents

I. Pre-Construction Meeting Documents
   a. Preamble to Site Assessment and Inspections
   b. Operator's Certification
   c. Qualified Professional's Credentials & Certification
   d. Pre-Construction Site Assessment Checklist

II. Construction Duration Inspections
   a. Directions
   b. Modification to the SWPPP

III. Monthly Summary Reports

IV. Monitoring, Reporting, and Three-Month Status Reports
   a. Operator's Compliance Response Form

Properly completing forms such as those contained in Appendix H meet the inspection requirement of NYS-DEC SPDES GP for Construction Activities. Completed forms shall be kept on site at all times and made available to authorities upon request.

I. PRE-CONSTRUCTION MEETING DOCUMENTS

Project Name _____

Permit No. _____ **Date of Authorization** _____

Name of Operator _____

Prime Contractor _____

a. Preamble to Site Assessment and Inspections

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified professional[1] conduct an assessment of the site prior to the commencement of construction[2] and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements.

When construction starts, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater (Construction Duration Inspections). The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request. The Operator shall post at the site, in a publicly accessible location, a summary of the site inspection activities on a monthly basis (Monthly Summary Report).

The operator shall also prepare a written summary of compliance with this general permit at a minimum frequency of every three months (Operator's Compliance Response Form), while coverage exists. The summary should address the status of achieving each component of the SWPPP.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization[3] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 "Qualified Professional means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, licensed engineer or someone working under the direction and supervision of a licensed engineer (person must have experience in the principles and practices of erosion and sediment control).

2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

b. Operators Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Further, I hereby certify that the SWPPP meets all Federal, State, and local erosion and sediment control requirements. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Name (please print): _____

Title _____ **Date:** _____

Address: _____

Phone: _____ **Email:** _____

Signature: _____

c. Qualified Professional's Credentials & Certification

"I hereby certify that I meet the criteria set forth in the General Permit to conduct site inspections for this project and that the appropriate erosion and sediment controls described in the SWPPP and as described in the following Pre-construction Site Assessment Checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction."

Name (please print): _____

Title _____ **Date:** _____

Address: _____

Phone: _____ **Email:** _____

Signature: _____

d. Pre-construction Site Assessment Checklist
(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

[✓] [ ] [ ] Has a Notice of Intent been filed with the NYS Department of Conservation?
[ ] [ ] [ ] Is the SWPPP on-site? Where?_____
[ ] [ ] [ ] Is the Plan current? What is the latest revision date?_____
[ ] [ ] [ ] Is a copy of the NOI (with brief description) onsite? Where?_____
[ ] [ ] [ ] Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

[ ] [ ] [ ] Are construction limits clearly flagged or fenced?
[ ] [ ] [ ] Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
[ ] [ ] [ ] Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

[ ] [ ] [ ] Clean stormwater runoff has been diverted from areas to be disturbed.
[ ] [ ] [ ] Bodies of water located either on site or in the vicinity of the site have been identified and protected.
[ ] [ ] [ ] Appropriate practices to protect on-site or downstream surface water are installed.
[ ] [ ] [ ] Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Entrance

Yes No NA

[ ] [ ] [ ] A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
[ ] [ ] [ ] Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
[ ] [ ] [ ] Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Perimeter Sediment Controls

Yes No NA

[ ] [ ] [ ] Silt fence material and installation comply with the standard drawing and specifications.
[ ] [ ] [ ] Silt fences are installed at appropriate spacing intervals
[ ] [ ] [ ] Sediment/detention basin was installed as first land disturbing activity.
[ ] [ ] [ ] Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

[ ] [ ] [ ] The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
[ ] [ ] [ ] The plan is contained in the SWPPP on page _____
[ ] [ ] [ ] Appropriate materials to control spills are onsite. Where? _____

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:
Inspection Forms will be filled out during the entire construction phase of the project.
Required Elements:

(1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

(2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

(3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

(4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

(5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and

(6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

Inspector (print name)	**Date of Inspection**
Qualified Professional (print name)	**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA
[ ] [ ] [ ] Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease?
[ ] [ ] [ ] All disturbance is within the limits of the approved plans.
[ ] [ ] [ ] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions
Yes No NA
[ ] [ ] [ ] Is construction site litter and debris appropriately managed?
[ ] [ ] [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ] [ ] [ ] Is construction impacting the adjacent property?
[ ] [ ] [ ] Is dust adequately controlled?

2. Temporary Stream Crossing
Yes No NA
[ ] [ ] [ ] Maximum diameter pipes necessary to span creek without dredging are installed.
[ ] [ ] [ ] Installed non-woven geotextile fabric beneath approaches.
[ ] [ ] [ ] Is fill composed of aggregate (no earth or soil)?
[ ] [ ] [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering
Yes No NA
[ ] [ ] [ ] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ] [ ] [ ] Clean water from upstream pool is being pumped to the downstream pool.
[ ] [ ] [ ] Sediment laden water from work area is being discharged to a silt-trapping device.
[ ] [ ] [ ] Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader
Yes No NA
[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ] [ ] [ ] Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales
Yes No NA
[ ] [ ] [ ] Installed per plan with minimum side slopes 2H:1V or flatter.
[ ] [ ] [ ] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ] [ ] [ ] Sediment-laden runoff directed to sediment trapping structure

4. Stone Check Dam

Yes No NA

[ ] [ ] [ ] Is channel stable? (flow is not eroding soil underneath or around the structure).
[ ] [ ] [ ] Check is in good condition (rocks in place and no permanent pools behind the structure).
[ ] [ ] [ ] Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

[ ] [ ] [ ] Stockpiles are stabilized with vegetation and/or mulch.
[ ] [ ] [ ] Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

[ ] [ ] [ ] Temporary seedings and mulch have been applied to idle areas.
[ ] [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Stabilized Construction Entrance

Yes No NA

[ ] [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.
[ ] [ ] [ ] Installed per standards and specifications?
[ ] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence

Yes No NA

[ ] [ ] [ ] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ] [ ] [ ] Joints constructed by wrapping the two ends together for continuous support.
[ ] [ ] [ ] Fabric buried 6 inches minimum.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

Yes No NA

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre or less.
[ ] [ ] [ ] Excavated area is 900 cubic feet.
[ ] [ ] [ ] Excavated side slopes should be 2:1.
[ ] [ ] [ ] 2" x 4" frame is constructed and structurally sound.
[ ] [ ] [ ] Posts 3-foot maximum spacing between posts.
[ ] [ ] [ ] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

Yes No NA

[ ] [ ] [ ] Outlet structure is constructed per the approved plan or drawing.
[ ] [ ] [ ] Geotextile fabric has been placed beneath rock fill.

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

Yes No NA

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

APPENDIX 10

NYSDEC CONSTRUCTION STORMWATER INSPECTION MANUAL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Construction Stormwater Inspection Manual

Primarily for Government Inspectors Evaluating Compliance with Construction Stormwater Control Requirements

New York State
Department of Environmental Conservation

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Version 1.05 (8/27/07)

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1.0 INTRODUCTION AND PURPOSE

The New York State Department of Environmental Conservation Division of Water (DOW) considers there to be two types of inspections germane to construction stormwater; compliance inspections and self-inspections.

This manual is for use by DOW and other regulatory oversight construction stormwater inspectors in performing compliance inspections, as well as for site operators in performing self inspections. The manual should be used in conjunction with the *New York State Standards and Specifications for Erosion and Sediment Control,* August 2005.

1.1 Compliance Inspections

Regulatory compliance inspections are performed by regulatory oversight authorities such as DOW staff, or representatives of DOW and local municipal construction stormwater inspectors. These inspections are intended to determine compliance with the state or local requirements for control of construction stormwater through erosion and sediment control and post construction practices. Compliance inspections focus on determinations of compliance with legal and water quality standards. Typically, compliance inspections can be further sub-categorized to include comprehensive inspections, and follow-up or reconnaissance inspections.

Compliance inspectors will focus on determining whether:

- the project is causing water quality standard violations;
- the required Stormwater Pollution Prevention Plan (SWPPP) includes appropriate erosion and sediment controls and, to some extent, post construction controls;
- the owner/operator is complying with the SWPPP;
- where required, self-inspections are being properly performed; and
- where self-inspections are required, the owner/operator responds appropriately to the self-inspector's reports.

1.1.1 Comprehensive Inspection

Comprehensive inspections are designed to verify permittee compliance with all applicable regulatory requirements, effluent controls, and compliance schedules. This inspection involves records reviews, visual observations, and evaluations of management practices, effluents, and receiving waters.

Comprehensive inspections should be conducted according to a neutral or random inspection scheme, or in accordance with established priorities. A neutral monitoring scheme provides some objective basis for scheduling inspections and sampling visits by establishing a system (whether complex factor-based, alphabetic, or geographic) for setting prioritiesto ensure that a particular facility is not unfairly selected for inspection or sampling. The selection of which

facility to inspect must be made without bias to ensure that the regulatory oversight authority, if challenged for being arbitrary and capricious manner, can reasonably defend itself.

A neutral inspection scheme should set the criteria the inspector uses to choose which facilities to inspect, but the schedule for the actual inspection should remain confidential, and may be kept separate from the neutral plan.

A routine comprehensive compliance inspection is most effective when it is unannounced or conducted with very little advance warning.

1.1.2 Reconnaissance Inspection

A reconnaissance inspection is performed in lieu of, or following a comprehensive inspection to obtain a preliminary overview of an owner/operator's compliance program, to respond to a citizen complaint, or to assess a non-permitted site. The inspector performs a brief (generally about an hour) visual inspection of the site, discharges and receiving waters. A reconnaissance inspection uses the inspector's experience and judgement to summarize potential compliance problems, without conducting a full comprehensive inspection. The objective of a reconnaissance inspection is to expand inspection coverage without increasing inspection resource expenditures. The reconnaissance inspection is the shortest and least resource intensive of all inspections.

Reconnaissance inspections may be initiated in response to known or suspected violations, a public complaint, a violation of regulatory requirements, or as follow-up to verify that necessary actions were taken in response to a previous inspection.

1.2 Self-inspections

For some projects, the site owner/operator is required by their State Pollutant Discharge Elimination System (SPDES) Permit and/or local requirements to have a qualified professional[1] perform a "self-inspection" at the site. In self-inspections, the qualified professional determines whether the site is being managed in accordance with the SWPPP, and whether the SWPPP's recommended erosion and sediment controls are effective. If activities are not in accordance with the SWPPP, or if the SWPPP erosion and sediment controls are not effective, the qualified professional inspecting the site recommends corrections to the owner/operator.

[1] A "Qualified professional" is a person knowledgeable in the principles and practice of erosion and sediment controls, such as a licensed professional engineer, Certified Professional in Erosion and Sediment Control (CPESC), licensed landscape architect or soil scientist.

2.0 PRE-INSPECTION ACTIVITIES

2.1 Regulatory Oversight Authorities

This section is intended for inspectors with regulatory oversight authority such as agents of the DOW or a local municipality, or others acting on their behalf, such as county Soil and Water Conservation District staff. Examples of other regulatory oversight authorities include: the United States Environmental Protection Agency (EPA); New York City Department of Environmental Protection (DEP), Adirondack Park Agency (APA); the Lake George Park Commission (LGPC), and the Skaneateles Lake Watershed Authority (SLWA). Before arriving on-site to conduct the inspection, considerations concerning communication, documentation and equipment must be made.

Regulatory oversight authority is granted by state or local law to government agencies or, depending upon the particular law, an authorized representative of state or local government. SPDES rules 6 NYCRR 750-2.3 and Environmental Conservation Law 17-0303(6) and 17-0829(a) all allow for authorized representatives of the (NYSDEC) commissioner to perform all the duties of an inspector.

2.1.1 Communication

Coordination with Other Entities

Where appropriate, prior to selecting sites for inspection, compliance inspectors should communicate with other regulatory oversight authorities to avoid unnecessary duplication or to coordinate follow-up to inspections performed by other regulatory oversight authorities.

Announced vs. Unannounced Inspection

Inspections may be announced or unannounced. Each method has its own advantages and disadvantages. Unannounced inspections are preferred, however many job sites are not continuously manned, or not always staffed by someone who is familiar with the SWPPP, thus necessitating an announced inspection. As an alternative, when an announced inspection is necessary, inspectors should try to give as little advanced warning as possible (24 hours is suggested).

Itinerary

For obvious safety reasons, inspectors should be sure to inform someone in their office which site or sites they will be visiting prior to leaving the to perform inspections.

2.1.2 Documentation

Data Review

The inspector should review any available information such as:

- Notice of Intent
- Stormwater Pollution Prevention Plan
- Past inspection records
- Phasing plan

- Construction sequence
- Inspection and Maintenance schedules
- Site specific issues
- Consent Orders
- Access agreements

Inspection Form

The inspector should have copies of, and be familiar with, the inspection form used by their regulatory oversight authority (example in Attachment 1) before leaving the office. Static information such as name, location and permit number can be entered onto the inspection form prior to arriving at the inspection site.

Credentials

Inspectors should always carry proper identification to prove that they are employed by an entity with jurisdictional authority. Failure to display proper credentials may be legal grounds for denial of entry to a site.

2.1.3 Equipment

Personal Protective Equipment

DOW employees must conform to the DOW Health and Safety policy as it relates to personal protective equipment. Other regulatory oversight authorities should have their own safety policies or, if not, may wish to consult the OSHA health and safety tool at: www.osha.gov/dep/etools/ehasp/ to develop a health and safety plan.

The following is a list of some of the most common health and safety gear that may be needed:

- Hard hat (Class G, Type1 or better)
- Safety toe shoes
- Reflective vest
- Hearing protection (to achieve 85 dBA - 8 hr TWA)
- Safety glasses with side shields

If the construction is on an industrial site or a hazardous waste site, special training may be required prior to entering the site. The inspector should consult with OSHA or NYSDEC prior to entering such a site.

Monitoring Equipment

The following is a list of some equipment that may be helpful to document facts and verify compliance:

- Digital Camera
- Measuring tape or wheel
- Hand level or clinometer
- Turbidity meter (in limited circumstances)

2.2 Permittee's Self-inspection

This section is intended for qualified professionals who conduct site self-inspections on behalf of owner/operators. Self-inspectors are responsible for performing inspections in accordance with permit requirements and reporting to site owners and operators the results and any recommendations resulting from the inspection.

Prior to conducting inspections, qualified professionals should ensure familiarity with the Stormwater Pollution Prevention Plan and previous inspection reports.

3.0 ON-SITE INSPECTION PROCESS

3.1 Compliance Inspections

3.1.1 Professionalism

Don't Pretend to Possess Knowledge

Unless the inspector has experience with a particular management practice, do not pretend to possess knowledge. Inspectors cannot be expert in all areas; their job is to collect information, not to demonstrate superior wisdom. Site operators are often willing to talk to someone who is inquisitive and interested. Within reason, asking questions to obtain new information about a management practice, construction technique or piece of equipment is one of the inspector's main roles in an inspection.

Don't Recommend Solutions

The inspector should not recommend solutions or endorse products. The solution to a compliance problem may appear obvious based on the inspector's experience. However, the responsibility should be placed on the site owner to implement a workable solution to a compliance problem that meets NYSDEC standards. The inspector should refer the site operator to the New York Standards and Specifications for Erosion and Sediment Control (the Blue Book) or the New York State Stormwater Management Design Manual (the Design Manual).

Key advice must be offered carefully. One experienced stormwater inspector suggests saying: "I can't direct you or make recommendations, but what we've seen work in other situations is ..."

The way inspectors present themselves is important to the effectiveness of the inspection. An inspector cannot be overly familiar, but will be more effective if able to establish a minimum level of communication.

3.1.2 Safety

DOW employees must conform to Division health and safety policies when on a construction site. Other regulatory oversight authorities should have their own safety policies or, if not, may

wish to consult the OSHA health and safety tool at:

www.osha.gov/dep/etools/ehasp to develop a health and safety plan.

Some general protections for construction sites are:

- Beware of heavy equipment, avoid operator blind spots and make sure of operator eye contact around heavy equipment.
- Avoid walking on rock rip-rap if possible. Loose rock presents a slip hazard.
- Stay out of confined spaces like tanks, trenches and foundation holes.
- Avoid lightning danger. Monitor weather conditions, get out of water, avoid open areas and high points, do not huddle in groups or near trees.
- Protect yourself from sun and heat exposure. Use sun screen or shading clothing. Remain hydrated by drinking water, watching for signs of heat cramps, exhaustion (fatigue, nausea, dizziness, headache, cool or moist skin), or stroke (high body temperature; red, hot and dry skin)
- Protect yourself from cold weather. Wear multiple layers of thin clothing. Wear a warm hat. Drink warm fluids or eat hot foods, and keep dry.
- Avoid scaffolding in excess of 4 feet above grade.
- Beware of ticks, stinging insects, snakes and poison ivy or sumac.

3.1.3 Legal access

DOW has general powers, set forth under ECL 17-0303, subparagraph 6, to enter premises for inspections. In addition, ECL 3-0301.2 conveys general statutory authority granting the DOW the power to access private property to fulfill DOW obligations under the law.

ECL 15-0305 gives the DOW the authority to enter at all times in or upon any property, public or private, for the purpose of inspecting or investigating conditions affecting the construction of improvements to or developments of water resources for the public health, safety or welfare.

ECL 17-0829 allows an authorized DOW representative, upon presentation of their credentials, to enter upon any premises where any effluent source is located, or in which records are required to be maintained. The representative may at reasonable times have access to, and sample discharges/pollutants to the waters or to publicly owned treatment plants where the effluent source is located. This subparagraph provides DOW representatives performing their duties authority to enter a site to pursue administrative violations. Pursuing criminal violations may require a warrant or the owner's permission to enter the site.

For sites that are permitted, DOW has authority under the permit to enter the site.

If the owner/operator's representatives onsite deny access, the inspector *should not* physically force entry. Under these circumstances the attorney representing the inspector should be immediately notified and consideration should be given to soliciting the aid of a law officer to obtain entry.

DOW staff have the right to enter at any reasonable time. If no one is available, and the site is fenced or posted, DOW staff should make all reasonable efforts to identify, contact and notify the owner that the DOW is entering the site. If the inspector has made all reasonable efforts to contact site owners, but was unable to do so, the site can then be accessed. All efforts should be taken not to cause any damage to the facility.

Other regulatory oversight authorities should seek advice on their legal authorities to enter a job site. Municipalities that have adopted Article 6 of the New York State Sample Local Law for Stormwater Management and Erosion and Sediment Control (NYSDEC, 2004, updated 2006) will have legal authority to enter sites in accordance with that chapter and any other existing municipal authority .

Agents of DOW have authority similar DOW staff authority to enter sites. However, DOW staff enjoy significant personal liability protections as state employees. That liability protection may not be the same for authorized representatives of DOW. For authorized representatives of DOW (or other regulatory oversight authorities), it is prudent to obtain permission to enter the site. If such permission is denied, the authorized representatives should inform the appropriate DOW contact, usually the regional water manager.

3.1.4 Find the Legally Responsible Party (Construction Manager, Self-inspector)

The first action a compliance inspector should take upon entering a construction site is to find the construction trailer or the construction or project manager if they are available. The inspector should present appropriate identification to the site's responsible party and state the reason for the inspection; construction stormwater complaint response or neutral construction stormwater inspection. If the inspection is initiated as a response to a complaint, frequently the responsible party will ask who made the complaint. DOW keeps private individual complainants confidential. If the complainant is another regulatory oversight authority, DOW tends to make that known to the site's responsible party.

3.1.5 On-site records review (NOI, SWPPP, Self-inspection Reports, Permit)

Generally, the compliance inspector should next review the on-site records. Verify that a copy of the construction stormwater permit and NOI are on-site. Verify that the acreage, site conditions, and receiving water listed on the NOI are accurate. Compare the on-site documentation with documentation already submitted to, or obtained by the compliance inspector.

If the SWPPP has not been reviewed in the office, verify that it exists and contains the minimum required components (16 for a basic plan and 22 for a full plan). On-site review of the SWPPP should determine if: there is an appropriate phasing plan; the acreage disturbed in each phase, construction sequence for each phase; proposed implementation of erosion and sediment control measures; and, where required, post construction controls. For each of the erosion and sediment control practices, the SWPPP must show design details in accordance with the NYS Standards for Erosion and Sediment Controls. The SWPPP must also include provisions for maintenance of practices during construction. On-site review of post construction controls is generally limited to verification that the proposed stormwater management practices are shown on the site plan.

Where self-inspections are required, self-inspection reports are a significant tool for the compliance inspector to determine the performance history of the site. The self-inspection reports should be done with the required frequency . Self-inspection reports must include all the details required by the permit. Generally, it is desirable for permit information to be shown on a site plan. The compliance inspector should become familiar with the report and use that familiarity to judge whether the self-inspections are being performed correctly and that the site operator is correcting deficiencies noted in the report.

3.1.6 Walk the Site

During wet weather conditions, it may be advantageous to observe the receiving waters prior to walking the rest of the site. At some point during the inspection, the receiving water conditions must be observed and noted. It is critical to note if there is a substantial visible contrast to natural conditions, or evidence of deposition, streambank erosion, construction debris or waste materials (e.g. concrete washdown) in the receiving stream.

Each inspector should evaluate actual implementation and maintenance of practices on-site compared to how implementation and maintenance is detailed in the SWPPP. At a minimum, the compliance inspector should observe all areas of active construction. Observing equipment or materials storage, recently stabilized areas, or stockpile areas is also appropriate to evaluate the effectiveness of management practices.

3.1.7 Taking Photographs

Evidence of poor receiving water conditions and poor or ineffective practices should be documented with digital photographs. Those photographs should be logged date stamped and stored on media that cannot be edited (e.g. write only CDs). Photos should also be appended to the site inspector's report.

It is also beneficial to take photographs of good practices for educational and technology transfer reasons.

3.1.8 Exit Interview

Clearly communicate expectations and consequences. If it is clear from the inspection that the owner/operator must modify the SWPPP, or modify management practices within an assigned period (e.g. 24 hours, 48 hours, one week, two weeks), then that finding should be communicated at the time of the exit interview. The inspector should assign the period based on factors such as how long it would reasonably take to complete such modifications and the level of risk to water quality associated with failure to make such modifications.

The inspector should make clear that NYSDEC reserves rights to future enforcement actions. If the inspector's supervisor or enforcement coordinator determines additional enforcement actions are necessary, the inspector *should not* reassure the owner/operator that the current situation is acceptable.

3.2 Non-permitted Site Inspections

For sites not authorized in accordance with state or local laws, the process will be abbreviated. First verify the need for authorization and observe receiving waters to detect water quality standard violations. If there is a violation, notify the owner of the violation or other compliance actions in response to their illicit activity. For DOW staff, Attachment 2 or a similar notice can be used to notify the site owner/operator that stormwater authorization is required.

3.3 Self-inspections

The role of the self-inspector is to verify that the site is complying with stormwater requirements. In particular, the self-inspector verifies that the SWPPP is being properly implemented. The self-inspector also documents SWPPP implementation so regulatory agencies can review implementation activities.

It is <u>not</u> the role of the self-inspector to report directly to regulatory authorities.

Appendix H of *The New York Standards and Specifications for Erosion and Sediment Control* - August 2005 (the Blue Book) includes a Construction Duration Inspection checklist that can be used by the owner/operators qualified professional for self-inspections. The Blue Book is available on the NYSDEC website.

3.3.1 Purpose

The self inspector should ensure that the project's SWPPP is being properly implemented. This includes ensuring that the erosion and sediment control practices are properly installed and being maintained in accordance with the SWPPP/Blue Book.

The project must be properly phased to limit the disturbance to less than five acres, and the construction sequence for each phase must be followed. The SWPPP must also be modified to address evolving circumstances. Finally, and most importantly, receiving waters must be protected.

If a soil disturbance will be greater than five acres at any given time, the site operator must obtain written permission from the DOW regional office.

3.3.2 Pre-construction Conference

The parties responsible for various aspects of stormwater compliance should be identified at the pre-construction conference. Responsible parties may include, but are not limited to, owner's engineer, owner/operator/permittee, contractors, and subcontractors.

Typical responsibilities include: installation of erosion and sediment control (E & SC) practices; maintenance of E & SC practices, inspection of E&SC practices, installation of post construction stormwater management practices (SMPs), inspection of post construction SMPs, SWPPP revisions, and contractor direction.

All parties should clearly know what is expected of them. Responsible parties should complete the Pre-construction Site Assessment Checklist provided in Appendix H of the Blue Book.

3.3.3 Inspection Preparation

The inspector should review the project's SWPPP (including the phasing plan, construction sequence and site specific issues) and the last few inspection reports (if the inspector has them available).

3.3.4 Self-inspection Components

Inspect installation, performance and maintenance of all E&SC practices

The self inspector should inspect all areas that are under active construction or disturbance and areas that are vulnerable to erosion. The self-inspector should also inspect areas that will be disturbed prior to the next inspection for measures required prior to construction (e.g. silt barriers, stabilized construction entrance, diversions). Finally, self-inspectors should inspect post-construction controls during and after installation.

Identify site deficiencies and corrective measures

The self-inspector's reports must be maintained in a log book on site and the log book must be made available to the regulatory authorities. Although the legal responsibility for filing a Notice of Termination lies with the owner/operator, the self-inspector may also be called upon to perform a final site inspection, including post construction SMPs, prior to filing the Notice of Termination.

4.0 POST-INSPECTION ACTIVITIES

4.1 Regulatory Oversight Authorities

This section is intended for inspectors with regulatory oversight authority such as agents of the DOW or a local municipality, or others acting on their behalf (such as County Soil and Water Conservation District staff.) Upon completion of an inspection, inspection results should be documented for the record.

4.1.1 Written Notification

The inspector should inform the permittee or the on-site representative of their inspection results in writing by sending the permittee a complete, signed copy of the inspection report. The inspection report should be transmitted under a cover letter which elaborates on any deficiencies noted in the inspection report. It is not a good idea to commend exceptional efforts by the owner/operator in a letter, because such letters tend to undermine enforcement efforts when compliance status at a site degrades.

The inspector should consider providing a copy of the cover letter and inspection report to other parties with including:

- Permittee
- Contractor(s)
- Other regulatory oversight authorities
- Other parties present during the inspection (e.g. SWPPP preparer, permittee's self-inspector, etc.)

For DOW staff, an example of the inspection cover letter is included as Attachment 3.

4.1.2 Inspection Tracking

DOW staff must enter their inspection results into the electronic *Water Compliance System*.

Local municipalities and other regulatory oversight authorities are encouraged to develop an electronic tracking system in which to record their inspections.

4.2 Permittee's Self-inspections

This section is intended for qualified professionals who conduct site inspections for permittees in accordance with a SPDES permit or local requirements.

4.2.1 Written Records

Inspection Reports
The inspector shall prepare a written report summarizing inspection results. The inspection report is then provided to the permittee, or the permittee's duly authorized representative, and to the contractor responsible for implementing stormwater controls on-site in order to correct deficiencies noted in the inspection report. Finally, the inspection report must be added to the site log book that is required to be maintained on-site, and be available to regulatory oversight authorities for review.

4.2.2 Stormwater Pollution Prevention Plan Revisions

The inspector must inform the permittee of his/her duty to amend the Stormwater Pollution Prevention Plan (SWPPP) whenever an inspection proves the SWPPP to be ineffective in:

- Eliminating or significantly minimizing pollutants from on-site sources
- Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity
- Eliminating discharges that cause a substantial visible contrast to natural conditions

ATTACHMENT 1

Construction Stormwater Compliance Inspection Report

Project Name and Location:	Date:	Page 1 of 2
	Permit # (if any): **NYR**	
Municipality: County:	Entry Time:	Exit Time:
On-site Representative(s) and contact information:	Weather Conditions:	
Name and Address of SPDES Permittee/Title/Phone/Fax Numbers: Contacted: Yes ☐ No ☐		

INSPECTION CHECKLIST

SPDES Authority

	Yes	No	N/A		Law, rule or permit citation
1.	☐	☐	☐	Is a copy of the NOI posted at the construction site for public viewing?	
2.	☐	☐	☐	Is an up-to-date copy of the signed SWPPP retained at the construction site?	
3.	☐	☐	☐	Is a copy of the SPDES General Permit retained at the construction site?	

SWPPP Content

	Yes	No	N/A		Law, rule or permit citation
4.	☐	☐	☐	Does the SWPPP describe and identify the erosion & sediment control measures to be employed?	
5.	☐	☐	☐	Does the SWPPP provide a maintenance schedule for the erosion & sediment control measures?	
6.	☐	☐	☐	Does the SWPPP describe and identify the post-construction SW control measures to be employed?	
7.	☐	☐	☐	Does the SWPPP identify the contractor(s) and subcontractor(s) responsible for each measure?	
8.	☐	☐	☐	Does the SWPPP include all the necessary 'CONTRACTOR CERTIFICATION' statements?	
9.	☐	☐	☐	Is the SWPPP signed/certified by the permittee?	

Recordkeeping

	Yes	No	N/A		Law, rule or permit citation
10.	☐	☐	☐	Are inspections performed as required by the permit (every 7 days and after ½" rain event)?	
11.	☐	☐	☐	Are the site inspections performed by a qualified professional?	
12.	☐	☐	☐	Are all required reports properly signed/certified?	
13.	☐	☐	☐	Does the SWPPP include copies of the monthly/quarterly written summaries of compliance status?	

Visual Observations

	Yes	No	N/A		Law, rule or permit citation
14.	☐	☐	☐	Are all erosion and sediment control measures installed/constructed?	
15.	☐	☐	☐	Are all erosion and sediment control measures maintained properly?	
16.	☐	☐	☐	Have all disturbances of 5 acres or more been approved prior to the disturbance?	
17.	☐	☐	☐	Are stabilization measures initiated in inactive areas?	
18.	☐	☐	☐	Are permanent stormwater control measures implemented?	
19.	☐	☐	☐	Was there a discharge into the receiving water on the day of inspection?	
20.	☐	☐	☐	Are receiving waters free of there evidence of turbidity, sedimentation, or oil ? (If no , complete Page 2)	

Overall Inspection Rating: ❑ Satisfactory ❑ Marginal ❑ Unsatisfactory	
Name/Agency of Lead Inspector:	**Signature of Lead Inspector:**
Names/Agencies of Other Inspectors:	

Water Quality Observations

Describe the discharge(s) [source(s), impact on receiving water(s), etc.] _____

_____

_____

_____

_____

Describe the quality of the receiving water(s) both upstream and downstream of the discharge_____

_____

_____

_____

_____

Describe any other water quality standards or permit violations _____

_____

_____

Additional Comments:_____

_____

_____

_____

_____

_____

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☐ Photographs attached

ATTACHMENT 2

**** NOTICE ****

On March 10, 2003, provisions of the Federal Clean Water Act went into effect that apply to many construction operations.

If your construction operations result in the disturbance of one acre or greater and stormwater runoff from your site reaches surface waters (i.e., lake, stream, road side ditch, swale, storm sewer system, etc.), the stormwater runoff from your site must be covered by a State Pollutant Discharge Elimination System (SPDES) Permit issued by the New York State Department of Environmental Conservation (NYSDEC).

To facilitate your compliance with the law, NYSDEC has issued a General Permit which may be applicable to your project. To obtain coverage under this General Permit, you need to prepare a Stormwater Pollution Prevention Plan (SWPPP) and then file a Notice of Intent (NOI) to the NYSDEC headquarters in Albany. The NOI form is available on the DEC website. You may also obtain a copy of the NOI form at the nearest NYSDEC regional offices.

When you file your NOI you are certifying that you have developed a SWPPP and that it will be implemented prior to commencing construction. When you submit the NOI you need to indicate if your SWPPP is in conformance with published NYSDEC technical standards; if it is, your SPDES permit coverage will be effective in as few as five business days. If your SWPPP does not conform to the DEC technical standards, coverage will not be available for at least 60 business days.

Failure to have the required permit can result in legal actions which include Stop Work Orders and/or monetary penalties of up to $37,500/day

If your construction operations are already in progress and you are not covered by an appropriate NYSDEC permit contact the NYSDEC Regional Water Engineer as soon as possible. If your construction field operations have not yet commenced, review the NOI and the General Permit on the DEC's website or at the DEC regional office for your area. When you are comfortable that you understand and comply with the requirements, file your NOI.

The requirement to file an NOI does not replace any local requirements. Developers/Contractors are directed to contact the Local Code Enforcement Officer or Stormwater Management Officer for local requirements.

ATTACHMENT 3

<< Date >>

Mr. John Smith
123 Main Street
Ferracane, NY 12345

Re: Stormwater Inspection
SPDES Permit Identification No. NYR10Z000 (through SPDES No. GP-02-01)
Blowing Leaves Subdivision
Gasper (T), Eaton (Co.)

Dear Mr. Smith:

On the afternoon of << date >> I conducted an inspection of the construction activities associated with the Blowing Leaves Subdivision located on County Route 1 in the town of Gasper, Eaton County. The inspection was conducted in the presence of you and Mr. Samuel Siltfence of Acme Excavating Co., Inc. The purpose of the inspection was to verify compliance with the *State Pollutant Discharge Elimination System (SPDES) General Permit for Storm Water Discharges from Construction Activity* ("the general permit").

The overall rating for the project at the time of the inspection was ***unsatisfactory***. A copy of my inspection report is attached for your information. In addition to the report, I would like to elaborate on the following:

SPDES Authority

- In accordance with subdivision 750-2.1 (a) of Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR), a copy of your permit must be retained at the construction site. You did not have a copy of the general permit at the site. **Your failure to retain a copy of the general permit at the construction site is a violation of 6 NYCRR Part 750-2.1 (a).** Please retain a copy of the general permit at the site from this point forward.

SWPPP Content

- In accordance with Part III.E.2. of the general permit, contractors and subcontractors must certify that they understand the terms and conditions of the general permit and the SWPPP before undertaking any construction activity at the site. Your SWPPP does not include a certification statement from Acme Excavating Co., Inc. **The failure of your contractor to sign this certification before undertaking construction activity at the site is a violation of Part III.E.2. of the general permit.** Please obtain copies of all necessary certifications and provide copies of them to each party who holds a copy of your SWPPP.

- In accordance with Part V.H.2. of the general permit, SWPPP's must be certified by the permittee. Your SWPPP was not certified by you. **Your failure to certify your SWPPP is a**

violation of Part V.H.2. of the general permit. Please certify your SWPPP.

Recordkeeping

- In accordance with Parts III.D.3.a. and III.D.3.b. of the general permit, permittees must have a qualified professional conduct site inspections within 24 hours of the end of 0.5" or greater rain events and at least once per week. A review of your records revealed that your "self-inspections" are only being conducted about two or three times per month. **Your failure to have a qualified professional conduct inspections at the required frequency is a violation of Part III.D.3.b. of the general permit.** Please immediately direct your qualified professional to conduct your site inspections at the required frequency.

- Although the frequency of self-inspections does not meet rquirements, the quality of them is very good. Your qualified professional has accurately noted the same SWPPP deficiencies and necessary maintenance activities that I also observed, and prepared thorough sketches on the self-inspection site maps.

- In accordance with Part V.H.2. of the general permit, the permittee must certify all reports required by the permit. A review of your records showed that your self-inspection reports were not certified. **Your failure to certify your self-inspection reports is a violation of Part V.H.2. of the general permit.** Please sign and certify any and all existing and future self-inspection reports.

Visual Observations

- In accordance with Parts III.A.2. and III.A.3. of the general permit, all erosion and sediment controls (E&SC) measures must be installed (as detailed in the SWPPP) prior to the initiation of construction. During the inspection, I noted all of your E&SC measures have been correctly installed at the right times and locations.

- In accordance with Part V.L. of the general permit, all of the E&SC measures at your site must be maintained properly. While on site I observed that, among other things, the section of silt fence in place parallel to County Route 1 is in various stages of disrepair. **The failure of your contractor to adequately maintain the E&SC measures currently in place at your site is a violation of Part V.L of the general permit.** Please direct your contractor to repair this silt fence immediately and to diligently maintain all of the other required E&SC measures as they are brought to his attention by your qualified professional.

- This inspection was conducted during a rain event which resulted in a stormwater discharge to the municipal separate storm sewer system (MS4) being operated by the Eaton County Department of Public Works. Your discharge was visibly turbid whereas upstream water MS4 was clear. As a result, the discharge from the MS4 outfall into Karimipour Creek was causing

Mr. John Smith << Date >>
Re: SPDES Inspection
Blowing Leaves Subdivision
Gasper (T), Eaton (Co.)

slight turbidity. Please be advised that the narrative water quality standard for turbidity in Karimipour Creek is “no increase that will cause a substantial visible contrast to natural conditions.” I attribute the lack of maintenance of your E&SC measures to be the primary cause of the turbid discharge. Please be reminded that the general permit does not authorize you cause or contribute to a condition in contravention of any water quality standards.

If you have any questions or comments, please feel free to contact me at (999) 456-5432.

Sincerely,

Hector D. Inspector, CPESC
Environmental Program Specialist 2

HDI:ms
Attachment

cc w/att.: Chester Checkdam, (T) Gasper Code Enforcement Officer
Samuel Siltfence, Acme Excavating Co., Inc.

APPENDIX 11

CONTRACTOR CERTIFICATION FORM

CONTRACTOR'S CERTIFICATION
Pursuant to
NYS DEC GENERAL PERMIT GP-0-25-001

Pursuant to the SPDES General Permit for Stormwater Discharges from Construction Activity (Permit GP-0-20-001) Part III.a.6, all contractors and subcontractors implementing all, or a portion of the Stormwater Pollution Prevention Plan (SWPPP) shall sign a copy of the following certification statement before undertaking any construction activity at the site identification in the SWPPP:

> *"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"*

_____	_____	_____
Signature	Print Name	Date

Contracting Firm Information:

Contracting Firm Name:

Address:

Telephone Number:

Address of Site: _____

Name of trained individual responsible for SWPPP implementation, and who shall be on site on a daily basis when soil disturbance activities are being performed:

Name: _____ Title: _____

\\nbcad\reference\ny stormwater\swppp report template\GP-0-20-001 contractor certification.docx

APPENDIX 12

NYSDEC DEEP-RIPPING & DECOMPACTION MANUAL

New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

Deep-Ripping and Decompaction

April 2008

New York State
Department of Environmental Conservation

Document Prepared by:

John E. Lacey,
Land Resource Consultant and Environmental Compliance Monitor
(Formerly with the Division of Agricultural Protection and Development Services,
NYS Dept. of Agriculture & Markets)

Alternative Stormwater Management
Deep-Ripping and Decompaction

Description

The two-phase practice of 1) “Deep Ripping;” and 2) “Decompaction” (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decompaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site alter the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil porosity which, if left unchecked, severely impairs the soil’s water holding capacity and vertical drainage (rainfall infiltration), from the surface downward.

In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decompaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor's densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soil when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.

Fig. 1. A typical deep ripping phase of this practice, during the first in a series of progressively deeper “rips” through severely compressed subsoil.

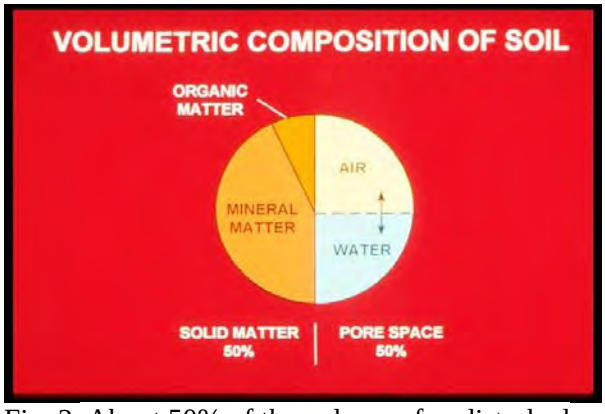

Fig. 2. About 50% of the volume of undisturbed loam surface soil is pore space, when soil is in good condition for plant growth. Brady, 2002.

Recommended Application of Practice

The objective of Deep Ripping and Decompaction is to effectively fracture (vertically and laterallly) through the thickness of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the "two-phase" practice of Deep Ripping and Decompaction first became established as a "best management practice" through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).

Fig. 3. Construction site with significant compaction of the deep basal till subsoil extends 24 inches below this exposed cut-and-fill work surface.

Soil permeability, soil drainage and cropland productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decompaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground obstructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.

Benefits

Aggressive "deep ripping" through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by "decompaction," i.e.: "sub-soiling," through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area's direct surface infiltration of rainfall by providing the open site's mitigated soil condition and lowers the demand on concentrated runoff control structures

- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures

- Decreases runoff volume generated and provides hydrologic source control

- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

- Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

Feasibility / Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (undisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implement maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

Soil

In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology, Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water with a moderate runoff potential, depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow rates of infiltration and transmission of soil-water, and high runoff potential.

In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate of infiltration begins immediately below the topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot

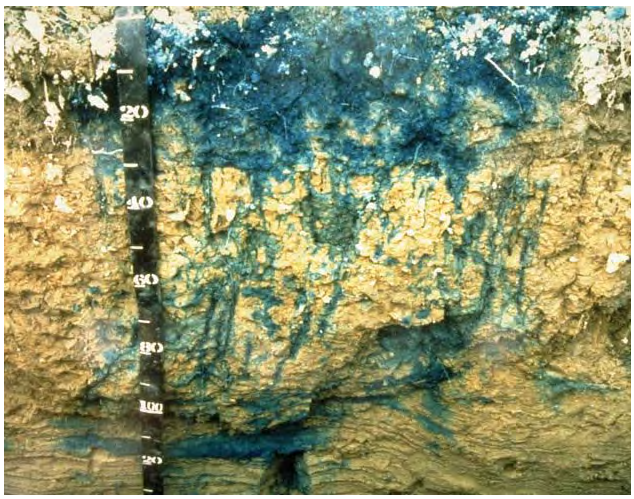

Fig. 4. Profile (in centimeters) displaying the infiltration test result of the natural undisturbed horizons of a soil in Hydrologic Soil Group C.

lawn/ground cover to help maintain the restored subsoil structure. Infiltration after construction-induced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils.

Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, well-drained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep ripping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered.

The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account.

Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompation (subsoiling); and other measures may be more practical.

Slope

The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

Local Weather/Timing/Soil Moisture

Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a "plastic" or "liquid" state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the "slicing and smearing" of the material or added "squeezing and compression" instead of the necessary fracturing. Ample drying time is needed for a "rippable" soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

The "poor man's Atterberg field test" for soil plasticity is a simple "hand-roll" method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the respective soil sample crumbles apart in segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or topsoil replacement), and decompaction. Conversely, as shown in Figure 5, if the rolled sample stretches out in increments greater than 3/8 of an inch long before crumbling, it is in a "plastic" state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.

Fig. 5. Augered from a depth of 19 inches below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistence, too wet for final decompaction (deep subsoiling) at this time.

Design Guidance

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

1) Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and

2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, "decompaction," mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area's soil permeability and

rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only "scarify" the uppermost surface portion of the mass of compacted subsoil material. The term "chisel plow" is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).

Fig. 6. A light duty chisel implement, not adequate for either the deep ripping or decompaction (deep subsoiling) phase.

Fig. 7. One of several variations of an agricultural ripper. This unit has long, rugged shanks mounted on a steel V-frame for deep, aggressive fracturing through Phase 1.

Use a "heavy duty" agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsoil layer by delivering a momentary, wave-like "lifting and shattering" action up through the soil layers as it is pulled.

Pulling-Power of Equipment

Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompacting a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes (see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At this slow and managed rate of operating speed, maximum functional performance is sustained by the tractor and the implement performing the soil fracturing. Referring to Figure 8, the implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are "chained up" so that only four legs will be engaged (at the maximum depth), requiring no less than 160 hp, (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this unobstructed, former construction access area simultaneously through 11 inches of replaced topsoil and the upper 12 inches of the previously deep-ripped subsoil. In constricted areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in Figure 9 pulling a 3-shank deep ripper, may be more maneuverable.

Fig. 8. A deep, angled-leg subsoiler, ideal for Phase 2 decompaction of after the topsoil layer is graded on top of the ripped subsoil.

Fig. 9. This medium tractor is pulling a 3-shank deep ripper. The severely compacted construction access corridor is narrow, and the 120 hp tractor is more maneuverable for Phase 1 deep ripping (subsoil fracturing), here.

Some industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are generally not recommended. Typically, the shanks or "teeth" of these rippers are too short and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and vertical fracturing of the soil materials necessary to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable for turns and patterns than the tractor.

Depth and Patterns of Movement

As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a "normal" maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

There may be construction sites where the depth of the exposed subsoil's compression is moderate, e.g.: 12 inches, rather than deep. This can be verified by using a ¾ inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of increasing depth. Once the full thickness of the subsoil's compacted zone is finally "pieced" and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompation (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.

Fig. 10. An early pass with a 3-shank deep ripper penetrating only 8 inches into this worksite's severely compressed subsoil.

Fig. 11. A repeat run of the 3-shank ripper along the same patterned pass area as Fig. 9; here, incrementally reaching 18 of the needed 22 inches of subsoil fracture.

Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the full depth of Decompation (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

pass of the implement's legs or shanks evenly staggered between those from the previous pass. This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing actuated every 12 to 15 inches across the densely compressed soil mass.

Large, Unobstructed Areas

For larger easy areas, use the standard patterns of movement:

- The first series (pattern) of passes is applied lengthwise, parallel with the longest spread of the site; gradually progressing across the site's width, with each successive pass.

- The second series runs obliquely, crossing the first series at an angle of about 45 degrees.

- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a ¾-inch cone penetrometer.)

Fig. 12. Moderately dry topsoil is being replaced on the affected site now that Phase 1 deep ripping of the compressed subsoil is complete.

Fig. 13. The same deep, angled-leg subsoiler shown in Fig. 7 is engaged at maximum depth for Phase 2, decompaction (deep soiling), of the replaced topsoil and the upper subsoil materials.

Corridors

In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

- First, apply the same initial lengthwise, parallel series of passes described above.

● A second series of passes makes a broad “S” shaped pattern of rips, continually and gradually alternating the “S” curves between opposite edges inside the compacted corridor.

● The third and final series again uses the broad, alternating S pattern, but it is “flip-flopped” to continually cross the previous S pattern along the corridor’s centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

Maintenance and Cost

Once the two-phase practice of Deep Ripping and Decompation is completed, two items are essential for maintaining a site’s soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Figure 15); and keeping the site free of traffic or other weight loads.

Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final practice of landscaping, i.e: surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no weight-bearing force of soil compaction is applied.

Fig. 14. The severely compacted soil of a temporary construction yard used daily by heavy equipment for four months; shown before deep ripping, topsoil replacement, and decompaction.

Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil replacement, decompaction through the topsoil and upper subsoil and final surface tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland.The cost of deep ripping and decompacting (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one acre may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at $1800 per day, the net cost is $900 per acre. If the Phase 2) Decompacting or deep subsoiling takes 3/4 the time as Phase 1, it costs $675 per acre for a combined total of $1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

Resources

Publications:

- American Society of Agricultural Engineers. 1971. *Compaction of Agricultural Soils.* ASAE.

- Brady, N.C., and R.R. Weil. 2002. *The Nature and Properties of Soils. 13th ed.* Pearson Education, Inc.

- Baver, L.D. 1948. *Soil Physics.* John Wiley & Sons.

- Carpachi, N. 1987 (1995 fifth printing). *Excavation and Grading Handbook, Revised. 2nd ed.* Craftsman Book Company
- Ellis, B. (Editor). 1997. Safe & Easy Lawn Care: The Complete Guide to Organic Low Maintenance Lawn. Houghton Mifflin.

- Harpstead, M.I., T.J. Sauer, and W.F. Bennett. 2001. *Soil Science Simplified. 4th ed.* Iowa State University Press.

- Magdoff, F., and H. van Es. 2000. *Building Soils for Better Crops. 2nd ed.* Sustainable Agricultural Networks

- McCarthy, D.F. 1993. *Essentials of Soil Mechanics and Foundations, Basic Geotechnics 4th ed.* Regents/Prentice Hall.

- Plaster, E.J. 1992. *Soil Science & Management. 3rd ed.* Delmar Publishers.

- Union Gas Limited, Ontario, Canada. 1984. *Rehabilitation of Agricultural Lands, Dawn-Kerwood Loop Pipeline; Technical Report*. Ecological Services for Planning, Ltd.; Robinson, Merritt & Devries, Ltd. and Smith, Hoffman Associates, Ltd.

- US Department of Agriculture in cooperation with Cornell University Agricultural Experiment Station. Various years. *Soil Survey of (various names) County, New York.* USDA.

Internet Access:

- Examples of implements:

V-Rippers. Access by internet search of *John Deere Ag -New Equipment for 915* (larger-frame model) *V-Rippe*; and, *for 913* (smaller-frame model) *V-Ripper*. Deep, angled-leg subsoiler. Access by internet search of: B*igham Brothers Shear Bolt Paratill-Subsoiler.* http://salesmanual.deere.com/sales/salesmanual/en_NA/primary_tillage/2008/feature/rippers/915v_pattern_frame.html?sbu=ag&link=prodcat Last visited March 08.

- Soils data of USDA Natural Resources Conservation Service. *NRCS Web Soil Survey.* http://websoilsurvey.nrcs.usda.gov/app/ and *USDA-NRCS Official Soil Series Descriptions; View by Name.* http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi . *Last visited Jan. 08.*

- Soil penetrometer information. Access by internet searches of: *Diagnosing Soil Compaction using a Penetrometer (soil compaction tester), PSU Extension;* as well as *Dickey-john Soil Compaction Tester*. http://www.dickey-johnproducts.com/pdf/SoilCompactionTest.pdf and http://cropsoil.psu.edu/Extension/Facts/uc178pdf Last visited Sept. 07

APPENDIX 13

NOAA PRECIPITATION DATA

NOAA Atlas 14, Volume 10, Version 3
Location name: Beacon, New York, USA*
Latitude: 41.5095°, Longitude: -73.9785°
Elevation: 104 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.342** (0.260-0.441)	**0.403** (0.306-0.521)	**0.503** (0.381-0.652)	**0.585** (0.440-0.762)	**0.699** (0.511-0.940)	**0.785** (0.563-1.07)	**0.874** (0.610-1.23)	**0.968** (0.648-1.39)	**1.10** (0.710-1.62)	**1.20** (0.760-1.81)
10-min	**0.484** (0.368-0.625)	**0.571** (0.433-0.738)	**0.712** (0.538-0.922)	**0.829** (0.624-1.08)	**0.990** (0.724-1.33)	**1.11** (0.798-1.52)	**1.24** (0.864-1.74)	**1.37** (0.918-1.97)	**1.56** (1.01-2.30)	**1.70** (1.08-2.56)
15-min	**0.570** (0.433-0.736)	**0.671** (0.509-0.868)	**0.837** (0.633-1.08)	**0.975** (0.734-1.27)	**1.16** (0.851-1.57)	**1.31** (0.939-1.79)	**1.46** (1.02-2.05)	**1.62** (1.08-2.32)	**1.83** (1.18-2.71)	**2.00** (1.27-3.01)
30-min	**0.779** (0.592-1.01)	**0.918** (0.696-1.19)	**1.14** (0.865-1.48)	**1.33** (1.00-1.73)	**1.59** (1.16-2.14)	**1.79** (1.28-2.44)	**1.99** (1.38-2.79)	**2.20** (1.47-3.16)	**2.48** (1.60-3.67)	**2.70** (1.71-4.07)
60-min	**0.989** (0.751-1.28)	**1.16** (0.883-1.50)	**1.45** (1.10-1.88)	**1.69** (1.27-2.20)	**2.01** (1.47-2.70)	**2.26** (1.62-3.09)	**2.52** (1.75-3.52)	**2.78** (1.86-3.99)	**3.13** (2.03-4.63)	**3.40** (2.16-5.12)
2-hr	**1.28** (0.974-1.64)	**1.50** (1.14-1.92)	**1.86** (1.42-2.40)	**2.17** (1.64-2.80)	**2.59** (1.90-3.46)	**2.90** (2.09-3.94)	**3.23** (2.27-4.51)	**3.58** (2.40-5.11)	**4.06** (2.64-5.97)	**4.45** (2.82-6.65)
3-hr	**1.46** (1.12-1.87)	**1.72** (1.32-2.21)	**2.16** (1.65-2.77)	**2.51** (1.91-3.24)	**3.01** (2.22-4.01)	**3.38** (2.45-4.59)	**3.77** (2.66-5.26)	**4.20** (2.82-5.97)	**4.80** (3.12-7.03)	**5.29** (3.36-7.88)
6-hr	**1.80** (1.39-2.28)	**2.16** (1.67-2.75)	**2.76** (2.12-3.52)	**3.25** (2.49-4.16)	**3.93** (2.92-5.23)	**4.44** (3.24-6.01)	**4.98** (3.55-6.96)	**5.60** (3.78-7.92)	**6.52** (4.25-9.48)	**7.28** (4.64-10.8)
12-hr	**2.16** (1.68-2.73)	**2.66** (2.06-3.36)	**3.48** (2.69-4.41)	**4.16** (3.20-5.30)	**5.10** (3.82-6.76)	**5.79** (4.26-7.82)	**6.54** (4.71-9.15)	**7.44** (5.04-10.5)	**8.79** (5.74-12.7)	**9.94** (6.36-14.6)
24-hr	**2.55** (1.99-3.20)	**3.18** (2.48-3.98)	**4.20** (3.27-5.28)	**5.05** (3.91-6.38)	**6.22** (4.68-8.20)	**7.08** (5.25-9.52)	**8.02** (5.81-11.2)	**9.16** (6.23-12.8)	**10.9** (7.15-15.7)	**12.4** (7.96-18.1)
2-day	**2.98** (2.34-3.70)	**3.67** (2.88-4.58)	**4.82** (3.77-6.02)	**5.76** (4.48-7.24)	**7.07** (5.35-9.25)	**8.03** (5.98-10.7)	**9.08** (6.61-12.6)	**10.4** (7.06-14.4)	**12.3** (8.10-17.6)	**14.0** (9.00-20.3)
3-day	**3.26** (2.58-4.05)	**4.00** (3.15-4.96)	**5.20** (4.08-6.47)	**6.19** (4.84-7.74)	**7.56** (5.75-9.86)	**8.57** (6.40-11.4)	**9.67** (7.06-13.3)	**11.0** (7.53-15.2)	**13.1** (8.62-18.6)	**14.8** (9.57-21.4)
4-day	**3.50** (2.77-4.34)	**4.27** (3.37-5.28)	**5.51** (4.34-6.84)	**6.54** (5.13-8.16)	**7.97** (6.07-10.4)	**9.02** (6.75-12.0)	**10.2** (7.43-14.0)	**11.6** (7.92-15.9)	**13.7** (9.03-19.4)	**15.5** (10.0-22.4)
7-day	**4.13** (3.29-5.09)	**4.97** (3.94-6.12)	**6.33** (5.01-7.82)	**7.46** (5.87-9.26)	**9.02** (6.90-11.6)	**10.2** (7.63-13.4)	**11.4** (8.36-15.6)	**12.9** (8.88-17.7)	**15.2** (10.0-21.4)	**17.1** (11.1-24.5)
10-day	**4.76** (3.79-5.83)	**5.64** (4.50-6.93)	**7.09** (5.63-8.73)	**8.30** (6.55-10.3)	**9.95** (7.63-12.8)	**11.2** (8.41-14.6)	**12.5** (9.15-16.9)	**14.1** (9.69-19.2)	**16.4** (10.9-23.0)	**18.3** (11.9-26.1)
20-day	**6.74** (5.41-8.21)	**7.74** (6.21-9.44)	**9.39** (7.50-11.5)	**10.7** (8.54-13.2)	**12.6** (9.70-16.0)	**14.0** (10.6-18.1)	**15.5** (11.3-20.6)	**17.1** (11.9-23.2)	**19.4** (12.9-27.0)	**21.2** (13.8-30.1)
30-day	**8.42** (6.79-10.2)	**9.51** (7.66-11.6)	**11.3** (9.06-13.8)	**12.8** (10.2-15.6)	**14.8** (11.4-18.7)	**16.4** (12.3-21.0)	**18.0** (13.1-23.6)	**19.6** (13.6-26.4)	**21.8** (14.6-30.3)	**23.5** (15.3-33.2)
45-day	**10.5** (8.51-12.7)	**11.7** (9.47-14.2)	**13.7** (11.0-16.6)	**15.3** (12.3-18.6)	**17.5** (13.6-22.0)	**19.3** (14.5-24.5)	**21.0** (15.3-27.3)	**22.7** (15.8-30.5)	**24.9** (16.7-34.4)	**26.5** (17.3-37.3)
60-day	**12.3** (9.95-14.8)	**13.6** (11.0-16.4)	**15.7** (12.7-19.0)	**17.4** (14.0-21.2)	**19.8** (15.4-24.8)	**21.7** (16.4-27.5)	**23.6** (17.1-30.5)	**25.3** (17.7-33.9)	**27.6** (18.5-38.0)	**29.2** (19.1-40.9)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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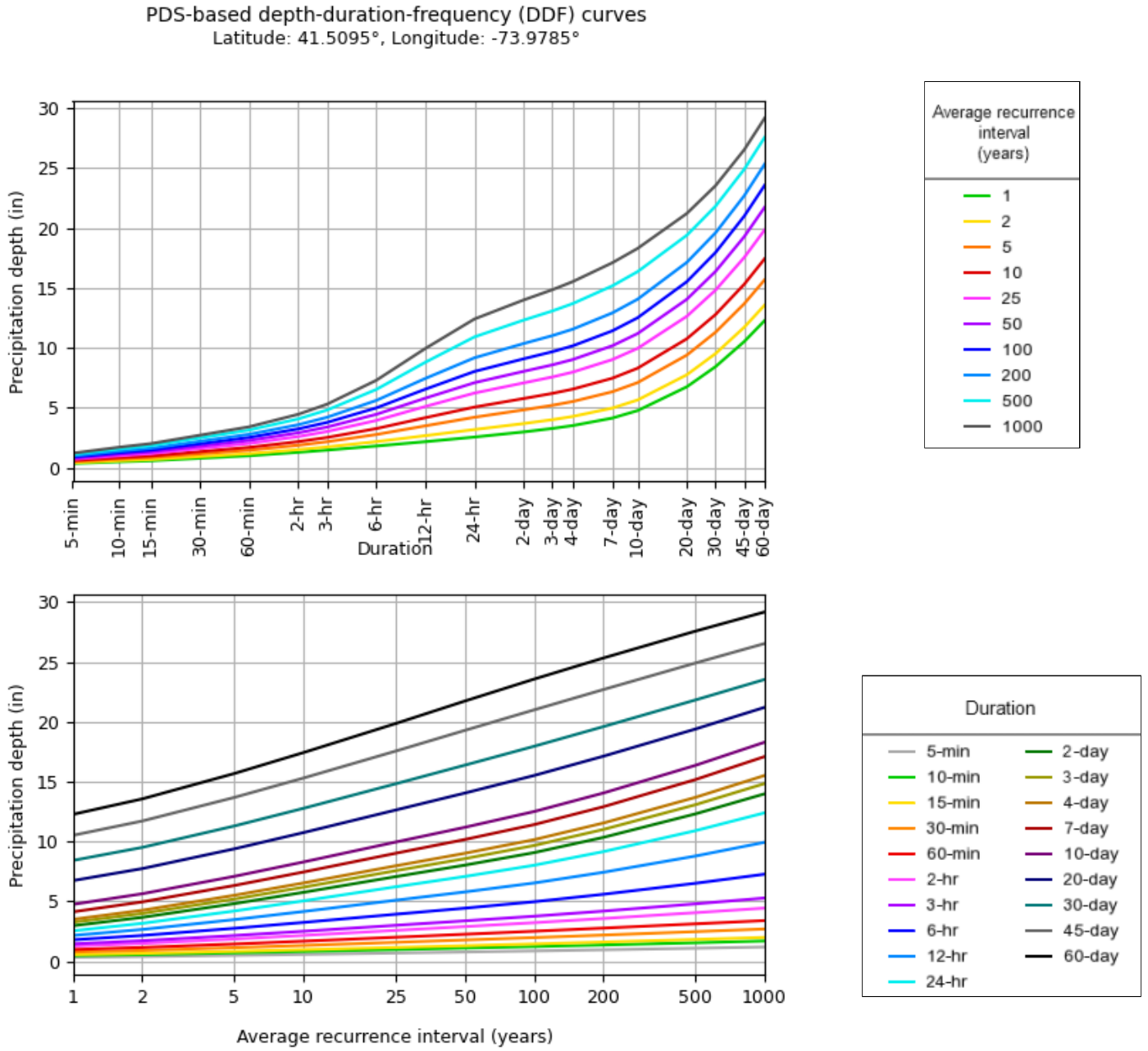
PF graphical



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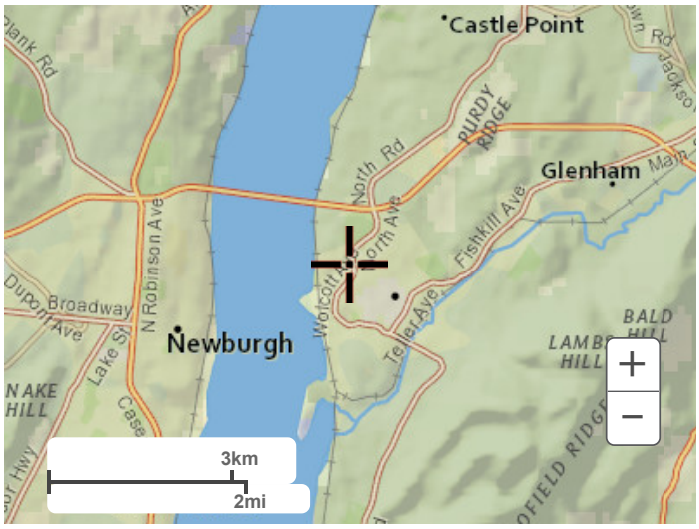
Maps & aerials

Small scale terrain



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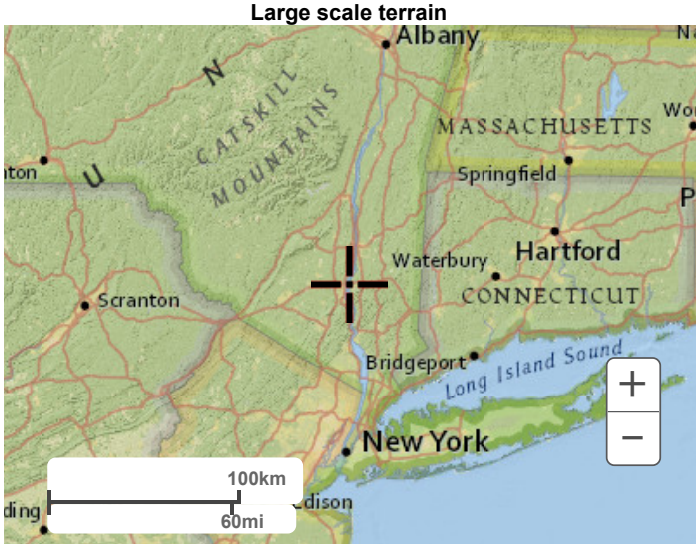
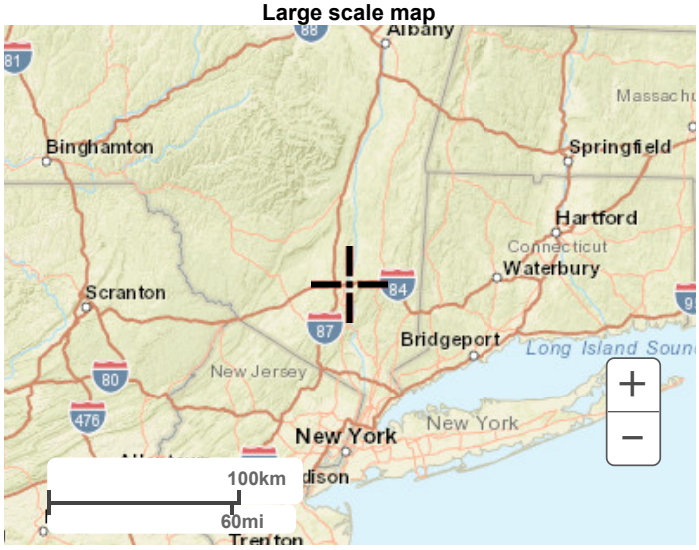
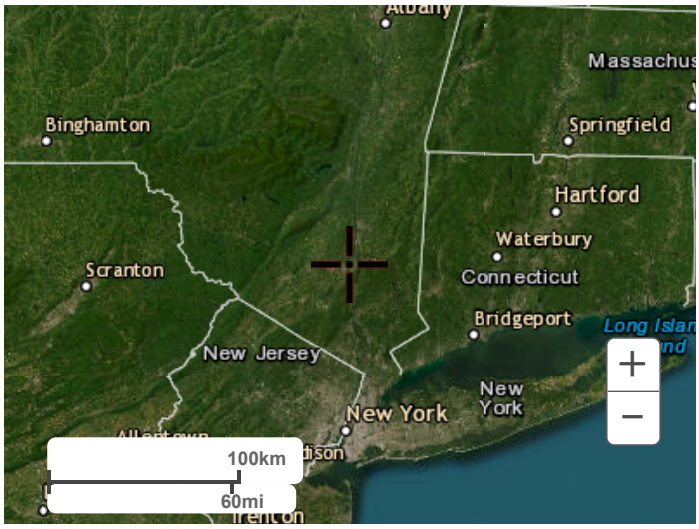


Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

APPENDIX 14

EROSION AND SEDIMENT CONTROL PLAN

GENERAL SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN FOURTEEN (14) DAYS FOR DISTURBANCES LESS THAN FIVE (5) ACRES AND SEVEN (7) DAYS FOR DISTURBANCES GREATER THAN FIVE (5) ACRES, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
3. PERMANENT VEGETATION TO BE SEEDED ON ALL EXPOSED AREAS WITHIN FIVE (5) DAYS AFTER FINAL GRADING. MULCHING IS REQUIRED ON ALL SEEDING. WHEN HYDROSEEDING, MULCH SHALL NOT BE INCLUDED IN THE TANK WITH THE SEED.
4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE 2016 NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL OR AS AMENDED.
5. A SUBBASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUBBASE SHALL BE INSTALLED WITHIN FIVE (5) DAYS OF THE PRELIMINARY GRADING.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION CONTINUES (I.E. SLOPES GREATER THAN 3:1).
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A STONE PAD, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
9. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF TWENTY-FOUR (24) INCHES OF SOIL HAVING A PH OF 5 OR MORE.
10. AT THE TIME THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER.
11. CONDUIT OUTLET PROTECTION MUST BE REVIEWED & SUPPLEMENTED AT ALL OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
12. UNFILTERED DEWATERING IS NOT PERMITTED. TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STATE STANDARDS.
13. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
14. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAY WILL BE REMOVED IMMEDIATELY.
15. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION AND SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
16. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMITS OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN.
17. CONCRETE WASHOUT, DUMPSTER, & STAGING AREA LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED AT THE PRE-CONSTRUCITON MEETING. THEY SHALL BE PLACED IN THE PROXIMITY OF THE CONSTRUCTION ENTRANCE AND STAGING AREAS AND SHALL BE USED PRIOR TO EXITING THE PROJECT SITE. THE LOCATION SHALL BE IN A PRACTICAL, CLEARLY DELINEATED, AREA AND BE MAINTAINED THROUGHOUT CONSTRUCTION.
18. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
19. ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE PROPERTY OWNER, AND SHALL BECOME THEIR RESPONSIBILITY.
20. PAVEMENT AREAS ARE TO BE KEPT CLEAN AT ALL TIMES.
21. DURING CONSTRUCTION, ANY ADDITIONAL CONTROL MEASURES AS DEEMED NECESSARY TO PREVENT EROSION OR CONTROL SEDIMENT BEYOND THOSE MEASURES SHOWN ON THE APPROVED PLAN SHALL BE INSTALLED OR EMPLOYED AT THE DIRECTION OF THE MUNICIPAL ENGINEER.
22. ALL TEMPORARY, STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED, WHEN ALL CONSTRUCTION ACTIVITY IDENTIFIED IN THE SWPPP HAS BEEN COMPLETED, ALL AREAS OF DISTURBANCE HAVE ACHIEVED FINAL STABILIZATION** AND ALL POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE SWPPP AND ARE OPERATIONAL.
23. BOTTOM AND BERM ELEVATIONS OF TEMPORARY SEDIMENT BASINS TO BE REVIEWED WITH THE CONTRACTOR BASED ON THEIR PROPOSED CONSTRUCTION SEQUENCE FOR THE PROJECT.

CONSTRUCTION SEQUENCE

- INSTALL CONSTRUCTION ENTRANCES.
- STAKE LIMITS OF DISTURBANCE AND ORANGE CONSTRUCTION FENCE.
- INSTALL PERIMETER SILT FENCING ON DOWNHILL AREAS AS SHOWN ON PLAN.
- INSTALL SEDIMENT PONDS. INSTALL TEMPORARY SWALES TO DIRECT ALL OPEN SOIL AREA DISTURBANCE TO SEDIMENT PONDS, AS NECESSARY. LOCATIONS AND SIZE OF THE EROSIONS AND SEDIMENT CONTROL PRACTICES ARE NOTED ON THE PLAN. THESE MAY VARY DEPENDING ON THE CONTRACTOR'S SCHEDULE AND APPROACH BUT 3,600 CF OF STORAGE MUST BE PROVIDED AT A MINIMUM PER ACRE OF UPSTREAM DISTURBANCE. SEDIMENT TRAPS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS AND DETAILS. SEDIMENT TRAPS AND BASINS SHALL BE SIZED IN ACCORDANCE WITH THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL MANUAL.
- SEDIMENT POND RESTORATION: WHEN TEMPORARY STRUCTURES HAVE SERVED THEIR INTENDED PURPOSE AND THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, THE EMBANKMENT AND RESULTING SEDIMENT DEPOSITS ARE TO BE LEVELED OR OTHERWISE DISPOSED OF. SEDIMENT CAN BE DISPOSED OF BY EXPORTING IT OFF SITE FOR DISPOSAL OR BE USED AS FILL IN LAWN AREAS. SEDIMENT PONDS IN FUTURE OPEN SPACE OR LAWN AREAS MAY BE PUMPED DRY, GRADED, AND BACKFILLED. SEDIMENT PONDS IN PAVED OR STRUCTURAL AREAS MUST HAVE THE BASIN MATERIAL AND TRAPPED SEDIMENTS REMOVED, SAFELY DISPOSED OF, AND BACKFILLED WITH STRUCTURAL FILL. SEDIMENT PONDS IN LOCATIONS OF FUTURE STORMWATER PONDS MUST HAVE THE TRAPPED SEDIMENT REMOVED LEAVING THE BASIN AREA OPEN FOR THE DEVELOPMENT OF THE FINAL STORMWATER POND.
- ROUGH GRADE PROPOSED DRIVEWAY/ROAD.
- DISTURBED SOILS SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICAL. MATERIALS STORED IN STOCKPILES SHALL BE CORDONED OFF WITH SILT FENCE PER THE APPROPRIATE SPECIFICATIONS AND DETAILS. THE OPERATOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- CONSTRUCT ROADS, DRIVES, BUILDINGS, PARKING AREAS AND INSTALL DRAINAGE SYSTEMS.
- TOPSOIL/HAYSEED LAWN AREAS.
- THE PROJECT SITE MUST MEET FINAL STABILIZATION CRITERIA PRIOR TO REMOVING ALL EROSION AND SEDIMENT CONTROL DEVICES AND CLOSING OUT THE PROJECT. LITTER AND CONSTRUCTION DEBRIS SHALL BE REMOVED AS PRACTICAL THROUGHOUT THE LIFE OF THE PROJECT.
- UPON FINAL STABILIZATION BEING MET, THE CONTRACTOR SHALL CLEAR DRAINAGE PIPES AND STRUCTURES OF ANY SEDIMENT WHICH MAY HAVE ACCUMULATED. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED, AS MAY BE NECESSARY, REQUIRED AND/OR REQUESTED BY AUTHORITIES, TO PREVENT THE INCIDENTAL DISCHARGE OF SILT LADEN RUNOFF FROM ENTERING A WATER COURSE OR A DRAINAGE SYSTEM. THE GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES STATES THAT IT IS UNLAWFUL FOR ANY PERSON TO CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS.
- ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED, AS MAY BE NECESSARY, REQUIRED AND/OR REQUESTED BY AUTHORITIES, TO PREVENT THE INCIDENTAL DISCHARGE OF SILT LADEN RUNOFF FROM ENTERING A WATER COURSE OR A DRAINAGE SYSTEM. THE GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES STATES THAT IT IS UNLAWFUL FOR ANY PERSON TO CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS.

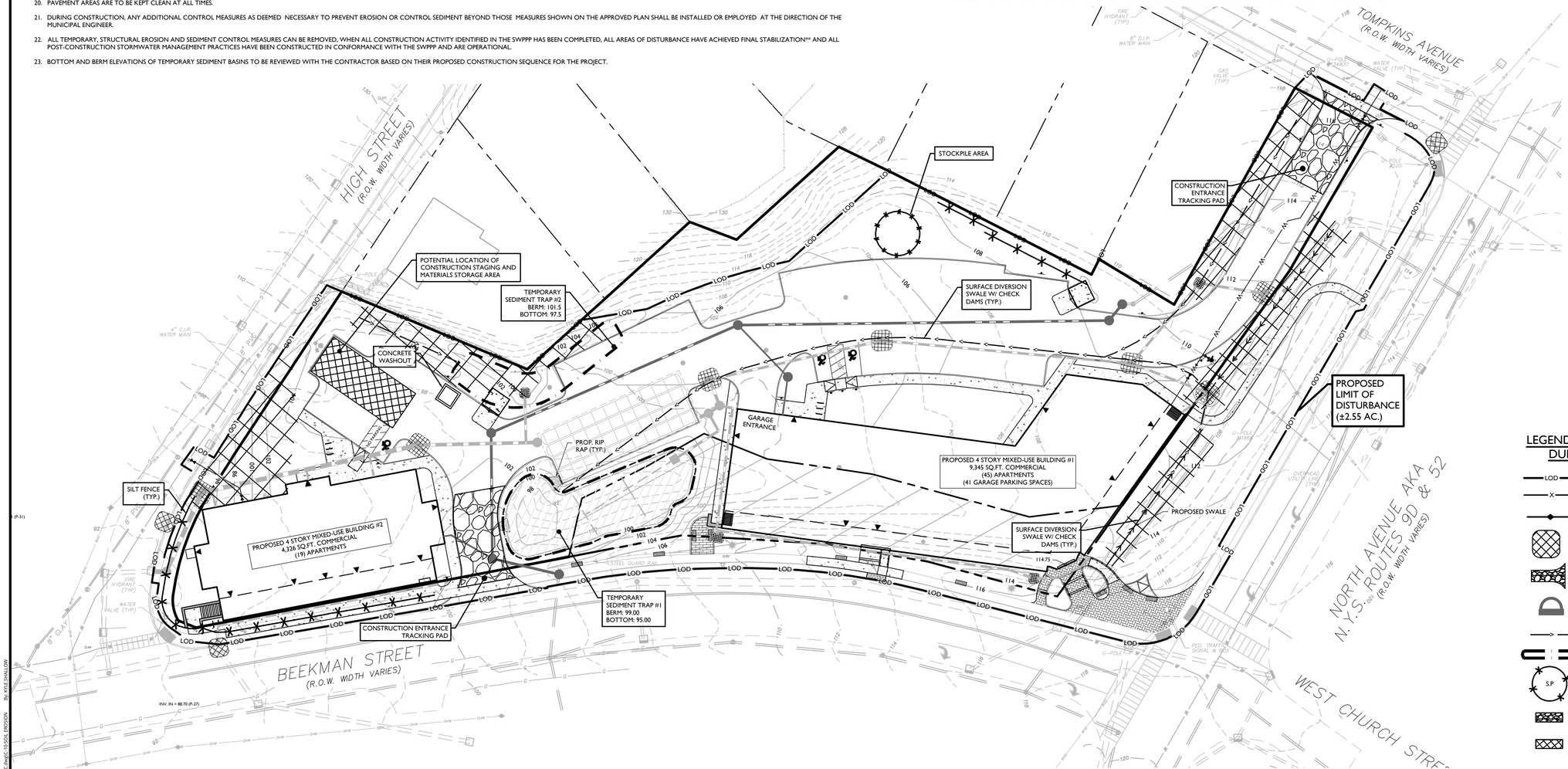
**FINAL STABILIZATION - MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.

MAINTENANCE PLAN DURING CONSTRUCTION:

INSPECTION AND MAINTENANCE SHALL BE PERFORMED IN CONFORMANCE WITH GP-0-20-001 OR AS AMENDED. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED AND INSTALLED FOR THE PROJECT. THE SEDIMENT TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 25% OF ITS' CAPACITY. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES APPROXIMATELY 6" DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. ALL SEEDED AREAS WILL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE LANDSCAPE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

MAINTENANCE AGREEMENT NOTE:

THE OWNER/APPLICANT SHALL ENTER INTO AN ENFORCEABLE MAINTENANCE AGREEMENT WITH THE MUNICIPALITY (IF AN MS4 COMMUNITY). RELATED TO MAINTENANCE OF STORMWATER FACILITIES. THE OWNER/APPLICANT IS RESPONSIBLE TO PERFORM ALL REQUIRED MAINTENANCE BOTH DURING CONSTRUCTION AND LONG-TERM. THE NATURE OF THE AGREEMENT IS TO ALLOW THE MUNICIPALITY TO PERFORM MAINTENANCE AT THEIR OPTION SHOULD THE OWNER/APPLICANT FAIL TO ADEQUATELY MAINTAIN THE SYSTEM AS DETERMINED BY THE MUNICIPAL ENGINEER. MAINTENANCE OF THE STORMWATER SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED SWPPP AND DETAIL SHEETS.



LEGEND FOR EROSION CONTROL DURING CONSTRUCTION

- LOD — CONSTRUCTION LIMIT LINE
- x — SILT FENCE
- ORANGE CONSTRUCTION FENCE
- STORM INLET SEDIMENT TRAP
- STABILIZED CONSTRUCTION ENTRANCE
- SEDIMENT TRAP OUTLET
- TEMPORARY SWALE
- TEMPORARY SEDIMENT BASIN
- S.P — MATERIAL STOCKPILE
- CHECK DAM
- SLOPE MATTING

30 0 30 60

SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Site Plans\C-SESC.dwg|C-10-SOIL EROSION By: KYLE SHALLOW

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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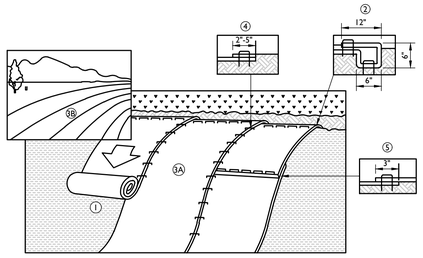
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER:	DRAWING NAME:
23010468A	C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

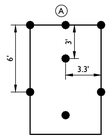
SHEET NUMBER:
10 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

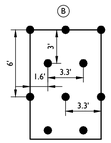


SLOPE INSTALLATION

STAPLES PATTERN GUIDE
6.67' WIDE ROLLS



0.7 STAPLES PER SQ. YD.



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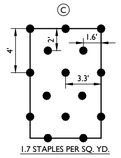

1.7 STAPLES PER SQ. YD.

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
   * WHEN USING MATTING WITH SEED, DO NOT SEED THE AREA. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECPS BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY STEP BY STEP ACROSS THE SLOPE TAMPERING IT DOWN ALONG THE WAY. RECP'S SHALL UNROLL WITH APPROPRIATE SIDE TIGHTLY AGAINST THE SOIL SURFACE. RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKESSHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAKED WITH APPROXIMATELY 2" TO 5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
6. MATTING SHALL BE 100% BIODEGRADABLE
   * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

EROSION MATTING DETAIL

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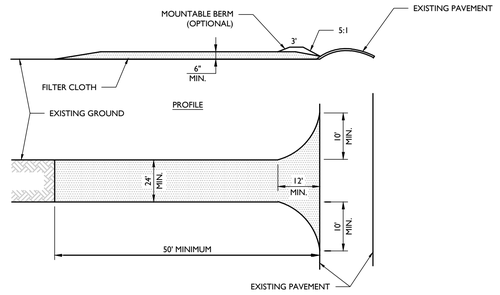

PLAN VIEW

NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. LENGTH: NOT LESS THAN 50 FEET. THICKNESS: NOT LESS THAN (6) INCHES.
2. WIDTH - 24'
3. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTING BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
6. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

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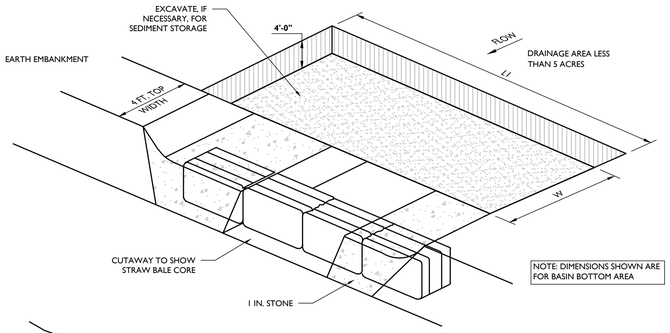

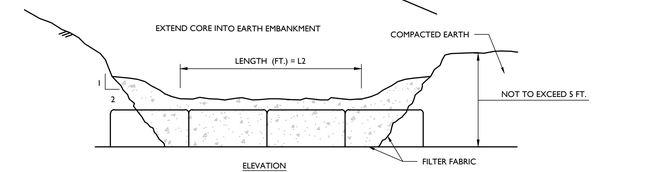

ELEVATION

TO BE INSTALLED PRIOR TO GRADING OR FILLING IN THE DRAINAGE AREA THEY ARE TO PROTECT. TRAPS THAT ARE TO FUNCTION DURING BUILDING CONSTRUCTION MUST NOT BE LOCATED WITHIN 20 FEET OF A PROPOSED BUILDING FOUNDATION. WHILE TRAPS SHOULD BE SITED TO MAXIMIZE STORAGE BENEFIT, THEY SHOULD NOT BE LOCATED IN WETLANDS OR WETLAND BUFFER AREAS, OR IN EXISTING WATERCOURSES.

SEE EROSION AND SEDIMENT CONTROL PLAN FOR LOCATIONS.

INSTALLATION NOTES:

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS WELL.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER SIZED STONES, ROCKS, ORGANIC MATERIAL AND OTHER QUESTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
6. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
7. ALL CUT AND FILL SLOPES SHALL BE 1 : 2 OR FLATTER.
8. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.

SIZING CALCULATIONS

NOTE:

1. 3,600 CUBIC FEET OF STORAGE REQUIRED PER ACRE OF DISTURBANCE.

*THIS IS THE MINIMUM AMOUNT OF SEDIMENT TRAPS, ADDITIONAL MAY BE REQUIRED BASED UPON OTHER ON-SITE CONDITIONS AND CONTRACTOR SCHEDULE AND PHASING ACTIVITIES.

STONE OUTLET SEDIMENT TRAP DETAIL

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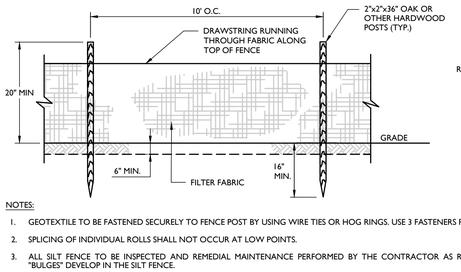
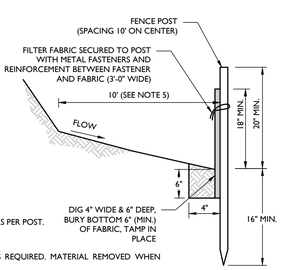


NOTES:

1. GEOTEXTILE TO BE FASTENED SECURELY TO FENCE POST BY USING WIRE TIES OR HOG RINGS. USE 3 FASTENERS PER POST.
2. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
3. ALL SILT FENCE TO BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR AS REQUIRED. MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
4. WHEN TWO SECTIONS OF FILTER FABRIC ARE JOINED, THEY SHALL BE OVER-WRAPPED BY SIX INCHES AND FOLDED.
5. FILTER FABRIC TO BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
6. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
7. IF SPACE PERMITTED, LOCATE SILT FENCE 10' AWAY FROM TOE OF SLOPE IF THE SLOPE IS STEEPER THAN 1:1.



STANDARD SILT FENCE DETAIL

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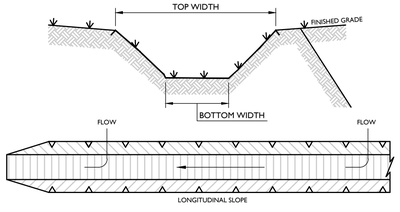
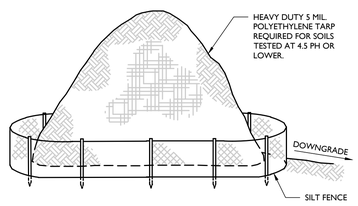


PLAN

VEGETATED SWALE					
SWALE	BOTTOM WIDTH	SIDE SLOPE	LONGITUDINAL SLOPE	DEPTH	LENGTH
1R	2.0 FT	50%	2.00%		506'

VEGETATIVE SWALE DETAIL



NOTES:

1. ALL STOCKPILES SHALL NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY.

TOPSOIL STOCKPILE DETAIL

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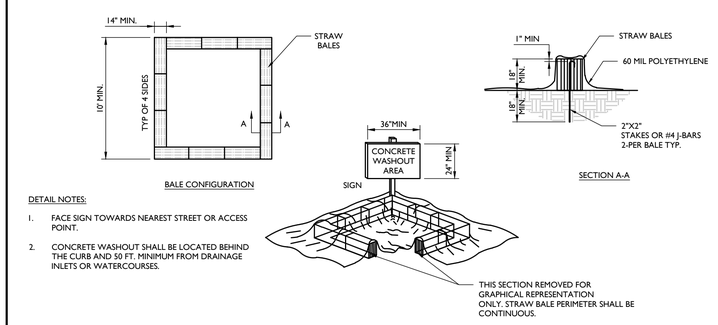

BALE CONFIGURATION

SECTION A-A

DETAIL NOTES:

1. FACE SIGN TOWARDS NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FT. MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES.

NOTES:

1. CONCRETE WASHOUTS ARE REQUIRED ON ALL CONSTRUCTION SITES INVOLVING CONCRETE AND STUCCO USE.
2. THE CONTRACTOR SHALL REQUIRE ALL CONCRETE DRIVERS TO UTILIZE THE CONCRETE WASHOUTS ONSITE.
3. WASHOUT FACILITIES SHALL BE LOCATED AT LEAST 50 FEET AWAY FROM STORM SEWER DRAIN INLETS, GUTTERS, OPEN DITCHES, AND WATER COURSES.
4. APPROPRIATE STONE SHOULD COVER PATHS TO CONCRETE WASHOUT.
5. THE NUMBER OF CONCRETE WASHOUTS DEPENDS ON THE EXPECTED DEMAND FOR STORAGE CAPACITY. LARGE SITES WITH EXTENSIVE CONCRETE WORK SHALL BE PLACED AT MULTIPLE LOCATIONS FOR USE BY CONCRETE TRUCK DRIVERS.
6. CONCRETE WASHOUT AREAS SHALL BE IDENTIFIED BY POSTING SIGNS ONSITE.
7. CONCRETE WASHOUTS ARE TO BE INSPECTED DAILY BY THE CONTRACTOR FOR LEAKS OR TEARS IN PLASTIC LINER.
8. REMOVE AND DISPOSE OF ALL MATERIAL WHEN THE WASHOUT HAS BEEN FILLED TO 75% CAPACITY.
9. PRIOR TO ANY RAINFALL, ALL CONCRETE WASHOUTS ARE TO BE CLEANED OUT OR COVERED.
10. ONCE THE MATERIAL HAS BEEN CLEANED OUT OF THE CONCRETE WASHOUT FACILITY, THE FACILITY MUST BE INSPECTED FOR REPAIR, RECONSTRUCTION OR REPLACEMENT. ALL PLASTIC LINING SHALL BE REMOVED AND REPLACED.
11. PRE-FABRICATED OR ONSITE FABRICATED CONCRETE WASHOUTS MAY BE USED.
12. OPTIONS FOR ONSITE CONCRETE WASHOUTS:
    A. DIG A PIT AND LINE WITH 10 MIL PLASTIC SHEETING.
    B. CREATE AN ABOVE-GROUND STRUCTURE FROM STRAW BALES OR SANDBAGS WITH 10 MIL PLASTIC LINING.

CONCRETE WASHOUT DETAIL

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3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
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5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL DETAILS

SHEET NUMBER:
11 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

APPENDIX 15

NJ CAT CERTIFICATION – FIRST DEFENSE

First Defense® High Capacity

A Simple Solution for your Trickiest Sites

Product Profile

The First Defense® High Capacity is an enhanced vortex separator that combines an effective stormwater treatment chamber with an integral peak flow bypass. It efficiently removes sediment total suspended solids (TSS), trash and hydrocarbons from stormwater runoff without washing out previously captured pollutants. The First Defense® High Capacity is available in several model configurations to accommodate a wide range of pipe sizes, peak flows and depth constraints (**Table 1**, next page).

Applications

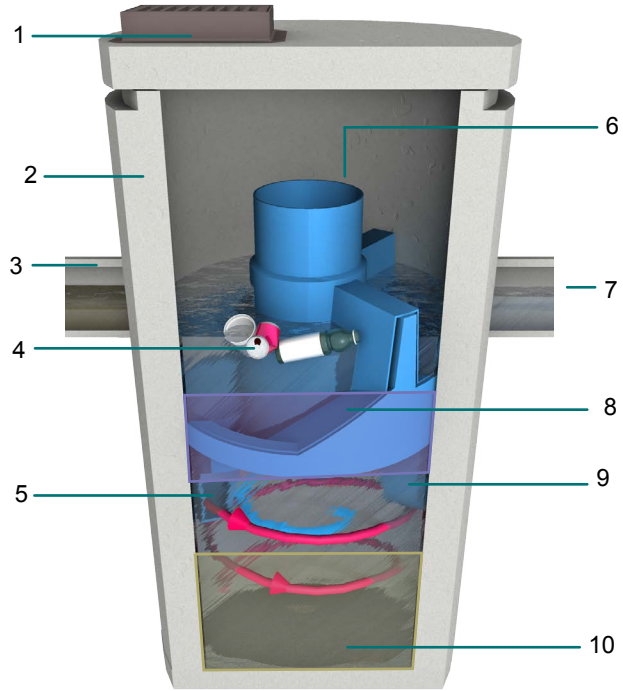
- Stormwater treatment at the point of entry into the drainage line
- Sites constrained by space, topography or drainage profiles with limited slope and depth of cover
- Retrofit installations where stormwater treatment is placed on or tied into an existing storm drain line
- Pretreatment for filters, infiltration and storage

Advantages

- Inlet options include surface grate or multiple inlet pipes
- Integral high capacity bypass conveys large peak flows without the need for "offline" arrangements using separate junction manholes
- Proven to prevent pollutant washout at up to 450% of its treatment flow
- Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling
- Delivered to site pre-assembled and ready for installation

Verified by NJCAT and NJDEP

Fig.1 The First Defense® High Capacity has internal components designed to efficiently capture pollutants and prevent washout at peak flows.



Components

1. Inlet Grate (optional)
2. Precast chamber
3. Inlet Pipe (optional)
4. Floatables Draw Off Slot (not pictured)
5. Inlet Chute
6. Internal Bypass
7. Outlet pipe
8. Oil and Floatables Storage
9. Outlet chute
10. Sediment Storage Sump

How it Works

The First Defense® High Capacity has internal components designed to remove and retain gross debris, total suspended solids (TSS) and hydrocarbons (**Fig.1**).

Contaminated stormwater runoff enters the inlet chute from a surface grate and/or inlet pipe. The inlet chute introduces flow into the chamber tangentially to create a low energy vortex flow regime (magenta arrow) that directs sediment into the sump while oils, floating trash and debris rise to the surface.

Treated stormwater exits through a submerged outlet chute located opposite to the direction of the rotating flow (blue arrow). Enhanced vortex separation is provided by forcing the rotating flow within the vessel to follow the longest path possible rather than directly from inlet to outlet.

Higher flows bypass the treatment chamber to prevent turbulence and washout of captured pollutants. An internal bypass conveys infrequent peak flows directly to the outlet eliminating the need for, and expense of, external bypass control structures. A floatables draw off slot functions to convey floatables into the treatment chamber prior to bypass.

Hydro International, 94 Hutchins Drive, Portland, ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212
Email: stormwaterinquiry@hydro-int.com Web: www.hydro-int.com

First Defense® High Capacity

Sizing & Design

This adaptable online treatment system works easily with large pipes, multiple inlet pipes, inlet grates and now, contains a high capacity bypass for the conveyance of large peak flows. Designed with site flexibility in mind, the First Defense® High Capacity allows engineers to maximize available site space without compromising treatment level.

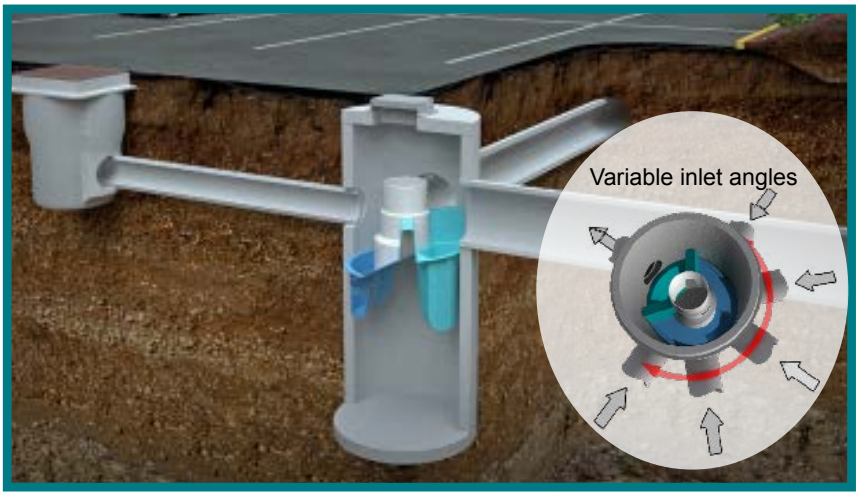


Fig 2. Works with multiple inlet pipes and grates

Free *Stormwater Separator Sizing Calculator* for Engineers

This simple online tool will recommend the best separatror, model size and online/offline arrangement based on site-specific data entered by the user.

Go to hydro-int.com/sizing to access the tool.

Inspection and Maintenance

Nobody maintains our systems better than we do. To ensure optimal, ongoing device performance, be sure to recommend Hydro International as a preferred service and maintenance provider to your clients.

Call **1 (800) 848-2706** to schedule an inspection and cleanout or learn more at **hydro-int.com/service**

Fig 3. Maintenance is done with a vactor truck

Table 1. First Defense® High Capacity Design Criteria.

First Defense® High Capacity Model Number	Diameter	Typical TSS Treatment Flow Rates			Peak Online Flow Rate	Maximum Pipe Diameter[1]	Oil Storage Capacity	Typical Sediment Storage Capacity[2]	Minimum Distance from Outlet Invert to Top of Rim[3]	Standard Distance from Outlet Invert to Sump Floor
		NJDEP Certified	106µm	230µm						
	(ft / m)	(cfs / L/s)	(cfs / L/s)	(cfs / L/s)	(cfs / L/s)	(in / mm)	(gal / L)	(yd^3 / m^3)	(ft / m)	(ft / m)
FD-3HC	3 / 0.9	0.84 / 23.7	0.3 / 8.77	0.53 / 15.0	15 / 424	18 / 457	125 / 473	0.4 / 0.3	2.0 - 3.5 / 0.6 - 1.0	3.71 / 1.13
FD-4HC	4 / 1.2	1.50 / 42.4	0.7 / 20	1.2 / 34	18 / 510	24 / 600	191 / 723	0.7 / 0.5	2.3 - 3.9 / 0.7 - 1.2	4.97 / 1.5
FD-5HC	5 / 1.5	2.34 / 66.2	1.3 / 37.9	2.2 / 62.2	20 / 566	24 / 609	300 / 1135	1.1 / .84	2.5 - 4.5 / 0.7 - 1.3	5.19 / 1.5
FD-6HC	6 / 1.8	3.38 / 95.7	2.2 / 63	3.8 / 108	32 / 906	30 / 750	496 / 1,878	1.6 / 1.2	3.0 - 5.1 / 0.9 - 1.6	5.97 / 1.8
FD-8HC	8 / 2.4	6.00 / 169.9	5.1 / 144	8.6 / 243	50 / 1,415	48 / 1219	1120 / 4239	2.8 / 2.1	3.0 - 6.0 / 0.9 -1.8	7.40 / 2.2

[1]Contact Hydro International when larger pipe sizes are required.
[2]Contact Hydro International when custom sediment storage capacity is required.
[3]Minimum distance for models depends on pipe diameter.

Hydro International, 94 Hutchins Drive, Portland, ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212
Email: stormwaterinquiry@hydro-int.com Web: www.hydro-int.com

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Nonpoint Pollution Control
Division of Water Quality
401-02B
Post Office Box 420
Trenton, New Jersey 08625-0420
609-633-7021 Fax: 609-777-0432
http://www.state.nj.us/dep/dwq/bnpc_home.htm

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

April 4, 2016

Lisa Lemont, CPSWQ
Business Development Manager
Hydro International
94 Hutchins Drive
Portland, ME 04102

Re: MTD Lab Certification
First Defense® HC (FDHC) Stormwater Treatment Device by Hydro International

TSS Removal Rate 50%

Dear Ms. Lemont:

The Stormwater Management rules under N.J.A.C. 7:8-5.5(b) and 5.7 (c) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by the New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP). Hydro International has requested an MTD Laboratory Certification for the First Defense® HC Stormwater Treatment Device.

The projects falls under the "Procedure for Obtaining Verification of a Stormwater Manufactured Treatment Device from New Jersey Corporation for Advance Technology" dated January 25, 2013. The applicable protocol is the "New Jersey Laboratory Testing Protocol to Assess Total Suspended Solids Removal by a Hydrodynamic Sedimentation Manufactured Treatment Device" dated January 25, 2013.

NJCAT verification documents submitted to the NJDEP indicate that the requirements of the aforementioned protocol have been met or exceeded. The NJCAT letter also included a recommended certification TSS removal rate and the required maintenance plan. The NJCAT Verification Report with the Verification Appendix (dated February 2016) for this device is published online at http://www.njcat.org/verification-process/technology-verification-database.html.

The NJDEP certifies the use of the First Defense® HC Stormwater Treatment Device by Hydro International at a TSS removal rate of 50% when designed, operated and maintained in accordance with the information provided in the Verification Appendix and the following conditions:

1. The maximum treatment flow rate (MTFR) for the manufactured treatment device (MTD) is calculated using the New Jersey Water Quality Design Storm (1.25 inches in 2 hrs) in N.J.A.C. 7:8-5.5.

2. The First Defense® HC Stormwater Treatment Device shall be installed using the same configuration reviewed by NJCAT and shall be sized in accordance with the criteria specified in item 6 below.

3. This First Defense® HC Stormwater Treatment Device cannot be used in series with another MTD or a media filter (such as a sand filter) to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.

4. Additional design criteria for MTDs can be found in Chapter 9.6 of the New Jersey Stormwater Best Management Practices (NJ Stormwater BMP) Manual which can be found on-line at www.njstormwater.org.

5. The maintenance plan for a site using the First Defense® HC Stormwater Treatment Device shall incorporate, at a minimum, the maintenance requirements noted in the attached document. However, it is recommended to review the maintenance website at http://www.hydro-int.com/UserFiles/downloads/FD_O%2BM_F1512.pdf for any changes to the maintenance requirements.

6. Sizing Requirements:

   The example below demonstrates the sizing procedure for the First Defense® HC Stormwater Treatment Device:

   Example: A 0.25 acre impervious site is to be treated to 50% TSS removal using a First Defense® HC Stormwater Treatment Device. The impervious site runoff (Q) based on the New Jersey Water Quality Design Storm was determined to be 0.79 cfs.

   Maximum Treatment Flow Rate (MTFR) Evaluation:

   The site runoff (Q) was based on the following:
   time of concentration = 10 minutes
   i=3.2 in/hr (page 5-8, Fig. 5-3 of the NJ Stormwater BMP Manual)
   c=0.99 (curve number for impervious)
   Q=ciA=0.99x3.2x0.25=0.79 cfs

   Given the site runoff is 0.79 cfs and based on Table 1 below, the First Defense® HC Model 4-ft with a MTFR of 1.5 cfs would be the smallest model approved that could be used for this site that could remove 50% of the TSS from the impervious area without exceeding the MTFR.

   The sizing table corresponding to the available system models is noted below. Additional specifications regarding each model can be found in the Verification Appendix under Table A-1 and Table A-2 of the NJCAT Verification Report.

Table 1 First Defense® HC Models

First Defense® Model	Manhole Diameter (ft)	Maximum Treatment Flowrate, MTFR (cfs)
4-ft	4-ft	1.50
6-ft	6-ft	3.38
8-ft	8-ft	6.00

Be advised a detailed maintenance plan is mandatory for any project with a Stormwater BMP subject to the Stormwater Management Rules, N.J.A.C. 7:8. The plan must include all of the items identified in the Stormwater Management Rules, N.J.A.C. 7:8-5.8. Such items include, but are not limited to, the list of inspection and maintenance equipment and tools, specific corrective and preventative maintenance tasks, indication of problems in the system, and training of maintenance personnel. Additional information can be found in Chapter 8: Maintenance of the New Jersey Stormwater Best Management Practices Manual.

If you have any questions regarding the above information, please contact Mr. Titus Magnanao of my office at (609) 633-7021.

Sincerely,

James J. Murphy, Chief
Bureau of Nonpoint Pollution Control

Attachment: Maintenance Plan
C: Chron File
Richard Magee, NJCAT
Vince Mazzei, DLUR
Ravi Patraju, NJDEP
Gabriel Mahon, BNPC
Titus Magnanao, BNPC

PART 1 - GENERAL

1.01 SCOPE

A. Work described in this section includes furnishing all labor, equipment, materials, tools and incidentals required for a complete and operable installation of the First Defense® stormwater treatment system as shown on the drawings and specified herein.

B. The manufacturer shall design and supply the equipment listed herein and the Contractor shall install the equipment in accordance with the manufacturer's Handling, Storage, and Installation Instructions.

1.02 GENERAL REQUIREMENTS

A. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff. The system shall be self-activating with no mechanical parts or external power requirements.

B. Upon request, independently certified performance data and references shall be made available to the Engineer of Record for use in determining that the treatment system meets the design criteria and performance requirements stated herein.

1.03 SUBMITTALS

A. Submittals shall be provided and shall include the following:

i. Site plan showing location and orientation of proposed pipe sizes, connections and excavation limits.

ii. Product installation drawings showing plan and elevation views with water elevations for the flow conditions specified herein.

iii. Performance data as required in Part 2.

iv. Inspection and maintenance procedures.

1.04 QUALITY ASSURANCE

A. The treatment system shall be manufactured under the direction of an ISO 9001 Certified Company.

B. Inspection

The treatment system shall be subject to inspection by the Engineer of Record or the owner's representative at either the place of manufacture or the project site. Any and all observed defects shall be repaired to the satisfaction of the owner or owner's representative or replacement shall be made available.

C. Warranty

The manufacturer shall guarantee the treatment system free from defects in materials and workmanship for a period of two years following installation. If during the warranty period defects in materials or workmanship are noted, then the manufacturer shall be promptly notified. The decision to repair or replace affected units shall be made at the discretion of the manufacturer.

D. Patent Indemnity

Upon request, the manufacturer shall warrant that the treatment system does not infringe upon or violate any patent, copyright, trade secret or any other proprietary right of any third party and shall indemnify the Owner against any loss, cost, expense or liability arising out of such claim whether or not such claim is successful.

E. Certificate of Compliance

Upon request, the manufacturer shall provide a "Letter of Certification" to certify that the treatment system adheres to the specifications required herein and complies with the project's stormwater management permit.

1.05 MANUFACTURER

A. The treatment system shall be supplied by a manufacturer regularly engaged in such work who has furnished similar installations that have been in successful and continuous operation for a minimum period of five years. The manufacturer shall be a Stormwater Equipment Manufacturer Association (SWEMA) member.

B. The treatment system shall be certified by an acceptable State agency, such as a State Department of Environmental Protection (DEP) or industry verification or assessment agency (e.g.: ETV, NJCAT, NETE, MaSTEP).

PART 2 – STORMWATER HVS

2.01 General

A. The treatment system shall use a tangential inlet chute to establish rotational flow within a cylindrical vortex chamber and be able to treat the Water Quality Flow Rate stated herein without re-suspending and releasing captured pollutants. The treatment system shall not release captured floating pollutants during surcharge conditions.

B. The treatment system shall not exceed the pressure drop (headloss) for the design flow rates specified herein as determined by ASTM C1745 / C1745M – 11.

C. The treatment system shall fit within the limits of excavation (area and depth) as shown in the project plans and will not exceed the dimensions for the design flow rates specified herein.

D. The storage capacities for pollutants that settle (sediment) and float (oil) shall not be less than the volumes listed in Table 1. The treatment system shall operate as

intended and perform as specified herein as pollutants accumulate. The accumulation of pollutants that settle shall not reduce the volume required in the treatment system for separation and for preventing re-suspension and washout, or reduce the floatables storage volume capacity.

E. Minimum 24-inch frame and cover shall provide access to the sediment storage volumes from the surface for inspection and maintenance. Removal of pollutants from the treatment system shall be possible without requiring confined space entry.

2.02 Performance

A. Performance of the treatment system shall be based on independent full-scale laboratory testing and shall adhere to the Performance Specifications listed in Table 1. The laboratory testing used as the basis of product performance shall be undertaken in accordance with testing protocols approved or endorsed by SWEMA or acceptable State agency, such as a State Department of Environmental Protection (DEP) or recognized verification agency (e.g.: ETV, NJCAT, NETE, MaSTEP).

B. Performance of the treatment system shall be based on treating the Water Quality Flow rate (WQF) without internally bypassing and without re-suspension and washout of captured pollutants (scour). The Maximum Treatment Flow Rate(s) (MTFR-106 and/or MTFR-230) shall be greater than or equal to the WQF. The treatment system shall remove greater than or equal to 90% of TSS based on the Target Particle Size (TPS) of 106 microns and/or 80% of TSS based on the TPS of 230 microns at MTFR-106 and MTFR-230, respectively.

C. The treatment system shall convey the Peak On-line Flow Rates listed in Table 1 without causing upstream surcharge conditions. Full-scale independent laboratory scour testing shall demonstrate effluent control of less than or equal to 5 mg/L for all flows up to 200% of MTFR-106.

D. The treatment system shall be capable of capturing and retaining fine silt and sand size particles. Analysis of captured sediment from full-scale field installations shall demonstrate particle sizes predominately in the 20-micron range.

Table 1.

First Defense® Model	Diameter	Maximum Treatment Flow Rates (MTFR)		Peak Online Flow Rate	Maximum Pipe Diameter	Oil Storage Capacity	Minimum Sediment Storage Capacity	Min. Cover (F/G to Invert)	Min. Depth
		106µm	230µm						
	(ft/m)	(cfs/ L/s)	(cfs/ L/s)	(cfs /L/s)	(in/mm)	(gal/L)	(yd^3/m^3)	(ft/m)	(ft/m)
FD-4	4/1.2	0.7/20	1.2/34	6.0/170	18/450	180/681	1.3/ 1.0	3.1/1.1	5.47/1.7
FD-4HC				18.0/510	24/600			2.3-3.9/0.7-1.2	
FD-6	6/1.8	2.2/63	3.8/108	18.0/510	24/600	420/1,590	3.3/ 2.5	4.0 / 1.2	6.52/2.0
FD-6HC				32/906	30/750			3.0-5.1/0.9-1.6	

PART 3 – EQUIPMENT

A. The treatment system shall be manufactured with materials typically used in stormwater drainage systems that have a minimum life expectancy of 30 years.

(i) Materials of construction shall be cross-linked polyethylene (XLPE) and/or Type 304 stainless steel or carbon steel powder coated in accordance with ASTM 775/ ASTM A775M. All components shall be designed to withstand normal loadings associated with fabrication, shipping, site installation, and normal operation of the equipment.

(ii) Precast shall be manufactured with concrete that has attained a compressive strength of 4,000 psi after 28 days. The structure shall be reinforced to withstand an HS20-44 loading. Shiplap joints shall be sealed with butyl rubber mastic sealant conforming to ASTM C990. Slab tops shall be suitably reinforced and provided with manhole openings and covers as required. The cast iron manhole frames and covers shall be sized as per the manufacturer's drawings and shall be in accordance with ASTM A48, CL.35B and AASHTO M105. The masonry fixing bolts shall be Type 304 stainless steel.

(iii) All piping connections and ancillary items not listed herein shall be provided by the Contractor.

PART 4 - EQUIPMENT DELIVERY

A. The treatment components of the treatment system shall be delivered within six weeks of date of approved technical submittal.

B. The components of the treatment system shall be preassembled and delivered to the site fully fabricated and ready for the final assembly.

C. Off-loading, storage, and installation shall be by the Contractor.

D. The Contractor shall inspect and provide signed acceptance of equipment prior to unloading, or notify the manufacturer of any damage to equipment to effect proper remedial action. Failure to notify the manufacturer of damage to equipment prior to unloading will void all warranties pertaining to subject equipment.

PART 5 - EQUIPMENT INSTALLATION

A. The system shall be installed in strict accordance with the site plans, and the manufacturer's general arrangement drawings and Handling, Storage and Installation Instructions. The Contractor shall be responsible for installing the equipment and all necessary site connections.

B. The Manufacturer shall be notified immediately of any equipment which is damaged during unloading, storage, or installation. The damaged equipment shall be repaired or replaced at the discretion of the manufacturer and entirely at the Contractor's expense.

C. The precast concrete structure shall be set on a granular or compacted sand sub-base in accordance with local requirements for standard manhole installation. In no instances shall the compacted sub-base material have a thickness of less than 12 inches.

D. The precast concrete structure shall be set level and plumb to within 0.5%.

E. Non-shrink grout or hydraulic cement conforming to ASTM C 595 shall be used to provide a water tight seal in the lift holes, any drain holes and around the concrete knock-outs for the inlet and outlet pipes.

F. The Contractor shall, at the discretion of the owner or owner's representative, test the concrete structure for water tightness before backfilling.

Colliers
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Traffic & Parking Study

November 28, 2023
Revised January 26, 2024
Revised June 24, 2024

45 Beekman Street & High Street
City of Beacon
Dutchess County, New York

Prepared for:

Beekman Arts Center LLC
Bay Ridge Studios LLC
268 Main Street
Beacon, NY 12508

Prepared by:

Richard G. D'Andrea, P.E., PTOE
New York Professional Engineer
License No. 090241

Joseph Muccin, P.E., PTOE
Senior Project Engineer

Colliers Engineering & Design
400 Columbus Avenue
Suite 180E
Valhalla New York 10595
Main: 877 627 3772
Colliersengineering.com

Project No. 23010468A

Colliers Engineering & Design

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I. Introduction

A. Project Description and Location

(Figure No. 1)

This report has been prepared to evaluate the potential traffic and parking related impacts associated with the proposed 45 Beekman and High Street mixed-use development in the City of Beacon, Dutchess County, New York (the "Project"). The Project is proposed to be developed on three (3) adjacent parcels, one (1) parcel that has frontage along Beekman Street that is presently improved by a 15,190 sq. ft commercia/retail building and associated parking areas. This parcel is setback from the ROW on North Avenue (NYS Route 9D), Tompkins Avenue and Beekman Street. The remaining two (2) vacant parcels are located along High Street, one of which is a corner lot fronting on both High Street and Beekman Street. The two (2) proposed mixed-use buildings are located entirely within the City of Beacon's Linkage ("L") Zoning District, however a very limited portion of the Project site, which includes the existing access driveway from Tompkins Avenue is classified within the R1-7.5 Zoning District.

The 45 Beekman Street parcel is proposed to consist of a 4-story building that will be comprised of approximately 10,566 square feet of commercial space and 2,360 square feet of tenant amenity space on the 1st Floor, together with 45 dwelling units on Floors 2-4. The lands generally comprising the existing High Street parcels are proposed to be improved by a 4-story building comprised of approximately 4,326 square feet of commercial space on the 1st Floor, together with approximately 19 dwelling units on Floors 2-4. The 45 Beekman Street building will also include 41 garage parking spaces located below the proposed building. In total the Project will provide 88 off-street parking spaces including the 41 garage parking spaces and a total of 47 surface parking lot spaces. It is anticipated that all parking spaces will be shared amongst the two (2) buildings. As shown on Figure No. 1, access to the development is proposed via existing driveway connections to Tompkins Avenue and Beekman Street. Additionally, the Project proposes landscaping and streetscape improvements to be completed within the NYSDOT Right-of-Way along the Project's North Avenue (NYS Route 9D) frontage. A Design Year of 2026 has been utilized to assess the potential future traffic impacts of the Project.

It should be noted that the commercial space proposed within each building is not currently defined as strictly retail or office space. For the purposes of the analysis contained herein, it has been assumed that all commercial space will be retail space, which provides a somewhat conservative analysis of traffic and parking conditions.

This Traffic & Parking Study has been revised to account for updated parking data recently published by the Institute of Transportation Engineers (ITE) and contained in the ***Parking Generation Manual, 6th Edition.*** This revised Study also provides a shared parking analysis to account for the site's proximity to nearby Beacon Metro North Train Station as discussed further herein. This revised study also addressed comments received from the City of Beacon's Traffic Consultant, Creighton Manning, dated February 9, 2024, and from the New York State Department of Transportation dated

B. Scope of Study

This study has been prepared to identify current and future traffic operating and parking conditions on the surrounding roadway network and to assess the potential traffic and parking impacts of the proposed development.

All available traffic count data for the study area intersections were obtained from previous reports prepared by our office. These data were supplemented with new traffic counts collected by representatives of Colliers Engineering & Design CT, P.C. These data were also compared to count data obtained from the New York State Department of Transportation (NYSDOT). Together these data were utilized to establish the 2023 Existing Traffic Volumes representing existing traffic conditions in the vicinity of the site.

The 2023 Existing Traffic Volumes were then projected to a 2026 Design Year to take into account background traffic growth. In addition, traffic for other specific potential or approved developments in the area were estimated and then added to the Projected Traffic Volumes to obtain the 2026 No-Build Traffic Volumes.

Estimates were then made of the potential traffic that the proposed development would generate during each of the peak hours (see Section III-C for further discussion). The resulting site generated traffic volumes were then added to the roadway system and combined with the 2026 No-Build Traffic Volumes resulting in the 2026 Build Traffic Volumes.

The Existing, No-Build and Build Traffic Volumes were then compared to roadway capacities based on the procedures from the Highway Capacity Manual to determine existing and future Levels of Service and operating conditions. Recommendations for improvements were made where necessary to serve the existing and/or future traffic volumes.

In addition to the traffic analysis, the anticipated parking demand of the Project was computed based on the City Code requirements. The analysis of parking conditions for the Project included a shared parking analysis to assess the actual anticipated peak parking demand for the Project.

II. Existing Roadway and Traffic Descriptions

A. Project Description and Location

As shown on Figure No. 1, the Project will be accessed from Tompkins Avenue and Beekman Street via existing driveway connections. The following is a brief description of the roadways located within the study area. In addition, Section III-F provides a further description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service and any recommended improvements for each of the study area intersections. Appendix "D" contains copies of the capacity analyses which indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied.

1. Wolcott Avenue/North Avenue (NYS Route 9D)

Wolcott Avenue/North Avenue (NYS Route 9D) is classified as an urban minor arterial roadway, which traverses in a generally north south direction throughout the City of Beacon. In the immediate vicinity of the Project, Wolcott Avenue/North Avenue consists of one lane in each direction with a center turn lane. There is no on-street parking along the roadway, but sidewalks are provided on both sides of the roadway. Within the study area Wolcott Avenue/North Avenue has signalized intersections with Verplanck Avenue, Beekman Street, Main Street and South Avenue. The posted speed limit within the City limits is 30 MPH.

It should be noted that the nearest bus stop to the Project site is located at the intersection of NYS Route 9D and Main Street. The Dutchess County Route B: Poughkeepsie Transit Hub to Beacon and Route G: Beacon Free Loop both make stops at this location.

2. Beekman Street

Beekman Street is a two-lane City roadway classified as an urban major collector roadway that originates at a signalized intersection with North Avenue north of the Project site. The roadway serves as a main access connection between North Avenue and the Beacon MetroNorth Train Station. Sidewalks are provided along the roadway on alternating sides of the roadway throughout its entire length. On-street parking is also provided along the east side of the roadway between North Avenue and River Street and then on the west side of the roadway between River Street and Railroad Avenue. The posted speed limit on Beekman Street is 30 MPH.

3. Tompkins Avenue

Tompkins Avenue is a two-lane City roadway that originates at an unsignalized intersection with North Avenue. One lane of travel is provided in both directions with no centerline striping. The roadway has a total pavement width of approximately 27-ft. and the City speed limit of 30 MPH prevails along the roadway. Sidewalks are provided along the south side of the roadway between North Avenue and Bank Street. On-street parking is permitted along both sides of the roadway but is limited to 4-hour parking between the hours of 6AM and 6PM.

4. **Verplanck Avenue**

   Verplanck Avenue is a two-lane City roadway classified as an urban major collector roadway that originates at a signalized intersection with North Avenue (NYS Route 9D) and continues southeast terminating at its intersection with Main Street. Sidewalks are provided along both sides of the roadway throughout its entire length. On-street parking is not provided along this roadway and the posted speed limit is 25 MPH.

B. 2023 Existing Traffic Volumes

(Figures No. 2 through 4, Appendix E)

Turning movement traffic counts were collected by representatives of Colliers Engineering & Design (CED) on Thursday, September 7, 2023, and Saturday, September 9, 2023, to determine the existing traffic volume conditions at the study area intersections during the anticipated peak operation of the Project. These traffic counts were then compared to traffic volume data from previous traffic studies conducted by our office and to traffic volume data available from the New York State Department of Transportation (NYSDOT) for the NYS Route 9D corridor. All relevant traffic volume data is provided in Appendix E for reference. Based on this information, the 2023 Existing Traffic Volumes were established for the Weekday Peak AM Hour, Weekday Peak PM Hour, and Saturday Peak Hour at the following study area intersections:

- North Avenue (NYS Route 9D) and Verplanck Avenue
- North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street
- North Avenue (NYS Route 9D) and Beekman Street/W. Church Street
- Wolcott Avenue/North Avenue (NYS Route 9D) and Main Street/Municipal Plaza
- Beekman Street and High Street

Based upon a review of the traffic counts, the peak hours were generally identified as follows:

- Weekday Peak AM Hour 7:30 AM – 8:30 AM
- Weekday Peak PM Hour 4:15 PM – 5:15 PM
- Saturday Peak Hour 1:00 PM – 2:00 PM

The resulting 2023 Existing Traffic Volumes are shown on Figures No. 2, 3, and 4 for the Weekday Peak AM Hour, Weekday Peak PM Peak Hour, and Saturday Peak Hour, respectively.

C. Crash Analysis

(Tables A-1, A-2 and A-3)

Historical crash data was obtained from NYSDOT for Beekman Street between W. Main Street & North Avenue (NYS Route 9D) and for North Avenue (NYS Route 9D) between Main Street and Verplanck Avenue encompassing each of the study area intersections. The crash data covers the five-plus year period between January 1, 2018 and July 31, 2023. The crash data is summarized in Table A-1, contained in Appendix B, which identifies each crash by location, date and time, type of accident, roadway conditions, and apparent contributing factors. In addition, Table A-2 provides as further summary of the crash data by intersection location. Finally, average accident rates were calculated for each of the study area intersections and compared to statewide average accident rates for similar type intersections. The accident rates are summarized in Table A-3, contained in Appendix B. A summary of the crash history at each of the study area intersection is provided below:

- **North Avenue (NYS Route 9D) and Verplanck Avenue** – The intersection experienced a total of 22 over the 5+ year study period with a high of seven (7) crashes experienced in 2019. The predominant crash type was rear end crashes (14). The calculated accident rate for the intersection was found to be generally comparable to the statewide average accident rate for similar type intersections.
- **North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street** – The intersection experienced a total of 12 crashes over the 5+ year study period with not more than three (3) crashes during any one-year period. The predominant crash type was found to be right angle (8) type crashes. However, it should also be noted that the calculated accident rate for the intersection was found to be slightly lower than but generally comparable to the statewide average accident rate for similar type intersections.
- **North Avenue (NYS Route 9D) and Beekman Street/W. Church Street** – The intersection experienced a total of 12 crashes over the 5+ year study period with not more than four (4) crashes during any one-year period. The predominant crash type was found to be rear end (7) type crashes. The calculated accident rate for the intersection was found to be slightly lower than but generally comparable to the statewide average accident rate for similar type intersections.
- **Wolcott Avenue/North Avenue (NYS Route 9D) and Main Street/Municipal Plaza** – The intersection experienced a total of 17 crashes over the 5+ year study period with not more than five (5) crashes during any one-year period. The predominant crash type was rear end crashes (7) and left turn crashes (4). The calculated accident rate for the intersection was found to be somewhat greater than the statewide average accident rate for similar type intersections.

It should be noted that no crashes were found to have occurred at the intersection of Beekman Street and High Street during the study period.

III. Evaluation of Future Traffic Conditions

A. 2026 No-Build Traffic Volumes

(Figure No. 5 through 28, Appendix G)

The 2023 Existing Traffic Volumes were increased by a growth factor of 2.0% per year to account for general background growth within the study area resulting in the 2026 Projected Traffic Volumes, which are shown on Figures No. 5, 6, and 7 for each of the Peak Hours. In addition, traffic from other specific potential and/or approved developments in the area including Mirbeau Beacon, 364 Main Street, Edgewater (Edgewater Place), Beacon Commons (16 West Main Street) and Prophecy Theater (1113 Wolcott Avenue) were identified. The table below provides additional details of each of these developments.

Exhibit No. 1: Other Development Summary

Project Name	Location	Propose Use & Size	Traffic Data Source
Mirbeau Beacon	7 Craig House Lane City of Beacon	80 Room Hotel & Spa	May 24, 2022 CED Traffic Impact Study
364 Main Street	364 Main Street City of Beacon	6,674 sq. ft. Commercial 20 Apartment Units	August 30, 2021 CED Traffic Study
Edgewater (Edgewater Place)	6 Edgewater Place City of Beacon	309 Apartment Units	February 27, 2017 CED Traffic Impact Study (formerly Maser Consulting)
Beacon Commons	16 West Main Street City of Beacon	62 Apartment Units	June 28, 2022 JMC Traffic Study
Prophecy Theater	1113 Wolcott Avenue City of Beacon	30 Room Hotel 50 Seat Cafe 150 Seat Event Space	February 21, 2022 CED Traffic Impact Study

The data referenced for each of the other developments identified above is provided in Appendix G for reference. Individual figures showing the traffic associated which each of the other developments identified in the table above are provided in Appendix A. The figures are identified as follows:

- Mirbeau Beacon – Figures No. 8, 9 & 10
- 364 Main Street – Figures No. 11, 12 & 13
- Edgewater (Edgewater Place) – Figures No. 14, 15 & 16
- Prophecy Theater – Figures No. 17, 18 & 19
- Beacon Commons – Figures No. 20, 21 & 22

The resulting total traffic volumes associated with these other developments are shown on Figures No. 23, 24, and 25 for each of the peak hours. These volumes were added to the 2026 Projected Traffic Volumes resulting in the 2026 No-Build Traffic Volumes which are shown on Figures No. 26, 27, and 28 for the AM, PM, and Saturday Peak Hours, respectively.

B. Site Generated Traffic Volumes

(Table No. 1, 1-A, 1-B, and 1-C, Appendix E)

Estimates of the amount of traffic to be generated by the proposed development during each of the peak hours were developed based on information published by the Institute of Transportation Engineers (ITE) as contained in the report entitled "Trip Generation", 11th Edition, 2021, based on Land Use Category – 220 – Multifamily Housing (Low Rise) and Land Use Category – 822 – Strip Retail Plaza (<40K). Table No. 1 summarizes the trip generation rates and corresponding site generated traffic volumes for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours.

It is anticipated that some portion of the Project generated trips could remain internal to the site as trips may occur between the residential and commercial portions of the Project. In order to assess the potential internal trips, an internal capture analysis was conducted for each of the peak hours based on NCHRP 684 Internal Trip Capture Estimation Tool. This analysis is summarized in Tables No. 1-A, 1-B, and 1-C contained in Appendix B. The internal capture analysis results indicate that the internal capture percentage during the Weekday Peak PM and Saturday Peak Hours could approach as much as 25%, while little to no internal capture trips are anticipated during the Weekday AM Peak Hour. Based on this analysis, the traffic generation estimates presented in Table No. 1 account for a somewhat conservative internal capture percentage of 10% for the Weekday PM and Saturday Peak Hours applied to the commercial portions of the development only. No internal capture has been applied to the traffic generation estimates for the Weekday AM Peak Hour.

It should also be noted that the Project is located within approximately 2,000-ft. of the Beacon Metro-North Train Station and it is anticipated that a portion of the residents of the Project may utilize train transportation on a regular basis potentially reducing the daily and peak hour vehicular trips generated by the Project. Based on 2021 American Community Survey data for the City of Beacon available from the United States Census Bureau, approximately ten percent (10%) of Beacon residents utilize public transportation for their means of transportation to work and considering the proximity of the Project to the train station this percentage could be somewhat higher. The American Community Survey data also indicates that approximately four percent (4%) of Beacon residents walk or bike to work and ten percent (10%) of Beacon residents work from home. The referenced American Community Survey data is provided in Appendix E. However, no credit for these potential reductions in traffic generation has been accounted for in the analysis providing a somewhat conservative analysis of future traffic conditions associated with the Project.

C. Arrival/Departure Distribution

(Figures No. 29 through 32)

It was necessary to establish arrival and departure distributions to assign the site generated traffic volumes to the surrounding roadway network. Based on a review of the Existing Traffic Volumes and the expected travel patterns on the surrounding roadway network, the distributions were identified separately for the residential and commercial portions of the Project. The resulting anticipated residential arrival and departure distributions are shown on Figures No. 29 and 30, respectively while the commercial arrival and departure distributions are shown on Figures No. 31 and 32.

D. 2026 Build Conditions Traffic Volumes

(Figures No. 33 through 38)

The site generated traffic volumes were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting residential site generated traffic volumes for each of the study area intersections are shown on Figures No. 33, 34 and 35 while the resulting commercial site generated traffic volumes are shown on Figures No. 36, 37 and 38 for each of the peak hours, respectively. The site generated traffic volumes were then added to the 2026 No-Build Traffic Volumes to obtain the 2026 Build Traffic Volumes. The resulting 2026 Build Traffic Volumes are shown on Figures No. 39, 40 and 41 for the Weekday Peak AM, Weekday Peak PM, and Saturday Peak Hours, respectively.

E. Description of Analysis Procedures

(Appendix C)

It was necessary to perform capacity analyses in order to determine existing and future traffic operating conditions at the study area intersections. The following is a brief description of the analysis method utilized in this report:

1. **Signalized Intersection Capacity Analysis**
   The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service "A" represents the best condition and a Level of Service "F" represents the worst condition. A Level of Service "C" is generally used as a design standard while a Level of Service "D" is acceptable during peak periods. A Level of Service "E" represents an operation near capacity. In order to identify an intersection's Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

2. **Unsignalized Intersection Capacity Analysis**
   The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Additional information concerning signalized and unsignalized Levels of Service can be found in Appendix C of this report.

F. Results of Analysis

(Tables No. 2, 2A, TSW-1 and TSW-2, Appendix D & E)

Capacity analyses, which take into consideration appropriate truck percentages, pedestrian activity, roadway grades and other factors, were performed at the study area intersections utilizing the procedures described above to determine the Levels of Service and average vehicle delays. Summarized below are a description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service as well as any recommended improvements.

Table No. 2 summarizes the results of the capacity analysis for the 2023 Existing, 2026 No-Build and 2026 Build Conditions. Appendix D contains copies of the capacity analysis which also indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied. The traffic signal timing data for each of the signalized intersections has also been obtained from the NYSDOT and is provided in Appendix E for reference.

1. **North Avenue (NYS Route 9D) and Verplanck Avenue**

   North Avenue (NYS Route 9D) and Verplanck Avenue intersect at a "T"-shaped signalized intersection. The northbound North Avenue approach consists of a single shared through/right lane. The southbound North Avenue approach consists of a shared through/right lane and separate left turn lane with approximately 340 ft. of storage distance. The westbound Verplanck Avenue approach consists of an 85 ft. long separate left turn lane and a separate right turn lane. The intersection also has signalized pedestrian actuated crossings of the northbound and westbound approaches.

   Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service "B" during each of the Peak Hours.

The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to operate at an overall Level of Service "B" during the AM and Saturday Peak Hours while a Level of Service "C" will be experienced during the PM Peak Hour both with and without the Project.

2. **North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street**

North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street intersect at a four-way intersection with Tompkins Avenue and Ralph Street controlled by stop-signs. The North Avenue approaches each consist of a shared through/right turn lane and separate left turn lane. The Tompkins Avenue and Ralph Street approaches each consist of one lane. Striped pedestrian crosswalks are present on the Tompkins Avenue and Ralph Street approaches.

Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at a Level of Service "D" or better across all time periods.

The capacity analysis was recomputed using the 2026 No-Build Traffic Volumes. These results indicate that the intersection is expected to operate at a Level of Service "F" for vehicles exiting Tompkins Avenue during all time periods. Similar operating conditions are also anticipated under future Build conditions with the Project.

Capacity analysis was also conducted for this intersection to assess the potential improvements that may result from the identified traffic signal timing, phasing and coordination improvements at the North Avenue (NYS Route 9D) and Beekman Street/W. Church Street, which are discussed further below. While some minor improvements in delays for vehicles exiting both Tompkins Avenue and Ralph Street are projected with these improvements, the Tompkins Avenue eastbound approach is still projected to operate at a Level of Service "F" during all time periods.

As part of the Edgewater development, this intersection was previously identified to be monitored for potential signalization after completion of that Project. In light of this, capacity analysis was conducted for the intersection under potential traffic signal control. These results indicate that the intersection would be expected to operate at an overall Level of Service "A" during each of the peak hours under future No-Build and Build conditions with traffic signal control.

A traffic signal warrant analysis has been conducted to further assess the potential need for a traffic signal at this intersection in the future. This analysis, which has been conducted in accordance with the Traffic Signal Warrant criteria specified in the Manual on Uniform Traffic Control Devices, assesses the intersection under future 2026 No-Build and 2026 Build Traffic Volume conditions. The No-Build conditions analysis is presented in Table TSW-1 while the Build conditions analysis is presented in Table TSW-2, both contained in Appendix B. Based on the results of the analysis, the intersection is projected to satisfy Warrant 2 – Four-Hour Vehicular under No-Build conditions regardless of the Project. Under future Build conditions, the intersection is projected to satisfy Warrant 1 Condition B – Minimum Vehicular

Interruption of Continuous Traffic, Warrant 2 – Four-Hour Vehicular Volume and Warrant 3 – Peak Hour Volume.

Based on this analysis of future projected traffic volume conditions, it appears that a traffic signal may be warranted at the intersection upon completion of area projects and specifically the Edgewater Project and the 45 Beekman Street & High Street Project. It is the recommendation of CED that this intersection continue to be monitored after completion of these projects to assess the actual traffic volumes at that time. Signalization of this intersection would also require the review and approval of the NYSDOT. It should be noted that the critical volume for satisfaction of the traffic signal volume warrants at this intersection is the exiting volume from Tompkins Avenue. The Edgewater Project is estimated to contribute as much as 7-times the amount of traffic to the Tompkins Avenue exiting approach as the 45 Beekman Street & High Street Project. In fact, the 45 Beekman Street & High Street Project traffic is only estimated to be approximately 3.0% of the total traffic at this intersection during all peak time periods analyzed under future Build conditions.

3. **North Avenue (NYS Route 9D) and Beekman Street/W. Church Street**

North Avenue (NYS Route 9D) intersects with Beekman Street and W. Church Street at a full movement signalized intersection. The northbound and southbound approaches each consist of a separate left turn lane in each direction with a shared through/right turn lane. The Beekman Street eastbound approach consists of a shared left turn/through lane and an approximately 95 ft. long separate right turn lane. The westbound W. Church Street approach consists of a single lane for all movements. The intersection also has signalized pedestrian actuated crossings of the southbound, eastbound and westbound approaches. There is no pedestrian crossing on the northbound North Avenue approach.

Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service “F” during each of the peak hours analyzed. It should be noted that during the AM Peak Hour the southbound North Avenue approach experiences the longest delays as vehicles turn onto Beekman Street towards the Beacon Metro North train station. Conversely, during the PM Peak Hour, the eastbound Beekman Street approach experiences the longest delays resulting from exiting traffic from the train station. Furthermore, these delays on the Beekman Street approach currently meter the release of traffic onto NYS Route 9D towards the I-84 interchange.

The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to operate at an overall Level of Service “F” during the each of the peak hours.

In order to address the existing and future delays at this intersection, traffic signal phasing and timing modifications have been identified that would improve the overall operations of the intersection. The traffic signal phasing modifications include changing the northbound and southbound left turn phases from a lagging left turn phase to a leading left turn phase. In addition, the eastbound and westbound approaches are proposed to be modified from concurrent operation to split phase operation. Associated signal timing modifications have also been identified. In addition, it is proposed to move the existing signalized pedestrian crossing of North Avenue from the north side of the intersection to the south side of intersection such that crossing pedestrians do not conflict with the traffic flows to and from Beekman Street at this intersection. Based on the analysis results, the intersection would be expected to operate at an overall Level of Service "C" during all time periods under future Build conditions. These signal timing and phasing modifications as well as the modifications to the pedestrian accommodations will require review and approval by NYSDOT and will require physical changes to the traffic signal equipment and intersection striping to be implemented under an NYSDOT Highway Work Permit.

4. **Wolcott Avenue/North Avenue (NYS Route 9D) and Main Street/Municipal Plaza**

   Wolcott Avenue/North Avenue (NYS Route 9D) intersects with Main Street/Municipal Plaza at a full movement signalized intersection. The northbound and southbound approaches each consist of a separate left turn lane in each direction with a shared through/right turn lane. The eastbound City Hall approach consists of a shared left/through/right lane, while the westbound Main Street approach consists of a shared left/through lane and a separate right turn lane with a storage length of approximately 70 feet. The intersection also has signalized pedestrian actuated crossings on all approaches.

   Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service "B" across all time periods.

   The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to operate at an overall Level of Service "B" across all time periods.

   In association with the traffic signal phasing and timing modifications at the Beekman Street/ W. Church Street intersection, corresponding traffic signal timing modifications are necessary at the Main Street/Municipal Plaza intersection since these two signals are currently coordinated. The traffic signal timing modifications for the Main Street/Municipal Plaza intersection have been identified to maintain coordination of the traffic signals. These modifications do not significantly change the traffic operating conditions at the intersection.

5. **Beekman Street and High Street**

   Beekman Street and High Street intersect at a "T" type intersection with High Street is controlled by a stop-sign. All approaches to the intersection consist of one lane. Sidewalks are provided on all approaches on both sides of each road, and a crosswalk is present crossing the High Street approach. Left turns from Beekman Street onto High Street are currently prohibited.

   Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at a Level of Service "B" or better during the AM Peak Hour and Saturday Peak Hour, while operating at a Level of Service "A" during the PM Peak Hour.

   The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to at a Level of Service "B" or better across all time periods.

6. **Beekman Street and Site Access**

   The Project Site is currently accessed from Beekman Street via a driveway connection located approximately 200 feet east of High Street and 345 ft. west of North Avenue forming an unsignalized "T" type intersection. Each approach to the intersection consists of one lane. Sidewalks are provided on all approaches. This site access location will be maintained under the future Build conditions.

   Capacity analysis was conducted for this intersection utilizing the 2026 Build Traffic Volumes. The analysis results indicate that the intersection is expected to operate at a Level of Service "B" or better during the AM Peak Hour and Saturday Peak Hour, while operating at a Level of Service "C" or better during the PM Peak Hour. Some pruning of vegetation on both sides of the driveway along the site frontage should be completed to ensure proper sight distance is provided.

   Queueing conditions along Beekman Street from the North Avenue intersection have also been reviewed to assess potential impacts to vehicles entering and exiting the site driveway. Based on the traffic analysis results for the North Avenue/Beekman Street intersection with the proposed traffic signal improvements, queues on the Beekman Street eastbound approach from the North Avenue intersection are expected to be less than 300 ft. which will allow for the vehicles to enter and exit the site access driveway without conflict with queues along Beekman Street.

7. **Tompkins Avenue and Site Access**

   The Project Site is currently accessed from Tomkins Avenue via a driveway connection located approximately 60 feet west of North Avenue forming an unsignalized "T" type intersection. Each approach to the intersection consists of one lane. Sidewalks are provided on the south side of Tompkins Avenue in this area. This site access driveway location will be maintained under the future Build conditions.

   Capacity analysis was conducted for this intersection utilizing the 2026 Build Traffic Volumes. The analysis results indicate that the intersection is expected to operate at a Level of Service "A" across all time periods.

   It is noted that due to the proximity of this driveway to North Avenue (NYS Route 9D) vehicles waiting to make turns from eastbound Tompkins Avenue onto North Avenue may queue through the driveway location. In order to ensure vehicles can freely enter and exit the driveway location, "Do Not Block Driveway" signage and pavement markings should be considered to be installed along eastbound Tompkins Avenue at the driveway, subject to the approval of the City.

8. **North Avenue (NYS Route 9D) Arterial Analysis**

   In addition to the above discussed capacity analyses, an Arterial Level of Service analysis has also been conducted to assess the existing and future conditions along North Avenue (NYS Route 9D). The arterial analysis results are provided in Appendix D and are also summarized in Table No. 2 A, contained in Appendix B. The analysis results indicate that the proposed Project will not have a significant impact an overall arterial level of service along North Avenue. It should also be noted that the results do not indicate a significant change in overall corridor operations as a result of the recommended improvements at the North Avenue (NYS Route 9D) and Beekman Street/W. Church Street. However, this is due the fact that the arterial analysis is for North Avenue (NYS Route 9D) only and does not take into account the significant improvements in level of service and delay anticipated along the Beekman Street eastbound approach to North Avenue.

G. Beekman Street Complete Streets Analysis

(Appendix E)

The Dutchess County Transportation Council (DCTC) prepared a Complete Streets Analysis for Beekman Street dated January 29, 2018. Relevant pages of this analysis are contained in Appendix E for reference. CED has reviewed this analysis, which analyzes existing vehicular, pedestrian and bicycle accommodations along and around Beekman Street including pathways between Main Steet/North Avenue and the Beacon Metro-North Train Station. The analysis makes recommendations to improve pedestrian and bicycle access along Beekman Street and surrounding roadways, which include improved pedestrian crossings and pathways, protected bike lanes along Beekman Street, installation of bicycle "sharrows" along Beekman Street, North Avenue and other area roadways, etc. The Project as currently proposed would not prohibit any of the recommendations of the Beekman Street Complete Streets Analysis from being implemented. Furthermore, the modifications at the intersection of North Avenue/Beekman Street intersection will consider the recommendation of the DCTC study.

IV. Parking Evaluation

(Table P-1, P-2, P-1A, P-2A, Appendix F)

As indicated previously, the Project development area falls within the City of Beacon Linkage District. The City of Beacon Zoning Code's (the "Zoning Code") provides specific parking requirements for Linkage District development as specified in Section 223-41.21.F. Based on the Zoning Code, 1 space is required for every residential dwelling unit, and 3 spaces are required for every 1,000 square feet of retail commercial space. The relevant code section is provided in Appendix F for reference. Exhibit No. 2 below summarizes the total parking requirements for the Project based on the City Code. It should be noted, and as previously indicated, it has been assumed that all commercial space will be retail space rather than office space, which provides a somewhat conservative analysis of traffic and parking conditions.

Exhibit No. 2 – City of Beacon Code Required Parking

Proposed Use	Size	City of Beacon Code Requirement[1]	Required Spaces
45 Beekman Street			
Residential	45 Dwelling Units	1 Space/Dwelling Unit	45 Spaces
Retail Commercial	10,566 sq. ft.	3 Space/1,000 Sq. Ft.	32 Spaces
High Street			
Residential	19 Dwelling Units	1 Space/Dwelling Unit	19 Spaces
Retail Commercial	4,326 sq. ft.	3 Space/1,000 Sq. Ft.	13 Spaces
		Total Required Parking Spaces	**109 Spaces**

Notes:
1. City of Beacon Code Requirement parking ratios based on Section 223-41.21.F of the City Code.

As indicated in the table, the Project is currently required to have a total of 109 off-street parking spaces per the City Code. As noted above, the Project currently proposes 88 off-street parking spaces, including 41 garages spaces within the 45 Beekman Street building and 47 surface lot parking spaces, which will result in the Project being deficient by 21 parking spaces per the current City Code requirements. It should be noted that all parking spaces are anticipated to be shared spaces with no spaces designated specifically for residential or commercial uses.

The City of Beacon Zoning Code allows for the Planning Board to modify off-street parking requirements in the L District. Specifically, City Code Section 223-41.21.F.(3) indicates… *The quantity of required on-site parking in Subsection F(2) above may be modified by the Planning Board, in its discretion, based upon information submitted by the applicant or otherwise made available to the Planning Board in the public record, demonstrating one or more of the following:*

(a) That the projected operational characteristics of the proposed use and/or its proximity within walking distance of the train station and other services justify a reduction in the required amount of parking.
(b) That adequate shared parking, contractually obligated for the duration of the proposed use, is available within 500 feet of the site and in the L District.
(c) That the applicant has provided sufficient bicycle parking to reduce anticipated vehicular travel demand, as supported by a professional parking study.
(d) That there is sufficient public parking available within 800 feet of the site and in the L District to meet foreseeable parking needs of the proposed use and surrounding uses for the duration of the proposed use.
(e) That the applicant will voluntarily dedicate land for public parking on site or will acquire land by purchase or long-term lease (for the duration of the proposed use) within 800 feet of the site and in the L District and voluntarily dedicate such land to the City for public parking.
(f) That a professional parking study of the proposed use and the surrounding area demonstrates that a different amount of parking would be appropriate for the use in its particular location and/or that existing and/or proposed off-site parking is sufficient.

Item (a) above applies to the Project since it is located within approximately 2,000 ft. of the Beacon Metro-North Train Station. The previously referenced 2021 American Community Survey data for the City of Beacon indicates that approximately ten percent (10%) of Beacon residents utilize public transportation, which could be somewhat higher for the Project given its proximity to the train station. (See further discussion of train usage below.) In addition, the American Community Survey data indicates that approximately five (5%) of Beacon residents do not own a vehicle. Item (c) also applies as the Project plans to provide bicycle racks in the vicinity of both proposed buildings.

Furthermore, in support of Item (b) & (f) and in order to assess the total parking requirement for the Project based on the variation of time of use of the parking spaces for each use proposed within the Project, a shared parking analysis was conducted to determine the total anticipated parking demand on an hourly basis. This analysis accounts for variations in parking demand over the course of the day for each of the proposed uses to determine a total parking demand for the Project. Hourly parking demand distributions for a typical Weekday and Saturday as published by the Institute of Transportation Engineers (ITE) contained in the ***Parking Generation Manual, 6th Edition*** were applied to the City Code required parking requirements to conduct this shared parking analysis. ITE provides parking demand distributions on an hourly basis for Land Use 220 – Multifamily Housing (Low-Rise) and Land Use 822 – Strip Retail Plaza (<40k)). The hourly distribution data for each land use is provided in Appendix F for reference.

The resulting Shared Parking Analysis is summarized in Tables P-1 and P-2 for Weekday and Saturday conditions, respectively. As indicated in the tables, the peak parking demand for the Project when accounting for the shared use of parking between the residential and commercial uses will result in a total parking demand of 80 parking spaces on a weekday, occurring between 7PM – 8PM and 88 parking spaces on a Saturday also occurring between 1PM – 2PM. It should also be noted that the parking analysis does not take any credit for the potential of internal trips

between the residential units and commercial space, which was estimated to be as much as ten percent (10%) as noted in Section III.B above and would result in some reductions in overall parking demand.

Furthermore, the Shared Parking Analysis presented in Tables P-1 and P-2 does not take credit for the proximity of the Project to the nearby Beacon Metro North Train Station (approximately 1,900 ft./0.36-mile walking distance). As indicated previously, approximately ten percent (10%) of Beacon residents utilize public transportation for their means of transportation to work. Moreover, ITE data for Land Use 220 – Multifamily Housing (Low-Rise) indicates that parking demand ratios for multifamily residential buildings within ½ mile of commuter rail have an average parking demand approximately 10-12% less than those multifamily buildings outside the ½ proximity. In recognition of this data, a further shared parking analysis was conducted accounting for the Project's proximity to the train station utilizing a 10% credit applied to the residential portions of the Project. This analysis is summarized in Tables P-1A and P-2A for Weekday and Saturday conditions, respectively. As indicated in the tables, the peak parking demand for the Project when accounting for the shared use of parking between the residential and commercial uses and the proximity to the train station will result in a total parking demand of 76 parking spaces on a weekday, occurring between 7PM – 8PM and 84 parking spaces on a Saturday also occurring between 1PM – 2PM. Based on this shared parking analysis, it is anticipated that the actual parking demand of the site may be somewhat lower than the 88 proposed on-site parking spaces.

Based on this analysis as well as the provision of bicycle parking/storage, as permitted by City Code Section 223-41.21.F.(3), the Applicant is requesting that the Planning Board consider approval of the joint use of parking spaces for the Project and approve a modification to the overall parking requirement for the Project down to the 88 proposed parking spaces to be provided.

It should also be noted that CED has continued to monitor the City Council's current draft amendments to the City's Parking Regulations that could impact the total amount of off-street parking spaces required for a mixed-use project. The latest available revision of the City's proposed Local Law dated April 15, 2024 has been reviewed as it relates to the Project. A copy of the April 12, 2024, revision of the proposed Local Law is provided in Appendix B for reference. Under the City's proposed Local Law the Project would be permitted to have a maximum of 109 parking spaces with the appropriate number of parking spaces provided on the site to be determined by the Planning Board based on various criteria including a parking study similar to that discussed above. It is respectfully submitted that under this proposed Local Law the 88 proposed parking spaces would be considered code compliant, and it is the opinion of CED that this is an appropriate number of parking spaces to be provided for the Project.

V. Summary and Conclusion

The traffic analysis summarized herein provides a somewhat conservative analysis of future traffic conditions since no credit has been taken for the potential reduction in the Project's traffic generation resulting from with the Project's proximity to the Beacon Metro North train station. It is anticipated that a portion of the Project residents will utilize the nearby public transportation on a regular basis reducing the overall vehicle trips generated by the Project. Based on this conservative analysis summarized above, the additional Project generated traffic is not anticipated to have a significant impact on traffic conditions in the vicinity of the site, however several the following recommendations have been identified to accommodate both existing and future traffic associated with the Project and other area projects currently under development.

- Consistent with previous findings for the North Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street intersection, this intersection should be monitored after substantial completion of this Project and other area projects to assess the actual traffic volumes at that time. Signalization of this intersection would require the review and approval of the NYSDOT.
- Traffic signal phasing and timing modifications should be considered for the intersection of North Avenue (NYS Route 9D) at Beekman Street/Church Street to improve the overall operation of the intersection and specifically the southbound North Avenue and eastbound Beekman Street approaches. In addition, it is proposed to move the existing signalized pedestrian crossing of North Avenue from the north side of the intersection to the south side of intersection such that crossing pedestrians do not conflict with the traffic flows to and from Beekman Street at this intersection. These will require review and approval by NYSDOT and will need to be implemented under an NYSDOT Highway Work Permit.
- Traffic signal timing modifications have also been identified for the intersection of North Avenue (NYS Route 9D) at Main Street/Municipal Plaza. These traffic signal timing modifications for the Main Street/Municipal Plaza intersection have been identified to maintain coordination of the traffic signal with the North Avenue (NYS Route 9D) at Beekman Street/Church Street.
- To ensure vehicles can freely enter and exit the Tompkins Avenue driveway location, "Do Not Block Driveway" signage and pavement markings should be considered to be installed along eastbound Tompkins Avenue at the driveway, subject to the approval of the City.

With the above identified mitigation measures, it is the opinion of Colliers Engineering & Design that the Project will not have any potentially significant adverse environmental impacts on traffic operating conditions in the vicinity of the site and that the proposed mitigation measures will help to address existing deficiencies in the area.

In addition, the parking analysis indicates that the Project will provide sufficient parking to accommodate the residential and commercial uses on-site based on the summarized shared parking analysis, the proximity to the train station and the provision of bicycle parking on the site. Based on this analysis as permitted by City Code Section 223-41.21.F.(3), the Applicant is requesting that the Planning Board consider approval of the joint use of parking spaces for the Project and approve a modification to the overall parking requirement for the Project down to the 88 proposed parking spaces to be provided.

Lastly, the Project proposes landscaping and streetscape improvements to be completed within the NYSDOT Right-of-Way along the Project's North Avenue (NYS Route 9D) frontage. These improvements will require review and approval of the NYSDOT under a Use & Occupancy Permit and a Highway Work Permit for the installation of the improvements.

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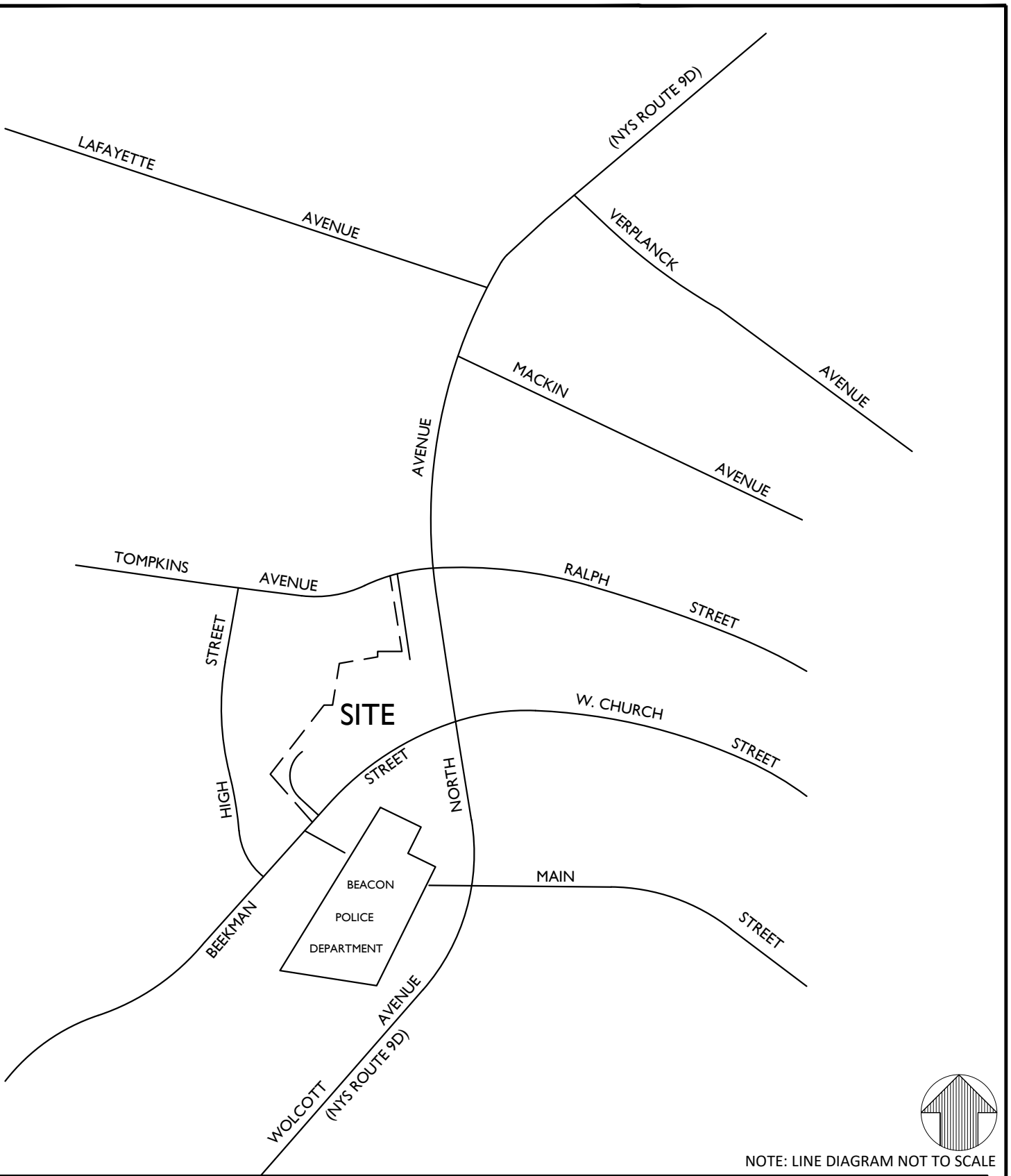
Traffic & Parking Study

Appendix A | Traffic Figures



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SITE LOCATION MAP

SHEET NUMBER: 1

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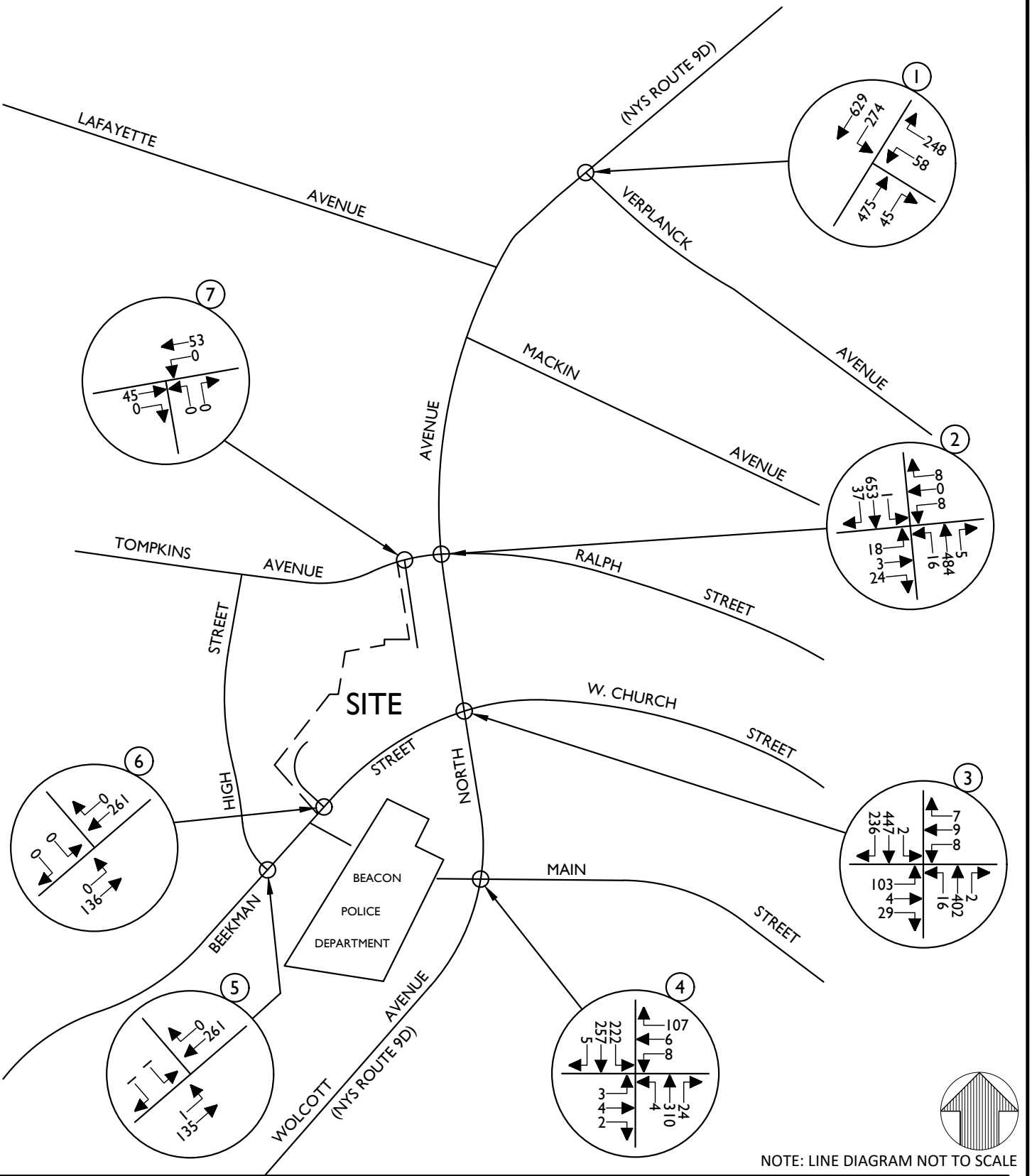

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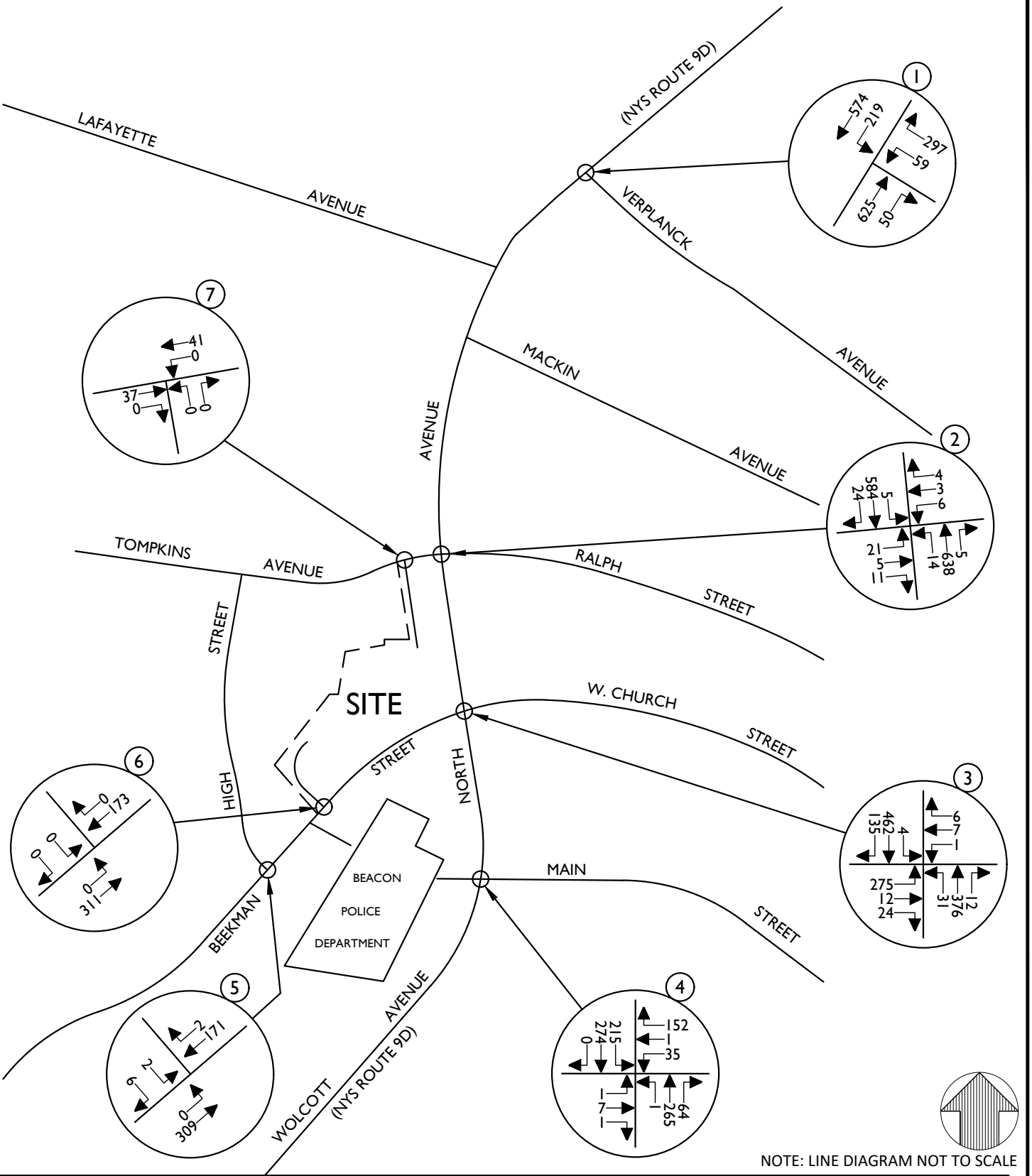

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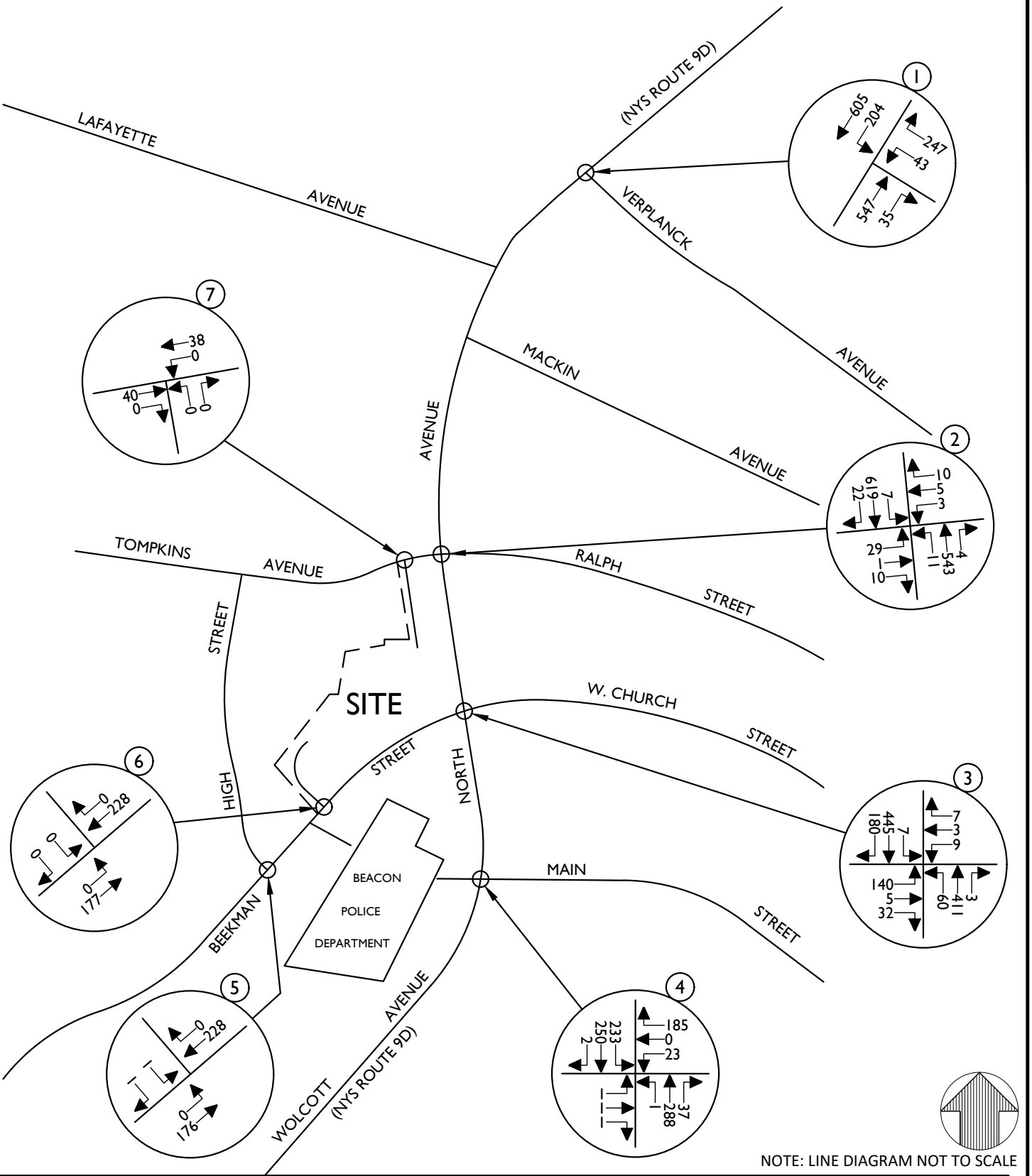

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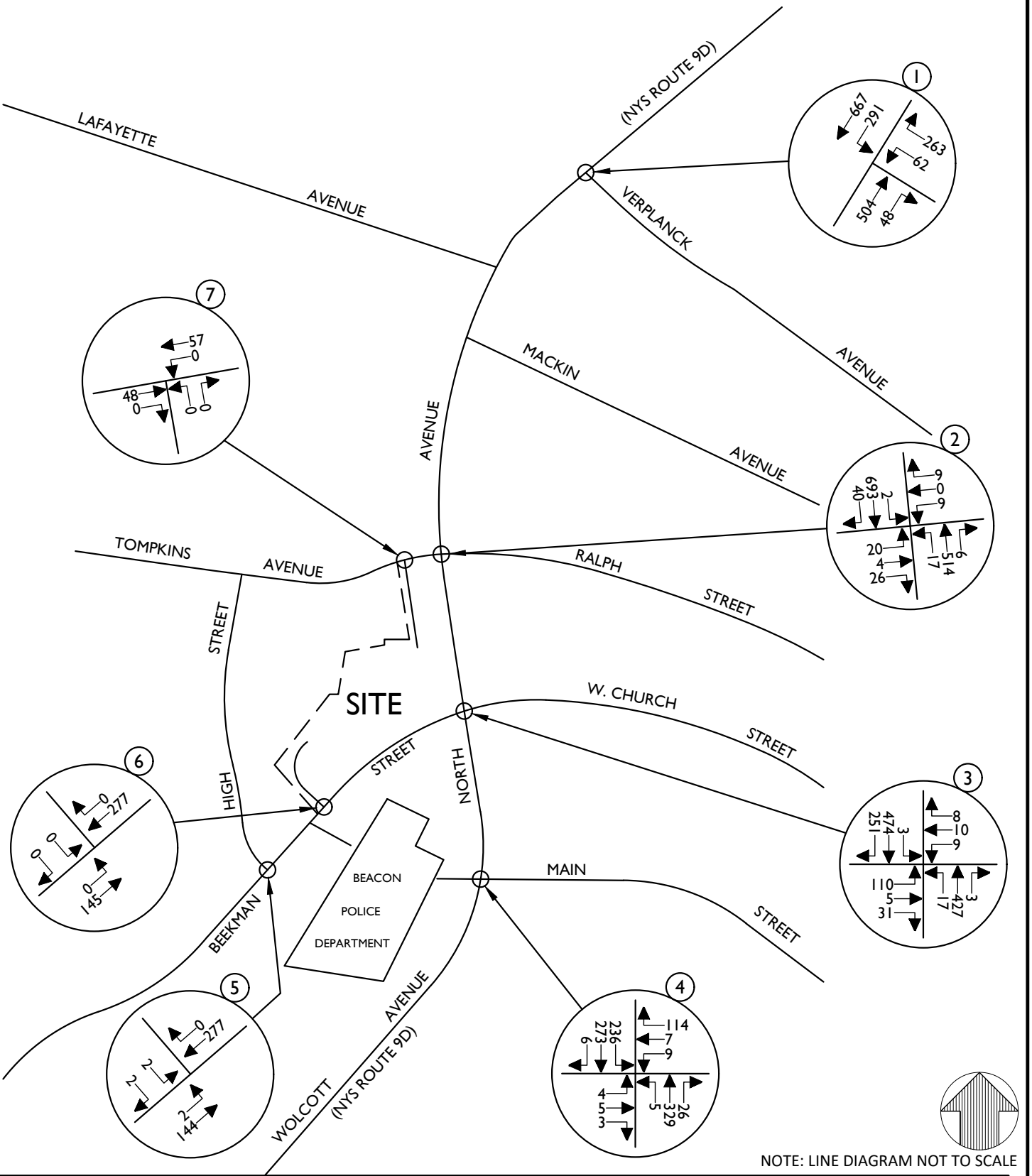

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2026 PROJECTED TRAFFIC VOLUMES
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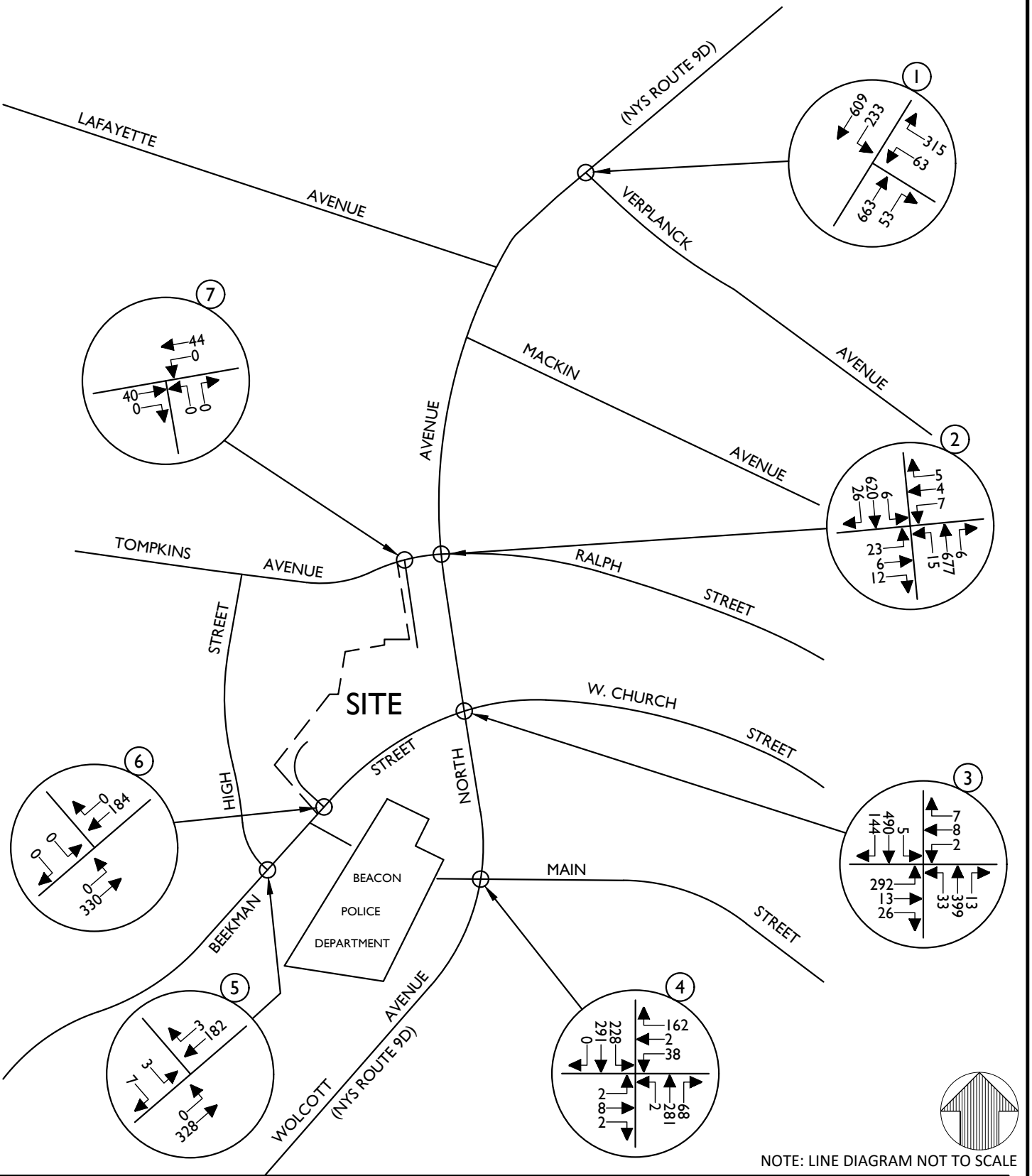

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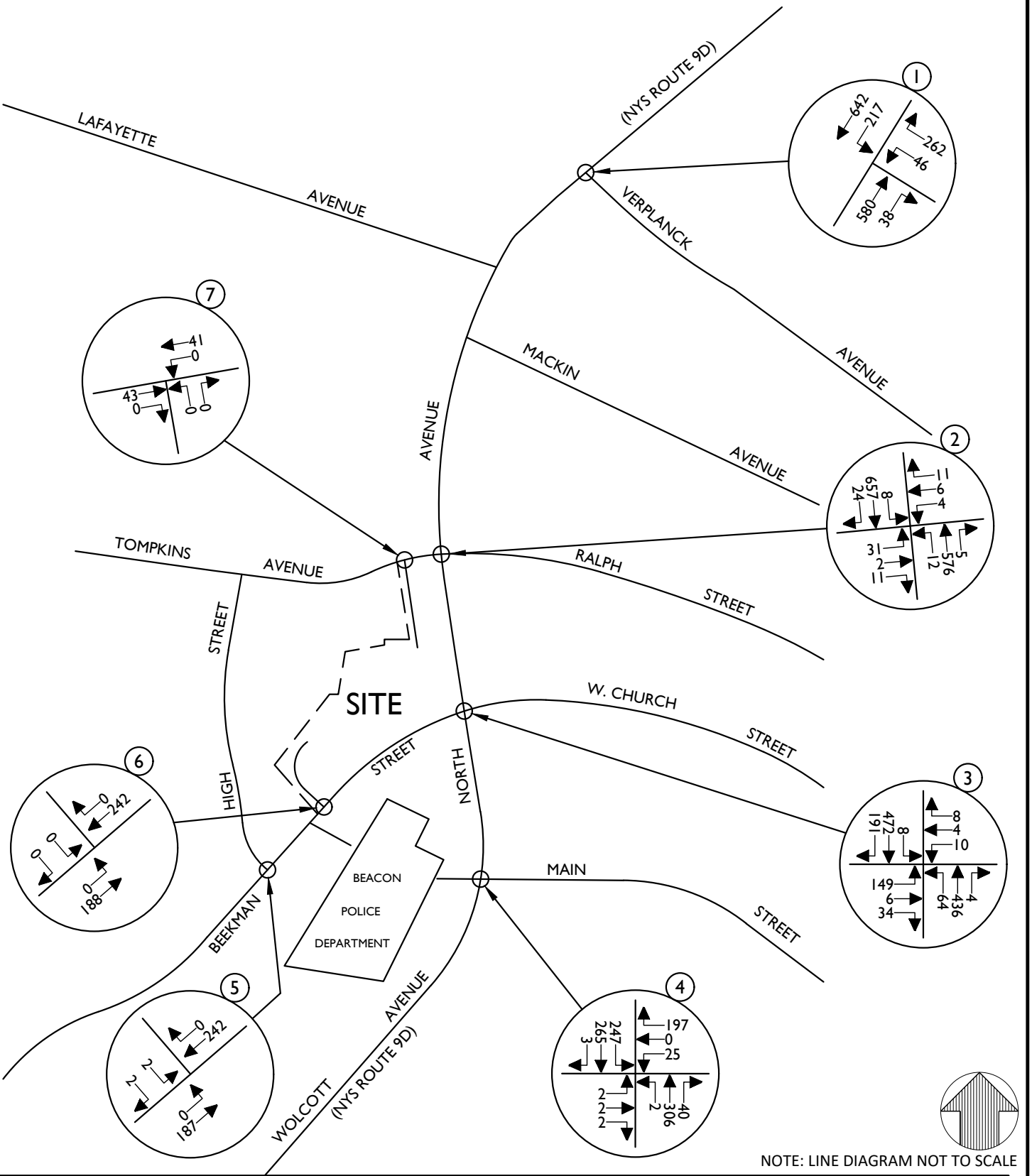

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2026 PROJECTED TRAFFIC VOLUMES
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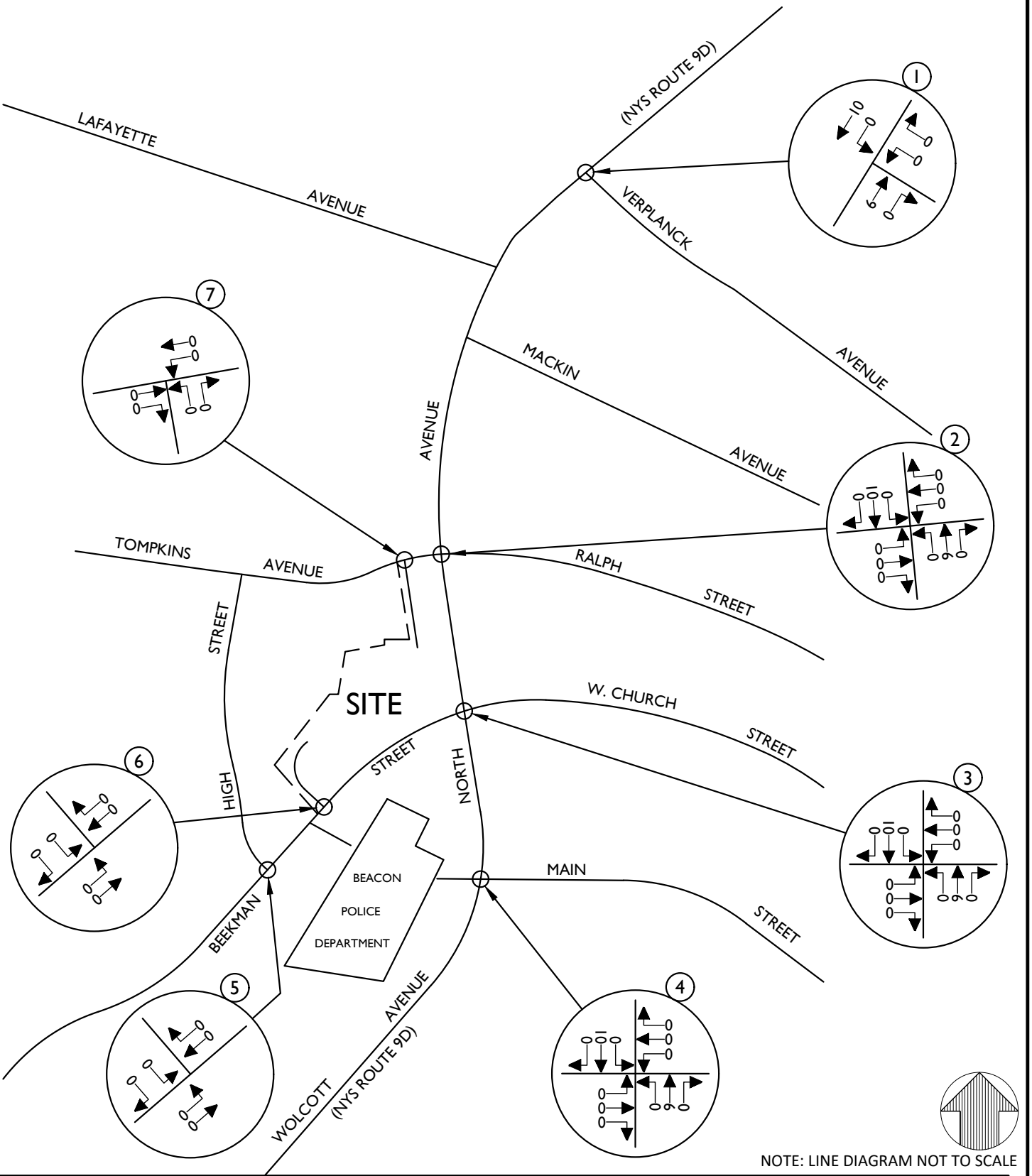

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MIRBEAU BEACON
OTHER DEVELOPMENT
WEEKDAY PEAK AM HOUR

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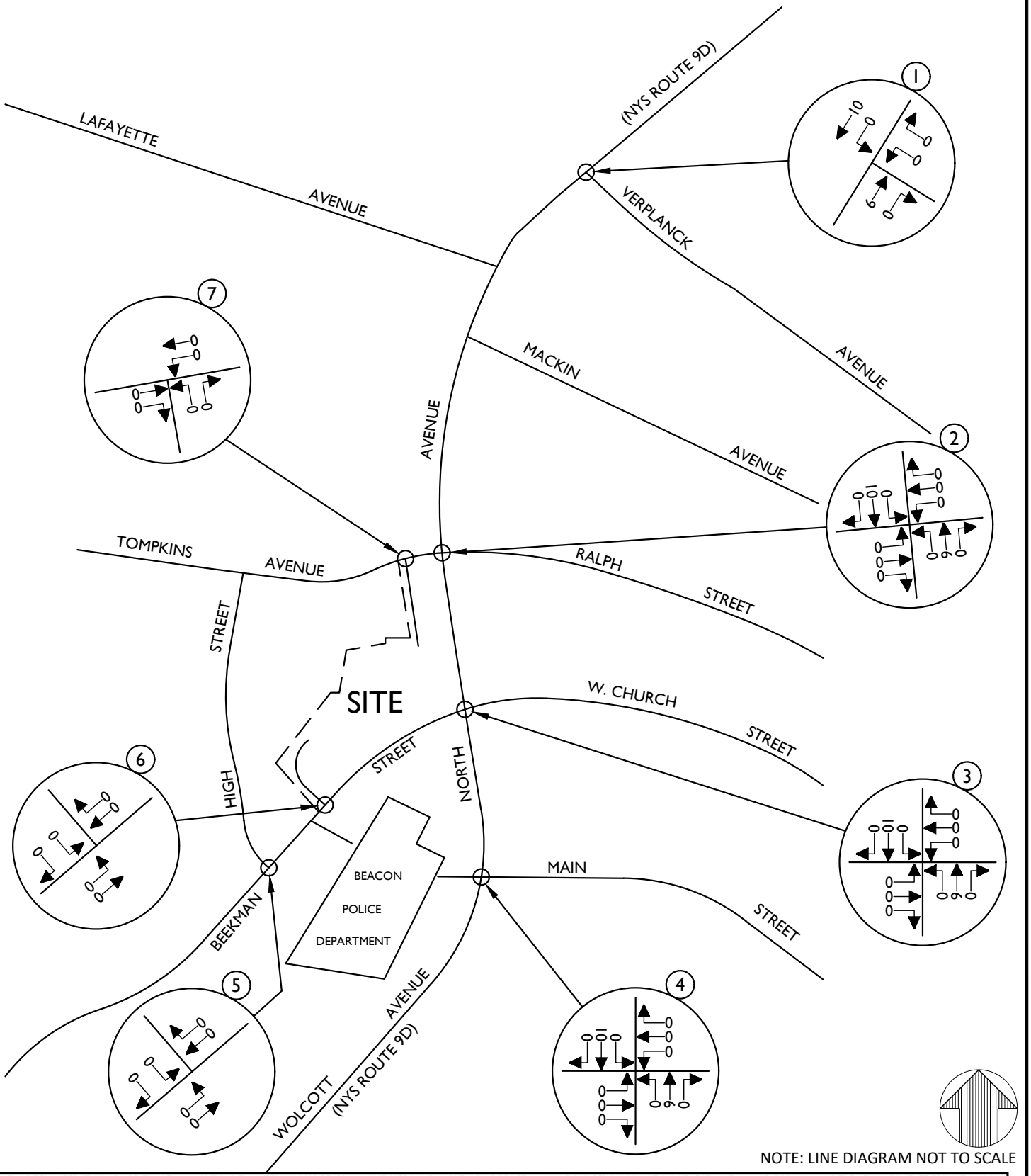

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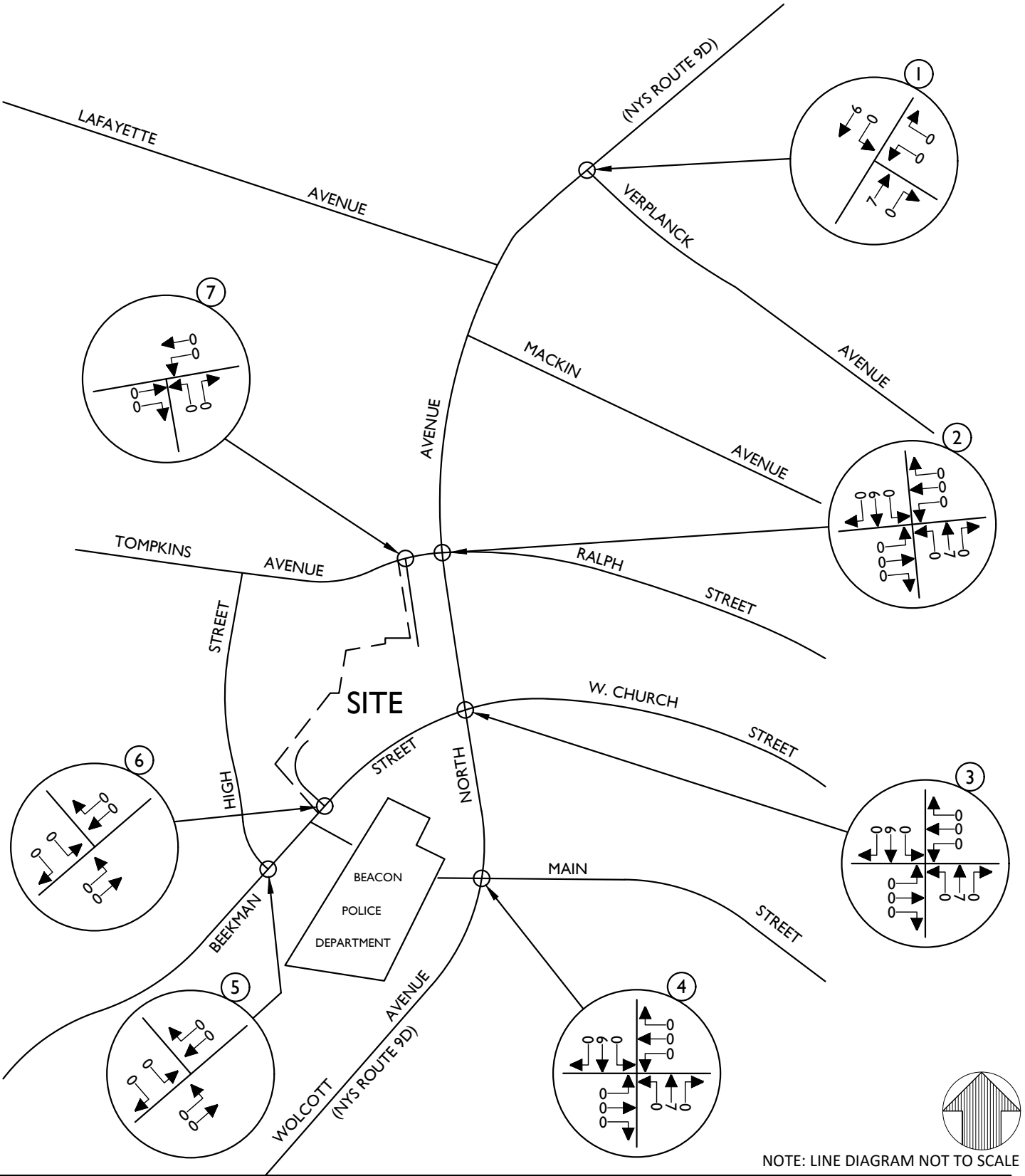
PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
MIRBEAU BEACON
OTHER DEVELOPMENT
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 9

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\9 By: RHILARIO



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PROJECT NUMBER:	DRAWING NAME:
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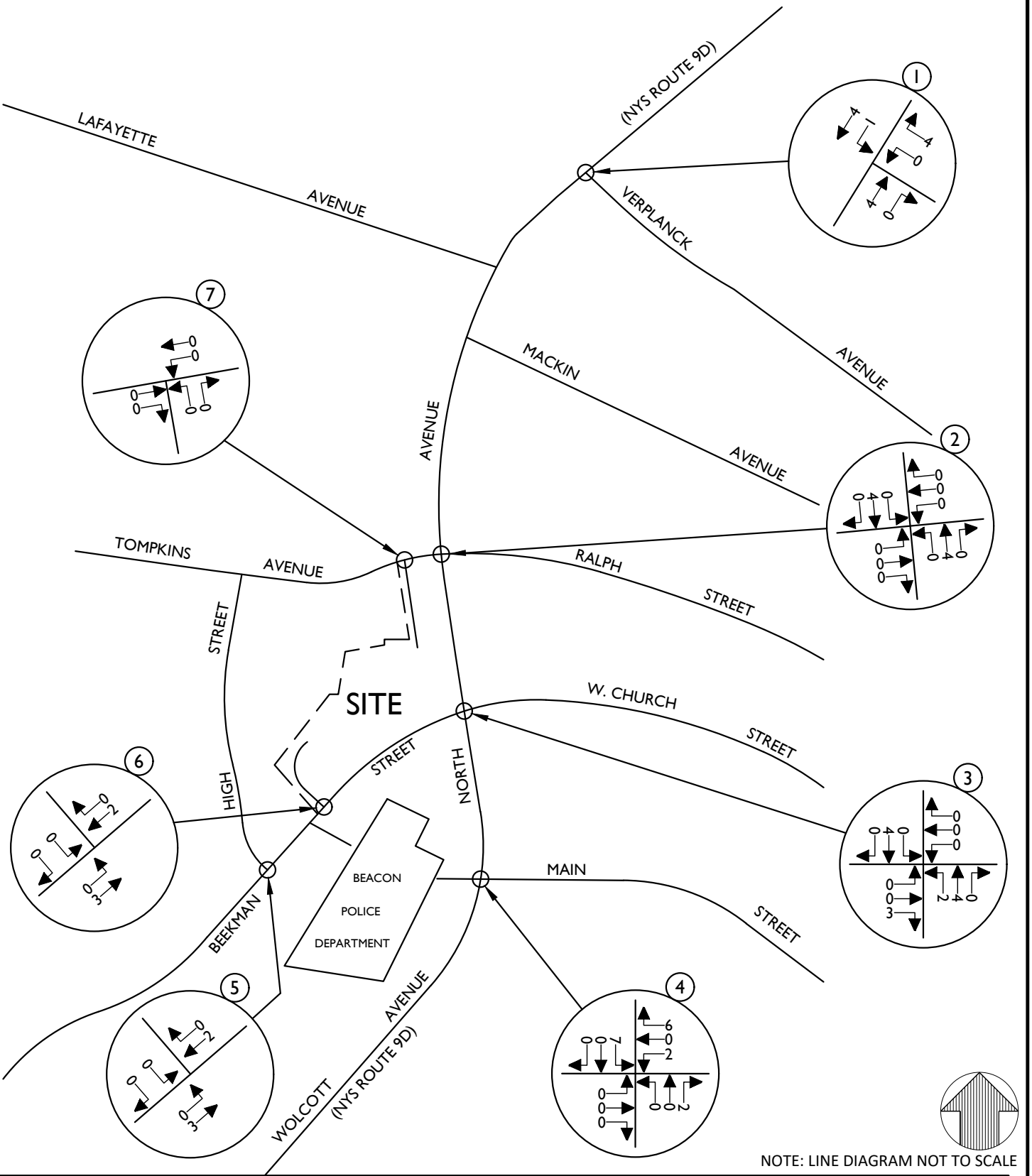
SHEET TITLE: FIELD BOOK: XX PAGE:XX
MIRBEAU BEACON
OTHER DEVELOPMENT
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 10

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\10 By: RHILARIO



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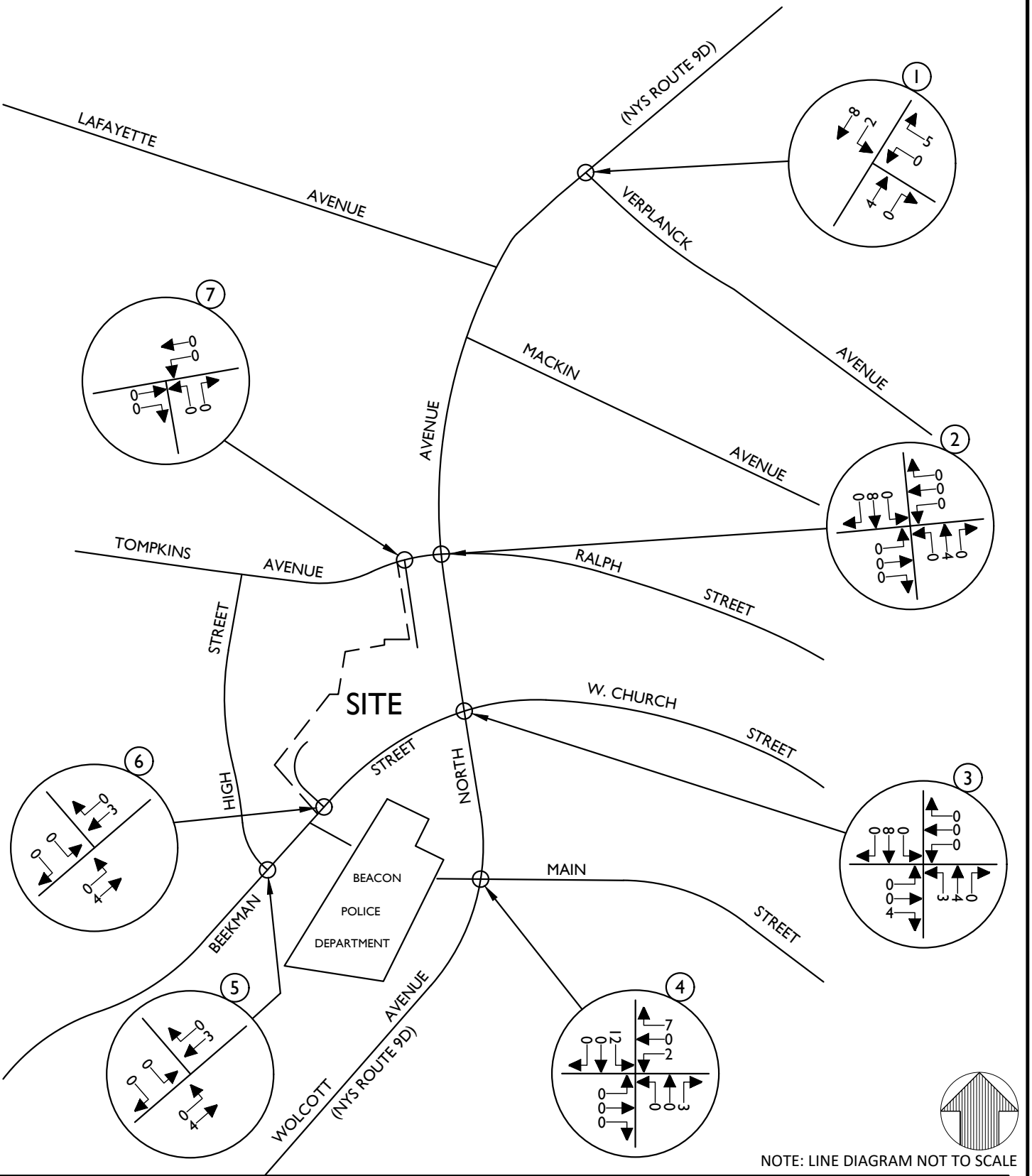
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
364 MAIN STREET
OTHER DEVELOPMENT
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 11

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\11 By: RHILARIO



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PROJECT NUMBER:	DRAWING NAME:
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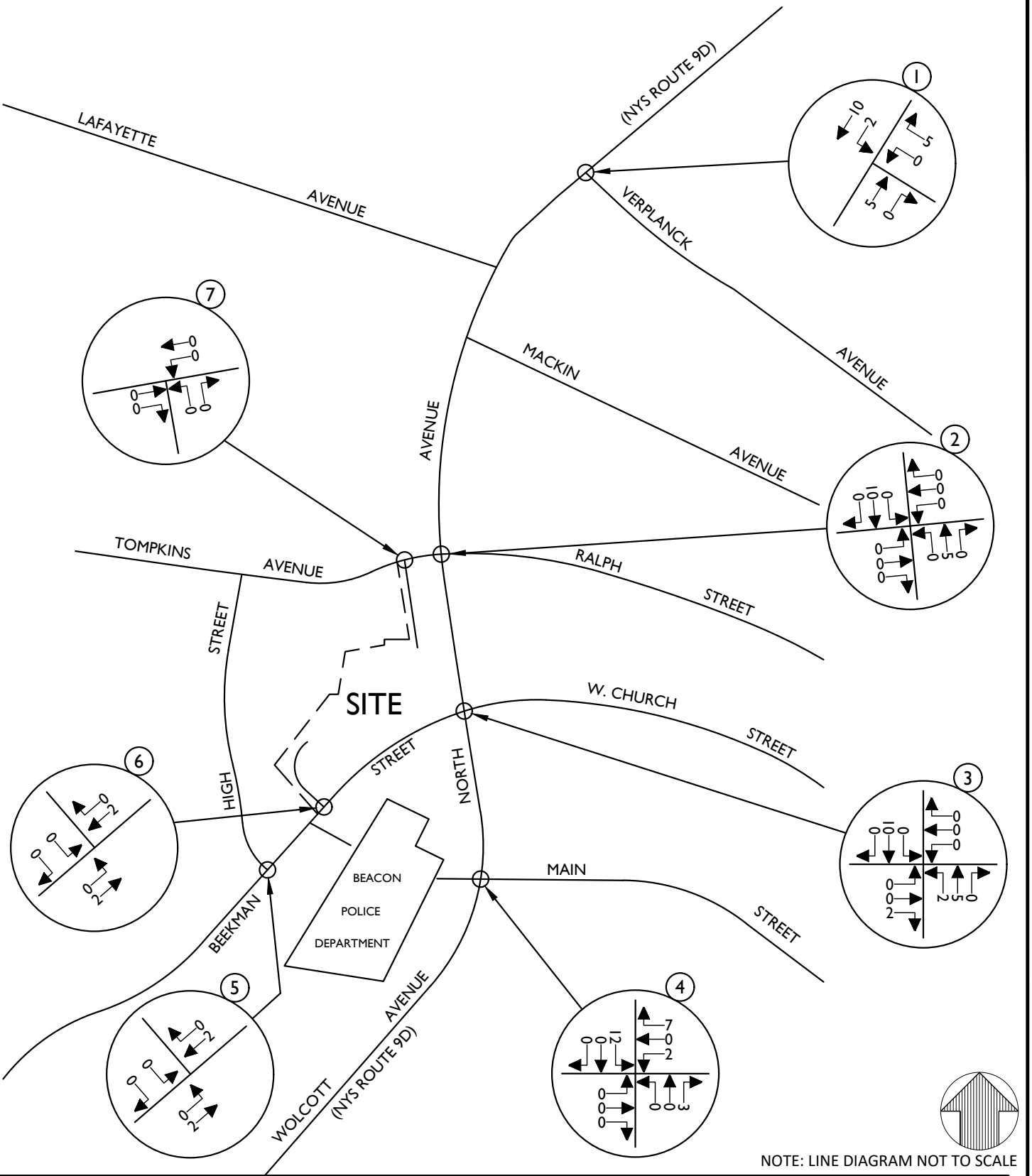
SHEET TITLE: FIELD BOOK: XX PAGE:XX
364 MAIN STREET
OTHER DEVELOPMENT
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 12

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\12 By: RHILARIO



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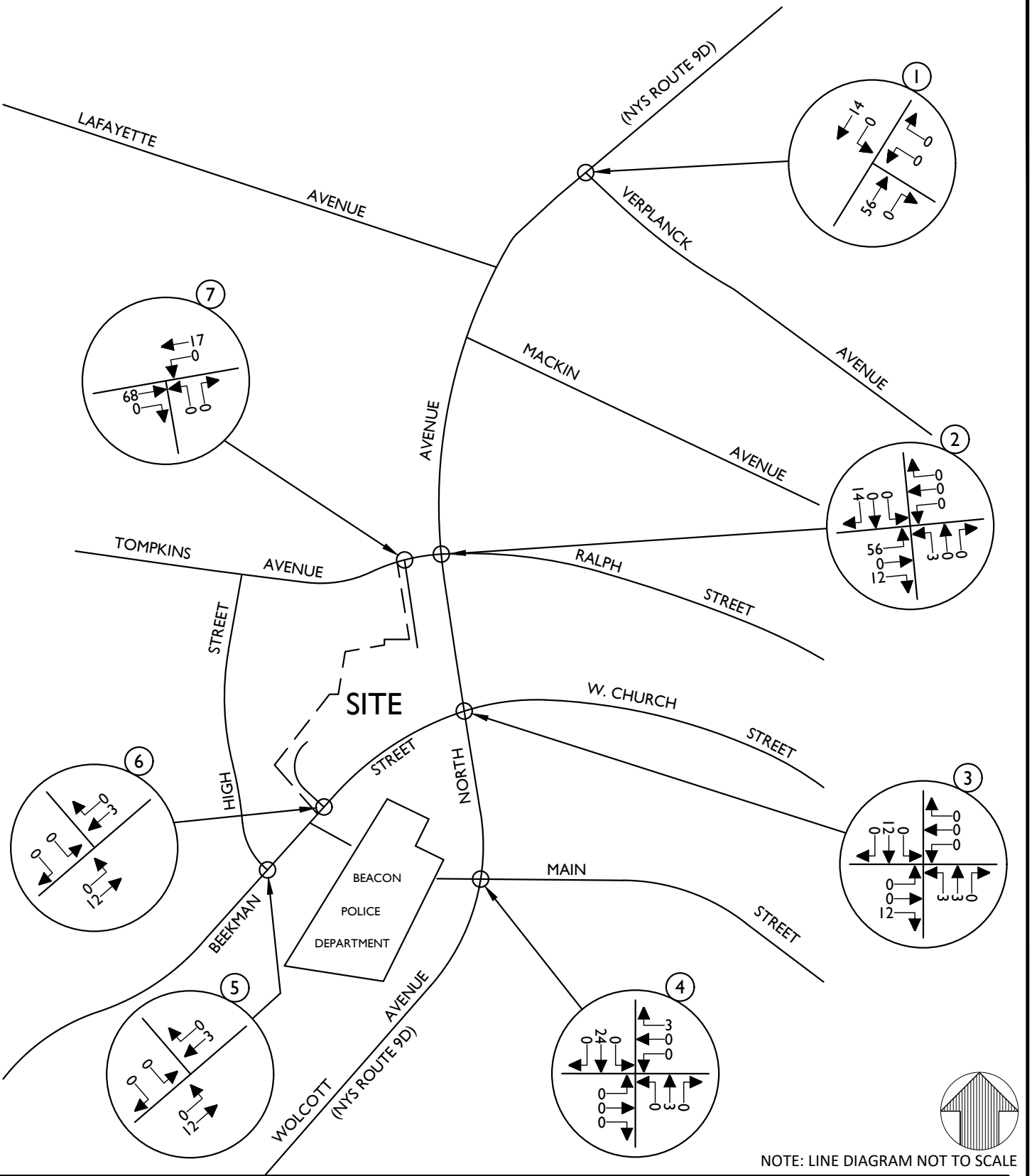
PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
364 MAIN STREET
OTHER DEVELOPMENT
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 13

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\13 By: RHILARIO



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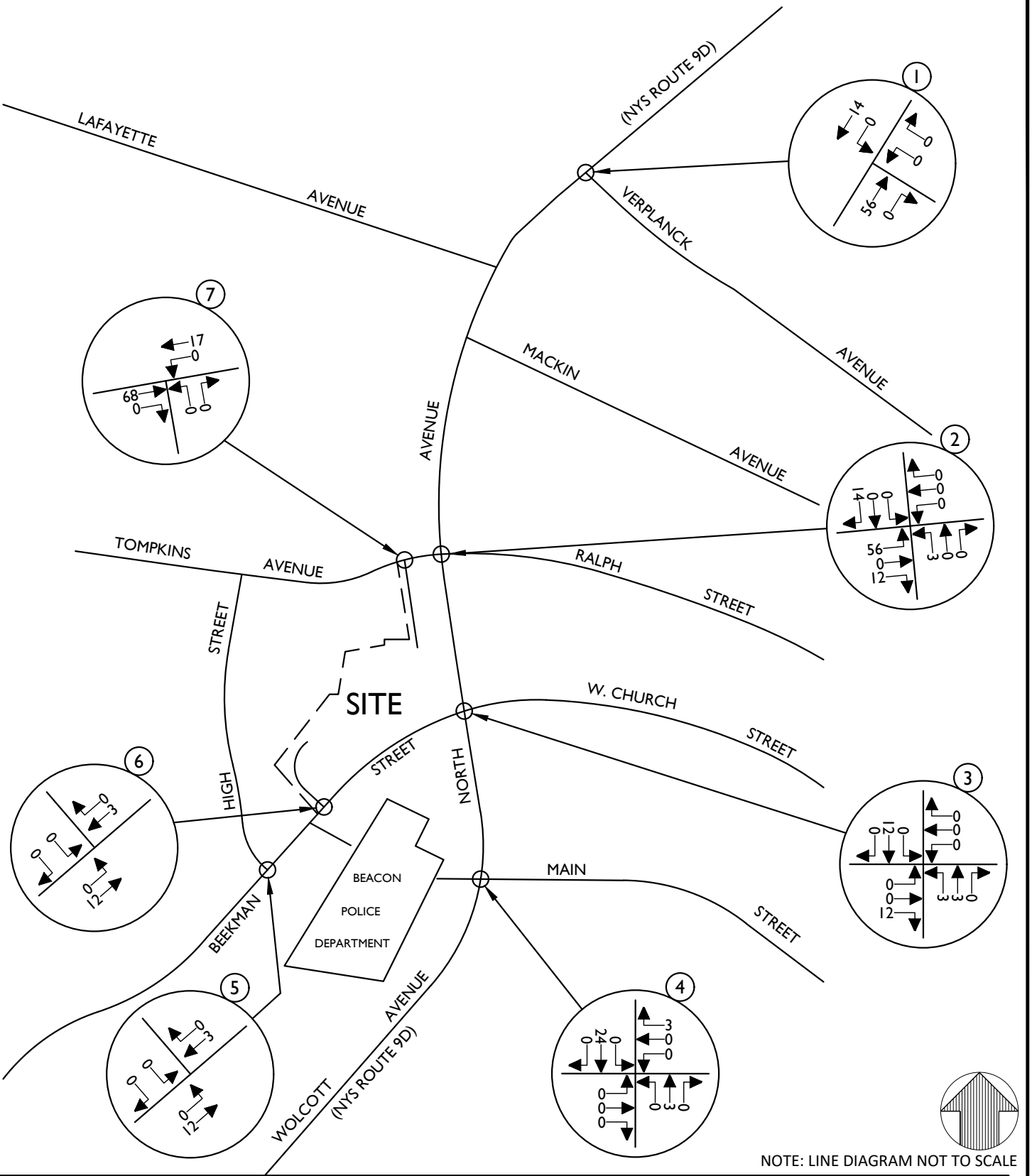
PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
EDGEWATER
OTHER DEVELOPMENT
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 14

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\14 By: RHILARIO



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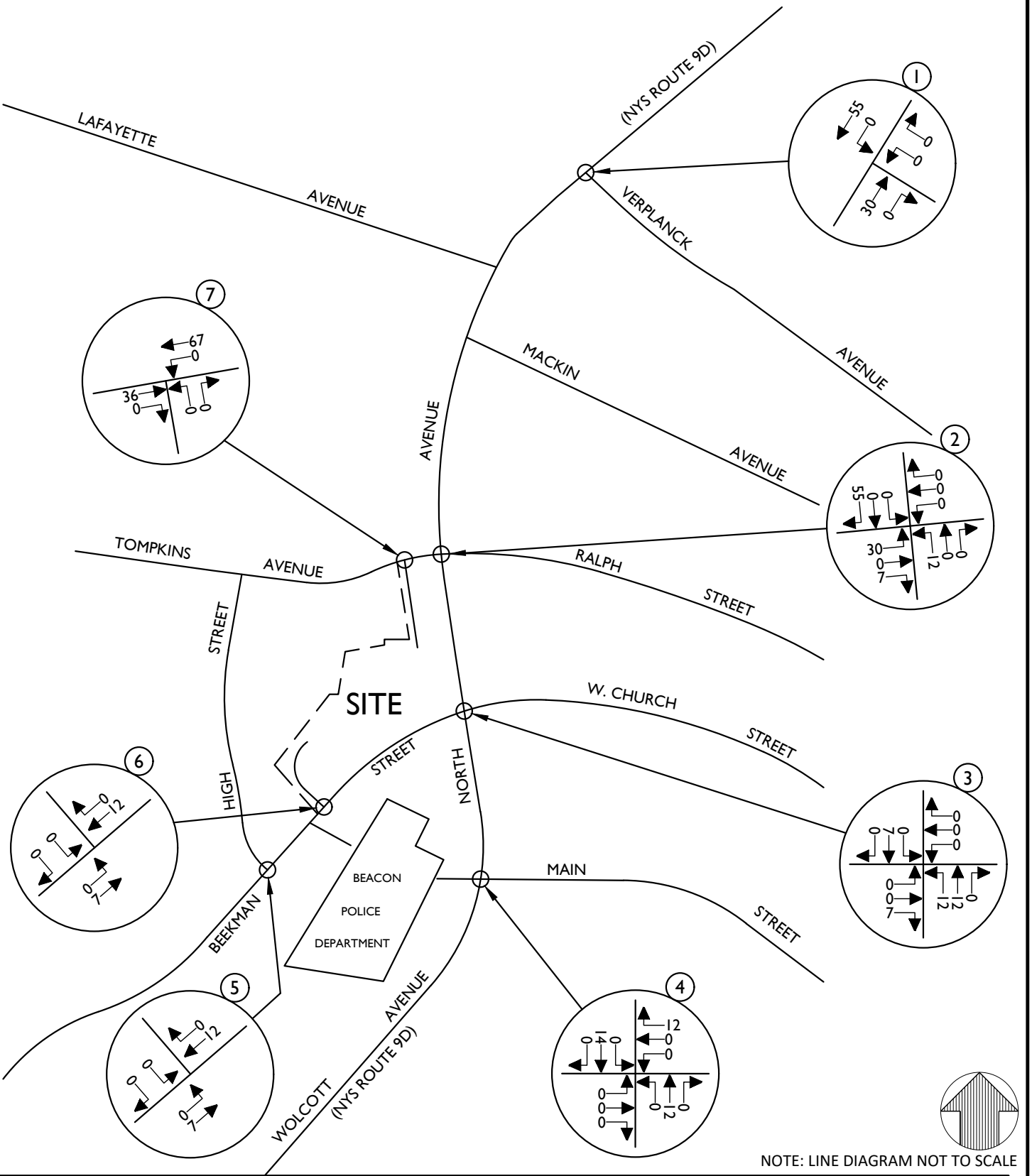
PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
EDGEWATER
OTHER DEVELOPMENT
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 15

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\15 By: RHILARIO



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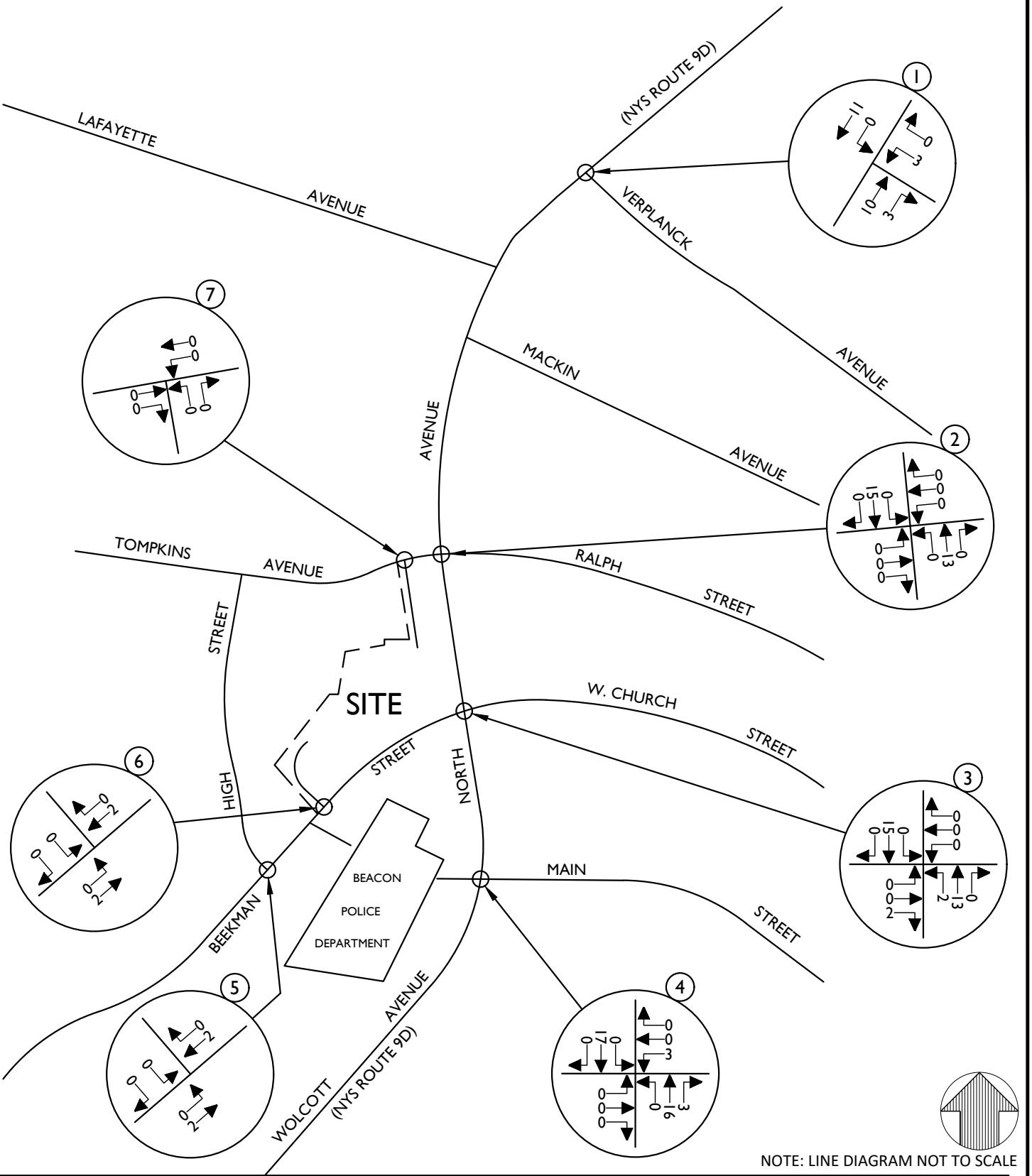
PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
EDGEWATER
OTHER DEVELOPMENT
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 16

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\16 By: RHILARIO



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PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
PROPHECY THEATER
OTHER DEVELOPMENT
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 17

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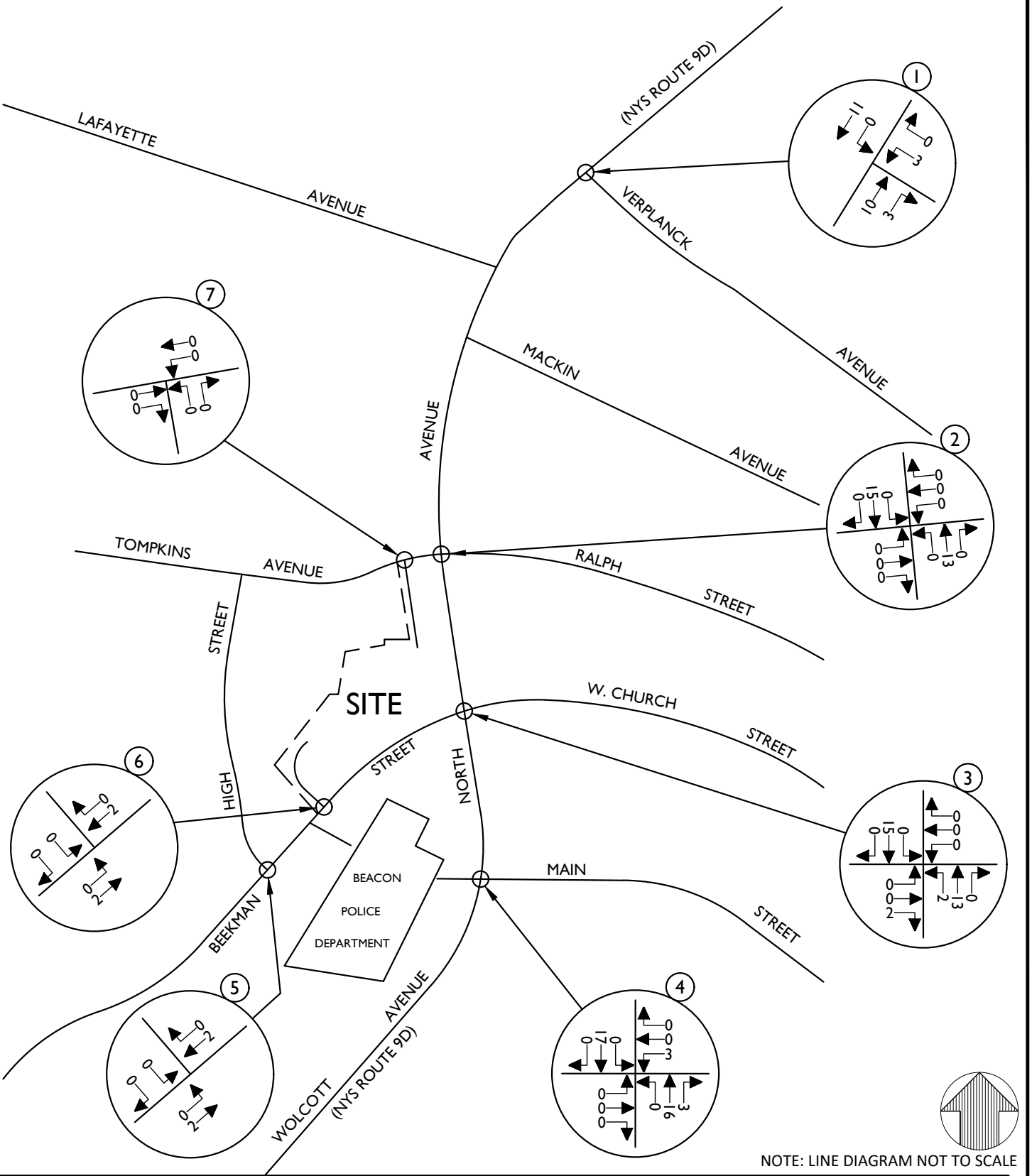

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PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
PROPHECY THEATER
OTHER DEVELOPMENT
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 18

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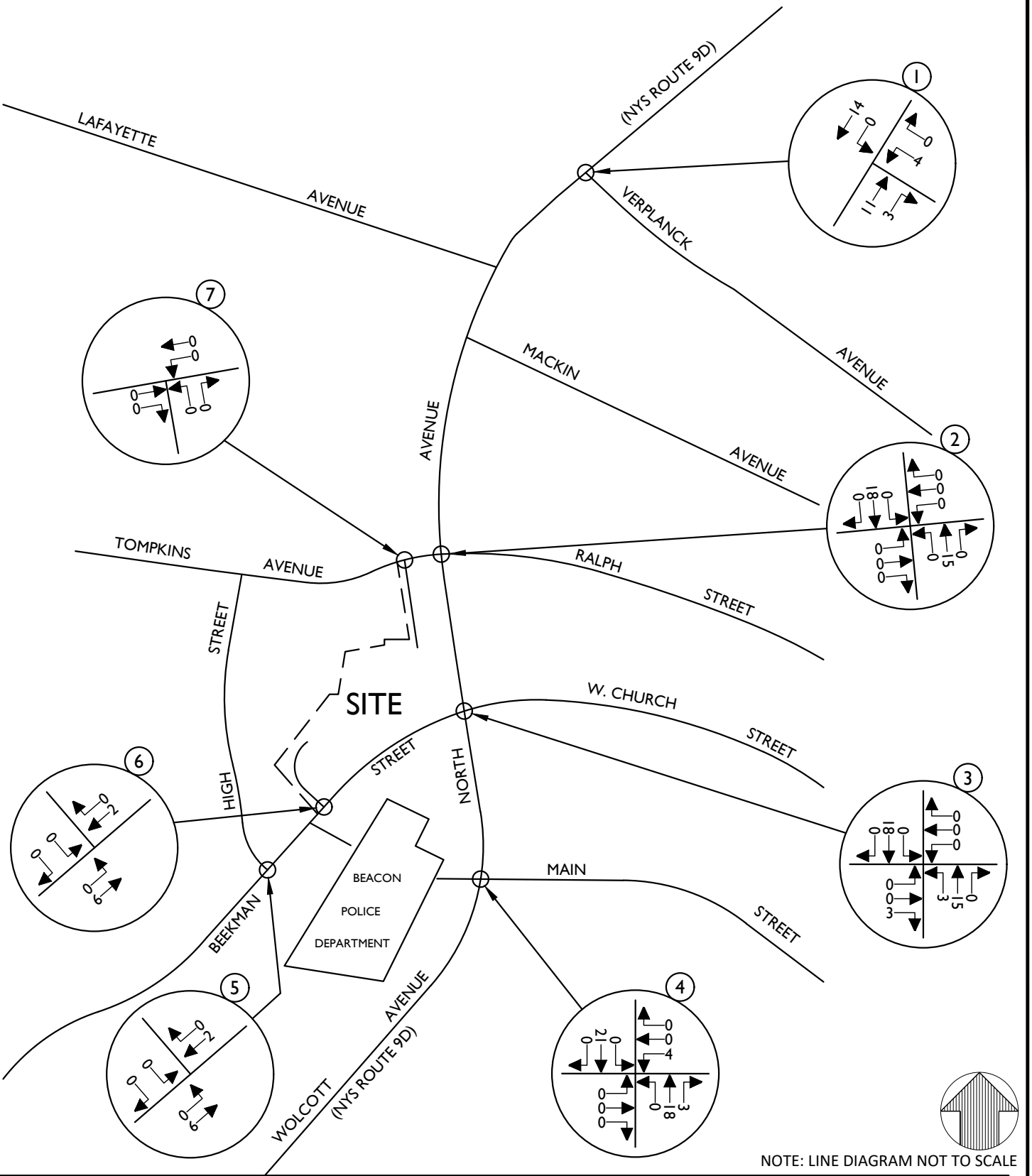

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PROJECT NUMBER:	DRAWING NAME:
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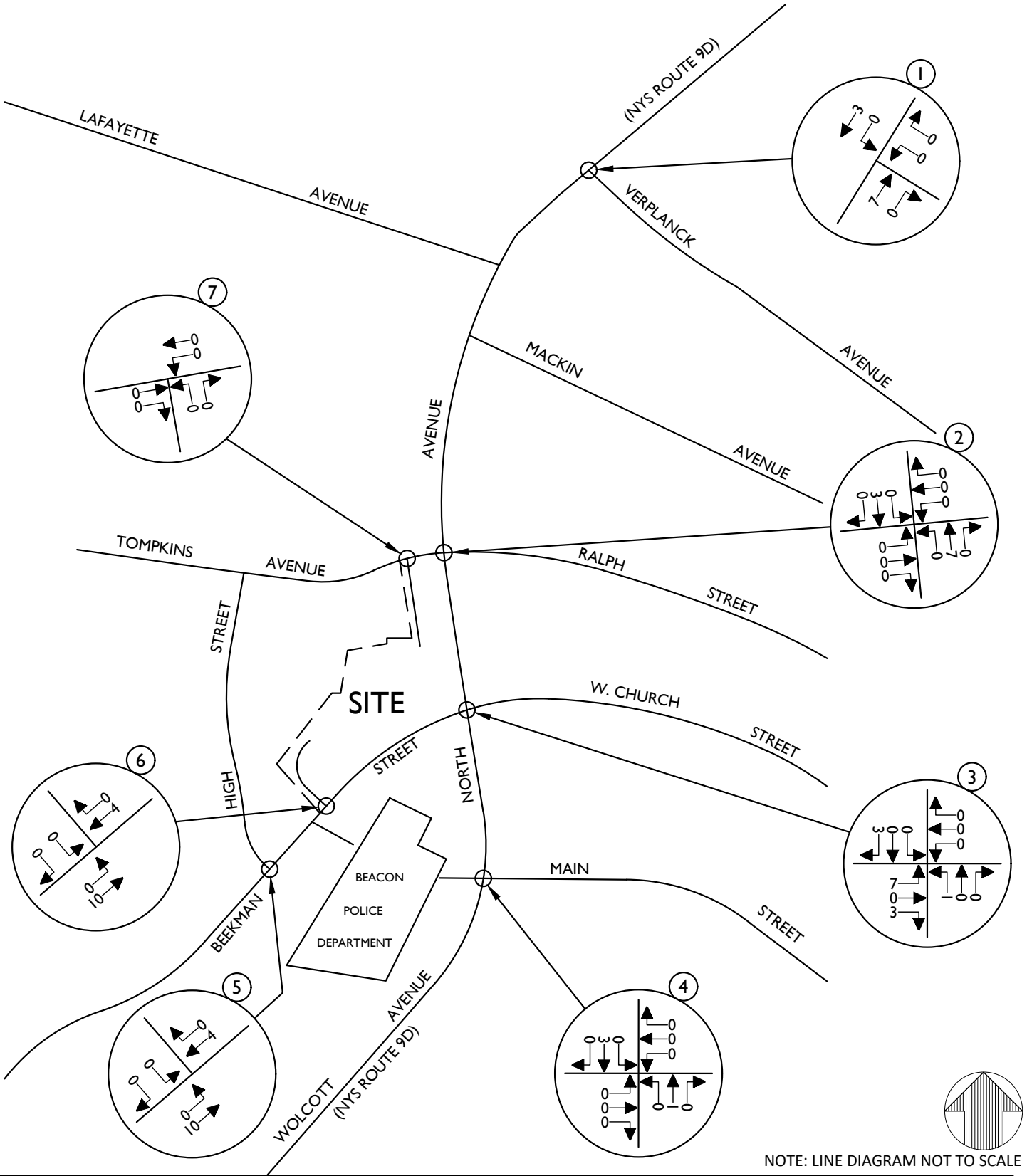
SHEET TITLE: FIELD BOOK: XX PAGE:XX
PROPHECY THEATER
OTHER DEVELOPMENT
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 19

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\19 By: RHILARIO



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PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE: XX
BEACON COMMONS
OTHER DEVELOPMENT
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 20

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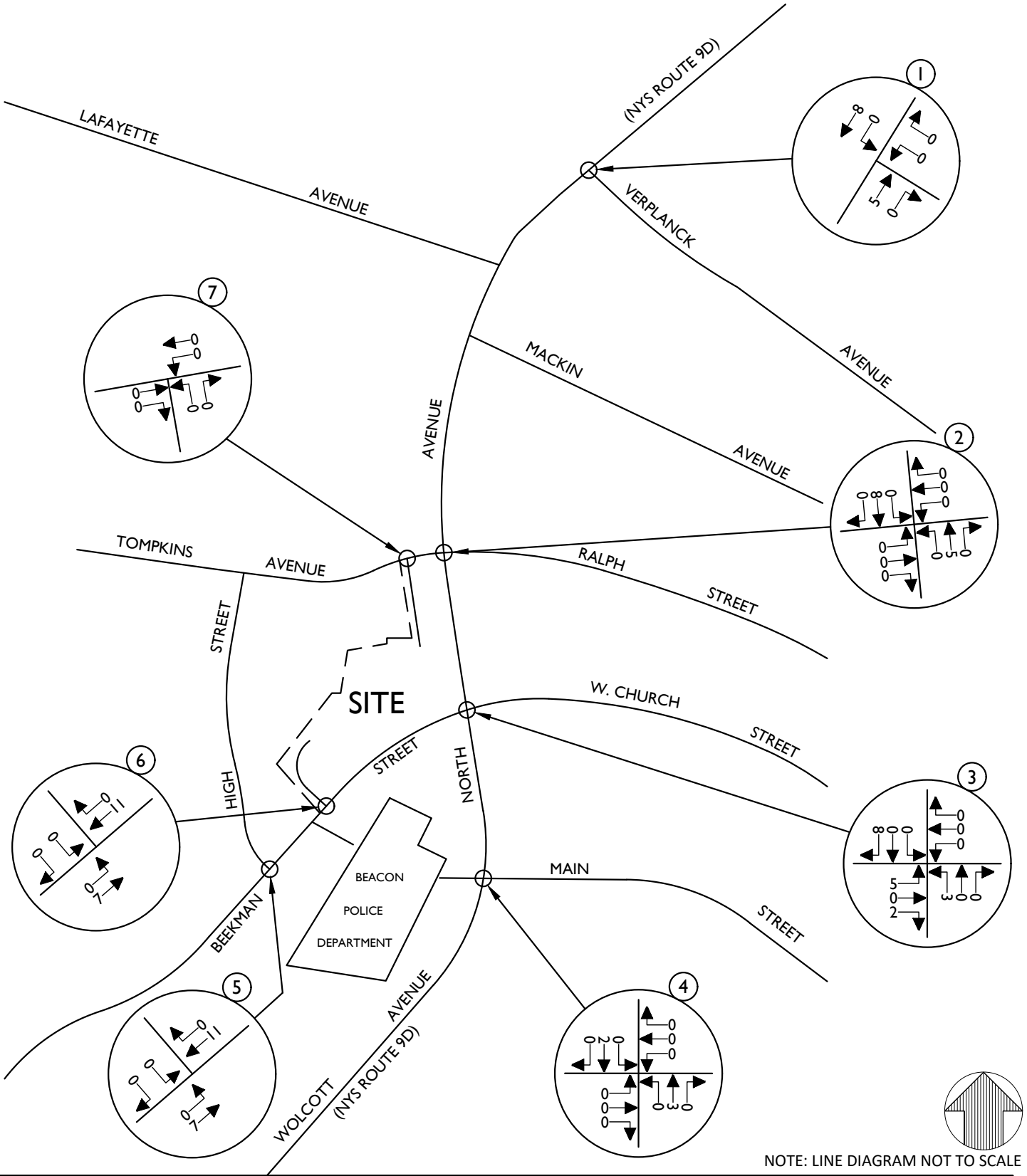

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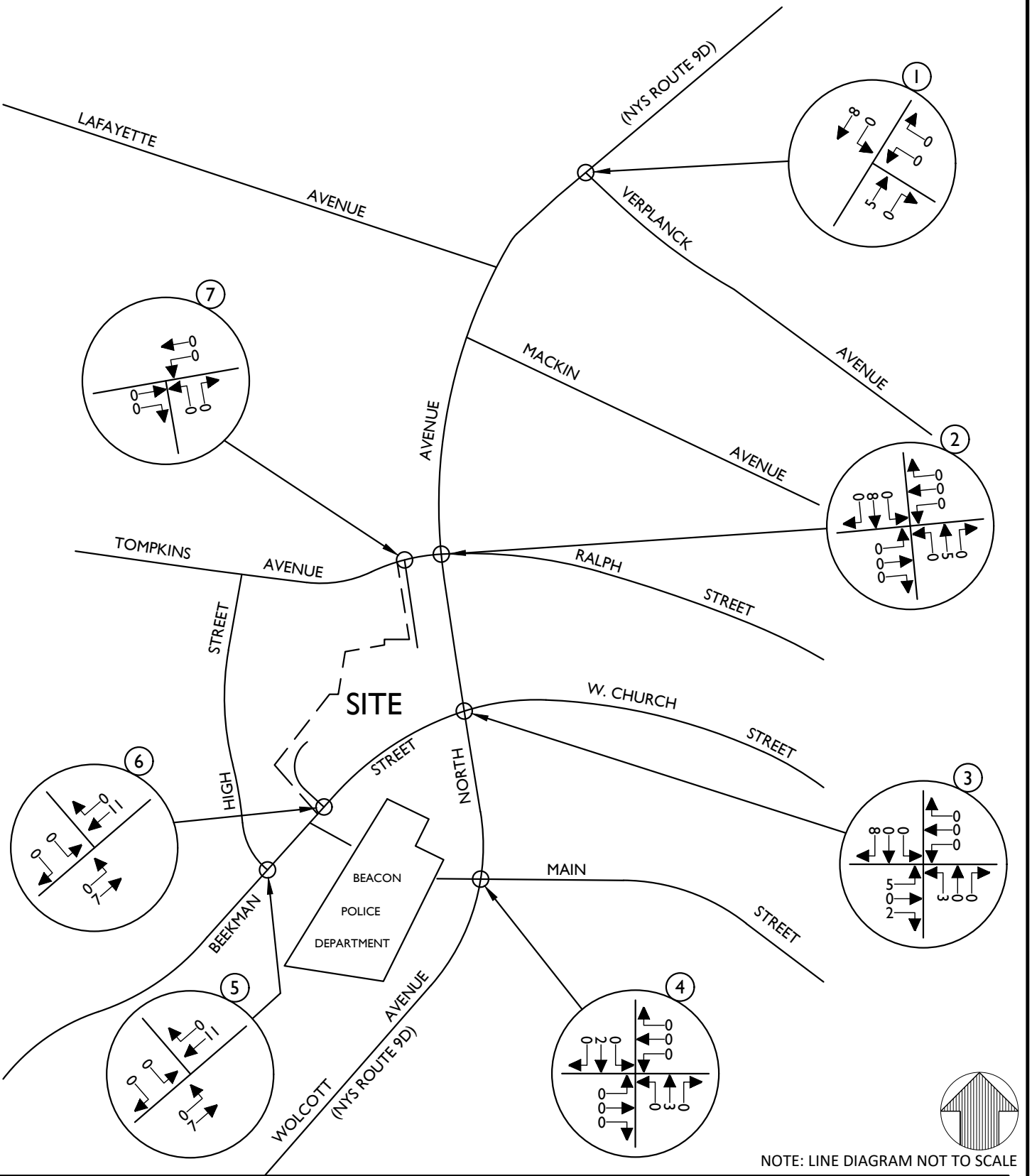
PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE: XX
BEACON COMMONS
OTHER DEVELOPMENT
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 21

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\21 By: RHILARIO



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23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE: XX
BEACON COMMONS
OTHER DEVELOPMENT
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 22

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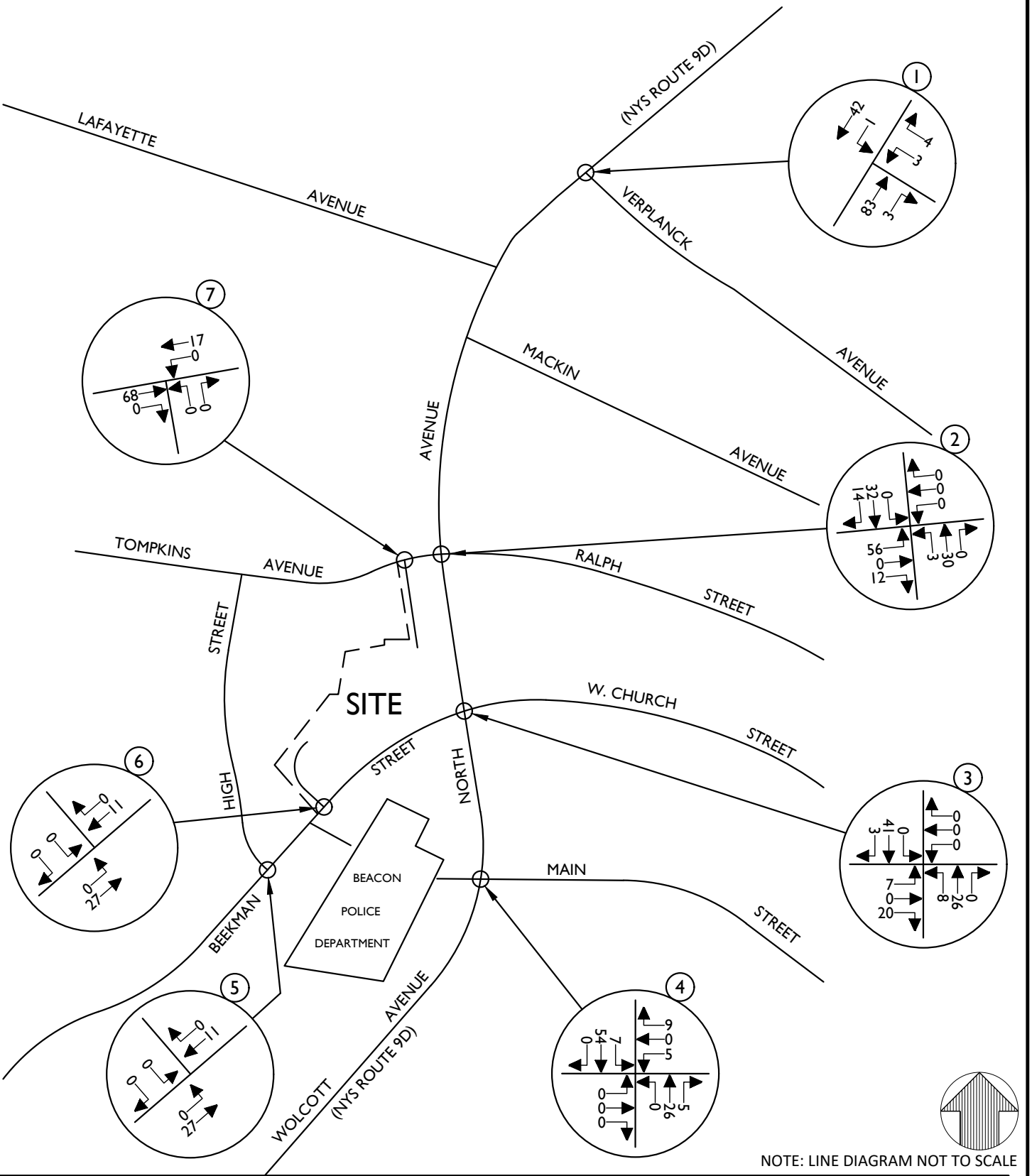

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PROJECT NUMBER:	DRAWING NAME:
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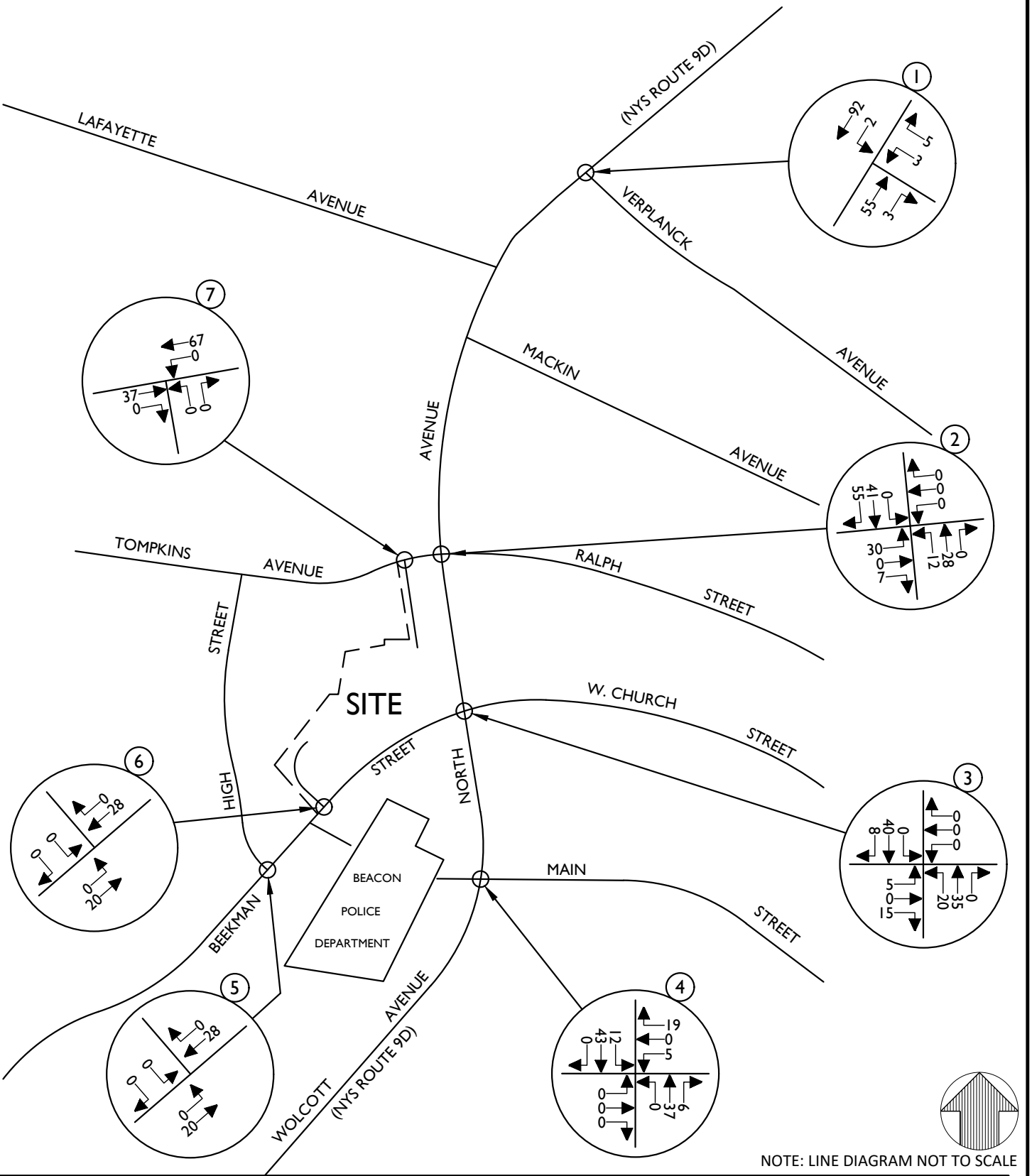
SHEET TITLE: FIELD BOOK: XX PAGE: XX
TOTAL OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 23

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\23 By: RHILARIO



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PROJECT NUMBER:	DRAWING NAME:
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SHEET TITLE: FIELD BOOK: XX PAGE: XX
TOTAL OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 24

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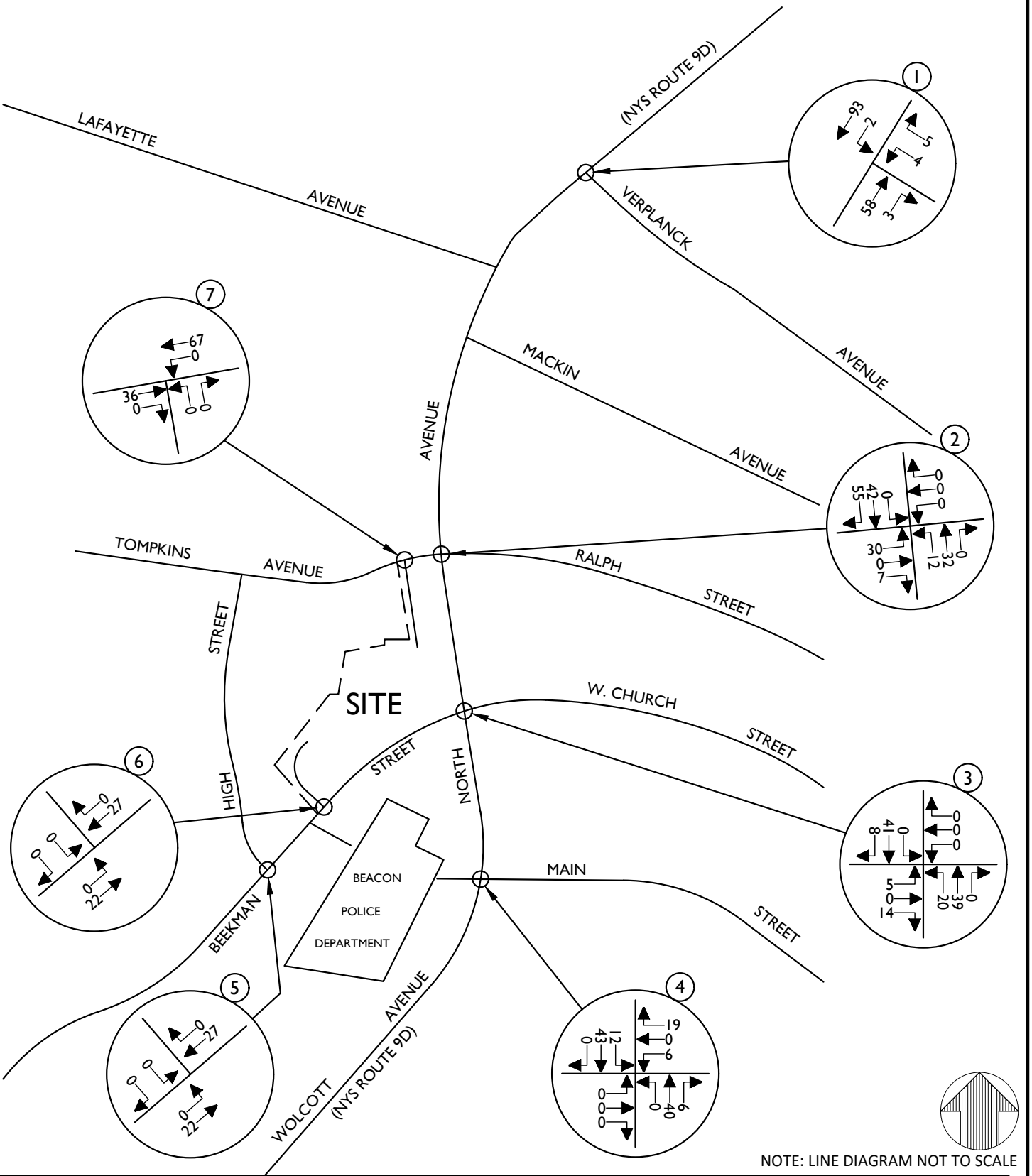

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SHEET TITLE: FIELD BOOK: XX PAGE: XX
TOTAL OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 25

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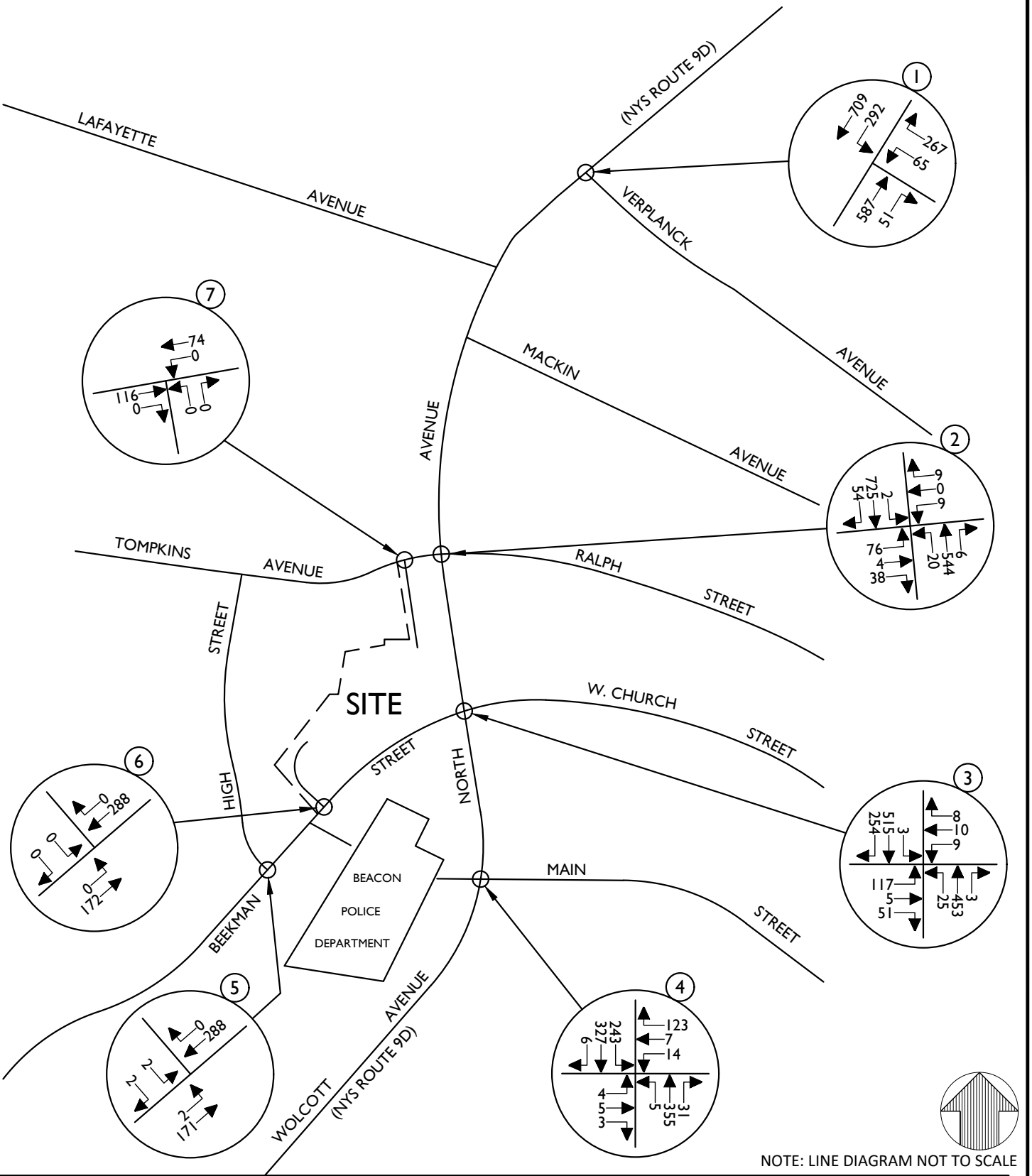

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PROJECT NUMBER:	DRAWING NAME:
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SHEET TITLE: FIELD BOOK: XX PAGE:XX

2026 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 26

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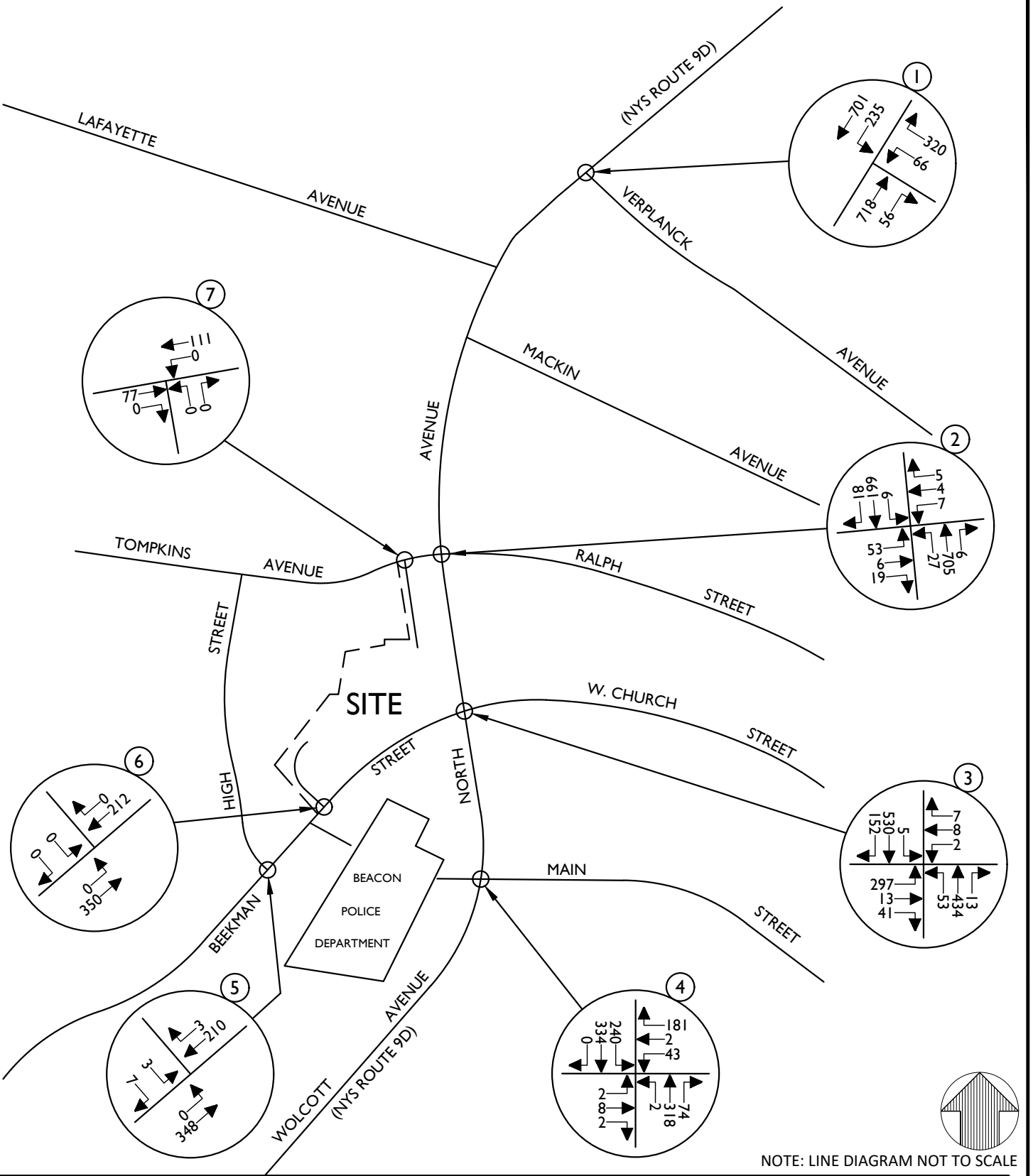

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2026 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 27

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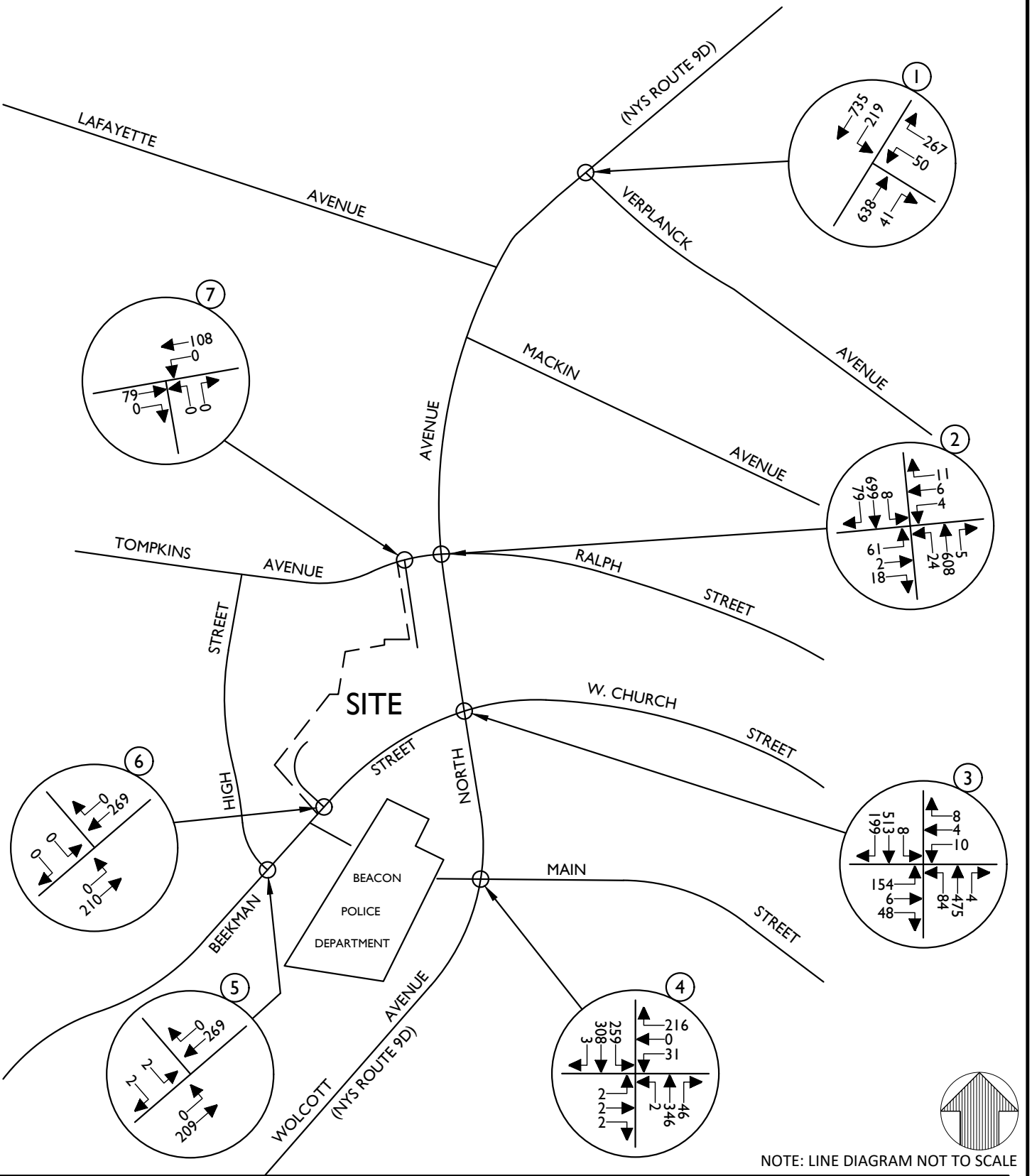

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PROJECT NUMBER:	DRAWING NAME:
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SHEET TITLE: FIELD BOOK: XX PAGE:XX

2026 NO-BUILD TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 28

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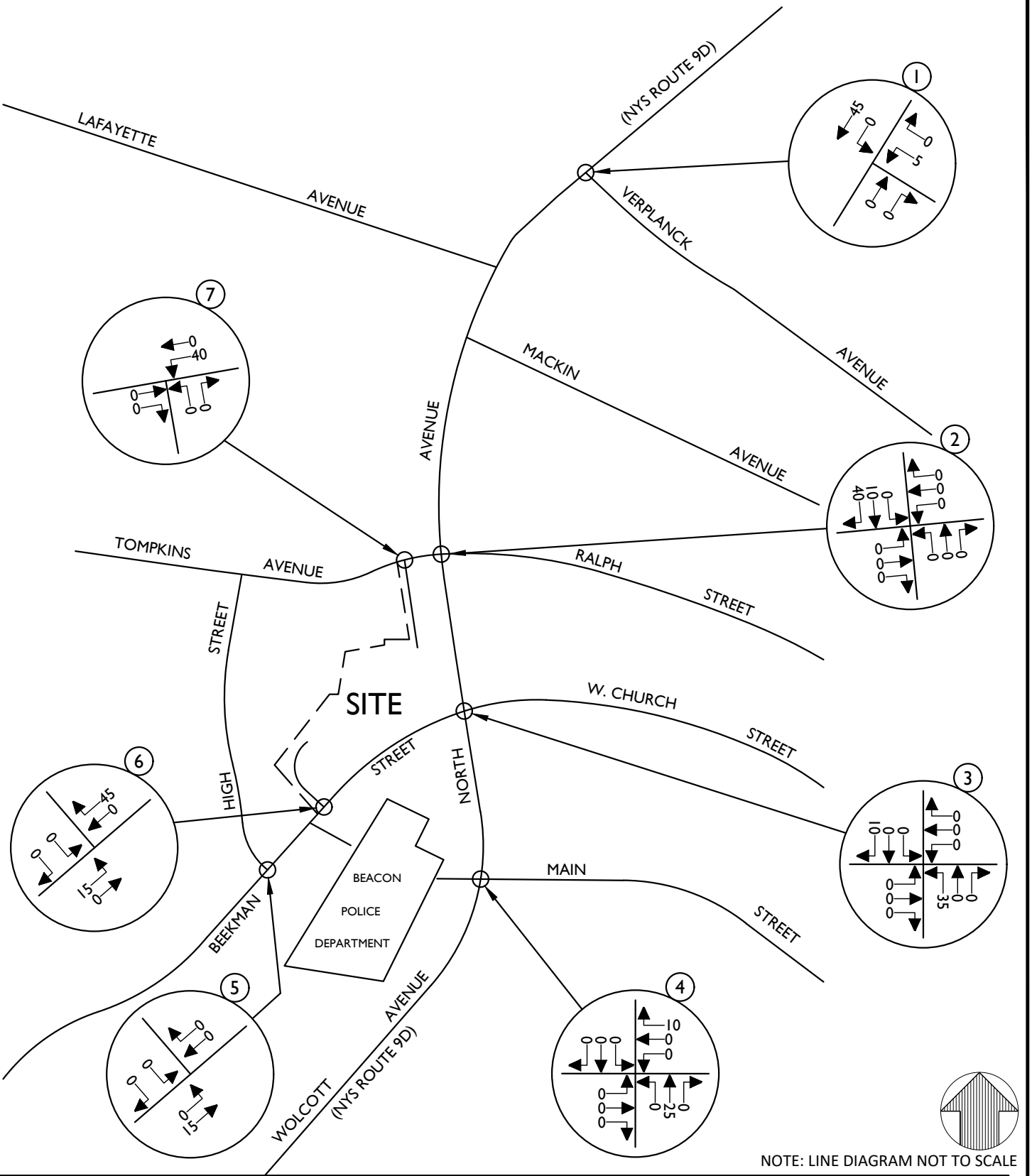

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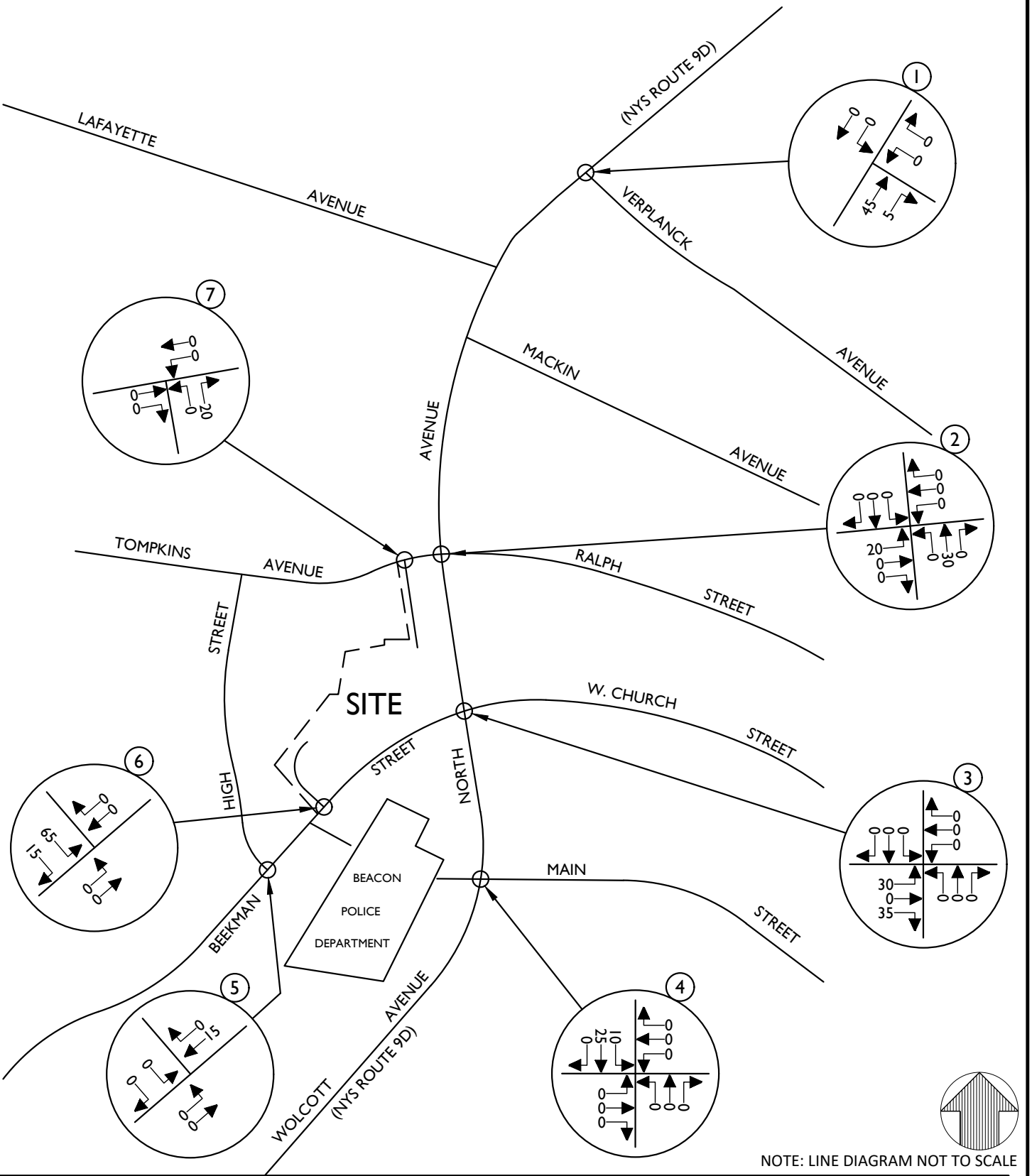

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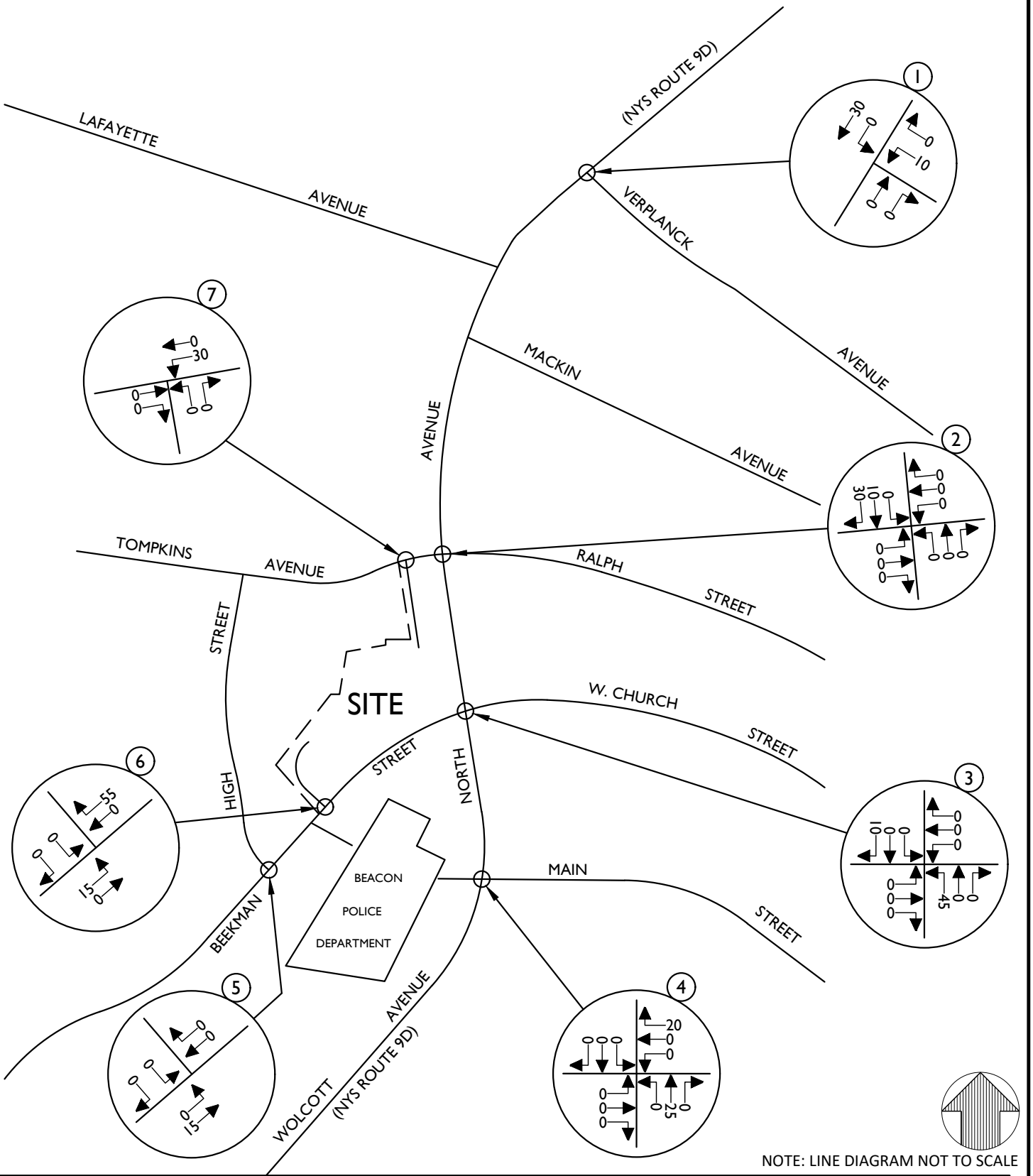

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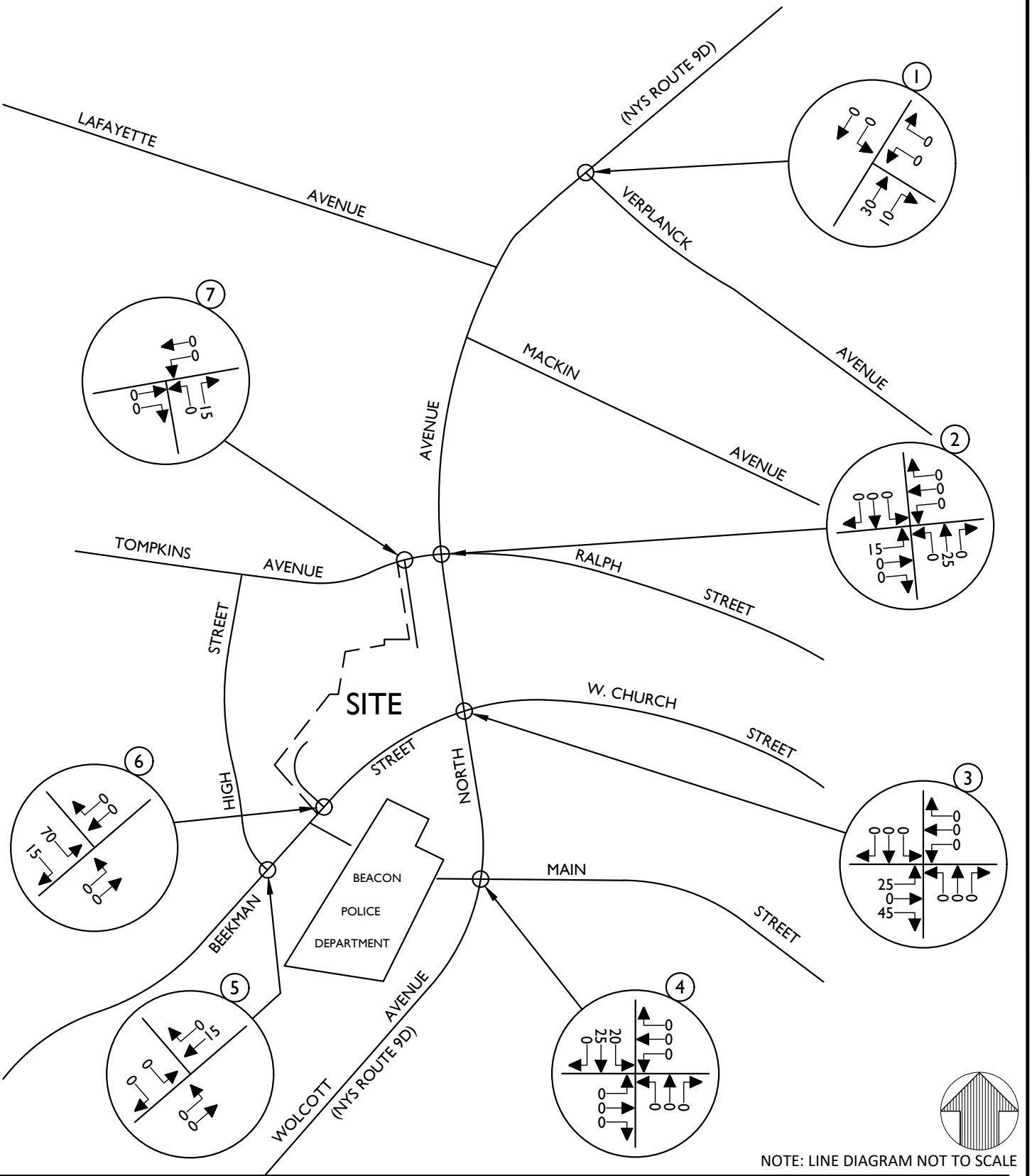

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SHEET NUMBER: 32

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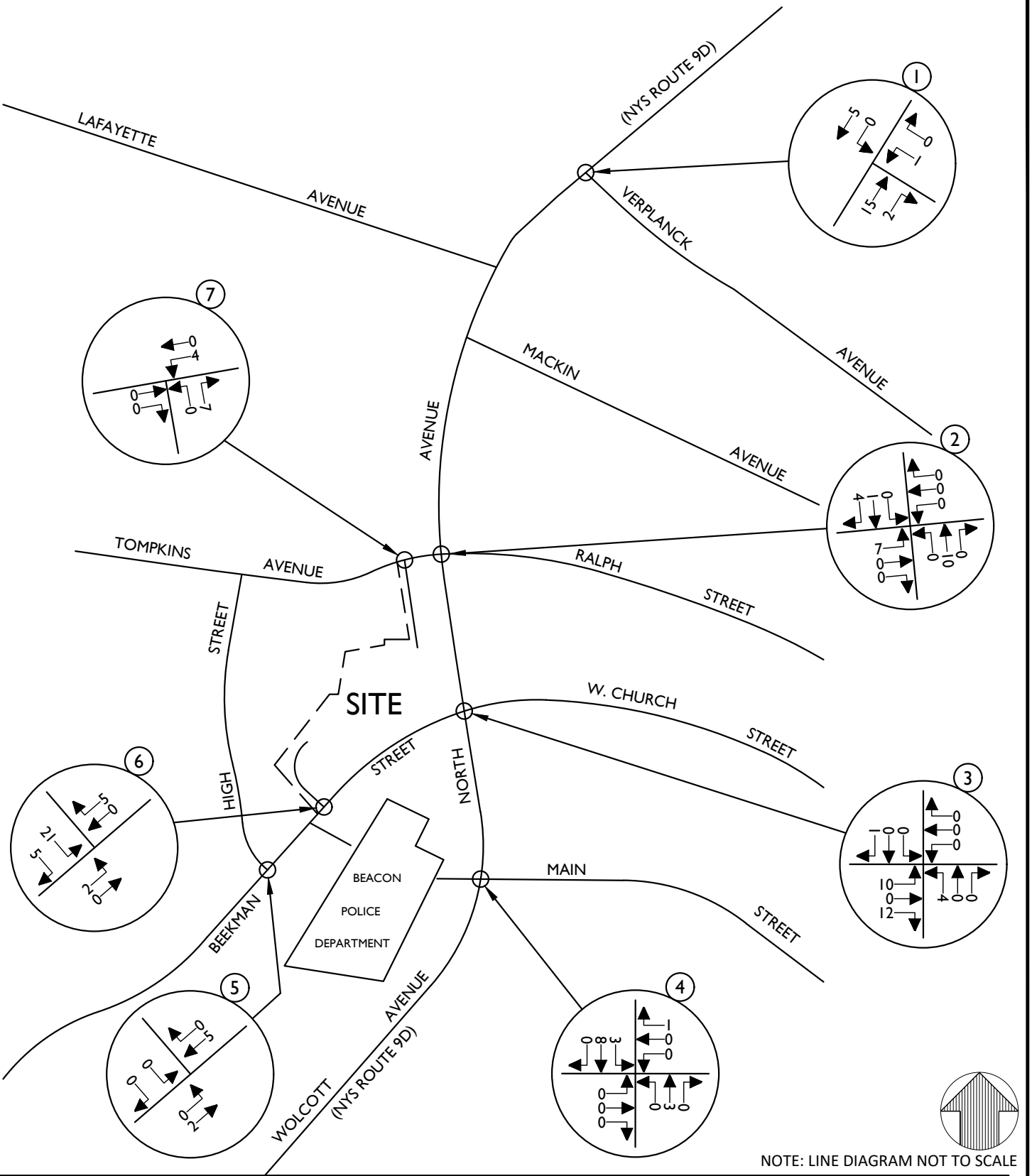

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SHEET TITLE: FIELD BOOK: XX PAGE: XX
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR
(RESIDENTIAL)

SHEET NUMBER: 33

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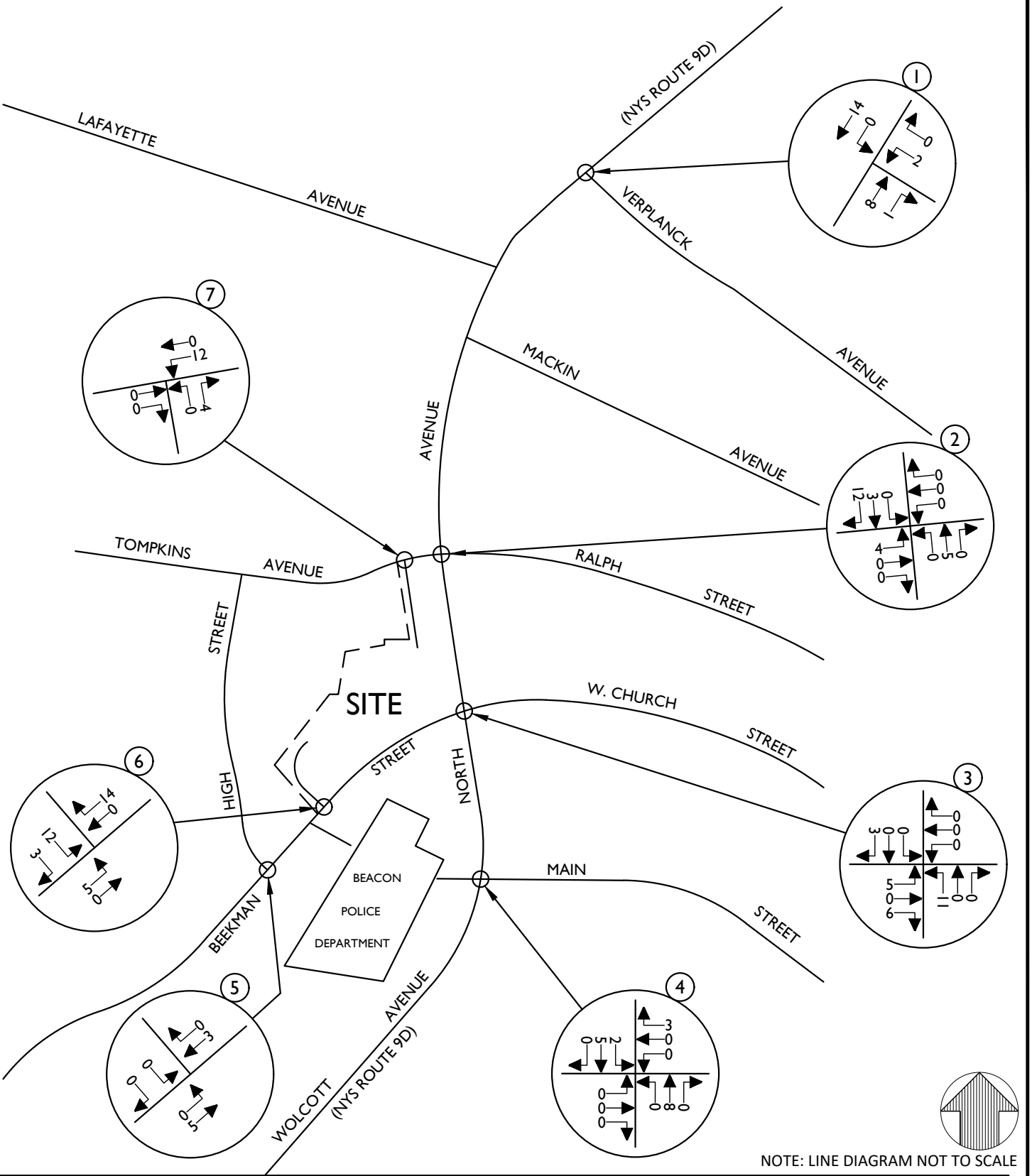

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WEEKDAY PEAK PM HOUR
(RESIDENTIAL)

SHEET NUMBER: 34

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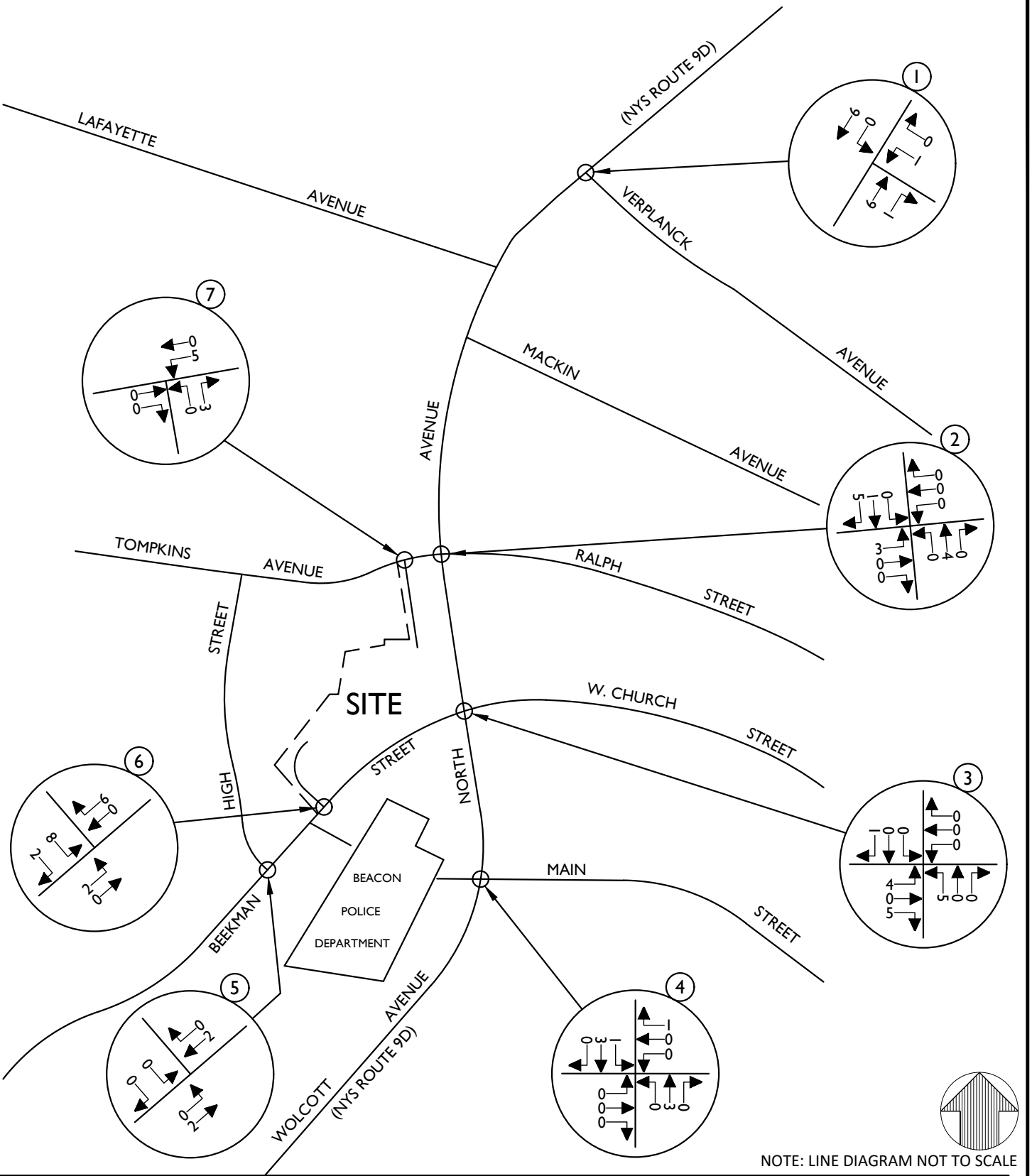

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SHEET TITLE: FIELD BOOK: XX PAGE: XX
SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR
(RESIDENTIAL)

SHEET NUMBER: 35

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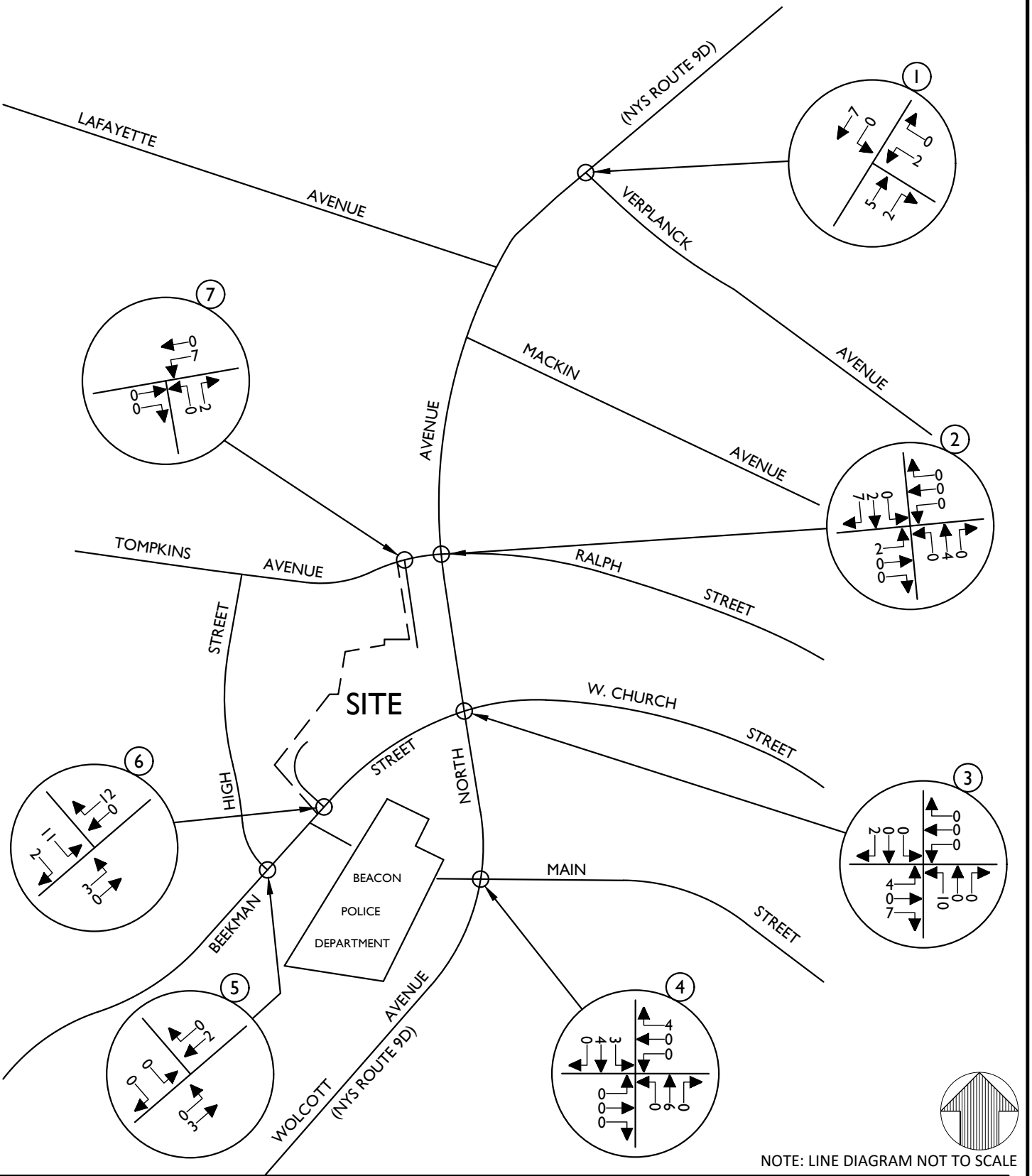

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SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR
(COMMERCIAL)

SHEET NUMBER: 36

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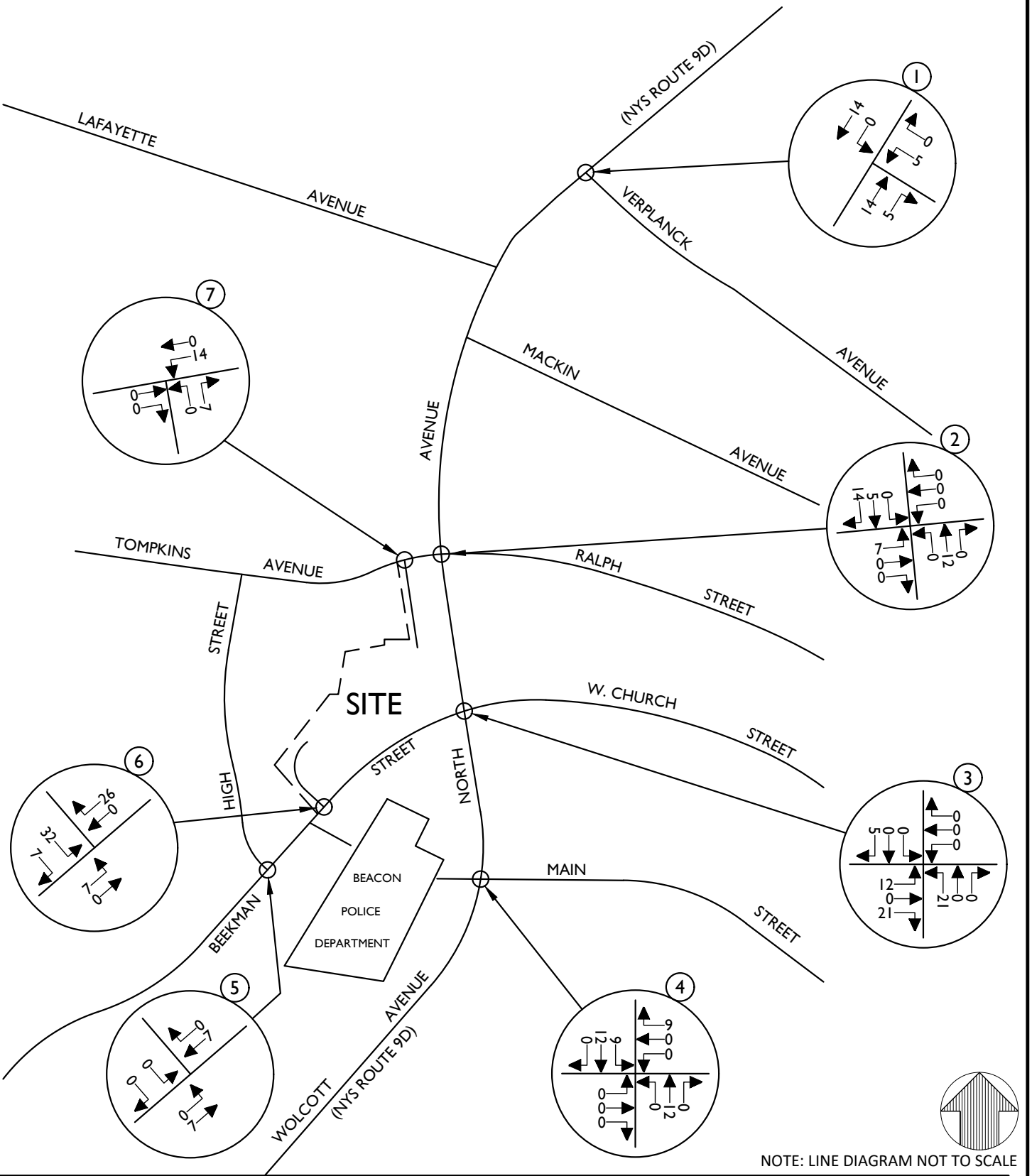

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SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR
(COMMERCIAL)

SHEET NUMBER: 37

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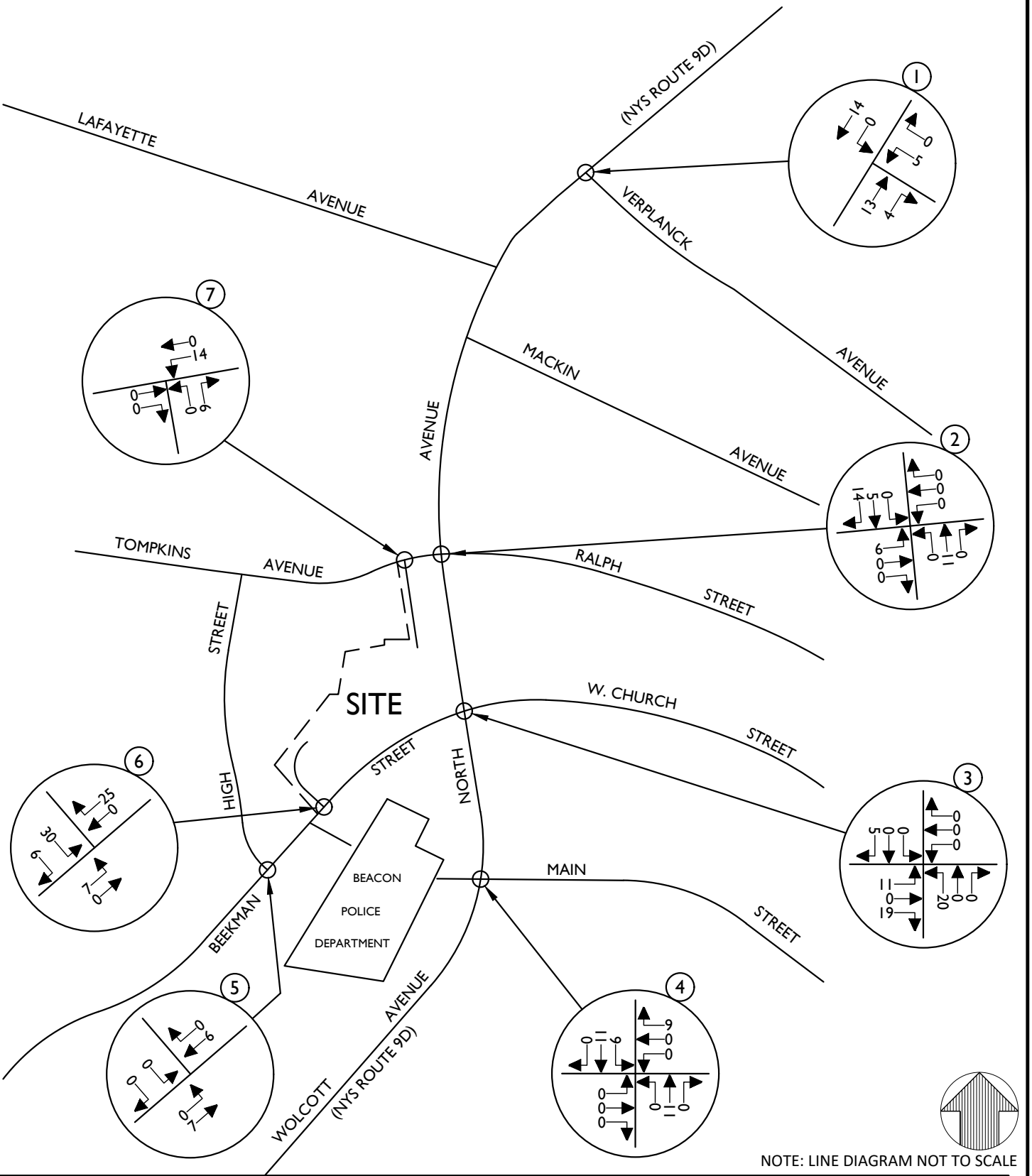

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WEEKEND PEAK SAT HOUR
(COMMERCIAL)

SHEET NUMBER: 38

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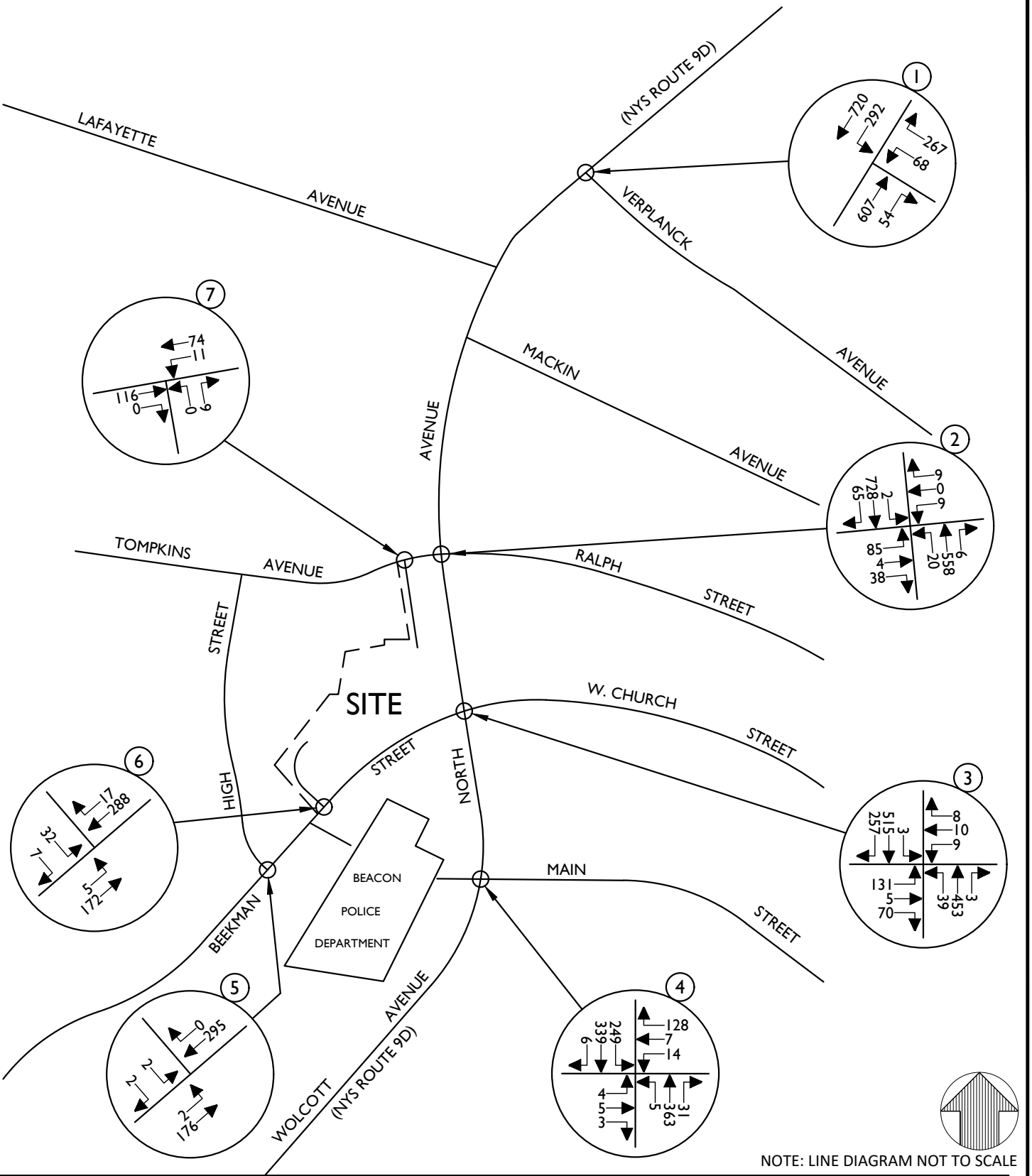

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2026 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 39

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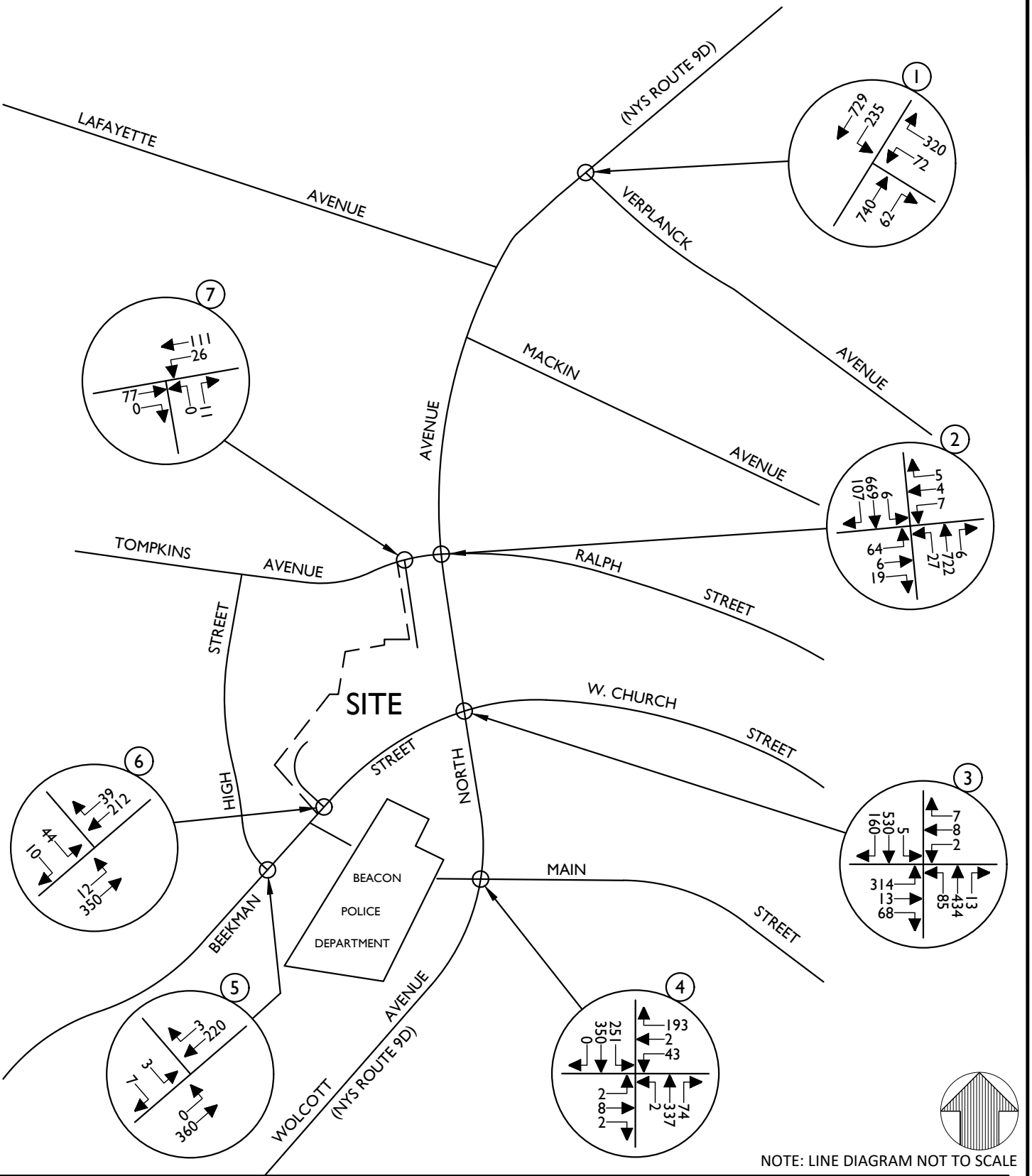

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2026 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 40

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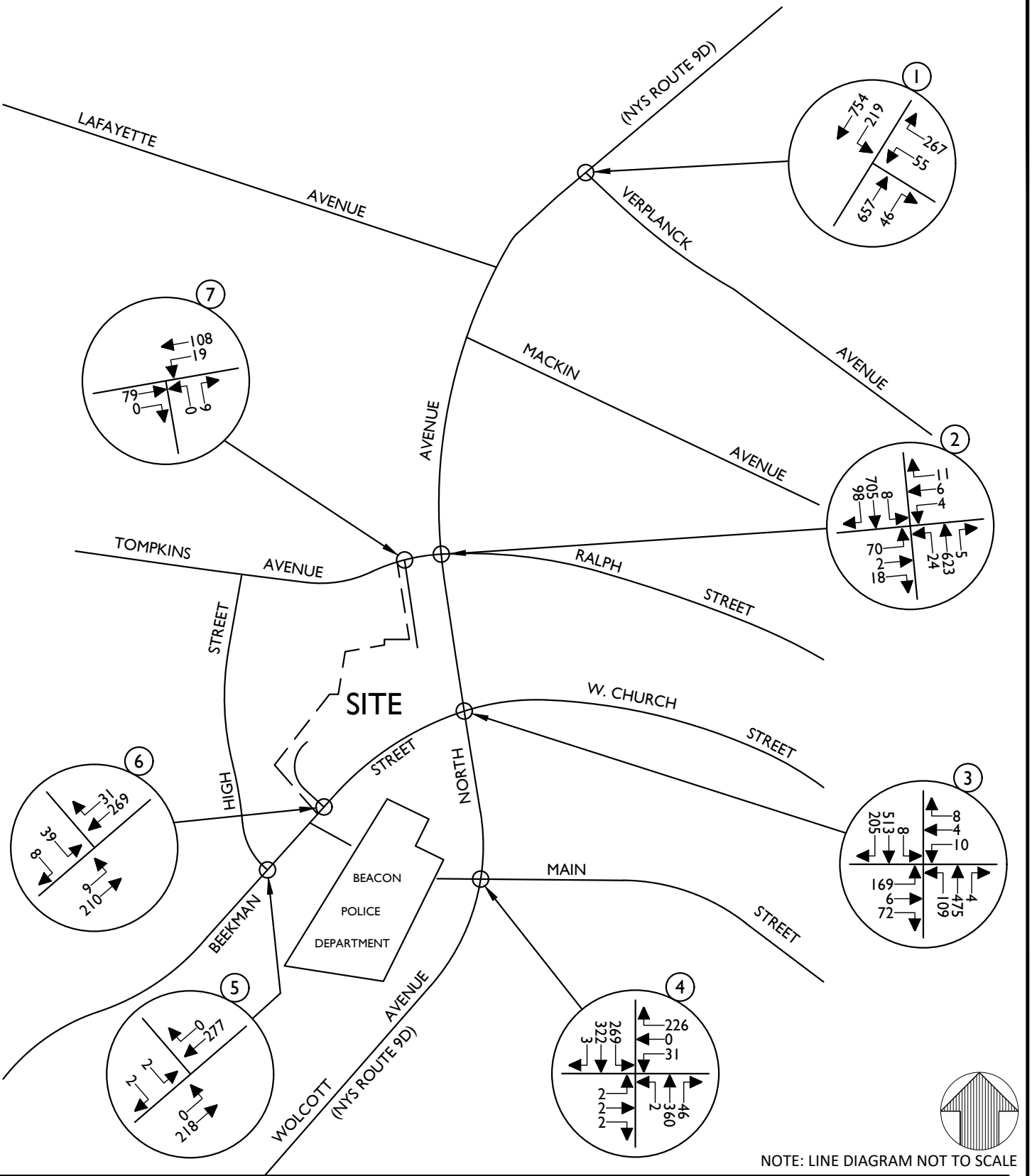

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Colliers Engineering & Design
WESTCHESTER
400 Columbus Avenue,
Suite 180E
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Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

TRAFFIC IMPACT STUDY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/24	R.H.	R.G.D.

PROJECT NUMBER:	DRAWING NAME:
23010468A	240612RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX

2026 BUILD TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 41

0468A\Reports\Traffic\Figures\240612RH_FIGURE.dwg\41 By: RHILARIO

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Traffic & Parking Study

Appendix B | Tables

Colliers Engineering & Design

Table No. 1
Hourly Trip Generation Rates (HTGR) and
Anticipated Site Generated Traffic Volumes

45 Beekman Street & High Street City of Beacon, Dutchess County, New York	Entry			Exit		
	HTGR[1]	Volume	New Trips[2]	HTGR[1]	Volume	New Trips[2]
Residential (64 Units)						
Peak AM Hour	0.16	10	10	0.52	33	33
Peak PM Hour	0.47	30	30	0.28	18	18
Saturday Peak Hour	0.20	13	13	0.20	13	13
Commercial (14,892 Sq. Ft.)						
Peak AM Hour	1.48	22	22	1.01	15	15
Peak PM Hour	3.49	52	47	3.42	51	46
Saturday Peak Hour	3.36	50	45	3.22	48	43
Total						
Peak AM Hour	-	32	32	-	48	48
Peak PM Hour	-	82	77	-	69	64
Saturday Peak Hour	-	63	58	-	61	56

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 11TH EDITION, 2021. ITE LAND USE CODE - 220 - MULTIFAMILY HOUSING (LOW-RISE) AND ITE LAND USE CODE - 822 - STRIP RETAIL PLAZA (<40K).

2) "NEW TRIPS" INCLUDES A 10% INTERNAL TRIP CREDIT APPLIED TO THE RETAIL LAND USE FOR THE PEAK PM AND SATURDAY PEAK HOURS TO ACCOUNT FOR TRIPS BETWEEN THE RESIDENTIAL AND COMMERCIAL PORTIONS OF THE SITE BASED ON NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL ANALYSIS AS SUMMARIZED ON TABLES 1-A, 1-B AND 1-C.

TABLE NO. 1-A

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	45 Beekman Street & High Street	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Weekday AM	**Date:**	9/28/2023
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	14,892		37	22	15
Restaurant				0		
Cinema/Entertainment				0		
Residential	220		64	43	10	33
Hotel				0		
All Other Land Uses[2]				0		
				80	32	48

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	80	32	48
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips[5]	80	32	48
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	0%	0%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	45 Beekman Street & High Street
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	22	22	1.00	15	15
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	10	10	1.00	33	33
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	4		2	0	2	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	7	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	0	0		0
Hotel	0	1	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	22	22	22	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	10	10	10	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	15	15	15	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	33	33	33	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

TABLE NO. 1-B

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	45 Beekman Street & High Street	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Weekday PM	**Date:**	9/28/2023
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	14,892		103	52	51
Restaurant				0		
Cinema/Entertainment				0		
Residential	220		64	48	30	18
Hotel				0		
All Other Land Uses[2]				0		
				151	82	69

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	13	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	151	82	69
Internal Capture Percentage	24%	22%	26%
External Vehicle-Trips[5]	115	64	51
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	25%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	43%	28%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	45 Beekman Street & High Street
Analysis Period:	**Weekday PM**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	52	52	1.00	51	51
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	30	30	1.00	18	18
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		15	2	13	3
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	8	4	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	1	0
Retail	0		0	0	14	0
Restaurant	0	26		0	5	0
Cinema/Entertainment	0	2	0		1	0
Residential	0	5	0	0		0
Hotel	0	1	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	5	47	52	47	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	13	17	30	17	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	13	38	51	38	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	13	18	13	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

TABLE NO. 1-C

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	45 Beekman Street & High Street	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Saturday Peak Hour	**Date:**	9/28/2023
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**Saturday Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	14,892		98	50	48
Restaurant				0		
Cinema/Entertainment				0		
Residential	220		64	26	13	13
Hotel				0		
All Other Land Uses[2]				0		
				124	63	61

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	6	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	124	63	61
Internal Capture Percentage	18%	17%	18%
External Vehicle-Trips[5]	102	52	50
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	13%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	46%	38%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	45 Beekman Street & High Street
Analysis Period:	**Saturday Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	50	50	1.00	48	48
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	13	13	1.00	13	13
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		14	2	12	2
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	5	3	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	1	0
Retail	0		0	0	6	0
Restaurant	0	25		0	2	0
Cinema/Entertainment	0	2	0		1	0
Residential	0	5	0	0		0
Hotel	0	1	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	5	45	50	45	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	6	7	13	7	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	6	42	48	42	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	8	13	8	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table No. 2
Level of Service Summary Table
Weekday Peak AM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	**NYS Route 9D & Verplanck Avenue**	**Signalized**											
	Verplanck Avenue	WB	L	0.27	B	17.7	0.34	C	22.0	0.36	C	23.0	1.0
			R	0.79	B	18.0	0.82	C	21.6	0.83	C	22.3	0.7
		WB Approach		***-***	***B***	***18.0***	***-***	***C***	***21.7***	***-***	***C***	***22.5***	***0.8***
	NYS Route 9D	NB	TR	0.82	B	15.2	0.87	B	17.0	0.87	B	17.3	0.3
		NB Approach		***-***	***B***	***15.2***	***-***	***B***	***17.0***	***-***	***B***	***17.3***	***0.3***
	NYS Route 9D	SB	L	0.78	B	19.9	0.81	C	23.3	0.82	C	24.1	0.8
			T	0.58	A	6.1	0.60	A	5.8	0.60	A	5.7	-0.1
		SB Approach		***-***	***B***	***10.3***	***-***	***B***	***10.9***	***-***	***B***	***11.0***	***0.1***
		Overall		**-**	**B**	**13.1**	**-**	**B**	**14.7**	**-**	**B**	**15.0**	**0.3**
2	**NYS Route 9D & Tompkins Avenue/ Ralph Street**	**Unsignalized**											
	Tompkins Avenue	EB	LTR	0.18	C	21.2	0.68	F	58.5	0.77	F	72.8	14.3
	Ralph Street	WB	LTR	0.08	C	24.7	0.12	D	31.9	0.13	D	32.8	0.9
	NYS Route 9D	NB	LTR	0.02	A	9.2	0.03	A	9.6	0.03	A	9.7	0.1
	NYS Route 9D	SB	LTR	0.00	A	8.5	0.00	A	8.7	0.00	A	8.8	0.1
	With Beekman Street Signal Improvements												
	Tompkins Avenue	EB	LTR	-	-	-	-	-	-	0.77	F	72.5	14.0
	Ralph Street	WB	LTR	-	-	-	-	-	-	0.13	D	32.8	0.9
	NYS Route 9D	NB	LTR	-	-	-	-	-	-	0.03	A	9.7	0.1
	NYS Route 9D	SB	LTR	-	-	-	-	-	-	0.00	A	8.8	0.1
	<u>With Signalization</u>												
	Tompkins Avenue	EB	LTR	-	-	-	0.49	D	38.6	0.46	D	36.8	-1.8
		EB Approach		-	-	-	***-***	***D***	***38.6***	***-***	***D***	***36.8***	**-1.8**
	Ralph Street	WB	LTR	-	-	-	0.07	D	35.7	0.06	C	33.9	-1.8
		WB Approach		-	-	-	***-***	***D***	***35.7***	***-***	***C***	***33.9***	**-1.8**
	NYS Route 9D	NB	L	-	-	-	0.05	A	5.3	0.05	A	6.2	0.9
			TR	-	-	-	0.43	A	6.2	0.45	A	1.0	-5.2
		NB Approach		-	-	-	***-***	***A***	***6.1***	***-***	***A***	***1.2***	**-4.9**
	NYS Route 9D	SB	L	-	-	-	0.00	A	4.5	0.00	A	4.5	0.0
			TR	-	-	-	0.56	A	8.0	0.59	A	9.3	1.3
		SB Approach		-	-	-	***-***	***A***	***8.0***	***-***	***A***	***9.3***	**1.3**
		Overall		**-**	**-**	**-**	**-**	**B**	**10.0**	**-**	**A**	**8.8**	**-1.2**

Table No. 2
Level of Service Summary Table
Weekday Peak AM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
3	**NYS Route 9D &**	**Signalized**											
	Beekman Street/W. Church Street												
	Beekman Street	EB	LT	0.48	C	30.0	0.52	C	28.5	0.54	C	27.2	-1.3
			R	0.11	C	25.1	0.16	C	23.1	0.19	C	21.2	-1.9
		EB Approach		**-**	***C***	***29.0***	**-**	***C***	***26.9***	**-**	***C***	***25.1***	***-1.8***
	W. Church Street	WB	LTR	0.12	C	25.4	0.13	C	23.4	0.13	C	21.7	-1.7
		WB Approach		**-**	***C***	***25.4***	**-**	***C***	***23.4***	**-**	***C***	***21.7***	***-1.7***
	NYS Route 9D	NB	L	0.03	B	19.7	0.05	C	22.0	0.09	C	24.2	2.2
			TR	0.64	C	25.4	0.72	C	27.8	0.72	C	27.8	0.0
		NB Approach		**-**	***C***	***25.2***	**-**	***C***	***27.5***	**-**	***C***	***27.5***	***0.0***
	NYS Route 9D	SB	L	0.00	B	12.2	0.00	B	15.5	0.01	B	17.4	1.9
			TR	1.34	F	191.4	1.51	F	262.2	1.51	F	264.9	2.7
		SB Approach		**-**	***F***	***190.9***	**-**	***F***	***261.3***	**-**	***F***	***264.0***	***2.7***
		Overall		**-**	**F**	**115.3**	**-**	**F**	**151.5**	**-**	**F**	**149.0**	**-2.5**
	<u>With Signal Timing & Phasing Modifications</u>												
	Beekman Street	EB	LT	-	-	-	-	-	-	0.80	D	41.1	12.6
			R	-	-	-	-	-	-	0.34	C	34.6	11.5
		EB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***D***	***38.9***	***12.0***
	W. Church Street	WB	LTR	-	-	-	-	-	-	0.49	D	45.3	21.9
		WB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***D***	***45.3***	***21.9***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.16	B	14.5	-7.5
			TR	-	-	-	-	-	-	0.39	A	9.4	-18.4
		NB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***A***	***9.8***	***-17.7***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.01	A	7.6	-7.9
			TR	-	-	-	-	-	-	0.84	C	21.0	-241.2
		SB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***C***	***21.0***	***-240.3***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**C**	**20.2**	**-131.3**

Table No. 2
Level of Service Summary Table
Weekday Peak AM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
4	**NYS Route 9D &**	**Signalized**											
	Main Street/City Hall												
	City Hall	EB	LTR	0.05	C	28.4	0.07	C	28.0	0.07	C	27.9	-0.1
		EB Approach		***-***	***C***	***28.4***	***-***	***C***	***28.0***	***-***	***C***	***27.9***	***-0.1***
	Main Street	WB	LT	0.05	C	28.4	0.07	C	28.0	0.07	C	27.8	-0.2
			R	0.31	C	25.1	0.33	C	24.4	0.34	C	24.2	-0.2
		WB Approach		***-***	***C***	***25.5***	***-***	***C***	***24.9***	***-***	***C***	***24.7***	***-0.2***
	NYS Route 9D	NB	L	0.01	A	6.3	0.01	A	6.8	0.01	A	6.9	0.1
			TR	0.37	A	9.1	0.44	B	10.4	0.45	B	10.8	0.4
		NB Approach		***-***	***A***	***9.0***	***-***	***B***	***10.4***	***-***	***B***	***10.7***	***0.3***
	NYS Route 9D	SB	L	0.37	A	5.2	0.44	A	6.1	0.46	A	6.3	0.2
			TR	0.25	A	5.5	0.32	A	6.1	0.33	A	6.2	0.1
		SB Approach		***-***	***A***	***5.4***	***-***	***A***	***6.1***	***-***	***A***	***6.3***	***0.2***
		Overall		**-**	**A**	**9.5**	**-**	**B**	**10.3**	**-**	**B**	**10.4**	**0.1**
	<u>With Signal Timing & Cooridnation Modifications</u>												
	City Hall	EB	LTR	-	-	-	-	-	-	0.07	C	34.0	6.0
		EB Approach		-	-	-	-	-	-	***-***	***C***	***34.0***	***6.0***
	Main Street	WB	LT	-	-	-	-	-	-	0.07	C	33.9	5.9
			R	-	-	-	-	-	-	0.37	C	30.4	6.0
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***30.9***	***6.0***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.01	A	6.4	-0.4
			TR	-	-	-	-	-	-	0.41	A	9.8	-0.6
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***9.8***	***-0.6***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.44	A	5.9	-0.2
			TR	-	-	-	-	-	-	0.31	A	5.8	-0.3
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***5.8***	***-0.3***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**B**	**10.7**	**0.4**
5	**Beekman Street &**	**Unsignalized**											
	High Street	EB	LT	0.00	A	8.0	0.00	A	8.1	0.00	A	8.1	0.0
		SB	LR	0.00	B	10.2	0.01	B	10.5	0.01	B	10.6	0.1
6	**Beekman Street &**	**Unsignalized**											
	Site Access	EB	LT	-	-	-	-	-	-	0.01	A	8.1	-
		SB	LR	-	-	-	-	-	-	0.10	B	13.3	-
7	**Tompkins Avenue &**	**Unsignalized**											
	Site Access	WB	LT	-	-	-	-	-	-	0.01	A	7.5	-
		NB	LR	-	-	-	-	-	-	0.01	A	9.1	-

<u>NOTES:</u>

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C"

Table No. 2
Level of Service Summary Table
Weekday Peak PM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	**NYS Route 9D & Verplanck Avenue**	**Signalized**											
	Verplanck Avenue	WB	L	0.21	C	21.2	0.25	C	26.7	0.29	C	28.4	1.7
			R	0.85	C	23.6	0.88	C	28.7	0.89	C	30.0	1.3
		WB Approach		***-***	***C***	***23.2***	***-***	***C***	***28.3***	***-***	***C***	***29.7***	***1.4***
	NYS Route 9D	NB	TR	0.88	B	19.2	0.92	C	28.2	0.93	C	31.0	2.8
		NB Approach		***-***	***B***	***19.2***	***-***	***C***	***28.2***	***-***	***C***	***31.0***	***2.8***
	NYS Route 9D	SB	L	0.79	C	27.5	0.83	C	32.9	0.83	C	34.4	1.5
			T	0.51	A	6.6	0.58	A	7.0	0.59	A	7.0	0.0
		SB Approach		***-***	***B***	***12.4***	***-***	***B***	***13.5***	***-***	***B***	***13.7***	***0.2***
		Overall		**-**	**B**	**17.0**	**-**	**C**	**21.6**	**-**	**C**	**23.0**	**1.4**
2	**NYS Route 9D & Tompkins Avenue/ Ralph Street**	**Unsignalized**											
	Tompkins Avenue	EB	LTR	0.20	D	27.8	0.63	F	69.6	0.79	F	100.6	31.0
	Ralph Street	WB	LTR	0.09	D	31.3	0.16	E	44.4	0.17	E	47.2	2.8
	NYS Route 9D	NB	LTR	0.02	A	9.0	0.04	A	9.6	0.04	A	9.8	0.2
	NYS Route 9D	SB	LTR	0.01	A	9.0	0.01	A	9.3	0.01	A	9.4	0.1
	With Beekman Street Signal Improvements												
	Tompkins Avenue	EB	LTR	-	-	-	-	-	-	0.79	F	99.1	29.5
	Ralph Street	WB	LTR	-	-	-	-	-	-	0.17	E	46.8	2.4
	NYS Route 9D	NB	LTR	-	-	-	-	-	-	0.04	A	9.8	0.2
	NYS Route 9D	SB	LTR	-	-	-	-	-	-	0.01	A	9.4	0.1
	<u>With Signalization</u>												
	Tompkins Avenue	EB	LTR	-	-	-	0.42	D	40.5	0.45	D	40.2	-0.3
		EB Approach		***-***	***-***	***-***	***-***	***D***	***40.5***	***-***	***D***	***40.2***	***-0.3***
	Ralph Street	WB	LTR	-	-	-	0.08	D	38.4	0.08	D	37.8	-0.6
		WB Approach		***-***	***-***	***-***	***-***	***D***	***38.4***	***-***	***D***	***37.8***	***-0.6***
	NYS Route 9D	NB	L	-	-	-	0.06	A	4.0	0.06	A	4.6	0.6
			TR	-	-	-	0.53	A	1.3	0.55	A	6.5	5.2
		NB Approach		***-***	***-***	***-***	***-***	***A***	***1.4***	***-***	***A***	***6.5***	***5.1***
	NYS Route 9D	SB	L	-	-	-	0.01	A	3.0	0.01	A	4.5	1.5
			TR	-	-	-	0.52	A	6.4	0.56	A	7.1	0.7
		SB Approach		***-***	***-***	***-***	***-***	***A***	***6.4***	***-***	***A***	***7.1***	***0.7***
		Overall		**-**	**-**	**-**	**-**	**A**	**6.1**	**-**	**A**	**8.9**	**2.8**

Table No. 2
Level of Service Summary Table
Weekday Peak PM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
3	**NYS Route 9D &**	**Signalized**											
	Beekman Street/W. Church Street												
	Beekman Street	EB	LT	1.75	F	394.9	1.71	F	375.4	1.80	F	415.9	40.5
			R	0.04	B	17.1	0.07	B	17.3	0.12	B	17.7	0.4
		EB Approach		***-***	***F***	***365.9***	***-***	***F***	***333.2***	***-***	***F***	***347.2***	***14.0***
	W. Church Street	WB	LTR	0.03	B	18.1	0.05	B	19.3	0.05	B	19.3	0.0
		WB Approach		***-***	***B***	***18.1***	***-***	***B***	***19.3***	***-***	***B***	***193.0***	***173.7***
	NYS Route 9D	NB	L	0.09	C	31.3	0.15	C	31.3	0.23	C	31.3	0.0
			TR	0.73	D	36.9	0.84	D	43.1	0.84	D	42.8	-0.3
		NB Approach		***-***	***D***	***36.5***	***-***	***D***	***41.8***	***-***	***D***	***41.0***	***-0.8***
	NYS Route 9D	SB	L	0.01	C	24.7	0.01	C	27.3	0.01	C	27.3	0.0
			TR	1.36	F	207.9	1.55	F	291.1	1.57	F	300.8	9.7
		SB Approach		***-***	***F***	***206.7***	***-***	***F***	***289.3***	***-***	***F***	***298.9***	***9.6***
		Overall		**-**	**F**	**188.4**	**-**	**F**	**216.6**	**-**	**F**	**223.9**	**7.3**
	<u>With Signal Timing & Phasing Modifications</u>												
	Beekman Street	EB	LT	-	-	-	-	-	-	0.90	D	52.3	-323.1
			R	-	-	-	-	-	-	0.18	C	25.6	8.3
		EB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***D***	***47.7***	***-285.5***
	W. Church Street	WB	LTR	-	-	-	-	-	-	0.44	D	46.2	26.9
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***D***	***46.2***	***26.9***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.39	B	18.6	-12.7
			TR	-	-	-	-	-	-	0.44	B	14.1	-29.0
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***B***	***14.8***	***-27.0***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.01	B	12.0	-15.3
			TR	-	-	-	-	-	-	0.89	C	31.2	-259.9
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***31.1***	***-258.2***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**C**	**30.0**	**-186.6**

Table No. 2
Level of Service Summary Table
Weekday Peak PM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
4	**NYS Route 9D &**	**Signalized**											
	Main Street/City Hall												
	City Hall	EB	LTR	0.05	C	33.0	0.06	C	32.2	0.06	C	31.8	-0.4
		EB Approach		***-***	***C***	***33.0***	***-***	***C***	***32.2***	***-***	***C***	***31.8***	***-0.4***
	Main Street	WB	LT	0.12	C	33.4	0.14	C	32.7	0.14	C	32.3	-0.4
			R	0.43	C	30.6	0.46	C	29.6	0.47	C	29.2	-0.4
		WB Approach		***-***	***C***	***31.1***	***-***	***C***	***30.2***	***-***	***C***	***29.8***	***-0.4***
	NYS Route 9D	NB	L	0.00	A	6.7	0.00	A	7.4	0.00	A	7.7	0.3
			TR	0.36	A	9.4	0.44	B	11.3	0.47	B	12.1	0.8
		NB Approach		***-***	***A***	***9.4***	***-***	***B***	***11.3***	***-***	***B***	***12.1***	***0.8***
	NYS Route 9D	SB	L	0.36	A	5.6	0.45	A	6.8	0.48	A	7.4	0.6
			TR	0.25	A	5.7	0.31	A	6.5	0.33	A	6.7	0.2
		SB Approach		***-***	***A***	***5.7***	***-***	***A***	***6.6***	***-***	***A***	***7.0***	***0.4***
		Overall		**-**	**B**	**11.7**	**-**	**B**	**12.7**	**-**	**B**	**13.1**	**0.4**
	<u>With Signal Timing & Cooridnation Modifications</u>												
	City Hall	EB	LTR	-	-	-	-	-	-	0.06	C	31.8	-0.4
		EB Approach		-	-	-	-	-	-	***-***	***C***	***31.8***	***-0.4***
	Main Street	WB	LT	-	-	-	-	-	-	0.14	C	32.4	-0.3
			R	-	-	-	-	-	-	0.48	C	29.2	-0.4
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***29.8***	***-0.4***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.00	A	7.7	0.3
			TR	-	-	-	-	-	-	0.47	B	12.0	0.7
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***B***	***12.0***	***0.7***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.48	A	7.4	0.6
			TR	-	-	-	-	-	-	0.33	A	6.7	0.2
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***7.0***	***0.4***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**B**	**13.1**	**0.4**
5	**Beekman Street &**	**Unsignalized**											
	High Street	EB	LT	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0
		SB	LR	0.02	A	9.9	0.02	B	10.4	0.02	B	10.5	0.1
6	**Beekman Street &**	**Unsignalized**											
	Site Access	EB	LT	-	-	-	-	-	-	0.01	A	8.0	-
		SB	LR	-	-	-	-	-	-	0.21	C	17.7	-
7	**Tompkins Avenue &**	**Unsignalized**											
	Site Access	WB	LT	-	-	-	-	-	-	0.03	A	7.5	-
		NB	LR	-	-	-	-	-	-	0.02	A	8.9	-

<u>NOTES:</u>

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C"

Table No. 2
Level of Service Summary Table
Saturday Peak Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	**NYS Route 9D & Verplanck Avenue**	**Signalized**											
	Verplanck Avenue	WB	L	0.17	B	18.0	0.21	C	22.0	0.24	C	23.1	1.1
			R	0.81	C	20.2	0.84	C	23.9	0.85	C	24.9	1.0
		WB Approach		***-***	***B***	***19.9***	***-***	***C***	***23.6***	***-***	***C***	***24.6***	***1.0***
	NYS Route 9D	NB	TR	0.85	B	16.0	0.89	B	19.1	0.90	C	20.5	1.4
		NB Approach		***-***	***B***	***16.0***	***-***	***B***	***19.1***	***-***	***C***	***20.5***	***1.4***
	NYS Route 9D	SB	L	0.75	C	23.4	0.79	C	27.2	0.80	C	28.2	1.0
			T	0.58	A	6.8	0.65	A	7.2	0.66	A	7.2	0.0
		SB Approach		***-***	***B***	***11.0***	***-***	***B***	***11.8***	***-***	***B***	***11.9***	***0.1***
		Overall		**-**	**B**	**14.3**	**-**	**B**	**16.3**	**-**	**B**	**17.0**	**0.7**
2	**NYS Route 9D & Tompkins Avenue/ Ralph Street**	**Unsignalized**											
	Tompkins Avenue	EB	LTR	0.21	D	27.7	0.61	F	63.9	0.73	F	83.2	19.3
	Ralph Street	WB	LTR	0.08	C	21.2	0.13	D	29.2	0.14	D	30.5	1.3
	NYS Route 9D	NB	LTR	0.01	A	9.0	0.03	A	9.7	0.03	A	9.8	0.1
	NYS Route 9D	SB	LTR	0.01	A	8.7	0.01	A	8.9	0.01	A	9.0	0.1
	With Beekman Street Signal Improvements												
	Tompkins Avenue	EB	LTR	-	-	-	-	-	-	0.72	F	81.7	17.8
	Ralph Street	WB	LTR	-	-	-	-	-	-	0.14	D	30.3	1.1
	NYS Route 9D	NB	LTR	-	-	-	-	-	-	0.03	A	9.8	0.1
	NYS Route 9D	SB	LTR	-	-	-	-	-	-	0.01	A	9.0	0.1
	<u>With Signalization</u>												
	Tompkins Avenue	EB	LTR	-	-	-	0.41	D	40.0	0.43	D	39.8	-0.2
		EB Approach		***-***	***-***	***-***	***-***	***D***	***40.0***	***-***	***D***	***39.8***	***-0.2***
	Ralph Street	WB	LTR	-	-	-	0.11	D	38.2	0.11	D	37.7	-0.5
		WB Approach		***-***	***-***	***-***	***-***	***D***	***38.2***	***-***	***D***	***37.7***	***-0.5***
	NYS Route 9D	NB	L	-	-	-	0.05	A	4.3	0.06	A	4.6	0.3
			TR	-	-	-	0.45	A	5.5	0.47	A	1.0	-4.5
		NB Approach		***-***	***-***	***-***	***-***	***A***	***5.4***	***-***	***A***	***1.1***	***-4.3***
	NYS Route 9D	SB	L	-	-	-	0.01	A	3.8	0.01	A	3.2	-0.6
			TR	-	-	-	0.54	A	6.7	0.56	A	7.2	0.5
		SB Approach		***-***	***-***	***-***	***-***	***A***	***6.6***	***-***	***A***	***7.1***	***0.5***
		Overall		**-**	**-**	**-**	**-**	**A**	**8.3**	**-**	**A**	**6.9**	**-1.4**

Table No. 2
Level of Service Summary Table
Saturday Peak Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
3	**NYS Route 9D &**	**Signalized**											
	Beekman Street/W. Church Street												
	Beekman Street	EB	LT	0.51	C	28.6	0.54	C	28.0	0.58	C	27.5	-0.5
			R	0.12	C	24.3	0.16	C	23.1	0.22	C	22.4	-0.7
		EB Approach		**-**	***C***	***27.9***	**-**	***C***	***26.9***	**-**	***C***	***26.0***	***-0.9***
	W. Church Street	WB	LTR	0.09	C	24.5	0.11	C	23.4	0.11	C	22.6	-0.8
		WB Approach		**-**	***C***	***24.5***	**-**	***C***	***23.4***	**-**	***C***	***22.6***	***-0.8***
	NYS Route 9D	NB	L	0.11	C	20.6	0.16	C	21.9	0.23	C	23.1	1.2
			TR	0.66	C	25.9	0.77	C	29.3	0.77	C	29.2	-0.1
		NB Approach		**-**	***C***	***25.2***	**-**	***C***	***28.2***	**-**	***C***	***28.0***	***-0.2***
	NYS Route 9D	SB	L	0.01	B	13.4	0.02	B	16.5	0.02	B	17.5	1.0
			TR	1.22	F	140.8	1.39	F	212.4	1.40	F	217.5	5.1
		SB Approach		**-**	***F***	***139.4***	**-**	***F***	***210.2***	**-**	***F***	***215.3***	***5.1***
		Overall		**-**	**F**	**81.0**	**-**	**F**	**114.6**	**-**	**F**	**113.5**	**-1.1**
	<u>With Signal Timing & Phasing Modifications</u>												
	Beekman Street	EB	LT	-	-	-	-	-	-	0.75	D	38.2	10.2
			R	-	-	-	-	-	-	0.28	C	31	7.9
		EB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***D***	***36.1***	***9.2***
	W. Church Street	WB	LTR	-	-	-	-	-	-	0.48	D	46.0	22.6
		WB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***D***	***46.0***	***22.6***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.41	B	16	-5.9
			TR	-	-	-	-	-	-	0.43	B	10.8	-18.5
		NB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***B***	***11.8***	***-16.4***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.02	A	9.1	-7.4
			TR	-	-	-	-	-	-	0.84	C	23.6	-188.8
		SB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***C***	***23.4***	***-186.8***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**C**	**21.4**	**-93.2**

Table No. 2
Level of Service Summary Table
Saturday Peak Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
4	**NYS Route 9D &**	**Signalized**											
	Main Street/City Hall												
	City Hall	EB	LTR	0.01	C	26.3	0.03	C	25.6	0.03	C	25.3	-0.3
		EB Approach		***-***	***C***	***26.3***	***-***	***C***	***25.6***	***-***	***C***	***25.3***	***-0.3***
	Main Street	WB	LT	0.07	C	26.7	0.09	C	26.0	0.09	C	25.7	-0.3
			R	0.46	C	24.3	0.49	C	23.3	0.49	C	22.9	-0.4
		WB Approach		***-***	***C***	***24.5***	***-***	***C***	***23.6***	***-***	***C***	***23.3***	***-0.3***
	NYS Route 9D	NB	L	0.00	A	7.5	0.00	A	8.3	0.00	A	8.5	0.2
			TR	0.34	B	10.1	0.43	B	12.1	0.46	B	12.8	0.7
		NB Approach		***-***	***B***	***10.1***	***-***	***B***	***12.1***	***-***	***B***	***12.7***	***0.6***
	NYS Route 9D	SB	L	0.37	A	5.9	0.46	A	7.1	0.48	A	7.5	0.4
			TR	0.24	A	6.2	0.30	A	6.9	0.31	A	7.1	0.2
		SB Approach		***-***	***A***	***6.0***	***-***	***A***	***7.0***	***-***	***A***	***7.3***	***0.3***
		Overall		**-**	**B**	**11.2**	**-**	**B**	**12.2**	**-**	**B**	**12.5**	**0.3**
	<u>With Signal Timing & Cooridnation Modifications</u>												
	City Hall	EB	LTR	-	-	-	-	-	-	0.03	C	31.0	5.4
		EB Approach		-	-	-	-	-	-	***-***	***C***	***31.0***	***5.4***
	Main Street	WB	LT	-	-	-	-	-	-	0.10	C	31.5	5.5
			R	-	-	-	-	-	-	0.53	C	29.0	5.7
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***29.3***	***5.7***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.00	A	8.1	-0.2
			TR	-	-	-	-	-	-	0.41	B	11.8	-0.3
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***B***	***11.8***	***-0.3***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.46	A	7.1	0.0
			TR	-	-	-	-	-	-	0.29	A	6.8	-0.1
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***7.0***	***0.0***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**B**	**13.3**	**1.1**
5	**Beekman Street &**	**Unsignalized**											
	High Street	EB	LT	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0
		SB	LR	0.00	B	10.0	0.01	B	10.3	0.01	B	10.4	0.1
6	**Beekman Street &**	**Unsignalized**											
	Site Access	EB	LT	-	-	-	-	-	-	0.01	A	8.0	-
		SB	LR	-	-	-	-	-	-	0.11	B	13.2	-
7	**Tompkins Avenue &**	**Unsignalized**											
	Site Access	WB	LT	-	-	-	-	-	-	0.02	A	7.4	-
		NB	LR	-	-	-	-	-	-	0.01	A	8.8	-

<u>NOTES:</u>

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C"

Table No. 2A
Level of Service Summary Table
North Avenue (NYS Route 9D) Arterial - Main Street to Verplanck Avenue

		Existing			No-Build			Build			Build Timing/ Phasing/ Coorindation Improvements			No-Build With Tompkins Avenue Signal			Build With Tompkins Avenue Signal		
Time Period	Direction	Travel Time (s)	Arterial Speed (MPH)	Arterial LOS	Travel Time (s)	Arterial Speed (MPH)	Arterial LOS	Travel Time (s)	Arterial Speed (MPH)	Arterial LOS	Travel Time (s)	Arterial Speed (MPH)	Arterial LOS	Travel Time (s)	Arterial Speed (MPH)	Arterial LOS	Travel Time (s)	Arterial Speed (MPH)	Arterial LOS
Weekday	**NB**	110.1	16.6	D	114.7	15.9	D	116.2	15.7	D	116.4	15.7	D	122.8	14.9	D	124.5	14.7	D
AM Peak Hour	**SB**	79.8	18.8	D	84.7	17.7	D	89.5	16.8	D	98.1	15.3	D	112.4	13.4	C	122.1	12.3	D
Weekday	**NB**	121.1	15.1	D	139.4	13.1	E	147.0	12.4	E	141.1	12.9	E	146.2	12.5	E	152.9	11.9	E
PM Peak Hour	**SB**	88.8	16.9	D	100.7	14.9	D	108.4	13.9	E	106.5	14.1	D	123.1	12.2	D	142.5	10.5	D
Saturday	**NB**	112.1	16.3	D	119.9	15.2	D	123.5	14.8	D	119.3	15.3	D	129.0	14.1	D	127.1	14.4	D
Peak Hour	**SB**	84.4	17.8	D	92.9	16.2	D	97.1	15.5	D	99.7	15.1	D	121.3	12.4	D	123.1	12.2	D

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT ANALYSIS SUMMARY

INTERSECTION DATA			
Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	30
Volume Basis:	2026 No-Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS SUMMARY		
Warrant 1 - Eight-Hour Vehicular Volume		
Condition A - Minimum Vehicular Volume		Not Satisfied -- No Signal
Condition B - Minimum Vehicular Interruption of Continous Traffic		Not Satisfied -- No Signal
Condition A & B Combined Condition		Not Applicable
	Warrant 1 Satisfied:	**NO**
Warrant 2 - Four-Hour Vehicular Volume		
Four-Hour Vehicular Volume		Satisfied -- Criteria Met for Signalization
	Warrant 2 Satisfied:	**YES**
Warrant 3 - Peak Hour		
Peak Hour Volume		Not Satisfied -- No Signal
	Warrant 3 Satisfied:	**NO**
Warrant 4 - Pedestrian Volume Warrant		
Condition A - Pedestrian Four-Hour Volume		Not Applicable
Condition B - Pedestrian Peak Hour Volume		Not Applicable
	Warrant 4 Satisfied:	**Not Applicable**
Warrant 5 - School Crossing		
	Warrant 5 Satisfied:	**Not Applicable**
Warrant 6 - Coordinated Signal System		
	Warrant 6 Satisfied:	**Not Analyzed**
Warrant 7 - Crash Experience		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 8 - Roadway Network		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 9 - Intersection Near a Grade Crossing		
Condition A - Distance to Rail		Not Applicable
Condition B - Traffic Volume Warrant		Not Applicable
	Warrant 9 Satisfied:	**Not Applicable**

Colliers Engineering & Design

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

INTERSECTION DATA

Major Street: Wolcott Avenue (NYS Route 9D)
Minor Street: Tompkins Avenue/Ralph Street
Location: City of Beacon, Dutchess County, New York
Date: 10/12/2023
Volume Basis: 2026 No-Build Traffic Volumes
Condition: Typical Weekday

Number of Lanes For Moving Traffic By Approach
Major Street (Excluding Auxiliary Lanes) = 1
Minor Street (Including Auxiliary Lanes) = 1

Major Street Speed
85TH Percentile Speed >= 40 mph (Y or N): N

Community Population
Community < 10,000 (Y or N): N

WARRANT ANALYSIS

Time of Day	Volumes		Warrant 1 Condition A		Warrant 1 Condition B		Warrant 1 Condition A & B				Warrant Met?			
							Condition A		Condition B				Combined	
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Warrant 1A	Warrant 1B	1A	1B
12:00 AM	153	9	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 AM	76	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 AM	55	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 AM	57	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
4:00 AM	286	22	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
5:00 AM	542	40	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
6:00 AM	1,107	95	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 AM	1,184	134	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
8:00 AM	1,347	116	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
9:00 AM	1,013	75	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
10:00 AM	800	67	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
11:00 AM	831	53	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
12:00 PM	955	53	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 PM	994	56	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 PM	1,110	62	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 PM	1,293	70	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
4:00 PM	1,475	76	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
5:00 PM	1,051	93	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
6:00 PM	1,415	81	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 PM	1,065	59	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
8:00 PM	842	49	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
9:00 PM	614	34	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
10:00 PM	444	27	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
11:00 PM	265	16	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
Total Hours Meeting Warrants											**0**	**7**	**0**	**0**
Total Hours Needed to Satisfy											**8**	**8**	**8***	**8***

WARRANT 1 SUMMARY

Warrant 1 Condition A - Minimum Vehicular Volume	**Not Satisfied -- No Signal**
Warrant 1 Condition B - Interruption of Continuous Traffic	**Not Satisfied -- No Signal**
Warrant 1A & 1B Combined Condition	**Not Applicable**

*Note: For Combined Warrant Both Conditions 1A & 1B Must Be Satisfied for a Minimum of 8 Hours.

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME & WARRANT 3 - PEAK HOUR

INTERSECTION DATA

Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	N
Volume Basis:	2026 No-Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS

Time of Day	Volumes		Warrant 2[1]		Warrant 3[1]		Warrant Met?	
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Warrant 2	Warrant 3
12:00 AM	153	9					NO	NO
1:00 AM	76	5					NO	NO
2:00 AM	55	5					NO	NO
3:00 AM	57	5					NO	NO
4:00 AM	286	22					NO	NO
5:00 AM	542	40					NO	NO
6:00 AM	1,107	95					YES	NO
7:00 AM	1,184	134					YES	NO
8:00 AM	1,347	116					YES	NO
9:00 AM	1,013	75					NO	NO
10:00 AM	800	67					NO	NO
11:00 AM	831	53					NO	NO
12:00 PM	955	53					NO	NO
1:00 PM	994	56					NO	NO
2:00 PM	1,110	62					NO	NO
3:00 PM	1,293	70					NO	NO
4:00 PM	1,475	76					NO	NO
5:00 PM	1,051	93					YES	NO
6:00 PM	1,415	81					YES	NO
7:00 PM	1,065	59					NO	NO
8:00 PM	842	49					NO	NO
9:00 PM	614	34					NO	NO
10:00 PM	444	27					NO	NO
11:00 PM	265	16					NO	NO
			See Figure 4C-1		**See Figure 4C-3**			
						Total Hours Meeting Warrants	5	0
						Total Hours Needed to Satisfy	4	1

WARRANTS 2 & 3 SUMMARY

Warrant 2 - Four Hour Vehicular Volume	**Satisfied -- Criteria Met for Signalization**
Warrant 3 - Peak Hour Volume	**Not Satisfied -- No Signal**

Notes:

1) Volumes for Warrants 2 & 3 are compared to attached MUTCD Figures 4C-1 and 4C-3, respectively.

Table TSW-1

Figure 4C-1

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 2 - Four Hour Vehicular Warrant

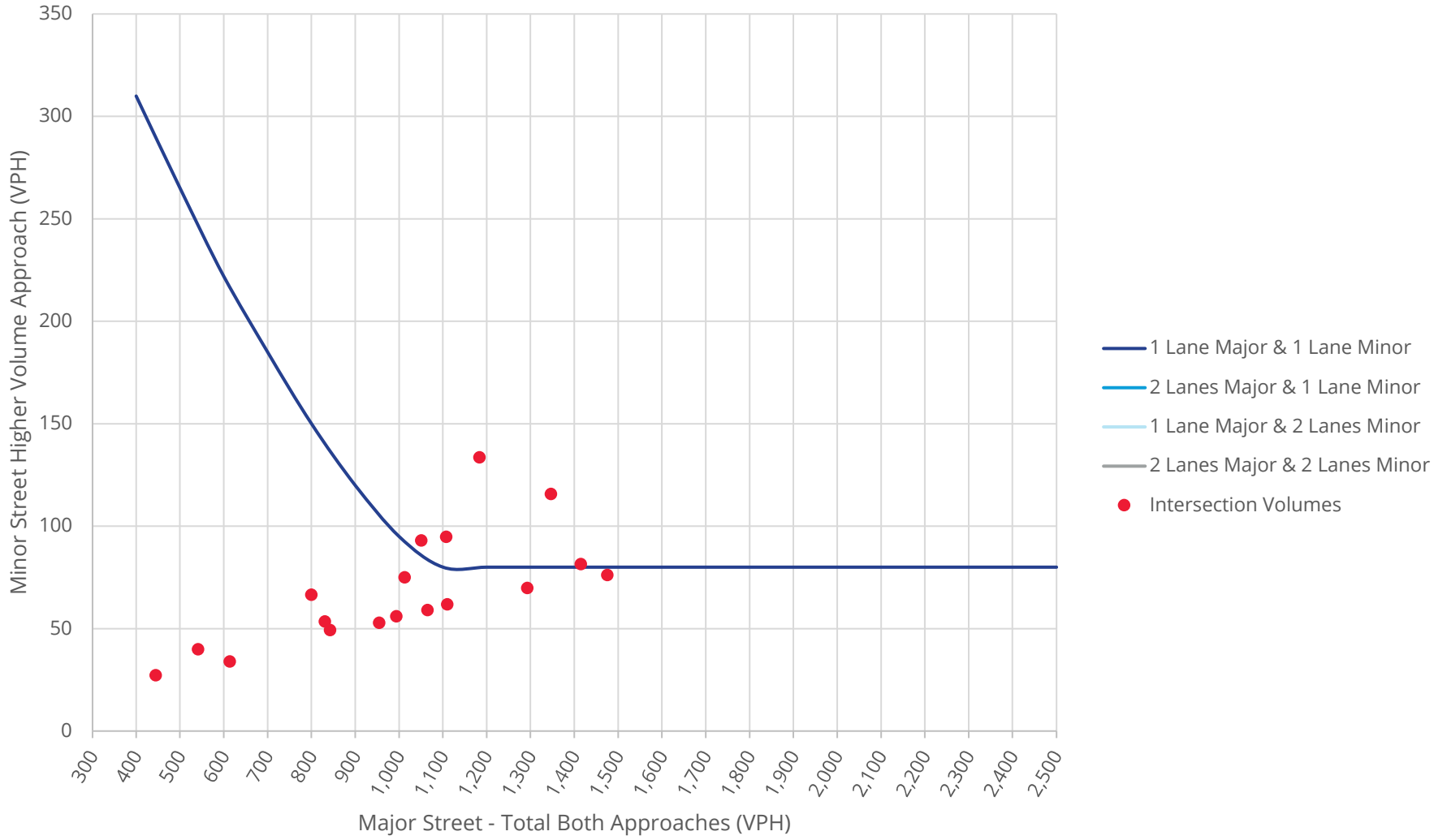

Table TSW-1

Figure 4C-3

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 3 - Peak Hour Warrant

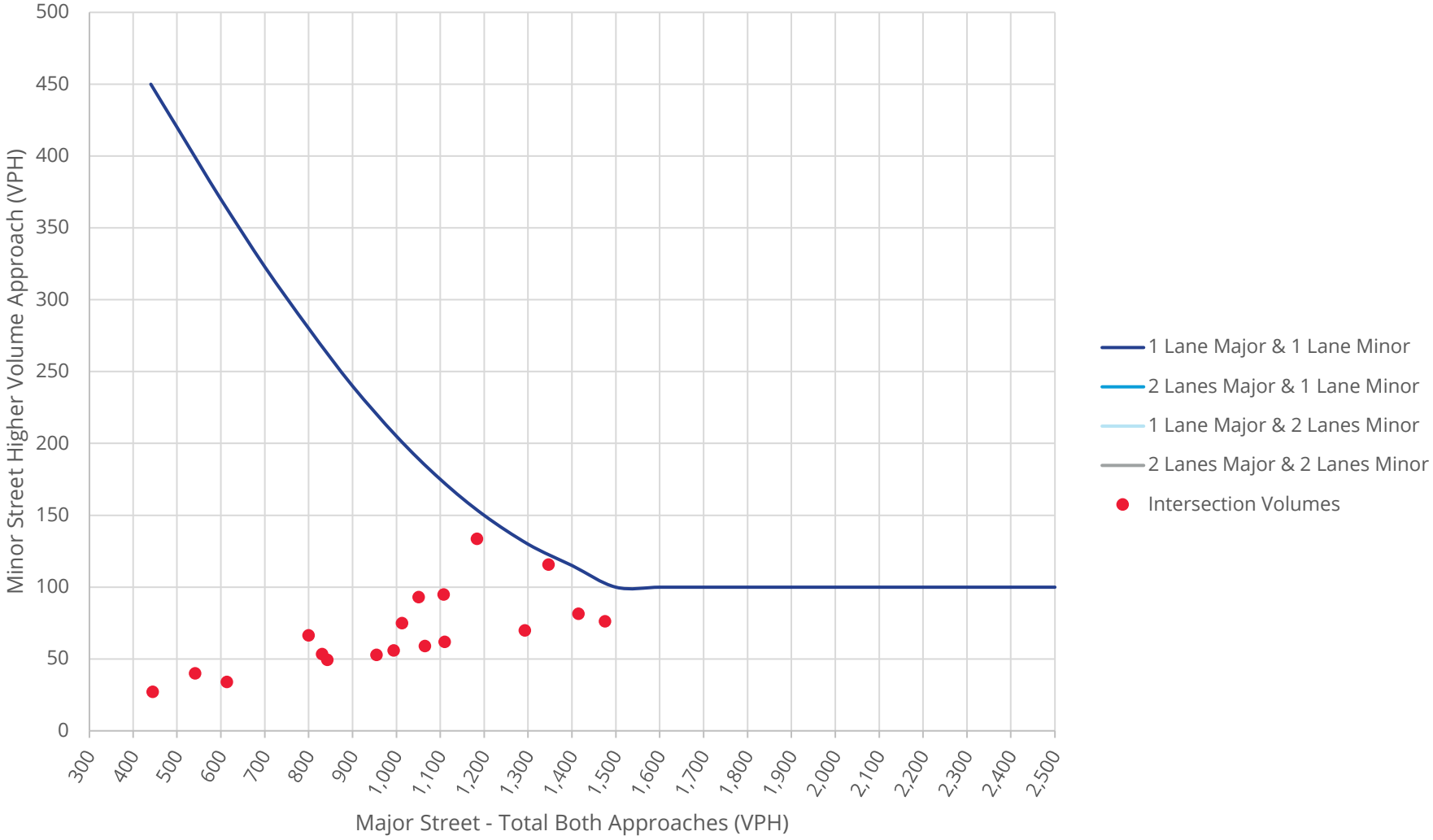

TABLE TSW-2

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT ANALYSIS SUMMARY

INTERSECTION DATA			
Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	30
Volume Basis:	2026 Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS SUMMARY		
Warrant 1 - Eight-Hour Vehicular Volume		
Condition A - Minimum Vehicular Volume		Not Satisfied -- No Signal
Condition B - Minimum Vehicular Interruption of Continous Traffic		Satisfied -- Criteria Met for Signalization
Condition A & B Combined Condition		Not Applicable
	Warrant 1 Satisfied:	**YES**
Warrant 2 - Four-Hour Vehicular Volume		
Four-Hour Vehicular Volume		Satisfied -- Criteria Met for Signalization
	Warrant 2 Satisfied:	**YES**
Warrant 3 - Peak Hour		
Peak Hour Volume		Satisfied -- Criteria Met for Signalization
	Warrant 3 Satisfied:	**YES**
Warrant 4 - Pedestrian Volume Warrant		
Condition A - Pedestrian Four-Hour Volume		Not Applicable
Condition B - Pedestrian Peak Hour Volume		Not Applicable
	Warrant 4 Satisfied:	**Not Applicable**
Warrant 5 - School Crossing		
	Warrant 5 Satisfied:	**Not Applicable**
Warrant 6 - Coordinated Signal System		
	Warrant 6 Satisfied:	**Not Analyzed**
Warrant 7 - Crash Experience		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 8 - Roadway Network		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 9 - Intersection Near a Grade Crossing		
Condition A - Distance to Rail		Not Applicable
Condition B - Traffic Volume Warrant		Not Applicable
	Warrant 9 Satisfied:	**Not Applicable**

Colliers Engineering & Design

TABLE TSW-2

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

INTERSECTION DATA

Major Street: Wolcott Avenue (NYS Route 9D)
Minor Street: Tompkins Avenue/Ralph Street
Location: City of Beacon, Dutchess County, New York
Date: 10/12/2023
Volume Basis: 2026 Build Traffic Volumes
Condition: Typical Weekday

Number of Lanes For Moving Traffic By Approach
Major Street (Excluding Auxiliary Lanes) = 1
Minor Street (Including Auxiliary Lanes) = 1

Major Street Speed
85TH Percentile Speed >= 40 mph (Y or N): N

Community Population
Community < 10,000 (Y or N): N

WARRANT ANALYSIS

Time of Day	Volumes		Warrant 1 Condition A		Warrant 1 Condition B		Warrant 1 Condition A & B				Warrant Met?			
							Condition A		Condition B				Combined	
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Warrant 1A	Warrant 1B	1A	1B
12:00 AM	155	9	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 AM	78	6	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 AM	56	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 AM	58	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
4:00 AM	288	23	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
5:00 AM	548	43	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
6:00 AM	1,121	101	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 AM	1,208	143	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
8:00 AM	1,374	124	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
9:00 AM	1,044	82	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
10:00 AM	840	76	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
11:00 AM	881	65	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
12:00 PM	997	62	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 PM	1,034	66	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 PM	1,151	72	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 PM	1,336	80	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
4:00 PM	1,516	87	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
5:00 PM	1,105	105	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
6:00 PM	1,462	92	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 PM	1,104	67	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
8:00 PM	875	57	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
9:00 PM	635	39	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
10:00 PM	466	32	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
11:00 PM	276	19	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
Total Hours Meeting Warrants											**0**	**9**	**0**	**0**
Total Hours Needed to Satisfy											**8**	**8**	**8***	**8***

WARRANT 1 SUMMARY

Warrant 1 Condition A - Minimum Vehicular Volume	**Not Satisfied -- No Signal**
Warrant 1 Condition B - Interruption of Continuous Traffic	**Satisfied -- Criteria Met for Signalization**
Warrant 1A & 1B Combined Condition	**Not Applicable**

*Note: For Combined Warrant Both Conditions 1A & 1B Must Be Satisfied for a Minimum of 8 Hours.

TABLE TSW-2

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME & WARRANT 3 - PEAK HOUR

INTERSECTION DATA

Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	N
Volume Basis:	2026 Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS

Time of Day	Volumes Major Street	Volumes Minor Street	Warrant 2[1] Major Street	Warrant 2[1] Minor Street	Warrant 3[1] Major Street	Warrant 3[1] Minor Street	Warrant Met? Warrant 2	Warrant Met? Warrant 3
12:00 AM	155	9					NO	NO
1:00 AM	78	6					NO	NO
2:00 AM	56	5					NO	NO
3:00 AM	58	5					NO	NO
4:00 AM	288	23					NO	NO
5:00 AM	548	43					NO	NO
6:00 AM	1,121	101					YES	NO
7:00 AM	1,208	143					YES	NO
8:00 AM	1,374	124					YES	YES
9:00 AM	1,044	82					NO	NO
10:00 AM	840	76					NO	NO
11:00 AM	881	65					NO	NO
12:00 PM	997	62					NO	NO
1:00 PM	1,034	66					NO	NO
2:00 PM	1,151	72					NO	NO
3:00 PM	1,336	80					YES	NO
4:00 PM	1,516	87					YES	NO
5:00 PM	1,105	105					YES	NO
6:00 PM	1,462	92					YES	NO
7:00 PM	1,104	67					NO	NO
8:00 PM	875	57					NO	NO
9:00 PM	635	39					NO	NO
10:00 PM	466	32					NO	NO
11:00 PM	276	19					NO	NO
			See Figure 4C-1		**See Figure 4C-3**			
						Total Hours Meeting Warrants	7	1
						Total Hours Needed to Satisfy	4	1

WARRANTS 2 & 3 SUMMARY

Warrant 2 - Four Hour Vehicular Volume	**Satisfied -- Criteria Met for Signalization**
Warrant 3 - Peak Hour Volume	**Satisfied -- Criteria Met for Signalization**

Notes:

1) Volumes for Warrants 2 & 3 are compared to attached MUTCD Figures 4C-1 and 4C-3, respectively.

Table TSW-2

Figure 4C-1

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 2 - Four Hour Vehicular Warrant

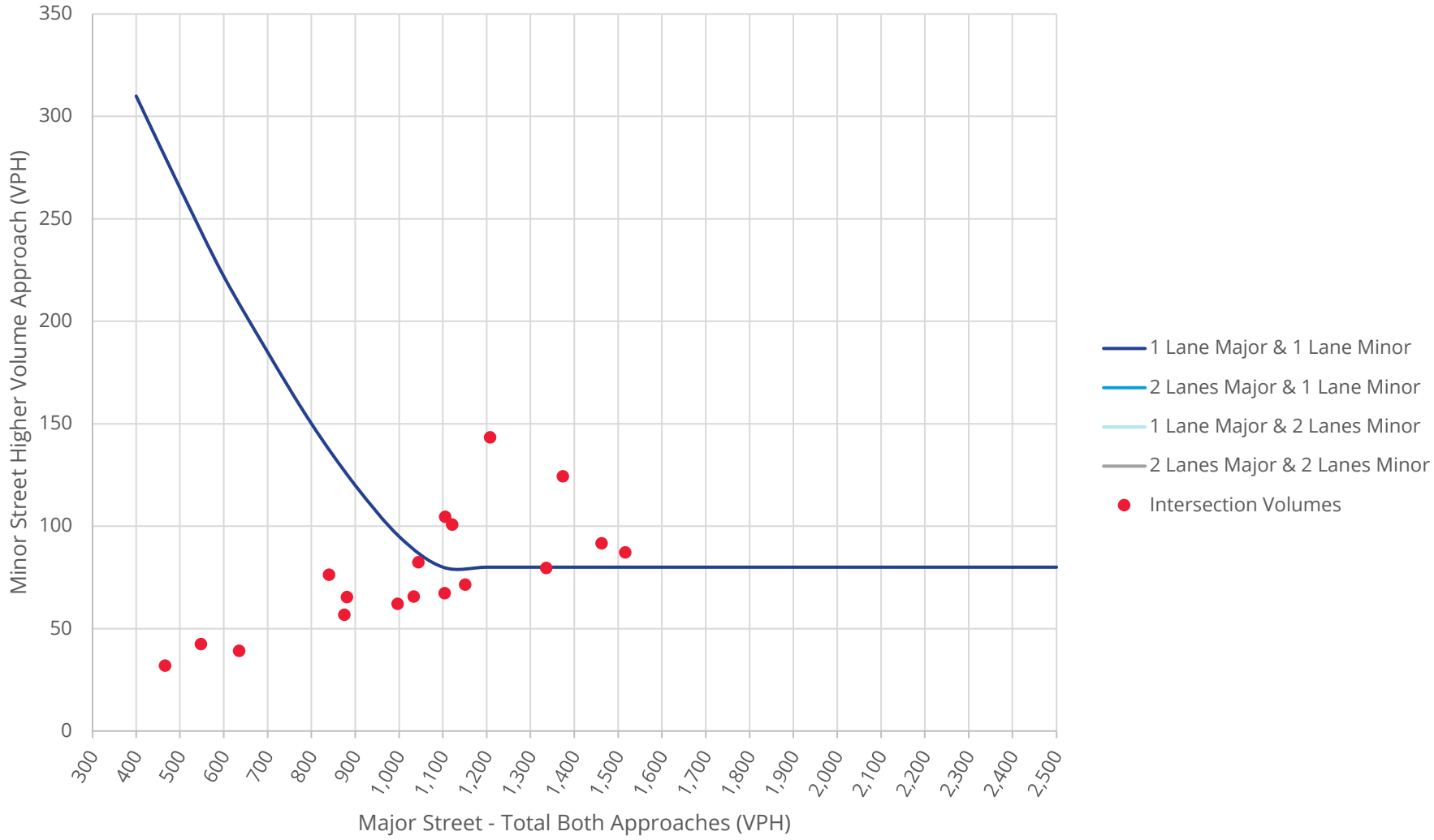

Table TSW-2

Figure 4C-3

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 3 - Peak Hour Warrant

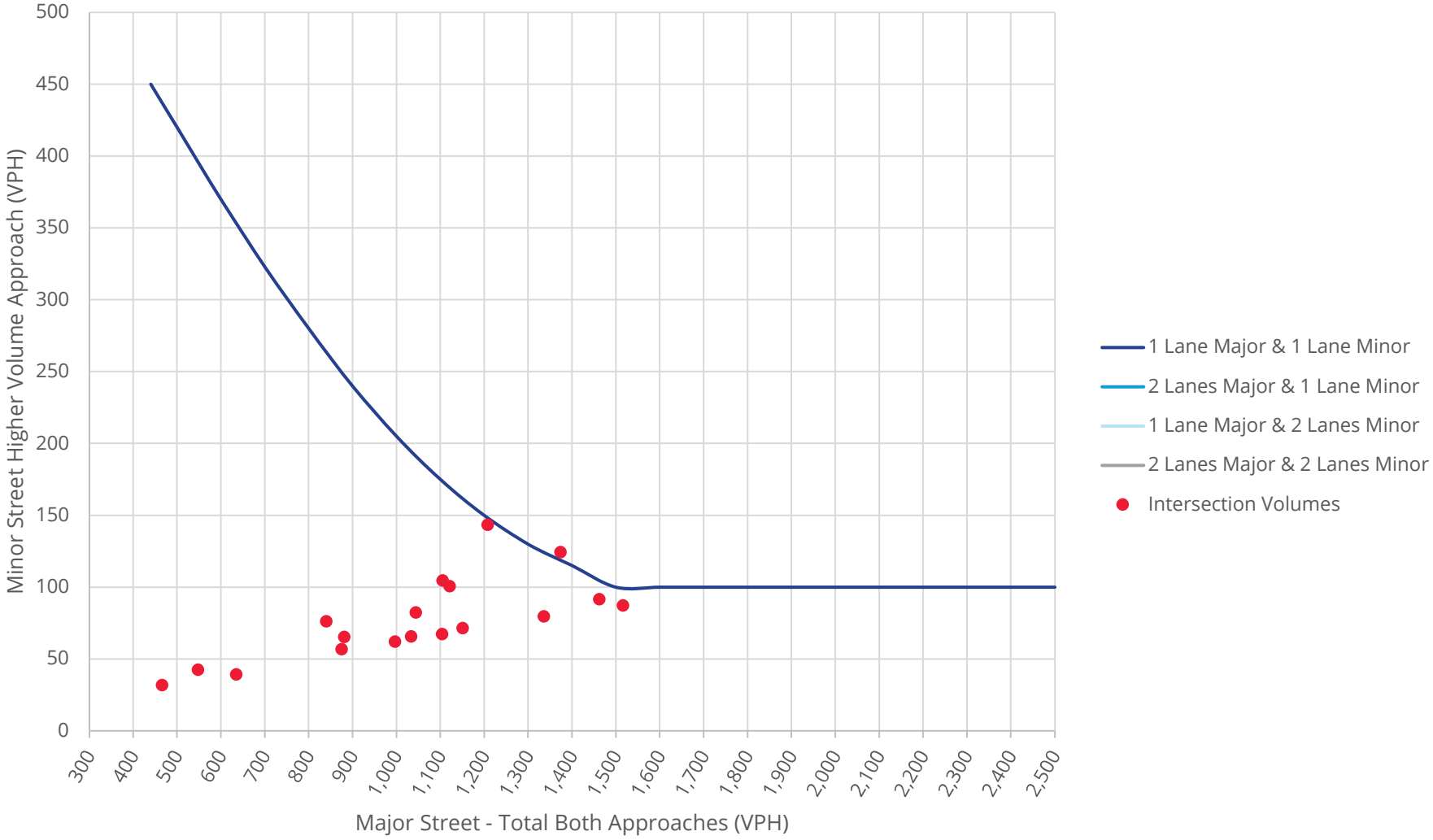

TABLE NO. P-1
SHARED PARKING ANALYSIS
WEEKDAY

		45 Beekman Street				High Street				
Use		**Residential**		**Retail**		**Residential**		**Retail**		
Size		45 Units		10,566 Sq. Ft.		19 Units		4,326 Sq. Ft.		**Total Peak**
Demand Factor		1 /Unit		3.0 /1,000 Sq. Ft.		1 /Unit		3.0 /1,000 Sq. Ft.		**Parking**
Peak Hour Demand		45 Spaces		32 Spaces		19 Spaces		13 Spaces		**Demand**
Time of Day		**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**Parking**
Start	**End**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Spaces**
12:00 AM	1:00 AM	97%	44	0%	-	97%	19	0%	-	63
1:00 AM	2:00 AM	97%	44	0%	-	97%	19	0%	-	63
2:00 AM	3:00 AM	97%	44	0%	-	97%	19	0%	-	63
3:00 AM	4:00 AM	97%	44	0%	-	97%	19	0%	-	63
4:00 AM	5:00 AM	97%	44	0%	-	97%	19	0%	-	63
5:00 AM	6:00 AM	100%	45	0%	-	100%	19	0%	-	64
6:00 AM	7:00 AM	96%	44	0%	-	96%	19	0%	-	63
7:00 AM	8:00 AM	85%	39	0%	-	85%	17	0%	-	56
8:00 AM	9:00 AM	67%	31	19%	7	67%	13	19%	3	54
9:00 AM	10:00 AM	54%	25	33%	11	54%	11	33%	5	52
10:00 AM	11:00 AM	48%	22	47%	16	48%	10	47%	7	55
11:00 AM	12:00 PM	45%	21	55%	18	45%	9	55%	8	56
12:00 PM	1:00 PM	45%	21	89%	29	45%	9	89%	12	71
1:00 PM	2:00 PM	42%	19	100%	32	42%	8	100%	13	72
2:00 PM	3:00 PM	42%	19	73%	24	42%	8	73%	10	61
3:00 PM	4:00 PM	47%	22	73%	24	47%	9	73%	10	65
4:00 PM	5:00 PM	49%	23	66%	22	49%	10	66%	9	64
5:00 PM	6:00 PM	56%	26	70%	23	56%	11	70%	10	70
6:00 PM	7:00 PM	64%	29	75%	24	64%	13	75%	10	76
7:00 PM	8:00 PM	72%	33	70%	23	72%	14	70%	10	80
8:00 PM	9:00 PM	77%	35	54%	18	77%	15	54%	8	76
9:00 PM	10:00 PM	85%	39	48%	16	85%	17	48%	7	79
10:00 PM	11:00 PM	92%	42	0%	-	92%	18	0%	-	60
11:00 PM	12:00 AM	95%	43	0%	-	95%	19	0%	-	62
								Peak Parking Demand		**80**

Notes:

1) "%of Peak Demand" based on Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th Edition Land Use 220 - Multifamily Housing (Low-Rise) and Land Use 820 - Shopping Center Hourly Demand Distributions.

TABLE NO. P-2
SHARED PARKING ANALYSIS
WEEKEND

		45 Beekman Street				High Street				
Use		**Residential**		**Retail**		**Residential**		**Retail**		
Size		45 Units		10,566 Sq. Ft.		19 Units		4,326 Sq. Ft.		**Total Peak**
Demand Factor		1 /Unit		3.0 /1,000 Sq. Ft.		1 /Unit		3.0 /1,000 Sq. Ft.		**Parking**
Peak Hour Demand		45 Spaces		32 Spaces		19 Spaces		13 Spaces		**Demand**
Time of Day		**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**Parking**
Start	**End**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Spaces**
12:00 AM	1:00 AM	92%	42	0%	-	92%	18	0%	-	60
1:00 AM	2:00 AM	92%	42	0%	-	92%	18	0%	-	60
2:00 AM	3:00 AM	92%	42	0%	-	92%	18	0%	-	60
3:00 AM	4:00 AM	92%	42	0%	-	92%	18	0%	-	60
4:00 AM	5:00 AM	92%	42	0%	-	92%	18	0%	-	60
5:00 AM	6:00 AM	100%	45	0%	-	100%	19	0%	-	64
6:00 AM	7:00 AM	99%	45	0%	-	99%	19	0%	-	64
7:00 AM	8:00 AM	97%	44	0%	-	97%	19	0%	-	63
8:00 AM	9:00 AM	92%	42	0%	-	92%	18	0%	-	60
9:00 AM	10:00 AM	83%	38	38%	13	83%	16	38%	5	72
10:00 AM	11:00 AM	79%	36	55%	18	79%	16	55%	8	78
11:00 AM	12:00 PM	71%	32	66%	22	71%	14	66%	9	77
12:00 PM	1:00 PM	68%	31	85%	28	68%	13	85%	12	84
1:00 PM	2:00 PM	65%	30	100%	32	65%	13	100%	13	88
2:00 PM	3:00 PM	62%	28	96%	31	62%	12	96%	13	84
3:00 PM	4:00 PM	66%	30	79%	26	66%	13	79%	11	80
4:00 PM	5:00 PM	66%	30	66%	22	66%	13	66%	9	74
5:00 PM	6:00 PM	67%	31	64%	21	67%	13	64%	9	74
6:00 PM	7:00 PM	70%	32	67%	22	70%	14	67%	9	77
7:00 PM	8:00 PM	78%	36	70%	23	78%	15	70%	10	84
8:00 PM	9:00 PM	77%	35	70%	23	77%	15	70%	10	83
9:00 PM	10:00 PM	80%	36	51%	17	80%	16	51%	7	76
10:00 PM	11:00 PM	82%	37	0%	-	82%	16	0%	-	53
11:00 PM	12:00 AM	88%	40	0%	-	88%	17	0%	-	57
								Peak Parking Demand		**88**

Notes:

1) "%of Peak Demand" based on Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th Edition Land Use 220 - Multifamily Housing (Low-Rise) and Land Use 820 - Shopping Center Hourly Demand Distributions.

TABLE NO. P-1AR
SHARED PARKING ANALYSIS
WEEKDAY (WITH RAIL CREDIT)

		45 Beekman Street				High Street				
Use		**Residential**		**Retail**		**Residential**		**Retail**		
Size		45 Units		10,566 Sq. Ft.		19 Units		4,326 Sq. Ft.		**Total Peak Parking Demand**
Demand Factor		1 /Unit		3.0 /1,000 Sq. Ft.		1 /Unit		3.0 /1,000 Sq. Ft.		
Peak Hour Demand[2]		41 Spaces		32 Spaces		18 Spaces		13 Spaces		
Time of Day		**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**Parking**
Start	**End**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Spaces**
12:00 AM	1:00 AM	97%	40	0%	-	97%	18	0%	-	58
1:00 AM	2:00 AM	97%	40	0%	-	97%	18	0%	-	58
2:00 AM	3:00 AM	97%	40	0%	-	97%	18	0%	-	58
3:00 AM	4:00 AM	97%	40	0%	-	97%	18	0%	-	58
4:00 AM	5:00 AM	97%	40	0%	-	97%	18	0%	-	58
5:00 AM	6:00 AM	100%	41	0%	-	100%	18	0%	-	59
6:00 AM	7:00 AM	96%	40	0%	-	96%	18	0%	-	58
7:00 AM	8:00 AM	85%	35	0%	-	85%	16	0%	-	51
8:00 AM	9:00 AM	67%	28	19%	7	67%	13	19%	3	51
9:00 AM	10:00 AM	54%	23	33%	11	54%	10	33%	5	49
10:00 AM	11:00 AM	48%	20	47%	16	48%	9	47%	7	52
11:00 AM	12:00 PM	45%	19	55%	18	45%	9	55%	8	54
12:00 PM	1:00 PM	45%	19	89%	29	45%	9	89%	12	69
1:00 PM	2:00 PM	42%	18	100%	32	42%	8	100%	13	71
2:00 PM	3:00 PM	42%	18	73%	24	42%	8	73%	10	60
3:00 PM	4:00 PM	47%	20	73%	24	47%	9	73%	10	63
4:00 PM	5:00 PM	49%	21	66%	22	49%	9	66%	9	61
5:00 PM	6:00 PM	56%	23	70%	23	56%	11	70%	10	67
6:00 PM	7:00 PM	64%	27	75%	24	64%	12	75%	10	73
7:00 PM	8:00 PM	72%	30	70%	23	72%	13	70%	10	76
8:00 PM	9:00 PM	77%	32	54%	18	77%	14	54%	8	72
9:00 PM	10:00 PM	85%	35	48%	16	85%	16	48%	7	74
10:00 PM	11:00 PM	92%	38	0%	-	92%	17	0%	-	55
11:00 PM	12:00 AM	95%	39	0%	-	95%	18	0%	-	57
								Peak Parking Demand		**76**

Notes:

1) "%of Peak Demand" based on Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th Edition Land Use 220 - Multifamily Housing (Low-Rise) and Land Use 820 - Shopping Center Hourly Demand Distributions.

2) "Peak Hour Demand" assumes a 10% credit for proximity to the Beacon Metro North Train Station based on ITE data.

TABLE NO. P-2AR
SHARED PARKING ANALYSIS
WEEKEND (WITH RAIL CREDIT)

		45 Beekman Street				High Street				
Use		**Residential**		**Retail**		**Residential**		**Retail**		
Size		45 Units		10,566 Sq. Ft.		19 Units		4,326 Sq. Ft.		**Total Peak Parking Demand**
Demand Factor		1 /Unit		3.0 /1,000 Sq. Ft.		1 /Unit		3.0 /1,000 Sq. Ft.		
Peak Hour Demand[2]		41 Spaces		32 Spaces		18 Spaces		13 Spaces		
Time of Day		**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**% of Peak**	**Parking**	**Parking**
Start	**End**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Demand**	**Spaces**	**Spaces**
12:00 AM	1:00 AM	92%	38	0%	-	92%	17	0%	-	55
1:00 AM	2:00 AM	92%	38	0%	-	92%	17	0%	-	55
2:00 AM	3:00 AM	92%	38	0%	-	92%	17	0%	-	55
3:00 AM	4:00 AM	92%	38	0%	-	92%	17	0%	-	55
4:00 AM	5:00 AM	92%	38	0%	-	92%	17	0%	-	55
5:00 AM	6:00 AM	100%	41	0%	-	100%	18	0%	-	59
6:00 AM	7:00 AM	99%	41	0%	-	99%	18	0%	-	59
7:00 AM	8:00 AM	97%	40	0%	-	97%	18	0%	-	58
8:00 AM	9:00 AM	92%	38	0%	-	92%	17	0%	-	55
9:00 AM	10:00 AM	83%	35	38%	13	83%	15	38%	5	68
10:00 AM	11:00 AM	79%	33	55%	18	79%	15	55%	8	74
11:00 AM	12:00 PM	71%	30	66%	22	71%	13	66%	9	74
12:00 PM	1:00 PM	68%	28	85%	28	68%	13	85%	12	81
1:00 PM	2:00 PM	65%	27	100%	32	65%	12	100%	13	84
2:00 PM	3:00 PM	62%	26	96%	31	62%	12	96%	13	82
3:00 PM	4:00 PM	66%	28	79%	26	66%	12	79%	11	77
4:00 PM	5:00 PM	66%	28	66%	22	66%	12	66%	9	71
5:00 PM	6:00 PM	67%	28	64%	21	67%	13	64%	9	71
6:00 PM	7:00 PM	70%	29	67%	22	70%	13	67%	9	73
7:00 PM	8:00 PM	78%	32	70%	23	78%	15	70%	10	80
8:00 PM	9:00 PM	77%	32	70%	23	77%	14	70%	10	79
9:00 PM	10:00 PM	80%	33	51%	17	80%	15	51%	7	72
10:00 PM	11:00 PM	82%	34	0%	-	82%	15	0%	-	49
11:00 PM	12:00 AM	88%	37	0%	-	88%	16	0%	-	53
								Peak Parking Demand		**84**

Notes:

1) "%of Peak Demand" based on Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th Edition Land Use 220 - Multifamily Housing (Low-Rise) and Land Use 820 - Shopping Center Hourly Demand Distributions.

2) "Peak Hour Demand" assumes a 10% credit for proximity to the Beacon Metro North Train Station based on ITE data.

TABLE A-1

ACCIDENT DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2018 THROUGH JULY 31, 2023

On Street	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	Vehicles-Injuries	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors
BEEKMAN STREET SOUTHWEST OF W MAIN STREET												
BEEKMAN ST	40FT SOUTH OF W MAIN ST	---	11/15/2018	7:17 PM	NO PASSING ZONE	PDO	2-0	DARK-ROAD LIGHTED	SNOW/ICE	SNOW	PARKED VEHICLE	V1:(PASSING OR LANE USAGE IMPROPERLY,PAVEMENT SLIPPERY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
BEEKMAN STREET AT INTERSECTION OF W MAIN STREET												
BEEKMAN ST	AT THE INTERSECTION OF W MAIN ST	---	8/20/2018	7:39 PM	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
BEEKMAN ST	AT THE INTERSECTION OF W MAIN ST	---	9/15/2018	2:44 PM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OBJECT IN ROADWAY	V1:(TURNING IMPROPER,NOT APPLICABLE)
W MAIN ST	AT THE INTERSECTION OF BEEKMAN ST	---	11/15/2018	7:05 PM	NONE	PDO	4-0	DARK-ROAD LIGHTED	SNOW/ICE	SNOW	REAR END	V1:(PAVEMENT SLIPPERY,NOT APPLICABLE) / V2:(PAVEMENT SLIPPERY,NOT APPLICABLE) / V3:(PAVEMENT SLIPPERY,NOT APPLICABLE) / V4:(NOT APPLICABLE,NOT APPLICABLE)
BEEKMAN ST	AT THE INTERSECTION OF W MAIN ST	---	1/15/2019	12:15 AM	NO PASSING ZONE	PDO	1-0	DARK-ROAD LIGHTED	DRY	CLEAR	ANIMAL	V1:(ANIMALS ACTION,NOT APPLICABLE)
W MAIN ST	AT THE INTERSECTION OF BEEKMAN ST	---	2/1/2019	3:32 PM	STOP SIGN	I	2-1	DAYLIGHT	DRY	CLEAR	REAR END	V1:(NOT APPLICABLE,NOT APPLICABLE) / V2:(FOLLOWING TOO CLOSELY,NOT APPLICABLE)
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) SOUTH OF MAIN STREET												
BEACON ST	AT THE INTERSECTION OF WOLCOTT AVE	9D82032024	3/29/2021	2:38 PM	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(DRIVER INATTENTION,FOLLOWING TOO CLOSELY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF MAIN STREET												
ROUTE 9D	AT THE INTERSECTION OF MAIN ST	9D82032026	3/7/2018	2:24 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	SNOW/ICE	SNOW	RIGHT ANGLE	V1:(NOT APPLICABLE,NOT APPLICABLE) / V2:(PAVEMENT SLIPPERY,TURNING IMPROPER)
MAIN ST	AT THE INTERSECTION OF ROUTE 9D	---	7/7/2018	8:13 PM	NO PASSING ZONE	PDO	2-0	DUSK	DRY	CLEAR	OVERTAKING	V1:(OVERSIZED VEHICLE,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF MAIN ST	9D82032026	4/12/2019	1:35 PM	TRAFFIC SIGNAL	I	2-2	DAYLIGHT	DRY	CLOUDY	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
MAIN ST	AT THE INTERSECTION OF WOLCOTT AVE	9D82032025	4/23/2019	4:29 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
MAIN ST	AT THE INTERSECTION OF NORTH AVE	9D82032026	9/17/2019	8:30 PM	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF MAIN ST	9D82032026	10/29/2019	12:50 PM	TRAFFIC SIGNAL	I	2-2	DAYLIGHT	DRY	CLEAR	REAR END	V1:(DRIVER INATTENTION,UNKNOWN) / V2:(NOT APPLICABLE,NOT APPLICABLE)
WOLCOTT AVE	AT THE INTERSECTION OF MAIN ST	9D82032025	12/23/2019	4:00 PM	TRAFFIC SIGNAL	I	1-3	DAYLIGHT	DRY	CLEAR	PEDESTRIAN	V1:(UNSAFE SPEED,FAILURE TO YIELD RIGHT OF WAY)
ROUTE 9D	AT THE INTERSECTION OF MAIN ST	9D82032026	9/2/2020	5:05 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	WET	CLOUDY	LEFT TURN (WITH OTHER CAR)	V1:(FAILURE TO YIELD RIGHT OF WAY,PASSING OR LANE USAGE IMPROPERLY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
WOLCOTT AVE	AT THE INTERSECTION OF MAIN ST	9D82032025	11/3/2020	12:00 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,UNKNOWN) / V2:(NOT APPLICABLE,NOT APPLICABLE)
MAIN ST	AT THE INTERSECTION OF NORTH AVE	9D82032026	12/18/2020	9:59 PM	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	WET	CLEAR	REAR END	V1:(DRIVER INATTENTION,FOLLOWING TOO CLOSELY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
MAIN ST	AT THE INTERSECTION OF WOLCOTT AVE	9D82032025	3/12/2021	1:46 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN (AGAINST OTHER CAR)	V1:(NOT APPLICABLE,NOT APPLICABLE) / V2:(PASSING OR LANE USAGE IMPROPERLY,NOT APPLICABLE)
MAIN ST	AT THE INTERSECTION OF ROUTE 9D	---	5/23/2021	10:47 AM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)

TABLE A-1

ACCIDENT DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2018 THROUGH JULY 31, 2023

On Street	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	Vehicles-Injuries	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors
MAIN ST	AT THE INTERSECTION OF ROUTE 9D	---	8/14/2021	10:32 AM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(PASSING OR LANE USAGE IMPROPERLY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF MAIN ST	9D82032026	3/10/2022	2:50 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(DRIVER INATTENTION,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
WOLCOTT AVE	AT THE INTERSECTION OF MAIN ST	9D82032025	7/3/2022	9:54 PM	TRAFFIC SIGNAL	I	2-1	DARK-ROAD LIGHTED	DRY	CLEAR	LEFT TURN (AGAINST OTHER CAR)	V1:(FAILURE TO YIELD RIGHT OF WAY,UNKNOWN) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF MAIN ST	9D82032025	7/26/2022	4:06 PM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(TURNING IMPROPER,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
WOLCOTT AVE	AT THE INTERSECTION OF MAIN ST	9D82032025	10/24/2022	10:40 AM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	WET	CLOUDY	LEFT TURN (WITH OTHER CAR)	V1:(TURNING IMPROPER,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) BETWEEN MAIN STREET & BEEKMAN STREET/CHURCH STREET												
WOLCOTT AVE	20FT NORTH OF MAIN ST	9D82032025	4/14/2018	12:00 AM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	PARKING	V1:(NOT ENTERED,NOT ENTERED) / V2:(NOT ENTERED,NOT ENTERED)
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF BEEKMAN STREET/CHURCH STREET												
NORTH AVE	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	1/28/2018	6:44 PM	TRAFFIC SIGNAL	PDO	2-0	DUSK	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
BEEKMAN ST	AT THE INTERSECTION OF ROUTE 9D	---	5/23/2018	4:20 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(PASSING OR LANE USAGE IMPROPERLY,NOT APPLICABLE) / V2:(PASSING OR LANE USAGE IMPROPERLY,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	11/12/2018	9:05 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(OTHER (VEHICLE),NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	11/15/2018	4:42 PM	NO PASSING ZONE	PDO	2-0	DARK-ROAD LIGHTED	SNOW/ICE	SNOW	REAR END	V1:(PAVEMENT SLIPPERY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	9/20/2019	5:02 PM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(PASSING OR LANE USAGE IMPROPERLY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	3/15/2021	10:04 AM	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(DRIVER INATTENTION,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	4/4/2021	1:16 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(TRAFFIC CONTROL DEVICES DISREGARDED,CELL PHONE (HAND HELD)) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF W CHURCH ST	9D82032026	4/12/2021	4:29 PM	TRAFFIC SIGNAL	I	1-1	DAYLIGHT	WET	RAIN	BICYCLIST	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	5/28/2021	4:15 PM	NONE	PDO	2-0	DAYLIGHT	WET	RAIN	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF BEEKMAN ST	9D82032026	4/8/2022	8:30 AM	TRAFFIC SIGNAL	PDO	3-0	DAYLIGHT	WET	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE) / V3:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF W CHURCH ST	9D82032026	9/23/2022	10:15 PM	TRAFFIC SIGNAL	I	2-1	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
BEEKMAN ST	AT THE INTERSECTION OF NORTH AVE	9D82032026	6/8/2023	5:30 PM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)

TABLE A-1

ACCIDENT DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2018 THROUGH JULY 31, 2023

On Street	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	Vehicles-Injuries	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) BETWEEN BEEKMAN STREET/CHURCH STREET AND TOMPKINS AVENUE/RALPH STREET												
ROUTE 9D	100FT NORTH OF BEEKMAN ST	9D82032026	3/6/2018	7:40 AM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	ANIMAL	V1:(ANIMALS ACTION,NOT APPLICABLE)
NORTH AVE	20FT SOUTH OF TOMPKINS TER	9D82032027	3/1/2019	6:24 AM	NO PASSING ZONE	PDO	1-0	DAWN	SNOW/ICE	SNOW	RUN OFF ROAD	V1:(UNSAFE SPEED,PAVEMENT SLIPPERY)
NORTH AVE	100FT NORTH OF W CHURCH ST	9D82032026	11/15/2019	3:29 AM	NO PASSING ZONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	ANIMAL	V1:(ANIMALS ACTION,NOT APPLICABLE)
NORTH AVE	5FT NORTH OF W CHURCH ST	9D82032026	5/18/2022	4:40 PM	TRAFFIC SIGNAL	PDO	3-0	DAYLIGHT	DRY	CLOUDY	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V3:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	20FT SOUTH OF TOMPKINS AVE	9D82032026	7/4/2022	1:21 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT ENTERED) / V2:(NOT ENTERED,NOT ENTERED)
NORTH AVE	100FT NORTH OF BEEKMAN ST	9D82032026	8/28/2022	11:28 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	100FT SOUTH OF RALPH ST	9D82032026	7/22/2023	3:40 PM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF TOMPKINS AVENUE/RALPH STREET												
ROUTE 9D	AT THE INTERSECTION OF TOMPKINS AVE	---	7/18/2018	12:22 PM	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	9/14/2018	6:04 PM	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(REACTION TO OTHER UNINVOLVED VEHICL,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	1/3/2019	11:33 AM	STOP SIGN	I	2-1	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	5/10/2019	3:29 PM	NONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	2/2/2020	1:11 PM	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,DRIVER INATTENTION) / V2:(NOT APPLICABLE,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF TOMPKINS AVE	9D82032027	5/4/2021	4:46 PM	STOP SIGN	I	2-2	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	7/21/2021	12:48 PM	STOP SIGN	I	2-1	DAYLIGHT	DRY	CLOUDY	LEFT TURN (AGAINST OTHER CAR)	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF TOMPKINS TER	9D82032027	11/26/2021	10:20 AM	NONE	PDO	2-0	DAYLIGHT	WET	RAIN	REAR END	V1:(PAVEMENT SLIPPERY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
TOMPKINS AVE	AT THE INTERSECTION OF NORTH AVE	9D82032027	10/24/2022	9:12 AM	STOP SIGN	PDO	2-0	DAYLIGHT	WET	CLOUDY	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
TOMPKINS AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	12/12/2022	4:03 PM	NONE	PDO	2-0	DAYLIGHT	WET	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT ENTERED) / V2:(NOT ENTERED,NOT ENTERED)
NORTH AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	4/21/2023	5:19 PM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,FATIGUED/DROWSY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
TOMPKINS AVE	AT THE INTERSECTION OF RALPH ST	9D82032027	7/21/2023	5:09 PM	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)

TABLE A-1

ACCIDENT DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2018 THROUGH JULY 31, 2023

On Street	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	Vehicles-Injuries	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) BETWEEN TOMPKINS AVENUE/RALPH STREET AND VERPLANCK AVENUE												
NORTH AVE	AT THE INTERSECTION OF LAFAYETTE AVE	9D82032028	2/7/2018	12:22 PM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	SNOW/ICE	SLEET/HAIL/ FREEZING RAIN	RUN OFF ROAD	V1:(PAVEMENT SLIPPERY,NOT APPLICABLE)
ROUTE 9D	15FT NORTH OF RALPH ST	9D82032027	8/28/2018	6:06 PM	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	RUN OFF ROAD	V1:(DRIVER INATTENTION,EATING OR DRINKING)
NORTH AVE	AT THE INTERSECTION OF MACKIN AVE	9D82032027	12/17/2018	4:20 PM	NO PASSING ZONE	I	2-2	DUSK	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
LAFAYETTE AVE	AT THE INTERSECTION OF NORTH AVE	9D82032028	6/29/2019	1:50 PM	STOP SIGN	I	2-2	DAYLIGHT	DRY	CLEAR	HEAD ON	V1:(DRIVER INEXPERIENCE,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH RD	200FT SOUTH OF VERPLANCK AVE	---	8/12/2019	3:40 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(NOT APPLICABLE,NOT APPLICABLE) / V2:(FOLLOWING TOO CLOSELY,NOT APPLICABLE)
NORTH AVE	46FT SOUTH OF VERPLANCK AVE	9D82032028	4/28/2020	4:15 PM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(DRIVER INATTENTION,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF LAFAYETTE AVE	9D82032028	8/20/2020	7:04 PM	STOP SIGN	PDO	1-0	DAYLIGHT	DRY	CLEAR	BICYCLIST	
NORTH AVE	200FT NORTH OF LAFAYETTE AVE	9D82032028	6/30/2021	6:47 AM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(PASSING OR LANE USAGE IMPROPERLY,NOT APPLICABLE)
NORTH AVE	50FT NORTH OF TOMPKINS AVE	9D82032027	11/11/2021	12:16 PM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	ANIMAL	V1:(ANIMALS ACTION,NOT APPLICABLE)
NORTH AVE	50FT SOUTH OF VERPLANCK AVE	9D82032028	7/4/2022	11:38 AM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	50FT SOUTH OF LAFAYETTE AVE	9D82032028	10/29/2022	11:50 AM	NO PASSING	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(DRIVER INATTENTION,FOLLOWING TOO CLOSELY) /
NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF VERPLANCK AVENUE												
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	1/5/2018	3:43 PM	TRAFFIC SIGNAL	I	2-2	DAYLIGHT	SNOW/ICE	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	1/20/2018	12:19 AM	TRAFFIC SIGNAL	I	2-1	DARK-ROAD LIGHTED	DRY	CLEAR	RIGHT ANGLE	V1:(NOT APPLICABLE,NOT APPLICABLE) / V2:(ALCOHOL INVOLVEMENT,FAILURE TO YIELD RIGHT OF WAY)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	8/3/2018	9:21 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
VERPLANCK AVE	AT THE INTERSECTION OF NORTH AVE	9D82032028	9/27/2018	3:05 PM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	V1:(BACKING UNSAFELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	1/5/2019	7:17 AM	TRAFFIC SIGNAL	I	2-3	DAWN	WET	RAIN	LEFT TURN (AGAINST OTHER CAR)	V1:(NOT APPLICABLE,NOT APPLICABLE) / V2:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE)
VERPLANCK AVE	AT THE INTERSECTION OF NORTH AVE	9D82032028	1/15/2019	2:31 PM	TRAFFIC SIGNAL	PDO	3-0	DAYLIGHT	DRY	CLEAR	LEFT TURN (AGAINST OTHER CAR)	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE) / V3:(UNKNOWN,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	2/6/2019	7:00 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(NOT APPLICABLE,NOT APPLICABLE) / V2:(FOLLOWING TOO CLOSELY,NOT APPLICABLE)
ROUTE 9D	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	5/11/2019	8:30 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	6/18/2019	2:10 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	WET	RAIN	REAR END	V1:(DRIVER INATTENTION,UNKNOWN) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	8/13/2019	9:26 AM	TRAFFIC SIGNAL	I	3-1	DAYLIGHT	DRY	CLOUDY	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT ENTERED) / V2:(NOT ENTERED,NOT ENTERED) / V3:(NOT ENTERED,NOT ENTERED)

TABLE A-1

ACCIDENT DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2018 THROUGH JULY 31, 2023

On Street	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	Vehicles-Injuries	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	10/15/2019	12:09 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	12/29/2020	4:16 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(GLARE,FOLLOWING TOO CLOSELY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	4/26/2021	5:20 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(UNKNOWN,UNKNOWN)
VERPLANCK AVE	AT THE INTERSECTION OF NORTH AVE	9D82032028	9/20/2021	1:41 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
VERPLANCK AVE	AT THE INTERSECTION OF NORTH AVE	9D82032028	9/30/2021	7:42 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(DRIVER INATTENTION,FOLLOWING TOO CLOSELY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	5/21/2022	3:20 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	V1:(FAILURE TO YIELD RIGHT OF WAY,UNSAFE LANE CHANGE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	5/27/2022	7:44 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	V1:(DRIVER INATTENTION,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	6/24/2022	1:07 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FELL ASLEEP,FOLLOWING TOO CLOSELY) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	8/18/2022	9:47 PM	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,UNKNOWN) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	11/3/2022	9:27 PM	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	SIDESWIPE	V1:(TURNING IMPROPER,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	3/20/2023	5:21 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	AT THE INTERSECTION OF VERPLANCK AVE	9D82032028	5/22/2023	4:02 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(PASSENGER DISTRACTION,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
MISCELLANEOUS CRASH LOCATIONS												
TOMPKINS HOSE FIRE HOUSE	PARKING LOT	9D82032025	2/5/2018	8:00 PM	NONE	PDO	1-0	DARK-ROAD LIGHTED	DRY	CLEAR	PARKING	V1:(BACKING UNSAFELY,NOT APPLICABLE)
MAIN ST	10FT WEST OF NORTH AVE	9D82032026	8/14/2018	4:44 PM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	V1:(FOLLOWING TOO CLOSELY,UNKNOWN) / V2:(NOT APPLICABLE,NOT APPLICABLE)
1158 NORTH AVE DRIVEWAY	15FT EAST OF MAIN ST	9D82032026	9/8/2018	4:04 PM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	V1:(FAILURE TO YIELD RIGHT OF WAY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
MAIN ST	250FT EAST OF NORTH AVE	9D82032026	10/8/2018	4:23 PM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	PARKING	V1:(BACKING UNSAFELY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
NORTH AVE	150FT EAST OF MAIN ST	9D82032026	2/22/2021	4:15 PM	NONE	PDO	2-0	DAYLIGHT	SLUSH	SNOW	PARKING	V1:(PAVEMENT SLIPPERY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
1 MUNICIPAL PLZ	PARKING LOT	---	5/16/2022	3:39 PM	NONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	PARKING	V1:(PASSING OR LANE USAGE IMPROPERLY,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)
1 MUNICIPAL PLZ	PARKING LOT	9D82032025	5/18/2022	4:05 PM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	PARKING	V1:(BRAKES DEFECTIVE,NOT APPLICABLE) / V2:(NOT APPLICABLE,NOT APPLICABLE)

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TABLE A-2

CRASH DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2017 THROUGH JULY 31, 2023

SUMMARY BY INTERSECTION

BEEKMAN STREET AT INTERSECTION OF W MAIN STREET

Crashes by Year	
Year	Crashes
2018	3
2019	2
2020	-
2021	-
2022	-
2023	-
Total Crashes	5

Accident Class Summary	
Accident Class	Crashes
N/R	-
PDO	4
I	1
PDO & I	-
F	-
Total Crashes	5

Light Condition Summary	
Light Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DAYLIGHT	3
DAWN	-
DUSK	-
DARK-ROAD LIGHTED	2
DARK-ROAD UNLIGHTED	-
Total Crashes	5

Road Condition Summary	
Road Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DRY	4
WET	-
MUDDY	-
SNOW/ICE	1
SLUSH	-
FLOODED	-
OTHER	-
Total Crashes	5

Weather Summary	
Weather Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
CLEAR	4
CLOUDY	-
RAIN	-
SNOW	1
SLEET/HAIL/FREEZING RAIN	-
FOG/SMOG/SMOKE	-
OTHER	-
Total Crashes	5

Collision Type Summary	
Collision Type	Crashes
PEDESTRIAN	-
ANIMAL	1
REAR END	2
RIGHT ANGLE	1
LEFT TURN (AGAINST OTHER CAR)	-
LEFT TURN (WITH OTHER CAR)	-
RIGHT TURN (AGAINST OTHER CAR)	-
RIGHT TURN (WITH OTHER CAR)	-
OVERTAKING	-
SIDESWIPE	-
HEAD ON	-
OBJECT IN ROADWAY	1
Total Crashes	5

NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF MAIN STREET

Crashes by Year	
Year	Crashes
2017	-
2018	2
2019	5
2020	3
2021	3
2022	4
2023	-
Total Crashes	17

Accident Class Summary	
Accident Class	Crashes
N/R	-
PDO	13
I	4
PDO & I	-
F	-
Total Crashes	17

Light Condition Summary	
Light Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DAYLIGHT	13
DAWN	-
DUSK	1
DARK-ROAD LIGHTED	3
DARK-ROAD UNLIGHTED	-
Total Crashes	17

Road Condition Summary	
Road Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DRY	13
WET	3
MUDDY	-
SNOW/ICE	1
SLUSH	-
FLOODED	-
OTHER	-
Total Crashes	17

Weather Summary	
Weather Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
CLEAR	13
CLOUDY	3
RAIN	-
SNOW	1
SLEET/HAIL/FREEZING RAIN	-
FOG/SMOG/SMOKE	-
OTHER	-
Total Crashes	17

Collision Type Summary	
Collision Type	Crashes
PEDESTRIAN	1
ANIMAL	-
REAR END	7
RIGHT ANGLE	2
LEFT TURN (AGAINST OTHER CAR)	2
LEFT TURN (WITH OTHER CAR)	2
RIGHT TURN (AGAINST OTHER CAR)	-
RIGHT TURN (WITH OTHER CAR)	-
OVERTAKING	3
SIDESWIPE	-
HEAD ON	-
OBJECT IN ROADWAY	-
Total Crashes	17

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TABLE A-2

CRASH DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2017 THROUGH JULY 31, 2023

SUMMARY BY INTERSECTION

NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF BEEKMAN STREET/CHURCH STREET

Crashes by Year	
Year	Crashes
2018	4
2019	1
2020	-
2021	4
2022	2
2023	1
Total Crashes	12

Accident Class Summary	
Accident Class	Crashes
N/R	-
PDO	10
I	2
PDO & I	-
F	-
Total Crashes	12

Light Condition Summary	
Light Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DAYLIGHT	9
DAWN	-
DUSK	1
DARK-ROAD LIGHTED	2
DARK-ROAD UNLIGHTED	-
Total Crashes	12

Road Condition Summary	
Road Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DRY	8
WET	3
MUDDY	-
SNOW/ICE	1
SLUSH	-
FLOODED	-
OTHER	-
Total Crashes	12

Weather Summary	
Weather Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
CLEAR	8
CLOUDY	1
RAIN	2
SNOW	1
SLEET/HAIL/FREEZING RAIN	-
FOG/SMOG/SMOKE	-
OTHER	-
Total Crashes	12

Collision Type Summary	
Collision Type	Crashes
BICYCLIST	1
ANIMAL	-
REAR END	7
RIGHT ANGLE	2
LEFT TURN (AGAINST OTHER CAR)	-
LEFT TURN (WITH OTHER CAR)	-
RIGHT TURN (AGAINST OTHER CAR)	-
RIGHT TURN (WITH OTHER CAR)	-
OVERTAKING	2
SIDESWIPE	-
HEAD ON	-
OBJECT IN ROADWAY	-
Total Crashes	12

NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF TOMPKINS AVENUE/RALPH STREET

Crashes by Year	
Year	Crashes
2018	2
2019	2
2020	1
2021	3
2022	2
2023	2
Total Crashes	12

Accident Class Summary	
Accident Class	Crashes
N/R	-
PDO	9
I	3
PDO & I	-
F	-
Total Crashes	12

Light Condition Summary	
Light Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DAYLIGHT	12
DAWN	-
DUSK	-
DARK-ROAD LIGHTED	-
DARK-ROAD UNLIGHTED	-
Total Crashes	12

Road Condition Summary	
Road Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
DRY	9
WET	3
MUDDY	-
SNOW/ICE	-
SLUSH	-
FLOODED	-
OTHER	-
Total Crashes	12

Weather Summary	
Weather Condition	Crashes
UNKNOWN	-
NOT ENTERED	-
CLEAR	8
CLOUDY	3
RAIN	1
SNOW	-
SLEET/HAIL/FREEZING RAIN	-
FOG/SMOG/SMOKE	-
OTHER	-
Total Crashes	12

Collision Type Summary	
Collision Type	Crashes
PEDESTRIAN	-
ANIMAL	-
REAR END	3
RIGHT ANGLE	8
LEFT TURN (AGAINST OTHER CAR)	1
LEFT TURN (WITH OTHER CAR)	-
RIGHT TURN (AGAINST OTHER CAR)	-
RIGHT TURN (WITH OTHER CAR)	-
OVERTAKING	-
SIDESWIPE	-
HEAD ON	-
OBJECT IN ROADWAY	-
Total Crashes	12

NYS ROUTE 9D (NORTH AVENUE/WOLCOTT AVENUE) AT INTERSECTION OF VERPLANCK AVENUE

Crashes by Year	
Year	Crashes
2018	4
2019	7

Accident Class Summary	
Accident Class	Crashes
N/R	-
PDO	18

Light Condition Summary	
Light Condition	Crashes
UNKNOWN	-
NOT ENTERED	-

Road Condition Summary	
Road Condition	Crashes
UNKNOWN	-
NOT ENTERED	-

Weather Summary	
Weather Condition	Crashes
UNKNOWN	-
NOT ENTERED	-

Collision Type Summary	
Collision Type	Crashes
PEDESTRIAN	-
ANIMAL	-

TABLE A-2

CRASH DATA SUMMARY
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2017 THROUGH JULY 31, 2023

SUMMARY BY INTERSECTION

2020	1
2021	3
2022	5
2023	2
Total Crashes	**22**

I	4
PDO & I	-
F	-
Total Crashes	**22**

DAYLIGHT	18
DAWN	1
DUSK	-
DARK-ROAD LIGHTED	3
DARK-ROAD UNLIGHTED	-
Total Crashes	**22**

DRY	19
WET	2
MUDDY	-
SNOW/ICE	1
SLUSH	-
FLOODED	-
OTHER	-
Total Crashes	**22**

CLEAR	17
CLOUDY	3
RAIN	2
SNOW	-
SLEET/HAIL/FREEZING RAIN	-
FOG/SMOG/SMOKE	-
OTHER	-
Total Crashes	**22**

REAR END	14
RIGHT ANGLE	4
LEFT TURN (AGAINST OTHER CAR)	2
LEFT TURN (WITH OTHER CAR)	-
RIGHT TURN (AGAINST OTHER CAR)	-
RIGHT TURN (WITH OTHER CAR)	-
OVERTAKING	1
SIDESWIPE	1
HEAD ON	-
OBJECT IN ROADWAY	-
Total Crashes	**22**

TABLE A-3
SUMMARY OF ACCIDENT RATES AND COMPARISON TO STATE WIDE AVERAGES
BEEKMAN STREET BETWEEN W. MAIN STREET & NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE)
NYS ROUTE 9D (WOLCOTT AVENUE/NORTH AVENUE) BETWEEN MAIN STREET AND VERPLANCK AVENUE
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK
STUDY PERIOD: JANUARY 1, 2017 THROUGH JULY 31, 2023

Roadway Intersection/Segment	Analysis Period (Years)	Intersection/ Segment AADT (VPD)	No. of Accidents	Intersection Accident Rate (ACC/MEV)	State-Wide Average Accident Rate (ACC/MEV)
North Avenue (NYS Route 9D) and Verplanck Avenue	5.583	25,224	17	0.33	0.32
North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street	5.583	21,379	12	0.28	0.31
North Avenue (NYS Route 9D) and Beekman Street/W. Church Street	5.583	23,254	12	0.25	0.26
Wolcott Avenue/North Avenue (NYS Route 9D) and Main Street/Municipal Plaza	5.583	23,142	22	0.47	0.26
Beekman Street and High Street	5.583	3,828	-	-	0.19

Notes:

1) State-Wide Average Accident Rates based on "Average Accident Rates for State Highways By Facility Type" published by the New York State Department of Transportation for the period September 1, 2017 through August 31, 2019.

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Appendix C | Level of Service Standards

Level of Service Standards

Level of Service for Signalized Intersections

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

- **LOS A** describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
- **LOS B** describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
- **LOS C** describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate.
- **LOS D** describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long.
- **LOS E** describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long.
- **LOS F** describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long.

A lane group can incur a delay less than 80 s/veh when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

The Level of Service Criteria for signalized intersections are given in Exhibit 19-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 19-8 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	v/c ≤ 1.0	v/c ≥ 1.0
≤10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

For approach-based and intersection wide assessments, LOS is defined solely by control delay.

Level of Service Criteria For Two-Way Stop-Controlled (TWSC) Unsignalized Intersections

Level of Service (LOS) for a two-way stop-controlled (TWSC) intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. LOS is not defined for the intersection as a whole or for major-street approaches.

The Level of Service Criteria for TWSC unsignalized intersections are given in Exhibit 20-2 from the Highway Capacity Manual, 6th Edition published by the Transportation Research Board.

Exhibit 20-2 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	v/c ≤ 1.0	v/c ≥ 1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

The LOS criteria apply to each lane on a given approach and to each approach on the minor street.
LOS is not calculated for major-street approaches or for the intersection as a whole.

As Exhibit 20-2 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.

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Appendix D | Capacity Analysis

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Appendix D | Intersection Capacity Analysis

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	58	248	475	45	274	629
Future Volume (vph)	58	248	475	45	274	629
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99			
Frt		0.850	0.988			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1809	0	1778	1854
Flt Permitted	0.950				0.303	
Satd. Flow (perm)	1715	1544	1809	0	567	1854
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	2			1	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	61	261	500	47	288	662
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	261	547	0	288	662
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	1	1	1		1	1
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Call	Call	Call		Call	Call
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	

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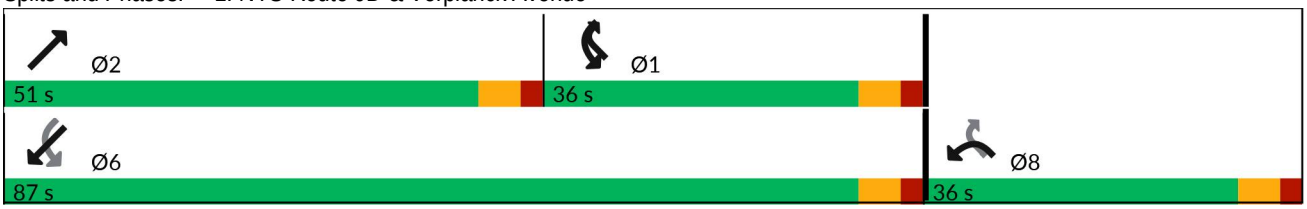
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.26	0.44	0.73		0.43	0.47
Control Delay (s/veh)	34.1	18.2	25.2		11.0	6.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	34.1	18.2	25.2		11.0	6.4
Queue Length 50th (ft)	22	69	171		32	95
Queue Length 95th (ft)	73	175	428		95	264
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	938	894	1294		1147	1768
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.07	0.29	0.42		0.25	0.37

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 66.5	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	58	248	475	45	274	629
Future Volume (veh/h)	58	248	475	45	274	629
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894
Adj Flow Rate, veh/h	61	261	500	47	288	662
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	223	331	612	58	371	1132
Arrive On Green	0.14	0.14	0.37	0.37	0.09	0.60
Sat Flow, veh/h	1641	1460	1636	154	1818	1894
Grp Volume(v), veh/h	61	261	0	547	288	662
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1789	1818	1894
Q Serve(g_s), s	1.5	3.5	0.0	12.4	1.6	9.7
Cycle Q Clear(g_c), s	1.5	3.5	0.0	12.4	1.6	9.7
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	223	331	0	670	371	1132
V/C Ratio(X)	0.27	0.79	0.00	0.82	0.78	0.58
Avail Cap(c_a), veh/h	1092	1104	0	1787	1418	3405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	16.4	0.0	12.7	18.6	5.6
Incr Delay (d2), s/veh	0.2	1.6	0.0	2.5	1.3	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.3	0.0	4.4	2.6	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.7	18.0	0.0	15.2	19.9	6.1
LnGrp LOS	B	B		B	B	A
Approach Vol, veh/h	322		547			950
Approach Delay, s/veh	18.0		15.2			10.3
Approach LOS	B		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.1	22.9				32.9	12.1
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	3.6	14.4				11.7	5.5
Green Ext Time (p_c), s	0.6	2.3				3.0	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	13.1
HCM 7th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	3	24	8	0	8	16	484	5	1	653	37
Future Volume (vph)	18	3	24	8	0	8	16	484	5	1	653	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.928			0.932			0.999			0.993	
Flt Protected		0.980			0.976		0.950					
Satd. Flow (prot)	0	1767	0	0	1661	0	1770	1851	0	0	1915	0
Flt Permitted		0.980			0.976		0.950					
Satd. Flow (perm)	0	1767	0	0	1661	0	1770	1851	0	0	1915	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	19	3	25	8	0	8	17	509	5	1	687	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	16	0	17	514	0	0	727	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

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Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	3	24	8	0	8	16	484	5	1	653	37
Future Vol, veh/h	18	3	24	8	0	8	16	484	5	1	653	37
Conflicting Peds, #/hr	6	0	8	14	0	12	8	0	14	12	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	13	2	2	2	6	2	2	4	11
Mvmt Flow	19	3	25	8	0	8	17	509	5	1	687	39

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1272	1279	729	1265	1296	538	734	0	0	529	0	0
Stage 1	717	717	-	560	560	-	-	-	-	-	-	-
Stage 2	555	562	-	705	736	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.84	7.23	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.617	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	192	220	455	139	162	543	871	-	-	1038	-	-
Stage 1	493	508	-	494	511	-	-	-	-	-	-	-
Stage 2	584	577	-	410	425	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	181	211	446	123	155	530	864	-	-	1025	-	-
Mov Cap-2 Maneuver	181	211	-	123	155	-	-	-	-	-	-	-
Stage 1	489	504	-	478	494	-	-	-	-	-	-	-
Stage 2	557	559	-	379	421	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	21.22	24.69	0.29	0.01
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	269	200	3	-	-
HCM Lane V/C Ratio	0.019	-	-	0.176	0.084	0.001	-	-
HCM Control Delay (s/veh)	9.2	-	-	21.2	24.7	8.5	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.3	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	4	29	8	9	7	16	402	2	2	447	236
Future Volume (vph)	103	4	29	8	9	7	16	402	2	2	447	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99	0.97		0.99		0.99	0.99		0.99	0.98	
Frt			0.850		0.960			0.999			0.948	
Flt Protected		0.954			0.984		0.950			0.950		
Satd. Flow (prot)	0	1713	1494	0	1835	0	1754	1844	0	1743	1688	0
Flt Permitted		0.714			0.891		0.276			0.472		
Satd. Flow (perm)	0	1280	1460	0	1660	0	509	1844	0	860	1688	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		8						38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	111	4	31	9	10	8	17	432	2	2	481	254
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	31	0	27	0	17	434	0	2	735	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.53	0.09		0.09		0.03	0.32		0.00	0.60	
Control Delay (s/veh)		36.2	0.5		18.3		3.2	7.4		5.5	12.8	
Queue Delay		0.0	0.0		0.0		0.0	0.1		0.0	0.0	
Total Delay (s/veh)		36.2	0.5		18.3		3.2	7.5		5.5	12.8	
Queue Length 50th (ft)		51	0		8		1	71		0	128	
Queue Length 95th (ft)		82	0		23		m5	148		3	#542	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		426	554		558		579	1325		816	1224	
Starvation Cap Reductn		0	0		0		0	274		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.27	0.06		0.05		0.03	0.41		0.00	0.60	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	4	29	8	9	7	16	402	2	2	447	236
Future Volume (veh/h)	103	4	29	8	9	7	16	402	2	2	447	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	111	4	31	9	10	8	17	432	2	2	481	254
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	231	6	286	82	96	48	633	678	3	714	358	189
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.28	0.33	0.33	0.28	0.33	0.33
Sat Flow, veh/h	716	33	1494	95	501	251	1948	2034	9	1731	1074	567
Grp Volume(v), veh/h	115	0	31	27	0	0	17	0	434	2	0	735
Grp Sat Flow(s),veh/h/ln	749	0	1494	846	0	0	1948	0	2044	1731	0	1642
Q Serve(g_s), s	0.0	0.0	1.3	0.1	0.0	0.0	0.0	0.0	13.5	0.0	0.0	25.0
Cycle Q Clear(g_c), s	12.2	0.0	1.3	12.3	0.0	0.0	0.0	0.0	13.5	0.0	0.0	25.0
Prop In Lane	0.97		1.00	0.33		0.30	1.00		0.00	1.00		0.35
Lane Grp Cap(c), veh/h	237	0	286	226	0	0	633	0	681	714	0	547
V/C Ratio(X)	0.48	0.00	0.11	0.12	0.00	0.00	0.03	0.00	0.64	0.00	0.00	1.34
Avail Cap(c_a), veh/h	398	0	498	497	0	0	633	0	681	714	0	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.94	0.00	0.94	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	25.1	25.3	0.0	0.0	19.7	0.0	21.2	12.2	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	4.2	0.0	0.0	166.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.4	0.4	0.0	0.0	0.2	0.0	6.9	0.0	0.0	34.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.0	0.0	25.1	25.4	0.0	0.0	19.7	0.0	25.4	12.2	0.0	191.4
LnGrp LOS	C		C	C			B		C	B		F
Approach Vol, veh/h		146			27			451			737	
Approach Delay, s/veh		29.0			25.4			25.2			190.9	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.7	30.0		19.3	25.7	30.0		19.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	15.5		14.2	2.0	27.0		14.3				
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	0.0		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			115.3									
HCM 7th LOS			F									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	4	2	8	6	107	4	310	24	222	257	5
Future Volume (vph)	3	4	2	8	6	107	4	310	24	222	257	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.99			0.99	
Frt		0.973				0.850		0.989			0.997	
Flt Protected		0.984			0.973		0.950			0.950		
Satd. Flow (prot)	0	1797	0	0	1923	1647	1832	1859	0	1743	1846	0
Flt Permitted		0.883			0.817		0.578			0.425		
Satd. Flow (perm)	0	1613	0	0	1614	1574	1115	1859	0	780	1846	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	5	7	3	9	7	118	5	392	30	252	292	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	16	118	5	422	0	252	298	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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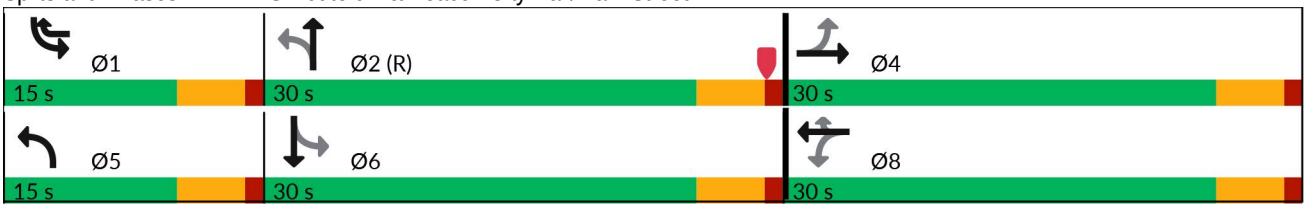
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.07			0.08	0.38	0.00	0.34		0.33	0.19	
Control Delay (s/veh)		23.0			26.1	25.0	5.7	10.9		4.3	4.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		23.0			26.1	25.0	5.7	10.9		4.3	4.0	
Queue Length 50th (ft)		5			7	53	0	50		0	0	
Queue Length 95th (ft)		10			19	51	5	220		59	72	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		539			538	349	969	1211		780	1560	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.03	0.34	0.01	0.35		0.32	0.19	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4	2	8	6	107	4	310	24	222	257	5
Future Volume (veh/h)	3	4	2	8	6	107	4	310	24	222	257	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.95		0.94	0.97		0.94	0.99		0.96	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	5	7	3	9	7	118	5	392	30	252	292	6
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	109	129	44	191	136	381	783	1066	82	675	1185	24
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.00	0.59	0.59	0.08	0.66	0.66
Sat Flow, veh/h	334	969	326	871	1016	1747	1922	1817	139	1731	1788	37
Grp Volume(v), veh/h	15	0	0	16	0	118	5	0	422	252	0	298
Grp Sat Flow(s),veh/h/ln	1629	0	0	1887	0	1747	1922	0	1956	1731	0	1825
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	4.3	0.1	0.0	8.5	3.9	0.0	4.9
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.5	0.0	4.3	0.1	0.0	8.5	3.9	0.0	4.9
Prop In Lane	0.33		0.20	0.56		1.00	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	282	0	0	327	0	381	783	0	1148	675	0	1209
V/C Ratio(X)	0.05	0.00	0.00	0.05	0.00	0.31	0.01	0.00	0.37	0.37	0.00	0.25
Avail Cap(c_a), veh/h	589	0	0	692	0	730	1032	0	1148	768	0	1209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.79	0.00	0.79
Uniform Delay (d), s/veh	28.4	0.0	0.0	28.4	0.0	24.9	6.3	0.0	8.2	5.1	0.0	5.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.9	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.2	0.0	1.7	0.0	0.0	3.4	1.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.4	0.0	0.0	28.4	0.0	25.1	6.3	0.0	9.1	5.2	0.0	5.5
LnGrp LOS	C			C		C	A		A	A		A
Approach Vol, veh/h		15			134			427			550	
Approach Delay, s/veh		28.4			25.5			9.0			5.4	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	49.0		15.0	5.3	54.7		15.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	5.9	10.5		2.5	2.1	6.9		6.3				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	9.5
HCM 7th LOS	A

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	1	1	1	135	261	0
Future Volume (vph)	1	1	1	135	261	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1939	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1939	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	16	16			14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	1	1	1	171	330	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	172	330	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	135	261	0
Future Vol, veh/h	1	1	1	135	261	0
Conflicting Peds, #/hr	14	16	16	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	1	1	1	171	330	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	534	362	346	0	-	0
Stage 1	346	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	682	755	1213	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	662	732	1195	-	-	-
Mov Cap-2 Maneuver	662	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	924	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/v	10.2	0.06	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	13	-	695	-	-
HCM Lane V/C Ratio	0.001	-	0.004	-	-
HCM Control Delay (s/veh)	8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	59	297	625	50	219	574
Future Volume (vph)	59	297	625	50	219	574
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99			
Frt		0.850	0.990			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1854
Flt Permitted	0.950				0.217	
Satd. Flow (perm)	1720	1544	1813	0	406	1854
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	1			3	3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	62	313	658	53	231	604
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	313	711	0	231	604
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	1	1	1		1	1
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Call	Call	Call		Call	Call
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	

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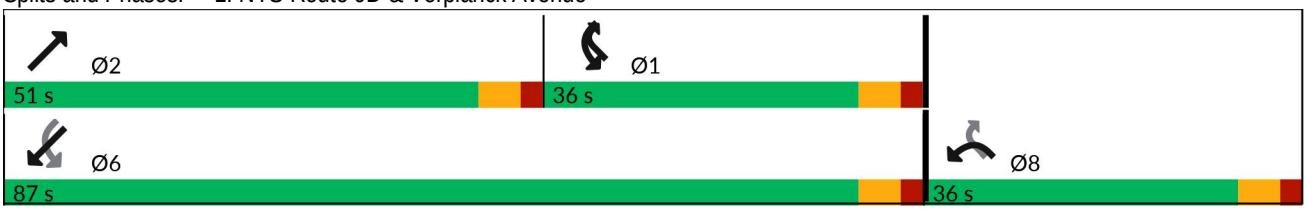
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	3		3			
v/c Ratio	0.35	0.57	0.76		0.37	0.40
Control Delay (s/veh)	45.1	26.8	27.9		10.6	4.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	45.1	26.8	27.9		10.6	4.9
Queue Length 50th (ft)	34	139	313		25	85
Queue Length 95th (ft)	77	213	#728		75	229
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	589	614	928		830	1650
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.11	0.51	0.77		0.28	0.37

Intersection Summary
Area Type: Other
Cycle Length: 123
Actuated Cycle Length: 89.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	59	297	625	50	219	574
Future Volume (veh/h)	59	297	625	50	219	574
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894
Adj Flow Rate, veh/h	62	313	658	53	231	604
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	292	367	744	60	293	1178
Arrive On Green	0.18	0.18	0.45	0.45	0.07	0.62
Sat Flow, veh/h	1641	1460	1659	134	1818	1894
Grp Volume(v), veh/h	62	313	0	711	231	604
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1793	1818	1894
Q Serve(g_s), s	1.9	7.9	0.0	21.7	2.0	10.6
Cycle Q Clear(g_c), s	1.9	7.9	0.0	21.7	2.0	10.6
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	292	367	0	804	293	1178
V/C Ratio(X)	0.21	0.85	0.00	0.88	0.79	0.51
Avail Cap(c_a), veh/h	821	837	0	1345	1069	2557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	21.4	0.0	15.1	25.7	6.3
Incr Delay (d2), s/veh	0.1	2.2	0.0	4.1	1.8	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.0	0.0	8.3	3.1	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.2	23.6	0.0	19.2	27.5	6.6
LnGrp LOS	C	C		B	C	A
Approach Vol, veh/h	375		711			835
Approach Delay, s/veh	23.2		19.2			12.4
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.4	32.9				43.3	16.7
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	4.0	23.7				12.6	9.9
Green Ext Time (p_c), s	0.4	3.1				2.7	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	17.0
HCM 7th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	5	11	6	3	4	14	638	5	5	584	24
Future Volume (vph)	21	5	11	6	3	4	14	638	5	5	584	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.959			0.961			0.999			0.995	
Flt Protected		0.972			0.976		0.950					
Satd. Flow (prot)	0	1830	0	0	1696	0	1770	1923	0	0	1945	0
Flt Permitted		0.972			0.976		0.950					
Satd. Flow (perm)	0	1830	0	0	1696	0	1770	1923	0	0	1945	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	23	5	12	7	3	4	15	693	5	5	635	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	14	0	15	698	0	0	666	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

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Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	5	11	6	3	4	14	638	5	5	584	24
Future Vol, veh/h	21	5	11	6	3	4	14	638	5	5	584	24
Conflicting Peds, #/hr	4	0	4	2	0	2	4	0	2	2	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	25	2	2	2	2	3	2
Mvmt Flow	23	5	12	7	3	4	15	693	5	5	635	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1392	1394	656	1381	1404	702	665	0	0	701	0	0
Stage 1	663	663	-	729	729	-	-	-	-	-	-	-
Stage 2	730	731	-	652	676	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.82	7.12	6.52	6.45	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.525	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	163	193	501	121	139	401	924	-	-	896	-	-
Stage 1	522	532	-	415	428	-	-	-	-	-	-	-
Stage 2	487	502	-	457	453	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	152	187	497	112	135	399	921	-	-	895	-	-
Mov Cap-2 Maneuver	152	187	-	112	135	-	-	-	-	-	-	-
Stage 1	515	525	-	407	420	-	-	-	-	-	-	-
Stage 2	468	493	-	435	447	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	27.81	31.26	0.19	0.07
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	921	-	-	198	151	15	-	-
HCM Lane V/C Ratio	0.017	-	-	0.204	0.093	0.006	-	-
HCM Control Delay (s/veh)	9	-	-	27.8	31.3	9	0	-
HCM Lane LOS	A	-	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.3	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	12	24	1	7	6	31	376	12	4	462	135
Future Volume (vph)	275	12	24	1	7	6	31	376	12	4	462	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.941			0.995			0.966	
Flt Protected		0.954			0.997		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1815	0	1690	1890	0	1743	1746	0
Flt Permitted		0.723			0.985		0.241			0.426		
Satd. Flow (perm)	0	1328	1568	0	1793	0	428	1890	0	781	1746	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		7			2			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	299	13	26	1	8	7	34	409	13	4	502	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	26	0	16	0	34	422	0	4	649	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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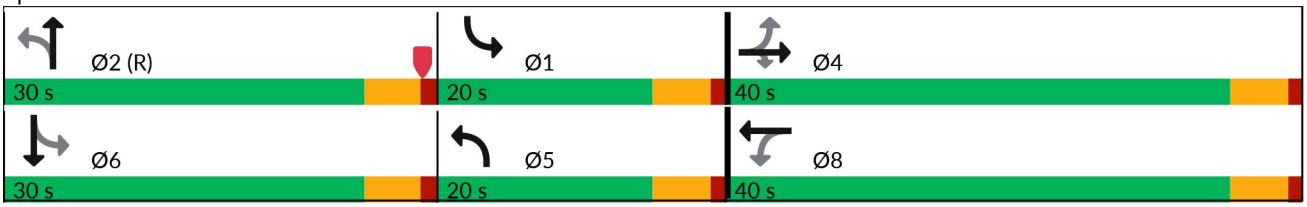
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%	44.4%	44.4%	44.4%		22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		15.0	25.0		15.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.81	0.05		0.03		0.10	0.38		0.00	0.68	
Control Delay (s/veh)		46.3	0.2		14.2		9.7	11.9		10.5	22.8	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay (s/veh)		46.3	0.2		14.2		9.7	12.3		10.5	22.8	
Queue Length 50th (ft)		164	0		4		7	172		1	272	
Queue Length 95th (ft)		230	0		16		16	142		6	#554	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		516	661		701		523	1099		714	954	
Starvation Cap Reductn		0	0		0		0	265		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.60	0.04		0.02		0.07	0.51		0.01	0.68	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	12	24	1	7	6	31	376	12	4	462	135
Future Volume (veh/h)	275	12	24	1	7	6	31	376	12	4	462	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	299	13	26	1	8	7	34	409	13	4	502	147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	174	4	607	43	263	205	395	559	18	456	369	108
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.17	0.28	0.28	0.17	0.28	0.28
Sat Flow, veh/h	246	11	1561	0	677	526	1891	2013	64	1731	1328	389
Grp Volume(v), veh/h	312	0	26	16	0	0	34	0	422	4	0	649
Grp Sat Flow(s),veh/h/ln	257	0	1561	1203	0	0	1891	0	2077	1731	0	1717
Q Serve(g_s), s	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0	25.0
Cycle Q Clear(g_c), s	35.0	0.0	0.9	35.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.06		0.44	1.00		0.03	1.00		0.23
Lane Grp Cap(c), veh/h	178	0	607	510	0	0	395	0	577	456	0	477
V/C Ratio(X)	1.75	0.00	0.04	0.03	0.00	0.00	0.09	0.00	0.73	0.01	0.00	1.36
Avail Cap(c_a), veh/h	178	0	607	510	0	0	395	0	577	456	0	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.93	0.00	0.93	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	17.1	18.1	0.0	0.0	31.3	0.0	29.5	24.7	0.0	32.5
Incr Delay (d2), s/veh	359.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	175.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.7	0.0	0.3	0.2	0.0	0.0	0.6	0.0	9.2	0.1	0.0	33.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	394.9	0.0	17.1	18.1	0.0	0.0	31.3	0.0	36.9	24.7	0.0	207.9
LnGrp LOS	F		B	B			C		D	C		F
Approach Vol, veh/h		338			16			456			653	
Approach Delay, s/veh		365.9			18.1			36.5			206.7	
Approach LOS		F			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	30.0		40.0	20.0	30.0		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	18.6		37.0	2.0	27.0		37.0				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		188.4
HCM 7th LOS		F

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	7	1	35	1	152	1	265	64	215	274	0
Future Volume (vph)	1	7	1	35	1	152	1	265	64	215	274	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.98				
Frt		0.983				0.850		0.971				
Flt Protected		0.994			0.954		0.950			0.950		
Satd. Flow (prot)	0	1838	0	0	1885	1647	1832	1804	0	1743	1853	0
Flt Permitted		0.969			0.720		0.571			0.418		
Satd. Flow (perm)	0	1792	0	0	1423	1566	1101	1804	0	767	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		2										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	2	12	2	38	1	167	1	335	81	244	311	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	0	0	39	167	1	416	0	244	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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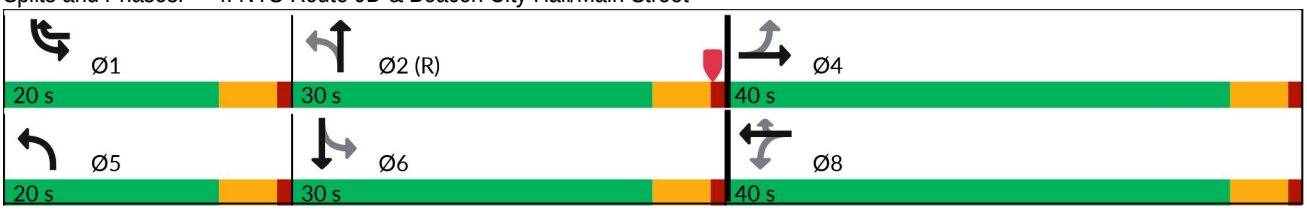
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0		40.0	40.0	20.0	20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%	22.2%	22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0	15.0	15.0	25.0		15.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	9	9		15	15			21				
v/c Ratio		0.06			0.19	0.42	0.00	0.37		0.33	0.21	
Control Delay (s/veh)		25.9			32.2	26.1	7.0	14.6		5.8	4.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay (s/veh)		25.9			32.2	26.1	7.0	14.6		5.8	4.6	
Queue Length 50th (ft)		8			22	80	0	99		16	20	
Queue Length 95th (ft)		14			43	89	2	232		69	73	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		698			553	464	969	1100		775	1476	
Starvation Cap Reductn		0			0	0	0	0		0	560	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.07	0.36	0.00	0.38		0.31	0.34	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	7	1	35	1	152	1	265	64	215	274	0
Future Volume (veh/h)	1	7	1	35	1	152	1	265	64	215	274	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	2	12	2	38	1	167	1	335	81	244	311	0
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	57	219	33	314	7	392	786	942	228	679	1255	0
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.61	0.61	0.07	0.68	0.00
Sat Flow, veh/h	81	1485	224	1592	51	1757	1922	1533	371	1731	1832	0
Grp Volume(v), veh/h	16	0	0	39	0	167	1	0	416	244	311	0
Grp Sat Flow(s),veh/h/ln	1791	0	0	1643	0	1757	1922	0	1904	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.0	0.0	7.4	0.0	0.0	9.7	4.3	5.8	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.7	0.0	7.4	0.0	0.0	9.7	4.3	5.8	0.0
Prop In Lane	0.12		0.12	0.97		1.00	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	309	0	0	322	0	392	786	0	1170	679	1255	0
V/C Ratio(X)	0.05	0.00	0.00	0.12	0.00	0.43	0.00	0.00	0.36	0.36	0.25	0.00
Avail Cap(c_a), veh/h	723	0	0	712	0	816	1104	0	1170	844	1255	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	33.0	0.0	0.0	33.4	0.0	30.3	6.7	0.0	8.6	5.5	5.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.8	0.1	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.7	0.0	3.1	0.0	0.0	3.9	1.3	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.0	0.0	0.0	33.4	0.0	30.6	6.7	0.0	9.4	5.6	5.7	0.0
LnGrp LOS	C			C		C	A		A	A	A	
Approach Vol, veh/h		16			206			417			555	
Approach Delay, s/veh		33.0			31.1			9.4			5.7	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	60.3		18.3	5.1	66.6		18.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	6.3	11.7		2.7	2.0	7.8		9.4				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	11.7	
HCM 7th LOS	B	

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	6	0	309	171	2
Future Volume (vph)	2	6	0	309	171	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.902				0.998	
Flt Protected	0.987					
Satd. Flow (prot)	1799	0	0	1977	1869	0
Flt Permitted	0.987					
Satd. Flow (perm)	1799	0	0	1977	1869	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	8	8			14
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	3	8	0	435	241	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	435	244	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	0.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	6	0	309	171	2
Future Vol, veh/h	2	6	0	309	171	2
Conflicting Peds, #/hr	14	8	8	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	3	8	0	435	241	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	705	264	258	0	-	0
Stage 1	256	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	596	833	1307	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	581	816	1291	-	-	-
Mov Cap-2 Maneuver	581	-	-	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/v	9.93	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1291	-	741	-	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s/veh)	0	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	43	247	547	35	204	605
Future Volume (vph)	43	247	547	35	204	605
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97		0.99			
Frt		0.850	0.992			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1818	0	1778	1872
Flt Permitted	0.950				0.264	
Satd. Flow (perm)	1688	1544	1818	0	494	1872
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	7			1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	268	595	38	222	658
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	268	633	0	222	658
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	1	1	1		1	1
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Call	Call	Call		Call	Call
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.23	0.52	0.71		0.33	0.41
Control Delay (s/veh)	37.2	23.1	23.5		8.3	4.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	37.2	23.1	23.5		8.3	4.8
Queue Length 50th (ft)	21	93	223		22	90
Queue Length 95th (ft)	60	181	#571		73	260
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	790	769	1232		1045	1769
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.06	0.35	0.51		0.21	0.37

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 72.4	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue

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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	43	247	547	35	204	605
Future Volume (veh/h)	43	247	547	35	204	605
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909
Adj Flow Rate, veh/h	47	268	595	38	222	658
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	276	330	701	45	295	1131
Arrive On Green	0.17	0.17	0.41	0.41	0.06	0.59
Sat Flow, veh/h	1641	1460	1690	108	1818	1909
Grp Volume(v), veh/h	47	268	0	633	222	658
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1798	1818	1909
Q Serve(g_s), s	1.2	5.8	0.0	15.9	0.6	10.7
Cycle Q Clear(g_c), s	1.2	5.8	0.0	15.9	0.6	10.7
Prop In Lane	1.00	1.00		0.06	1.00	
Lane Grp Cap(c), veh/h	276	330	0	746	295	1131
V/C Ratio(X)	0.17	0.81	0.00	0.85	0.75	0.58
Avail Cap(c_a), veh/h	983	959	0	1614	1279	3086
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	18.4	0.0	13.2	22.0	6.4
Incr Delay (d2), s/veh	0.1	1.9	0.0	2.8	1.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.0	5.7	2.4	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.0	20.2	0.0	16.0	23.4	6.8
LnGrp LOS	B	C		B	C	A
Approach Vol, veh/h	315		633			880
Approach Delay, s/veh	19.9		16.0			11.0
Approach LOS	B		B			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.9	26.8			35.7	14.4
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0			81.0	30.0
Max Q Clear Time (g_c+I1), s	2.6	17.9			12.7	7.8
Green Ext Time (p_c), s	0.4	2.8			3.0	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	14.3
HCM 7th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	1	10	3	5	10	11	543	4	7	619	22
Future Volume (vph)	29	1	10	3	5	10	11	543	4	7	619	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.965			0.922			0.999			0.995	
Flt Protected		0.965			0.992		0.950				0.999	
Satd. Flow (prot)	0	1815	0	0	1761	0	1770	1923	0	0	1961	0
Flt Permitted		0.965			0.992		0.950				0.999	
Satd. Flow (perm)	0	1815	0	0	1761	0	1770	1923	0	0	1961	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	31	1	11	3	5	11	12	578	4	7	659	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	19	0	12	582	0	0	689	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

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Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	1	10	3	5	10	11	543	4	7	619	22
Future Vol, veh/h	29	1	10	3	5	10	11	543	4	7	619	22
Conflicting Peds, #/hr	6	0	6	2	0	2	6	0	2	2	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	1	11	3	5	11	12	578	4	7	659	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1301	1298	682	1285	1308	588	688	0	0	584	0	0
Stage 1	691	691	-	605	605	-	-	-	-	-	-	-
Stage 2	610	607	-	680	703	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.72	5.82	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	183	216	485	141	159	509	906	-	-	991	-	-
Stage 1	505	519	-	485	487	-	-	-	-	-	-	-
Stage 2	550	556	-	441	440	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	167	209	480	133	154	505	901	-	-	989	-	-
Mov Cap-2 Maneuver	167	209	-	133	154	-	-	-	-	-	-	-
Stage 1	496	510	-	477	480	-	-	-	-	-	-	-
Stage 2	522	548	-	423	432	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	27.65	21.23	0.18	0.09
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	201	241	19	-	-
HCM Lane V/C Ratio	0.013	-	-	0.212	0.079	0.008	-	-
HCM Control Delay (s/veh)	9	-	-	27.7	21.2	8.7	0	-
HCM Lane LOS	A	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.3	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	5	32	9	3	7	60	411	3	7	445	180
Future Volume (vph)	140	5	32	9	3	7	60	411	3	7	445	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98	0.97		0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.949			0.999			0.957	
Flt Protected		0.954			0.977		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1787	0	1823	1916	0	1743	1741	0
Flt Permitted		0.719			0.856		0.237			0.425		
Satd. Flow (perm)	0	1304	1524	0	1563	0	454	1916	0	777	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		8						29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	157	6	36	10	3	8	67	462	3	8	500	202
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	36	0	21	0	67	465	0	8	702	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		

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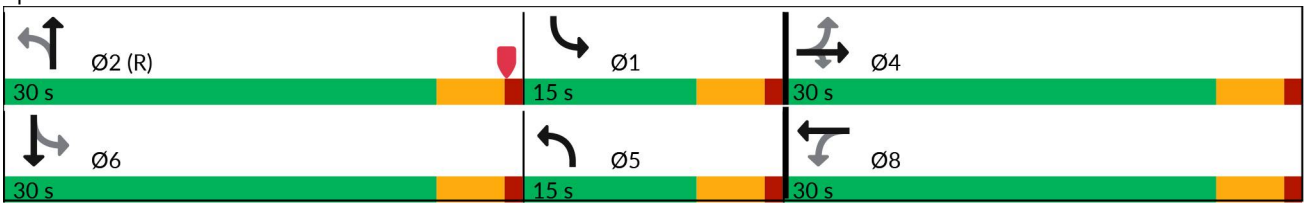
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				11	11							
v/c Ratio		0.64	0.09		0.06		0.17	0.37		0.01	0.69	
Control Delay (s/veh)		38.8	0.5		16.6		8.4	10.6		6.4	18.8	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay (s/veh)		38.8	0.5		16.6		8.4	10.9		6.4	18.8	
Queue Length 50th (ft)		71	0		5		14	152		1	208	
Queue Length 95th (ft)		111	0		19		m21	176		7	#504	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		434	576		526		522	1238		679	1015	
Starvation Cap Reductn		0	0		0		0	300		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.38	0.06		0.04		0.13	0.50		0.01	0.69	

Intersection Summary
Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	5	32	9	3	7	60	411	3	7	445	180
Future Volume (veh/h)	140	5	32	9	3	7	60	411	3	7	445	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.98		0.95	0.98		0.97	1.00		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	157	6	36	10	3	8	67	462	3	8	500	202
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	8	307	116	51	59	618	697	5	675	408	165
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.26	0.33	0.33	0.26	0.33	0.33
Sat Flow, veh/h	1056	40	1485	217	248	286	2006	2090	14	1731	1225	495
Grp Volume(v), veh/h	163	0	36	21	0	0	67	0	465	8	0	702
Grp Sat Flow(s),veh/h/ln	1097	0	1485	752	0	0	2006	0	2103	1731	0	1720
Q Serve(g_s), s	0.0	0.0	1.5	0.1	0.0	0.0	0.0	0.0	14.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	11.5	0.0	1.5	11.6	0.0	0.0	0.0	0.0	14.2	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.48		0.38	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	321	0	307	226	0	0	618	0	701	675	0	573
V/C Ratio(X)	0.51	0.00	0.12	0.09	0.00	0.00	0.11	0.00	0.66	0.01	0.00	1.22
Avail Cap(c_a), veh/h	495	0	495	452	0	0	618	0	701	675	0	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	24.2	24.4	0.0	0.0	20.5	0.0	21.4	13.4	0.0	25.0
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.0	0.0	0.0	4.5	0.0	0.0	115.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.5	0.3	0.0	0.0	0.8	0.0	7.4	0.1	0.0	27.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.6	0.0	24.3	24.5	0.0	0.0	20.6	0.0	25.9	13.4	0.0	140.8
LnGrp LOS	C		C	C			C		C	B		F
Approach Vol, veh/h		199			21			532			710	
Approach Delay, s/veh		27.9			24.5			25.2			139.4	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.5	30.0		20.5	24.5	30.0		20.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	16.2		13.5	2.0	27.0		13.6				
Green Ext Time (p_c), s	0.0	0.7		0.3	0.0	0.0		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			81.0									
HCM 7th LOS			F									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	23	0	185	1	288	37	233	250	2
Future Volume (vph)	1	1	1	23	0	185	1	288	37	233	250	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.97		0.98			0.99	
Frt		0.955				0.850		0.983			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1877	1663	1832	1832	0	1760	1851	0
Flt Permitted		0.890			0.756		0.591			0.451		
Satd. Flow (perm)	0	1584	0	0	1494	1614	1140	1832	0	836	1851	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		1									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			14			6			48			11
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	2%	5%	1%	1%	0%
Adj. Flow (vph)	1	1	1	26	0	208	1	327	42	253	272	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	26	208	1	369	0	253	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		

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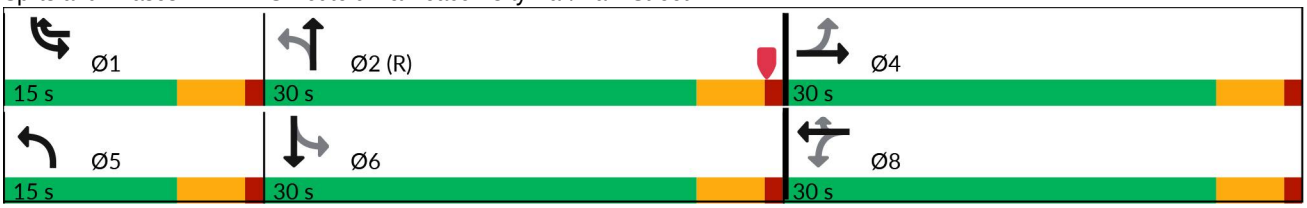
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	14	14		6	6			48				
v/c Ratio		0.01			0.14	0.57	0.00	0.32		0.30	0.17	
Control Delay (s/veh)		21.0			27.4	29.1	6.0	11.3		4.1	4.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		21.0			27.4	29.1	6.0	11.3		4.1	4.0	
Queue Length 50th (ft)		1			12	92	0	55		0	0	
Queue Length 95th (ft)		5			25	83	2	220		m57	m65	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		528			498	377	952	1138		829	1561	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.01			0.05	0.55	0.00	0.32		0.31	0.18	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	23	0	185	1	288	37	233	250	2
Future Volume (veh/h)	1	1	1	23	0	185	1	288	37	233	250	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		0.98	0.99		0.96	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2200	2018	1988	1943	1832	1832	1847
Adj Flow Rate, veh/h	1	1	1	26	0	208	1	327	42	253	272	2
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	2	5	1	1	0
Cap, veh/h	120	113	85	357	0	455	754	949	122	681	1156	9
Arrive On Green	0.16	0.16	0.16	0.16	0.00	0.16	0.00	0.55	0.55	0.08	0.64	0.64
Sat Flow, veh/h	344	696	520	1607	0	1830	1922	1716	220	1745	1816	13
Grp Volume(v), veh/h	3	0	0	26	0	208	1	0	369	253	0	274
Grp Sat Flow(s),veh/h/ln	1561	0	0	1608	0	1830	1922	0	1936	1745	0	1830
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	7.2	0.0	0.0	7.9	4.3	0.0	4.8
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.0	0.0	7.2	0.0	0.0	7.9	4.3	0.0	4.8
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	318	0	0	357	0	455	754	0	1071	681	0	1165
V/C Ratio(X)	0.01	0.00	0.00	0.07	0.00	0.46	0.00	0.00	0.34	0.37	0.00	0.24
Avail Cap(c_a), veh/h	570	0	0	631	0	767	1007	0	1071	767	0	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.70	0.00	0.70
Uniform Delay (d), s/veh	26.3	0.0	0.0	26.7	0.0	24.0	7.5	0.0	9.3	5.8	0.0	5.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.9	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.4	0.0	3.0	0.0	0.0	3.2	1.2	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.3	0.0	0.0	26.7	0.0	24.3	7.5	0.0	10.1	5.9	0.0	6.2
LnGrp LOS	C			C		C	A		B	A		A
Approach Vol, veh/h		3			234			370			527	
Approach Delay, s/veh		26.3			24.5			10.1			6.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	46.5		17.2	5.1	52.7		17.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	6.3	9.9		2.1	2.0	6.8		9.2				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			11.2									
HCM 7th LOS			B									

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	1	1	0	176	228	0
Future Volume (vph)	1	1	0	176	228	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1977	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1977	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	17	17			14
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	1	1	0	205	265	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	205	265	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

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Intersection	
Int Delay, s/veh	0

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	1	0	176	228	0
Future Vol, veh/h	1	1	0	176	228	0
Conflicting Peds, #/hr	14	17	17	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	0	205	265	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	501	299	282	0	-	0
Stage 1	282	-	-	-	-	-
Stage 2	219	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	700	805	1280	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	678	779	1261	-	-	-
Mov Cap-2 Maneuver	678	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/v	9.98	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1261	-	725	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s/veh)	0	-	10	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	65	267	587	51	292	709
Future Volume (vph)	65	267	587	51	292	709
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99			
Frt		0.850	0.989			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1811	0	1778	1854
Flt Permitted	0.950				0.242	
Satd. Flow (perm)	1715	1544	1811	0	453	1854
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	2			1	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	68	281	618	54	307	746
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	281	672	0	307	746
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	

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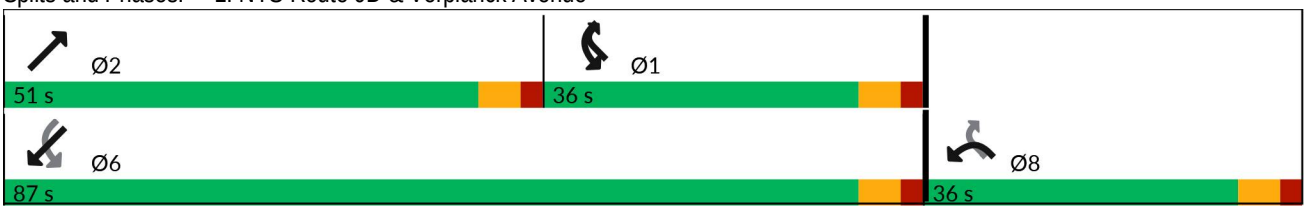
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.35	0.51	0.73		0.49	0.50
Control Delay (s/veh)	43.7	24.8	26.2		13.7	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	43.7	24.8	26.2		13.7	6.1
Queue Length 50th (ft)	36	121	278		36	123
Queue Length 95th (ft)	82	188	#664		101	319
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	626	640	986		887	1680
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.11	0.44	0.68		0.35	0.44

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 86	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	65	267	587	51	292	709
Future Volume (veh/h)	65	267	587	51	292	709
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894
Adj Flow Rate, veh/h	68	281	618	54	307	746
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	202	341	714	62	378	1241
Arrive On Green	0.12	0.12	0.43	0.43	0.11	0.66
Sat Flow, veh/h	1641	1460	1647	144	1818	1894
Grp Volume(v), veh/h	68	281	0	672	307	746
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1791	1818	1894
Q Serve(g_s), s	2.0	3.9	0.0	18.4	3.4	12.1
Cycle Q Clear(g_c), s	2.0	3.9	0.0	18.4	3.4	12.1
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	202	341	0	776	378	1241
V/C Ratio(X)	0.34	0.82	0.00	0.87	0.81	0.60
Avail Cap(c_a), veh/h	911	972	0	1491	1186	2839
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	19.7	0.0	13.9	21.7	5.3
Incr Delay (d2), s/veh	0.4	1.9	0.0	3.1	1.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.2	0.0	6.7	3.5	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	22.0	21.6	0.0	17.0	23.3	5.8
LnGrp LOS	C	C		B	C	A
Approach Vol, veh/h	349		672			1053
Approach Delay, s/veh	21.7		17.0			10.9
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.0	29.4				41.4	12.6
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	5.4	20.4				14.1	5.9
Green Ext Time (p_c), s	0.6	3.0				3.6	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	14.7
HCM 7th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	4	38	9	0	9	20	544	6	2	725	54
Future Volume (vph)	76	4	38	9	0	9	20	544	6	2	725	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.956			0.932			0.998			0.991	
Flt Protected		0.969			0.976		0.950					
Satd. Flow (prot)	0	1807	0	0	1661	0	1770	1849	0	0	1909	0
Flt Permitted		0.969			0.976		0.950					
Satd. Flow (perm)	0	1807	0	0	1661	0	1770	1849	0	0	1909	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	80	4	40	9	0	9	21	573	6	2	763	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	18	0	21	579	0	0	822	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	4	38	9	0	9	20	544	6	2	725	54
Future Vol, veh/h	76	4	38	9	0	9	20	544	6	2	725	54
Conflicting Peds, #/hr	6	0	8	14	0	12	8	0	14	12	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	13	2	2	2	6	2	2	4	11
Mvmt Flow	80	4	40	9	0	9	21	573	6	2	763	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1431	1439	814	1415	1464	602	828	0	0	593	0	0
Stage 1	804	804	-	632	632	-	-	-	-	-	-	-
Stage 2	627	635	-	783	832	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.84	7.23	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.617	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	154	183	411	109	128	500	803	-	-	983	-	-
Stage 1	450	473	-	450	474	-	-	-	-	-	-	-
Stage 2	542	544	-	371	384	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	144	174	402	90	122	488	798	-	-	971	-	-
Mov Cap-2 Maneuver	144	174	-	90	122	-	-	-	-	-	-	-
Stage 1	445	468	-	433	456	-	-	-	-	-	-	-
Stage 2	512	523	-	325	380	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/veh	58.46	31.93	0.34	0.02
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	798	-	-	183	153	5	-	-
HCM Lane V/C Ratio	0.026	-	-	0.679	0.124	0.002	-	-
HCM Control Delay (s/veh)	9.6	-	-	58.5	31.9	8.7	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.1	0.4	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	5	51	9	10	8	25	453	3	3	515	254
Future Volume (vph)	117	5	51	9	10	8	25	453	3	3	515	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99	0.97		0.99		0.99	0.99		0.99	0.98	
Frt			0.850		0.959			0.999			0.950	
Flt Protected		0.954			0.984		0.950			0.950		
Satd. Flow (prot)	0	1712	1494	0	1833	0	1754	1844	0	1743	1692	0
Flt Permitted		0.712			0.888		0.203			0.427		
Satd. Flow (perm)	0	1276	1460	0	1653	0	374	1844	0	779	1692	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		9						35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	126	5	55	10	11	9	27	487	3	3	554	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	131	55	0	30	0	27	490	0	3	827	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.58	0.16		0.10		0.07	0.37		0.00	0.70	
Control Delay (s/veh)		37.2	2.2		18.0		4.1	7.8		6.0	17.3	
Queue Delay		0.0	0.0		0.0		0.0	0.1		0.0	0.0	
Total Delay (s/veh)		37.2	2.2		18.0		4.1	7.9		6.0	17.3	
Queue Length 50th (ft)		57	0		8		2	72		0	173	
Queue Length 95th (ft)		92	8		25		m7	172		4	#646	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		425	554		557		480	1309		736	1172	
Starvation Cap Reductn		0	0		0		0	169		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.31	0.10		0.05		0.06	0.43		0.00	0.71	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	5	51	9	10	8	25	453	3	3	515	254
Future Volume (veh/h)	117	5	51	9	10	8	25	453	3	3	515	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	126	5	55	10	11	9	27	487	3	3	554	273
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	246	8	347	83	98	50	554	677	4	610	368	181
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.33	0.33	0.23	0.33	0.33
Sat Flow, veh/h	656	33	1496	82	423	216	1948	2031	13	1731	1103	544
Grp Volume(v), veh/h	131	0	55	30	0	0	27	0	490	3	0	827
Grp Sat Flow(s),veh/h/ln	689	0	1496	720	0	0	1948	0	2043	1731	0	1647
Q Serve(g_s), s	0.0	0.0	2.2	0.2	0.0	0.0	0.0	0.0	15.8	0.0	0.0	25.0
Cycle Q Clear(g_c), s	15.1	0.0	2.2	15.3	0.0	0.0	0.0	0.0	15.8	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.33		0.30	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	254	0	347	231	0	0	554	0	681	610	0	549
V/C Ratio(X)	0.52	0.00	0.16	0.13	0.00	0.00	0.05	0.00	0.72	0.00	0.00	1.51
Avail Cap(c_a), veh/h	369	0	499	423	0	0	554	0	681	610	0	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	23.0	23.3	0.0	0.0	22.0	0.0	21.9	15.5	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	5.9	0.0	0.0	237.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.8	0.4	0.0	0.0	0.4	0.0	8.2	0.0	0.0	45.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.5	0.0	23.1	23.4	0.0	0.0	22.0	0.0	27.8	15.5	0.0	262.2
LnGrp LOS	C		C	C			C		C	B		F
Approach Vol, veh/h		186			30			517			830	
Approach Delay, s/veh		26.9			23.4			27.5			261.3	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.6	30.0		22.4	22.6	30.0		22.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	17.8		17.1	2.0	27.0		17.3				
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	0.0		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			151.5									
HCM 7th LOS			F									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	3	14	7	123	5	355	31	243	327	6
Future Volume (vph)	4	5	3	14	7	123	5	355	31	243	327	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.99			0.99	
Frt		0.966				0.850		0.988			0.997	
Flt Protected		0.983			0.968		0.950			0.950		
Satd. Flow (prot)	0	1779	0	0	1913	1647	1832	1855	0	1743	1846	0
Flt Permitted		0.882			0.791		0.537			0.368		
Satd. Flow (perm)	0	1596	0	0	1563	1574	1036	1855	0	675	1846	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	7	8	5	15	8	135	6	449	39	276	372	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	23	135	6	488	0	276	379	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.10			0.12	0.38	0.00	0.43		0.40	0.25	
Control Delay (s/veh)		21.9			27.0	22.0	6.2	14.0		7.1	4.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay (s/veh)		21.9			27.0	22.0	6.2	14.0		7.1	4.8	
Queue Length 50th (ft)		7			10	49	1	114		17	24	
Queue Length 95th (ft)		12			23	57	5	261		m82	92	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		535			521	386	872	1125		695	1481	
Starvation Cap Reductn		0			0	0	0	0		0	413	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.04			0.04	0.35	0.01	0.43		0.40	0.35	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	3	14	7	123	5	355	31	243	327	6
Future Volume (veh/h)	4	5	3	14	7	123	5	355	31	243	327	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	7	8	5	15	8	135	6	449	39	276	372	7
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	116	118	56	226	110	409	712	1027	89	624	1172	22
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.57	0.57	0.09	0.65	0.65
Sat Flow, veh/h	360	833	398	1043	779	1753	1922	1796	156	1731	1792	34
Grp Volume(v), veh/h	20	0	0	23	0	135	6	0	488	276	0	379
Grp Sat Flow(s),veh/h/ln	1591	0	0	1822	0	1753	1922	0	1952	1731	0	1826
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	4.8	0.1	0.0	10.7	4.5	0.0	6.8
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.7	0.0	4.8	0.1	0.0	10.7	4.5	0.0	6.8
Prop In Lane	0.35		0.25	0.65		1.00	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	289	0	0	336	0	409	712	0	1116	624	0	1195
V/C Ratio(X)	0.07	0.00	0.00	0.07	0.00	0.33	0.01	0.00	0.44	0.44	0.00	0.32
Avail Cap(c_a), veh/h	578	0	0	678	0	746	959	0	1116	704	0	1195
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.69	0.00	0.69
Uniform Delay (d), s/veh	28.0	0.0	0.0	28.0	0.0	24.2	6.8	0.0	9.2	6.0	0.0	5.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.2	0.1	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.4	0.0	1.9	0.0	0.0	4.3	1.2	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.0	0.0	0.0	28.0	0.0	24.4	6.8	0.0	10.4	6.1	0.0	6.1
LnGrp LOS	C			C		C	A		B	A		A
Approach Vol, veh/h		20			158			494			655	
Approach Delay, s/veh		28.0			24.9			10.4			6.1	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	47.9		15.6	5.4	54.1		15.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	6.5	12.7		2.7	2.1	8.8		6.8				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.3				

Intersection Summary			
HCM 7th Control Delay, s/veh		10.3	
HCM 7th LOS		B	

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	2	171	288	0
Future Volume (vph)	2	2	2	171	288	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1838	0	0	1938	1909	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1838	0	0	1938	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	16	16			14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	3	3	3	216	365	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	219	365	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized

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Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	171	288	0
Future Vol, veh/h	2	2	2	171	288	0
Conflicting Peds, #/hr	14	16	16	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	3	3	3	216	365	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	616	397	381	0	-	0
Stage 1	381	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	639	729	1178	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	619	707	1161	-	-	-
Mov Cap-2 Maneuver	619	-	-	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/veh	10.49	0.09	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	21	-	660	-	-
HCM Lane V/C Ratio	0.002	-	0.008	-	-
HCM Control Delay (s/veh)	8.1	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	66	320	718	56	235	701
Future Volume (vph)	66	320	718	56	235	701
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99			
Frt		0.850	0.990			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1854
Flt Permitted	0.950				0.131	
Satd. Flow (perm)	1720	1544	1813	0	245	1854
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	1			3	3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	69	337	756	59	247	738
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	337	815	0	247	738
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	

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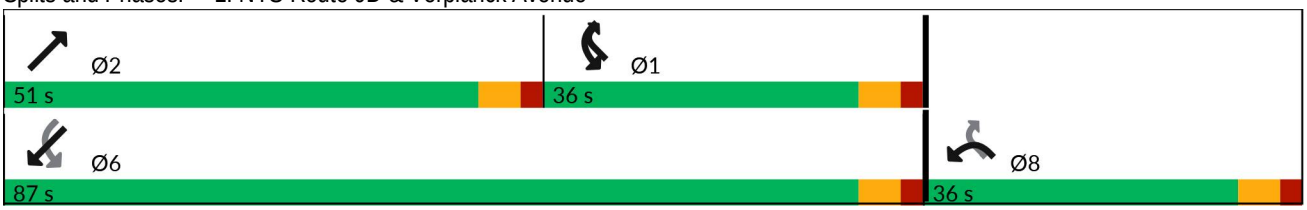
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	3		3			
v/c Ratio	0.38	0.59	0.89		0.45	0.49
Control Delay (s/veh)	46.8	26.9	38.8		18.9	5.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	46.8	26.9	38.8		18.9	5.7
Queue Length 50th (ft)	39	153	420		35	121
Queue Length 95th (ft)	86	229	#925		128	310
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	575	634	907		725	1618
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.12	0.53	0.90		0.34	0.46

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 92	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	66	320	718	56	235	701
Future Volume (veh/h)	66	320	718	56	235	701
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894
Adj Flow Rate, veh/h	69	337	756	59	247	738
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	274	382	820	64	299	1267
Arrive On Green	0.17	0.17	0.49	0.49	0.09	0.67
Sat Flow, veh/h	1641	1460	1664	130	1818	1894
Grp Volume(v), veh/h	69	337	0	815	247	738
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1794	1818	1894
Q Serve(g_s), s	2.7	9.3	0.0	30.9	4.5	15.5
Cycle Q Clear(g_c), s	2.7	9.3	0.0	30.9	4.5	15.5
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	274	382	0	884	299	1267
V/C Ratio(X)	0.25	0.88	0.00	0.92	0.83	0.58
Avail Cap(c_a), veh/h	673	736	0	1103	873	2097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	25.9	0.0	17.3	30.7	6.6
Incr Delay (d2), s/veh	0.2	2.7	0.0	10.9	2.2	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.8	0.0	13.8	4.2	4.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	26.7	28.7	0.0	28.2	32.9	7.0
LnGrp LOS	C	C		C	C	A
Approach Vol, veh/h	406		815			985
Approach Delay, s/veh	28.3		28.2			13.5
Approach LOS	C		C			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.9	42.0				54.9	18.2
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	6.5	32.9				17.5	11.3
Green Ext Time (p_c), s	0.5	3.1				3.5	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	21.6
HCM 7th LOS	C

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	6	19	7	4	5	27	705	6	6	661	81
Future Volume (vph)	53	6	19	7	4	5	27	705	6	6	661	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967			0.960			0.999			0.985	
Flt Protected		0.967			0.977		0.950					
Satd. Flow (prot)	0	1836	0	0	1693	0	1770	1923	0	0	1927	0
Flt Permitted		0.967			0.977		0.950					
Satd. Flow (perm)	0	1836	0	0	1693	0	1770	1923	0	0	1927	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	58	7	21	8	4	5	29	766	7	7	718	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	17	0	29	773	0	0	813	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	6	19	7	4	5	27	705	6	6	661	81
Future Vol, veh/h	53	6	19	7	4	5	27	705	6	6	661	81
Conflicting Peds, #/hr	4	0	4	2	0	2	4	0	2	2	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	25	2	2	2	2	3	2
Mvmt Flow	58	7	21	8	4	5	29	766	7	7	718	88

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1611	1613	770	1569	1654	776	811	0	0	775	0	0
Stage 1	780	780	-	830	830	-	-	-	-	-	-	-
Stage 2	831	834	-	739	824	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.82	7.12	6.52	6.45	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.525	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	120	149	436	90	98	363	816	-	-	841	-	-
Stage 1	462	483	-	364	385	-	-	-	-	-	-	-
Stage 2	438	461	-	409	388	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	141	433	77	93	361	813	-	-	839	-	-
Mov Cap-2 Maneuver	107	141	-	77	93	-	-	-	-	-	-	-
Stage 1	454	474	-	350	370	-	-	-	-	-	-	-
Stage 2	409	444	-	377	381	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/veh	69.86	44.42	0.35	0.07
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	813	-	-	134	108	14	-	-
HCM Lane V/C Ratio	0.036	-	-	0.634	0.16	0.008	-	-
HCM Control Delay (s/veh)	9.6	-	-	69.9	44.4	9.3	0	-
HCM Lane LOS	A	-	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.4	0.5	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	297	13	41	2	8	7	53	434	13	5	530	152
Future Volume (vph)	297	13	41	2	8	7	53	434	13	5	530	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.943			0.996			0.967	
Flt Protected		0.954			0.995		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1816	0	1690	1892	0	1743	1748	0
Flt Permitted		0.721			0.972		0.140			0.354		
Satd. Flow (perm)	0	1325	1568	0	1774	0	249	1892	0	649	1748	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		8			2			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	323	14	45	2	9	8	58	472	14	5	576	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	45	0	19	0	58	486	0	5	741	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%	44.4%	44.4%	44.4%		22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		15.0	25.0		15.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.83	0.08		0.03		0.27	0.45		0.01	0.83	
Control Delay (s/veh)		46.3	1.2		13.4		15.1	15.7		11.2	33.0	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay (s/veh)		46.3	1.2		13.4		15.1	16.1		11.2	33.0	
Queue Length 50th (ft)		176	0		4		12	174		1	355	
Queue Length 95th (ft)		246	6		17		m23	212		7	#714	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		518	665		699		414	1060		615	884	
Starvation Cap Reductn		0	0		0		0	201		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.65	0.07		0.03		0.14	0.57		0.01	0.84	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 75
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	297	13	41	2	8	7	53	434	13	5	530	152
Future Volume (veh/h)	297	13	41	2	8	7	53	434	13	5	530	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	323	14	45	2	9	8	58	472	14	5	576	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	192	5	607	44	195	142	395	561	17	419	371	106
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.17	0.28	0.28	0.17	0.28	0.28
Sat Flow, veh/h	292	13	1561	0	502	365	1891	2018	60	1731	1336	383
Grp Volume(v), veh/h	337	0	45	19	0	0	58	0	486	5	0	741
Grp Sat Flow(s),veh/h/ln	305	0	1561	866	0	0	1891	0	2078	1731	0	1719
Q Serve(g_s), s	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	19.8	0.0	0.0	25.0
Cycle Q Clear(g_c), s	35.0	0.0	1.6	35.0	0.0	0.0	0.0	0.0	19.8	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.11		0.42	1.00		0.03	1.00		0.22
Lane Grp Cap(c), veh/h	197	0	607	381	0	0	395	0	577	419	0	477
V/C Ratio(X)	1.71	0.00	0.07	0.05	0.00	0.00	0.15	0.00	0.84	0.01	0.00	1.55
Avail Cap(c_a), veh/h	197	0	607	381	0	0	395	0	577	419	0	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.88	0.00	0.88	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.5	0.0	17.3	19.3	0.0	0.0	31.2	0.0	30.6	27.3	0.0	32.5
Incr Delay (d2), s/veh	340.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	12.4	0.0	0.0	258.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.0	0.0	0.6	0.2	0.0	0.0	1.0	0.0	11.6	0.1	0.0	44.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	375.4	0.0	17.3	19.3	0.0	0.0	31.3	0.0	43.1	27.3	0.0	291.1
LnGrp LOS	F		B	B			C		D	C		F
Approach Vol, veh/h		382			19			544			746	
Approach Delay, s/veh		333.2			19.3			41.8			289.3	
Approach LOS		F			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	30.0		40.0	20.0	30.0		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	21.8		37.0	2.0	27.0		37.0				
Green Ext Time (p_c), s	0.0	0.4		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		216.6
HCM 7th LOS		F

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	8	2	43	2	181	2	318	74	240	334	0
Future Volume (vph)	2	8	2	43	2	181	2	318	74	240	334	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.98				
Frt		0.979				0.850		0.972				
Flt Protected		0.992			0.954		0.950			0.950		
Satd. Flow (prot)	0	1825	0	0	1885	1647	1832	1806	0	1743	1853	0
Flt Permitted		0.959			0.721		0.536			0.349		
Satd. Flow (perm)	0	1764	0	0	1425	1566	1034	1806	0	640	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	3	13	3	47	2	199	3	403	94	273	380	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	49	199	3	497	0	273	380	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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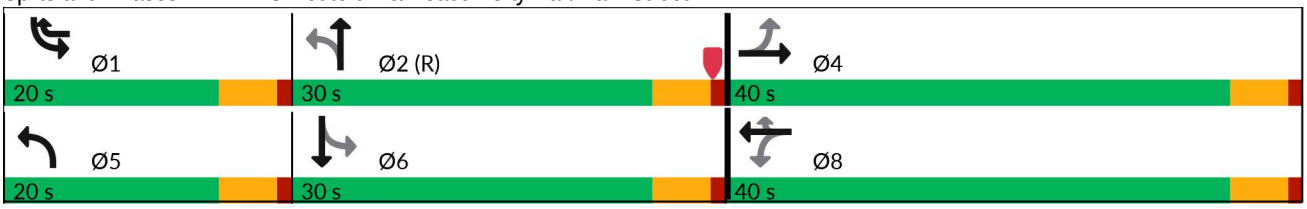
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0		40.0	40.0	20.0	20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%	22.2%	22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0	15.0	15.0	25.0		15.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	9	9		15	15			21				
v/c Ratio		0.07			0.24	0.44	0.00	0.47		0.40	0.25	
Control Delay (s/veh)		25.4			33.2	25.0	7.5	18.2		10.2	5.3	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay (s/veh)		25.4			33.2	25.0	7.5	18.2		10.2	5.6	
Queue Length 50th (ft)		9			27	91	0	144		18	25	
Queue Length 95th (ft)		15			51	97	3	304		m91	m86	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		687			554	483	901	1048		706	1472	
Starvation Cap Reductn		0			0	0	0	0		0	543	
Spillback Cap Reductn		0			0	0	0	21		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.09	0.41	0.00	0.48		0.39	0.41	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 65
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	8	2	43	2	181	2	318	74	240	334	0
Future Volume (veh/h)	2	8	2	43	2	181	2	318	74	240	334	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	3	13	3	47	2	199	3	403	94	273	380	0
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	66	215	44	329	13	431	715	917	214	612	1230	0
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.59	0.59	0.08	0.67	0.00
Sat Flow, veh/h	124	1348	276	1573	80	1764	1922	1546	361	1731	1832	0
Grp Volume(v), veh/h	19	0	0	49	0	199	3	0	497	273	380	0
Grp Sat Flow(s),veh/h/ln	1748	0	0	1653	0	1764	1922	0	1906	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	8.7	0.1	0.0	12.9	5.1	7.7	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.1	0.0	8.7	0.1	0.0	12.9	5.1	7.7	0.0
Prop In Lane	0.16		0.16	0.96		1.00	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	325	0	0	342	0	431	715	0	1131	612	1230	0
V/C Ratio(X)	0.06	0.00	0.00	0.14	0.00	0.46	0.00	0.00	0.44	0.45	0.31	0.00
Avail Cap(c_a), veh/h	707	0	0	715	0	835	1030	0	1131	761	1230	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.51	0.51	0.00
Uniform Delay (d), s/veh	32.1	0.0	0.0	32.6	0.0	29.3	7.4	0.0	10.1	6.7	6.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.2	0.1	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.9	0.0	3.6	0.0	0.0	5.3	1.5	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.2	0.0	0.0	32.7	0.0	29.6	7.4	0.0	11.3	6.8	6.5	0.0
LnGrp LOS	C			C		C	A		B	A	A	
Approach Vol, veh/h		19			248			500			653	
Approach Delay, s/veh		32.2			30.2			11.3			6.6	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	58.4		19.3	5.2	65.4		19.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	7.1	14.9		2.8	2.1	9.7		10.7				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary			
HCM 7th Control Delay, s/veh		12.7	
HCM 7th LOS		B	

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	3	7	0	348	210	3
Future Volume (vph)	3	7	0	348	210	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.904				0.998	
Flt Protected	0.986					
Satd. Flow (prot)	1801	0	0	1977	1869	0
Flt Permitted	0.986					
Satd. Flow (perm)	1801	0	0	1977	1869	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	8	8			14
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	4	10	0	490	296	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	490	300	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	0.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	3	7	0	348	210	3
Future Vol, veh/h	3	7	0	348	210	3
Conflicting Peds, #/hr	14	8	8	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	4	10	0	490	296	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	816	320	314	0	-	0
Stage 1	312	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	545	788	1246	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	803	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	532	772	1231	-	-	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/veh	10.41	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1231	-	680	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s/veh)	0	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	50	267	638	41	219	735
Future Volume (vph)	50	267	638	41	219	735
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97		0.99			
Frt		0.850	0.992			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1818	0	1778	1872
Flt Permitted	0.950				0.204	
Satd. Flow (perm)	1688	1544	1818	0	382	1872
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	7			1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	290	693	45	238	799
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	290	738	0	238	799
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.31	0.55	0.78		0.40	0.52
Control Delay (s/veh)	43.1	26.4	27.8		12.1	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	43.1	26.4	27.8		12.1	6.2
Queue Length 50th (ft)	29	126	320		25	129
Queue Length 95th (ft)	68	196	#749		78	356
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	597	613	945		828	1687
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.09	0.47	0.78		0.29	0.47

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 88.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue

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Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	50	267	638	41	219	735	
Future Volume (veh/h)	50	267	638	41	219	735	
Initial Q (Qb), veh	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909	
Adj Flow Rate, veh/h	54	290	693	45	238	799	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	260	344	781	51	301	1222	
Arrive On Green	0.16	0.16	0.46	0.46	0.08	0.64	
Sat Flow, veh/h	1641	1460	1688	110	1818	1909	
Grp Volume(v), veh/h	54	290	0	738	238	799	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1797	1818	1909	
Q Serve(g_s), s	1.7	6.7	0.0	22.3	2.2	15.4	
Cycle Q Clear(g_c), s	1.7	6.7	0.0	22.3	2.2	15.4	
Prop In Lane	1.00	1.00		0.06	1.00		
Lane Grp Cap(c), veh/h	260	344	0	832	301	1222	
V/C Ratio(X)	0.21	0.84	0.00	0.89	0.79	0.65	
Avail Cap(c_a), veh/h	826	847	0	1357	1076	2594	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	21.8	21.7	0.0	14.6	25.4	6.6	
Incr Delay (d2), s/veh	0.1	2.2	0.0	4.5	1.8	0.6	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.6	3.7	0.0	8.6	3.1	4.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	22.0	23.9	0.0	19.1	27.2	7.2	
LnGrp LOS	C	C		B	C	A	
Approach Vol, veh/h	344		738			1037	
Approach Delay, s/veh	23.6		19.1			11.8	
Approach LOS	C		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.6	33.6				44.2	15.5
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	4.2	24.3				17.4	8.7
Green Ext Time (p_c), s	0.5	3.3				4.0	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	16.3	
HCM 7th LOS	B	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	2	18	4	6	11	24	608	5	8	699	79
Future Volume (vph)	61	2	18	4	6	11	24	608	5	8	699	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.970			0.926			0.999			0.986	
Flt Protected		0.964			0.991		0.950				0.999	
Satd. Flow (prot)	0	1822	0	0	1766	0	1770	1923	0	0	1943	0
Flt Permitted		0.964			0.991		0.950				0.999	
Satd. Flow (perm)	0	1822	0	0	1766	0	1770	1923	0	0	1943	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	65	2	19	4	6	12	26	647	5	9	744	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	22	0	26	652	0	0	837	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	2	18	4	6	11	24	608	5	8	699	79
Future Vol, veh/h	61	2	18	4	6	11	24	608	5	8	699	79
Conflicting Peds, #/hr	6	0	6	2	0	2	6	0	2	2	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	2	19	4	6	12	26	647	5	9	744	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1516	1514	798	1470	1553	657	834	0	0	654	0	0
Stage 1	809	809	-	703	703	-	-	-	-	-	-	-
Stage 2	707	705	-	768	851	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.72	5.82	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	136	168	422	105	113	465	799	-	-	933	-	-
Stage 1	446	471	-	428	440	-	-	-	-	-	-	-
Stage 2	497	513	-	394	377	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	118	158	417	94	107	461	795	-	-	931	-	-
Mov Cap-2 Maneuver	118	158	-	94	107	-	-	-	-	-	-	-
Stage 1	436	461	-	414	425	-	-	-	-	-	-	-
Stage 2	459	496	-	366	368	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	63.87	29.16	0.36	0.09
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	795	-	-	141	171	18	-	-
HCM Lane V/C Ratio	0.032	-	-	0.61	0.13	0.009	-	-
HCM Control Delay (s/veh)	9.7	-	-	63.9	29.2	8.9	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.2	0.4	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	6	48	10	4	8	84	475	4	8	513	199
Future Volume (vph)	154	6	48	10	4	8	84	475	4	8	513	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98	0.97		0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.949			0.999			0.958	
Flt Protected		0.954			0.978		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1790	0	1823	1916	0	1743	1744	0
Flt Permitted		0.717			0.856		0.154			0.360		
Satd. Flow (perm)	0	1300	1524	0	1564	0	295	1916	0	658	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		9			1			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	173	7	54	11	4	9	94	534	4	9	576	224
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	180	54	0	24	0	94	538	0	9	800	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		

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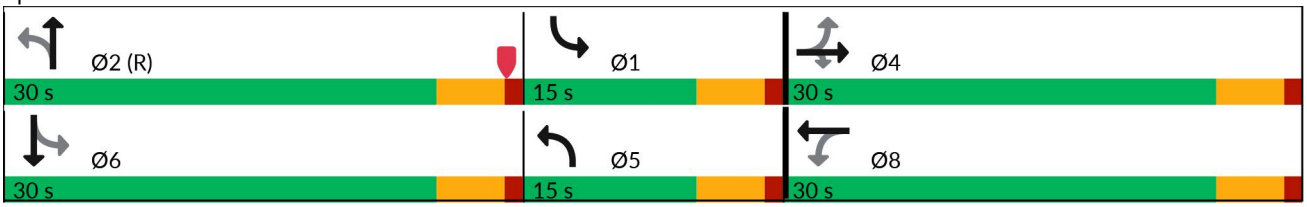
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				11	11							
v/c Ratio		0.68	0.13		0.07		0.32	0.44		0.01	0.81	
Control Delay (s/veh)		39.9	1.8		16.1		13.1	11.9		6.8	25.1	
Queue Delay		0.0	0.0		0.0		0.0	0.2		0.0	0.0	
Total Delay (s/veh)		39.9	1.8		16.1		13.1	12.2		6.8	25.1	
Queue Length 50th (ft)		78	0		6		18	107		1	275	
Queue Length 95th (ft)		123	7		21		m27	223		7	#630	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		433	576		527		419	1211		600	987	
Starvation Cap Reductn		0	0		0		0	223		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.42	0.09		0.05		0.22	0.54		0.02	0.81	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	6	48	10	4	8	84	475	4	8	513	199
Future Volume (veh/h)	154	6	48	10	4	8	84	475	4	8	513	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.95	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	173	7	54	11	4	9	94	534	4	9	576	224
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	9	343	109	55	57	570	696	5	593	413	161
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.24	0.33	0.33	0.24	0.33	0.33
Sat Flow, veh/h	988	40	1490	171	241	247	2006	2087	16	1731	1240	482
Grp Volume(v), veh/h	180	0	54	24	0	0	94	0	538	9	0	800
Grp Sat Flow(s),veh/h/ln	1028	0	1490	658	0	0	2006	0	2103	1731	0	1723
Q Serve(g_s), s	0.0	0.0	2.2	0.2	0.0	0.0	0.0	0.0	17.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	13.7	0.0	2.2	13.8	0.0	0.0	0.0	0.0	17.2	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.46		0.37	1.00		0.01	1.00		0.28
Lane Grp Cap(c), veh/h	331	0	343	222	0	0	570	0	701	593	0	574
V/C Ratio(X)	0.54	0.00	0.16	0.11	0.00	0.00	0.16	0.00	0.77	0.02	0.00	1.39
Avail Cap(c_a), veh/h	473	0	497	406	0	0	570	0	701	593	0	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.87	0.00	0.87	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	0.0	23.1	23.3	0.0	0.0	21.9	0.0	22.4	16.5	0.0	25.0
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.0	0.0	0.0	6.9	0.0	0.0	187.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.7	0.3	0.0	0.0	1.2	0.0	9.3	0.1	0.0	39.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.0	0.0	23.1	23.4	0.0	0.0	21.9	0.0	29.3	16.5	0.0	212.4
LnGrp LOS	C		C	C			C		C	B		F
Approach Vol, veh/h		234			24			632			809	
Approach Delay, s/veh		26.9			23.4			28.2			210.2	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.7	30.0		22.3	22.7	30.0		22.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	19.2		15.7	2.0	27.0		15.8				
Green Ext Time (p_c), s	0.0	0.7		0.3	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	114.6	
HCM 7th LOS	F	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	2	31	0	216	2	346	46	259	308	3
Future Volume (vph)	2	2	2	31	0	216	2	346	46	259	308	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.97		0.98			0.99	
Frt		0.955				0.850		0.982			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1877	1663	1832	1829	0	1760	1851	0
Flt Permitted		0.898			0.752		0.557			0.390		
Satd. Flow (perm)	0	1598	0	0	1486	1614	1074	1829	0	723	1851	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			14			6			48			11
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	2%	5%	1%	1%	0%
Adj. Flow (vph)	3	3	3	35	0	243	2	393	52	282	335	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	35	243	2	445	0	282	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		

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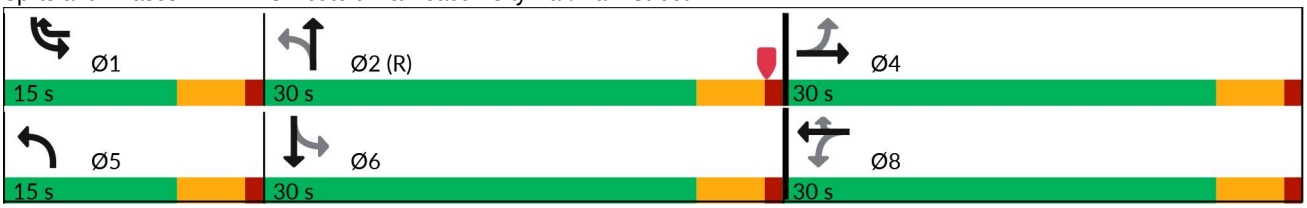
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	14	14		6	6			48				
v/c Ratio		0.04			0.18	0.62	0.00	0.41		0.39	0.22	
Control Delay (s/veh)		20.6			28.2	29.1	6.5	13.5		7.6	4.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		20.6			28.2	29.1	6.5	13.5		7.6	4.9	
Queue Length 50th (ft)		3			16	98	0	95		18	21	
Queue Length 95th (ft)		9			31	98	3	275		m72	m75	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		534			495	403	878	1080		727	1477	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	11		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.07	0.60	0.00	0.42		0.39	0.23	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	31	0	216	2	346	46	259	308	3
Future Volume (veh/h)	2	2	2	31	0	216	2	346	46	259	308	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		0.98	0.99		0.95	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2200	2018	1988	1943	1832	1832	1847
Adj Flow Rate, veh/h	3	3	3	35	0	243	2	393	52	282	335	3
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	2	5	1	1	0
Cap, veh/h	126	120	91	380	0	500	690	904	120	617	1128	10
Arrive On Green	0.18	0.18	0.18	0.18	0.00	0.18	0.00	0.53	0.53	0.09	0.62	0.62
Sat Flow, veh/h	349	680	515	1615	0	1832	1922	1709	226	1745	1813	16
Grp Volume(v), veh/h	9	0	0	35	0	243	2	0	445	282	0	338
Grp Sat Flow(s),veh/h/ln	1544	0	0	1615	0	1832	1922	0	1935	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.0	0.0	8.4	0.0	0.0	10.6	5.1	0.0	6.4
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.3	0.0	8.4	0.0	0.0	10.6	5.1	0.0	6.4
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	336	0	0	380	0	500	690	0	1023	617	0	1138
V/C Ratio(X)	0.03	0.00	0.00	0.09	0.00	0.49	0.00	0.00	0.43	0.46	0.00	0.30
Avail Cap(c_a), veh/h	565	0	0	633	0	788	943	0	1023	684	0	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.55	0.00	0.55
Uniform Delay (d), s/veh	25.6	0.0	0.0	26.0	0.0	23.0	8.3	0.0	10.8	7.0	0.0	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.5	0.0	3.5	0.0	0.0	4.4	1.5	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.6	0.0	0.0	26.0	0.0	23.3	8.3	0.0	12.1	7.1	0.0	6.9
LnGrp LOS	C			C		C	A		B	A		A
Approach Vol, veh/h		9			278			447			620	
Approach Delay, s/veh		25.6			23.6			12.1			7.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	44.7		18.2	5.1	51.7		18.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	7.1	12.6		2.3	2.0	8.4		10.4				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.2	
HCM 7th LOS	B	

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	0	209	269	0
Future Volume (vph)	2	2	0	209	269	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1977	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1977	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	17	17			14
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	2	2	0	243	313	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	243	313	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

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Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	0	209	269	0
Future Vol, veh/h	2	2	0	209	269	0
Conflicting Peds, #/hr	14	17	17	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	0	243	313	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	587	347	330	0	-	0
Stage 1	330	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	654	767	1230	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	634	742	1211	-	-	-
Mov Cap-2 Maneuver	634	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/v	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1211	-	684	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s/veh)	0	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	68	267	607	54	292	720
Future Volume (vph)	68	267	607	54	292	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99			
Frt		0.850	0.989			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1811	0	1778	1854
Flt Permitted	0.950				0.232	
Satd. Flow (perm)	1715	1544	1811	0	434	1854
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	2			1	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	72	281	639	57	307	758
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	281	696	0	307	758
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	

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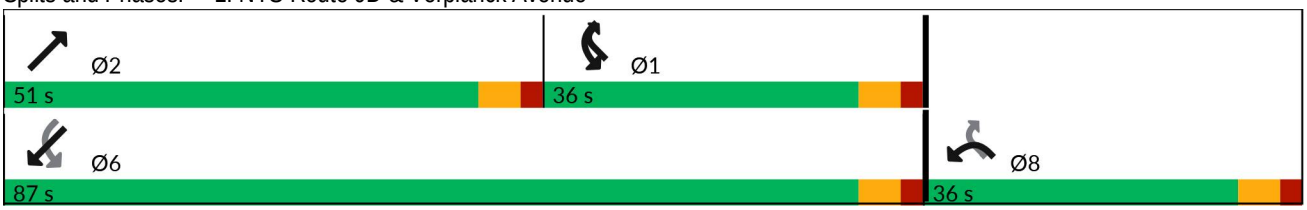
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.38	0.52	0.74		0.50	0.50
Control Delay (s/veh)	44.9	25.6	26.6		14.4	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	44.9	25.6	26.6		14.4	6.1
Queue Length 50th (ft)	39	122	296		37	128
Queue Length 95th (ft)	87	188	#706		101	326
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	594	613	936		852	1659
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.12	0.46	0.74		0.36	0.46

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	68	267	607	54	292	720
Future Volume (veh/h)	68	267	607	54	292	720
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894
Adj Flow Rate, veh/h	72	281	639	57	307	758
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	197	340	732	65	376	1259
Arrive On Green	0.12	0.12	0.44	0.44	0.11	0.66
Sat Flow, veh/h	1641	1460	1644	147	1818	1894
Grp Volume(v), veh/h	72	281	0	696	307	758
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1791	1818	1894
Q Serve(g_s), s	2.3	3.9	0.0	19.7	3.7	12.5
Cycle Q Clear(g_c), s	2.3	3.9	0.0	19.7	3.7	12.5
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	197	340	0	797	376	1259
V/C Ratio(X)	0.36	0.83	0.00	0.87	0.82	0.60
Avail Cap(c_a), veh/h	882	949	0	1444	1149	2749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	20.4	0.0	14.1	22.4	5.2
Incr Delay (d2), s/veh	0.4	2.0	0.0	3.2	1.7	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.3	0.0	7.2	3.7	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.0	22.3	0.0	17.3	24.1	5.7
LnGrp LOS	C	C		B	C	A
Approach Vol, veh/h	353		696			1065
Approach Delay, s/veh	22.5		17.3			11.0
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.3	30.8				43.1	12.7
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	5.7	21.7				14.5	5.9
Green Ext Time (p_c), s	0.6	3.1				3.7	0.8

Intersection Summary			
HCM 7th Control Delay, s/veh		15.0	
HCM 7th LOS		B	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	4	38	9	0	9	20	558	6	2	728	65
Future Volume (vph)	85	4	38	9	0	9	20	558	6	2	728	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.959			0.932			0.998			0.989	
Flt Protected		0.968			0.976		0.950					
Satd. Flow (prot)	0	1812	0	0	1661	0	1770	1849	0	0	1903	0
Flt Permitted		0.968			0.976		0.950					
Satd. Flow (perm)	0	1812	0	0	1661	0	1770	1849	0	0	1903	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	89	4	40	9	0	9	21	587	6	2	766	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	18	0	21	593	0	0	836	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	4	38	9	0	9	20	558	6	2	728	65
Future Vol, veh/h	85	4	38	9	0	9	20	558	6	2	728	65
Conflicting Peds, #/hr	6	0	8	14	0	12	8	0	14	12	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	13	2	2	2	6	2	2	4	11
Mvmt Flow	89	4	40	9	0	9	21	587	6	2	766	68

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1454	1463	823	1433	1494	617	843	0	0	608	0	0
Stage 1	813	813	-	647	647	-	-	-	-	-	-	-
Stage 2	641	650	-	787	847	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.84	7.23	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.617	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	149	178	406	106	123	490	793	-	-	971	-	-
Stage 1	446	470	-	442	467	-	-	-	-	-	-	-
Stage 2	534	537	-	369	378	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	139	169	398	88	117	479	787	-	-	958	-	-
Mov Cap-2 Maneuver	139	169	-	88	117	-	-	-	-	-	-	-
Stage 1	441	464	-	425	448	-	-	-	-	-	-	-
Stage 2	504	516	-	323	374	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	72.83	32.85	0.33	0.02
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	787	-	-	174	148	4	-	-
HCM Lane V/C Ratio	0.027	-	-	0.768	0.128	0.002	-	-
HCM Control Delay (s/veh)	9.7	-	-	72.8	32.8	8.8	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5	0.4	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	5	70	9	10	8	39	453	3	3	515	257
Future Volume (vph)	131	5	70	9	10	8	39	453	3	3	515	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99	0.97		0.99		0.99	0.99		0.99	0.98	
Frt			0.850		0.959			0.999			0.950	
Flt Protected		0.954			0.984		0.950			0.950		
Satd. Flow (prot)	0	1714	1494	0	1833	0	1754	1844	0	1743	1692	0
Flt Permitted		0.711			0.894		0.171			0.414		
Satd. Flow (perm)	0	1275	1460	0	1664	0	315	1844	0	755	1692	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		9						36	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	141	5	75	10	11	9	42	487	3	3	554	276
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	75	0	30	0	42	490	0	3	830	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.61	0.21		0.09		0.14	0.40		0.00	0.79	
Control Delay (s/veh)		38.1	4.1		17.5		5.1	8.4		6.3	22.0	
Queue Delay		0.0	0.0		0.0		0.0	0.1		0.0	0.0	
Total Delay (s/veh)		38.1	4.1		17.5		5.1	8.5		6.3	22.0	
Queue Length 50th (ft)		64	0		8		5	58		0	279	
Queue Length 95th (ft)		102	18		25		m10	173		4	#648	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		425	554		560		434	1212		693	1046	
Starvation Cap Reductn		0	0		0		0	162		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.34	0.14		0.05		0.10	0.47		0.00	0.79	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	5	70	9	10	8	39	453	3	3	515	257
Future Volume (veh/h)	131	5	70	9	10	8	39	453	3	3	515	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	141	5	75	10	11	9	42	487	3	3	554	276
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	261	7	403	83	99	50	481	677	4	546	366	182
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.20	0.33	0.33	0.20	0.33	0.33
Sat Flow, veh/h	619	27	1497	70	367	187	1948	2031	13	1731	1099	547
Grp Volume(v), veh/h	146	0	75	30	0	0	42	0	490	3	0	830
Grp Sat Flow(s),veh/h/ln	646	0	1497	624	0	0	1948	0	2043	1731	0	1646
Q Serve(g_s), s	0.0	0.0	2.9	0.2	0.0	0.0	0.0	0.0	15.8	0.0	0.0	25.0
Cycle Q Clear(g_c), s	17.9	0.0	2.9	18.2	0.0	0.0	0.0	0.0	15.8	0.0	0.0	25.0
Prop In Lane	0.97		1.00	0.33		0.30	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	268	0	403	232	0	0	481	0	681	546	0	549
V/C Ratio(X)	0.54	0.00	0.19	0.13	0.00	0.00	0.09	0.00	0.72	0.01	0.00	1.51
Avail Cap(c_a), veh/h	341	0	499	353	0	0	481	0	681	546	0	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	21.1	21.7	0.0	0.0	24.1	0.0	21.9	17.4	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	5.8	0.0	0.0	239.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.0	0.4	0.0	0.0	0.6	0.0	8.2	0.0	0.0	45.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.2	0.0	21.2	21.7	0.0	0.0	24.2	0.0	27.8	17.4	0.0	264.9
LnGrp LOS	C		C	C			C		C	B		F
Approach Vol, veh/h		221			30			532			833	
Approach Delay, s/veh		25.1			21.7			27.5			264.0	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	30.0		25.2	19.8	30.0		25.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	17.8		19.9	2.0	27.0		20.2				
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		149.0
HCM 7th LOS		F

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	3	14	7	128	5	363	31	249	339	6
Future Volume (vph)	4	5	3	14	7	128	5	363	31	249	339	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.99			0.99	
Frt		0.966				0.850		0.988			0.997	
Flt Protected		0.983			0.968		0.950			0.950		
Satd. Flow (prot)	0	1779	0	0	1913	1647	1832	1856	0	1743	1846	0
Flt Permitted		0.882			0.791		0.530			0.358		
Satd. Flow (perm)	0	1596	0	0	1563	1574	1022	1856	0	657	1846	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	7	8	5	15	8	141	6	459	39	283	385	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	23	141	6	498	0	283	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	40		20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.10			0.12	0.38	0.00	0.44		0.42	0.26	
Control Delay (s/veh)		21.9			27.0	21.8	6.2	14.5		7.3	4.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay (s/veh)		21.9			27.0	21.8	6.2	14.5		7.3	4.9	
Queue Length 50th (ft)		7			10	51	1	121		18	25	
Queue Length 95th (ft)		12			23	59	5	267		m72	m93	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		535			521	393	857	1114		688	1481	
Starvation Cap Reductn		0			0	0	0	0		0	421	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.04			0.04	0.36	0.01	0.45		0.41	0.37	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	3	14	7	128	5	363	31	249	339	6
Future Volume (veh/h)	4	5	3	14	7	128	5	363	31	249	339	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	7	8	5	15	8	141	6	459	39	283	385	7
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	117	119	57	229	111	417	697	1021	87	616	1169	21
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.57	0.57	0.09	0.65	0.65
Sat Flow, veh/h	362	830	397	1045	776	1755	1922	1800	153	1731	1793	33
Grp Volume(v), veh/h	20	0	0	23	0	141	6	0	498	283	0	392
Grp Sat Flow(s),veh/h/ln	1588	0	0	1822	0	1755	1922	0	1953	1731	0	1826
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	5.0	0.1	0.0	11.1	4.6	0.0	7.1
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.7	0.0	5.0	0.1	0.0	11.1	4.6	0.0	7.1
Prop In Lane	0.35		0.25	0.65		1.00	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	293	0	0	340	0	417	697	0	1108	616	0	1190
V/C Ratio(X)	0.07	0.00	0.00	0.07	0.00	0.34	0.01	0.00	0.45	0.46	0.00	0.33
Avail Cap(c_a), veh/h	577	0	0	678	0	751	945	0	1108	692	0	1190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.59	0.00	0.59
Uniform Delay (d), s/veh	27.8	0.0	0.0	27.8	0.0	24.0	6.9	0.0	9.4	6.2	0.0	5.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.3	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.4	0.0	2.0	0.0	0.0	4.5	1.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.9	0.0	0.0	27.8	0.0	24.2	6.9	0.0	10.8	6.3	0.0	6.2
LnGrp LOS	C			C		C	A		B	A		A
Approach Vol, veh/h		20			164			504			675	
Approach Delay, s/veh		27.9			24.7			10.7			6.3	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	47.5		15.8	5.4	53.9		15.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	6.6	13.1		2.7	2.1	9.1		7.0				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.3		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh		10.4
HCM 7th LOS		B

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	2	176	295	0
Future Volume (vph)	2	2	2	176	295	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1838	0	0	1938	1909	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1838	0	0	1938	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	16	16			14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	3	3	3	223	373	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	226	373	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	176	295	0
Future Vol, veh/h	2	2	2	176	295	0
Conflicting Peds, #/hr	14	16	16	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	3	3	3	223	373	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	631	405	389	0	-	0
Stage 1	389	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	632	722	1169	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	612	701	1152	-	-	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	900	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/veh	10.55	0.09	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	20	-	653	-	-
HCM Lane V/C Ratio	0.002	-	0.008	-	-
HCM Control Delay (s/veh)	8.1	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	32	7	5	172	288	17
Future Volume (vph)	32	7	5	172	288	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.976				0.992	
Flt Protected	0.961			0.999		
Satd. Flow (prot)	1922	0	0	2049	1786	0
Flt Permitted	0.961			0.999		
Satd. Flow (perm)	1922	0	0	2049	1786	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	41	9	6	218	365	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	0	224	387	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	1.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	32	7	5	172	288	17
Future Vol, veh/h	32	7	5	172	288	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	2	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	41	9	6	218	365	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	606	375	386	0	-	0
Stage 1	375	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	460	671	1172	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	458	671	1172	-	-	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	808	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/v	13.26	0.23	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	51	-	485	-	-
HCM Lane V/C Ratio	0.005	-	0.102	-	-
HCM Control Delay (s/veh)	8.1	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	116	0	11	74	0	9
Future Volume (vph)	116	0	11	74	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1973	0	0	1885	1428	0
Flt Permitted				0.994		
Satd. Flow (perm)	1973	0	0	1885	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	147	0	14	94	0	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	0	108	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	0	11	74	0	9
Future Vol, veh/h	116	0	11	74	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	147	0	14	94	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	147	0	268	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	122	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1435	-	689	889
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1435	-	682	889
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	877	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.97	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	889	-	-	233	-
HCM Lane V/C Ratio	0.013	-	-	0.01	-
HCM Control Delay (s/veh)	9.1	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	72	320	740	62	235	729
Future Volume (vph)	72	320	740	62	235	729
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99			
Frt		0.850	0.990			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1854
Flt Permitted	0.950				0.108	
Satd. Flow (perm)	1720	1544	1813	0	202	1854
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	1			3	3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	76	337	779	65	247	767
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	337	844	0	247	767
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	

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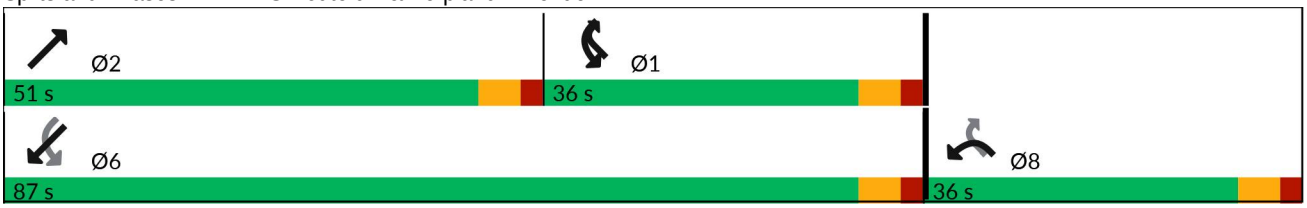
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	3		3			
v/c Ratio	0.41	0.59	0.93		0.47	0.51
Control Delay (s/veh)	47.4	26.8	43.5		21.9	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	47.4	26.8	43.5		21.9	6.1
Queue Length 50th (ft)	43	153	452		51	133
Queue Length 95th (ft)	93	229	#972		147	332
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	574	637	905		700	1614
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.13	0.53	0.93		0.35	0.48

Intersection Summary
Area Type: Other
Cycle Length: 123
Actuated Cycle Length: 92.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	72	320	740	62	235	729
Future Volume (veh/h)	72	320	740	62	235	729
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894
Adj Flow Rate, veh/h	76	337	779	65	247	767
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	266	380	835	70	297	1290
Arrive On Green	0.16	0.16	0.50	0.50	0.10	0.68
Sat Flow, veh/h	1641	1460	1654	138	1818	1894
Grp Volume(v), veh/h	76	337	0	844	247	767
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1792	1818	1894
Q Serve(g_s), s	3.1	9.5	0.0	33.7	5.1	16.6
Cycle Q Clear(g_c), s	3.1	9.5	0.0	33.7	5.1	16.6
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	266	380	0	904	297	1290
V/C Ratio(X)	0.29	0.89	0.00	0.93	0.83	0.59
Avail Cap(c_a), veh/h	644	716	0	1054	832	2006
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	27.2	0.0	17.7	32.0	6.5
Incr Delay (d2), s/veh	0.2	2.8	0.0	13.3	2.3	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	0.0	15.6	4.5	5.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	28.4	30.0	0.0	31.0	34.4	7.0
LnGrp LOS	C	C		C	C	A
Approach Vol, veh/h	413		844			1014
Approach Delay, s/veh	29.7		31.0			13.7
Approach LOS	C		C			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.5	44.6				58.1	18.4
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	7.1	35.7				18.6	11.5
Green Ext Time (p_c), s	0.5	2.9				3.8	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	23.0
HCM 7th LOS	C

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	6	19	7	4	5	27	722	6	6	669	107
Future Volume (vph)	64	6	19	7	4	5	27	722	6	6	669	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.971			0.960			0.999			0.982	
Flt Protected		0.966			0.977		0.950					
Satd. Flow (prot)	0	1842	0	0	1693	0	1770	1923	0	0	1921	0
Flt Permitted		0.966			0.977		0.950					
Satd. Flow (perm)	0	1842	0	0	1693	0	1770	1923	0	0	1921	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	70	7	21	8	4	5	29	785	7	7	727	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	17	0	29	792	0	0	850	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	6	19	7	4	5	27	722	6	6	669	107
Future Vol, veh/h	64	6	19	7	4	5	27	722	6	6	669	107
Conflicting Peds, #/hr	4	0	4	2	0	2	4	0	2	2	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	25	2	2	2	2	3	2
Mvmt Flow	70	7	21	8	4	5	29	785	7	7	727	116

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1652	1654	793	1596	1709	794	847	0	0	793	0	0
Stage 1	802	802	-	849	849	-	-	-	-	-	-	-
Stage 2	850	852	-	747	861	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.82	7.12	6.52	6.45	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.525	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	113	142	424	86	91	354	790	-	-	828	-	-
Stage 1	451	474	-	356	377	-	-	-	-	-	-	-
Stage 2	429	454	-	405	373	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	100	134	421	74	86	352	787	-	-	826	-	-
Mov Cap-2 Maneuver	100	134	-	74	86	-	-	-	-	-	-	-
Stage 1	443	465	-	342	363	-	-	-	-	-	-	-
Stage 2	400	437	-	372	366	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	100.63	47.16	0.35	0.07
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	787	-	-	122	103	13	-	-
HCM Lane V/C Ratio	0.037	-	-	0.793	0.17	0.008	-	-
HCM Control Delay (s/veh)	9.8	-	-	100.6	47.2	9.4	0	-
HCM Lane LOS	A	-	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.6	0.6	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	314	13	68	2	8	7	85	434	13	5	530	160
Future Volume (vph)	314	13	68	2	8	7	85	434	13	5	530	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.943			0.996			0.965	
Flt Protected		0.954			0.995		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1816	0	1690	1892	0	1743	1744	0
Flt Permitted		0.721			0.972		0.109			0.340		
Satd. Flow (perm)	0	1325	1568	0	1774	0	194	1892	0	623	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		8			2			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	341	14	74	2	9	8	92	472	14	5	576	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	74	0	19	0	92	486	0	5	750	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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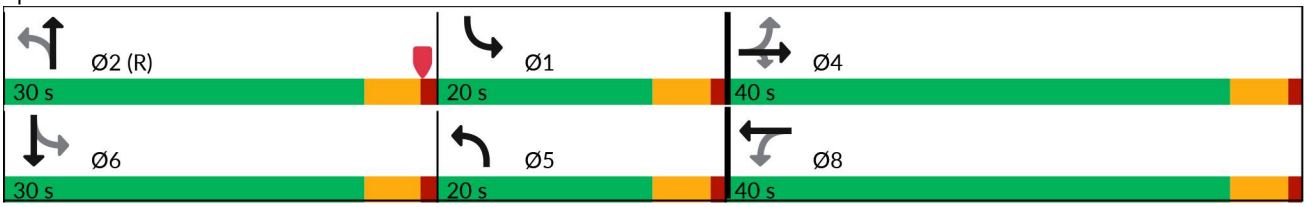
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%	44.4%	44.4%	44.4%		22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		15.0	25.0		15.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.84	0.13		0.03		0.46	0.47		0.01	0.89	
Control Delay (s/veh)		46.5	3.9		12.9		27.2	17.6		12.0	39.7	
Queue Delay		0.0	0.0		0.0		0.0	0.4		0.0	0.0	
Total Delay (s/veh)		46.5	3.9		12.9		27.2	18.0		12.0	39.7	
Queue Length 50th (ft)		185	0		4		24	184		1	377	
Queue Length 95th (ft)		259	21		17		0	#326		7	#768	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		521	668		702		381	1026		587	841	
Starvation Cap Reductn		0	0		0		0	187		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.68	0.11		0.03		0.24	0.58		0.01	0.89	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	13	68	2	8	7	85	434	13	5	530	160
Future Volume (veh/h)	314	13	68	2	8	7	85	434	13	5	530	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	341	14	74	2	9	8	92	472	14	5	576	174
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	192	5	607	44	195	142	395	561	17	419	366	111
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.17	0.28	0.28	0.17	0.28	0.28
Sat Flow, veh/h	292	12	1561	0	502	365	1891	2018	60	1731	1317	398
Grp Volume(v), veh/h	355	0	74	19	0	0	92	0	486	5	0	750
Grp Sat Flow(s),veh/h/ln	304	0	1561	866	0	0	1891	0	2078	1731	0	1715
Q Serve(g_s), s	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	19.8	0.0	0.0	25.0
Cycle Q Clear(g_c), s	35.0	0.0	2.7	35.0	0.0	0.0	0.0	0.0	19.8	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.11		0.42	1.00		0.03	1.00		0.23
Lane Grp Cap(c), veh/h	197	0	607	381	0	0	395	0	577	419	0	477
V/C Ratio(X)	1.80	0.00	0.12	0.05	0.00	0.00	0.23	0.00	0.84	0.01	0.00	1.57
Avail Cap(c_a), veh/h	197	0	607	381	0	0	395	0	577	419	0	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.86	0.00	0.86	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.5	0.0	17.6	19.3	0.0	0.0	31.2	0.0	30.6	27.3	0.0	32.5
Incr Delay (d2), s/veh	381.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	12.2	0.0	0.0	268.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.2	0.0	1.0	0.2	0.0	0.0	1.7	0.0	11.6	0.1	0.0	45.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	415.9	0.0	17.7	19.3	0.0	0.0	31.3	0.0	42.8	27.3	0.0	300.8
LnGrp LOS	F		B	B			C		D	C		F
Approach Vol, veh/h		429			19			578			755	
Approach Delay, s/veh		347.2			19.3			41.0			298.9	
Approach LOS		F			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	30.0		40.0	20.0	30.0		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	21.8		37.0	2.0	27.0		37.0				
Green Ext Time (p_c), s	0.0	0.4		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		223.9
HCM 7th LOS		F

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	8	2	43	2	193	2	337	74	251	350	0
Future Volume (vph)	2	8	2	43	2	193	2	337	74	251	350	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.98				
Frt		0.979				0.850		0.973				
Flt Protected		0.992			0.954		0.950			0.950		
Satd. Flow (prot)	0	1825	0	0	1885	1647	1832	1810	0	1743	1853	0
Flt Permitted		0.959			0.721		0.527			0.329		
Satd. Flow (perm)	0	1764	0	0	1425	1566	1016	1810	0	604	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	3	13	3	47	2	212	3	427	94	285	398	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	49	212	3	521	0	285	398	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	40		20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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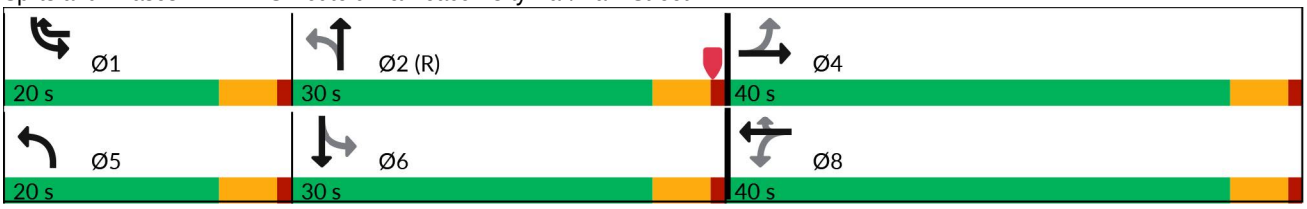
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0		40.0	40.0	20.0	20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%	22.2%	22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0	15.0	15.0	25.0		15.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	9	9		15	15			21				
v/c Ratio		0.07			0.24	0.46	0.00	0.50		0.42	0.27	
Control Delay (s/veh)		25.4			33.2	25.0	8.0	19.3		12.3	6.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay (s/veh)		25.4			33.2	25.0	8.0	19.4		12.3	6.3	
Queue Length 50th (ft)		9			27	96	0	158		26	36	
Queue Length 95th (ft)		15			51	101	3	326		m109	m99	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		687			554	488	885	1037		688	1472	
Starvation Cap Reductn		0			0	0	0	0		0	556	
Spillback Cap Reductn		0			0	0	0	42		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.09	0.43	0.00	0.52		0.41	0.43	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	8	2	43	2	193	2	337	74	251	350	0
Future Volume (veh/h)	2	8	2	43	2	193	2	337	74	251	350	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	3	13	3	47	2	212	3	427	94	285	398	0
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	67	220	45	336	13	447	693	915	201	593	1222	0
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.58	0.58	0.08	0.67	0.00
Sat Flow, veh/h	126	1344	276	1574	80	1767	1922	1565	345	1731	1832	0
Grp Volume(v), veh/h	19	0	0	49	0	212	3	0	521	285	398	0
Grp Sat Flow(s),veh/h/ln	1745	0	0	1653	0	1767	1922	0	1910	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	9.2	0.1	0.0	14.0	5.5	8.3	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.1	0.0	9.2	0.1	0.0	14.0	5.5	8.3	0.0
Prop In Lane	0.16		0.16	0.96		1.00	1.00		0.18	1.00		0.00
Lane Grp Cap(c), veh/h	333	0	0	350	0	447	693	0	1117	593	1222	0
V/C Ratio(X)	0.06	0.00	0.00	0.14	0.00	0.47	0.00	0.00	0.47	0.48	0.33	0.00
Avail Cap(c_a), veh/h	706	0	0	716	0	844	1008	0	1117	735	1222	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.46	0.46	0.00
Uniform Delay (d), s/veh	31.8	0.0	0.0	32.3	0.0	28.9	7.7	0.0	10.7	7.3	6.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.4	0.1	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.9	0.0	3.9	0.0	0.0	5.8	1.6	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	0.0	0.0	32.3	0.0	29.2	7.7	0.0	12.1	7.4	6.7	0.0
LnGrp LOS	C			C		C	A		B	A	A	
Approach Vol, veh/h		19			261			524			683	
Approach Delay, s/veh		31.8			29.8			12.1			7.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	57.6		19.8	5.2	65.0		19.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	7.5	16.0		2.8	2.1	10.3		11.2				
Green Ext Time (p_c), s	0.2	0.4		0.0	0.0	0.3		0.6				

Intersection Summary			
HCM 7th Control Delay, s/veh		13.1	
HCM 7th LOS		B	

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	3	7	0	360	220	3
Future Volume (vph)	3	7	0	360	220	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.904				0.998	
Flt Protected	0.986					
Satd. Flow (prot)	1801	0	0	1977	1869	0
Flt Permitted	0.986					
Satd. Flow (perm)	1801	0	0	1977	1869	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	8	8			14
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	4	10	0	507	310	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	507	314	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	0.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	3	7	0	360	220	3
Future Vol, veh/h	3	7	0	360	220	3
Conflicting Peds, #/hr	14	8	8	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	4	10	0	507	310	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	847	334	328	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	532	777	1231	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	518	761	1216	-	-	-
Mov Cap-2 Maneuver	518	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/veh	10.51	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1216	-	667	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s/veh)	0	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	44	10	12	350	212	39
Future Volume (vph)	44	10	12	350	212	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975				0.979	
Flt Protected	0.961			0.998		
Satd. Flow (prot)	1920	0	0	2086	1734	0
Flt Permitted	0.961			0.998		
Satd. Flow (perm)	1920	0	0	2086	1734	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	62	14	17	493	299	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	0	510	354	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	1.6

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	44	10	12	350	212	39
Future Vol, veh/h	44	10	12	350	212	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	2	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	62	14	17	493	299	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	853	326	354	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	330	715	1205	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	323	715	1205	-	-	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	592	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/v	17.67	0.27	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	60	-	360	-	-
HCM Lane V/C Ratio	0.014	-	0.211	-	-
HCM Control Delay (s/veh)	8	0	17.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	77	0	26	111	0	11
Future Volume (vph)	77	0	26	111	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.991		
Satd. Flow (prot)	1973	0	0	1879	1428	0
Flt Permitted				0.991		
Satd. Flow (perm)	1973	0	0	1879	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	108	0	37	156	0	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	0	0	193	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	0	26	111	0	11
Future Vol, veh/h	77	0	26	111	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	0	37	156	0	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	108	0	338	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	230	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1482	-	622	937
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	778	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1482	-	605	937
Mov Cap-2 Maneuver	-	-	-	-	605	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	757	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.42	8.91
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	937	-	-	342	-
HCM Lane V/C Ratio	0.017	-	-	0.025	-
HCM Control Delay (s/veh)	8.9	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	55	267	657	46	219	754
Future Volume (vph)	55	267	657	46	219	754
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97		0.99			
Frt		0.850	0.991			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1816	0	1778	1872
Flt Permitted	0.950				0.185	
Satd. Flow (perm)	1688	1544	1816	0	346	1872
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Confl. Peds. (#/hr)	7			1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	290	714	50	238	820
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	290	764	0	238	820
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6

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Lane Group	NWL	NWR	NET	NER	SWL	SWT
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.33	0.54	0.81		0.42	0.54
Control Delay (s/veh)	43.6	26.3	29.6		13.7	6.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	43.6	26.3	29.6		13.7	6.5
Queue Length 50th (ft)	32	126	344		26	139
Queue Length 95th (ft)	74	196	#788		78	374
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	596	614	941		806	1683
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.10	0.47	0.81		0.30	0.49

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 88.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue

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Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	55	267	657	46	219	754
Future Volume (veh/h)	55	267	657	46	219	754
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909
Adj Flow Rate, veh/h	60	290	714	50	238	820
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	255	342	798	56	299	1243
Arrive On Green	0.16	0.16	0.48	0.48	0.08	0.65
Sat Flow, veh/h	1641	1460	1679	118	1818	1909
Grp Volume(v), veh/h	60	290	0	764	238	820
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1796	1818	1909
Q Serve(g_s), s	2.0	6.9	0.0	24.1	2.5	16.3
Cycle Q Clear(g_c), s	2.0	6.9	0.0	24.1	2.5	16.3
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	255	342	0	853	299	1243
V/C Ratio(X)	0.24	0.85	0.00	0.90	0.80	0.66
Avail Cap(c_a), veh/h	795	822	0	1305	1036	2497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	22.7	0.0	14.8	26.3	6.6
Incr Delay (d2), s/veh	0.2	2.3	0.0	5.6	1.9	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.9	0.0	9.5	3.3	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.1	24.9	0.0	20.5	28.2	7.2
LnGrp LOS	C	C		C	C	A
Approach Vol, veh/h	350		764			1058
Approach Delay, s/veh	24.6		20.5			11.9
Approach LOS	C		C			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.9	35.4				46.3	15.6
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	4.5	26.1				18.3	8.9
Green Ext Time (p_c), s	0.5	3.4				4.2	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	17.0
HCM 7th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	2	18	4	6	11	24	623	5	8	705	98
Future Volume (vph)	70	2	18	4	6	11	24	623	5	8	705	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.973			0.926			0.999			0.984	
Flt Protected		0.963			0.991		0.950				0.999	
Satd. Flow (prot)	0	1826	0	0	1766	0	1770	1923	0	0	1939	0
Flt Permitted		0.963			0.991		0.950				0.999	
Satd. Flow (perm)	0	1826	0	0	1766	0	1770	1923	0	0	1939	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	74	2	19	4	6	12	26	663	5	9	750	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	22	0	26	668	0	0	863	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	2	18	4	6	11	24	623	5	8	705	98
Future Vol, veh/h	70	2	18	4	6	11	24	623	5	8	705	98
Conflicting Peds, #/hr	6	0	6	2	0	2	6	0	2	2	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	2	19	4	6	12	26	663	5	9	750	104

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1548	1546	814	1493	1596	673	860	0	0	670	0	0
Stage 1	825	825	-	718	718	-	-	-	-	-	-	-
Stage 2	723	721	-	774	877	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.72	5.82	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	130	161	414	102	107	455	781	-	-	920	-	-
Stage 1	439	465	-	420	433	-	-	-	-	-	-	-
Stage 2	488	507	-	391	366	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	112	152	409	90	101	452	777	-	-	918	-	-
Mov Cap-2 Maneuver	112	152	-	90	101	-	-	-	-	-	-	-
Stage 1	428	454	-	405	418	-	-	-	-	-	-	-
Stage 2	451	489	-	363	357	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	83.23	30.47	0.36	0.09
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	132	164	17	-	-
HCM Lane V/C Ratio	0.033	-	-	0.725	0.137	0.009	-	-
HCM Control Delay (s/veh)	9.8	-	-	83.2	30.5	9	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.1	0.5	0	-	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	6	72	10	4	8	109	475	4	8	513	205
Future Volume (vph)	169	6	72	10	4	8	109	475	4	8	513	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98	0.97		0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.949			0.999			0.957	
Flt Protected		0.954			0.978		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1790	0	1823	1916	0	1743	1741	0
Flt Permitted		0.716			0.855		0.133			0.351		
Satd. Flow (perm)	0	1298	1524	0	1562	0	255	1916	0	642	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		9			1			29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	190	7	81	11	4	9	122	534	4	9	576	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	81	0	24	0	122	538	0	9	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		

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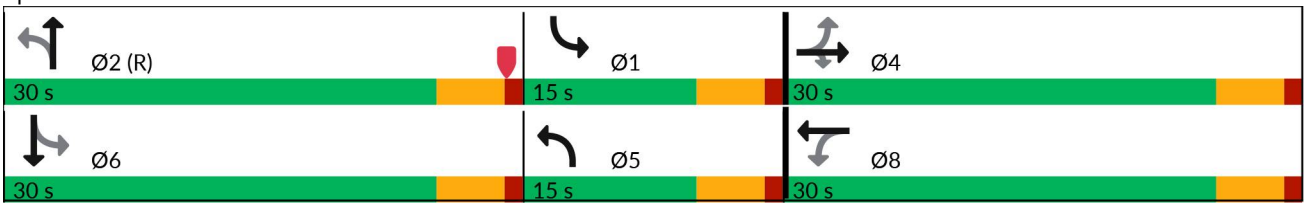
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				11	11							
v/c Ratio		0.71	0.20		0.07		0.44	0.45		0.01	0.84	
Control Delay (s/veh)		41.1	4.4		15.8		19.9	12.9		7.2	28.8	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay (s/veh)		41.1	4.4		15.8		19.9	13.2		7.2	28.8	
Queue Length 50th (ft)		85	0		6		23	107		1	294	
Queue Length 95th (ft)		135	21		21		m0	223		7	#656	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		432	576		526		391	1185		579	954	
Starvation Cap Reductn		0	0		0		0	211		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.46	0.14		0.05		0.31	0.55		0.02	0.84	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	6	72	10	4	8	109	475	4	8	513	205
Future Volume (veh/h)	169	6	72	10	4	8	109	475	4	8	513	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.95	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	190	7	81	11	4	9	122	534	4	9	576	230
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	9	373	105	54	54	531	696	5	559	410	164
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.22	0.33	0.33	0.22	0.33	0.33
Sat Flow, veh/h	957	35	1493	142	217	215	2006	2087	16	1731	1230	491
Grp Volume(v), veh/h	197	0	81	24	0	0	122	0	538	9	0	806
Grp Sat Flow(s),veh/h/ln	992	0	1493	574	0	0	2006	0	2103	1731	0	1721
Q Serve(g_s), s	0.0	0.0	3.2	0.2	0.0	0.0	0.0	0.0	17.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	15.4	0.0	3.2	15.6	0.0	0.0	0.0	0.0	17.2	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.46		0.37	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	342	0	373	213	0	0	531	0	701	559	0	574
V/C Ratio(X)	0.58	0.00	0.22	0.11	0.00	0.00	0.23	0.00	0.77	0.02	0.00	1.40
Avail Cap(c_a), veh/h	457	0	498	361	0	0	531	0	701	559	0	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.85	0.00	0.85	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	22.3	22.5	0.0	0.0	23.0	0.0	22.4	17.5	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.1	0.0	6.8	0.0	0.0	192.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.1	0.3	0.0	0.0	1.7	0.0	9.3	0.1	0.0	40.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.5	0.0	22.4	22.6	0.0	0.0	23.1	0.0	29.2	17.5	0.0	217.5
LnGrp LOS	C		C	C			C		C	B		F
Approach Vol, veh/h		278			24			660			815	
Approach Delay, s/veh		26.0			22.6			28.0			215.3	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.3	30.0		23.7	21.3	30.0		23.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	19.2		17.4	2.0	27.0		17.6				
Green Ext Time (p_c), s	0.0	0.7		0.4	0.0	0.0		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			113.5									
HCM 7th LOS			F									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	2	31	0	226	2	360	46	269	322	3
Future Volume (vph)	2	2	2	31	0	226	2	360	46	269	322	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.97		0.98			0.99	
Frt		0.955				0.850		0.983			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1877	1663	1832	1832	0	1760	1851	0
Flt Permitted		0.898			0.752		0.550			0.376		
Satd. Flow (perm)	0	1598	0	0	1486	1614	1061	1832	0	697	1851	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			14			6			48			11
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	2%	5%	1%	1%	0%
Adj. Flow (vph)	3	3	3	35	0	254	2	409	52	292	350	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	35	254	2	461	0	292	353	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	40		20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		

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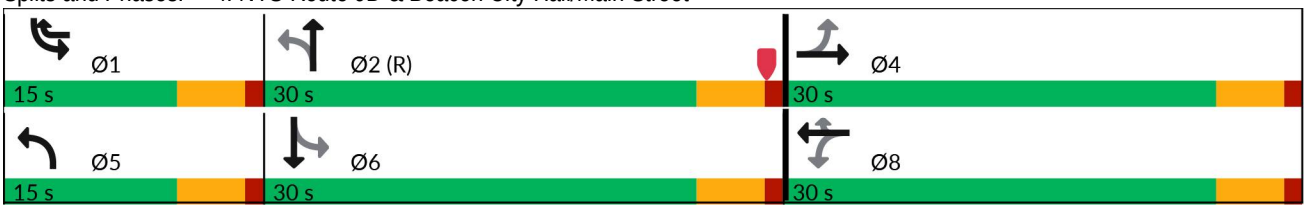
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	14	14		6	6			48				
v/c Ratio		0.04			0.18	0.63	0.00	0.43		0.41	0.23	
Control Delay (s/veh)		20.6			28.2	28.8	6.5	14.3		8.2	5.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		20.6			28.2	28.8	6.5	14.3		8.2	5.2	
Queue Length 50th (ft)		3			16	101	0	105		19	23	
Queue Length 95th (ft)		9			31	102	3	#295		m82	m83	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		534			495	410	862	1067		715	1477	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	25		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.07	0.62	0.00	0.44		0.41	0.24	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	31	0	226	2	360	46	269	322	3
Future Volume (veh/h)	2	2	2	31	0	226	2	360	46	269	322	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		0.98	0.99		0.95	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2200	2018	1988	1943	1832	1832	1847
Adj Flow Rate, veh/h	3	3	3	35	0	254	2	409	52	292	350	3
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	2	5	1	1	0
Cap, veh/h	127	122	92	387	0	514	674	896	114	603	1121	10
Arrive On Green	0.18	0.18	0.18	0.18	0.00	0.18	0.00	0.52	0.52	0.10	0.62	0.62
Sat Flow, veh/h	350	675	513	1616	0	1833	1922	1718	218	1745	1814	16
Grp Volume(v), veh/h	9	0	0	35	0	254	2	0	461	292	0	353
Grp Sat Flow(s),veh/h/ln	1539	0	0	1616	0	1833	1922	0	1936	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.0	0.0	8.7	0.0	0.0	11.2	5.3	0.0	6.8
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.3	0.0	8.7	0.0	0.0	11.2	5.3	0.0	6.8
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	341	0	0	387	0	514	674	0	1009	603	0	1131
V/C Ratio(X)	0.03	0.00	0.00	0.09	0.00	0.49	0.00	0.00	0.46	0.48	0.00	0.31
Avail Cap(c_a), veh/h	564	0	0	633	0	795	927	0	1009	664	0	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.52	0.00	0.52
Uniform Delay (d), s/veh	25.3	0.0	0.0	25.7	0.0	22.7	8.5	0.0	11.3	7.3	0.0	6.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.5	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.5	0.0	3.6	0.0	0.0	4.7	1.6	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.3	0.0	0.0	25.7	0.0	22.9	8.5	0.0	12.8	7.5	0.0	7.1
LnGrp LOS	C			C		C	A		B	A		A
Approach Vol, veh/h		9			289			463			645	
Approach Delay, s/veh		25.3			23.3			12.7			7.3	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	44.1		18.5	5.1	51.4		18.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	7.3	13.2		2.3	2.0	8.8		10.7				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.5	
HCM 7th LOS	B	

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	0	218	277	0
Future Volume (vph)	2	2	0	218	277	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1977	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1977	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	17	17			14
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	2	2	0	253	322	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	253	322	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

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Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	0	218	277	0
Future Vol, veh/h	2	2	0	218	277	0
Conflicting Peds, #/hr	14	17	17	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	0	253	322	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	607	356	339	0	-	0
Stage 1	339	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	644	759	1220	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	624	735	1201	-	-	-
Mov Cap-2 Maneuver	624	-	-	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	888	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/veh	10.37	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1201	-	675	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s/veh)	0	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	39	8	9	210	269	31
Future Volume (vph)	39	8	9	210	269	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977				0.986	
Flt Protected	0.960			0.998		
Satd. Flow (prot)	1922	0	0	2086	1775	0
Flt Permitted	0.960			0.998		
Satd. Flow (perm)	1922	0	0	2086	1775	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	45	9	10	244	313	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	0	0	254	349	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

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Intersection	
Int Delay, s/veh	1.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	39	8	9	210	269	31
Future Vol, veh/h	39	8	9	210	269	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	2	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	9	10	244	313	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	596	331	349	0	-	0
Stage 1	331	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	466	711	1210	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	462	711	1210	-	-	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s/v	13.25	0.33	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	74	-	491	-	-
HCM Lane V/C Ratio	0.009	-	0.111	-	-
HCM Control Delay (s/veh)	8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	79	0	19	108	0	9
Future Volume (vph)	79	0	19	108	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1973	0	0	1883	1428	0
Flt Permitted				0.993		
Satd. Flow (perm)	1973	0	0	1883	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	92	0	22	126	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	0	148	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		60	60		60	60
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

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Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	79	0	19	108	0	9
Future Vol, veh/h	79	0	19	108	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	0	22	126	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	92	0	262	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1503	-	696	958
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	685	958
Mov Cap-2 Maneuver	-	-	-	-	685	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.11	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	958	-	-	269	-
HCM Lane V/C Ratio	0.011	-	-	0.015	-
HCM Control Delay (s/veh)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	4	38	9	0	9	20	558	6	2	728	65
Future Volume (vph)	85	4	38	9	0	9	20	558	6	2	728	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.959			0.932			0.998			0.988	
Flt Protected		0.968			0.976		0.950			0.950		
Satd. Flow (prot)	0	1812	0	0	1661	0	1770	1849	0	1814	1901	0
Flt Permitted		0.968			0.976		0.950			0.950		
Satd. Flow (perm)	0	1812	0	0	1661	0	1770	1849	0	1814	1901	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	89	4	40	9	0	9	21	587	6	2	766	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	18	0	21	593	0	2	834	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑			↑	
Traffic Vol, veh/h	85	4	38	9	0	9	20	558	6	2	728	65
Future Vol, veh/h	85	4	38	9	0	9	20	558	6	2	728	65
Conflicting Peds, #/hr	6	0	8	14	0	12	8	0	14	12	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	13	2	2	2	6	2	2	4	11
Mvmt Flow	89	4	40	9	0	9	21	587	6	2	766	68

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1454	1463	823	1433	1494	617	843	0	0	608	0	0
Stage 1	813	813	-	647	647	-	-	-	-	-	-	-
Stage 2	641	650	-	787	847	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.84	7.23	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.617	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	149	178	406	106	123	490	793	-	-	971	-	-
Stage 1	446	470	-	442	467	-	-	-	-	-	-	-
Stage 2	534	537	-	369	378	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	140	169	398	88	117	479	787	-	-	958	-	-
Mov Cap-2 Maneuver	140	169	-	88	117	-	-	-	-	-	-	-
Stage 1	442	465	-	425	448	-	-	-	-	-	-	-
Stage 2	504	516	-	324	374	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	72.53	32.79	0.33	0.02
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	787	-	-	174	148	958	-	-
HCM Lane V/C Ratio	0.027	-	-	0.767	0.128	0.002	-	-
HCM Control Delay (s/veh)	9.7	-	-	72.5	32.8	8.8	-	-
HCM Lane LOS	A	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5	0.4	0	-	-

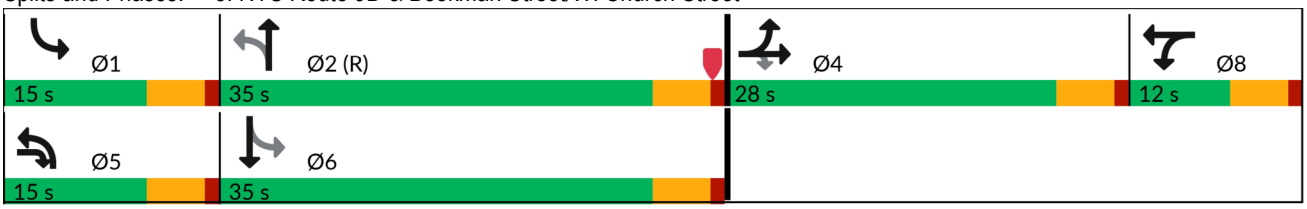
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	5	70	9	10	8	39	453	3	3	515	257
Future Volume (vph)	131	5	70	9	10	8	39	453	3	3	515	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99	0.97		0.98		0.99	0.99		0.99	0.98	
Frt			0.850		0.959			0.999			0.950	
Flt Protected		0.954			0.984		0.950			0.950		
Satd. Flow (prot)	0	1714	1494	0	1828	0	1754	1844	0	1743	1692	0
Flt Permitted		0.954			0.984		0.128			0.425		
Satd. Flow (perm)	0	1711	1459	0	1827	0	236	1844	0	775	1692	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					9						30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	141	5	75	10	11	9	42	487	3	3	554	276
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	75	0	30	0	42	490	0	3	830	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4				2			6		
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.57	0.25		0.23		0.18	0.41		0.00	0.84	
Control Delay (s/veh)		43.3	20.8		35.3		8.5	8.7		9.6	29.7	
Queue Delay		0.0	0.0		0.0		0.0	0.2		0.0	0.0	
Total Delay (s/veh)		43.3	20.8		35.3		8.5	8.9		9.6	29.7	
Queue Length 50th (ft)		80	28		12		8	97		1	395	
Queue Length 95th (ft)		121	44		38		m18	142		5	#823	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		438	382		150		325	1188		620	988	
Starvation Cap Reductn		0	0		0		0	205		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.33	0.20		0.20		0.13	0.50		0.00	0.84	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	5	70	9	10	8	39	453	3	3	515	257
Future Volume (veh/h)	131	5	70	9	10	8	39	453	3	3	515	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	141	5	75	10	11	9	42	487	3	3	554	276
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	177	6	223	20	22	18	262	1256	8	520	661	329
Arrive On Green	0.13	0.13	0.13	0.03	0.03	0.03	0.02	0.62	0.62	0.00	0.60	0.60
Sat Flow, veh/h	1387	49	1491	694	763	625	1948	2031	13	1731	1103	550
Grp Volume(v), veh/h	146	0	75	30	0	0	42	0	490	3	0	830
Grp Sat Flow(s),veh/h/ln	1437	0	1491	2082	0	0	1948	0	2043	1731	0	1653
Q Serve(g_s), s	8.9	0.0	4.1	1.3	0.0	0.0	0.8	0.0	10.8	0.1	0.0	36.4
Cycle Q Clear(g_c), s	8.9	0.0	4.1	1.3	0.0	0.0	0.8	0.0	10.8	0.1	0.0	36.4
Prop In Lane	0.97		1.00	0.33		0.30	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	183	0	223	61	0	0	262	0	1263	520	0	990
V/C Ratio(X)	0.80	0.00	0.34	0.49	0.00	0.00	0.16	0.00	0.39	0.01	0.00	0.84
Avail Cap(c_a), veh/h	367	0	413	162	0	0	437	0	1263	708	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.1	0.0	34.3	43.0	0.0	0.0	14.4	0.0	8.6	7.6	0.0	14.5
Incr Delay (d2), s/veh	3.0	0.0	0.3	2.3	0.0	0.0	0.1	0.0	0.8	0.0	0.0	8.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.5	0.7	0.0	0.0	0.3	0.0	4.6	0.0	0.0	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.1	0.0	34.6	45.3	0.0	0.0	14.5	0.0	9.4	7.6	0.0	23.0
LnGrp LOS	D		C	D			B		A	A		C
Approach Vol, veh/h		221			30			532			833	
Approach Delay, s/veh		38.9			45.3			9.8			22.9	
Approach LOS		D			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	60.7		16.5	7.0	58.9		7.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.1	12.8		10.9	2.8	38.4		3.3				
Green Ext Time (p_c), s	0.0	0.9		0.4	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	21.2	
HCM 7th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	3	14	7	128	5	363	31	249	339	6
Future Volume (vph)	4	5	3	14	7	128	5	363	31	249	339	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.99			0.99	
Frt		0.966				0.850		0.988			0.997	
Flt Protected		0.983			0.968		0.950			0.950		
Satd. Flow (prot)	0	1778	0	0	1913	1647	1832	1855	0	1743	1847	0
Flt Permitted		0.908			0.822		0.530			0.370		
Satd. Flow (perm)	0	1642	0	0	1624	1566	1022	1855	0	679	1847	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	7	8	5	15	8	141	6	459	39	283	385	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	23	141	6	498	0	283	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.08			0.10	0.38	0.00	0.42		0.42	0.26	
Control Delay (s/veh)		23.7			29.9	26.2	6.8	14.5		8.4	5.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay (s/veh)		23.7			29.9	26.2	6.8	14.5		8.4	5.9	
Queue Length 50th (ft)		8			13	69	1	112		16	23	
Queue Length 95th (ft)		15			29	80	5	273		m83	m100	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		550			541	389	843	1161		675	1475	
Starvation Cap Reductn		0			0	0	0	0		0	581	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.04			0.04	0.36	0.01	0.43		0.42	0.44	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	3	14	7	128	5	363	31	249	339	6
Future Volume (veh/h)	4	5	3	14	7	128	5	363	31	249	339	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	7	8	5	15	8	141	6	459	39	283	385	7
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	106	110	54	211	103	383	736	1114	95	641	1241	23
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.62	0.62	0.08	0.69	0.69
Sat Flow, veh/h	377	806	395	1058	756	1750	1922	1800	153	1731	1793	33
Grp Volume(v), veh/h	20	0	0	23	0	141	6	0	498	283	0	392
Grp Sat Flow(s),veh/h/ln	1578	0	0	1815	0	1750	1922	0	1953	1731	0	1826
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	6.2	0.1	0.0	11.7	4.9	0.0	7.6
Cycle Q Clear(g_c), s	0.9	0.0	0.0	0.8	0.0	6.2	0.1	0.0	11.7	4.9	0.0	7.6
Prop In Lane	0.35		0.25	0.65		1.00	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	270	0	0	314	0	383	736	0	1209	641	0	1264
V/C Ratio(X)	0.07	0.00	0.00	0.07	0.00	0.37	0.01	0.00	0.41	0.44	0.00	0.31
Avail Cap(c_a), veh/h	564	0	0	663	0	728	941	0	1209	698	0	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.51	0.00	0.51
Uniform Delay (d), s/veh	33.9	0.0	0.0	33.9	0.0	30.2	6.4	0.0	8.8	5.8	0.0	5.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.0	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	4.8	1.4	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.0	0.0	0.0	33.9	0.0	30.4	6.4	0.0	9.8	5.9	0.0	5.8
LnGrp LOS	C			C		C	A		A	A		A
Approach Vol, veh/h		20			164			504			675	
Approach Delay, s/veh		34.0			30.9			9.8			5.8	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	60.7		17.3	5.4	67.3		17.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	6.9	13.7		2.9	2.1	9.6		8.2				
Green Ext Time (p_c), s	0.1	0.4		0.0	0.0	0.3		0.4				

Intersection Summary		
HCM 7th Control Delay, s/veh		10.7
HCM 7th LOS		B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	6	19	7	4	5	27	722	6	6	669	107
Future Volume (vph)	64	6	19	7	4	5	27	722	6	6	669	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.971			0.960			0.999			0.979	
Flt Protected		0.966			0.977		0.950			0.950		
Satd. Flow (prot)	0	1842	0	0	1693	0	1770	1923	0	1814	1915	0
Flt Permitted		0.966			0.977		0.950			0.950		
Satd. Flow (perm)	0	1842	0	0	1693	0	1770	1923	0	1814	1915	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	70	7	21	8	4	5	29	785	7	7	727	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	17	0	29	792	0	7	843	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	6	19	7	4	5	27	722	6	6	669	107
Future Vol, veh/h	64	6	19	7	4	5	27	722	6	6	669	107
Conflicting Peds, #/hr	4	0	4	2	0	2	4	0	2	2	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	25	2	2	2	2	3	2
Mvmt Flow	70	7	21	8	4	5	29	785	7	7	727	116

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1652	1654	793	1596	1709	794	847	0	0	793	0	0
Stage 1	802	802	-	849	849	-	-	-	-	-	-	-
Stage 2	850	852	-	747	861	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.82	7.12	6.52	6.45	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.525	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	113	142	424	86	91	354	790	-	-	828	-	-
Stage 1	451	474	-	356	377	-	-	-	-	-	-	-
Stage 2	429	454	-	405	373	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	101	135	421	74	86	352	787	-	-	826	-	-
Mov Cap-2 Maneuver	101	135	-	74	86	-	-	-	-	-	-	-
Stage 1	446	468	-	342	363	-	-	-	-	-	-	-
Stage 2	400	437	-	375	368	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	99.06	46.83	0.35	0.07
HCM LOS	F	E		

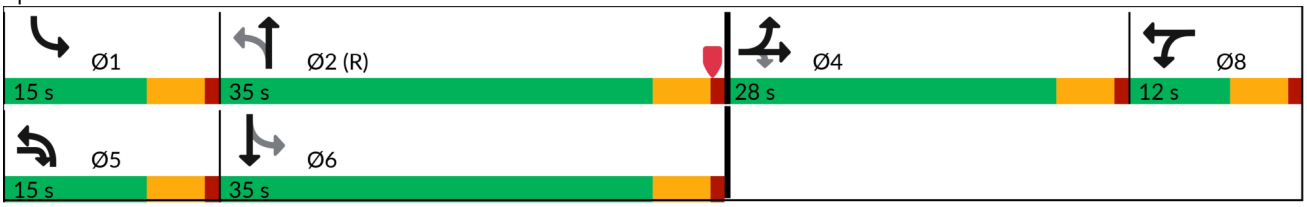
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	787	-	-	123	103	826	-	-
HCM Lane V/C Ratio	0.037	-	-	0.787	0.169	0.008	-	-
HCM Control Delay (s/veh)	9.8	-	-	99.1	46.8	9.4	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.6	0.6	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	314	13	68	2	8	7	85	434	13	5	530	160
Future Volume (vph)	314	13	68	2	8	7	85	434	13	5	530	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.943			0.996			0.965	
Flt Protected		0.954			0.995		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1806	0	1690	1892	0	1743	1745	0
Flt Permitted		0.954			0.995		0.096			0.403		
Satd. Flow (perm)	0	1753	1568	0	1806	0	171	1892	0	739	1745	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					8			2			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	341	14	74	2	9	8	92	472	14	5	576	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	74	0	19	0	92	486	0	5	750	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4				2			6		
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.86	0.14		0.15		0.45	0.43		0.01	0.84	
Control Delay (s/veh)		55.1	15.4		32.1		15.5	14.7		11.0	34.3	
Queue Delay		0.0	0.0		0.0		0.0	0.9		0.0	0.2	
Total Delay (s/veh)		55.1	15.4		32.1		15.5	15.7		11.0	34.5	
Queue Length 50th (ft)		188	27		6		26	158		1	333	
Queue Length 95th (ft)		#324	40		28		50	389		7	#744	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		449	591		147		272	1107		548	886	
Starvation Cap Reductn		0	0		0		0	364		0	0	
Spillback Cap Reductn		0	65		0		0	0		0	8	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.79	0.14		0.13		0.34	0.65		0.01	0.85	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 40 (44%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	13	68	2	8	7	85	434	13	5	530	160
Future Volume (veh/h)	314	13	68	2	8	7	85	434	13	5	530	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	341	14	74	2	9	8	92	472	14	5	576	174
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	378	16	413	5	20	18	233	1069	32	427	649	196
Arrive On Green	0.22	0.22	0.22	0.02	0.02	0.02	0.04	0.53	0.53	0.00	0.49	0.49
Sat Flow, veh/h	1693	69	1558	216	971	863	1891	2018	60	1731	1319	399
Grp Volume(v), veh/h	355	0	74	19	0	0	92	0	486	5	0	750
Grp Sat Flow(s),veh/h/ln	1762	0	1558	2050	0	0	1891	0	2078	1731	0	1718
Q Serve(g_s), s	17.6	0.0	3.3	0.8	0.0	0.0	2.1	0.0	12.9	0.1	0.0	35.4
Cycle Q Clear(g_c), s	17.6	0.0	3.3	0.8	0.0	0.0	2.1	0.0	12.9	0.1	0.0	35.4
Prop In Lane	0.96		1.00	0.11		0.42	1.00		0.03	1.00		0.23
Lane Grp Cap(c), veh/h	393	0	413	43	0	0	233	0	1101	427	0	845
V/C Ratio(X)	0.90	0.00	0.18	0.44	0.00	0.00	0.39	0.00	0.44	0.01	0.00	0.89
Avail Cap(c_a), veh/h	450	0	463	159	0	0	365	0	1101	613	0	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.87	0.00	0.87	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	0.0	25.5	43.5	0.0	0.0	18.2	0.0	13.0	12.0	0.0	20.6
Incr Delay (d2), s/veh	18.3	0.0	0.1	2.6	0.0	0.0	0.4	0.0	1.1	0.0	0.0	13.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	1.2	0.4	0.0	0.0	0.9	0.0	6.0	0.0	0.0	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.3	0.0	25.6	46.2	0.0	0.0	18.6	0.0	14.1	12.0	0.0	33.9
LnGrp LOS	D		C	D			B		B	B		C
Approach Vol, veh/h		429			19			578			755	
Approach Delay, s/veh		47.7			46.2			14.8			33.7	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	52.7		25.1	8.7	49.3		6.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.1	14.9		19.6	4.1	37.4		2.8				
Green Ext Time (p_c), s	0.0	0.9		0.4	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	31.1	
HCM 7th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	8	2	43	2	193	2	337	74	251	350	0
Future Volume (vph)	2	8	2	43	2	193	2	337	74	251	350	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.98				
Frt		0.979				0.850		0.973				
Flt Protected		0.992			0.954		0.950			0.950		
Satd. Flow (prot)	0	1825	0	0	1885	1647	1832	1810	0	1743	1853	0
Flt Permitted		0.959			0.721		0.527			0.344		
Satd. Flow (perm)	0	1764	0	0	1425	1566	1016	1810	0	631	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	3	13	3	47	2	212	3	427	94	285	398	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	49	212	3	521	0	285	398	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.07			0.24	0.51	0.00	0.47		0.43	0.27	
Control Delay (s/veh)		25.4			33.1	28.5	7.0	16.3		7.6	9.5	
Queue Delay		0.0			0.0	1.3	0.0	0.0		0.0	0.6	
Total Delay (s/veh)		25.4			33.1	29.8	7.0	16.3		7.6	10.1	
Queue Length 50th (ft)		9			27	104	0	136		56	91	
Queue Length 95th (ft)		15			51	113	3	300		m128	m286	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		590			475	413	814	1088		653	1473	
Starvation Cap Reductn		0			0	0	0	0		0	722	
Spillback Cap Reductn		0			0	76	0	12		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.10	0.63	0.00	0.48		0.44	0.53	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	8	2	43	2	193	2	337	74	251	350	0
Future Volume (veh/h)	2	8	2	43	2	193	2	337	74	251	350	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	3	13	3	47	2	212	3	427	94	285	398	0
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	67	220	45	336	13	445	693	917	202	592	1222	0
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.59	0.59	0.08	0.67	0.00
Sat Flow, veh/h	126	1344	276	1574	80	1767	1922	1565	345	1731	1832	0
Grp Volume(v), veh/h	19	0	0	49	0	212	3	0	521	285	398	0
Grp Sat Flow(s),veh/h/ln	1745	0	0	1653	0	1767	1922	0	1910	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	9.2	0.1	0.0	14.0	5.5	8.3	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.1	0.0	9.2	0.1	0.0	14.0	5.5	8.3	0.0
Prop In Lane	0.16		0.16	0.96		1.00	1.00		0.18	1.00		0.00
Lane Grp Cap(c), veh/h	332	0	0	349	0	445	693	0	1119	592	1222	0
V/C Ratio(X)	0.06	0.00	0.00	0.14	0.00	0.48	0.00	0.00	0.47	0.48	0.33	0.00
Avail Cap(c_a), veh/h	614	0	0	625	0	744	902	0	1119	640	1222	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.53	0.53	0.00
Uniform Delay (d), s/veh	31.8	0.0	0.0	32.3	0.0	28.9	7.7	0.0	10.6	7.3	6.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.4	0.1	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.9	0.0	3.9	0.0	0.0	5.8	1.6	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	0.0	0.0	32.4	0.0	29.2	7.7	0.0	12.0	7.4	6.7	0.0
LnGrp LOS	C			C		C	A		B	A	A	
Approach Vol, veh/h		19			261			524			683	
Approach Delay, s/veh		31.8			29.8			12.0			7.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.5	57.7		19.7	5.2	65.0		19.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	7.5	16.0		2.8	2.1	10.3		11.2				
Green Ext Time (p_c), s	0.1	0.4		0.0	0.0	0.3		0.6				

Intersection Summary		
HCM 7th Control Delay, s/veh		13.1
HCM 7th LOS		B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	2	18	4	6	11	24	623	5	8	705	98
Future Volume (vph)	70	2	18	4	6	11	24	623	5	8	705	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.973			0.926			0.999			0.982	
Flt Protected		0.963			0.991		0.950			0.950		
Satd. Flow (prot)	0	1826	0	0	1766	0	1770	1923	0	1814	1937	0
Flt Permitted		0.963			0.991		0.950			0.950		
Satd. Flow (perm)	0	1826	0	0	1766	0	1770	1923	0	1814	1937	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	74	2	19	4	6	12	26	663	5	9	750	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	22	0	26	668	0	9	854	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	2	18	4	6	11	24	623	5	8	705	98
Future Vol, veh/h	70	2	18	4	6	11	24	623	5	8	705	98
Conflicting Peds, #/hr	6	0	6	2	0	2	6	0	2	2	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	2	19	4	6	12	26	663	5	9	750	104

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1548	1546	814	1493	1596	673	860	0	0	670	0	0
Stage 1	825	825	-	718	718	-	-	-	-	-	-	-
Stage 2	723	721	-	774	877	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.72	5.82	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	130	161	414	102	107	455	781	-	-	920	-	-
Stage 1	439	465	-	420	433	-	-	-	-	-	-	-
Stage 2	488	507	-	391	366	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	113	153	409	91	101	452	777	-	-	918	-	-
Mov Cap-2 Maneuver	113	153	-	91	101	-	-	-	-	-	-	-
Stage 1	432	458	-	405	418	-	-	-	-	-	-	-
Stage 2	451	489	-	366	361	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/veh	81.74	30.26	0.36	0.09
HCM LOS	F	D		

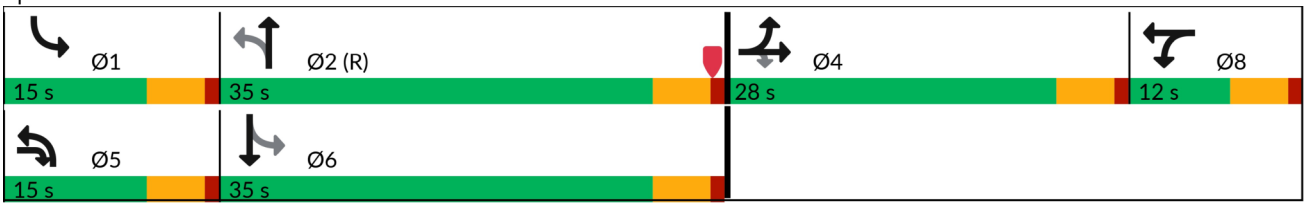
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	133	165	918	-	-
HCM Lane V/C Ratio	0.033	-	-	0.719	0.136	0.009	-	-
HCM Control Delay (s/veh)	9.8	-	-	81.7	30.3	9	-	-
HCM Lane LOS	A	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.1	0.5	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	6	72	10	4	8	109	475	4	8	513	205
Future Volume (vph)	169	6	72	10	4	8	109	475	4	8	513	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	0.97		0.96		0.99	0.99		0.99	0.99	
Frt			0.850		0.949			0.999			0.957	
Flt Protected		0.954			0.978		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1755	0	1823	1916	0	1743	1741	0
Flt Permitted		0.954			0.978		0.110			0.402		
Satd. Flow (perm)	0	1724	1522	0	1751	0	211	1916	0	735	1741	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					9						24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	190	7	81	11	4	9	122	534	4	9	576	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	81	0	24	0	122	538	0	9	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4				2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.66	0.22		0.20		0.48	0.43		0.01	0.84	
Control Delay (s/veh)		45.4	19.3		33.1		19.9	10.1		9.7	30.9	
Queue Delay		0.0	0.0		0.0		0.0	0.4		0.0	0.0	
Total Delay (s/veh)		45.4	19.3		33.1		19.9	10.6		9.7	30.9	
Queue Length 50th (ft)		107	35		8		17	81		1	292	
Queue Length 95th (ft)		156	41		32		m82	237		10	#811	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		449	430		144		320	1241		591	959	
Starvation Cap Reductn		0	0		0		0	306		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.44	0.19		0.17		0.38	0.58		0.02	0.84	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	6	72	10	4	8	109	475	4	8	513	205
Future Volume (veh/h)	169	6	72	10	4	8	109	475	4	8	513	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.90	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	190	7	81	11	4	9	122	534	4	9	576	230
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	9	292	23	8	19	299	1244	9	475	686	274
Arrive On Green	0.15	0.15	0.15	0.03	0.03	0.03	0.05	0.60	0.60	0.01	0.56	0.56
Sat Flow, veh/h	1699	63	1466	911	331	745	2006	2087	16	1731	1232	492
Grp Volume(v), veh/h	197	0	81	24	0	0	122	0	538	9	0	806
Grp Sat Flow(s),veh/h/ln	1762	0	1466	1987	0	0	2006	0	2103	1731	0	1724
Q Serve(g_s), s	9.6	0.0	4.2	1.1	0.0	0.0	2.3	0.0	12.5	0.2	0.0	35.0
Cycle Q Clear(g_c), s	9.6	0.0	4.2	1.1	0.0	0.0	2.3	0.0	12.5	0.2	0.0	35.0
Prop In Lane	0.96		1.00	0.46		0.37	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	264	0	292	50	0	0	299	0	1253	475	0	960
V/C Ratio(X)	0.75	0.00	0.28	0.48	0.00	0.00	0.41	0.00	0.43	0.02	0.00	0.84
Avail Cap(c_a), veh/h	450	0	446	155	0	0	430	0	1253	656	0	960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.87	0.00	0.87	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.6	0.0	30.8	43.3	0.0	0.0	15.7	0.0	9.9	9.1	0.0	16.6
Incr Delay (d2), s/veh	1.6	0.0	0.2	2.7	0.0	0.0	0.3	0.0	0.9	0.0	0.0	8.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	1.5	0.6	0.0	0.0	1.0	0.0	5.5	0.1	0.0	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.2	0.0	31.0	46.0	0.0	0.0	16.0	0.0	10.8	9.1	0.0	25.3
LnGrp LOS	D		C	D			B		B	A		C
Approach Vol, veh/h		278			24			660			815	
Approach Delay, s/veh		36.1			46.0			11.8			25.2	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	58.6		18.5	9.1	55.1		7.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.2	14.5		11.6	4.3	37.0		3.1				
Green Ext Time (p_c), s	0.0	1.0		0.5	0.0	0.0		0.0				

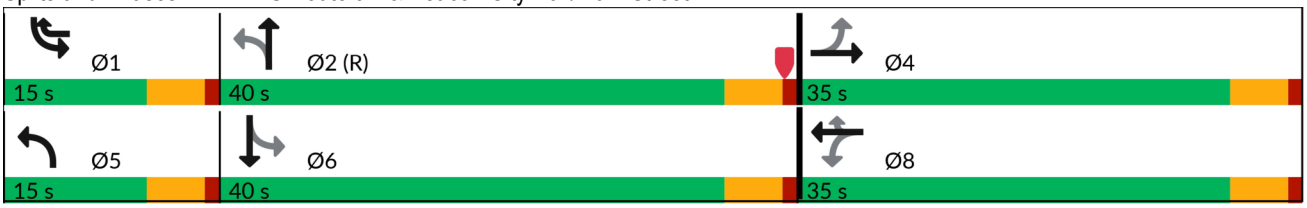
Intersection Summary												
HCM 7th Control Delay, s/veh			22.2									
HCM 7th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	2	31	0	226	2	360	46	269	322	3
Future Volume (vph)	2	2	2	31	0	226	2	360	46	269	322	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.96		0.98			0.99	
Frt		0.955				0.850		0.983			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1749	0	0	1877	1663	1832	1829	0	1760	1851	0
Flt Permitted		0.921			0.752		0.550			0.383		
Satd. Flow (perm)	0	1637	0	0	1486	1611	1061	1829	0	710	1851	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			14			6			48			11
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	2%	5%	1%	1%	0%
Adj. Flow (vph)	3	3	3	35	0	254	2	409	52	292	350	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	35	254	2	461	0	292	353	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.03			0.16	0.60	0.00	0.42		0.41	0.23	
Control Delay (s/veh)		23.1			31.5	31.1	7.0	14.8		9.3	6.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay (s/veh)		23.1			31.5	31.1	7.0	14.8		9.3	6.2	
Queue Length 50th (ft)		3			19	127	0	116		16	19	
Queue Length 95th (ft)		11			39	140	3	290		m103	m94	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		547			495	421	838	1094		711	1475	
Starvation Cap Reductn		0			0	0	0	0		0	572	
Spillback Cap Reductn		0			0	0	0	32		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.07	0.60	0.00	0.43		0.41	0.39	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	31	0	226	2	360	46	269	322	3
Future Volume (veh/h)	2	2	2	31	0	226	2	360	46	269	322	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		0.98	0.99		0.96	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2200	2018	1988	1943	1832	1832	1847
Adj Flow Rate, veh/h	3	3	3	35	0	254	2	409	52	292	350	3
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	2	5	1	1	0
Cap, veh/h	116	113	88	358	0	477	716	987	125	630	1196	10
Arrive On Green	0.17	0.17	0.17	0.17	0.00	0.17	0.00	0.57	0.57	0.09	0.66	0.66
Sat Flow, veh/h	365	654	509	1613	0	1832	1922	1719	219	1745	1814	16
Grp Volume(v), veh/h	9	0	0	35	0	254	2	0	461	292	0	353
Grp Sat Flow(s),veh/h/ln	1528	0	0	1613	0	1832	1922	0	1937	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	10.7	0.0	0.0	12.0	5.7	0.0	7.3
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.6	0.0	10.7	0.0	0.0	12.0	5.7	0.0	7.3
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	317	0	0	358	0	477	716	0	1113	630	0	1206
V/C Ratio(X)	0.03	0.00	0.00	0.10	0.00	0.53	0.00	0.00	0.41	0.46	0.00	0.29
Avail Cap(c_a), veh/h	551	0	0	616	0	772	927	0	1113	673	0	1206
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.53	0.00	0.53
Uniform Delay (d), s/veh	31.0	0.0	0.0	31.4	0.0	28.7	8.1	0.0	10.7	7.0	0.0	6.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.1	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.6	0.0	4.7	0.0	0.0	5.1	1.8	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.0	0.0	0.0	31.5	0.0	29.0	8.1	0.0	11.8	7.1	0.0	6.8
LnGrp LOS	C			C		C	A		B	A		A
Approach Vol, veh/h		9			289			463			645	
Approach Delay, s/veh		31.0			29.3			11.8			7.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	56.7		20.5	5.1	64.3		20.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	7.7	14.0		2.4	2.0	9.3		12.7				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary			
HCM 7th Control Delay, s/veh		13.3	
HCM 7th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	4	38	9	0	9	20	544	6	2	725	54
Future Volume (vph)	76	4	38	9	0	9	20	544	6	2	725	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97			0.95			0.99			0.99	
Frt		0.956			0.932			0.998			0.990	
Flt Protected		0.969			0.976		0.950			0.950		
Satd. Flow (prot)	0	1783	0	0	1617	0	1770	1848	0	1814	1902	0
Flt Permitted		0.794			0.870		0.251			0.399		
Satd. Flow (perm)	0	1445	0	0	1420	0	468	1848	0	762	1902	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			85			1			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	80	4	40	9	0	9	21	573	6	2	763	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	18	0	21	579	0	2	820	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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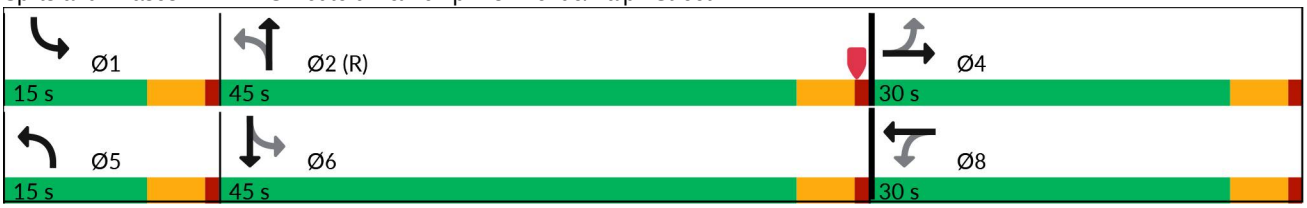
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.64			0.07		0.05	0.41		0.00	0.59	
Control Delay (s/veh)		43.9			0.5		3.5	6.4		3.5	9.9	
Queue Delay		0.0			0.0		0.0	1.7		0.0	0.0	
Total Delay (s/veh)		43.9			0.5		3.5	8.1		3.5	9.9	
Queue Length 50th (ft)		54			0		2	86		0	146	
Queue Length 95th (ft)		104			0		9	251		2	437	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		420			455		505	1387		704	1388	
Starvation Cap Reductn		0			0		0	609		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.30			0.04		0.04	0.74		0.00	0.59	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	4	38	9	0	9	20	544	6	2	725	54
Future Volume (veh/h)	76	4	38	9	0	9	20	544	6	2	725	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	0.94		0.97	0.98		0.94	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2027	2108	1997	1707	1945	1870	1870	1884	1870	2067	2118	1932
Adj Flow Rate, veh/h	80	4	40	9	0	9	21	573	6	2	763	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	4	13	2	2	2	6	2	2	4	11
Cap, veh/h	175	16	60	137	19	95	447	1333	14	627	1371	102
Arrive On Green	0.12	0.12	0.12	0.12	0.00	0.12	0.01	0.72	0.72	0.00	0.70	0.70
Sat Flow, veh/h	947	142	519	668	162	830	1781	1860	19	1968	1945	145
Grp Volume(v), veh/h	124	0	0	18	0	0	21	0	579	2	0	820
Grp Sat Flow(s),veh/h/ln	1608	0	0	1660	0	0	1781	0	1880	1968	0	2090
Q Serve(g_s), s	5.7	0.0	0.0	0.0	0.0	0.0	0.3	0.0	11.3	0.0	0.0	17.2
Cycle Q Clear(g_c), s	6.6	0.0	0.0	0.8	0.0	0.0	0.3	0.0	11.3	0.0	0.0	17.2
Prop In Lane	0.65		0.32	0.50		0.50	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	251	0	0	251	0	0	447	0	1347	627	0	1473
V/C Ratio(X)	0.49	0.00	0.00	0.07	0.00	0.00	0.05	0.00	0.43	0.00	0.00	0.56
Avail Cap(c_a), veh/h	507	0	0	489	0	0	621	0	1347	843	0	1473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.00	0.93	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.1	0.0	0.0	35.6	0.0	0.0	5.3	0.0	5.2	4.5	0.0	6.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	0.4	0.0	0.0	0.1	0.0	3.9	0.0	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.6	0.0	0.0	35.7	0.0	0.0	5.3	0.0	6.2	4.5	0.0	8.0
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		124			18			600			822	
Approach Delay, s/veh		38.6			35.7			6.1			8.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	69.5		15.4	6.2	68.4		15.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	13.3		8.6	2.3	19.2		2.8				
Green Ext Time (p_c), s	0.0	1.2		0.2	0.0	2.0		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		10.0	
HCM 7th LOS		B	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	6	19	7	4	5	27	705	6	6	661	81
Future Volume (vph)	53	6	19	7	4	5	27	705	6	6	661	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.99			0.99			0.99	
Frt		0.967			0.960			0.999			0.984	
Flt Protected		0.967			0.977		0.950			0.950		
Satd. Flow (prot)	0	1823	0	0	1681	0	1770	1922	0	1814	1919	0
Flt Permitted		0.787			0.886		0.254			0.299		
Satd. Flow (perm)	0	1476	0	0	1522	0	473	1922	0	571	1919	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			5			1			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	58	7	21	8	4	5	29	766	7	7	718	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	17	0	29	773	0	7	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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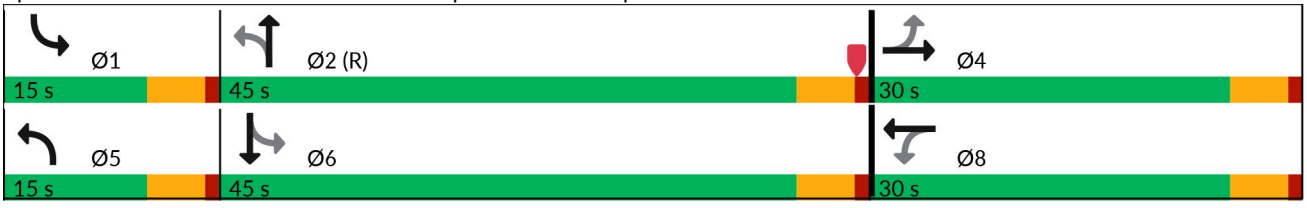
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.44			0.09		0.06	0.51		0.01	0.56	
Control Delay (s/veh)		34.6			26.0		3.0	5.1		4.6	11.3	
Queue Delay		0.0			0.0		0.0	0.3		0.0	0.8	
Total Delay (s/veh)		34.6			26.0		3.0	5.4		4.6	12.1	
Queue Length 50th (ft)		37			6		1	33		1	206	
Queue Length 95th (ft)		69			21		m6	314		6	523	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		423			426		518	1503		590	1421	
Starvation Cap Reductn		0			0		0	272		0	0	
Spillback Cap Reductn		3			0		0	0		0	324	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.20			0.04		0.06	0.63		0.01	0.73	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	6	19	7	4	5	27	705	6	6	661	81
Future Volume (veh/h)	53	6	19	7	4	5	27	705	6	6	661	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	0.99		0.98	0.98		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2027	2108	2027	1870	1945	1530	1870	1945	1870	2067	2134	2067
Adj Flow Rate, veh/h	58	7	21	8	4	5	29	766	7	7	718	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	2	2	2	2	3	2
Cap, veh/h	152	18	33	106	53	42	495	1438	13	656	1370	168
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	1.00	1.00	0.01	0.74	0.74
Sat Flow, veh/h	1050	221	410	582	653	515	1781	1924	18	1968	1863	228
Grp Volume(v), veh/h	86	0	0	17	0	0	29	0	773	7	0	806
Grp Sat Flow(s),veh/h/ln	1681	0	0	1750	0	0	1781	0	1942	1968	0	2092
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0	14.9
Cycle Q Clear(g_c), s	4.4	0.0	0.0	0.8	0.0	0.0	0.4	0.0	0.0	0.1	0.0	14.9
Prop In Lane	0.67		0.24	0.47		0.29	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	203	0	0	200	0	0	495	0	1451	656	0	1538
V/C Ratio(X)	0.42	0.00	0.00	0.08	0.00	0.00	0.06	0.00	0.53	0.01	0.00	0.52
Avail Cap(c_a), veh/h	526	0	0	511	0	0	663	0	1451	865	0	1538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.89	0.00	0.89	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	0.0	0.0	38.4	0.0	0.0	4.0	0.0	0.0	3.0	0.0	5.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.5	0.0	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.5	0.0	0.0	38.4	0.0	0.0	4.0	0.0	1.3	3.0	0.0	6.4
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		86			17			802			813	
Approach Delay, s/veh		40.5			38.4			1.4			6.4	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	72.3		12.3	6.5	71.2		12.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		6.4	2.4	16.9		2.8				
Green Ext Time (p_c), s	0.0	1.8		0.1	0.0	2.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	6.1	
HCM 7th LOS	A	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	2	18	4	6	11	24	608	5	8	699	79
Future Volume (vph)	61	2	18	4	6	11	24	608	5	8	699	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.98			0.99			0.99	
Frt		0.970			0.926			0.999			0.985	
Flt Protected		0.964			0.991		0.950			0.950		
Satd. Flow (prot)	0	1810	0	0	1743	0	1770	1923	0	1814	1937	0
Flt Permitted		0.764			0.942		0.251			0.359		
Satd. Flow (perm)	0	1422	0	0	1656	0	468	1923	0	685	1937	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			12			1			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	65	2	19	4	6	12	26	647	5	9	744	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	22	0	26	652	0	9	828	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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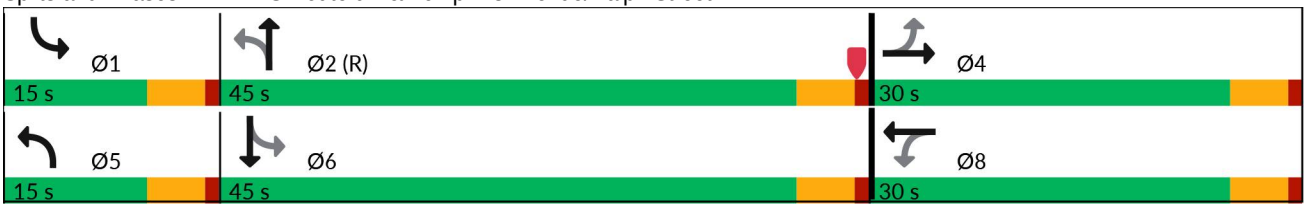
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.45			0.10		0.06	0.43		0.01	0.56	
Control Delay (s/veh)		36.0			21.0		4.4	7.5		4.6	10.6	
Queue Delay		0.0			0.0		0.0	1.3		0.0	0.0	
Total Delay (s/veh)		36.0			21.0		4.4	8.8		4.6	10.6	
Queue Length 50th (ft)		38			5		2	88		1	128	
Queue Length 95th (ft)		70			23		14	365		7	541	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		406			468		514	1500		666	1470	
Starvation Cap Reductn		0			0		0	607		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.21			0.05		0.05	0.73		0.01	0.56	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	2	18	4	6	11	24	608	5	8	699	79
Future Volume (veh/h)	61	2	18	4	6	11	24	608	5	8	699	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2012	2108	2027	1870	1945	1870	1870	1945	1870	2067	2149	2067
Adj Flow Rate, veh/h	65	2	19	4	6	12	26	647	5	9	744	84
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	10	31	59	55	80	478	1428	11	619	1387	157
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.02	0.74	0.74	0.01	0.73	0.73
Sat Flow, veh/h	1172	118	366	134	647	936	1781	1928	15	1968	1896	214
Grp Volume(v), veh/h	86	0	0	22	0	0	26	0	652	9	0	828
Grp Sat Flow(s),veh/h/ln	1656	0	0	1716	0	0	1781	0	1942	1968	0	2110
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	11.8	0.1	0.0	15.6
Cycle Q Clear(g_c), s	4.4	0.0	0.0	1.0	0.0	0.0	0.3	0.0	11.8	0.1	0.0	15.6
Prop In Lane	0.76		0.22	0.18		0.55	1.00		0.01	1.00		0.10
Lane Grp Cap(c), veh/h	212	0	0	194	0	0	478	0	1439	619	0	1544
V/C Ratio(X)	0.41	0.00	0.00	0.11	0.00	0.00	0.05	0.00	0.45	0.01	0.00	0.54
Avail Cap(c_a), veh/h	519	0	0	512	0	0	647	0	1439	824	0	1544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	0.0	38.1	0.0	0.0	4.3	0.0	4.5	3.8	0.0	5.3
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	0.5	0.0	0.0	0.1	0.0	3.9	0.0	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.0	0.0	0.0	38.2	0.0	0.0	4.3	0.0	5.5	3.8	0.0	6.7
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		86			22			678			837	
Approach Delay, s/veh		40.0			38.2			5.4			6.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	71.7		12.7	6.4	70.9		12.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	13.8		6.4	2.3	17.6		3.0				
Green Ext Time (p_c), s	0.0	1.4		0.1	0.0	2.0		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	8.3
HCM 7th LOS	A

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	4	38	9	0	9	20	558	6	2	728	65
Future Volume (vph)	85	4	38	9	0	9	20	558	6	2	728	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.96			0.99		0.99	0.99	
Frt		0.959			0.932			0.998			0.988	
Flt Protected		0.968			0.976		0.950			0.950		
Satd. Flow (prot)	0	1793	0	0	1626	0	1770	1848	0	1814	1896	0
Flt Permitted		0.788			0.883		0.230			0.383		
Satd. Flow (perm)	0	1448	0	0	1455	0	428	1848	0	727	1896	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			85			1			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	89	4	40	9	0	9	21	587	6	2	766	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	18	0	21	593	0	2	834	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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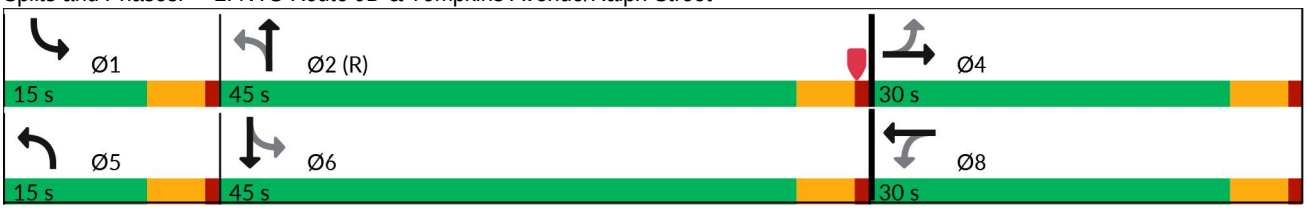
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.59			0.06		0.05	0.43		0.00	0.62	
Control Delay (s/veh)		39.2			0.4		4.8	6.4		5.0	12.6	
Queue Delay		0.0			0.0		0.0	0.1		0.0	3.2	
Total Delay (s/veh)		39.2			0.4		4.8	6.5		5.0	15.8	
Queue Length 50th (ft)		60			0		2	99		0	158	
Queue Length 95th (ft)		102			0		m11	175		3	#623	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		419			465		469	1348		665	1343	
Starvation Cap Reductn		0			0		0	173		0	0	
Spillback Cap Reductn		4			17		0	0		0	395	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.32			0.04		0.04	0.50		0.00	0.88	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	4	38	9	0	9	20	558	6	2	728	65
Future Volume (veh/h)	85	4	38	9	0	9	20	558	6	2	728	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	0.95		0.97	0.98		0.95	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2027	2108	1997	1707	1945	1870	1870	1884	1870	2067	2118	1932
Adj Flow Rate, veh/h	89	4	40	9	0	9	21	587	6	2	766	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	4	13	2	2	2	6	2	2	4	11
Cap, veh/h	200	21	66	153	19	112	415	1293	13	702	1308	116
Arrive On Green	0.14	0.14	0.14	0.14	0.00	0.14	0.03	1.00	1.00	0.00	0.68	0.68
Sat Flow, veh/h	976	153	486	679	139	818	1781	1861	19	1968	1916	170
Grp Volume(v), veh/h	133	0	0	18	0	0	21	0	593	2	0	834
Grp Sat Flow(s),veh/h/ln	1615	0	0	1636	0	0	1781	0	1880	1968	0	2086
Q Serve(g_s), s	5.9	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	19.0
Cycle Q Clear(g_c), s	6.9	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.0	0.0	0.0	19.0
Prop In Lane	0.67		0.30	0.50		0.50	1.00		0.01	1.00		0.08
Lane Grp Cap(c), veh/h	288	0	0	284	0	0	415	0	1306	702	0	1424
V/C Ratio(X)	0.46	0.00	0.00	0.06	0.00	0.00	0.05	0.00	0.45	0.00	0.00	0.59
Avail Cap(c_a), veh/h	511	0	0	491	0	0	588	0	1306	918	0	1424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.00	0.92	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	0.0	33.9	0.0	0.0	6.2	0.0	0.0	4.5	0.0	7.5
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.4	0.0	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.8	0.0	0.0	33.9	0.0	0.0	6.2	0.0	1.0	4.5	0.0	9.3
LnGrp LOS	D			C			A		A	A		A
Approach Vol, veh/h		133			18			614			836	
Approach Delay, s/veh		36.8			33.9			1.2			9.3	
Approach LOS		D			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	67.5		17.3	6.2	66.5		17.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	2.0		8.9	2.3	21.0		2.8				
Green Ext Time (p_c), s	0.0	1.3		0.2	0.0	2.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	8.8	
HCM 7th LOS	A	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	5	70	9	10	8	39	453	3	3	515	257
Future Volume (vph)	131	5	70	9	10	8	39	453	3	3	515	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99	0.97		0.98		0.99	0.99		0.99	0.98	
Frt			0.850		0.959			0.999			0.950	
Flt Protected		0.954			0.984		0.950			0.950		
Satd. Flow (prot)	0	1714	1494	0	1828	0	1754	1844	0	1743	1692	0
Flt Permitted		0.954			0.984		0.128			0.425		
Satd. Flow (perm)	0	1711	1459	0	1827	0	236	1844	0	775	1692	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					9						30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	141	5	75	10	11	9	42	487	3	3	554	276
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	75	0	30	0	42	490	0	3	830	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	

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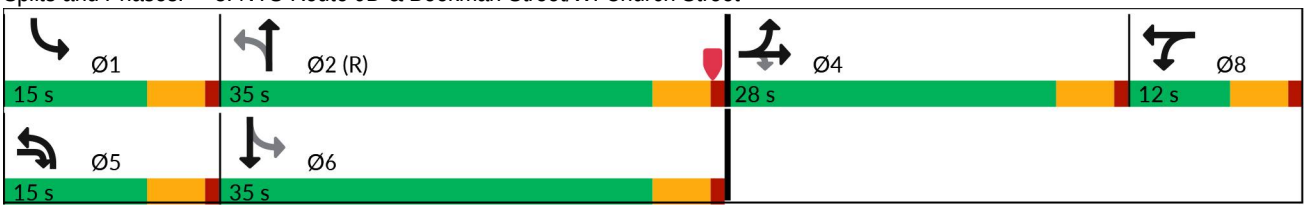
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4				2			6		
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.57	0.25		0.23		0.18	0.41		0.00	0.84	
Control Delay (s/veh)		43.3	20.8		35.3		8.5	8.7		6.6	23.2	
Queue Delay		0.0	0.0		0.0		0.0	0.2		0.0	0.0	
Total Delay (s/veh)		43.3	20.8		35.3		8.5	8.9		6.6	23.2	
Queue Length 50th (ft)		80	28		12		8	97		0	403	
Queue Length 95th (ft)		121	44		38		m18	142		m0	#801	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		438	382		150		325	1188		620	988	
Starvation Cap Reductn		0	0		0		0	205		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.33	0.20		0.20		0.13	0.50		0.00	0.84	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	5	70	9	10	8	39	453	3	3	515	257
Future Volume (veh/h)	131	5	70	9	10	8	39	453	3	3	515	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	141	5	75	10	11	9	42	487	3	3	554	276
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	177	6	223	20	22	18	262	1256	8	520	661	329
Arrive On Green	0.13	0.13	0.13	0.03	0.03	0.03	0.02	0.62	0.62	0.00	0.60	0.60
Sat Flow, veh/h	1387	49	1491	694	763	625	1948	2031	13	1731	1103	550
Grp Volume(v), veh/h	146	0	75	30	0	0	42	0	490	3	0	830
Grp Sat Flow(s),veh/h/ln	1437	0	1491	2082	0	0	1948	0	2043	1731	0	1653
Q Serve(g_s), s	8.9	0.0	4.1	1.3	0.0	0.0	0.8	0.0	10.8	0.1	0.0	36.4
Cycle Q Clear(g_c), s	8.9	0.0	4.1	1.3	0.0	0.0	0.8	0.0	10.8	0.1	0.0	36.4
Prop In Lane	0.97		1.00	0.33		0.30	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	183	0	223	61	0	0	262	0	1263	520	0	990
V/C Ratio(X)	0.80	0.00	0.34	0.49	0.00	0.00	0.16	0.00	0.39	0.01	0.00	0.84
Avail Cap(c_a), veh/h	367	0	413	162	0	0	437	0	1263	708	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.91	0.00	0.91	0.75	0.00	0.75
Uniform Delay (d), s/veh	38.1	0.0	34.3	43.0	0.0	0.0	14.4	0.0	8.6	7.6	0.0	14.5
Incr Delay (d2), s/veh	3.0	0.0	0.3	2.3	0.0	0.0	0.1	0.0	0.8	0.0	0.0	6.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.5	0.7	0.0	0.0	0.3	0.0	4.6	0.0	0.0	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.1	0.0	34.6	45.3	0.0	0.0	14.5	0.0	9.4	7.6	0.0	21.0
LnGrp LOS	D		C	D			B		A	A		C
Approach Vol, veh/h		221			30			532			833	
Approach Delay, s/veh		38.9			45.3			9.8			21.0	
Approach LOS		D			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	60.7		16.5	7.0	58.9		7.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.1	12.8		10.9	2.8	38.4		3.3				
Green Ext Time (p_c), s	0.0	0.9		0.4	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	20.2	
HCM 7th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	3	14	7	128	5	363	31	249	339	6
Future Volume (vph)	4	5	3	14	7	128	5	363	31	249	339	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.99			0.99	
Frt		0.966				0.850		0.988			0.997	
Flt Protected		0.983			0.968		0.950			0.950		
Satd. Flow (prot)	0	1778	0	0	1913	1647	1832	1855	0	1743	1847	0
Flt Permitted		0.908			0.822		0.530			0.370		
Satd. Flow (perm)	0	1642	0	0	1624	1566	1022	1855	0	679	1847	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	7	8	5	15	8	141	6	459	39	283	385	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	23	141	6	498	0	283	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.08			0.10	0.38	0.00	0.42		0.42	0.26	
Control Delay (s/veh)		23.7			29.9	26.2	6.8	14.5		8.4	5.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay (s/veh)		23.7			29.9	26.2	6.8	14.5		8.4	5.9	
Queue Length 50th (ft)		8			13	69	1	112		16	23	
Queue Length 95th (ft)		15			29	80	5	273		m83	m101	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		550			541	389	843	1161		675	1475	
Starvation Cap Reductn		0			0	0	0	0		0	581	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.04			0.04	0.36	0.01	0.43		0.42	0.44	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	3	14	7	128	5	363	31	249	339	6
Future Volume (veh/h)	4	5	3	14	7	128	5	363	31	249	339	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	7	8	5	15	8	141	6	459	39	283	385	7
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	106	110	54	211	103	383	736	1114	95	641	1241	23
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.62	0.62	0.08	0.69	0.69
Sat Flow, veh/h	377	806	395	1058	756	1750	1922	1800	153	1731	1793	33
Grp Volume(v), veh/h	20	0	0	23	0	141	6	0	498	283	0	392
Grp Sat Flow(s),veh/h/ln	1578	0	0	1815	0	1750	1922	0	1953	1731	0	1826
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	6.2	0.1	0.0	11.7	4.9	0.0	7.6
Cycle Q Clear(g_c), s	0.9	0.0	0.0	0.8	0.0	6.2	0.1	0.0	11.7	4.9	0.0	7.6
Prop In Lane	0.35		0.25	0.65		1.00	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	270	0	0	314	0	383	736	0	1209	641	0	1264
V/C Ratio(X)	0.07	0.00	0.00	0.07	0.00	0.37	0.01	0.00	0.41	0.44	0.00	0.31
Avail Cap(c_a), veh/h	564	0	0	663	0	728	941	0	1209	698	0	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.51	0.00	0.51
Uniform Delay (d), s/veh	33.9	0.0	0.0	33.9	0.0	30.2	6.4	0.0	8.8	5.8	0.0	5.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.0	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	4.8	1.4	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.0	0.0	0.0	33.9	0.0	30.4	6.4	0.0	9.8	5.9	0.0	5.8
LnGrp LOS	C			C		C	A		A	A		A
Approach Vol, veh/h		20			164			504			675	
Approach Delay, s/veh		34.0			30.9			9.8			5.8	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	60.7		17.3	5.4	67.3		17.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	6.9	13.7		2.9	2.1	9.6		8.2				
Green Ext Time (p_c), s	0.1	0.4		0.0	0.0	0.3		0.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.7
HCM 7th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	6	19	7	4	5	27	722	6	6	669	107
Future Volume (vph)	64	6	19	7	4	5	27	722	6	6	669	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.99			0.99			0.99	
Frt		0.971			0.960			0.999			0.979	
Flt Protected		0.966			0.977		0.950			0.950		
Satd. Flow (prot)	0	1831	0	0	1681	0	1770	1923	0	1814	1908	0
Flt Permitted		0.778			0.889		0.231			0.285		
Satd. Flow (perm)	0	1466	0	0	1527	0	430	1923	0	544	1908	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			5			1			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	70	7	21	8	4	5	29	785	7	7	727	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	17	0	29	792	0	7	843	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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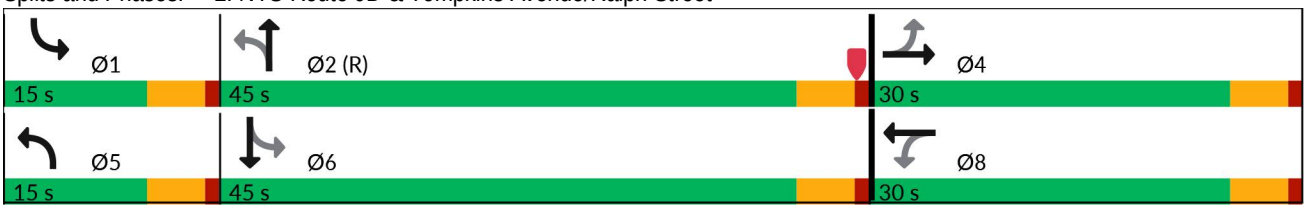
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.49			0.08		0.07	0.53		0.01	0.60	
Control Delay (s/veh)		37.4			25.5		4.2	10.0		4.6	12.4	
Queue Delay		0.4			0.0		0.0	0.7		0.0	39.1	
Total Delay (s/veh)		37.8			25.6		4.2	10.8		4.6	51.5	
Queue Length 50th (ft)		46			6		3	75		1	233	
Queue Length 95th (ft)		80			21		m10	610		6	#632	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		418			427		486	1491		567	1401	
Starvation Cap Reductn		0			0		0	382		0	0	
Spillback Cap Reductn		106			106		0	0		0	613	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.31			0.05		0.06	0.71		0.01	1.07	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	6	19	7	4	5	27	722	6	6	669	107
Future Volume (veh/h)	64	6	19	7	4	5	27	722	6	6	669	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2027	2108	2027	1870	1945	1530	1870	1945	1870	2067	2134	2067
Adj Flow Rate, veh/h	70	7	21	8	4	5	29	785	7	7	727	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	2	2	2	2	3	2
Cap, veh/h	169	16	32	112	57	46	464	1423	13	514	1306	208
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.02	0.74	0.74	0.01	0.73	0.73
Sat Flow, veh/h	1131	182	358	604	639	518	1781	1925	17	1968	1795	286
Grp Volume(v), veh/h	98	0	0	17	0	0	29	0	792	7	0	843
Grp Sat Flow(s),veh/h/ln	1671	0	0	1761	0	0	1781	0	1942	1968	0	2081
Q Serve(g_s), s	4.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	16.2	0.1	0.0	16.7
Cycle Q Clear(g_c), s	5.0	0.0	0.0	0.8	0.0	0.0	0.4	0.0	16.2	0.1	0.0	16.7
Prop In Lane	0.71		0.21	0.47		0.29	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	217	0	0	215	0	0	464	0	1436	514	0	1514
V/C Ratio(X)	0.45	0.00	0.00	0.08	0.00	0.00	0.06	0.00	0.55	0.01	0.00	0.56
Avail Cap(c_a), veh/h	526	0	0	513	0	0	632	0	1436	722	0	1514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	0.0	37.7	0.0	0.0	4.6	0.0	5.2	4.5	0.0	5.6
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	0.3	0.0	0.0	0.1	0.0	5.4	0.0	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.2	0.0	0.0	37.8	0.0	0.0	4.6	0.0	6.5	4.5	0.0	7.1
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		98			17			821			850	
Approach Delay, s/veh		40.2			37.8			6.5			7.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	71.5		13.0	6.5	70.5		13.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	18.2		7.0	2.4	18.7		2.8				
Green Ext Time (p_c), s	0.0	1.8		0.1	0.0	2.1		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	8.9	
HCM 7th LOS	A	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	314	13	68	2	8	7	85	434	13	5	530	160
Future Volume (vph)	314	13	68	2	8	7	85	434	13	5	530	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.98		0.99	0.99		0.99	0.99	
Frt			0.850		0.943			0.996			0.965	
Flt Protected		0.954			0.995		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1806	0	1690	1892	0	1743	1745	0
Flt Permitted		0.954			0.995		0.096			0.403		
Satd. Flow (perm)	0	1753	1568	0	1806	0	171	1892	0	739	1745	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					8			2			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	341	14	74	2	9	8	92	472	14	5	576	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	74	0	19	0	92	486	0	5	750	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	

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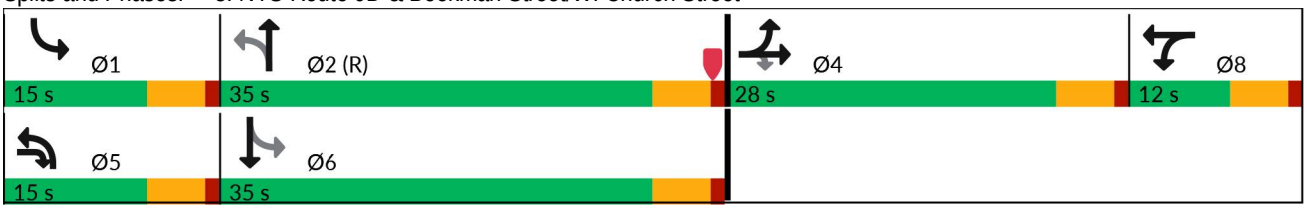
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4				2			6		
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.86	0.14		0.15		0.45	0.43		0.01	0.84	
Control Delay (s/veh)		55.1	15.4		32.1		15.5	14.7		15.8	40.2	
Queue Delay		5.6	0.0		0.0		0.0	0.9		0.0	50.6	
Total Delay (s/veh)		60.7	15.4		32.1		15.5	15.7		15.8	90.8	
Queue Length 50th (ft)		188	27		6		26	158		2	418	
Queue Length 95th (ft)		#324	40		28		50	389		m3	#771	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		449	591		147		272	1107		548	886	
Starvation Cap Reductn		0	0		0		0	364		0	325	
Spillback Cap Reductn		54	65		0		0	100		0	8	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.90	0.14		0.13		0.34	0.65		0.01	1.34	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 40 (44%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	13	68	2	8	7	85	434	13	5	530	160
Future Volume (veh/h)	314	13	68	2	8	7	85	434	13	5	530	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	341	14	74	2	9	8	92	472	14	5	576	174
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	378	16	413	5	20	18	233	1069	32	427	649	196
Arrive On Green	0.22	0.22	0.22	0.02	0.02	0.02	0.04	0.53	0.53	0.00	0.49	0.49
Sat Flow, veh/h	1693	69	1558	216	971	863	1891	2018	60	1731	1319	399
Grp Volume(v), veh/h	355	0	74	19	0	0	92	0	486	5	0	750
Grp Sat Flow(s),veh/h/ln	1762	0	1558	2050	0	0	1891	0	2078	1731	0	1718
Q Serve(g_s), s	17.6	0.0	3.3	0.8	0.0	0.0	2.1	0.0	12.9	0.1	0.0	35.4
Cycle Q Clear(g_c), s	17.6	0.0	3.3	0.8	0.0	0.0	2.1	0.0	12.9	0.1	0.0	35.4
Prop In Lane	0.96		1.00	0.11		0.42	1.00		0.03	1.00		0.23
Lane Grp Cap(c), veh/h	393	0	413	43	0	0	233	0	1101	427	0	845
V/C Ratio(X)	0.90	0.00	0.18	0.44	0.00	0.00	0.39	0.00	0.44	0.01	0.00	0.89
Avail Cap(c_a), veh/h	450	0	463	159	0	0	365	0	1101	613	0	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.87	0.00	0.87	0.77	0.00	0.77
Uniform Delay (d), s/veh	34.0	0.0	25.5	43.5	0.0	0.0	18.2	0.0	13.0	12.0	0.0	20.6
Incr Delay (d2), s/veh	18.3	0.0	0.1	2.6	0.0	0.0	0.4	0.0	1.1	0.0	0.0	10.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	1.2	0.4	0.0	0.0	0.9	0.0	6.0	0.0	0.0	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.3	0.0	25.6	46.2	0.0	0.0	18.6	0.0	14.1	12.0	0.0	31.2
LnGrp LOS	D		C	D			B		B	B		C
Approach Vol, veh/h		429			19			578			755	
Approach Delay, s/veh		47.7			46.2			14.8			31.1	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	52.7		25.1	8.7	49.3		6.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.1	14.9		19.6	4.1	37.4		2.8				
Green Ext Time (p_c), s	0.0	0.9		0.4	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	30.0	
HCM 7th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	8	2	43	2	193	2	337	74	251	350	0
Future Volume (vph)	2	8	2	43	2	193	2	337	74	251	350	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.95		0.98				
Frt		0.979				0.850		0.973				
Flt Protected		0.992			0.954		0.950			0.950		
Satd. Flow (prot)	0	1825	0	0	1885	1647	1832	1810	0	1743	1853	0
Flt Permitted		0.959			0.721		0.527			0.344		
Satd. Flow (perm)	0	1764	0	0	1425	1566	1016	1810	0	631	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	3	13	3	47	2	212	3	427	94	285	398	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	49	212	3	521	0	285	398	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.07			0.24	0.51	0.00	0.47		0.43	0.27	
Control Delay (s/veh)		25.4			33.1	28.5	7.0	16.3		7.6	9.5	
Queue Delay		0.0			0.0	1.3	0.0	0.0		0.0	0.6	
Total Delay (s/veh)		25.4			33.1	29.8	7.0	16.3		7.6	10.2	
Queue Length 50th (ft)		9			27	104	0	136		56	91	
Queue Length 95th (ft)		15			51	113	3	300		m128	m286	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		590			475	413	814	1088		653	1473	
Starvation Cap Reductn		0			0	0	0	0		0	722	
Spillback Cap Reductn		0			0	76	0	12		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.10	0.63	0.00	0.48		0.44	0.53	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	8	2	43	2	193	2	337	74	251	350	0
Future Volume (veh/h)	2	8	2	43	2	193	2	337	74	251	350	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	3	13	3	47	2	212	3	427	94	285	398	0
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	67	220	45	336	13	445	693	917	202	592	1222	0
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.59	0.59	0.08	0.67	0.00
Sat Flow, veh/h	126	1344	276	1574	80	1767	1922	1565	345	1731	1832	0
Grp Volume(v), veh/h	19	0	0	49	0	212	3	0	521	285	398	0
Grp Sat Flow(s),veh/h/ln	1745	0	0	1653	0	1767	1922	0	1910	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	9.2	0.1	0.0	14.0	5.5	8.3	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.1	0.0	9.2	0.1	0.0	14.0	5.5	8.3	0.0
Prop In Lane	0.16		0.16	0.96		1.00	1.00		0.18	1.00		0.00
Lane Grp Cap(c), veh/h	332	0	0	349	0	445	693	0	1119	592	1222	0
V/C Ratio(X)	0.06	0.00	0.00	0.14	0.00	0.48	0.00	0.00	0.47	0.48	0.33	0.00
Avail Cap(c_a), veh/h	614	0	0	625	0	744	902	0	1119	640	1222	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.53	0.53	0.00
Uniform Delay (d), s/veh	31.8	0.0	0.0	32.3	0.0	28.9	7.7	0.0	10.6	7.3	6.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.4	0.1	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.9	0.0	3.9	0.0	0.0	5.8	1.6	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	0.0	0.0	32.4	0.0	29.2	7.7	0.0	12.0	7.4	6.7	0.0
LnGrp LOS	C			C		C	A		B	A	A	
Approach Vol, veh/h		19			261			524			683	
Approach Delay, s/veh		31.8			29.8			12.0			7.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.5	57.7		19.7	5.2	65.0		19.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	7.5	16.0		2.8	2.1	10.3		11.2				
Green Ext Time (p_c), s	0.1	0.4		0.0	0.0	0.3		0.6				

Intersection Summary			
HCM 7th Control Delay, s/veh		13.1	
HCM 7th LOS		B	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	2	18	4	6	11	24	623	5	8	705	98
Future Volume (vph)	70	2	18	4	6	11	24	623	5	8	705	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.98			0.99			0.99	
Frt		0.973			0.926			0.999			0.982	
Flt Protected		0.963			0.991		0.950			0.950		
Satd. Flow (prot)	0	1814	0	0	1743	0	1770	1923	0	1814	1930	0
Flt Permitted		0.759			0.942		0.235			0.348		
Satd. Flow (perm)	0	1417	0	0	1656	0	438	1923	0	664	1930	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			12			1			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	74	2	19	4	6	12	26	663	5	9	750	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	22	0	26	668	0	9	854	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

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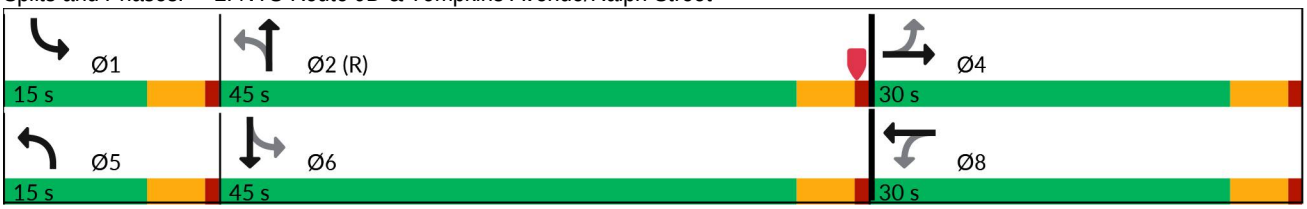
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.49			0.10		0.06	0.44		0.01	0.58	
Control Delay (s/veh)		37.9			20.7		4.5	6.1		4.6	11.3	
Queue Delay		0.0			0.0		0.0	0.2		0.0	0.7	
Total Delay (s/veh)		37.9			20.7		4.5	6.3		4.6	12.1	
Queue Length 50th (ft)		44			5		1	119		1	142	
Queue Length 95th (ft)		78			23		m14	212		7	#637	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		403			468		491	1490		648	1456	
Starvation Cap Reductn		0			0		0	254		0	0	
Spillback Cap Reductn		1			0		0	0		0	297	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.24			0.05		0.05	0.54		0.01	0.74	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	2	18	4	6	11	24	623	5	8	705	98
Future Volume (veh/h)	70	2	18	4	6	11	24	623	5	8	705	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2012	2108	2027	1870	1945	1870	1870	1945	1870	2067	2149	2067
Adj Flow Rate, veh/h	74	2	19	4	6	12	26	663	5	9	750	104
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	9	30	59	60	86	456	1417	11	709	1340	186
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.03	1.00	1.00	0.01	0.73	0.73
Sat Flow, veh/h	1224	96	330	129	653	939	1781	1928	15	1968	1846	256
Grp Volume(v), veh/h	95	0	0	22	0	0	26	0	668	9	0	854
Grp Sat Flow(s),veh/h/ln	1650	0	0	1721	0	0	1781	0	1942	1968	0	2102
Q Serve(g_s), s	3.8	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	16.9
Cycle Q Clear(g_c), s	4.9	0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	16.9
Prop In Lane	0.78		0.20	0.18		0.55	1.00		0.01	1.00		0.12
Lane Grp Cap(c), veh/h	222	0	0	205	0	0	456	0	1428	709	0	1526
V/C Ratio(X)	0.43	0.00	0.00	0.11	0.00	0.00	0.06	0.00	0.47	0.01	0.00	0.56
Avail Cap(c_a), veh/h	520	0	0	514	0	0	626	0	1428	914	0	1526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	0.0	37.6	0.0	0.0	4.6	0.0	0.0	3.2	0.0	5.7
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0	0.4	0.0	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.8	0.0	0.0	37.7	0.0	0.0	4.6	0.0	1.0	3.2	0.0	7.2
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		95			22			694			863	
Approach Delay, s/veh		39.8			37.7			1.1			7.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	71.2		13.2	6.4	70.3		13.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		6.9	2.3	18.9		3.0				
Green Ext Time (p_c), s	0.0	1.5		0.1	0.0	2.1		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			6.9									
HCM 7th LOS			A									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	6	72	10	4	8	109	475	4	8	513	205
Future Volume (vph)	169	6	72	10	4	8	109	475	4	8	513	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98	0.97		0.96		0.99	0.99		0.99	0.99	
Frt			0.850		0.949			0.999			0.957	
Flt Protected		0.954			0.978		0.950			0.950		
Satd. Flow (prot)	0	1759	1568	0	1755	0	1823	1916	0	1743	1741	0
Flt Permitted		0.954			0.978		0.110			0.402		
Satd. Flow (perm)	0	1724	1522	0	1751	0	211	1916	0	735	1741	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					9						24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	190	7	81	11	4	9	122	534	4	9	576	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	81	0	24	0	122	538	0	9	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4				2			6		

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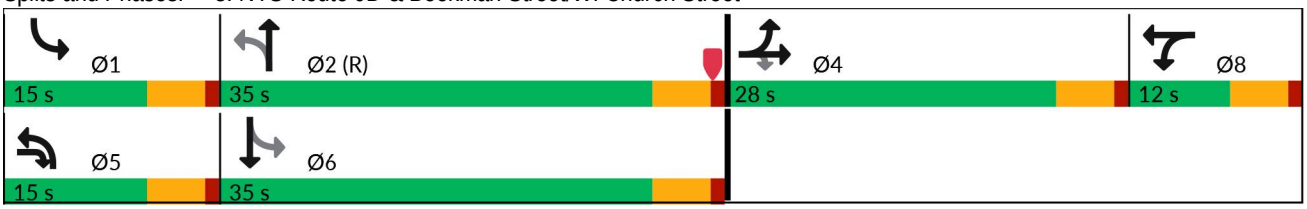
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.66	0.22		0.20		0.48	0.43		0.01	0.84	
Control Delay (s/veh)		45.4	19.3		33.1		19.9	10.1		6.2	25.1	
Queue Delay		0.0	0.0		0.0		0.0	0.4		0.0	0.0	
Total Delay (s/veh)		45.4	19.3		33.1		19.9	10.6		6.2	25.2	
Queue Length 50th (ft)		107	35		8		17	81		1	299	
Queue Length 95th (ft)		156	41		32		m82	237		m2	#790	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		449	430		144		320	1241		591	959	
Starvation Cap Reductn		0	0		0		0	306		0	4	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.44	0.19		0.17		0.38	0.58		0.02	0.84	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	6	72	10	4	8	109	475	4	8	513	205
Future Volume (veh/h)	169	6	72	10	4	8	109	475	4	8	513	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.90	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	190	7	81	11	4	9	122	534	4	9	576	230
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	9	292	23	8	19	299	1244	9	475	686	274
Arrive On Green	0.15	0.15	0.15	0.03	0.03	0.03	0.05	0.60	0.60	0.01	0.56	0.56
Sat Flow, veh/h	1699	63	1466	911	331	745	2006	2087	16	1731	1232	492
Grp Volume(v), veh/h	197	0	81	24	0	0	122	0	538	9	0	806
Grp Sat Flow(s),veh/h/ln	1762	0	1466	1987	0	0	2006	0	2103	1731	0	1724
Q Serve(g_s), s	9.6	0.0	4.2	1.1	0.0	0.0	2.3	0.0	12.5	0.2	0.0	35.0
Cycle Q Clear(g_c), s	9.6	0.0	4.2	1.1	0.0	0.0	2.3	0.0	12.5	0.2	0.0	35.0
Prop In Lane	0.96		1.00	0.46		0.37	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	264	0	292	50	0	0	299	0	1253	475	0	960
V/C Ratio(X)	0.75	0.00	0.28	0.48	0.00	0.00	0.41	0.00	0.43	0.02	0.00	0.84
Avail Cap(c_a), veh/h	450	0	446	155	0	0	430	0	1253	656	0	960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.87	0.00	0.87	0.78	0.00	0.78
Uniform Delay (d), s/veh	36.6	0.0	30.8	43.3	0.0	0.0	15.7	0.0	9.9	9.1	0.0	16.6
Incr Delay (d2), s/veh	1.6	0.0	0.2	2.7	0.0	0.0	0.3	0.0	0.9	0.0	0.0	7.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	1.5	0.6	0.0	0.0	1.0	0.0	5.5	0.1	0.0	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.2	0.0	31.0	46.0	0.0	0.0	16.0	0.0	10.8	9.1	0.0	23.6
LnGrp LOS	D		C	D			B		B	A		C
Approach Vol, veh/h		278			24			660			815	
Approach Delay, s/veh		36.1			46.0			11.8			23.4	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	58.6		18.5	9.1	55.1		7.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.2	14.5		11.6	4.3	37.0		3.1				
Green Ext Time (p_c), s	0.0	1.0		0.5	0.0	0.0		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			21.4									
HCM 7th LOS			C									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	2	31	0	226	2	360	46	269	322	3
Future Volume (vph)	2	2	2	31	0	226	2	360	46	269	322	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.96		0.98			0.99	
Frt		0.955				0.850		0.983			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1749	0	0	1877	1663	1832	1829	0	1760	1851	0
Flt Permitted		0.921			0.752		0.550			0.383		
Satd. Flow (perm)	0	1637	0	0	1486	1611	1061	1829	0	710	1851	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			8.8	
Confl. Peds. (#/hr)			14			6			48			11
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	2%	5%	1%	1%	0%
Adj. Flow (vph)	3	3	3	35	0	254	2	409	52	292	350	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	35	254	2	461	0	292	353	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		

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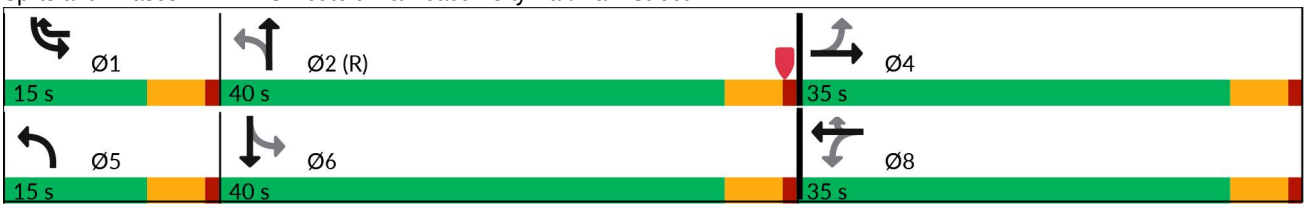
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.03			0.16	0.60	0.00	0.42		0.41	0.23	
Control Delay (s/veh)		23.1			31.5	31.1	7.0	14.8		9.2	5.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay (s/veh)		23.1			31.5	31.1	7.0	14.8		9.2	6.2	
Queue Length 50th (ft)		3			19	127	0	116		15	19	
Queue Length 95th (ft)		11			39	140	3	290		m103	m94	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		547			495	421	838	1094		711	1475	
Starvation Cap Reductn		0			0	0	0	0		0	572	
Spillback Cap Reductn		0			0	0	0	32		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.07	0.60	0.00	0.43		0.41	0.39	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	31	0	226	2	360	46	269	322	3
Future Volume (veh/h)	2	2	2	31	0	226	2	360	46	269	322	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		0.98	0.99		0.96	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2200	2018	1988	1943	1832	1832	1847
Adj Flow Rate, veh/h	3	3	3	35	0	254	2	409	52	292	350	3
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	2	5	1	1	0
Cap, veh/h	116	113	88	358	0	477	716	987	125	630	1196	10
Arrive On Green	0.17	0.17	0.17	0.17	0.00	0.17	0.00	0.57	0.57	0.09	0.66	0.66
Sat Flow, veh/h	365	654	509	1613	0	1832	1922	1719	219	1745	1814	16
Grp Volume(v), veh/h	9	0	0	35	0	254	2	0	461	292	0	353
Grp Sat Flow(s),veh/h/ln	1528	0	0	1613	0	1832	1922	0	1937	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	10.7	0.0	0.0	12.0	5.7	0.0	7.3
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.6	0.0	10.7	0.0	0.0	12.0	5.7	0.0	7.3
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	317	0	0	358	0	477	716	0	1113	630	0	1206
V/C Ratio(X)	0.03	0.00	0.00	0.10	0.00	0.53	0.00	0.00	0.41	0.46	0.00	0.29
Avail Cap(c_a), veh/h	551	0	0	616	0	772	927	0	1113	673	0	1206
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.53	0.00	0.53
Uniform Delay (d), s/veh	31.0	0.0	0.0	31.4	0.0	28.7	8.1	0.0	10.7	7.0	0.0	6.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.1	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.6	0.0	4.7	0.0	0.0	5.1	1.8	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.0	0.0	0.0	31.5	0.0	29.0	8.1	0.0	11.8	7.1	0.0	6.8
LnGrp LOS	C			C		C	A		B	A		A
Approach Vol, veh/h		9			289			463			645	
Approach Delay, s/veh		31.0			29.3			11.8			7.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	56.7		20.5	5.1	64.3		20.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	7.7	14.0		2.4	2.0	9.3		12.7				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary			
HCM 7th Control Delay, s/veh		13.3	
HCM 7th LOS		B	

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Colliers Engineering & Design

Appendix D | Arterial Analysis

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	11.0	35.1	0.19	19.5	C
W. Church Street	III	30	11.4	7.4	18.8	0.07	14.1	D
Verplanck Avenue	III	30	31.0	25.2	56.2	0.24	15.6	D
Total	III		66.5	43.6	110.1	0.51	16.6	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.4	20.5	0.10	17.6	D
Beekman Street	III	30	31.0	12.9	43.9	0.24	20.0	C
Beacon City Hall	III	30	11.4	4.0	15.4	0.07	17.2	D
Total	III		56.5	23.3	79.8	0.42	18.8	C

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.7	38.8	0.19	17.6	D
W. Church Street	III	30	11.4	12.0	23.4	0.07	11.3	E
Verplanck Avenue	III	30	31.0	27.9	58.9	0.24	14.9	D
Total	III		66.5	54.6	121.1	0.51	15.1	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	4.9	19.0	0.10	19.0	C
Beekman Street	III	30	31.0	22.9	53.9	0.24	16.3	D
Beacon City Hall	III	30	11.4	4.5	15.9	0.07	16.6	D
Total	III		56.5	32.3	88.8	0.42	16.9	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	11.3	35.4	0.19	19.3	C
W. Church Street	III	30	11.4	10.7	22.1	0.07	12.0	E
Verplanck Avenue	III	30	31.0	23.6	54.6	0.24	16.1	D
Total	III		66.5	45.6	112.1	0.51	16.3	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	4.9	19.0	0.10	19.0	C
Beekman Street	III	30	31.0	18.9	49.9	0.24	17.6	D
Beacon City Hall	III	30	11.4	4.1	15.5	0.07	17.1	D
Total	III		56.5	27.9	84.4	0.42	17.8	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.1	38.2	0.19	17.9	D
W. Church Street	III	30	11.4	7.8	19.2	0.07	13.8	E
Verplanck Avenue	III	30	31.0	26.3	57.3	0.24	15.3	D
Total	III		66.5	48.2	114.7	0.51	15.9	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.1	20.2	0.10	17.9	D
Beekman Street	III	30	31.0	17.4	48.4	0.24	18.1	C
Beacon City Hall	III	30	11.4	4.7	16.1	0.07	16.4	D
Total	III		56.5	28.2	84.7	0.42	17.7	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	18.2	42.3	0.19	16.2	D
W. Church Street	III	30	11.4	15.8	27.2	0.07	9.7	F
Verplanck Avenue	III	30	31.0	38.9	69.9	0.24	12.6	E
Total	III		66.5	72.9	139.4	0.51	13.1	E

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	5.8	19.9	0.10	18.1	C
Beekman Street	III	30	31.0	33.0	64.0	0.24	13.7	E
Beacon City Hall	III	30	11.4	5.4	16.8	0.07	15.7	D
Total	III		56.5	44.2	100.7	0.42	14.9	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	13.6	37.7	0.19	18.1	C
W. Church Street	III	30	11.4	11.9	23.3	0.07	11.4	E
Verplanck Avenue	III	30	31.0	27.9	58.9	0.24	14.9	D
Total	III		66.5	53.4	119.9	0.51	15.2	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.2	20.3	0.10	17.8	D
Beekman Street	III	30	31.0	25.2	56.2	0.24	15.6	D
Beacon City Hall	III	30	11.4	5.0	16.4	0.07	16.1	D
Total	III		56.5	36.4	92.9	0.42	16.2	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.6	38.7	0.19	17.7	D
W. Church Street	III	30	11.4	8.4	19.8	0.07	13.4	E
Verplanck Avenue	III	30	31.0	26.7	57.7	0.24	15.2	D
Total	III		66.5	49.7	116.2	0.51	15.7	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.2	20.3	0.10	17.8	D
Beekman Street	III	30	31.0	22.0	53.0	0.24	16.6	D
Beacon City Hall	III	30	11.4	4.8	16.2	0.07	16.3	D
Total	III		56.5	33.0	89.5	0.42	16.8	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	19.4	43.5	0.19	15.7	D
W. Church Street	III	30	11.4	17.6	29.0	0.07	9.1	F
Verplanck Avenue	III	30	31.0	43.5	74.5	0.24	11.8	E
Total	III		66.5	80.5	147.0	0.51	12.4	E

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.1	20.2	0.10	17.9	D
Beekman Street	III	30	31.0	39.8	70.8	0.24	12.4	E
Beacon City Hall	III	30	11.4	6.0	17.4	0.07	15.2	D
Total	III		56.5	51.9	108.4	0.42	13.9	E

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.3	38.4	0.19	17.8	D
W. Church Street	III	30	11.4	13.0	24.4	0.07	10.8	E
Verplanck Avenue	III	30	31.0	29.7	60.7	0.24	14.5	D
Total	III		66.5	57.0	123.5	0.51	14.8	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.5	20.6	0.10	17.5	D
Beekman Street	III	30	31.0	28.9	59.9	0.24	14.6	D
Beacon City Hall	III	30	11.4	5.2	16.6	0.07	15.9	D
Total	III		56.5	40.6	97.1	0.42	15.5	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.5	38.6	0.19	17.7	D
W. Church Street	III	30	11.4	8.7	20.1	0.07	13.2	E
Verplanck Avenue	III	30	31.0	26.7	57.7	0.24	15.2	D
Total	III		66.5	49.9	116.4	0.51	15.7	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.2	20.3	0.10	17.8	D
Beekman Street	III	30	31.0	29.8	60.8	0.24	14.4	D
Beacon City Hall	III	30	11.4	5.6	17.0	0.07	15.6	D
Total	III		56.5	41.6	98.1	0.42	15.3	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	16.3	40.4	0.19	16.9	D
W. Church Street	III	30	11.4	14.8	26.2	0.07	10.1	E
Verplanck Avenue	III	30	31.0	43.5	74.5	0.24	11.8	E
Total	III		66.5	74.6	141.1	0.51	12.9	E

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.1	20.2	0.10	17.9	D
Beekman Street	III	30	31.0	34.4	65.4	0.24	13.4	E
Beacon City Hall	III	30	11.4	9.5	20.9	0.07	12.7	E
Total	III		56.5	50.0	106.5	0.42	14.1	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.9	39.0	0.19	17.5	D
W. Church Street	III	30	11.4	10.2	21.6	0.07	12.2	E
Verplanck Avenue	III	30	31.0	27.7	58.7	0.24	14.9	D
Total	III		66.5	52.8	119.3	0.51	15.3	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	III	30	14.1	6.2	20.3	0.10	17.8	D
Beekman Street	III	30	31.0	31.0	62.0	0.24	14.2	D
Beacon City Hall	III	30	11.4	6.0	17.4	0.07	15.2	D
Total	III		56.5	43.2	99.7	0.42	15.1	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.1	38.2	0.19	17.9	D
W. Church Street	III	30	11.4	7.8	19.2	0.07	13.8	E
Ralph Street	III	30	9.8	6.4	16.2	0.06	14.1	D
Verplanck Avenue	III	30	22.9	26.3	49.2	0.18	13.2	E
Total	III		68.2	54.6	122.8	0.51	14.9	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	IV	30	18.0	6.1	24.1	0.10	15.0	C
Tompkins Avenue	IV	30	25.2	9.9	35.1	0.18	18.5	C
Beekman Street	IV	30	14.4	17.4	31.8	0.06	7.2	E
Beacon City Hall	IV	30	16.7	4.7	21.4	0.07	12.4	D
Total	IV		74.3	38.1	112.4	0.42	13.4	C

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	18.2	42.3	0.19	16.2	D
W. Church Street	III	30	11.4	15.8	27.2	0.07	9.7	F
Ralph Street	III	30	9.8	5.1	14.9	0.06	15.3	D
Verplanck Avenue	III	30	22.9	38.9	61.8	0.18	10.5	E
Total	III		68.2	78.0	146.2	0.51	12.5	E

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	IV	30	18.0	5.8	23.8	0.10	15.2	C
Tompkins Avenue	IV	30	25.2	11.3	36.5	0.18	17.8	C
Beekman Street	IV	30	14.4	26.3	40.7	0.06	5.6	F
Beacon City Hall	IV	30	16.7	5.4	22.1	0.07	12.0	D
Total	IV		74.3	48.8	123.1	0.42	12.2	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	13.6	37.7	0.19	18.1	C
W. Church Street	III	30	11.4	11.8	23.2	0.07	11.4	E
Ralph Street	III	30	9.8	7.5	17.3	0.06	13.2	E
Verplanck Avenue	III	30	22.9	27.9	50.8	0.18	12.8	E
Total	III		68.2	60.8	129.0	0.51	14.1	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	IV	30	18.0	6.2	24.2	0.10	14.9	C
Tompkins Avenue	IV	30	25.2	10.7	35.9	0.18	18.1	C
Beekman Street	IV	30	14.4	25.1	39.5	0.06	5.8	F
Beacon City Hall	IV	30	16.7	5.0	21.7	0.07	12.2	D
Total	IV		74.3	47.0	121.3	0.42	12.4	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.5	38.6	0.19	17.7	D
W. Church Street	III	30	11.4	8.7	20.1	0.07	13.2	E
Ralph Street	III	30	9.8	6.4	16.2	0.06	14.1	D
Verplanck Avenue	III	30	22.9	26.7	49.6	0.18	13.1	E
Total	III		68.2	56.3	124.5	0.51	14.7	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	IV	30	18.0	6.2	24.2	0.10	14.9	C
Tompkins Avenue	IV	30	25.2	12.6	37.8	0.18	17.2	C
Beekman Street	IV	30	14.4	23.3	37.7	0.06	6.1	F
Beacon City Hall	IV	30	16.7	5.7	22.4	0.07	11.8	D
Total	IV		74.3	47.8	122.1	0.42	12.3	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	16.3	40.4	0.19	16.9	D
W. Church Street	III	30	11.4	14.8	26.2	0.07	10.1	E
Ralph Street	III	30	9.8	10.1	19.9	0.06	11.5	E
Verplanck Avenue	III	30	22.9	43.5	66.4	0.18	9.8	F
Total	III		68.2	84.7	152.9	0.51	11.9	E

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	IV	30	18.0	6.1	24.1	0.10	15.0	C
Tompkins Avenue	IV	30	25.2	12.4	37.6	0.18	17.3	C
Beekman Street	IV	30	14.4	40.2	54.6	0.06	4.2	F
Beacon City Hall	IV	30	16.7	9.5	26.2	0.07	10.1	D
Total	IV		74.3	68.2	142.5	0.42	10.5	D

Arterial Level of Service: NB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Main Street	III	30	24.1	14.9	39.0	0.19	17.5	D
W. Church Street	III	30	11.4	10.2	21.6	0.07	12.2	E
Ralph Street	III	30	9.8	6.1	15.9	0.06	14.4	D
Verplanck Avenue	III	30	22.9	27.7	50.6	0.18	12.8	E
Total	III		68.2	58.9	127.1	0.51	14.4	D

Arterial Level of Service: SB NYS Route 9D

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Verplanck Avenue	IV	30	18.0	6.2	24.2	0.10	14.9	C
Tompkins Avenue	IV	30	25.2	11.4	36.6	0.18	17.7	C
Beekman Street	IV	30	14.4	25.2	39.6	0.06	5.8	F
Beacon City Hall	IV	30	16.7	6.0	22.7	0.07	11.7	D
Total	IV		74.3	48.8	123.1	0.42	12.2	D

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Traffic & Parking Study

Appendix E | Traffic Volumes and Reference Data

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Appendix E | Traffic Volume Data

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
Site Code :
Start Date : 9/7/2023
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	164	68	0	232	63	0	17	0	80	12	99	0	1	112	0	0	0	0	0	424
07:15 AM	0	132	70	0	202	68	0	10	0	78	13	110	0	1	124	0	0	0	0	0	404
07:30 AM	0	136	57	0	193	59	0	19	0	78	4	114	0	0	118	0	0	0	0	0	389
07:45 AM	0	121	79	0	200	58	0	12	1	71	16	137	0	0	153	0	0	0	0	0	424
Total	0	553	274	0	827	248	0	58	1	307	45	460	0	2	507	0	0	0	0	0	1641
08:00 AM	0	171	71	0	242	32	0	19	0	51	8	88	0	1	97	0	0	0	0	0	390
08:15 AM	0	136	44	0	180	33	0	7	3	43	9	132	0	0	141	0	0	0	0	0	364
08:30 AM	0	142	55	0	197	41	0	7	2	50	7	122	0	0	129	0	0	0	0	0	376
08:45 AM	0	125	41	0	166	37	0	12	1	50	11	128	0	0	139	0	0	0	0	0	355
Total	0	574	211	0	785	143	0	45	6	194	35	470	0	1	506	0	0	0	0	0	1485
Grand Total	0	1127	485	0	1612	391	0	103	7	501	80	930	0	3	1013	0	0	0	0	0	3126
Apprch %	0	69.9	30.1	0		78	0	20.6	1.4		7.9	91.8	0	0.3		0	0	0	0		
Total %	0	36.1	15.5	0	51.6	12.5	0	3.3	0.2	16	2.6	29.8	0	0.1	32.4	0	0	0	0	0	
Lights	0	1075	458	0	1533	371	0	93	0	464	73	876	0	0	949	0	0	0	0	0	2946
% Lights	0	95.4	94.4	0	95.1	94.9	0	90.3	0	92.6	91.2	94.2	0	0	93.7	0	0	0	0	0	94.2
Buses	0	17	15	0	32	11	0	7	0	18	5	20	0	0	25	0	0	0	0	0	75
% Buses	0	1.5	3.1	0	2	2.8	0	6.8	0	3.6	6.2	2.2	0	0	2.5	0	0	0	0	0	2.4
Trucks	0	35	12	0	47	9	0	3	0	12	2	34	0	0	36	0	0	0	0	0	95
% Trucks	0	3.1	2.5	0	2.9	2.3	0	2.9	0	2.4	2.5	3.7	0	0	3.6	0	0	0	0	0	3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0	3
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	28.6	0.4	0	0	0	33.3	0.1	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	5	5	0	0	0	2	2	0	0	0	0	0	7
% Pedestrians	0	0	0	0	0	0	0	0	71.4	1	0	0	0	66.7	0.2	0	0	0	0	0	0.2

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400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
Site Code :
Start Date : 9/7/2023

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	**164**	68	0	**232**	63	0	17	0	**80**	12	99	0	**1**	112	0	0	0	0	0	**424**
07:15 AM	0	132	70	0	202	**68**	0	10	0	78	13	110	0	1	124	0	0	0	0	0	404
07:30 AM	0	136	57	0	193	59	0	**19**	0	78	4	114	0	0	118	0	0	0	0	0	389
07:45 AM	0	121	**79**	0	200	58	0	12	**1**	71	**16**	**137**	0	0	**153**	0	0	0	0	0	424
Total Volume	0	553	274	0	827	248	0	58	1	307	45	460	0	2	507	0	0	0	0	0	1641
% App. Total	0	66.9	33.1	0		80.8	0	18.9	0.3		8.9	90.7	0	0.4		0	0	0	0		
PHF	.000	.843	.867	.000	.891	.912	.000	.763	.250	.959	.703	.839	.000	.500	.828	.000	.000	.000	.000	.000	.968
Lights	0	527	260	0	787	240	0	51	0	291	40	437	0	0	477	0	0	0	0	0	1555
% Lights	0	95.3	94.9	0	95.2	96.8	0	87.9	0	94.8	88.9	95.0	0	0	94.1	0	0	0	0	0	94.8
Buses	0	6	9	0	15	6	0	5	0	11	3	7	0	0	10	0	0	0	0	0	36
% Buses	0	1.1	3.3	0	1.8	2.4	0	8.6	0	3.6	6.7	1.5	0	0	2.0	0	0	0	0	0	2.2
Trucks	0	20	5	0	25	2	0	2	0	4	2	16	0	0	18	0	0	0	0	0	47
% Trucks	0	3.6	1.8	0	3.0	0.8	0	3.4	0	1.3	4.4	3.5	0	0	3.6	0	0	0	0	0	2.9
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	50.0	0.2	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
% Pedestrians	0	0	0	0	0	0	0	0	100	0.3	0	0	0	50.0	0.2	0	0	0	0	0	0.1

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
Site Code :
Start Date : 9/7/2023
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	0	120	57	0	177	89	0	15	0	104	6	116	0	1	123	0	0	0	0	0	404
03:15 PM	0	117	47	0	164	82	0	15	0	97	12	154	0	0	166	0	0	0	0	0	427
03:30 PM	0	102	44	0	146	86	0	16	1	103	3	148	0	0	151	0	0	0	0	0	400
03:45 PM	0	156	38	0	194	67	0	8	0	75	5	150	0	0	155	0	0	0	0	0	424
Total	0	495	186	0	681	324	0	54	1	379	26	568	0	1	595	0	0	0	0	0	1655
04:00 PM	0	127	42	0	169	76	0	10	0	86	9	129	0	0	138	0	0	0	0	0	393
04:15 PM	0	153	55	0	208	74	0	10	0	84	7	165	0	0	172	0	0	0	0	0	464
04:30 PM	0	144	54	0	198	54	0	11	2	67	4	155	0	0	159	0	0	0	0	0	424
04:45 PM	0	143	66	0	209	80	0	19	0	99	1	148	0	1	150	0	0	0	0	0	458
Total	0	567	217	0	784	284	0	50	2	336	21	597	0	1	619	0	0	0	0	0	1739
05:00 PM	0	129	44	0	173	89	0	19	1	109	4	151	0	0	155	0	0	0	0	0	437
05:15 PM	0	99	44	0	143	54	0	12	3	69	4	69	0	0	73	0	0	0	0	0	285
05:30 PM	0	127	44	0	171	71	0	26	0	97	3	91	0	0	94	0	0	0	0	0	362
05:45 PM	0	100	49	0	149	77	0	17	0	94	4	59	0	0	63	0	0	0	0	0	306
Total	0	455	181	0	636	291	0	74	4	369	15	370	0	0	385	0	0	0	0	0	1390
06:00 PM	0	109	55	0	164	72	0	22	1	95	1	71	0	1	73	0	0	0	0	0	332
06:15 PM	0	107	31	0	138	60	0	25	0	85	3	136	0	3	142	0	0	0	0	0	365
Grand Total	0	1733	670	0	2403	1031	0	225	8	1264	66	1742	0	6	1814	0	0	0	0	0	5481
Apprch %	0	72.1	27.9	0		81.6	0	17.8	0.6		3.6	96	0	0.3		0	0	0	0		
Total %	0	31.6	12.2	0	43.8	18.8	0	4.1	0.1	23.1	1.2	31.8	0	0.1	33.1	0	0	0	0	0	
Lights	0	1690	657	0	2347	1006	0	215	0	1221	63	1687	0	0	1750	0	0	0	0	0	5318
% Lights	0	97.5	98.1	0	97.7	97.6	0	95.6	0	96.6	95.5	96.8	0	0	96.5	0	0	0	0	0	97
Buses	0	21	6	0	27	12	0	6	0	18	2	24	0	0	26	0	0	0	0	0	71
% Buses	0	1.2	0.9	0	1.1	1.2	0	2.7	0	1.4	3	1.4	0	0	1.4	0	0	0	0	0	1.3
Trucks	0	22	7	0	29	13	0	4	0	17	1	31	0	0	32	0	0	0	0	0	78
% Trucks	0	1.3	1	0	1.2	1.3	0	1.8	0	1.3	1.5	1.8	0	0	1.8	0	0	0	0	0	1.4
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	4
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	50	0.3	0	0	0	0	0	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	4	4	0	0	0	6	6	0	0	0	0	0	10
% Pedestrians	0	0	0	0	0	0	0	0	50	0.3	0	0	0	100	0.3	0	0	0	0	0	0.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
Site Code :
Start Date : 9/7/2023

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	**153**	55	0	208	74	0	10	0	84	**7**	**165**	0	0	**172**	0	0	0	0	0	**464**
04:30 PM	0	144	54	0	198	54	0	11	**2**	67	4	155	0	0	159	0	0	0	0	0	424
04:45 PM	0	143	**66**	0	**209**	80	0	**19**	0	99	1	148	0	**1**	150	0	0	0	0	0	458
05:00 PM	0	129	44	0	173	**89**	0	19	1	**109**	4	151	0	0	155	0	0	0	0	0	437
Total Volume	0	569	219	0	788	297	0	59	3	359	16	619	0	1	636	0	0	0	0	0	1783
% App. Total	0	72.2	27.8	0		82.7	0	16.4	0.8		2.5	97.3	0	0.2		0	0	0	0		
PHF	.000	.930	.830	.000	.943	.834	.000	.776	.375	.823	.571	.938	.000	.250	.924	.000	.000	.000	.000	.000	.961
Lights	0	553	217	0	770	292	0	59	0	351	16	606	0	0	622	0	0	0	0	0	1743
% Lights	0	97.2	99.1	0	97.7	98.3	0	100	0	97.8	100	97.9	0	0	97.8	0	0	0	0	0	97.8
Buses	0	5	0	0	5	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	13
% Buses	0	0.9	0	0	0.6	0.3	0	0	0	0.3	0	1.1	0	0	1.1	0	0	0	0	0	0.7
Trucks	0	11	2	0	13	4	0	0	0	4	0	6	0	0	6	0	0	0	0	0	23
% Trucks	0	1.9	0.9	0	1.6	1.3	0	0	0	1.1	0	1.0	0	0	0.9	0	0	0	0	0	1.3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	66.7	0.6	0	0	0	0	0	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
% Pedestrians	0	0	0	0	0	0	0	0	33.3	0.3	0	0	0	100	0.2	0	0	0	0	0	0.1

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1.NYS_Route_9D_and_Verplanck_Avenue__-SAT_1107098_09-09-2023
Site Code :
Start Date : 9/9/2023
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	160	43	0	203	53	0	8	1	62	10	127	0	0	137	0	0	0	0	0	402
11:15 AM	0	127	55	0	182	57	0	5	0	62	7	103	0	0	110	0	0	0	0	0	354
11:30 AM	0	125	52	0	177	65	0	3	0	68	8	128	0	1	137	0	0	0	0	0	382
11:45 AM	0	155	46	0	201	65	0	16	0	81	9	113	0	2	124	0	0	0	0	0	406
Total	0	567	196	0	763	240	0	32	1	273	34	471	0	3	508	0	0	0	0	0	1544
12:00 PM	0	158	48	0	206	62	0	9	0	71	9	140	0	0	149	0	0	0	0	0	426
12:15 PM	0	157	34	0	191	78	0	8	1	87	6	127	0	2	135	0	0	0	0	0	413
12:30 PM	0	136	44	0	180	65	0	12	0	77	7	125	0	0	132	0	0	0	0	0	389
12:45 PM	0	144	42	0	186	54	0	8	1	63	13	135	0	0	148	0	0	0	0	0	397
Total	0	595	168	0	763	259	0	37	2	298	35	527	0	2	564	0	0	0	0	0	1625
01:00 PM	0	137	47	0	184	60	0	9	1	70	4	119	0	1	124	0	0	0	0	0	378
01:15 PM	0	147	51	0	198	58	0	9	0	67	8	117	0	1	126	0	0	0	0	0	391
01:30 PM	0	153	52	0	205	66	0	11	0	77	7	157	0	5	169	0	0	0	0	0	451
01:45 PM	0	157	54	0	211	63	0	14	0	77	5	139	0	0	144	0	0	0	0	0	432
Total	0	594	204	0	798	247	0	43	1	291	24	532	0	7	563	0	0	0	0	0	1652
Grand Total	0	1756	568	0	2324	746	0	112	4	862	93	1530	0	12	1635	0	0	0	0	0	4821
Apprch %	0	75.6	24.4	0		86.5	0	13	0.5		5.7	93.6	0	0.7		0	0	0	0		
Total %	0	36.4	11.8	0	48.2	15.5	0	2.3	0.1	17.9	1.9	31.7	0	0.2	33.9	0	0	0	0	0	
Lights	0	1735	561	0	2296	733	0	110	0	843	92	1509	0	0	1601	0	0	0	0	0	4740
% Lights	0	98.8	98.8	0	98.8	98.3	0	98.2	0	97.8	98.9	98.6	0	0	97.9	0	0	0	0	0	98.3
Buses	0	7	1	0	8	5	0	0	0	5	0	5	0	0	5	0	0	0	0	0	18
% Buses	0	0.4	0.2	0	0.3	0.7	0	0	0	0.6	0	0.3	0	0	0.3	0	0	0	0	0	0.4
Trucks	0	14	6	0	20	8	0	2	0	10	1	16	0	0	17	0	0	0	0	0	47
% Trucks	0	0.8	1.1	0	0.9	1.1	0	1.8	0	1.2	1.1	1	0	0	1	0	0	0	0	0	1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	4	4	0	0	0	12	12	0	0	0	0	0	16
% Pedestrians	0	0	0	0	0	0	0	0	100	0.5	0	0	0	100	0.7	0	0	0	0	0	0.3

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1.NYS_Route_9D_and_Verplanck_Avenue__-SAT_1107098_09-09-2023
Site Code :
Start Date : 9/9/2023
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	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	137	47	0	184	60	0	9	**1**	70	4	119	0	1	124	0	0	0	0	0	378
01:15 PM	0	147	51	0	198	58	0	9	0	67	**8**	117	0	1	126	0	0	0	0	0	391
01:30 PM	0	153	52	0	205	**66**	0	11	0	**77**	7	**157**	0	**5**	**169**	0	0	0	0	0	**451**
01:45 PM	0	**157**	**54**	0	**211**	63	0	**14**	0	77	5	139	0	0	144	0	0	0	0	0	432
Total Volume	0	594	204	0	798	247	0	43	1	291	24	532	0	7	563	0	0	0	0	0	1652
% App. Total	0	74.4	25.6	0		84.9	0	14.8	0.3		4.3	94.5	0	1.2		0	0	0	0		
PHF	.000	.946	.944	.000	.945	.936	.000	.768	.250	.945	.750	.847	.000	.350	.833	.000	.000	.000	.000	.000	.916
Lights	0	590	203	0	793	246	0	43	0	289	24	524	0	0	548	0	0	0	0	0	1630
% Lights	0	99.3	99.5	0	99.4	99.6	0	100	0	99.3	100	98.5	0	0	97.3	0	0	0	0	0	98.7
Buses	0	2	1	0	3	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	5
% Buses	0	0.3	0.5	0	0.4	0.4	0	0	0	0.3	0	0.2	0	0	0.2	0	0	0	0	0	0.3
Trucks	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
% Trucks	0	0.3	0	0	0.3	0	0	0	0	0	0	1.3	0	0	1.2	0	0	0	0	0	0.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	1	1	0	0	0	7	7	0	0	0	0	0	8
% Pedestrians	0	0	0	0	0	0	0	0	100	0.3	0	0	0	100	1.2	0	0	0	0	0	0.5

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-WKDAY_1107099_09-07-2023
Site Code :
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	17	168	0	0	185	2	1	0	0	3	0	97	2	0	99	1	3	6	0	10	297
07:15 AM	14	132	0	0	146	1	0	0	1	2	1	106	1	0	108	3	0	6	2	11	267
07:30 AM	8	138	0	0	146	1	1	0	1	3	0	97	1	0	98	0	1	5	1	7	254
07:45 AM	13	122	2	0	137	0	2	1	2	5	0	122	2	0	124	5	3	11	0	19	285
Total	52	560	2	0	614	4	4	1	4	13	1	422	6	0	429	9	7	28	3	47	1103
08:00 AM	15	173	0	0	188	1	0	1	1	3	0	92	0	0	92	2	2	3	1	8	291
08:15 AM	7	142	0	0	149	2	0	1	6	9	1	121	4	0	126	9	0	4	2	15	299
08:30 AM	8	151	0	0	159	2	0	4	3	9	1	121	5	0	127	11	1	7	2	21	316
08:45 AM	7	123	1	0	131	3	0	2	2	7	3	135	7	2	147	2	0	4	1	7	292
Total	37	589	1	0	627	8	0	8	12	28	5	469	16	2	492	24	3	18	6	51	1198
Grand Total	89	1149	3	0	1241	12	4	9	16	41	6	891	22	2	921	33	10	46	9	98	2301
Apprch %	7.2	92.6	0.2	0		29.3	9.8	22	39		0.7	96.7	2.4	0.2		33.7	10.2	46.9	9.2		
Total %	3.9	49.9	0.1	0	53.9	0.5	0.2	0.4	0.7	1.8	0.3	38.7	1	0.1	40	1.4	0.4	2	0.4	4.3	
Lights	82	1100	3	0	1185	11	4	8	0	23	6	840	22	0	868	32	10	46	0	88	2164
% Lights	92.1	95.7	100	0	95.5	91.7	100	88.9	0	56.1	100	94.3	100	0	94.2	97	100	100	0	89.8	94
Buses	0	20	0	0	20	1	0	1	0	2	0	19	0	0	19	0	0	0	0	0	41
% Buses	0	1.7	0	0	1.6	8.3	0	11.1	0	4.9	0	2.1	0	0	2.1	0	0	0	0	0	1.8
Trucks	7	29	0	0	36	0	0	0	0	0	0	32	0	0	32	1	0	0	0	1	69
% Trucks	7.9	2.5	0	0	2.9	0	0	0	0	0	0	3.6	0	0	3.5	3	0	0	0	1	3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	2	2	6
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	25	9.8	0	0	0	0	0	0	0	0	22.2	2	0.3
Pedestrians	0	0	0	0	0	0	0	0	12	12	0	0	0	2	2	0	0	0	7	7	21
% Pedestrians	0	0	0	0	0	0	0	0	75	29.3	0	0	0	100	0.2	0	0	0	77.8	7.1	0.9

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-WKDAY_1107099_09-07-2023
Site Code :
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	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**15**	**173**	0	0	**188**	1	0	1	1	3	0	92	0	0	92	2	**2**	3	1	8	291
08:15 AM	7	142	0	0	149	2	0	1	**6**	**9**	1	121	4	0	126	9	0	4	**2**	15	299
08:30 AM	8	151	0	0	159	2	0	**4**	3	9	1	121	5	0	127	**11**	1	**7**	2	**21**	**316**
08:45 AM	7	123	**1**	0	131	**3**	0	2	2	7	**3**	**135**	**7**	**2**	**147**	2	0	4	1	7	292
Total Volume	37	589	1	0	627	8	0	8	12	28	5	469	16	2	492	24	3	18	6	51	1198
% App. Total	5.9	93.9	0.2	0		28.6	0	28.6	42.9		1	95.3	3.3	0.4		47.1	5.9	35.3	11.8		
PHF	.617	.851	.250	.000	.834	.667	.000	.500	.500	.778	.417	.869	.571	.250	.837	.545	.375	.643	.750	.607	.948
Lights	33	566	1	0	600	8	0	7	0	15	5	442	16	0	463	23	3	18	0	44	1122
% Lights	89.2	96.1	100	0	95.7	100	0	87.5	0	53.6	100	94.2	100	0	94.1	95.8	100	100	0	86.3	93.7
Buses	0	9	0	0	9	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	20
% Buses	0	1.5	0	0	1.4	0	0	12.5	0	3.6	0	2.1	0	0	2.0	0	0	0	0	0	1.7
Trucks	4	14	0	0	18	0	0	0	0	0	0	17	0	0	17	1	0	0	0	1	36
% Trucks	10.8	2.4	0	0	2.9	0	0	0	0	0	0	3.6	0	0	3.5	4.2	0	0	0	2.0	3.0
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	1	1	5
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	33.3	14.3	0	0	0	0	0	0	0	0	16.7	2.0	0.4
Pedestrians	0	0	0	0	0	0	0	0	8	8	0	0	0	2	2	0	0	0	5	5	15
% Pedestrians	0	0	0	0	0	0	0	0	66.7	28.6	0	0	0	100	0.4	0	0	0	83.3	9.8	1.3

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-WKDAY_1107099_09-07-2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	6	124	5	0	135	2	0	2	1	5	2	127	7	0	136	3	3	3	1	10	286
03:15 PM	3	107	2	0	112	1	0	0	0	1	2	180	5	0	187	6	0	3	0	9	309
03:30 PM	3	97	1	0	101	1	0	1	1	3	1	138	3	0	142	1	0	3	1	5	251
03:45 PM	5	153	1	0	159	2	1	1	0	4	0	145	4	0	149	4	1	6	0	11	323
Total	17	481	9	0	507	6	1	4	2	13	5	590	19	0	614	14	4	15	2	35	1169
04:00 PM	1	112	2	0	115	3	0	0	0	3	0	126	3	1	130	2	2	10	1	15	263
04:15 PM	4	139	2	0	145	3	1	3	0	7	1	170	2	0	173	4	2	7	3	16	341
04:30 PM	7	145	0	0	152	1	1	0	0	2	2	129	2	0	133	3	2	2	1	8	295
04:45 PM	5	150	1	0	156	0	1	2	0	3	1	162	4	0	167	2	1	5	0	8	334
Total	17	546	5	0	568	7	3	5	0	15	4	587	11	1	603	11	7	24	5	47	1233
05:00 PM	8	124	2	0	134	0	0	1	2	3	1	137	6	0	144	2	0	7	0	9	290
05:15 PM	9	97	2	0	108	1	0	1	0	2	2	85	2	3	92	5	2	5	1	13	215
05:30 PM	8	130	2	0	140	0	1	1	0	2	2	88	1	0	91	4	6	4	0	14	247
05:45 PM	6	99	5	0	110	2	0	0	2	4	1	43	1	2	47	2	1	3	0	6	167
Total	31	450	11	0	492	3	1	3	4	11	6	353	10	5	374	13	9	19	1	42	919
06:00 PM	5	114	0	0	119	2	0	1	3	6	1	86	2	1	90	3	3	1	0	7	222
06:15 PM	3	112	3	0	118	1	0	0	0	1	3	127	3	0	133	1	1	4	1	7	259
Grand Total	73	1703	28	0	1804	19	5	13	9	46	19	1743	45	7	1814	42	24	63	9	138	3802
Apprch %	4	94.4	1.6	0		41.3	10.9	28.3	19.6		1	96.1	2.5	0.4		30.4	17.4	45.7	6.5		
Total %	1.9	44.8	0.7	0	47.4	0.5	0.1	0.3	0.2	1.2	0.5	45.8	1.2	0.2	47.7	1.1	0.6	1.7	0.2	3.6	
Lights	73	1655	27	0	1755	17	5	12	0	34	19	1693	45	0	1757	42	24	61	0	127	3673
% Lights	100	97.2	96.4	0	97.3	89.5	100	92.3	0	73.9	100	97.1	100	0	96.9	100	100	96.8	0	92	96.6
Buses	0	24	0	0	24	2	0	0	0	2	0	21	0	0	21	0	0	0	0	0	47
% Buses	0	1.4	0	0	1.3	10.5	0	0	0	4.3	0	1.2	0	0	1.2	0	0	0	0	0	1.2
Trucks	0	24	1	0	25	0	0	1	0	1	0	29	0	0	29	0	0	2	0	2	57
% Trucks	0	1.4	3.6	0	1.4	0	0	7.7	0	2.2	0	1.7	0	0	1.6	0	0	3.2	0	1.4	1.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.4	2.9	0.1
Pedestrians	0	0	0	0	0	0	0	0	9	9	0	0	0	7	7	0	0	0	5	5	21
% Pedestrians	0	0	0	0	0	0	0	0	100	19.6	0	0	0	100	0.4	0	0	0	55.6	3.6	0.6

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-WKDAY_1107099_09-07-2023
Site Code :
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	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	4	139	**2**	0	145	**3**	**1**	**3**	0	**7**	1	**170**	2	0	**173**	**4**	**2**	**7**	**3**	**16**	**341**
04:30 PM	7	145	0	0	152	1	1	0	0	2	**2**	129	2	0	133	3	2	2	1	8	295
04:45 PM	5	**150**	1	0	**156**	0	1	2	0	3	1	162	4	0	167	2	1	5	0	8	334
05:00 PM	**8**	124	2	0	134	0	0	1	**2**	3	1	137	**6**	0	144	2	0	7	0	9	290
Total Volume	24	558	5	0	587	4	3	6	2	15	5	598	14	0	617	11	5	21	4	41	1260
% App. Total	4.1	95.1	0.9	0		26.7	20	40	13.3		0.8	96.9	2.3	0		26.8	12.2	51.2	9.8		
PHF	.750	.930	.625	.000	.941	.333	.750	.500	.250	.536	.625	.879	.583	.000	.892	.688	.625	.750	.333	.641	.924
Lights	24	543	5	0	572	3	3	6	0	12	5	585	14	0	604	11	5	21	0	37	1225
% Lights	100	97.3	100	0	97.4	75.0	100	100	0	80.0	100	97.8	100	0	97.9	100	100	100	0	90.2	97.2
Buses	0	5	0	0	5	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	12
% Buses	0	0.9	0	0	0.9	25.0	0	0	0	6.7	0	1.0	0	0	1.0	0	0	0	0	0	1.0
Trucks	0	10	0	0	10	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	17
% Trucks	0	1.8	0	0	1.7	0	0	0	0	0	0	1.2	0	0	1.1	0	0	0	0	0	1.3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75.0	7.3	0.2
Pedestrians	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
% Pedestrians	0	0	0	0	0	0	0	0	100	13.3	0	0	0	0	0	0	0	0	25.0	2.4	0.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-SAT_1107100_09-09-2023
Site Code :
Start Date : 9/9/2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	6	157	1	0	164	3	1	0	2	6	1	116	0	0	117	4	1	5	1	11	298
11:15 AM	6	122	0	0	128	4	0	2	1	7	0	105	1	0	106	2	0	3	0	5	246
11:30 AM	6	117	1	0	124	2	2	1	0	5	1	117	0	0	118	4	1	4	0	9	256
11:45 AM	7	163	1	0	171	2	0	0	1	3	0	117	4	0	121	2	0	6	1	9	304
Total	25	559	3	0	587	11	3	3	4	21	2	455	5	0	462	12	2	18	2	34	1104
12:00 PM	7	153	3	0	163	2	1	0	0	3	0	132	3	0	135	4	1	10	3	18	319
12:15 PM	2	146	2	0	150	3	1	2	1	7	3	112	2	0	117	3	0	4	0	7	281
12:30 PM	6	144	1	0	151	3	3	1	0	7	1	117	2	0	120	1	0	9	2	12	290
12:45 PM	7	139	3	0	149	4	1	1	5	11	0	127	1	0	128	2	0	6	0	8	296
Total	22	582	9	0	613	12	6	4	6	28	4	488	8	0	500	10	1	29	5	45	1186
01:00 PM	6	132	0	0	138	0	0	0	1	1	0	115	3	0	118	1	1	6	0	8	265
01:15 PM	4	148	1	0	153	0	0	0	1	1	0	120	2	1	123	1	0	3	0	4	281
01:30 PM	7	157	3	0	167	1	1	2	0	4	2	146	2	0	150	3	0	3	0	6	327
01:45 PM	11	154	2	0	167	1	0	2	0	3	0	127	1	2	130	3	1	6	5	15	315
Total	28	591	6	0	625	2	1	4	2	9	2	508	8	3	521	8	2	18	5	33	1188
Grand Total	75	1732	18	0	1825	25	10	11	12	58	8	1451	21	3	1483	30	5	65	12	112	3478
Apprch %	4.1	94.9	1	0		43.1	17.2	19	20.7		0.5	97.8	1.4	0.2		26.8	4.5	58	10.7		
Total %	2.2	49.8	0.5	0	52.5	0.7	0.3	0.3	0.3	1.7	0.2	41.7	0.6	0.1	42.6	0.9	0.1	1.9	0.3	3.2	
Lights	75	1705	18	0	1798	24	9	11	0	44	8	1431	21	0	1460	30	5	64	0	99	3401
% Lights	100	98.4	100	0	98.5	96	90	100	0	75.9	100	98.6	100	0	98.4	100	100	98.5	0	88.4	97.8
Buses	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	13
% Buses	0	0.4	0	0	0.4	0	0	0	0	0	0	0.3	0	0	0.3	0	0	1.5	0	0.9	0.4
Trucks	0	20	0	0	20	1	1	0	0	2	0	15	0	0	15	0	0	0	0	0	37
% Trucks	0	1.2	0	0	1.1	4	10	0	0	3.4	0	1	0	0	1	0	0	0	0	0	1.1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	1.8	0.1
Pedestrians	0	0	0	0	0	0	0	0	12	12	0	0	0	3	3	0	0	0	10	10	25
% Pedestrians	0	0	0	0	0	0	0	0	100	20.7	0	0	0	100	0.2	0	0	0	83.3	8.9	0.7

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-SAT_1107100_09-09-2023
Site Code :
Start Date : 9/9/2023
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	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	**7**	**163**	1	0	**171**	2	0	0	**1**	3	0	117	**4**	0	121	2	0	6	1	9	304
12:00 PM	7	153	**3**	0	163	2	1	0	0	3	0	**132**	3	0	**135**	**4**	**1**	**10**	**3**	**18**	**319**
12:15 PM	2	146	2	0	150	**3**	1	**2**	1	**7**	**3**	112	2	0	117	3	0	4	0	7	281
12:30 PM	6	144	1	0	151	3	**3**	1	0	7	1	117	2	0	120	1	0	9	2	12	290
Total Volume	22	606	7	0	635	10	5	3	2	20	4	478	11	0	493	10	1	29	6	46	1194
% App. Total	3.5	95.4	1.1	0		50	25	15	10		0.8	97	2.2	0		21.7	2.2	63	13		
PHF	.786	.929	.583	.000	.928	.833	.417	.375	.500	.714	.333	.905	.688	.000	.913	.625	.250	.725	.500	.639	.936
Lights	22	593	7	0	622	10	5	3	0	18	4	473	11	0	488	10	1	28	0	39	1167
% Lights	100	97.9	100	0	98.0	100	100	100	0	90.0	100	99.0	100	0	99.0	100	100	96.6	0	84.8	97.7
Buses	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	6
% Buses	0	0.3	0	0	0.3	0	0	0	0	0	0	0.6	0	0	0.6	0	0	3.4	0	2.2	0.5
Trucks	0	11	0	0	11	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	13
% Trucks	0	1.8	0	0	1.7	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	1.1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	2.2	0.1
Pedestrians	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	5	5	7
% Pedestrians	0	0	0	0	0	0	0	0	100	10.0	0	0	0	0	0	0	0	0	83.3	10.9	0.6

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-WKDAY_1107101_09-07-2023
Site Code :
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	102	58	2	2	164	1	1	0	1	3	0	73	6	0	79	1	2	24	0	27	273
07:15 AM	59	85	0	0	144	0	3	1	3	7	0	71	5	0	76	5	0	33	1	39	266
07:30 AM	55	74	1	0	130	3	3	0	1	7	0	77	6	0	83	2	0	18	1	21	241
07:45 AM	24	110	1	6	141	2	3	1	3	9	1	83	3	0	87	7	2	40	4	53	290
Total	240	327	4	8	579	6	10	2	8	26	1	304	20	0	325	15	4	115	6	140	1070
08:00 AM	63	99	2	1	165	1	3	1	1	6	0	70	8	0	78	6	1	19	0	26	275
08:15 AM	31	125	0	0	156	3	1	2	7	13	0	89	1	2	92	5	2	36	4	47	308
08:30 AM	41	125	0	0	166	0	4	5	3	12	1	108	3	0	112	11	1	18	2	32	322
08:45 AM	36	98	0	0	134	3	1	0	3	7	1	122	4	0	127	7	0	21	1	29	297
Total	171	447	2	1	621	7	9	8	14	38	2	389	16	2	409	29	4	94	7	134	1202
Grand Total	411	774	6	9	1200	13	19	10	22	64	3	693	36	2	734	44	8	209	13	274	2272
Apprch %	34.2	64.5	0.5	0.8		20.3	29.7	15.6	34.4		0.4	94.4	4.9	0.3		16.1	2.9	76.3	4.7		
Total %	18.1	34.1	0.3	0.4	52.8	0.6	0.8	0.4	1	2.8	0.1	30.5	1.6	0.1	32.3	1.9	0.4	9.2	0.6	12.1	
Lights	407	724	6	0	1137	13	19	10	0	42	3	650	33	0	686	40	7	201	0	248	2113
% Lights	99	93.5	100	0	94.8	100	100	100	0	65.6	100	93.8	91.7	0	93.5	90.9	87.5	96.2	0	90.5	93
Buses	3	21	0	0	24	0	0	0	0	0	0	17	3	0	20	3	1	3	0	7	51
% Buses	0.7	2.7	0	0	2	0	0	0	0	0	0	2.5	8.3	0	2.7	6.8	12.5	1.4	0	2.6	2.2
Trucks	1	29	0	0	30	0	0	0	0	0	0	26	0	0	26	1	0	5	0	6	62
% Trucks	0.2	3.7	0	0	2.5	0	0	0	0	0	0	3.8	0	0	3.5	2.3	0	2.4	0	2.2	2.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.1	0	0	0	0	0	0
Pedestrians	0	0	0	9	9	0	0	0	22	22	0	0	0	1	1	0	0	0	13	13	45
% Pedestrians	0	0	0	100	0.8	0	0	0	100	34.4	0	0	0	50	0.1	0	0	0	100	4.7	2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-WKDAY_1107101_09-07-2023
Site Code :
Start Date : 9/7/2023
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	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**63**	99	**2**	**1**	165	1	3	1	1	6	0	70	**8**	0	78	6	1	19	0	26	275
08:15 AM	31	**125**	0	0	156	**3**	1	2	**7**	**13**	0	89	1	**2**	92	5	**2**	**36**	**4**	**47**	308
08:30 AM	41	125	0	0	**166**	0	**4**	**5**	3	12	**1**	108	3	0	112	**11**	1	18	2	32	**322**
08:45 AM	36	98	0	0	134	3	1	0	3	7	1	**122**	4	0	**127**	7	0	21	1	29	297
Total Volume	171	447	2	1	621	7	9	8	14	38	2	389	16	2	409	29	4	94	7	134	1202
% App. Total	27.5	72	0.3	0.2		18.4	23.7	21.1	36.8		0.5	95.1	3.9	0.5		21.6	3	70.1	5.2		
PHF	.679	.894	.250	.250	.935	.583	.563	.400	.500	.731	.500	.797	.500	.250	.805	.659	.500	.653	.438	.713	.933
Lights	169	424	2	0	595	7	9	8	0	24	2	364	15	0	381	27	3	90	0	120	1120
% Lights	98.8	94.9	100	0	95.8	100	100	100	0	63.2	100	93.6	93.8	0	93.2	93.1	75.0	95.7	0	89.6	93.2
Buses	1	10	0	0	11	0	0	0	0	0	0	11	1	0	12	1	1	1	0	3	26
% Buses	0.6	2.2	0	0	1.8	0	0	0	0	0	0	2.8	6.3	0	2.9	3.4	25.0	1.1	0	2.2	2.2
Trucks	1	13	0	0	14	0	0	0	0	0	0	14	0	0	14	1	0	3	0	4	32
% Trucks	0.6	2.9	0	0	2.3	0	0	0	0	0	0	3.6	0	0	3.4	3.4	0	3.2	0	3.0	2.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	50.0	0.2	0	0	0	0	0	0.1
Pedestrians	0	0	0	1	1	0	0	0	14	14	0	0	0	1	1	0	0	0	7	7	23
% Pedestrians	0	0	0	100	0.2	0	0	0	100	36.8	0	0	0	50.0	0.2	0	0	0	100	5.2	1.9

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-WKDAY_1107101_09-07-2023
Site Code :
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	28	106	3	3	140	2	0	0	4	6	1	107	9	0	117	11	1	24	0	36	299
03:15 PM	19	86	2	0	107	1	1	0	0	2	2	135	4	0	141	4	4	55	1	64	314
03:30 PM	25	76	3	0	104	1	1	0	1	3	0	119	5	0	124	6	1	22	1	30	261
03:45 PM	40	113	1	0	154	4	1	1	0	6	1	117	0	0	118	4	1	20	0	25	303
Total	112	381	9	3	505	8	3	1	5	17	4	478	18	0	500	25	7	121	2	155	1177
04:00 PM	24	92	2	5	123	1	2	0	1	4	1	110	6	0	117	5	2	23	2	32	276
04:15 PM	27	114	1	1	143	2	1	0	1	4	2	98	7	0	107	11	3	80	3	97	351
04:30 PM	35	121	0	0	156	0	1	0	0	1	0	98	7	0	105	3	1	28	1	33	295
04:45 PM	33	114	2	0	149	2	3	0	0	5	6	68	8	0	82	9	5	100	1	115	351
Total	119	441	5	6	571	5	7	0	2	14	9	374	28	0	411	28	11	231	7	277	1273
05:00 PM	38	94	1	1	134	2	2	1	1	6	4	111	9	0	124	1	3	31	1	36	300
05:15 PM	23	85	0	0	108	1	0	0	3	4	5	57	4	0	66	9	10	38	0	57	235
05:30 PM	26	101	5	0	132	2	1	1	1	5	10	54	4	0	68	13	3	33	2	51	256
05:45 PM	40	63	1	1	105	3	2	2	3	10	11	27	3	0	41	23	19	20	1	63	219
Total	127	343	7	2	479	8	5	4	8	25	30	249	20	0	299	46	35	122	4	207	1010
06:00 PM	31	87	1	1	120	1	8	2	3	14	8	56	6	0	70	9	6	25	1	41	245
06:15 PM	39	75	1	3	118	3	3	1	0	7	3	61	6	1	71	10	6	68	5	89	285
Grand Total	428	1327	23	15	1793	25	26	8	18	77	54	1218	78	1	1351	118	65	567	19	769	3990
Apprch %	23.9	74	1.3	0.8		32.5	33.8	10.4	23.4		4	90.2	5.8	0.1		15.3	8.5	73.7	2.5		
Total %	10.7	33.3	0.6	0.4	44.9	0.6	0.7	0.2	0.5	1.9	1.4	30.5	2	0	33.9	3	1.6	14.2	0.5	19.3	
Lights	417	1290	22	0	1729	25	26	8	0	59	51	1177	70	0	1298	115	64	559	0	738	3824
% Lights	97.4	97.2	95.7	0	96.4	100	100	100	0	76.6	94.4	96.6	89.7	0	96.1	97.5	98.5	98.6	0	96	95.8
Buses	8	16	0	0	24	0	0	0	0	0	2	16	7	0	25	2	0	4	0	6	55
% Buses	1.9	1.2	0	0	1.3	0	0	0	0	0	3.7	1.3	9	0	1.9	1.7	0	0.7	0	0.8	1.4
Trucks	3	21	1	0	25	0	0	0	0	0	1	25	1	0	27	1	1	4	0	6	58
% Trucks	0.7	1.6	4.3	0	1.4	0	0	0	0	0	1.9	2.1	1.3	0	2	0.8	1.5	0.7	0	0.8	1.5
Bicycles on Crosswalk	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	5	5	7
% Bicycles on Crosswalk	0	0	0	6.7	0.1	0	0	0	5.6	1.3	0	0	0	0	0	0	0	0	26.3	0.7	0.2
Pedestrians	0	0	0	14	14	0	0	0	17	17	0	0	0	1	1	0	0	0	14	14	46
% Pedestrians	0	0	0	93.3	0.8	0	0	0	94.4	22.1	0	0	0	100	0.1	0	0	0	73.7	1.8	1.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-WKDAY_1107101_09-07-2023
Site Code :
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	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	27	114	1	**1**	143	**2**	1	0	**1**	4	2	98	7	0	107	**11**	3	80	**3**	97	**351**
04:30 PM	35	**121**	0	0	**156**	0	1	0	0	1	0	98	7	0	105	3	1	28	1	33	295
04:45 PM	33	114	**2**	0	149	2	**3**	0	0	5	**6**	68	8	0	82	9	**5**	**100**	1	**115**	351
05:00 PM	**38**	94	1	1	134	2	2	**1**	1	**6**	4	**111**	**9**	0	**124**	1	3	31	1	36	300
Total Volume	133	443	4	2	582	6	7	1	2	16	12	375	31	0	418	24	12	239	6	281	1297
% App. Total	22.9	76.1	0.7	0.3		37.5	43.8	6.2	12.5		2.9	89.7	7.4	0		8.5	4.3	85.1	2.1		
PHF	.875	.915	.500	.500	.933	.750	.583	.250	.500	.667	.500	.845	.861	.000	.843	.545	.600	.598	.500	.611	.924
Lights	130	431	4	0	565	6	7	1	0	14	12	364	28	0	404	24	12	236	0	272	1255
% Lights	97.7	97.3	100	0	97.1	100	100	100	0	87.5	100	97.1	90.3	0	96.7	100	100	98.7	0	96.8	96.8
Buses	3	2	0	0	5	0	0	0	0	0	0	4	2	0	6	0	0	2	0	2	13
% Buses	2.3	0.5	0	0	0.9	0	0	0	0	0	0	1.1	6.5	0	1.4	0	0	0.8	0	0.7	1.0
Trucks	0	10	0	0	10	0	0	0	0	0	0	7	1	0	8	0	0	1	0	1	19
% Trucks	0	2.3	0	0	1.7	0	0	0	0	0	0	1.9	3.2	0	1.9	0	0	0.4	0	0.4	1.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	0.4	0.1
Pedestrians	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	0	0	0	5	5	9
% Pedestrians	0	0	0	100	0.3	0	0	0	100	12.5	0	0	0	0	0	0	0	0	83.3	1.8	0.7

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-SAT_1107102_09-09-2023
Site Code :
Start Date : 9/9/2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	61	97	2	0	160	2	6	1	0	9	2	88	8	0	98	4	1	29	2	36	303
11:15 AM	34	87	0	0	121	0	3	2	2	7	2	87	7	0	96	3	0	15	1	19	243
11:30 AM	30	102	1	1	134	0	1	3	0	4	0	94	8	0	102	15	0	32	0	47	287
11:45 AM	44	104	3	0	151	1	2	2	0	5	1	98	8	0	107	8	2	22	3	35	298
Total	169	390	6	1	566	3	12	8	2	25	5	367	31	0	403	30	3	98	6	137	1131
12:00 PM	47	101	1	1	150	2	0	0	1	3	0	89	14	0	103	9	1	41	1	52	308
12:15 PM	48	101	2	2	153	2	1	2	2	7	0	98	11	0	109	5	1	15	0	21	290
12:30 PM	44	94	4	0	142	3	2	0	0	5	0	72	9	0	81	12	3	49	2	66	294
12:45 PM	32	111	3	4	150	2	4	0	6	12	0	97	7	1	105	9	0	29	0	38	305
Total	171	407	10	7	595	9	7	2	9	27	0	356	41	1	398	35	5	134	3	177	1197
01:00 PM	35	96	0	1	132	4	0	1	1	6	1	88	8	1	98	8	0	32	1	41	277
01:15 PM	44	92	2	6	144	2	0	3	8	13	0	89	12	0	101	7	2	31	1	41	299
01:30 PM	45	117	4	0	166	1	0	4	0	5	1	100	8	2	111	13	0	46	4	63	345
01:45 PM	55	90	1	4	150	0	3	1	0	4	0	99	17	0	116	4	3	31	0	38	308
Total	179	395	7	11	592	7	3	9	9	28	2	376	45	3	426	32	5	140	6	183	1229
Grand Total	519	1192	23	19	1753	19	22	19	20	80	7	1099	117	4	1227	97	13	372	15	497	3557
Apprch %	29.6	68	1.3	1.1		23.8	27.5	23.8	25		0.6	89.6	9.5	0.3		19.5	2.6	74.8	3		
Total %	14.6	33.5	0.6	0.5	49.3	0.5	0.6	0.5	0.6	2.2	0.2	30.9	3.3	0.1	34.5	2.7	0.4	10.5	0.4	14	
Lights	513	1175	23	0	1711	19	22	19	0	60	7	1081	110	0	1198	97	13	370	0	480	3449
% Lights	98.8	98.6	100	0	97.6	100	100	100	0	75	100	98.4	94	0	97.6	100	100	99.5	0	96.6	97
Buses	2	5	0	0	7	0	0	0	0	0	0	4	7	0	11	0	0	2	0	2	20
% Buses	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0.4	6	0	0.9	0	0	0.5	0	0.4	0.6
Trucks	4	12	0	0	16	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	30
% Trucks	0.8	1	0	0	0.9	0	0	0	0	0	0	1.3	0	0	1.1	0	0	0	0	0	0.8
Bicycles on Crosswalk	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	4
% Bicycles on Crosswalk	0	0	0	5.3	0.1	0	0	0	0	0	0	0	0	25	0.1	0	0	0	13.3	0.4	0.1
Pedestrians	0	0	0	18	18	0	0	0	20	20	0	0	0	3	3	0	0	0	13	13	54
% Pedestrians	0	0	0	94.7	1	0	0	0	100	25	0	0	0	75	0.2	0	0	0	86.7	2.6	1.5

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-SAT_1107102_09-09-2023
Site Code :
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	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	35	96	0	1	132	**4**	0	1	1	6	**1**	88	8	1	98	8	0	32	1	41	277
01:15 PM	44	92	2	**6**	144	2	0	3	**8**	**13**	0	89	12	0	101	7	2	31	1	41	299
01:30 PM	45	**117**	**4**	0	**166**	1	0	**4**	0	5	1	**100**	8	**2**	111	**13**	0	**46**	**4**	**63**	**345**
01:45 PM	**55**	90	1	4	150	0	**3**	1	0	4	0	99	**17**	0	**116**	4	**3**	31	0	38	308
Total Volume	179	395	7	11	592	7	3	9	9	28	2	376	45	3	426	32	5	140	6	183	1229
% App. Total	30.2	66.7	1.2	1.9		25	10.7	32.1	32.1		0.5	88.3	10.6	0.7		17.5	2.7	76.5	3.3		
PHF	.814	.844	.438	.458	.892	.438	.250	.563	.281	.538	.500	.940	.662	.375	.918	.615	.417	.761	.375	.726	.891
Lights	179	391	7	0	577	7	3	9	0	19	2	368	44	0	414	32	5	140	0	177	1187
% Lights	100	99.0	100	0	97.5	100	100	100	0	67.9	100	97.9	97.8	0	97.2	100	100	100	0	96.7	96.6
Buses	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4
% Buses	0	0.5	0	0	0.3	0	0	0	0	0	0	0.3	2.2	0	0.5	0	0	0	0	0	0.3
Trucks	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
% Trucks	0	0.5	0	0	0.3	0	0	0	0	0	0	1.9	0	0	1.6	0	0	0	0	0	0.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	33.3	0.2	0	0	0	16.7	0.5	0.2
Pedestrians	0	0	0	11	11	0	0	0	9	9	0	0	0	2	2	0	0	0	5	5	27
% Pedestrians	0	0	0	100	1.9	0	0	0	100	32.1	0	0	0	66.7	0.5	0	0	0	83.3	2.7	2.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
Site Code :
Start Date : 9/7/2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	105	0	0	105	0	0	0	0	0	0	27	0	1	28	0	0	0	1	1	134
07:15 AM	0	72	0	0	72	0	0	0	0	0	0	39	0	0	39	0	0	0	3	3	114
07:30 AM	0	59	0	0	59	0	0	0	0	0	0	23	0	1	24	0	0	0	2	2	85
07:45 AM	0	30	0	1	31	0	0	0	0	0	0	46	1	1	48	1	0	1	7	9	88
Total	0	266	0	1	267	0	0	0	0	0	0	135	1	3	139	1	0	1	13	15	421
08:00 AM	0	71	0	0	71	0	0	0	0	0	0	26	0	1	27	1	0	1	2	4	102
08:15 AM	0	36	0	0	36	0	0	0	0	0	0	39	0	0	39	0	0	0	1	1	76
08:30 AM	1	47	0	6	54	0	0	0	0	0	0	30	0	0	30	1	0	0	6	7	91
08:45 AM	0	38	0	0	38	0	0	0	0	0	0	27	0	2	29	0	0	1	1	2	69
Total	1	192	0	6	199	0	0	0	0	0	0	122	0	3	125	2	0	2	10	14	338
Grand Total	1	458	0	7	466	0	0	0	0	0	0	257	1	6	264	3	0	3	23	29	759
Apprch %	0.2	98.3	0	1.5		0	0	0	0		0	97.3	0.4	2.3		10.3	0	10.3	79.3		
Total %	0.1	60.3	0	0.9	61.4	0	0	0	0	0	0	33.9	0.1	0.8	34.8	0.4	0	0.4	3	3.8	
Lights	1	450	0	0	451	0	0	0	0	0	0	246	1	0	247	3	0	3	0	6	704
% Lights	100	98.3	0	0	96.8	0	0	0	0	0	0	95.7	100	0	93.6	100	0	100	0	20.7	92.8
Buses	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
% Buses	0	1.5	0	0	1.5	0	0	0	0	0	0	2.7	0	0	2.7	0	0	0	0	0	1.8
Trucks	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
% Trucks	0	0.2	0	0	0.2	0	0	0	0	0	0	1.6	0	0	1.5	0	0	0	0	0	0.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.3	3.4	0.1
Pedestrians	0	0	0	7	7	0	0	0	0	0	0	0	0	6	6	0	0	0	22	22	35
% Pedestrians	0	0	0	100	1.5	0	0	0	0	0	0	0	0	100	2.3	0	0	0	95.7	75.9	4.6

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
Site Code :
Start Date : 9/7/2023
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	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	**105**	0	0	**105**	0	0	0	0	0	0	27	0	**1**	28	0	0	0	1	1	**134**
07:15 AM	0	72	0	0	72	0	0	0	0	0	0	39	0	0	39	0	0	0	3	3	114
07:30 AM	0	59	0	0	59	0	0	0	0	0	0	23	0	1	24	0	0	0	2	2	85
07:45 AM	0	30	0	**1**	31	0	0	0	0	0	0	**46**	**1**	1	**48**	**1**	0	**1**	**7**	**9**	88
Total Volume	0	266	0	1	267	0	0	0	0	0	0	135	1	3	139	1	0	1	13	15	421
% App. Total	0	99.6	0	0.4		0	0	0	0		0	97.1	0.7	2.2		6.7	0	6.7	86.7		
PHF	.000	.633	.000	.250	.636	.000	.000	.000	.000	.000	.000	.734	.250	.750	.724	.250	.000	.250	.464	.417	.785
Lights	0	261	0	0	261	0	0	0	0	0	0	130	1	0	131	1	0	1	0	2	394
% Lights	0	98.1	0	0	97.8	0	0	0	0	0	0	96.3	100	0	94.2	100	0	100	0	13.3	93.6
Buses	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
% Buses	0	1.9	0	0	1.9	0	0	0	0	0	0	3.0	0	0	2.9	0	0	0	0	0	2.1
Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0	0	0	0.2
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.7	6.7	0.2
Pedestrians	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3	0	0	0	12	12	16
% Pedestrians	0	0	0	100	0.4	0	0	0	0	0	0	0	0	100	2.2	0	0	0	92.3	80.0	3.8

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	0	33	0	0	33	0	0	0	0	0	0	34	0	0	34	0	0	2	1	3	70
03:15 PM	0	20	0	0	20	0	0	0	0	0	0	62	0	0	62	0	0	1	4	5	87
03:30 PM	1	29	0	2	32	0	0	0	0	0	0	30	1	0	31	1	0	0	3	4	67
03:45 PM	1	33	0	0	34	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	57
Total	2	115	0	2	119	0	0	0	0	0	0	149	1	0	150	1	0	3	8	12	281
04:00 PM	1	33	0	1	35	0	0	0	0	0	0	26	0	0	26	1	0	0	6	7	68
04:15 PM	1	37	0	2	40	0	0	0	0	0	0	89	0	1	90	3	0	0	2	5	135
04:30 PM	0	45	0	2	47	0	0	0	0	0	0	27	0	0	27	1	0	0	2	3	77
04:45 PM	1	41	0	2	44	0	0	0	0	0	0	114	0	0	114	1	0	2	0	3	161
Total	3	156	0	7	166	0	0	0	0	0	0	256	0	1	257	6	0	2	10	18	441
05:00 PM	0	48	0	1	49	0	0	0	0	0	0	30	0	0	30	1	0	0	3	4	83
05:15 PM	0	28	0	0	28	0	0	0	0	0	0	82	1	0	83	2	0	1	0	3	114
05:30 PM	1	30	0	0	31	0	0	0	0	0	0	44	1	0	45	1	0	0	1	2	78
05:45 PM	0	45	0	0	45	0	0	0	0	0	0	57	3	2	62	2	0	0	0	2	109
Total	1	151	0	1	153	0	0	0	0	0	0	213	5	2	220	6	0	1	4	11	384
06:00 PM	1	46	0	0	47	0	0	0	0	0	0	21	1	0	22	1	0	0	2	3	72
06:15 PM	1	44	0	0	45	0	0	0	0	0	0	83	0	0	83	1	0	0	5	6	134
Grand Total	8	512	0	10	530	0	0	0	0	0	0	722	7	3	732	15	0	6	29	50	1312
Apprch %	1.5	96.6	0	1.9		0	0	0	0		0	98.6	1	0.4		30	0	12	58		
Total %	0.6	39	0	0.8	40.4	0	0	0	0	0	0	55	0.5	0.2	55.8	1.1	0	0.5	2.2	3.8	
Lights	8	496	0	0	504	0	0	0	0	0	0	710	7	0	717	15	0	6	0	21	1242
% Lights	100	96.9	0	0	95.1	0	0	0	0	0	0	98.3	100	0	98	100	0	100	0	42	94.7
Buses	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	20
% Buses	0	2.7	0	0	2.6	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	1.5
Trucks	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
% Trucks	0	0.4	0	0	0.4	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0.6
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17.2	10	0.4
Pedestrians	0	0	0	10	10	0	0	0	0	0	0	0	0	3	3	0	0	0	24	24	37
% Pedestrians	0	0	0	100	1.9	0	0	0	0	0	0	0	0	100	0.4	0	0	0	82.8	48	2.8

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
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	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	**1**	37	0	**2**	40	0	0	0	0	0	0	89	0	**1**	90	**3**	0	0	2	**5**	135
04:30 PM	0	45	0	2	47	0	0	0	0	0	0	27	0	0	27	1	0	0	2	3	77
04:45 PM	1	41	0	2	44	0	0	0	0	0	0	**114**	0	0	**114**	1	0	**2**	0	3	**161**
05:00 PM	0	**48**	0	1	**49**	0	0	0	0	0	0	30	0	0	30	1	0	0	**3**	4	83
Total Volume	2	171	0	7	180	0	0	0	0	0	0	260	0	1	261	6	0	2	7	15	456
% App. Total	1.1	95	0	3.9		0	0	0	0		0	99.6	0	0.4		40	0	13.3	46.7		
PHF	.500	.891	.000	.875	.918	.000	.000	.000	.000	.000	.000	.570	.000	.250	.572	.500	.000	.250	.583	.750	.708
Lights	2	165	0	0	167	0	0	0	0	0	0	259	0	0	259	6	0	2	0	8	434
% Lights	100	96.5	0	0	92.8	0	0	0	0	0	0	99.6	0	0	99.2	100	0	100	0	53.3	95.2
Buses	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
% Buses	0	2.9	0	0	2.8	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	1.3
Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Trucks	0	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.3	6.7	0.2
Pedestrians	0	0	0	7	7	0	0	0	0	0	0	0	0	1	1	0	0	0	6	6	14
% Pedestrians	0	0	0	100	3.9	0	0	0	0	0	0	0	0	100	0.4	0	0	0	85.7	40.0	3.1

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-SAT_1107105_09-09-2023
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Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	1	78	0	1	80	0	0	0	0	0	0	34	0	0	34	1	0	1	1	3	117
11:15 AM	0	44	0	0	44	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	62
11:30 AM	0	38	0	5	43	0	0	0	0	0	0	48	0	2	50	0	0	0	9	9	102
11:45 AM	0	52	0	0	52	0	0	0	0	0	0	31	0	0	31	0	0	0	2	2	85
Total	1	212	0	6	219	0	0	0	0	0	0	131	0	2	133	1	0	1	12	14	366
12:00 PM	0	61	0	0	61	0	0	0	0	0	0	47	0	0	47	0	0	1	0	1	109
12:15 PM	1	61	0	0	62	0	0	0	0	0	0	24	0	0	24	0	0	0	2	2	88
12:30 PM	0	57	0	0	57	0	0	0	0	0	0	61	0	0	61	1	0	0	1	2	120
12:45 PM	1	42	0	4	47	0	0	0	0	0	0	39	0	0	39	0	0	1	10	11	97
Total	2	221	0	4	227	0	0	0	0	0	0	171	0	0	171	1	0	2	13	16	414
01:00 PM	0	43	0	0	43	0	0	0	0	0	0	37	0	0	37	1	0	1	0	2	82
01:15 PM	0	55	0	0	55	0	0	0	0	0	0	44	0	1	45	0	0	0	4	4	104
01:30 PM	0	52	0	1	53	0	0	0	0	0	0	55	0	2	57	0	0	0	5	5	115
01:45 PM	0	78	0	0	78	0	0	0	0	0	0	40	0	1	41	0	0	0	4	4	123
Total	0	228	0	1	229	0	0	0	0	0	0	176	0	4	180	1	0	1	13	15	424
Grand Total	3	661	0	11	675	0	0	0	0	0	0	478	0	6	484	3	0	4	38	45	1204
Apprch %	0.4	97.9	0	1.6		0	0	0	0		0	98.8	0	1.2		6.7	0	8.9	84.4		
Total %	0.2	54.9	0	0.9	56.1	0	0	0	0	0	0	39.7	0	0.5	40.2	0.2	0	0.3	3.2	3.7	
Lights	2	648	0	0	650	0	0	0	0	0	0	476	0	0	476	3	0	4	0	7	1133
% Lights	66.7	98	0	0	96.3	0	0	0	0	0	0	99.6	0	0	98.3	100	0	100	0	15.6	94.1
Buses	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	11
% Buses	0	1.4	0	0	1.3	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0.9
Trucks	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
% Trucks	33.3	0.6	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.6	2.2	0.1
Pedestrians	0	0	0	11	11	0	0	0	0	0	0	0	0	6	6	0	0	0	37	37	54
% Pedestrians	0	0	0	100	1.6	0	0	0	0	0	0	0	0	100	1.2	0	0	0	97.4	82.2	4.5

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-SAT_1107105_09-09-2023
Site Code :
Start Date : 9/9/2023
Page No : 2

	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	43	0	0	43	0	0	0	0	0	0	37	0	0	37	**1**	0	**1**	0	2	82
01:15 PM	0	55	0	0	55	0	0	0	0	0	0	44	0	1	45	0	0	0	4	4	104
01:30 PM	0	52	0	**1**	53	0	0	0	0	0	0	**55**	0	**2**	**57**	0	0	0	**5**	**5**	115
01:45 PM	0	**78**	0	0	**78**	0	0	0	0	0	0	40	0	1	41	0	0	0	4	4	**123**
Total Volume	0	228	0	1	229	0	0	0	0	0	0	176	0	4	180	1	0	1	13	15	424
% App. Total	0	99.6	0	0.4		0	0	0	0		0	97.8	0	2.2		6.7	0	6.7	86.7		
PHF	.000	.731	.000	.250	.734	.000	.000	.000	.000	.000	.000	.800	.000	.500	.789	.250	.000	.250	.650	.750	.862
Lights	0	227	0	0	227	0	0	0	0	0	0	176	0	0	176	1	0	1	0	2	405
% Lights	0	99.6	0	0	99.1	0	0	0	0	0	0	100	0	0	97.8	100	0	100	0	13.3	95.5
Buses	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Buses	0	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	1	1	0	0	0	0	0	0	0	0	4	4	0	0	0	13	13	18
% Pedestrians	0	0	0	100	0.4	0	0	0	0	0	0	0	0	100	2.2	0	0	0	100	86.7	4.2

NYSDOT CLASSIFICATION DATA SUMMARY

ROADWAY: BEEKMAN STREET
SEGMENT: FROM NYS ROUTE 9D TO RED FLYNN DRIVE
LOCATION: 275' E OF RIVER ST
START DATE OF COUNT: Tuesday, April 24, 2018
NYSDOT COUNT STATION: 821009
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
FACTOR GROUP: 30

VEHICLE CLASS	DIRECTIONAL VOLUMES		TOTAL VEHICLES	TOTAL AXLES
	EASTBOUND	WESTBOUND		
F1	0	5	5	10
F2	2369	1352	3721	7442
F3	255	142	397	794
F4	20	6	26	65
F5	27	13	40	80
F6	7	5	12	36
F7	0	3	3	12
F8	1	0	1	4
F9	4	0	4	20
F10	0	3	3	18
F11	0	0	0	0
F12	0	0	0	0
F13	0	0	0	0
AVERAGE WEEKDAY TOTAL	**2683**	**1529**	**4212**	**8481**

	EASTBOUND	WESTBOUND	TOTAL
% TRUCKS & BUSES (F3 - F13)	12%	11%	12%
% HEAVY VEHICLES (F4 - F13)	2%	2%	2%
% F3 - F7	2%	2%	2%
% F8 - F13	0%	0%	0%
% F1	0%	0%	0%
% F2	88%	88%	88%
% F3	10%	9%	9%
% F4	1%	0%	1%
% F5 - F7	1%	1%	1%

VEHICLE CLASSIFICATION CODES:

- **F1** MOTORCYCLES
- **F2** AUTOS (INCLUDING THOSE HAULING TRAILERS)
- **F3** 2 AXLE, 4-TIRE PICKUPS, VANS, MOTORHOMES (INCLUDING THOSE HAULING TRAILERS)
- **F4** BUSES
- **F5** 2 AXLE, 6-TIRE SINGLE UNIT TRUCKS
- **F6** 3 AXLE SINGLE UNIT TRUCKS
- **F7** 4 OR MORE AXLE SINGLE UNIT TRUCKS
- **F8** 4 OR LESS AXLE VEHICLES, ONE UNIT IS A TRUCK
- **F9** 5 AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F10** 6 OR MORE AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F11** 5 OR LESS AXLE MULTI-UNIT TRUCKS
- **F12** 6 AXLE MULTI UNIT TRUCKS
- **F13** 7 OR MORE AXLE MULTI-UNIT TRUCKS

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT SPEED DATA SUMMARY

ROADWAY: BEEKMAN STREET
SEGMENT: FROM NYS ROUTE 9D TO RED FLYNN DRIVE
LOCATION: 275' E OF RIVER ST
START DATE OF COUNT: Tuesday, April 24, 2018
NYSDOT COUNT STATION: 821009
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
POSTED SPEED LIMIT: 30
FACTOR GROUP: 30

SPEEDS (MPH)	DIRECTIONAL VOLUMES		TOTAL VOLUME
	EASTBOUND	WESTBOUND	
0 - 20.0	97	14	111
20.1 - 25.0	323	40	363
25.1 - 30.0	1129	262	1391
30.1 - 35.0	896	690	1586
35.1 - 40.0	206	423	629
40.1 - 45.0	33	95	128
45.1 - 50.0	1	13	14
50.1 - 55.0	0	0	0
55.1 - 60.0	0	0	0
60.1 - 65.0	0	0	0
65.1 - 70.0	0	0	0
70.1 - 75.0	0	0	0
75.1 - 80.0	0	0	0
80.1+	0	0	0
UNCLASSIFIED	0	0	0
AVERAGE SPEED (MPH)	**28**	**32**	**29**
50TH PERCENTILE SPEED (MPH)	**29**	**33**	**31**
85TH PERCENTILE SPEED (MPH)	**34**	**39**	**36**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

Colliers Engineering & Design

NYSDOT VOLUME DATA SUMMARY

ROADWAY: BEEKMAN STREET
SEGMENT: FROM NYS ROUTE 9D TO RED FLYNN DRIVE
LOCATION: 275' E OF RIVER ST
START DATE OF COUNT: Tuesday, April 24, 2018
NYSDOT COUNT STATION: 821009
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
FACTOR GROUP: 30
SEASONAL FACTOR: 1.062

TIME PERIOD		DIRECTIONAL VOLUMES		TOTAL VOLUME
START	FINISH	EASTBOUND	WESTBOUND	
12:00 AM	1:00 AM	53	6	59
1:00 AM	2:00 AM	22	4	26
2:00 AM	3:00 AM	12	1	13
3:00 AM	4:00 AM	7	5	12
4:00 AM	5:00 AM	24	101	125
5:00 AM	6:00 AM	41	120	161
6:00 AM	7:00 AM	90	196	286
7:00 AM	8:00 AM	152	132	284
8:00 AM	9:00 AM	113	88	201
9:00 AM	10:00 AM	79	59	138
10:00 AM	11:00 AM	84	68	152
11:00 AM	12:00 PM	79	54	133
12:00 PM	1:00 PM	81	58	139
1:00 PM	2:00 PM	85	70	155
2:00 PM	3:00 PM	94	63	157
3:00 PM	4:00 PM	128	67	195
4:00 PM	5:00 PM	239	77	316
5:00 PM	6:00 PM	252	77	329
6:00 PM	7:00 PM	356	93	449
7:00 PM	8:00 PM	273	68	341
8:00 PM	9:00 PM	181	56	237
9:00 PM	10:00 PM	103	37	140
10:00 PM	11:00 PM	82	22	104
11:00 PM	12:00 AM	62	14	76
AVERAGE WEEKDAY DAILY TRAFFIC		**2692**	**1536**	**4228**
	AADT	**2535**	**1446**	**3981**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT CLASSIFICATION DATA SUMMARY

ROADWAY: NYS ROUTE 9D
SEGMENT: FROM MAIN STREET TO RTS I-84 AND 52 UNDER
LOCATION: 55' S OF VAN NESS RD
START DATE OF COUNT: Monday, May 6, 2019
NYSDOT COUNT STATION: 820021
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
FACTOR GROUP: 30

VEHICLE CLASS	DIRECTIONAL VOLUMES		TOTAL VEHICLES	TOTAL AXLES
	NORTHBOUND	SOUTHBOUND		
F1	54	48	102	204
F2	10789	10027	20816	41632
F3	1279	1569	2848	5696
F4	94	93	187	468
F5	223	260	483	966
F6	42	37	79	237
F7	8	9	17	68
F8	17	17	34	119
F9	21	19	40	200
F10	3	11	14	84
F11	0	0	0	0
F12	0	0	0	0
F13	0	2	2	18
AVERAGE WEEKDAY TOTAL	**12530**	**12092**	**24622**	**49691**

	NORTHBOUND	SOUTHBOUND	TOTAL
% TRUCKS & BUSES (F3 - F13)	13%	17%	15%
% HEAVY VEHICLES (F4 - F13)	3%	4%	3%
% F3 - F7	3%	3%	3%
% F8 - F13	0%	0%	0%
% F1	0%	0%	0%
% F2	86%	83%	85%
% F3	10%	13%	12%
% F4	1%	1%	1%
% F5 - F7	2%	3%	2%

VEHICLE CLASSIFICATION CODES:

- **F1** MOTORCYCLES
- **F2** AUTOS (INCLUDING THOSE HAULING TRAILERS)
- **F3** 2 AXLE, 4-TIRE PICKUPS, VANS, MOTORHOMES (INCLUDING THOSE HAULING TRAILERS)
- **F4** BUSES
- **F5** 2 AXLE, 6-TIRE SINGLE UNIT TRUCKS
- **F6** 3 AXLE SINGLE UNIT TRUCKS
- **F7** 4 OR MORE AXLE SINGLE UNIT TRUCKS
- **F8** 4 OR LESS AXLE VEHICLES, ONE UNIT IS A TRUCK
- **F9** 5 AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F10** 6 OR MORE AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F11** 5 OR LESS AXLE MULTI-UNIT TRUCKS
- **F12** 6 AXLE MULTI UNIT TRUCKS
- **F13** 7 OR MORE AXLE MULTI-UNIT TRUCKS

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT SPEED DATA SUMMARY

ROADWAY: NYS ROUTE 9D
SEGMENT: FROM MAIN STREET TO RTS I-84 AND 52 UNDER
LOCATION: 55' S OF VAN NESS RD
START DATE OF COUNT: Monday, May 6, 2019
NYSDOT COUNT STATION: 820021
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
POSTED SPEED LIMIT: 30
FACTOR GROUP: 30

SPEEDS (MPH)	DIRECTIONAL VOLUMES		TOTAL VOLUME
	NORTHBOUND	SOUTHBOUND	
0 - 20.0	985	230	1215
20.1 - 25.0	551	455	1006
25.1 - 30.0	1100	1690	2790
30.1 - 35.0	3426	4619	8045
35.1 - 40.0	4343	3865	8208
40.1 - 45.0	1716	1102	2818
45.1 - 50.0	344	166	510
50.1 - 55.0	73	16	89
55.1 - 60.0	14	2	16
60.1 - 65.0	1	0	1
65.1 - 70.0	1	0	1
70.1 - 75.0	1	0	1
75.1 - 80.0	0	0	0
80.1+	0	0	0
UNCLASSIFIED	0	0	0
AVERAGE SPEED (MPH)	**31**	**32**	**32**
50TH PERCENTILE SPEED (MPH)	**35**	**34**	**35**
85TH PERCENTILE SPEED (MPH)	**41**	**39**	**40**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

Colliers Engineering & Design

NYSDOT VOLUME DATA SUMMARY

ROADWAY: NYS ROUTE 9D
SEGMENT: FROM MAIN STREET TO RTS I-84 AND 52 UNDER
LOCATION: 55' S OF VAN NESS RD
START DATE OF COUNT: Monday, May 6, 2019
NYSDOT COUNT STATION: 820021
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
FACTOR GROUP: 30
SEASONAL FACTOR: 1.089

TIME PERIOD		DIRECTIONAL VOLUMES		TOTAL VOLUME
START	FINISH	NORTHBOUND	SOUTHBOUND	
12:00 AM	1:00 AM	100	78	178
1:00 AM	2:00 AM	46	42	88
2:00 AM	3:00 AM	33	30	63
3:00 AM	4:00 AM	28	38	66
4:00 AM	5:00 AM	87	254	341
5:00 AM	6:00 AM	221	426	647
6:00 AM	7:00 AM	482	839	1321
7:00 AM	8:00 AM	798	930	1728
8:00 AM	9:00 AM	816	781	1597
9:00 AM	10:00 AM	599	599	1198
10:00 AM	11:00 AM	562	546	1108
11:00 AM	12:00 PM	536	535	1071
12:00 PM	1:00 PM	625	605	1230
1:00 PM	2:00 PM	643	644	1287
2:00 PM	3:00 PM	741	686	1427
3:00 PM	4:00 PM	1018	746	1764
4:00 PM	5:00 PM	1021	852	1873
5:00 PM	6:00 PM	996	896	1892
6:00 PM	7:00 PM	995	801	1796
7:00 PM	8:00 PM	745	600	1345
8:00 PM	9:00 PM	588	465	1053
9:00 PM	10:00 PM	383	380	763
10:00 PM	11:00 PM	315	235	550
11:00 PM	12:00 AM	180	150	330
AVERAGE WEEKDAY DAILY TRAFFIC		**12558**	**12158**	**24716**
	AADT	**11532**	**11164**	**22696**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

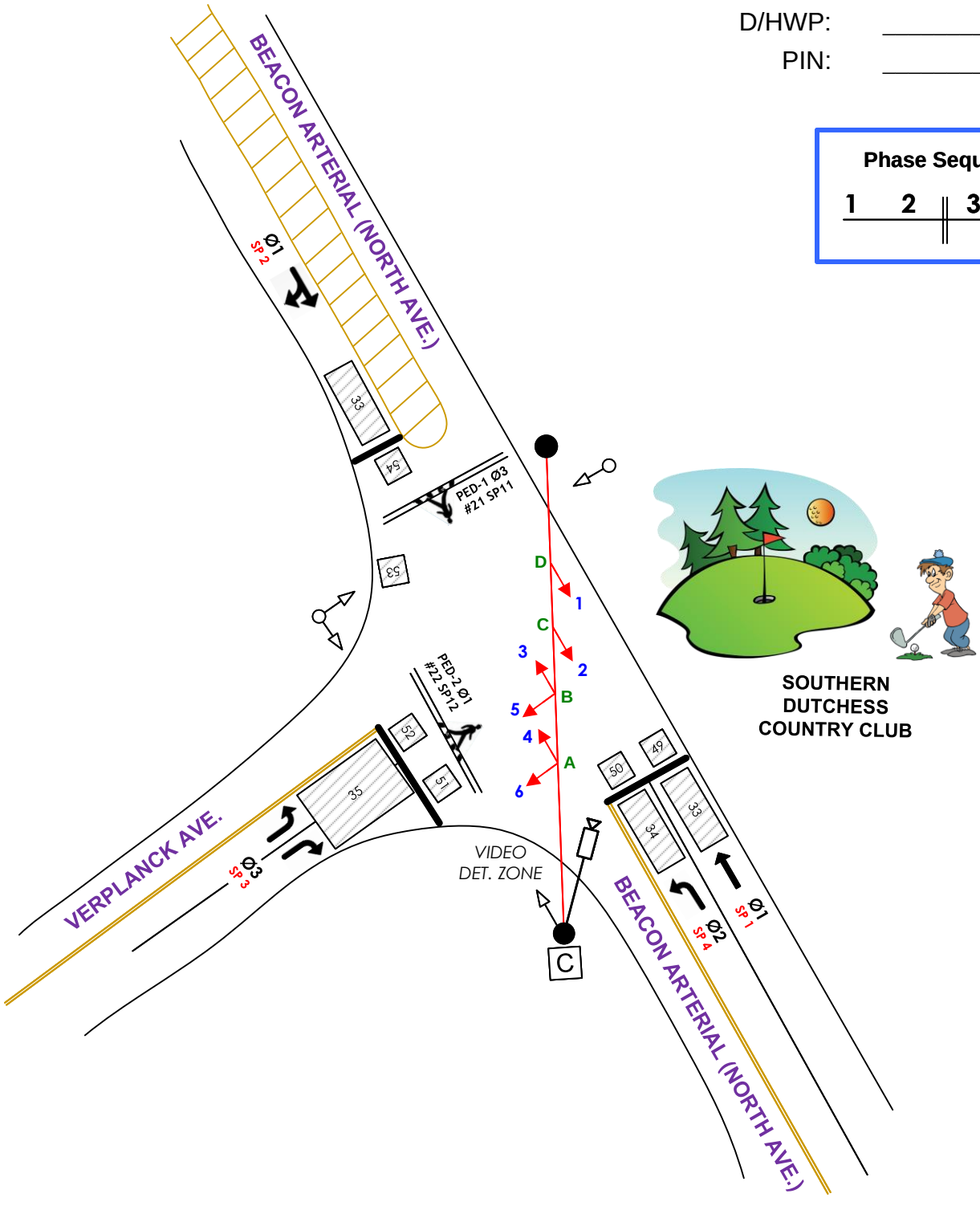
Appendix E | NYSDOT Traffic Signal Timing Plans

D-24A
Signal #

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
in the City of BEACON

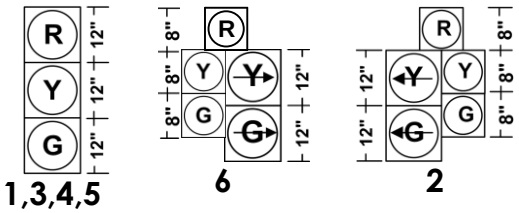
Signal: **D-24A**
File: 13.01-BEACON ART.
D/HWP: _____
PIN: _____

Phase Sequence
1 2 3



SOUTHERN
DUTCHESS
COUNTRY CLUB

TABLE OF FACES



NORTH

Printed: 10/13/2022

677

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	3	15	3			15		3
Gap, Ext	2	3	2			3		2
Max 1	30	45	30			45		30
Max 2								
Yel Clearance	4	4	4	3.5	3.5	4	3.5	4
Red Clearance	2	2	2	1.5	1.5	2	1.5	2
Walk		7	7					7
Ped Clearance		21	13					13
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable	ON	ON	ON			ON		ON
Min Recall		ON				ON		
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		ON	ON			ON		ON
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay			10					

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	115	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	25	50	40	0	0	75	0	40
		NON	NON	NON	NON	NON	NON	NON	NON		2	NON	Max	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

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Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Red	ON
2	1	Green	ON
3	1	Red	ON
4	1	Red	OFF
5	2	Red	OFF
6	2	Green	ON
7	2	Red	OFF
8	2	Red	ON

Coord Modes [2.1]

Test OpMode	254
Correction	SHRT/LNG
Maximum	MAX INH
Force-Off	FIXED
Closed Loop	ON
Stop-in-Walk	ON
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH_OVLP
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	ON
Start Flash(s)	0
Start AllRed(s)	0
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock: OFF | Overlap Lock Inhibit: OFF | Parent Ph Clearance: ON | Extra Included Ph: OFF

1	Included Ø	1	3							Type	NORMAL	9	Included Ø									Type	NORMAL
	Modifier Ø	3								Grn			Modifier Ø									Grn	
	Conflict Ø	3								Yel	4		Conflict Ø									Yel	3.5
A	Conflict Olap									Red	2	I	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	
2	Included Ø									Type	NORMAL	10	Included Ø									Type	NORMAL
	Modifier Ø									Grn			Modifier Ø									Grn	
	Conflict Ø									Yel	3.5		Conflict Ø									Yel	3.5
B	Conflict Olap									Red	1.5	J	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	
3	Included Ø									Type	NORMAL	11	Included Ø									Type	NORMAL
	Modifier Ø									Grn			Modifier Ø									Grn	
	Conflict Ø									Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap									Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	
4	Included Ø									Type	NORMAL	12	Included Ø									Type	NORMAL
	Modifier Ø									Grn			Modifier Ø									Grn	
	Conflict Ø									Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap									Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	
5	Included Ø									Type	NORMAL	13	Included Ø									Type	NORMAL
	Modifier Ø									Grn			Modifier Ø									Grn	
	Conf o0l									Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap									Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	
6	Included Ø									Type	NORMAL	14	Included Ø									Type	NORMAL
	Modifier Ø									Grn			Modifier Ø									Grn	
	Conflict Ø									Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap									Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	
7	Included Ø									Type	NORMAL	15	Included Ø									Type	NORMAL
	Modifier Ø									Grn			Modifier Ø									Grn	
	Conflict Ø									Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap									Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	
8	Included Ø									Type	NORMAL	16	Included Ø									Type	NORMAL
	Modifier Ø									Grn			Modifier Ø									Grn	
	Conflict Ø									Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap									Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped									LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3			6			1	2	3													
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	PED	OLP	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	DRK	YEL	Red	Red	Red	YEL	DRK	DRK	DRK	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22		3	8				EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	1	6	1				45	50	15
2							45	50	2
3	3		3				45	50	15
4	3		3				45	50	15
5							45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11	1	6	2				45	50	15
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29	1		15				45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35	6						45	50	
36							45	50	
37							45	50	
38							45	50	
39	2						45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33					ON	ON		ON
34					ON	ON		ON
35					ON	ON		ON
36					ON	ON		ON
37					ON	ON		ON
38					ON	ON		ON
39					ON	ON		ON
40					ON	ON		ON
41					ON	ON		ON
42					ON	ON		ON
43					ON	ON		ON
44					ON	ON		ON
45					ON	ON		ON
46					ON	ON		ON
47					ON	ON		ON
48					ON	ON		ON
49					ON	ON		ON
50					ON	ON		ON
51					ON	ON		ON
52					ON	ON		ON
53					ON	ON		ON
54					ON	ON		ON
55					ON	ON		ON
56					ON	ON		ON
57					ON	ON		ON
58					ON	ON		ON
59					ON	ON		ON
60					ON	ON		ON
61					ON	ON		ON
62					ON	ON		ON
63					ON	ON		ON
64					ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	1
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1	3		15	
2	2		15	
3			15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults	ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

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Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases				Track Overlaps											
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh	Override Higher	Flsh Dwell	Link
1	ON	ON	ON	OFF	
2	ON	ON	ON	OFF	
3	ON	ON	ON	OFF	
4	ON	ON	ON	OFF	
5	ON	ON	ON	OFF	
6	ON	ON	ON	OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3]	Month of Year												Day of Week							Date																											Day	Link
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Plan	To
1																																																	1	
2																																																		1	
3																																																	1	
4																																																	1	
5																																																	1	
6																																																	1	
7																																																	1	
8																																																	1	
9																																																	1	
10																																																	1	
11																																																	1	
12																																																	1	
13																																																	1	
14																																																	1	
15																																																	1	
16																																																	1	
17																																																	1	
18																																																	1	
19																																																	1	
20																																																	1	
21																																																	1	
22																																																	1	
23																																																	1	
24																																																	1	

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Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	Overlap Off 1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door		
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3		
8	External Alarm # 4		
9	Closed Loop Disabled	ON	
10	External Alarm # 5		
11	External Alarm # 6		
12	Manual Control Enable	ON	ON
13	Coord Free Input		
14	Local Flash Input	ON	ON
15	MMU Flash		
16	CMU Flash		
17	Cycle Fault	ON	
18	Cycle Failure	ON	
19	Coordination Fault	ON	
20	Controller Fault	ON	ON
21	Detector SDLC Failure		
22	MMU SDLC Failure		
23	Critical SDLC Failure		
24	Reserved		
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure		
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	
29	Ped Detector Fault	ON	
30	Coord Diagnostic Fault		
41	TempAlert Probe Ch. A		
42	TempAlert Probe Ch. B		
47	Coord Active		
48	Preempt Active	ON	
49	Preempt 1 Input	ON	
50	Preempt 2 Input	ON	
51	Preempt 3 Input	ON	
52	Preempt 4 Input	ON	
53	Preempt 5 Input	ON	
54	Preempt 6 Input	ON	
55	Preempt 7 Input	ON	
56	Preempt 8 Input	ON	
57	Preempt 9 Input	ON	
58	Preempt 10 Input	ON	
61	In Transition	ON	
81	FIO Status Alarm		

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø			
1					
2					
3					
4					
5					
6					
7					
8					

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø			
1					
2					
3					
4					
5					
6					
7					
8					

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	189	Unused
I1-3	3	Veh Call 3
I1-4	4	Veh Call 4
I1-5	189	Unused
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	129	Ped Call 1
I2-2	130	Ped Call 2
I2-3	11	Veh Call 11
I2-4	189	Unused
I2-5	189	Unused
I2-6	189	Unused
I2-7	189	Unused
I2-8	189	Unused
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	189	Unused
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	39	Ch15 Yellow
O5-6	63	Ch15 Green
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	40	Ch16 Yellow
O7-2	16	Ch16 Red
O7-3	64	Ch16 Green
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	15	Ch15 Red

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None

22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None

43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	2924
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	0	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	0	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	0	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	0	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	SP8	None	0
ASYNC4	SP4	None	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	SP3S	SYNC4	OFF

2070 Port Binding Functions [6.6]

Function	Channel	Function	Channel
TS2/CVN	ASYNC3	SYSUp	ASYNC2
CMU/MN	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

D-24A
Signal #

MODEL 2070 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

Signal: **D-24A**
File: 13.01-BEACON ART.
D/HWP:
PIN:

TABLE OF SWITCH PACKS

Date: 4/25/2022

SWITCH PACK	FUNCTION	INDICATIONS	FACE	TERMINAL	WIRE COLOR CODE	FACE	TERMINAL	WIRE COLOR CODE
1	Ø1	Red	1	SP 1 R	14/5C-D-R	2	SP 1 R	14/10C-C-R
		Yellow		SP 1 Y	14/5C-D-O		SP 1 Y	14/10C-C-O
		Green		SP 1 G	14/5C-D-G		SP 1 G	14/10C-C-G
		Ground Wire		Grnd Bus	14/5C-D-W		Grnd Bus	14/10C-C-W
2	Ø1	Red	3	SP 2 R	14/10C-B-R	4	SP 2 R	14/15C-A-R
		Yellow		SP 2 Y	14/10C-B-O		SP 2 Y	14/15C-A-O
		Green		SP 2 G	14/10C-B-G		SP 2 G	14/15C-A-G
		Ground Wire		Grnd Bus	14/10C-B-W		Grnd Bus	14/15C-A-W
3	Ø3	Red	5	SP 3 R	14/10C-B-R/B	6	SP 3 R	14/15C-A-R/B
		Yellow		SP 3 Y	14/10C-B-O/B		SP 3 Y	14/15C-A-O/B
		Green		SP 3 G	14/10C-B-G/B		SP 3 G	14/15C-A-G/B
		Ground Wire		Grnd Bus	14/10C-B-W/B		Grnd Bus	14/15C-A-W/B
4.	Ø2	- - - - -	2	SP 4 R	- - - - - -		SP 4 R	
		←		SP 4 Y	14/10C-C-O/B		SP 4 Y	
		←		SP 4 G	14/10C-C-G/B		SP 4 G	
		Ground Wire		Grnd Bus	14/10C-C-W/B		Grnd Bus	
5.	Ø3	- - - - -	6	SP 5 R	- - - - - -		SP 5 R	
		→		SP 5 Y	14/15C-A-BL/W		SP 5 Y	
		→		SP 5 G	14/15C-A-G/W		SP 5 G	
		Ground Wire		Grnd Bus	14/15C-A-B/W		Grnd Bus	
6.				SP 6 R			SP 6 R	
				SP 6 Y			SP 6 Y	
				SP 6 G			SP 6 G	
		Ground Wire		Grnd Bus			Grnd Bus	
7.				SP 7 R			SP 7 R	
				SP 7 Y			SP 7 Y	
				SP 7 G			SP 7 G	
		Ground Wire		Grnd Bus			Grnd Bus	
8				SP 8 R			SP 8 R	
				SP 8 Y			SP 8 Y	
				SP 8 G			SP 8 G	
		Ground Wire		Grnd Bus			Grnd Bus	
9				SP 9 R			SP 9 R	
				SP 9 Y			SP 9 Y	
				SP 9 G			SP 9 G	
		Ground Wire		Grnd Bus			Grnd Bus	
10				SP 10 R			SP 10 R	
				SP 10 Y			SP 10 Y	
				SP 10 G			SP 10 G	
		Ground Wire		Grnd Bus			Grnd Bus	
11.	PED-1 Ø3		21	SP 11 R	14/5C-1P-R		SP 11 R	
				SP 11 Y	- - - - - -		SP 11 Y	
				SP 11 G	14/5C-1P-G		SP 11 G	
		Ground Wire		Grnd Bus	14/5C-1P-W		Grnd Bus	
12.	PED-2 Ø1		22	SP 12 R	14/5C-2P-R		SP 12 R	
				SP 12 Y	- - - - - -		SP 12 Y	
				SP 12 G	14/5C-2P-G		SP 12 G	
		Ground Wire		Grnd Bus	14/5C-2P-W		Grnd Bus	
13				SP 13 R			SP 13 R	
				SP 13 Y			SP 13 Y	
				SP 13 G			SP 13 G	
		Ground Wire		Grnd Bus			Grnd Bus	
14.				SP 14 R			SP 14 R	
				SP 14 Y			SP 14 Y	
				SP 14 G			SP 14 G	
		Ground Wire		Grnd Bus			Grnd Bus	
15				SP 15 R			SP 15 R	
				SP 15 Y			SP 15 Y	
				SP 15 G			SP 15 G	
		Ground Wire		Grnd Bus			Grnd Bus	
16				SP 16 R			SP 16 R	
				SP 16 Y			SP 16 Y	
				SP 16 G			SP 16 G	
		Ground Wire		Grnd Bus			Grnd Bus	

D-24A
Signal #

MODEL 2070 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

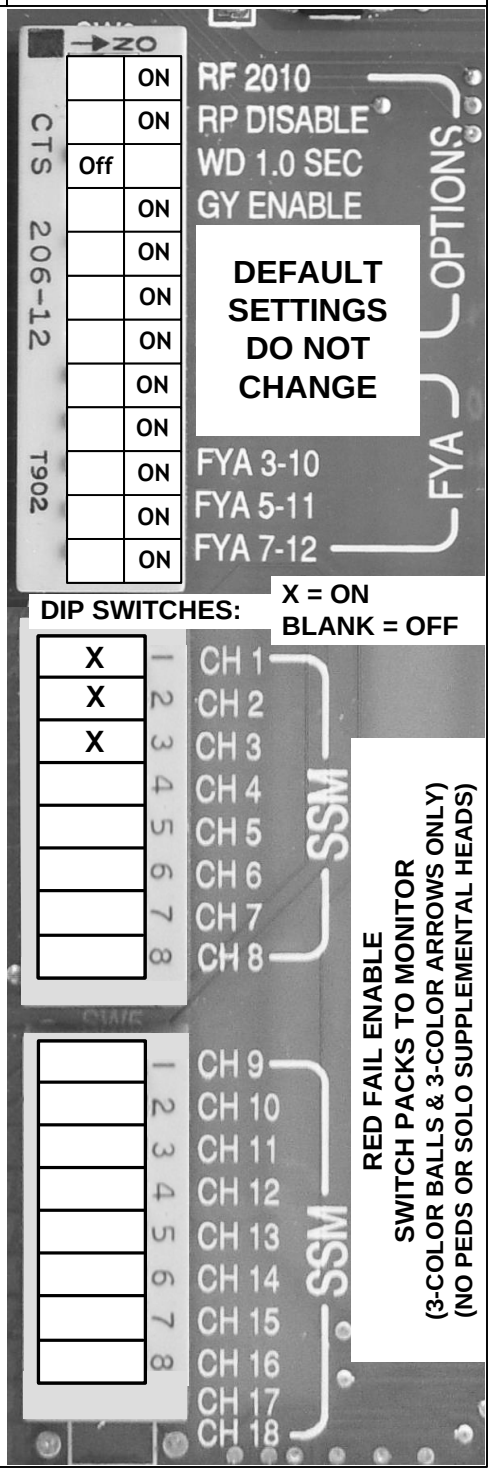
Signal: **D-24A**
File: 13.01-BEACON ART.
D/HWP:
PIN:
Date: 4/25/2022

TRAFFIC SIGNAL MONITOR PROGRAMMING

CONFLICT MONITOR DIODES TO BE CUT (SWITCH PACKS TO RUN TOGETHER)		
1-2	3-5	
1-4	3-11	
2-4	5-11	
1-12		
2-12		

YELLOW DISABLE: WIRE JUMPERS TO BE INSTALLED FOR PEDS	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	X
12	X
13	
14	
15	
16	

210NYR MONITOR BOARD
(SWITCH PACKS TO MONITOR)



CURRENT MONITOR BOARD (IF USED)

CURRENT MONITOR DIODES TO BE CUT (SWITCH PACKS TO *NOT* MONITOR)
4-18

Notes:

D-24A
Signal #

MODEL 2070 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

Signal: **D-24A**
File: 13.01-BEACON ART.
D/HWP:
PIN:

Date: 4/25/2022

TABLE OF INPUT WIRING

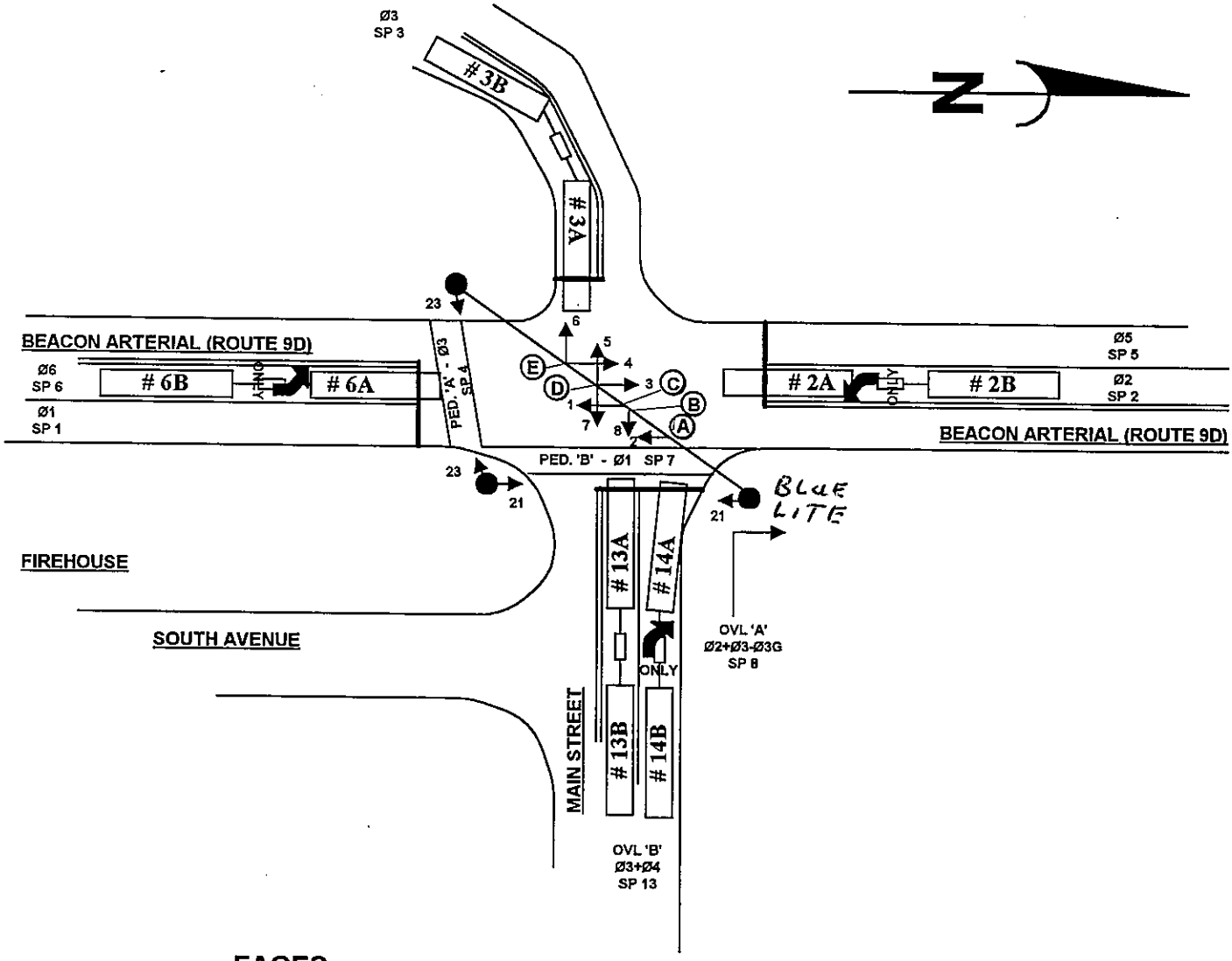
SDLC CHANNEL	FUNCTION	DET. ZONE NO.	DET. TYPE	DET. AN OVER	REMARKS
33	**Ø1**	33	GRIDSMART		PRESENCE
34	**Ø2**	34	GRIDSMART		PRESENCE
35	**Ø3**	35	GRIDSMART		PRESENCE
49	**Ø1 (NORTHBOUND-STRAIGHT)**	49	GRIDSMART		COUNT
50	**Ø2 (NORTHBOUND-LT)**	50	GRIDSMART		COUNT
51	**Ø3 (RT)**	51	GRIDSMART		COUNT
52	**Ø3 (LT)**	52	GRIDSMART		COUNT
53	**Ø1 (SOUTHBOUND-RT)**	53	GRIDSMART		COUNT
54	**Ø1 (SOUTHBOUND-STRAIGHT)**	54	GRIDSMART		COUNT
21	**PED-1 Ø3**	21	BUTTON		PEDESTRIAN
22	**PED-2 Ø1**	22	BUTTON		PEDESTRIAN

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
TRAFFIC CONTROL SIGNAL SPECIFICATIONS (CONTINUED)

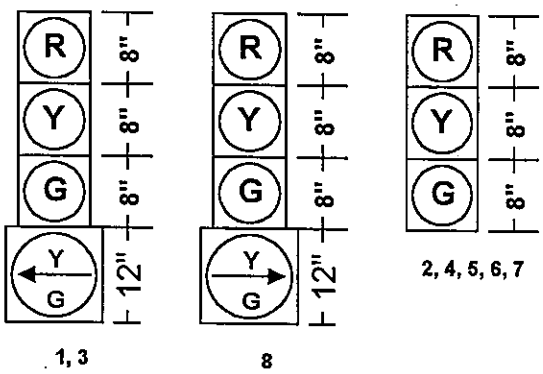
STUDY:
CONTRACT:
PIN:
FILE: 13.01.9D

D25A — SIGNAL NO(S)
DUTCHESS — COUNTY
DATE
PAGE _____ OF _____ PAGES

HWP # 8-95-1120



FACES



Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	10	3	5	5	10	3		
Gap, Ext		1	2			1		
Max 1	35	15	40	40	35	15		
Max 2								
Yel Clearance	4	4	4	4	4	4	3.5	3.5
Red Clearance	1	1	1	1	1	1	1.5	1.5
Walk	8		8					
Ped Clearance	15		15					
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								
Options [1.1.2]	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Enable	ON	ON	ON	ON	ON	ON		
Min Recall								
Max Recall	ON				ON			
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry	ON				ON			
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								
Options+ [1.1.3]	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay								

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	75	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	90	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1
Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	30	15	30	0	30	15	30	0	13	Coor	0	0	0	0	0	0	0	0
	1	Max	NON	NON	OMT	Max	NON	NON	OMT			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	30	20	40	0	30	20	40	0	14	Coor	0	0	0	0	0	0	0	0
	1	Max	NON	NON	OMT	Max	NON	NON	OMT			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

2925

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Green	ON
2	1	Red	ON
3	1	Red	ON
4	1	Red	ON
5	2	Green	ON
6	2	Red	ON
7	2	Red	OFF
8	2	Red	OFF

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	Float
Closed Loop	ON
Stop-in-Walk	ON
Auto Reset	ON
Expand Splt	OFF
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH OVER
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	User
Loc Flsh Start	ON
Start Flash(s)	0
Start AllRed(s)	0
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	0
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	OFF	Extra Included Ph	ON

	Included Ø	2	3	4					Type	NORMAL		Included Ø									Type	NORMAL
1	Modifier Ø	3							Grn		9	Modifier Ø									Grn	
	Conflict Ø								Yel	4		Conflict Ø									Yel	3.5
A	Conflict Olap								Red	1	I	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø	3	4						Type	NORMAL		Included Ø									Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø									Grn	
	Conflict Ø								Yel	4		Conflict Ø									Yel	3.5
B	Conflict Olap								Red	1	J	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	
	Included Ø								Type	NORMAL		Included Ø									Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø									Grn	
	Conflict Ø								Yel	3.5		Conflict Ø									Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap									Red	1.5
	Conflict Ped								LG			Conflict Ped									LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	3	5	6	1	1					2	3										
Channel Type	VEH	VEH	VEH	PED	VEH	VEH	PED	OLP	VEH	VEH	VEH	VEH	OLP	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	YEL	DRK	Red	DRK	YEL	DRK	DRK	Red	Red	Red	Red	Red	Red	DRK	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	SINGLE	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1							45	50	2
2	2		3				45	50	10
3	3		3				45	50	20
4							45	50	2
5							45	50	2
6	6		3				45	50	10
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13	3		3				45	50	20
14	3		5				45	50	20
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add AddInit	Red Lock	Yell Lock	occ	vol
33	ON	ON		ON				
34	ON	ON		ON				
35	ON	ON		ON				
36	ON	ON		ON				
37	ON	ON		ON				
38	ON	ON		ON				
39	ON	ON		ON				
40	ON	ON		ON				
41	ON	ON		ON				
42	ON	ON		ON				
43	ON	ON		ON				
44	ON	ON		ON				
45	ON	ON		ON				
46	ON	ON		ON				
47	ON	ON		ON				
48	ON	ON		ON				
49	ON	ON		ON				
50	ON	ON		ON				
51	ON	ON		ON				
52	ON	ON		ON				
53	ON	ON		ON				
54	ON	ON		ON				
55	ON	ON		ON				
56	ON	ON		ON				
57	ON	ON		ON				
58	ON	ON		ON				
59	ON	ON		ON				
60	ON	ON		ON				
61	ON	ON		ON				
62	ON	ON		ON				
63	ON	ON		ON				
64	ON	ON		ON				

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1	1		15	
2	3		15	
3			15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults	ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3	40			15	ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		40			4
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3	1		OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	None
Pre Invert Rail Input	OFF

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases	Track Overlaps
1		
2		
3		
4		
5		
6		

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #		
1	Phases	
	Overlap	
	Peds	
2	Phases	
	Overlap	
	Peds	
3	Phases	4
	Overlap	1 2
	Peds	
4	Phases	
	Overlap	
	Peds	
5	Phases	
	Overlap	
	Peds	
6	Phases	
	Overlap	
	Peds	

Exit Phases [3.2]

Pre #	Exit Phase
1	
2	
3	
4	
5	
6	

Preemption Options+ [3.6]

Pre #	Lock	Override Auto Flsh	Override Higher	Flsh Dwell	Link
1	ON	ON	ON	OFF	
2	ON	ON	ON	OFF	
3	ON	ON	ON	OFF	
4	ON	ON	ON	OFF	
5	ON	ON	ON	OFF	
6	ON	ON	ON	OFF	

Alt# 1 Times Table [1.1.6.1.2]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1.2]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1.3]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2.1]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 1 Veh Parameters [5.5.1.1]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Swiitch																
Delay																
Extend																
Queue																
No Activity																
Max Presence																
Erratic Count																
Fail Time																

Alt# 1 Veh Options [5.5.1.2]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Extend																
Queue																
Added Initial																
Red Lock																
Yellow Lock																
Occupancy																
Volume																

Alt# 1 Veh Parameters+ [5.5.1.3]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Occ-on-green																
Occ-on-yellow																
Occ-on-red																
Delay Phase 1																
Delay Phase 2																
Detector Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Source																

Alt# 1 Ped Parameters+ [5.5.1.4]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Det#								
Call								
No Activity								
Max Presence								
Erratic Count								

Alt# 2 Options Table [1.1.6.2.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 3 Options Table [1.1.6.2.3]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 4 Options Table [1.1.6.2.4]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 2 Veh Parameters [5.5.2.1]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Swiitch																
Delay																
Extend																
Queue																
No Activity																
Max Presence																
Erratic Count																
Fail Time																

Alt# 2 Veh Options [5.5.2.2]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Extend																
Queue																
Added Initial																
Red Lock																
Yellow Lock																
Occupancy																
Volume																

Alt# 2 Veh Parameters+ [5.5.2.3]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Occ-on-green																
Occ-on-yellow																
Occ-on-red																
Delay Phase 1																
Delay Phase 2																
Detector Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Source																

Alt# 2 Ped Parameters+ [5.5.2.4]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Det#								
Call								
No Activity								
Max Presence								
Erratic Count								

Annual Schedule [4.3]	Month of Year												Day of Week							Date																											Day Plan	Link To
1	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	1	
2	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON						ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	2	
3	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
4	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
5	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
6	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
7	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
8	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
9	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
10	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
11	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
12	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
13	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
14	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
15	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
16	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
17	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
18	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
19	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
20	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
21	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
22	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
23	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
24	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	

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Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	6	30	1	10	0	0	0
3	16	0	2	11	0	0	0
4	19	0	1	12	0	0	0
5	22	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	6	30	1	10	0	0	0
3	22	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	Overlap Off 1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

C1-USER IO Map [1.8.9.1 In]

I1-1	189	Unused
I1-2	2	Veh Call 2
I1-3	3	Veh Call 3
I1-4	189	Unused
I1-5	189	Unused
I1-6	6	Veh Call 6
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	13	Veh Call 13
I2-6	14	Veh Call 14
I2-7	189	Unused
I2-8	189	Unused
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	129	Ped Call 1
I3-6	130	Ped Call 2
I3-7	130	Ped Call 2
I3-8	200	Pre 3 In
I4-1	**189**	Unused
I4-2	**189**	Unused
I4-3	**189**	Unused
I4-4	**189**	Unused
I4-5	179	Door Open
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	137	PreemptActv
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	39	Ch15 Yellow
O5-6	63	Ch15 Green
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	40	Ch16 Yellow
O7-2	16	Ch16 Red
O7-3	64	Ch16 Green
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	15	Ch15 Red

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	IO1	Opn1	O2Fcn	Inv2	IO2	Opn2	O3Fcn	Inv3	IO3	Opn3	Dly	Sec
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0
I	0	=	-----	-	I	0	-----	-	I	0	-----	-	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD	22	None	43	None
2	SECURE	23	None	44	None
3	None	24	None	45	None
4	None	25	None	46	None
5	None	26	None	47	None
6	None	27	None	48	None
7	None	28	None	49	None
8	None	29	None	50	None
9	None	30	None	51	None
10	None	31	None	52	None
11	None	32	None	53	None
12	None	33	None	54	None
13	None	34	None	55	None
14	None	35	None	56	None
15	None	36	None	57	None
16	None	37	None	58	None
17	None	38	None	59	None
18	None	39	None	60	None
19	None	40	None	61	None
20	None	41	None	62	None
21	None	42	None	63	None
				64	None

Com Parameters [6.1]

Station ID	2925
Group ID	
Master ID	0
Backup Time	0

SysUp Modem [6.1]

Enable Modem	OFF
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	MODE 6
SP2	9600	MODE 6
SP3	19200	MODE 6
SP4	38400	MODE 6
SP5	1200	AUTO
SP6	1200	AUTO
SP7	1200	AUTO
SP8	1200	AUTO

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	0	0	0	0
Mask	0	0	0	0
Brdcst	0	0	0	0
GtWay	0	0	0	0
Port	0			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	0	0	0	0
Mask	0	0	0	0
Brdcst	0	0	0	0
GtWay	0	0	0	0
Port	0			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	OFF	0
ASYNC2	SP2	OFF	0
ASYNC3	SP3	OFF	0
ASYNC4	SP4	OFF	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

2070 Port Binding Functions [6.6]

Function	Channel	Function	Channel
TS2/CVM	None	SYSUp	ASYNC2
CMU/MMU	None	SYSDown	ASYNC1
Opticom	None	Shell	None
Loop Det.	None		
GPS	-		

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door		
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3		
8	External Alarm # 4		
9	Closed Loop Disabled	ON	ON
10	External Alarm # 5		
11	External Alarm # 6		
12	Manual Control Enable	ON	ON
13	Coord Free Input		
14	Local Flash Input	ON	ON
15	MMU Flash		
16	CMU Flash		
17	Cycle Fault	ON	ON
18	Cycle Failure	ON	ON
19	Coordination Fault	ON	ON
20	Controller Fault	ON	ON
21	Detector SDLC Failure		
22	MMU SDLC Failure		
23	Critical SDLC Failure		
24	Reserved		
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failur		
27	BIU Detector Failure	ON	ON
32	Queue detector alarm	ON	ON
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault		
41	TempAlert Probe Ch. A		
42	TempAlert Probe Ch. B		
47	Coord Active		
48	Preempt Active	ON	ON
49	Preempt 1 Input	ON	ON
50	Preempt 2 Input	ON	ON
51	Preempt 3 Input	ON	ON
52	Preempt 4 Input	ON	ON
53	Preempt 5 Input	ON	ON
54	Preempt 6 Input	ON	ON
55	Preempt 7 Input	ON	ON
56	Preempt 8 Input	ON	ON
57	Preempt 9 Input	ON	ON
58	Preempt 10 Input	ON	ON
61	In Transition	ON	ON
81	FIO Status Alarm		

Call Phases[1.1.5]

Ø	Ø	Phases Called By Ø			
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Coord, CIC Plans [2.3]

CIC	CoØ	Grow	1	2	3	4	5	6	7	8
1	OFF									
2	OFF									
3	OFF									
4	OFF									

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

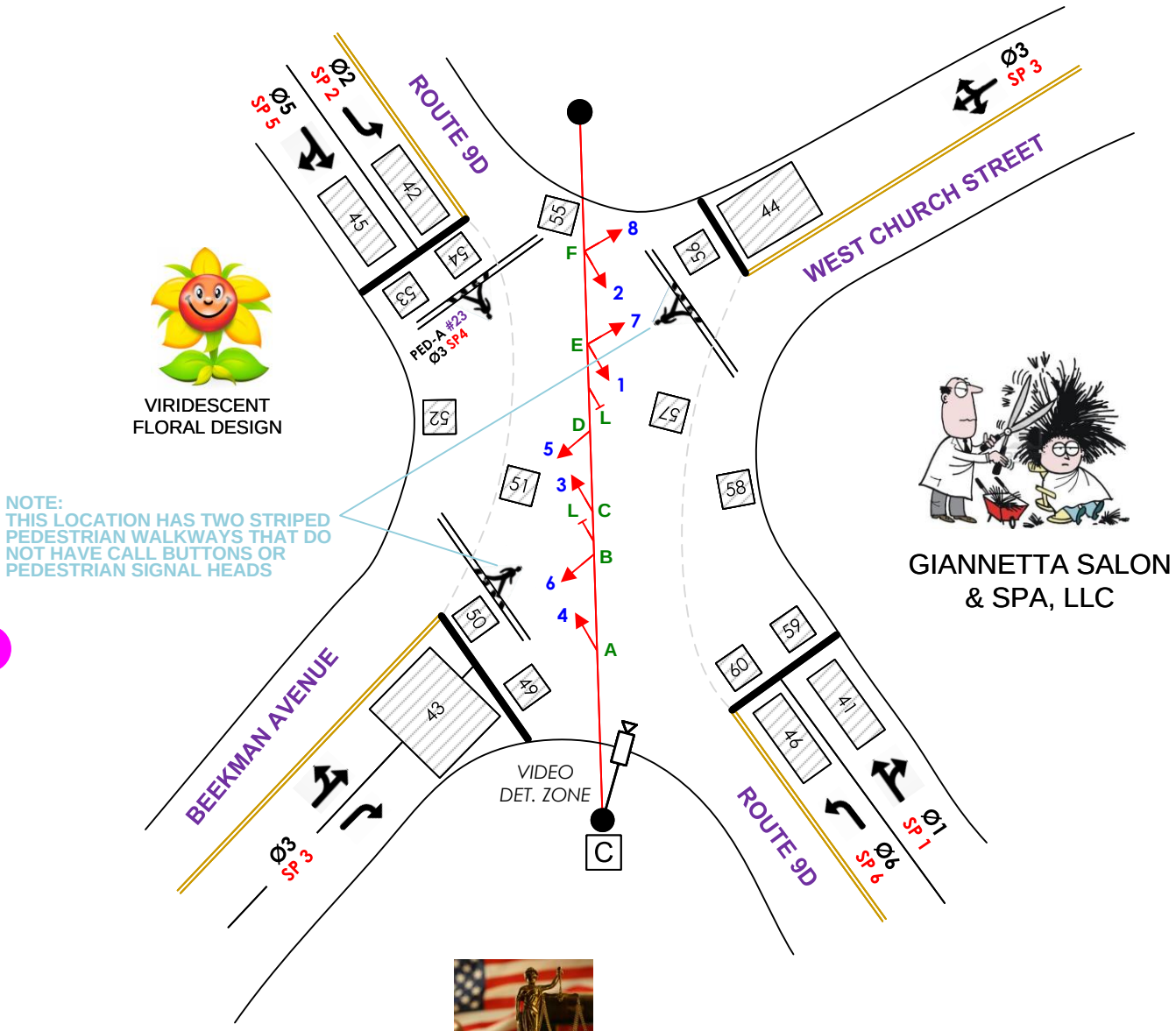
Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

D-26A
Signal #

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
in the City of ***BEACON***

Signal: **D-26A**
File: 13.01-9D
D/HWP: D256460
PIN: _____



VIRIDESCENT
FLORAL DESIGN

NOTE:
THIS LOCATION HAS TWO STRIPED PEDESTRIAN WALKWAYS THAT DO NOT HAVE CALL BUTTONS OR PEDESTRIAN SIGNAL HEADS

GIANNETTA SALON
& SPA, LLC

TABLE OF SIGNS

ONLY
L

Phase Sequence

1	2		3
5	6		

NORTH

2022
PLAN OF OPERATION

Printed: 2/2/2023

700

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	10	3	5		10	3		5
Gap, Ext	2	1	2		2	1		2
Max 1	35	15	40		35	15		40
Max 2								
Yel Clearance	4	4	4	3.5	4	4	3.5	4
Red Clearance	1	1	1	1.5	1	1	1.5	1
Walk			8					
Ped Clearance			15					
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable	ON	ON	ON		ON	ON		ON
Min Recall	ON				ON			
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry	ON				ON			
Enable Simul Gap	ON	ON	ON	ON	ON	ON	ON	ON
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay								

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	1	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	1	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3	0	0	3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4	0	0	4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5	0	0	5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6	0	0	6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7	0	0	7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8	0	0	8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9	0	0	9	1	21	115	0	21	1	33	0	0	0	1	45	0	0	0	1
10	0	0	10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11	0	0	11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12	0	0	12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	0	0	0	0	0	0	0	0	13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	0	0	0	0	0	0	0	0	14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
3	Coor	0	0	0	0	0	0	0	0	15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
4	Coor	0	0	0	0	0	0	0	0	16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
5	Coor	0	0	0	0	0	0	0	0	17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
6	Coor	0	0	0	0	0	0	0	0	18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
7	Coor	0	0	0	0	0	0	0	0	19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
8	Coor	0	0	0	0	0	0	0	0	20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
9	Coor	0	0	0	0	0	0	0	0	21	Coor	55	20	40	0	55	20	0	40
		NON	NON	NON	NON	NON	NON	NON	NON		5	Max	NON	NON	NON	Max	NON	NON	NON
10	Coor	0	0	0	0	0	0	0	0	22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
11	Coor	0	0	0	0	0	0	0	0	23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON
12	Coor	0	0	0	0	0	0	0	0	24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON			NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

2926

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	Green	ON
2	1	Red	ON
3	1	Red	ON
4	1	Red	OFF
5	2	Green	ON
6	2	Red	ON
7	2	Red	OFF
8	2	Red	ON

Coord Modes [2.1]

Test OpMode	254
Correction	SHRT/LNG
Maximum	MAX INH
Force-Off	FIXED
Closed Loop	ON
Stop-in-Walk	ON
Auto Reset	ON
Expand Splt	
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH_OVLP
Flash Yel	45
Flash Red	20

Unit Params [1.2.1]

Phase Mode	User
IO Mode	User
Loc Flsh Start	ON
Start Flash(s)	0
Start AllRed(s)	0
Yellow < 3"	OFF
Display Time	20
Red Revert	3
MCE Timeout	0
Feature Profile	
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
1	Modifier Ø								Grn		9	Modifier Ø								Grn	
	Conflict Ø								Yel	3.5		Conflict Ø								Yel	3.5
A	Conflict Olap								Red	1.5	I	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	
	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
2	Modifier Ø								Grn		10	Modifier Ø								Grn	
	Conflict Ø								Yel	3.5		Conflict Ø								Yel	3.5
B	Conflict Olap								Red	1.5	J	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	
	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
3	Modifier Ø								Grn		11	Modifier Ø								Grn	
	Conflict Ø								Yel	3.5		Conflict Ø								Yel	3.5
C	Conflict Olap								Red	1.5	K	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	
	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
4	Modifier Ø								Grn		12	Modifier Ø								Grn	
	Conflict Ø								Yel	3.5		Conflict Ø								Yel	3.5
D	Conflict Olap								Red	1.5	L	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	
	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
5	Modifier Ø								Grn		13	Modifier Ø								Grn	
	Conf o0l								Yel	3.5		Conflict Ø								Yel	3.5
E	Conflict Olap								Red	1.5	M	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	
	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
6	Modifier Ø								Grn		14	Modifier Ø								Grn	
	Conflict Ø								Yel	3.5		Conflict Ø								Yel	3.5
F	Conflict Olap								Red	1.5	N	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	
	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
7	Modifier Ø								Grn		15	Modifier Ø								Grn	
	Conflict Ø								Yel	3.5		Conflict Ø								Yel	3.5
G	Conflict Olap								Red	1.5	O	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	
	Included Ø								Type	NORMAL		Included Ø								Type	NORMAL
8	Modifier Ø								Grn		16	Modifier Ø								Grn	
	Conflict Ø								Yel	3.5		Conflict Ø								Yel	3.5
H	Conflict Olap								Red	1.5	P	Conflict Olap								Red	1.5
	Conflict Ped								LG			Conflict Ped								LG	

Channel Settings [1.8.1]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	3	5	6							3											
Channel Type	VEH	VEH	VEH	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	Red	YEL	Red	DRK	Red	YEL	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

.....Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22							EndGRN				
2	12	22							EndGRN				
3	12	22							EndGRN				
4	12	22							EndGRN				
5	12	22							EndGRN				
6	12	22							EndGRN				
7	12	22							EndGRN				
8	12	22							EndGRN				
9	12	22							EndGRN				
10	12	22							EndGRN				
11	12	22							EndGRN				
12	12	22							EndGRN				
13	12	22							EndGRN				
14	12	22							EndGRN				
15	12	22							EndGRN				
16	12	22							EndGRN				
17	12	22							EndGRN				
18	12	22							EndGRN				
19	12	22							EndGRN				
20	12	22							EndGRN				
21	12	22							EndGRN				
22	12	22							EndGRN				
23	12	22							EndGRN				
24	12	22							EndGRN				
25									BegGRN				
26									BegGRN				
27									BegGRN				
28									BegGRN				
29									BegGRN				
30									BegGRN				
31									BegGRN				
32									BegGRN				
33									BegGRN				
34									BegGRN				
35									BegGRN				
36									BegGRN				
37									BegGRN				
38									BegGRN				
39									BegGRN				
40									BegGRN				
41									BegGRN				
42									BegGRN				
43									BegGRN				
44									BegGRN				
45									BegGRN				
46									BegGRN				
47									BegGRN				
48									BegGRN				

Channel Params[1.8.3]

C1 IO Mode	User	Single BIU Map	DEFAULT	Invert Rail Input	OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1							45	50	2
2							45	50	2
3							45	50	2
4							45	50	2
5							45	50	2
6							45	50	2
7							45	50	2
8							45	50	2
9							45	50	2
10							45	50	2
11							45	50	2
12							45	50	2
13							45	50	2
14							45	50	2
15							45	50	2
16							45	50	2
17							45	50	2
18							45	50	2
19							45	50	
20							45	50	
21							45	50	
22							45	50	
23							45	50	
24							45	50	
25							45	50	
26							45	50	
27							45	50	
28							45	50	
29							45	50	
30							45	50	
31							45	50	
32							45	50	

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41	1						45	50	25
42	2	5	2				45	50	10
43	3		3				45	50	25
44	3		3				45	50	25
45	5						45	50	25
46	6	1	2				45	50	10
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	ON	ON		ON				
2	ON	ON		ON				
3	ON	ON		ON				
4	ON	ON		ON				
5	ON	ON		ON				
6	ON	ON		ON				
7	ON	ON		ON				
8	ON	ON		ON				
9	ON	ON		ON				
10	ON	ON		ON				
11	ON	ON		ON				
12	ON	ON		ON				
13	ON	ON		ON				
14	ON	ON		ON				
15	ON	ON		ON				
16	ON	ON		ON				
17	ON	ON		ON				
18	ON	ON		ON				
19	ON	ON		ON				
20	ON	ON		ON				
21	ON	ON		ON				
22	ON	ON		ON				
23	ON	ON		ON				
24	ON	ON		ON				
25	ON	ON		ON				
26	ON	ON		ON				
27	ON	ON		ON				
28	ON	ON		ON				
29	ON	ON		ON				
30	ON	ON		ON				
31	ON	ON		ON				
32	ON	ON		ON				

Vehicle Options 1-64 [5.2]

Det #	vol	occ	Yell Lock	Red Lock	Ext	Add Init	Que	Call
33	ON	ON			ON	ON		ON
34	ON	ON			ON	ON		ON
35	ON	ON			ON	ON		ON
36	ON	ON			ON	ON		ON
37	ON	ON			ON	ON		ON
38	ON	ON			ON	ON		ON
39	ON	ON			ON	ON		ON
40	ON	ON			ON	ON		ON
41	ON	ON			ON	ON		ON
42	ON	ON			ON	ON		ON
43	ON	ON			ON	ON		ON
44	ON	ON			ON	ON		ON
45	ON	ON			ON	ON		ON
46	ON	ON			ON	ON		ON
47	ON	ON			ON	ON		ON
48	ON	ON			ON	ON		ON
49	ON	ON			ON	ON		ON
50	ON	ON			ON	ON		ON
51	ON	ON			ON	ON		ON
52	ON	ON			ON	ON		ON
53	ON	ON			ON	ON		ON
54	ON	ON			ON	ON		ON
55	ON	ON			ON	ON		ON
56	ON	ON			ON	ON		ON
57	ON	ON			ON	ON		ON
58	ON	ON			ON	ON		ON
59	ON	ON			ON	ON		ON
60	ON	ON			ON	ON		ON
61	ON	ON			ON	ON		ON
62	ON	ON			ON	ON		ON
63	ON	ON			ON	ON		ON
64	ON	ON			ON	ON		ON

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1	3		15	
2			15	
3			15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults		ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	0
Vol/Occ Period Minutes	15

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Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	Dwell		
2	ON	RAIL	Dwell		
3	ON	EMERG	Dwell		
4	ON	EMERG	Dwell		
5	ON	EMERG	Dwell		
6	ON	EMERG	Dwell		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max
7	OFF		
8	OFF		
9	OFF		
10	OFF		

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	OFF
Pre Invert Rail Input	None

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases					Track Overlaps										
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption 1, Options+ [3.6]

Pre #	Lock	Override Auto Flsh	Override Higher	Flsh Dwell	Link
1	ON	ON	ON	OFF	
2	ON	ON	ON	OFF	
3	ON	ON	ON	OFF	
4	ON	ON	ON	OFF	
5	ON	ON	ON	OFF	
6	ON	ON	ON	OFF	

Alt# 1 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#.. ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	ON	ON	ON	ON	ON	ON	ON	ON
Soft Recall								
Dual Enrty								
Enabl SimGap	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Annual Schedule [4.3]	Month of Year												Day of Week							Date																													Day	Link
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Plan	To
1																																																		1	
2																																																			1	
3																																																		1	
4																																																		1	
5																																																		1	
6																																																		1	
7																																																		1	
8																																																		1	
9																																																		1	
10																																																		1	
11																																																		1	
12																																																		1	
13																																																		1	
14																																																		1	
15																																																		1	
16																																																		1	
17																																																		1	
18																																																		1	
19																																																		1	
20																																																		1	
21																																																		1	
22																																																		1	
23																																																		1	
24																																																		1	

Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

Pat#	ØOpt	ØTime	DetG	Call Inh	CIC	CNA1	Overlap Off 1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	ON	ON
2	Stop Timing	ON	ON
3	TS1 Cabinet Door		
4	Coordination Failure	ON	ON
5	External Alarm # 1	ON	ON
6	External Alarm # 2	ON	ON
7	External Alarm # 3		
8	External Alarm # 4		
9	Closed Loop Disabled	ON	ON
10	External Alarm # 5		
11	External Alarm # 6		
12	Manual Control Enable	ON	ON
13	Coord Free Input		
14	Local Flash Input	ON	ON
15	MMU Flash		
16	CMU Flash		
17	Cycle Fault	ON	ON
18	Cycle Failure	ON	ON
19	Coordination Fault	ON	ON
20	Controller Fault	ON	ON
21	Detector SDLC Failure		
22	MMU SDLC Failure		
23	Critical SDLC Failure		
24	Reserved		
25	EEPROM CRC Fault	ON	ON
26	Detector Diagnostic Failure		
27	BIU Detector Failure	ON	ON
28	Queue detector alarm	ON	ON
29	Ped Detector Fault	ON	ON
30	Coord Diagnostic Fault		
41	TempAlert Probe Ch. A		
42	TempAlert Probe Ch. B		
47	Coord Active		
48	Preempt Active	ON	ON
49	Preempt 1 Input	ON	ON
50	Preempt 2 Input	ON	ON
51	Preempt 3 Input	ON	ON
52	Preempt 4 Input	ON	ON
53	Preempt 5 Input	ON	ON
54	Preempt 6 Input	ON	ON
55	Preempt 7 Input	ON	ON
56	Preempt 8 Input	ON	ON
57	Preempt 9 Input	ON	ON
58	Preempt 10 Input	ON	ON
61	In Transition	ON	ON
81	FIO Status Alarm		

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1						1								
2						2								
3						3								
4						4								
5						5								
6						6								
7						7								
8						8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	Alarm
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	Alarm		
Enable Run Timer	ON		

C1-USER IO Map [1.8.9.1 In]

I1-1	189	Unused
I1-2	189	Unused
I1-3	189	Unused
I1-4	189	Unused
I1-5	189	Unused
I1-6	189	Unused
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	189	Unused
I2-5	189	Unused
I2-6	189	Unused
I2-7	189	Unused
I2-8	189	Unused
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	129	Ped Call 1
I3-8	189	Unused
I4-1	189	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	39	Ch15 Yellow
O5-6	63	Ch15 Green
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	40	Ch16 Yellow
O7-2	16	Ch16 Red
O7-3	64	Ch16 Green
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	15	Ch15 Red

C11S-USER IO Map [1.8.9.1 In]

I4-1		
I4-2		
I4-3		
I4-4		
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Op1	Result		O1Fcn	Inv1	Src1	IO1	Fun1	O2Fcn	Inv2	Src2	IO2	Fun2	O3Fcn	Inv3	Src3	IO3	Fun3	Dly	Sec
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0
I	0	=	----	-	0	I	0	----	-	0	I	0	----	-	0	I	0	DLY	0

Security Access Levels [8.2]

1	SWLOAD
2	SECURE
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	None
19	None
20	None
21	None
22	None
23	None
24	None
25	None
26	None
27	None
28	None
29	None
30	None
31	None
32	None
33	None
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	None
42	None
43	None
44	None
45	None
46	None
47	None
48	None
49	None
50	None
51	None
52	None
53	None
54	None
55	None
56	None
57	None
58	None
59	None
60	None
61	None
62	None
63	None
64	None

Com Parameters [6.1]

Station ID	2926
Group ID	0
Master ID	0
Backup Time	900

SysUp Modem [6.1]

Enable Modem	None
Idle Time	0
Dial Time	0
Tel:	
Alt:	

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	6
SP2	9600	6
SP3	19200	6
SP4	38400	6
SP5	1200	0
SP6	1200	0
SP7	1200	0
SP8	1200	0

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	192	168	0	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	0	1
Port	###			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	192	168	0	100
Mask	255	255	255	0
Brdcst	0	0	0	0
GtWay	192	168	0	1
Port	5001			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	None	0
ASYNC2	SP2	None	0
ASYNC3	OFF	None	0
ASYNC4	SP4	None	0
SYNC1	SP5	SYNC3	OFF
SYNC2	SP3	SYNC4	OFF

2070 Port Binding Functions [6.6]

Function	Channel	Function	Channel
TS2/CVN	ASYNC3	SYSUp	ASYNC2
CMU/MN	None	SYSDow	ASYNC1
Opticom	None	Shell	None
Loop De	None		
GPS	None		

D-26A
Signal #

MODEL 2070 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

Signal: **D-26A**
File: 13.01-9D
D/HWP: D256460
PIN:

TABLE OF SWITCH PACKS

Date: 2/2/2023

SWITCH PACK	FUNCTION	INDICATIONS	FACE	TERMINAL	WIRE COLOR CODE	FACE	TERMINAL	WIRE COLOR CODE
1	Ø1	Red	1	SP 1 R	14/15C-E-R	2	SP 1 R	14/10C-F-R
		Yellow		SP 1 Y	14/15C-E-O		SP 1 Y	14/10C-F-O
		Green		SP 1 G	14/15C-E-G		SP 1 G	14/10C-F-G
		Ground Wire		Grnd Bus	14/15C-E-W		Grnd Bus	14//10C-F-W
2	Ø2	- - - - -	3	SP 2 R	- - - - - -		SP 2 R	
		⟵		SP 2 Y	14/10C-C-O/B		SP 2 Y	
		←		SP 2 G	14/10C-C-G/B		SP 2 G	
		Ground Wire		Grnd Bus	14/10C-C-W/B		Grnd Bus	
3	Ø3	Red	7	SP 3 R	14/15C-E-R/W	8	SP 3 R	14/10C-F-R/B
		Yellow		SP 3 Y	14/15C-E-BL/W		SP 3 Y	14/10C-F-O/B
		Green		SP 3 G	14/15C-E-G/W		SP 3 G	14/10C-F-G/B
		Ground Wire		Grnd Bus	14/15C-E-B/W		Grnd Bus	14/10C-F-W/B
4.	PED-1 Ø3	HAND	23	SP 4 R	14/5C-1P-R		SP 4 R	
		- - - - - - -		SP 4 Y	- - - - - -		SP 4 Y	
		MAN		SP 4 G	14/5C-1P-G		SP 4 G	
		Ground Wire		Grnd Bus	14/5C-1P-W		Grnd Bus	
5.	Ø5	Red	3	SP 5 R	14/10C-C-R	4	SP 5 R	14/5C-A-R
		Yellow		SP 5 Y	14/10C-C-O		SP 5 Y	14/5C-A-O
		Green		SP 5 G	14/10C-C-G		SP 5 G	14/5C-A-G
		Ground Wire		Grnd Bus	14/10C-C-W		Grnd Bus	14/5C-A-W
6.	Ø6	- - - - -	1	SP 6 R	- - - - - -		SP 6 R	
		⟵		SP 6 Y	14/15C-E-O/B		SP 6 Y	
		←		SP 6 G	14/15C-E-G/B		SP 6 G	
		Ground Wire		Grnd Bus	14/15C-E-W/B		Grnd Bus	
7.				SP 7 R			SP 7 R	
				SP 7 Y			SP 7 Y	
				SP 7 G			SP 7 G	
		Ground Wire		Grnd Bus			Grnd Bus	
8				SP 8 R			SP 8 R	
				SP 8 Y			SP 8 Y	
				SP 8 G			SP 8 G	
		Ground Wire		Grnd Bus			Grnd Bus	
9				SP 9 R			SP 9 R	
				SP 9 Y			SP 9 Y	
				SP 9 G			SP 9 G	
		Ground Wire		Grnd Bus			Grnd Bus	
10				SP 10 R			SP 10 R	
				SP 10 Y			SP 10 Y	
				SP 10 G			SP 10 G	
		Ground Wire		Grnd Bus			Grnd Bus	
11.				SP 11 R			SP 11 R	
				SP 11 Y			SP 11 Y	
				SP 11 G			SP 11 G	
		Ground Wire		Grnd Bus			Grnd Bus	
12.				SP 12 R			SP 12 R	
				SP 12 Y			SP 12 Y	
				SP 12 G			SP 12 G	
		Ground Wire		Grnd Bus			Grnd Bus	
13	Ø3	Red	5	SP 13 R	14/5C-D-R	6	SP 13 R	14/5C-B-R
		Yellow		SP 13 Y	14/5C-D-O		SP 13 Y	14/5C-B-O
		Green		SP 13 G	14/5C-D-G		SP 13 G	14/5C-B-G
		Ground Wire		Grnd Bus	14/5C-D-W		Grnd Bus	14/5C-B-W
14.				SP 14 R			SP 14 R	
				SP 14 Y			SP 14 Y	
				SP 14 G			SP 14 G	
		Ground Wire		Grnd Bus			Grnd Bus	
15				SP 15 R			SP 15 R	
				SP 15 Y			SP 15 Y	
				SP 15 G			SP 15 G	
		Ground Wire		Grnd Bus			Grnd Bus	
16				SP 16 R			SP 16 R	
				SP 16 Y			SP 16 Y	
				SP 16 G			SP 16 G	
		Ground Wire		Grnd Bus			Grnd Bus	

D-26A
Signal #

MODEL 2070 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

Signal: **D-26A**
File: 13.01-9D
D/HWP: D256460
PIN:
Date: 2/2/2023

TRAFFIC SIGNAL MONITOR PROGRAMMING

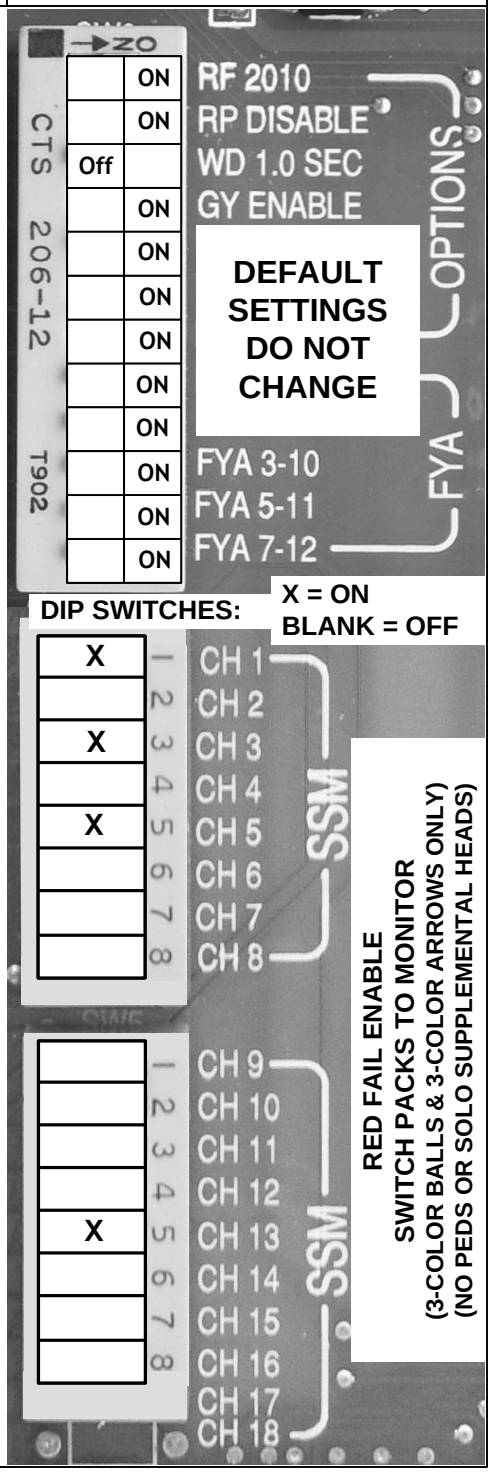
CONFLICT MONITOR DIODES TO BE CUT
(SWITCH PACKS TO RUN TOGETHER)

1-5	**2-5**	**3-4**
1-6	**2-6**	**3-13**
4-13		

YELLOW DISABLE:
WIRE JUMPERS
TO BE INSTALLED FOR
PEDS

1	
2	
3	
4	X
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

210NYR MONITOR BOARD
(SWITCH PACKS TO MONITOR)



CURRENT MONITOR BOARD (IF USED)

CURRENT MONITOR DIODES TO BE CUT (SWITCH PACKS TO *NOT* MONITOR)
2,4,6-12,14-18

Notes:

D-26A
Signal #

MODEL 2070 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

Signal: **D-26A**
File: 13.01-9D
D/HWP: D256460
PIN:

Date: 2/2/2023

TABLE OF INPUT WIRING

SDLC CHANNEL	FUNCTION	DET. ZONE NO.	DET. TYPE	DET. AN OVER	REMARKS
41	**Ø1**	33	GRIDSMART		PRESENCE
42	**Ø2**	34	GRIDSMART		PRESENCE
43	**Ø3**	35	GRIDSMART		PRESENCE
44					
45	**Ø5**	37	GRIDSMART		PRESENCE
46	**Ø6**	38	GRIDSMART		PRESENCE
47					
48					
49	**Ø3 (EB-RT)**	49	GRIDSMART		COUNT
50	**Ø3 (EB-STRAIGHT)**	50	GRIDSMART		COUNT
51	**Ø3 (EB-LT)**	51	GRIDSMART		COUNT
52	**Ø5 (SB-RT)**	52	GRIDSMART		COUNT
53	**Ø5 (SB-STRAIGHT)**	53	GRIDSMART		COUNT
54	**Ø2 (SB-LT)**	54	GRIDSMART		COUNT
55	**Ø3 (WB-RT)**	55	GRIDSMART		COUNT
56	**Ø3 (WB-STRAIGHT)**	56	GRIDSMART		COUNT
57	**Ø3 (WB-LT)**	57	GRIDSMART		COUNT
58	**Ø1 (NB-RT)**	58	GRIDSMART		COUNT
59	**Ø1 (NB-STRAIGHT)**	59	GRIDSMART		COUNT
60	**Ø6 (NB-LT)**	60	GRIDSMART		COUNT
25A, 25B	**PED-A Ø3**	23	BUTTON		PEDESTRIAN

Colliers Engineering & Design

Appendix E | American Community Survey Data

COMMUTING CHARACTERISTICS BY SEX

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

	ZCTA5 12508					
	Total		Male		Female	
Label	Estimate	Margin of Error	Estimate	Margin of Er	Estimate	Margin of Erro
Workers 16 years and over	9,162	±595	4,636	±403	4,526	±372
MEANS OF TRANSPORTATION TO WORK						
Car, truck, or van	75.5%	±3.4	78.5%	±4.4	72.5%	±5.1
Public transportation (excluding taxicab)	10.1%	±2.2	8.8%	±3.1	11.4%	±3.5
Walked	3.3%	±1.5	2.7%	±1.6	4.0%	±2.1
Bicycle	0.4%	±0.6	0.8%	±1.2	0.0%	±0.8
Taxicab, motorcycle, or other means	0.4%	±0.5	0.4%	±0.6	0.5%	±0.9
Worked from home	10.3%	±2.3	9.0%	±2.9	11.6%	±3.1
PLACE OF WORK						
Workers 16 years and over who did not work from home	8,222	±566	4,221	±392	4,001	±345
VEHICLES AVAILABLE						
Workers 16 years and over in households	9,129	±591	4,612	±395	4,517	±372
No vehicle available	4.9%	±2.2	5.3%	±3.1	4.4%	±2.5
1 vehicle available	25.6%	±3.9	24.1%	±5.4	27.2%	±4.4
2 vehicles available	40.3%	±5.6	42.6%	±6.5	38.0%	±6.3
3 or more vehicles available	29.2%	±5.0	28.0%	±5.2	30.4%	±5.8
PERCENT ALLOCATED						

Table Notes

COMMUTING CHARACTERISTICS BY SEX

Survey/Program: American Community Survey
Year: 2021
Estimates: 5-Year
Table ID: S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and dissemina the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling erro (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, dat are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

Several means of transportation to work categories were updated in 2019. For more information, see: Change to Means of Transportation.

The 2017-2021 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

-

The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest inter or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

**

The margin of error could not be computed because there were an insufficient number of sample observations.

***

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

*****

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling erro and the margin of error may be treated as zero.

Colliers Engineering & Design

Appendix E | DCTC Beekman Street Complete Streets Analysis

City of Beacon: Beekman Street Complete Streets Analysis

A. Introduction

The Beacon waterfront is home to several key destinations, including the Metro-North train station, Long Dock Park, the Beacon-Newburgh Ferry dock, the Beacon Farmers Market, and Riverfront Park, as well as a local trail system. However, the waterfront is separated from Main St by a half-mile with a substantial hill, and there is not a direct walking or bicycling route connecting them.

To address this, the City of Beacon requested that the DCTC evaluate ways to improve walking and bicycling access and safety between Main Street and the Beacon train station. The City specifically requested an evaluation of Beekman Street between Route 9D and Red Flynn Drive/Long Dock Park Road. DCTC also evaluated West Main Street and other potential connections.

Improving connections between the train station and Main Street is especially critical given the amount of current and proposed development in the area, including planned transit-oriented development (TOD) around the train station. Our recommendations include new and improved sidewalks, shorter and more visible crosswalks, dedicated street space for bicycles, bicycle parking, and consistent wayfinding signage. Using these tools, the City can make the Beekman Street area safer, more accessible, and more comfortable for everyone, regardless of how they choose to travel.

B. Existing Conditions

We evaluated existing conditions on Beekman St, West Main St, and the train station area in early May, 2017. This included taking measurements and photographs, and observing people using the streets. We also collected background data from the DCTC's traffic count database and other sources. Traffic count reports are provided in the Appendix; see also the Existing Conditions map and Existing Street Sections graphics at the end of this report.

Beekman Street

- Annual Average Daily Traffic volume (AADT): about 5,500 (evenly split northbound/southbound)
    - Peaks: 6-7 am southbound (downhill); 6-7 pm northbound (uphill)
    - Heavy vehicles: about 2.5% of traffic
- Speed limit: 30 mph; 85% speed: 36 mph uphill, 37 mph downhill; average speed: 27 mph uphill, 31 mph downhill
- Average slope: 3.5% (ranges from 1.5% to 4.6%)
- Pavement width: 35-36 feet between Route 9D and River St; 33 feet between River St and Railroad Dr; 38 feet between Railroad Dr and Red Flynn Dr.
    - Travel lanes: typically 12-15 feet adjacent to parking; 12 feet in opposite direction
- On-street parking: train-station permit/metered parking on one side (east between 9D and River St; west south of River St; none south of Railroad Dr)
    - Marked spaces, 8 feet wide x 21 feet long
- Sidewalks: on both sides between 9D and West Main; on east side only between West Main St and Ferry St; on west side only south of Ferry St.
    - Typically 5 feet wide; with a 3-foot brick buffer between 9D and a point 300 feet south of West Main St; 5 feet with no buffer south of that point.

- Utilities:
    - Light poles on the west side, typically about 10 feet behind the curb (some are closer)
    - Utility poles on the east side, 15-20 feet behind the curb (from 9D to north of West Main St)
    - Guard rail on the west side; behind sidewalk from 9D to 350 feet south; about 10 feet behind the curb from 200 feet south of West Main St to 130 feet north of River St.

West Main Street

- Annual Average Daily Traffic volume (AADT): about 1,600 (84% westbound)
    - Peaks: 6-7 am westbound (downhill); 3-4 pm eastbound (uphill)
    - Heavy vehicles: about 5.5% of traffic
- Speed limit: 25 mph; 85% speed: 34 mph uphill, 36 mph downhill; average speed: 24 mph uphill, 29 mph downhill
- Average slope: 6.6% (ranges from about 4% to more than 9%)
- Pavement width: about 34 feet (24 feet near the train station)
    - Travel lanes: about 10 feet in areas with parking; wider in areas with no parking
- On-street parking: unmarked, but allowed on both sides in middle segment (from about 330 feet south of Beekman St to the MTA property line south of the auto repair business).
    - Some restrictions for driveways/intersections
    - 4 hour limit on weekdays
- Sidewalks: on north side only
    - 8 feet wide with no buffer between Beekman St and Bank St; 5 feet with a 3-foot grass buffer between Bank St and the MTA property line; 4-6 feet with no buffer in the train station area.
- Utilities:
    - Utility/light poles on the south side, about 3 feet behind the curb (Beekman St to Bank St)
    - Utility/light poles on the north side, in sidewalk buffer (River St to train station area)

C. Observations

As part of our fieldwork in May 2017, we observed the condition of existing facilities, people walking, and evidence of 'desire lines' (worn paths in the grass, which reflect people's preference to take the shortest path to their destination). Key observations are listed below.

Infrastructure

1. Sidewalks:

- Sidewalks are typically in good condition, except for some lifting due to tree roots (in particular, north of Ferry St, and north of River St)
- One obstruction was noted – a hydrant in the middle of the Beekman St sidewalk north of River St. In two places, the sidewalk was widened to provide (minimal) clearance around a light pole.

2. Buffers:

- The brick buffer on Beekman St is broken in areas (e.g., on the west side near Route 9D and the east side between High St and West Main St).
- Many sidewalks lack a buffer (most of Beekman St south of West Main St; West Main St north of Bank St).

3. Crosswalks:

- Most of the crosswalks outside of MTA property are standard crosswalks (two parallel lines), rather than high-visibility ladder crosswalks, such as the crosswalk below the MTA stairs.

- Several crosswalks are unnecessarily long, due to their placement.
- Crosswalks in the MTA area are red stamped concrete (faux brick) with two parallel white lines.
- A crosswalk is missing across the upper portion of Municipal Plaza to connect to the path to 9D/Main St.
- A standard crosswalk was marked on Beekman St north of Ferry St after our field observations; however, it lacks a curb ramp on the west side. An In-Street Pedestrian Crossing sign was later placed near the crosswalk.
- Two crosswalks lack ramps: the east side of the Beekman St crosswalk at River St, and the west side of the Beekman St crosswalk at Ferry St.
- Many crosswalk ramps lack detectable warning surfaces.

4. Warning signs

- There are four signs in the City Police parking lot warning pedestrians to look for emergency vehicles.
- The warning signs at the uncontrolled West Main St crossing are non-standard and hard to read, while the uncontrolled crosswalk at River St lacks pedestrian warning signs. The recently-installed In-Street Pedestrian Crossing sign at Ferry St is placed outside of the crosswalk (rather than in the center), and may be prone to damage.
- There is a standard pedestrian crossing warning sign (MUTCD W11-2) at the train station exit, with flashing beacons. However, it was unclear how the beacons were activated; no buttons were present, but it was unclear whether it could detect pedestrians passively.

5. Wayfinding signs

- There are at least four different types and styles of wayfinding signs. Only one has a map, and it is hard to read.

6. Amenities

- There are very few streetscape amenities outside of the train station area. There is no pedestrian-scale lighting, trashcans or bicycle parking racks along Beekman St or West Main St. The only benches we observed were in front of a building on the north side of West Main St. There are trees behind the sidewalk on portions of Beekman St, but no street trees in the sidewalk buffer area.

7. Bicycle Facilities

- There are no bicycle facilities (bike paths or lanes) and no bicycle-related lane markings or signs in the study area. There is limited short-term bicycle parking on the east side of the station near the entrance (wave racks with about 12 spaces), as well as one small rack on the west side, near the ferry dock (about 5 spaces). There are no bike lockers or other long-term bike parking.

Behavior

8. Walking: People walking from Main St to the train station generally cut through the City Police parking lot (using 3 flights of stairs), cut through the grass to Beekman St, cross Beekman St near High St, then cut through the grass to West Main St, and walk down West Main St to the station. This route is reversed for people walking from the station to Main St.

We observed a desire-line trail from the end of Ferry St to Route 9D. We expect that this reflects people who live south of Main St walking on 9D to Ferry St (via the trail), and then to the station via Railroad Dr.

On West Main St, we observed people walking in the street rather than on the sidewalk, possibly because the sidewalk on the western end of the street is relatively narrow.

9. ***Parking and Walking:*** People who park in the MTA spaces on northern Beekman St tend to access the station via West Main St, as described above. Those who park in the MTA spaces on Beekman St south of West Main St tend to walk to the station via Beekman St, the stairs just north of Ferry St, and Railroad Dr. We observed a desire line in the grass on the west side of Beekman St near the MTA Police building, indicating that some people take the stairs and walk through the grass to their car (if they parked near the MTA building), or walk to River St and the sidewalk on the east side of Beekman St, using the crosswalk at River St.

10. ***Bicycling*****:** The only bicyclists we observed were riding south on Beekman St. They appeared to be on a recreational ride, based on their attire. According to City staff, some bicyclists access the train station on the river side, using Beekman St and Red Flynn Dr. Based on discussions with some residents, local bicyclists often access the station via West Main St and use the overpass to access the platform (this is also evidenced by the number of bikes parked along the fence by the overpass). Others ride to the main entrance (non-river side), and park there, or bring their bike on the train. For the return, some bicyclists use West Main St, either riding a short distance against traffic, using the sidewalk, or walking their bike until the street becomes two-way. Others prefer the less steep hill on Beekman St, and return via Railroad Dr and Beekman St. This can involve navigating heavy traffic leaving the station, particularly at the end of the workday. One resident noted that he rides on the sidewalk from the station to Beekman St to avoid conflicts with vehicle traffic and "crazy" drivers. He also noted that riding uphill on Beekman St is "a little dicey" and more room for bicyclists would be helpful.

D. Route Options

Walking

Since most people prefer to take the shortest path when walking, we measured various route options between the train station area and Main St. A table of each route is included in the Appendix; see also the Walking Route Options map.

For comparison purposes, we assumed that people walk between the central train station building and the southeast corner of Main St and Route 9D. For an accessible route, using sidewalks but no stairs or shortcuts through the grass, walking via Beekman St and walking via West Main St are the same distance (both 0.63 mile). However, the Beekman St route is not fully accessible, as the crossing just north of Ferry St lacks a curb ramp (and is uncontrolled). If using stairs and shortcuts, walking via Beekman St is just 50 feet shorter than West Main St (0.51 mile vs 0.52 mile).

The planned path between Beekman St and Route 9D will include stairs, so it is not an accessible option. Using the MTA stairs and planned path/stairs would be about 225 feet longer than the standard Beekman St 'shortcuts' route, which cuts through the Municipal Plaza (0.55 mile vs 0.51 mile). Similarly for West Main St, using the planned path would be longer than the West Main St 'shortcuts' route, which cuts through the Municipal Plaza (0.59 mile vs 0.52 mile). However, this planned path (or the planned path and stairs at the end of Ferry St) would be a good option for destinations south of Main St.

If people are able to start or end at the train station overpass, walking via West Main St is by far the shortest route—about 0.40 mile using stairs and shortcuts, and 0.46 mile using the planned path. However, this option is inherently inaccessible because it relies on using the train station overpass.

Based on this analysis and our observations, **we recommend focusing pedestrian improvements on Beekman St,** and considering potential improvements on West Main St. In particular, **improving accessibility** will enable people of all ages and abilities to travel safely between Main St and the train station area. Specific recommendations are listed in Part F below.

Bicycling

Bicyclists are typically willing to take a slightly longer route if it feels safer and more comfortable. The "Level of Traffic Stress" (LTS) is the current state of the practice measurement of bicycle comfort. The LTS is based on a street's traffic volume and traffic speed, as well as the type of bicycle facility, if one exists. Levels of traffic stress range from 1 to 4. Lower-stress streets have lower speeds, volumes, and fewer lanes, or have separated bike paths or protected bike lanes/cycle tracks. LTS 1 represents streets that are suitable for all ages and abilities; LTS 2 represents streets that most adults can ride on comfortably; LTS 3 represents streets that experienced and confident riders can feel comfortable on; LTS 4 represents streets where only the most fearless riders would feel comfortable. In their current condition, based on the traffic data above, Beekman St would be classified as LTS 3 or 4, while West Main St would be classified as LTS 1 or 2.[1]

> The LTS methodology explains, "Stress is lower if average daily traffic (ADT) is 3,000 or less **and** no centerline is marked. (Most quiet, local streets have both of these characteristics.) On such streets, cars tend to drive in the middle of the street, moving to the side when meeting an oncoming vehicle. It's far less stressful sharing a road with cars where the cars are actively sharing the road with each other in the same way."

Based on existing conditions, West Main St would be the preferred bicycle connection between Main St and the train station. However, a route is only as good as its weakest link—a high stress segment makes the entire route more stressful. Currently, bicyclists need to ride on a short portion of 9D (or cut through the Municipal Plaza) and the northern portion of Beekman St to access West Main St. In addition, Railroad Dr between West Main St and the train station entrance is one-way westbound/southbound. Finally, West Main St has a substantial grade, making the uphill direction difficult for many potential bicyclists. For the West Main St route to be more functional, Railroad Dr should be redesigned to allow eastbound bicycle access, at least from the overpass to West Main St. Longer-term, Railroad Dr could be redesigned to allow two-way bicycle access between West Main St and the main station entrance. This may be feasible in coordination with future redevelopment of the train station area. In the interim, bicyclists may choose to use West Main St to access the station, and return via Beekman St.

We understand that many bicyclists cross Route 9D from Main St and ride through the Municipal Plaza to Beekman St. However, this is not recommended due to potential conflicts with drivers entering and exiting parking spaces, as well as the uncontrolled turn across Beekman St (heading south). Any redesign of the Municipal Plaza property should incorporate a safe bicycle access route, such as a path separate from parking areas.

Based on NYSDOT data, traffic volumes and speeds on Route 9D south of Main St are slightly higher than on Beekman St (approximately 6,500 AADT vs 5,500, and 85% speeds of 37-39 mph, vs 36-37 mph), while volumes and speeds on Route 9D north of Main St are significantly higher (approximately 23,000 AADT and 85% speeds of 40 mph). However, the data for the northern section is based on a count taken just south of I-84, so it is likely that the volume between Main St and Beekman St is substantially lower than NYSDOT's estimate.

[1] See http://www.northeastern.edu/peter.furth/research/level-of-traffic-stress/

Based on the evaluation above, we recommend focusing bicycle infrastructure improvements on Beekman St, with connections to the train station via Railroad Dr and Red Flynn Dr. Longer-term, we recommend pursuing two-way bicycle access along Railroad Dr and a bike path connecting Main St to Beekman St.

E. Bicycle Facility Options

We evaluated the following bicycle facilities, based on recent best practice guidance.[2] We assumed no changes to the existing roadway widths and no removal of on-street parking. A summary spreadsheet is included in the Appendix.

- ***Shared Street/Bicycle Boulevard***: Per guidance from the National Association of City Transportation Officials (NACTO), shared streets work best when target vehicle speeds[3] are below 10 mph. However, bicycle boulevards can work on streets with target speeds up to 25 mph and average daily traffic (ADT) up to 1,500, if there are fewer than 50 vehicles per hour in the peak hour and peak direction. Bicycle Boulevards include sharrows (shared lane-use markings) to highlight bicyclists' right to ride in the travel lane, wayfinding signs, and traffic calming treatments.

- ***Bicycle Lanes/Buffered Bike Lanes***: Bike lanes provide dedicated on-street space for bicyclists. Per NACTO, bike lanes work best if target speeds do not exceed 25 mph and ADT does not exceed 6,000. Bike lanes should be at least 5 feet wide. Buffered bike lanes include a striped buffer of at least 18 inches between the bike lane and the adjacent travel lane and/or parking lane.

- **Protected Bike Lanes/Cycle Track**: NACTO recommends protected bike lanes (also called cycle tracks) for streets with target speeds above 26 mph or ADT above 6,000. Protected bike lanes are physically separated from the adjacent travel lane by parking, planters, bollards, or a raised curb. Protected bike lanes can be one-way or two-way (on one side of the street). One-way cycle tracks should be at least 5 feet wide with a 3 foot separation from the travel or parking lane, while two-way cycle tracks should be at least 8 feet wide (12 feet is preferred) with a 3 foot separation from the travel or parking lane.

- ***Bike Path/Shared-Use Path***: Separated paths, either for bicycles only or shared with pedestrians, work best where there are few intersections or driveways-- some guidance suggests fewer than five per mile. Per NYSDOT guidance, paths should be at least 10 feet wide (12 feet or wider is preferred) and set back at least 5 feet from an adjacent roadway.

A description of our analysis of bicycle facility options for each street follows.

Beekman St: Based on NACTO guidance and current traffic volumes and speeds, the recommended treatment for Beekman St would be a protected bike lane. However, given the road width, this would be feasible in one direction only. There is insufficient width for a two-way protected bike lane (or for two separate bike lanes) unless the on-street parking was removed.

Therefore, we recommend a **bike lane (protected where feasible) in the uphill/northbound direction, and sharrows in the downhill/southbound direction.** A bike lane gives bicyclists dedicated space uphill, when they are

[2] See the NACTO Urban Bikeway Design Guide at https://nacto.org/publication/urban-bikeway-design-guide/ and NACTO's Designing for All Ages & Abilities guidance at https://nacto.org/publication/urban-bikeway-design-guide/designing-ages-abilities-new/.

[3] NACTO defines target speed as the posted or 85th percentile speed, but encourages use of the 95th percentile speed.

traveling significantly slower than motor vehicles, while sharrows encourage them to 'take the lane' if needed when they are traveling downhill, at speeds more consistent with motor vehicles. Sharrows should be placed in the center of the 'effective lane' (see NYSDOT's Shared Lane Marking Policy in the Appendix).

From River St to 9D (northbound), there is room for a protected bike lane. It would be located adjacent to the curb, with a striped buffer between it and the parking lane. If the travel lanes were reduced to 10 feet, there would be room for a five-foot bike lane and three-foot buffer adjacent to the 8 foot parking lane. These widths are consistent with NACTO's guidance (they also recommend a 7-foot bike lane on uphill sections to allow bicyclists to pass each other, but that is infeasible given existing conditions and likely unnecessary). Sharrows would be marked in the southbound travel lane, adjacent to the curb.

At intersections, parking should be limited to improve visibility and allow bicycle access between the bike lane and the side street. Parkers would also need to be educated to look for bicyclists before crossing to the sidewalk. That said, conflicts are less likely here than on a commercial street with on-street parking, given the low turnover of the spaces and the relatively slow speed of bicyclists riding uphill. At the 9D intersection approach, a 'mixing zone' (combined bike lane/turn lane) may be needed.[4] This would require NYSDOT approval.

From Ferry St to River St (northbound), there is room for a conventional five-foot bike lane if travel lanes are narrowed to ten feet (as above). The bike lane would be placed between the curb and the travel lane. Sharrows would be marked in the southbound direction, adjacent to the 8 foot parking lane.

From Red Flynn Dr to Ferry St (northbound), there is room for a buffered bike lane. The buffer would separate the five-foot bike lane from the travel lane. The buffer should be two to three feet, depending on the width of the travel lanes. Sharrows would be marked in the southbound lane/right turn lane to access riverside destinations.

We recommend ten-foot travel lanes to help calm traffic and provide enough bike lane and buffer space for bicyclist comfort. However, 10.5-foot lanes could be used if the City feels wider lanes are needed to accommodate buses, trucks, or other vehicles. In that case, the parking lane would be reduced to 7 feet. Note that this would fall short of NACTO's recommended combined 11 foot width for the parking lane and buffer for parking-protected bike lanes. A narrower parking lane could also be less comfortable for southbound bicyclists riding next to the parking lane between River St and Railroad Ave, though these spaces have low turnover.

These treatments assume that there will continue to be on-street parking on one side of Beekman St. If the on-street parking were removed, protected bike lanes could be provided in both directions between Ferry St and 9D, with up to three-foot buffers (bollards, curbing, or planters could be used). A two-way protected bike lane would also be possible, but would require careful design treatments at intersections.

West Main St: Based on NACTO guidance and current traffic volumes and speeds, the preferred treatment would be a bike lane, ideally protected, but possibly conventional or buffered. However, there is insufficient width for bike lanes unless on-street parking were removed. As a basic improvement, we recommend **sharrows and signage** on West Main St, connecting to the station entrance in the downhill direction, and at least from the MTA property line to Beekman St in the uphill direction. Longer-term, Railroad Dr could be reconfigured to allow two-way bicycle access between the main station entrance and West Main St (such as with a bicycle path).

[4] See https://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/cycle-track-intersection-approach/ for more details.

Route 9D: Based on NACTO guidance and current traffic volumes and speeds, the preferred treatment would be protected bike lanes or a separate path. However, there is insufficient width for bike lanes. A path on the west side of Route 9D may be feasible, either as part of a redesign of the Municipal Plaza, or wrapping around the Municipal Plaza parking to the north, to connect Main St to Beekman St.

If a path were to be constructed, we suggest considering stop signs on Beekman St to control traffic for bicyclists exiting from the connecting path onto southbound Beekman St. At a minimum, sight distance at that location would need to be evaluated to ensure that exiting bicyclists and approaching drivers have a clear view, and bicycle crossing warning signs installed.

As a basic, interim improvement, **sharrows and signage** could be marked on Route 9D in both directions between Main St and Beekman St. This would require NYSDOT approval. In addition, NYSDOT should improve the traffic signals at the 9D/Main St and 9D/Beekman St intersections to improve detection and timing for bicyclists.

Railroad Dr & Red Flynn Dr: We did not evaluate these streets in detail, but based on estimated roadway widths, it appears that both could accommodate a bike lane on one side of the street if travel lanes were narrowed. To provide consistency with the other recommendations, we suggest a **bike lane in the uphill direction (away from the station), and sharrows in the downhill direction (towards the station)**.

A summary of the recommendations are listed in Part F below and shown in the Pedestrian Recommendations map, Bicycle Recommendations map, and Proposed Street Sections at the end of this report.

F. Recommendations

Specific recommendations are outlined below. Priority items are *starred and **bolded**.

A. Pedestrian Access and Safety

Improve access through the Municipal Plaza:

The City should improve pedestrian access and safety through the Municipal Plaza, while also promoting alternate routes, such as the planned path to 9D. As noted above, the 'shortcut' routes through the Municipal Plaza are the most direct, and people will likely continue to use them. However, they are not accessible, and walking through the police parking lot presents potential conflicts with vehicles entering and exiting parking spaces.

- Mark a walking path through the parking area to increase drivers' awareness of pedestrians.
- Mark a high-visibility ladder crosswalk across Municipal Plaza between the stairs at the top and the path to Route 9D.
- Pave/formalize the desire line in the grass at the southwest corner of Beekman St and Municipal Plaza. This appears to include a small piece of Central Hudson property, but the paved path could be aligned to include only City property.

- ***Explore a re-design of the property to provide accessible alternatives to the stairs,** such as the concept shown in the Appendix to the City's 2007 Comprehensive Plan[5].

Complete missing connections:

- ***Install a sidewalk on the west side of Beekman St between West Main St and the MTA stairs** (approximately 1,150 feet). This sidewalk should be at least 5 feet wide, and include a 5-foot buffer with street trees where feasible. Based on our observations, at least two light poles (in front of the MTA building, and north of River St), and two hydrants (just south of West Main St, and halfway to River St) would need to be relocated.

- Longer-term, pursue pedestrian access through the MTA Police building parcel, as envisioned in the Comprehensive Plan. The police building is located directly between the train station and Beekman St. Access through this parcel would substantially shorten the walking route between the train station and Beekman St.

Improve Infrastructure:

- Repair sidewalk lifts and cracks through shaving or replacement. Focus in particular on lifts on Beekman St between River St and Ferry St/Railroad Dr.

- Replace the brick buffer on Beekman St with a more durable and stable material, such as stamped concrete, or with grass.

- Remove obstructions or widen the sidewalk around obstructions. Maintain a minimum 3-foot clearance (wider if possible). Specifically:
  - Widen the sidewalk around the hydrant on the east side of Beekman St just north of River St.
  - Check clearance around the pole on the east side of Beekman St just south of River St, and widen if possible.

- On West Main St, consider the following sidewalk improvements as long-term options in coordination with future land use changes (we understand that on-street parking will likely be needed on both sides of the street to serve existing and future development):
  - Widen the 5-foot sidewalk west of Bank St to 8 feet, consistent with the segment east of Bank St, to accommodate increased pedestrian activity.
  - If feasible, install a consistent buffer between the sidewalk and curb for the entire length of the street.

***Make Safer Crosswalks**:*

- ***Stripe all crosswalks with high-visibility white ladder markings** (such as across Municipal Plaza at Beekman St). Avoid using red crosswalks, as they are less visible than white at night.

- ***Install consistent signage for all uncontrolled crosswalks,** such as advance Pedestrian Crossing and Pedestrian Crossing warning signs (MUTCD sign W11-2; see Section 2C.50). In-Street Pedestrian Crossing

[5] See the conceptual plan entitled 'Connecting Beacon's Main Street with the Hudson River and Railroad Station.'

signs (MUTCD sign R1-6; see Section 2B.12) may be used but often become damaged. Encourage MTA/Metro-North to install consistent signs at uncontrolled crosswalks within their property as well.

- ***Shorten crossings as much as possible to maximize safety and convenience.** Specifically:
  - Crossing Beekman St at Route 9D – Reduce the curb radii and/or re-locate the crosswalk to the west to reduce the crossing length. Reconfigure the ramps to direct people into the crosswalk rather than the center of the intersection.
  - Crossing Beekman St at West Main St – Redesign the crosswalk to be straight instead of diagonal, reducing the crossing distance. This would involve replacing the ramp on the east side.
    - Consider an all-way stop at this intersection to improve safety at the crosswalk (and access from West Main St to Beekman St).
  - Crossing Beekman St at River St – Reduce the curb radius on the west side to shorten the crossing. Add a curb ramp on the east side.
  - Crossing Beekman St at Ferry St/MTA stairs – Upgrade the recently marked crosswalk to a high-visibility ladder crosswalk, install a curb extension on the west side to make pedestrians visible between parked cars and to help pedestrians see oncoming traffic, and construct a curb ramp on the west side of the crosswalk.
  - Crossing the MTA parking lot at Railroad Dr – Work with Metro-North/MTA to realign the diagonal crosswalk to connect directly to the stairs.
  - Install detectable warnings on all curb ramps to alert vision-impaired pedestrians of the transition to the street.

- Mark high-visibility crosswalks on side streets to increase driver awareness of pedestrians. Recommended locations include:
  - Across West Main St at Beekman St (in coordination with the recommended sidewalk on the west side of Beekman St).
  - Across River St at Beekman St (in coordination with the recommended sidewalk on the west side of Beekman St).
  - Across Bank St at West Main St.

  The City asked about using raised crosswalks to slow traffic and increase yielding to pedestrians at uncontrolled marked crossings (such as Beekman St at West Main St, River St, and Ferry St/MTA stairs). However, raised crosswalks are typically used at mid-block crossings with very high pedestrian volumes or above-average pedestrian crash rates, and are usually not appropriate on bus routes or segments with steep grades.[6]

Provide Amenities and Wayfinding Signage:

- ***Develop a consistent format for pedestrian wayfinding signs throughout the study area.** Signs should clearly show destinations and recommended walking routes. In particular, provide wayfinding signage to direct people from the train station to Main Street via West Main St, and vice versa (existing signs at the train station direct people via Railroad Dr). New public walking paths/routes should also be promoted with wayfinding signage.

[6] See http://www.pedbikesafe.org/PEDSAFE/countermeasures_detail.cfm?CM_NUM=7.

- Develop one preferred accessible route, and clearly sign it to assist those with mobility limitations. Until the missing curb ramp is installed on Beekman St north of Ferry St and/or other accessibility improvements are made, the only fully accessible route is via West Main St. However, it has a significant grade.

- Install amenities along Beekman St, West Main St, and other routes as needed, including consistent street trees and pedestrian-scale lighting, as well as trash/recycling cans and benches at key locations.

- Snow plowing: We did not observe conditions during the winter, but understand from some residents that sidewalk plowing could be improved. On Beekman St, snow could be stored in the buffer area (where one exists) or behind the sidewalk. On West Main St, the existing and proposed buffer areas could be used for snow storage. Particular attention should be focused on plowing at curb ramps and crosswalks to maintain accessibility.

B. Bicycle Access and Safety

Beekman St:

- ***In the northbound (uphill) direction, install a buffered bike lane from Red Flynn Dr to Ferry St, a conventional bike lane from Ferry St to River St, and a parking-protected bike lane from River St to 9D.** Reduce the travel lanes to 10 feet to allow room for five-foot bike lanes and three-foot buffers (where feasible).

- Mark sharrows in the southbound (downhill) lane.

West Main St:

- Mark sharrows in both directions between Beekman St and the MTA property line.

Municipal Plaza:

- ***Construct a bicycle path connecting Main St and Beekman St, outside of the parking area.**

Route 9D (these improvements would need to be approved by and coordinated with NYSDOT):

- Mark sharrows between Main St and Beekman St.

- Upgrade the traffic signal detectors at the 9D/Main St and 9D/Beekman St intersections to consistently detect bicycles. This may entail adjusting the detectors' sensitivity, or replacing the loops with a more bicycle-friendly design (such as diagonal quadrupole loops) or technology (such as video detection).[7] If loop detectors are used, paint bicycle symbols and install signs on each approach to show bicyclists where to position themselves to be detected.[8] Note that NYSDOT has not yet approved video detection and would have to review any other detection technology prior to installation.

[7] See Walk Bike Dutchess, Chapter 3, part L for more detail on signal timing for bicyclists.
[8] See MUTCD Sections 9C.05 and 9B.13 and Figures 9C-7 and 9B-2 (sign R10-22).

- Adjust the signal timing at the 9D/Main St and 9D/Beekman St intersections to allow sufficient minimum green time, a longer green extension time for bicycles (if possible) and more all-red clearance time if needed.

Railroad Dr:

- Work with MTA to mark sharrows in the downhill direction from Beekman St to the train station, and to provide a bike lane in the uphill direction to Beekman St.

- Work with MTA to mark sharrows in the southbound direction from West Main St to the train station.

- Longer-term, work with MTA to reconfigure Railroad Dr to allow two-way bicycle access between the main station entrance and West Main St.

Red Flynn Dr:

- Mark sharrows in the downhill direction from Beekman St to the train station entrance (river side), and provide a bike lane in the uphill direction from the station to Beekman St.

Provide Bike Route Signage:

- Install bike route guide signs to direct bicyclists to preferred routes between the train station and Main St.[9]

Improve Bicycle Parking: [10]

- ***Work with MTA to provide secure long-term bike parking,** such as a bicycle enclosure or a Bike Station, in the station area.[11] We recommend long-term parking for at least 70-100 bicycles.

- ***Work with MTA to provide significantly more short-term bike parking**, such as covered bike racks, at both entrances to the station and by the overpass.[12] We recommend short-term spaces for at least 30-50 bicycles.

- Work with other property owners, including the City, to provide short-term bike parking at key destinations (e.g. the farmers market, parks, and commercial buildings), as well as long-term bike parking for employees, commuters, and visitors.

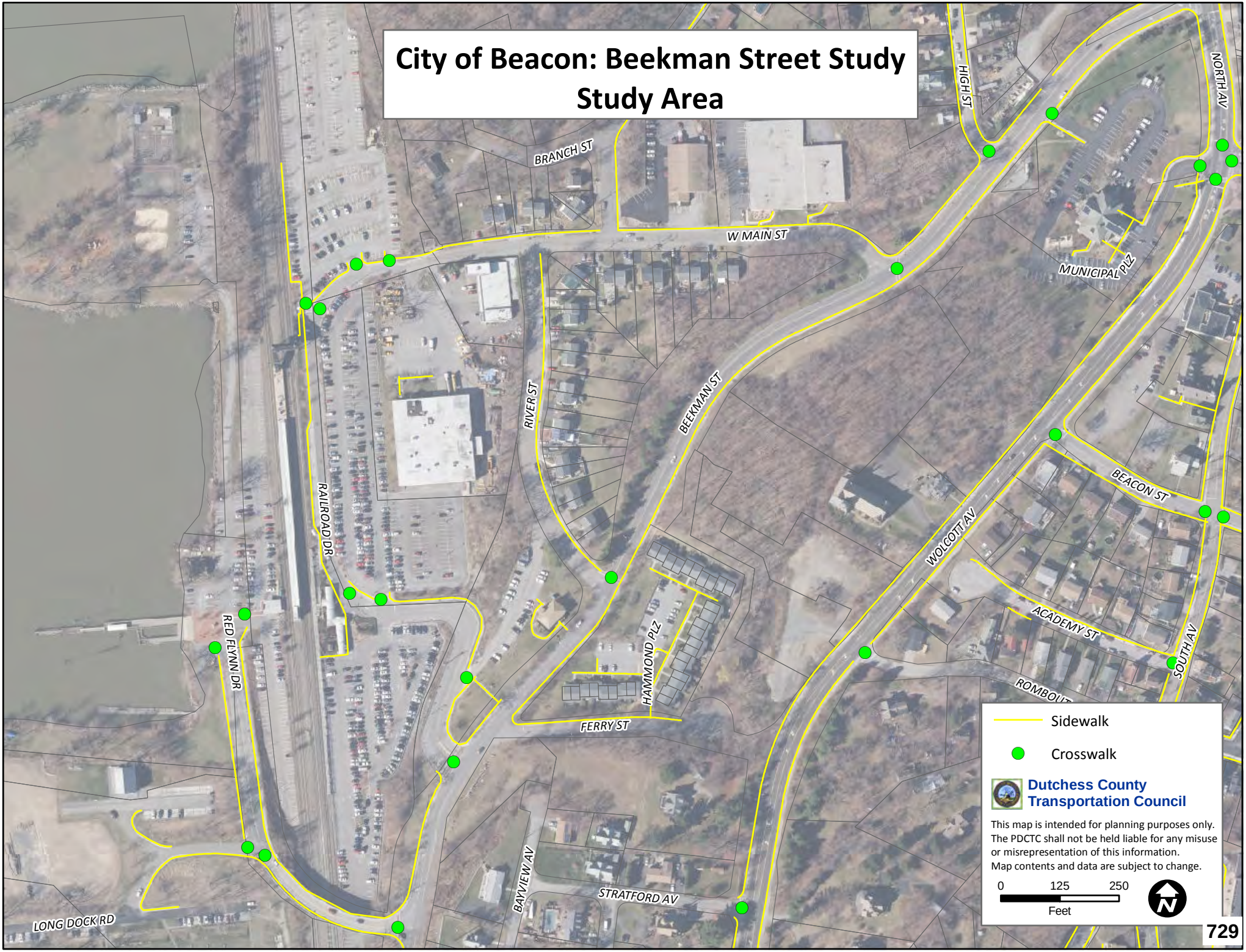
[9] See Bike Route Guide signs in MUTCD Section 9B.20, Figures 9B-4 and 9B-6

[10] Bicycle parking guidance is available online at http://www.co.dutchess.ny.us/CountyGov/Departments/TransportationCouncil/17205.htm.

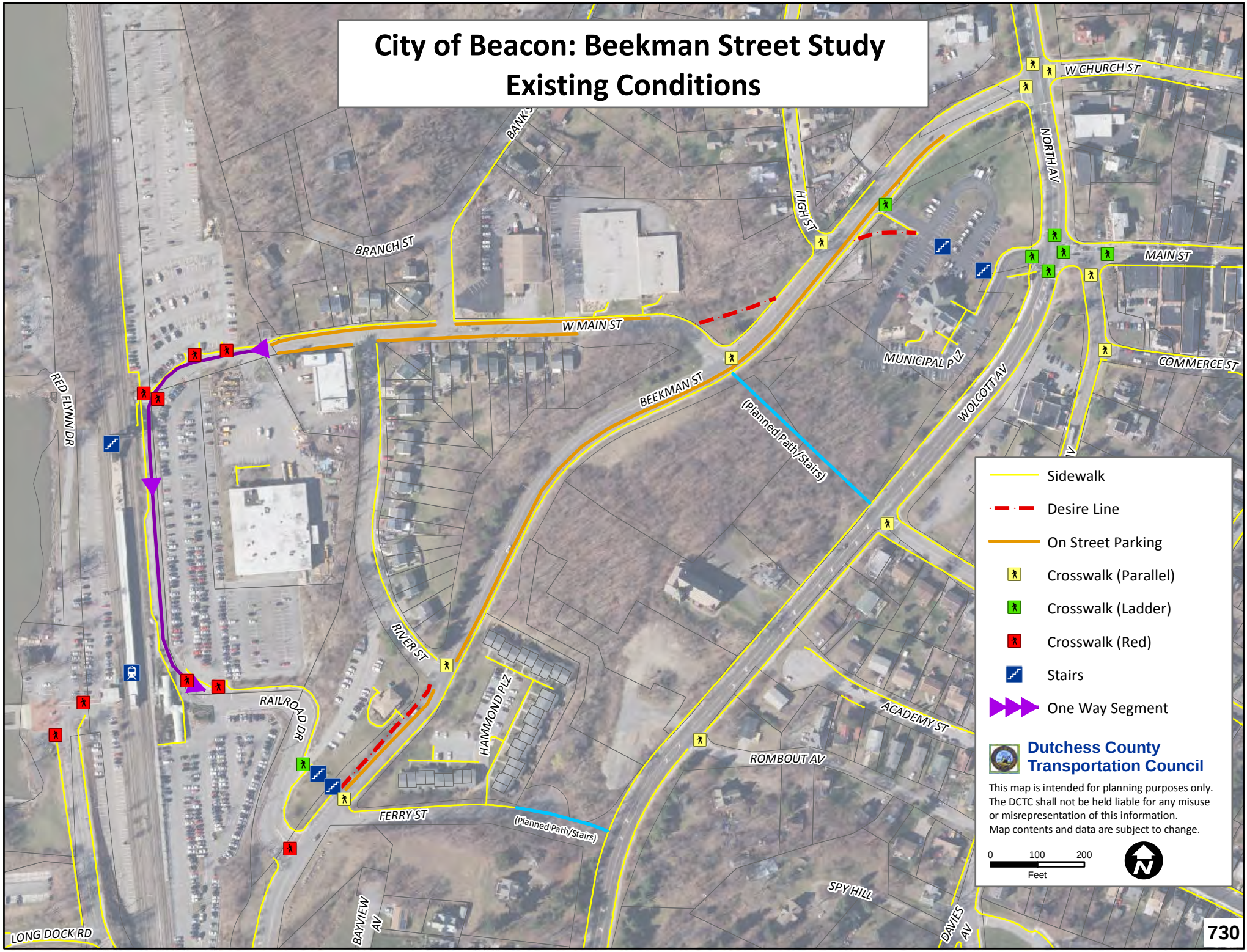
[11] For images of Bicycle Enclosures, see Google images. For Bike Stations, see http://bikehub.com/caltrain-bike-station/ and http://home.bikestation.com/.

[12] See the County's online Bicycle Parking Finder for a current inventory of bike parking: https://geoaccess.co.dutchess.ny.us/bicycleparking/

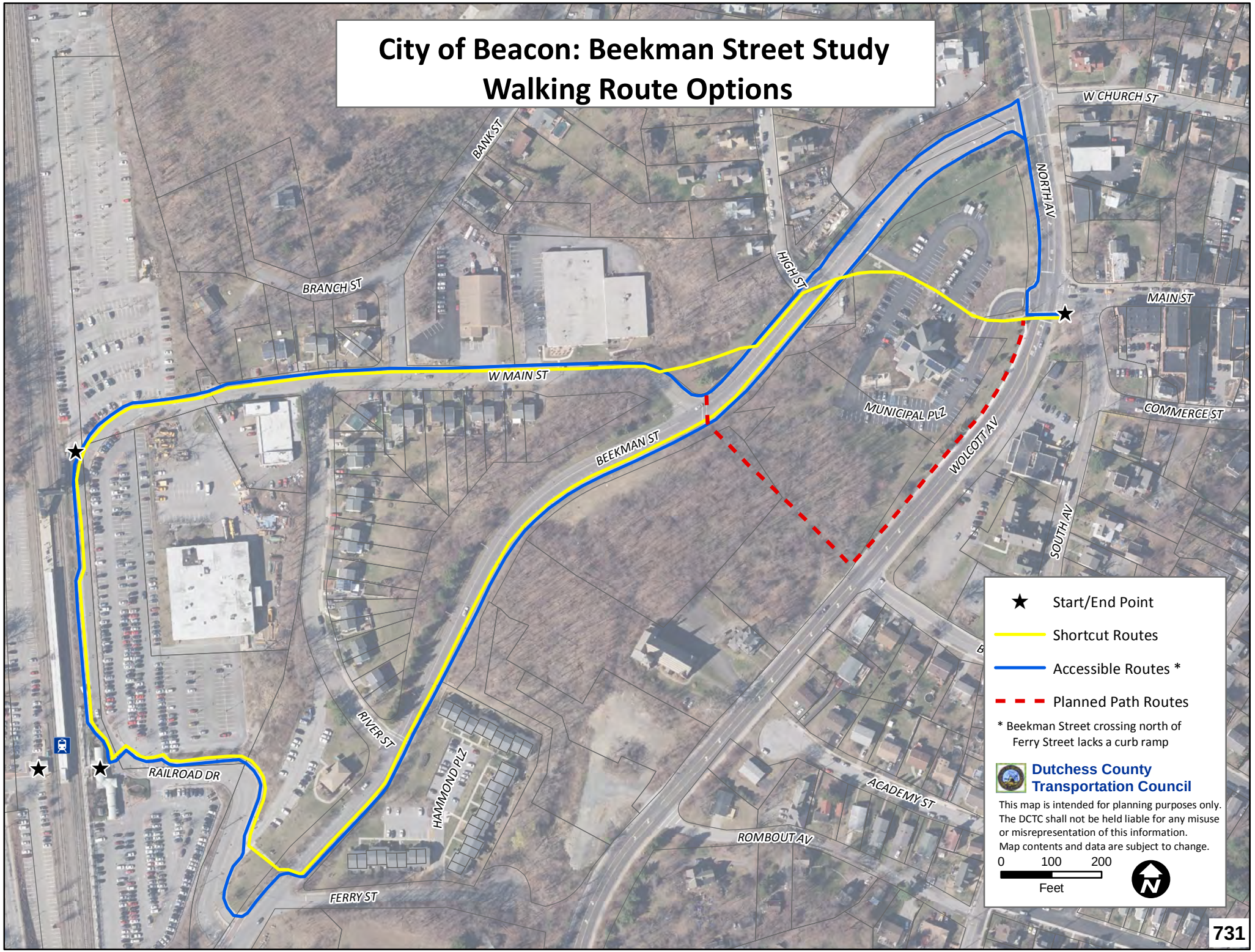
City of Beacon: Beekman Street Study
Study Area



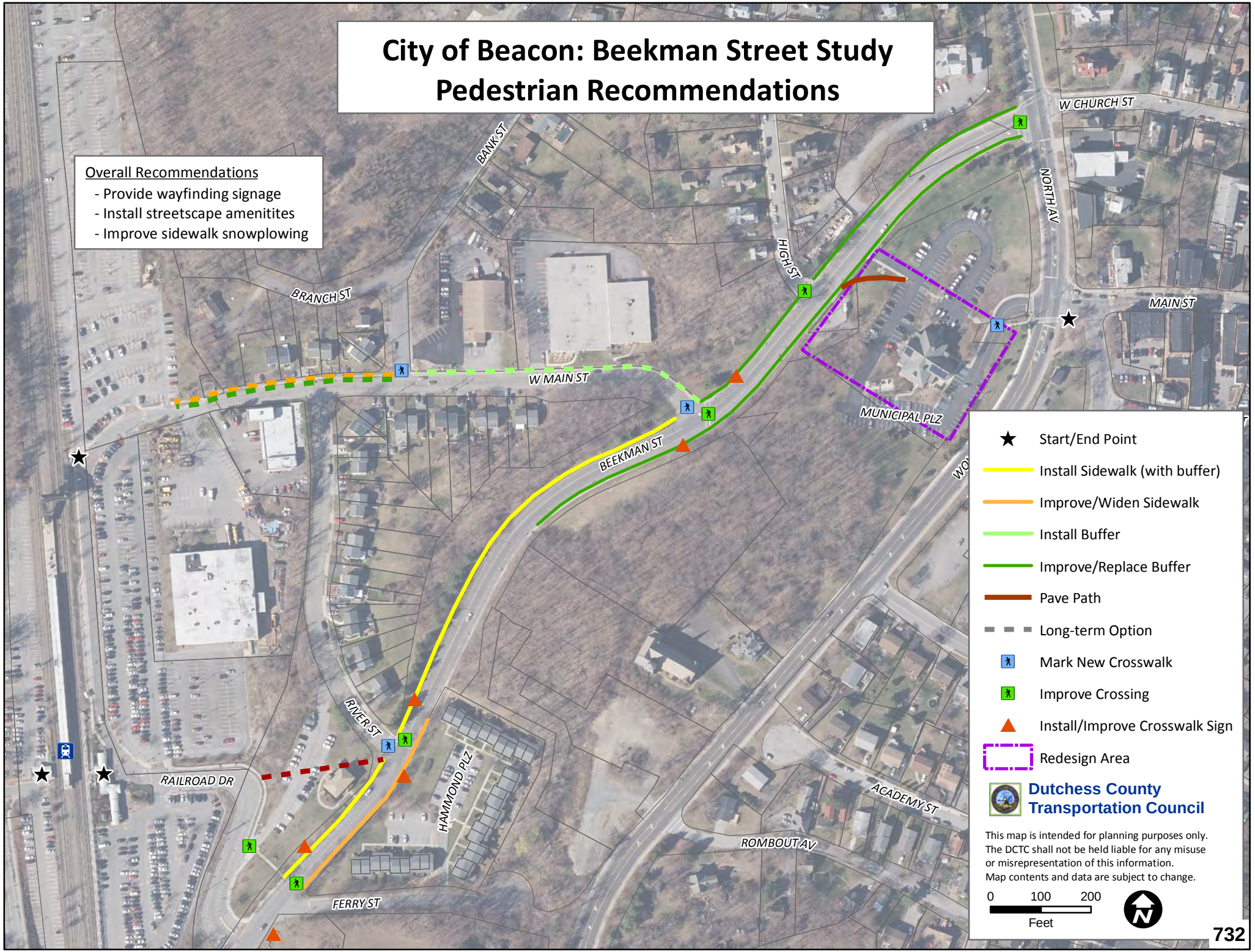
729


City of Beacon: Beekman Street Study
Existing Conditions
W CHURCH ST
NORTH AV
HIGH ST
BANK
BRANCH ST
W MAIN ST
MAIN ST
COMMERCE ST
MUNICIPAL PLZ
WOLCOTT AV
BEEKMAN ST
(Planned Path/Stairs)
RED FLYNN DR
RIVER ST
RAILROAD DR
HAMMOND PLZ
ACADEMY ST
ROMBOUT AV
FERRY ST
(Planned Path/Stairs)
SPY HILL
DAVIES AV
BAYVIEW AV
LONG DOCK RD
Sidewalk
Desire Line
On Street Parking
Crosswalk (Parallel)
Crosswalk (Ladder)
Crosswalk (Red)
Stairs
One Way Segment
Dutchess County Transportation Council
This map is intended for planning purposes only.
The DCTC shall not be held liable for any misuse or misrepresentation of this information.
Map contents and data are subject to change.
0
100
200
Feet
730

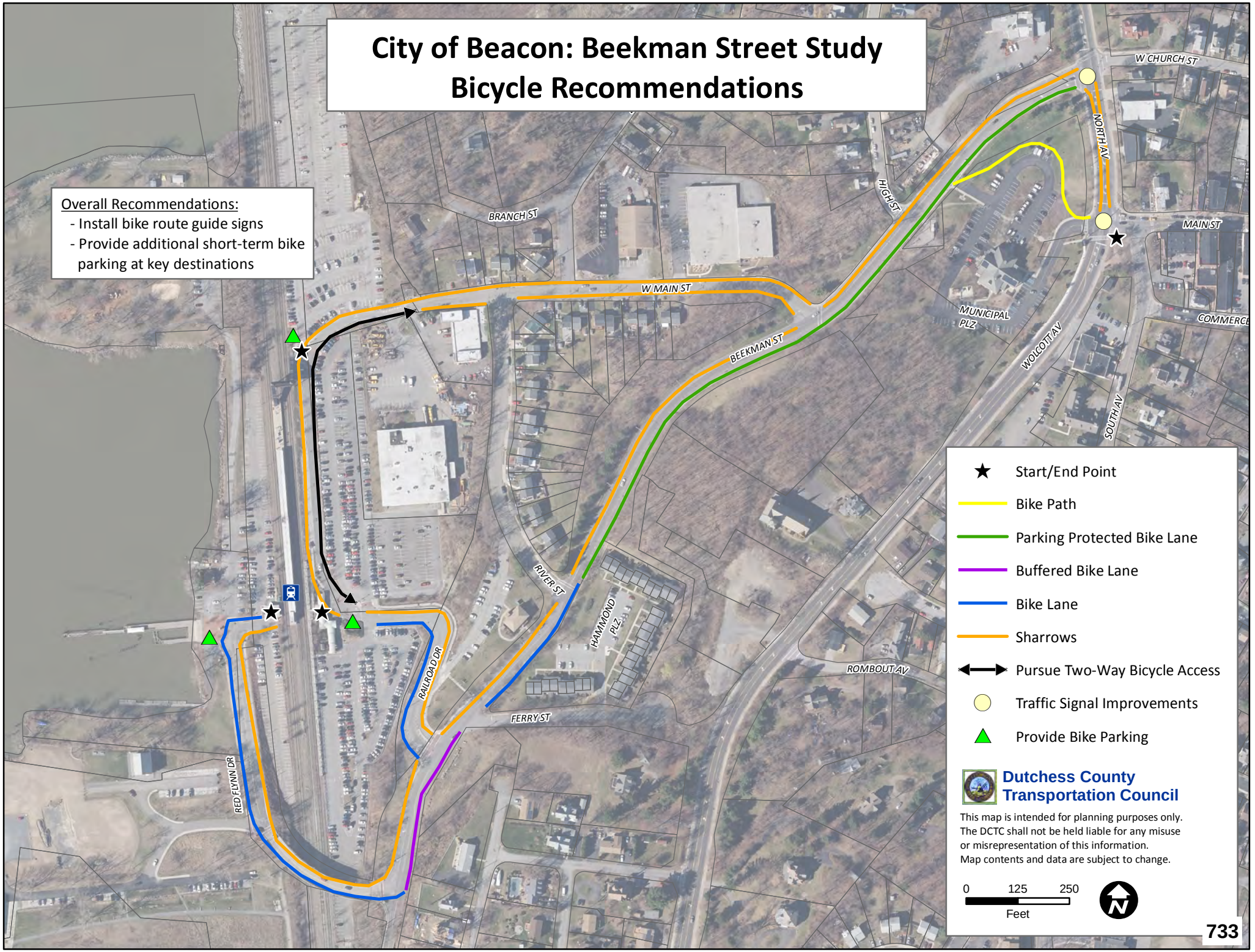
City of Beacon: Beekman Street Study
Walking Route Options



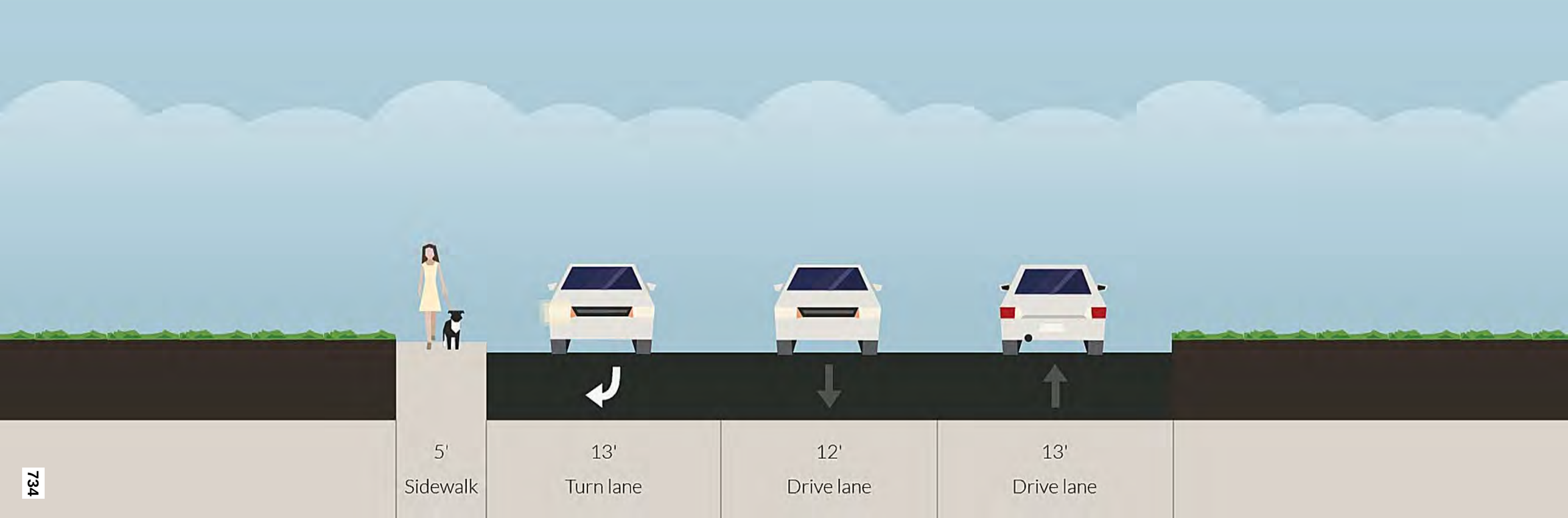
City of Beacon: Beekman Street Study
Pedestrian Recommendations



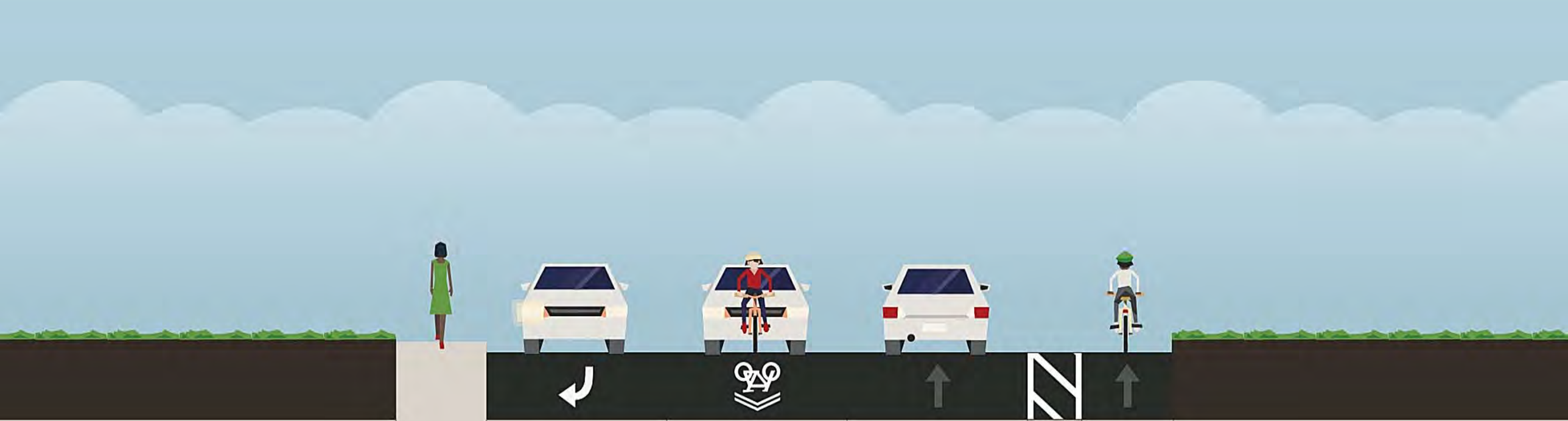
City of Beacon: Beekman Street Study
Bicycle Recommendations



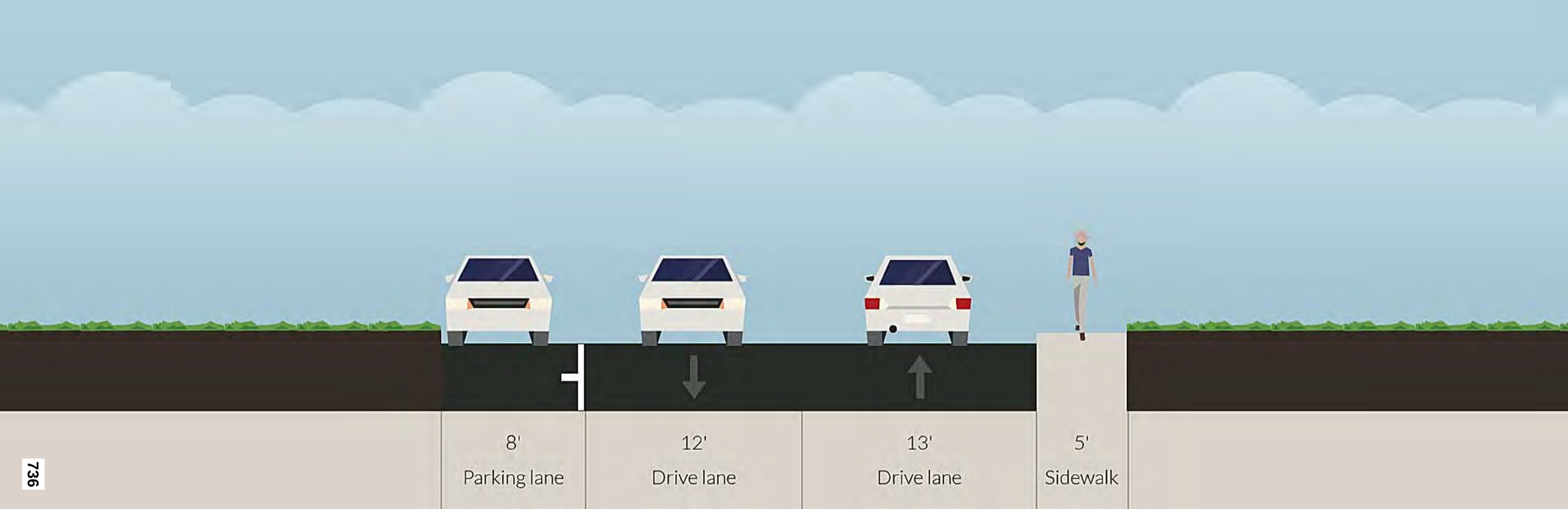
Beekman St: Red Flynn–Ferry (existing)



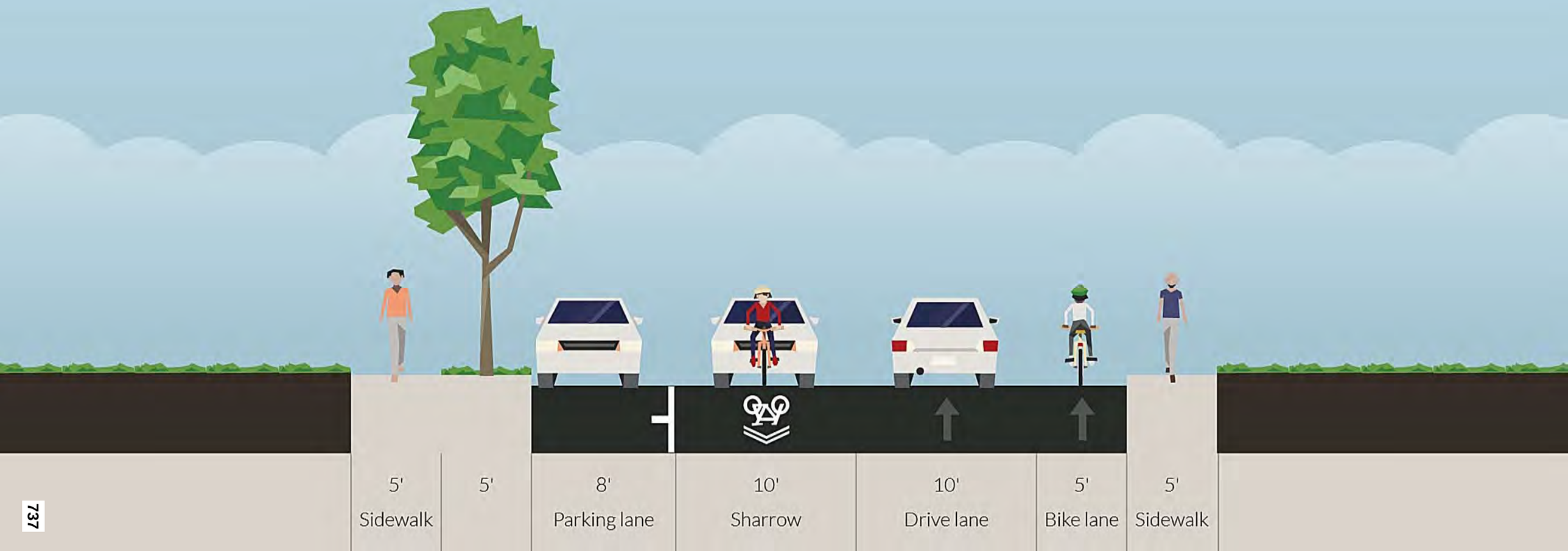
Beekman St: Red Flynn–Ferry (proposed)



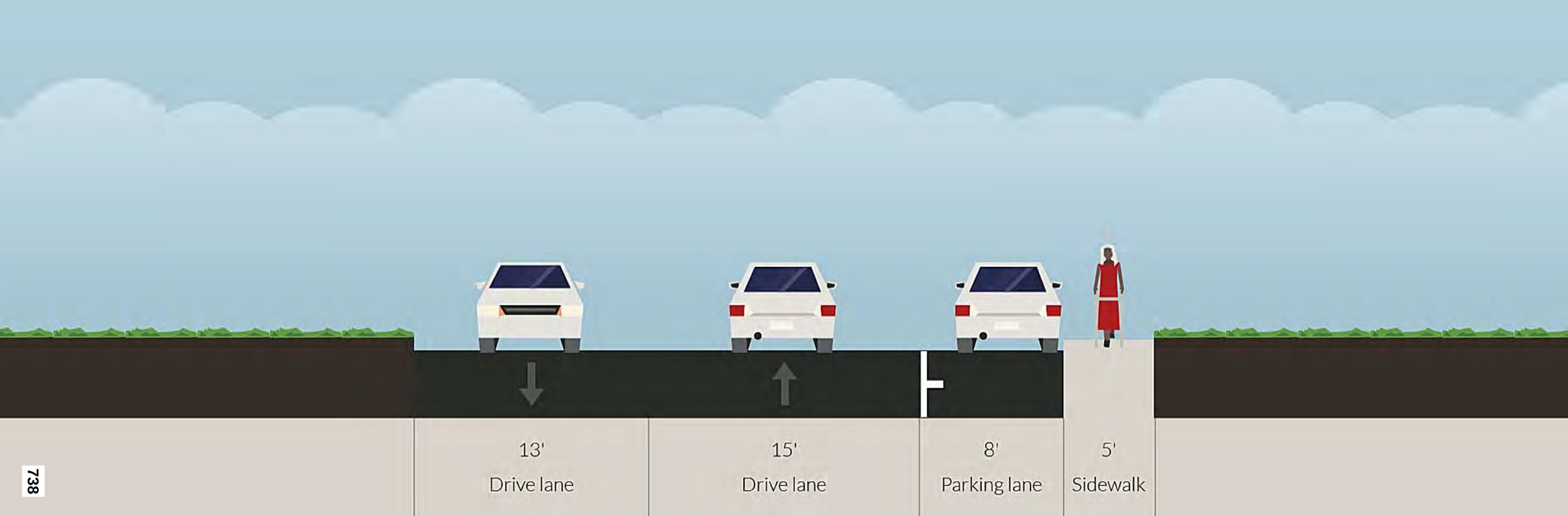
Beekman St: Ferry – River (existing)



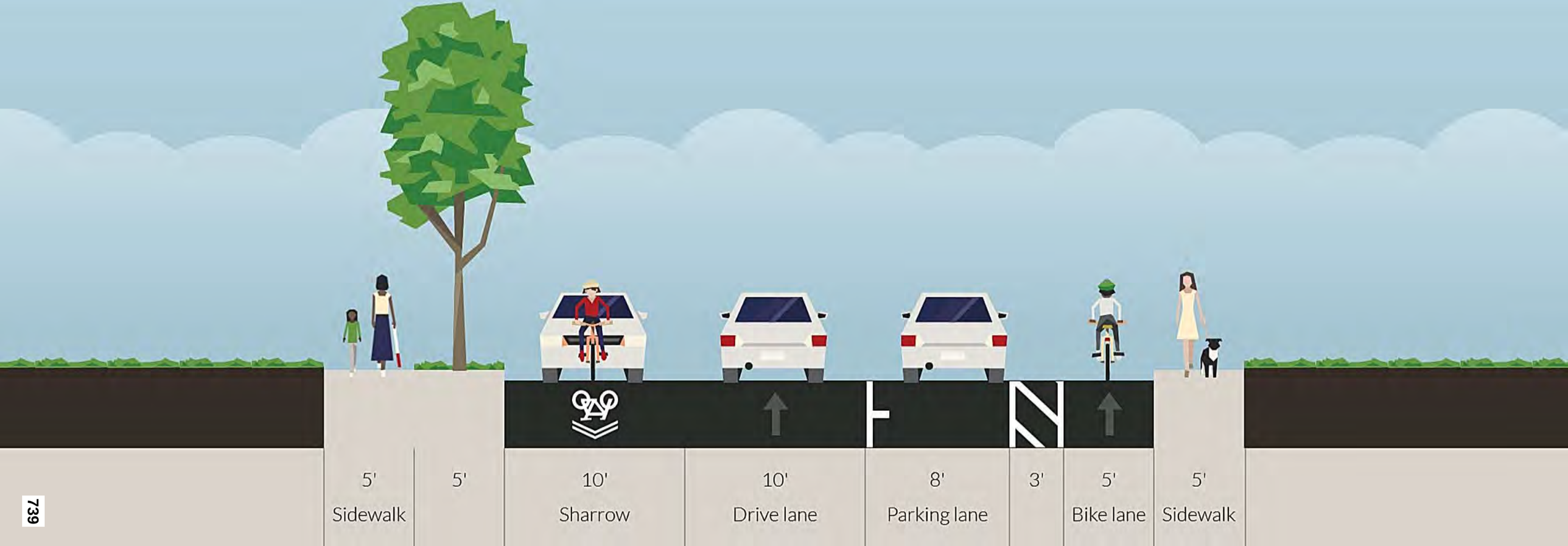
Beekman St: Ferry – River (proposed)



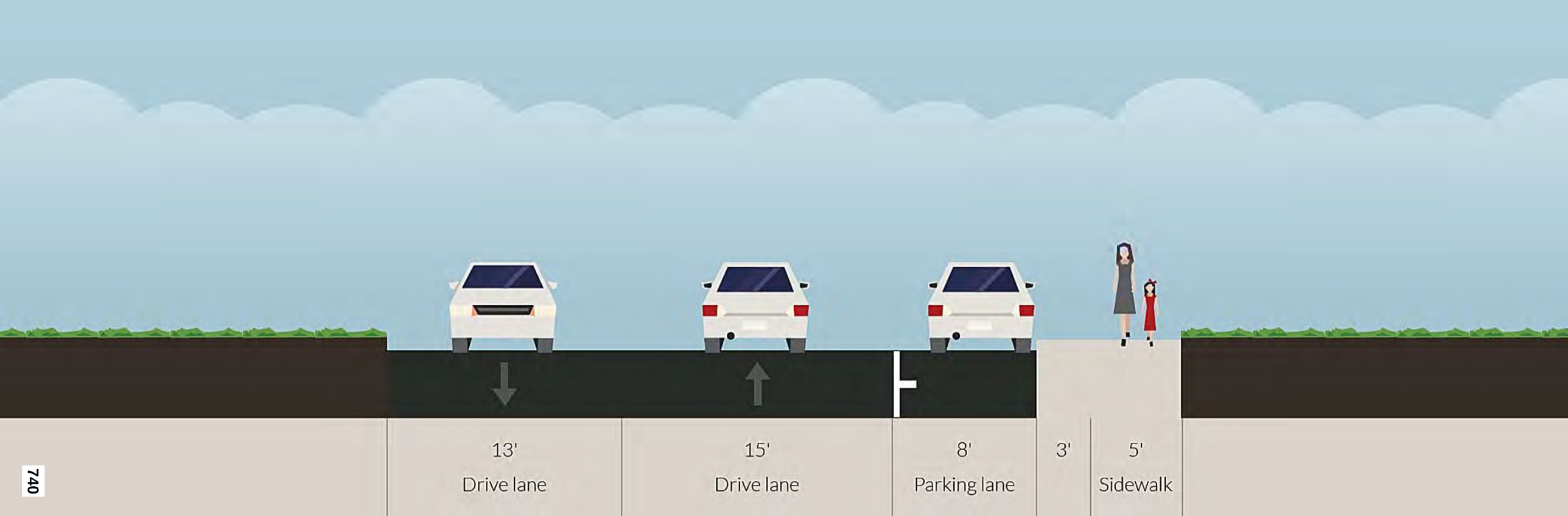
Beekman St: River–W Main (existing)



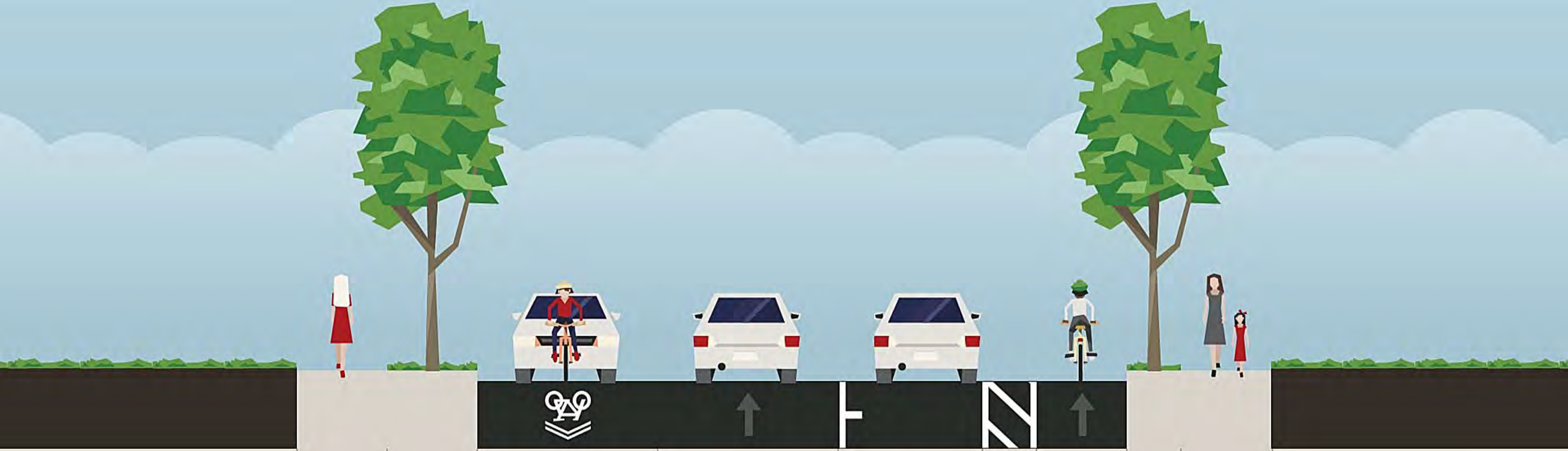
Beekman St: River–W Main (proposed)



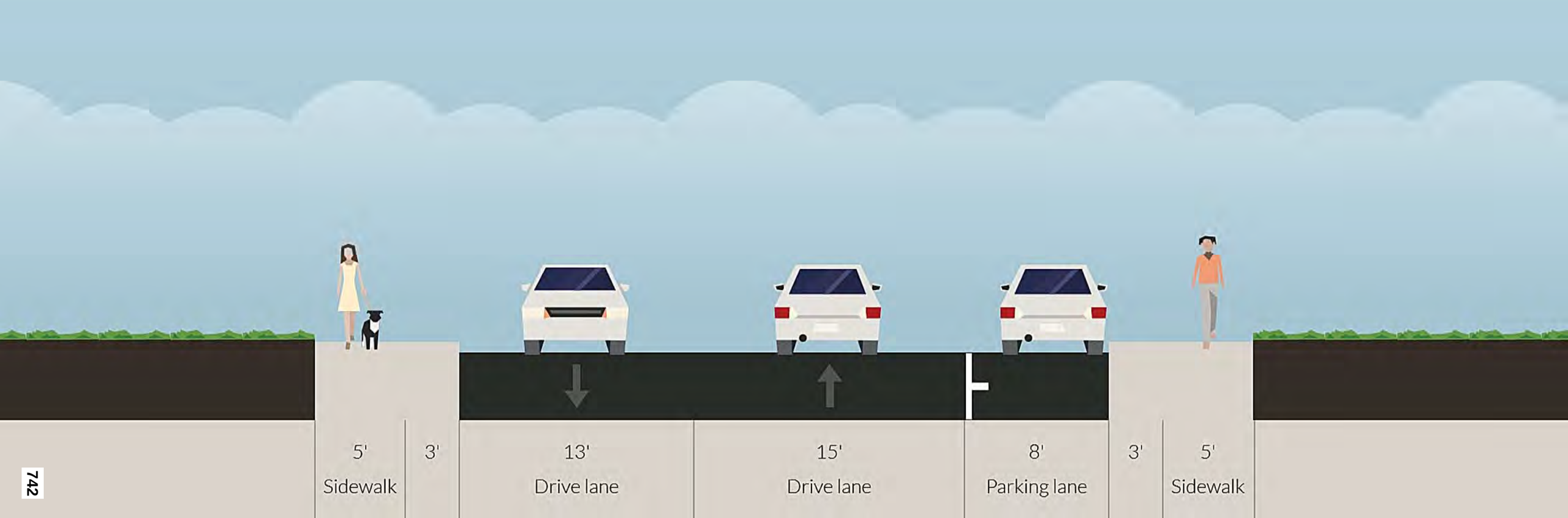
Beekman St: south of W Main St (existing)



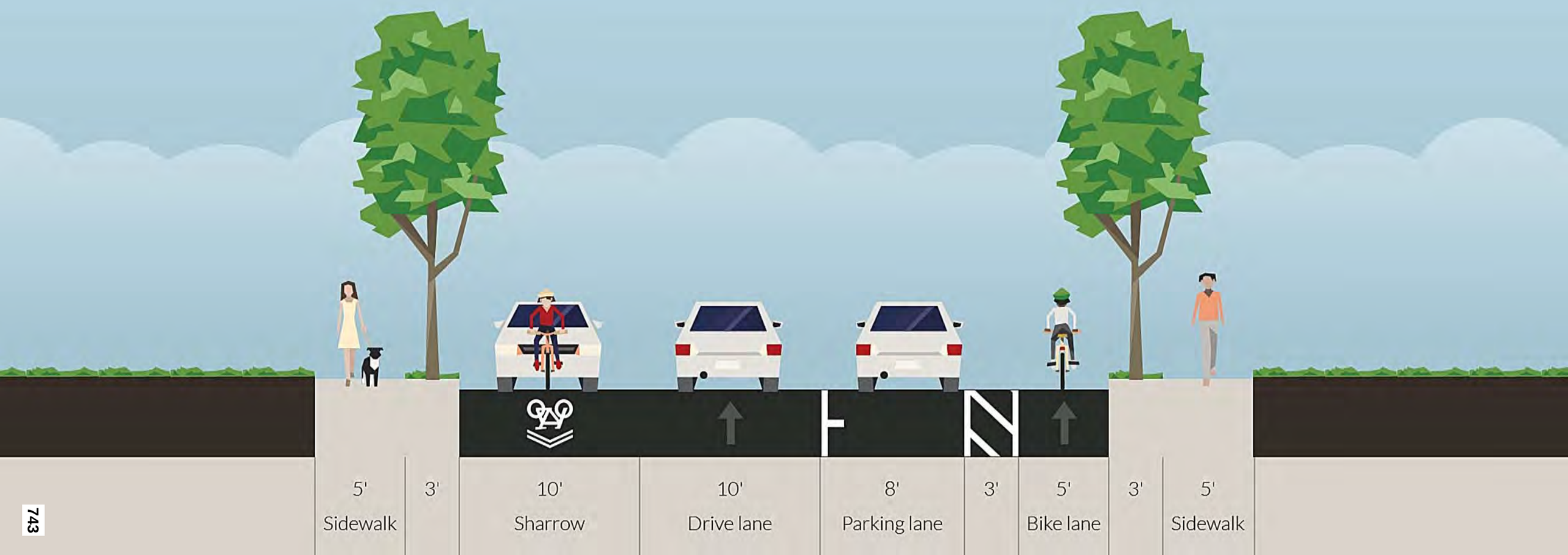
Beekman St: south of W Main St (proposed)



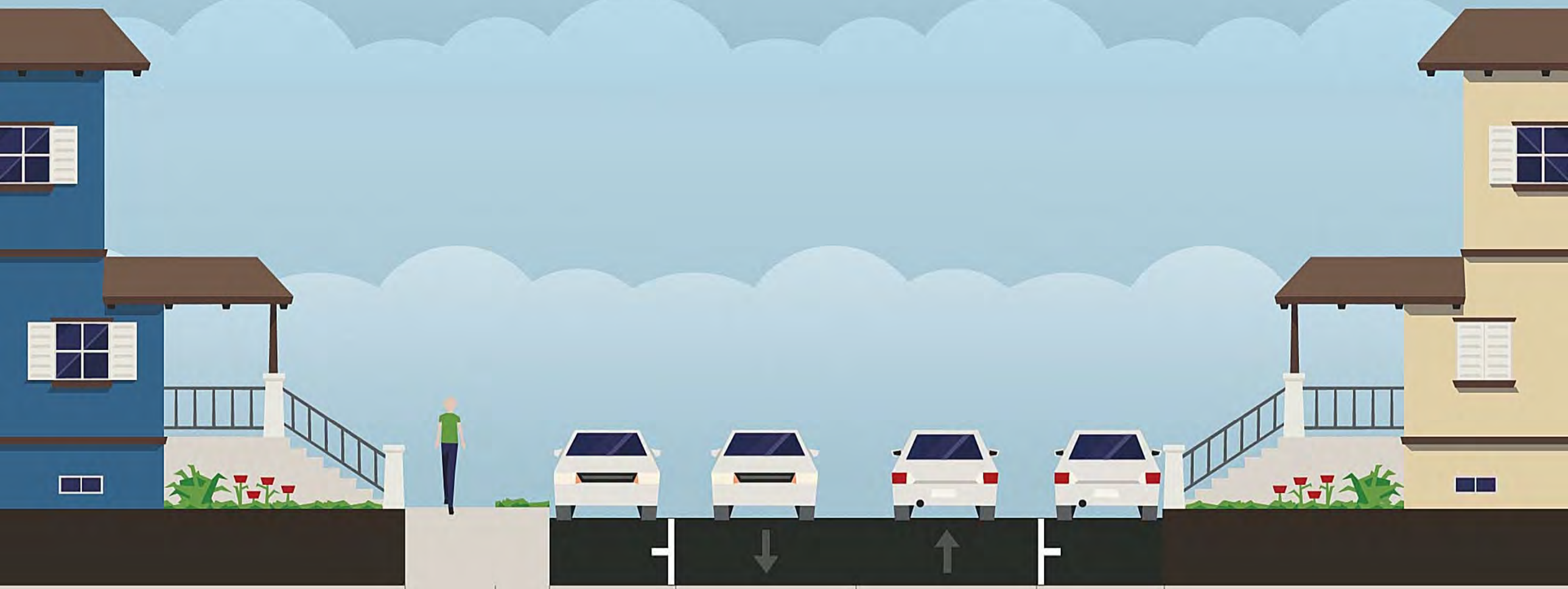
Beekman St: West Main St – 9D (existing)



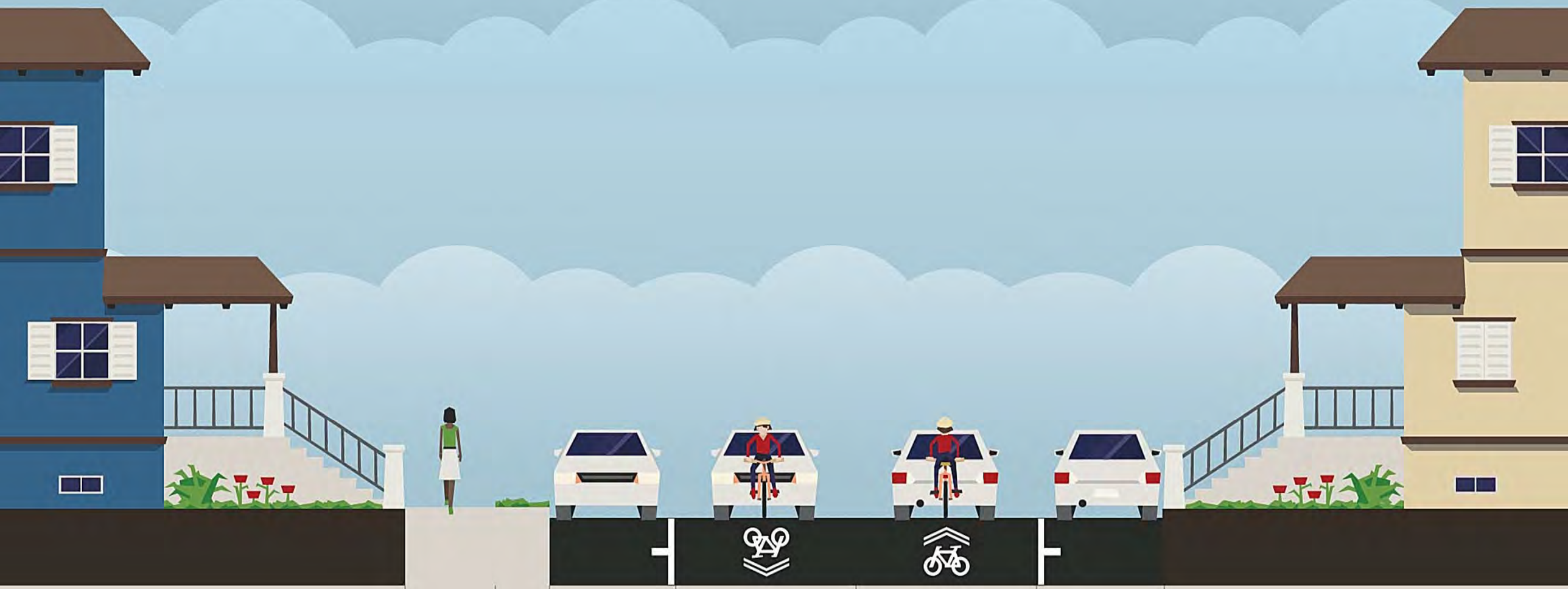
Beekman St: West Main St – 9D (proposed)



W Main St: west of Bank St (existing)

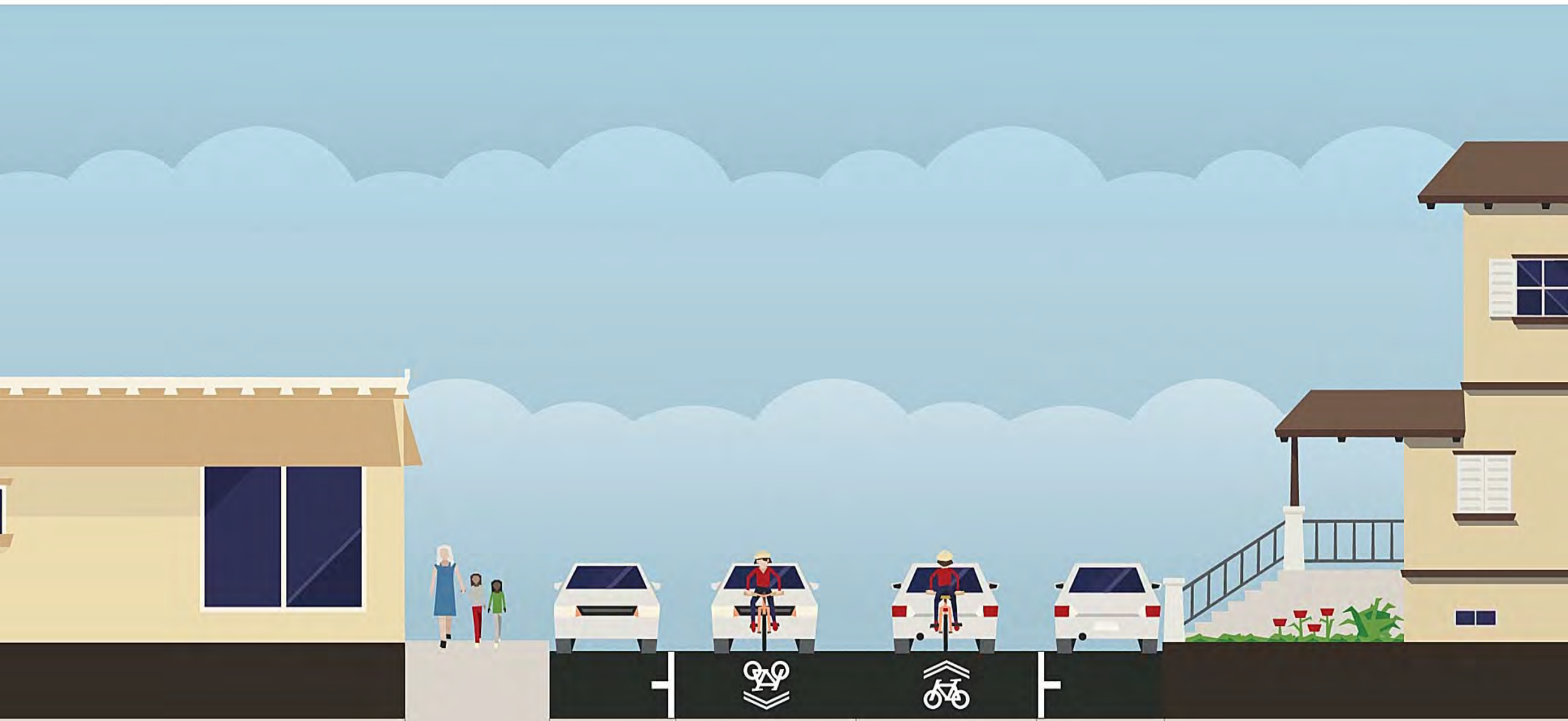


W Main St: west of Bank St (proposed)



W Main St: east of Bank St (existing)

W Main St: east of Bank St (proposed)



Colliers
Engineering
& Design

Traffic & Parking Study

Appendix F | Parking Data

§ 223-41.21. Regulations.

A. Uses by right. Uses listed below in this Subsection A are permitted by right subject to site plan review, except as otherwise noted in this § 223-41.21. Site plan review shall not be required for a change of use in an existing building where the new use is allowed by right, the building will not be expanded, and the minimum number of off-street parking spaces required for the new use in § 223-41.21F(2) is not more than 25% greater than the requirement for the existing use in § 223-26F herein. The following uses are allowed by right subject to a requirement that for any new construction of a principal building, an apartment use or attached, semidetached, or multifamily dwelling unit shall only be located on the upper stories or at least 50 feet behind the facade in the rear portion of the ground floor, if the building faces the north side of Beekman Street between Route 9D and West Main Street, faces the north side of West Main Street, or if the parcel is within 400 feet of the Route 9D-Beekman Street intersection, as identified on the Zoning Map: **[Amended 8-19-2013 by L.L. No. 14-2013; 7-21-2014 by L.L. No. 11-2014; 6-15-2020 by L.L. No. 7-2020; 2-16-2021 by L.L. No. 02-2021]**

(1) Multifamily dwelling.

(2) Attached or semidetached dwelling units.

(3) Apartment building.

(4) Inn.

(5) Bed-and-breakfast establishment.

(6) Artist studio, art gallery or exhibit space.

(7) Hotel.

(8) Park, plaza, green, preserve or community garden.

(9) Retail, personal services business, bank, or restaurant, coffee house, bar, brew pub or other establishment that serves food, with or without alcoholic beverages, provided that:

(a) The floor area of each such establishment is not greater than 5,000 square feet;

(b) The parcel is within 400 feet of the Route 9D-Beekman Street intersection, located along the north side of Beekman Street between Route 9D and West Main Street, or located along the north side of West Main Street, as identified on the Zoning Map.

(10) Office, trade school, training program, microbrewery or microdistillery, provided that:

(a) The total floor area of each such establishment is no greater than 25,000 square feet;

(b) The parcel is within 400 feet of the Route 9D-Beekman Street intersection, located along the north side of Beekman Street between Route 9D and West Main Street, or located along the north side of West Main Street, as identified on the Zoning Map.

(11) Government facility, including buildings, structures and uses owned or operated by the City of Beacon or any department or agency thereof.

(12) Day-care center.

(13) Museum, theater, concert, or conference space.

:1

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(14) College, university, private school, or nursery school.

(15) Workshop.

(16) Artist live/work space, provided that, if the use faces the north side of Beekman Street between Route 9D and West Main Street, faces the north side of West Main Street, or if the parcel is within 400 feet of the Route 9D-Beekman Street intersection, the residential space shall only be located on the upper stories or at least 50 feet behind the facade in the rear portion of the ground floor, unless the first 50 feet behind the facade is used for the retail sale of the artist's wares.

(17) Spa, fitness center, or exercise studio.

(18) Wireless telecommunication services facilities, subject to § 223-26.4.

B. Uses by special permit. **[Amended 7-21-2014 by L.L. No. 11-2014; 4-3-2017 by L.L. No. 5-2017; 1-16-2018 by L.L. No. 1-2018; 10-15-2018 by L.L. No. 17-2018; 6-15-2020 by L.L. No. 7-2020]**

(1) The following uses are allowed in existing buildings as permitted uses. For newly constructed buildings, the following uses are allowed by special permit from the Planning Board, upon a finding that the proposed use is consistent with the City of Beacon Comprehensive Plan, will enhance the architectural character of the street, and will contribute to creating a more urban, pedestrian-friendly quality in the L District, and that the conditions and standards in § 223-18B(1)(a) through (f) have been met: **[Amended 2-16-2021 by L.L. No. 02-2021]**

(a) Manufacturing use or food preparation business that may also sell goods made on the site for consumption off the premises, provided that:

[1] The total manufacturing or food preparation business floor area of the building is no greater than 25,000 square feet;

[2] The parcel is within 400 feet of the Route 9D-Beekman Street intersection, located along the north side of Beekman Street between Route 9D and West Main Street, or located along the north side of West Main Street, as identified on the Zoning Map; and

[3] The Planning Board finds that there are no substantial detrimental effects on parking, traffic or on the character of surrounding neighborhoods or the community.

(b) Historic District and Landmark Overlay use, subject to § 23-24.7.

(2) In considering the appropriateness of the proposed use, the Planning Board shall consider impacts on shadows, traffic, and parking and may impose traffic and parking mitigation measures, including but not limited to provision of pedestrian walkways and stairways on-site.

B.1. Accessory uses. The following are permitted accessory uses in the L District: **[Added 7-21-2014 by L.L. No. 11-2014]**

(1) Any accessory building or use customarily incident to a permitted use, except outside storage.

(2) Signs, in accordance with the provisions of § 223-15, as applicable.

(3) Off-street parking areas, in accordance with § 223-41.21F.

(4) Exterior lighting, in accordance with the provisions of § 223-41.21K(12) and § 223-14B. **[Amended 6-15-2020 by L.L. No. 7-2020]**

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(5) Parking structure. **[Added 6-15-2020 by L.L. No. 7-2020[1]]**

(6) Roof garden or solar collector, site plan review not required.

(7) Greenhouse.

(8) Short-term rentals in any dwelling unit, or room(s) therein, located in a one-family home, two-family home, accessory apartment, or multifamily dwelling, as provided in § 223-26.5. **[Added 6-15-2020 by L.L. No. 6-2020[2]]**

C. Prohibited uses. Uses not listed in Subsection A or B above and the following specific uses are prohibited in the L District:

(1) Gasoline filling station.

(2) Drive-through facilities, stand-alone or used in connection with any other use.

D. Dimensional regulations. All new construction or enlargement of existing structures in the L District shall be subject to the following minimum and maximum dimensional regulations:

(1) Front setback: minimum zero, maximum 20 feet, except that a larger maximum may be allowed if a) surrounding buildings have a larger setback, in which case the setback line may be placed in a location that harmonizes with the prevailing setbacks, provided that there is no parking in the front yard other than on a driveway accessing a rear garage; and b) the area in front of a building has no parking spaces and is landscaped and used in a manner that enhances the street life by such means as pocket parks, gardens, fountains, outdoor tables, public art, and outdoor display of items for sale on the premises. At least 30% of any such outdoor space shall be landscaped with plant materials in a configuration approved by the Planning Board.

(2) Corner buildings: Corner buildings shall be treated as having frontage on both streets and front setbacks shall apply to both, as appropriate to the street.

(3) Side setbacks: minimum of zero, maximum of 30 feet. The minimum side setback may be increased by the Planning Board to allow light and air to continue to penetrate an existing building that has side windows.

(4) Rear setbacks: minimum 25 feet, except that if the rear yard is voluntarily dedicated to the City of Beacon as all or part of a public parking lot or parking structure, the minimum setback shall be 10 feet with landscaping to screen adjacent uses.

(5) Building height: minimum two stories, average maximum four stories and 48 feet, as determined from the average street front level. Stories built below the grade of the street front shall not be counted toward building height. The second story of a two-story building shall be built in a manner that allows actual occupancy for one or more permitted uses and does not create the mere appearance of a second story. For any building over three stories, a stepback of at least 15 feet behind the facade shall be required above the third story. Chimneys, vent pipes, mechanical systems, elevator shafts, antennas, wireless communications facilities, roof gardens and fences, greenhouses, solar collectors, wind energy systems, and other rooftop accessory

1. **Editor's Note: This local law also repealed former Subsection B(5), which listed home occupation as a permitted accessory use.**

2. **Editor's Note: This local law provided the following: "This local law shall take effect on October 1, 2020. Any short-term rental, as defined herein, in existence prior to October 1, 2020 shall have until November 15, 2020, to file an application to obtain a short-term rental permit. Any short-term rental existing prior to October 1, 2020 that (a) does not meet the definition of short-term rental or (b) is a short-term rental, as defined, and does not file an application by November 15, 2020 shall be deemed to be in violation of this local law and subject to enforcement."**

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structures may project up to 15 feet above the maximum height. With the exception of roof gardens and solar collectors, such projections may occupy no more than 20% of the roof area and must be set back at least 15 feet from the front edge of the roof. **[Amended 4-3-2017 by L.L. No. 5-2017]**

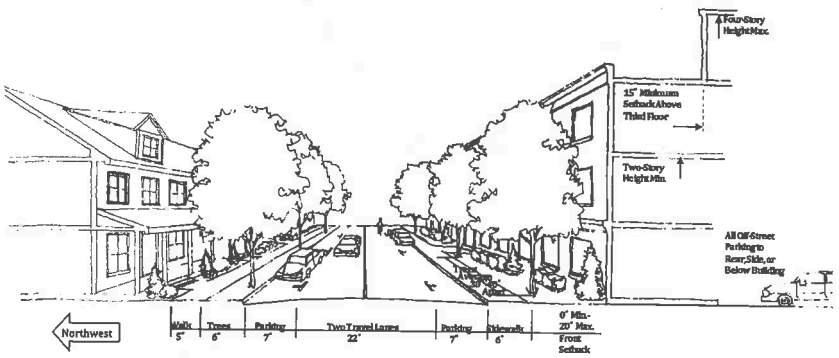
(6) Lot area and lot width: There are no minimum lot area or lot width requirements.

(7) Lot depth: Minimum lot depth is 75 feet, except that on any lot in which the area behind a building is voluntarily dedicated to the City as public parking, there shall be no minimum depth requirement.

(8) Floor area ratio: There is no maximum floor area ratio.

(9) Landscaped area: A minimum of 15% of the lot shall be landscaped with trees, shrubs, or grass, in locations approved by the Planning Board that enhance the streetscape or provide a landscaped interior courtyard and are found to be consistent with the intent of the L District. This requirement shall be reduced to 5% if the landscaped area is accessible to the public. These requirements may be waived for preexisting lots of 5,000 square feet or less.

Figure 21-0: Illustrative View of Proposed Linkage Zoning Requirements



(10) Linkage Zone standards.

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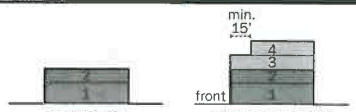
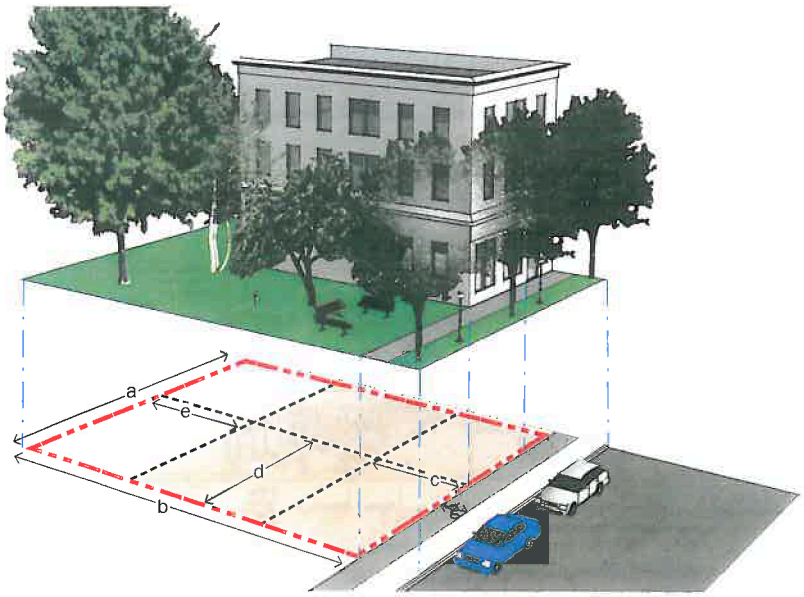
Figure 21-1: Linkage Zone Standards

LOT STANDARDS			
		Min.	Max.
	Lot Area	–	–
(a)	Lot Width	–	–
(b)	Lot Depth	75'	–
	F.A.R.	–	–
(c)	Front Setback	0'	20'
(d)	Side Setback	0'	30'
(e)	Rear Setback	25'	–
(f)	Landscaped Area	15%	–
	Frontage Occupancy	–	–
(g)	Pedestrian Clearway	5'	–

BUILDING HEIGHTS



FRONTAGE TYPES	
	Allowed
Storefront	within 400' of Rt. 9-D/Beekman St. intersection
Forecourt	yes
Stoop	yes
Porch	yes
Lightwell	yes



See text for exceptions and clarifications to Figure 21-1

E. Frontage types.

(1) The following building frontage types are permitted:

(a) Storefront, only at locations within 400 feet of the Route 9D-Beekman Street intersection.

(b) Forecourt.

(c) Stoop.

(d) Porch.

(e) Lightwell.

(2) Storefront: a frontage type where the building facade is placed at or close to the right-of-way line, with the entrance at sidewalk grade. This building frontage type is conventional for retail use. It is characterized by a high percentage of glazing on the first floor, a prominent entrance, and often an awning. Recessed doors on storefronts are acceptable.

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Figure 21-2: Illustrative View of Storefront Frontage Type

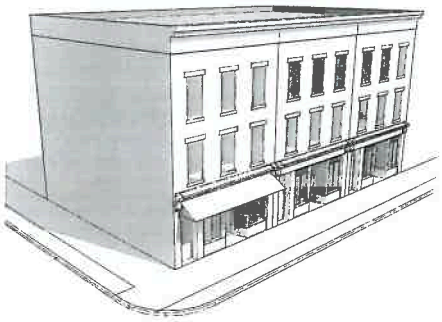


Figure 21-3: Section View of Storefront Frontage Type

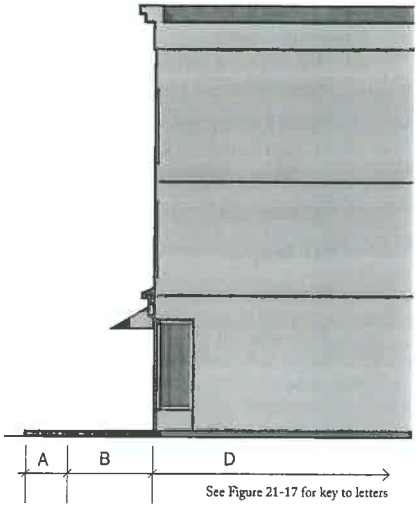
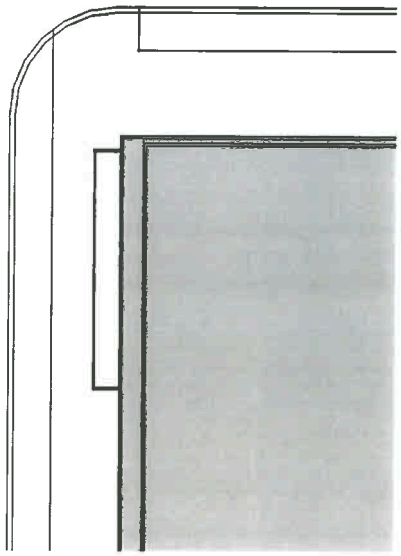


Figure 21-4: Plan View of Storefront Frontage Type



(3) Forecourt. A forecourt is a semi-public exterior space whose back and sides are surrounded by a building and whose front opens to a thoroughfare—forming a court. The court is suitable for gardens, gathering space, and outdoor dining.

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Figure 21-5: Illustrative View of Forecourt Frontage Type

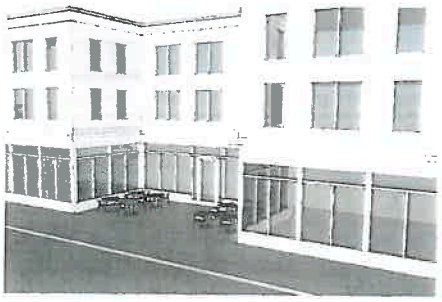
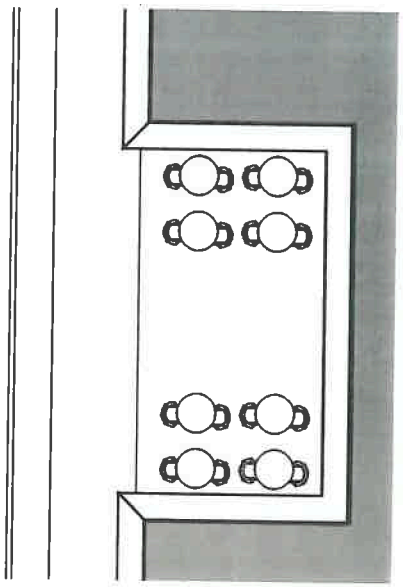


Figure 21-6: Section View of Forecourt Frontage Type

Figure 21-7: Plan View of Forecourt Frontage Type



(4) Stoop. In this frontage type, the building facade is aligned close to the frontage line. The first story is usually elevated sufficiently to provide some privacy for occupants. A stoop (composed of an elevated pad and stairs) lands at the edge of the sidewalk or a short front walkway. A small porch or roof may cover the stoop. This frontage type is suitable for ground-floor residential uses with short setbacks.

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Figure 21-8: Illustrative View of Stoop Frontage Type

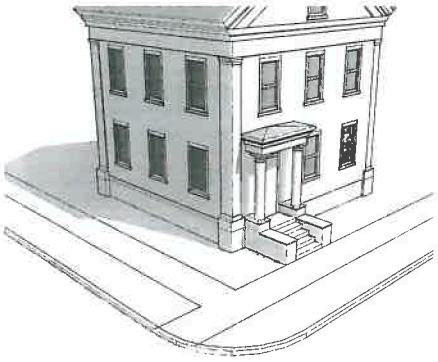


Figure 21-9: Section View of Stoop Frontage Type

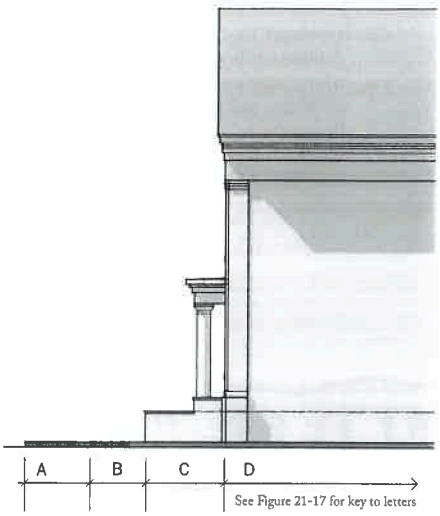
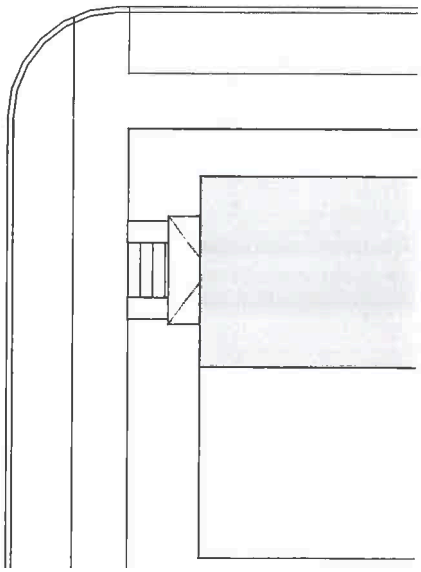


Figure 21-10: Plan View of Stoop Frontage Type



(5) Porch. A frontage type where the building facade is set back from the frontage line. The porch (a covered, but not enclosed, space) sits between the facade and the frontage line. The porch provides a transition from the public realm to the private realm. Porches are typically elevated above the surrounding grade. A porch should have a clear space that is a minimum of six feet deep and 10 feet wide.

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Figure 21-11: Illustrative View of Porch Frontage Type

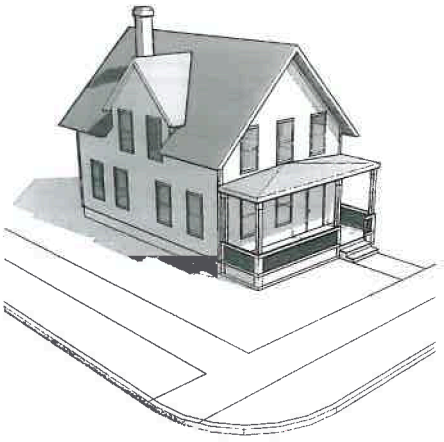
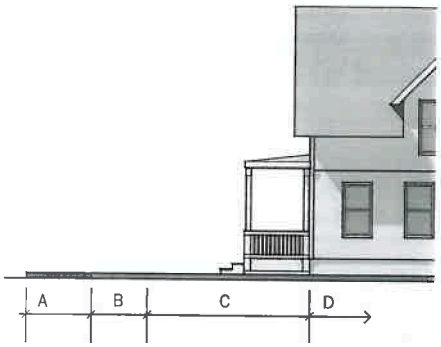
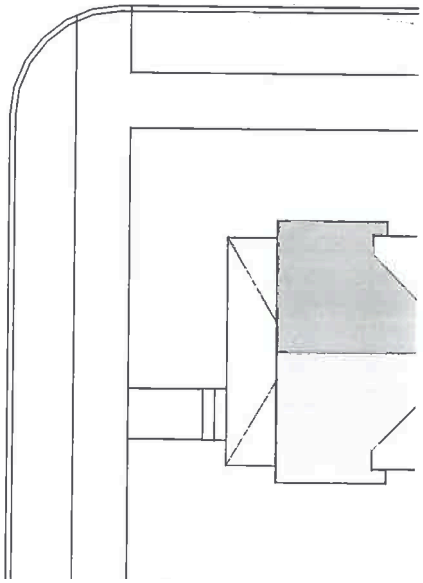


Figure 21-12: Section View of Porch Frontage Type



See Figure 21-17 for key to letters

Figure 21-13: Plan View of Porch Frontage Type



(6) Lightwell: a frontage type where the facade is set back from the frontage line. The ground floor of the building is elevated to allow light to enter the basement, which is typically occupied. Stairs lead up to the ground floor and down to a below-grade entrance and/or sunken court. The stairs typically land at the frontage line.

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Figure 21-14: Illustrative View of Lightwell Frontage Type

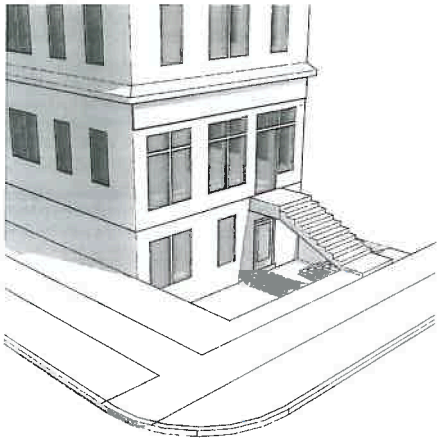
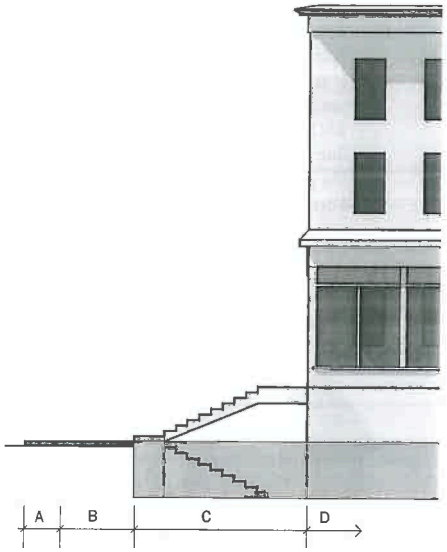
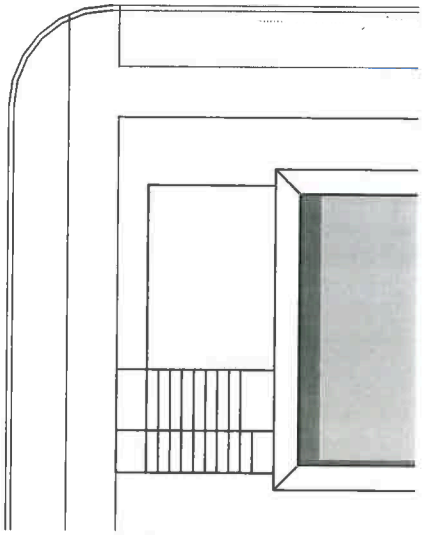


Figure 21-15: Section View of Lightwell Frontage Type



See Figure 21-17 for key to letters

Figure 21-16: Plan View of Lightwell Frontage Type



F. Parking location and quantity.

(1) All off-street parking shall be located behind, underneath, or to the side of a building. If on the side, it shall be located at least 40 feet from any property line that fronts on a street and be screened by a low brick or stone wall, hedge, ornamental fence, and/or other landscaping that maintains the continuity of the street and that screens parked cars from view from the street.

(2) The minimum quantity of required on-site parking spaces shall be as follows:

(a) Residential: one space per unit.

(b) Office and general commercial: 2.5 spaces per 1,000 square feet of floor area.

:10

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(c) Retail commercial and personal services: three spaces per 1,000 square feet of floor area.

(d) Other uses: as listed in § 223-26 of this chapter. **[Amended 4-3-2017 by L.L. No. 5-2017]**

(3) The quantity of required on-site parking in Subsection F(2) above may be modified by the Planning Board, in its discretion, based upon information submitted by the applicant or otherwise made available to the Planning Board in the public record, demonstrating one or more of the following:

(a) That the projected operational characteristics of the proposed use and/or its proximity within walking distance of the train station and other services justify a reduction in the required amount of parking.

(b) That adequate shared parking, contractually obligated for the duration of the proposed use, is available within 500 feet of the site and in the L District.

(c) That the applicant has provided sufficient bicycle parking to reduce anticipated vehicular travel demand, as supported by a professional parking study. **[Amended 4-3-2017 by L.L. No. 5-2017]**

(d) That there is sufficient public parking available within 800 feet of the site and in the L District to meet foreseeable parking needs of the proposed use and surrounding uses for the duration of the proposed use.

(e) That the applicant will voluntarily dedicate land for public parking on site or will acquire land by purchase or long-term lease (for the duration of the proposed use) within 800 feet of the site and in the L District and voluntarily dedicate such land to the City for public parking.

(f) That a professional parking study of the proposed use and the surrounding area demonstrates that a different amount of parking would be appropriate for the use in its particular location and/or that existing and/or proposed off-site parking is sufficient.

(4) For small preexisting lots where the provision of on-site parking is infeasible, the Planning Board may waive up to 50% of the parking requirements, provided that the total floor area of the building is no greater than 3,000 square feet. The Planning Board may grant additional parking waivers, at its discretion, subject to an in-lieu payment of $10,000 per parking space. **[Amended 4-3-2017 by L.L. No. 5-2017]**

(5) Section 223-26B of this chapter shall not apply in the L District.

G. Streetscape improvements.

(1) On West Main Street, Beekman Street, and Wolcott Avenue, within the building transition zone, the Planning Board may require the lot owner to provide planters, trees, shrubs, or other landscaping to enhance the appearance of the streetscape. Ornamental fencing four feet or less in height may be provided to separate privately owned space from public space. Chain link, vinyl, and solid fencing shall be prohibited. For commercial uses, display areas, and outdoor dining and seating areas may be provided.

(2) A pedestrian clearway, at least five feet wide, with unobstructed space for pedestrian activity, shall be provided along the sidewalk, unless site conditions require a narrower clearway. A pedestrian clearway of eight feet shall be provided along storefront frontages.

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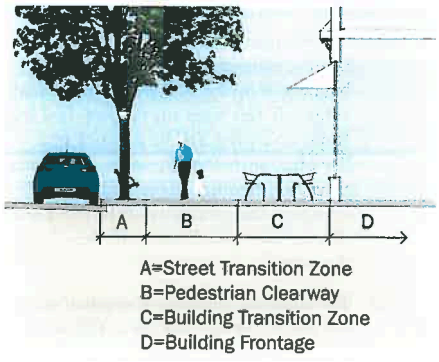
(3) Within the street transition zone, if space permits, lot owners may plant trees and place benches, tables, and outdoor seating areas with the approval of the Department of Public Works. The Planning Board may require the planting of street trees on average 30 feet to 40 feet apart as a condition of site plan approval. To the extent practical, an applicant shall, in cooperation with the City of Beacon Department of Public Works, implement the recommendations in the Linkage Plan street sections for Beekman Street and Wolcott Avenue.

(4) The Planning Board may require that an applicant constructing a building greater than 10,000 square feet in floor area pay for the provision of related street improvements to improve pedestrian and/or bicycle safety.

Figure 21-17: Parts of the Streetscape



H. (Reserved).[3]

I. Site plan and special permit amendments. For any proposed change to an approved site plan, the applicant shall meet with the Building Inspector who shall make a determination as to whether or not the proposed change is significant. If the Building Inspector determines that the change is significant (e.g., a change of use and/or a change in dimensions of more than 10% shall be presumed to be significant), the application shall be referred to the Planning Board for an amendment to the site plan or special permit, as appropriate. If the Building Inspector determines that the change is not significant and otherwise complies with applicable requirements, the Building Inspector is authorized to issue a building permit without further review.

J. Compliance with below market rate housing requirements. All applications involving residential development shall comply with Article IVB of this chapter (Affordable-Workforce Housing).

K. Design standards.

(1) Because of the design standards in this section, the architectural review provisions of Chapter 86 shall not apply within the L District. In addition to the preceding sections of this article, all new buildings or substantial alterations of existing buildings shall comply with the following design requirements. These design standards are intended to promote the following purposes:

(a) Preserve and enhance the unique character of the City of Beacon;

(b) Promote pedestrian access and activity, as well as a general sense of area security;

3. **Editor's Note: Former Subsection H, Site plan review/special permit procedures and criteria, as amended, was repealed 6-15-2020 by L.L. No. 7-2020.**

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(c) Restore and maintain the role of streets as civic and social spaces, framed by active uses;

(d) Encourage economic development and a convenient mix of uses and services; and

(e) Support a sense of design context that appropriately relates historic buildings, general facade and window patterns, and traditional streetscapes in the area to new redevelopment efforts, while still allowing contemporary architectural flexibility.

(2) Standards using the verb "shall" are required; "should" is used when the standard is to be applied unless the Planning Board finds a strong justification for an alternative solution in an unusual and specific circumstance; and "may" means that the "standard" is an optional guideline that is encouraged but not required.

(3) Buildings should have a top-floor cornice feature and first-floor architectural articulation, such as a storefront with a secondary cornice or an architecturally emphasized entrance doorway, to accent the central body of the building.

(4) Architectural features and windows should be continued on all sides of the building that are clearly visible from a street or public parking area, avoiding any blank walls, except in cases of existing walls or potential common property walls. Larger buildings shall incorporate significant breaks in the facades and rooflines at intervals of no more than 35 feet.

(5) Building elements that provide additional architectural interest, such as bay windows, and cornices, but not including balconies or porches, may encroach up to two feet beyond the front line if the bottom of the encroaching building elements is at least 12 feet above grade. **[Amended 12-9-2019 by L.L. No. 12-2019]**

(6) Metal, glass or canvas-type awnings and canopies or projecting signs are encouraged and may encroach up to six feet into the front setback and over the sidewalk above seven feet. Vinyl awnings are discouraged unless the applicant can demonstrate to the Planning Board's satisfaction that the finish and design of such awning are of high quality, aesthetically pleasing and meet the intended standards of the district, as determined by said Board. **[Amended 7-21-2014 by L.L. No. 11-2014]**

(7) Buildings shall have a front entrance door facing the primary street and connected to the sidewalk. Front entrance doors for commercial buildings and retail storefronts shall be active and provide main access during business hours.

(8) Primary individual window proportions shall be greater in height than in width. Mirrored, reflective, or tinted glass, all-glass walls, and exterior roll-down security gates shall not be permitted. Any shutters shall match the size of the window opening, appear functional, and be attached to the window frame.

(9) Commercial buildings shall have at least 70% glass on the first-floor facades, located between two feet and 10 feet above the sidewalk. Residential buildings shall have at least 30% glass on the first-floor facades.

(10) Finish building materials should be wood, brick, traditional cement-based stucco, stone or fiber-cement siding or other material deemed acceptable by the Planning Board. Vinyl, aluminum or sheet metal siding or sheet trim, exposed concrete blocks or concrete walls, plywood or other similar prefabricated panels, unpainted or unstained lumber, synthetic stone or brick, or synthetic stucco, exterior insulation and finishing system (EIFS), or direct-applied finish system (DAFS), and chain link fencing shall not be permitted. **[Amended 7-21-2014 by L.L. No.**

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11-2014]

(11) Materials and colors should complement historic buildings on the block.

(12) Lighting fixtures shall be a maximum of 15 feet in height, except pole lights in rear parking lots shall be a maximum of 20 feet high. All exterior lighting shall comply with the standards in §223-14B. **[Amended 6-15-2020 by L.L. No. 7-2020]**

(13) Mechanical equipment and refuse containers shall be concealed from public view by approved architectural elements and shall be located to the rear of the site. Window or projecting air conditioners shall not be permitted on the front facade.

(14) The Planning Board may waive setback requirements for landmark civic buildings, including government buildings, schools, libraries, or places of worship, and for pedestrian-oriented places, such as public greens or plazas and outdoor eating areas.

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Figure 21-18: Design Standards Examples A [Amended 6-15-2020 by L.L. No. 7-2020]

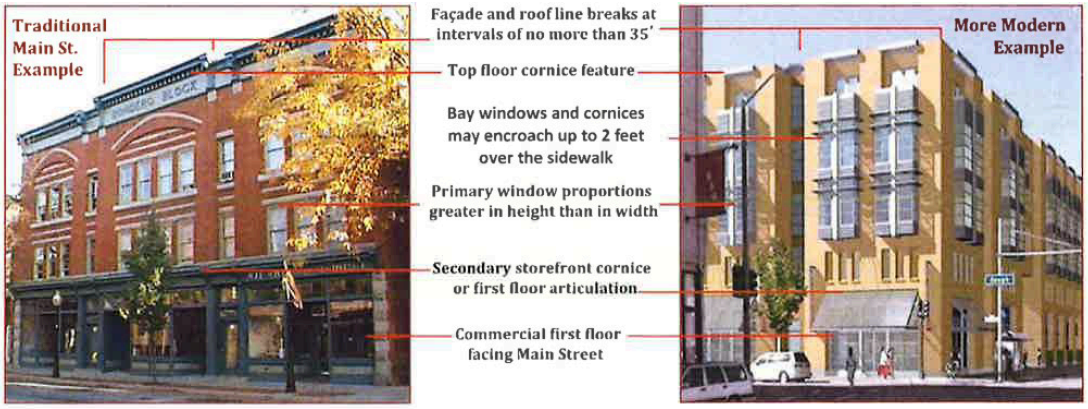

Figure 21-19: Design Standards Examples B

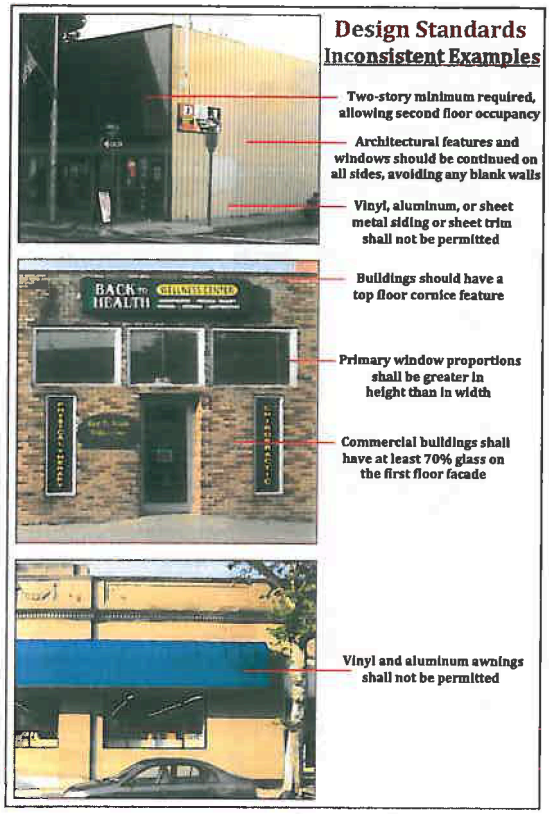

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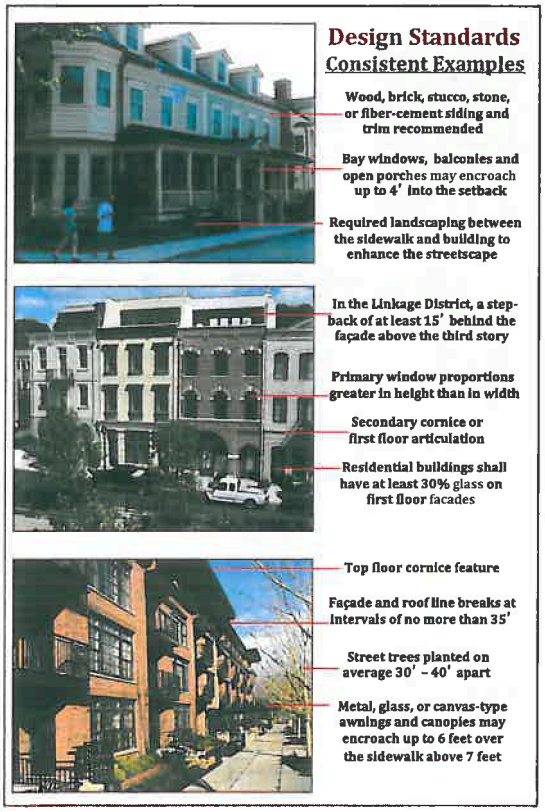
Figure 21-20: Design Standards Examples C



L. Linkage plan. This sketch plan provides one possible set of design solutions, which was included in the 2007 Comprehensive Plan Appendix as an illustration of planning principles for the Linkage District.

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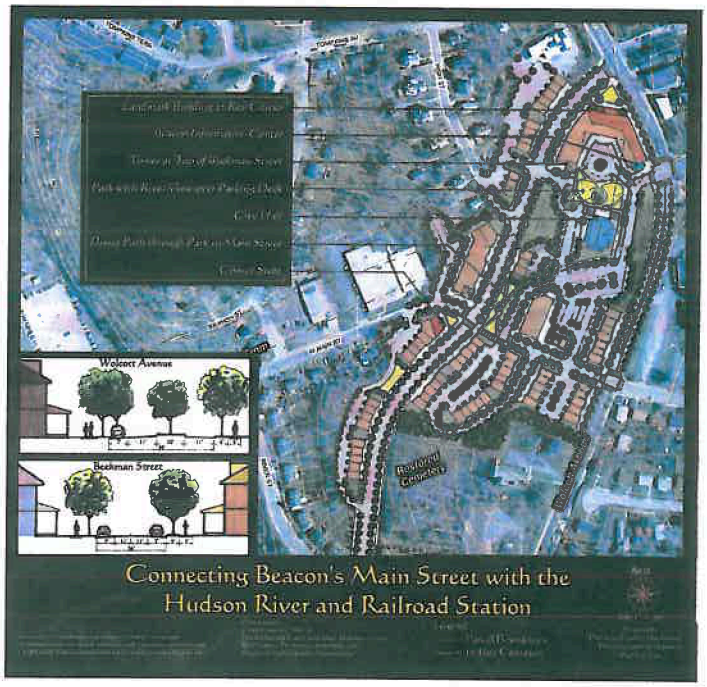
Figure 21-21: Connecting Beacon's Main Street with the Hudson River and Railroad Station



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Land Use: 220 Multifamily Housing—2+ BR (Low-Rise)

Description

Low-rise multifamily housing with two-or-more bedrooms is a residential building with two or three floors (levels) of residence that contain at least one dwelling unit with two or more bedrooms.

Various configurations can fit this description, including the following:

- Walkup apartment or multiplex-access to the individual dwelling units is typically internal to the structure and provided through a shared entry, stairway, and hallway
- Mansion apartment-several dwelling units within what appears from the outside to be a single-family dwelling unit
- Stacked townhouse-designed to match the external appearance of a townhouse, but which have dwelling units that share both floors and walls and with access through a central entry and stairway

Land Use Subcategory

Data are separated into two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Time-of-Day Distribution for Parking Demand

The following table presents a Time-of-Day distribution of parking demand (1) on a weekday (13 study sites) and a Saturday (eight study sites) in a general urban/suburban setting and (2) on a weekday (three study sites) and a Saturday (three study sites) in a dense multi-use urban setting.

	Percent of Peak Parking Demand			
	General Urban/Suburban		Dense Multi-Use Urban	
Hour Beginning	Weekday	Saturday	Weekday	Saturday
12:00-4:00 a.m.	97	92	89	100
5:00 a.m.	100	100	100	92
6:00 a.m.	96	99	97	92
7:00 a.m.	85	97	84	84
8:00 a.m.	67	92	58	76
9:00 a.m.	54	83	55	81
10:00 a.m.	48	79	47	78
11:00 a.m.	45	71	55	86
12:00 p.m.	45	68	55	81
1:00 p.m.	42	65	55	73
2:00 p.m.	42	62	42	70
3:00 p.m.	47	66	45	49
4:00 p.m.	49	66	47	51
5:00 p.m.	56	67	50	46
6:00 p.m.	64	70	68	43
7:00 p.m.	72	78	58	49
8:00 p.m.	77	77	58	59
9:00 p.m.	85	80	61	62
10:00 p.m.	92	82	74	76
11:00 p.m.	95	88	84	86

Additional Data

The average parking supply ratios and average peak parking occupancy for the study sites with parking supply information are shown in the table below.

Setting	Proximity to Rail Transit	Parking Supply Per Dwelling Unit	Average Peak Parking Occupancy
Dense Multi-Use Urban	Within ½ mile of rail transit	1.2 (21 sites)	73%
	Not within ½ mile of rail transit	1.3 (18 sites)	70%
General Urban/ Suburban	Within ½ mile of rail transit	1.6 (31 sites)	72%
	Not within ½ mile of rail transit	1.7 (114 sites)	72%

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), Arizona, California, Colorado, District of Columbia, Maine, Maryland, Massachusetts, New Jersey, Ontario (CAN), Oregon, Pennsylvania, Tennessee, Virginia, Washington, and Wisconsin.

Source Numbers

209, 218, 219, 247, 255, 277, 314, 402, 414, 419, 432, 437, 505, 512, 533, 535, 536, 537, 538, 544, 545, 577, 578, 579, 580, 584, 585, 587, 603, 604, 610, 611, 617, 620, 631

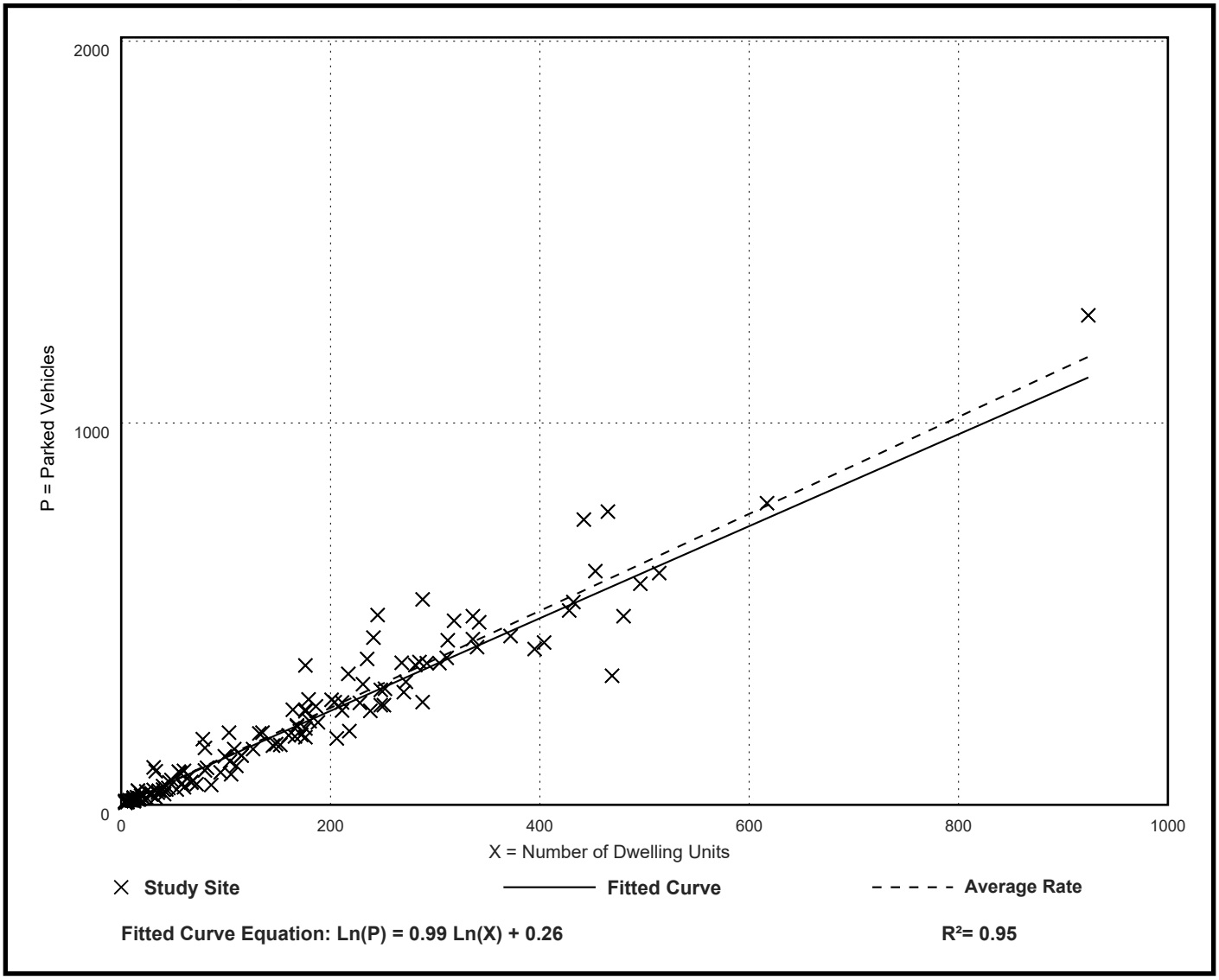
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: **Dwelling Units**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 143
Avg. Num. of Dwelling Units: 154

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.27	0.58 - 3.16	1.07 / 1.59	1.22 - 1.32	0.29 (23%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.99 Ln(X) + 0.26

R^2= 0.95

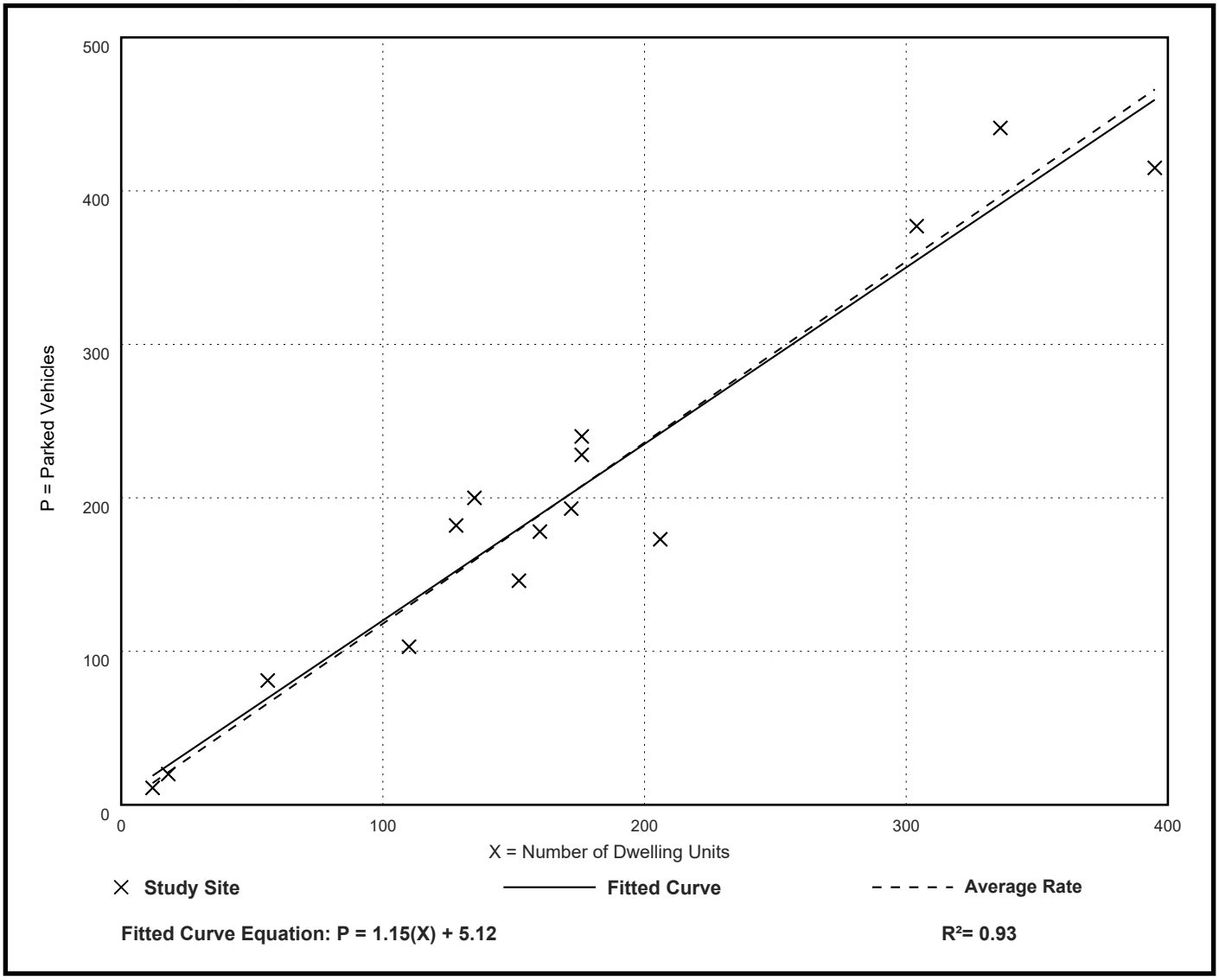
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: Dwelling Units
On a: Saturday
Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. Num. of Dwelling Units: 169

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.18	0.84 - 1.48	1.07 / 1.44	***	0.19 (16%)

Data Plot and Equation



Fitted Curve Equation: P = 1.15(X) + 5.12

R^2= 0.93

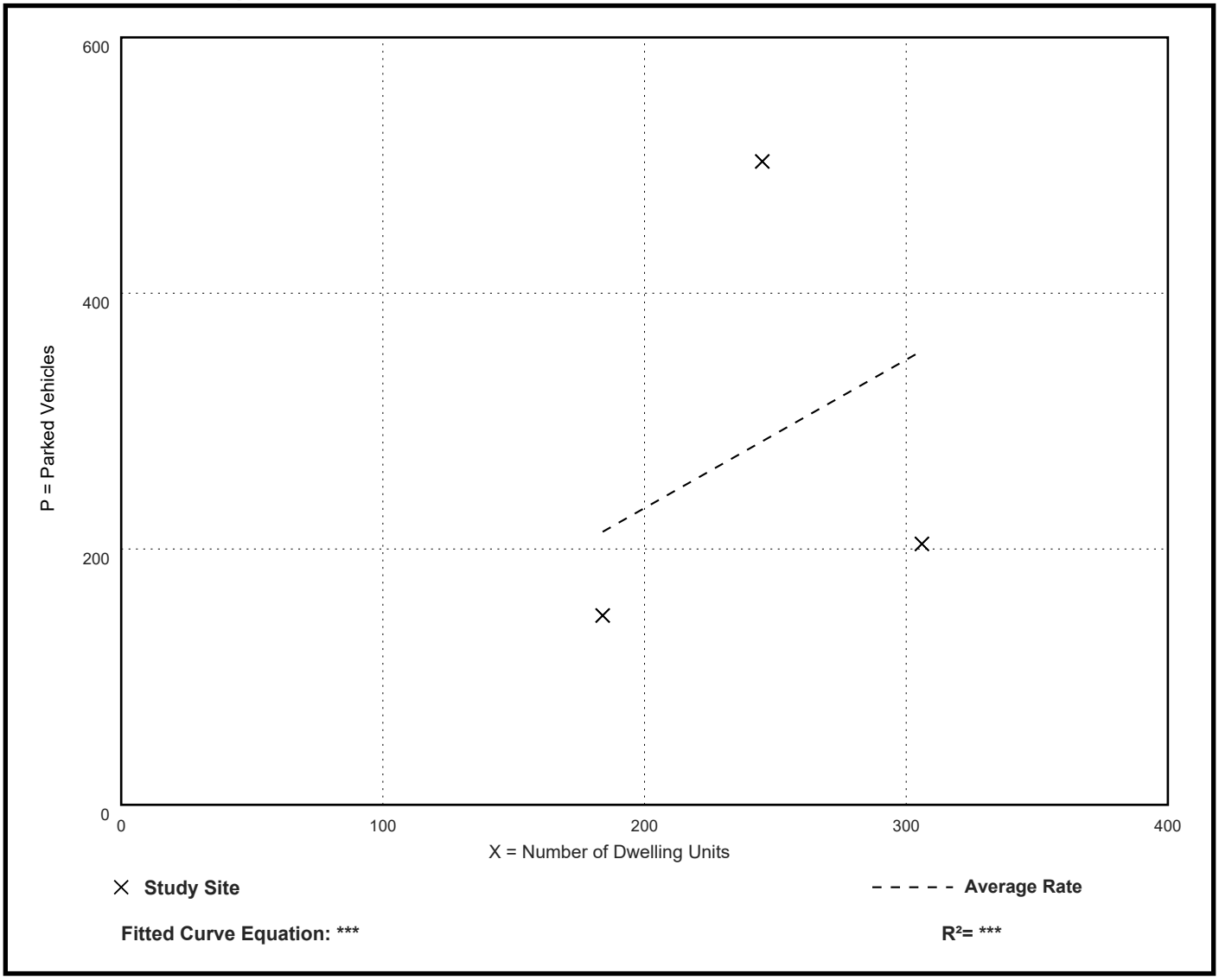
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: **Dwelling Units**
On a: **Sunday**
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. Num. of Dwelling Units: 245

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.16	0.67 - 2.05	0.71 / 2.05	***	0.77 (66%)

Data Plot and Equation



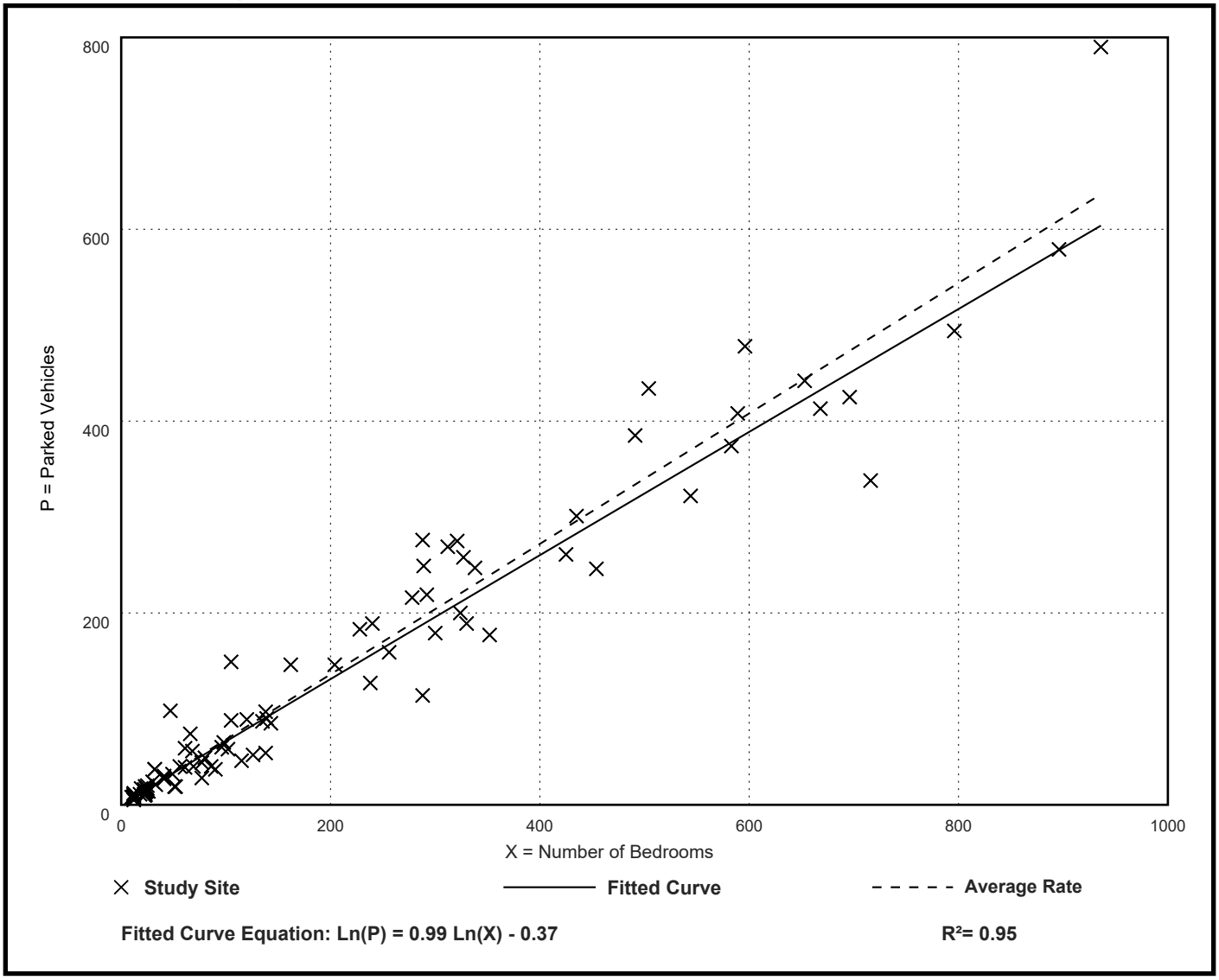
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: Bedrooms
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 97
Avg. Num. of Bedrooms: 192

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.68	0.36 - 2.09	0.61 / 0.86	0.65 - 0.71	0.16 (24%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.99 Ln(X) - 0.37

R^2= 0.95

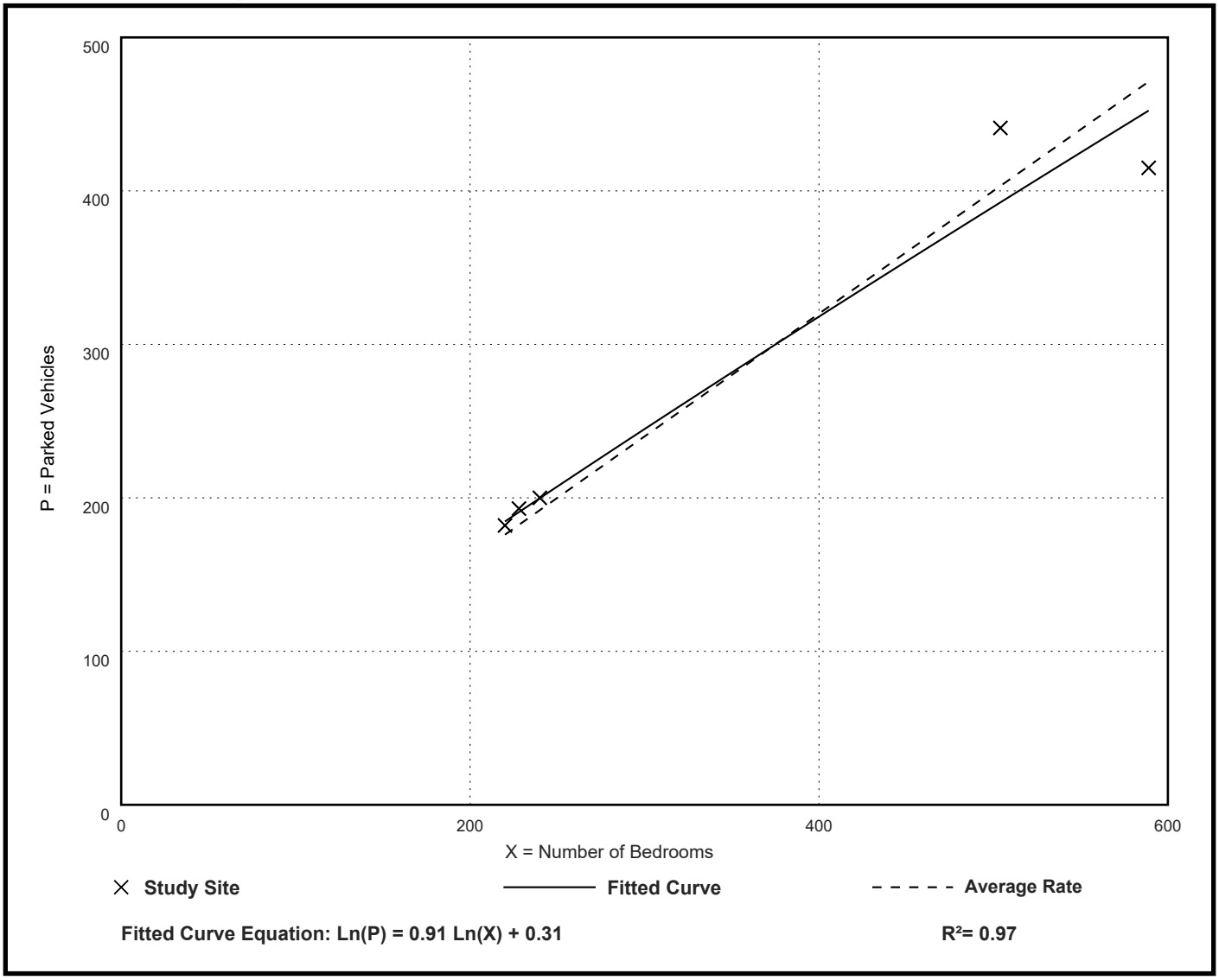
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: Bedrooms
On a: Saturday
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Bedrooms: 356

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.80	0.70 - 0.88	0.82 / 0.88	***	0.08 (10%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.91 Ln(X) + 0.31

R^2= 0.97

Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

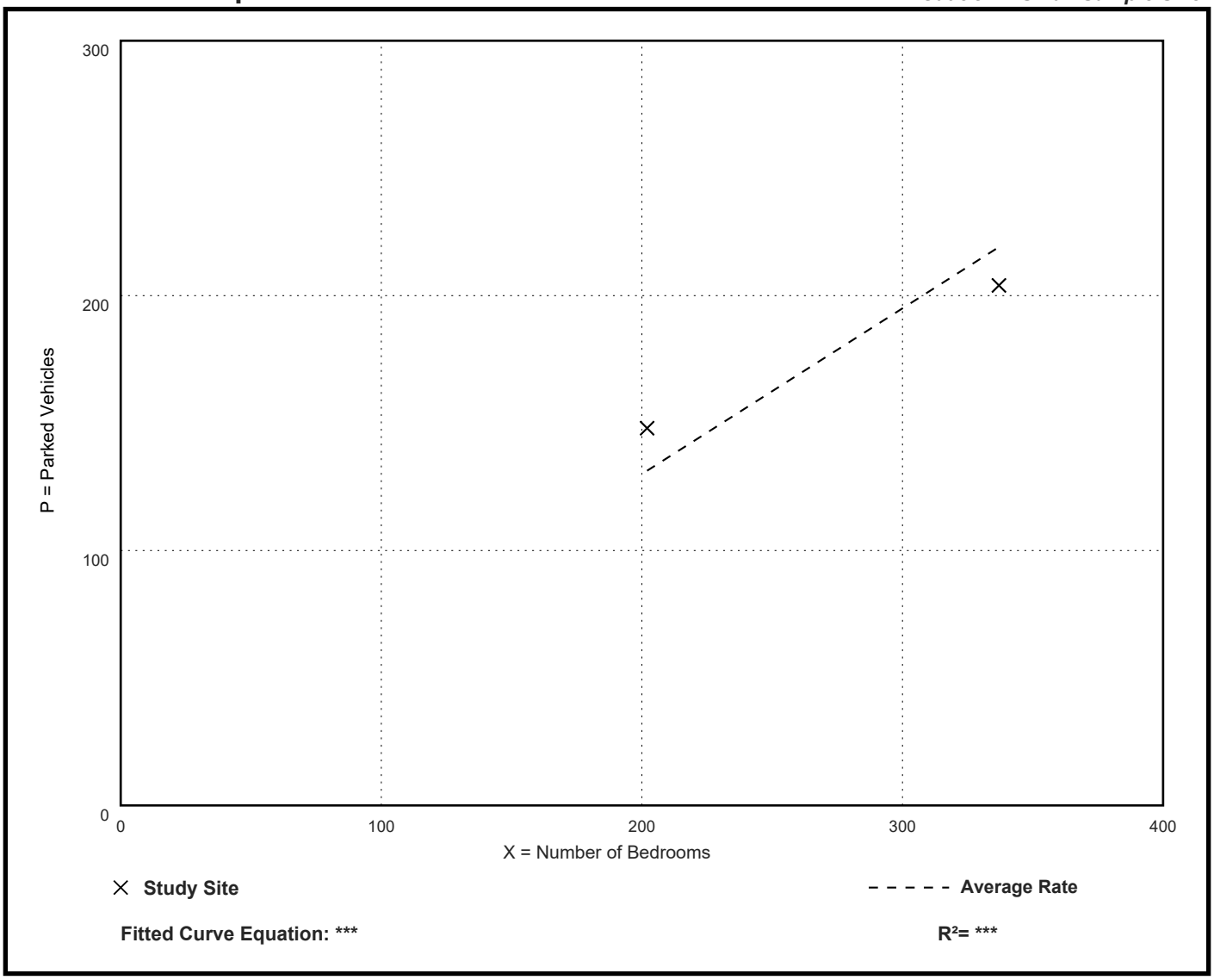
Peak Period Parking Demand vs: Bedrooms
On a: Sunday
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Bedrooms: 270

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.65	0.61 - 0.73	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: ***

R^2= ***

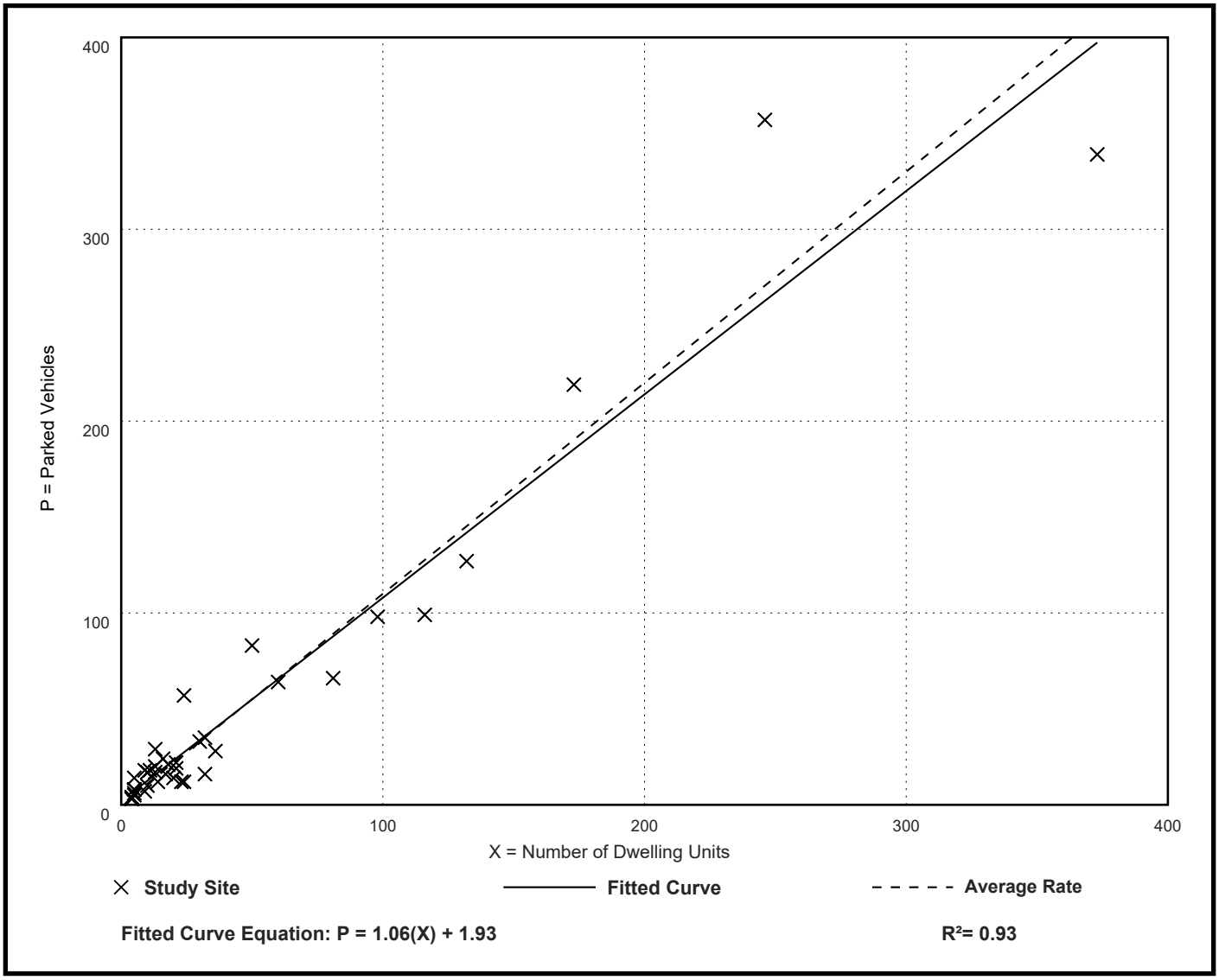
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: **Dwelling Units**
On a: **Weekday (Monday - Friday)**
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 39
Avg. Num. of Dwelling Units: 46

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.10	0.50 - 2.80	0.95 / 1.66	0.99 - 1.21	0.35 (32%)

Data Plot and Equation



Fitted Curve Equation: P = 1.06(X) + 1.93

R^2= 0.93

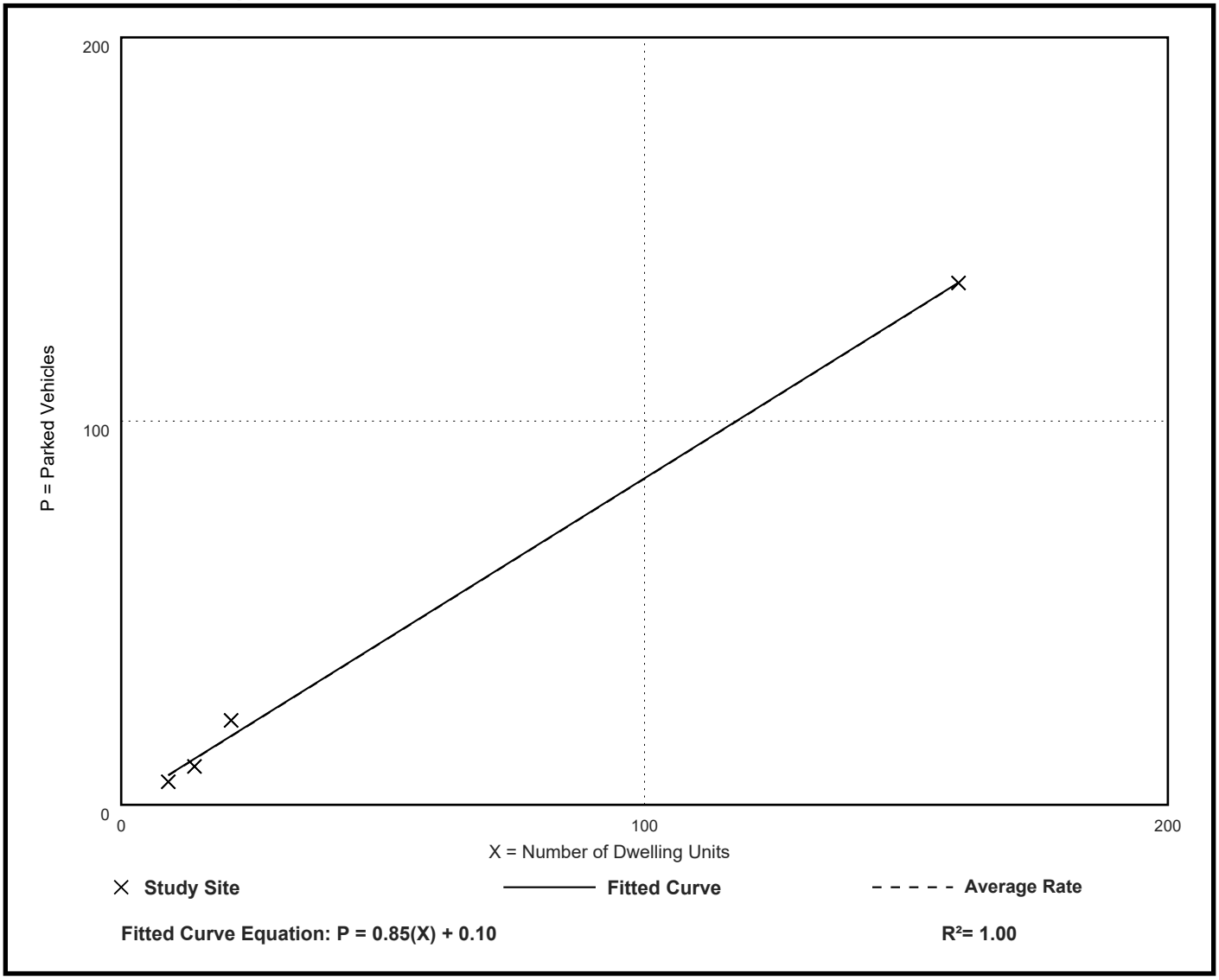
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: Dwelling Units
On a: Saturday
Setting/Location: Dense Multi-Use Urban
Number of Studies: 4
Avg. Num. of Dwelling Units: 51

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.85	0.67 - 1.05	0.70 / 1.05	***	0.09 (11%)

Data Plot and Equation



Fitted Curve Equation: P = 0.85(X) + 0.10

R^2= 1.00

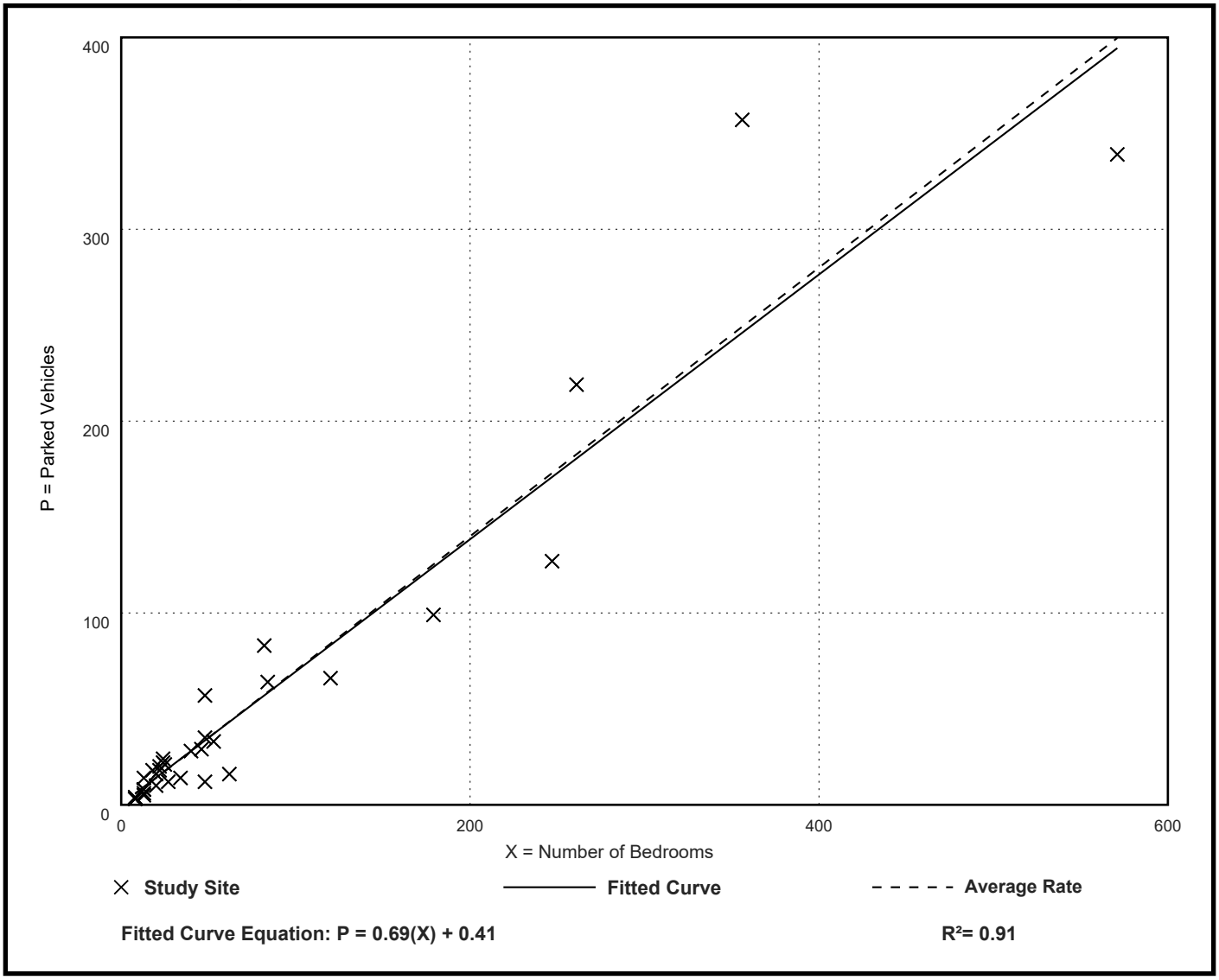
Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: **Bedrooms**
On a: **Weekday (Monday - Friday)**
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 33
Avg. Num. of Bedrooms: 78

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.70	0.25 - 1.19	0.55 / 1.00	0.62 - 0.78	0.22 (31%)

Data Plot and Equation



Fitted Curve Equation: P = 0.69(X) + 0.41

R^2= 0.91

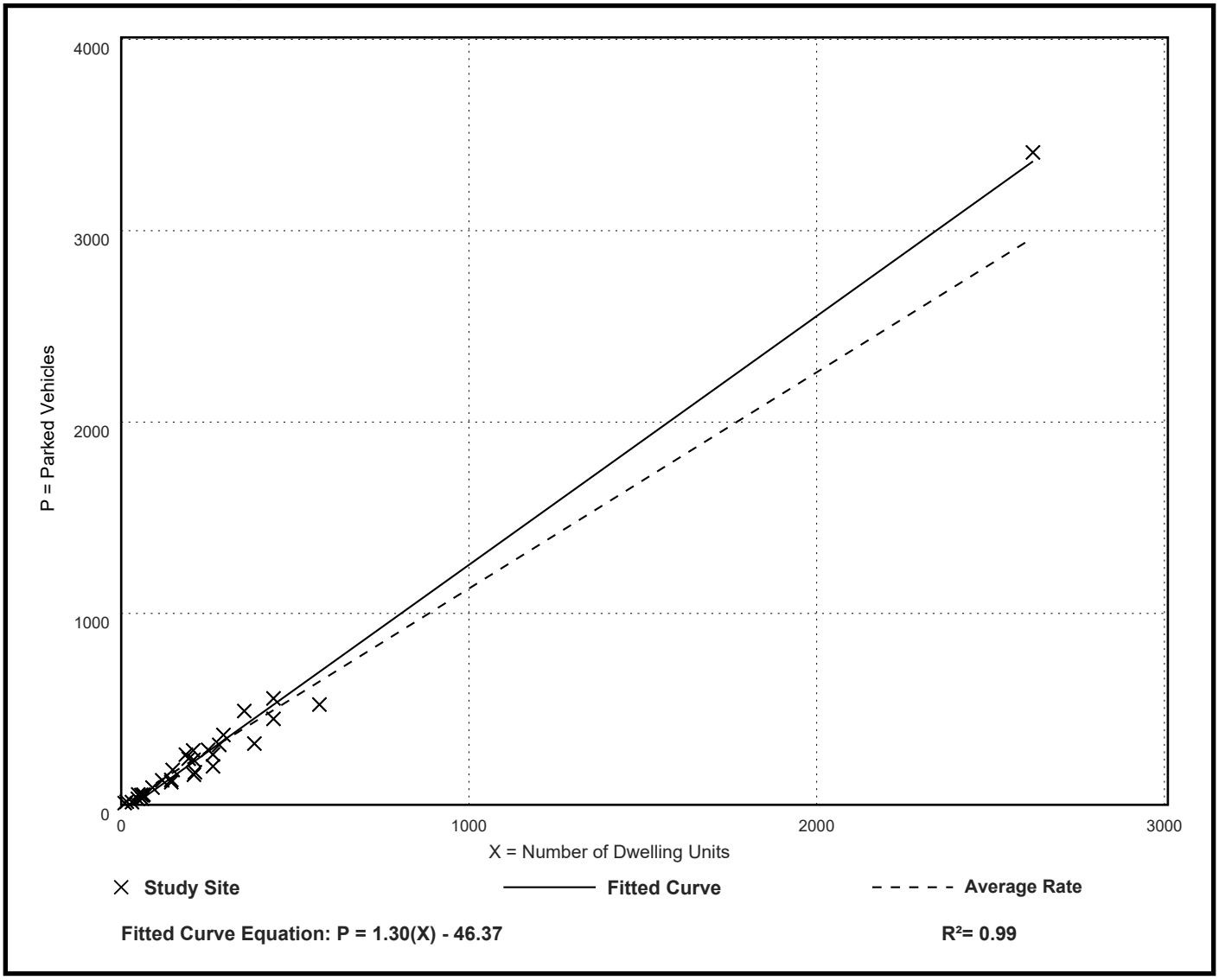
Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

Peak Period Parking Demand vs: Dwelling Units
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Dwelling Units: 272

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.13	0.45 - 1.41	0.86 / 1.28	1.05 - 1.21	0.22 (19%)

Data Plot and Equation



Fitted Curve Equation: P = 1.30(X) - 46.37

R^2= 0.99

Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

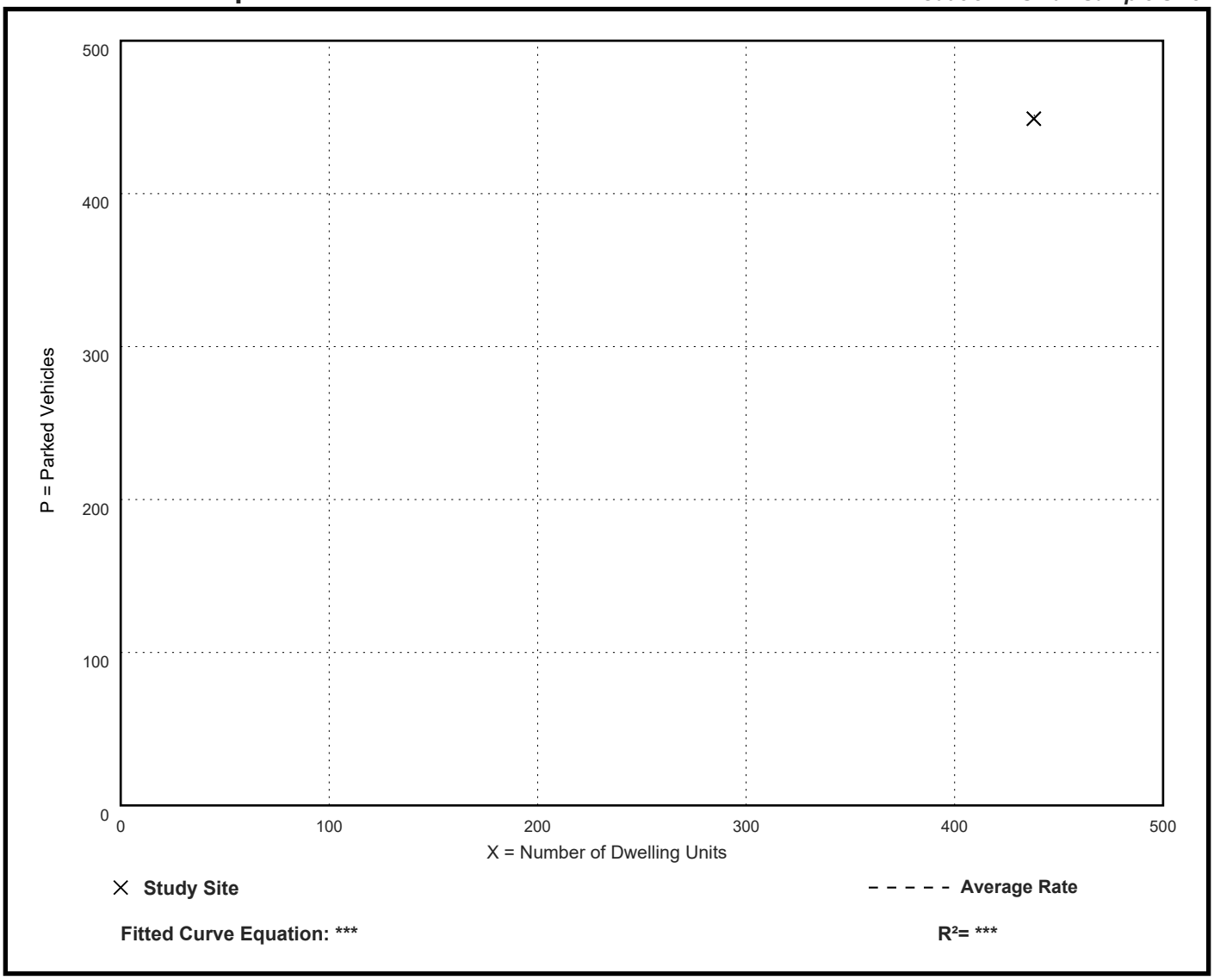
Peak Period Parking Demand vs: **Dwelling Units**
On a: **Saturday**
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 438

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.03	1.03 - 1.03	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

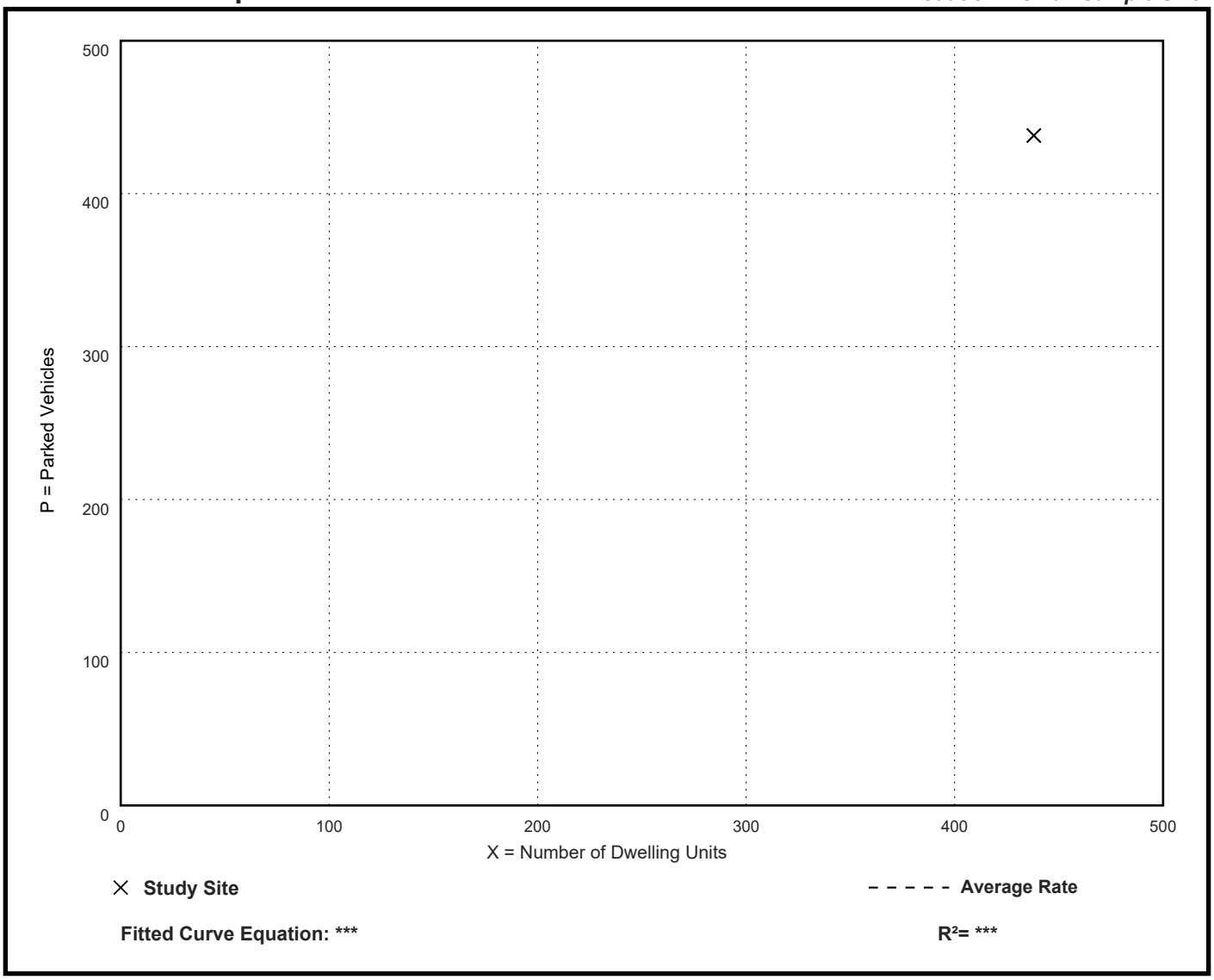
Peak Period Parking Demand vs: **Dwelling Units**
On a: **Sunday**
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 438

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.00	1.00 - 1.00	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: ***

R^2= ***

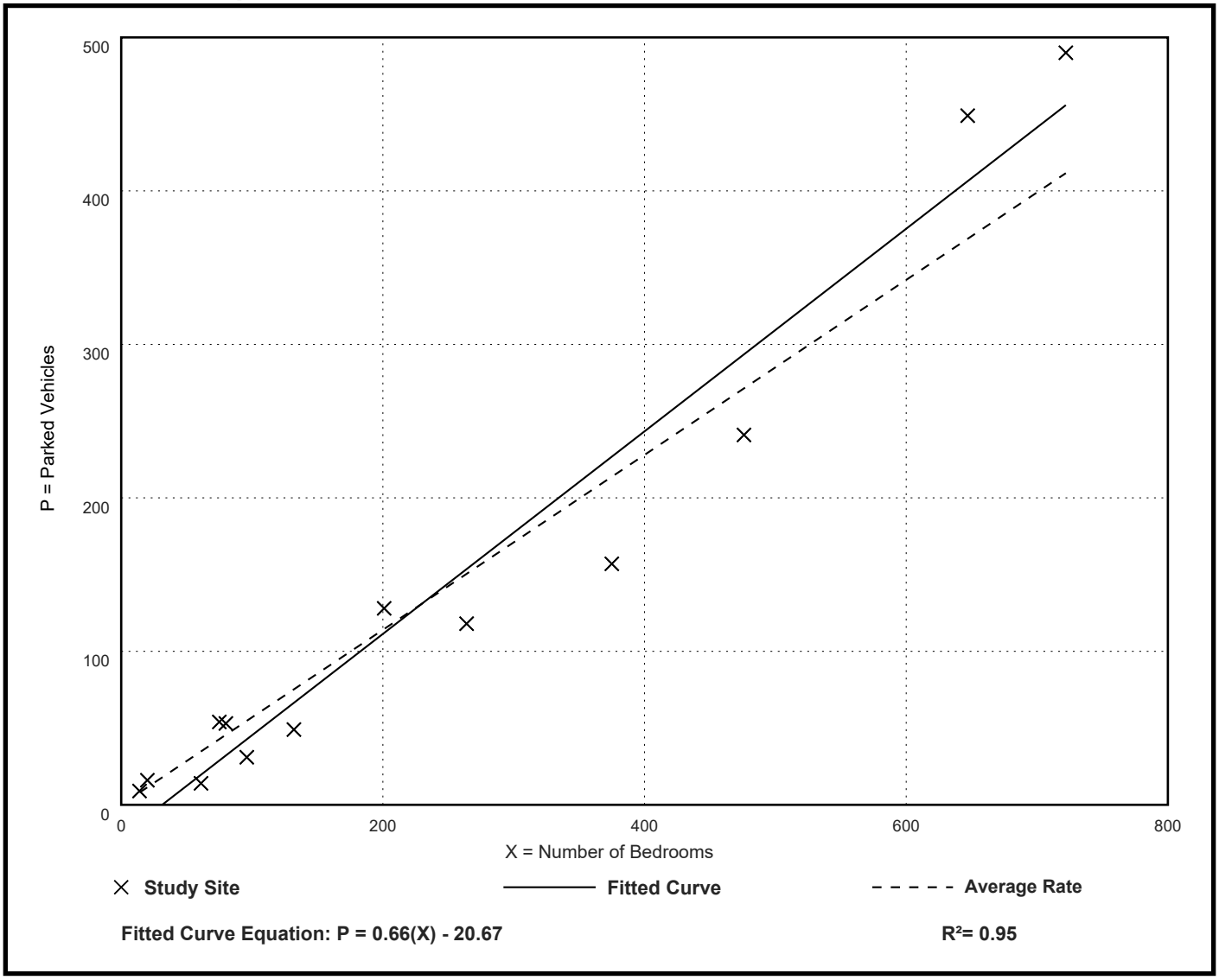
Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

Peak Period Parking Demand vs: **Bedrooms**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 13
Avg. Num. of Bedrooms: 243

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.57	0.23 - 0.80	0.44 / 0.72	***	0.14 (25%)

Data Plot and Equation



Fitted Curve Equation: P = 0.66(X) - 20.67

R^2= 0.95

Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

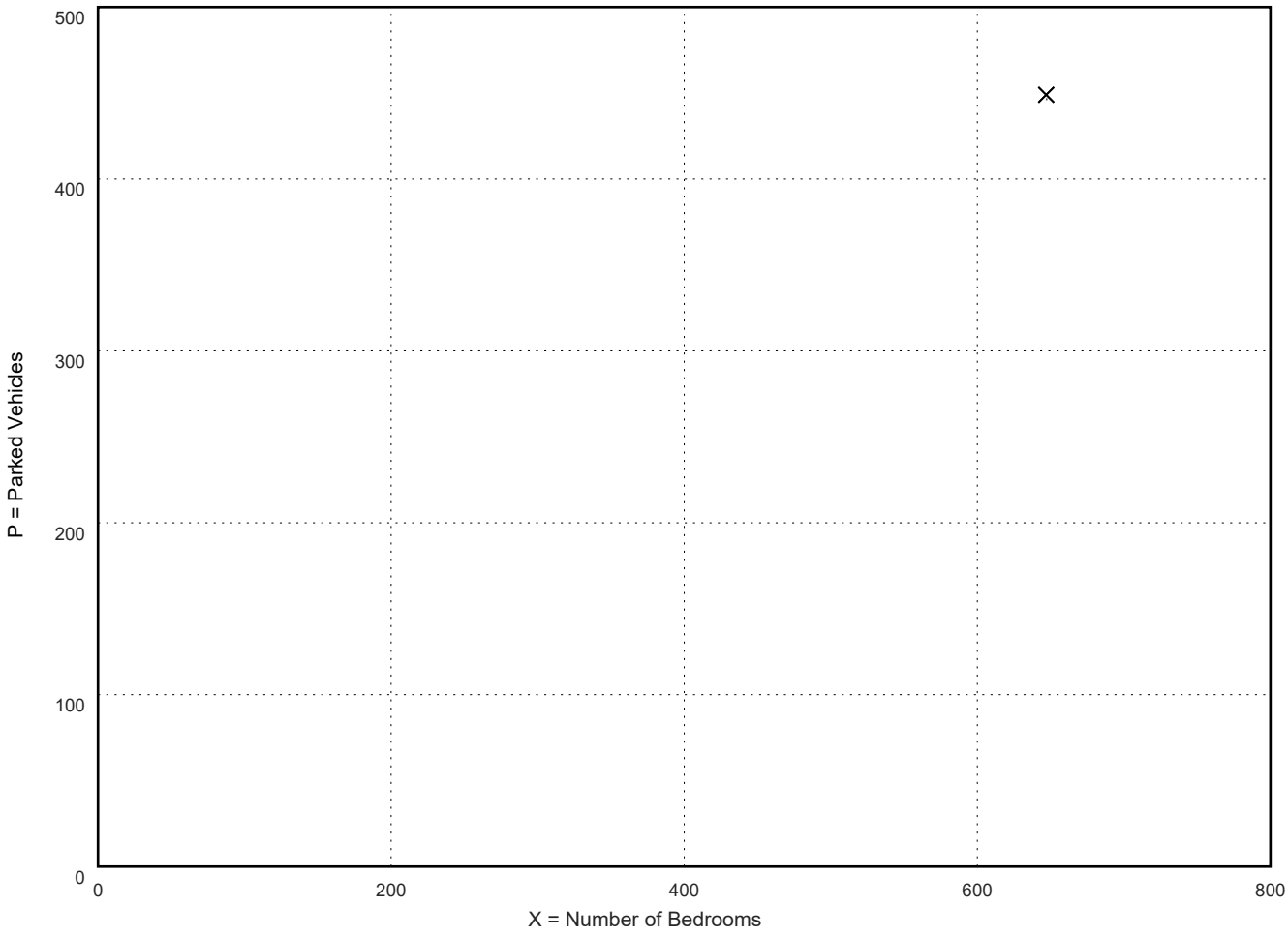
Peak Period Parking Demand vs: **Bedrooms**
On a: **Saturday**
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Bedrooms: 647

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.69	0.69 - 0.69	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: ***

R^2= ***

Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

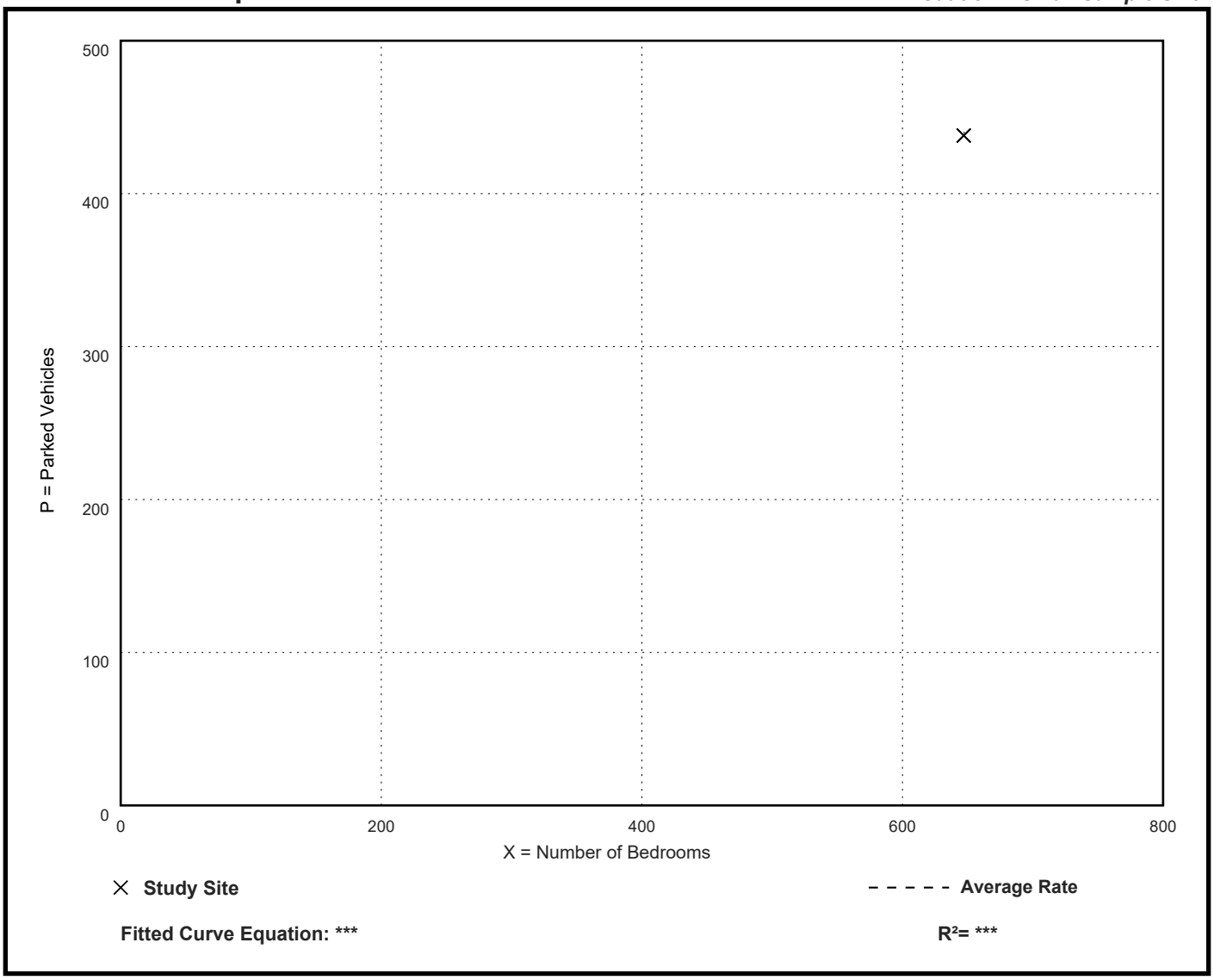
Peak Period Parking Demand vs: Bedrooms
On a: Sunday
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Bedrooms: 647

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.68	0.68 - 0.68	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



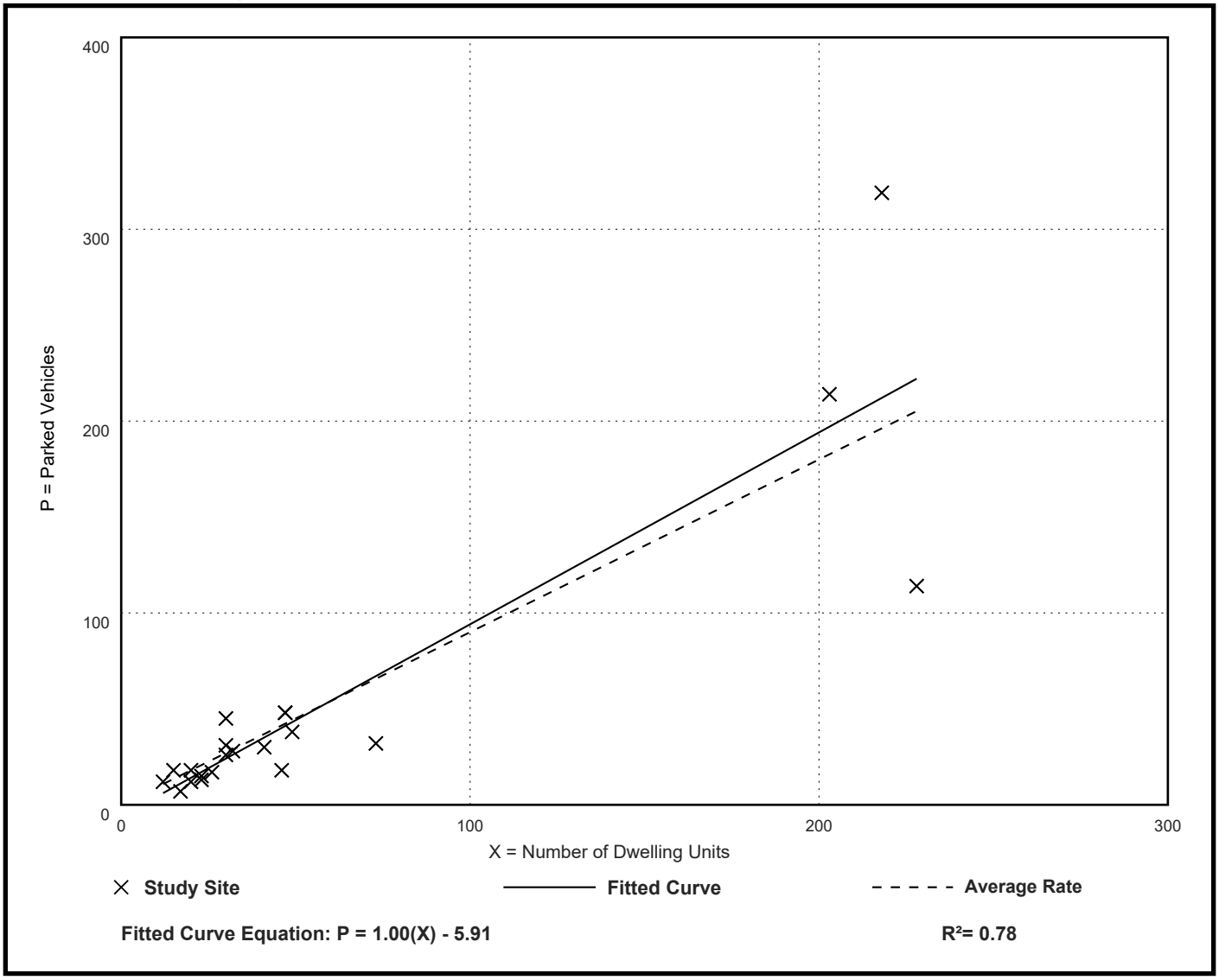
Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

Peak Period Parking Demand vs: **Dwelling Units**
On a: **Weekday (Monday - Friday)**
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 21
Avg. Num. of Dwelling Units: 59

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.90	0.39 - 1.50	0.65 / 1.16	0.74 - 1.06	0.38 (42%)

Data Plot and Equation



Fitted Curve Equation: P = 1.00(X) - 5.91

R^2= 0.78

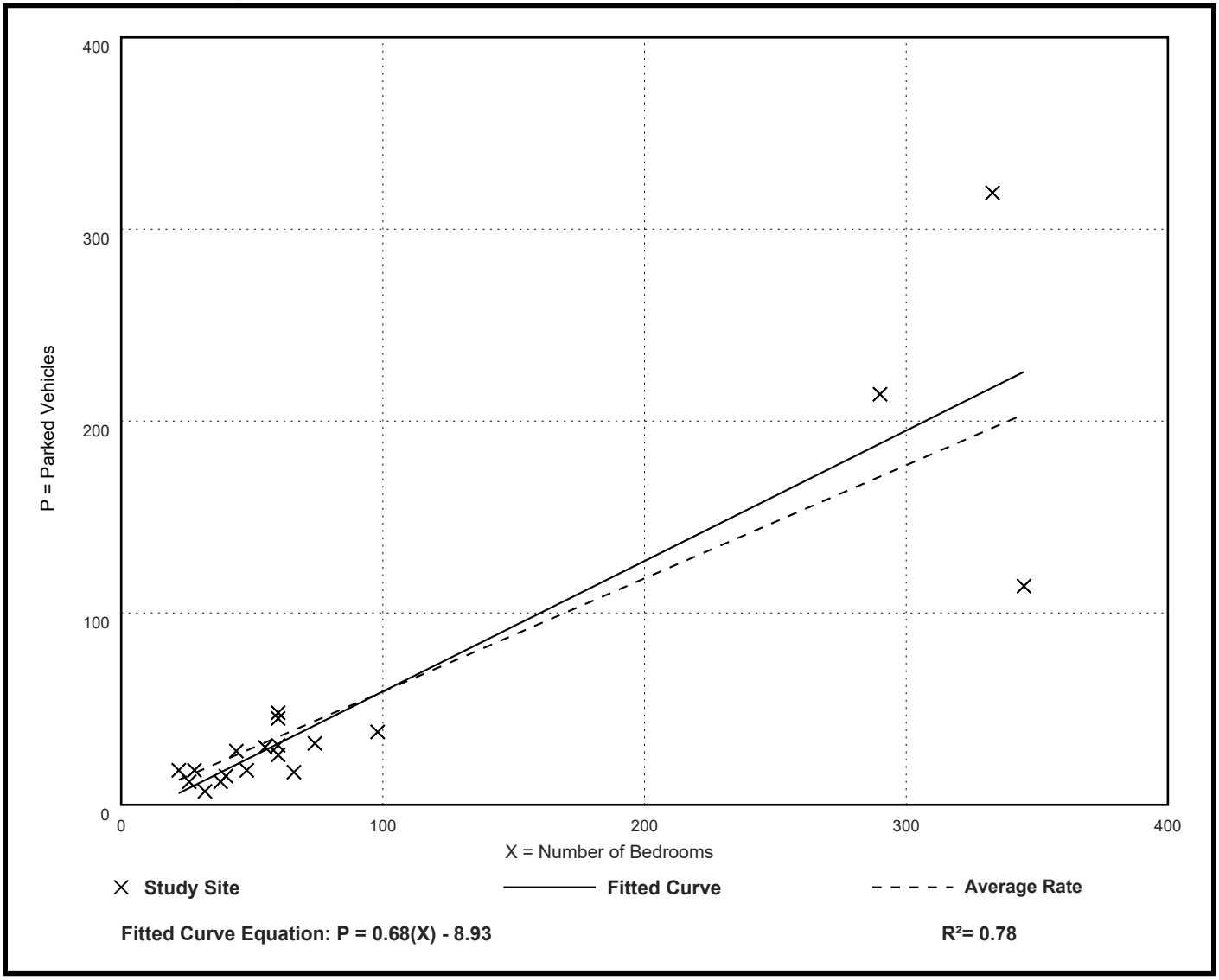
Multifamily Housing - 2+ BR (Low-Rise) Close to Rail Transit (220)

Peak Period Parking Demand vs: **Bedrooms**
On a: **Weekday (Monday - Friday)**
Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 19
Avg. Num. of Bedrooms: 94

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.59	0.22 - 0.96	0.38 / 0.80	***	0.25 (42%)

Data Plot and Equation



Land Use: 822 Strip Retail Plaza (<40k)

Description

A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area (GFA) of the building.

The 40,000 square feet GLA threshold between shopping plaza and strip retail plaza (Land Use 822) is based on an examination of the parking demand database. All shopping plazas with a supermarket as their anchor in the database are larger than 40,000 square feet GLA.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a Monday–Thursday (five study sites), a Friday (two study sites), and a Saturday (four study sites).

Hour Beginning	Percent of Peak Parking Demand		
	Monday–Thursday	Friday	Saturday
12:00–4:00 a.m.	—	—	—
5:00 a.m.	—	—	—
6:00 a.m.	—	—	—
7:00 a.m.	—	—	—
8:00 a.m.	19	19	—
9:00 a.m.	33	40	38
10:00 a.m.	47	44	55
11:00 a.m.	55	52	66
12:00 p.m.	89	96	85
1:00 p.m.	100	96	100
2:00 p.m.	73	84	96
3:00 p.m.	73	52	79
4:00 p.m.	66	50	66
5:00 p.m.	70	63	64
6:00 p.m.	75	49	67
7:00 p.m.	70	100	70
8:00 p.m.	54	94	70
9:00 p.m.	48	73	51
10:00 p.m.	—	—	—
11:00 p.m.	—	—	—

Additional Data

The average parking supply ratios for the study sites with parking supply information are the following:

- 5.7 spaces per 1,000 square feet GLA (24 sites) in a general urban/suburban setting
- 3.3 spaces per 1,000 square feet GLA (3 sites) in a dense multi-use urban setting

The average peak parking occupancy is 50 percent at the general urban/suburban sites and 76 percent at the dense multi-use urban sites.

The sites were surveyed in the 1990s, the 2010s, and the 2020s in Alberta (CAN), British Columbia (CAN), California, Colorado, Kansas, Maine, Manitoba (CAN), Maryland, Michigan, Minnesota, Missouri, New York, Texas, Virginia, and Washington.

Future data submissions should attempt to provide information on the composition of each study site (types and number of stores, restaurants, or other tenants within the shopping center).

Source Numbers

89, 209, 219, 297, 511, 601, 605, 606, 618, 619, 621, 635

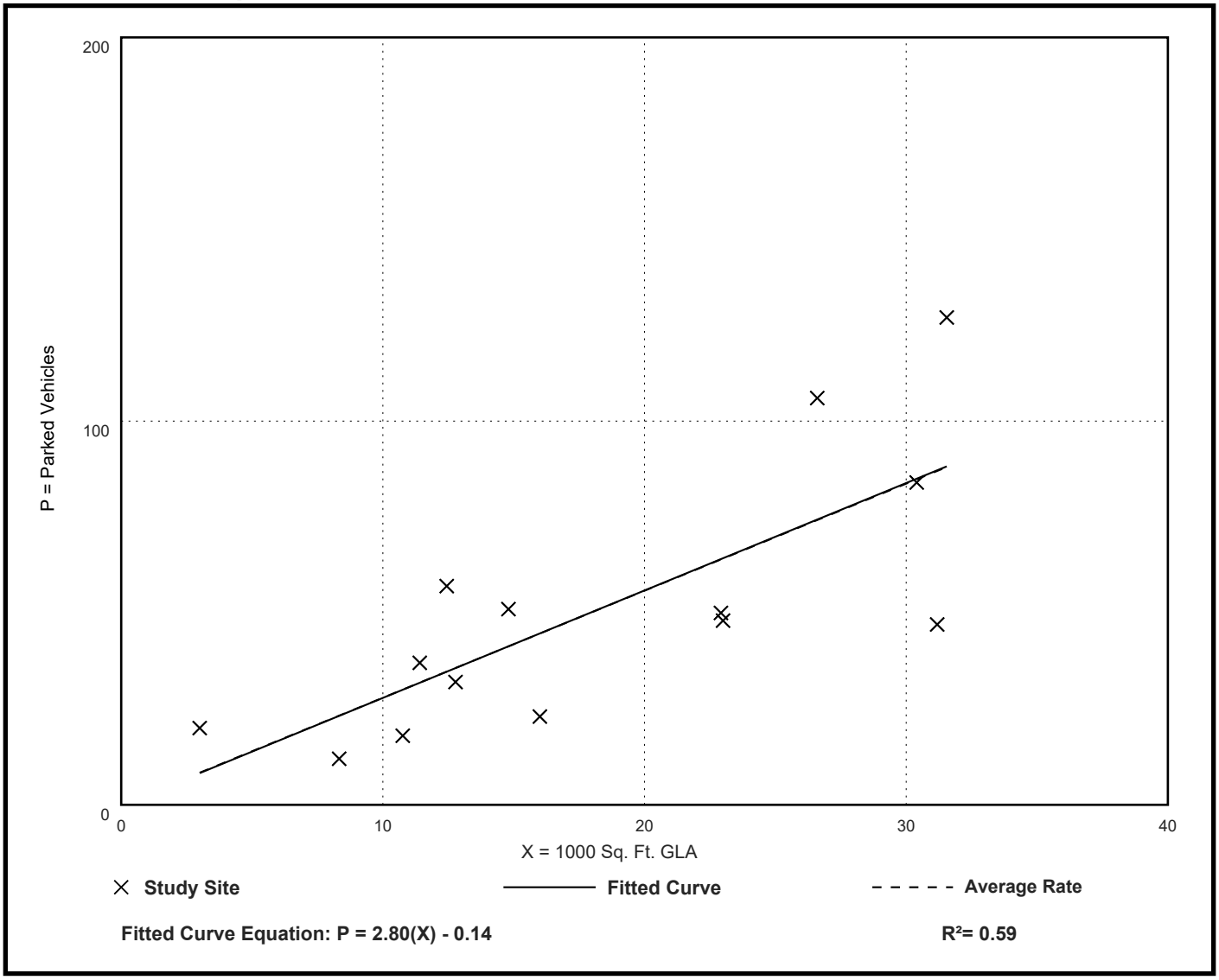
Strip Retail Plaza (< 40k)
(822)

Peak Period Parking Demand vs: 1000 Sq. Ft. GLA
On a: Weekday (Monday - Thursday)
Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. 1000 Sq. Ft. GLA: 18

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.79	1.44 - 6.67	2.07 / 4.44	***	1.14 (41%)

Data Plot and Equation



Fitted Curve Equation: P = 2.80(X) - 0.14

R^2= 0.59

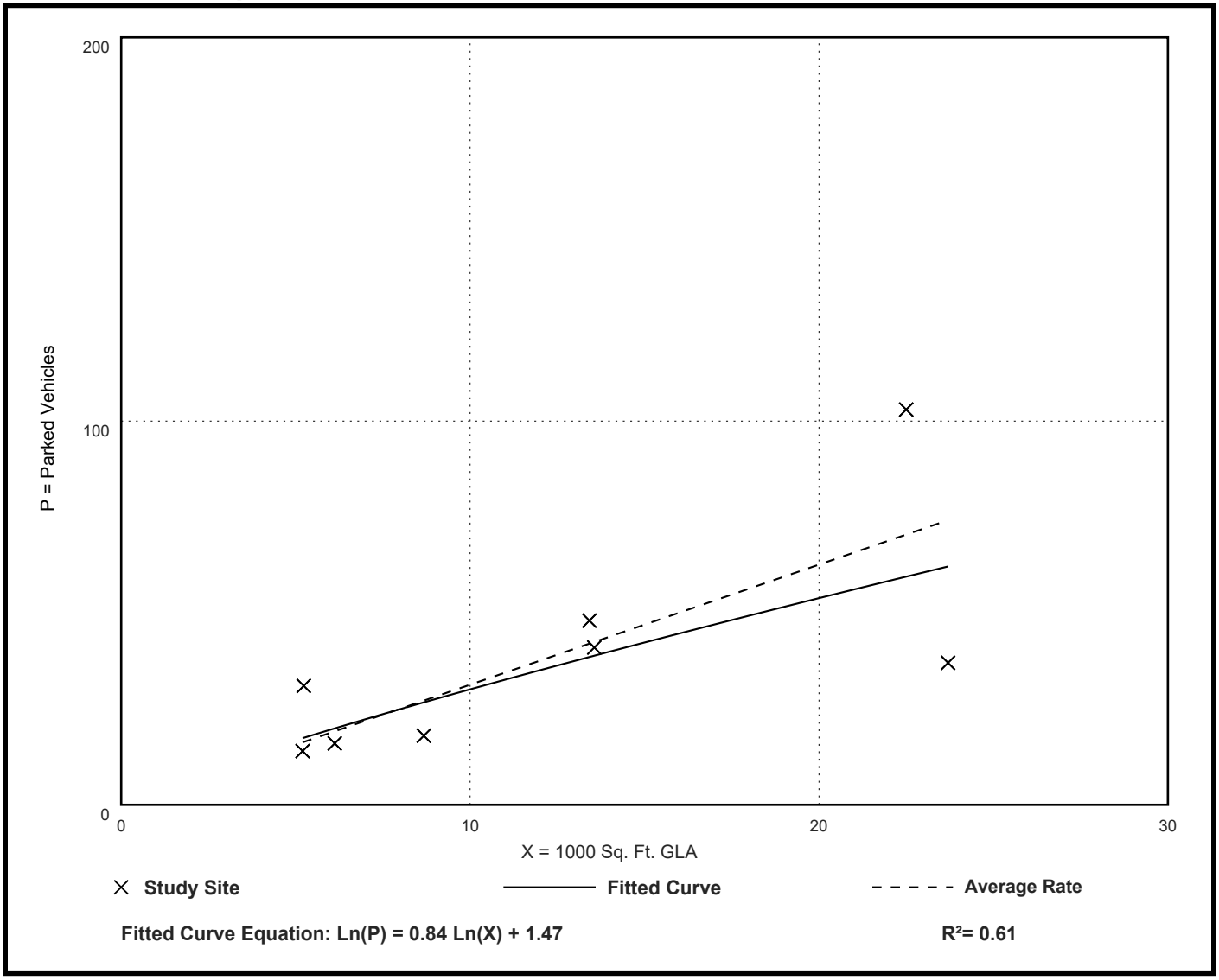
Strip Retail Plaza (< 40k)
(822)

Peak Period Parking Demand vs: 1000 Sq. Ft. GLA
On a: Friday
Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. 1000 Sq. Ft. GLA: 12

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
3.13	1.56 - 5.93	2.60 / 5.45	***	1.37 (44%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.84 Ln(X) + 1.47

R^2= 0.61

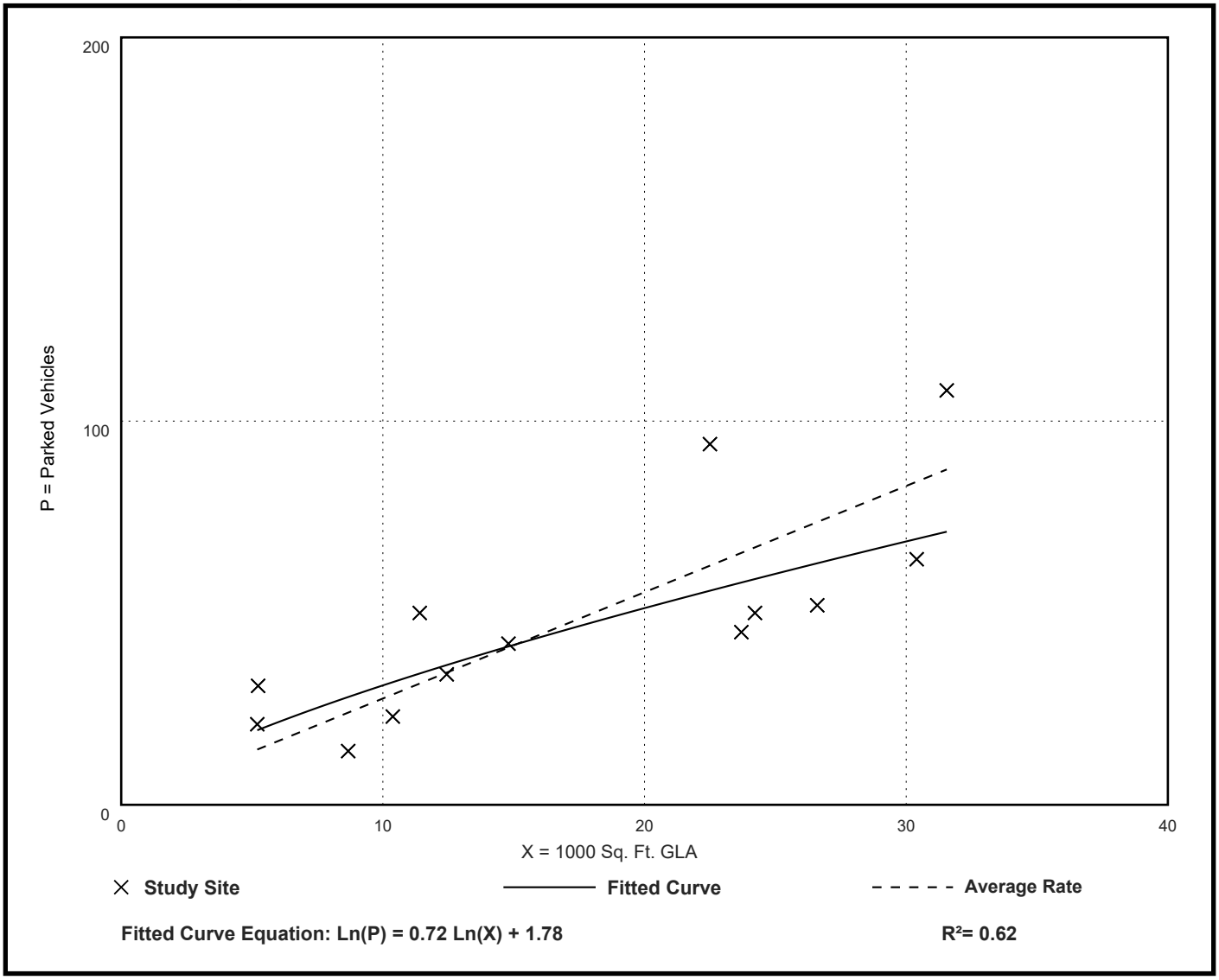
Strip Retail Plaza (< 40k)
(822)

Peak Period Parking Demand vs: 1000 Sq. Ft. GLA
On a: Saturday
Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. 1000 Sq. Ft. GLA: 17

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.77	1.61 - 5.93	2.09 / 4.36	***	1.03 (37%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.72 Ln(X) + 1.78

R^2= 0.62

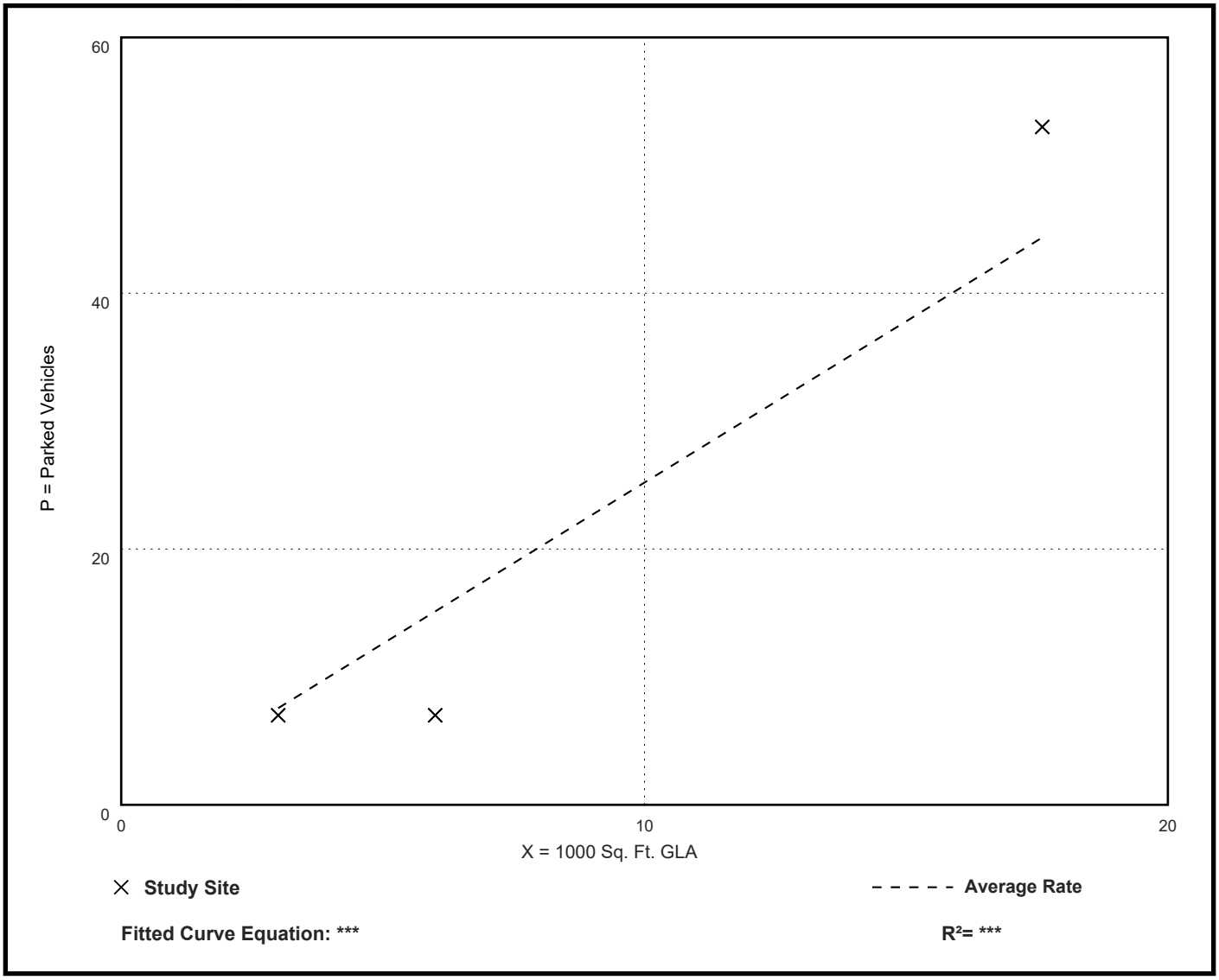
Strip Retail Plaza (< 40k)
(822)

Peak Period Parking Demand vs: 1000 Sq. Ft. GLA
On a: Weekday (Monday - Thursday)
Setting/Location: Dense Multi-Use Urban
Number of Studies: 3
Avg. 1000 Sq. Ft. GLA: 8.9

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.52	1.17 - 3.01	1.54 / 3.01	***	0.93 (37%)

Data Plot and Equation



Strip Retail Plaza (< 40k)
(822)

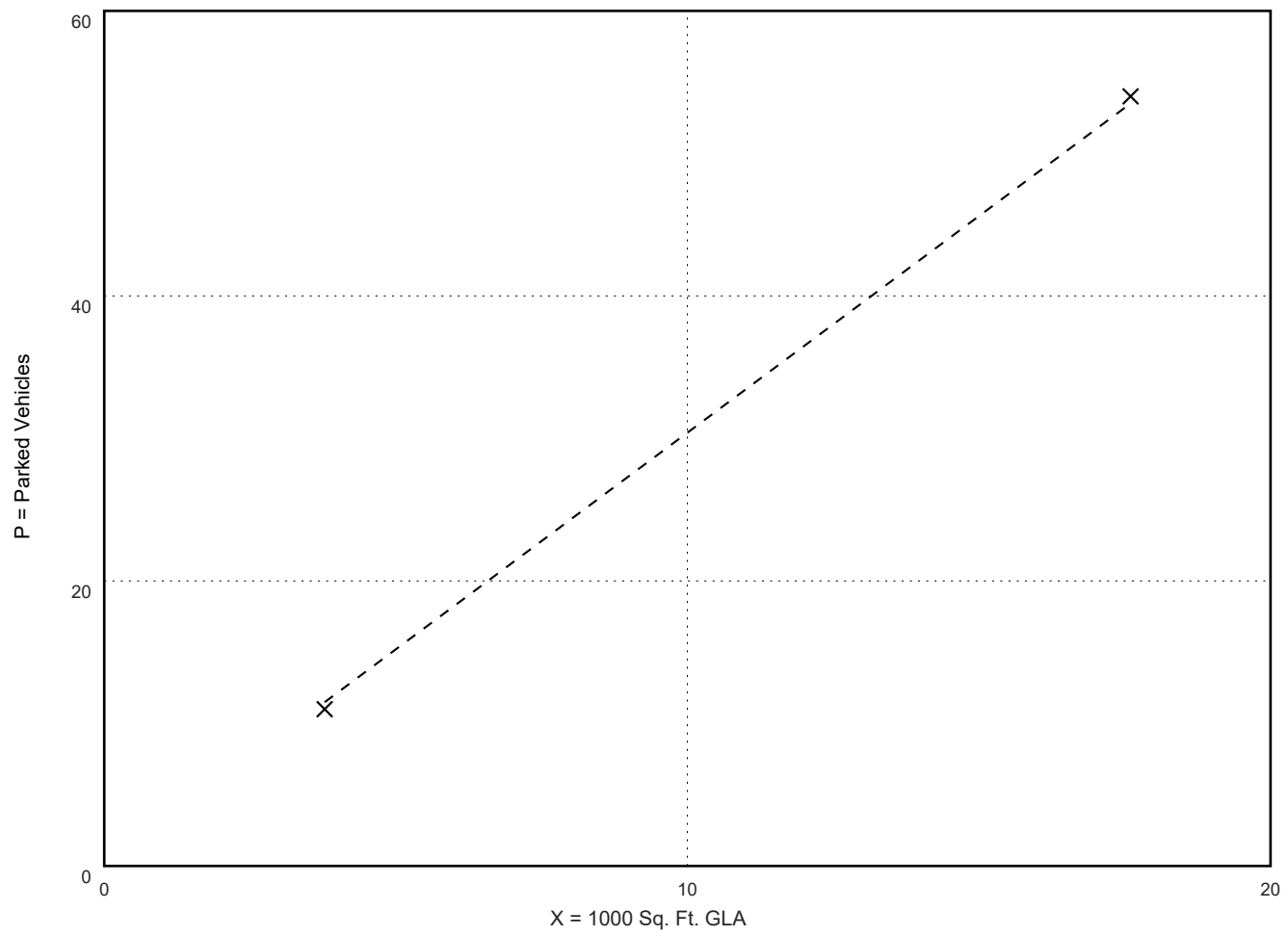
Peak Period Parking Demand vs: 1000 Sq. Ft. GLA
On a: Saturday
Setting/Location: Dense Multi-Use Urban
Number of Studies: 2
Avg. 1000 Sq. Ft. GLA: 11

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
3.04	2.91 - 3.07	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: *

R^2= *

PROPOSED LOCAL LAW NO. __ OF 2024

CITY COUNCIL
CITY OF BEACON

A LOCAL LAW TO AMEND PARKING REQUIREMENTS IN THE CITY OF BEACON

A LOCAL LAW to amend the Zoning Code concerning parking requirements.

BE IT ENACTED by the City Council of the City of Beacon as follows:

Section 1. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-26, entitled "Off-street parking, loading and vehicular access" is hereby amended as follows:

§ 223-26 **Off-street parking, loading and vehicular access.**

A. General.

~~(1) All structures and land uses hereafter erected, enlarged, created or extended shall be provided with the amount of off-street automobile parking space and loading and unloading space required by the terms of this section to meet the needs of persons making use of such structures or land.~~ A permit for the erection, replacement, reconstruction, extension or substantial alteration of a structure or the development of a land use shall not be issued unless off-street automobile parking ~~facilities~~ areas or structures and, where ~~required~~ appropriate loading and unloading spaces ~~shall have been laid out in plan in accordance~~are consistent with the ~~appropriate requirements for structures and uses as set forth~~provisions in this section~~, and such required parking and loading facilities shall be completed before a certificate of occupancy shall be issued. As used herein, "parking facilities" shall be construed to include loading and unloading spaces required by this section~~.

~~(2) In case of exceptional difficulty or unusual hardship to such properties arising out of the requirements of this section, the Board of Appeals may reduce the parking requirements but shall require such degree of compliance as it may deem reasonable for that part of the structure or use that is legally nonconforming and shall not waive any part of the requirement for that part of the structure or use that constitutes an enlargement or expansion and shall not permit reduction or elimination of whatever quantity of parking may already exist, unless it is in excess of requirements.~~

~~(3) Required off-street parking facilities which, after development, are later dedicated to and accepted by the City shall be deemed to continue to serve the uses or structures for which they were originally provided.~~

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~~B. Effect on existing uses.~~

~~(1) Structures and land uses in existence on April 20, 1964, or structures and uses for which building permits had been approved on or before said date, shall not be subject to the requirements set forth in this section, unless there shall occur an increased intensity of use, provided that any parking facilities now existing to serve such structures or uses shall not in the future be reduced, except where they exceed such requirement, in which case they may not be reduced below such requirement.~~

~~(2) Whenever a building or structure erected prior to or after April 20, 1964, or any land use shall undergo any increase in intensity of use in the number of dwelling units, floor area, seating capacity, number of employees or other unit of measurement specified hereinafter for required parking facilities, or from other causes, and further when said increase would result in a requirement for additional parking facilities through application of the Schedule of Off-Street Parking Requirements (Subsection F), additional parking facilities shall be provided accordingly, except that no building or structure erected prior to said date shall be required to provide parking facilities unless the aforesaid additional required facilities amount to a cumulative total increase of at least 25% over the existing use as of said date, in which case parking spaces shall be provided on the basis of the total units of measurements of the new use or of the alteration or expansion of the existing use.~~

~~C.~~B. Location, use, design, construction and maintenance.

(1) Location. ~~The~~Except as required elsewhere under the City Code, any approved off-street parking ~~facilities~~ area or structure ~~which are required by this section~~ shall be provided on the same lot or premises with such structure or land use; ~~except~~ unless ~~that~~ such off-street parking spaces ~~required~~ for structures or land uses on two or more adjoining lots may be provided in a single common facility on one or more of said lots, provided that an easement or deed restriction(s) ~~binding agreement~~, in a form approved by the Corporation Counsel, assuring the continued operation of said parking facility during the life of the structure or the land use the parking is designed to serve, is filed on the land records prior to approval of the plans for said parking facility.

~~(1)~~(2) In any residence district, no designated off-street parking ~~facility~~ area or structure shall be developed in any ~~required~~ front yard forward of the principal building, except as approved by the Building Inspector or Planning Board for an unusual lot configuration. Nor shall any residence district off-street parking area or structure be developed ~~or~~ in any ~~required~~ minimum side or rear yard setback adjacent to a street line or in any other side or rear yard within five feet of the lot line. However, off-street parking spaces shall be permitted in residential districts as indicated in § **223-17C**.

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~~(2)~~(3) Parking specifications.

(a) Each parking space provided in an unenclosed area shall be at least nine feet wide and at least 18 feet long, except that the Planning Board, in approving a plan under § **223-25**, may permit that portion of the total ~~required~~ parking which is specifically set aside for and limited to employee parking to have a width of at least 8 1/2 feet and a depth of at least 18 feet. This possible exception shall not be permitted in the CMS District.

(b) Each parking space which is bordered by walls or columns on two or more sides shall be not less than 10 feet wide nor less than 18 feet long. Enclosed or garaged parking areas shall not contain any columns, walls or other obstacles which would prevent or obstruct the use of any parking space.

(c) Except for one-family and two-family dwellings, ~~The~~ the maneuvering area needed to permit parked vehicles to enter and exit off-street parking spaces shall have a width of at least 24 feet, ~~except~~ unless ~~where~~ the Planning Board approves a lesser distance as adequate for areas with parallel or angled parking spaces.

(4) Landscaping. Except for parking spaces accessory to a one-family and two-family dwellings and accessory apartment dwelling units subject to approval by the Building Inspector, all off-street parking areas shall be landscaped with appropriate trees, shrubs and other plant materials and ground cover, as approved by the Planning Board based upon consideration of the adequacy of the proposed landscaping to assure the establishment of a safe, convenient and attractive parking facility with a minimum amount of maintenance, including plant care, snowplowing and the removal of leaves and other debris.

~~(3)~~(a) At least one tree with a minimum caliper of three inches at a height of four feet above ground level shall be provided within such parking area for each ~~10~~ 8 parking spaces.

~~(a)~~(b) Wherever possible, planting islands, at least eight feet in width, shall be provided to guide vehicle movement and to separate opposing rows of parking spaces so as to provide adequate space for plant growth, pedestrian circulation and vehicle overhang. Such planting islands and the landscaping within them shall be designed and arranged in such a way as to provide vertical definition to major traffic circulation aisles, entrances and exits, to channel internal traffic flow and prevent indiscriminate diagonal movement of vehicles and to provide relief from the visual monotony and shadeless expanse of a large parking area.

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~~(b)~~(c) The Planning Board may require curbing to facilitate surface drainage and prevent vehicles from overlapping sidewalks and damaging landscaping materials.

(d) No obstruction to driver vision shall be erected or maintained on any lot within the triangle formed by the street line of such lot, the outer edge of the access driveway to the parking area and a line drawn between points along such street line and access drive ~~30~~ 25 feet distant from their point of intersection.

~~(c)~~(e) Such property owner shall have an obligation to maintain and replace any landscaping which dies or becomes unsightly.

~~(4)~~(5) Grades, drainage, paving and marking. All proposed and ~~required~~ approved parking ~~facilities~~areas and structures, regardless of size, shall be graded, surfaced, drained and maintained throughout the duration of their use so as to comply with the New York State Stormwater Management Design Manual, as amended from time to time, and/or Chapter **190**, Stormwater Management and Erosion and Sediment Control, of this Code, or other acceptable stormwater management practice(s), as deemed suitable to the City Engineer to the extent necessary to avoid nuisances of dust, erosion or excessive water flow across public ways or adjacent lands. The drainage analysis for said parking ~~facilities~~ areas or structures shall include pre- and post-development conditions as well as remediation and/or mitigation of stormwater runoff. The maximum slope within a parking area shall not exceed 5%. In RD Districts and in any multifamily or nonresidential developments, the Planning Board shall require the provision of suitable markings to indicate individual parking spaces, maneuvering area, entrances and exits. Except for one-family or two-family dwellings, the Planning Board shall require green stormwater infrastructure for the development of parking spaces, unless the Applicant establishes to the Planning Board's satisfaction that the underlying soils do not allow natural drainage. Such green stormwater infrastructure is subject to § 190-9.

~~(5)~~(6) Traffic circulation. In order to encourage safe and convenient traffic circulation, the Planning Board may require the interconnection of parking areas via access drives within and between adjacent lots. The Board shall require ~~written assurance and/or deed restrictions~~easements, satisfactory to the Corporation Counsel, binding the owner and his heirs and assignees to permit and maintain such internal access and circulation and inter-use of parking ~~facilities~~areas or structures.

~~(6)~~(7) Two or more uses on same lot. Where two or more different uses occur on a single lot, ~~the total amount of parking facilities to be provided shall be the sum of the requirements of each individual use on the lot, except that~~ the Planning Board may approve the joint use of parking space by two or more establishments on the same lot or on contiguous lots, the total capacity of which is less than the sum of

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the spaces ~~required~~ needed for each, provided that said Board finds that the capacity to be provided will substantially meet the intent of this article by reason of variation in the probable time of maximum use by patrons or employees at such establishments and provided that such approval of such joint use shall be automatically terminated upon a change of use at any such establishment.

~~(7)~~(8) Designed residence and multifamily residence districts.

(a) In RD Districts, in order that some of the ~~required~~ parking spaces may be convenient for use by visitors as well as by occupants, 2/3 of the ~~required~~ car spaces for a residential building shall, whenever possible, be directly accessible to a main entrance to that building and within 100 feet of that entrance.

(b) In RD Districts, off-street parking lots shall be located behind, underneath, or to the side of the building, whenever possible. Any parking to the side of the building shall be screened from street views by a low wall, hedge, fence, and/or other landscaping and, whenever possible, it shall be located at least 40 feet from any property line that fronts on a street.

~~(8)~~(9) Off-street parking for private passenger vehicles may be allowed by a special permit from the Planning Board on a vacant lot in a residential district which has a shared parcel line for at least 20 feet with a commercial or industrial district, provided that the off-street parking shall be on a portion of the lot within 200 feet of the commercial or industrial district and that the use shall not include fee-based parking for railroad commuters.

~~D.~~C. Alternatives to providing parking spaces.

(1) Conveyance of land. Where, because of limitations of size, dimensions or topography of a lot, an applicant for a building permit in a business district finds it impractical to provide all or a portion of the off-street parking spaces required by ~~Subsection F hereinthe~~ Planning Board, in connection with a proposed building or addition, ~~he~~ the applicant may grant and convey to the City of Beacon, and the City Council, at its discretion, may accept, appropriately located and developed land for commercial parking as a permitted use equivalent, provided that said land is permanently dedicated to the City.

~~(1)~~(2) Waiver of improvement. Except within the Central Main Street District, and notwithstanding any other provision of this chapter, the City Council or Planning Board, in reviewing plans submitted in accordance with the provisions of this section or § **223-18** or **223-25**, may waive the initial improvement of up to 50% of the ~~required~~ off-street parking spaces, provided that all of the ~~required~~ spaces are shown on the proposed plan and further provided that suitable agreements,

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satisfactory to the City Council or Planning Board, are obtained assuring the City that the property owner(s) will be responsible for the construction of such waived spaces, or any portion thereof, within six months of the date such spaces may be deemed necessary by the City Council or Planning Board.

D. Schedule of Off-Street Parking ~~Requirements~~Standards. ~~Off-street parking spaces shall be provided as follows, except that the Board of Appeals may modify these provisions as a condition of the issuance of a special permit according to the provisions of § **223-19**.~~

(1) In order to promote walkability and other transportation alternatives and to avoid excessive automobile traffic and unnecessarily large paved parking lots, parking maximums have been established for all uses. N~~n~~o minimum number of off-street parking spaces are ~~required,~~required within the CMS, L, WD, and T districts due to the proximity of these districts to municipal parking areas, public transportation, and pedestrian-oriented streetscapes. ~~except for one-family and two-family dwellings as well as accessory apartment dwelling units which shall require a minimum of one off-street parking space per dwelling unit.~~

(2) The Planning Board shall determine the appropriate number of on-site parking spaces as part of application review and based on the context of the property, including but not limited to, as applicable, the size of the parcel, proposed uses, existing buildings on the parcel, especially if they are designated as historic, availability of public and street parking in the area, ~~walkable~~ access to public transit, a parking study submitted by the applicant, shared parking arrangements, land-banking authorized under § **223-26C(2)**, compliance with the Americans with Disabilities Act (ADA) and any state requirements for accessible parking, and input from any public hearing.

(3) Any professional parking study requested by the Planning Board and reviewed by the City's consultant shall be based primarily on specific site-related information, a comparable analysis of similar uses and properties in the area or region, and an examination of demand reduction strategies, including such elements as promotion of walking, bicycle parking or storage facilities, alternative mobility options, transit access opportunities, car-share rentals, and ride-sharing or carpooling services.

(4) The following table gives guidance to the Planning Board on the minimum and maximum ~~parking allowed~~parking allowed.; ~~notwithstanding~~Where only maximums are identified, the Planning Board may approve fewer spaces:

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Schedule of Off-Street Parking Standards

Building Use	CMS, L, WD, T		R1, RD, LI, HI, WP, FCD, GB	
	Min	Max	Min	Max
Residential (Including accessory apartment)	=	1 space per dwelling unit	1 space per dwelling unit	3 spaces per dwelling unit
Lodging	=	0.75 space per guest room	0.5 space per guest room	1.5 space per guest room
Commercial (Retail / Office / Service / Food / Auto-Oriented/ Social and Community)	=	3 spaces Per 1000 SF GFA	3 spaces Per 1000 SF GFA	5 spaces Per 1000 SF GFA
Health Care and Educational		4 spaces per 1000 SF GFA	1 space per 1000 SF GFA	4 spaces per 1000 SF GFA
Industrial (Industrial or Assembly)	=	=	0.25 space per 1,000 SF GFA	2.5 spaces per 1,000 SF GFA
Other Uses		Off-street parking requirements for types of which do not fall within the categories listed above shall be determined by the Planning Board or the Building Inspector upon consideration of relevant factors dictating the parking needs of each such use		

NOTES:
* The calculation of Gross Floor Area ("GFA") shall exclude utility space
* Up to 30% of the provided parking may be designated for compact automobiles at the discretion of and in accordance with standards as determined by the Planning Board

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Use	Minimum Maximum Off-Street Parking
1- and 2-family dwelling	2 spaces 3 spaces for each dwelling unit
Multifamily dwelling and/or apartment or artist live/work space	1 space for each dwelling unit, plus 1/4 space for each bedroom, plus 1/2 space for each live/work space containing retail area
Professional home office or home occupation permitted in a residential district	2 spaces in addition to spaces required for the residential use, except that there shall be a maximum 4 spaces for each medical or dental practitioner in addition to spaces required for the residential use
Bed-and-breakfast establishment	1 space for each guest sleeping room, plus 2 spaces for the dwelling unit, plus 1 space for each nonresident employee
Hotel or inn	Subject to § **223-14.1C** 1 for each hotel guest room, plus 1 for each employee on site at any one time
Place of worship, theater, auditorium, athletic field or other place of assembly	1 space for each 4 seats or pew spaces or, in places or, in places without seats, 1 space for each 100 square feet of floor space used for public assembly
Nursery school or day-care center	1 per employee plus 1 per classroom
Primary or secondary school	1 per employee plus 1 per 5 students in the 11th grade or above, or 1 per 4 assembly seats, whichever is greater

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Use	Minimum Maximum Off-Street Parking
Dance, art, tutorial, martial arts or similar instructional school	1 space for each 150 square feet of gross floor space
Hospital, nursing home, convalescent home or home for the aged	1 space for each 3 resident persons, plus space for each employee, including medical, nursing and service staff employed at the same time when the building is operating at full capacity
Golf and country club	1 space for each 2 memberships
Bowling alley or other place of indoor commercial recreation or public amusement	5 spaces for each bowling lane; all others, 1 space for each 4 persons of maximum occupancy or 1 space for each 200 square feet of gross floor area, whichever is greater
Retail or service business, including auction gallery	1 space for each 200 250 square feet of gross floor area, excluding utility areas
Restaurant or coffee house	1 space for each 3 patron seats or 1 space for each 150 200 square feet of gross floor area, excluding kitchen and storage areas, whichever is greater
Office for business or professional use (other than accessory to residential use)	1 space for each 200 300 square feet of gross floor area, excluding utility areas
Banking office	1 space for each 200 300 square feet of gross floor area, excluding utility areas

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Use	Minimum Maximum Off-Street Parking
Funeral home or undertaking establishment	10 spaces per establishment, plus 1 space per employee
Motor vehicle sales and service	1 space per employee, plus 1 space per 150 square feet of gross floor space
Animal care facility	1 space per employee, plus 1 space per 300 square feet of gross floor space
Car washing establishment	Subject to § **223-21F** 1 space per each two persons working at the same time at full capacity or 1 space for each 400 square feet of gross floor area, whichever is greater
Research or development laboratory	1 space per employee, but not less than or 1 space per 600 square feet of gross floor space
Manufacturing or industrial use	1 space per 2 employees but not less than or 1 space per 400 square feet of gross floor space
Wholesale, warehouse storage, utility or other similar commercial use	1 space per employee but not less than or 1 space per 1,000 square feet of gross floor space
Self-storage facility	1 space per 10,000 square feet of gross floor space, plus one space per employee

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Use	Minimum Maximum Off-Street Parking
Senior housing	2 spaces for each 3 dwelling units
Museums located within walking distance (3,000 feet) of entrance to train station	1 parking space per 3,000 feet of gross floor space
Artist studio	1 space for each 500 square feet of gross floor space
Art gallery/exhibit space	1 space for each 250 square feet of gross floor area
Bar or brew pub	1 space for each 3 patron seats or 1 space for each 250 square feet of gross floor area, excluding kitchen and storage areas, whichever is greater
Microbrewery or microdistillery	1 space for each employee on the largest shift, plus 1 space for each 3-patron sitting or standing spaces in any tasting room or other visitor facility open to the general public
Museum	1 space for each 300 500 square feet of gross floor area
Other uses not listed	Off-street parking requirements for types of uses which do not fall within the categories listed above shall be determined by the Planning Board or the Building Inspector, as the case may be, upon consideration of relevant factors entering into the parking needs of each such use

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~~Use~~ ~~Minimum~~ ~~Maximum~~ ~~Off-Street Parking~~

~~(1) Notwithstanding § **223-26F** above, with respect to lots which, on the effective date of this section, are located wholly or partially within 2,500 feet of the train station platform, the City Council shall have the authority to limit the amount of parking to be provided for multifamily and nonresidential development projects on said lots having a parking requirement in accordance with § **223-26F** of 25 spaces or more, in the interest of appropriately and reasonably minimizing the environmental impact of the project's vehicular traffic accessing the train station. In such cases, the City Council shall ensure that convenient pedestrian access is provided by the project, or is otherwise available between the project and the train station. Where a substantial change in elevation exists between the project and the train station, the City Council may require the project to provide, if deemed feasible by the Council, an elevator, escalator, stairs and/or other similar pedestrian conveyance or access for such purpose.~~

E. Operation and maintenance of off-street parking ~~facilities~~areas and structures. ~~Required~~ Approved off-street parking ~~facilities~~ areas or structures shall be maintained as long as the use of the structure exists which the ~~facilities~~ parking areas or structures are designed to serve. ~~Required~~ Designated parking areas developed for specific structures and uses shall be reserved at all times to those persons who are employed at or make use of such structures and land uses, except when dedicated to and accepted by the City as public parking areas.

F. Off-street loading requirements. Off-street loading and unloading facilities ~~shall be located on the same site with the use to be served, except as provided in Subsection **C(1)**, and~~ shall be provided as follows:

...

(2) ~~Required number~~ Number of spaces. The Planning Board shall determine the location (on-site or off-site) and appropriate number of on-site loading spaces as part of site plan approval and based on the context of the property, including but not limited to the size of the parcel, proposed uses, existing buildings on the parcel, a professional study prepared by the applicant, and input from any public hearing.

~~(a) For retail and/or service business establishments: a minimum of one space for the first 7,500 square feet or major portion thereof, plus one space for~~

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~~each additional 10,000 square feet of gross floor area or major portion thereof, except that no berths shall be required for buildings with a gross floor area of less than 5,000 square feet.~~

~~(b) For office establishments: a minimum of one space for the first 20,000 square feet of gross floor area or major portion thereof, plus one space for each additional 40,000 square feet of gross floor area or major portion thereof, except that no berths are required for buildings of less than 10,000 square feet of gross floor area.~~

~~(c) For research establishments: a minimum of one space for the first 12,000 square feet of gross floor area of building or major portion thereof, plus one space for each additional 20,000 square feet of gross floor area or major portion thereof.~~

~~(d) For wholesale business, industry, storage, warehouses and other commercial establishments: a minimum of one space for each establishment, plus one space for each 10,000 square feet of gross floor area or major portion thereof.~~

~~(e) For nursing homes: a minimum of one space for each establishment.~~

~~(f) For museums, a minimum of one space for each establishment.~~

~~(g) Other uses which do not fall within the categories listed above shall be determined by the City Council and adopted as an amendment to this section.~~

G. Driveways. For reasons of traffic and pedestrian safety, both on and off street, as well as to provide for possible future road widening or other improvements, all new driveways and sidewalk crossings entering onto any street shall comply with all requirements of Chapter **100**, Driveways, and shall be subject to the approval of the Highway Superintendent, except where such are part of a use subject to special permit or site development plan approval, in accordance with §§ **223-18** and **223-25**, in which case they shall be subject to approval by the Planning Board and/or City Council.

Section 2. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-14.1, entitled "Hotels," Subsection C is hereby amended as follows:

§ 223-14.1 **Hotels.**

…

C. ~~Minimum~~ Oo~~f~~ff-street parking shall be in accordance with § 223-26.

~~(1) For hotel rooms: One parking space shall be provided for each hotel guest room.~~

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~~(2) For restaurants, bars and other public rooms, and for recreation facilities and other permitted uses, other than lobbies: The number of parking spaces required in accordance with § 223-26 of this chapter shall be provided.~~

~~(3) For employees: One parking space shall be provided for each employee for the maximum number of employees working at the hotel at any one time.~~

…

Section 3. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-21, entitled "Car washes," Subsection F(1) is hereby amended as follows:

§ 223-21 **Car washes.**

…

F. Off-street parking ~~requirements~~ shall be provided in accordance with § 223-26~~as follows:~~

~~(1) One space per each two persons employed at the same time when the building is operating at full capacity or one space for each 400 square feet of gross floor area, whichever is greater.~~Off-street parking shall be in accordance with § 223-26.

…

Section 4. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-21, entitled "Nursing homes," Subsection D(1) is hereby amended as follows:

§ 223-21 **Nursing homes.**

…

~~D.~~(1) Off-street parking shall be provided in accordance with § 223-26.~~.~~

~~(1) One off-street parking space shall be required for each three resident persons and one for each person employed at the same time when the building is operating at full capacity, including staff doctors.~~Off-street parking shall be in accordance with § 223-26.

…

Section 5. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-25, entitled "Site development plan approval," Subsection A, is hereby amended as follows:

§ 223-25 **Site development plan approval.**

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A. Approval required. No building permit shall be issued, other than for interior alterations, and no change in type of use, as categorized in § 223-26DF hereof, shall be permitted, other than one-family dwellings, except in conformity with an approved site development plan, and no certificate of occupancy for such structure or use shall be issued until all the requirements for such approval and any conditions attached thereto have been met. The continued validity of any certificate of occupancy shall be subject to continued conformance with such approved plan and conditions. Revisions of such plans shall be subject to the same approval procedure.

Section 6. Chapter 223 of the City Code of the City of Beacon, Article IVA, Waterfront Zones, Section 223-41.3, entitled "Waterfront Park (WP) Zone," Subsection J(11) is hereby amended as follows:

§ 223-41.3 **Waterfront Park (WP) Zone.**

…

J. Waterfront ~~park~~ Park standards. Because the Waterfront Park area is a central element in the City's waterfront, it is essential that any proposed site plans meet the following standards:

…

(11) Off-street parking and loading~~:~~ shall be provided in accordance with § 223-26

…

~~(b) Parking requirementsshall be in accordance with § 223-26.~~

~~[1] Marina: 1/2 space per slip or dry rack storage unit.~~

~~[2] Museums, educational facilities, auditorium, athletic field or other place of assembly: One space for each four seats or pew spaces or, in places without seats, one space for each 100 square feet of floor space used for public assembly.~~

~~(c) With respect to any building, structure or use for which the required number of parking spaces is not specifically set forth in the above schedule, the Planning Board in the course of site plan review shall determine the number of off-street parking spaces required, which number shall bear a reasonable relation to the minimum off-street parking requirements for specified uses as set forth in the above schedule.~~

~~(d) Up to 30% of the required parking may be designated for compact automobiles at the discretion of and in accordance with standards as determined by the Planning Board~~.

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~~(e) Alternative methods of meeting off-street parking requirements.~~

~~[1] General~~

~~[a] The waterfront area will include a mix of land uses on the waterfront, wherein the cumulative parking demand is less than the sum of the peak demand values for each individual land use. This makes it possible to share parking without conflict and to avoid a large surplus of parking spaces in the waterfront area.~~

~~[b] Also, because of the special nature and value of land along the waterfront, and because of the anticipated mix of land uses, alternative parking solutions, such as valet parking, off-site parking, etc., may, in certain situations, also be appropriate.~~

~~[2] Planning Board authority. The Planning Board shall be authorized to find that any portion of the off-street parking requirements of a Waterfront Park project have been satisfied when the applicant establishes to the Board's satisfaction that alternative parking solutions are appropriate and will provide adequate parking for the project. If an applicant wishes to use alternative parking methods, he must submit a complete analysis to the Board for review. This analysis must include estimates of peak parking demands for different land uses for different hours of the day and days of the week. It should also define strategies intended to incorporate alternative parking methods and the advantages of such strategies.~~

~~[3] Alternative parking methods. Alternative parking methods include the following, and such other methods as the Planning Board deems appropriate, or any combination thereof:~~

~~[a] Parking shared among various use elements within a Waterfront Park project.~~

~~[b] Parking shared among various use elements within a Waterfront Park project.~~

~~[c] Valet parking.~~

~~(f) Off-street loading. Off-street loading shall be provided as the Planning Board may find appropriate.~~

Section 7. Chapter 223 of the City Code of the City of Beacon, Article IVA, Waterfront Zones, Section 223-41.4, entitled "Waterfront Development (WD) Zone," Subsection J(11) is hereby amended as follows:

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§ 223-41.4 **Waterfront Development (WD) Zone.**

…

J. Development standards for Waterfront Development District. It is essential that development in this district meet the following development standards:

…

(12) Off-street parking and loading shall be provided in accordance with § 223-26 ~~(11)~~.

~~…~~

~~(b) Parking requirements~~shall be in accordance with § 223-26, ~~except that the maximum parking standards for the following uses in the WD Zone are:~~.

~~[1] Multifamily dwelling: one space per unit.~~

~~[2] Retail or service business: one space for each 333 square feet of gross floor, excluding basement storage utility areas.~~

~~[3] Restaurant: one space for each three patron seats or one space for each 300 square feet of gross floor area, excluding kitchen and storage areas, whichever is greater.~~

~~[4] Office for business or professional use: one space for each 400 square feet of gross floor area.~~

~~[5] Hotel: 0.75 space for each hotel guest room.~~

~~(c) With respect to any building, structure or use for which the required number of parking spaces is not specifically set forth in the above schedule, the Planning Board, in the course of site plan review, shall determine the number of off-street parking spaces required, which number shall bear a reasonable relation to the minimum off-street parking requirements for specified uses as set forth in the above schedule.~~

~~(d) Up to 30% of the required parking may be designated for compact automobiles at the discretion of and in accordance with standards as determined by the Planning Board.~~

~~(e) Alternative methods of meeting off-street parking requirements.~~

~~[1] General.~~

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[a] The WD Zone encourages a mix of land uses on the waterfront wherein the cumulative parking demand is less than the sum of the peak demand values for each individual land use. This makes it possible to share parking without conflict and to avoid a large surplus of parking spaces in the waterfront area.

[b] Also, because of the special nature and value of land along the waterfront, and because of the anticipated mix of land uses, alternative parking solutions, such as valet parking, off-site parking, etc., may, in certain situations, also be appropriate.

[2] Planning Board authority. The Planning Board shall be authorized to reduce parking requirements for a given use, based upon a finding that any portion of the off-street parking requirements of a waterfront development have been satisfied when the applicant establishes to the Board's satisfaction that alternative parking solutions are appropriate and will provide adequate parking for the WD site. If an applicant wishes to use alternative parking methods, he must submit a complete analysis to the Board for review. This analysis must include estimates of peak parking demands for different land uses for different hours of the day and days of the week. It should also define strategies intended to incorporate alternative parking methods and the advantages of such strategies.

[3] Alternative parking methods. Alternative parking methods include the following, and such other methods as the Planning Board deems appropriate, or any combination thereof:

[a] Parking shared among various use elements within the waterfront development. The Planning Board's acceptance of such an alternative parking method shall be based on a professional parking study of the proposed use and the surrounding area that demonstrates that a different amount of parking would be appropriate for the use in its particular location and/or that existing and/or proposed off-site parking is sufficient.

[b] Provision of parking off-site, in private or municipal lots, where appropriate arrangements for such parking can be made.

[c] Valet parking.

(f) Off-street loading. Off-street loading shall be provided as the Planning Board may find appropriate.

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Section 8. Chapter 223 of the City Code of the City of Beacon, Article IVC, Fishkill Creek Development (FCD) Zone, Section 223-41.13, entitled "Uses; plan review; design standards," Subsection I(11) is hereby amended as follows:

§ 223-41.13 **Uses; plan review; design standards.**

…

I. Fishkill Creek development design standards.

…

(11) Off-street parking and loading.

…

(b) ~~Parking requirements.~~ The FCD District parking ~~requirements~~ shall be in accordance with § 223-26 of this chapter~~, except that the requirements in § 223-26F shall be both the minimum and maximum requirements for a FCD project~~.

~~(c) With respect to any building, structure or use for which the required number of parking spaces is not specifically set forth in § 223-26F of this chapter, the Planning Board, in the course of site plan review, shall determine the number of off-street parking spaces required, which number shall bear a reasonable relation to the minimum off-street parking requirements for specified uses as set forth in the above schedule.~~

~~(d) Up to 20% of the required parking may be designated for compact automobiles at the discretion of and in accordance with standards as determined by the Planning Board.~~

~~(e) Off-street loading shall be provided as the Planning Board may find appropriate.~~

Section 9. Chapter 223 of the City Code of the City of Beacon, Article IVD, Central Main Street (CMS) District, Section 223-41.18, entitled "Regulations," Subsections A and G are hereby amended as follows:

§ 223-41.18 **Regulations.**

A. Uses by right. The uses listed below are permitted by right in the CMS District, in the manner and under the conditions specified below. Unless otherwise indicated in this § 223-41.18, all such uses require site development plan review and approval. Site development plan review shall not be required for a change of use in an existing building where the new use is allowed by right, the building will not be expanded, and the ~~minimum~~ maxiumum

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number of off-street parking spaces required for the new use in § 223-41.18G(2) is not more than 25% greater than the ~~requirement~~ maximum standard for the existing use in § 223-26DF~~F~~ herein.

...

G. Parking location and quantity.

...

(2) ~~The minimum quantity of required on-site parking spaces shall be as follows~~Parking shall be in accordance with § 223-26~~, except that the maximum parking standards for the following uses in the CMS District are as follows~~:

~~(a) Residential: one space per unit.~~

~~(b) Office and nonretail commercial: two spaces per 1,000 square feet of floor area.~~

~~(c) Retail commercial and personal services: two spaces per 1,000 square feet of floor area.~~

~~(d) Other uses: as determined to be appropriate by the Planning Board in the course of site plan review, or in the case of a new use where site plan review is not required under § 223-41.18A, as determined by the Building Inspector in consultation with the City Planner.~~

(3) The ~~requirements~~ maximum standards in ~~Subsection G(2) above or~~ § 223-26 may be modified by the Planning Board, in its discretion, based upon information submitted by the applicant or otherwise made available in the public record, demonstrating one or more of the following:

(a) That the projected operational characteristics of the proposed use require a different amount of parking.

(b) That adequate shared parking, contractually obligated for the duration of the proposed use, is available within 500 feet of the site and within the CMS or PB District.

(c) That the applicant has provided sufficient bicycle parking to reduce anticipated vehicular travel demand.

(d) That there is sufficient public parking available within 800 feet of the site and within the CMS or PB District to meet foreseeable parking needs of the proposed use and surrounding uses for the duration of the proposed use.

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(e) That the applicant will voluntarily dedicate land for public parking on site or will acquire land by purchase or long-term lease (for the duration of the proposed use) within 800 feet of the site and within the CMS or PB District and voluntarily dedicate such land to the City for public parking.

(f) That a professional parking study of the proposed use and the surrounding area demonstrates that a different amount of parking would be appropriate for the use in its particular location and/or that existing and/or proposed off-site parking is sufficient.

(g) The application involves a designated historic property as defined in Chapter 134 of the City Code.

~~(4) For lots of 8,000 square feet or less, where the provision of on-site parking is infeasible, the Planning Board may waive all parking requirements, provided that the total floor area of the building is no greater than 5,000 square feet.~~

~~(5) Section 223-26B of this chapter shall apply in the CMS District.~~

Section 10. Chapter 223 of the City Code of the City of Beacon, Article IVE, Linkage District (L), Section 223-41.21, entitled "Regulations," Subsections A and F are hereby amended as follows:

§ 223-41.21 **Regulations.**

A. Uses by right. Uses listed below in this Subsection A are permitted by right subject to site plan review, except as otherwise noted in this § 223-41.21. Site plan review shall not be required for a change of use in an existing building where the new use is allowed by right, the building will not be expanded, and the ~~minimum~~ maximum number of off-street parking spaces ~~required~~ for the new use in § 223-41.21F(2) is not more than 25% greater than the ~~requirement~~ maximum standard for the existing use in § 223-26D~~F~~ herein. The following uses are allowed by right subject to a requirement that for any new construction of a principal building, an apartment use or attached, semidetached, or multifamily dwelling unit shall only be located on the upper stories or at least 50 feet behind the facade in the rear portion of the ground floor, if the building faces the north side of Beekman Street between Route 9D and West Main Street, faces the north side of West Main Street, or if the parcel is within 400 feet of the Route 9D-Beekman Street intersection, as identified on the Zoning Map:

…

F. Parking location and quantity.

…

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(2) ~~The minimum quantity of required on-site parking spaces shall be as follows~~Parking shall be in accordance with § 223-26~~, except that the maximum parking standards for the following uses in the L District are as follows~~:

~~(a) Residential: one space per unit.~~

~~(b) Office and general commercial: 2.5 spaces per 1,000 square feet of floor area.~~

~~(c) Retail commercial and personal services: three spaces per 1,000 square feet of floor area.~~

~~(d) Other uses: as determined to be appropriate by the Planning Board in the course of site plan review, or in the case of a new use where site plan review is not required under § 223-41.21A, as determined by the Building Inspector in consultation with the City Planner~~as listed in § 223-26 of this chapter.

(3) The ~~quantity of required on-site parking~~maximum standards in ~~Subsection F(2) above or~~ § 223-26 may be modified by the Planning Board, in its discretion, based upon information submitted by the applicant or otherwise made available to the Planning Board in the public record, demonstrating one or more of the following:

~~(e)~~(a) That the projected operational characteristics of the proposed use and/or its proximity within walking distance of the train station and other services justify a reduction in the required amount of parking.

~~(f)~~(b) That adequate shared parking, contractually obligated for the duration of the proposed use, is available within 500 feet of the site and in the L District.

~~(g)~~(c) That the applicant has provided sufficient bicycle parking to reduce anticipated vehicular travel demand, as supported by a professional parking study.

~~(h)~~(d) That there is sufficient public parking available within 800 feet of the site and in the L District to meet foreseeable parking needs of the proposed use and surrounding uses for the duration of the proposed use.

~~(i)~~(e) That the applicant will voluntarily dedicate land for public parking on site or will acquire land by purchase or long-term lease (for the duration of the proposed use) within 800 feet of the site and in the L District and voluntarily dedicate such land to the City for public parking.

~~(j)~~(f) That a professional parking study of the proposed use and the surrounding area demonstrates that a different amount of parking would be

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appropriate for the use in its particular location and/or that existing and/or proposed off-site parking is sufficient.

~~(4) For small preexisting lots where the provision of on-site parking is infeasible, the Planning Board may waive up to 50% of the parking requirements, provided that the total floor area of the building is no greater than 3,000 square feet. The Planning Board may grant additional parking waivers, at its discretion, subject to an in-lieu payment of $10,000 per parking space.~~

~~(5) Section 223-26B of this chapter shall not apply in the L District.~~

Section 11. Chapter 223 of the City Code of the City of Beacon, Article IVF, Senior Affordable Housing Overlay (SAHO) District, Section 223-41.22, entitled "Specific requirements and regulations," Subsection E(1) is hereby amended as follows:

§ 223-41.22 **Specific requirements and regulations.**

…

E. Supplementary site regulations.

(1) Parking~~ ratio~~. ~~Unless modified by the City Council in its zoning designation or special permit, parking spaces shall be provided at the ratio of 1.2 spaces per dwelling unit. The 0.2 fractional space shall be accumulated for staff and visitors~~Off-street parking shall be in accordance with § 223-26.

…

Section 12. Chapter 223 of the City Code of the City of Beacon, Article VI, Definitions and Word Usage, Section 223-63, entitled "Definitions," is hereby amended as follows:

…

LOADING SPACE
Any off-street space available for the loading or unloading of goods and complying with the ~~requirements~~ provisions specified in § 223-26 of this chapter.

…

PARKING SPACE
An off-street space available for the parking of one motor vehicle on a transient basis and complying with the ~~requirements~~ provisions specified in § 223-26 of this chapter.

…

Section 13. Ratification, Readoption and Confirmation.

Except as specifically modified by the amendments contained herein, Chapter 223 of the City of Beacon Zoning Code is otherwise to remain in full force and effect and is otherwise ratified, readopted and confirmed.

Section 14. Numbering for Codification.

It is the intention of the City of Beacon and it is hereby enacted that the provisions of this Local Law shall be included in the Code of the City of Beacon; that the sections and subsections of this Local Law may be re-numbered or re-lettered by the Codifier to accomplish such intention; that the Codifier shall make no substantive changes to this Local Law; that the word "Local Law" shall be changed to "Chapter," "Section" or other appropriate word as required for codification; and that any such rearranging of the numbering and editing shall not affect the validity of this Local Law or the provisions of the Code affected thereby.

Section 15. Severability.

The provisions of this Local Law are separable and if any provision, clause, sentence, subsection, word or part thereof is held illegal, invalid or unconstitutional, or inapplicable to any person or circumstance, such illegality, invalidity or unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, subsections, words or parts of this Local Law or their petition to other persons or circumstances. It is hereby declared to be the legislative intent that this Local law would have been adopted if such illegal, invalid or unconstitutional provision, clause, sentence, subsection, word or part had not been included therein, and if such person or circumstance to which the Local Law or part hereof is held inapplicable had been specifically exempt there from.

Section 16. Effective Date.

This local law shall take effect immediately upon filing with the Office of the Secretary of State.

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Traffic & Parking Study

Appendix G | Other Development Traffic Data

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Appendix G | Mirbeau Beacon TIS Excerpt

Colliers Engineering & Design

Traffic Impact Study

May 24, 2022

Mirbeau Beacon
Wolcott Avenue (NYS Route 9D)
City of Beacon, Dutchess County, NY

Prepared for:

The Mirbeau Companies LLC
433 Broadway STE 203
Saratoga Springs, NY 12866

Prepared by:

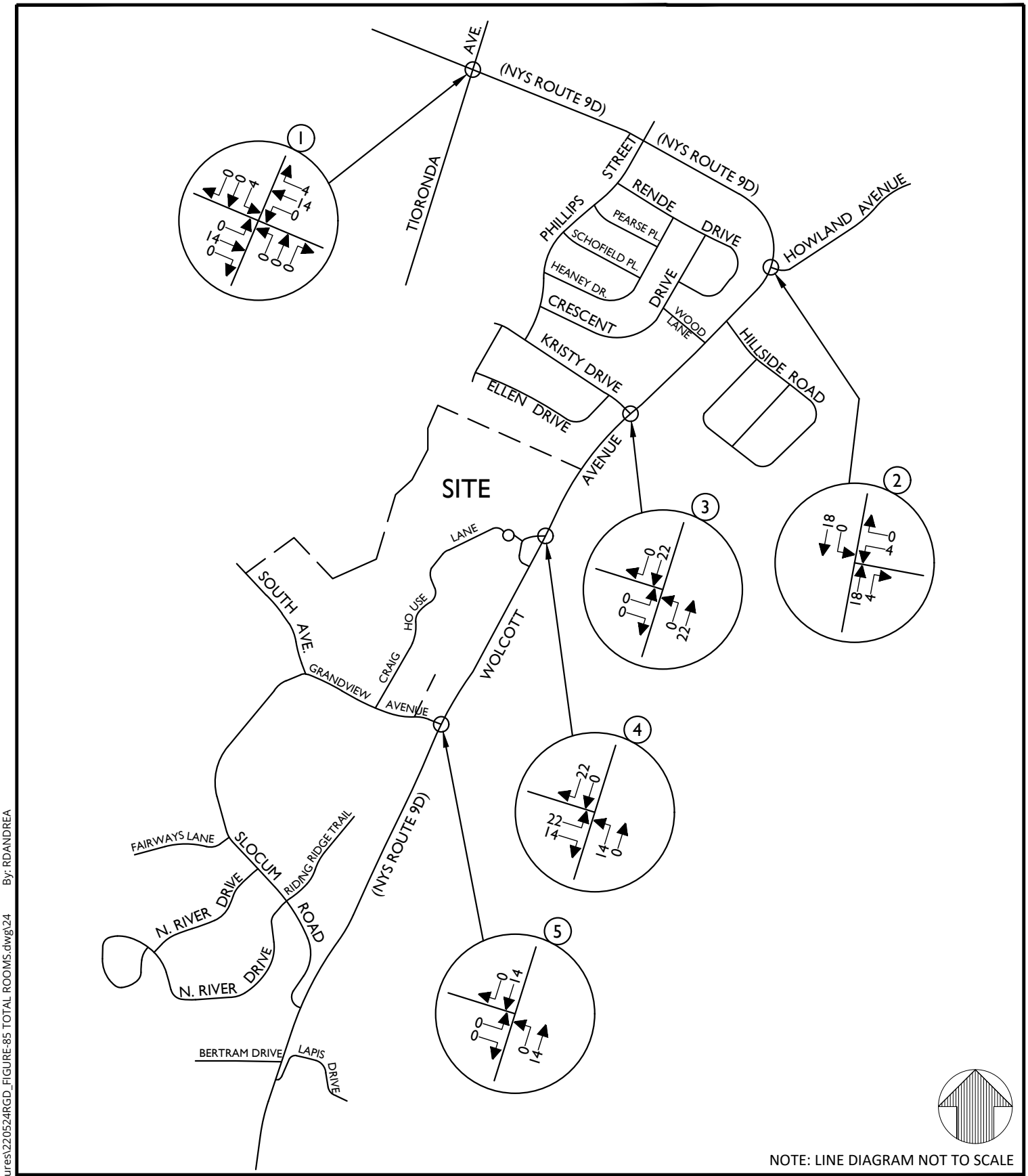
Philip J. Grealy, Ph.D., P.E.
New York Professional Engineer
License No.58958

Richard G. D'Andrea, P.E., PTOE
New York Professional Engineer
License No. 090241

Colliers Engineering & Design
400 Columbus Avenue
Suite 180E
Valhalla New York 10595
Main: 877 627 3772
Colliersengineering.com

Project No. 21007271A

Maser Consulting is now Colliers Engineering & Design



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TRAFFIC IMPACT STUDY

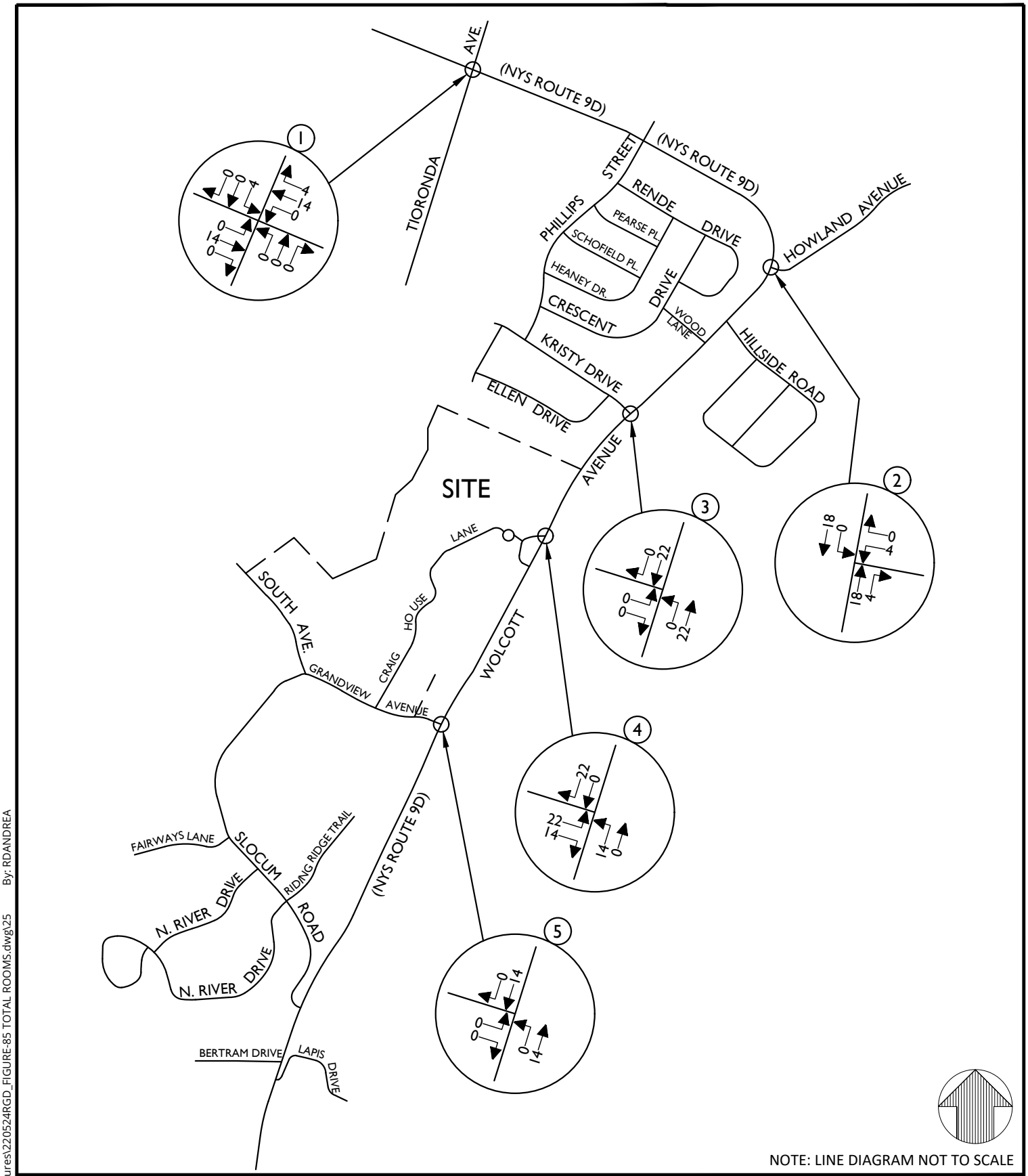
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	5/24/22	R.H.	P.J.G.

PROJECT NUMBER:	DRAWING NAME:
21007271A	220524RGD_FIGURE-85 TOTAL ROOMS

SHEET TITLE:
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK FRIDAY PM HOUR
(EVENT CONDITIONS)

SHEET NUMBER: 24

7271A-Mirbeau Spa\Reports\Traffic\Figures\220524RGD_FIGURE-85 TOTAL ROOMS.dwg\24 By: RDANDREA



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TRAFFIC IMPACT STUDY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	5/24/22	R.H.	P.J.G.

PROJECT NUMBER:	DRAWING NAME:
21007271A	220524RGD_FIGURE-85 TOTAL ROOMS

SHEET TITLE:
SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR
(EVENT CONDITIONS)

SHEET NUMBER: 25

7271A-Mirbeau Spa\Reports\Traffic\Figures\220524RGD_FIGURE-85 TOTAL ROOMS.dwg\25 By: RDANDREA

Table No. 2
Hourly Trip Generation Rates (HTGR) and Analyzed Site Generated Traffic Volumes
Proposed Mirbeau Beacon

Mirbeau Beacon	Entry		Exit		Total
	HTGR[1]	Volume	HTGR[1]	Volume	
Mirbeau Beacon (80 Hotel Rooms)					
Peak PM Hour Generator	0.56	48	0.34	29	77
Saturday Peak Hour	0.36	31	0.40	34	65
Future Rental Homes (19 Units)					
Peak PM Hour Generator	0.56	11	0.34	6	17
Saturday Peak Hour	0.36	7	0.40	8	15
Total With Future Rental Homes					
Peak PM Hour Generator	-	59	-	35	94
Saturday Peak Hour	-	38	-	42	80
Events (100 Attendees)					
Peak PM Hour Generator	-	36	-	36	72
Saturday Peak Hour	-	36	-	36	72
Total With Events					
Peak PM Hour Generator	-	95	-	71	166
Saturday Peak Hour	-	74	-	78	152

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 11TH EDITION, 2021. ITE LAND USE CODE - 310 - HOTEL.

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Appendix G |364 Main Street TIS Excerpt

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July 26, 2021
Revised August 30, 2021

Chairman John Gunn
City of Beacon Planning Board
City of Beacon City Hall
1 Municipal Plaza
Beacon, NY 12508

O'Donnell Construction Corp.
364 Main Street – Application for Site Plan Approval
Beacon, New York
Colliers Engineering & Design Project No. 21001718A

Dear Chairman Gunn and Members of the Planning Board,

Colliers Engineering & Design has conducted a complete review of the traffic and parking related impacts of the proposed 364 Main Street commercial and multi-family mixed-use redevelopment project ("The Project"). The enclosed information is being provided as an update to our initial traffic and parking review letter for the Project dated May 25, 2021.

The 364 Main Street Project site is comprised of two (2) lots that are located on the north side of Main Street generally opposite of Veterans Place, east of Eliza Street and approximately 300 feet west of the Teller Avenue intersection. The 364 Main Street Lot is classified in the City of Beacon's Central Main Street (CMS) Zoning District and is presently improved by an approximately 7,031 sq. ft. building that was formerly occupied by Citizens Bank, which has since relocated to the 344 Main Street property at the corner of Eliza Street. The Project site currently has two (2) driveway connections to Main Street, including a one-way entry-only driveway on the east side of the existing building along the eastern property line and a one-way exit-only driveway on the west side of the existing building along the western property line. The Project site also includes the abutting property to the north, which is currently improved by a private parking lot that provides direct access to Eliza Street (the "Eliza Street Parcel"). The Eliza Street Parcel is classified in the in the Transitional (T) Zoning District.

The Applicant proposes to expand the existing one (1)-story building on the Project site to include approximately 6,674 sq. ft. of commercial space and 1,521 sq. ft. of residential common area space on the first floor and twenty (20) multi-family residential units on two (2) new upper floors. Note since our initial traffic and parking review, the development proposal has eliminated a previously proposed fourth floor that would have included seven (7) additional residential units. As part of the development Project, the 364 Main Street Lot and the Eliza Street Lots will share an internal driveway connection between the two (2) properties, which will provide 40 off-street parking spaces, including one (1) handicap-accessible parking spaces, for the Project. The off-street parking will consist of 29 spaces on the Eliza Street Lot and 14 spaces adjacent to the building on the 364 Main

Street Lot. Access to the Site is proposed to be provided via the existing entry-only and exit only driveway connections to Main Street on the east side of the building and two-way access to Eliza Street via the existing driveway connection to that roadway from the Eliza Street lot. Note the project no longer includes a public green space which was previously proposed on the west side of the building and would have eliminated the existing exit only driveway to Main Street.

The following provides description of the tasks undertaken to review the potential traffic and parking related impacts associated with the proposed development.

Existing Conditions

As previously described, the Project will be access via Main Street and Eliza Street with a majority of the project generated traffic also utilizing Fishkill Avenue/Teller Avenue for regional access to the Site. The following is a brief description of these roadways located within the study area.

Main Street

Main Street is a City street that consists of one lane in each direction and traverses in a northwest/southeast direction between NYS Route 9D and Churchill Street. Beyond Churchill Street, Main Street continues in a more northeasterly direction. Northwest of Fishkill Avenue/Teller Avenue, the roadway is classified as an Urban Major Collector, southeast of Fishkill Avenue it is classified as a local roadway. In the vicinity of the site, the roadway intersects with Eliza Street and Veteran's Place at an unsignalized "T" shaped intersection as well as with Fishkill Avenue/Teller Avenue (NYS Route 52) at a signalized full movement intersection. Sidewalks are provided on both sides of the street and striped pedestrian crossings are provided at the Eliza Street, Veterans Place and Fishkill Avenue/Teller Avenue intersections. Parking is permitted on both sides of Main Street for its entire length with the parking limited to two-hour parking between 9AM and 5PM seven days a week. Main Street has a City Speed Limit of 30 MPH northeast of Fishkill Avenue, while the speed limit southwest of Fishkill Avenue is 25 MPH.

Eliza Street

Eliza Street is a local City street that originates at an unsignalized "T" shaped intersection with Main Street. Between Main Street and Church Street Eliza Street is a one-way northbound only roadway with on-street parking and sidewalks provided on both sides of the street. This section of the roadway provides access to the Eliza Street portion of the project as well as the Eliza Street Public Parking lot on the west side of Eliza Street. North of Church Street, Eliza Street becomes a two-way roadway to Verplanck Avenue and then terminating at Kent Street.

Fishkill Avenue/Teller Avenue (NYS Route 52)

Fishkill Avenue and Teller Avenue are classified as Urban Minor Arterials. These roadways are also known as NYS Route 52 but are owned and maintained by the City. Fishkill Avenue and Teller Avenue each consist of one lane in each direction and traverse in a generally north/south direction. The roadway intersects Main Street at a full movement signalized intersection. Sidewalks are provided on both sides of the roadway to the north and south of Main Street. On street parking is not permitted along Teller Avenue, while limited on street parking is permitted along the

east side of Fishkill Avenue. Fishkill Avenue and Teller Avenue each have a posted City Speed Limit of 30 MPH. It is noted that improvements to this intersection are proposed as part of the City of Beacon Teller Avenue/Fishkill Avenue Rehabilitation project.

Manual traffic counts were collected by representatives of Colliers Engineering & Design on Thursday June 3, 2021 and Saturday June 5, 2021 for the Weekday AM and PM Peak periods and Saturday Midday Peak period to determine the existing traffic volume conditions at the study area intersections. This information was also compared to previous traffic data collected by our office within the study area during February 2020 prior to the onset of the COVID 19 Pandemic. These traffic counts were then compared to traffic volume data from previous traffic studies conducted by our office and to traffic volume data available from the New York State Department of Transportation (NYSDOT) for the Fishkill Avenue/Teller Avenue (NYS Route 52) Corridor. Based on this information, the 2021 Existing Traffic Volumes were established for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours at the following study area intersections.

- Fishkill Avenue/Teller Avenue (NYS Route 52) and Main Street
- Main Street and Veterans Place

Based upon a review of the traffic counts, the peak hours were generally identified as follows:

- Weekday Peak AM Hour 8:30 AM – 9:30 AM
- Weekday Peak PM Hour 3:45 PM – 4:45 PM
- Saturday Peak Hour 2:00 PM – 3:00 PM

The resulting 2021 Existing Traffic Volumes are shown on Figures No. 2, 3 and 4 (Appendix A) for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours, respectively.

Future No-Build Conditions

The 2021 Existing Traffic Volumes were increased by a growth factor of 2.0% per year to account for general background growth resulting in the 2021 Projected Traffic Volumes, which are shown on Figures No. 5, 6 and 7 (Appendix A) for each of the Peak Hours. In addition, traffic associated with the recently approved 416-420 Main Street development was also accounted for. The resulting Other Development traffic volumes associated with that development are shown on Figures No. 8, 9 and 10 (Appendix A) for each of the peak hours. These volumes were added to the 2026 Projected Traffic Volumes resulting in the 2026 No-Build Traffic Volumes, which are shown on Figures No. 11, 12 and 13 for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours, respectively.

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Future Build Conditions

In order to assess the potential traffic related impacts associated with the Project, estimates of the amount of traffic to be generated by the Project during peak hours were developed based on information published by the Institute of Transportation Engineers (ITE) as contained in the report entitled "Trip Generation", 10th Edition, 2017, based on Land Use Category – 220 – Multi-Family Housing (Low-Rise) and Land Use Category – 820 – Retail. Table No. 1, below summarizes the trip generation rates and corresponding site generated traffic volumes for the Weekday Peak AM, Weekday Peak PM and Saturday Midday Peak Hours.

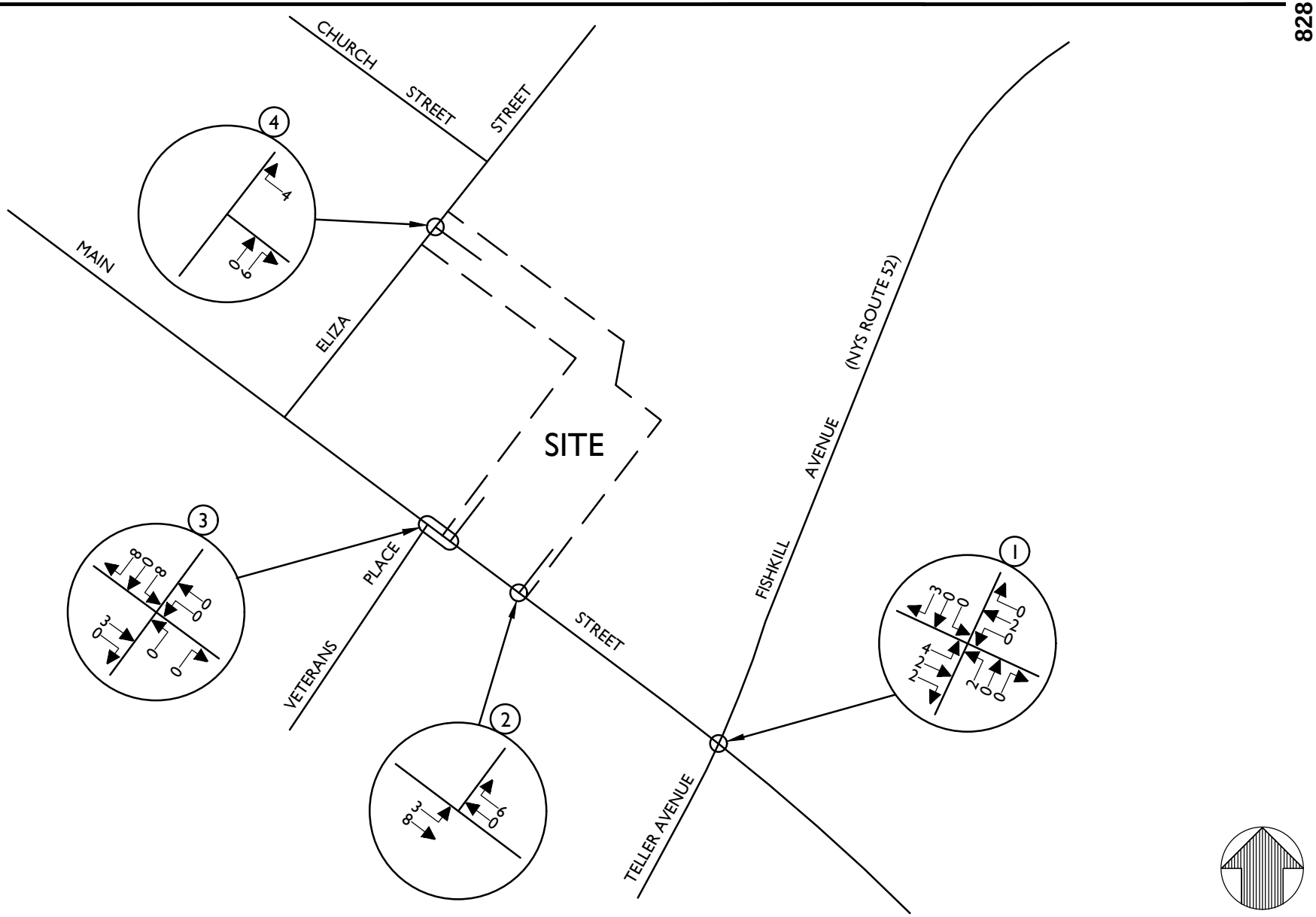
Table No. 1 – Anticipated Site Generated Traffic Volumes

Time Period	Entry		Exit		Total Volume
	HTGR	Volume	HTGR	Volume	
Residential – 20 Units					
Weekday AM Peak Hour	0.20	4	0.45	9	13
Weekday PM Peak Hour	0.45	9	0.30	6	15
Saturday Midday Peak Hour	0.40	8	0.30	6	14
Commercial – 6,674 Sq. Ft.					
Weekday AM Peak Hour	1.65	11	1.35	9	20
Weekday PM Peak Hour	2.10	14	2.10	14	28
Saturday Midday Peak Hour	2.40	16	2.10	14	30
Totals					
Weekday AM Peak Hour	---	15	---	18	33
Weekday PM Peak Hour	---	23	---	20	43
Saturday Midday Peak Hour	---	24	---	20	44

Source: The Hourly Trip Generation Rates (HTGR) are based on data published by The Institute of Transportation Engineers (ITE) as contained In the Trip Generation Handbook, 10th Edition, 2017. ITR Land Use Code - Land Use Code - 220 - Residential, and ITE Land Use Code - 820 – Retail.

It should be noted that the above-referenced traffic generation estimates do not account for potential "internal" trips that would be expected to occur between the proposed residential and commercial uses of the Project. Data provided by ITE indicates that internal trips between residential and commercial land uses can be between 5% and 15% of the total traffic generation of the Project, which would therefore reduce the total number of vehicle trips generated by the development.

It is noted that the magnitude of trips anticipated to be generated by the Project is less than the NYSDOT and ITE recommended threshold of 100 new site generated trips at any one location, which would indicate the need for further detailed analysis. However, regardless of this guidance and in consideration of the Project's location along the Main Street corridor, a has been prepared as contained herein.



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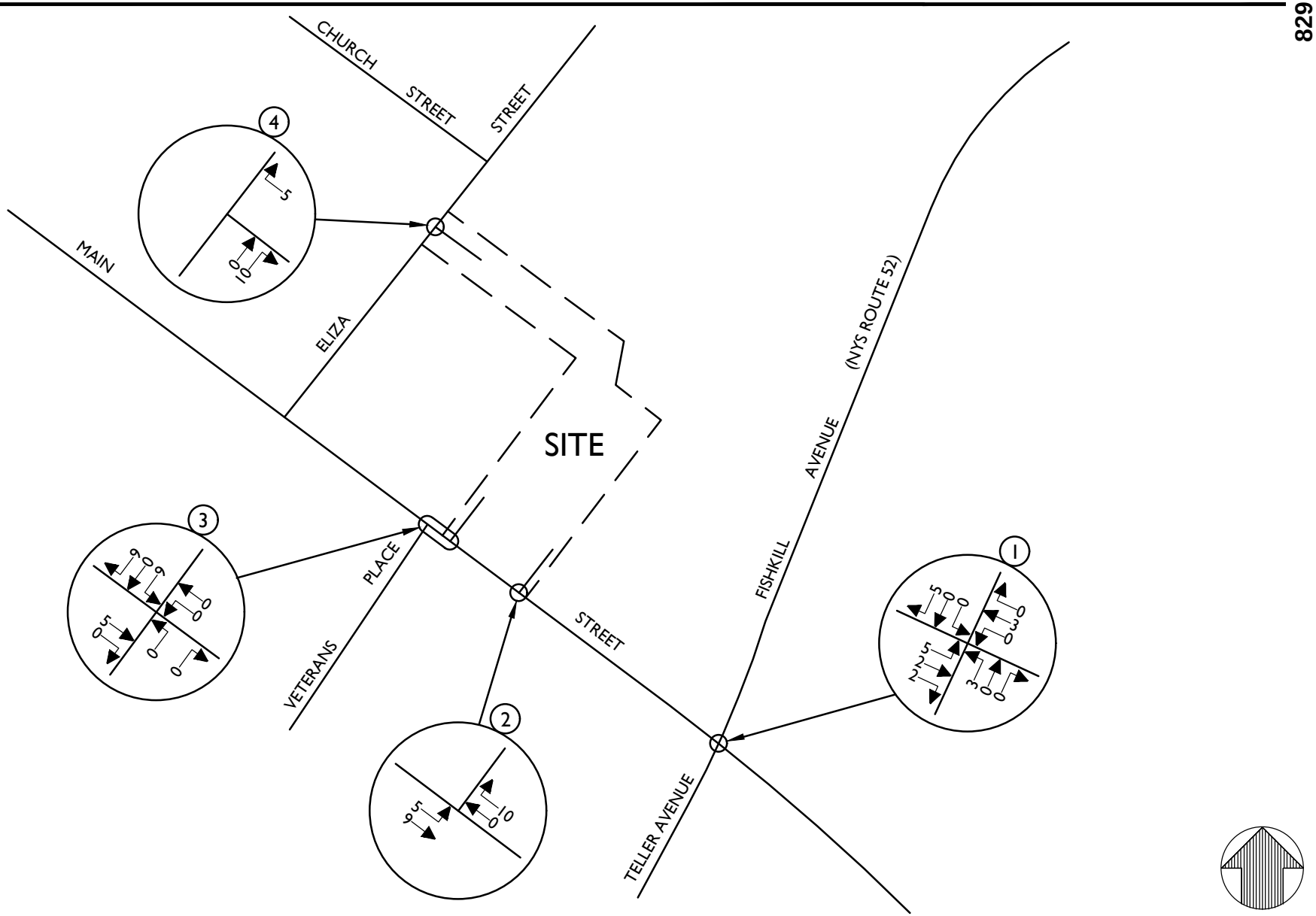
TRAFFIC IMPACT STUDY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	7/19/21	R.H.	R.G.D.

PROJECT NUMBER: 21001718A
DRAWING NAME: 210719RH_FIGURE

SHEET TITLE:
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER:
16



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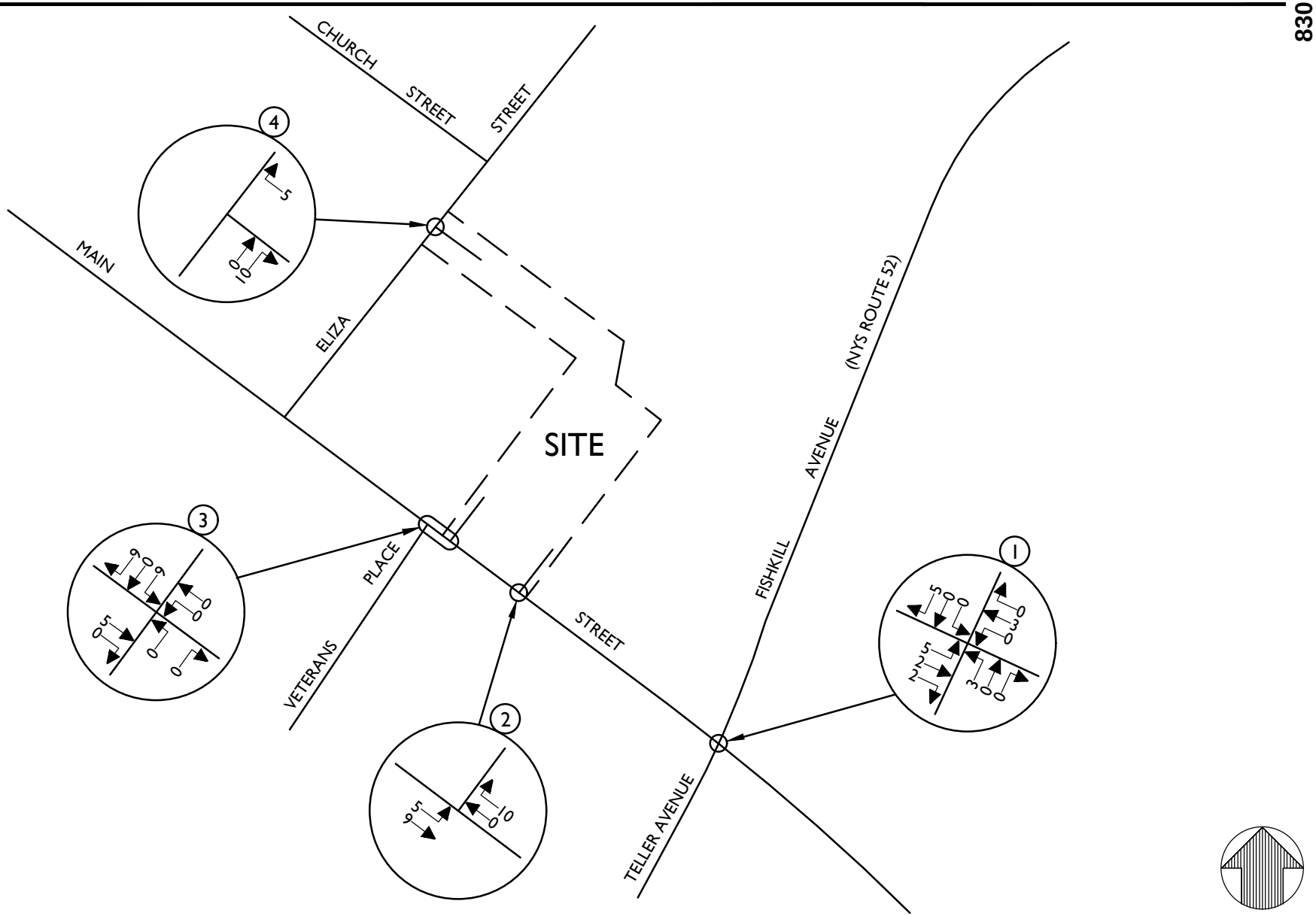
TRAFFIC IMPACT STUDY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	7/19/21	R.H.	R.G.D.

PROJECT NUMBER: 21001718A
DRAWING NAME: 210719RH_FIGURE

SHEET TITLE:
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER:
17



NOTE: LINE DIAGRAM NOT TO SCALE

\AcPublish_32160\210719RH_FIGURE.dwg\18 By: RDANDREA

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364 MAIN STREET
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	7/19/21	R.H.	R.G.D.

PROJECT NUMBER: 21001718A
DRAWING NAME: 210719RH_FIGURE

SHEET TITLE:
SITE GENERATED TRAFFIC VOLUMES
SATURDAY PEAK HOUR

SHEET NUMBER:
18

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Appendix G | Edgewater (Edgewater Place) TIS Excerpt

Engineers Planners Surveyors Landscape Architects Environmental Scientists

MASER CONSULTING P. A.

Traffic Impact Study

Edgewater Development

Tompkins Avenue and Branch Street
City of Beacon, Dutchess County, New York

January 18, 2017
Revised February 27, 2017

Prepared For

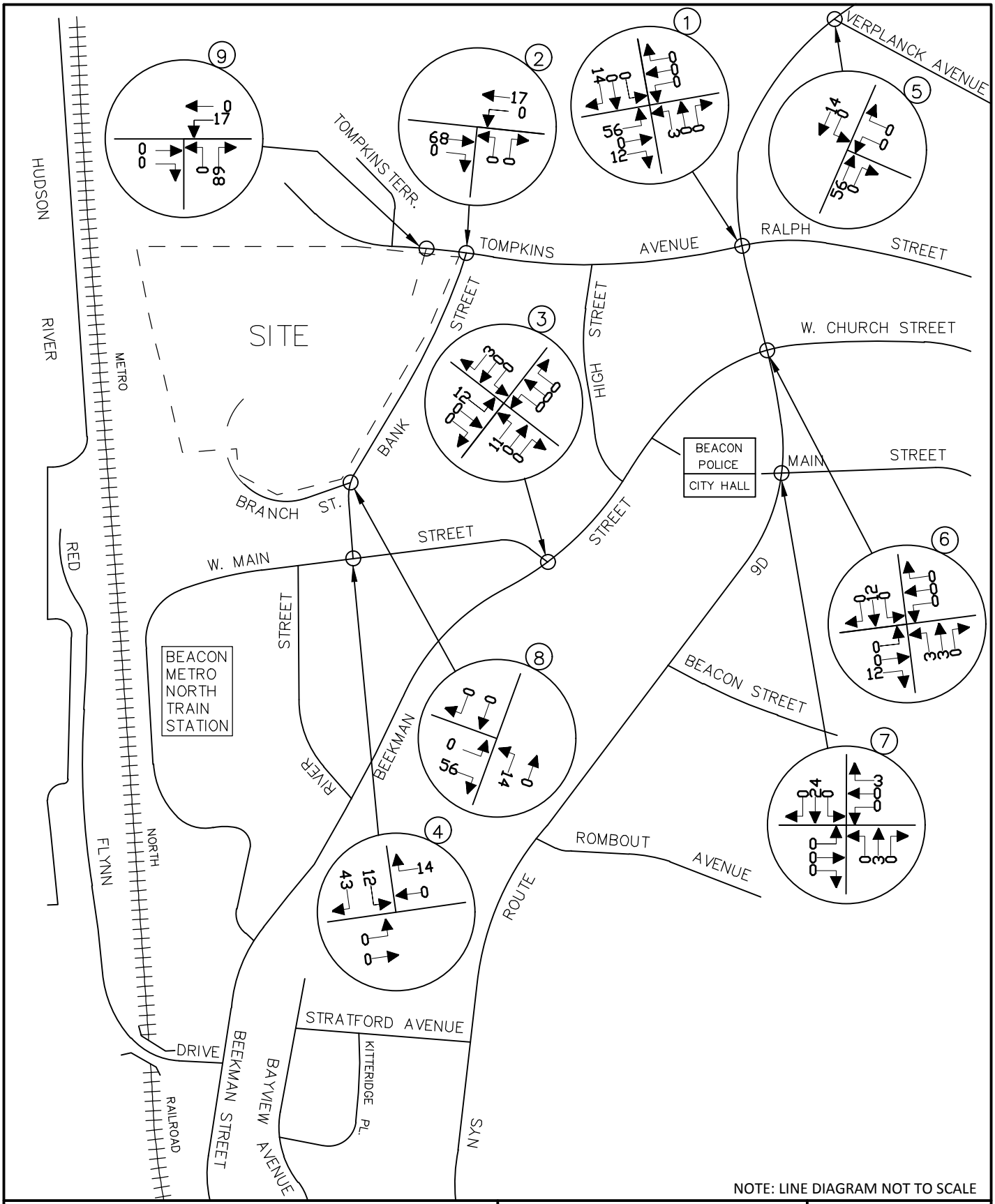
Scenic Beacon Developments, LLC
25 East Main Street
Beacon, NY 12508

Prepared By

Maser Consulting P.A.
11 Bradhurst Avenue
Hawthorne, NY 10532
914.347.7500

Philip J Grealy, Ph.D., P.E., Principal/Dept. Manager
License No. 59858

Richard G D'Andrea, P.E., PTOE, Associate/ Project Manager
License No. 092041



NOTE: LINE DIAGRAM NOT TO SCALE

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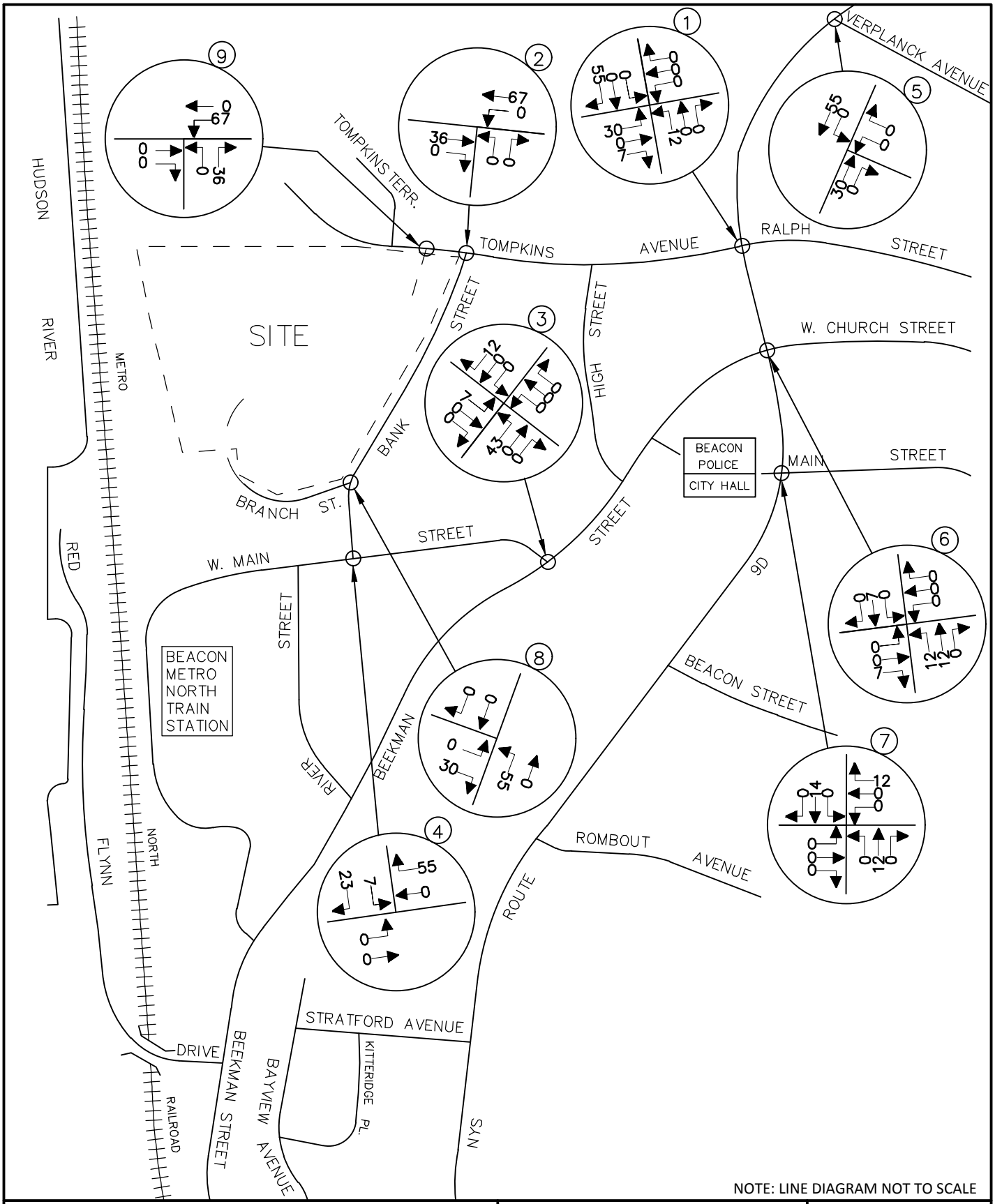
Hawthorne, NY 10532
Phone: 914.347.7500
Fax: 914.347.7266
email: solutions @ maserconsulting.com

EDGEWATER
CITY OF BEACON, DUTCHESS COUNTY, NY

SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOB NUMBER:	DATE:
16003078A	FEB. 2017
FIGURE NUMBER:	
12	



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EDGEWATER
CITY OF BEACON, DUTCHESS COUNTY, NY

SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOB NUMBER:	DATE:
16003078A	FEB. 2017
FIGURE NUMBER:	
13	

TABLE 1

HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

EDGEWATER BEACON, NY	ENTRY		EXIT	
	HTGR*	VOLUME	HTGR*	VOLUME
APARTMENT (309 DWELLING UNITS)				
PEAK AM HOUR	0.10	31	0.40	124
PEAK PM HOUR	0.39	122	0.21	66

NOTES:

1) * HTGR-HOURLY TRIP GENERATION RATES EXPRESSED IN TERMS OF TRIPS PER 1000 S.F. FOR LAND USES - 220 APARTMENT; BASED ON THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) PUBLICATION ENTITLED "TRIP GENERATION", 9TH EDITION, 2012.

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Appendix G | Beacon Commons TIS Excerpt

TRAFFIC STUDY

BEACON COMMONS

16 WEST MAIN STREET
CITY OF BEACON, NEW YORK

Prepared for: **Farrell Building Company**
2317 Montauk Highway
Bridgehampton, NY 11932

Prepared by:

JMC Project **18119**

Date: March 31, 2020
Revised: March 8, 2022
Revised: May 31, 2022
Revised: June 28, 2022

TABLE 1

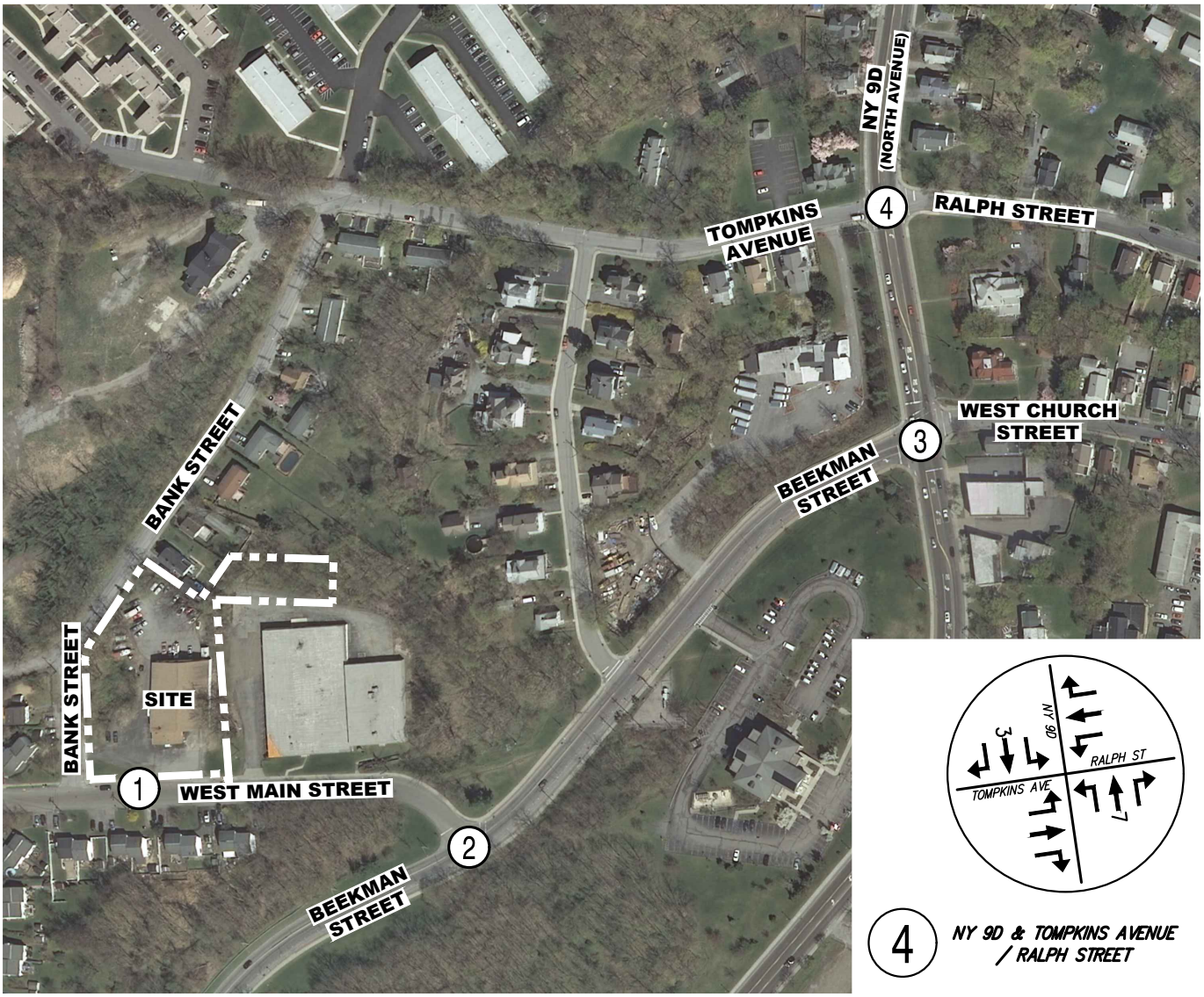
PROPOSED DEVELOPMENT VOLUMES[1]

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
a. Proposed 62 Unit Multifamily Housing Primary Volumes (ITE Code 221)[2]	6	16	22	17	11	28

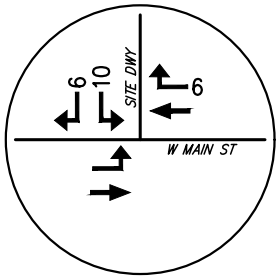
Notes:

(1) Trip generation is based on Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition.

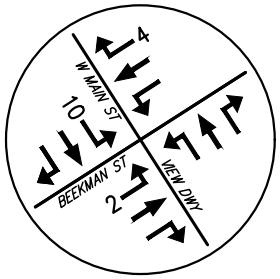
(2) Multifamily Housing (Mid-Rise) (ITE Code 221) is defined by ITE as multifamily housing including apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors).



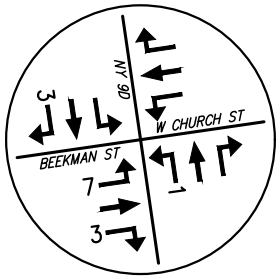
4 NY 9D & TOMPKINS AVENUE / RALPH STREET



1 WEST MAIN STREET & SITE DRIVEWAY



2 WEST MAIN STREET / THE VIEW DRIVEWAY & BEEKMAN STREET



3 NY 9D & BEEKMAN STREET / WEST CHURCH STREET

BEACON COMMONS

16 WEST MAIN STREET BEACON, NY 12508

PRIMARY VOLUMES

PEAK WEEKDAY AM HOUR

DATE: 03/31/2020 JMC PROJECT: 18119

FIGURE: 13 SCALE: 1" = 250'

120 BEDFORD RD
ARMONK
NY 10504

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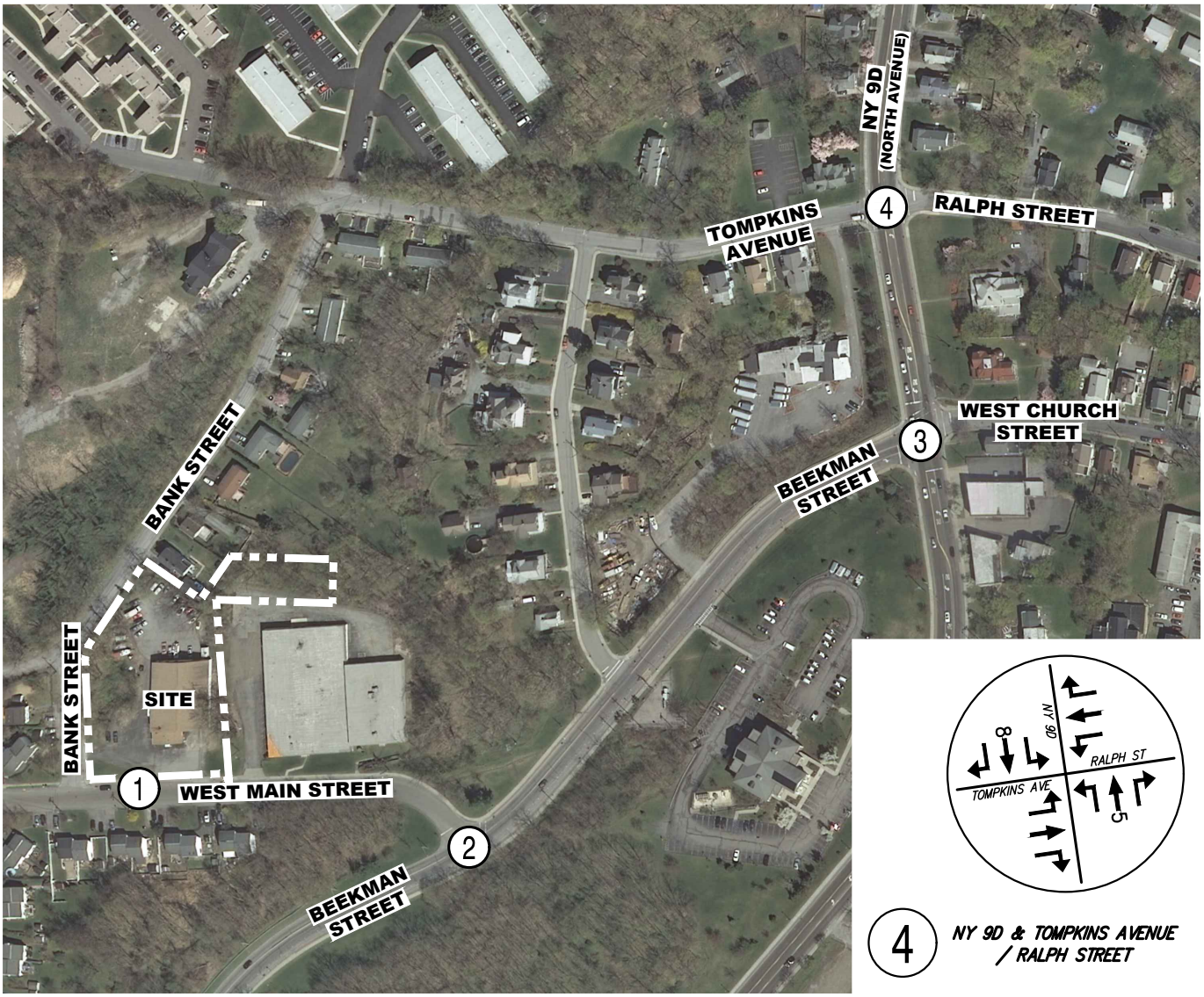
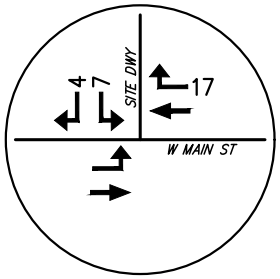
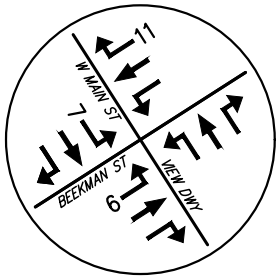


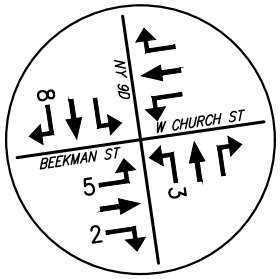
4 NY 9D & TOMPKINS AVENUE / RALPH STREET



1 WEST MAIN STREET & SITE DRIVEWAY



2 WEST MAIN STREET / THE VIEW DRIVEWAY & BEEKMAN STREET



3 NY 9D & BEEKMAN STREET / WEST CHURCH STREET

BEACON COMMONS

16 WEST MAIN STREET BEACON, NY 12508

PRIMARY VOLUMES

PEAK WEEKDAY PM HOUR

DATE: 03/31/2020 JMC PROJECT: 18119

FIGURE: 14 SCALE: 1" = 250'

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Appendix G | Prophecy Theater TIS Excerpt

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Traffic & Parking Study

February 21, 2022

1113 Wolcott Avenue

City of Beacon
Dutchess County, New York

Prepared for:

Prophecy Theatre LLC
369 Main Street, Unit 493 Beacon,
NY 12508

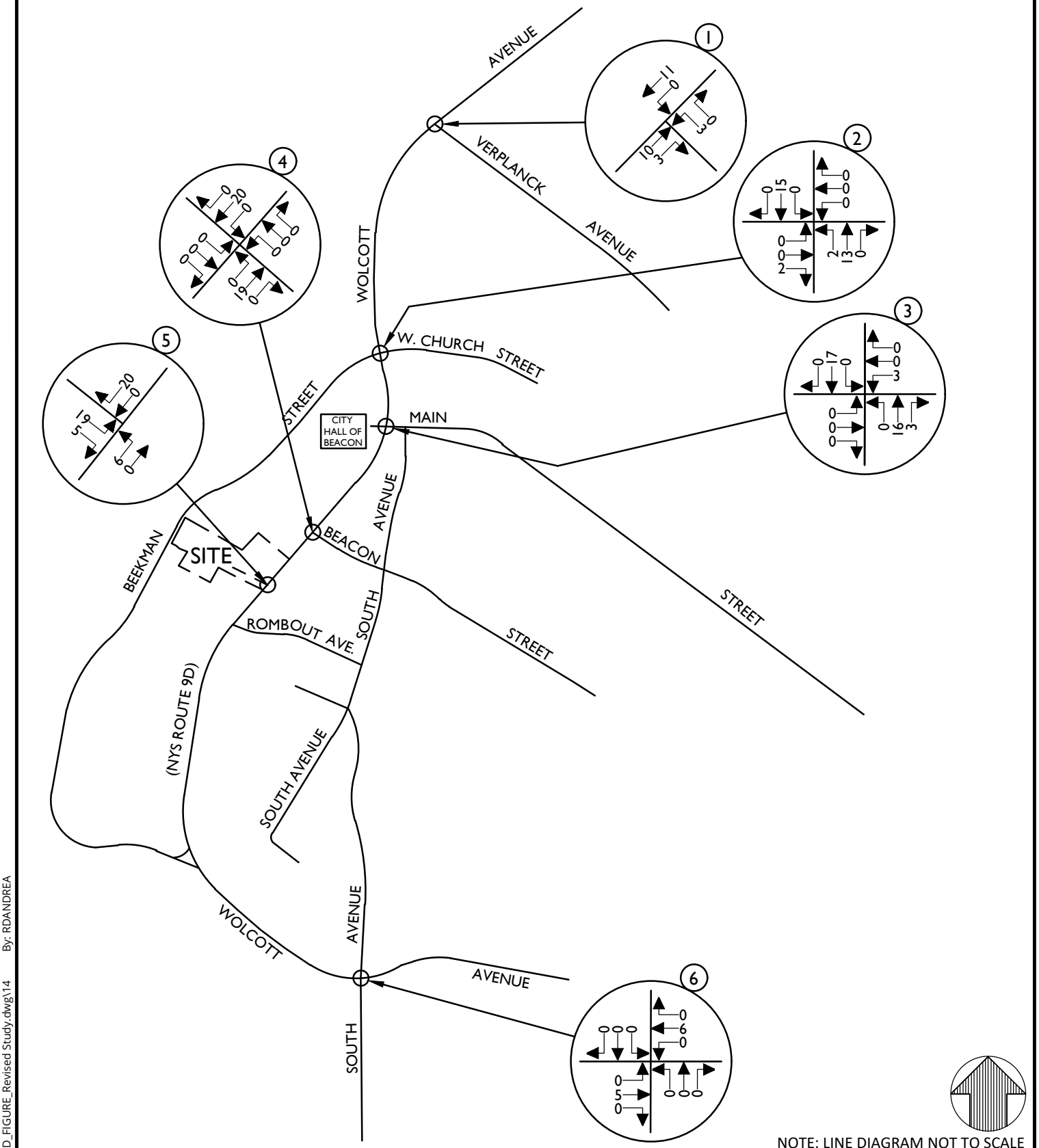
Prepared by:

Richard G. D'Andrea, P.E., PTOE
New York Professional Engineer
License No. 090241

Colliers Engineering & Design
400 Columbus Avenue
Suite 180E
Valhalla New York 10595
Main: 877 627 3772
Colliersengineering.com

Project No. 21004333A

Maser Consulting is now Colliers Engineering & Design



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PROPHECY THEATER

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TRAFFIC IMPACT STUDY

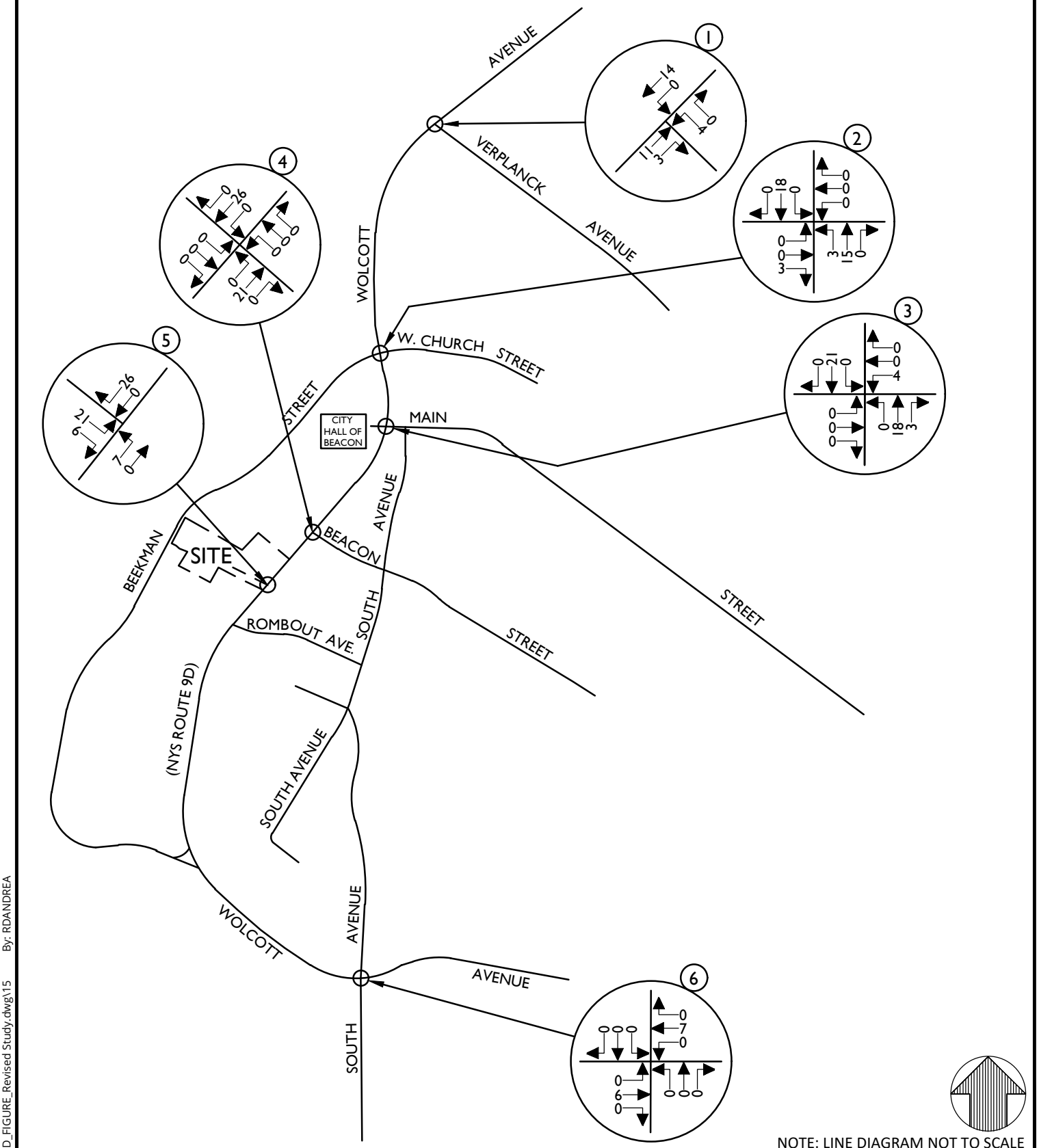
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	10/5/21	R.H.	P.J.G.

PROJECT NUMBER: 21004333A
DRAWING NAME: 220221RGD_FIGURE_REVISED STUDY

SHEET TITLE:
TYPICAL CONDITIONS
SITE GENERATED TRAFFIC VOLUMES
FRIDAY PM PEAK HOUR

SHEET NUMBER: 14

4333A\Reports\TrafficFigures\220221RGD_FIGURE_Revised Study.dwg\14 By: RDANDREA



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TRAFFIC IMPACT STUDY

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AS SHOWN	10/5/21	R.H.	P.J.G.

PROJECT NUMBER:	DRAWING NAME:
21004333A	220221RGD_FIGURE_REVISED STUDY

SHEET TITLE:
TYPICAL CONDITIONS
SITE GENERATED TRAFFIC VOLUMES
SATURDAY PEAK HOUR

SHEET NUMBER: 15

4333A\Reports\TrafficFigures\220221RGD_FIGURE_Revised Study.dwg\15 By: RDANDREA

Table No. 1
Hourly Trip Generation Rates (HTGR) and
Anticipated Site Generated Traffic Volumes

1113 Wolcott Avenue City of Beacon, New York	Entry			Exit			Total Trips
	HTGR[1]	Volume	New Trips[2]	HTGR1	HTGR[1]	New Trips[2]	
Typical Conditions							
Weekday Peak PM Hour							
Hotel (30 Rooms)	0.37	11	9	0.40	12	8	17
Café (50 Seats)	0.12	15	12	0.10	12	9	21
Total	-	**26**	**21**	-	**24**	**17**	**38**
Saturday Midday Peak Hour							
Hotel (30 Rooms)	0.60	18	14	0.50	15	12	26
Café (50 Seats)	0.12	15	12	0.10	12	9	21
Total	-	**33**	**26**	-	**27**	**21**	**47**
Event Conditions							
Weekday Peak Event Entry Hour							
Hotel (30 Rooms)	0.37	11	6	0.40	12	8	14
Event (350 Persons)	1.02	127	109	0.20	25	19	128
Total	-	**138**	**115**	-	**37**	**27**	**142**
Weekday Peak Event Exit Hour							
Hotel (30 Rooms)	0.37	11	6	0.40	12	8	14
Event (350 Persons)	0.20	25	18	1.02	127	110	128
Total	-	**36**	**24**	-	**139**	**118**	**142**
Saturday Peak Event Entry Hour							
Hotel (30 Rooms)	0.50	15	8	0.40	12	6	14
Event (350 Persons)	1.02	127	107	0.20	25	17	124
Total	-	**142**	**115**	-	**37**	**23**	**138**
Saturday Peak Event Exit Hour							
Hotel (30 Rooms)	0.50	15	8	0.40	12	6	14
Event (350 Persons)	0.20	25	16	1.02	127	108	124
Total	-	**40**	**24**	-	**139**	**114**	**138**

NOTES:

1) The Hotel and Café Hourly Trip Generation Rates (HTGR) are based on data published by the Institute of Transportation Engineers (ITE) as contained in the Trip Generation Handbook, 10TH Edition, 2017. ITE Land Use Code - 310 - Hotel and Land Use - 932 - High-Turnover (Sit-Down) Restaurant. The Event traffic generation is based on a 2.75 Persons per Vehicle car occupancy ratio for the maximum of 350 guests. It is assumed that all guests will enter in a one hour period prior to the event and exit in a one hour period following the event.

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From: Scott Lerman
To: Mercedes Nagy; Benjamin Swanson
Subject: Beekman/High Street and Telephone Building Proposed developments
Date: Tuesday, April 1, 2025 11:31:44 AM

Please copy to the Mayor, City Administrator, Council and Planning Board. Also include in the public record for the Planning Board and Council.

Thank you,

Scott Lerman

40 North Street

_____

Beekman/High Street Proposal

Both High Street's Victorian homes and the fully restored historic Telephone building are supposed to be protected as historic structures—but are under real threat of being compromised.

The Beekman/High Street developer says that the design of their buildings is in keeping with the extraordinary neighborhood of Victorians on High Street and that, in any case, trees will be planted to screen them. I don't agree.

Maybe I'm reading their planting plan the wrong way, but it seems like they are putting in a handful of 2 1/2" diameter trees (so about 12'-14' at planting) that grow about 24" in height a year. The main screening, Skyline® Honeylocust, drop their leaves early and leaf out late. So for much of Fall, Winter, and early Spring they will have no leaves and provide no real screening.

So when you look at the architect's renderings (below) of their proposed "screening" and "no screening", think of it as a seasonal view twenty years from now... Some screening in the Spring and Summer, virtually none the rest of the time.

IMO, the design has nothing to do with the High Street Victorians and it is absurdly out of scale to the neighborhood it actually sits within.

The Telephone Building

Adding an annex to the freestanding Telephone Building is no better. It simply should be rejected out of hand. Perhaps the developer could ask for a variance to build more in the back... Less profitable, but likely viable.

Action?

We need the Planning Board to reject this kind of damage to Beacon's defining historic buildings and neighborhoods. **IF the laws in place don't offer sufficient protection, the City Council needs to amend them now--before the foundations are poured and it is too late.** This is far more pressing than blocking drive-ins and storage units on Fishkill Avenue.

View From High Street (With Landscaping)

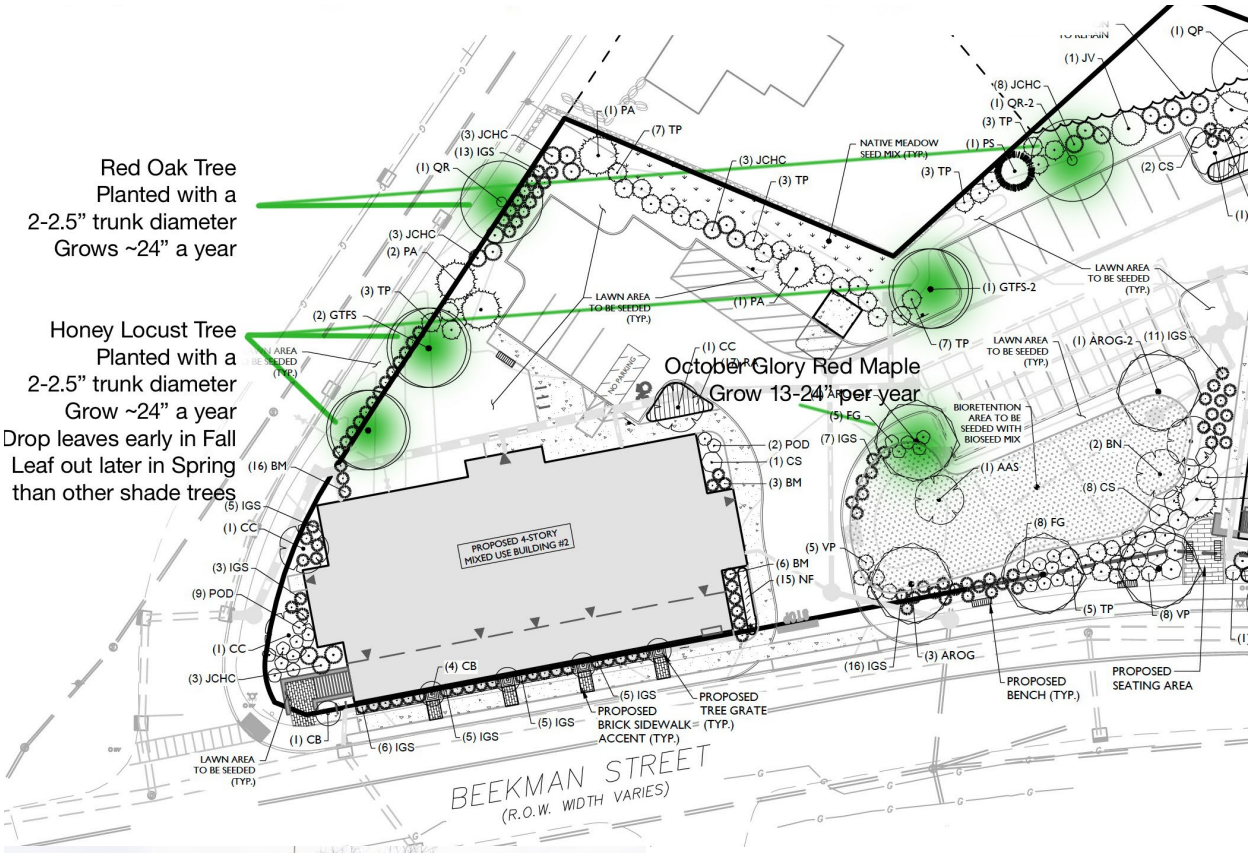
Architect:
Aryeh Siegel, Architect

View From High Street (Without Landscaping)

Red Oak Tree
Planted with a
2-2.5” trunk diameter
Grows ~24” a year

Honey Locust Tree
Planted with a
2-2.5” trunk diameter
Grow ~24” a year
Drop leaves early in Fall
Leaf out later in Spring
than other shade trees

October Glory Red Maple
Grow 13-24” per year



From: Dana Rubin
To: Mercedes Perez
Subject: correcting typo
Date: Wednesday, April 2, 2025 12:26:47 AM

My apologies Mercedes — the version below corrects a small typo. Please use this one instead.

—Dana Rubin

_____

45 Beekman proposal

The mixed-use apartment/retail building proposed for 45 Beekman Street is markedly inconsistent with the surrounding built environment and will cause adverse impacts to the city's historic resources.

The architect has stated that the project "evinces Beacon's unique urban character in a manner that is compatible with the surrounding area." It does nothing of the sort. The project is insensitive to and incompatible with the surrounding area.

"The building design is intended to fit in with neighboring buildings," the architect states. Unfortunately, nothing could be further from the truth.

The proposed design is massively out of scale and out of sync with the adjacent built environment. The proposed buildings are bulky, boxy, and bland, and would fit right in on any suburban street in Anywhereville, USA.

But Beacon is not Anywhereville. Beacon has been bestowed with a distinct character and aesthetic attributes like no other.

We should welcome development that is imaginative, right-sized, and harmonious with the surrounding structures. Unfortunately, that's not what's on offer for 45 Beekman.

This project would transform a vital gateway to the city into a homogenized streetscape with the look and feel of an oversized outlet mall.

I urge the Planning Board to reject it and support a process that responds to projects of this nature with greater sensitivity and respect for the precious physical assets that are this city's pride and joy.

Best,
Dana Rubin

LANC & TULLY
Engineering and Surveying, P.C.

April 3, 2025

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 45 Beekman Street
Mixed-Use Building
Tax Nos. 5955-19-706012, 5954-26-689990 & 781983
City of Beacon

Dear Mr. Gunn:

My office has received the following regarding two mixed-use buildings to be located at 45 Beekman Street:

- Correspondence dated March 25, 2025, from Cuddy & Feder.
- Response correspondence dated March 25, 2025, from Colliers Engineering & Design.
- Plans titled "Site Plan for Beekman Arts Center LLC & Bay Ridge Studios LLC", with the latest revision date of March 25, 2025, and consisting of Sheets 1 of 19 through 19, as prepared by Colliers Engineering & Design.
- Architectural plan Sheets A-101, A-102, A-103, A-104, A-105, A-106 and A-107 titled "45 Beekman Street", with the latest revision date of March 25, 2025, consisting of floor plans, site section diagrams, and building elevations, as prepared by Aryeh Siegel, Architect.

The proposed project entails the demolition of the existing structure located at the intersection of North Avenue & Beekman Street, and the merging of the three (3) parcels into a single parcel; and the construction of two (2) mixed-use buildings. Both buildings are proposed to have commercial space, tenant amenity space on the 1st floor and dwelling units on the 2nd through 4th floors. The applicant is currently pursuing the acquisition of a portion of the NYSDOT right-of-way along Beekman Street. If the applicant is able to acquire this land, the applicant will be able to develop the site in a more consistent manner with the zoning code, as shown on the current plans. The submitted architectural floor plans show a total of 62 dwelling units consisting of 33 one-bedroom units and 31 two-bedroom units. The project site, with the lots merged, has an area of 2.05± acres and is located in the L (Linkage) Zone, with a small portion of the lot along North Avenue being located in the R1-7.5 Zone and the vacant parcel along High Street being located in the Historic District and Landmark Overly (HDLO) district. The proposed uses, commercial and residential, are permitted uses within the L Zone.

Based on our review of the above documents, plans and report, we would like to offer the following comments:

General Comments:

1. A lot-line merger plan shall be prepared for the project. ***Applicant's engineer notes that they are currently preparing this plan, and it will be submitted as part of a future submission.***

2. A subdivision plan shall be prepared to show the combining of the lots and the offers of dedications for lands to be conveyed to the City of Beacon for road right-of-way area along Beekman Street and High Street. ***Applicant's engineer notes that they are currently preparing this plan, and it will be submitted as part of a future submission.***

3. A stormwater maintenance and access agreement shall be prepared for the project and provided for review. ***Applicant's consultant notes that this will be provided pending NYSDOT response to acquire additional site area along Beekman Street.***

4. As the project progresses, the project engineer shall prepare a construction cost estimate for all public improvements and submit it for review. ***Applicant's consultant notes that this will be provided pending NYSDOT response to acquire additional site area along Beekman Street.***

5. As the current plans show grading, drainage improvements, and sidewalks within the NYSDOT right-of-way along Route 9D, the proposed work within the NYSDOT right-of-way will require their review and approval, as well as NYSDOT permitting for the work. ***Applicant notes that coordination with the NYSDOT for the R.O.W. acquisition and intersection improvements continues to proceed.***

Sheet 4 of 19:

1. The applicant will need to seek a variance for the proposed parking located within the required setback along High Street.

Sheets 8 & 9 of 19:

1. The "Sanitary Sewer & Utilities Survey" plan shows 5 possible connections to the sanitary sewer line running between SMH-12 and SMH-13. The applicant shall conduct further studies of these connections to determine if they are active or not. It may be possible to determine this through dye testing of the neighboring homes. As the sanitary sewer lines running across the site are private, there is concern that a neighboring parcel(s) may be connected to this private system. If it is found that a neighboring parcel(s) is connected to the private system, the applicant will need to make provisions to reconnect the neighboring parcel(s) to the sewer collection system in Tompkins Avenue. If dye testing is to be

performed, we would recommend that the applicant coordinate this with the City's Water & Sewer Department. ***The applicant's consultant has been able to confirm that the sewer lateral for the residence at 7 Tompkins is connected to the sewer line running through the project parcel and are proposing to re-connect this sewer service to the sewer line within Tompkins Avenue. The applicant further notes that continue to reach out to the neighboring residents at 9 and 11 Tompkins Avenue to determine where the sewer services for each of these dwellings drain to.***

The plans shall be updated to reflect the proposed relocation of sewer services as proposed by the applicant for each of the dwellings that may be connected to the existing sewer running through the project parcel.

2. The findings of the sewer lateral connections just north of SMH-13 as mentioned in Comment No. 1 above, may allow for the applicant to remove the existing sewer collection running across the site, as well as reducing the amount of new sewer main and manholes (213 feet of main and 2 manholes) to be installed as part of the project. ***Applicant's consultant notes that plan revisions will be provided upon the results of the dye-testing for the neighboring parcels.***

3. The condition of the 12" clay sewer line running across Beekman Street from the proposed doghouse manhole to SMH 5 should be assessed as to its condition. ***Applicant notes that they are in the process of scheduling the work to have the existing drainage line televised.***

Stormwater Pollution Prevention Plan:

1. Once the soil testing has been conducted at the site, the findings from the soil testing shall be added to the Stormwater Pollution Prevention Plan (SWPPP).

1. The detail provided within the report for the bioretention area in the "Bioretention Basin with Underdrain (No infiltration)" belongs to the 2015 Stormwater Design manual. The applicant should update the detail to that as provided in the 2024 Stormwater Design manual so that it is representative of current bioretention requirements. (See page 6-55 of the design manual)

2. The design sheet for the proposed Filtration Bioretention (F-5) shows the average ponding depth as 0.25 feet. The 2024 Stormwater Design Manual, Section 6.4.4.2 – "Sizing Criteria" allows for a maximum average ponding depth of 0.50 feet. Applicant to update the Bioretention design to reflect this.

3. Section 6.4.2 of the 2024 Stormwater Design Manual States that "For Design F-5, except where a liner is provided, underdrain systems shall be designed to create an internal storage of one of the following methods:
    a. Provide an upturned elbow, set 10 inches above the bottom of the practice. (See Appendix C – Figure C.12 – Upturned elbow)

b. Set the outlet pipe invert, at the outlet control structure, 10 inches above the bottom of the practice; or
c. Increase the drainage layer depth to provide 8 inches of stone below the underdrains.

Applicant shall provide one such measure for the proposed bioretention. The Proposed Bioretention detail shall be updated to reflect this.

4. Table 9 "Swirl Chamber Sizing Calculations" states that the tributary area is PDA-1C which is not consistent with the areas modeled in the HydroCAD model. Applicant to define what areas this tributary area is comprised of, or to revise sub-catchment labeling accordingly.

5. The Swirl Chamber is considered a flow-based alternative practice. Applicant to provide required Water Quality calculations for this practice in accordance with Section 9.3 and Appendix B of the 2024 Stormwater Design Manual as part of the appendices in the Stormwater Pollution Prevention Plan (SWPPP) report. The 2024 New York State Department of Environmental Conservation (NYSDEC) Green Infrastructure (G.I.) worksheets provide calculation worksheets for these calculations. (See worksheets "Appendix B Calculations" and "Flow Based Alternative Practice"). The latest version of the NYSDEC worksheets can be found on their official website (https://dec.ny.gov/environmental-protection/water/water-quality/stormwater/construction-stormwater-toolbox).

6. Section 6, page 6-1 of the 2024 Stormwater Design Manual defines the purpose of a pre-treatment area is to "trap course sediments and debris before they enter the practice to reduce the maintenance burden and ensure long-term performance of the practice." The current layout of the forebay/Bioretention area does not properly allow for the forebay to meet the definition of pre-treatment, since there is no clear separation between the forebay and the bioretention bed. The applicant shall provide a berm with a spillway to ensure that no course sediments flows into the bioretention bed.

7. The proposed Bioretention detail shall specify a drainage layer depth of 12 inches as mentioned on page 16, in the "Bioretention Basin with Underdrain (No Infiltration)" section of the SWPPP report.

8. Runoff Reduction volumes reported in page 12 of the SWPPP report shall be consistent with the calculations shown in the G.I. worksheet for the proposed Bioretention practice.

9. The provided surface bed area for the proposed bioretention practice in the HydroCAD model is not consistent with the provided surface bed area reported within the G.I. worksheet. Applicant shall revise for consistency.

10. The way that the stormwater routing is laid out on the driveway entrance on the southern side of the site, appears to allow for a portion of the runoff to bypass the proposed bioretention. This should be adjusted so that the entirety of the tributary area being credited to the proposed bioretention is directed to it.

11. The Contractor's Certification Form in Appendix 11 shall be updated to the latest General Permit (GP-0-25-001). Certification statement to match the statement in the General Permit Part III.A.7.

12. The MS4 SWPPP Acceptance Form used for this project shall be consistent with the one provided in the General Permit (GP-0-25-001), Appendix G.

This completes our review at this time. Further comments may be provided based on future submissions. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: Natalie Quinn, Planner
Jennifer Gray, Esq.
Bryan Murphy, Building Inspector

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☐ Type 1 ☑ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
All application materials and studies submitted by the Applicant, memoranda from City staff and consultants, public comments and testimony during public meetings.

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the City of Beacon Planning Board as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

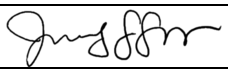
Name of Action: 45 Beekman Street/High Street

Name of Lead Agency: City of Beacon Planning Board

Name of Responsible Officer in Lead Agency: John Gunn

Title of Responsible Officer: Chairman

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer)  Date: 3-11-2025

For Further Information:

Contact Person: Mercedes Perez, Planning Board Secretary

Address: 1 Municipal Plaza, Beacon NY 12508

Telephone Number: 845-838-5005

E-mail: mperez@beaconny.gov

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

ATTACHMENT TO
NEGATIVE DECLARATION
REASONS SUPPORTING DETERMINATION

APPLICATION FOR SITE PLAN,
SUBDIVISION AND CERTIFICATE OF APPROPRIATENESS APPROVALS
FOR 45 BEEKMAN STREET/HIGH STREET

Parcel Nos. 5955-19-706012, 5954-26-689990 & 5954-26-781983

CONCLUSIONS

This Part 3 analysis has been prepared to address all relevant areas of environmental concern as identified in the review by the Planning Board. This Part 3 analysis will discuss and explain the analysis of the potential impacts, and why a particular element of the proposed action will not result in a significant adverse environmental impact. Such analysis is appropriately set forth in Part 3, even if the potential impact was identified as "none" or "small." Based upon a review of Parts 1 and 2 of the Full Environmental Assessment Form (EAF) and all other application materials that were submitted in support of the Proposed Action, along with reports from City staff and consultants, information from involved and interested agencies, and information from the public, the Planning Board, acting as Lead Agency, provides the following rationale for its SEQRA Determination.

Project Description:

The Proposed Action is the development of two (2) 4-story mixed-use buildings that will be comprised of commercial (retail/office) and tenant amenity spaces on the first floor, together with multi-family residences on the upper floors on property located at 45 Beekman Street and High Street, known and designated on the Tax Map as Parcel No. 5955-19-706012, 5954-26-689990 & 5954-26-781983 in the Linkage (L) Zoning District, partially located within the Historic District and Landmark Overlay (HDLO) District and Residential R1-7.5 District, as well as within the Local Waterfront Revitalization Program (LWRP) boundary (the "Property"). The Proposed Action includes 62 residential units with a mix of 32 1-bedroom units and 30 2-bedroom units, 14,892 square feet of commercial space, and 91 off-street parking spaces.

The Proposed Action includes a Site Plan application, Subdivision (lot merger) application to combine multiple parcels which comprise the development site, and a Certificate of Appropriateness. As a result of 1970's urban renewal, the right-of-way adjacent to the Property is unusually wide which means there is quite a distance from the edge of road pavement to the boundary of the Property. The Applicant is currently pursuing the acquisition of a portion of the NYSDOT right-of-way adjacent to the Property. The project design which is the subject of this environmental review assumes the Applicant will ultimately acquire that portion of the

NYSDOT right-of-way. Such acquisition will allow development of the Property in a manner that is more consistent with the purposes of the Linkage District than the development of the Property without such right-of-way acquisition. In the event the right-of-way is not acquired by the Applicant, this Negative Declaration may require amendment.

The Proposed Action is an Unlisted action. The Planning Board circulated Notice of Intent to act as Lead Agency and received no objections. The Planning Board opened a duly noticed public hearing on the Site Plan application and to consider comments regarding any environmental impacts of the Proposed Action on February 11, 2025 and continued the hearing to March 11, 2025 at which time members of the public were given an opportunity to be heard. The SEQRA public hearing was closed on April 8, 2025 and the Site Plan public hearing was continued to May 13, 2025.

Summary of Rationale for Negative Declaration

The Proposed Action will not result in any significant adverse impacts on the environment.

In summary:

- **Impact on Land: The Proposed Action will not have a significant adverse environmental impact as a result of any physical change to the project site.**

  The Property is located in the Linkage Zoning District and currently is improved with a building and parking lot. The portion of the Property at the corner of Beekman Street and High Street was also previously used as a contractor's yard. The Project is located on a previously developed site and will require demolition of the existing building. The Proposed Action involves the merging of existing lots and the construction of two 4-story mixed-use buildings with garage and surface parking areas and associated improvements along with typical grading and site work associated with such construction.

  The Property slopes downward from Route 9D and Beekman Avenue and also includes a slope at the rear of the Property extending up to residential properties on High Street. Limited grading on this rear slope is proposed. Earthwork in this area will tie into the existing grade at or before an existing retaining wall on the neighboring 16 High Street property. A drainage structure is proposed to be installed approximately 10 feet from the retaining wall, but no other excavation is proposed at the base of the existing retaining wall. All disturbances to slopes are proposed to be appropriately stabilized pursuant to best management practices. A portion of the proposed off-street surface parking located along High Street will require a setback variance from the City of Beacon Zoning Board of Appeals.

No wetlands or wetland buffer areas will be disturbed as a result of the Project and any disturbance of slopes will be stabilized using best management practices during construction and post-construction.

For these reasons the Proposed Action will not have an adverse impact as a result of physical changes to the project site.

- **Impact on Geological Features: The Proposed Action will not have a significant adverse environmental impact on any unique or unusual land forms on the site.**

There are no unique geological features on the Property.

- **Impacts on Surface Water and Groundwater: The Proposed Action will not have a significant adverse environmental impact on surface or groundwater quality or quantity.**

Residential land uses are generally not associated with the discharge of contaminants into aquifers or other ground water sources. There will be no bulk storage of petroleum or chemicals on-site. The Project does not include or require wastewater discharged to groundwater, and is not located within 100 feet of potable drinking water or irrigation sources.

Site disturbance will exceed 1-acre and therefore a full Stormwater Pollution Prevention Plan (SWPPP), last revised December 31, 2024 was submitted in order to obtain coverage under NYSDEC SPDES General Permit. The City Engineer reviewed the SWPPP and found it to be in general compliance with NYSDEC requirements, but it cannot be accepted until soil testing is conducted at the site and the Applicant completes the land acquisition process with NYSDOT. SWPPP acceptance will occur prior to any Site Plan approval by the Planning Board.

The proposed stormwater practices shown on the plans and described in the SWPPP are designed in general compliance with the NYSDEC Stormwater Management Design Manual and City of Beacon requirements. S*ee* SWPPP dated December 31, 2024 prepared by Colliers Engineering and Design (CED); Sheets 5-7 of the Site Plan Set. A bioretention basin, subsurface detention system, and hydrodynamic separator are proposed as part of the Project. The Project involves implementation of several soil erosion measures to ensure that there will be no measurable increase in erosion or flooding. *See* Sheets 10-11 of the Site Plan Set. No wetlands or wetland buffer area will be disturbed by the Project. All stormwater facilities will be inspected by a licensed engineer annually with a report being provided to the City Building Department.

The Project will be connected to the existing public water distribution system. At full build-out, the Project is expected to require 11,910 gallons of water per day. The public water system has sufficient capacity to support the Project.

The Project will be connected to the existing public sanitary sewer system. At full build out, the Project is expected to generate 11,910 gallons of wastewater per day. The public sanitary sewer system has sufficient capacity to support the Project. The Applicant has explored and is continuing to explore whether surrounding residential properties are connected to the site's existing sewer line. It is the Applicants' intent to remove any such connections, and service such residences to the existing sanitary sewer main in Tompkins Avenue. The Applicants have confirmed that the sewer lateral for the residence at 7 Tomkins is connected to the site's sewer line and the Applicant proposes to reconnect this sewer service to the sewer main in Tompkins Avenue. The Applicant is continuing efforts to contact the owners of 9 and 11 Tompkins Avenue to determine whether the sewer service lines for these dwellings are connected to the site's sewer line.

For these reasons the Proposed Action will not have an adverse impact on surface or groundwater quality or quantity.

- **Impact on Flooding: The Proposed Action will not have a significant adverse environmental impact on or alter drainage flows or patterns, or surface water runoff.**

  See discussion above regarding the SWPPP submitted and reviewed for the Project.

  Green infrastructure practices will be implemented to the greatest extent possible to reduce runoff, including avoidance of sensitive areas, minimizing grading and soil disturbance, minimizing impervious areas on internal access ways, driveways and parking areas. Parking spaces and drive aisles are 9'x18' with a 24' drive aisle, to comply with the City Code requirements and consistency with the "Greenway Connections" and NYSDEC stormwater objectives to reduce impervious surfaces.

  For these reasons the Proposed Action will not have an adverse impact on or alter drainage flows or patterns or surface water runoff.

- **Impact on Air: The Proposed Action will not have a significant adverse environmental impact on air quality.**

  Construction activities associated with grading and excavation could result in temporary air quality impacts. Air quality in the area, however, is not expected to be significantly impacted by project construction because the construction activities will be temporary and confined to the Site. Construction vehicles will emit certain air pollutants through engine exhaust. There is also the potential for fugitive dust to be created during the construction period from site preparation activities, including removal of existing impervious surfaces and vegetation, and site grading. Fugitive dust emissions will be mitigated by wetting and stabilizing soils to suppress dust generation. Other dust suppression methods will include

the spraying of soil stockpiles during dry periods and covering trucks carrying solid and other dry materials. These unavoidable short term impacts to air quality will cease upon project completion. Construction will be conducted in accordance with the final filed site plan and in accordance with all applicable federal, state and local codes. It is anticipated that nearby properties will experience temporary fugitive dust and an elevation in vehicle emissions from construction vehicles throughout occasional periods during construction of the proposed project. This is a temporary, construction-related, unavoidable impact that is not significant.

For these reasons the Proposed Action will not have an adverse impact on surface or air quality.

- **Impact on Plants and Animals: The Proposed Action will not have a significant adverse environmental impact on flora or fauna.**

The Full EAF indicates that the Property may contain or serve as habitat for the Indiana Bat, Atlantic Sturgeon and Shortnose Sturgeon.

The Property does not contain any streams or waterbodies and there will be no impact to the Atlantic and Shortnose Sturgeon populations. The main impact of concern for the Indiana Bat is the removal of potential roost trees. The proposed project will require the removal of trees which may serve as habitat for the Indiana Bat. Pursuant to NYSDEC recommendations, removal of trees greater than four (4) inches in diameter at the Project Site will take place between November 1 and March 31 during the bat hibernation period to avoid the removal of trees which may be utilized by Indiana Bats as roosting trees. The Proposed Action also includes shielded, cut-off light fixtures that direct light down to minimize light pollution and not interfere with potential bat foraging activities. Also, native vegetation is proposed to enhance wildlife habitat.

For these reasons the Proposed Action will not have an adverse impact on flora or fauna.

- **Impact on Agricultural Resources: The Proposed Action will not have a significant adverse environmental impact on agricultural resources.**

There are no agricultural resources in the vicinity of the Site.

- **Impact on Aesthetic Resources: The Proposed Action will not have a significant adverse environmental impact on aesthetic resources.**

The Proposed Action will not result in the obstruction, elimination or significant screening of one or more officially designated scenic views, or visible from any publicly accessible vantage points either seasonally nor year around. The roof plan of the

Beekman Street building was adjusted to conceal rooftop mechanical equipment with screening on all sides to help shield potential views. The Local Waterfront Revitalization Program (LWRP), adopted in 1991 and amended in 2011, does not list viewsheds from the Site, or viewsheds that would be obscured by the Project. The nearest viewshed to the Premises as articulated in the City's LWRP is the viewshed located at the intersection of Main Street and NYS Route 9D. The LWRP describes the viewpoint as follows: "The traffic light at the intersection of Route 9D and Main Street is the western entrance to the City's business district. Due to urban renewal demolition, the view to the west is unobstructed from an elevation of 100 feet. In the foreground the land is bulldozed stumps and some weed trees. The middle ground is dominated by Beekman Street and the old residential neighborhood of High Street. The background is a clear view of the Hudson River, the Newburgh waterfront to the City's center and the hills beyond."

The Applicant submitted an LWRP Consistency Statement which was reviewed by the City's former Planning Consultant who found it to be acceptable in a memorandum dated December 8, 2023. The Project is consistent with the relevant polices of the LWRP.

Further, the Project's architecture was extensively reviewed by the Architectural Review Subcommittee of the Planning Board/Architectural Review Board and discussed at length at multiple Planning Board meetings with specific attention paid to views of the buildings from local roadways.

For these reasons the Proposed Action will not have an adverse impact on aesthetic resources.

- **Impact on Historic and Archeological Resources: The Proposed Action will not have a significant adverse environmental impact on historic or archeological resources.**

The Project will not cause a significant adverse environmental impact on historic or archeological resources.

The Property is located in proximity to the Bogardus DeWindt House and the Lower Main Street Historic District. A portion of the Property along High Street is also located in the City of Beacon's Historic District and Landmark Overlay District and partially located within the High Street/Tompkins Avenue Historic District which was deemed by SHPO to be eligible for listing on the National Register of Historic Places in November 2024. According to the evaluation form available on the Cultural Resource Information System (CRIS) database, it was deemed eligible because it embodies the distinctive characteristics of a type, period or method of construction, specifically its intact representation of Queen Anne style architecture. The evaluation further notes that "most of the homes located within the district retain significant

historic integrity, including original wood spindlework, multi-story towers, one-story porches, and decorative corner brackets."

The Bogardus DeWindt House is surrounded by heavy landscape screening and separated from the Premises by Tompkins Avenue and residential developments. The proposed improvements will not be visible from the DeWindt House. The Property is similarly removed from the Lower Main Street Historic District which begins over 100 feet east of the intersection of NYS Route 9D and Main Street.

Regarding the High Street/Tompkins Avenue Historic District, the portion of the Property located within this district is the currently vacant area along High Street that was formerly occupied as a contractor's yard. The Applicant prepared rear elevations and renderings of the views of the Project from High Street in the High Street/Tompkins Avenue Historic District. Section diagrams were also reviewed which show sight lines from the top of the slope on High Street toward the proposed buildings. The Project design does not introduce elements that detract from or impede upon the integrity of the historic features of nearby properties. The design incorporates gabled roofs, dormers and corner towers in response to the design of the nearby homes in the Historic District. It is noted that the Property is located at a lower elevation than the residences in the High Street/Tompkins Avenue Historic District. Further, existing trees and proposed landscaping will limit some views of the Project from High Street.

The portion of the Project located in the HDLO District is subject to the issuance of a Certificate of Appropriateness pursuant to Chapter 134 of the City Code.

No archaeological or historic sites have been identified on the Project Site.

For these reasons the Proposed Action will not have an adverse impact on historic or archeological resources.

- **Impact on Open Space and Recreation: The Proposed Action will not have a significant adverse environmental impact on open space and recreation.**

The area of the Proposed Action is not designated as open space by the City of Beacon. The Proposed Action will not result in the loss of a current or future recreational resource, eliminate significant open space, or result in loss of an area now used informally by the community as an open space resource. A recreation set aside or fee may be required which will be used for the future need for park and recreational opportunities in the City of Beacon.

For these reasons the Proposed Action will not have an adverse impact on open space and recreation.

- **Impact on Critical Environmental Areas: The Proposed Action will not have a significant adverse environmental impact on Critical Environmental Areas.**

  The Proposed Action is not located in a Critical Environmental Area.

- **Impact on Transportation: The Proposed Action will not have a significant adverse environmental impact on transportation.**

  A Traffic Impact Study, dated November 28, 2023, revised January 26, 2024 and June 24, 2024 (the "TIS") was prepared by Colliers Engineering & Design ("CED") for review by the Planning Board. This Study is based upon the standards established by the Institute of Transportation Engineers ("ITE") and set forth in the Parking Generation Manual, 6th Edition, in addition to data provided by the NYSDOT and collected on the ground by CED. The TIS was prepared to identify current and future traffic operating conditions on the surrounding roadway network and to assess the potential traffic impacts of the Project. The analysis of future traffic conditions in the TIS is conservative because no credit was taken for the potential reduction in the Project's traffic generation resulting from the Project's proximity to the Beacon Metro-North Train Station. The TIS was subject to review and comment by the Planning Board's Traffic Consultant, Creighton Manning Engineers, LLP.

  The Project proposes access to the Site at Tompkins Avenue and Beekman Street.

  The following intersections were studied:
  - North Avenue (NYS Route 9D) and Verplanck Avenue
  - North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street
  - North Avenue (NYS Route 9D) and Beekman Street/W. Church Street
  - Wolcott Avenue/North Avenue (NYS Route 9D) and Main Street/Municipal Plaza
  - Beekman Street and High Street

  The TIS included the projected traffic increases associated with each of the following approved projects:
  - Mirbeau Beacon
  - 364 Main Street
  - Edgewater
  - Beacon Commons (16 West Main Street)
  - Prophecy Theater (1113 Wolcott Avenue)

  As requested by the Planning Board, the Applicant also conducted additional studies assessing a separate southbound right turn lane on North Avenue (NYS Route 9D) for vehicles turning onto Beekman Street. As is more fully detailed in CED's Southbound Right Turn Lane Memorandum dated July 30, 2024, the study ". . . did not find that a southbound right turn lane is merited or necessary to mitigate any minimal potential

traffic generated by the Project . . .” Instead, the key improvements to the overall Level of Service in this corridor were those previously highlighted in the TIS – namely traffic signal phasing and timing modifications. The City’s Traffic Consultant noted in its August 12, 2024 letter that although the southbound right turn lane is not necessary for mitigation related to the Project, pursuit of the additional southbound right turn lane should be considered to provide additional capacity.

The TIS also assessed the Dutchess County Transportation Council’s Complete Streets Analysis for Beekman Street dated January 29, 2018 (“DCTC Analysis”). In addressing the DCTC Analysis, it found the Project does not interfere with the implementation of any of the recommendations contained therein. Furthermore, the TIS acknowledges that any modifications at the intersection of North Avenue/Beekman Street intersection, as discussed below, will consider the recommendation of the DCTC Analysis.

Additionally, the TIS included historical crash data from the NYSDOT for several surrounding area intersections. As is further detailed therein, the calculated accident rate for the selected intersections was generally found to be comparable to the statewide average accident rate for similar type intersections.

The TIS demonstrates that the intersection of North Avenue (NYS Route 9D) and Beekman Street/W. Church Street exhibits current operational constraints during all study periods which will be exacerbated in the “build” condition. As described below, the Proposed Action includes signal timing and phasing modifications that will address this condition.

The Proposed Action includes the following mitigation measures:

(1) Continued monitoring of the Route 9D/Tompkins Avenue intersection to assess actual traffic volumes derived from the instant Project;

(2) Traffic signal phasing and timing modifications for the intersection of North Avenue (NYS Route 9D) at Beekman Street/Church Street to improve the overall operation of the intersection and specifically the southbound North Avenue and eastbound Beekman Street approaches; and

(3) Traffic signal timing modifications for the intersection of North Avenue (NYS Route 9D) at Main Street/Municipal Plaza. These traffic signal timing modifications for the Main Street/Municipal Plaza intersection have been identified to maintain coordination of the traffic signal with the North Avenue (NYS Route 9D) at Beekman Street/Church Street.

CED also prepared a supplemental Parking Memorandum confirming that the proposed off-street parking facilities conform with the City’s recently adopted parking

regulation updates. *See* Parking Memorandum, prepared by Colliers Engineering & Design P.C., dated September 23, 2024. As detailed therein, the shared parking analysis prepared for the Project indicated that 88 parking spaces would be the appropriate number of spaces needed to service the Project. Notably, this figure did not account for the potential of internal trips between the residential units and commercial space or the proximity of the Project to the nearby Beacon Metro-North Train Station. In response to comments from the City's Traffic Consultant dated November 12, 2024, the Project proposes 91 off-street parking spaces. *See* CED Response to Comments dated November 26, 2024. Accordingly, the number of spaces proposed are appropriate and will not result in an adverse environmental impacts.

Related to transportation, the Project also proposes improved pedestrian access to and from the Project with upgraded pedestrian facilities at the intersection of Beekman Street and NYS Route 9D.

For these reasons the Proposed Action is not anticipated to have a significant adverse environmental impact on traffic or parking.

- **Impact on Energy: The Proposed Action will not have a significant adverse environmental impact on energy.**

  It is anticipated that existing energy infrastructure will continue to serve the Proposed Action and that enough surplus exists to meet potential demand. The Proposed Action does not require a new, or an upgrade to any existing substation.

  For these reasons the Proposed Action will not have an adverse impact on energy.

- **Impact on Noise, Odor and Light: The Proposed Action will not have a significant adverse environmental impact as a result of objectionable odors, noise or light.**

  The Proposed Action is not anticipated to generate any noxious odors.

  Noise impacts associated with the proposed Project will be limited to temporary impacts generated during construction. Temporary noise impacts associated with construction will be mitigated by limiting construction activities to the hours between 7:00 a.m. and 7:00 p.m.

  All proposed lighting will be fully shielded and dark sky compliant.

  For these reasons the Proposed Action will not have an adverse impact as a result of objectionable odors, noise or light.

- **Impact on Human Health: The Proposed Action will not have a significant adverse environmental impact on human health from exposure to new or existing sources of contaminants.**

According to information available on the NYS DEC Site Remediation Database, the off-site contamination under the following Site Codes identified in the EAF has either completed a remediation program or does not pose a threat to development on the Property: V00293, 314069, 546031. Further, the Proposed Action does not include construction or implementation of a solid waste facility and the Property has never been used as a solid waste management facility.

For these reasons the Proposed Action will not have an adverse impact on human health from exposure to new or existing sources of contamination.

- **Consistency with Community Plans and Community Character: The Proposed Action is not inconsistent with adopted community plans and community character.**

The Project is consistent with the recommendations and goals identified in the 2007 Comprehensive Plan and 2017 Comprehensive Plan Updates regarding density of developments. The Site is in the Linkage (L) District and the number of proposed dwelling units complies with the provisions of the Linkage District. The location of the Project in proximity to the train station is consistent with the Comprehensive Plan which seeks to encourage development and allow for increased density of housing in the waterfront/train station area of the City. (2007 Comprehensive Plan, pp. 7 & 17; 2017 Comprehensive Plan Update, p. 10).

The L District was established to assist with the transition between the Main Street core and waterfront area based upon the planning and development goals, objectives, and recommendations set forth in the City of Beacon Comprehensive Plan, dated April 3, 2007 (the "Comprehensive Plan") and the Comprehensive Plan Update, dated 2017 ("Comprehensive Plan Update").[1]

The Comprehensive Plan explicitly calls for: "encourage[ing] the development of high density housing along Beekman Street"; [2] "increase[ing] densities of housing located around the central commercial hub and the waterfront/train station area of Beacon";[3]

[1] *See* City of Beacon Comprehensive Plan Update (2017), at page 152 ("In keeping with the 2007 Comprehensive Plan recommendations, the City adopted the Linkage Zoning District, to promote residential development that reinforces connections between the Main Street and waterfront area.") Notably, these planning objectives resulted from feedback from City residents regarding improving the connection between the train station and Main Street by "encouraging residential development along Beekman Street to provide for a more attractive and interesting streetscape"). Comprehensive Plan, at page 59.

[2] Comprehensive Plan, at pages 12-13 and 106-07 (Land Use Goal, Waterfront/Train Station Area Objective).

[3] Comprehensive Plan, at page 7 (Population and Residential Development Goal, Density Objective).

and the "development of residential and/or other uses along Beekman Street and Wolcott Avenue to improve the pedestrian streetscape between Main Street and the train station".[4] The City's Comprehensive Plan Update similarly provides that "[t]he primary focus area for the 2017 Plan is the waterfront and train station area… The vision for this area is to create a destination that serves as a "gateway" to Beacon, to reclaim the riverfront and to **link that riverfront to downtown Beacon**."[5] The Local Waterfront Revitalization Program ("LWRP") and its appended City of Beacon Harbor Management Plan, which includes the property within its boundaries, echoes these sentiments by outlining a goal that the "[t]he waterfront should be linked to and integrated with downtown Beacon and other points of interest".[6]

Notably, both the Comprehensive Plan and the Comprehensive Plan Update identify the Premises as a location for future development of high-density residential development.[7] These recommendations are reflected in the purpose underlying the L District regulations, which is to "… encourage residential development to help support Main Street businesses and to create a vibrant, economically successful, walkable, and environmentally sustainable connection between Beacon's Central Main Street District and the train station and riverfront".[8]

For these reasons the Proposed Action will not have an adverse impact on Community Plans.

Regarding Community Character, the Project will create an increased demand for community services such as emergency services and the Beacon City School District. However, the Project will be constructed in accordance with all applicable state and local emergency and fire safety requirements and will not overburden City emergency services. Further, due to the Project's composition of 1 bedroom and 2 bedroom residential units it is anticipated that the number of school aged children generated by the Project will be limited and there is capacity in the Beacon City School District for such children.

The area surrounding the Project includes municipal (City Hall, Fire House), commercial, multi-family, and single-family developments. Several nearby developments (including The View, West End Lofts and River Ridge Views) were recently built as a part of Beacon's ongoing renewal and revitalization process, and to

[4] Comprehensive Plan, at pages 8 & 66 (Commercial, Office and Industrial Development Goal, Waterfront/Train Station Area Objective, Connection Recommendation).

[5] City of Beacon, 2017 Comprehensive Plan Update, at page 10 (emphasis added).

[6] City of Beacon LWRP, Appendix C: Harbor Management Plan, at page 8.

[7] Comprehensive Plan, Appendix "Proposed Land Use Plan"; Comprehensive Plan Update Figure 11-1 "Future Land Use Map; Comprehensive Plan Appendix "Connecting Beacon's Main Street with the Hudson River and Railroad Station" prepared by Dutchess County Department of Planning and Development, dated March 6, 2007 (including a sketch depicting the Premises with compact development located along High Street and Beekman Street).

[8] City of Beacon Zoning Code § 223-41.19

"increase the vitality, attractiveness and marketability of the of the City of Beacon lying between Main Street and the Metro North Train Station . . . as recommended in the City of Beacon Comprehensive Plan adopted on December 17, 2007, and the Comprehensive Plan update adopted on April 3, 2017." Another multi-family development with 62 units in a 4-story building, known as Beacon Commons, was recently approved at 16 West Main Street. Thus, the scope of the Project is consistent with the surrounding character of the neighborhood.

The Project's design and appearance is in line with the surrounding area's community character. The Project has undergone extensive review by the Planning Board and Architectural Review Board ("ARB") Subcommittee with respect to the Project's design. At the September 10, 2024 meeting, the Planning Board referred the Application to the ARB Subcommittee for review of the Project. The Applicants then met with the Subcommittee for an initial meeting on October 7, 2024, at which time the Subcommittee provided preliminary feedback on the Applicants' design and incorporation of the buildings amongst the surrounding developed, urban landscape. The Applicants revised the plans in accordance with the Subcommittee's initial feedback by, amongst other things, updating the arcade walkway, fenestration and corner tower to reflect less divisions and balancing various façade components. The Applicants have since met with the Subcommittee on November 8, 2024 and December 6, 2024 to present additional Project refinements. Since then, the Project's review before the ARB has completed and it has been referred back before the entire Board for consideration of the revised design, which has been altered to create a more coherent and compatible development relative to the surrounding area. The appearance of the Project has been discussed at length at multiple Planning Board meetings in recognition of the prominent location of this Project and the importance of securing an attractive, cohesive and appropriate design that respects the existing character of its surroundings and the City, generally. Accordingly, the Applicants respectfully submit that this mixed-use Project is consistent with the community character of the surrounding area.

For these reasons the Proposed Action will not have an adverse impact on Community Plans.

Based upon all information before the Planning Board to-date, including the Full Environmental Assessment Form, the Planning Board finds that the Proposed Action will not have any significant adverse impacts upon the environment. This Negative Declaration indicates that no environmental impact statement need be prepared and that the SEQRA process is complete.

Adopted: April 8, 2025
Beacon, New York

Motion by _____, seconded by _____:

Kevin Byrne	Voting	Leonard Warner	Voting
David Jensen	Voting	J. Randall Williams	Voting
Karen Quiana	Voting	John Gunn, Chairperson	Voting
James Vermeulen	Voting		

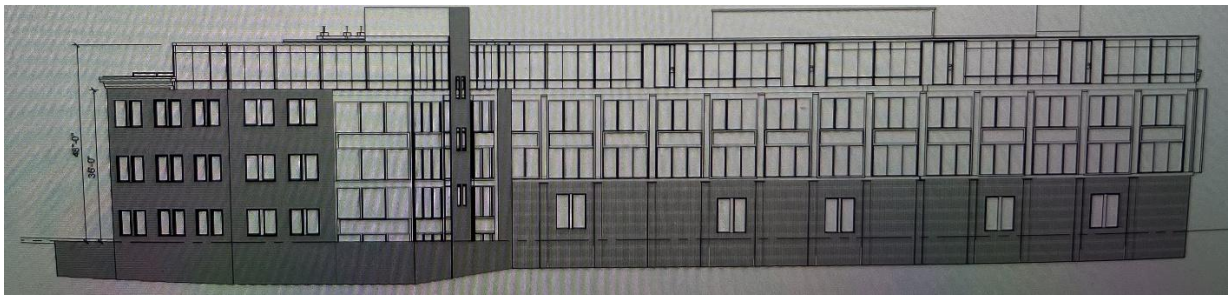
Planning Board Review – 45 Beekman
Public Comment, April 8, 2025
James Zellinger – West Church Street, Beacon

I continue to strongly oppose the development as presented for 45 Beekman. Since public comment has been opened, members of the community have voiced their opposition to the project with numerous examples of how this development does not meet the requirements set by the Comprehensive Plan and the Linkage District Plan and how the proposed development is not in keeping with the surrounding environment**. Instead of considering the carefully outlined violations and concerns, the applicant has failed to modify the plans and has chosen to tell the public and the Planning Board that they are wrong, wrong about the size and scale, wrong about the design materials, wrong about the street scape, and wrong about the historic impact.**

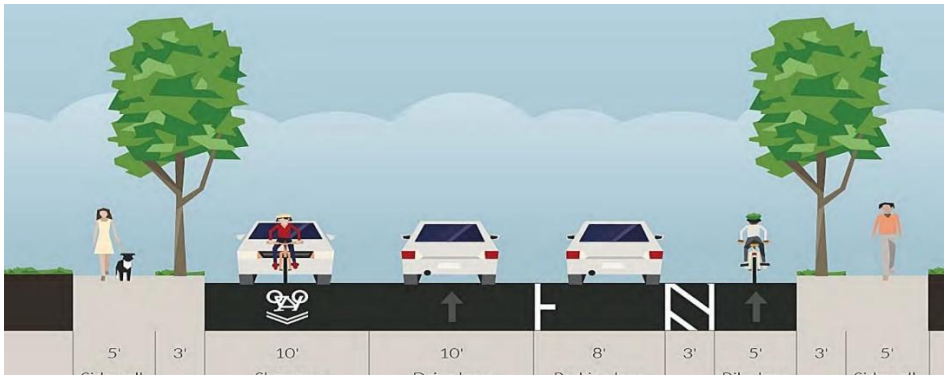
- When challenged about the **size and scale of the proposal**, the applicant shared examples of various municipal, business, and residential buildings. They then offered a categorically false statement. The applicant wrote: *"It is worth noting that comparisons are drawn based on design, not the underlying use, as that distinction is an irrelevant consideration."* The underlying use defines the nature, limitations, and requirements of the design. A fire station requires that multiple vehicles, exceeding 25 ft long and weighing 12 tons, park inside. The court house that we are in now requires a large open chamber for legal proceedings and numerous administrative offices. These buildings are expected to be large as they are designed for purpose. A residential building on the other hand has no such requirement, therefore comparing them is in fact a very relevant consideration. By showing these buildings as comparable only demonstrates the oversized scale of the proposal. (Oddly, the applicant included what I would call examples of appropriately sized buildings, 1154 and 1158 North Ave (9D) which are much smaller than the proposed 45 Beekman structures.)

- When challenged about the **design materials**, the applicant seemed to miss or ignore the statements made by the Board in the last meeting. The Board clearly made the point regarding the use of metal siding, that it is irrelevant what the intent may have been if it was not definitively stated in the Plan. The applicant then offered that they "*could*" change the material but have not, again indicating that they believe the public and the Board to be wrong. Furthermore, the repeated statement that the building is *"primarily brick"* is false. All renderings clearly show more green than red, and more metal siding than brick.

  (There is unequivocally more white/siding than gray/brick denoted on these renderings. Pg 42-43)



- When challenged about the **street scape** and the guidelines described in the Linkage District plan, they again have made no effort to follow the Plan recommendations as written, instead they repeat the point that they have plantings and seating near the buildings. Undermining their own point, the applicant's latest proposal actually includes the Linkage Plan image below (from pg. 743 of the agenda packet) denoting the City Council's proposed street scape for Beekman. (Image shows a transition zone from the street to the sidewalk with tree cover.)



- When challenged about the **impact this development will have on the unique historical context** of High Street and the immediate vicinity, again the applicant tells us we are wrong. This time, they say it outright, stating that the proposed building will not impact the historic street scape. First, they say the design "evokes" the Victorian architecture, and then they pivot by saying landscaping will screen the development. At the same time, the proposal is saying that the design is right and that you will not see it. We do see it and it does not evoke anything remotely like the surrounding area.

The 45 Beekman proposal continues to be in violation of the stated requirements of the Comprehensive Plan and the Linkage District Plan and fails to meet the guidelines for continuity. After communicating said violations and lack of continuity the applicant has made no attempt to better the proposal, instead the applicant has doubled down and argued that the community is wrong, and the Board is wrong**. I strongly urge the Board to vote no on this proposal. As nothing in the applicant's proposal has changed, I will say again: This location demands better alignment with the city, its immediate neighbors, and the community at large. In its current form 45 Beekman both violates the requirements set by the City Council and lacks continuity with the environment.**

CUDDY +FEDER LLP

300 Westage Business Center, Suite 380
Fishkill, New York 12524
T 845 896 2229
F 845 896 3672
cuddyfeder.com

Taylor M. Palmer, Esq.
tpalmer@cuddyfeder.com

April 8, 2025

VIA EMAIL
Hon. John Gunn
and Members of the Planning Board
City of Beacon
One Municipal Plaza
Beacon, New York 12508

Re: Application for Site Plan & Subdivision Approval for Proposed Mixed-Use Development
Supplemental Submission – NYS SHPO No Impact Letter
Property: 45 Beekman Street, High Street & High Street, Beacon, New York
Tax Parcel ID's: (5955-19-706012, 5954-26-689990 & 5954-26-781983)

Dear Chairman Gunn and Members of the Planning Board:

On behalf of Beekman Arts Center LLC and Bay Ridge Studios LLC (the "Applicants"), the owners of the above-referenced Premises, we respectfully submit this letter and the referenced enclosure in furtherance of the Planning Board's environmental review of the Project and the comments contained in our March 25, 2025 supplemental submission to this Board.

For the Board's further consideration in completing the SEQR review of the Project, enclosed please find a copy of the "No Impact" letter that the Applicant received from the New York State Parks, Recreation and Historic Preservation ("SHPO") dated April 7, 2025, confirming that the Project *will not* have any impacts on archaeological or historic resources with the inclusion of certain construction protections and updating the roof plan (that the SHPO has advised is specific to screening the rooftop mechanicals, as was recommended by the Planning Board), which the Applicant will be incorporating into the Project.

Please include this letter and the referenced enclosure as part of the record of proceedings regarding this matter.

Very truly yours,

Taylor M. Palmer

Enclosure
cc: Jennifer L. Gray, Esq.

April 7, 2025

Kyle Shallow
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553

Re: DEC
45 Beekman Street Mixed-Use Redevelopment
45 Beekman St, Beacon, NY 12508
24PR09913
23010468A

Dear Kyle Shallow:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

We note that the project is directly adjacent to the High Street - Tompkins Avenue Historic District which is eligible for listing in the State and National Registers of Historic Places. We have reviewed the project description and supplementary documentation, submitted to our office on March 26, 2025. Based upon that review, it is the OPRHP's opinion that the two mixed-use residential and retail buildings, as described, will have No Adverse Impact on historic and archaeological resources, provided the following condition is met:

1. Submit a Construction Protection Plan for historic resources within 90 feet of proposed construction activities. A construction protection plan should, at a minimum, include a pre-work photo survey of historic resources, vibration monitoring surveys, construction barriers, and a post-work photo survey of historic resources. For more information, please refer to the link : https://www.nps.gov/orgs/1739/upload/tech-note-temporary-protection-03-during-construction.pdf
2. Submit a revised rooftop design, locating it further from the Hight Street view, for review and approval.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

If you have any questions, you can call or e-mail me at the contact information below.

Sincerely,

Mariana Staines
Historic Site Restoration Coordinator
518-268-2142 | mariana.montesstaines@parks.ny.gov

KARC
PLANNING CONSULTANTS, INC.

TO: John Gunn, Chair, and the City of Beacon Planning Board

FR: KARC Planning Consultants, Inc.

DATE: April 08, 2025

RE: 45 Beekman Street Site Plan, Beekman Arts Center LLC & Bay Ridge Studios LLC

I have reviewed the following materials regarding the proposed construction of two (2) new mixed-use buildings at 45 Beekman Street:

- Cover letter by Taylor M. Palmer, Cuddy + Feder LLP, dated March 25, 2025
- Site Plan Set (19 sheets) prepared by Colliers Engineering and Design, dated January 30, 2024, last revised March 25, 2025 (Attachment 1)
- Architectural Plan Set (7 sheets) prepared by Aryeh Siegel Architect, dated November 28, 2023, last revised March 25, 2025 (Attachment 2)
- Stormwater Pollution Prevention Plan (SWPPP) prepared by Colliers Engineering and Design, dated March 25, 2025 (Attachment 3)
- Exhibit A: Responses to Comments Memo, prepared by Colliers Engineering and Design, dated March 25, 2025
- Digital Copy of Previously Submitted Traffic and Parking Study by Colliers Engineers and Design, dated November 28, 2023 last revised June 24, 2024

Project Description:
The proposed project includes construction of two 4-story mixed-use buildings with a total of 64 residential dwelling units, 14,892 sq. ft. commercial space, and 91 off-street parking spaces. The 2.06-acre site includes three parcels and ROW acquisition to be merged into a single lot of record. The property is located primarily within the Linkage (L) district, with only the northern driveway onto Tompkins Avenue located in the R1-7.5 Residential district, with frontages on Beekman Street, High Street, and Tompkins Avenue. Multifamily residential, retail, and office uses are permitted within this portion of the Linkage District. The project site is within the Local Waterfront Revitalization Program (LWRP) area, and immediately abuts parcels that fall within the Historic District and Landmark Overlay Zone along High Street and Thompkins Avenue.

Comments & Recommendations:

1. **Finished Building Materials:** Section 223-41.21(K)(10) discusses permitted and prohibited materials within the Linkage District. The regulation specifically prohibits “sheet metal siding or sheet trim.” A determination from the Building Inspector will be required to clarify if the proposed architectural “metal panel & metal trim” fall within this category. Additional material spec sheets or samples from the applicant may be required to facilitate a determination.

2. **Parking Variance:** As previously noted, three (3) parking stalls on the southwest portion of the lot are located within the 40 ft setback from High Street and will therefore require a variance from the Zoning Board of Appeals. If the Board acts on SEQRA, this matter should be referred to the Zoning Board of Appeals for review.

3. **Subdivision:** As the Applicant is requesting that a public hearing be scheduled for the subdivision component of the project, a lot-line merger plan and subdivision plan should be provided prior to the scheduled public hearing.

4. **Elevations:** Building elevations are provided on sheet A-105 through A-107. To confirm compliance with Section 223-41.19(D)(5), a label or note should be added to indicate that rooftop mechanicals will not project greater than 15 ft above the maximum height. Additionally, the applicant should discuss how they intend to address comments from NYS OPRHP in a letter dated April 7, 2025, which request "a revised rooftop design, locating it further from the High Street view."

5. **Easement Agreement**. The proposed sidewalk connection to NYS Route 9D and the proposed sculpture area extend beyond the proposed property boundary, into the right-of-way that is proposed to be retained by NYS DOT. A DOT Highway Permit may be required, and any proposed easement agreements may require review by the Board's Legal Counsel.

If you have any questions or need additional information, please feel free to contact me.

Natalie Quinn
Beacon Planning Consultant

Cc: Bryan Murphy, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer

City of Beacon Planning Board Agenda
04/08/2025

Title:

Continue public hearing and continue review of application for Site Plan Approval, Mixed-Use Commercial and Residential, 291 Main Street, submitted by Telephone Building Beacon, LLC.

ATTACHMENTS

291 Main PB 4.8.25 HLD Response Letter_2025-0325.pdf

291 Main PB 4.8.25 Aryeh Siegel comment response ltr_250325.pdf

291 Main PB 4.8.25 plan set Submission 5_250325.pdf

Lanc & Tully 291 Main St 04-03-25 review.pdf

KARC Review PB_291 Main Street_2025.04.07.pdf

291 Main PB 4.8.25 PH public comment Lerman.pdf

291 Main PB 4.8.25 PH public comment Rubin.pdf

291 Main PB 4.8.25 PH public comment Vaughn.pdf

291 Main PB 4.8.25 PH public comment - resident.pdf

HUDSON LAND DESIGN

Civil & Environmental Engineering Consultants
174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)
13 Chambers Street, Newburgh, NY 12550 (Satellite Office)
Phone: 845-440-6926 Fax: 845-440-6637
www.HudsonLandDesign.com

March 25, 2025

Hon. John Gunn, Chairman
City of Beacon Planning Board
1 Municipal Plaza
Beacon, New York 12508

Re: 291 Main Street Residential Site Plan
Telephone Building Beacon, LLC (Applicant)
291 Main Street
Tax Parcel: 5954-36-893875 (±0.143 acre)
City of Beacon, New York

Dear Chairman Gunn and Members of the Planning Board:

On behalf of the Applicant for the above referenced project, Hudson Land Design (HLD) has revised the Site Plan Set in response to Lanc & Tully's March 5, 2025 comment letter, and KARC's March 6, 2025 comment memorandum. Below is a point-by-point response to the comments received.

Lanc & Tully March 5, 2025 Comment Letter

General Comments:

1. Comment noted. A cost estimate will be prepared in a future submission once the design has been generally accepted by the City.
2. Comment noted. Lighting is limited to building mounted fixtures and is being prepared by Aryeh Siegel.

Site Plan (Sheet 1 of 8)

1. Aryeh Siegel has responded to this comment under separate cover.
2. Aryeh Siegel has responded to this comment under separate cover.
3. The ADA loading zone has been moved to the last stall. The building columns have been removed from in between the parking spaces.

Grading & Utility Plan (Sheet 5 of 8)

1. See response # 3 under Sheet 1 of 8.

2. The snow removal note has been revised to state that snow shall be removed from the site when it impedes the parking spaces.

KARC March 6, 2025 Comment Memorandum

1. Aryeh Siegel has responded to this comment under separate cover.
2. The Landscaped area to the east of the parking spaces have been revised to include some taller arborvitaes for additional screening. Please note that removal of existing sidewalk for landscaped area on the east side of the telephone building has been eliminated from the plans at the request of the building owner for the following reasons. 1. The existing sidewalk provides an impermeable barrier against the building preventing infiltration against the historic stone and mortar foundation. Introducing infiltration could introduce water into the basement which is currently dry. 2. There are functional basement windows on this side of the building that will be blocked by proposed landscaping. Introducing landscaping and mulch against these windows will create a condition where mulch and/or soil can get into the building through the windows. As an alternative, 3 concrete planter boxes are proposed in this area as an alternative. The planters are positioned such that they are not blocking the existing windows.
3. Parking Standards:
   a. Aryeh Siegel has responded to this comment under separate cover.
4. Aryeh Siegel has responded to this comment under separate cover.
5. Aryeh Siegel has responded to this comment under separate cover.

The following materials are submitted in support of the project:

- 5 copies of the Updated Site Plan Set

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 845-440-6926.

Sincerely,

Michael A. Bodendorf, P.E.
Principal

cc: Telephone Building Beacon, LLC (via email)
Aryeh Siegel, AIA
Daniel G. Koehler, P.E. (HLD file)

ARYEH SIEGEL
ARCHITECT

John Gunn - Planning Board Chairman
City of Beacon
One Municipal Plaza
Beacon, NY 12508

Re: 291 Main Street, Beacon, New York
Site Plan Application – Responses to Comments

March 25, 2025

Dear Chairman Gunn and Members of the Planning Board,

Below please find our responses to the comments included in KARC Planning Consultant's Memorandum, dated March 6, 2025; and Lanc & Tully's Engineering Memorandum dated March 5, 2025.

At the March Planning Board meeting, the Chairman requested that the Applicant provide options for the height at the Main Street façade, as well as adjustments to the 2nd floor window details. Options for the finish material and the roof configuration of the rear portion of the building were also requested.

Several options have been submitted for the Board's review and discussion. The Applicant requests that the Board provide direction based on the provided options so that the design can be developed accordingly. The suggestion that the Main Street façade be reduced to one story conflicts with the CMS regulations that buildings be a minimum of two stories, except for portions of the building that are 50 feet from the principal building façade. Additionally, reducing the height to one story is not feasible for the Applicant.

KARC Planning Consultant's Comment Responses:

1. **Mechanical equipment** shall be concealed from public view by approved architectural or landscaping elements. The applicant has stated that the equipment will be located on the flat roof of the 3-story building section, with appropriate screening materials. A note should be added to the plans and a detail of the screening material provided. ***The applicant has indicated these details will be provided once building design is finalized.***

   Response: Mechanical equipment will be screened from view. The equipment will be located on the flat roof of the 3-story building section, with appropriate screening materials. We will locate the equipment and screening on the plans after the overall building design has been determined.

2. **Landscaping Plan:** Per Section 223-41.18(E)(12), the Planning Board should review the landscaping details provided on Sheet 7 to ensure that the proposed landscaped areas enhance the streetscape, provide a landscaped rear yard or courtyard, and meet the minimum requirement of 10%. Contrary to what is shown in the "View 2" rendering on Sheet 4, based on the site plan it appears that one of the proposed parking spaces will be outside of the covered and partially enclosed parking. It is recommended that additional landscaping with varied heights be planted along S Brett Street to further screen the proposed parking.

84 Mason Circle | ajs@ajsarch.com | *Tel* 845 838 2490
Beacon, New York 12508 | www.ajsarch.com | *Fax* 845 838 2657

Response: A landscaping plan has been added to the set and submitted. Note that we are proposing shade-tolerant plantings in areas where there may not be full sunlight. The renderings will be updated to reflect the landscape proposals.

3. **Parking Standards:** No minimum number of off-street parking spaces are required within the CMS district due to the proximity of this district to municipal parking areas, public transportation, and pedestrian-oriented streetscapes. A parking maximum of 17 spaces is applied to the proposed project based on the calculation of 1 space per dwelling unit and 3 spaces per every 1,000 GFA of commercial space [588 SF of proposed retail + 3,650 SF of existing office]. A total of 4 parking spaces are currently proposed on site, one of which will be a dedicated ADA space.

    a. The project narrative states that "the existing Telephone Building provides parking spaces for two of the existing commercial tenants in their leases. Does the property owner intend for the onsite parking spaces to be designated to the commercial tenants moving forward or will the existing commercial leases be updated to reflect a shared parking situation with the proposed residential tenants?

Response: The Applicant intends to update commercial leases moving forward to reflect shared parking with the residential tenants. We are still working to identify existing examples of similarly scaled commercial/residential projects with similar parking requirements to get real world scenarios that can inform the proposed parking.

4. **Elevations and Design Standards:** Elevations with dimensions and material callouts will be required.

Response: Elevations with dimensions and material callouts will be provided once there is general agreement on the direction of the building design.

5. **SHPO Comment Letter:** The State Historic Preservation Office recommends extending the cornice detail across the entire new cornice and unifying the design between the Main Street and South Brett Street facades to create a more cohesive and compatible approach. SHPO also recommends lowering the height of the ground floor parking structure fronting on Brett Street to reduce the height of the addition compared to the existing historic building. I believe both recommendations are appropriate and should be discussed by the Board.

Response: The SHPO recommendation to lower the height of the Brett Street portion of the addition has been implemented, along with other recommendations in the Preservation Brief 14 discussed at the March meeting. We have provided several options for the building design which the Board can review in light of the SHPO recommendations.

Lanc & Tully Comment Responses:

General Comments:

1. A landscape plan and lighting plan shall be prepared for the project and made part of the overall site.

Response: A Landscape Plan has been submitted. Site lighting will be added to the plans once there is general agreement on the direction of the building design.

Site Plan (Sheet 1 of 8):

1. Required signage shall be provided for the Accessible Parking stall and access aisle

   Response: The signage has been provided.

2. The snow removal note on Sheet 5 of 8 shall also be provided on Sheet 1 Site Plan.

   Response: The snow removal note has been added to Sheet 1.

3. The first parking stall on the site, located outside of the building, appears to be extremely tight and does not appear that it would allow the driver to open their door since it is directly against the building based upon the elevation views. The parking stall should be adjusted so as to allow the driver and passengers to be able to exit the vehicle. It is further noted that the roof leaders are encroaching into the parking stall in turn making this stall even tighter for a vehicle to maneuver.

   Response: The parking has been revised to allow for easier maneuvering. Columns between each bay have been eliminated to reduce vehicle conflicts.

Please refer to Hudson Land Design's letter for additional responses to Lanc & Tully comments.

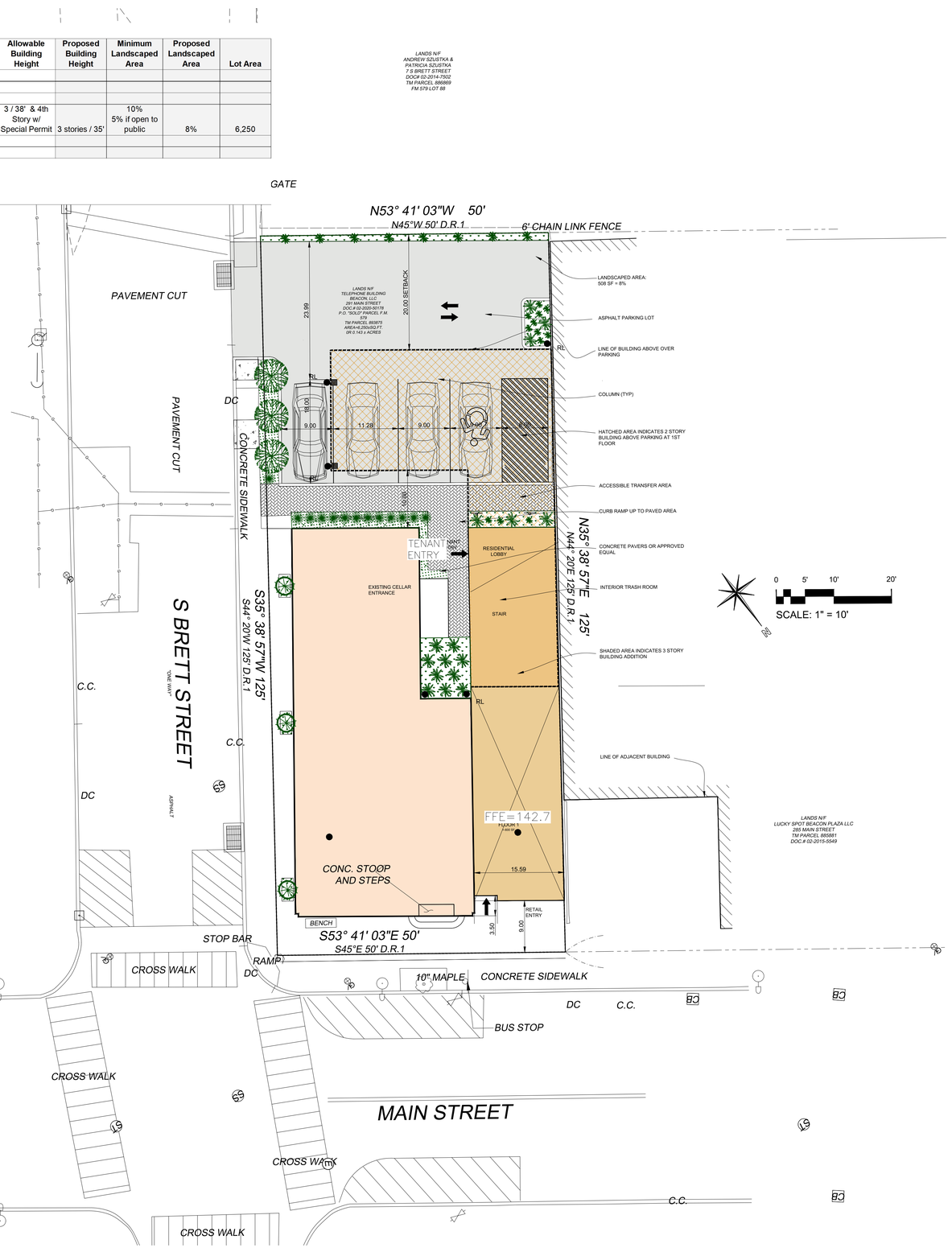
Thank you. Please let me know if you have any questions.

Sincerely,

Aryeh Siegel
Aryeh Siegel, Architect

Bulk Zoning Regulations Table

	Required Setbacks			Proposed Setbacks			Main Street Frontage Required	Main Street Frontage Proposed	Minimum Lot Depth	Proposed Lot Depth	Allowable Building Height	Proposed Building Height	Minimum Landscaped Area	Proposed Landscaped Area	Lot Area
	Front	Side	Rear	Front	Side	Rear									
Zoning District															
CMS	0'-10'	0'	20'	9'	0'	20'	100%	100%	75'	125' existing	3 / 38' & 4th Story w/ Special Permit	3 stories / 35'	10% 5% if open to public	8%	6,250



Site Plan

Scale: 1" = 10'

Location Map

Scale: 1" = 400'

Zoning Summary

Zoning District:	CMS (Central Main Street)
Tax Map No.:	5954-36-893875
Lot Area:	0.143 Acres (6,250 sf)
Building Footprint:	1,926 sf
Historical Overlay District:	Yes
Parking Overlay District:	Yes
Existing Use:	Commercial
Proposed Use:	Mixed-Use: Retail / Office / Residential

Parking & Loading

Use & Parking Requirements	Proposed Area / Count	Parking Requirement
Residential		
1 space per dwelling unit (minimum)	3 dwelling units	3 parking spaces maximum
Commercial		
3 spaces per 1,000 sf GFA (minimum)	3,650 sf existing + 588 sf proposed = 4,238 sf total commercial	13 parking spaces maximum
Total Required		**17 parking spaces maximum**
Total Provided		**4 parking spaces** See Notes Below

Notes:

1. Parking for the residential use is provided on site. See Note 2 below for shared parking since there are both commercial and residential uses on the property. There is no other space for parking on the site.
2. There are municipal parking lots and ample street parking within walking distance from the property
3. Two or more uses on same lot. Where two or more different uses occur on a single lot, the Planning Board may approve the joint use of parking spaces by two or more establishments on the same lot or on contiguous lots, the total capacity of which is less than the sum of the spaces needed for each use individually, provided that said Board finds that the capacity to be provided will substantially meet the intent of this article by reason of variation in the probable time of maximum use by patrons or employees at such establishments and provided that such approval of such joint use shall be automatically terminated upon a change of use at any such establishment.
4. No signage is proposed as part of this application. Retail tenant will apply separately to the Planning Board for their own signage
5. Retail hours of operation: Monday through Sunday 7am – 11pm

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	12/31/24	REVISE PER PLANNING BOARD COMMENTS	AJS
2	01/28/25	REVISE PER PLANNING BOARD COMMENTS	AJS
3	02/25/25	REVISE PER PLANNING BOARD COMMENTS	AJS
4	03/25/25	REVISE PER PLANNING BOARD COMMENTS	AJS

Index of Drawings

Sheet 1 of 8	Site Plan
Sheet 2 of 8	Existing Conditions Plan
Sheet 3 of 8	Floor Plans
Sheet 4 of 8	Building Elevations & Renderings
Sheet 5 of 8	Grading & Utility Plan
Sheet 6 of 8	Erosion and Sediment Control Plan
Sheet 7 of 8	Landscape & Lighting Plan
Sheet 8 of 8	Construction Details

Site Plan Application

Sheet 1 of 8 - Site Plan

Owner:
Telephone Building Beacon LLC
221 Beechwood Ave
Poughkeepsie, NY 12601

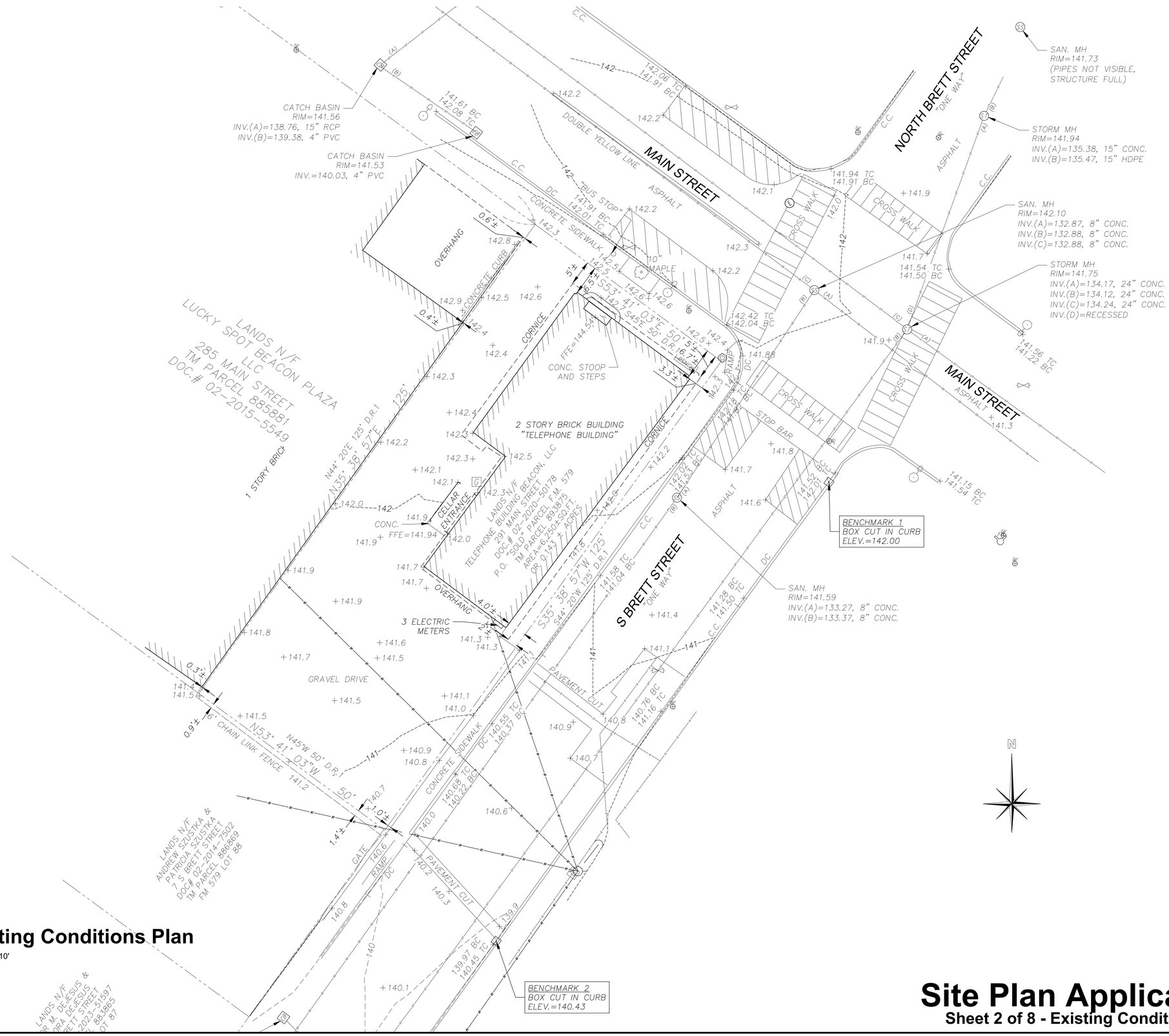
Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
MJ Engineering
21 Corporate Drive
Clifton Park, New York 12065

291 Main Street - Telephone Building

Beacon, New York
Scale: 1" = 10'
October 1, 2024



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1	12/31/24	REVISE PER PLANNING BOARD COMMENTS	AJS
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3	02/25/25	NO CHANGE	AJS
4	03/25/25	REVISE PER PLANNING BOARD COMMENTS	AJS

Existing Conditions Plan

Scale: 1" = 10'

Site Plan Application

Sheet 2 of 8 - Existing Conditions Plan

Owner:
Telephone Building Beacon LLC
221 Beechwood Ave
Poughkeepsie, NY 12601

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
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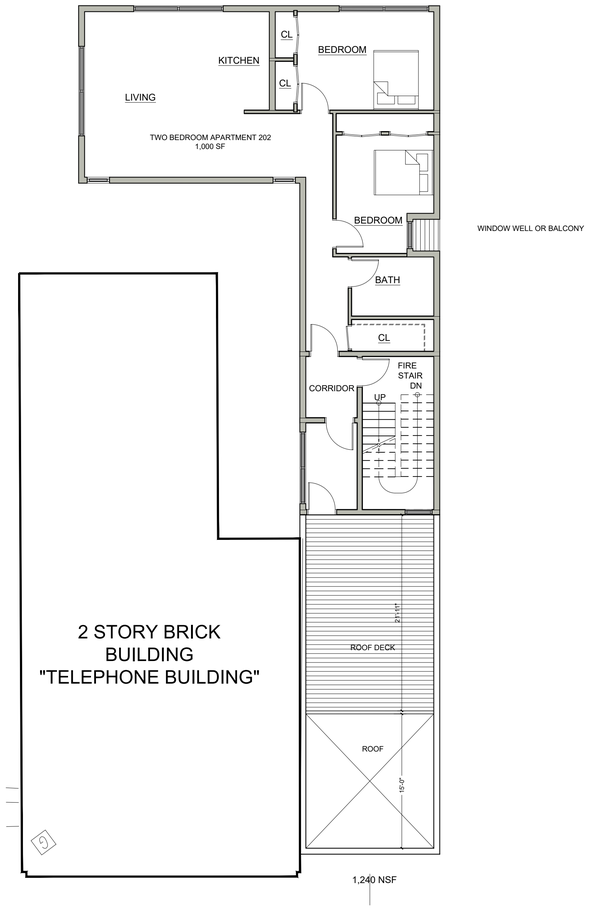
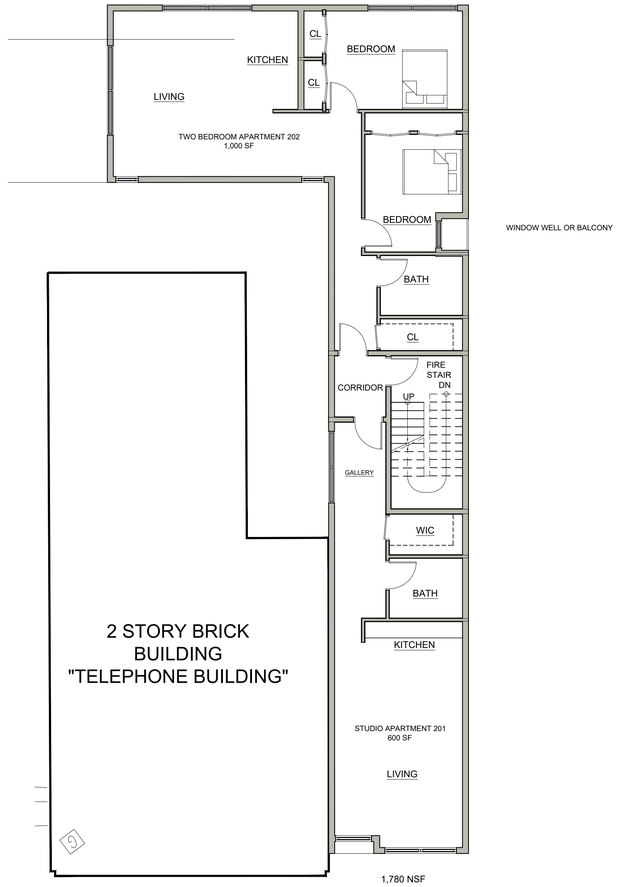


WINDOW WELL OR BALCONY

1,240 NSF

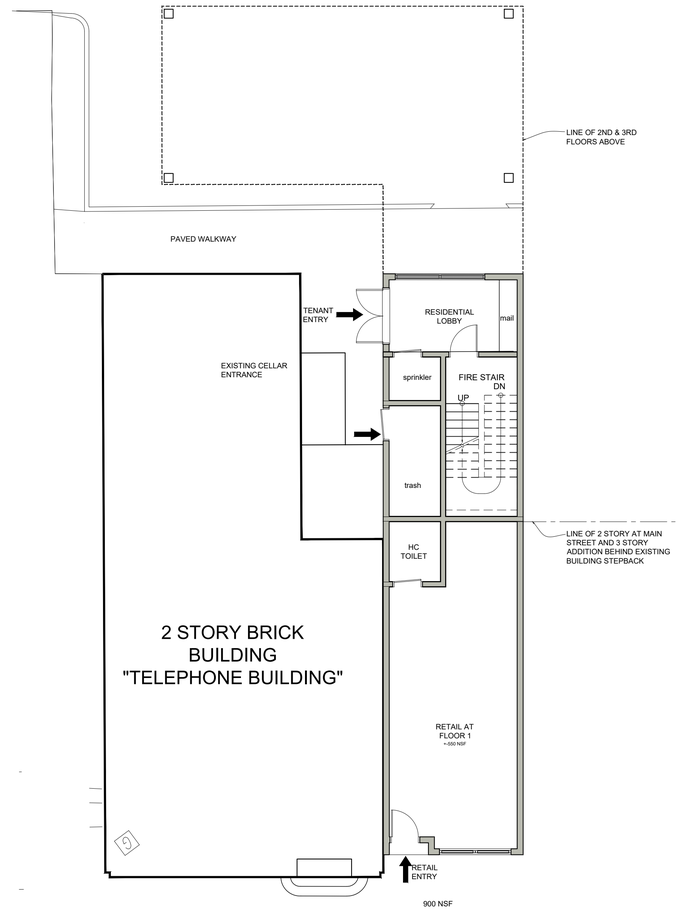
3 3rd Floor Plan
1/8" = 1'-0"



WINDOW WELL OR BALCONY

1,780 NSF

2 2nd Floor Plan
1/8" = 1'-0"



900 NSF

1 1st Floor Plan
1/8" = 1'-0"

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4	03/25/25	REVISE PER PLANNING BOARD COMMENTS	AJS

Site Plan Application

Sheet 3 of 8 - Floor Plans

Owner:
Telephone Building Beacon LLC
221 Beechwood Ave
Poughkeepsie, NY 12601

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
MJ Engineering
21 Corporate Drive
Clifton Park, New York 12065

291 Main Street - Telephone Building

Beacon, New York
Scale: 1" = 10'
October 1, 2024

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2	01/28/25	REVISE PER PLANNING BOARD COMMENTS	AJS
3	02/25/25	REVISE PER PLANNING BOARD COMMENTS	AJS
4	03/25/25	REVISE PER PLANNING BOARD COMMENTS	AJS

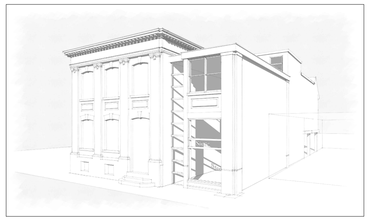
View 2: South Brett Street

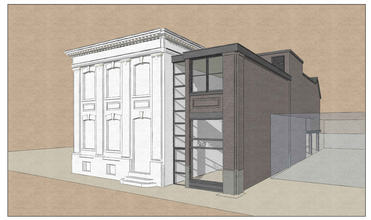
Scale: NTS

View 1: Main Street

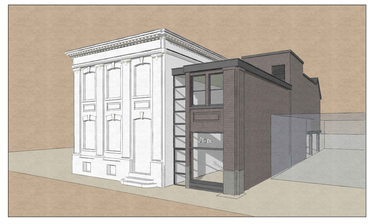
Scale: NTS

OPTION 1
- BRICK SIDING
- GABLE ROOF AT REAR
- MAIN STREET ADDITION JUST BELOW EXISTING CORNICE
- COLUMNS AT EACH PARKING BAY

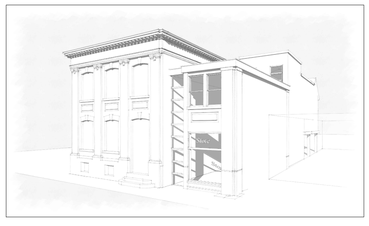


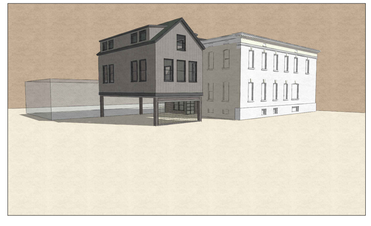
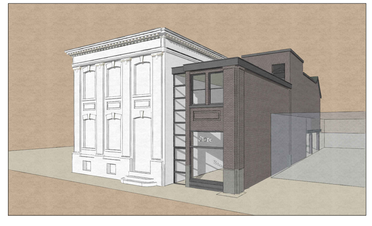


OPTION 2
- BRICK SIDING
- GABLE ROOF AT REAR
- MAIN STREET ADDITION HEIGHT REDUCED
- COLUMNS REMOVED AT EACH PARKING BAY

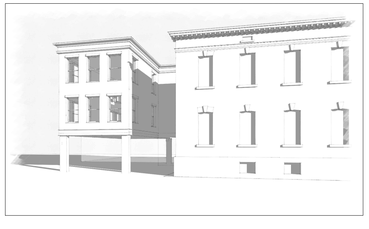
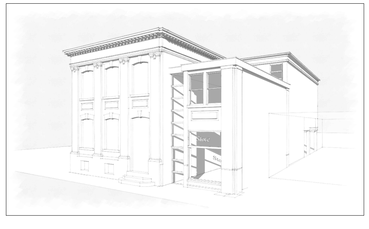


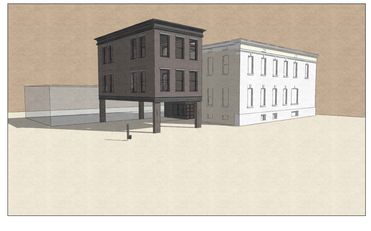
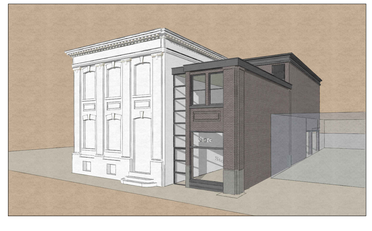
OPTION 3
- VERTICAL WOOD SIDING
- GABLE ROOF AT REAR
- MAIN STREET ADDITION HEIGHT REDUCED
- COLUMNS REMOVED AT EACH PARKING BAY



OPTION 4
- BRICK SIDING
- FLAT ROOF WITH CORNICE AT REAR
- MAIN STREET ADDITION HEIGHT REDUCED
- COLUMNS REMOVED AT EACH PARKING BAY

Site Plan Application

Sheet 4 of 8 - Building Elevations & Views

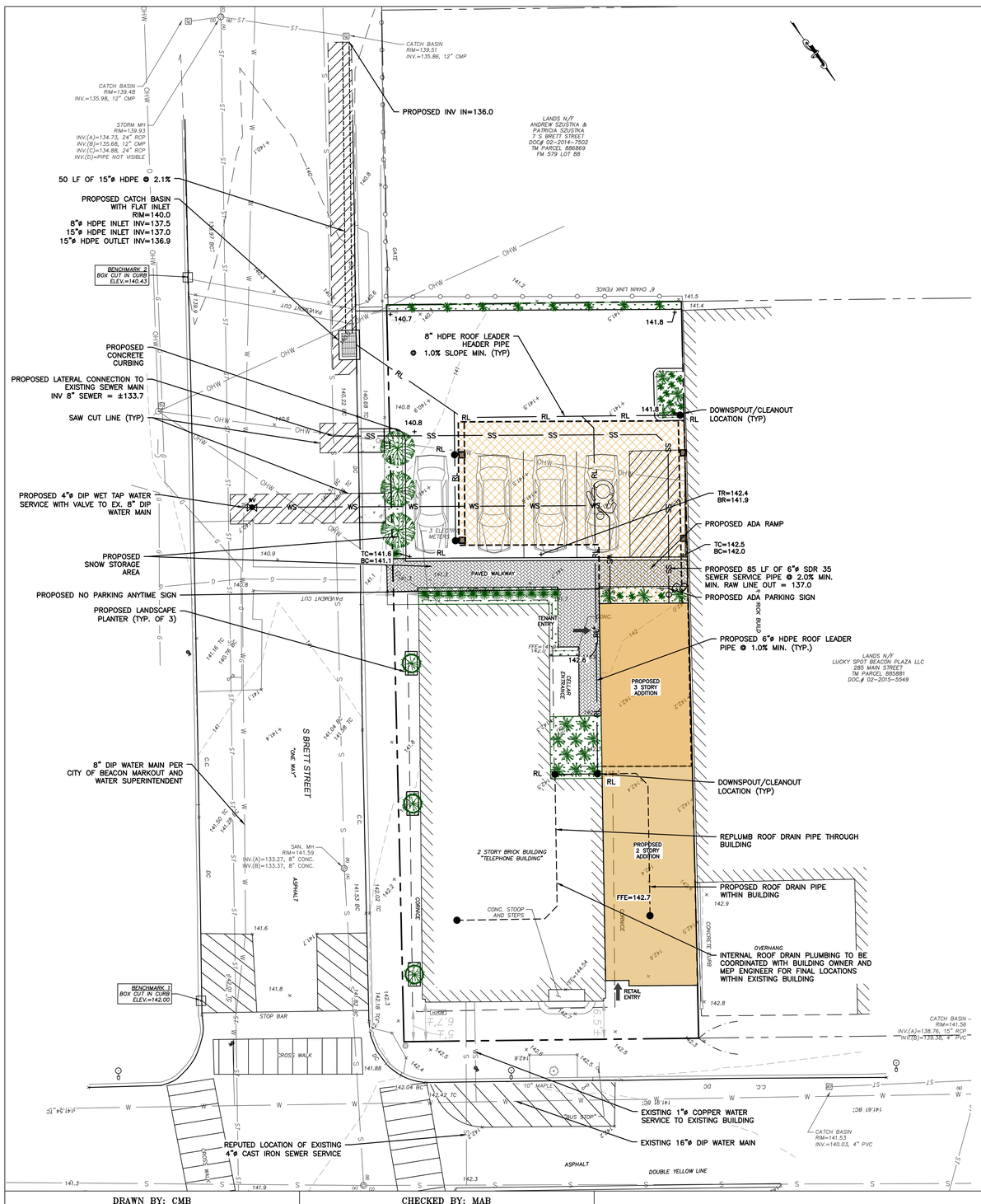
Owner:
Telephone Building Beacon LLC
221 Beechwood Ave
Poughkeepsie, NY 12601

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
MJ Engineering
21 Corporate Drive
Clifton Park, New York 12065

291 Main Street - Telephone Building
Beacon, New York
Scale: As Noted
October 1, 2024



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
- OHW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- SS EXISTING SEWER SERVICE LINE
- S EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- W EXISTING WATER LINE
- WS EXISTING WATER SERVICE LINE
- EXISTING HYDRANT
- EXISTING WATER VALVE
- ST EXISTING STORM WATER LINE
- EXISTING CATCH BASIN
- EXISTING STORM WATER MANHOLE
- EXISTING GAS VALVE

- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- 250 PROPOSED MAJOR CONTOUR
- 252 PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- SS PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED STORM WATER LINE
- RL PROPOSED ROOF LEADER LINE
- PROPOSED ROOF LEADER
- WS PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE

SITE SPECIFIC NOTES:

1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962. SPECIFIC ATTENTION SHALL BE PAID TO THE LOCATIONS OF THE GAS (IF APPLICABLE), WATER AND SEWER MAINS WITH RESPECT TO THE PROPOSED LOCATIONS FOR THE SERVICE LINES.
2. THE CONTRACTOR SHALL CONTACT THE CITY OF BEACON WATER AND SEWER DEPARTMENTS TO SCHEDULE A PRE-CONSTRUCTION MEETING TO ENSURE THAT THE ARRANGEMENTS FOR WATER SUPPLY AND SEWAGE DISPOSAL ARE COMMENCED IN ACCORDANCE WITH THE APPROVED PLANS AND AMENDMENTS THERETO AND GENERALLY ACCEPTED STANDARDS.
3. THE SITE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF UTILITY LINES WITHIN SOUTH BRETT STREET VIA INVESTIGATIVE TEST PIT EXCAVATIONS. ANY UTILITY CONFLICTS SHALL BE BROUGHT TO THE DESIGN ENGINEER'S ATTENTION IMMEDIATELY.
4. THE PROPOSED BUILDING SHALL BE SERVED BY THE CITY OF BEACON MUNICIPAL WATER AND SEWER SERVICES.
5. THE WATER SERVICE LINE AND METER SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BEACON WATER DEPARTMENT REQUIREMENTS.
6. THE WATER SERVICE LINE TO THE BUILDING SHALL BE PER MEP ENGINEER TO MEET SPRINKLER REQUIREMENTS.
7. THE EXISTING 3/4" WATER SERVICE STUB TO THE FRONT BUILDING MAY BE USED OR ABANDONED IN PLACE.
8. A ROAD OPENING PERMIT SHALL BE REQUIRED FOR THE INSTALLATION OF THE UNDERGROUND UTILITIES. STREET CLOSURE FOR SERVICE CONNECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF BEACON REQUIREMENTS.
9. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. THE PROPOSED DRIVEWAY SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE.
10. SUMP PUMP TO BE PROVIDED FOR FOOTING DRAIN, IF NECESSARY. THE TYPE OF PUMP AND METHODS USED TO ENSURE PROPER DRAINAGE SHALL BE ACCEPTABLE TO THE CITY OF BEACON BUILDING DEPARTMENT.
11. THE CITY OF BEACON BUILDING DEPARTMENT SHALL BE PROVIDED ACCESS TO VERIFY THE LOCATION OF THE EXISTING ROOF LEADERS AND SUMP PUMPS AND THE AREA THEY DRAIN TO.

EXISTING SIDEWALK, CURBING AND ASPHALT PAVEMENT REPAIR NOTES:

1. THE CONTRACTOR SHALL REPAIR AND REPLACE IN-KIND EXISTING CONCRETE SIDEWALKS AND CURBING, AND ASPHALT PAVEMENT WITHIN THE CITY R.O.W. AS A RESULT OF UTILITY WORK.
2. THE SIDEWALKS SHALL BE SAW CUT AT AN EXISTING CONSTRUCTION JOINT OR CONTROL JOINT SO THAT THE FINISHED CONSTRUCTION AND CONTROL JOINT SPACING MATCHES EXISTING.
3. CUTS THROUGH EXISTING PAVEMENT SHALL BE MADE VIA SAW CUT AND REPAIRED IN ACCORDANCE WITH THE DETAILS ON CD-1.

GENERAL CONSTRUCTION NOTES:

1. ALL OTHER UTILITIES (TELEPHONE, ELECTRIC, GAS, CABLE, ETC.) SHALL BE INCORPORATED PRIOR TO CONSTRUCTION. ALL SUCH UTILITY DESIGNS SHALL BE DEVELOPED IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANIES.

2. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962.

3. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL CATCH BASINS, SANITARY MANHOLES AND WATERLINES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT. INVESTIGATIVE TEST PITS MAY BE REQUIRED TO VERIFY LOCATIONS.

4. PIPE CONNECTIONS TO ALL CATCH BASINS SHALL BE MADE WATERTIGHT, WITH PARTICULAR ATTENTION BEING PAID TO CONNECTIONS LOCATED WITHIN 10 FEET OF WATER AND SEWER MAINS (AND SERVICE LATERALS).

ROOF LEADER NOTES:

1. AN INFLOW AND INFILTRATION INVESTIGATION REVEALED THAT THE ROOF DRAINS IN THE EXISTING BUILDING ARE CONNECTED TO THE SANITARY SEWER SYSTEM. THE ROOF DRAIN PIPES SHALL BE DISCONNECTED FROM THE SANITARY SEWER WITHIN THE BUILDING AND DISCHARGED TO THE CITY DRAINAGE SYSTEM SEPARATELY.

2. A SEPARATE 6" SCH 40 PVC PIPE SHALL BE CONNECTED TO THE ROOF DRAINS IN THE ATTIC SPACE AND DIRECTED DOWN THROUGH THE EXISTING PIPE CHASE WITHIN THE BUILDING TO THE BASEMENT. THE PIPE WILL THEN BE DIRECTED THROUGH THE EAST WALL OF THE BUILDING AND CONNECTED TO THE CURB-O-LET OUTSIDE THE BUILDING.

3. THE ROOF DRAINS FROM THE NEW BUILDING ADDITION SHALL BE CONNECTED TO THE NEW ROOF LEADER PIPE WITHIN THE EXISTING BUILDING.

4. THERE ARE NO CATCH BASINS IN THE VICINITY OF THE BUILDING. THEREFORE, A CURB-O-LET IS PROPOSED TO DISCHARGE ROOF RUNOFF TO THE GUTTER LINE OF SOUTH BRETT ST., THE ROAD GRADE SLOPES TOWARD THE SOUTH. THERE IS A CATCH BASIN LOCATED APPROXIMATELY 45 FEET SOUTH OF THE PARCEL ON THE WEST SIDE OF SOUTH BRETT ST.

SNOW REMOVAL NOTE:

SNOW SHALL BE REMOVED FROM THE SITE WHEN THE SNOW STORAGE AREA SHOWN ON THIS PLAN IS AT CAPACITY. ONSITE SNOW STORAGE SHALL NOT IMPEDE THE FUNCTIONALITY OF THE PARKING AREA OR PEDESTRIAN WALKWAYS.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

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_____ SECRETARY

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DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	12/31/24	PER PLANNING BOARD COMMENTS	CMB				
2	1/28/25	PER PLANNING BOARD COMMENTS	CMB				
3	2/25/25	PER PLANNING BOARD COMMENTS	CMB				
4	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

Dig Safely. New York. Call 811 before you dig

STATE OF NEW YORK
STEPHEN A. BOSCHKOFF
084466
LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

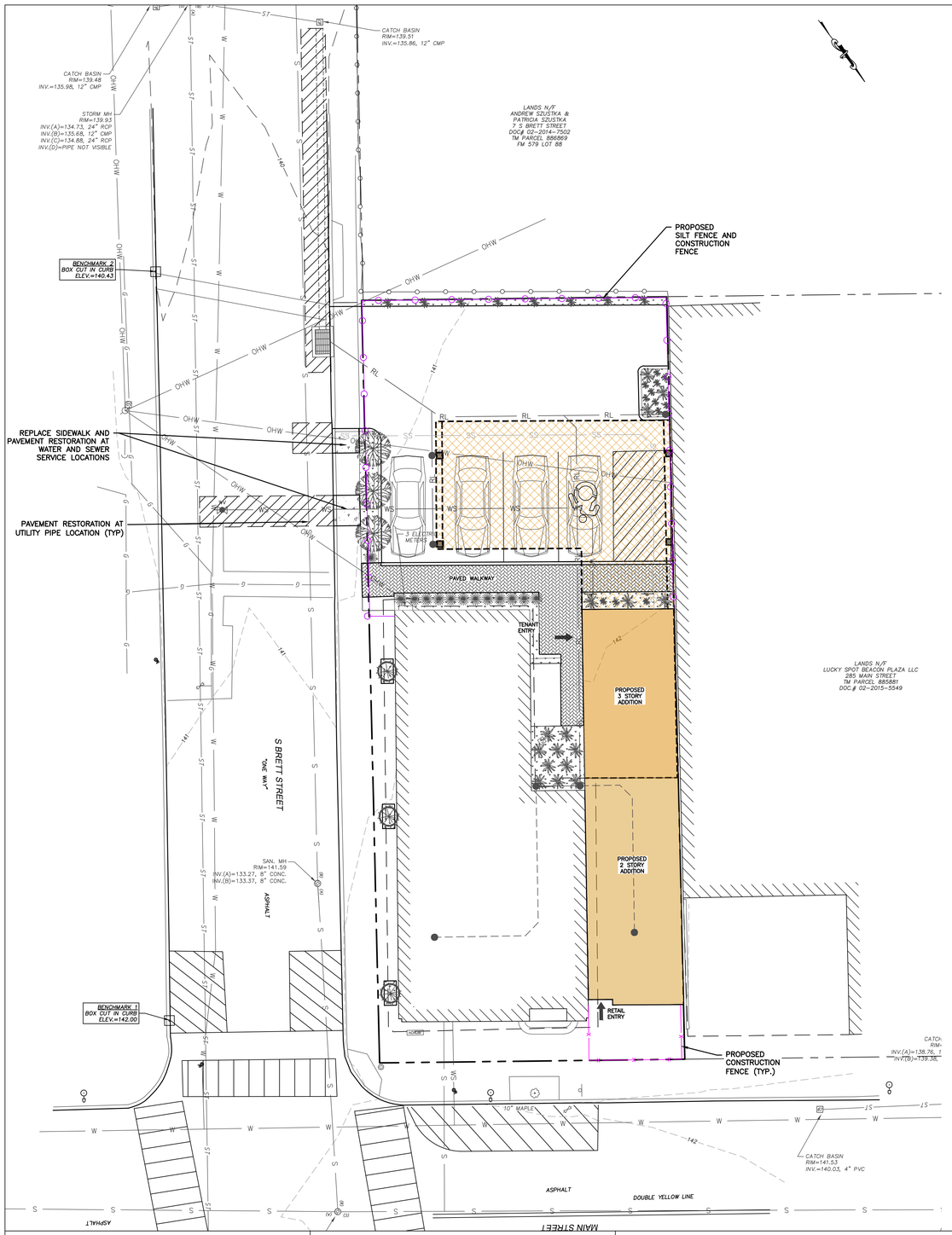
GRADING & UTILITY PLAN

291 MAIN STREET-TELPHONE BUILDING

291 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-36-893875

JOB #:	2024:034
DATE:	10/29/24
SCALE:	1" = 10'
TITLE:	GU-1
SHEET:	5 OF 8

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



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- 252 EXISTING MINOR CONTOUR
- OHW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- SS EXISTING SEWER SERVICE LINE
- S EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- W EXISTING WATER LINE
- WS EXISTING WATER SERVICE LINE
- EXISTING HYDRANT
- EXISTING WATER VALVE
- ST EXISTING STORM WATER LINE
- EXISTING CATCH BASIN
- EXISTING STORM WATER MANHOLE
- EXISTING GAS VALVE

- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- 250 PROPOSED MAJOR CONTOUR
- 252 PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- SS PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED STORM WATER LINE
- RL PROPOSED ROOF LEADER LINE
- PROPOSED ROOF LEADER
- WS PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION FENCE

EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE PROVIDED ON THIS SHEET. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.

2. ALL STORMWATER MANAGEMENT STRUCTURES (E.G., SWALES, CULVERTS) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. SEDIMENT AND TRASH SHALL BE REMOVED, AS NECESSARY.

3. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

4. ANY PILE OF POTENTIALLY EROSIVE MATERIAL TEMPORARILY STOCKPILED ON THE SITE DURING THE CONSTRUCTION PROCESS SHALL BE LOCATED IN AN AREA AWAY FROM STORM DRAINAGE AND SHALL BE PROPERLY PROTECTED FROM EROSION BY A SURROUNDING SILT FENCE.

5. PERMANENT SEEDED AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THE APPROVED SITE PLAN DETAIL SHEET.

6. AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND WILL NOT BE REDISTURBED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE COVER WITHIN 14 DAYS.

7. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY STANDARD METHODS OF LIGHTLY WATERING ALL EXPOSED SOIL AND RAPIDLY STABILIZING THE REGRADED AREAS WITH TOPSOIL, LOAM AND/OR SEEDING.

8. THE PROJECT ENGINEER SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE START OF ANY SITE WORK, AND BY SUCH NOTIFICATION, SHALL BE PROVIDED WITH THE NAME AND TELEPHONE NUMBER OF THE GENERAL CONTRACTOR RESPONSIBLE FOR SUCH WORK.

9. THE CITY MAY INSPECT EROSION AND SEDIMENT CONTROL PRACTICES ON THE SITE DURING CONSTRUCTION AND RECOMMEND THAT THE CONTRACTOR INSTALL ADDITIONAL EROSION CONTROL MEASURES IF DEEMED NECESSARY TO PROTECT ANY UNDISTURBED AREAS OF THE SITE. ANY SUCH REQUESTS SHALL BE MADE DIRECTLY TO THE CONTRACTOR AND QUALIFIED PROFESSIONAL AND FOLLOWED UP WITH A WRITTEN NOTIFICATION TO THE DEVELOPER. IN ADDITION, THE CITY SHALL BE CONSULTED ON ANY SPECIAL ADDITIONS OR DELETIONS OF EROSION CONTROL MEASURES WARRANTED BY CHANGING FIELD CONDITIONS.

10. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (AKA SUMP PIT) TO FILTER WATER FOR PUMPING TO A SUITABLE LOCATION.

11. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED PER THE APPROVAL OF THE ENGINEER SUPERVISING CONSTRUCTION.

INSPECTION SCHEDULE & MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES

PERMANENT AND TEMPORARY VEGETATION:

INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

SILT FENCE:

INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

DUST CONTROL:

SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORK. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

CATCH BASINS:

ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION AND DEBRIS, AND REMOVED AS NECESSARY. THE INLET PROTECTION SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND REPLACED AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	12/31/24	PER PLANNING BOARD COMMENTS	CMB				
2	1/28/25	PER PLANNING BOARD COMMENTS	CMB				
3	2/25/25	PER PLANNING BOARD COMMENTS	CMB				
4	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

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STATE OF NEW YORK MICHAEL A. RIEDEMANN 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

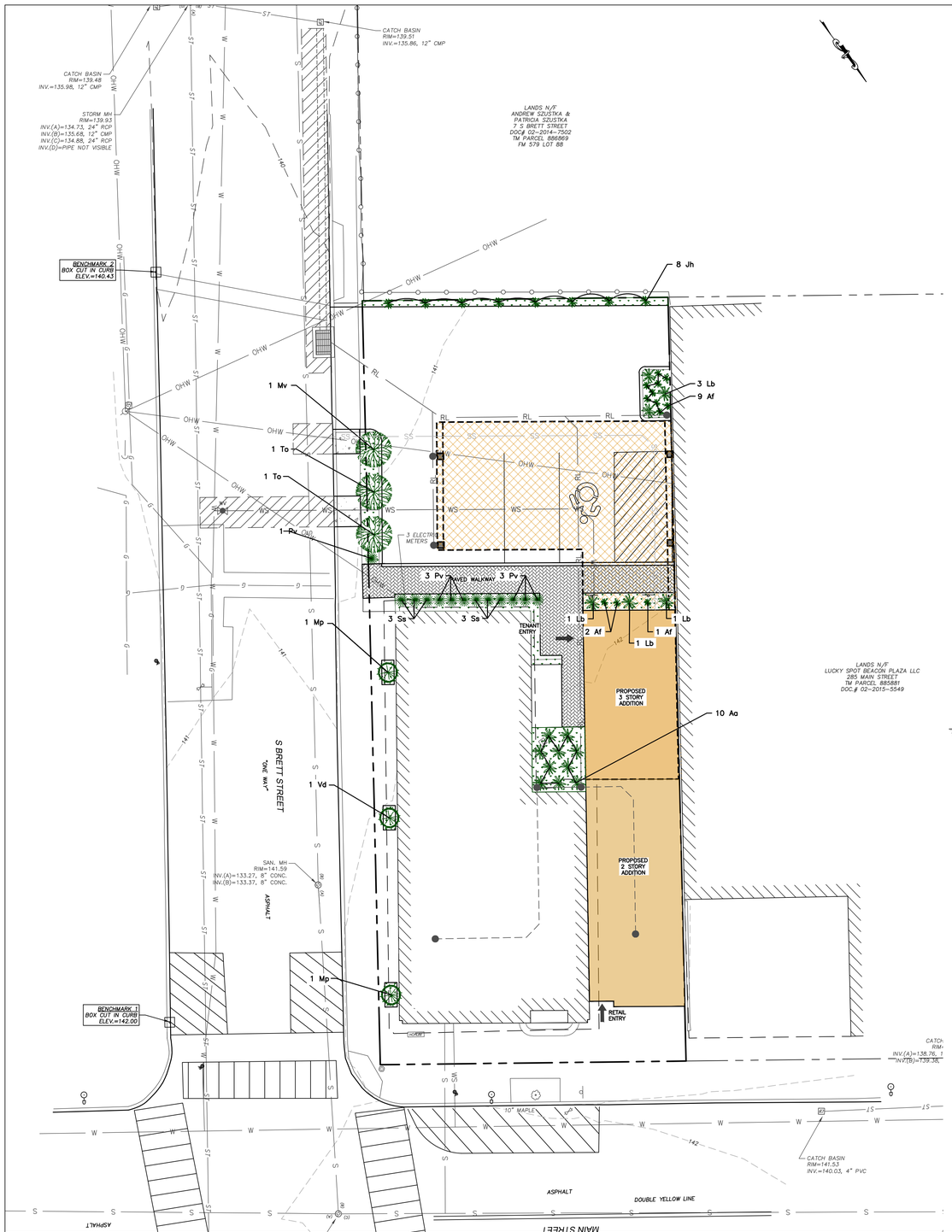
EROSION & SEDIMENT CONTROL PLAN

291 MAIN STREET-TELPHONE BUILDING

291 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-36-893875

JOB #:	2024:034
DATE:	10/29/24
SCALE:	1" = 10'
TITLE:	ESC-1
SHEET:	6 OF 8

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
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- EXISTING UTILITY POLE
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PLANTING SCHEDULE

TREES

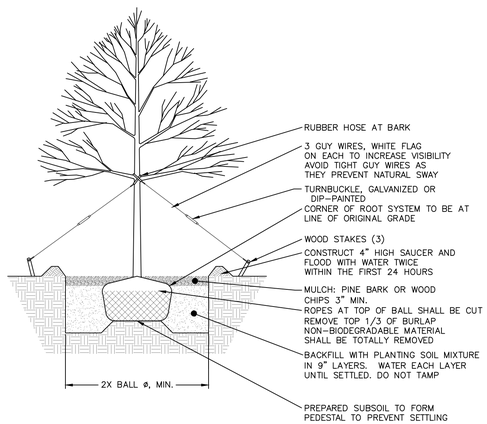
KEY	QTY	BOTANICAL NAME	COMMON NAME	CALIPER	SPACING
Mv	1	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	3 INCH (DBH)	AS SHOWN
To	2	THUJA OCCIDENTALIS	ARBORVITAE	3 INCH (DBH)	AS SHOWN

SHRUBS

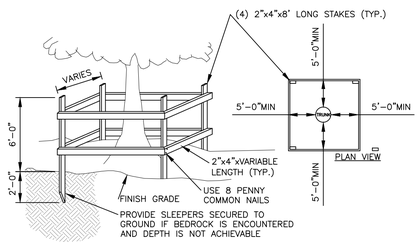
KEY	QTY	BOTANICAL NAME	COMMON NAME	CALIPER	SPACING
Jh	8	JUNIPERUS HORIZONTALIS	CREEPING JUNIPER	3 GALLON	6 FT
Aa	10	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	3 GALLON	3 FT
Lb	6	LINDERA BENZOIN	SPICEBUSH	3 GALLON	6 FT
Pv	7	PANICUM VIRGATUM	SWITCHGRASS	3 GALLON	2 FT
Ss	6	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	3 GALLON	1 FT
Mp	2	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	3 GALLON	6 FT
Vd	1	VIBURNUM DENTATUM	ARROWOOD VIBURNUM	3 GALLON	6 FT
Af	12	ATHYRIUM FILIX-FEMINA	LADY FERN	3 GALLON	2 FT

LANDSCAPE NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL CAREFULLY COORDINATE CONSTRUCTION ACTIVITIES WITH THAT OF THE EARTHWORK CONTRACTOR AND OTHER SITE DEVELOPMENT.
2. THE CONTRACTOR SHALL VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS AND INSPECT RELATED WORK AND ADJACENT SURFACES. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL FINISH GRADES WITHIN THE WORK AREA. THE CONTRACTOR SHALL REPORT TO THE ENGINEER AND OWNER ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
3. THE EXACT LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND UNDERGROUND UTILITIES, WHICH MAY NOT BE INDICATED ON THE DRAWINGS, SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITY SERVICES AND IS RESPONSIBLE FOR THEIR REPLACEMENT IF DAMAGED.
4. THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM RUBBISH AND ALL DEBRIS AT ALL TIMES AND SHALL ARRANGE MATERIAL STORAGE SO AS NOT TO INTERFERE WITH THE OPERATION OF THE PROJECT. ALL UNUSED MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE SITE.
5. NO TREES OR SHRUBS SHALL BE PLANTED ON EXISTING OR PROPOSED UTILITY LINES.
6. QUALITY ASSURANCE:
   A. PLANT NAMES SHALL CONFORM TO THE LATEST EDITION OF "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.
   B. SIZE AND GRADING: PLANT SIZES AND GRADING SHALL CONFORM TO THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" AS SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC (AAN), UNLESS OTHERWISE SPECIFIED.
   C. NURSERY SOURCE: OBTAIN FRESHLY DUG, HEALTHY, VIGOROUS PLANTS NURSERY GROWN UNDER CLIMACTIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR A MINIMUM OF 2 YEARS. PLANTS SHALL HAVE BEEN LINED OUT IN ROWS, ANNUALLY CULTIVATED, SPRAYED, PRUNED AND FERTILIZED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. ALL PLANTS SHALL HAVE BEEN TRANSPLANTED OR ROOT PRUNED AT LEAST ONCE IN THE PAST 3 YEARS. BALLED AND BURLAPPED PLANTS MUST COME FROM SOIL WHICH WILL HOLD A FIRM ROOT BALL. HEELED IN PLANTS AND PLANTS FROM COLD STORAGE ARE NOT ACCEPTABLE.
   D. SUBSTITUTIONS: DO NOT MAKE SUBSTITUTIONS OF TREES AND/OR SHRUB MATERIALS. IF REQUIRED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY AND PROPOSAL FOR USE OF EQUIVALENT MATERIAL.
7. SEEDING & PLANTING SEASONS AND TIMING CONDITIONS:
   A. UNLESS OTHERWISE DIRECTED IN WRITING, SEED LAWNS FROM MARCH 15 TO JUNE 15, AND FROM AUGUST 15 TO OCTOBER 15.
   B. UNLESS OTHERWISE DIRECTED IN WRITING PLANT TREES AND SHRUBS FROM MARCH 15 TO JUNE 1, AND FROM AUGUST 15 TO OCTOBER 30.
8. ALL LANDSCAPING SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE SITE.

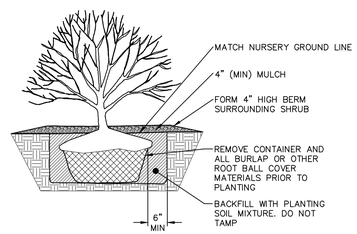


TREE PLANTING DETAIL
NOT TO SCALE



NOTES:
1. TREES TO REMAIN NOTED ON EXISTING CONDITIONS PLAN.
2. NOT ALL TREES TO REMAIN REQUIRE PROTECTION. TREE PROTECTION TO BE UTILIZED ON TREES WHERE CONSTRUCTION TRAFFIC WOULD COMPACT THE ROOT ZONE OF THE TREE.

TEMPORARY TREE PROTECTION DETAIL
NOT TO SCALE



NOTE
1. WATER PER NURSERY SPECIFICATIONS IMMEDIATELY FOLLOWING PLANTING.
2. DETAIL IS FOR BOTH BALL & BURLAPPED OR CONTAINERED SHRUBS.

SHRUB PLANTING DETAIL
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

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REVISIONS:				REVISIONS:			
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GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

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STATE OF NEW YORK GEORGE A. BEDROS 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

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13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

LANDSCAPING PLAN

291 MAIN STREET-TELPHONE BUILDING

291 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-36-893875

JOB #:	2024:034
DATE:	10/29/24
SCALE:	1" = 10'
TITLE:	LS-1
SHEET:	7 OF 8

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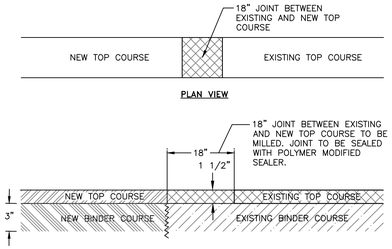
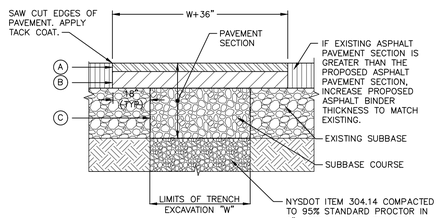


NOTES:
1. 3" BINDER COURSE AND 1½" TOP COURSE TO BE USED FOR RESTORATION OF PAVEMENT WITHIN CITY ROADS.
2. EXCAVATIONS ARE TO BE SAW CUT SMOOTH, ALL EDGES TACK COATED, AND ALL SEAMS SEALED WITH A HOT POLYMER MODIFIED CRACK SEALANT.
3. IF EXISTING ASPHALT PAVEMENT DEPTH IS GREATER THAN THE PROPOSED ASPHALT PAVEMENT SECTION, INCREASE PROPOSED ASPHALT BINDER THICKNESS TO MATCH EXISTING.

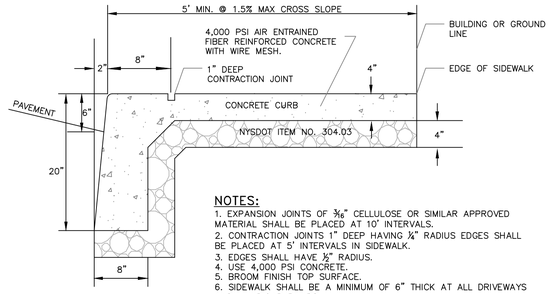
MILLED KEYWAY DETAIL
NOT TO SCALE



LEGEND
- (A) 1–1/2" ASPHALT CONCRETE TOP COURSE– NYSDOT TYPE 6F
- (B) 3–1/2" ASPHALT CONCRETE BINDER COURSE– NYSDOT TYPE 3
- (C) 10" GRANULAR SUBBASE COURSE– NYSDOT ITEM 304.14

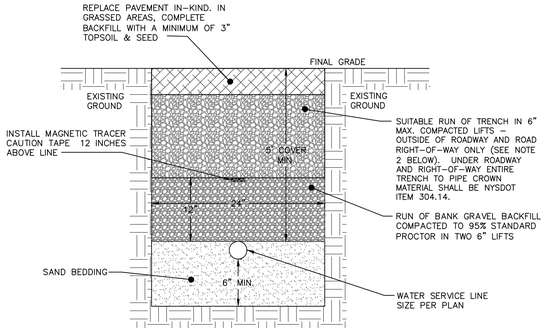
NOTES:
1. SAW CUT MIN. 18" BEYOND EXCAVATION WITH SMOOTH EDGES. 18" JOINT BETWEEN EXISTING AND NEW TOP COURSE TO BE MILLED. JOINT TO BE SEALED WITH POLYMER MODIFIED SEALER.
2. FURNISH, PLACE, AND COMPACT SUBBASE.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.

STREET PAVEMENT RESTORATION DETAIL
NOT TO SCALE



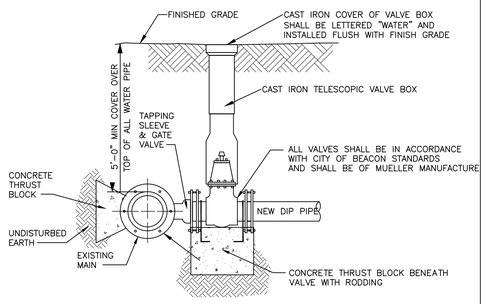
NOTES:
1. EXPANSION JOINTS OF 3/8" CELLULOSE OR SIMILAR APPROVED MATERIAL SHALL BE PLACED AT 10' INTERVALS.
2. CONTRACTION JOINTS 1" DEEP HAVING ¼" RADIUS EDGES SHALL BE PLACED AT 5' INTERVALS IN SIDEWALK.
3. EDGES SHALL HAVE ½" RADIUS.
4. USE 4,000 PSI CONCRETE.
5. BROOM FINISH TOP SURFACE.
6. SIDEWALK SHALL BE A MINIMUM OF 6" THICK AT ALL DRIVEWAYS AND HANDICAP RAMPS.
7. MAXIMUM SLOPE OF 1 ON 12 TO BE USED WHERE SIDEWALK TERMINATES AT HANDICAP RAMPS.

MONOLITHIC CURB AND SIDEWALK DETAIL
NOT TO SCALE



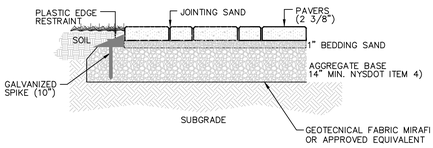
NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ENLOGATED PARTICLES, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.
3. IN AREAS WHERE 5' COVER REQUIREMENT CANNOT BE MET, THE CONTRACTOR SHALL PROVIDE PIPE INSULATION TO PREVENT FREEZING.

WATER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



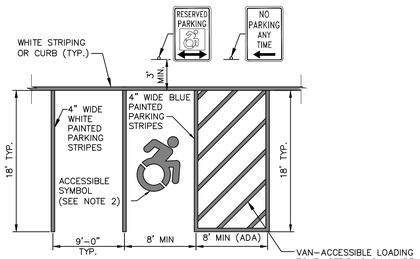
NOTES:
1. TAPPING SLEEVE SHALL BE USED IT THE SECTION OF WATER MAIN IN THE VICINITY OF THE CONNECTION CANNOT BE SHUT DOWN AND ISOLATED.
2. ALL VALVES SHALL OPEN BY TURNING LEFT (COUNTERCLOCKWISE) AND HAVE A 2–INCH SQUARE–OPERATING NUT PAINTED RED.
3. ALL VALVES SHALL BE M.J. RESILIENT WEDGE TYPE WITH "O" RING PACKING, DESIGNED FOR A WORKING PRESSURE OF 150 PSI AND BE IN FULL CONFORMANCE WITH AWWA C500.
4. TAPPING SLEEVE AND GATE VALVE SHOWN ARE MUELLER H–615, AND T–2630 RESPECTIVELY.

TAPPING SLEEVE DETAIL
NOT TO SCALE



NOTE:
THE CONCRETE PAVER DRIVE SHALL SUPPORT A MINIMUM OF 75,000 POUNDS PER APPENDIX "D" OF THE 2020 INTERNATIONAL BUILDING CODE

CONCRETE PAVER DETAIL
NOT TO SCALE

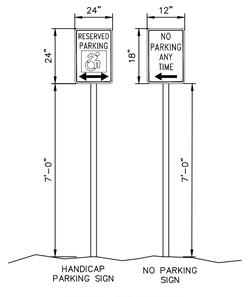


TYPICAL PARKING STRIPING

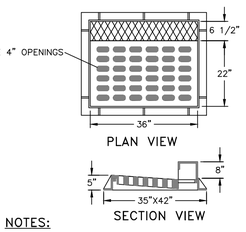
ACCESSIBLE PARKING STRIPING

NOTES:
1. ALL DIMENSIONS SUBJECT TO CURRENT MUNICIPALITY ZONING AND SITE REGULATIONS.
2. PAINTED HANDICAP SYMBOL TO BE IN ACCORDANCE WITH NYSDOT AND ADA STANDARDS.
3. IF PARKING ABUTS A SIDEWALK, THEN THE REGULATORY SIGNS SHALL BE PLACED BEHIND THE SIDEWALK.
4. PARALLEL SPACES SHALL BE 10'W X 20'L.

PARKING AND STRIPING DETAIL
NOT TO SCALE

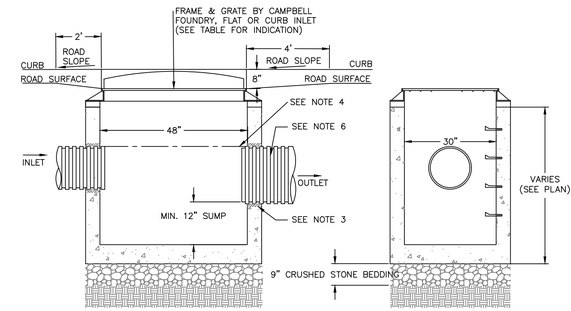


SIGN DETAILS
NOT TO SCALE



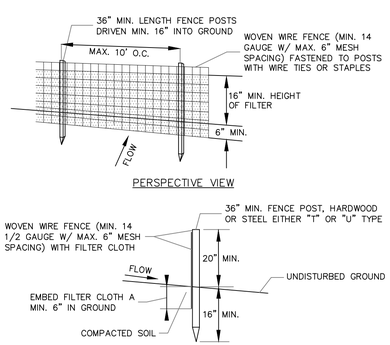
NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 2541, OR APPROVED EQUAL.
2. ALL CATCH BASINS TO RECEIVE CURB INLETS UNLESS OTHERWISE NOTED.

CAST IRON STORMWATER CURB INLET GRATE DETAIL
NOT TO SCALE



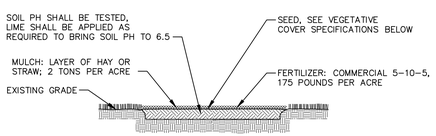
NOTES:
1. PRECAST CONCRETE CATCH BASIN WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. CONNECTIONS MADE WITHIN 10 FEET OF A WATER MAIN (OR SERVICE LINE) OR A SEWER MAIN (OR SERVICE LATERAL) SHALL BE MADE WATERTIGHT.
4. PROVIDE A MINIMUM 0.1' DROP BETWEEN INLET AND OUTLET INVERTS (MATCH CROWNS FOR PIPES WITH DIFFERENT SIZE) UNLESS OTHERWISE NOTED ON THE PLAN.
5. CATCH BASINS WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.
6. HOPE PIPE SHALL BE PROVIDED WITH WATERTIGHT CONNECTIONS. ADS MODEL N12 WT IB OR APPROVED EQUAL.

CATCH BASIN DETAIL
NOT TO SCALE



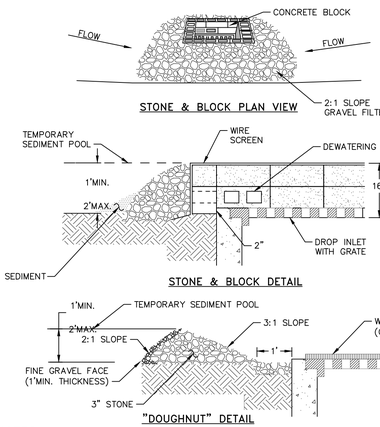
NOTES:
1. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL
NOT TO SCALE



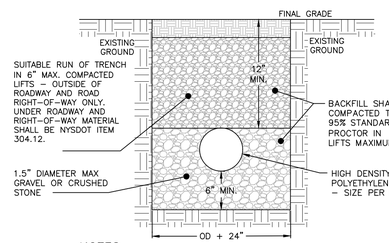
NOTES:
1. TOPSOIL SEED, MULCH, AND FERTILIZE DISTURBED SOIL AREAS THAT WILL BE LEFT EXPOSED FOR 14 DAYS OR MORE.
2. SEED MIXTURE FOR USE ON LAWNS IN SUNNY AREAS:
   - 65% KENTUCKY BLUE GRASS BLEND — 114 POUNDS PER ACRE
   - 20% PERENNIAL RYEGRASS — 35 POUNDS PER ACRE
   - 15% FINE FESCUE — 26 POUNDS PER ACRE
   - 175 POUNDS PER ACRE
3. SEED MIXTURE FOR USE IN SHADY AREAS:
   - 80% BLEND OF SHADE TOLERANT KENTUCKY BLUEGRASS — 138 POUNDS PER ACRE
   - 20% FINE FESCUE — 37 POUNDS PER ACRE
   - 175 POUNDS PER ACRE
4. SEED BETWEEN APRIL 1ST AND MAY 15TH OR AUGUST 15TH AND OCTOBER 15TH. SEEDING MAY OCCUR BETWEEN MAY 15TH AND AUGUST 15TH IF ADEQUATE IRRIGATION IS PROVIDED.
5. TOPSOIL SHALL HAVE AT LEAST 6% BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATERIAL, AND NO GREATER THAN 20%. TOPSOIL SHALL HAVE NOT LESS THAN 20% FINE TEXTURED MATERIAL (PASSING THE NO. 200 SIEVE) AND NOT MORE THAN 15% CLAY.

TOPSOIL, SEED AND MULCH DETAIL
NOT TO SCALE



NOTES:
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2–3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS. MAXIMUM DRAINAGE AREA 1 ACRE

CATCH BASIN INLET PROTECTION DETAIL
NOT TO SCALE



NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

STORM LINE TRENCH DETAIL
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	12/31/24	PER PLANNING BOARD COMMENTS	CMB				
2	1/28/25	PER PLANNING BOARD COMMENTS	CMB				
3	2/25/25	PER PLANNING BOARD COMMENTS	CMB				
4	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

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SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926

CONSTRUCTION DETAILS

291 MAIN STREET–TELPHONE BUILDING

291 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954–36–893875

JOB #:	2024:034
DATE:	10/29/24
SCALE:	AS SHOWN
TITLE:	CD–1
SHEET:	8 OF 8

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LANC & TULLY
Engineering and Surveying, P.C.

April 3, 2025

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 291 Main Street
Tax No. 5954-36-893875
City of Beacon

Dear Mr. Gunn:

My office has received the following regarding the proposed mixed-use commercial and residential space at 291 Main Street:

- Response correspondence from Aryeh Siegel, Architect, dated March 25, 2025.
- Response correspondence from Hudson Land Design, dated March 25, 2025.
- Plan set titled "291 Main Street – Telephone Building", as prepared by Aryeh Siegel, Architect, and Hudson Land Design and consisting of the following drawings, with the latest revision date of March 25, 2025:
  - Sheet 1 of 8 – Site Plan
  - Sheet 2 of 8 – Existing Conditions Plan
  - Sheet 3 of 8 – Floor Plans
  - Sheet 4 of 8 – Building Elevations & Views
  - Sheet 5 of 8 – Grading & Utility Plan
  - Sheet 6 of 8 – Erosion & Sediment Control Plan
  - Sheet 7 of 8 – Landscape Plan
  - Sheet 8 of 8 – Construction Details

The proposed project entails the construction of a 2 and 3-story addition to the existing building located at 291 Main Street, on a 0.143-acre parcel in the Central Main Street (CMS) Zone and the Historic District and Landmark Overlay Zone. The first floor consists of 550± square feet of commercial space, whereas the second and third floors will consist of 3 residential apartments.

Based on our review of the above documents and plans, we would like to offer the following comments:

General Comments:

1. A construction cost estimate shall be prepared for all work proposed within the City's road right-of-way and submitted for review. ***Applicant's consultant notes that this will be provided with a future submission.***

2. A lighting plan shall be prepared for the project and made part of the overall site. ***Applicant's consultant notes that this will be provided with a future submission.***

Site Plan (Sheet 1 of 8):

1. The dimension for the width of the ADA access aisle should be masked so that it is legible. Consideration should also be given to lightening the hatch on the access aisle.

2. The required signage located in front of the ADA parking stall and the ADA access aisle shall be identified on the plan and noted as to what each sign is.

3. The snow removal note on Sheet 5 of 8 shall also be provided on Sheet 1 of 8.

4. The first parking stall on the site, located outside of the building, appears to be extremely tight and does not appear that it would allow the driver to open their door since it is directly against the building based upon the elevation views. The parking stall should be adjusted so as to allow the driver and passengers to be able to exit the vehicle. It is further noted that the roof leaders are encroaching into the parking stall in turn making this stall even tighter for a vehicle to maneuver.

Building Elevations & Views (Sheet 4 of 8):

1. "View 2" at the top of the sheet is not representative of what is proposed per the plan, as this does not reflect the parking stall located between the sidewalk and building. Submitted views shall be representative of what is to be constructed.

Grading & Utility Plan (Sheet 5 of 8):

1. The plans call out the landscaped island along South Brett Street to be used for snow storage. How is snow to be stored in this area given that this area will be planted with trees?

Landscape Plan (Sheet 7 of 8):

1. The plan notes the planting of Thuja Occidentalis (Northern White Cedar) in the 3-foot-wide landscape island between the sidewalk and parking lot. These trees have a spread of 3 to 4 feet, or wider. The trees planted within the landscaped island should not have a wide spared that would impede pedestrians on the sidewalk or impede the proposed parking stall. As represented on the plans, the trees are 6 foot wide and protrude into the sidewalk area and parking stall area.

2. The planting schedule notes that the Thuja Occidentalis would be supplied having a 3" caliper at breast height. What is the actual height of the tree at this caliper? These trees are usually sold by their height, not caliper.

This completes our review at this time. Further comments may be provided based on future submissions when more detailed plans are prepared for the project. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: Natalie Quinn, Planner
Jennifer Gray, Esq.
Bryan Murphy, Building Inspector

KARC
PLANNING CONSULTANTS, INC.

TO: John Gunn, Chair, and the City of Beacon Planning Board

FR: KARC Planning Consultants, Inc.

DATE: April 7, 2025

RE: 291 Main Street Application for Site Plan Approval, Telephone Building Beacon LLC c/o Aryeh Siegel Architect

---

I have reviewed the following materials regarding the proposed development at 291 Main Street:

- Comment response letter by Aryeh Siegel, dated March 25, 2025
- Comment response letter by Hudson Land Design, dated March 25, 2025
- Site Plan Set (8 sheets) prepared by Aryeh Siegel and Hudson Land Design, dated October 1, 2024, last revised March 25, 2025.

Project Description:

The applicant is proposing a three-story addition adjacent to the existing two-story historic Telephone Building located at 291 Main Street. The third story façade facing Main Street will be set back approximately 40 feet from the second-story facade. The addition will consist of 550 square feet of commercial on the ground floor with three residential apartments on the second and third floors. The project is located within the CMS district and the Historic District and Landmark Overlay Zone (HDLO).

Comments & Recommendations:

1. **Mechanical equipment** shall be concealed from public view by approved architectural or landscaping elements. The applicant has stated that the equipment will be located on the flat roof of the 3-story building section, with appropriate screening materials. A note should be added to the plans and a detail of the screening material provided. ***The applicant has indicated these details will be provided once building design is finalized.***

2. **Landscaped Area:** The proposed landscaping plan does not comply with Section 223-41.18(E)(12), which requires a minimum of 10% of the lot to be landscaped and a rear yard or courtyard provided. Per the Bulk Table provided on Sheet 1 of 8, only 8% of the lot is provided as landscaped area.

3. **Parking Standards:** No minimum number of off-street parking spaces are required within the CMS district due to the proximity of this district to municipal parking areas, public transportation, and pedestrian-oriented streetscapes. A parking maximum of 17 spaces is applied to the proposed project based on the calculation of 1 space per dwelling unit and 3

spaces per every 1,000 GFA of commercial space [588 SF of proposed retail + 3,650 SF of existing office]. A total of 4 parking spaces are currently proposed on site, one of which will be a dedicated ADA space. ***The applicant has indicated that existing commercial leases will be updated in the future to reflect a shared parking arrangement with the residential units, and that parking data for similarly sized projects on Main Street will be provided.***

4. **Parking Layout:** The three parking stalls beneath the addition range from 9 ft. to 11.28 ft. in width. The exterior parking stall is proposed to be 9ft in width, with columns on one side and landscaping on the other. It is recommended that the exterior stall width be increased to 10ft minimum to ensure passengers can navigate the columns and landscaping. It should be noted that if the applicant returns to a proposal with columns at each parking bay (Option 1 on Sheet 4), each stall shall not be less than 10 ft wide.

5. **Elevations:** Dimensions and material callouts will be required on the proposed elevations. ***The applicant has indicated that these will be provided once there is general agreement on the direction of the building design.***

6. **Refuse:** There is an interior trash room identified on the ground floor of the addition. The applicant should clarify the proposed logistics and exterior location for trash pickup.

7. **Building Height:** At the last Planning Board meeting it was suggested that the addition be reduced to one-story. The CMS district carries a minimum building height of two (2) stories pursuant to Section 223-41.18(E)(6).

8. **Historical Compatibility:** Section 223-41.18(J)(3) states "Proposed new buildings should be compatible with nearby historic-quality buildings along Main Street. References to the existing context should include scale, type and texture of materials, roof and cornice forms, spacing and proportion of windows and doors, signs, and street-front fixtures. Building exteriors in or directly adjoining the Historic District and Landmark Overlay sections of the CMS District shall reinforce historic patterns and neighboring buildings with an emphasis on continuity and compatibility, not contrast, but new construction may still be distinguishable in architectural details, most evident in window construction and interiors."

   Based on the section above and the comments issued by SHPO dated February 24, 2025, the proposed South Brett Street façade should be redesigned to more closely align with the scale, materials, and spacing and proportion of windows of the existing Telephone Building (Option 4 on Sheet 4) or the proposed Main Street addition façade (option not shown) to create a more cohesive and compatible approach for the entirety of the addition.

9. **Lighting Plan:** A lighting plan shall be submitted to ensure there is no glare or light trespassing onto adjacent residential properties. The applicant has indicated that a lighting plan is forthcoming.

If you have any questions or need additional information, please feel free to contact me.

Natalie Quinn
Beacon Planning Consultant

Cc: Cory Wirthmann, Acting Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer

From: Scott Lerman
To: Mercedes Nagy; Benjamin Swanson
Subject: Beekman/High Street and Telephone Building Proposed developments
Date: Tuesday, April 1, 2025 11:31:44 AM

Please copy to the Mayor, City Administrator, Council and Planning Board. Also include in the public record for the Planning Board and Council.

Thank you,

Scott Lerman

40 North Street

_____

Beekman/High Street Proposal

Both High Street's Victorian homes and the fully restored historic Telephone building are supposed to be protected as historic structures—but are under real threat of being compromised.

The Beekman/High Street developer says that the design of their buildings is in keeping with the extraordinary neighborhood of Victorians on High Street and that, in any case, trees will be planted to screen them. I don't agree.

Maybe I'm reading their planting plan the wrong way, but it seems like they are putting in a handful of 2 1/2" diameter trees (so about 12'-14' at planting) that grow about 24" in height a year. The main screening, Skyline® Honeylocust, drop their leaves early and leaf out late. So for much of Fall, Winter, and early Spring they will have no leaves and provide no real screening.

So when you look at the architect's renderings (below) of their proposed "screening" and "no screening", think of it as a seasonal view twenty years from now... Some screening in the Spring and Summer, virtually none the rest of the time.

IMO, the design has nothing to do with the High Street Victorians and it is absurdly out of scale to the neighborhood it actually sits within.

The Telephone Building

Adding an annex to the freestanding Telephone Building is no better. It simply should be rejected out of hand. Perhaps the developer could ask for a variance to build more in the back... Less profitable, but likely viable.

Action?

We need the Planning Board to reject this kind of damage to Beacon's defining historic buildings and neighborhoods. **IF the laws in place don't offer sufficient protection, the City Council needs to amend them now--before the foundations are poured and it is too late.** This is far more pressing than blocking drive-ins and storage units on Fishkill Avenue.

View From High Street (With Landscaping)

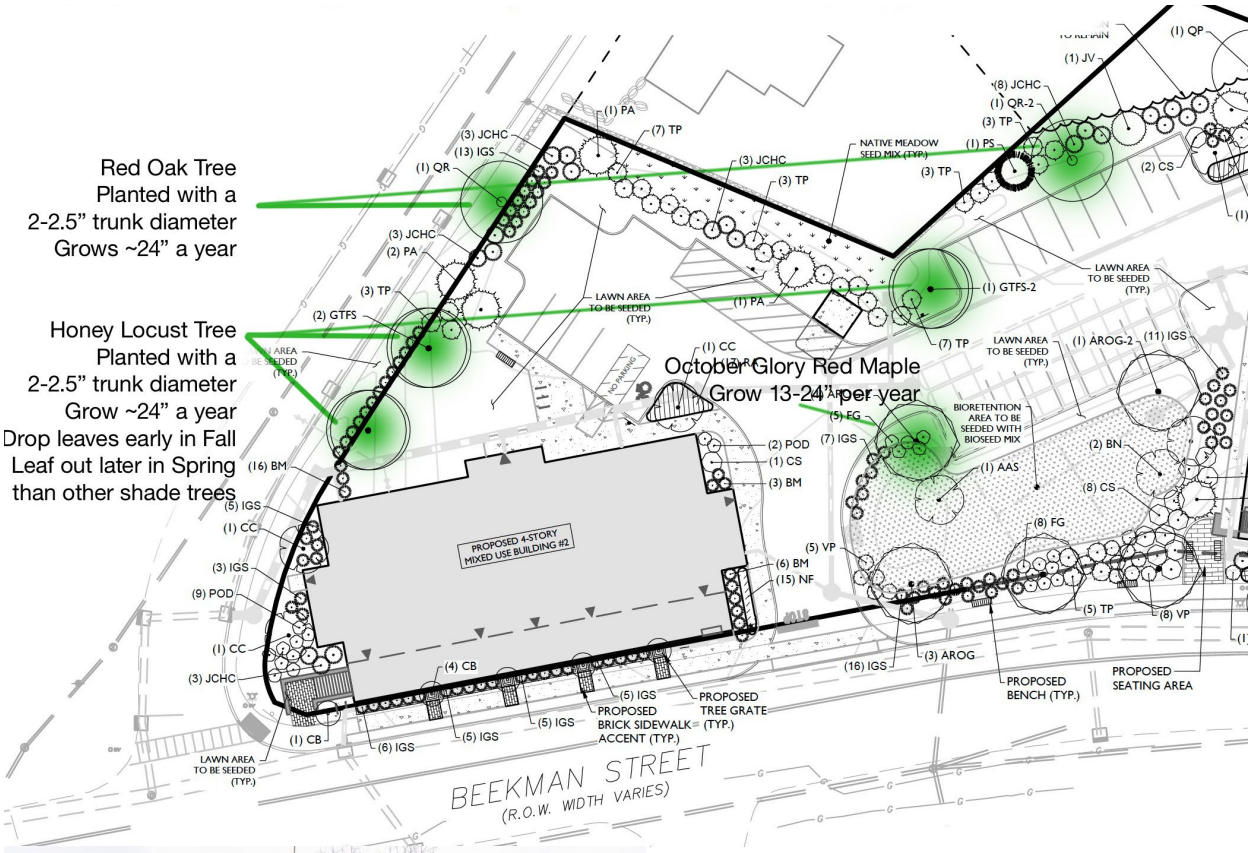
Architect:
Aryeh Siegel, Architect

View From High Street (Without Landscaping)

Red Oak Tree
Planted with a
2-2.5” trunk diameter
Grows ~24” a year

Honey Locust Tree
Planted with a
2-2.5” trunk diameter
Grow ~24” a year
Drop leaves early in Fall
Leaf out later in Spring
than other shade trees

October Glory Red Maple
Grow 13-24” per year



From: Rachel Rubin
To: Mercedes Perez
Subject: Building Project 291 Main St.
Date: Monday, March 17, 2025 11:03:26 AM

Dear Mr. Gunn,
My name is Rachel, and I'm a longtime resident of Beacon. Currently, I am a tenant in the Telephone Building located at 291 Main St.
The purpose of this email is to encourage the board to foster an environment where individuals, like the current owners of this building, who care about our town can continue to invest in its growth and improvement.
In my time working with the owners, I've witnessed firsthand their deep commitment to both the integrity of this building and the beauty that resides within its walls. We have spent countless hours collaborating on every possible enhancement for the space, with a shared goal of improving it while preserving its historic charm. This work is driven by a genuine passion for the building and a meticulous focus on even the smallest details that others might overlook—whether it's a freshly painted wall or a carefully placed plant.
I can say without hesitation that anything they embark on is done with an immense amount of care, dedication, and a desire to improve not just the building, but the entire neighborhood.
It is my hope that I can express my support for this project, its vision for the space, and that you and the board will provide your support as well.
Thank you so much for your time, consideration, and the dedication you put into the betterment of our hometown. Your hard work is truly appreciated.
Thank you,

Book Appointment: Zoom or In-Office
Tax Document: Upload
Bookkeeping/Payroll Document: Upload

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From: Neil Vaughn
To: Mercedes Perez
Subject: comment on proposed addition 291 Mai Street
Date: Monday, March 24, 2025 3:55:27 PM

Dear Zoning Secretary Perez,

Rarely have I officially expressed an opinion on any project proposals before the city. I have, however, certainly complained to friends and family about some of the "improvements" and construction projects completed in the city in recent years.

I moved my antique and estate auction company here in 1992 and have operated since then in two locations on Main Street. I travel through many areas throughout the state and am very fond of most architectural styles and appreciate building and restoring of such as I have personally been involved in many such projects.

I have often been impressed with architectural additions to existing historically significant properties in which modern elements are incorporated in a visually pleasing or dramatic manner. In addressing the proposed addition to 291 Main Street I find myself compelled to voice an opinion.

I believe that in the best case the building facade would be duplicated on the Main Street exposure to appear as an extension of the original building.

I am fully aware that the cost of doing so would certainly exceed the proposed "façade of the addition reflects elements and proportions of the existing building while offering a modern interpretation". I would hope a compromise or reconsideration is possible.

Neil Vaughn

After looking at the updated Telephone Building TB proposal (link and screenshot below) and comparing to "§ 134-7. Central Main Street District, site development plan or special permit design standards", there should be no doubt the proposal doesn't meet the standards.

Especially section B:

(1) Where possible, an addition to an historic structure should be placed towards the rear, or at least
recessed, so that the historic structure remains more prominent than the subsidiary addition.

--- The proposed additions almost completely blocks the TB from view coming from west Main St. and S Brett

(2) Any alteration or addition to an historic structure shall not damage or obscure the character-defining features of the architecture or site to the maximum extent possible.

--- All of the back windows are blocked. 2 of the 4 walls are over 90% blocked

(3) The height of any new building facades in the HDLO shall not conflict with the heights of
adjacent historic structures on adjoining HDLO parcels.

--- Even at two stories, the addition takes up too much space and the windows dwarf the historical windows on the TB

(4) Larger buildings or additions should incorporate significant breaks in the facades and rooflines, generally at intervals of no more than 35 feet.

--- Not enough room for a break

Section C.

(4) New buildings in the HDLO should have a top-floor cornice feature or eave and first-floor
architectural articulation, such as an architecturally emphasized entrance doorway or porch, to accent the central body of the building.

Please do not approve this updated proposal.

At the very least, the additions should be smaller, the design should be consistent, and views of the TB should not be blocked from any direction of public foot traffic.

Thank you

City of Beacon Planning Board Agenda
04/08/2025

Title:

Public hearing and continue review of applications for Amended Special Use Permit and Amended Site Plan, hotel and restaurant, 1113 Wolcott Avenue, submitted by Prophecy Theater, LLC.

ATTACHMENTS

1113 Wolcott PB 4.8.25 Aryeh Siegel Comment Response Letter_250325.pdf

1113 Wolcott PB 4.8.25 HLD Response Letter_2025-0325.pdf

1113 Wolcott PB 4.8.25 Project narrative_03_21_25.pdf

1113 Wolcott PB 4.8.25 Project comparison table.pdf

1113 Wolcott PB 4.8.25 Full EAF_2025-0325-COMPILED.pdf

1113 Wolcott PB 4.8.25 PROJECT PARKING OBSERVATION DATA.pdf

1113 Wolcott PB 4.8.25 Traffic Parking Mgmt Plan_3_17_25.pdf

1113 Wolcott PB 4.8.25 Site Plan Set_ Submission 3_RESTAURANT_250325.pdf

Lanc & Tully 1113 Wolcott Ave 04-03-25 review.pdf

KARC Review PB_1113 Wolcott Ave_2025.04.07.pdf

1113 Wolcott PB 4.8.25 PH public comment Wall.pdf

1113 Wolcott PB 4.8.25 PH public comment Riley.pdf

1113 Wolcott PB 4.8.25 PH public comment Brooks.pdf

ARYEH SIEGEL
ARCHITECT

John Gunn - Planning Board Chairman
City of Beacon
One Municipal Plaza
Beacon, NY 12508

Re: 1113 Wolcott Avenue, Beacon, New York
Site Plan Application – Responses to Comments

March 25, 2025

Dear Chairman Gunn and Members of the Planning Board,

Below please find our responses to the comments included in John Clarke Planning and Design's Memorandum, dated March 6, 2025. Please refer to Hudson Land Design's response letter regarding Lanc & Tully's letter dated March 6, 2025.

KARC Planning Consultants Comment Responses:

1. **Complete Site Plan Set:** The site plan set is numbered "Sheet # of 16", however sheets 4, 7, and16 are not included in the submission. It is possible that Sheet WZTC-1 from Colliers Engineering is intended to be Sheet 16. Missing sheets should be provided or the set renumbered prior to site plan approval.

   Response: The full site plan set has been submitted. Sheet 7 of 16 was not used in this submission but may be added later. If the sheet is not used, the set will be renumbered. The parking and loading table has been updated to note 36 parking spaces. The hours of operation have been coordinated between the table on Sheet 1 and the EAF.

2. **Parking Demand:** The Zoning Code requires that the project provide a minimum of 25 parking spaces up to a maximum of 52 parking spaces. A total of 39 parking spaces are proposed on-site, including 2 ADA accessible parking spaces. The applicant has therefore decreased the demand for parking via a reduction in hotel units and increased supply of parking onsite. While the revised demand calculations and Traffic & Parking Management Plan will be reviewed by the Board's Traffic Consultant, but we offer the following comment for consideration: It is anticipated that the project will have a peek parking demand of approximately 75 spaces and off-site public parking has been identified as the means for accommodating the excess 36 spaces. The applicant states that "each of the identified areas of public parking were observed during the anticipated peak periods to determine the parking availability in the area." A record of these observations should be provided to the Board for review. **Applicant cover letter stated that information was forthcoming from Colliers Engineering.**

   Response: Comment acknowledged. The parking observations document has been submitted for review.

84 Mason Circle | ajs@ajsarch.com | *Tel* 845 838 2490
Beacon, New York 12508 | www.ajsarch.com | *Fax* 845 838 2657

Lanc & Tully Comment Responses:

General Comments

1. The "Traffic & Parking Management Plan" shall be revised to reflect only 36 off-street parking spaces.

   Response: The Traffic & Parking Management plan has been revised to reflect 36 parking spaces.

2. Exhibit No. 2 in the Traffic & Parking Plan shall be revised so that it is clear and legible. This also applies to Exhibit No. 3 in the plan.

   Response: The Traffic & Parking Management plan has been revised for clarification and legibility.

3. Based upon the notes provided on Sheet 1 of 16, it appears that the applicant is no longer employing some of the required noise mitigation as listed in the previous approval resolution. Will the restaurant at any time have live entertainment, such as during weddings? If so, how does the applicant propose to limit noise emanating from the restaurant so as not to impact the neighbors if certain mitigation is not to be installed, such as the acoustical glass inserts?

   Response: The noise mitigation notes have been added back to Sheet 1 of 16. Acoustic glass inserts will be used for noise mitigation.

4. Although the intended use of the church is changing, we would recommend that the required post monitoring of traffic and parking management by the applicant's traffic engineer still be a condition of any revised approval resolution.

   Response: Comment acknowledged.

Please refer to Hudson Land Design's letter for responses to additional engineering comments.

Thank you. Please let me know if you have any questions.

Sincerely,

Aryeh Siegel
Aryeh Siegel, Architect

HUDSON
LAND DESIGN

Civil & Environmental Engineering Consultants
174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)
13 Chambers Street, Newburgh, NY 12550 (Satellite Office)
Phone: 845-440-6926 Fax: 845-440-6637
www.HudsonLandDesign.com

March 25, 2025

Hon. John Gunn, Chairman
City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

Re: 1113 Wolcott Avenue, Amended Site Plan and Special Use Permit
1113 Wolcott Avenue
Tax Parcel: 5954-26-651901, ±2.28 ac.
City of Beacon, NY

Dear Chairman Gunn and Members of the Planning Board:

On behalf of the Applicant for the above referenced project, Hudson Land Design (HLD) has updated the amended EAF for consultant review in response to Lanc & Tully's March 6, 2025 comment letter and KARC's March 6, 2025 comment memorandum. Below is a point-by-point response to the comments received.

Lanc & Tully March 6, 2025 Comment Letter

General Comments:

1. Colliers has revised the Traffic & Parking Management Plan to reflect 36 off-street parking spaces.
2. Exhibit No. 2 and No. 3 in the Traffic & Parking Plan have been updated by Colliers.
3. Additional noise mitigation measures have been added back to the plan. Aryeh Siegel has responded to this comment under separate cover.
4. Comment noted.

KARC March 6, 2025 Comment Memorandum

1. Comment noted. A complete engineering set is provided with this submission. Colliers WZTC-1 has bene renumbered to sheet 16 of 16.
   a. The parking table has been corrected on sheet 1.
   b. The EAF has been updated to match the hours of operation noted on Sheet 1 of 16.
2. The updated letter from Colliers is included with this submission.

The following materials are submitted in support of the project:

- Amended Site Plan Set Sheets 9 Through 16
- Updated EAF

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 845-440-6926.

Sincerely,

Michael A. Bodendorf, P.E.
Principal

cc: Prophecy Theater, LLC
Aryeh Siegel, AIA
Richard D'Andrea, P.E., PTOE
Daniel G. Koehler, P.E. (HLD file)

March 21, 2025

Prophecy Hall
1113 Wolcott Ave

Mr. John Gunn, Chairperson City of Beacon Planning Board City of Beacon City Hall
1 Municipal Plaza
Beacon, NY 12508
1113 Wolcott Avenue – Prophecy Theater LLC
City of Beacon, Dutchess County, New York

Dear Mr. Gunn & Planning Board Members,

We are writing to present a newly designed plan for the project on 1113 Wolcott Ave. which will decrease overall intensity of use and provide more onsite parking. The project will downsize the hotel component in the existing parsonage by eliminating 14 out of the 30 previously approved guest rooms. A stand-alone fine dining restaurant with a maximum occupancy of 150 will be located in the existing adjacent church on the same property.

The unique location of the project provides an ideal opportunity for the adaptable reuse of a large historic property to serve a pedestrian friendly market.

36 onsite parking spaces will be shared between the restaurant and hotel. **The 36 spaces are in range of 25 (min)-52(max) for combined parking allowance for the proposed use. Approximately 75 spaces may be needed for peak use (39 offsite spaces).**

Dining facilities in the church building will serve brunch and dinner to members of the public as well as breakfast and snacks for hotel guests to be served in the hotel building next door. The dining facilities may operate seven (7) days a week in support of the hotel operations and the general public with a maximum capacity of 150 seats. **The restaurant may operate Sunday – Thursday 7AM – 9PM and Friday/Saturday 7AM – 10:30 PM**. It is also anticipated that the restaurant may hold a limited number of wedding or other similar private events.

Peak hours are anticipated to be Fri, Sat 6PM- 9PM

The project is currently approved for a 150-capacity conference center/theater/event space with a bar/café/restaurant as an accessory to a 30-room hotel with 33 onsite parking spaces. The current occupancy of the church building remains at 336. This amended proposal is a substantial decrease in the intensity of use from the already approved project and provides an updated, more self-contained parking model.

Attached:

1)Updated TPMP, revised March 17, 2025
2)Site plan set, sheets 1-16
3)Parking observation data (prior record and new 2025 supplement observation)
4)Project comparison table/summary

PROJECT COMPARISON TABLE

1113 Wolcott	CHURCH	HOUSE	CAPACITY	MITIGATION	LATEST CLOSE TIME	PEAK HOURS
CURRENT USE	Traditional	single family	336	NONE	NONE	N/A
APPROVED USE	Acessory Theater & cafe	30 room hotel	150	NOISE	9:00 FRI-SAT	6-9 pm Fri-Sat
AMENDED USE	Stand alone Resturaunt	16 room hotel	150	NOISE	10:30 FRI-SAT	7-9 pm Fri-Sat

PARKING SUMMARY	REQUIREMENT	PEAK NEED	ON SITE	Excess Demand	Within 1000 ft
CURRENT	NONE	86	22	64	250
APPROVED USE	78	96	33	63	250
AMENDED USE	RANGE (25-52)	75	36	39	250

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: 1113 Wolcott Avenue - Application for Site Plan and Special Permit Approval		
Project Location (describe, and attach a general location map): 1113 Wolcott Avenue, Beacon NY 12508		
Brief Description of Proposed Action (include purpose or need): Application for Site Plan and Special Permit Approval proposing to redevelop the Premises, which includes an existing church, rectory and cemetery. The proposal calls for the rectory to be renovated with a proposed addition to allow for the construction of a 16 room, 2-1/2 story hotel building with an adjacent parking lot for 36 vehicles. The existing church building will be preserved with minimal changes to the exterior, and internally modified to serve as a restaurant with a maximum capacity of 150 occupants.		
Name of Applicant/Sponsor: Prophecy Theater, LLC - Gavin Hecker, President	Telephone: 215-913-3199 E-Mail: gavinhecker@gmail.com	
Address: 36 South Brett Street		
City/PO: Beacon	State: New York	Zip Code: 12508
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO: Beacon	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Site Plan & Special Use Approval LWRP Consistency & Certificate of App. - Planning Board	June 2021, Amended November 2021; Amended October 2024
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No	Interpretation & Building Permit - Building Department	November 2021; Amended October 2024
e. County agencies ☐Yes ☑No		
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	SHPO	June 2021
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☑Yes ☐No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes ☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
R1-40-One Family, Historic District and Landmark Overlay Zone

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Beacon City School District

b. What police or other public protection forces serve the project site?
City of Beacon Police Department

c. Which fire protection and emergency medical services serve the project site?
City of Beacon Fire Department

d. What parks serve the project site?
Scenic Hudson Long Dock Park, Pete and Toshi Seeger Riverfront Park, Polhill Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial

b. a. Total acreage of the site of the proposed action? 2.28 acres
b. Total acreage to be physically disturbed? 0.81 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 2.28 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
_____
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 18 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 1

ii. Dimensions (in feet) of largest proposed structure: 35 height; 26 width; and 48 length

iii. Approximate extent of building space to be heated or cooled: 3,750 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No
If Yes:

i. Total anticipated water usage/demand per day: 5,960 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑Yes ☐No
If Yes: Proposed water usage is based upon (16 hotel rooms X 110 gpd per room) + (150 cafe seats X 35 gpd X 0.8) = 5,960 gpd [*Per DCDBCH loading rates*]

- Name of district or service area: City of Beacon Water District
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No
If Yes:

i. Total anticipated liquid waste generation per day: 5,960 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
Sanitary wastewater, laundry, food preparation/cleaning wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: City of Beacon Wastewater Treatment Facility
- Name of district: City of Beacon Sewer
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑ Yes ☐ No
- Will a line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

N/A

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

None

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐ Yes ☑ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Stormwater currently flows toward adjacent properties to the west, and will continue to flow toward the west. An on site underground detention/infiltration system is proposed to mitigate runoff from additional impervious surfaces where currently there is no stormwater control.

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☑ Yes ☐ No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐ Yes ☑ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☑ Evening ☑Weekend ☑ Randomly between hours of 7 am to 11 pm.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): 2 truck trips per day using box delivery trucks

iii. Parking spaces: Existing 18-20 Proposed 36 Net increase/decrease +16

iv. Does the proposed action include any shared use parking? ☑Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: None

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☑Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☑Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: 450 kWh for the hotel and 500 kWh for the restaurant

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): Central Hudson Gas and Electric

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 am to 7 pm
- Saturday: 8 am to 6 pm
- Sunday: 9 am to 5 pm
- Holidays: Emergency only

ii. During Operations:

- Sunday - Thursday: 7 am to 9 pm
- Friday: 7 am to 10:30 pm
- Saturday: 7 am to 10:30 pm
- Holidays: 7 am to 9 pm

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Construction equipment on site during demolition and construction operations (8 am to 7 pm). During operation, the church building will continue to be used as it has in the past as a place of public assembly for music, school, food and other community events. Noise ordinances will be followed.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☑ Yes ☐ No

Describe: If the City permits, the existing cemetery will be cleaned up by removal of vegetation and some trees.

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Most site lighting will be building mounted; however, parking lighting will be LED dark sky compliant on 18' high poles.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☑ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: 50 tons per year (unit of time)
- Operation : 430 tons per year (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: Demolition and construction waste will be recycled as applicable.
- Operation: Solid waste will be separated from recycled materials

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: Local sanitation company
- Operation: Local sanitation company

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.53 ac.	0.60 ac.	+0.07 ac.
• Forested	0.89 ac.	0.89 ac.	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0.32 ac	0.32 ac.	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Lawn/Landscaped areas	0.54 ac.	0.47 ac.	-0.07 ac.

c. Is the project site presently used by members of the community for public recreation? ☑ Yes ☐ No

i. If Yes: explain: The existing church is rented out to the public for events. This will continue after the project is completed.

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

South Avenue Elementary School, Rose Hill Manor Day School

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑ Yes ☐ No

If yes, provide DEC ID number(s): V00299, V00096, C314112, V00293, 314069, 546031

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

V00299 - remediation complete % Site Management Plan in place; V00096 & C314112 remediation complete & Site Management Plan in place; V00293 remediation complete; 314069 has been redeveloped; 546031 ongoing

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 5.0 (average) feet

b. Are there bedrock outcroppings on the project site? ☑ Yes ☐ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? <5 %

c. Predominant soil type(s) present on project site:

Nassau-Cardigan complex, rolling	60.6 %
Udorthents, smoothed	39.4 %
	%

d. What is the average depth to the water table on the project site? Average: 7 (average) feet

e. Drainage status of project site soils:
☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 48.2 % of site
☑ 10-15%: 29.5 % of site
☑ 15% or greater: 22.3 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☑ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:

White Tail Deer	Native Birds	
Gray Squirrel	Chipmunk	
Racoon	Skunk	

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

If Yes:

i. Species and listing (endangered or threatened): Atlantic Sturgeon, Shortnose Sturgeon, Indiana Bat

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☑ Archaeological Site ☑ Historic Building or District

ii. Name: Reformed Dutch Church of Fishkill Landing

iii. Brief description of attributes on which listing is based:

Reformed Dutch Church is on the National Register of Historic Places. There is a cemetery located behind the church that dates back to the early 1800's.

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Hudson Highlands State Park (+/- 6.5 miles)

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Long Dock Park;Madame Brett Park; Fishkill Ridge; Mount Beacon; Beacon Point Park

iii. Distance between project and resource: 0.2 - 1.0 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Prophecy Theater, LLC (Gavin Hecker) Date 2/25/25

Signature Gavin Hecker Title Member/Owner/Manager

PRINT FORM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	V00299, V00096, C314112, V00293, 314069, 546031
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	No
E.2.h.iii [Surface Water Features]	No
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes

E.2.o. [Endangered or Threatened Species - Name]	Atlantic Sturgeon, Shortnose Sturgeon, Indiana Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Reformed Dutch Church of Fishkill Landing
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Colliers Engineering & Design

Table No. 4
Area Parking Observations Summary

Time of Day	Observed Available Parking Spaces						
	Tompkins Lot	Municipal Plaza	Beekman St. On-Street	Cross Lot	Cliff Lot	Beacon Center Lot	Beacon Metro North Train Station
Total Spaces	68	76	70±	18	19	92	---
Friday September 24, 2021							
1:00 PM	Not Observed This Day	Not Observed This Day	65	3	1	8	Not Specifically Counted
2:00 PM			65	3	1	7	
3:00 PM			65	3	-	6	
4:00 PM			65	2	2	10	
5:00 PM			66	-	1	12	
6:00 PM			67	1	-	15	
7:00 PM			70	2	-	18	
8:00 PM			70	5	3	22	
Saturday September 25, 2021							
1:00 PM	Not Observed This Day	Not Observed This Day	70	1	3	25	Not Specifically Counted
2:00 PM			70	-	3	20	
3:00 PM			70	1	2	21	
4:00 PM			70	1	1	19	
5:00 PM			70	-	-	16	
6:00 PM			70	-	-	18	
7:00 PM			70	-	-	20	
8:00 PM			70	1	1	19	
Friday November 5, 2021							
1:00 PM	65	Not Specifically Counted	64	2	2	5	Not Specifically Counted
2:00 PM	65		64	2	3	8	
3:00 PM	65		64	1	2	9	
4:00 PM	66		65	-	1	7	
5:00 PM	68	55	65	-	1	10	
6:00 PM	68	73	67	1	1	13	
7:00 PM	66	76	69	-	2	19	
8:00 PM	66	76	70	3	2	21	
Saturday November 6, 2021							
1:00 PM	65	76	70	2	3	22	Not Specifically Counted
2:00 PM	65	76	70	1	1	20	
3:00 PM	65	76	70	1	-	23	
4:00 PM	66	76	70	-	-	25	
5:00 PM	65	76	70	-	-	19	
6:00 PM	66	76	70	-	2	18	
7:00 PM	66	76	70	-	1	17	
8:00 PM	67	76	70	1	1	19	
Friday January 21, 2021							
1:00 PM	-	20	-	-	-	-	Not Specifically Counted
2:00 PM	-	23	-	-	-	-	
3:00 PM	-	21	-	-	-	-	
4:00 PM	-	26	-	-	-	-	
5:00 PM	-	36	-	-	-	-	

Project No. 21004333A
February 27, 2023
Appendix A: Supplemental Parking Analysis

Colliers Engineering & Design

Supplemental Parking Observation Data

Date/Time	Tompkins Lot	Municipal Plaza	Beekman Street On-Street
Thursday, November 10, 2022, 8:45 AM	5	N/A	N/A
Thursday, November 10, 2022, 6:10 PM	7	N/A	N/A
Friday, November 11, 2022, 8:45 AM	8	N/A	N/A
Friday, November 11, 2022, 6:10 PM	3	28	8
Saturday, November 12, 2022, 3:00 PM	5	29	12
Saturday, November 12, 2022, 7:10 PM	12	28	5
Sunday, November 13, 2022, 1:00 PM	6	29	3
Sunday, November 13, 2022, 5:00 PM	10	26	3
Monday, November 14, 2022, 10:00 AM	5	N/A	N/A
Monday, November 14, 2022, 3:40 PM	5	N/A	10
Tuesday, November 15, 2022, 9:00 AM	4	N/A	N/A
Thursday, November 17, 2022, 8:45 AM	4	N/A	N/A
Friday, November 18, 2022, 6:00 PM	5	29	9
Saturday, November 19, 2022, 3:10 PM	5	28	6
Saturday, November 19, 2022, 6:45 PM	4	27	7
Sunday, November 20, 2022, 4:45 PM	10	25	3

A review of this data indicates that parking utilization of the Tompkins Lot and Beekman Street On-Street parking has increased slightly since these lots were previously observed during the 2021 data collection. The Municipal Plaza lot parking observations indicate that the utilization of this parking lot outside of typical City Hall hours of operation is generally consistent with what was observed during the 2021 data collection. It should be noted that the majority of the parking observed in the Municipal Plaza Lot was related to reserved police and official use parking that has been discontinued from the available parking in this lot as previously indicated in the February 21, 2022, Traffic parking Study. Utilizing this supplemental data, the previous data collected for Friday and Saturday was adjusted was adjusted for the Tompkins Lot and Beekman Street On-Street parking areas. No adjustment was made for the Municipal Plaza Lot for Friday with a small adjustment applied for Saturday. The resulting Friday and Saturday adjusted parking availability for these three parking locations are identified in the table below. It should also be noted that the parking availability in the Tompkins Lot has also been adjusted for the future proposed availability of 52 public parking spaces in that lot after completion of the Tompkins Firehouse improvements.

MARCH 2025 SUPLEMENTAL OBSERVATION DATA (count of parked cars)

	Tomkins Lot	Municipal Plaza	Beekman St
TOTAL SPACES	**53**	**133**	**70**
Date/Time	**cars parked**	**cars parked**	**cars parked**
Sat March 1, 2025 7:15 PM	11	N/A	N/A
Sat March 1, 2025 8:00 PM	11	N/A	N/A
Sat March 1, 2025, 9:00 PM	10	N/A	N/A
Thrus March 13, 2025, 8:15 PM	8	20	N/A
Fri, March 14, 2025, 6:30 PM	9	22	7
Sat March 15, 2025, 7:15 PM	10	20	2
Sun March 16, 2025, 4:00 PM	9	21	1
Fri March 21, 2025, 7:00 PM	10	20	N/A
Sat March 22, 2025, 1:30 PM	12	25	8
Sat March 22, 2025, 6:30 PM	9	21	4
Sat March 22, 2025, 8:00 PM	11	20	N/A
Sun March 23, 2025, 1:00 PM	9	22	N/A

Traffic & Parking Management Plan

August 8, 2023

Revised March 17, 2025

1113 Wolcott Avenue

City of Beacon
Dutchess County, New York

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Introduction and Background

The 1113 Wolcott Avenue Project ("the Project") is a proposed redevelopment of the property located at 1113 Wolcott Avenue (NYS Route 9D) in the City of Beacon, Dutchess County, New York. The Project previously proposed to redevelop the former rectory building and church, which was most recently occupied by the Reformed Church of Beacon, with a 30-room hotel contained in an expanded rectory building along with accessory conference center and dining facility (café/restaurant/bar) uses within the church building. Modifications to the Project are now proposed that will reduce the hotel to 16 rooms and change the conference center into a fine dining restaurant. In addition, as previously planned, the existing cemetery located behind (west of) the church and rectory building will be consistently maintained and is proposed to be further restored after development of the hotel and restaurant.

Under the Modified Project proposal, the hotel and restaurant will operate 365 days per year. Dining facilities in the church building will serve brunch and dinner to members of the public as well as breakfast and snacks for hotel guests, to be served in the hotel building next door. The restaurant is expected to operate seven (7) days a week in support of the hotel operations and general public with a maximum capacity of 150 seats. The restaurant may operate Sunday–Thursday 7AM – 9PM and Friday/Saturday 7AM – 10:30 PM.

The Project had previously proposed to hold up to 150 person events within the conference center that could include various cultural, educational, or professional programs, including weddings, conferences, art exhibitions, performances, lectures, seminars, retreats, youth activities, and workshops. The modified project proposes to hold a limited number of weddings or similar type private events within the restaurant, but at a much lower frequency than the events that were previously proposed.

Access to the Project is proposed via an existing access connection from Wolcott Avenue that will provide access to the main parking area as an entry only driveway. A second, exit only driveway is also proposed at the northern property line of the Site, which will be a reestablishment of the existing driveway in this location. A total of 36 off-street parking spaces, inclusive of two (2) ADA accessible parking spaces, will be provided primarily for use by both hotel guests and restaurant patrons. The site is considered code compliant with this level of provided parking spaces. The existing Site is also provided a third driveway connection to Wolcott Avenue south of the existing church building. This existing southern driveway is proposed to be eliminated as part of the Project.

It is anticipated that the Project will have a peak parking demand of approximately 75 parking spaces. In order to meet this parking demand, the Applicant proposes to utilize both the onsite parking and nearby public parking as discussed further herein.

Based on the above and associated with the review of the Project by the City of Beacon Planning Board and its consultants, this Traffic & Parking Management Plan ("TPMP") has been prepared in order to provide an efficient and ongoing method of managing traffic flows, on-site and off-site parking, and other transportation related aspects of the Project. The purpose of this plan is to allow input and coordination with other agencies, including the New York State Department of Transportation (NYSDOT) and the City of Beacon and allow for ongoing revisions to this plan upon implementation of the Project.

On-Site Parking and Circulation

The Project site will provide a total of 36 parking spaces. These spaces will be used for parking by both Hotel guests and restaurant patrons. However, during peak times, typically expected to occur on Friday and Saturday evenings parking demand may exceed the number of available parking spaces on the site. As indicated previously, the Main (southerly) access driveway will be a one-way entry only driveway with the northerly driveway a one-way exit only driveway.

ADA Accessible Parking

The Project site will provide a total of two (2) ADA accessible parking spaces included within the 36 on-site parking spaces. These ADA parking spaces will be available for use by hotel and restaurant guests.

Off-Site Parking

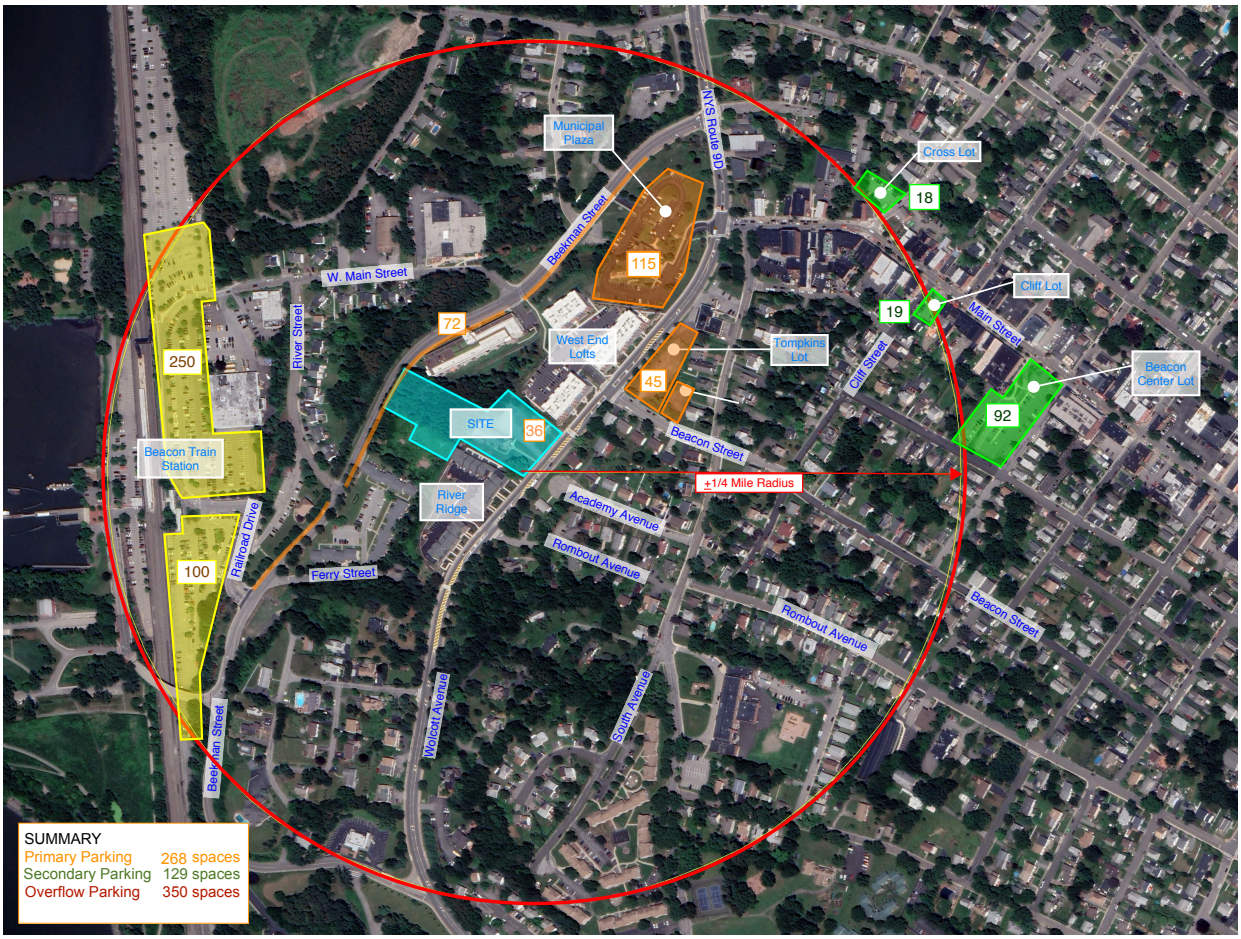
Off-Site Parking Locations

While the Project proposes to provide 36 off-street parking spaces, nearby public parking is readily available to accommodate any overflow. The closest public parking in the area includes the below listed locations in order of proximity to the Project:

- **Tomkins Firehouse Parking Lot** – 53 Parking Spaces (8 reserved for the firehouse employees)
- **City of Beacon Municipal Plaza (City Hall) Parking Lots** – 133 Parking Spaces (18 reserved for employees and police)
- **Beekman Street Metro North on-street parking between Railroad Drive and Wolcott Avenue** - 70± on-street metered parking spaces
  This parking is operated by LAZ parking, parking can be paid electronically via LAZgo Parking App.
- **Cross Lot** – 18 Parking Spaces (24 Hour Free Parking – City Lot)
- **Cliff Lot** – 19 Parking Spaces (24 Hour Free Parking – City Lot)
- **Beacon Center Lot** – 92 Parking Spaces (24 Hour Free Parking – City Lot)
- **Beacon Metro North Train Station Parking lots metered parking spaces** *This parking is operated by LAZ parking, parking can be paid electronically via LAZgo Parking App.*

Exhibit No. 2 below identifies the locations of parking within 1/3 of mile of the Project location.

Exhibit No. 2 – Off-Site Parking Locations



The Tomkins Firehouse and City of Beacon Municipal Plaza parking lots are within 500 and 1,000 ft. respectively of the Project Site making these the most accessible public parking for the Project. Access to the Beekman Street on-street metered parking spaces will be provided via the existing public connections between Wolcott Avenue and Beekman Street. These pathways will also provide access to parking available at the Beacon Metro north station, however these metered spaces are more remote, in excess of 2,000 ft. from the Project site, and less likely to be utilized. The Cross Street lot, Cliff Lot and Beacon Center Lot are more remote parking locations located within 1,500 – 1,900 ft. from the Project site.

In total there are approximately 250 total parking spaces within 2,000 ft. walking distance of the Project site, which can be utilized to accommodate the parking needs of the Project under peak conditions. Each of the identified areas of public parking were observed during the anticipated peak periods to determine the parking availability in the area. These observations indicated that there is sufficient public parking within the Tomkins Lot, the Municipal Plaza Lot and along Beekman Street to accommodate the parking needs of the project during peak times.

Employee Parking

The Project anticipates having 1-4 employees on-site to service the hotel including front desk staff, housekeeping staff and a maintenance staff employee who will provide maintenance to the hotel and restaurant. The restaurant will typically have an additional 10 employees including restaurant staff. Parking for these employees will largely be accommodated by off-site public parking during peak times.

Shuttles

The limited weddings that may occur at the restaurant may allow for the use of shuttle buses for attendees arriving from other locations. The use of shuttles will be strongly encouraged by the Project owners. Information on available area shuttle bus companies will be provided to wedding coordinators at the start of the planning process to assist in this effort. The use of shuttles for attendees arriving from other consolidated locations will reduce the overall parking needs during weddings.

Pedestrian and Bicycle Access

Access to the Project by pedestrians, including patrons parking off-site, is provided in several manners. There are existing sidewalks along all area roadways surrounding the Project that can be utilized to access various parking areas or pedestrians arriving from other destinations. There are existing signalized crosswalks of Wolcott Avenue both at its signalized intersections with Beekman Street and Main Street providing signalized pedestrian access from the east side of Wolcott Avenue to the west side where the Project site is located. In addition, there are existing crosswalks crossing Wolcott Avenue that are supplemented with pedestrian activated Rectangular Rapid Flashing Beacon (RRFB) signs located at the northern property line of the Project site as well as at a location approximately 150 ft. south of Rombout Avenue at approximately the southern property line of the River Ridge property. Any patrons utilizing the public parking available at the Tompkins lot on the east side of Wolcott Avenue would be likely to use the RRFB crosswalk at the northern property line of the Project site to cross Wolcott Avenue. Similarly, any pedestrians coming from the Main Street area would be likely to utilize either the signalized pedestrian crossing at the Wolcott Avenue/Main Street intersection or the RRFB crosswalk at the northern property line to cross to the west side of the roadway. The RRFB crosswalk at the northern property line is a highly visible crosswalk located at the crest of a vertical curve along Route 9D and with excellent sightlines in all directions.

Pedestrians arriving from the Beacon Train Station or utilizing parking along Beekman Street would also be provided several opportunities to access the Project site. There are existing public pedestrian pathway connections between Beekman Street and Wolcott Avenue through Ferry Street and the West End Lofts development as well as through the Municipal Plaza that could be utilized. Exhibit No. 3 below provides a map of the existing and future pedestrian accommodations in the vicinity of the Project.

Bicycle racks are also proposed to be provided on the Site for any patrons that may arrive via bicycle.

Exhibit No. 3 – Existing Pedestrian Pathways

Emergency Vehicle Access

In the event of an emergency at the Site, on-site personnel will be responsible to ensure the site parking area and driveway are clear of all vehicles that are not in a designated parking space, to ensure adequate access to the Site for emergency vehicles.

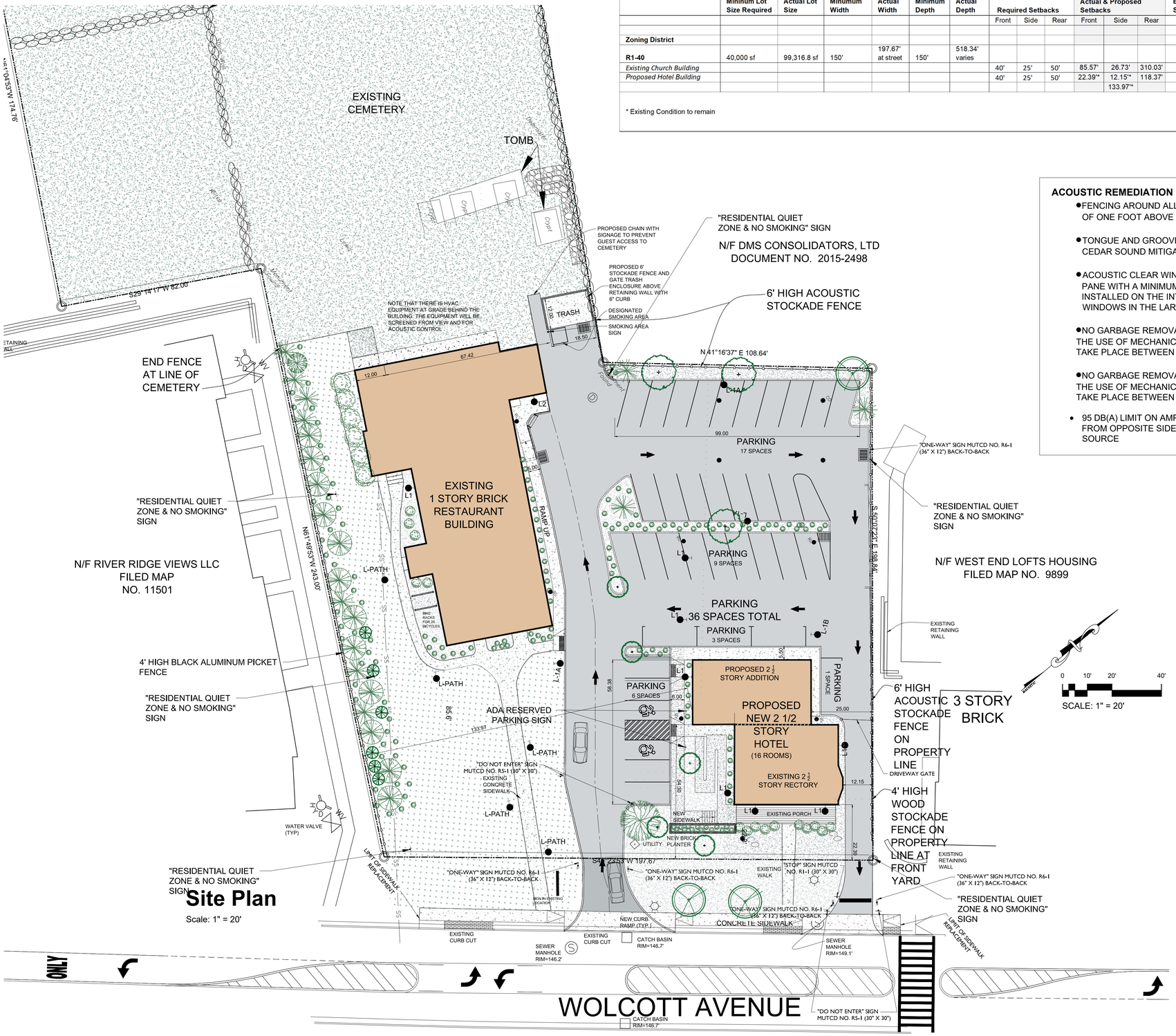
Ongoing Monitoring and Coordination

This TPMP is meant to be a living document that can regularly be referred to and updated by the operators of the Project. This document provides the basis for managing and directing traffic and parking for the facility. This document may be updated and modified based on the future needs of the Project and in coordination with the City of Beacon to best serve the Project and the City as traffic and parking conditions in the vicinity of the Project may change over time. In order to ensure that the TPMP is achieving the goals set forth herein the Applicant agrees to conduct a monitoring of the peak conditions within the first 9-months after initial occupancy of the event space. The City's Traffic Consultant will also be invited to take part in the monitoring on the date of the specific events to conduct their own independent observations of the event conditions. The requirements of the TPMP and the associated monitoring will be worked into the Project approvals with the City of Beacon.

Bulk Zoning Regulations Table

	Mininum Lot Size Required	Actual Lot Size	Minumum Width	Actual Width	Minimum Depth	Actual Depth	Required Setbacks			Actual & Proposed Setbacks			Minimum Distance Between Buildings Same Lot	Allowable Building Height	Proposed Building Height	Maximum Building Coverage	Proposed Building Coverage
							Front	Side	Rear	Front	Side	Rear					
Zoning District																	
R1-40	40,000 sf	99,316.8 sf	150'	197.67' at street	150'	518.34' varies										15%	1%
Existing Church Building							40'	25'	50'	85.57'	26.73'	310.03'	NA	2.5 stories / 35'	Existing		
Proposed Hotel Building							40'	25'	50'	22.39'*	12.15'*	118.37'	NA	2.5 stories / 35'	2.5 Stories / 35'		
											133.97'*						

* Existing Condition to remain



Site Plan

Scale: 1" = 20'

Location Map

Scale: 1" = 400'

ACOUSTIC REMEDIATION MEASURES

- FENCING AROUND ALL HVAC UNITS WILL BE A MINIMUM OF ONE FOOT ABOVE EXHAUST
- TONGUE AND GROOVE CONSTRUCTION OF ROUGH CEDAR SOUND MITIGATING FENCE (NORTH FENCE)
- ACOUSTIC CLEAR WINDOW INSERTS (MINIMUM OF ONE PANE WITH A MINIMUM STC RATING OF 10) TO BE INSTALLED ON THE INTERIOR SIDE OF STAINED GLASS WINDOWS IN THE LARGE SANCTUARY SPACE
- NO GARBAGE REMOVAL OR LOADING/UNLOADING WITH THE USE OF MECHANICAL/POWERED EQUIPMENT WILL TAKE PLACE BETWEEN 9:00 P.M. - 7:00 A.M
- NO GARBAGE REMOVAL OR LOADING/UNLOADING WITH THE USE OF MECHANICAL/POWERED EQUIPMENT WILL TAKE PLACE BETWEEN 9:00 P.M. - 7:00 A.M
- 95 DB(A) LIMIT ON AMPLIFIED SOUND AS MEASURED FROM OPPOSITE SIDE OF ROOM FROM AMPLIFIED SOURCE

Zoning Summary

Zoning District:	R1-40
Tax Map No.:	5954-26-651901
Lot Area:	2.28 Acres
Building Footprint:	8,830 square feet (existing church building + proposed hotel building)
Historical Overlay District:	Yes
Parking Overlay District:	No
Existing Use:	Church / Rectory
Proposed Use:	Hotel, Restaurant

Parking & Loading

Use & Parking Requirements	Proposed Area / Count	Parking Requirement
Lodging		
0.5 space per guest room (minimum) 1.5 space per guest room (maximum)	16 Guest Rooms	8 parking spaces minimum 24 parking spaces maximum
Commercial (Restaurant)		
3 spaces per 1,000 sf GFA (minimum) 5 spaces per 1,000 sf GFA (maximum)	5,475 gsf	17 parking spaces minimum 28 parking spaces maximum
Total Required		**25 parking spaces minimum** **52 parking spaces maximum**
Total Provided		**39 parking spaces** See Notes Below

Notes:

1. 36 parking spaces are provided on site.
2. Maximum proposed occupancy for the Restaurant is 150 people.
   a. Note that the maximum occupancy is only expected to occur Friday and Saturday evenings from 6pm to 8pm, and Sunday brunch from 10am to 3pm.
3. Hours of Operation:
   a. The Restaurant shall operate between 7am and 9pm Sunday through Thursday & Friday/Saturday between 7am and 10:30pm, 7 days a week, 365 days a year.
   b. The Hotel shall operate 24 hours per day, 7 days a week, 365 days a year.
4. The Applicant and project shall comply with the final approved version of the Traffic and Parking Management Plan, as prepared by Colliers Engineering & Design.

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	01/28/25	REVISED PER PLANNING BOARD COMMENTS	AJS
2	02/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS
3	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

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Sheet 3 of 16	Existing Conditions & Demolition Plan
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Sheet 5 of 16	Hotel Building Plans & Elevations
Sheet 6 of 16	Restaurant Plans
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Sheet 9 of 16	Grading & Utility Plan
Sheet 10 of 16	Erosion & Sediment Control Plan
Sheet 11 of 16	Vehicle Tracking Plan
Sheet 12 of 16	Site Construction Details
Sheet 13 of 16	Stormwater Construction Details
Sheet 14 of 16	Water & Sewer Construction Details
Sheet 15 of 16	Erosion & Sediment Control Details
Sheet 16 of 16	Work Zone Traffic Control Plan

Special Use Permit Amendment

Sheet 1 of 16 - Site Plan

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
Robert Oswald
175 WALSH ROAD PO BOX 1
LAGRANGEVILLE, NEW YORK 12540

Landscape Designer:
Landscape Restorations
7 Creek Drive
Beacon, New York 12508

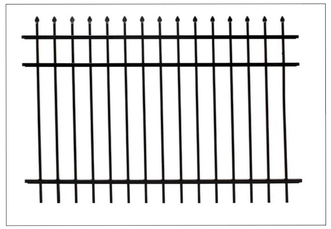
1113 Wolcott Avenue
Beacon, New York
Scale: 1" = 20'
October 29, 2024

5.85" X 9.75" SIGN MOUNTED ON WOOD POST SET INTO CONCRETE FOOTING. TOP OF SIGN TO BE 3'-0" HIGH. COLOR: BRONZE

18" X 18" SIGN MOUNTED ON WOOD POST BELOW EACH RESIDENTIAL QUIET ZONE SIGN. COLOR: GREEN WITH WHITE LETTERING TO MATCH QUIET ZONE SIGN

18" X 18" SIGN MOUNTED ON WOOD POST SET INTO CONCRETE FOOTING. TOP OF SIGN TO BE 3'-0" HIGH. COLOR: GREEN WITH WHITE LETTERING

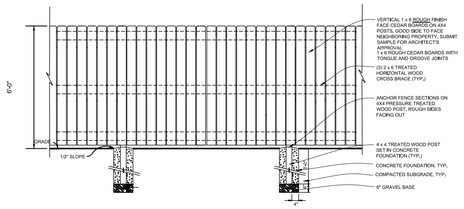
Signage



4' HIGH ALUMINUM PICKET FENCE. COLOR: BLACK.

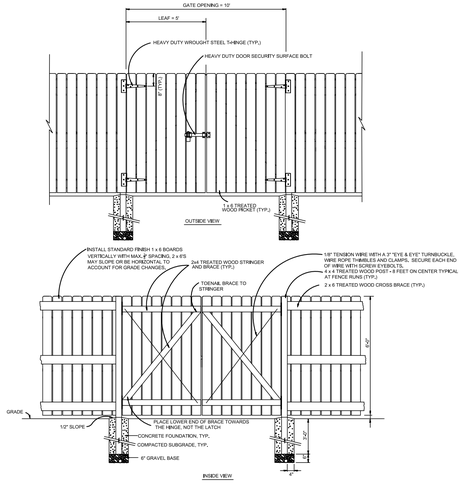
COORDINATE FENCE INSTALLATION DETAIL IN CONCRETE FOOTINGS WITH SPECIFIC FENCE MANUFACTURER ACCORDING TO THEIR SPECIFICATIONS

Metal Picket Fence



ACOUSTIC WOOD FENCE DETAILS

Acoustic Fence Details



Stockade Fence Details

Site Plan

Scale: 1" = 30'

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
2	02/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS
3	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

Special Use Permit Amendment

Sheet 2 of 16 - Full Site Plan

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

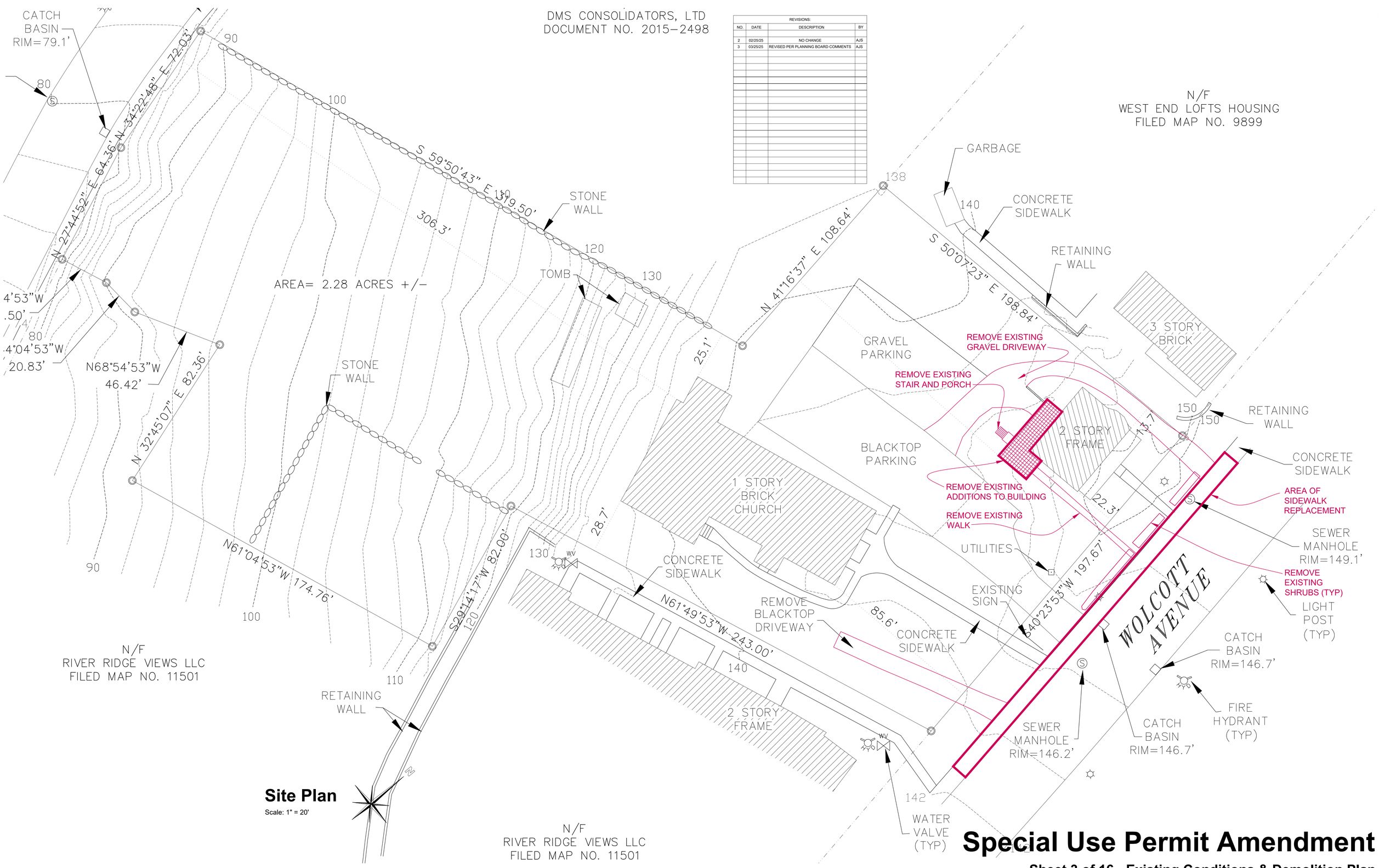
Surveyor:
Robert Oswald
175 WALSH ROAD PO BOX 1
LAGRANGEVILLE, NEW YORK 12540

Landscape Designer:
Landscape Restorations
7 Creek Drive
Beacon, New York 12508

1113 Wolcott Avenue
Beacon, New York
Scale: 1" = 30'
October 29, 2024

DMS CONSOLIDATORS, LTD
DOCUMENT NO. 2015-2498

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
2	02/25/25	NO CHANGE	AJS
3	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS



Site Plan

Scale: 1" = 20'

Special Use Permit Amendment

Sheet 3 of 16 - Existing Conditions & Demolition Plan

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
Robert Oswald
175 WALSH ROAD PO BOX 1
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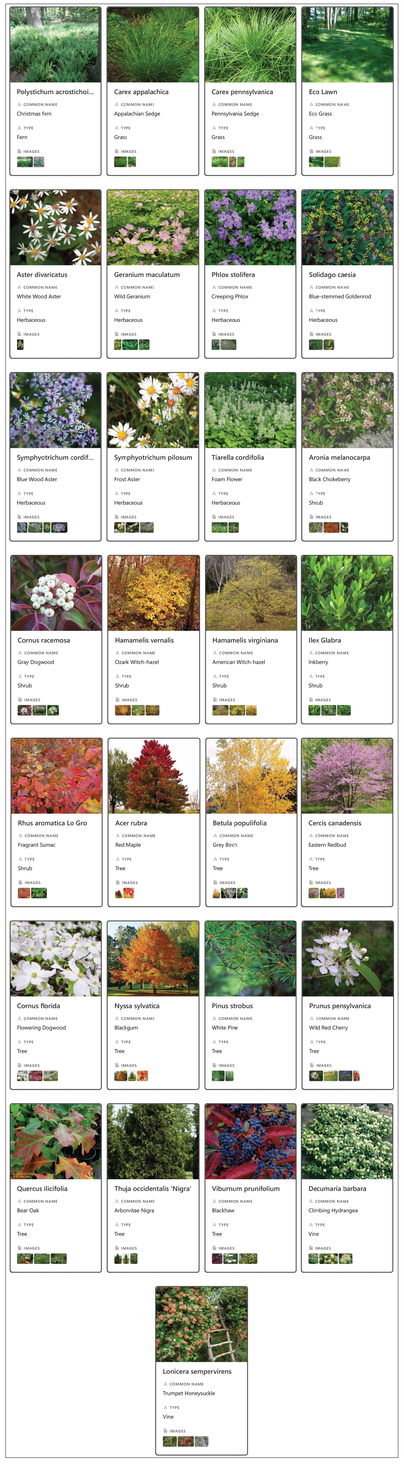
Scale: 1" = 20'
October 29, 2024

Planting Schedule

Symbol	Quantity	Type	Common Name	Botanical Name	Size	Planting Time
T-Ar	4	Tree	Red Maple	Acer rubrum	7'-8'	Spring/Fall
T-Bp	3	Tree	Grey Birch	Betula populifolia	7'-8'	Spring/Fall
T-Cc	2	Tree	Eastern Redbud	Cercis canadensis	6'-7'	Spring/Fall
T-Cf	1	Tree	Flowering Dogwood	Cornus florida	6'-7'	Spring/Fall
T-Ns	2	Tree	Blackgum	Nyssa sylvatica	7'-8'	Spring/Fall
T-Ps	12	Tree	White Pine	Pinus strobus	7'-8'	Spring/Fall
T-Pp	1	Tree	Wild Red Cherry	Prunus pensylvanica	7'-8'	Spring/Fall
T-Qi	2	Tree	Bear Oak	Quercus illicifolia	7'-8'	Spring/Fall
T-To	14	Tree	Arborvitae 'Nigra'	Thuja occidentalis 'Nigra'	7'-8'	Spring/Fall
S-Am	5	Shrub	Black Chokeberry	Aronia melanocarpa	3 Gallon	Spring/Fall
S-Cr	7	Shrub	Gray Dogwood American	Cornus racemosa	3 Gallon	Spring/Fall
S-Hve	15	Shrub	Ozark Witch-hazel	Hamamelis vernalis	3 Gallon	Spring/Fall
S-Hv	9	Shrub	Witch-hazel	Hamamelis virginiana	3 Gallon	Spring/Fall
S-Ig	64	Shrub	Inkberry	Ilex glabra	3 Gallon	Spring/Fall
S-Ra	33	Shrub	Low-grow Sumac	Rhus aromatica	3 Gallon	Spring/Fall
H-S/F/W	15	Fern	Christmas Fern	Polystichum arostichoides	1 Gallon	Spring, Summer or Fall
H-S/F/W	20	Herbaceous	White Wood Aster	Aster divaricatus	Plugs	Spring, Summer or Fall
H-S/F/W	20	Herbaceous	Wild Geranium	Geranium maculatum	Plugs	Spring, Summer or Fall
H-S/F/W	20	Herbaceous	Creeping Phlox	Phlox stolifera	Plugs	Spring, Summer or Fall
H-S/F/W	20	Herbaceous	Blue-stemmed Goldenrod	Solidago caesia	Plugs	Spring, Summer or Fall
H-S/F/W	20	Herbaceous	Blue Wood Aster	Symphyotrichum cordifolia	Plugs	Spring, Summer or Fall
H-S/F/W	20	Herbaceous	Frost Aster	Symphyotrichum pilosum	Plugs	Spring, Summer or Fall
V-Db	25	Vine	Climbing Hydrangea	Decumaria barbara	Plugs	Spring, Summer or Fall
V-Ls	25	Vine	Trumpet Honeysuckle	Lonicera sempervirens	Plugs	Spring, Summer or Fall
G-Ca	100	Grass	Appalachian Sedge	Carex appalachica	Plugs	Spring, Summer or Fall
G-Cp	100	Grass	Pennsylvania Sedge	Carex pennsylvanica	Plugs	Spring, Summer or Fall
G-Eg	10	Grass	Eco Grass	Eco Lawn	Seed	Spring/Fall

Illustrated Plant List



Planting and Landscape Notes

1. Contractors shall enter and exit site through pre-approved routes only.
2. No non-native plant species shall be introduced onto the site. All species shall be indigenous to the northeast region of North America.
3. If a straight specie is specified, no cultivars will be accepted without prior approval of designer.
4. No plants will be accepted that display mechanical injury, disease or specie irregularities.
5. Soil shall be prepped by removing all construction debris, loose roots and stones larger than 3".
6. All plants must be labeled when delivered to site.
7. Areas to be planted shall be marked and labeled by designer.
8. All plant locations and orientations in the field require approval from designer and owner prior to installation.
9. Test tree-pit for drainage before planting. Do not plant tree in pit if water is still evident after one hour. Contact site engineer or landscape designer if this condition is encountered.
10. All tree-planting to be coordinated with as-built utilities. Trees to be located minimum of 5' from active lines.
11. All trees shall be ball and burlap unless otherwise specified on Plant List.
12. Each new tree hole tree shall be twice the width of the rootball.
13. Burlap, wire, cords, ties and any wrapping materials must be removed from all rootballs before backfilling.
14. Plant all plants so top of rootball is slightly above surrounding soil(small and large plants)
15. No planting shall be done in muddy, rainy or frozen conditions.
16. All plants calling for 'Overflowing" in the notes shall not be accepted by designer if plants are thin.
17. If planting is delayed for more than 3 hours after delivery, set plants in shade. Protect from weather and mechanical damage. Keep roots moist and cover with mulch.
18. Contractors shall leave site neat and orderly during course of project, and store materials and equipment in owner-approved locations away from all trees and plants. Store all unplanted plant material away from damaging sun.
19. If site conditions conflict with intended design, contractor shall alert Owner and designer.
20. No substitutions are to be made without the written or verbal consent of landscape designer and owner.
21. Create a size-specific water-well around each plant, 3' from center of tree, and mulch from the outside. Do not mulch crown.
22. Water thoroughly after planting each plant. Water schedule to be determined.
23. Spray for deer if planted in fall. Sometimes bucks mark their territory with their antlers.
24. Keep planting areas weed-free until plant is established.
25. Eco Lawn seeding shall be implemented by contractor familiar with this specie mix and with the process and approved by designer. This is not the same as casting contractor grass seed.
26. Pervious/Permeable Pavers and associated grass seeding shall be installed by contractor with experience in this process. This process requires establishment maintenance, in order to succeed.
27. Bermed areas shall be built with designer directing construction.
28. Street tree and surrounding tree-pit shall be installed by contractor experienced with these materials and approved by designer.
29. All plants require regular watering for the first two seasons to succeed.

POLE MOUNTED LIGHT (L1A)

KING LUMINAIRE "K-595 ARISTOCRAT" POLE MOUNTED 3000K LED FIXTURE. LOW GLARE CUTOFF SHIELD, DARK SKY COMPLIANT. CRI 80-100 RANGE. COLOR: BLACK. PHOTOCELL CONTROL. OR APPROVED EQUAL. MOUNTING HEIGHT ON BLACK ALUMINUM POLE = 12 FEET

WALL MOUNTED HOUSE LIGHT (L1)

HUBBARDTON FORGE WALL MOUNTED FIXTURE. MODEL "Hood Outdoor Dark Sky Wall Sconce", 60W, 2700K. CRI 80-100 RANGE. COLOR: COASTAL BLACK, OR APPROVED EQUAL. MOUNTING HEIGHT = 7 FEET. NOTE THAT THE MANUFACTURER DOES NOT PROVIDE FOOTCANDLE DIAGRAMS FOR THIS FIXTURE

WALL MOUNTED HOUSE LIGHT (L2)

MATCH EXISTING BUILDING MOUNTED LIGHTS ON CHURCH. PROVIDE CUSTOM FABRICATED LIGHTING IF A SUITABLE MATCH CANNOT BE FOUND FROM AVAILABLE MANUFACTURERS.

PATH LIGHT (L-PATH)

VOLT Estate Colonial Brass Path Light. 25 watt, 2700K, COLOR: BRASS, OR APPROVED EQUAL. DARK SKY COMPLIANT. CRI 80-100 RANGE.30" HIGH POST MOUNTED. NOTE THAT THE MANUFACTURER DOES NOT PROVIDE FOOTCANDLE DIAGRAMS FOR THIS FIXTURE

NOTE: ALL EXTERIOR LIGHTING ON THE SITE SHALL BE DIRECTED AND/OR SHIELDED SO AS NOT TO CAUSE ANY OBJECTIONABLE GLARE OBSERVABLE FROM NEIGHBORING STREETS AND PROPERTIES. THE SOURCE (BULBS) OF SUCH LIGHTING SHALL NOT BE VISIBLE FROM SAID NEIGHBORING STREETS AND PROPERTIES. PHOTOMETRIC DIAGRAMS ARE SHOWN WITH SHIELDED CONDITIONS.

POLE MOUNTED LIGHT (L1B)

GREENSHINE "L30" ARM MOUNTED 3000K LED FIXTURE. LOW GLARE CUTOFF SHIELD, DARK SKY COMPLIANT. CRI 80-100 RANGE. COLOR: BLACK. PHOTOCELL CONTROL. OR APPROVED EQUAL. MOUNTING HEIGHT ON BUILDING = 10 FEET

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
2	02/25/25	NO CHANGE	AJS
3	03/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

Special Use Permit Amendment

Sheet 4 of 16 - Landscape and Lighting Plan

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
Robert Oswald
175 WALSH ROAD PO BOX 1
LAGRANGEVILLE, NEW YORK 12540

Landscape Designer:
Landscape Restorations
7 Creek Drive
Beacon, New York 12508

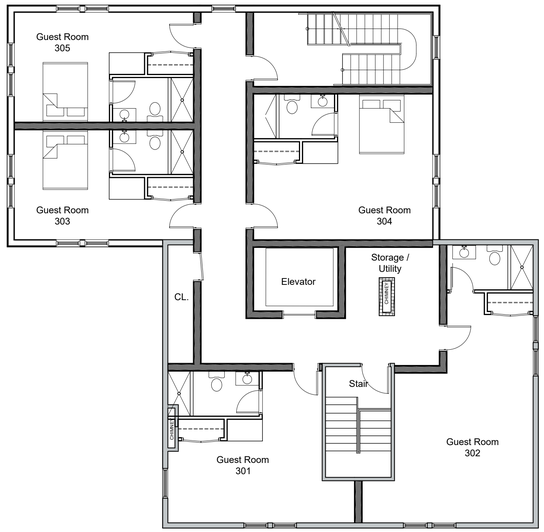
1113 Wolcott Avenue
Beacon, New York
Scale: 1" = 30'
October 29, 2024

View 4

View 3

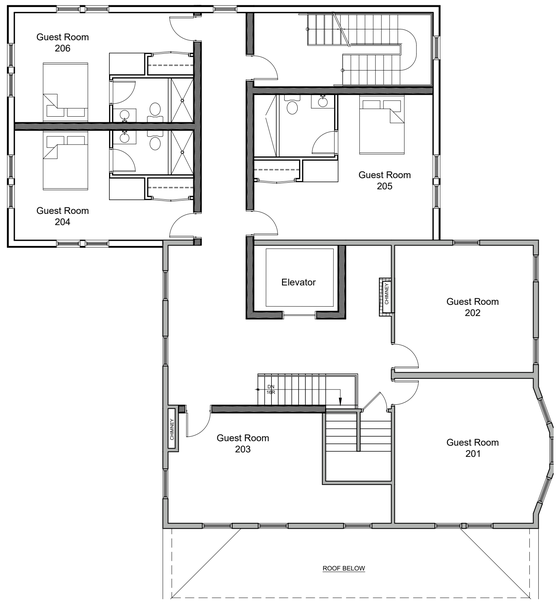
View 2

View 1



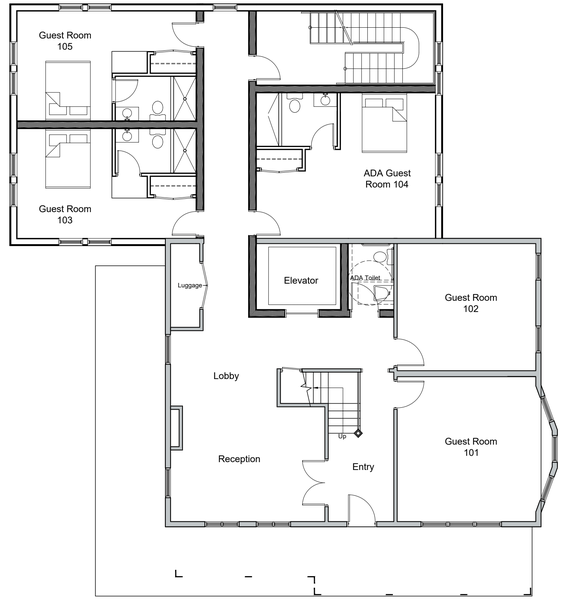
3rd Floor Plan: Hotel

Scale: $\frac{1}{8}$" = 1'-0"



2nd Floor Plan: Hotel

Scale: $\frac{1}{8}$" = 1'-0"



1st Floor Plan: Hotel

Scale: $\frac{1}{8}$" = 1'-0"

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Special Use Permit Amendment

Sheet 5 of 16 - Hotel Plans & Elevations

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
Robert Oswald
175 WALSH ROAD PO BOX 1
LAGRANGEVILLE, NEW YORK 12540

Landscape Designer:
Landscape Restorations
7 Creek Drive
Beacon, New York 12508

1113 Wolcott Avenue
Beacon, New York
Scale: AS NOTED
October 29, 2024

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
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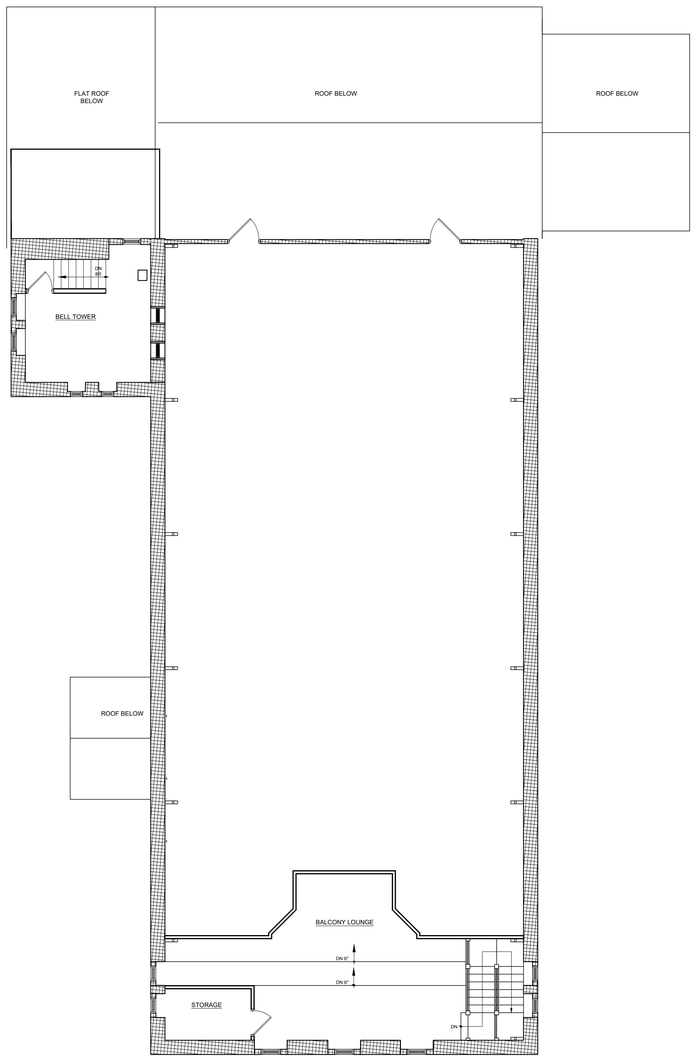
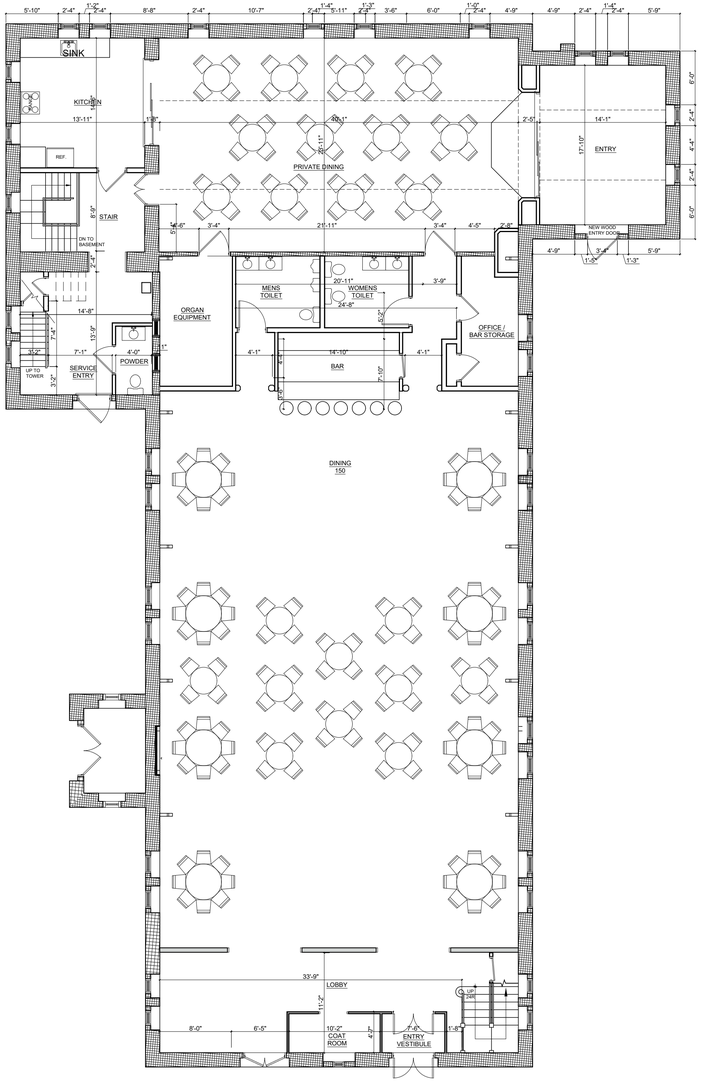


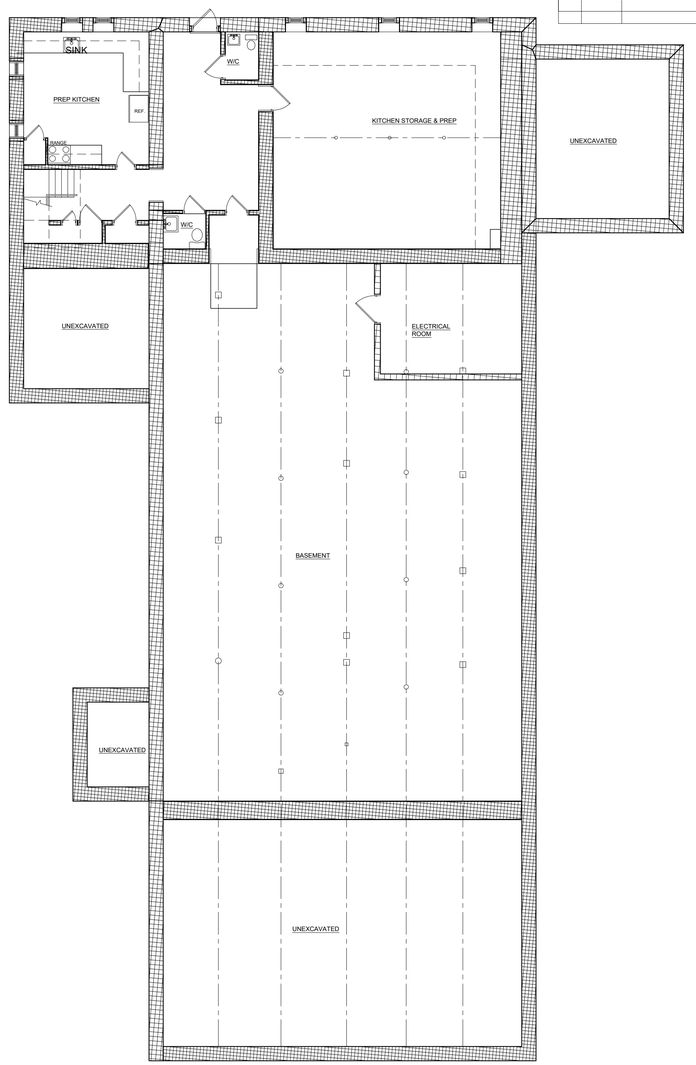
Upper Level Plan: Restaurant

Scale: 1/8" = 1'-0"



Main Level Plan: Restaurant

Scale: 1/8" = 1'-0"



Basement Plan: Restaurant

Scale: 1/8" = 1'-0"

Special Use Permit Amendment

Sheet 6 of 16 - Floor Plans

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
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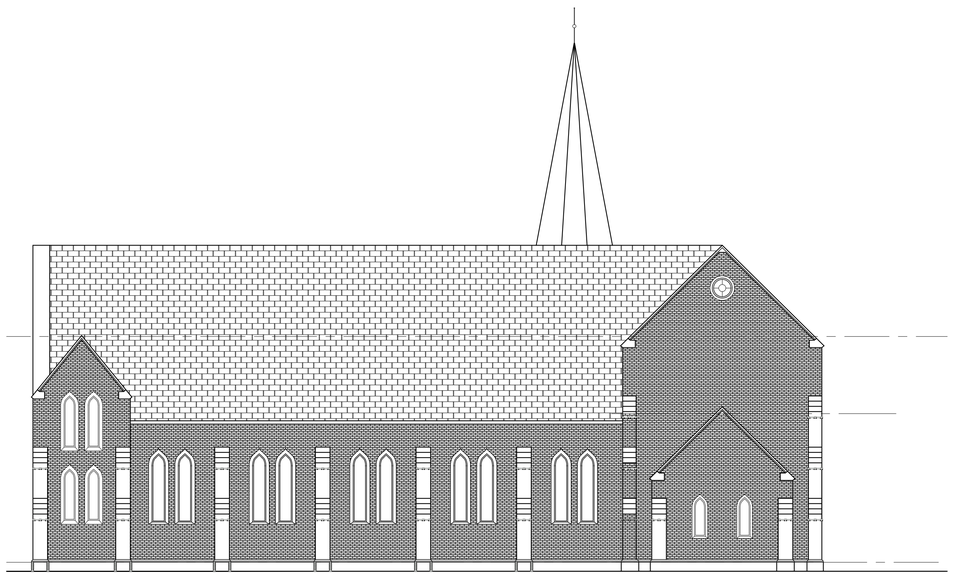
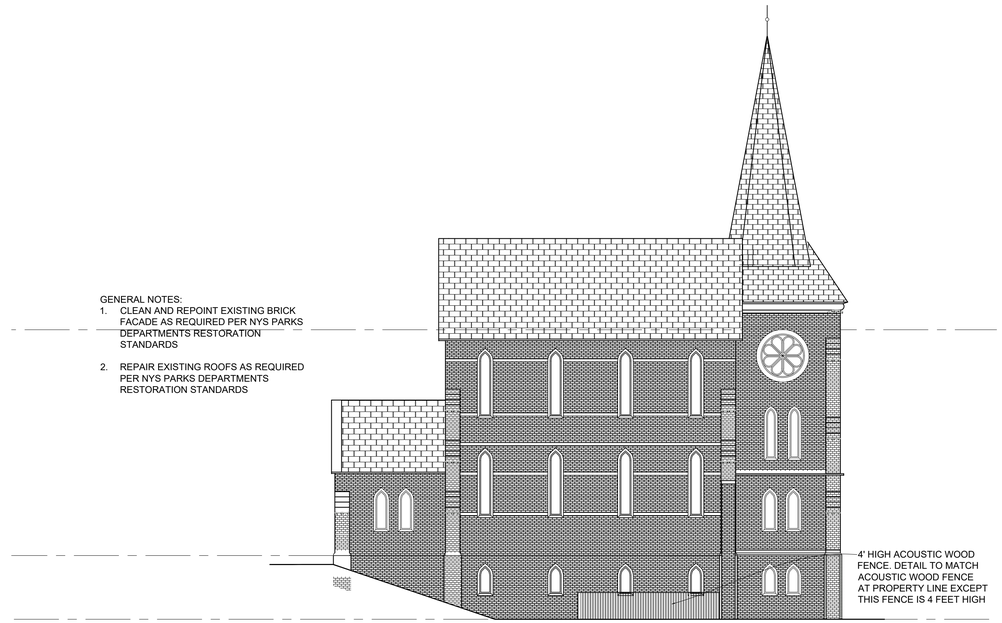


Elevation: Restaurant Building - North

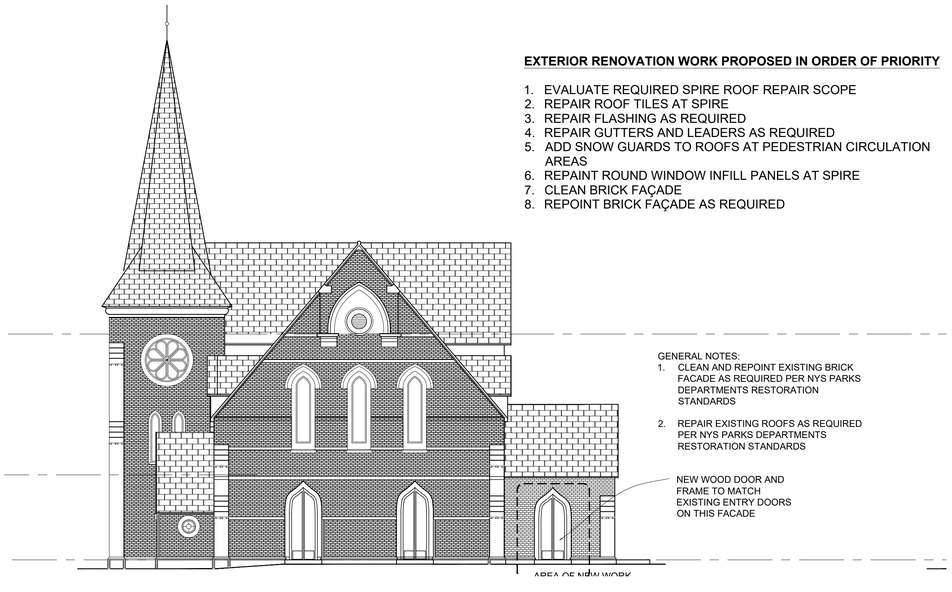
Scale: $\frac{3}{32}$" = 1'-0"



ELEVATION: WEST

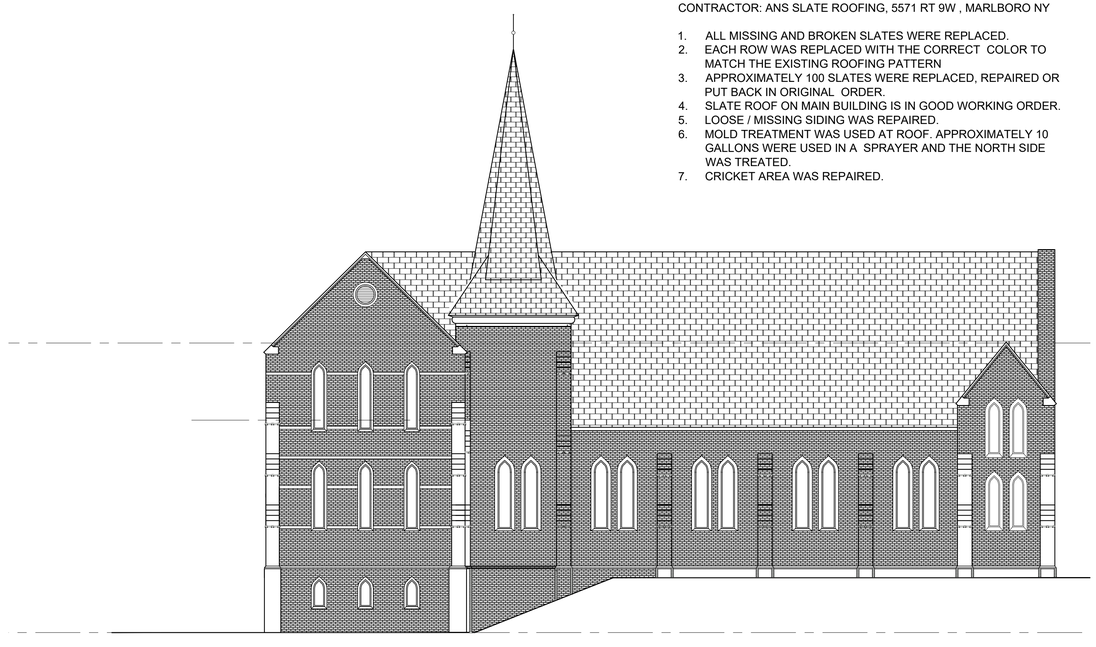
Elevation: Restaurant Building - West

Scale: $\frac{3}{32}$" = 1'-0"



Elevation: Restaurant Building - East

Scale: $\frac{3}{32}$" = 1'-0"



Elevation: Restaurant Building - South

Scale: $\frac{3}{32}$" = 1'-0"

Special Use Permit Amendment

Sheet 8 of 16 - Existing Building (Restaurant) Elevations

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
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October 29, 2024

CEMETERY RESTORATION & MAINTENANCE NOTES:

APPLICANT WILL CLEAN UP AND MAINTAIN THE CEMETERY PROPERTY AS IT CURRENTLY EXISTS BY REGULARLY DOING THE FOLLOWING: (THIS WORK HAS ALREADY BEGUN, AND WILL CONTINUE).

1. CLEARING DEBRIS, DEAD TREES, GARBAGE AND FALLEN BRANCHES; AND
2. PERFORM REGULAR MAINTENANCE AND UPKEEP OF THE CEMETERY GROUNDS TO CONTROL GARBAGE AND VEGETATION GROWTH.

APPLICANT WILL MAKE BEST EFFORTS TO PURSUE OTHER RESTORATION EFFORTS THAT REQUIRE OUTSIDE CONSULTATION AND ADDITIONAL FUNDING, INCLUDING THE FOLLOWING:

3. WORK WITH A SPECIALIST IN NATIVE AND/OR HISTORIC VEGETATION RESTORATION TO CONDUCT AN EXISTING VEGETATION ASSESSMENT TO RECOMMEND HOW TO ADDRESS AND MANAGE THE SITE.
4. ASSESS HEADSTONES AND MONUMENTS TO DOCUMENT THE DESCRIPTIONS AND EXISTING CONDITIONS ON THE PREMISES.
5. AS APPROPRIATE, CONDUCT FURTHER LANDSCAPE RESTORATION PRIOR TO OR AFTER HEADSTONE RESTORATION. WORK WITH THE CEMETERY RESTORATION EXPERTS RECOMMENDED BY THE BEACON HISTORICAL SOCIETY OR PRESERVATION GROUP IN CONNECTION RE WITH ANY HEADSTONE REPAIRS, AND ANY WORK TO RESTORE AND PLACE ANY HEADSTONES IN THEIR ORIGINAL LOCATION AS NECESSARY AND APPROPRIATE.

ROCK REMOVAL NOTES:

1. ROCK REMOVAL (IF NECESSARY) SHALL BE ACCOMPLISHED BY MECHANICAL METHODS AS MUCH AS POSSIBLE AND SHALL ONLY BE PERMITTED BETWEEN 8:00AM AND 5:00 PM ON ANY DAY WHICH ROCK REMOVAL IS PERMITTED.
2. ACCEPTABLE ROCK REMOVAL METHODS ARE RIPPING, HYDRAULIC HAMMER OR DRILLING HOLES WITH USE OF EXPANSIVE TOOLS AND/OR WEDGES.
3. IF MECHANICAL METHODS BECOME INEFFECTIVE DUE TO HARD ROCK, AND IT IS DETERMINED THAT BLASTING IS REQUIRED, IT SHALL BE BROUGHT TO THE ATTENTION OF THE CITY OF BEACON BUILDING DEPARTMENT. NO BLASTING SHALL COMMENCE UNTIL A BLASTING PROTOCOL IS SUBMITTED TO THE CITY OF BEACON BUILDING DEPARTMENT FOR REVIEW AND APPROVAL.
4. BLASTING PROTOCOL SHALL BE IN ACCORDANCE WITH §111 OF THE CITY OF BEACON CODE.

UNDERGROUND DETENTION INFILTRATION NOTES:

1. INFILTRATION TESTING SHALL BE CONDUCTED AT THE PROPOSED BOTTOM OF THE UNDERGROUND DETENTION SYSTEM DURING CONSTRUCTION TO VERIFY IF THE EXISTING SUB SOILS HAVE INFILTRATIVE CAPACITY. THE INFILTRATION RESULTS SHALL BE PROVIDED TO THE CITY OF BEACON BUILDING DEPARTMENT. THE RESULTS OF THE TESTING SHALL ALSO BE PROVIDED TO THE CITY ENGINEER AND ANY INFILTRATION TESTING CONDUCTED SHALL BE COORDINATED WITH THE CITY ENGINEER FOR JOINT TESTING.

SNOW REMOVAL AND STORAGE NOTES:

1. SNOW SHALL BE REMOVED WITHIN 8 HOURS AFTER A SNOW EVENT.
2. THE PEDESTRIAN PATH THROUGH THE CEMETERY SHALL BE MAINTAINED ND KEPT CLEAR OF SNOW AND ICE DURING THE WINTER MONTHS.

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING STREAM
- EXISTING WETLAND BOUNDARY
- 100' WETLAND BUFFER
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- OHW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- SS EXISTING SEWER SERVICE LINE
- S EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- W EXISTING WATER LINE
- WS EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- EXISTING WATER SHUT OFF VALVE
- EXISTING WATER VALVE
- EXISTING STORM WATER LINE
- EXISTING ROOF LEADER
- EXISTING CATCH BASIN
- 250 PROPOSED MAJOR CONTOUR
- 252 PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- S PROPOSED SEWER LINE
- SS PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- ST PROPOSED STORM WATER LINE
- RL PROPOSED ROOF LEADER LINE
- PROPOSED ROOF LEADER
- W PROPOSED WATER LINE
- WS PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE

INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES

CATCH BASINS AND PIPING:

ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION, AND DEBRIS, AND REMOVE AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED. ASSOCIATED PIPING SHALL BE INSPECTED ANNUALLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NEEDED.

RIP RAP OUTLET PROTECTION AND FLOW DIFFUSER:

RIP RAP OUTLET PROTECTION SHALL BE INSPECTED AFTER EACH STORM AND CLEARED OF ANY SEDIMENT AND/OR DEBRIS. IF THE RIP RAP STONE BECOMES SILTED WITH SEDIMENT, IT MAY REQUIRE REMOVAL OF THE RIP RAP STONE SO THAT THE SEDIMENT CAN BE REMOVED PROPERLY. REPLACE RIP RAP STONE AS REQUIRED.

UNDERGROUND DETENTION:

BEST MANAGEMENT PRACTICE FOR MAINTAINING OPTIMUM PERFORMANCE OF THE UNDERGROUND INFILTRATION SYSTEM IS A COMBINATION OF THE FOLLOWING:

1. PROPER MAINTENANCE OF THE INLET ROW,
2. REMOVAL OF ACCUMULATED SEDIMENT FROM THE UPSTREAM CATCH BASIN AND STORMWATER COLLECTION SYSTEM, AND
3. MAINTAINING THE SITE IMPERVIOUS AND LAWN AREAS IN A STABLE CONDITION. ANY FUTURE LAND DISTURBANCE ASSOCIATED WITH MAINTENANCE OF THE BUILDINGS AND GROUNDS SHALL CAREFULLY PREPARE AN EROSION AND SEDIMENT CONTROL PLAN TO LIMIT TRANSPORT OF SEDIMENT LADEN RUNOFF TO THE COLLECTION SYSTEM.

THE CULTEC SYSTEM SHALL BE EQUIPPED WITH AN INSPECTION PORT LOCATED ON THE INLET ROW. THE INSPECTION PORT IS A CIRCULAR CAST BOX PLACED IN A RECTANGULAR CONCRETE COLLAR. WHEN THE LID IS REMOVED, A 6–INCH PIPE WITH A SCREW–IN PLUG WILL BE EXPOSED. REMOVE THE PLUG. THIS WILL PROVIDE ACCESS TO THE CULTEC CHAMBER ROW BELOW. FROM THE SURFACE, THROUGH THIS ACCESS, THE SEDIMENT MAY BE MEASURED AT THIS LOCATION. A STADIA ROD MAY BE USED TO MEASURE THE DEPTH OF SEDIMENT IF ANY IN THIS ROW. ADDITIONALLY, CCTV INSPECTION OF THIS ROW CAN BE DEPLOYED THROUGH THIS ACCESS PORT TO DETERMINE IF ANY SEDIMENT HAS ACCUMULATED. IF THE DEPTH OF SEDIMENT IS IN EXCESS OF 3 INCHES, THEN THIS ROW SHOULD BE CLEANED WITH HIGH PRESSURE WATER THROUGH A CULVERT CLEANING NOZZLE. THIS WOULD BE CARRIED OUT THROUGH THE UPSTREAM STRUCTURES. THE INLET ROW IS PLACED ON A POLYETHYLENE LINER TO PREVENT SCOURING OF THE WASHED STONE BENEATH THIS ROW. THIS FACILITATES THE FLUSHING OF THIS ROW WITH HIGH PRESSURE WATER THROUGH A CULVERT CLEANING NOZZLE. THE NOZZLE IS DEPLOYED THROUGH THE UPSTREAM STRUCTURE AND EXTENDED TO THE END OF THE ROW. THE WATER IS TURNED ON AND THE INLET ROW IS BACK–FLUSHED INTO THE STRUCTURE WHERE IT IS REMOVED BY USING A VACUUM TRUCK.

MAINTENANCE GUIDELINES:

1. THE OWNER SHALL KEEP A MAINTENANCE LOG WHICH SHALL INCLUDE DETAILS OF ANY EVENTS WHICH WOULD HAVE AN EFFECT ON THE SYSTEM'S OPERATIONAL CAPACITY.
2. THE OPERATION AND MAINTENANCE PROCEDURE SHALL BE REVIEWED PERIODICALLY AND CHANGED TO MEET SITE CONDITIONS.
3. MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED BY QUALIFIED WORKERS AND SHALL FOLLOW APPLICABLE OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS.
4. DEBRIS REMOVED FROM THE STORMWATER MANAGEMENT SYSTEM SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.

SUGGESTED MAINTENANCE SCHEDULE (TO BE RE–ASSESSED BY THE OPERATOR PERIODICALLY BASED ON SITE CONDITIONS AND EVALUATION OF SYSTEM FUNCTIONALITY):

1. YEAR 1: INSPECT INLETS AND OUTLETS MONTHLY FOR ANY CLOGGING, AND REMOVE DEBRIS AS MAY BE NECESSARY. INSPECT THE SURFACE AROUND THE CHAMBERS FOR ANY DEPRESSIONS.
2. YEAR 2 AND AFTER: INSPECT INLETS AND OUTLETS EVERY SPRING AND FALL FOR ANY CLOGGING, AND REMOVE DEBRIS AS MAY BE NECESSARY. INSPECT THE SURFACE AROUND THE CHAMBERS FOR ANY DEPRESSIONS.
3. 2 YEARS AFTER COMMISSIONING: INSPECT THE INTERIOR OF THE STORMWATER MANAGEMENT CHAMBERS THROUGH INSPECTION PORT FOR DEFICIENCIES USING CCTV OR COMPARABLE TECHNIQUE.
4. 9 YEARS AFTER COMMISSIONING, AND EVERY 9 YEARS THEREAFTER (OR AS MAY BE NEEDED): CLEAN STORMWATER MANAGEMENT CHAMBERS AND FEED CONNECTORS OF ANY DEBRIS. INSPECT THE INTERIOR OF THE STORMWATER MANAGEMENT CHAMBERS THROUGH INSPECTION PORT FOR DEFICIENCIES USING CCTV OR COMPARABLE TECHNIQUE.
5. 45 YEARS AFTER COMMISSIONING: A PROFESSIONAL ENGINEER SHALL ASSESS THE REMAINING LIFE EXPECTANCY OF THE STORMWATER MANAGEMENT CHAMBERS AND RECOMMEND ACTIONS TO REHABILITATE, RESTORE OR REPLACE THE STORMWATER MANAGEMENT CHAMBERS AS MAY BE REQUIRED.
6. ANNUALLY: CONFIRM THAT NO UNAUTHORIZED MODIFICATIONS HAVE BEEN PERFORMED TO THE SITE THAT MAY IMPACT THE ADEQUATE FUNCTIONING OF THE SYSTEM.
7. PERIODICALLY: MONITOR WATER LEVELS IN THE CHAMBER SYSTEM FOLLOWING SIGNIFICANT STORM EVENTS. DEWATERING OF THE SYSTEM SHOULD TAKE NO LONGER THAN 24 HOURS.

THE FACILITY OWNER SHALL PROVIDE FOR THE PERIODIC INSPECTION OF THE STORMWATER FACILITIES IN ACCORDANCE WITH THE PLANS, AND SHALL HAVE THE FACILITIES INSPECTED ON A YEARLY BASIS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK, TO DETERMINE THE CONDITION AND INTEGRITY OF THE STORMWATER CONTROL MEASURES. THE INSPECTING PROFESSIONAL SHALL PREPARE AND SUBMIT TO THE CITY OF BEACON WITHIN 30 DAYS OF THE INSPECTION BUT NOT LATER THAN JUNE 1 OF EACH YEAR, A WRITTEN REPORT OF THE FINDINGS INCLUDING RECOMMENDATIONS FOR THOSE ACTIONS NECESSARY FOR THE CONTINUATION OF THE STORMWATER CONTROL MEASURES.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

SITE SPECIFIC NOTES:

1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL–OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1–800–962–7962. SPECIFIC ATTENTION SHALL BE PAID TO THE LOCATIONS OF THE GAS, WATER AND SEWER MAINS WITH RESPECT TO THE PROPOSED LOCATIONS FOR THE SERVICE LINES.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL DRAINAGE, SANITARY SEWER, WATER AND GAS LINES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT.
3. THE PROPOSED LOT SHALL BE SERVED BY THE CITY OF BEACON MUNICIPAL WATER AND SEWER SERVICES. AS SUCH, THE CONTRACTOR SHALL CONTACT THE CITY OF BEACON WATER AND SEWER DEPARTMENTS TO SCHEDULE A PRE–CONSTRUCTION MEETING TO ENSURE THAT THE ARRANGEMENTS FOR WATER SUPPLY AND SEWAGE DISPOSAL ARE COMMENCED IN ACCORDANCE WITH THE APPROVED PLANS AND AMENDMENTS THERETO AND GENERALLY ACCEPTED STANDARDS.
4. THE WATER SERVICE LINE AND METER SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BEACON WATER DEPARTMENT REQUIREMENTS.
5. THE NEW WATER SERVICE LINE SHALL BE CLASS 52 DIP, SIZE TO BE DETERMINED.
6. THE SEWER SERVICE LATERAL SHALL BE 6"ø SDR–35 PVC PIPE WITH PITCH AS SHOWN ON THE PLAN.
7. STREET CLOSURE FOR WATER, SEWER AND GAS SERVICE CONNECTIONS AND DRIVEWAY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF BEACON AND NYSDOT REQUIREMENTS. A PLAN SHALL BE IN PLACE FOR MAINTENANCE AND PROTECTION OF TRAFFIC.
8. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. WOLLCOTT AVENUE SHALL BE KEPT CLEAN AND SWEPT DURING CONSTRUCTION.
9. SUMP PUMPS TO BE PROVIDED FOR FOOTING DRAINS, AS REQUIRED. THE TYPES OF PUMPS AND METHODS USED TO ENSURE PROPER DRAINAGE SHALL BE ACCEPTABLE TO THE CITY OF BEACON BUILDING DEPARTMENT.
10. THE BUILDING DEPARTMENT SHALL HAVE THE RIGHT TO INSPECT THE EXISTING BUILDING TO CONFIRM THAT THERE ARE NOT EXISTING STORMWATER CONNECTIONS TO THE CITY'S SANITARY SEWER SYSTEM PRIOR TO THE MAP BEING SIGNED.
11. WATER AND SEWER FOR THE RECTORY WILL BE ABANDONED IN ACCORDANCE WITH CITY REQUIREMENTS.
12. IN ORDER TO PROTECT THE FEDERALLY–LISTED ENDANGERED INDIANA BAT (MYOTIS SODALIS) AND THE FEDERALLY–LISTED THREATENED NORTHERN LONG–EARED BAT (MYOTIS SEPTENTRIONALIS), THE CLEARING OF POTENTIAL ROOSTING TREES SHALL OCCUR ONLY BETWEEN NOVEMBER 1 AND MARCH 31. ORANGE CONSTRUCTION FENCING SHALL BE USED TO SEPARATE AREAS TO BE GRADED FROM AREAS NOT TO BE DISTURBED. NO ARTIFICIAL DYES, COLORING, INSECTICIDE, OR ALGAECIDE SUCH AS COPPER SULFATE SHALL BE USED IN STORMWATER CONTROL STRUCTURES.
13. THE EXISTING SEWER LINE FOR THE RECTORY SHALL BE ABANDONED BY CUTTING THE PIPE, AND SEAL AND CAP AT THE ROW LINE WITH WOLCOTT AVENUE.
14. THE EXISTING WATER SERVICE LINES TO THE BUILDINGS SHALL BE ABANDONED BY REMOVING UP TO THE CORPORATION STOP.

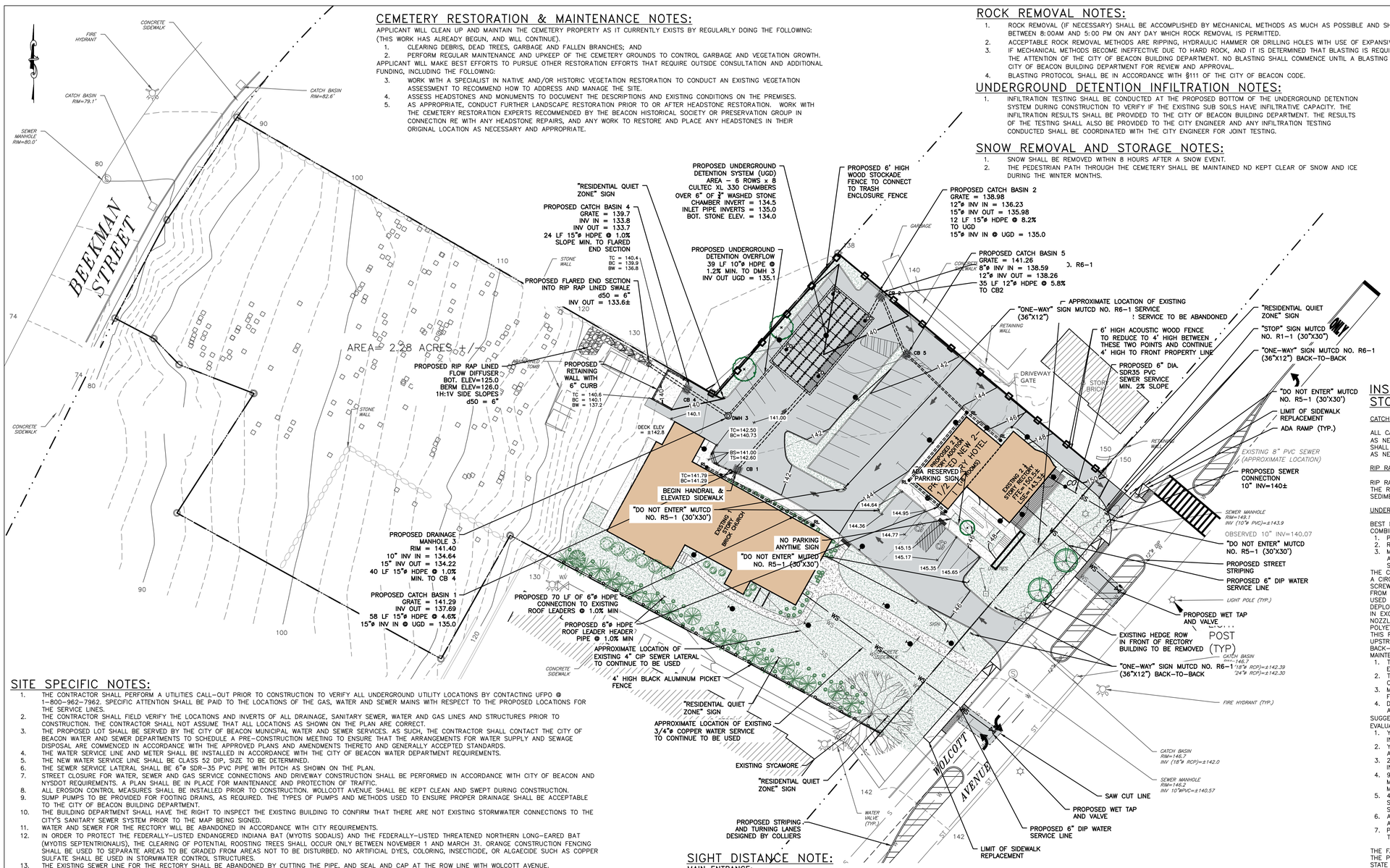
SIGHT DISTANCE NOTE:

MAIN ENTRANCE:

THE SIGHT DISTANCES AT THE PROPOSED DRIVEWAY LOCATION WERE ANALYZED. BASED ON FIELD MEASUREMENTS, THE EXISTING SIGHT DISTANCES ARE APPROXIMATELY 433 FEET LOOKING LEFT (NORTH) AND 544 FEET RIGHT (SOUTH) FROM THE PROPOSED ACCESS. EXISTING STOPPING SIGHT DISTANCES ARE APPROXIMATELY 336 FEET LOOKING LEFT (NORTH) AND 534 FEET RIGHT (SOUTH) FROM THE PROPOSED ACCESS. SIGHT DISTANCES ARE BASED ON AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) CRITERIA THE STOPPING SIGHT DISTANCE (200 FEET) AND INTERSECTION SIGHT DISTANCE (335 FEET) FOR THE 30 MPH POSTED SPEED LIMIT ALONG ROUTE 9D WILL BE SATISFIED. AVAILABLE NYSDOT SPEED DATA FOR ROUTE 9D IN THIS AREA INDICATES THAT THE 85TH PERCENTILE SPEEDS ARE APPROXIMATELY 37 TO 38 MPH. FOR A 40 MPH DESIGN SPEED, AASHTO REQUIRES A MINIMUM 305 FOOT STOPPING SIGHT DISTANCE, 385 FEET MINIMUM INTERSECTION SIGHT DISTANCE LEFT, 445 FEET MINIMUM INTERSECTION SIGHT DISTANCE RIGHT. AND TO ALLOW FOR THE SAFE OPERATION OF THE INTERSECTION. THIS REQUIRED STOPPING SIGHT DISTANCE WILL ALSO BE SATISFIED. THE HEDGE ROW IMMEDIATELY NORTH OF THE PROPOSED DRIVEWAY LOCATION ON THE WEST SIDE OF ROUTE 9D SHALL BE REMOVED IN ORDER TO MAXIMIZE THE SIGHT DISTANCE LOOKING TO THE NORTH FROM THE SITE DRIVEWAY.

SOUTHERLY EGRESS ONLY LOOP:

THE SIGHT DISTANCES AT THE PROPOSED DRIVEWAY LOCATION WERE ANALYZED. BASED ON FIELD MEASUREMENTS, THE EXISTING SIGHT DISTANCES ARE APPROXIMATELY 389 FEET LOOKING LEFT (NORTH) AND 536 FEET RIGHT (SOUTH) FROM THE PROPOSED ACCESS. EXISTING STOPPING SIGHT DISTANCES ARE APPROXIMATELY 331 FEET LOOKING LEFT (NORTH) AND 501 FEET RIGHT (SOUTH) FROM THE PROPOSED ACCESS. SIGHT DISTANCES ARE BASED ON AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) CRITERIA THE STOPPING SIGHT DISTANCE (200 FEET) AND INTERSECTION SIGHT DISTANCE (335 FEET) FOR THE 30 MPH POSTED SPEED LIMIT ALONG ROUTE 9D WILL BE SATISFIED. AVAILABLE NYSDOT SPEED DATA FOR ROUTE 9D IN THIS AREA INDICATES THAT THE 85TH PERCENTILE SPEEDS ARE APPROXIMATELY 37 TO 38 MPH, FOR A 40 MPH DESIGN SPEED, AASHTO REQUIRES A MINIMUM 305 FOOT STOPPING SIGHT DISTANCE, 385 FEET MINIMUM INTERSECTION SIGHT DISTANCE LEFT, 445 FEET MINIMUM INTERSECTION SIGHT DISTANCE RIGHT. AND TO ALLOW FOR THE SAFE OPERATION OF THE INTERSECTION. THIS REQUIRED STOPPING SIGHT DISTANCE WILL ALSO BE SATISFIED.



GRADING & UTILITY PLAN

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926
F: 845–440–6637

GRADING & UTILITY PLAN

1113 WOLCOTT AVENUE AMENDED SITE PLAN

1113 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954–26–651901

JOB #:	2021:022
DATE:	10/29/2024
SCALE:	1" = 30'
TITLE:	GU–1
SHEET:	9 OF 16

DRAWN BY: ESR				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	2/25/25	UPDATED PLAN SET	CMB				
2	3/25/25	NO CHANGE THIS SHEET	CMB				

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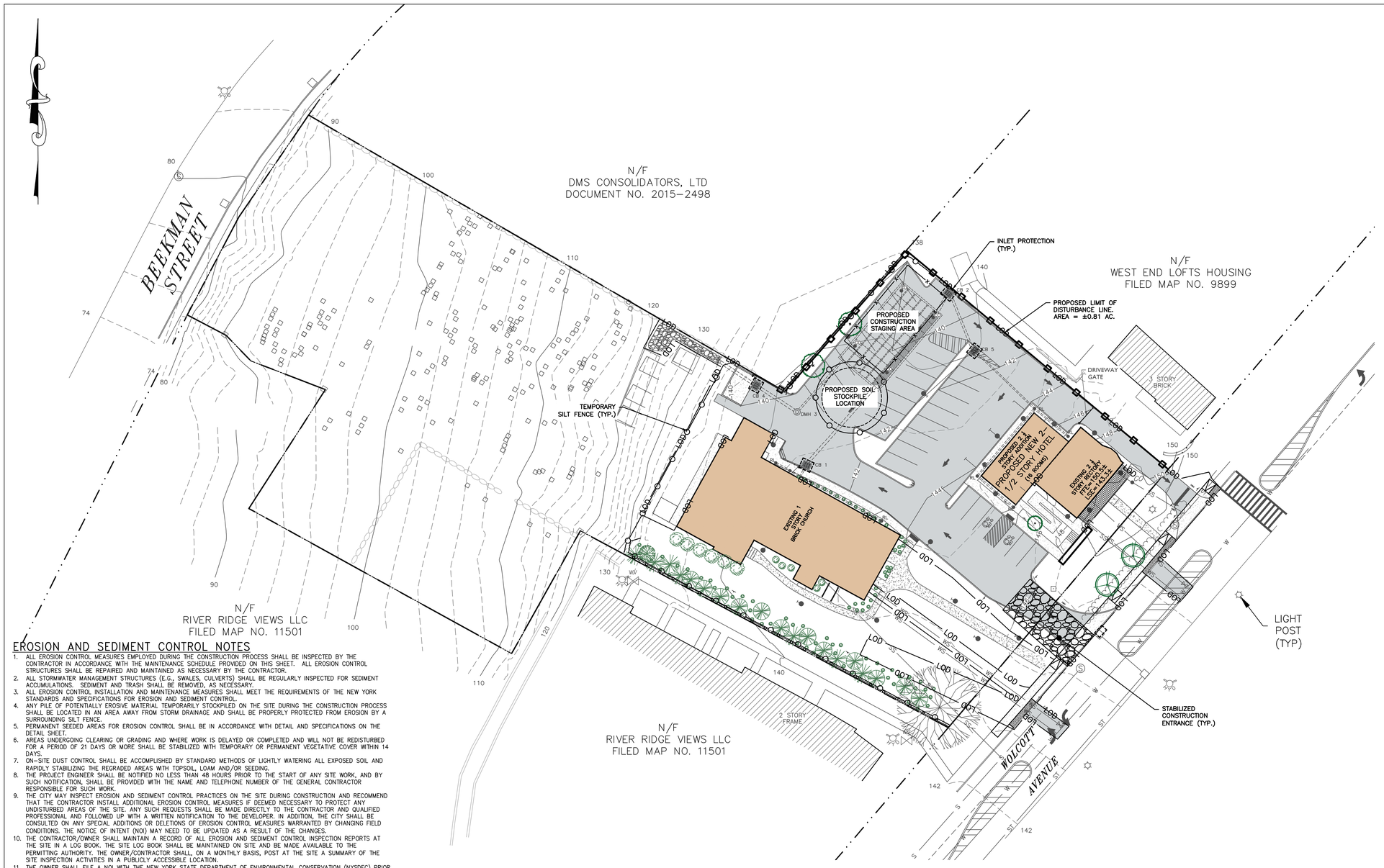

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING STREAM
- EXISTING WETLAND BOUNDARY
- 100' WETLAND BUFFER
- 250 EXISTING MAJOR CONTOUR
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- EXISTING STORM WATER LINE
- RL EXISTING ROOF LEADER
- EXISTING CATCH BASIN
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- W PROPOSED WATER LINE
- WS WS PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED SILT FENCE
- LOD PROPOSED LIMIT OF DISTURBANCE
- PROPOSED CONSTRUCTION ENTRANCE

INSPECTION SCHEDULE & MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES

PERMANENT AND TEMPORARY VEGETATION:
INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:
INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. REGRADE PAD AS NEEDED FOR RUNOFF CONTROL, WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE AS DIRECTED BY PROJECT ENGINEER.

SILT FENCE:
INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

SOIL STOCKPILE:
INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCKPILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:
SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORKS. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

CHECK DAM:
(IF REQUIRED) INSPECT CHECK DAMS EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. IF SIGNIFICANT EROSION OCCURS BETWEEN STRUCTURES, A LINER OF STONE OR OTHER SUITABLE MATERIAL SHOULD BE INSTALLED IN THAT PORTION OF THE CHANNEL. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAM AS NEEDED TO ALLOW CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. REPLACE STONES AS NEEDED TO MAINTAIN THE DESIGN CROSS SECTION OF THE STRUCTURES. REMOVE CHECK DAMS AS PER APPROVAL OF THE PROJECT ENGINEER.

EROSION CONTROL BLANKET:
(IF REQUIRED) INSPECT THE BLANKET EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. REPLACE WIRE STAPLES AS REQUIRED. REPAIR AND RESEED WHERE CRACKS AND DAMAGED VEGETATION IS EVIDENT. WHEN DAMAGED BEYOND REPAIR OR NO LONGER FUNCTIONING, THE BLANKET SHALL BE REPLACED.

DEWATERING PITS:
(IF REQUIRED) – INSPECT DAILY DURING OPERATION FOR CLOGGING OR OVERFLOW. CLEAR INLET AND DISCHARGE PIPES OF OBSTRUCTIONS. IF A FILTER MATERIAL BECOMES CLOGGED WITH SEDIMENT, PIT SHALL BE DISMANTLED AND NEW PITS SHALL BE CONSTRUCTED AS NEEDED.

SEDIMENT TRAP:
(IF REQUIRED) SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO THE ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF OF THE DESIGN DEPTH OF THE TRAP. SEDIMENT REMOVED FROM THE TRAP SHALL BE DEPOSITED IN A PROTECTED AREA IN SUCH A MANNER THAT IT WILL NOT ERODE.

CATCH BASINS:
ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION, AND DEBRIS, AND REMOVE AS NECESARRY. THE INLET PROTECTION SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND REPLACED AS NECESARRY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED.

EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE PROVIDED ON THIS SHEET. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.
2. ALL STORMWATER MANAGEMENT STRUCTURES (E.G., SWALES, CULVERTS) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. SEDIMENT AND TRASH SHALL BE REMOVED, AS NECESSARY.
3. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
4. ANY PILE OF POTENTIALLY EROSIVE MATERIAL TEMPORARILY STOCKPILED ON THE SITE DURING THE CONSTRUCTION PROCESS SHALL BE LOCATED IN AN AREA AWAY FROM STORM DRAINAGE AND SHALL BE PROPERLY PROTECTED FROM EROSION BY A SURROUNDING SILT FENCE.
5. PERMANENT SEEDED AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THE DETAIL SHEET.
6. AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND WILL NOT BE REDISTURBED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE COVER WITHIN 14 DAYS.
7. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY STANDARD METHODS OF LIGHTLY WATERING ALL EXPOSED SOIL AND RAPIDLY STABILIZING THE REGRADED AREAS WITH TOPSOIL, LOAM AND/OR SEEDING.
8. THE PROJECT ENGINEER SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE START OF ANY SITE WORK, AND BY SUCH NOTIFICATION, SHALL BE PROVIDED WITH THE NAME AND TELEPHONE NUMBER OF THE GENERAL CONTRACTOR RESPONSIBLE FOR SUCH WORK.
9. THE CITY MAY INSPECT EROSION AND SEDIMENT CONTROL PRACTICES ON THE SITE DURING CONSTRUCTION AND RECOMMEND THAT THE CONTRACTOR INSTALL ADDITIONAL EROSION CONTROL MEASURES IF DEEMED NECESSARY TO PROTECT ANY UNDISTURBED AREAS OF THE SITE. ANY SUCH REQUESTS SHALL BE MADE DIRECTLY TO THE CONTRACTOR AND QUALIFIED PROFESSIONAL AND FOLLOWED UP WITH A WRITTEN NOTIFICATION TO THE DEVELOPER. IN ADDITION, THE CITY SHALL BE CONSULTED ON ANY SPECIAL ADDITIONS OR DELETIONS OF EROSION CONTROL MEASURES WARRANTED BY CHANGING FIELD CONDITIONS. THE NOTICE OF INTENT (NOI) MAY NEED TO BE UPDATED AS A RESULT OF THE CHANGES.
10. THE CONTRACTOR/OWNER SHALL MAINTAIN A RECORD OF ALL EROSION AND SEDIMENT CONTROL INSPECTION REPORTS AT THE SITE IN A LOG BOOK. THE SITE LOG BOOK SHALL BE MAINTAINED ON SITE AND BE MADE AVAILABLE TO THE PERMITTING AUTHORITY. THE OWNER/CONTRACTOR SHALL, ON A MONTHLY BASIS, POST AT THE SITE A SUMMARY OF THE SITE INSPECTION ACTIVITIES IN A PUBLICLY ACCESSIBLE LOCATION.
11. THE OWNER SHALL FILE A NOI WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES AND A NOTICE OF TERMINATION (NOT) WITH THE NYSDEC FOLLOWING CONSTRUCTION ACTIVITIES.
12. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (AKA SUMP PIT) TO FILTER WATER FOR PUMPING TO A SUITABLE LOCATION.
13. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED PER THE APPROVAL OF THE CITY AND QUALIFIED PROFESSIONAL.
14. UPON COMPLETION OF CONSTRUCTION, THE PARCEL OWNER(S) AND SUBSEQUENTLY THE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM. THE STORMWATER MANAGEMENT SYSTEM SHALL BE INSPECTED QUARTERLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT. THE OWNER(S) SHALL MAINTAIN A RECORD OF INSPECTION AND MAINTENANCE REPORTS AT THE SITE. REFER TO THE SWPPP FOR INSPECTION REQUIREMENTS AND FUTURE MAINTENANCE.

SOIL RESTORATION NOTES:

1. THE CONSTRACTOR SHALL EMPLOY SOIL RESTORATION TO ALL DISTURBED AREAS THAT WILL REMAIN LANDSCAPED.
2. FOR HEAVY TRAFFIC AREAS, FULL SOIL REASTORATION WILL BE REQUIRED. FULL SOIL RESTORATION CONSISTS OF USE OF A BULLDOZER WITH A DEEP RIPPER ATTACHED TO IT. THE RIPPING SHALL BE DONE TO A DEPTH OF 12"-24". COMPOST IS PLACED OVER THE RIPPED SOIL, THEN WORKED INTO THE SOIL WITH A DEEP SUB-SOILER.
3. FOR LIGHT TRAFFIC AREAS, SOIL RESTORATION MAY BE ACCOMPLISHED BY MEANS OF TILLING THE SOIL WITH A DISK TYPE TILLER PULLED BY A TRACTOR OR PLACEMENT OF TOPSOIL OVER THE EXISTING SOIL A.O.B.E..

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: ESR				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	2/25/25	UPDATED PLAN SET	CMB				
2	3/25/25	NO CHANGE THIS SHEET	CMB				

EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 30'
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

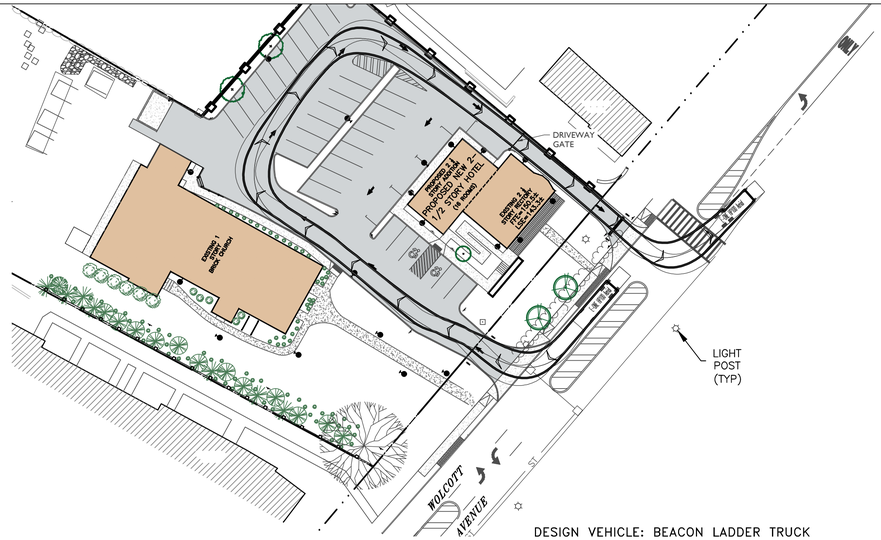
SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

EROSION & SEDIMENT CONTROL PLAN
1113 WOLCOTT AVENUE AMENDED SITE PLAN
1113 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-26-651901

JOB #:	2021:022
DATE:	10/29/2024
SCALE:	1" = 30'
TITLE:	EC-1
SHEET:	10 OF 16

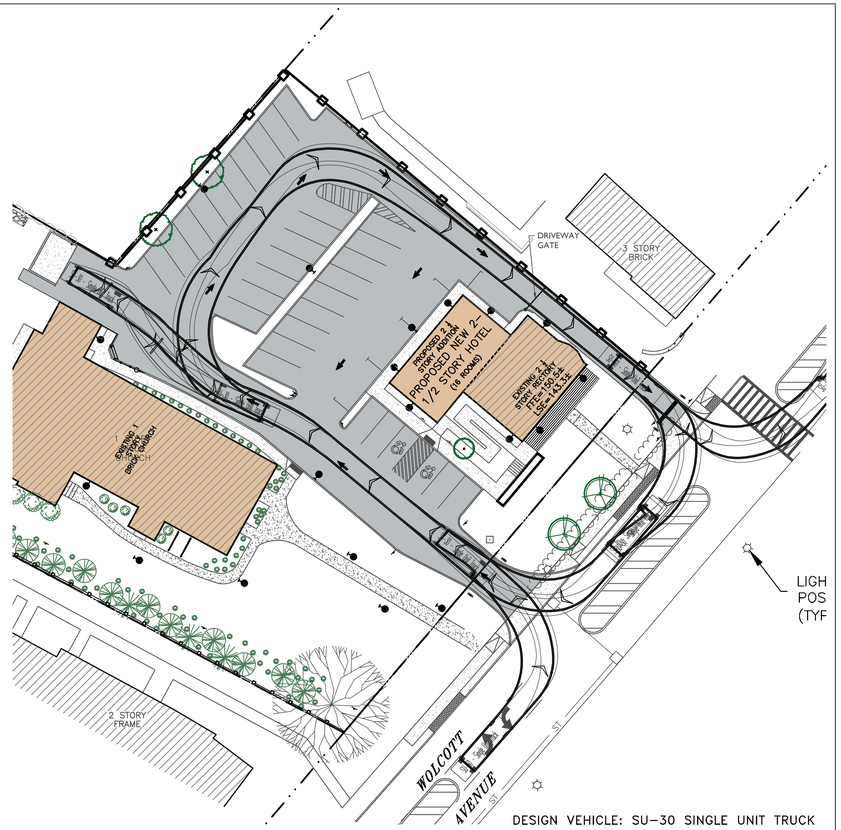
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



DESIGN VEHICLE: BEACON LADDER TRUCK

BEACON LADDER TRUCK MANEUVERING PLAN

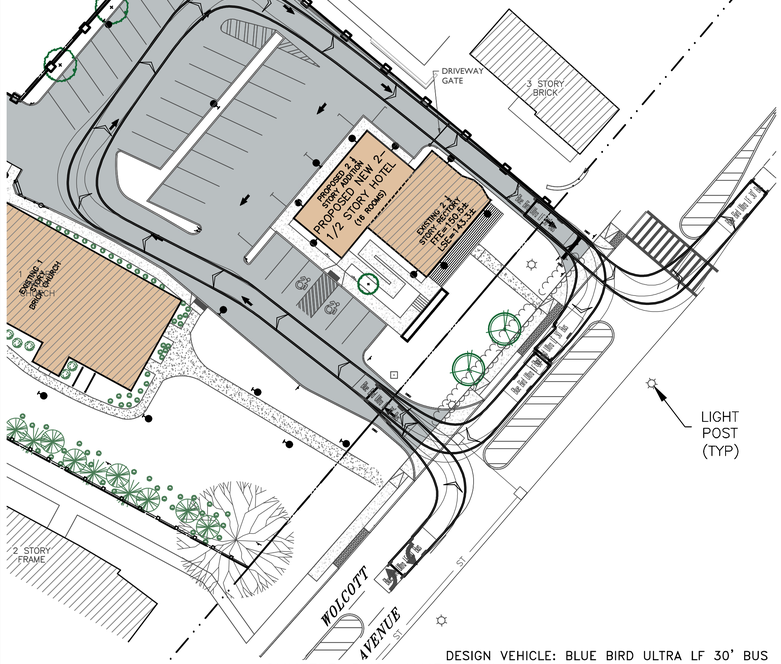
SCALE: 1" = 40'



DESIGN VEHICLE: SU-30 SINGLE UNIT TRUCK

BOX-TRUCK MANEUVERING PLAN

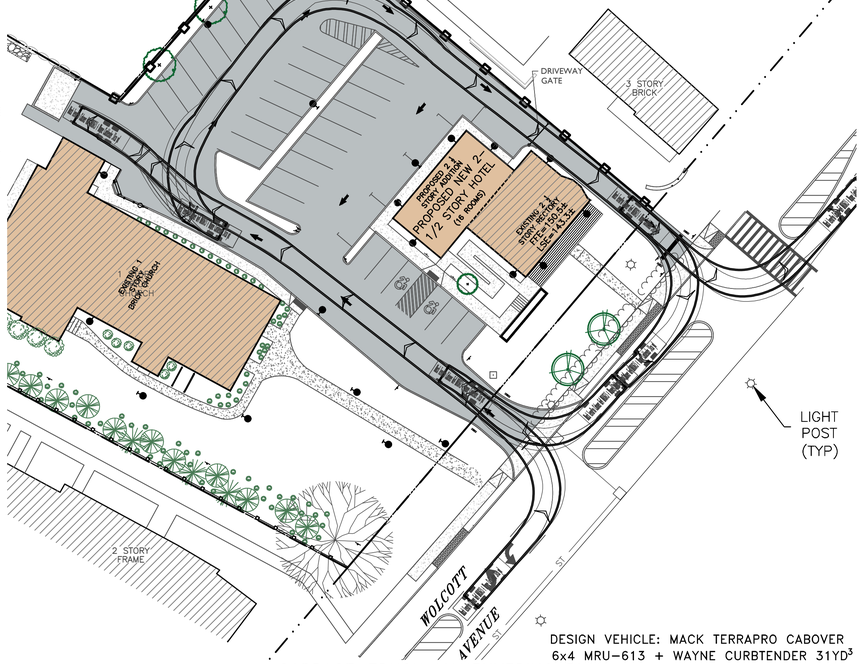
SCALE: 1" = 30'



DESIGN VEHICLE: BLUE BIRD ULTRA LF 30' BUS

SHUTTLE-BUS MANEUVERING PLAN

SCALE: 1" = 30'



DESIGN VEHICLE: MACK TERRAPRO CABOVER 6x4 MRU-613 + WAYNE CURBTENDER 31YD³

GARBAGE-TRUCK MANEUVERING PLAN

SCALE: 1" = 30'

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: ESR				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	2/25/25	UPDATED PLAN SET	CMB				
2	3/25/25	NO CHANGE THIS SHEET	CMB				

VEHICLE TRACKING PLAN

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

STATE OF NEW YORK ANDREW A. BIDERMAN LICENSED PROFESSIONAL ENGINEER 084466

SEAL

HUDSON LAND DESIGN

HUDSON LAND DESIGN PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

VEHICLE TRACKING PLAN

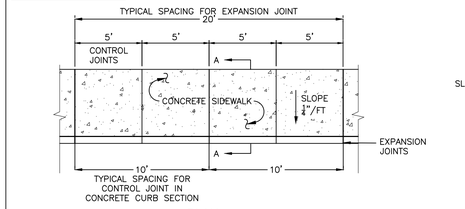
1113 WOLCOTT AVENUE AMENDED SITE PLAN

1113 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-26-651901

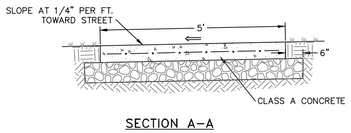
JOB #:	2021:022
DATE:	10/29/2024
SCALE:	1" = 40'
TITLE:	VHC-1
SHEET:	11 OF 16

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

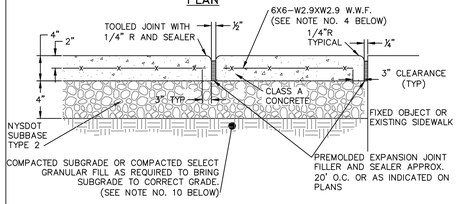
SITE DETAILS



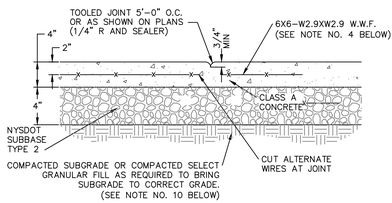
PLAN



SECTION A–A



EXPANSION JOINT

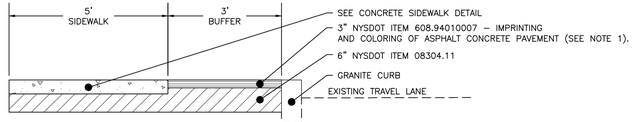


CONTROL JOINT

NOTES:

1. 10' SPACING OF CONTROL JOINTS SHALL BE USED FOR CAST IN PLACE CONCRETE CURBS.
2. MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 2, 2002, AND ALL ADDENDA THERETO; THE ONLY EXCEPTION BEING THAT THE WORK OF THIS CONTRACT SHALL BE MEASURED IN ENGLISH UNITS.
3. ALL CONCRETE SHALL BE 3,500 PSI CLASS A CONCRETE. CONCRETE MATERIALS, PLACEMENT, AND CONSTRUCTION SHALL CONFORM WITH SECTION 500 OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
4. REINFORCING STEEL FOR CONCRETE SHALL CONFORM WITH SECTION 556 – REINFORCING STEEL FOR CONCRETE STRUCTURES OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND AS SPECIFICALLY CALLED OUT IN THE DRAWINGS.
5. ALL EXPOSED SURFACED SHALL HAVE A BROOM TEXTURED FINISH.
6. EXPANSION JOINTS SHALL BE LOCATED A MAXIMUM OF 20' ON CENTER, OR AS INDICATED ON PLANS.
7. JOINTS SHALL NOT BE SAW CUT.
8. EXPOSED CONCRETE SURFACES SHALL BE TREATED WITH "SUREBOND"/"SAFEBOND"SB–7000 INTENSIFIER BRIGHT PROTECTOR AND SIDEWALK SEALER, OR EQUAL. RATE AND METHOD OF APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 OF THE ABOVE REFERENCED NYSDOT STANDARD.
10. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSE OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMATION WITH SECTION 203–EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
11. ALL WORK SHALL CONFORM WITH SECTION 608–SIDEWALK, DRIVEWAYS, AND BICYCLE PATHS OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.

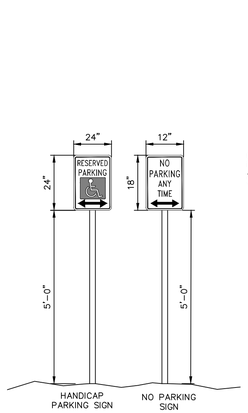
CONCRETE SIDEWALK DETAIL
NOT TO SCALE



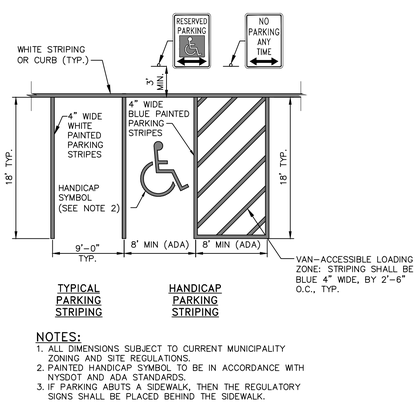
NOTES:

1. THE PATTERN AND COLOR SHALL MATCH THE EXISTING STAMPED ASPHALT LOCATED ALONG THE WEST SIDE OF ROUTE 9D.

STAMPED ASPHALT CONCRETE DETAILS
NOT TO SCALE



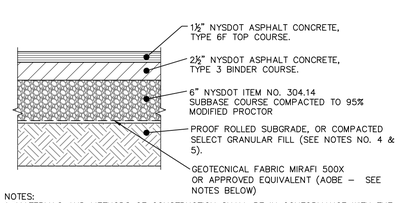
SIGN DETAILS
NOT TO SCALE



NOTES:

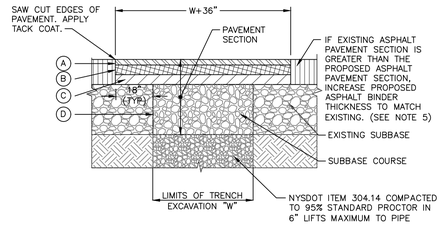
1. ALL DIMENSIONS SUBJECT TO CURRENT MUNICIPALITY ZONING AND SITE REGULATIONS.
2. PAINTED HANDICAP SYMBOL TO BE IN ACCORDANCE WITH NYSDOT AND ADA STANDARDS.
3. IF PARKING ABUTS A SIDEWALK, THEN THE REGULATORY SIGNS SHALL BE PLACED BEHIND THE SIDEWALK.

PARKING AND STRIPING DETAIL
NOT TO SCALE



NOTES:
1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 2, 2002.
2. SUBGRADE SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS.
3. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407–TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
4. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203–EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
5. IT IS EXPECTED THAT THE EXISTING SITE SUB–SOILS ARE SAND AND GRAVEL IN NATURE (CALIFORNIA BEARING RATIO RANGE BETWEEN 40 AND 80) . IF UNSUITABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR POSSIBLE MODIFICATIONS TO THE PAVEMENT DETAIL.

PAVEMENT SECTION DETAIL
NOT TO SCALE

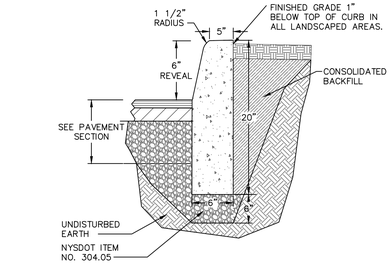


LEGEND
- (A) 1–1/2" ASPHALT CONCRETE TOP COURSE– NYSDOT ITEM 402.1261013
- (B) 2–1/2" ASPHALT CONCRETE BINDER COURSE– NYSDOT ITEM 402.256903
- (C) 8" ASPHALT CONCRETE BASE COURSE– NYSDOT ITEM 402.376903 (2"–4" LIFTS)
- (D) 12" GRANULAR SUBBASE COURSE– NYSDOT ITEM 304.11000008

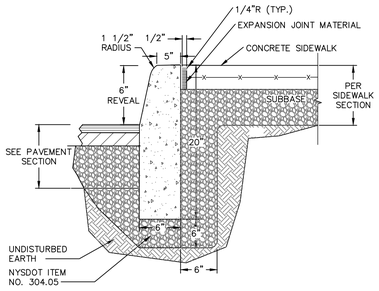
NOTES:

1. SAW CUT MIN. 18" BEYOND EXCAVATION WITH SMOOTH EDGES. 18" JOINT BETWEEN EXISTING AND NEW TOP COURSE TO BE MILLED. JOINT TO BE SEALED WITH POLYMER MODIFIED SEALER.
2. FURNISH, PLACE, AND COMPACT SUBBASE.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.
5. IF THE PAVEMENT SECTION IS OVER A CONCRETE SLAB, THE RESTORED PAVEMENT SECTION SHALL MATCH THE TOTAL THICKNESS OF THE EXISTING CONCRETE SLAB AND PAVEMENT.

NYSDOT ROW PAVEMENT RESTORATION DETAIL
NOT TO SCALE



ABUTTING GRASS OR LANDSCAPE

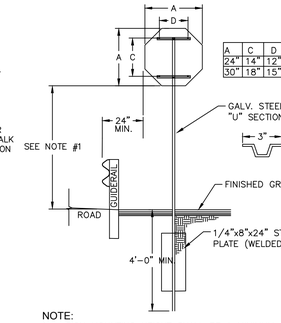


ABUTTING SIDEWALK

NOTES:

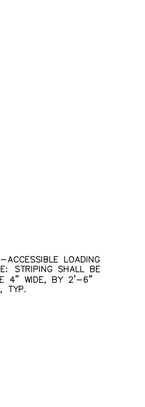
1. CONCRETE CURB SHALL BE 4,000 PSI CAST–IN–PLACE, AND IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. EXPANSION JOINTS OF 1/2" CELLULOSE OR SIMILAR MATERIAL SHALL BE PLACED AT 10 FOOT INTERVALS.
3. FOR MOUNTABLE CURBS ABUTTING SIDEWALK OR OTHER HARDSCAPE, REFER TO "ABUTTING SIDEWALK" DETAIL.

CAST–IN–PLACE CONCRETE CURB DETAIL
NOT TO SCALE



NOTE:
1. SIGN MOUNTING HEIGHT SHALL BE A MINIMUM OF 7'. MINIMUM MOUNTING HEIGHT MAY BE ADJUSTED ONLY IN ACCORDANCE WITH PROVISIONS OUTLINED IN "NYCRR, CHAPTER V–UNIFORM TRAFFIC CONTROL DEVICES."
2. SIGN POST SHALL BE IN ACCORDANCE W/ NYSDOT STANDARD SPECS SECTION 730.
3. THIS SIGN POST MAY BE SUBSTITUTED FOR THE BREAKAWAY WOOD SIGN POSTS AS DIRECTED BY THE ENGINEER (ITEM 645.81).

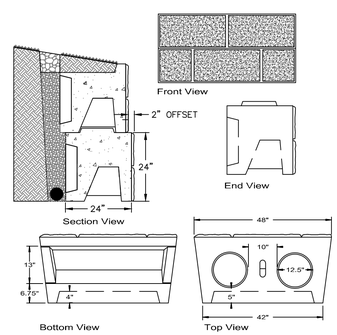
SINGLE POLE SIGN DETAIL
SCALE: NOT TO SCALE



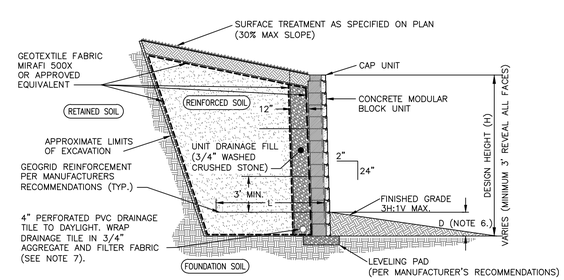
NOTES:

1. IT IS ASSUMED THAT THE EXISTING GRANITE CURB IS NYSDOT TYPE A. CONTRACTOR TO VERIFY AND MATCH EXISTING GRANITE CURB.
2. AS MARKED IN THE DETAIL ABOVE, FOR TYPE A CURB, THE FRONT ARRIS LINE FOR VERTICAL–FACED AND NEAR–VERTICAL STONE AND GRANITE CURBS SHALL BE BUZZED TO REMOVE A MINIMUM OF 1/8", MAXIMUM OF 3/8" INCH ALL ALONG THE EXPOSED EDGE.

GRANITE CURB DETAILS
NOT TO SCALE



WOODARD'S CONCRETE BLOCK WALL DETAIL
NOT TO SCALE



MODULAR RETAINING WALL NOTES:

1. MODULAR RETAINING WALL MANUFACTURED BY WOODARD'S OR APPROVED EQUAL.
2. GRID TYPE SHALL BE AS SPECIFIED BY THE MANUFACTURER.
3. GRID SPACING AND LENGTH VARY BASED ON OVERALL WALL HEIGHT, SOIL AND LOADING CONDITIONS. WALLS OF LIMITED HEIGHT (I.E., 4' OR LESS) MAY NOT REQUIRE THE INSTALLATION OF GRID.
4. LEVELING PAD DEPTH SHALL BE SPECIFIED BY THE MANUFACTURER BASED ON ENGINEERING DESIGN SPECIFIC FOR THE SITE.
5. MANUFACTURER TO PROVIDE FINAL ENGINEERING CALCULATIONS AND DETAILS TO THE OWNER FOR REVIEW BY THE OWNERS ENGINEER.
6. D SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
7. RELOCATE PERFORATED PIPE WITHIN STONE CROSS SECTION FOR STEPPED WALLS TO ACHIEVE CONTINUOUS FLOW TOWARD DISCHARGE POINT.
8. SEE MANUFACTURER'S DETAILS AND INSTALLATION GUIDELINES FOR FURTHER REQUIREMENTS.

CONCRETE MODULAR RETAINING WALL DETAIL
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: ESR				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	2/25/25	UPDATED PLAN SET	CMB				
2	3/25/25	NO CHANGE THIS SHEET	CMB				

STATE OF NEW YORK · ANDREA A. BODENMAN · LICENSED PROFESSIONAL ENGINEER · 084486

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926
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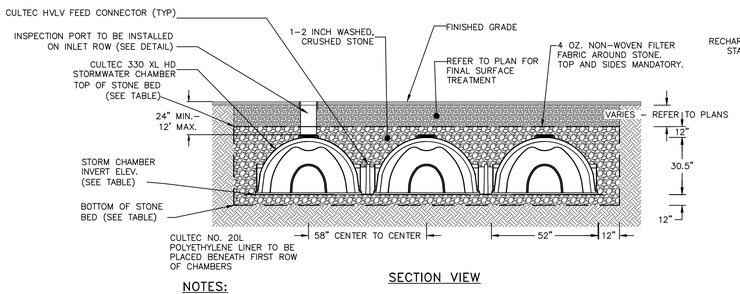
SITE CONSTRUCTION DETAILS

1113 WOLCOTT AVENUE AMENDED SITE PLAN

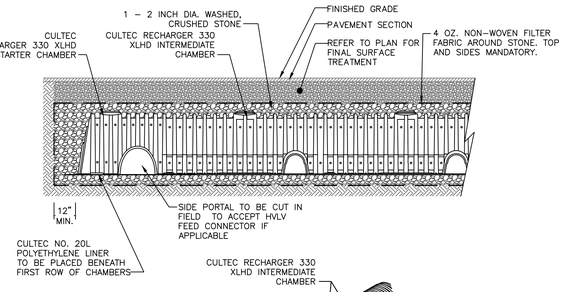
1113 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954–26–651901

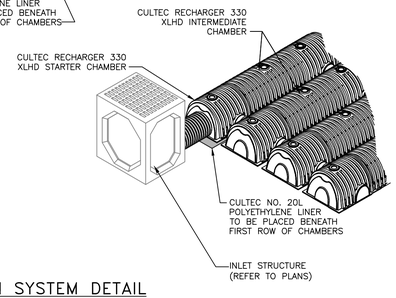
JOB #:	2021:022
DATE:	10/29/2024
SCALE:	AS SHOWN
TITLE:	CD–1
SHEET:	12 OF 16

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



SECTION VIEW

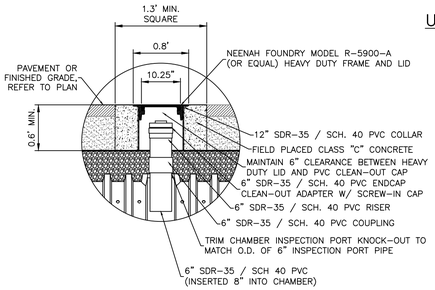




NOTES:
1. CULTEC RECHARGER 330XLHD CHAMBERS BY CULTEC, INC. OF BROOKFIELD, CT. ALL CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH CULTEC INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
2. THE BED OF THE SYSYTEM FOOTPRINT SHALL BE LAID NEARLY LEVEL.
3. EACH ROW OF CHAMBERS SHALL BE FED VIA A 12" MANIFOLD WITH TEE CONNECTIONS BY CULTEC OR EQUAL.
4. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IF SUBSURFACE CONDITIONS IN THE AREAS OF THE INFILTRATOR TRENCHES IN NOT CONSISTENT WITH THE TEST PIT OR PERCOLATION DATA (E.G. GROUNDWATER OR BEDROCK ENCOUNTERED, SOIL PROPERTIES ARE NOT CONSISTENT, ETC.).
5. REFER TO THE INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES NOTES ON THE GRADING SHEET.
6. SEE ALSO CLAY KEY DETAIL THIS SHEET.

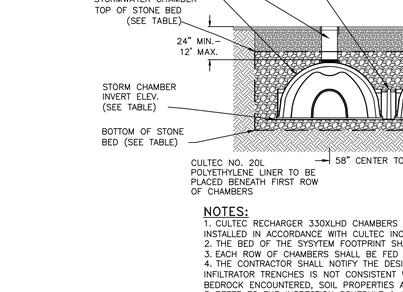
BOTTOM OF STONE BED ELEVATION	CHAMBER INVERT	TOP OF STONE BED ELEVATION	STONE BED FOOTPRINT	STONE BED DIMENSIONS	NO. OF CHAMBERS
134.0	134.5	137.54	1,601 S.F.	30.5'X52.5'	42

UNDERGROUND INFILTRATION/DETENTION SYSTEM DETAIL
NOT TO SCALE



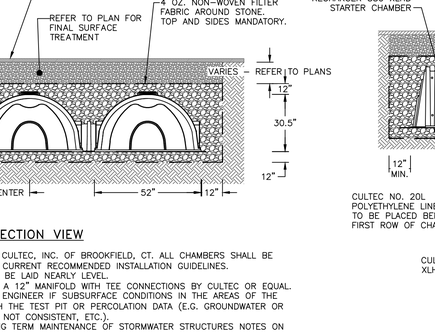
NOTES:
1. PROVIDE AN INSPECTION PORT FOR THE INITIAL AND FINAL CHAMBER OF EACH ROW, AND FOR ROWS WITH MORE THAN 10 CHAMBERS, ONE IN AN INTERMEDIATE CHAMBER.

UNDERGROUND DETENTION SYSTEM INSPECTION PORT DETAIL
NOT TO SCALE



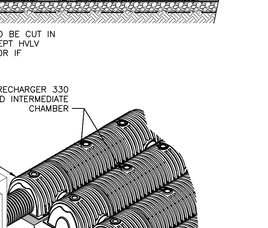
NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

STORMWATER PIPE IN TRENCH DETAIL
NOT TO SCALE



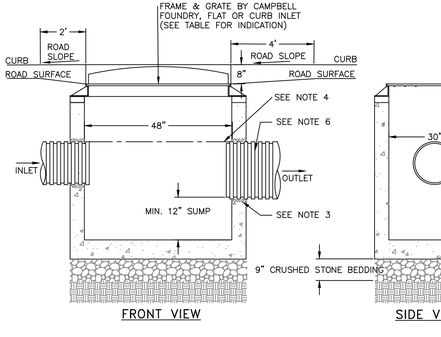
NOTES:
1. ROOF LEADER LOCATIONS AND SIZES TO BE DETERMINED BY THE PROJECT ARCHITECT. DOWNSPOUT ADAPTER TO MATCH DOWNSPOUT SIZE.
2. PVC JOINT CONNECTIONS SHALL BE MADE WITH PVC CEMENT.
3. ROOF DRAINAGE HEADER PIPES SHALL BE AS NOTED ON THE UTILITY SHEET.
4. SUBSTITUTIONS OF PIPE MATERIAL SHALL BE BROUGHT TO THE DESIGN ENGINEER'S ATTENTION FOR REVIEW.

ROOF LEADER CONNECTION DETAIL
NOT TO SCALE



NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 2541, OR APPROVED EQUAL.
2. CATCH BASINS TO RECEIVE CURB INLETS ARE: CB 1&2. CB 4 TO RECEIVE A FLAT GRATE

CAST IRON STORMWATER CURB INLET GRATE DETAIL
NOT TO SCALE



DIMENSION TABLE:

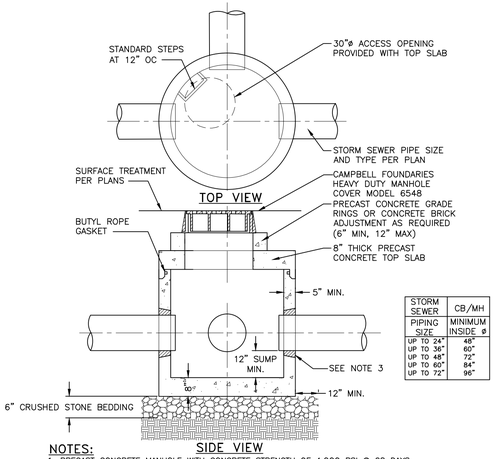
B	C	E	F	X	BB	CC	FF
30"	24"	4"	22"	1"	41"	36"	34"

NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 3433, OR APPROVED EQUAL.
2. STMH1 AND STMH 2 RECEIVE SOLID CAST IRON COVERS.

CAST IRON STORMWATER FLAT INLET GRATE DETAIL
NOT TO SCALE

NOTES:
1. PRECAST CONCRETE CATCH BASIN WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. CONNECTIONS MADE WITHIN 10 FEET OF A WATER MAIN (OR SERVICE LINE) OR A SEWER MAIN (OR SERVICE LATERAL) SHALL BE MADE WATERTIGHT.
4. PROVIDE A MINIMUM 0.1' DROP BETWEEN INLET AND OUTLET INVERTS (MATCH CROWNS FOR PIPES WITH DIFFERENT SIZE) UNLESS OTHERWISE NOTED ON THE PLAN.
5. CATCH BASINS WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.
6. HDPE PIPE SHALL BE PROVIDED WITH WATERTIGHT CONNECTIONS. ADS MODEL N12 WT IB OR APPROVED EQUAL.

CATCH BASIN DETAIL
NOT TO SCALE



STORM SEWER	CB/MH
PIPING SIZE	MINIMUM INSIDE ø
UP TO 24"	48"
UP TO 36"	60"
UP TO 48"	72"
UP TO 60"	84"
UP TO 72"	96"

NOTES:
1. PRECAST CONCRETE MANHOLE WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE MANHOLE AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE.
4. CONCRETE STRUCTURE AND CASTING SHALL BE RATED FOR H20 TRAFFIC LOADING.
5. INLET FRAME SHALL BE FULLY SUPPORTED ON THE CONCRETE STRUCTURE FOR H20 LOADING.
6. MANHOLES WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.

STORMWATER MANHOLE DETAIL
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

SEE SHEET 9 FOR PREVIOUS REVISIONS

DRAWN BY: ESR				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	2/25/25	UPDATED PLAN SET	CMB				
2	3/25/25	NO CHANGE THIS SHEET	CMB				

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

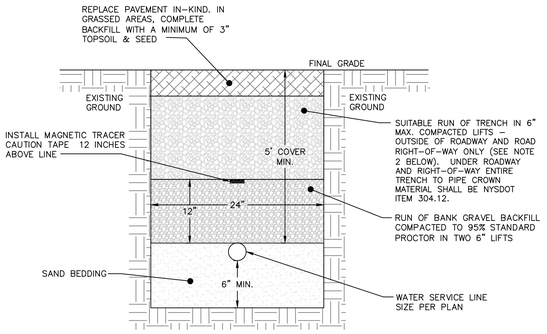
STORMWATER CONSTRUCTION DETAILS

1113 WOLCOTT AVENUE AMENDED SITE PLAN

1113 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-26-651901

JOB #: 2021:022
DATE: 10/29/2024
SCALE: AS SHOWN
TITLE: CD-2
SHEET: 13 OF 16

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



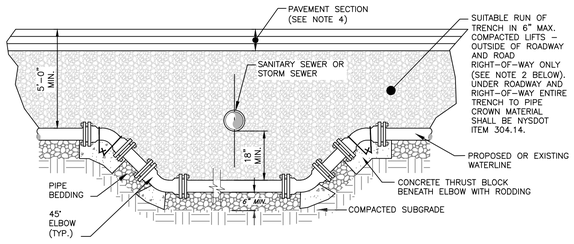
NOTES:

1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ELONGATED PARTICLES, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

3. IN AREAS WHERE 5' COVER REQUIREMENT CANNOT BE MET, THE CONTRACTOR SHALL PROVIDE PIPE INSULATION TO PREVENT FREEZING.

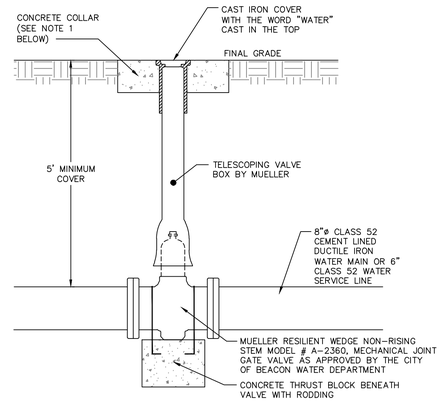
WATER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



NOTES:
1. WHEN THE ELEVATION OF THE SANITARY OR STORM SEWER CAN NOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATER SERVICE LINE OR MAIN SHALL BE RELOCATED TO PROVIDE THIS REQUIRED SEPARATION OR RECONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATERMAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR AWAY FROM THE SEWER AS POSSIBLE.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ENLOGATED PARTICLES, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

3. THE RELOCATED WATER MAIN/SERVICE LINE SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA, NYSDOH AND DCDOH STANDARDS.
4. PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH THE PAVEMENT RESTORATION DETAIL.
5. ALL REPLACED WATERMAIN SHALL BE 12"ø CLASS 52 DUCTILE IRON.

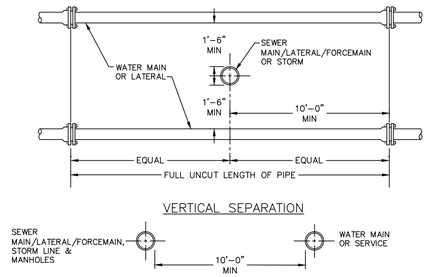
WATER LINE OFFSET DETAIL
NOT TO SCALE



NOTES:

1. CONCRETE COLLAR TO BE PROVIDED IN AREAS THAT ARE NOT PAVED. THE COLLAR SHALL BE 6" FROM THE COVER AND SHALL EXTEND 6" BELOW FINAL GRADE.

GATE VALVE DETAIL
NOT TO SCALE



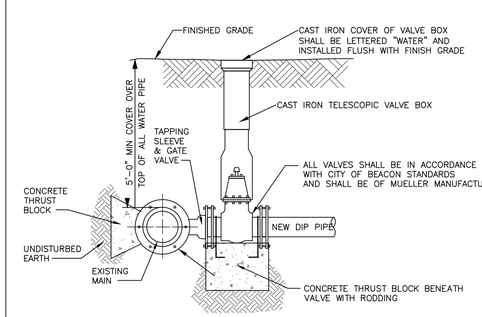
VERTICAL SEPARATION

HORIZONTAL SEPARATION

NOTE:

NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DUTCHESS COUNTY DEPARTMENT OF HEALTH AND THE CITY OF BEACON. CONCRETE ENCASEMENT OF WATERLINE OR OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.

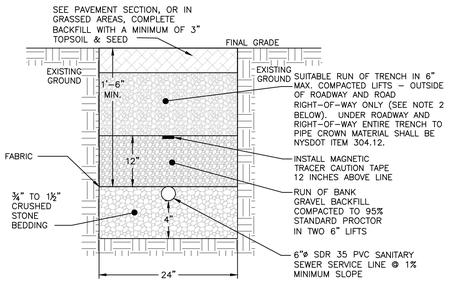
WATER LINE SEPARATION DETAIL
NOT TO SCALE



NOTES:

1. ALL VALVES SHALL OPEN BY TURNING LEFT (COUNTERCLOCKWISE) AND HAVE A 2-INCH SQUARE-OPERATING NUT PAINTED RED.
2. ALL VALVES SHALL BE M.J. RESILIENT WEDGE TYPE WITH "O" RING PACKING, DESIGNED FOR A WORKING PRESSURE OF 150 PSI AND BE IN FULL CONFORMANCE WITH AWWA C500.
3. TAPPING SLEEVE AND GATE VALVE SHOWN ARE MUELLER H-615, AND T-2630 RESPECTIVELY.

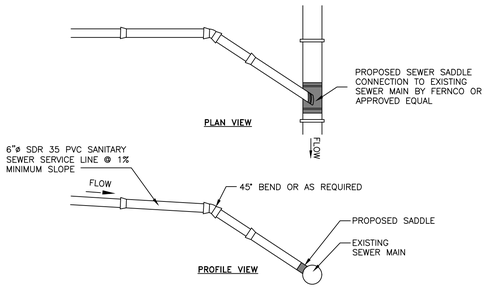
TAPPING SLEEVE DETAIL
NOT TO SCALE



NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

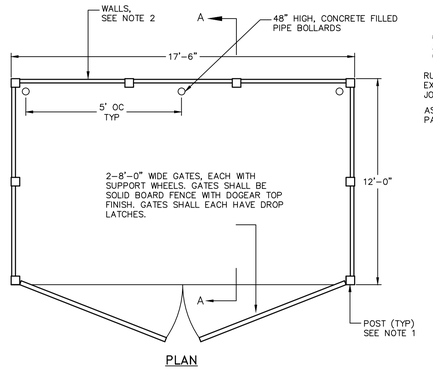
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

SANITARY SEWER SERVICE LINE TRENCH DETAIL
NOT TO SCALE

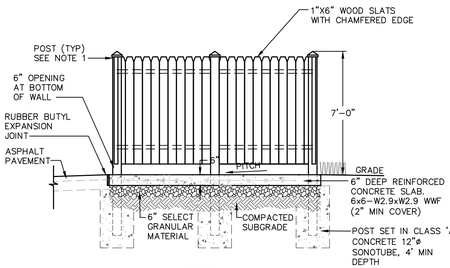


NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

SANITARY SEWER SERVICE CONNECTION DETAIL
NOT TO SCALE



PLAN



SECTION A-A

NOTES

1. POSTS SHALL HAVE A DECORATIVE CAP, CONSISTENT WITH THE ARTS & CRAFTS STYLE, AS APPROVED BY OWNER. POST SPACING SHALL BE AS REQUIRED BY WALL CONSTRUCTION.

2. WALLS OF DUMPSTER ENCLOSURE SHALL BE A SOLID WOOD PRIVACY FENCING NATURAL STAIL OR PAINT TO COMPLEMENT BUILDING.

TRASH ENCLOSURE DETAILS
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____ BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: ESR				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	2/25/25	UPDATED PLAN SET	CMB				
2	3/25/25	NO CHANGE THIS SHEET	CMB				

STATE OF NEW YORK MICHAEL A. BOSENKO 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

WATER & SEWER CONSTRUCTION DETAILS

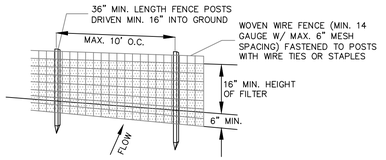
1113 WOLCOTT AVENUE AMENDED SITE PLAN

1113 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-26-651901

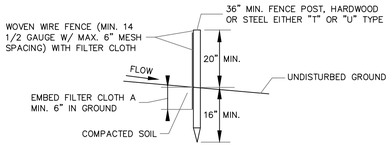
JOB #:	2021:022
DATE:	10/29/2024
SCALE:	AS SHOWN
TITLE:	CD-3
SHEET:	14 OF 16

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

EROSION AND SEDIMENT CONTROL DETAILS



PERSPECTIVE VIEW

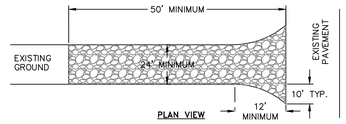


SECTION VIEW

NOTES:

1. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL
NOT TO SCALE



NOTES:

1) STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2) LENGTH - NOT LESS THAN 50 FEET FOR A COMMERCIAL.

3) THICKNESS - NOT LESS THAN SIX (6) INCHES.

4) WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.

5) GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

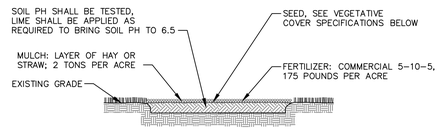
6) SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

7) MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

8) WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9) PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



NOTES:

1. TOPSOIL, SEED, MULCH, AND FERTILIZE DISTURBED SOIL AREAS THAT WILL BE LEFT EXPOSED FOR 14 DAYS OR MORE.
2. SEED MIXTURE FOR USE ON LAWNS IN SUNNY AREAS:

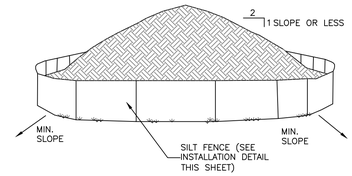
65% KENTUCKY BLUE GRASS BLEND	114 POUNDS PER ACRE
20% PERENNIAL RYEGRASS	35 POUNDS PER ACRE
15% FINE FESCUE	26 POUNDS PER ACRE
	175 POUNDS PER ACRE

3. SEED MIXTURE FOR USE IN SHADY AREAS:

80% BLEND OF SHADE TOLERANT KENTUCKY BLUEGRASS	138 POUNDS PER ACRE
20% FINE FESCUE	37 POUNDS PER ACRE
	175 POUNDS PER ACRE

4. SEED BETWEEN APRIL 1ST AND MAY 15TH OR AUGUST 15TH AND OCTOBER 15TH. SEEDING MAY OCCUR BETWEEN MAY 15TH AND AUGUST 15TH IF ADEQUATE IRRIGATION IS PROVIDED.
5. TOPSOIL SHALL HAVE AT LEAST 5% BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATERIAL, AND NO GREATER THAN 20%. TOPSOIL SHALL HAVE NOT LESS THAN 20% FINE TEXTURED MATERIAL (PASSING THE NO. 200 SIEVE) AND NOT MORE THAN 15% CLAY.

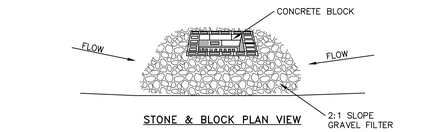
TOPSOIL, SEED AND MULCH DETAIL
NOT TO SCALE



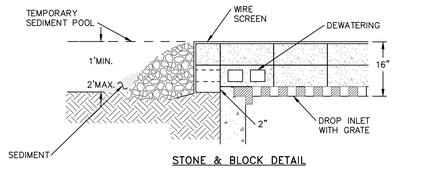
NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

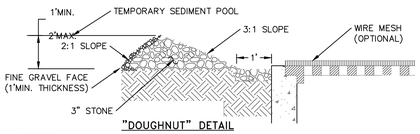
TEMPORARY SOIL STOCKPILE DETAIL
NOT TO SCALE



STONE & BLOCK PLAN VIEW



STONE & BLOCK DETAIL

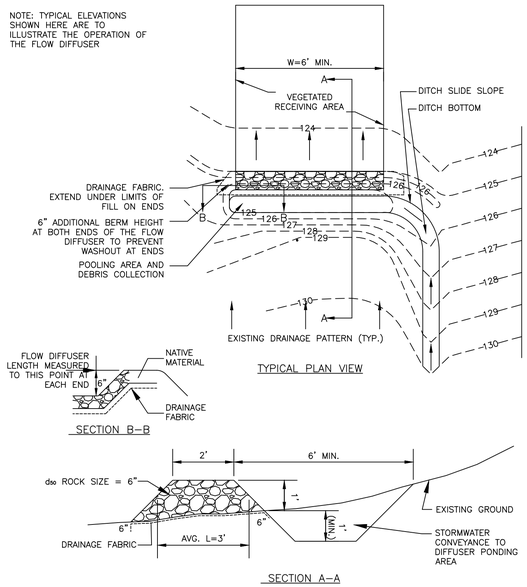


"DOUGHNUT" DETAIL

NOTES:

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS. MAXIMUM DRAINAGE AREA 1 ACRE

CATCH BASIN INLET PROTECTION DETAIL
NOT TO SCALE



TYPICAL PLAN VIEW

SECTION B-B

SECTION A-A

FLOW DIFFUSER DETAIL
NOT TO SCALE

DIFFUSER CALCULATIONS:

DESIGN IS IN ACCORDANCE WITH SECTION 3.16 OF THE 2016 NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

$$W = \frac{Q_{10}}{q_p}$$

WHERE :
W = LINEAR LENGTH OF DIFFUSER ALONG CENTERLINE
Q_{10} = 10 YEAR FLOW TO THE DESIGN POINT = 1.4 CFS
q_p = THE AVERAGE FLOW THROUGH THE DIFFUSER STONE (0.25 CFS/FT)

$$W = \frac{1.4 \text{ CFS}}{0.25 \text{ CFS/FT}} = 5.6 \text{ FEET, OR 6 FEET.}$$

USING THE STANDARD MINIMUM DIFFUSER CROSS SECTION DIMENSIONS, SOLVER FOR THE d_{50} ROCK SIZE:

ASSUME: 1:1 SIDE SLOPES, 2 FT TOP WIDTH, h = 1.0 FT., W = 6 FEET

$$Q = \frac{(h^{2/3})W}{[(L/D)+2.5+L^2]^{0.5}}$$

WHERE:
h = THE PONDING DEPTH BEHIND THE DIFFUSER
W = LINEAR LENGTH OF DIFFUSER ALONG CENTERLINE
L = AVERAGE HORIZONTAL FLOW LENGTH THROUGH THE DIFFUSER PERPENDICULAR TO THE CENTERLINE
D = AVERAGE STONE DIAMETER (FT.) IN THE STRUCTURE

USE d_{50} = 6"

$$Q = \frac{(1^{2/3})(6)}{[(3/0.5)+2.5+(3^2)]^{0.5}}$$

$$= \frac{6}{(17.5)^{0.5}}$$

Q = 1.43 CFS - MATCHES Q_{10}; THEREFORE THE DISCHARGE AND DESIGN ARE BALANCED.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: ESR				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	2/25/25	UPDATED PLAN SET	CMB				
2	3/25/25	NO CHANGE THIS SHEET	CMB				

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

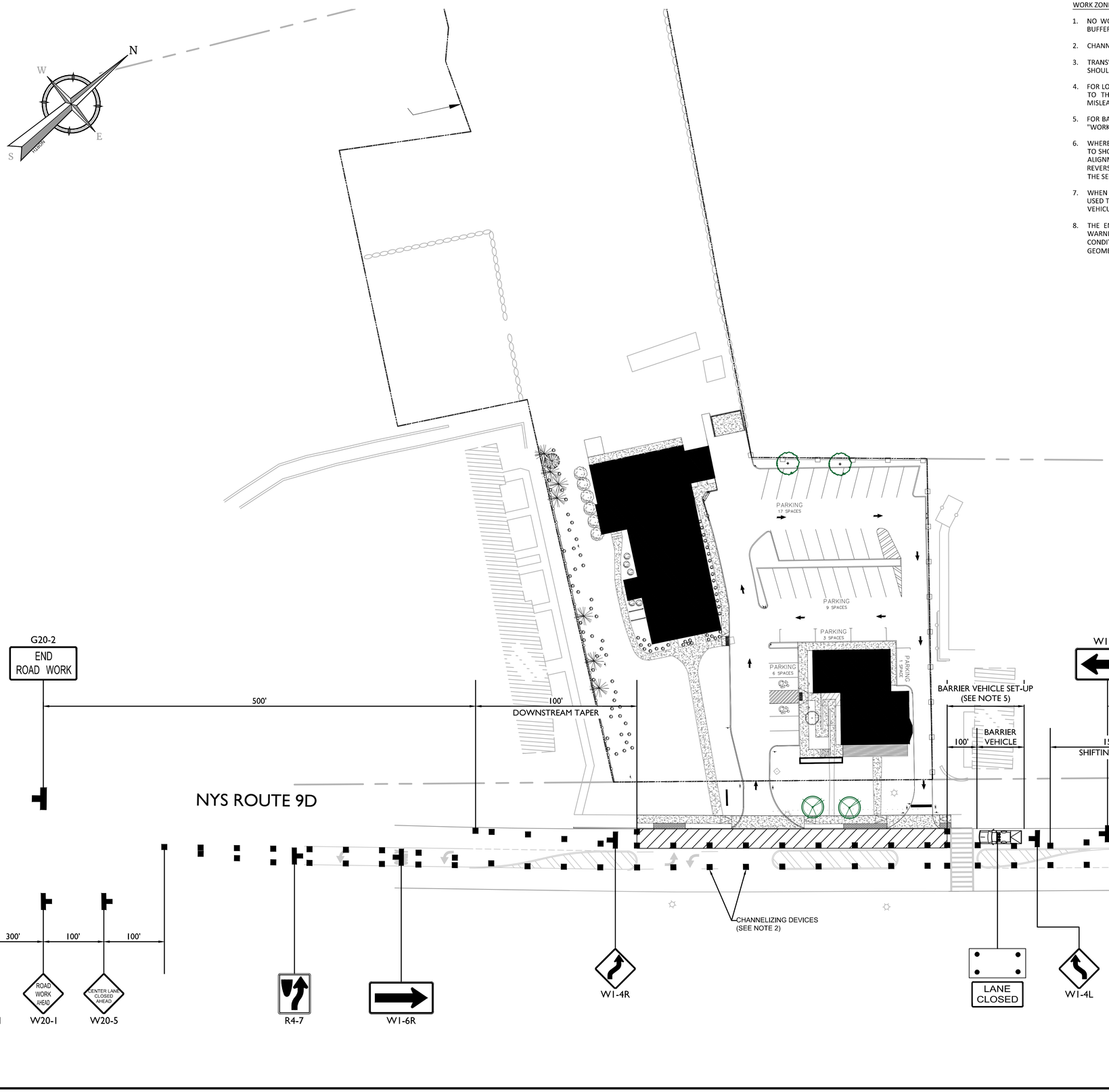
EROSION & SEDIMENT CONTROL DETAILS

1113 WOLCOTT AVENUE AMENDED SITE PLAN

1113 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-26-651901

JOB #: 2021:022
DATE: 10/29/2024
SCALE: AS SHOWN
TITLE: CD-4
SHEET: 15 OF 16

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



WORK ZONE TRAFFIC CONTROL NOTES:

1. NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES, OR MATERIAL SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.
2. CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 40' IN THE ACTIVE WORK SPACE.
3. TRANSVERSE DEVICES SHALL BE REQUIRED (AS PER 619 STANDARD SPECIFICATIONS) WHEN A PAVED SHOULDER HAVING A WIDTH OF 8' OR GREATER IS CLOSED FOR A DISTANCE GREATER THAN 1500'.
4. FOR LONG DURATION LANE CLOSURES, TEMPORARY PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE TO THE CONTRACT DOCUMENTS. ANY EXISTING PAVEMENT MARKINGS THAT ARE CONFLICTING OR MISLEADING SHALL BE REMOVED OR COVERED.
5. FOR BARRIER VEHICLE USE REQUIREMENTS SEE TABLES NY1-A AND NY2-A ON THE STANDARD SHEET TITLED "WORK ZONE TRAFFIC CONTROL LEGENDS AND NOTES".
6. WHERE THE SHIFTED SECTION IS LONGER THAN 600'. ONE SET OF REVERSE CURVE SIGNS SHOULD BE USED TO SHOW THE INITIAL SHIFT AND A SECOND SET SHOULD BE USED TO SHOW THE RETURN TO THE NORMAL ALIGNMENT. IF THE TANGENT DISTANCE ALONG THE TEMPORARY DIVERSION IS LESS THAN 600'. THE DOUBLE REVERSE CURVE SIGNS (W24-1L) SHOULD BE USED INSTEAD OF THE FIRST REVERSE CURVE SIGN (W1-4L) AND THE SECOND REVERSE CURVE SIGN (W1-4L) SHOULD BE OMITTED.
7. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8' OR MORE ARE CLOSED, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK SPACE TO DIRECT VEHICULAR TRAFFIC TO REMAIN IN THE TRAVELED WAY.
8. THE ENGINEER MAY REQUIRE THE USE OF AN ADVISORY SPEED PLAQUE (W13-1) TO SUPPLEMENT A WARNING SIGN. THE PLAQUE WILL BE USED TO INDICATE AN ADVISORY SPEED FOR THE WORK ZONE CONDITION. (IE. NARROW LANES, BUMPS, POOR ROADWAY SURFACE, LOW OR NO SHOULDER, DROP-OFFS, GEOMETRIC CONSTRAINTS, AND/OR POOR SIGHT CONDITIONS).

Colliers
Engineering & Design

www.colliersengineering.com

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Doing Business as MASER CONSULTING

811 Know what's below. Call before you dig.
PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	2/25/25	RGD	ADDED REVISED SITE PLAN
2	3/27/25	RGD	MODIFIED PLAN VIEW & SHEET NUMBERING FOR FINAL PLAN SUBMISSION

STATE OF NEW YORK
RICHARD G. D'ANDREA
No. 090241
LICENSED PROFESSIONAL ENGINEER

Richard G D'Andrea
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090241-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

WORK ZONE TRAFFIC CONTROL PLAN

FOR

PROPHECY THEATER, LLC

1113 WOLCOTT AVENUE

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK

Colliers Engineering & Design
RED BANK (Headquarters)
331 Newman Springs Road, Suite 203
Red Bank, NJ 07701
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	11/18/22	J.F.M.	R.G.D.

PROJECT NUMBER: 21004333A
DRAWING NAME: R-PL02-WZTC

SHEET TITLE: WORK ZONE TRAFFIC CONTROL PLAN

SHEET NUMBER: 16 of 16

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

2021\21004333A\Transportation\Plans\R-PL02-WZTC.dwg,R-PL01-WZTC By: RDANDREA

LANC & TULLY
Engineering and Surveying, P.C.

April 3, 2025

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 1113 Wolcott Avenue
Tax No. 5954-26-651901
Special Use & Site Plan
City of Beacon

Dear Mr. Gunn:

My office has received the following in regard to the above application:

- Response correspondence dated March 25, 2025, from Aryeh Siegel, Architect.
- Response correspondence dated March 25, 2025, from Hudson Land Design.
- Full Environmental Assessment Form dated February 25, 2025.
- Project narrative dated March 21, 2025.
- Traffic & Parking Management Plan, with the latest revision date of March 17, 2025, as prepared by Colliers Engineering & Design.
- Project Parking Observation Data, as prepared by Colliers Engineering & Design.
- Plan set titled "Special Use Permit Amendment - 1113 Wolcott Avenue", with the latest revision date of March 25, 2025, consisting of 16 sheets, as prepared by Aryeh Siegel, Architect, Hudson Land Design, and Colliers Engineering. It should be noted that Sheet 7 was not submitted as part of the plan set with this submission.

The proposed project is located on Wolcott Avenue in the R1-40 Zone and Historic District & Landmark Overlay District (HDLO). The existing 2.28± acre parcel contains a church (Reformed Dutch Church of Fishkill Landing), parsonage building and a cemetery. The previously approved project proposed converting the church into a conference center with dining facilities, and constructing a 30-room hotel on the parcel, along with providing 33 on site spaces for parking as related to the hotel, with 4 of the spaces being ADA compliant. Currently, the applicant is looking to amend the previously approved project to provide for a 150-seat restaurant in the church, the elimination of the conference center, and reducing the hotel portion of the project down to 16 rooms total. Other changes that are proposed from the previously approved project are the removal of the rear deck, removal of steps and walking path out to Beekman Street and an increase in the parking area to allow for 36 parking stalls.

Based on our review of the above documents we would like to offer the following comments:

General Comments:

1. There is a duplication of notes in the "Acoustic Remediation Measures" table on Sheet 1 with regards times for garbage removal. The duplicate note should be removed.

2. Although the intended use of the church is changing, we would recommend that the required post monitoring of traffic and parking management by the applicant's traffic engineer still be a condition of any revised approval resolution.

This completes our review at this time. Further comments may be provided based on future submissions. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: Natalie Quinn, Planner
Jennifer Gray, Esq.
Bryan Murphy, Building Inspector

KARC
PLANNING CONSULTANTS, INC.

TO: John Gunn, Chair, and the City of Beacon Planning Board

FR: KARC Planning Consultants, Inc.

DATE: April 7, 2025

RE: 1113 Wolcott Ave Site Plan/Special Use Permit Amendment, Prophecy Theater, LLC

I have reviewed the following materials regarding the proposed site plan amendment for the project located at 1113 Wolcott Ave:

- Project Narrative, dated March 21, 2025
- Project Comparison Table
- Comment Response Letter by Aryeh Siegel Architect, dated March 25, 2025
- Comment Response letter by Hudson Land Design, dated March 25, 2025
- Full EAF, by Prophecy Theater LLC, dated February 25, 2025
- Site Plan Set (15 Sheets) by Aryeh Siegel, Architect and Hudson Land Design, dated October 29, 2024, last revised March 25, 2025
- Traffic & Parking Management Plan, dated August 8, 2023, last revised March 17, 2025
- Project Parking Observation Data with Supplemental Data from March 2025, prepared by Colliers Engineering & Design

Project Description:

The applicant is proposing modifications to a previously approved project located at 1113 Wolcott Avenue. The proposed project is in the R1-40 zoning district and Historic District & Landmark Overlay District (HDLO). The existing 2.28-acre site contains a church, parsonage building, and a cemetery. The previous approval consisted of a 30-room hotel contained in the expanded rectory building along with an accessory conference center and dining facility within the renovated church building. Under the previous proposal the conference center was permitted to hold events of up to 150 attendees with certain restrictions on days and hours of events. The applicant is seeking to amend the previously approved project to provide a 150-seat restaurant (4,575 sq. ft.) within the church building, eliminate the previously approved conference center, reduce the proposed hotel guest rooms from 30 to 16 rooms, and increase the proposed parking to 36 spaces on-site.

Comments & Recommendations:

1. **Complete Site Plan Set**: Sheet 7 of 16 is not included in the submission. The applicant has indicated that Sheet 7 was not used in the submission but may be added later, and if not used the set will be renumbered. Until Sheet 7 is reviewed by the Board, it should be expressly excluded from any site plan approval resolution.

a. **Sheet 1 of 16**. The Parking & Loading table still indicates "39 parking spaces" in the table, whereas note 1 indicates "36 parking spaces are provided on site". The table should be updated to correctly note 36 parking spaces provided

2. **Parking Demand:** The Zoning Code requires that the project provide a minimum of 25 parking spaces up to a maximum of 52 parking spaces. A total of 36 parking spaces are proposed on-site, including 2 ADA accessible parking spaces. The applicant has therefore decreased the demand for parking via a reduction in hotel units and increased supply of parking onsite.

   It is anticipated that the project will have a peek parking demand of approximately 75 spaces and that off-site public parking will accommodate the anticipated excess demand of 39 spaces during peak hours. Based on the Area Parking Observations Summary and noted pedestrian access within the applicant's TPMP, it appears there is sufficient available public parking within the vicinity of the site, as well as convenient and safe pedestrian infrastructure connecting this parking to the site.

3. **Ongoing Monitoring and Coordination:** As noted in the final paragraph of the applicant's TPMP it should be noted in final approvals that the Applicant agrees to conduct a monitoring of the peak conditions within the first 9-months after initial occupancy of the restaurant and hotel.

All other comments have been addressed at this time. With the clerical corrections noted above, we believe the plans are acceptable from a planning perspective.

If you have any questions or need additional information, please feel free to contact me.

Natalie Quinn
Beacon Planning Consultant

Cc: Bryan Murphy, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer

From:	bettyw jaffeandpartners.com
To:	Mercedes Perez
Subject:	1113 Wolcott Avenue
Date:	Monday, April 7, 2025 3:55:44 PM
Attachments:	IMG_2714 2.png

Hi Mercedes, Thank you for sharing the below with the Planning Board. Could I ask you to please confirm receipt.

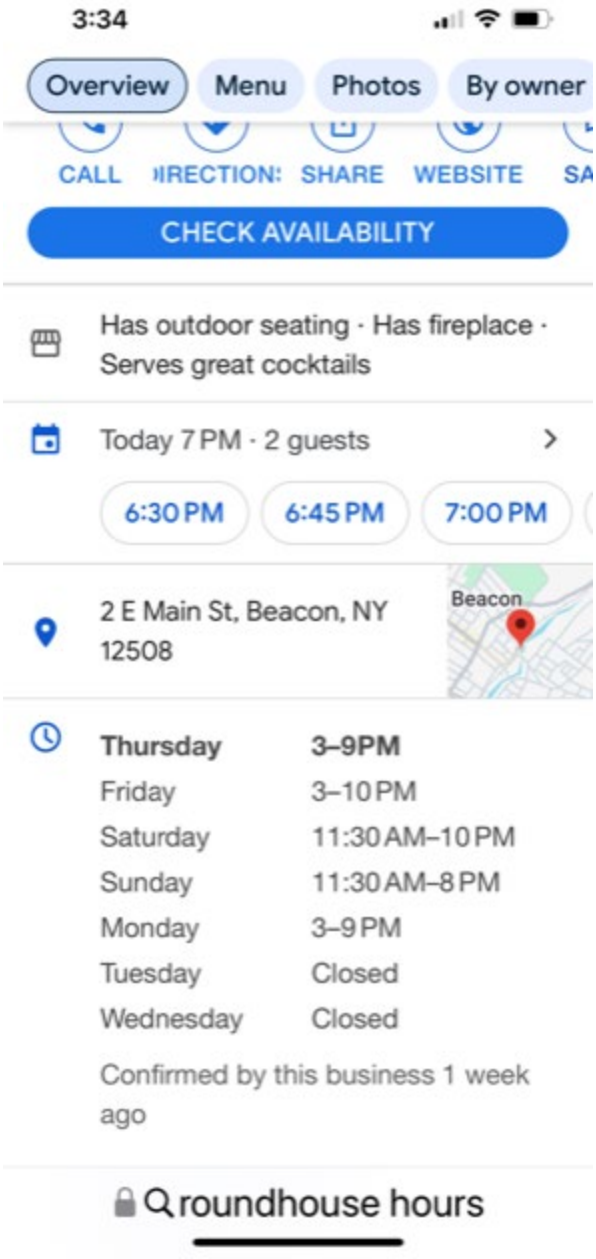
Dear Beacon Planning Board Members,

I am writing regarding the proposed development at 1113 Wolcott Avenue.

While I am pleased to learn that the plans are no longer for an "event space", I still have some concerns which have been shared with the applicant.

- Hours of construction 8 am to 7pm, with work being done potentially 7 days a week and holidays. Given the close proximity to neighbors, that seems excessive and disruptive
- Hours of operation 7am to 9pm or 10:30pm, 7 days a week and holidays. A few months ago the applicant's team had presented "probable hours" (5 days a week from 11:00am to 10:00pm worse case scenario) which seemed more appropriate given the site is closely surrounded by residential homes. The Roundhouse, which is much more secluded from homes, has much more parking and is a much larger venue is only open 5 days a week from 3pm or 11:30am to 8, 9 or 10pm. I understand the potential need to serve hotel guests breakfast, but can't that be done without the restaurant being open to the public? Basically there will be restaurant activity from 6am or earlier until potentially 11:30pm when you factor in prep and clean up. That will be an excessive level of disturbance to some of the homeowners who live close by.
- They have indicated a "limited number of events". Can they specify what "limited" means? It would be a little more reassuring to know that there is going to be a reasonable number of weddings or that type of event.
- Can there be some specifics on what is going to be done to clean up the cemetery and repair the church. The steeple has been in total disrepair for over 3 years and shingles continue to fly off and onto our property — which is frankly dangerous
- Do they still need 2 box truck deliveries/day given the change in scope of usage?
- Where will the fence between RRV and the church be placed? We currently have a row of trees on our north side which demarcates our property. Will the fence go between those trees and their trees/shrubs?
- I was happy to see that thanks to the Board's recent comments, noise mitigation measures have been added back into the proposal and I look forward to hearing more details about that. Noise remains a great concern, particularly to the 6 homes that are located 100 or so feet from the church.

Thank you.
Best,
Betty Wall
River Ridge Court


3:34
Overview
Menu
Photos
By owner
CALL
SHARE
WEBSITE
CHECK AVAILABILITY
Has outdoor seating · Has fireplace · Serves great cocktails
Today 7 PM · 2 guests
6:30 PM
6:45 PM
7:00 PM
2 E Main St, Beacon, NY 12508
Beacon
Thursday 3–9PM
Friday 3–10 PM
Saturday 11:30 AM–10 PM
Sunday 11:30 AM–8 PM
Monday 3–9 PM
Tuesday Closed
Wednesday Closed
Confirmed by this business 1 week ago
roundhouse hours

From: bettyw jaffeandpartners.com
To: Mercedes Perez
Subject: 1113 Wolcott Ave
Date: Monday, April 7, 2025 4:24:22 PM

Hi Mercedes, my neighbor Jane Riley asked me to submit this to the board either in writing or by reading it. I would prefer to do it in writing. Please let me know that is ok. Thank you.

Dear Beacon Planning Board,

Regarding 1113, Wolcott Avenue, my first concern is with the preservation and restoration of the church as well as the repair/beautification of the graveyard. My major second concern is traffic and pedestrian safety. I personally tried to cross 9D, pressed for the lights to be active and not one but two passenger cars sped right past me while I was standing in the road trying to cross. Hours of operation are, of course, a major concern. I want traffic slowed on 9D and I want to see restoration/preservation of our historic buildings. Thank you.

Jane Riley
Stratford Ave
Sent from my iPhone

Received:
APR 08 2025
City of Beacon
Building/Planning/Zoning
957

April 8, 2025

Delivered By Hand

Regarding: 1113 Wolcott Avenue

Dear Mr. Gunn and Planning Board Members,

At this point why should we accept anything the Applicant says?

The Construction hours are completely unreasonable 11 hours a day. That is not typical for a neighborhood project. It suggests either two full shifts or overtime, and the impact on the surrounding area is being ignored and inconsiderate.

Applicant's Plan continues to shift without clarity or consistency. The Applicant removed the acoustical windows, only to put them back later.

Now ,the hotel which was originally pitched as the Main Use has been reduced from 30 rooms to just 16 rooms. What is exactly the plan right now?

This doesn't reflect on someone acting it good faith. That concern was raised early on in this journey, and nothing since changed that impression. The process has been marked by evasiveness, revision, and lack of accountability.

This Board has a responsibility to protect the integrity of our community and ensure that the projects moving forward are built on transparency and honest intent. So far, this proposal hast not met the Standard.

Sincerely,

Dale Brooks

Dale E. Brooks

10 River Ridge Ct

City of Beacon Planning Board Agenda
04/08/2025

Title:

Public hearing and continue review of application for Subdivision Approval, Residential, 74 Anderson Street, submitted by Sadhna Gupta.

ATTACHMENTS

74 Anderson PB 4.8.25 Cover Letter_2025-0325.pdf

74 Anderson PB 4.8.25 plan set_2025-0325.pdf

Lanc & Tully 74 Anderson St 04-03-25 review.pdf

KARC Review PB_74 Anderson St_2025.04.07.pdf

74 Anderson PB 4.8.25 PH public comment Joanes.pdf

74 Anderson Street - SEAF Parts 2 and 3 (4932-3258-2450.1).pdf

74 Anderson Street - Subdivision_SEQRA Negative Declaration (4924-9123-8194.1).pdf

Civil & Environmental Engineering Consultants
174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)
13 Chambers Street, Newburgh, NY 12550 (Satellite Office)
Phone: 845-440-6926
www.HudsonLandDesign.com

March 25, 2025

John Gunn, Chairman and Members of the City of Beacon Planning Board
1 Municipal Plaza
Beacon, New York 12508

Re: 74 Anderson Street Subdivision
Sadhna Gupta (Applicant)
74 Anderson Street
Tax Parcel ID: 6054-31-358838 (±0.65 acres total)
City of Beacon, NY

Dear Chairman Gunn and Members of the Planning Board:

On behalf of the Applicant for the above referenced project, Hudson Land Design (HLD) is pleased to submit copies of the following documents in support of the Project:

- Five (5) copies of the Civil Site Plan Set (Sheets 1 through 7 of 7)

The documents have been prepared and/or updated in response to comments from the Planning Board and from the City's consultants for the Planning Board's continued review and consideration of the Application. The following are point-by-point responses to each comment contained within the letters prepared by the City's consultants:

Lanc & Tully Review Letter, Dated March 6, 2025:

Existing Conditions & Removals Plan (Sheet 2 of 7):

1. All existing trees over 6 inches in diameter have been added to the plan and identified by size and species in a table, and also identifies those trees to be removed.

Subdivision Plat (Sheet 3 of 7):

1. The proposed retaining wall on Lot 2 has been removed from this sheet.

Subdivision Plan (Sheet 4 of 7):

1. The latest proposal calls for the sanitary sewer service line to run westerly down Anderson Street to an existing manhole. Elevations provide the minimum required pitch on the 4" diameter pipe. A profile of the line will be provided with a future submittal.

2. The plans call for no basements due to the shallow bedrock. For the record, the existing structure being removed has a crawl space.
3. Proposed grading around the houses and walkways has been provided. Adequate pitch away from the structures is maintained.
4. The plans show a front door location with a walkway to the driveway and towards the garage.
5. We reached out to the City Water Department and are awaiting a response on the size and material of the water main in Anderson Street.
6. Rim elevation and inverts of the existing sewer manholes are provided.

Erosion & Sediment Control Plan (Sheet 5 of 7):

1. Additional silt fencing has been added per the comment, and per the latest grading revisions.
2. The sewer service lateral has been relocated, and the silt fence is no longer in conflict.
3. Additional silt fencing has been added per the comment, and per the latest grading revisions.

Construction Details (Sheet 6 of 7):

1. The sanitary sewer service lines are directed to the manhole. As such, a core, bore and boot detail is provided to facilitate the connection.

KARC Planning Consultants, Inc. Review Letter, Dated March 10, 2025:

1. The Title of Sheet SP-1 has been changed from Subdivision Plat to Preliminary Plat. The title index on Sheet CV-1 has been edited to reflect the same.
2. All existing trees over 6 inches in diameter have been added to the plan and identified by size and species along with removals (see sheet XC-1).
3. Front doors are shown and labelled on sheet SP-2.

We look forward to continuing our discussions regarding this Application and conducting the public hearing at your April 8, 2025 Planning Board meeting. Should you have any questions, please feel free to contact me on my direct line 845-766-8955.

Sincerely,

Daniel G. Koehler, P.E.
Principal

cc: Sadhna Gupta, Applicant (via email)
Joseph Rappa, Jr., L.S., Project Surveyor (via email)
Michael A. Bodendorf, P.E. (HLD file)

74 ANDERSON STREET

RESIDENTIAL SUBDIVISION

74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK

PARCEL INFORMATION:
TAX ID: 6054-31-358838
TOTAL LOT AREA: ±0.659 ACRES
ZONING DISTRICT: R-10

SITE LOCATION MAP SCALE: 1" = 400'

ADJOINING OWNERS WITHIN 200'
PARCEL: OWNER & ADDRESS
1. CITY OF BEACON SCHOOL DISTRICT, 10 EDUCATION DRIVE, BEACON NY 12508
2. MONICA COOPER, 84 ANDERSON STREET, BEACON NY 12508
3. ANN MCGOWAN, 335 EAST 86TH STREET 5A, NEW YORK NY 10028
4. ANDREY NETBOY, 85 ANDERSON STREET, BEACON NY 12508
5. PHILOMENA KIERNAN, 80 OVERLOOK AVENUE, BEACON NY 12508
6. TRACY DROSS, 72 OVERLOOK AVENUE, BEACON NY 12508
7. CHARLES DEL BENE JR, 54 OVERLOOK AVENUE, BEACON NY 12508
8. GREGORY MARTIN WHITE, 65 ANDERSON STREET, BEACON NY 12508
9. CRAIG HEITCZMAN, 30 TILLOTT STREET, BEACON NY 12508
10. THOMAS CERCHIARA, 10 TILLOT STREET, BEACON NY 12508
11. WILLIAM TOBAR, 48 ANDERSON STREET, CORNWALL ON THE HUDSON NY 12520
12. CHRISTOPHER WOLFE, 52 ANDERSON STREET, BEACON NY 12508
13. ANA JOANES, 60 ANDERSON STREET, BEACON NY 12508

PROJECT ENGINEER:
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN STREET
BEACON, NEW YORK 12508
PH: 845-440-6926

OWNER/APPLICANT:
SADHNA GUPTA
17 WESTON ROAD
WESTPORT CT 06880
PH: 321-381-2135

PROJECT SURVEYOR:
BOUNDARY & BENCHMARK
PO BOX 389
WALLKILL, NEW YORK 12589
PH: 845-802-3687

DRAWING INDEX:
SHEET 1: COVER SHEET (CV-1)
SHEET 2: EXISTING CONDITIONS & REMOVALS PLAN (XC-1)
SHEET 3: PRELIMINARY PLAT (SP-1)
SHEET 4: SUBDIVISION PLAN (SP-2)
SHEET 5: EROSION & SEDIMENT CONTROL PLAN (ESC-1)
SHEET 6: CONSTRUCTION DETAILS (CD-1)
SHEET 7: CONSTRUCTION DETAILS (CD-2)

OWNER'S CONSENT:
THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SADHNA GUPTA DATE

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED ON JANUARY 16, 2025.

BY:_____
JOSEPH RAPPA JR., L.S. N.Y. State Lic. no. 051206

DCDBCH STANDARD NOTE:

FOR PERMISSION TO FILE
THIS PLAN DOES NOT CONSTITUTE A REALTY SUBDIVISION AS DEFINED BY ARTICLE XI, TITLE II, SECTION 1115 OF THE PUBLIC HEALTH LAW OF THE STATE OF NEW YORK, AND ARTICLE XI OF THE DUTCHESS COUNTY SANITARY CODE. PERMISSION IS HEREBY GRANTED FOR THE FILING OF THIS MAP WITH THE CLERK OF DUTCHESS COUNTY. APPROVAL FOR ARRANGEMENTS FOR WATER SUPPLY AND/OR SEWAGE DISPOSAL IS NEITHER SOUGHT NOR GRANTED.

_____ _____
AUTHORIZED REPRESENTATIVE OF THE COMMISSIONER OF HEALTH DATE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

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STATE OF NEW YORK DANIEL G. ROBERTS 082716 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

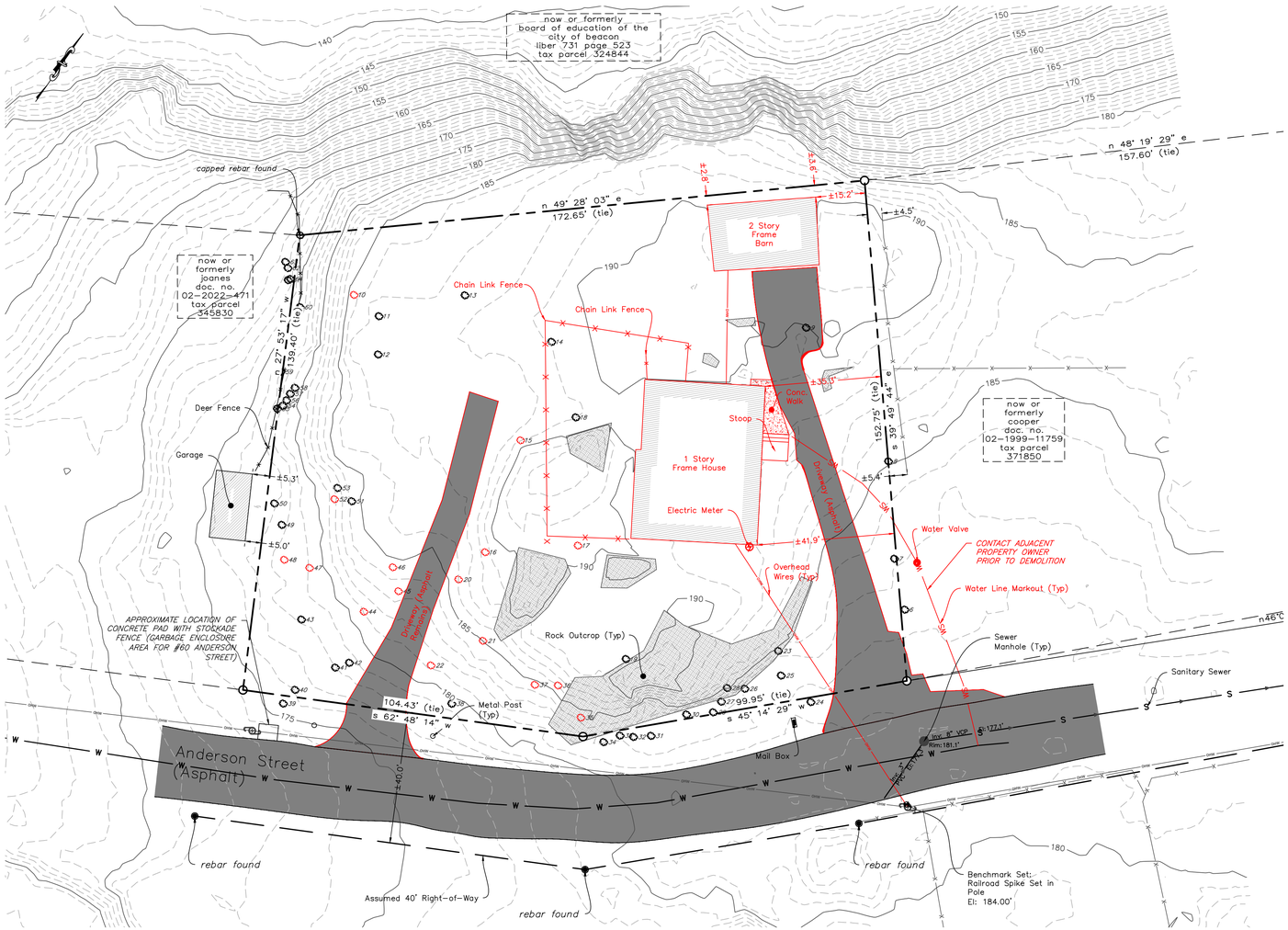
COVER SHEET

74 ANDERSON STREET

74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-31-358838

JOB #:	2024:051
DATE:	2/25/25
SCALE:	AS SHOWN
TITLE:	CV-1
SHEET:	1 OF 7

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING WATER LINE
- EXISTING WATER SERVICE LINE
- EXISTING WATER VALVE
- EXISTING FENCE
- TO BE REMOVED

EXISTING TREE & REMOVAL SCHEDULE:

6. 24" BLACK WALNUT		26. 9" FIR		46. 18" OAK	TBR
7. 21"		27. 10" DEAD FIR		47. 8" MAPLE	TBR
8. 24"		28. 10" MAPLE		48. 15" TWN BLACK WALNUT	TBR
9. 24" OAK		29. 8" DEAD FIR		49. 6" MAPLE	
10. 12" SYCAMORE	TBR	30. 6" FIR		50. 8" MAPLE	
11. 9" MAPLE		31. 10" MAPLE		51. 16" MAPLE	
12. 10" SYCAMORE		32. 7" FIR		52. 10" OAK	TBR
13. 15" OAK		33. 14" OAK		53. 16" MAPLE	
14. 18" WHITE PINE		34. 8" FIR		54. 12" OAK	
15. 18" TWN OAK	TBR	35. 15" MAPLE	TBR	55. 10" MAPLE	
16. 15" MAPLE	TBR	36. 6" MAPLE	TBR	56. 12" OAK	
17. 16" PIN OAK	TBR	37. 8" MAPLE	TBR	57. 6" MAPLE	
18. 16" WHITE PINE		38. 16" OAK		58. 7" MAPLE	
19. 6" MAPLE		39. 16" BLACK WALNUT		59. 12" MAPLE	
20. 12" TWN MAPLE	TBR	40. 8" MAPLE		60. 10" MAPLE	
21. 18" OAK	TBR	41. 14" MAPLE		61. 10" MAPLE	
22. 10" OAK	TBR	42. 14" MAPLE		62. 20" OAK	
23. 10" QUAD MAPLE		43. 12" MAPLE		63. 7" MAPLE	
24. 21" BLACK WALNUT		44. 8" OAK	TBR	64. 8" MAPLE	
25. 10" FIR		45. 21" OAK	TBR		

NOTES:
1. TREE LOCATIONS, SIZES AND IDENTIFICATION BY HUDSON LAND DESIGN PERSONNEL ON MARCH 18, 2025.
2. **TBR** = TO BE REMOVED

PROJECT INFORMATION:

PARCEL OWNER:	SADHNA GUPTA, 17 WESTON ROAD, WESTPORT CT 06880
PROJECT ENGINEER:	HUDSON LAND DESIGN P.C., 174 MAIN STREET, BEACON NY 12508
PARCEL LOCATION:	74 ANDERSON STREET, BEACON NY 12508
TAX PARCEL ID:	6054-31-358838
PARCEL AREA:	±.659-ACRE
WATER SUPPLY:	MUNICIPAL
SEWAGE DISPOSAL:	MUNICIPAL

MAP REFERENCES:

1. BOUNDARY AND TOPOGRAPHIC SURVEY PER BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR SADHNA GUPTA" PREPARED BY BOUNDARY & BENCHMARK LAND SURVEYORS, P.C., DATED JANUARY 16, 2025.

SURVEY NOTES:

1. COPYRIGHT RAPPA & BURNETT LAND SURVEYORS, P.C. ALL RIGHTS RESERVED. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND / OR COPYRIGHT HOLDER IS OBTAINED.
2. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
3. ONLY BOUNDARY SURVEY MAPS WITH THE SURVEYOR'S EMBOSSED OR RED INKED SEAL ARE GENUINE, TRUE AND CORRECT COPIES OF THE SURVEYOR'S ORIGINAL WORK AND OPINION. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED INKED SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.
4. CERTIFICATIONS ON THIS BOUNDARY SURVEY MAP SIGNIFY THAT THE MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC. THE CERTIFICATION IS LIMITED TO PERSONS FOR WHOM THE BOUNDARY SURVEY MAP IS PREPARED, TO THE TITLE COMPANY, TO THE GOVERNMENTAL AGENCY, AND TO THE LENDING INSTITUTION LISTED ON THIS BOUNDARY SURVEY MAP.
5. THE CERTIFICATIONS HEREIN ARE NOT TRANSFERABLE.
6. THE LOCATIONS OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE NOT ALWAYS KNOWN AND OFTEN MUST BE ESTIMATED. IF ANY UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS EXIST OR ARE SHOWN, THE IMPROVEMENTS OR ENCROACHMENTS ARE NOT COVERED BY THIS CERTIFICATE.
7. SUBJECT TO THE FINDINGS OF A CURRENT TITLE SEARCH.
8. SUBJECT TO COVENANTS, EASEMENTS, RESTRICTIONS, CONDITIONS, AND AGREEMENTS OF RECORD IF ANY.
9. SUBJECT TO ANY RIGHT, TITLE OR INTEREST THE PUBLIC MAY HAVE FOR HIGHWAY USE.
10. BEARINGS AND NORTH SHOWN HEREON ARE REFERENCED TO NAD 83-NY EAST USING REAL-TIME KINEMATIC GPS OBSERVATIONS.
11. CONTOUR INTERVAL IS ONE FOOT AND IS REFERENCED TO NAVD88. THE TOPOGRAPHY SHOWN HEREON IS DERIVED FROM UAV PHOTOGRAMMETRY UTILIZING BASE-ROVER GPS WITH AN ON-SITE BASE AND 10 INDEPENDENT CHECK POINTS. CHECK POINTS HAVE THE FOLLOWING ACCURACY: HRMS 0.093' (NORTHING), 0.089' (EASTING), VRMS 0.137' (ELEVATION).
12. PARCEL AREA NOTED HEREON DERIVED FROM BOTH MEASURED AND RECORD EVIDENCE.
13. BEARINGS AND DISTANCES SHOWN HEREON ARE FOR COMPUTATIONAL PURPOSES ONLY.

DEMOLITION NOTES:

1. PRIOR TO DEMOLISHING ANY BUILDINGS/STRUCTURES, THE CONTRACTOR SHALL PERFORM A PRE-DEMOLITION SURVEY IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS GOVERNING THE DISPOSAL OF SOLID WASTE. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS BY THE AUTHORITY HAVING JURISDICTION. ALL DEBRIS RESULTING FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE AT A FACILITY APPROVED TO RECEIVE THE DEBRIS.
2. CONFORM TO APPLICABLE CODE FOR DEMOLITION OF STRUCTURES, SAFETY OF ADJACENT STRUCTURES, DUST CONTROL, RUNOFF CONTROL, AND HAULING, DISPOSAL AND STORAGE OF DEBRIS.
3. PROVIDE, ERECT, AND MAINTAIN TEMPORARY BARRIERS AND SECURITY DEVICES.
4. MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING SELECTIVE DEMOLITION OPERATIONS. DO NOT INTERRUPT EXISTING UTILITIES SERVING OPERATING FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY OWNER AND AUTHORITIES HAVING JURISDICTION.
5. NOTIFY ADJACENT OWNERS OF WORK THAT MAY AFFECT THEIR PROPERTY, POTENTIAL NOISE, UTILITY OUTAGE, OR DISRUPTION. COORDINATE WITH OWNER.
6. PREVENT MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES. PROVIDE BRACING AND SHORING.
7. LOCATE AND IDENTIFY ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA. DISCONNECT AND SEAL OR CAP OFF UTILITY SERVICES THAT WILL BE AFFECTED BY THIS PROJECT. NOTIFY AFFECTED UTILITY COMPANIES BEFORE STARTING WORK AND COMPLY WITH THEIR REQUIREMENTS. VERIFY THAT UTILITIES HAVE BEEN DISCONNECTED AND CAPPED.
8. DEMOLISH AND REMOVE COMPONENTS IN AN ORDERLY AND CAREFUL MANNER.
9. PROTECT EXISTING FEATURES THAT ARE NOT TO BE DEMOLISHED.
10. CONDUCT OPERATIONS WITH MINIMUM INTERFERENCE TO PUBLIC OR PRIVATE ACCESSES.
11. MAINTAIN EGRESS AND ACCESS AT ALL TIMES. DO NOT CLOSE OR OBSTRUCT ROADWAYS, OR SIDEWALKS WITHOUT PERMITS.
12. CEASE OPERATIONS IMMEDIATELY IF ADJACENT STRUCTURES APPEAR TO BE IN DANGER. NOTIFY AUTHORITY HAVING JURISDICTION.
13. ROUGH GRADE AND COMPACT AREAS AFFECTED BY DEMOLITION TO MAINTAIN SITE GRADES AND CONTOURS.
14. FIELD VERIFY EXISTING CONDITIONS AND CORRELATE WITH REQUIREMENTS INDICATED ON DEMOLITION PLAN TO DETERMINE EXTENT OF SELECTIVE DEMOLITION REQUIRED.
15. MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING SELECTIVE DEMOLITION OPERATION.
16. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH SELECTIVE DEMOLITION OPERATIONS.
17. CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND SELECTIVE DEMOLITION AREA.
18. USE WATER MIST, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS TO LIMIT THE SPREAD OF DUST AND DIRT. COMPLY WITH GOVERNING ENVIRONMENTAL PROTECTION REGULATIONS. DO NOT USE WATER WHEN IT MAY DAMAGE EXISTING CONSTRUCTION, SUCH AS ICE, FLOODING, AND POLLUTION.
19. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.
20. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT AND DEBRIS CAUSED BY SELECTIVE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF SELECTIVE DEMOLITIONS.
21. PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. DO NOT BURN DEMOLISHED MATERIALS ON-SITE.

INDIANA BAT PROTECTION NOTES:

1. TREE CLEARING SHALL BE RESTRICTED TO THE PERIOD BETWEEN OCTOBER 1 AND MARCH 31.
2. THE LIMITS OF DISTURBANCE SHALL BE DEMARCATED BY INSTALLING ORANGE CONSTRUCTION FENCE FOR THE GENERAL IMPROVEMENT AND INFRASTRUCTURE CONSTRUCTION ACTIVITIES AND FOR THE INDIVIDUAL LOT CONSTRUCTION. THESE LIMITS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. DUST CONTROL DURING CONSTRUCTION SHALL BE IMPLEMENTED. THIS INCLUDES USE OF CONSTRUCTION ENTRANCES, APPLYING LIGHT WATER, AND ESTABLISHING VEGETATION.
4. STREET LIGHTS ARE NOT PERMITTED. RESIDENTIAL LIGHTING SHALL BE DIRECTED DOWNWARD TO REDUCE IMPACTS TO BATS FORAGING FOR FOOD.

OWNER'S CONSENT:

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SADHNA GUPTA DATE

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED ON JANUARY 16, 2025.

BY: _____
JOSEPH RAPPA JR., L.S. *N.Y. State Lic. no. 051206*

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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STATE OF NEW YORK DANIEL G. KOENIG 282715 LICENSED PROFESSIONAL ENGINEER
SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

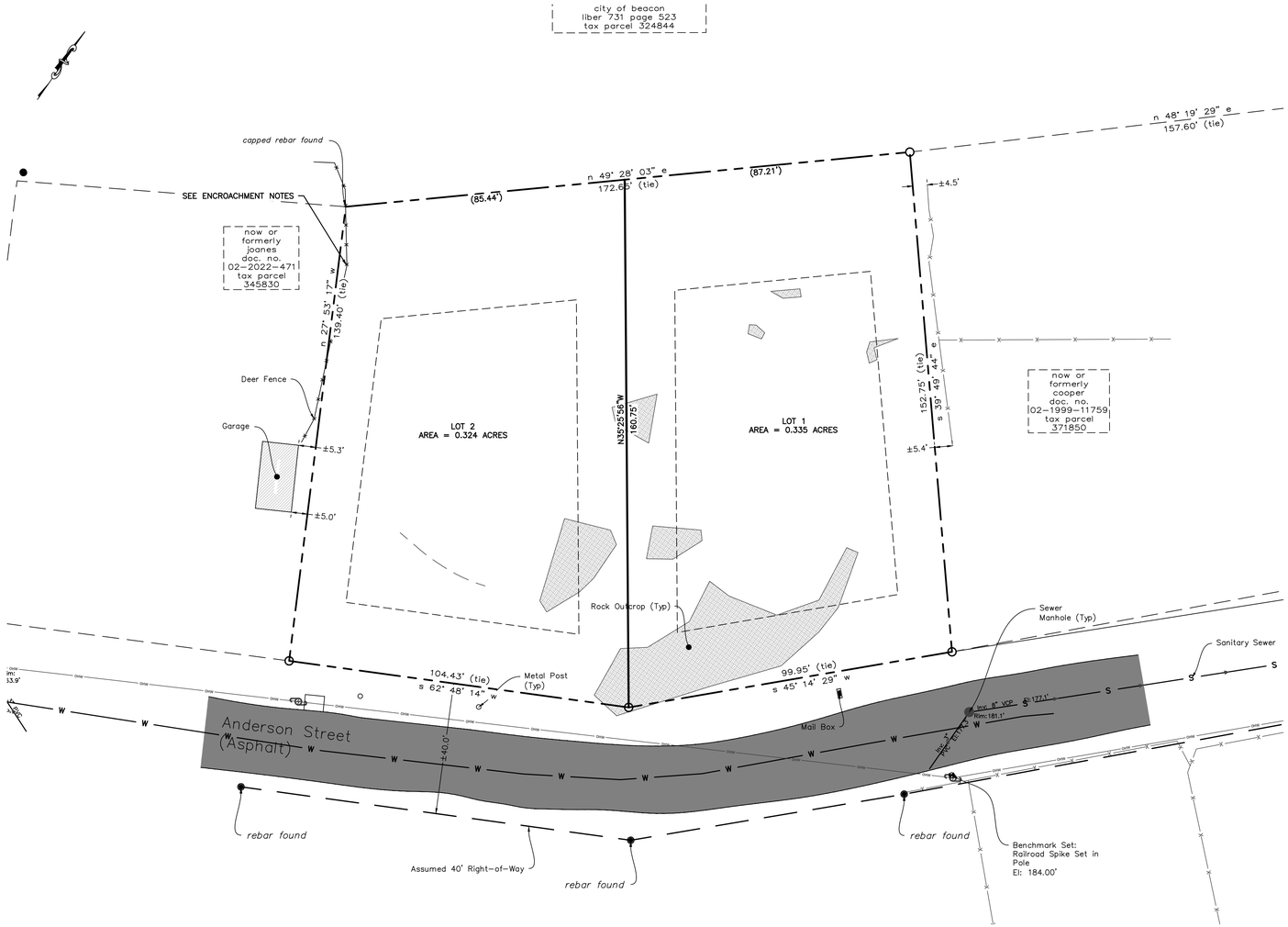
EXISTING CONDITIONS & REMOVALS PLAN

74 ANDERSON STREET

74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-31-358838

JOB #:	2024:051
DATE:	2/25/25
SCALE:	1" = 20'
TITLE:	XC-1
SHEET:	2 OF 7

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
- DW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- S EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- W EXISTING WATER LINE
- EXISTING WATER SERVICE LINE
- EXISTING WATER VALVE
- X EXISTING FENCE
- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- 250 PROPOSED MAJOR CONTOUR
- 252 PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- S PROPOSED SEWER LINE
- SS PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED SDS LATERAL
- PROPOSED SDS SOLID LINE
- ST PROPOSED STORM WATER LINE
- RL PROPOSED ROOF LEADER LINE
- PROPOSED ROOF LEADER
- W PROPOSED WATER LINE
- WS PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE

SCHEDULE OF REGULATIONS (R1-10 ZONING DISTRICT) AND LOT CONFORMANCE TABLE:

PARAMETER	REQUIREMENT
LOT AREA:	10,000 SQFT MIN./UNIT
LOT WIDTH:	85 FEET MINIMUM
LOT DEPTH:	100 FEET MINIMUM
YARD SETBACKS (RESIDENTIAL USE):	
FRONT YARD:	20 FEET
SIDE YARD:	15 FEET
REAR YARD:	35 FEET MINIMUM
MAX. BUILDING HEIGHT:	35 FT, 2.5 STORIES
MAX. BUILDING COVERAGE:	25% MAX.

MAP REFERENCE:

1. BOUNDARY AND TOPOGRAPHIC SURVEY PER BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR SADHNA GUPTA" PREPARED BY BOUNDARY & BENCHMARK LAND SURVEYORS, P.C., DATED JANUARY 16, 2025.

TOTAL PARCEL AREA:

±28,706 S.F. OR ±0.659 ACRE

TAX MAP REFERENCE:

CITY OF BEACON 130200-6054-31-358838

HORIZONTAL DATUM:

NAD 83-NY EAST

VERTICAL DATUM:

NAVD 88

FLOOD BOUNDARY:

SUBJECT PARCEL IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANGE FLOODPLAIN) PER PANEL 36027C0464E DATED MAY 2, 2012.

WETLAND NOTE:

NO NYSDEC OR FEDERAL WETLANDS WERE FOUND ONSITE.

ENCROACHMENT NOTE:

THE FILING OF THIS PLAT DOES NOT CONSTITUTE ANY ENDORSEMENT, APPROVAL OR AUTHORIZATION OF ANY KIND FOR THE CONTINUATION OR REMOVAL OF ANY EXISTING ENCROACHMENTS ON THE SUBJECT PROPERTY.

OWNER'S CONSENT:

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SADHNA GUPTA DATE

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED ON JANUARY 16, 2025.

BY: _____
JOSEPH RAPPA JR., L.S. *N.Y. State Lic. no. 051206*

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

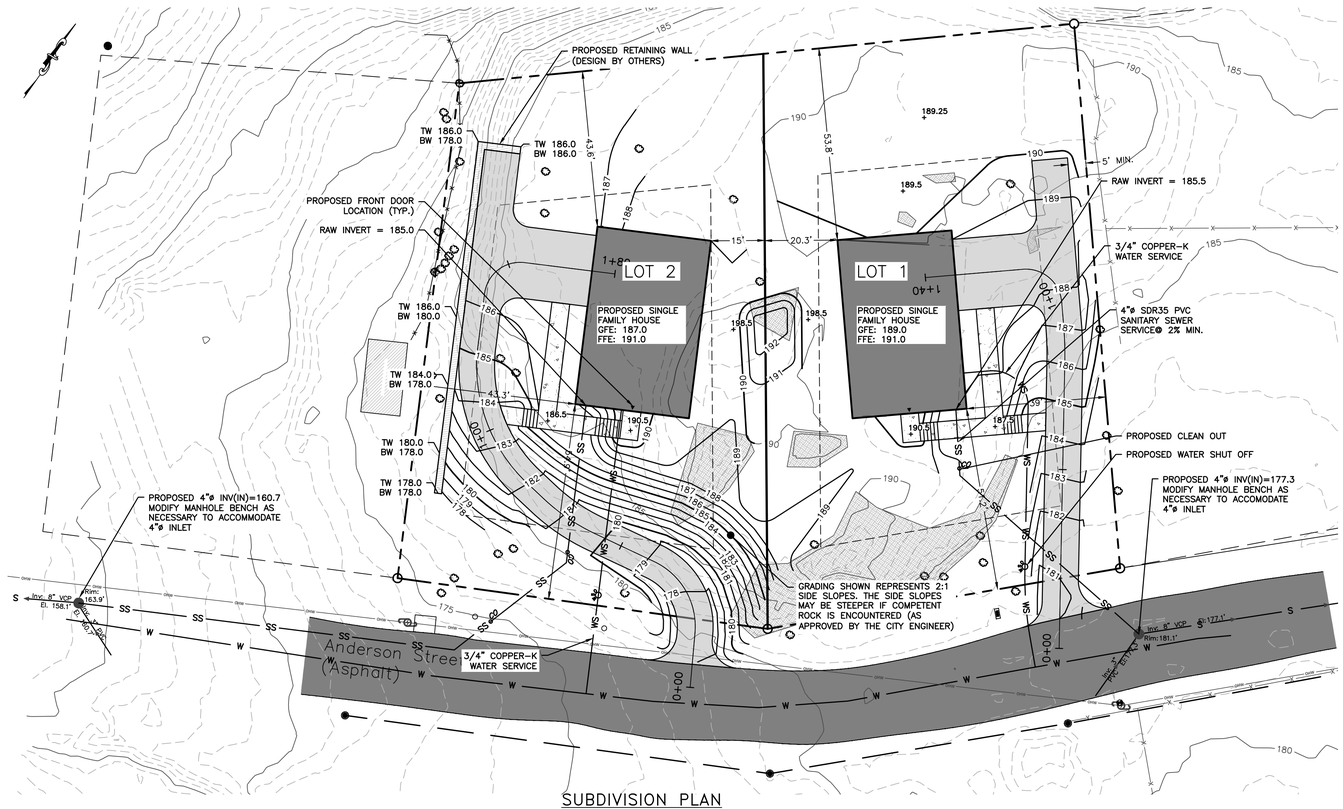
PRELIMINARY PLAT

74 ANDERSON STREET

74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-31-358838

JOB #:	2024:051
DATE:	2/25/25
SCALE:	1" = 20'
TITLE:	SP-1
SHEET:	3 OF 7

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



SUBDIVISION PLAN
SCALE: 1" = 20'

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING WATER LINE
- EXISTING WATER SERVICE LINE
- EXISTING WATER VALVE
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- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE

SCHEDULE OF REGULATIONS (R1–10 ZONING DISTRICT) AND LOT CONFORMANCE TABLE:

PARAMETER	REQUIREMENT	LOT 1	LOT 2
LOT AREA:	10,000 SQFT MIN./UNIT	±14,588 SQFT	±14,118 SQFT
LOT WIDTH:	85 FEET MINIMUM	±86.9 FEET	±85.1 FEET
LOT DEPTH:	100 FEET MINIMUM	±152.8 FEET	±139.4 FEET
YARD SETBACKS (RESIDENTIAL USE):			
FRONT YARD:	20 FEET	51.2 FEET	54.9 FEET
SIDE YARD:	15 FEET	20.3 FEET	15.0 FEET
REAR YARD:	35 FEET MINIMUM	53.8 FEET	43.6 FEET
MAX. BUILDING HEIGHT:	35 FT, 2.5 STORIES	≤35 FEET	≤35 FEET
MAX. BUILDING COVERAGE:	25% MAX.	±10.9%	±11.3%

WATER & SEWER NOTES:

1. ALL WATER & SEWER CONNECTIONS SHALL COMPLY WITH CITY WATER AND SEWER DISTRICT REQUIREMENTS.
2. THE PROPOSED BUILDING SHALL BE SET AT SUCH ELEVATION TO ENSURE GRAVITY FLOW FROM THE RAW SEWER LINE TO THE POINT OF CONNECTION WITH THE EXISTING SEWER MAIN, WHILE MAINTAINING PROPER EARTH COVER ABOVE ALL PIPING.
3. NO CELLAR, ROOF, OR FOOTING DRAINS SHALL BE DISCHARGED INTO THE SANITARY SEWER SYSTEM.
4. THE APPLICANT/APPLICANT'S PLUMBER SHALL ACQUIRE WATER METERS AND MXU UNITS (SIGNAL SENDING AND RECEIVING UNIT) FOR THE AMI SYSTEM (ADVANCED METERING INFRASTRUCTURE) FROM THE CITY OF BEACON WATER DEPARTMENT. THE MXU UNIT SHALL BE INSTALLED ON THE EXTERIOR OF THE BUILDING AND SHALL BE LOCATED 2 TO 3 FEET ABOVE THE EXTERIOR GROUND ELEVATION.

GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL–OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1–800–962–7962.
2. WATER, SEWER AND STORM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS. ALL OTHER UTILITIES (TELEPHONE, ELECTRIC, GAS, CABLE, ETC.) SHALL BE INCORPORATED FOLLOWING SITE PLAN APPROVAL. ALL SUCH UTILITY DESIGNS SHALL BE DEVELOPED IN COORDINATION WITH THE RESPECTIVE UTILITY COMPANIES.
3. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, LOCATION, DEPTH AND CONDITION OF ALL UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT.
4. THE CONTRACTOR SHALL CONSTRUCT ALL IMPROVEMENTS AS SHOWN ON PLANS. ANY FIELD CONDITIONS THAT MAY RESULT IN A VARIATION FROM THE PLAN SET SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IN WRITING. VARIATIONS FROM THE PLAN WITHOUT APPROVAL FROM THE ENGINEER WILL BE CONSIDERED DEFICIENT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ON–SITE OR OFF–SITE DAMAGES TO VEGETATION OR PROPERTY CAUSED BY HIS OPERATIONS. SUCH DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS COST TO THE SATISFACTION OF THE ENGINEER, PROPERTY OWNER OR AGENCY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL KEEP THE SITE IN A CLEAN AND ORDERLY MANNER.

SITE SPECIFIC NOTES:

1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL–OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1–800–962–7962.
2. THE CONTRACTOR SHALL CONTACT THE CITY OF BEACON WATER AND SEWER DEPARTMENTS TO SCHEDULE A PRE–CONSTRUCTION MEETING TO ENSURE THAT THE ARRANGEMENTS FOR WATER SUPPLY AND SEWAGE DISPOSAL ARE COMMENCED IN ACCORDANCE WITH THE APPROVED PLANS AND AMENDMENTS THERETO AND GENERALLY ACCEPTED STANDARDS.
3. THE PROPOSED LOTS SHALL BE SERVED BY THE CITY OF BEACON MUNICIPAL WATER AND SEWER SERVICES.
4. THE WATER SERVICE LINE AND METER SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BEACON WATER DEPARTMENT REQUIREMENTS.
5. THE WATER SERVICE LINE TO EACH LOT SHALL BE 3/4"ø K–COPPER.
6. THE SEWER SERVICE LINES TO EACH LOT SHALL BE 4"ø SDR 35 PVC PIPE WITH PITCH AS SHOWN ON THE PLAN (MINIMUM OF ¼" PER FOOT SHALL BE MAINTAINED).
7. A ROAD OPENING PERMIT SHALL BE REQUIRED FOR THE INSTALLATION OF THE PROPOSED WATER AND SEWER SERVICES FOR THE NEW BUILDING. STREET CLOSURE FOR WATER AND SEWER SERVICE CONNECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF BEACON REQUIREMENTS.
8. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. THE PROPOSED DRIVEWAY SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE.
9. SUMP PUMP TO BE PROVIDED FOR FOOTING DRAINS. THE TYPE OF PUMP AND METHODS USED TO ENSURE PROPER DRAINAGE SHALL BE ACCEPTABLE TO THE CITY OF BEACON BUILDING DEPARTMENT. BACKFLOW PREVENTION DEVICES SHALL BE PLACED ON THE FOOTING DRAINS TO PREVENT BACKFLOW INTO THE FOOTING DRAIN. SUMP PUMP DISCHARGE SHALL NOT ENTER THE SANITARY SEWER SYSTEM.
10. THE PROPOSED DRIVEWAY SIGHT DISTANCE SHALL BE IN COMPLIANCE WITH THE CITY OF BEACON'S 192–9(B) CODE AND THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. THE STATE UTILIZES THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) GUIDELINES FOR INTERSECTION SIGHT DISTANCES. FOR ROADS WITH A SPEED LIMIT OF 30 MPH, AASHTO DESIGN TABLES CALL FOR A SIGHT DISTANCE OF 290 FEET TO THE LEFT AND 335 FEET TO THE RIGHT. IN CASES WHERE INTERSECTION SIGHT DISTANCE IS DEFICIENT, A MINIMUM STOPPING SIGHT DISTANCE OF 200 FEET IS REQUIRED. THE MEASURED SIGHT DISTANCE IS AS FOLLOWS:

LOT 1: INTERSECTION SIGHT DISTANCE RIGHT = ±200 FEET
INTERSECTION SIGHT DISTANCE LEFT = ±285 FEET
STOPPING SIGHT DISTANCE (WESTBOUND) = ±480 FEET
STOPPING SIGHT DISTANCE (EASTBOUND) = ±240 FEET

LOT 1: INTERSECTION SIGHT DISTANCE RIGHT = ±700 FEET
INTERSECTION SIGHT DISTANCE LEFT = ±120 FEET
STOPPING SIGHT DISTANCE (WESTBOUND) = ±320 FEET
STOPPING SIGHT DISTANCE (EASTBOUND) = ±700 FEET

11. BEDROCK SHALL REMOVED BY MECHANICAL MEANS. NO BLASTING SHALL BE PERMITTED WITHOUT APPROVAL FROM THE BUILDING DEPARTMENT.

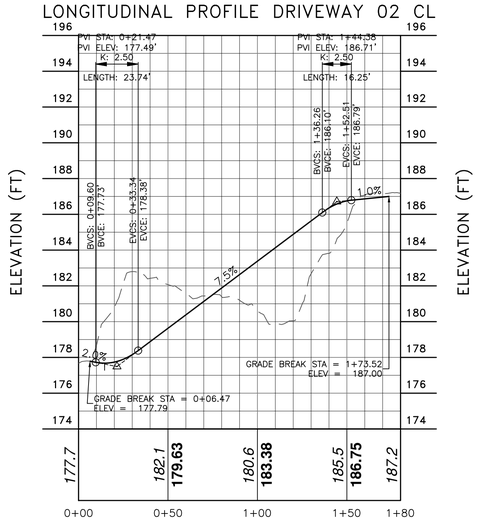
INFILTRATION AND INFLOW MITIGATION NOTES:

1. AT AN INSPECTION PERFORMED ON FEBRUARY 17, 2025, HUDSON LAND DESIGN OBSERVED NO ILLICIT STORMWATER OR SUMP PUMP CONNECTIONS TO THE CITY OF BEACON'S SANITARY SEWER COLLECTION SYSTEM.

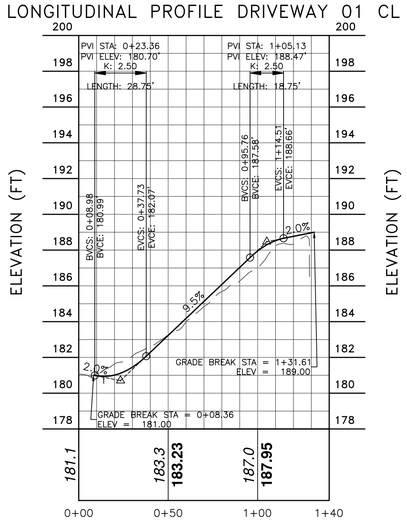
RETAINING WALL NOTES:

1. THE DESIGN OF THE RETAINING WALL SHALL BE COMPLETED BY A NYS LICENSED ENGINEER, AND SUBMITTED TO THE CITY OF BEACON FOR REVIEW.
2. TOP WALL AND BOTTOM WALL ELEVATIONS SHOWN. BOTTOM WALL REPRESENTS THE FINAL GRADE AT EXPOSED FACE OF WALL.
3. RETAINING WALL SHALL INCLUDE RAIL SYSTEM AT THE TOP WHERE DIRECTLY ADJACENT TO THE DRIVEWAY.

LONGITUDINAL PROFILE DRIVEWAY 02 CL



LONGITUDINAL PROFILE DRIVEWAY 01 CL



DRIVEWAY PROFILES
SCALE: 1"=40'H / 1"=4'V

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

OWNER'S CONSENT:

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SADHNA GUPTA DATE

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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STATE OF NEW YORK DANIEL G. KOESTER 082716 PROFESSIONAL ENGINEER
SEAL

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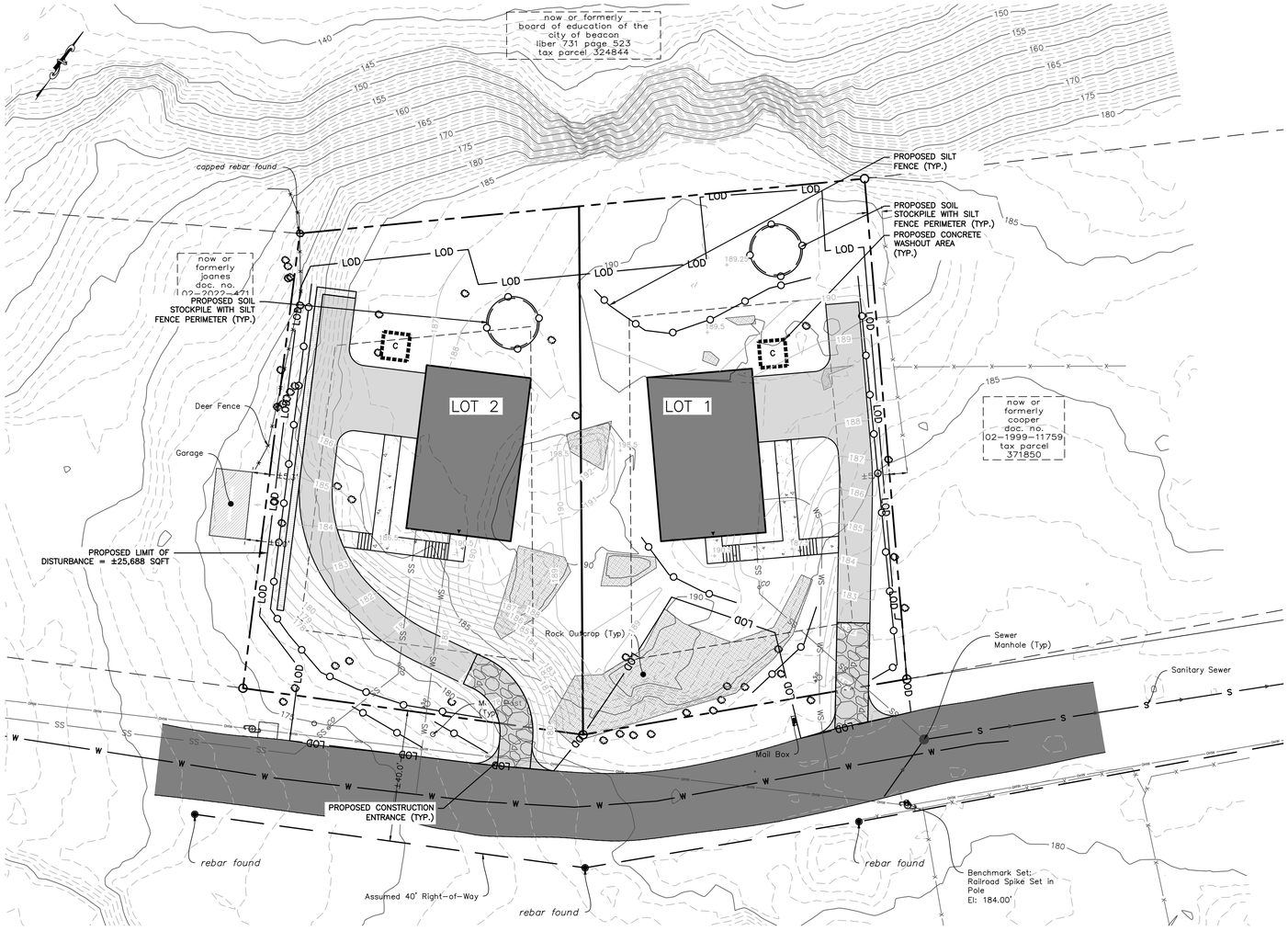
HUDSON LAND DESIGN PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926

SUBDIVISION PLAN
74 ANDERSON STREET
74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054–31–358838

JOB #: 2024:051
DATE: 2/25/25
SCALE: AS SHOWN
TITLE: SP–2
SHEET: 4 OF 7

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING WATER LINE
- EXISTING WATER SERVICE LINE
- EXISTING WATER VALVE
- EXISTING FENCE
- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- PROPOSED SEWER LINE
- PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED SDS LATERAL
- PROPOSED SDS SOLID LINE
- PROPOSED STORM WATER LINE
- PROPOSED ROOF LEADER LINE
- PROPOSED ROOF LEADER
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED CATCH BASIN INLET PROTECTION
- PROPOSED CONSTRUCTION ENTRANCE

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.
2. ALL STORMWATER MANAGEMENT STRUCTURES (E.G. CATCH BASINS) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. CATCH BASINS SHALL BE CLEANED WHEN SEDIMENT DEPTH REACHES A MAXIMUM OF ONE-HALF THE AVAILABLE SUMP DEPTH.
3. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
4. ANY PILE OF POTENTIALLY EROSIVE MATERIAL TEMPORARILY STOCKPILED ON THE SITE DURING THE CONSTRUCTION PROCESS SHALL BE LOCATED IN AN AREA AWAY FROM STORM DRAINAGE AND SHALL BE PROPERLY PROTECTED FROM EROSION BY A SURROUNDING SILT FENCE.
5. PERMANENT SEEDED AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THIS PLAN.
6. AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND WILL NOT BE REDISTURBED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE COVER WITHIN 14 DAYS.
7. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY STANDARD METHODS OF LIGHTLY WATERING ALL EXPOSED SOIL AND RAPIDLY STABILIZING THE REGRADED AREAS WITH TOPSOIL, LOAM AND/OR SEEDING.
8. THE CITY ENGINEER AND PROJECT ENGINEER SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE START OF ANY SITE WORK, AND BY SUCH NOTIFICATION, SHALL BE PROVIDED WITH THE NAME AND TELEPHONE NUMBER OF THE GENERAL CONTRACTOR RESPONSIBLE FOR SUCH WORK.
9. THE CITY AND/OR ITS REPRESENTATIVES MAY INSPECT EROSION AND SEDIMENT CONTROL PRACTICES ON THE SITE DURING CONSTRUCTION AND RECOMMEND THAT THE CONTRACTOR INSTALL ADDITIONAL EROSION CONTROL MEASURES IF DEEMED NECESSARY TO PROTECT ANY UNDISTURBED AREAS OF THE SITE. ANY SUCH REQUESTS SHALL BE MADE DIRECTLY TO THE CONTRACTOR AND QUALIFIED PROFESSIONAL AND FOLLOWED UP WITH A WRITTEN NOTIFICATION TO THE DEVELOPER. IN ADDITION, THE PROJECT ENGINEER SHALL BE CONSULTED ON ANY SPECIAL ADDITIONS OR DELETIONS OF EROSION CONTROL MEASURES WARRANTED BY CHANGING FIELD CONDITIONS.
10. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL TO FILTER WATER FOR PUMPING TO A SUITABLE LOCATION.
11. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

INSPECTION SCHEDULE & MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES

PERMANENT AND TEMPORARY VEGETATION:
INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:
INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. REGRADE PAD AS NEEDED FOR RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE AS DIRECTED BY PROJECT ENGINEER.

SILT FENCE:
INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

SOIL STOCKPILE:
INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCKPILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:
SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORKS. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

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OWNER'S CONSENT:

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_____ _____
SADHNA GUPTA DATE

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

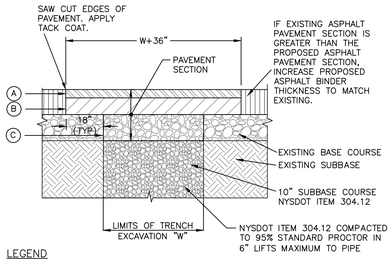
EROSION & SEDIMENT CONTROL PLAN

74 ANDERSON STREET

74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-31-358838

JOB #:	2024:051
DATE:	2/25/25
SCALE:	1" = 20'
TITLE:	ESC-1
SHEET:	5 OF 7

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



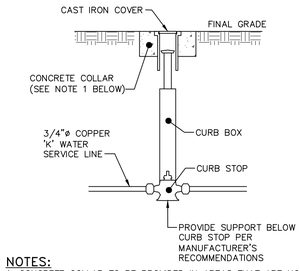
LEGEND

(A) 1.5" ASPHALT CONCRETE TOP COURSE– NYSDOT TYPE F1
(B) 3.0" ASPHALT CONCRETE BINDER COURSE– NYSDOT TYPE F9
(C) 3.0" ASPHALT BASE COURSE– NYSDOT TYPE F9

NOTES:

1. SAW CUT MIN. 18" BEYOND EXCAVATION WITH SMOOTH EDGES. 18" JOINT BETWEEN EXISTING AND NEW TOP COURSE TO BE MILLED. JOINT TO BE SEALED WITH POLYMER MODIFIED SEALER.
2. FURNISH, PLACE, AND COMPACT SUBBASE.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.

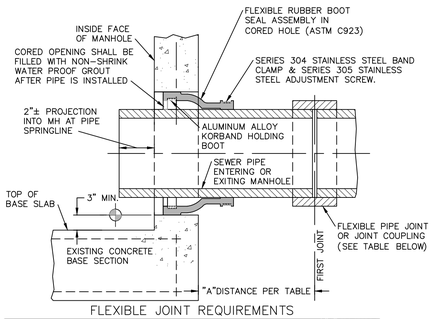
PAVEMENT RESTORATION DETAIL
NOT TO SCALE



NOTES:

1. CONCRETE COLLAR TO BE PROVIDED IN AREAS THAT ARE NOT PAVED. THE COLLAR SHALL BE 6" FROM THE COVER AND SHALL EXTEND 6" BELOW FINAL GRADE.
2. CURB STOP TO BE COMPRESSION TYPE BY MUELLER.
3. AREA AROUND CURB BOX TO BE BACKFILLED WITH GRAVELLY MATERIAL.

WATER SHUT–OFF VALVE DETAIL
NOT TO SCALE

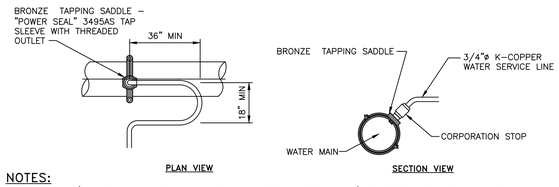


FLEXIBLE JOINT REQUIREMENTS

SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A"DISTANCE (FEET)
DUCTILE IRON	STD RUBBER GASKET PIPE JOINT ONLY	10' MAX
PVC	STD RUBBER GASKET PIPE JOINT ONLY	3' MAX

NOTE:
REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.

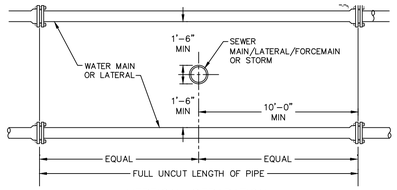
CORED HOLE AND INSERTED BOOT DETAIL
NOT TO SCALE



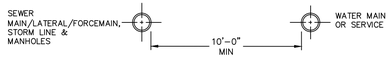
NOTES:

1. A MINIMUM 5' COVER SHALL BE PROVIDED ON THE WATER SERVICE LINE (CONDITIONED ON ACTUAL WATER MAIN DEPTH).
2. CORPORATION STOP TO BE COMPRESSION TYPE BY MUELLER.
3. WATER SERVICE LINE TO HAVE A 'GOOSENECK' NEAR CORPORATION STOP.
4. CORPORATION STOP TO BE INSTALLED IN THE UPPER HALF OF THE WATER MAIN AT AN ANGLE OF APPROXIMATELY 45° FROM HORIZONTAL.
5. THE CONTRACTOR SHALL INSTALL A FULL BODIED STAINLESS STEEL TAPPING SLEEVE AT THE PROPOSED WATER SERVICE LOCATION.

WATER SERVICE CONNECTION DETAIL
NOT TO SCALE



VERTICAL SEPARATION

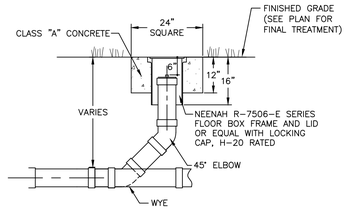


HORIZONTAL SEPARATION

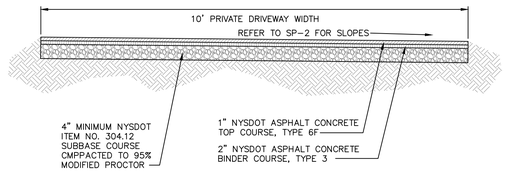
NOTE:

1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DUTCHESS COUNTY DEPARTMENT OF HEALTH AND THE CITY OF BEACON. CONCRETE ENCASEMENT OF WATERLINE OR OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.

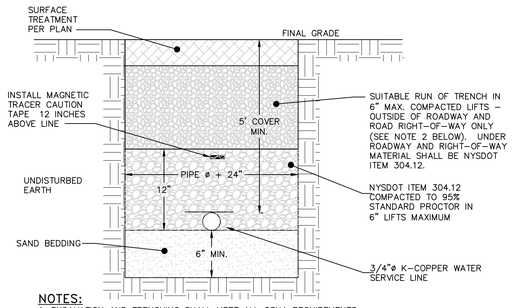
WATER LINE SEPARATION DETAIL
NOT TO SCALE



CLEANOUT DETAIL
NOT TO SCALE



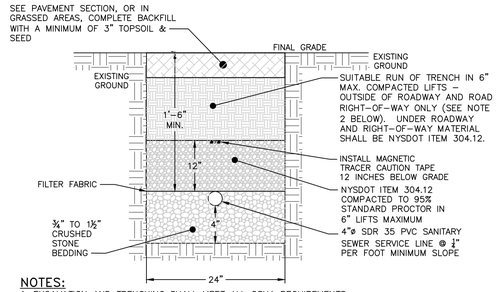
PAVED DRIVEWAY SECTION DETAIL
NOT TO SCALE



NOTES:

1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ENLOGATED PARTICLES, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.
3. IN AREAS WHERE 5' COVER REQUIREMENT CANNOT BE MET, THE CONTRACTOR SHALL PROVIDE PIPE INSULATION TO PREVENT FREEZING.
4. IF WATER SERVICE AND SEWER SERVICE LINE CROSSINGS ARE NEEDED, PROVIDE 18" OF VERTICAL SEPARATION

WATER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



NOTES:

1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

SANITARY SEWER SERVICE LINE TRENCH DETAIL
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

OWNER'S CONSENT:

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SADHNA GUPTA DATE

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926

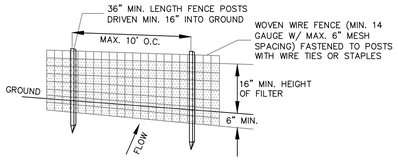
CONSTRUCTION DETAILS

74 ANDERSON STREET

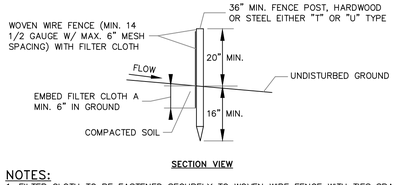
74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054–31–358838

JOB #:	2024:051
DATE:	2/25/25
SCALE:	AS SHOWN
TITLE:	CD–1
SHEET:	6 OF 7

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



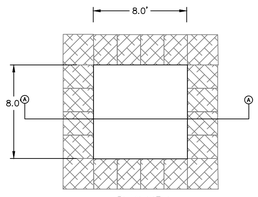
PERSPECTIVE VIEW



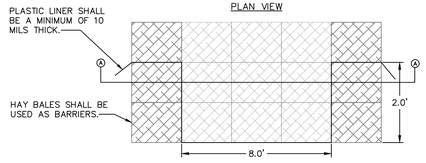
SECTION VIEW

NOTES:
1. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL
NOT TO SCALE



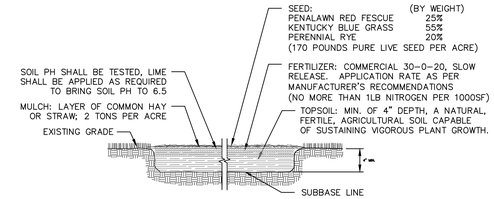
PLAN VIEW



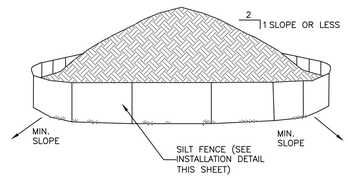
SECTION VIEW

NOTES:
1. WASHOUT STATION SHALL BE LOCATED 100' FROM ANY STORMWATER FEATURE ON SITE OR NATURAL WATERWAYS OR WETLANDS.
2. INSPECT WASHOUT STATION DAILY AND REPLACE PLASTIC LINER WHEN ANY RIPS OR TEARS ARE OBSERVED.
3. REPLACE WASHOUT STATION WHEN IT IS AT 75% OF ITS CAPACITY WITH HARDENED MATERIAL.
4. WATER ACCUMULATION IN WASHOUT AREA FROM RAINWATER SHALL BE PUMPED FROM THE STATION INTO A GRASSED AREA.

CONCRETE WASHOUT STATION DETAIL
NOT TO SCALE

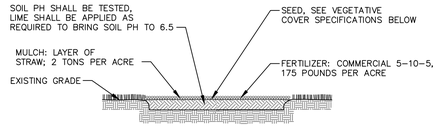


TOPSOIL SEED, FERTILIZER AND MULCH DETAIL
NOT TO SCALE

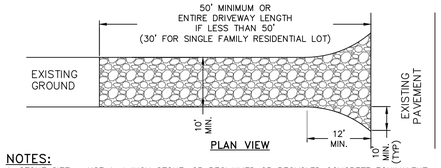


NOTES:
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

TEMPORARY SOIL STOCKPILE DETAIL
NOT TO SCALE



TEMPORARY SEEDING DETAIL
NOT TO SCALE



PLAN VIEW

NOTES:
1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THICKNESS - NOT LESS THAN SIX (6) INCHES.
3. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO LARGE COMMERCIAL OF RESIDENTIAL SITE.
4. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
5. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
7. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

OWNER'S CONSENT:
THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SADHNA GUPTA DATE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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SEAL
STATE OF NEW YORK
DANIEL G. KOSENDA
082716
LICENSED PROFESSIONAL ENGINEER

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

CONSTRUCTION DETAILS

74 ANDERSON STREET

74 ANDERSON STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-31-358838

JOB #:	2024:051
DATE:	2/25/25
SCALE:	AS SHOWN
TITLE:	CD-2
SHEET:	7 OF 7

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LANC & TULLY
Engineering and Surveying, P.C.

April 3, 2025

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 74 Anderson St. – 2 Lot Subdivision
Tax No. 6054-31-358838
City of Beacon

Dear Mr. Gunn:

My office has received the following regarding a 2-lot subdivision of the parcel located at 74 Anderson Street:

- Correspondence from Hudson Land Design dated March 25, 2025.
- Plan set titled "74 Anderson Street Residential Subdivision", consisting of Sheets 1 of 7 through 7 of 7, with the latest revision date of March 25, 2025, as prepared by Hudson Land Design.

The proposed project entails the subdivision of a 28,706± square foot (0.659± acre) parcel located at 74 Anderson Street into 2 lots, with proposed Lot 1 being 14,588 square feet in size and proposed Lot 2 being 14,118 square feet in size. The existing structures on the site would be demolished to allow for the construction of new single-family residences on each lot. The project is located in the R1-10 Zone. Based on our review of the above plans, we would like to offer the following comments:

Existing Conditions & Removal Plan (Sheet 2 of 7):

1. The plan shall note the size and material of the existing water line within Anderson Street.

Subdivision Plan (Sheet 4 of 7):

1. The sewer lateral for Lot 2 is proposed to run from the dwelling to Anderson Street, and then an additional 105 feet along Anderson Street to an existing sanitary sewer manhole located to the south-west of the project site. This is an excessive run for a private sewer lateral to be run within a City street. The sewer main within Anderson Street should be extended by the applicant to allow for a sewer lateral connection close to the project site itself. A private sewer lateral running this length along the roadway, as currently proposed, could hinder/impede any road improvements that would be made by the City of Beacon in the future.

2. The water service and sewer lateral on Lot 1 are shown to cross one another. A note shall be added to the plan stating that there shall be a minimum of 18 inches of separation between the lines, as measured from outside of pipe to outside of pipe.

3. A profile shall be provided for the sewer lateral from Lot 2 out to the existing sewer manhole in Aderson Street. ***Applicant's consultant notes that this will be provided with a future submission.***

4. If the proposed residences are not to have a basement or crawl space below them, a note shall be added to the plan stating such.

5. A guide rail system should be installed adjacent to the proposed retaining wall along the driveway for Lot 2 to prevent a vehicle from going over a 6-foot vertical drop. This should be depicted on the plans. A construction detail for the guide rail system should be shown on the plans.

6. The plan shall note the size and material of the existing water main running along Anderson Street.

Construction Details (Sheet 6 & 7 of 7):

1. Construction details shall be provided on the plans for the retaining walls proposed as part of the project. A note shall be added to the detail stating that the retaining walls shall be designed by a licensed engineer in the State of New York and submitted to the Beacon Building Department for review prior to construction. A second note should also be added to the detail stating that a licensed engineer in the State of New York shall certify to the Beacon Building Department that wall was constructed in accordance with the approved.

This completes our review at this time. Further comments may be provided based on future submissions. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: Jennifer Gray, Esq.
Natalie Quinn, Planner
Bryan Murphy, Building Inspector

KARC
PLANNING CONSULTANTS, INC.

TO: John Gunn, Chair, and the City of Beacon Planning Board

FR: KARC Planning Consultants, Inc.

DATE: April 7, 2025

RE: 74 Anderson Street Subdivision Application, Sadhna Gupta

I have reviewed the following materials regarding the proposed subdivision of the parcel located at 74 Anderson Street:

- Cover letter by Hudson Land Design, dated March 25, 2025
- Site Plan Set (7 sheets) by Hudson Land Design, last revised March 25, 2025

Project Description:

The subject property is a developed residential parcel located at 74 Anderson Street in the City of Beacon, Dutchess County (Tax ID #130200-6054-31-358838). The property owner is seeking to develop the property through the razing of the existing residence and detached barn on the parcel and the subdivision of the property into two (2) individual residential lots, with proposed Lot 1 being 14,588 sq. ft. in size and proposed Lot 2 being 14,118 sq. ft. in size. Each lot will then be developed through the construction of a new, single-family, residence. The property is located in the R1-10 zoning district, where single family residences are a permitted use.

Comments & Recommendations:

1. **Compliance with Chapter 223 Zoning.** The proposed lots each meet the dimensional regulations applicable in the R1-10 zoning district as outlined in Chapter 223 Attachment 1 Schedule of Dimensional Regulations.

2. **Preservation of Natural Features.** Of the 64 trees over 6 inches currently existing onsite, the applicant is proposing to remove 16 trees as required for the construction of driveways, retaining walls, grading, and the proposed residential structures. Section 195-20(B)(2) requires that "no tree… shall be removed from its natural position except where necessary and incidental to the improvement of the lots. The proposed tree removal plan appears to minimize removal of trees to the greatest extent possible. Additional landscaping along the shared property line with 60 Anderson Street could be required to provide additional buffering between the proposed new residential structure and the existing home and garage.

The comments provided above are intended to confirm compliance with the city's applicable zoning and subdivision codes and to indicate that the plans are acceptable from a planning perspective. If you have any questions or need additional information, please feel free to contact me.

KARC
PLANNING CONSULTANTS, INC.

Natalie Quinn
Beacon Planning Consultant

Cc: Bryan Murphy, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer

Ana Joanes

60 Anderson Street

Beacon, NY 12508

anasofiajoanes@gmail.com

9175845552

April 07, 2025

John Gunn, Chairman

City of Beacon Planning Board

1 Municipal Plaza

Beacon, NY 12508

Re: Public Comment on Proposed Subdivision at 74 Anderson Street

Applicant: Sadhna Gupta | Tax Parcel ID: 6054-31-358838

Dear Chairman Gunn and Members of the Planning Board,

As a neighbor living adjacent to the proposed subdivision at 74 Anderson Street, I am writing to express my deep concerns about the project's potential impact on my property, safety, privacy, and the character of our neighborhood. After reviewing the submitted plans and the applicant's responses to the Planning Board Engineer's comments (dated March 25, 2025), I respectfully request that the Board withhold approval unless key issues are fully addressed and mitigated through conditions.

1. Tree Removal and Lack of Screening
The updated Existing Conditions Plan (XC-1) identifies the removal of a substantial number of mature trees, including multiple trees over 6” in diameter along the shared property lines. These trees currently provide essential natural screening, erosion control, and stormwater absorption.

While the engineer requested clarification on which trees would be removed, the applicant’s response simply confirmed the removals, with no plan to preserve, replace, or buffer the loss.

Requested Conditions:
- Require a tree preservation and replacement plan that prioritizes retention of healthy mature trees and adds native plantings where screening will be lost.
- Add a landscape buffer or privacy fencing between existing homes and proposed lots.

2. Slope, Grading, and Retaining Wall Removal
The site involves significant grading changes to level out the sloped property. A retaining wall previously proposed was removed in response to the engineer's comment requesting construction details. However, the underlying slope remains, particularly at Lot 2, and may still require slope stabilization.

Removing the retaining wall from the plans does not eliminate the risk of slope instability, runoff, or damage to nearby properties—including my own.

Requested Conditions:
- Require a geotechnical assessment or structural plan to confirm that no retaining wall is needed—or if it is, ensure it is properly engineered.
- Condition approval on ongoing inspection during grading and fill operations to ensure slope stability.

3. Privacy and Proximity to Adjacent Homes
The proposed homes are situated very close to neighboring properties. With trees removed and no fencing or landscape screening shown, there will be direct lines of sight between homes, decks, and yards—dramatically reducing privacy.

Requested Conditions:
- Require fencing and/or evergreen screening plantings on rear and side lot lines.
- Review and condition window placement and elevated decks to avoid direct visibility into existing homes.

4. Stormwater Management and Drainage
While the applicant updated Sheet ESC-1 to add silt fencing, this addresses only short-term construction erosion, not long-term stormwater impacts. There are no rain gardens, dry wells, infiltration systems, or swales shown in the plans—despite substantial tree removal, regrading, and shallow bedrock.

The potential for runoff onto adjacent properties—including mine—is high, especially given the site's slope and loss of natural absorption.

Requested Conditions:
- Require a comprehensive stormwater mitigation plan, including on-site infiltration features.

- Condition post-construction drainage inspection to ensure no runoff affects adjacent properties.

In Summary
While I understand the property owner's right to develop, the site's steep slopes, mature tree coverage, and close proximity to existing homes demand a higher standard of care. The applicant's responses to the Planning Board Engineer's comments addressed formality—but not substance. Key issues remain unresolved or deferred, and should not be approved without enforceable protections for neighbors and the community.

I respectfully urge the Board to require stronger mitigation measures and site-specific conditions before granting approval.

Thank you for your time and commitment to responsible, community-focused planning.

Sincerely,
Ana Joanes

Addendum: Site Grading, Retaining Wall Removal, and Driveway Placement

In addition to the comments already submitted, I would like to formally request clarification and additional consideration on the following safety and design concerns:

1. Site Grading and Slope Stability
The applicant has removed the retaining wall from the plan in response to engineering comments—but it remains unclear how the proposed grading will be safely executed on such a steep slope. Without the wall, how will the applicant level the slope sufficiently to construct the driveway and foundation of the proposed home on Lot 2? I am deeply concerned about the potential for soil, rocks, or debris to shift or collapse during excavation and grading—especially given the site's shallow bedrock and the lack of tree root systems to hold soil in place.

2. Construction Safety and Property Protection
What specific safety precautions will be in place during construction to prevent erosion, slippage, or collapse—particularly during heavy rains? My home is located directly downslope, and I have invested significantly in landscaping, plantings, and outdoor improvements that could be damaged or destroyed by runoff or falling debris. The removal of mature trees further increases this risk.

Without proper controls, this situation could expose the applicant to open liability if damage occurs to adjacent properties. I respectfully request that a temporary and permanent slope stabilization plan be submitted and reviewed before any grading occurs.

3. Driveway Location and Setback
From reviewing the site plans, it appears that the proposed driveway on Lot 2 may be located less than 10 feet from the property line. Please clarify whether this complies with the City of Beacon's required setbacks for driveways and paved surfaces. If not, I request that the plan be revised to comply with local standards.

Agency Use Only [If applicable]

Project:	74 Anderson Street
Date:	4-8-2025

Short Environmental Assessment Form
Part 2 - Impact Assessment

Part 2 is to be completed by the Lead Agency.
Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	☑	☐
2. Will the proposed action result in a change in the use or intensity of use of land?	☑	☐
3. Will the proposed action impair the character or quality of the existing community?	☑	☐
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	☑	☐
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	☑	☐
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	☑	☐
7. Will the proposed action impact existing: a. public / private water supplies?	☑	☐
b. public / private wastewater treatment utilities?	☑	☐
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	☑	☐
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	☑	☐
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☑	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☑	☐

PRINT FORM

Agency Use Only [If applicable]

Project: 74 Anderson Street

Date: 4-8-2025

Short Environmental Assessment Form
Part 3 Determination of Significance

For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

See attached.

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.

☑ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

City of Beacon Planning Board	4-8-2025
Name of Lead Agency	Date
John Gunn	Chairperson
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT FORM

ATTACHMENT TO
NEGATIVE DECLARATION
REASONS SUPPORTING DETERMINATION

APPLICATION FOR SUBDIVISION APPROVAL
FOR 74 ANDERSON STREET

Parcel No. 6054-31-358838

CONCLUSIONS

This Part 3 analysis has been prepared to address all relevant areas of environmental concern as identified in the review by the Planning Board. This Part 3 analysis will discuss and explain the analysis of the potential impacts, and why a particular element of the proposed action will not result in a significant adverse environmental impact. Such analysis is appropriately set forth in Part 3, even if the potential impact was identified as "none" or "small." Based upon a review of Parts 1 and 2 of the Short Environmental Assessment Form (EAF) and all other application materials that were submitted in support of the Proposed Action, along with reports from City staff and consultants, information from involved and interested agencies, and information from the public, the Planning Board, acting as Lead Agency, provides the following rationale for its SEQRA Determination.

Project Description:

The Proposed Action is the subdivision of a 28,706 square foot parcel (0.659 acres) into two lots. Lot 1 will have 14,588 square feet and Lot 2 will have 14,118 square feet. The existing structures on the property will be demolished to allow for the construction of one new single family residence on each lot. The property is located at 74 Anderson Steet in the R1-10 Zoning District on property known and designated on the Tax Map as Parcel No. 6054-31-358838 (the "Property").

The Proposed Action is an Unlisted action. The Planning Board circulated its Notice of Intent to act as Lead Agency and received no objections. The only other Involved Agency was the Dutchess County Department of Health, but after circulating its Notice of Intent it was confirmed that no permits or approvals are required from the Department of Health. Therefore, the Planning Board is the only Involved Agency.

Summary of Rationale for Negative Declaration

The Proposed Action will not result in any significant adverse impacts on the environment. In summary:

- **Impact on Land: The Proposed Action will not have a significant adverse environmental impact as a result of any physical change to the project site.**

The project site is located in the R1-10 Zoning District and is currently improved with a single-family dwelling. The Proposed Action would involve the subdivision of the existing lot, demolition of existing structures, and the construction of two new single-family dwellings with typical grading and site work associated with such construction. There are no wetlands or water bodies on the Property. The Property contains slopes and rock as evidenced by several rock outcroppings. Slopes are proposed to be appropriately stabilized during and after construction. No basements are proposed in the two new single-family dwellings due to shallow bedrock. The Subdivision Plan, SP-2, Sheet 4 of 7 includes a note stating "Bedrock shall be removed by mechanical means. No blasting shall be permitted without approval from the Building Department." No on-site rock processing is proposed, nor shall it be permitted on-site. The Proposed Action will not have a significant adverse environmental impact as a result of physical changes to the Property.

- **Impact on Geological Features: The Proposed Action will not have a significant adverse environmental impact on any unique or unusual land forms on the site.**

  There are no unique geological features on the Property.

- **Impacts on Surface Water and Groundwater: The Proposed Action will not have a significant adverse environmental impact on surface or groundwater quality or quantity.**

  Residential land uses are generally not associated with the discharge of contaminants into aquifers or other groundwater sources. There will be no bulk storage of petroleum or chemicals on-site. The Project includes the implementation of erosion and sediment controls. The Project does not include or require wastewater discharged to groundwater. The Project will be connected to the existing public water distribution and sanitary sewer systems. Adequate water supply and sewer capacity exist for these additional flows.

  For these reasons, the Proposed Action will not result in any significant adverse impact to surface or groundwater quality or quantity.

- **Impact on Flooding: The Proposed Action will not have a significant adverse environmental impact on or alter drainage flows or patterns, or surface water runoff.**

  According to the Short EAF the Property is not located within a regulated flood plain and there are no wetlands. The Project includes the implementation of erosion and sediment controls. For these reasons and those stated above, the Proposed Action will not have a significant adverse impact on drainage flows or patterns, or surface water runoff.

- **Impact on Air: The Proposed Action will not have a significant adverse environmental impact on air quality.**

Construction activities associated with grading and excavation could result in temporary air quality impacts. Air quality in the area, however, is not expected to be significantly impacted by project construction because the construction activities will be temporary and confined to the Property. Construction vehicles will emit certain air pollutants through engine exhaust. There is also the potential for fugitive dust to be created during the construction period from site preparation activities, including removal of existing impervious surfaces and vegetation, and site grading. Fugitive dust emissions will be mitigated by wetting and stabilizing soils to suppress dust generation. Other dust suppression methods will include the spraying of soil stockpiles during dry periods and covering trucks carrying solid and other dry materials. These unavoidable short term impacts to air quality will cease upon project completion. Construction will be conducted in accordance with all applicable federal, state and local codes. It is anticipated that nearby properties will experience temporary fugitive dust and an elevation in vehicle emissions from construction vehicles throughout occasional periods during construction of the proposed project. This is a temporary, construction-related, unavoidable impact that is not significant.

For these reasons, the Proposed Action will not have a significant adverse environmental impact on air quality.

- **Impact on Plants and Animals: The Proposed Action will not have a significant adverse environmental impact on flora or fauna.**

The Short EAF indicates that the Property may contain habitat for the Indiana Bat. The proposed plans show sixteen (16) trees of 6-inches diameter at breast height (dbh) or greater will be removed. Pursuant to NYSDEC recommendations, removal of trees greater than four (4) inches in diameter at the Project Site will take place between November 1 and March 31 during the bat hibernation period to avoid the removal of trees which may be utilized by Indiana Bats as roosting trees. Otherwise, the Applicant shall seek and obtain an Incidental Take Permit from NYSDEC.

For these reasons, the Proposed Action will not have a significant adverse environmental impact on flora or fauna.

- **Impact on Agricultural Resources: The Proposed Action will not have a significant adverse environmental impact on agricultural resources.**

There are no agricultural resources in the vicinity of the Property.

- **Impact on Aesthetic Resources: The Proposed Action will not have a significant adverse environmental impact on aesthetic resources.**

The Proposed Action will not result in the obstruction, elimination or significant screening of one or more officially designated scenic views, or visible from any publicly accessible vantage points either seasonally nor year around.

For these reasons, the Proposed Action will not have a significant adverse environmental impact on aesthetic resources.

- **Impact on Historic and Archeological Resources: The Proposed Action will not have a significant adverse environmental impact on historic or archeological resources.**

The subdivision of the Property into two lots for the construction of one new single family home in an existing residential neighborhood will not have a significant adverse impact on historic or archeological resources. There are no historic resources in the immediate vicinity of the Site and the nature of the area as a developed suburban neighborhood makes impacts to archeological resources unlikely and not significant.

For these reasons, the Proposed Action will not have a significant adverse impact on historic or agricultural resources.

- **Impact on Open Space and Recreation: The Proposed Action will not have a significant adverse environmental impact on open space and recreation.**

The area of the Proposed Action is not designated as open space by the City of Beacon. The Proposed Action will not result in the loss of a current or future recreational resource, eliminate significant open space, or result in loss of an area now used informally by the community as an open space resource. A recreation set aside or fee may be required which will be used for the future need for park and recreational opportunities in the City of Beacon.

For these reasons, the Proposed Action will not have a significant adverse impact on open space and recreation.

- **Impact on Critical Environmental Areas: The Proposed Action will not have a significant adverse environmental impact on Critical Environmental Areas.**

The Proposed Action is not located in a Critical Environmental Area.

- **Impact on Transportation: The Proposed Action will not have a significant adverse environmental impact on transportation.**

The construction of one additional single family home will not result in a significant adverse traffic impact.

- **Impact on Energy: The Proposed Action will not have a significant adverse environmental impact on energy.**

  The existing energy infrastructure will adequately serve the additional demand associated with one single family home. The Proposed Action does not require a new, or an upgrade to any existing substation. For these reasons, the Proposed Action will not have a significant adverse impact on energy.

- **Impact on Noise, Odor and Light: The Proposed Action will not have a significant adverse environmental impact as a result of objectionable odors, noise or light.**

  The Proposed Action is not anticipated to generate any noxious odors. Outdoor lighting will be consistent with typical residential lighting. Noise impacts associated with the proposed Project will be limited to temporary impacts generated during construction. Temporary noise impacts associated with construction will be mitigated by limiting construction activities to the hours permitted by City Code. In addition, there will be no significant noise impacts post-construction.

  For these reasons, the Proposed Action will not have a significant adverse environmental impact as a result of objectionable odors, noise or light.

- **Impact on Human Health: The Proposed Action will not have a significant adverse environmental impact on human health from exposure to new or existing sources of contaminants.**

  Residential land uses are generally not associated with significant adverse impacts on human health from exposure to new or existing sources of contaminants. There are no known remediation sites in the area.

  For these reasons, the Proposed Action will not have a significant adverse environmental impact on human health from exposure to new or existing sources of contaminants.

- **Consistency with Community Plans and Community Character: The Proposed Action is not inconsistent with adopted community plans and community character.**

  The Proposed Action is generally consistent with the Comprehensive Plan and City Zoning Code, will not have a significant impact on municipal services, and is consistent with the character of the existing neighborhood which consists of other single-family homes on lots of varying sizes.

Based upon this information and the information in the Short Environmental Assessment Form and all other documents and information in the record, the Planning Board finds that the Proposed Action will not have any significant adverse impacts upon the environment. This

Negative Declaration indicates that no environmental impact statement need be prepared and that the SEQRA process is complete.

Adopted: April 8, 2025
Beacon, New York

Motion by _____, seconded by _____:

Kevin Byrne	Voting	Leonard Warner	Voting
David Jensen	Voting	J. Randall Williams	Voting
Karen Quiana	Voting	John Gunn, Chairperson	Voting
James Vermeulen	Voting		

City of Beacon Planning Board Agenda
04/08/2025

Title:

Continue review of applications of Site Plan Approval and Special Use Permit, hotel and restaurant, 1064 Wolcott Avenue, submitted by JMARKMNG, LLC.

ATTACHMENTS

1064 Wolcott PB 4.8.25 Supplemental Submission - Cover Letter.pdf

1064 Wolcott PB 4.8.25 Exhibit A - Updated Application for SUP.pdf

1064 Wolcott PB 4.8.25 Exhibit B - Updated Application for Site Plan Approval.pdf

1064 Wolcott PB 4.8.25 Exhibit C - Updated Full EAF by HLD rev 3.25.25.pdf

1064 Wolcott PB 4.8.25 Exhibit D - Response to Comments Aryeh Siegel 3.25.25.pdf

1064 Wolcott PB 4.8.25 Exhibit E - Response to Comments by HLD 3.25.25.pdf

1064 Wolcott PB 4.8.25 Exhibit F - Traffic and Parking Evaluation by Colliers 3.21.25.pdf

1064 Wolcott PB 4.8.25 Exhibit G - Inflow & Infiltration Report by HLD 3.25.25.pdf

1064 Wolcott PB 4.8.25 Attachment 1 Water & Sewer Report.pdf

1064 Wolcott PB 4.8.25 Attachment 2 SWPPP.pdf

1064 Wolcott PB 4.8.25 Attachment 3 Plans.pdf

Lanc & Tully 1064 Wolcott 04-04-25 review.pdf

KARC Review PB_1064 Wolcott Ave_2025.04.08.pdf

CUDDY +FEDER LLP

445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

Taylor M. Palmer, Esq.
tpalmer@cuddyfeder.com

March 25, 2025

VIA E-MAIL AND HAND DELIVERY
Hon. John Gunn
and Members of the Planning Board
City of Beacon
1 Municipal Plaza
Beacon, New York 12508

Re: Application for Site Plan & Special Use Permit Approvals for Adaptive Reuse of Former Rose Hill Manor Day School for a Proposed Hotel with Accessory Restaurant
Premises: 1064 Wolcott Avenue, Beacon, New York
Tax Parcel ID: 5945-34-641767

Dear Chairman Gunn and Members of the Planning Board:

On behalf of JMARKMNG, LLC (the "Applicant"), the owner of the above-referenced Premises, we respectfully submit this letter and the referenced enclosures in furtherance of an Application for Site Plan and Special Use Permit Approvals (the "Application"), proposing to adaptively reuse the two (2) existing buildings that comprise the Rose Hill Manor Day School and to construct an addition linking the two existing buildings to redevelop the Premises for use as a three (3)-story hotel with associated guest amenity spaces and a 56-seat accessory restaurant (the "Project").

SITE PLAN REFINEMENTS AND RESPONSE TO BOARD AND CONSULTANT COMMENTS:

Following the Applicant's first appearance at the Planning Board in connection with the Application at the Board's February 11, 2025 meeting Agenda, the Applicant took an additional month to study and significantly refine the proposed Project. The enclosed Site Plans, prepared by Aryeh Siegel, Architect, and Hudson Land Design Professional Engineering, P.C. ("HLD") dated January 28, 2025 and revised March 25, 2025 (collectively, the "Plans"), reflect these important changes to the Project, and the Plans have been revised to respond to Board's comments and in response to the comments contained in the City Planning Consultant and Engineering Consultant's comment memoranda. Point-by-point response prepared by Aryeh Siegel, Architect and HLD are also enclosed as **Exhibit D** and **Exhibit E**, respectively.

As is further detailed on the Plans, the Project now further emphasizes the existing historic building on the Premises and highlights the proposed hotel use of the Premises. For instance, the

proposed addition linking the two (2) existing buildings on the Premises (the "Addition") has been further recessed from the façade of the existing buildings to maintain the prominence of the historic northern building. In addition, the height of the Addition has been reduced, and grading of the Premises has been adjusted to redefine the appearance of the overall structure and reduce the massing of the Addition. Further, the roofline of the Addition has been redesigned to incorporate a series of bays with shed roof details, which complement the turret details of the existing buildings on the Premises while remaining lower in height and subservient to these architectural details.

The Plans now also include the following updates:

- The main entrance to the hotel has been relocated to the center of the Addition and will appear as a central focal point for the overall Project building.
- A porch-type entryway has been incorporated at the entrance to the accessory restaurant, which echoes the architectural design of the porch features on the historic northern building and on the southern building.
- Along the base of the existing buildings, the existing brick will be replaced with stone, and this feature will be extended across the base of the Addition to provide a visual complement and enhance consistency between the existing buildings and the Addition.
- Other engineering refinements have been presented in this submission, including modifications to the proposed stormwater design, incorporation of ADA signage and accessible curbing details, and sidewalk width and cross-slope alterations.

In addition to the foregoing, Colliers Engineering & Design, P.C. has also provided a revised Traffic and Parking Evaluation which addresses the 42 guest rooms proposed for the hotel and the associated 56-seat accessory restaurant. *See* **Exhibit F**. As detailed further therein, the Traffic and Parking Evaluation confirms that the Project is not anticipated to cause any significant impacts in the overall operation of traffic in the vicinity of the Premises, and that the 50 parking spaces that have been provided conform to the City's parking regulations and will be sufficient to meet the needs of the Project at most times, with valet parking used to accommodate any excess parking demand and in particular, during peak periods on Friday through Sunday evenings. *See* **Exhibit F** - Traffic and Parking Evaluation.

LIST OF ENCLOSURES:

In support of this Application, please find five (5) copies of the following documents:

Exhibit A: Updated Application for Special Use Permit;

Exhibit B: Updated Application for Site Plan Approval;

Exhibit C: Updated Full Environmental Assessment Form, prepared by HLD, revised March 25, 2025;

Exhibit D: Response to Comments Memorandum prepared by Aryeh Siegel, Architect, dated March 25, 2025, providing responses to City Planning Consultant KARC Planning Consultants' memorandum dated February 11, 2025 and City Engineering Consultant Lanc & Tully's memorandum dated November 8, 2024;

Exhibit E: Response to Comments Memorandum prepared by HLD, dated March 25, 2025, providing responses to City Planning Consultant KARC Planning Consultants' memorandum dated February 11, 2025 and City Engineering Consultant Lanc & Tully's memorandum dated November 8, 2024;

Exhibit F: Traffic and Parking Evaluation, prepared by Colliers Engineering & Design, dated March 21, 2025; and

Exhibit G: Inflow & Infiltration Report, prepared by HLD, dated March 25, 2025.

In further support of this application, enclosed please find three (3) copies of the updated Water & Sewer Report, prepared by HLD, revised March 25, 2025 and updated Stormwater Pollution Prevention Plan for 1064 Wolcott Avenue, prepared by HLD, revised March 25, 2025, along with five (5) full-size sets of Plans, prepared by Aryeh Siegel, Architect and HLD, dated January 28, 2025 and revised March 25, 2025.

CONCLUSION:

We look forward to appearing at this Board's regular meeting on April 8, 2025 to continue the Board's review of the Project and to answer any questions that the Board may have. In the meantime, should this Board or City Staff have any questions or comments with regard to the foregoing, please do not hesitate to contact me.

Very truly yours,

Taylor M. Palmer
Enclosures

cc: Bryan Murphy, City of Beacon Building Inspector
Jennifer L. Gray, Esq., City of Beacon Planning Board Attorney
Natalie Quinn, KARC Planning Consultants, Inc.
John Russo, P.E., Lanc & Tully, P.C.
JMARKMNG, LLC
Hudson Land Design Professional Engineering, P.C.
Aryeh Siegel, Architect
Jessica Zalin, Esq.

APPLICATION FOR SPECIAL USE PERMIT

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: JMARKMNG, LLC

Address: 1064 Wolcott Avenue
Beacon, NY 12508

Signature: [signature]

Date: 3/24/25

Phone: 845-541-4445

(For Official Use Only)

	Date	Initials
Application & Fee Rec'd		
Initial Review		
PB Public Hearing		
Sent to City Council		
City Council Workshop		
City Council Public Hearing		
City Council Approve/Disapprove		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: Hudson Land Design Professional Engineering, P.C.

Address: c/o Michael Bodendorf, P.C.
174 Main Street, Beacon, NY 12508

Phone: (845) 440-6926

Fax: (845) 440-6637

Email address: mbodendorf@hudsonlanddesign.com

IDENTIFICATION OF SUBJECT PROPERTY:

Property Address: 1064 Wolcott Avenue, Beacon, NY 12508

Tax Map Designation: Section 5954 Block 34 Lot(s) 641767

Land Area: 1.77 acres

Zoning District(s) R1-40 , HD LO

DESCRIPTION OF PROPOSED DEVELOPMENT:

Proposed Use: Hotel with accessory restaurant

Gross Non-Residential Floor Space: Existing 10,153 Proposed 22,413

TOTAL: 32,556

Dwelling Units (by type): Existing 2 (one 1-bedroom and one 2-bedroom) (to be removed) Proposed 0

TOTAL: 0 (at project completion)

ITEMS TO ACCOMPANY THIS APPLICATION

a. Five (5) **folded** copies and One (1) digital copy of a site location sketch showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. Five (5) **folded** copies and One (1) digital copy of the proposed site development plan, consisting of sheets, showing the required information as set forth on the back of this form and other such information as deemed necessary by the City Council or the Planning Board to determine and provide for the property enforcement of the Zoning Ordinance.

c. Five (5) **folded** copies and One (1) digital copy of additional sketches, renderings or other information.

d. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

e. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

INFORMATION TO BE SHOWN ON SITE LOCATION SKETCH

a. Property lines, zoning district boundaries and special district boundaries affecting all adjoining strets and properties, including properties located on the opposite sides of adjoining streets.
b. Any reservations, easements or other areas of public or special use which affect the subject property.
c. Section, block and lot numbers written on the subject property and all adjoining properties, including the names of the record owners of such adjoining properties.

INFORMATION TO BE SHOWN ON THE SITE DEVELOPMENT PLAN

a. Title of development, date and revision dates if any, north point, scale, name and address of record owner of property, and of the licensed engineer, architect, landscape architect, or surveyor preparing the site plan.
b. Existing and proposed contours at a maximum vertical interval of two (2) feet.
c. Location and identification of natural features including rock outcrops, wooded areas, single trees with a caliper of six (6) or more inches measured four (4) feet above existing grade, water bodies, water courses, wetlands, soil types, etc.
d. Location and dimensions of all existing and proposed buildings, retaining walls, fences, septic fields, etc.
e. Finished floor level elevations and heights of all existing and proposed buildings.
f. Location, design, elevations, and pavement and curbing specifications, including pavement markings, of all existing and proposed sidewalks, and parking and truck loading areas, including access and egress drives thereto.
g. Existing pavement and elevations of abutting streets, and proposed modifications.
h. Location, type and design of all existing and proposed storm drainage facilities, including computation of present and estimated future runoff of the entire tributary watershed, at a maximum density permitted under existing zoning, based on a 100 year storm.
i. Location and design of all existing and proposed water supply and sewage disposal facilities.
j. Location of all existing and proposed power and telephone lines and equipment, including that located within the adjoining street right-of-way. All such lines and equipment must be installed underground.
k. Estimate of earth work, including type and quantities of material to be imported to or removed from the site.
l. Detailed landscape plan, including the type, size, and location of materials to be used.
m. Location, size, type, power, direction, shielding, and hours of operation of all existing and proposed lighting facilities.
n. Location, size, type, and design of all existing and proposed business and directional signs.
o. Written dimensions shall be used wherever possible.
p. Signature and seal of licensed professional preparing the plan shall appear on each sheet.
q. Statement of approval, in blank, as follows:

Approved by Resolution of the Beacon Planning Board
on the _____ day of _____, 20_____
subject to all conditions as stated therein

_____ _____
Chairman, City Planning Board **Date**

APPLICATION FEES

Site Plan	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Special Use Permit	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Subdivision	$ 750 for 2-4 lots + $100 per lot $1,000 for 5 or more lots + $300 per lot

ESCROW FEES

ALL SUBDIVISIONS, AND RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

No. of Lots or Dwelling Units	Initial Deposit	Depleted to	Replenishment
1-5 (including lot-line realignment)	$ 3,000	$ 1,000	Current bills + $1,200
6-15	$ 9,000	$ 2,500	Current bills + $1,200
Over 15	$ 18,000	$ 5,000	Current bills + $6,000

NON-RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

	Initial Deposit	Depleted to	Replenishment
Existing Buildings/Change of Use with no site development	$ 1,800	$ 1,000	Current bills + $600
Up to 3,000 s.f. gross floor area	$ 3,125	$ 1,000	Current bills + $1,200
3,000 to 10,000 s.f. gross floor area	$ 3,000 + $0.50 per sq.ft. over 3,000	$ 2,500	Current bills + $3,000
Over 10,000 s.f. gross floor area	$ 9,000 + $0.50 per sq.ft. over 10,000	$ 2,500	Current bills + $3,000

ARCHITECTURAL REVIEW OR CERTIFICATE OF APPROPRIATENESS ***(if not currently before PB)***

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: JMARKMNG, LLC

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.
Mark DeFabio, 50%; Julie DeFabio, 50%

List all properties in the City of Beacon that you hold a 5% interest in:
1064 Wolcott Avenue

Applicant Address: 1064 Wolcott Avenue, Beacon, NY 12508

Project Address: 1064 Wolcott Avenue, Beacon, NY 12508

Project Tax Grid # 5954-34-641767

Type of Application Application for Special Use Permit

Please note that the property owner is the applicant. "Applicant" is defined as any individual who owns at least five percent (5%) interest in a corporation or partnership or other business.

I, JMARKMNG, LLC, the undersigned owner of the above referenced property, hereby affirm that I have reviewed my records and verify that the following information is true.

1. No violations are pending for ANY parcel owned by me situated within the City of Beacon ✓
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon N/A
3. ALL tax payments due to the City of Beacon are current ✓
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon N/A
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon N/A
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current ✓

Signature of Owner

Mark DeFabio, Member

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	___	___	___
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)	___	___	___
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)	___	___	___

CITY OF BEACON
SITE PLAN SPECIFICATION FORM

Name of Application: 1064 Wolcott Avenue

PLEASE INDICATE WHETHER THE SITE PLAN DRAWINGS SHOW THE SUBJECT INFORMATION BY PLACING A CHECK MARK IN THE APPROPRIATE BOXES BELOW.		
	YES	**NO**
The site plan shall be clearly marked "Site Plan", it shall be prepared by a legally certified individual or firm, such as a Registered Architect or Professional Engineer, and it shall contain the following information:	✓	
LEGAL DATA		
Name and address of the owner of record.	✓	
Name and address of the applicant (if other than the owner).	✓	
Name and address of person, firm or organization preparing the plan.	✓	
Date, north arrow, and written and graphic scale.	✓	
NATURAL FEATURES		
Existing contours with intervals of two (2) feet, referred to a datum satisfactory to the Planning Board.	✓	
Approximate boundaries of any areas subject to flooding or stormwater overflows.	N/A	
Location of existing watercourses, wetlands, wooded areas, rock outcrops, isolated trees with a diameter of eight (8) inches or more measured three (3) feet above the base of the trunk, and any other significant existing natural features.	✓	
EXISTING STRUCTURES, UTILITIES, ETC.		
Outlines of all structures and the location of all uses not requiring structures. Paved areas, sidewalks, and vehicular access between the site and public streets.	✓	
Locations, dimensions, grades, and flow direction of any existing sewers, culverts, water lines, as well as other underground and above ground utilities within and adjacent to the property.	✓	
Other existing development, including fences, retaining walls, landscaping, and screening.	✓	
Sufficient description or information to define precisely the boundaries of the property.	✓	
The owners of all adjoining lands as shown on the latest tax records.	✓	
The locations, names, and existing widths of adjacent streets and curb lines.	✓	
Location, width, and purpose of all existing and proposed easements, setbacks, reservations, and areas dedicated to private or public use within or adjacent to the	✓	

properties.		
PROPOSED DEVELOPMENT	**YES**	**NO**
The location, use and design of proposed buildings or structural improvements.	✓	
The location and design of all uses not requiring structures, such as outdoor storage (if permitted), and off-street parking and unloading areas.	✓	
Any proposed division of buildings into units of separate occupancy.	✓	
The location, direction, power, and time of use for any proposed outdoor lighting. TO BE PROVIDED		✓
The location and plans for any outdoor signs. TO BE PROVIDED		✓
The location, arrangement, size(s) and materials of proposed means of ingress and egress, including sidewalks, driveways, or other paved areas.	✓	
Proposed screening and other landscaping including a planting plan and schedule prepared by a qualified individual or firm. TO BE PROVIDED		✓
The location, sizes and connection of all proposed water lines, valves, and hydrants and all storm drainage and sewer lines, culverts, drains, etc.	✓	
Proposed easements, deed restrictions, or covenants and a notation of any areas to be dedicated to the City.	N/A	
Any contemplated public improvements on or adjoining the property.	N/A	
Any proposed new grades, indicating clearly how such grades will meet existing grades of adjacent properties or the street.	✓	
Elevations of all proposed principal or accessory structures.	✓	
Any proposed fences or retaining walls.	✓	
MISCELLANEOUS		
A location map showing the applicant's entire property and adjacent properties and streets, at a convenient scale.	✓	
Erosion and sedimentation control measures.	✓	
A schedule indicating how the proposal complies with all pertinent zoning standards, including parking and loading requirements.	✓	
An indication of proposed hours of operation.	✓	
If the site plan only indicates a first stage, a supplementary plan shall indicate ultimate development.	N/A	

For all items marked "NO" above, please explain below why the required information has not been provided:

Applicant/Sponsor Name: JMARKMNG, LLC, Mark DeFabio, Member

Signature:

Date: 3/24/25

Application #

CITY OF BEACON

1 Municipal Plaza, Beacon, NY

Telephone (845) 838-5000 • http://cityofbeacon.org/

ENTITY DISCLOSURE FORM

(This form must accompany every land use application and every application for a building permit or certificate of occupancy submitted by any entity)

Disclosure of the names and addresses of all persons or entities owning any interest or controlling position of any Limited Liability Company, Partnership, Limited Partnership, Joint Venture, Corporation or other business entity (hereinafter referred to as the "Entity") filing a land-use application with the City is required pursuant to Section 223-61.4 of the City Code of the City of Beacon. If any Member of the Entity is not a natural person, then the names and addresses as well as all other information sought herein must be supplied about the non-natural person member of that Entity, including names, addresses and Formation filing documents. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity	Address of Entity
Place where such business entity was created	Official Registrar's or Clerk's office where the documents and papers creating entity were filed
Date such business entity or partnership was created	Telephone Contact Information

IF AFFIANT IS A CORPORATION:

Name of Entity	Telephone Contact Information
JMARKMNG, LLC	845-541-4445
Principal Place of Business of Entity 1064 Wolcott Avenue, Beacon, NY 12508	Place and Date of incorporation Albany, NY 11/21/2013

Method of Incorporation	Official place where the documents and papers of incorporation were filed
Department of State Filing	State of New York, Albany

SECTION B. List all persons, officers, limited or general partners, directors, members, shareholders, managers, and any others with any interest, mortgage, encumbrance or other interest (recorded or unrecorded) in or with the above referenced Entity. List all persons to whom corporate stock has been pledged, mortgaged or encumbered and with whom any agreement has been made to pledge, mortgage or encumber said stock. Use a supplemental sheet to list additional persons.

Name	Resident Address	Resident Telephone Number	Nature and Extent of Interest
Mark DeFabio	1064 Wolcott Avenue Beacon, NY 12508	845-541-4445	Member 50% Interest
Julie DeFabio	1064 Wolcott Avenue Beacon, NY 12508	845-541-4445	Member 50% Interest

SECTION C. List all owners of record of the subject property or any part thereof.

Name	Residence or Business Address	Telephone Number	Date and Manner title was acquired	Date and place where the deed or document of conveyance was recorded or filed.
JMARKMNG, LLC	1064 Wolcott Avenue, Beacon, NY 12508	845-541-4445	3/14/2014, Deed	3/20/2014, Dutchess County Clerk

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ YES ☒ NO

Name	Employer	Position

SECTION E. Is any party identified in Sections A- C an officer, elected or appointed, or employee of the City of Beacon or related, by marriage or otherwise, to a City Council member, planning board member, zoning board of appeals member or employee of the City of Beacon ?

☐ **YES** ☒ **NO**

If yes, list every Board, Department, Office, agency or other position with the City of Beacon with which a party has a position, unpaid or paid, or relationship and identify the agency, title, and date of hire.

Agency	**Title**	**Date of Hire, Date Elected, or Date Appointed**	**Position or Nature of Relationship**

SECTION F. Was any person referred to in Sections A-D known by any other name within five (5) years preceding the date of the application?

☐ **YES** ☒ **NO**

Current Name	**Other Names**

SECTION G. List the names and addresses of each person, business entity, partnership and corporation in the chain of title of the subject premises for the five (5) years next preceding the date of the application.

Name	Address
JMARKMNG, LLC	1064 Wolcott Avenue, Beacon, NY 12508

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

_____

_____

_____

SECTION I. If the applicant is a contract vendee, a duplicate original or photocopy of the full and complete contract of purchase, including all riders, modification and amendments thereto, shall be submitted with the application. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J.

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted:

Name of the Corporation JMARKMNG, LLC	Telephone Contact Information 845-541-4445
Principal Business Address 1064 Wolcott Avenue, Beacon, NY 12508	Place and Date of Incorporation Albany, NY 11/21/2013
Method of Incorporation Department of State Filing	Official place where the documents and papers of incorporation were filed State of New York, Albany

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	Residence or business address	Telephone number
Mark DeFabio	1064 Wolcott Avenue, Beacon NY 12508	845-541-4445
Julie DeFabio	1064 Wolcott Avenue, Beacon NY 12508	845-541-4445

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ YES ☒ NO

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

Name	Address

SECTION K. Have the present owners entered into a contract for the sale of all or any part of the subject property and, if in the affirmative, please provide a duplicate original or photocopy of the fully and complete contract of sale, including all riders, modifications and amendments thereto.

☐ YES ☒ NO

I, Mark DeFabio being first duly sworn, according to law, deposes and says that I am (Title) Member, an active and qualified member of the JMARKMNG, LLC, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) Mark DeFabio

(Signature) _____

APPLICATION FOR SITE PLAN APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: JMARKMNG, LLC

Address: 1064 Wolcott Avenue

Beacon, NY 12508

Signature: [signature]

Date: 3/24/25

Phone: 845-541-4445

(For Official Use Only)

	Date	Initials
Application & Fee Rec'd		
Initial Review		
Public Hearing		
Conditional Approval		
Final Approval		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: Hudson Land Design Professional Engineering, P.C.

Address: c/o Michael Bodendorf, P.E.

174 Main Street, Beacon, NY 12508

Phone: (845) 440-6926

Fax: (845) 440-6637

Email address: mbodendorf@hudsonlanddesign.com

IDENTIFICATION OF SUBJECT PROPERTY:

Property Address: 1064 Wolcott Avenue, Beacon, NY 12508

Tax Map Designation: Section 5954 Block 34 Lot(s) 641767

Land Area: 1.77 acres

Zoning District(s) R1-40, HDLO

DESCRIPTION OF PROPOSED DEVELOPMENT:

Proposed Use: Hotel with accessory restaurant

Gross Non-Residential Floor Space: Existing 10,153 Proposed 22,413

TOTAL: 32,556

Dwelling Units (by type): Existing 2 (one 1-bedroom and one 2-bedroom) (to be removed) Proposed 0

TOTAL: 0 (at project completion)

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** paper copies of a site location sketch showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. One electronic and five (5) **folded** paper copies of the proposed site development plan, consisting of sheets, showing the required information as set forth on the back of this form and other such information as deemed necessary by the City Council or the Planning Board to determine and provide for the property enforcement of the Zoning Ordinance.

c. One electronic and five (5) **folded** paper copies of additional sketches, renderings or other information.

d. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

e. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

INFORMATION TO BE SHOWN ON SITE LOCATION SKETCH

a. Property lines, zoning district boundaries and special district boundaries affecting all adjoining streets and properties, including properties located on the opposite sides of adjoining streets.
b. Any reservations, easements or other areas of public or special use which affect the subject property.
c. Section, block and lot numbers written on the subject property and all adjoining properties, including the names of the record owners of such adjoining properties.

INFORMATION TO BE SHOWN ON THE SITE DEVELOPMENT PLAN

a. Title of development, date and revision dates if any, north point, scale, name and address of record owner of property, and of the licensed engineer, architect, landscape architect, or surveyor preparing the site plan.
b. Existing and proposed contours at a maximum vertical interval of two (2) feet.
c. Location and identification of natural features including rock outcrops, wooded areas, single trees with a caliper of six (6) or more inches measured four (4) feet above existing grade, water bodies, water courses, wetlands, soil types, etc.
d. Location and dimensions of all existing and proposed buildings, retaining walls, fences, septic fields, etc.
e. Finished floor level elevations and heights of all existing and proposed buildings.
f. Location, design, elevations, and pavement and curbing specifications, including pavement markings, of all existing and proposed sidewalks, and parking and truck loading areas, including access and egress drives thereto.
g. Existing pavement and elevations of abutting streets, and proposed modifications.
h. Location, type and design of all existing and proposed storm drainage facilities, including computation of present and estimated future runoff of the entire tributary watershed, at a maximum density permitted under existing zoning, based on a 100 year storm.
i. Location and design of all existing and proposed water supply and sewage disposal facilities.
j. Location of all existing and proposed power and telephone lines and equipment, including that located within the adjoining street right-of-way. All such lines and equipment must be installed underground.
k. Estimate of earth work, including type and quantities of material to be imported to or removed from the site.
l. Detailed landscape plan, including the type, size, and location of materials to be used.
m. Location, size, type, power, direction, shielding, and hours of operation of all existing and proposed lighting facilities.
n. Location, size, type, and design of all existing and proposed business and directional signs.
o. Written dimensions shall be used wherever possible.
p. Signature and seal of licensed professional preparing the plan shall appear on each sheet.
q. Statement of approval, in blank, as follows:

Approved by Resolution of the Beacon Planning Board
on the _____ day of _____, 20_____
subject to all conditions as stated therein

_____ _____
Chairman, City Planning Board **Date**

APPLICATION FEES

Site Plan	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Special Use Permit	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Subdivision	$ 750 for 2-4 lots + $100 per lot $1,000 for 5 or more lots + $300 per lot

ESCROW FEES

ALL SUBDIVISIONS, AND RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

No. of Lots or Dwelling Units	Initial Deposit	Depleted to	Replenishment
1-5 (including lot-line realignment)	$ 3,000	$ 1,000	Current bills + $1,200
6-15	$ 9,000	$ 2,500	Current bills + $1,200
Over 15	$ 18,000	$ 5,000	Current bills + $6,000

NON-RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

	Initial Deposit	Depleted to	Replenishment
Existing Buildings/Change of Use with no site development	$ 1,800	$ 1,000	Current bills + $600
Up to 3,000 s.f. gross floor area	$ 3,125	$ 1,000	Current bills + $1,200
3,000 to 10,000 s.f. gross floor area	$ 3,000 + $0.50 per sq.ft. over 3,000	$ 2,500	Current bills + $3,000
Over 10,000 s.f. gross floor area	$ 9,000 + $0.50 per sq.ft. over 10,000	$ 2,500	Current bills + $3,000

ARCHITECTURAL REVIEW OR CERTIFICATE OF APPROPRIATENESS ***(if not currently before PB)***

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: JMARKMNG, LLC

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.

Mark DeFabio, 50%; Julie DeFabio, 50%

List all properties in the City of Beacon that you hold a 5% interest in:

1064 Wolcott Avenue

Applicant Address: 1064 Wolcott Avenue, Beacon, NY 12508

Project Address: 1064 Wolcott Avenue, Beacon, NY 12508

Project Tax Grid # 5954-34-641767

Type of Application Application for Site Plan Approval

Please note that the property owner is the applicant. "Applicant" is defined as any individual who owns at least five percent (5%) interest in a corporation or partnership or other business.

I, JMARKMNG, LLC, the undersigned owner of the above referenced property, hereby affirm that I have reviewed my records and verify that the following information is true.

1. No violations are pending for ANY parcel owned by me situated within the City of Beacon ✓
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon N/A
3. ALL tax payments due to the City of Beacon are current ✓
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon N/A
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon N/A
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current ✓

Signature of Owner

Mark DeFabio, Member

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	___	___	___
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)	___	___	___
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)	___	___	___

CITY OF BEACON
SITE PLAN SPECIFICATION FORM

Name of Application: 1064 Wolcott Avenue

PLEASE INDICATE WHETHER THE SITE PLAN DRAWINGS SHOW THE SUBJECT INFORMATION BY PLACING A CHECK MARK IN THE APPROPRIATE BOXES BELOW.

	YES	NO
The site plan shall be clearly marked "Site Plan", it shall be prepared by a legally certified individual of firm, such as a Registered Architect or Professional Engineer, and it shall contain the following information:	✓	
LEGAL DATA		
Name and address of the owner of record.	✓	
Name and address of the applicant (if other than the owner).	✓	
Name and address of person, firm or organization preparing the plan.	✓	
Date, north arrow, and written and graphic scale.	✓	
NATURAL FEATURES		
Existing contours with intervals of two (2) feet, referred to a datum satisfactory to the Planning Board.	✓	
Approximate boundaries of any areas subject to flooding or stormwater overflows.	N/A	
Location of existing watercourses, wetlands, wooded areas, rock outcrops, isolated trees with a diameter of eight (8) inches or more measured three (3) feet above the base of the trunk, and any other significant existing natural features.	✓	
EXISTING STRUCTURES, UTILITIES, ETC.		
Outlines of all structures and the location of all uses not requiring structures. Paved areas, sidewalks, and vehicular access between the site and public streets.	✓	
Locations, dimensions, grades, and flow direction of any existing sewers, culverts, water lines, as well as other underground and above ground utilities within and adjacent to the property.	✓	
Other existing development, including fences, retaining walls, landscaping, and screening.	✓	
Sufficient description or information to define precisely the boundaries of the property.	✓	
The owners of all adjoining lands as shown on the latest tax records.	✓	
The locations, names, and existing widths of adjacent streets and curb lines.	✓	
Location, width, and purpose of all existing and proposed easements, setbacks, reservations, and areas dedicated to private or public use within or adjacent to the	✓	

properties.		
PROPOSED DEVELOPMENT	**YES**	**NO**
The location, use and design of proposed buildings or structural improvements.	✓	
The location and design of all uses not requiring structures, such as outdoor storage (if permitted), and off-street parking and unloading areas.	✓	
Any proposed division of buildings into units of separate occupancy.	✓	
The location, direction, power, and time of use for any proposed outdoor lighting.	TO BE PROVIDED	✓
The location and plans for any outdoor signs.	TO BE PROVIDED	✓
The location, arrangement, size(s) and materials of proposed means of ingress and egress, including sidewalks, driveways, or other paved areas.	✓	
Proposed screening and other landscaping including a planting plan and schedule prepared by a qualified individual or firm.	TO BE PROVIDED	✓
The location, sizes and connection of all proposed water lines, valves, and hydrants and all storm drainage and sewer lines, culverts, drains, etc.	✓	
Proposed easements, deed restrictions, or covenants and a notation of any areas to be dedicated to the City.	N/A	
Any contemplated public improvements on or adjoining the property.	N/A	
Any proposed new grades, indicating clearly how such grades will meet existing grades of adjacent properties or the street.	✓	
Elevations of all proposed principal or accessory structures.	✓	
Any proposed fences or retaining walls.	✓	
MISCELLANEOUS		
A location map showing the applicant's entire property and adjacent properties and streets, at a convenient scale.	✓	
Erosion and sedimentation control measures.	✓	
A schedule indicating how the proposal complies with all pertinent zoning standards, including parking and loading requirements.	✓	
An indication of proposed hours of operation.	✓	
If the site plan only indicates a first stage, a supplementary plan shall indicate ultimate development.	N/A	

For all items marked "NO" above, please explain below why the required information has not been provided:

Applicant/Sponsor Name: JMARKMNG, LLC, Mark DeFabio, Member

Signature: [signature]

Date: 3/24/25

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
1 Municipal Plaza, Beacon, NY
Telephone (845) 838-5000 • http://beaconny.gov/

ENTITY DISCLOSURE FORM

(This form must accompany every land use application and every application for a building permit or certificate of occupancy submitted by any entity)

Disclosure of the names and addresses of all persons or entities owning any interest or controlling position of any Limited Liability Company, Partnership, Limited Partnership, Joint Venture, Corporation or other business entity (hereinafter referred to as the "Entity") filing a land-use application with the City is required pursuant to Section 223-61.4 of the City Code of the City of Beacon. If any Member of the Entity is not a natural person, then the names and addresses as well as all other information sought herein must be supplied about the non-natural person member of that Entity, including names, addresses and Formation filing documents. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity	Address of Entity
Place where such business entity was created	Official Registrar's or Clerk's office where the documents and papers creating entity were filed
Date such business entity or partnership was created	Telephone Contact Information

IF AFFIANT IS A CORPORATION:

Name of Entity JMARKMNG, LLC	Telephone Contact Information 845-541-4445
Principal Place of Business of Entity 1064 Wolcott Avenue, Beacon, NY 12508	Place and Date of incorporation Albany, NY 11/21/2013
Method of Incorporation Department of State Filing	Official place where the documents and papers of incorporation were filed State of New York, Albany

SECTION B. List all persons, officers, limited or general partners, directors, members, shareholders, managers, and any others with any interest, mortgage, encumbrance or other interest (recorded or unrecorded) in or with the above referenced

Entity. List all persons to whom corporate stock has been pledged, mortgaged or encumbered and with whom any agreement has been made to pledge, mortgage or encumber said stock. Use a supplemental sheet to list additional persons.

Name	Resident Address	Resident Telephone Number	Nature and Extent of Interest
Mark DeFabio	1064 Wolcott Avenue Beacon, NY 12508	845-541-4445	Member 50% Interest
Julie DeFabio	1064 Wolcott Avenue Beacon, NY 12508	845-541-4445	Member 50% Interest

SECTION C. List all owners of record of the subject property or any part thereof.

Name	Residence or Business Address	Telephone Number	Date and Manner title was acquired	Date and place where the deed or document of conveyance was recorded or filed.
JMARKMNG, LLC	1064 Wolcott Avenue, Beacon, NY 12508	845-541-4445	3/14/2014, Deed	3/20/2014, Dutchess County Clerk

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ **YES** ☒ **NO**

Name	Employer	Position

SECTION E. Is any party identified in Sections A- C an officer, elected or appointed, or employee of the City of Beacon or related, by marriage or otherwise, to a City Council member, planning board member, zoning board of appeals member or employee of the City of Beacon ?

☐ **YES** ☒ **NO**

If yes, list every Board, Department, Office, agency or other position with the City of Beacon with which a party has a position, unpaid or paid, or relationship and identify the agency, title, and date of hire.

Agency	Title	Date of Hire, Date Elected, or Date Appointed	Position or Nature of Relationship

SECTION F. Was any person referred to in Sections A-D known by any other name within five (5) years preceding the date of the application?

☐ **YES** ☒ **NO**

Current Name	Other Names

SECTION G. List the names and addresses of each person, business entity, partnership and corporation in the chain of title of the subject premises for the five (5) years next preceding the date of the application.

Name	Address
JMARKMNG, LLC	1064 Wolcott Avenue, Beacon, NY 12508

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

SECTION I. If the applicant is a contract vendee, a duplicate original or photocopy of the full and complete contract of purchase, including all riders, modification and amendments thereto, shall be submitted with the application. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J.

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted:

Name of the Corporation JMARKMNG, LLC	Telephone Contact Information 845-541-4445
Principal Business Address 1064 Wolcott Avenue, Beacon, NY 12508	Place and Date of Incorporation Albany, NY 11/21/2013
Method of Incorporation Department of State Filing	Official place where the documents and papers of incorporation were filed State of New York, Albany

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**
Mark DeFabio	1064 Wolcott Avenue Beacon, NY 12508	845-541-4445
Julie DeFabio	1064 Wolcott Avenue Beacon, NY 12508	845-541-4445

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ **YES** ☒ **NO**

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

Name	**Address**

SECTION K. Have the present owners entered into a contract for the sale of all or any part of the subject property and, if in the affirmative, please provide a duplicate original or photocopy of the fully and complete contract of sale, including all riders, modifications and amendments thereto.

☐ **YES** ☒ **NO**

I, Mark DeFabio being first duly sworn, according to law, deposes and says that I am (Title) Member, an active and qualified member of the JMARKMNG, LLC, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) Mark DeFabio

(Signature) _____

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: 1064 Wolcott Avenue		
Project Location (describe, and attach a general location map): 1064 Wolcott Avenue, Beacon, NY 12508		
Brief Description of Proposed Action (include purpose or need): The project consists of the redevelopment of an existing commercial site that currently has two buildings and functions as a pre-school with 2 apartments (one 1-bedroom and one 2-bedroom). The proposed development includes a change of use to a hotel with a restaurant. A building addition is proposed that connect to the existing buildings. Site improvements will consist of a reconfiguration of on-site parking, pedestrian walkways and on-site landscaping. The project also includes modifications to the existing sewer and water services to accommodate the building addition, as well as the addition of an on-site stormwater management system. The project is located within the City's R1-40 residential zoning district, the City of Beacon's Historic District and Landmark Overlay Zone and the City of Beacon's Local Waterfront Revitalization Program boundary.		
Name of Applicant/Sponsor: JMARKMNG LLC (Mark DeFabio	Telephone: (845) 541-4445 E-Mail: mjdefabio@gmail.com	
Address: 1064 Wolcott Avenue		
City/PO: Beacon	State: New York	Zip Code: 12508
Project Contact (if not same as sponsor; give name and title/role): Same as Sponsor	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Same as Sponsor	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Beacon Planning Board - Site Plan Approval and Special Use Permit	January 28, 2025
c. City, Town or Village Zoning Board of Appeals ☑Yes ☐No	City of Beacon Zoning Board - Rear yard variance	April, 2025
d. Other local agencies ☑Yes ☐No	C. of Beacon Building Department - Building Permit, Water & Sewage Connection Approval	January 28, 2025
e. County agencies ☑Yes ☐No	County 238 Referral	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDOT - Highway entrance modification, Utility installation	
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☑Yes ☐No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes ☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

Local Waterfront Local Waterfront Revitalization Program, Rehabilitation Plan & Harbor Management Area.

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
One Family-40,000 SQ. FT./dwelling (R1-40) Zoning District, Historic District and Landmark Overlay Zone

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? City of Beacon School District

b. What police or other public protection forces serve the project site?
City of Beacon Police Department

c. Which fire protection and emergency medical services serve the project site?
City of Beacon Fire Department

d. What parks serve the project site?
South Avenue Park, Scenic Hudson's Long Dock Park, Pete and Toshi Seeger Riverfront Park.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial Development - Hotel with restaurant and spa services

b. a. Total acreage of the site of the proposed action? 1.767 acres
b. Total acreage to be physically disturbed? 1.15 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 1.767 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 18 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 1

ii. Dimensions (in feet) of largest proposed structure: +/- 35 ft height; +/- 59 ft width; and +/- 160 length

iii. Approximate extent of building space to be heated or cooled: +/- 11,584 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑ Yes ☐ No

If Yes,

i. Purpose of the impoundment: Underground storage of stormwater

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify: Stormwater runoff

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: 0.024 million gallons; surface area: 0.037 acres

v. Dimensions of the proposed dam or impounding structure: 3.5' height; 53' length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): Underground chambers

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☑ Yes ☐ No

If Yes:

i .What is the purpose of the excavation or dredging? Site preparation for building addition and parking improvements

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): 5,936 cubic yards
- Over what duration of time? 12 months

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

Clean earth and rock material will be excavated and removed from the site to be disposed of locally on other sites in need of clean fill.

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☑ No

If yes, describe.

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan:

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description):

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No

If Yes:

i. Total anticipated water usage/demand per day: 6,306 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑Yes ☐No
Existing water usage is 2,600 GPD.
Therefore the increase in demand is 3,736 GPD.

If Yes:

- Name of district or service area: City of Beacon Water District
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☑No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No

If Yes:

i. Total anticipated liquid waste generation per day: 6,306 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

Sanitary wastewater

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: City of Beacon Wastewater Treamtmetn Plant
- Name of district: City of Beacon Sewer District
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑ Yes ☐ No
- Will a line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

None

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑ Yes ☐ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 0.90 acres (impervious surface)

_____ Square feet or 1.767 acres (parcel size)

ii. Describe types of new point sources. The project will create 0.29 acres of additional impervious surface. The existing stormwater collection and mgmnt system will temporarily store and treat additional runoff before it is conveyed to the City's system.

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

On-site stormwater management structures/practices that will connect to the municipality's (City of Beacon) existing underground stormwater management infrastructure (existing catch basins and stormwater pipes on Wolcott Avenue).

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐ Yes ☑ No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑ Yes ☐ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

Delivery vehicles for restaurant and hotel supplies.

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

Rock crushing may be required.

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

None.

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing 28 Proposed 50 Net increase/decrease +22

iv. Does the proposed action include any shared use parking? ☑Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

None.

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☑Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? Bike lanes and public pedestrian connections currently exist in vicinity of the site. ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: +/- 2,800 kWh per day

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

Local grid owned and maintained by Central Hudson Gas & Electric

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00 am to 5:00 pm
- Saturday: 8:00 am to 5:00 pm
- Sunday: 9 am to 5:00 pm
- Holidays: Emergency only

ii. During Operations:

- Monday - Friday: 7:00 am to 11:00 pm
- Saturday: 7:00 am to 11:00 pm
- Sunday: 7:00 am to 11:00 pm
- Holidays: 7:00 am to 11:00 pm

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Heavy construction equipment used during the construction phase of the project.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

14' high light poles will be provided at parking areas and internal roadways, along with building mounted fixtures at buildings. All site lighting will be Dark Sky compliant.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☑ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: 3 cubic yards tons per week (unit of time)
- Operation : 1 cubic yards tons per week (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: Re-use of materials wherever possible
- Operation: Recyclable materials will be disposed on in a separated refuse bin and recycled.

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: Open top containers will be used for disposal of construction debris to be hauled off-site to a licensed landfill.
- Operation: Enclosed trash receptacles & recycle bins provided with a contracted sanitation company.

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.61	0.90	+0.29
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	1.157	0.867	-0.29
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Meadows, grasslands or brushlands includes landscaped area and lawns			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Rose Hill Manor Day School (project site), Care Jenny's Group Family Daycare, Health Quest Medical Practice

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑ Yes ☐ No

If yes, provide DEC ID number(s): V00299, V00293, 314069, V00096, C314112, 546031

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

V00299-Complete (Code: C), V00293-Complete (Code: C), 314069- No Further Action (Code: N), V00096-No Further Action (Classification Code: N), C314112-Complete (Classification Code: C), 546031-Classificaiton Code 2. Please refer to attached copies of the sites' NYSDEC Remediation Database Reports at the end of this form.

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 2.5 feet

b. Are there bedrock outcroppings on the project site? ☑ Yes ☐ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? 3 %

c. Predominant soil type(s) present on project site:

Dutchess-Cardigan complex (DwB)	99.7 %
Hudson and Vergennes soils (HvD)	0.3 %
	%

d. What is the average depth to the water table on the project site? Average: 6.67 feet

e. Drainage status of project site soils:

☑	Well Drained:	99.7 % of site
☑	Moderately Well Drained:	0.3 % of site
☐	Poorly Drained	% of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	25 % of site
☑	10-15%:	19 % of site
☑	15% or greater:	56 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☑ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:

Raccoon, Squirrel
White Tail Deer, Skunks
Groundhog

n. Does the project site contain a designated significant natural community? ☑ Yes ☐ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): Brackish Subtidal Aquatic Bed

ii. Source(s) of description or evaluation: EAF Mapper

iii. Extent of community/habitat:

- Currently: 596.57 acres
- Following completion of project as proposed: 596.57 acres
- Gain or loss (indicate + or -): 0 acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

If Yes:

i. Species and listing (endangered or threatened): Minute Duckweed, Atlantic Sturgeon, Shortnose Sturgeon

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☑ Yes ☐ No

If Yes:

i. Species and listing: Estuary Beggar Ticks

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☑ Yes ☐ No

i. If Yes: acreage(s) on project site? 1.772 acres

ii. Source(s) of soil rating(s): Farmland Classification of site soils from USDA NRCS Web Soil Survey

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name:

ii. Basis for designation:

iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: National Biscuit Company Carton-Making and Printing Plant

iii. Brief description of attributes on which listing is based:

Listed site is DIA

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Hudson Highlands HH-26

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): State and National Registers of Historic Places

iii. Distance between project and resource: 1 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

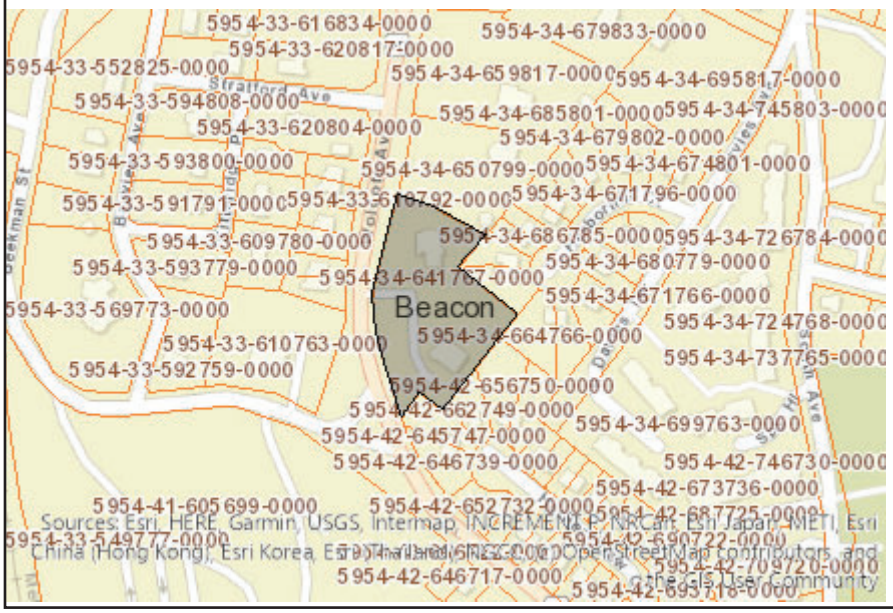
Applicant/Sponsor Name Michael A. Bodendorf, P.E. Date 1/28/2025; Last Revised 3/24/2025

Signature _____ Title Engineer for Applicant

PRINT FORM

EAF Mapper Summary Report

Wednesday, January 22, 2025 3:14 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	V00299, V00293, 314069, V00096, C314112, 546031
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	No
E.2.h.iii [Surface Water Features]	No
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	Yes

E.2.n.i [Natural Communities - Name]	Brackish Subtidal Aquatic Bed
E.2.n.i [Natural Communities - Acres]	596.57
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Minute Duckweed, Atlantic Sturgeon, Shortnose Sturgeon
E.2.p. [Rare Plants or Animals]	Yes
E.2.p. [Rare Plants or Animals - Name]	Estuary Beggar Ticks
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	National Biscuit Company Carton-Making and Printing Plant
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: Dia Center for the Arts
Site Code: V00299
Program: Voluntary Cleanup Program
Classification: C
EPA ID Number:

Location

DEC Region: 3
Address: 3 Beekman Street
City: Beacon Zip: 12508-
County: Dutchess
Latitude: 41.44914206
Longitude: -73.97981732
Site Type:
Estimated Size: 27.63 Acres

Institutional And Engineering Controls

Control Type:
Deed Restriction

Control Elements:
Ground Water Use Restriction
Cover System
Landuse Restriction
Site Management Plan

Site Owner(s) and Operator(s)

Current On-Site Operator: Dia Center for the Arts, Inc.
Stated Operator(s) Address: Dia Center for the Arts, Inc.
Beacon,NY 12508

Site Document Repository

Name: City of Beacon
Address: Beacon City Hall
One Municipal Plaza Beacon,NY 12508
Name: Howland Public Library
Address: 313 Main Street
Beacon,NY 12508

Site Description

Location: The DIA Center for the Arts is located at 3 Beekman Street in the City of Beacon, Dutchess County. The site abuts the Metro North rail line on the east bank of the Hudson River, and is about 1/4 mile south of the Beacon Train Station. Site Features: The site is relatively flat and contains the large art museum. The site rises steeply on the eastern boundary. The site is bounded to the west by the Metro North Railroad tracks and a park; bounded to the north by Beekman Street and the Metro North Train Station, and bounded to the east for commercial and residential housing and the south by a vacant lot. Zoning/ Uses: The site is zoned commercial/light industrial. The surrounding properties are commercial establishments, a transportation corridor (Metro North Railroad) and recreational parkland along the Hudson River. Past Use of the Site: The Dia Art Museum was the location of the former Nabisco and Federal Paperboard facility which operated from 1929 to 1990. The former cardboard box plant reportedly disposed of paint sludge wastes and incinerator ash in the southern portion of the site just outside the facility. Operable Units: The site is divided into two operable units. OU-1 is a 20.5 acre property that is the location of the main museum property which contains the large museum building, parking area and green space. OU 2 is a 7 acre vacant parcel south of the present art museum. OU2 is a low-lying undeveloped parcel. In OU1 under an area of road surface, there is a capped area which contains paint sludge residue. In OU 2, the remediation program cleared all soil-type material (including any waste sludge) off the bedrock surface. Clean back fill which met residential soil cleanup objectives was placed in the excavated areas to a depth of two feet. The Dia Center for the Arts site has been remediated and is in site management. The Final Engineering Report was approved in summer of 2011 and the release letter was issued in September 2011. Site Geology and Hydrology: Groundwater flows west toward the Hudson River and site surface water also drains west to the River. Groundwater and surface water are not impacted and meet guidance levels.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type
Hazardous Substances

Site Environmental Assessment

Nature and Extent of contamination: The Dia Center for the Arts site has been remediated and is in site management. OU 1 was remediated in 2002, and OU 2 was remediated in 2008. In OU1 a small area of soil contamination containing petroleum and metals contamination (from ink and ink wastes)

was capped under a road ramp south of the building. There is no residual contamination in OU-2. A Site Management Plan and Institutional Controls are in place. Groundwater and surface water are not impacted and meet groundwater guidance values. Special Resources: There are no impacts to ecological or special resources at the site. The site drainage flows west to the Hudson River (a distance of 400 feet from the site).

Site Health Assessment

Measures are in place to address residual contamination. Therefore, contact with site-related contaminants is not expected.

For more Information: E-mail Us

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: Doral Hat Property
Site Code: V00293
Program: Voluntary Cleanup Program
Classification: C
EPA ID Number:

Location

DEC Region: 3
Address: 1 West Main Street
City: Beacon Zip: 12508
County: Dutchess
Latitude: 41.50621157
Longitude: -73.98240676
Site Type:
Estimated Size: 3.11 Acres

Site Owner(s) and Operator(s)

Site Description

Site Location: The CHGE Beacon Manufactured Gas Plant (MGP) Dorel Hat property is located in a suburban area in the City of Beacon, Dutchess County, N.Y. The site is approximately 4 acres in size, and is bounded by West Main St. to the north, River St. to the east, an open field owned by the Metropolitan Transportation Authority (MTA)to the south and by Railroad Drive and the Beacon Railroad station to the west. Site Features: The main site features include: an approximately 32,000 square foot building surrounded by a grass covered area in the southern portion of the property and an asphalt paved parking lot in the northern half. Current Zoning/Uses: The site is currently used for storage and office space and is zoned commercial. The surrounding parcels are commercial and residential. The nearest residential area is comprised of townhouses located approximately 100 feet to

the east on River St. Past Uses of the Site: The 1 Main Street site is adjacent to a former MGP located on River Street, which operated from 1871 to approximately 1946. Operable Units (OU) The site was divided into 2 Operable Units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination Operable Unit 1 (OU1) consists of the MGP site itself, which has since been redeveloped for residential use. It appears that all contaminated soils were removed prior to redevelopment. No significant amounts of MGP contamination were found to remain at the former MGP site, and it was determined that no further action was required. A release letter for the Beacon MGP was issued under the VCA on January 31, 2002. Operable Unit 2 (OU2) consists of the property across the street from the MGP, known as the Dorel Hat property. The majority of MGP contaminated soil on OU2 was removed during an IRM conducted in 2007. On September 12, 2007 the Dorel Hat property was transferred to the MTA. On July 15, 2011 the MTA filed a Deed Restriction by which it is required to comply with the Department approved Site Management Plan. Site Geology/Hydrogeology: The site is underlain by unconsolidated sand and silt deposits to a depth of approximately 8 feet. Below these, a 4 foot thick clay layer lies above the slate bedrock. Groundwater on the site flows toward the Hudson River, to the west.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

coal tar

other

Site Environmental Assessment

Remediation of accessible contaminated soil at this site has been completed. The primary contaminant is coal tar which contains PAHs and BTEX compounds. The majority of coal tar contaminated soil was removed during an IRM conducted in 2007. Due to the presence of the Dorel Hat building, a force sewer Main and a gas line on the site, some of the coal tar contaminated soil was not removed and remains in the subsurface under the building and to the east of the building. The coal tar is located at a depth of approximately 5 to 10 feet below the ground surface. Levels of sub-slab soil vapor beneath the building exceed DOH guidance values for indoor air. A sub-slab depressurization vapor mitigation system was installed to prevent sub-slab vapor from entering the building. Groundwater on the site exceeds Groundwater Quality Standards for VOCs, SVOC's, Metals and Pesticides. The area is supplied by a public water supply.

Site Health Assessment

Measures are in place to control the potential for coming in contact with sub-surface soil and groundwater contamination remaining at the site. People are not drinking the contaminated groundwater because the site is served by a public water supply that is not affected by this contamination. Volatile organic compounds in groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings is referred to as soil vapor intrusion. A sub slab depressurization system (systems that ventilate/remove the air beneath the building) has been installed in the on-site building to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the building. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

For more Information: E-mail Us

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Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: CH - MGP - Beacon Street
Site Code: 314069
Program: State Superfund Program
Classification: N *
EPA ID Number:

Location

DEC Region: 3
Address: River Street
City: Beacon Zip: 12508
County: Dutchess
Latitude: 41.5062354
Longitude: -73.98241136
Site Type:
Estimated Size: 0 Acres

Site Owner(s) and Operator(s)

Current Owner Name: CITY OF BEACON
Current Owner(s) Address: 1 MUNICIPAL PLAZA, SUITE 1
BEACON,NY, 12508
Current Owner Name: GARY BLUM
Current Owner(s) Address: 418 RIVER STREET
BEACON,NY, 12508
Current Owner Name: Gurmukh Singh
Current Owner(s) Address: 428 RIVER STREET
BEACON,NY, 12508
Current Owner Name: Hassan Toy
Current Owner(s) Address: 422 RIVER STREET
BEACON,NY, 12508
Current Owner Name: JOSEPH HARNEY
Current Owner(s) Address: 416 RIVER STREET
BEACON,NY, 12508
Current Owner Name: Jeffrey L. Boetign

Current Owner(s) Address: 424 RIVER STREET
BEACON,NY, 12508
Current Owner Name: Jeffrey Staten
Current Owner(s) Address: 420 RIVER STREET
BEACON,NY, 12508
Current Owner Name: Joseph Stezel
Current Owner(s) Address: 430 RIVER STREET
BEACON,NY, 12508
Current Owner Name: Robert Harrington
Current Owner(s) Address: 426 RIVER STREET
BEACON,NY, 12508
Current On-Site Operator: 7-11
Stated Operator(s) Address:
,NY
Current On-Site Operator: CENTRAL HUDSON GAS & ELECTRIC CORP.
Stated Operator(s) Address: 284 SOUTH AVENUE
POUGHKEEPSIE,NY 126014874
Current On-Site Operator: Central Hudson Gas & Electric Corp.
Stated Operator(s) Address: 284 South Avenue
Poughkeepsie,NY 12601

Site Description

See V00293

Site Environmental Assessment

See V00293. The actual site of the MGP has been redeveloped, and no trace of the original plant or surrounding soils remains. A neighboring property across the street (Dorel Hat) was found to have been impacted by tar which had migrated from the MGP site, and was remediated under V00293.

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* **Class N Sites:** "DEC offers this information with the caution that the amount of information provided for Class N sites is highly variable, not necessarily based on any DEC investigation, sometimes of unknown origin, and sometimes is many years old. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

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Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: Ferry Road Waterfront Site
Site Code: V00096
Program: Voluntary Cleanup Program
Classification: N *
EPA ID Number:

Location

DEC Region: 3
Address: West End of Ferry Street
City: Beacon Zip: 12508
County: Dutchess
Latitude: 41.504367438
Longitude: -73.986838475
Site Type:
Estimated Size: 0 Acres

Site Owner(s) and Operator(s)

Site Description

This site is a former mulitple oil storage facility. This site along with Site #V00444 (Beacon Salvage) have been combined into Long Dock Beacon BCP Site. See site # C314112 for further information.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

Site Environmental Assessment

The Ferry Road Site is a former MOSF. Petroleum contamination has been noted in the subsurface.

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Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: Long Dock Beacon
Site Code: C314112
Program: Brownfield Cleanup Program
Classification: C
EPA ID Number:

Location

DEC Region: 3
Address: 8 and 23 Long Dock Beacon Road
City: Beacon Zip: 12508-
County: Dutchess
Latitude: 41.50436724
Longitude: -73.98681499
Site Type:
Estimated Size: 6.44 Acres

Institutional And Engineering Controls

Control Type:
Environmental Easement

Control Elements:
Monitoring Plan
Site Management Plan
IC/EC Plan
Ground Water Use Restriction
Landuse Restriction
Cover System
Soil Management Plan

Site Owner(s) and Operator(s)

Current Owner Name: The Scenic Hudson Land Trust, Inc.
Current Owner(s) Address: One Civic Center Plaza, Suite 200
Poughkeepsie,NY, 12601

Site Document Repository

Name: Beacon City Hall
Address: Municipal Plaza, Lower Level
One Municipal Plaza Beacon,NY 12508
Name: Howland Public Library
Address: 313 Main Street
Beacon,NY 12508
Name: The Beacon Institute
Address: 199 Main Street
Beacon,NY 12508

Site Description

Location: The Long Dock Beacon Site is located on a peninsula adjacent to the Hudson River on Long Dock Road in the City of Beacon, Dutchess County, New York. The site is bordered by the Hudson River to the west, Red Flynn Drive to the east, land owned by Scenic Hudson to the south and the Hudson River and the Metro North Railroad station to the north. Site Features: A rehabilitated red barn which serves as an art gallery and a parking area are located in the northeast corner of the site. The remainder of the site is a passive recreational park. Current Zoning/Use: The site is zoned for commercial/recreational use. A portion of the site is currently a park which extends from the site to the south. The surrounding area has a combination of residential, commercial, and light industrial land uses. Past Use of the Site: Prior uses of the site included a salvage yard, which operated on the northeastern portion of the site from approximately 1962 to 1983 and a Major Oil Storage Facility (MOSF), which operated on the southern portion of the site from approximately 1936 to 1994. In addition unregulated filling of the site may have also led to site contamination. The site is comprised of two former Voluntary Cleanup Program (VCP) sites, the Beacon Salvage site (V00444) and the Garret Storm site (V00096). Site Geology and Hydrogeology: Shallow subsurface soils at the site generally consist of historic fill material consisting of sand, gravel, coal, ash, wood, and brick fragments. Fill is underlain by silt and clay at a depth of 5-10 feet in the northern portion of the site. A dense clay layer is generally present beneath the site at depths of 10 feet on the northern portion of the site and 15-17 feet on the southern portion of the site. Overburden soils extend several hundred feet beneath the site. Overburden groundwater is present at depths of 0 to 5 feet beneath the ground surface. The overall direction of groundwater flow is tidally influenced (to the east at high tide, to the southwest at low tide).

Summary of Project Completion Dates

Projects associated with this site are listed in the Project Completion Dates table and are grouped by Operable Unit (OU). A site can be divided into a number of operable units depending on the complexity of the site and the number of issues associated with a site. Sites are often divided into operable units based on the media to be addressed (such as groundwater or contaminated soil), geographic area, or other factors.

Project Completion Dates

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type
arsenic
benzo(a)pyrene
lead
polychlorinated biphenyls (PCB)

Site Environmental Assessment

Remediation at the site is complete. Prior to remediation, the primary contaminants of concern were polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and metals in soil and volatile organic compounds (VOCs) and semi-volatile-organic compounds (SVOCs) in groundwater. Remedial actions have successfully achieved soil cleanup objectives for restricted-residential use on the eastern portion of the site and commercial use on the western portion of the site. Residual contamination in soil, groundwater, and the potential for contamination in soil vapor is being managed under a Site Management Plan. The site was redeveloped in 2017 as a park.

Site Health Assessment

Measures are in place to control the potential for coming in contact with subsurface soil and groundwater contamination remaining on the site.

For more Information: E-mail Us

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Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: Hudson River PCB Sediments
Site Code: 546031
Program: State Superfund Program
Classification: 02
EPA ID Number:

Location

DEC Region: 5
Address: Hudson River, Hudson Falls-NYC Battery
City: Zip: 12180
County: Saratoga
Latitude: 43.286475666
Longitude: -73.595363441
Site Type:
Estimated Size: 0 Acres

Site Owner(s) and Operator(s)

Current Owner Name: New York State
Current Owner(s) Address:
,ZZ,
Current Owner Name: STATE OF NEW YORK
Current Owner(s) Address:
,ZZ,
Owner(s) during disposal: STATE OF NEW YORK
Current On-Site Operator: NYS Department of Transportation
Stated Operator(s) Address: State Campus - Building 5
Albany,NY 12233

Site Document Repository

Name: US Epa
Address: 187 Wolf road
colonie,NY

Hazardous Waste Disposal Period

From: 1946 **To:** present

Site Description

Site Location: This National Priorities List site includes the nearly 200-mile stretch of the Hudson River that extends from Hudson Falls in Washington County to the Battery in New York City. The river is part of the Champlain Canal between Fort Edward and Waterford. EPA is the lead agency for the investigation and cleanup of the site. Site Features: The site includes the main stem of the Hudson River, as well as the associated flood plains, river banks, riverene fringing wetlands, and backwater areas. Current zoning / uses: The river is currently used for recreation, transportation, and as a source of water for drinking and other purposes. The river floodplain areas include all types of land uses, from passive / recreational to residential to commercial / industrial. Historical uses: The General Electric Company (GE) discharged PCBs into the river from two capacitor manufacturing plants located in Hudson Falls and Fort Edward starting sometime in 1946. Previous investigations identified 40 areas or 'hot spots' in the upper Hudson that had sediments contaminated with greater than 50 ppm of PCBs. Also included in the definition of this site are five Remnant Deposits or river sediment areas that were exposed when the level of the river was lowered when the Fort Edward Dam was removed in 1973. EPA issued a Record of Decision (ROD) for this National Priorities List site on September 25, 1984 which included: in-place containment of the Remnant Deposits; evaluation of downstream domestic water quality at Waterford, New York; and interim “No Action” as to the PCB-contaminated river sediment. The 1984 ROD indicated that both the No Action decision for the river sediments and the containment remedy for the Remnant Deposits might be reexamined by EPA in the future. The containment remedy for the Remnant Deposits was performed by GE under a 1990 Consent Decree with EPA. In addition, in 1990, NYSDEC completed the evaluation of downstream domestic water quality at Waterford, New York, which concluded that PCB concentrations were below analytical detection limits after treatment and met standards applicable to public water supplies. In December 1989, EPA announced its decision to initiate a detailed Reassessment Remedial Investigation/Feasibility Study (RI/FS) of the September 1984 decision concerning the PCB contaminated Hudson River sediments. The Reassessment culminated with EPA’s issuance of a second ROD for the site in February 2002 which included the dredging of an estimated 2.65 million cubic yards of PCB contaminated sediments from the Upper Hudson River (between Fort Edward and Troy), which was estimated in the ROD to contain about 66,300 kilograms of total PCBs (approximately 65% of the total PCB mass estimated to be present within the Upper Hudson River). The ROD also identified further evaluation of PCB contamination in the flood plains concurrent with the design phase of the project. EPA issued a series of Orders to GE for performance of the engineering design for the project. Phase 1 dredging commenced in May 2009, and was completed in October 2009. After completion of Phase 1, EPA reviewed the environmental monitoring and operational data to determine the changes to the project standards and to project design specifications for Phase 2. The changes to the project for Phase 2 were provided to GE in December 2010. GE, in

accordance with the Consent Decree for the site, opted to implement Phase 2 of the remedy on 12/31/10. Construction work for Phase 2 of the remedial project started in 2011, and was completed in 2016. Dredging was completed in fall 2015; habitat reconstruction was completed in 2016. Facility decommissioning was performed in 2016. Operable Units: The site was divided into five operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately in investigation, eliminate or mitigate release, threat of release or exposure pathway resulting from the site contamination. Operable Unit 1 (OU1) consists of the capping of the remnant deposits. OU 2 consists of the dredging of the Upper Hudson River. OU 3 consists of the removal of soils on Rogers Island. OU 4 consists of the Upper Hudson River Floodplains Investigation (EPA tracks as OU4). OU 5 consists of the Lower Hudson River Sediments (from the Federal Dam in Troy to the Battery in New York City). For more information on the Hudson River Fish advisory, copy and paste this link into a web browser: https://www.health.ny.gov/environmental/outdoors/fish/hudson_river/advisory_outreach_project/

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type
cadmium
lead
PCB aroclor 1016
PCB aroclor 1242
PCB aroclor 1254
polychlorinated biphenyls (PCB)

Site Environmental Assessment

Nature and extent of contamination: Contaminants: The primary constituent of concern is PCBs, discharged from two GE capacitor plants in Hudson Falls and Fort Edward. The upstream extent of contamination is the portion of the river immediately above the Bakers Falls Dam at the GE Hudson Falls plant site. The downstream extent of contamination is the Atlantic Ocean. The commercial mixtures of PCBs discharged from the two GE plant sites changed over time; initially aroclor 1254, changing to aroclor 1242 and then to aroclor 1016. Contaminant Concentrations: PCBs have been found in excess of standards, criteria and guidance concentrations (SCGs) in sediments, surface water, biota, air, and soils at the Hudson River PCBs site. The primary sources at the plant sites have been almost completely abated through remedial work at the plant sites; as a result, the primary source of PCB to the surface water and biota of the river are the remaining contaminated sediments in the river south of the plant sites. Prior to remediation of the Upper Hudson River from 2009 to 2016, PCB concentrations in sediment range from non-detect to greater than one percent PCB (> 10,000 parts per million). In surface water typically concentrations range from 2 nanograms per liter (ng/l or parts per trillion) to 100 ng/l, except at times of high flow when scour-driven remobilization of

contaminated sediments can cause much higher concentrations in excess of 1 microgram per liter (1 ug/l or part per billion). Floodplains - Investigations are underway to determine the extent of floodplain impacts. To date, PCB concentrations in excess of 500 milligrams per kilogram (mg/kg or part per million) have been found in limited areas. Those areas have been addressed over the past 15 years with various interim remedies (soil covers). The nature and extent of floodplain soil contamination has not yet been established. Remedial investigations are currently underway. Lower Hudson River - The Lower Hudson River portion of the NPL site (from the Federal Dam in Troy to the Battery in New York City) has not been fully investigated to date. Preliminary sampling of sediment started in 2023 under an order between EPA and GE. Annual fish monitoring for PCBs occurs in certain locations in the lower Hudson. Significant threat: PCB contamination in the Hudson River sediments continue to pose a significant threat to human health and/or the environment. Concentrations in PCBs in biota directly attributable to the waste disposal at the site have led the Department of Health to recommend that human consumption of biota be limited over a substantial portion of the Hudson River between Hudson Falls and the Battery in New York City. In the upper Hudson, the fishery is catch and release only, and the NYSDOH advisory is to eat none. To see the fish consumption advisories, go to: https://www.health.ny.gov/publications/2794.pdf and https://www.health.ny.gov/environmental/outdoors/fish/hudson_river/advisory_outreach_project/ The disposal of PCB into the Hudson River has also led to significant environmental damage as defined in 6 NYCRR Part 375. This site has been included in the Federal National Priorities List (NPL).

Site Health Assessment

Consumption of fish is the major potential route of human exposure to PCBs from this site. Because of site impacts, most fish from the Hudson River downstream of Hudson Falls have elevated PCB levels. Fishing is restricted to catch and release, with a “eat none” advisory for fish consumption, from Hudson Falls to Troy. In addition, there are advisories ("eat none" or "eat no more than 1 meal per month") on consumption of several fish species caught from the Hudson River below the Troy Dam to New York Harbor. People may come into contact with contaminants present in the shallow river sediments while entering or exiting the river during recreational activities, and may also come into contact with contaminants present in floodplain soils. This direct contact route of exposure is present primarily in the upper Hudson between Hudson Falls and Troy.GE under USEPA and State oversight has taken actions at several properties along the Hudson River to address PCB contaminated floodplain soils between Hudson Falls and Troy. These actions vary from deploying signs to installing various covers and are intended to reduce exposures to PCBs in floodplain soils until a permanent remedy is developed. Additionally, a remedial investigation to address floodplain soils in the Upper Hudson River Floodplain under USEPA and State oversight is now underway.

For more Information: E-mail Us

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ARYEH SIEGEL
ARCHITECT

John Gunn - Planning Board Chairman
City of Beacon
One Municipal Plaza
Beacon, NY 12508

Re: 1064 Wolcott Avenue, Beacon, New York
Site Plan Application – Responses to Comments

March 25, 2025

Dear Chairman Gunn and Members of the Planning Board,

Below please find our responses to the comments included in KARC Planning Consultant's Memorandum, dated February 11, 2025; and Lanc & Tully's Engineering Memorandum dated February 6, 2025.

Based on comments received at the initial Planning Board meeting in February, the Applicant has redesigned the project with an understanding that the addition linking the 2 existing buildings must be reduced in scale in relation to the existing, especially the historic building at the north end of the property.

The revised approach addresses the following:

- The addition has been set back in relation to the existing buildings.
- The height of the addition has been reduced to allow the existing buildings to retain their prominence.
- The front door to the hotel has been relocated to the center of the addition to clarify the importance of the entrance. The entrance has been redesigned so that the double height entry is pulled forward of the main façade of the addition.
- The roof of the addition has been redesigned to reduce the scale of the addition in relation to the existing buildings.
    - The addition is a series of bays with shed roofs to reduce the height of the addition in relation to the existing buildings, as suggested by Len Warner. We looked at mansard roofs, but those roofs were determined to create a full additional story by the Building Inspector.
    - The bays break up the addition to eliminate the previously proposed long flat elevation
    - The new roof design works better with the requirement that the upper level be a half story.
- The connection between the existing buildings and the addition has a different siding material to visually break up the overall building. Karen Quiana suggested looking at physically separating the addition from the existing. This creates issues with circulation that makes it infeasible, but the idea of visually separating the buildings is addressed with the way the materials connect. This approach creates the visual separation discussed at the meeting. This idea also follows the suggestion of Preservation Brief 14 concerning how additions can be integrated with historic buildings.
- The Applicant proposes to change the color of the siding for the new and existing buildings.
- The Applicant proposes to use stone at the base of the new and existing buildings to replace the existing brick.
- The restaurant entry has been redesigned to complement the existing porch on the historic building.

84 Mason Circle | ajs@ajsarch.com | *Tel* 845 838 2490
Beacon, New York 12508 | www.ajsarch.com | *Fax* 845 838 2657

- The existing porch on the historic building has been extended to better integrate the later existing addition to the north building.
- The lower level windows have been eliminated, and the grading has been adjusted to eliminate the previous designs appearance of having more than 2 ½ stories.

KARC Planning Consultant's Comment Responses:

1. **Proposed Use:** Certain commercial uses are permitted by Special Permit in the HDLO under Section 223-24.7, as an incentive for the preservation of historic structures. Among the listed uses are "hotel and hotel-related accessory uses and structures with adequate screening of any new structures from surrounding public street views." The new addition connecting the two existing structures does appear to be screened to the north and south during the summer months by existing trees and the existing buildings themselves. However, the new construction is highly visible from Wolcott Avenue to the west. The Board should discuss whether the proposed placement of the new construction and proposed landscaping provide adequate screening of the new structure. Per Section 134-7(B), as elevations and renderings are further developed, care should be taken to ensure that the existing historic three (3) story building on the northern portion of the site remains the most prominent feature of the site and new construction is sufficiently recessed.

   Response: The addition has been significantly redesigned to reinforce the existing historic building and retain its prominence.

2. **Proposed Use:** Section 223-24.7 also permits "sit-down restaurants not to exceed a seating capacity of 50." The applicant is proposing a 56-seat restaurant. The seating capacity should be reduced to 50. Alternatively, the Planning Board may allow a larger number of seats if the applicant can demonstrate that such larger number is warranted by one or more of the following: building size, building configuration, the nature of the proposed preservation, and/or the historic nature and context of the building(s) and the need for preservation and/or adaptive reuse.

   Response: The Applicant believes that the building configuration and the nature of the proposed preservation warrant the minimal increase to 56 seats, which increase is requested to provide sufficient capacity in the restaurant to accommodate all guests of the hotel.

3. **Architectural Design & Preservation:** Project materials note that the historic structure (1900) and existing building (2006) will be preserved with minimal changes to the exterior. The proposed elevations will need to be further developed with notes and callouts provided to identify proposed restoration work and modifications. The elevations should also include proposed colors, materials, and major dimensions ensure compliance with portions of Section 134-7(C).

   Response: The historic structure will be preserved with minimal changes to the exterior, apart from changes that enhance the overall design and connections between the new and existing buildings. It should be noted that the existing historic building at the north end of the site has been modified over time and that this project seeks to address those changes with complementary features. The siding color does not appear to be original to the building, so changing the color is a minimal change to the building design. Elevations will be provided once there is general agreement on the design direction.

4. **Rear Yard Setback:** The applicant has noted that a variance from the ZBA will be required to permit an 18.6 ft rear yard setback where a 50 ft rear yard setback is required.

   Response: Comment acknowledged. The Applicant is in contact with neighboring property owners to potentially acquire small portions of property to reduce or eliminate the requirement for an area variance for the rear yard setback. We will update the Board as these negotiations move forward to determine the variance requirements.

5. **Tree Removal:** Neither the Existing Conditions and Demolition Plan (sheet 2 of 12) nor the Landscape Plan (sheet 3 of 12) note existing trees to be retained or removed. Existing trees to be removed should be shown on the demolition plan, and it would be helpful if existing trees to be retained were indicated on the landscaping plan.

   Response: Existing trees to be removed and/or retained will be shown on the Existing Conditions Plan and on the Landscaping Plan in a future submission.

6. **Lighting Plan:** A photometric plan will be required to ensure compliance with SECTION 223-14(B)

   Response: A photometric plan will be added to the drawing set in a future submission.

7. **Screening of Parking Facilities:** Per Section 223-14.2, outdoor parking areas and recreational facilities for hotels shall be screened with fencing, landscaping and/or buildings on all sides toward adjoining residential lots. Where hotel buildings are set back less than 100 feet from one-family residential lots, such buildings shall be suitably screened with planting. The proposed parking expansion on the eastern portion of the site, including the proposed refuse area, are less than 20 feet from the property line abutting the rear yard of residential properties on Harborhill Court. The Planning Board may require a visual analysis of the area to ensure appropriate screening via landscaping or fencing is provided.

   Response: The Applicant is working with a Landscape Designer to coordinate planting and screening between the hotel and residential properties.

8. **Traffic & Parking**: The Zoning Code requires that the project provide a minimum of 27 parking spaces up to a maximum of 71 parking spaces. A total of 50 parking spaces are proposed on-site, including 2 ADA accessible parking spaces. While the revised demand calculations and Traffic & Parking Analysis should be reviewed by the Board's Traffic Consultant. Additionally, the zoning summary table on Sheet 1 of 12 should be updated to reflect 50 spaces proposed, rather than 48.

   Response: Comment acknowledged. Please refer to the Traffic and Parking Evaluation, prepared by Colliers Engineering & Design.

9. **Application Forms**: The existing and proposed non-residential floor space should be noted on the Application for Special Use Permit (Exhibit B) and Application for Site Plan Approval (Exhibit C). Additionally, the EAF states that 2 two-bedroom apartments exist onsite, but these units are not indicated on the application forms. The forms should be corrected and updated.

   Response: Comment acknowledged. The EAF has been updated.

10. **Local Waterfront Redevelopment Program**: The proposal is within the City's LWRP Boundary. The applicant has provided a Coastal Assessment Form and a consistency statement for the proposal. These documents are sufficient for the Planning Board to declare an LWRP Consistency Determination as part of the review process.

    Response: Comment acknowledged.

Lanc & Tully Comment Responses:

General Comments:

1. Section 223-24. 7, Paragraph B(1) of the Zoning Code states that sit-down restaurants are not to exceed a seating capacity of 50. The project narrative provided states seating for 56. This should be adjusted to comply with zoning or provide additional information as to why 56 seats is acceptable.

   Response: The Applicant believes that the building configuration and the nature of the proposed preservation warrant the minimal increase to 56 seats, which increase is requested to provide sufficient capacity in the restaurant to accommodate all guests of the hotel.

2. The applicant will need to seek a variance from the Zoning Board of Appeals for the required rear-yard setback. The required rear-yard setback in the R1-40 Zone is 50 feet, whereas the applicant is currently proposing a setback of 18.6 feet.

   Response: Comment acknowledged. The Applicant is in contact with neighboring property owners to potentially acquire small portions of property to reduce or eliminate the requirement for an area variance for the rear yard setback. We will update the Board as these negotiations move forward to determine the variance requirements.

3. The applicant will need to seek a variance from the Zoning Board of Appeals for the required rear-yard setback. The required rear-yard setback in the R1-40 Zone is 50 feet, whereas the applicant is currently proposing a setback of 18.6 feet.

   Response: Comment acknowledged. The Applicant is in contact with neighboring property owners to potentially acquire small portions of property to reduce or eliminate the requirement for an area variance for the rear yard setback. We will update the Board as these negotiations move forward to determine the variance requirements.

4. A separate lighting plan shall be prepared that provides photometrics across the site.

   Response: A Lighting Plan will be prepared and submitted as the building design is developed.

5. The project should be referred to the Beacon Fire Chief to see if there are any concerns that should be incorporated in the design, such as providing an additional fire hydrant in front of the site or on the site, recommended location for fire department connection (FDC) to sprinkler system, etc.

   Response: Comment acknowledged. The Applicant will review the project with the Fire Chief as the building design is developed.

Site Plan (Sheet 1 of 12):
5. The plan shall be revised to reflect all retaining walls as depicted on Sheet 6 of 12.

Response: The design of the retaining walls and front planters has been modified and is being further coordinated.

Please refer to Hudson Land Design's response letter regarding the additional comments on the Site Plan Sheet.

Landscape Plan (Sheet 3 of 12):
1. It is recommended that additional landscaping be provided along the parking lot on the rear side of the hotel to provide additional screening for the adjacent residents from vehicle headlights. We would further recommend that some year-round landscaping be used in this area to provide screening during the winter months.

Response: The Applicant is working with a Landscape Designer to coordinate planting and screening between the hotel and residential properties, which will be provided in a future submission. The Landscape Plan will include a planting schedule.

2. The landscape plan shall include a planting schedule identifying the number of each planting, as well as the size of each planting to be installed.

Response: The Landscape Plan that will be provided with a future submission will include a planting schedule.

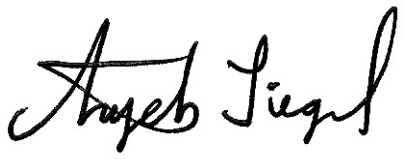
Building Plans (Sheet 4 of 12):
1. Given the proposed uses within the facility, the building will be required to be sprinklered. The current floor plans do not show a sprinkler room, nor to they show a mechanical or electrical room. The floor plans should be revised to reflect all utility rooms that will be required for the project.

   Response: Comment acknowledged. A sprinkler room and required utility rooms will be shown on the floor plans.

Please refer to Hudson Land Design's letter for additional responses to Lanc & Tully comments.

Thank you. Please let me know if you have any questions.

Sincerely,



Aryeh Siegel
Aryeh Siegel, Architect

Civil & Environmental Engineering Consultants
174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)
13 Chambers Street, Newburgh, NY 12550 (Satellite Office)
Phone: 845-440-6926 Fax: 845-440-6637
www.HudsonLandDesign.com

March 25, 2025

Hon. John Gunn, Chairman
City of Beacon Planning Board
1 Municipal Plaza
Beacon, New York 12508

Re: 1064 Wolcott Avenue Site Plan
JMARKMNG, LLC (Applicant)
1064 Wolcott Avenue
Tax Parcel: 5954-34-641767 (±1.77 acres)
City of Beacon, New York

Dear Chairman Gunn and Members of the Planning Board:

On behalf of the Applicant for the above referenced project, Hudson Land Design (HLD) has revised the Site Plan Set in response to Lanc & Tully's February 6, 2025 comment letter, and KARC's February 11, 2025 comment memorandum. Below is a point-by-point response to the comments received.

Lanc & Tully February 6, 2025 Comment Letter

General Comments:

1. Aryeh Siegel has responded to this comment under separate cover.
2. Comment noted. A variance will be requested.
3. An I&I study has been conducted on the site and a report is provided with this submission. No illicit connections were encountered.
4. The Applicant is currently working with a lighting company. A lighting plan will be provided in a future submission. Lighting pole and building mounted light fixtures are shown on the plan.
5. Comment noted. The Applicant will meet with the Fire Chief to discuss fire fighting details on the site.

SEQRA Comments:

1. The EAF has been updated with an anticipated period of construction.

2. Comment noted. Permits will be obtained if applicable.

Engineer's Water & Sewer Report:

1. The water and sewer report has been updated to 56 seats.

2. The statement has been clarified.

3. The formatting issue has been corrected in the revised report.

Site Plan (Sheet 1 of 12):

1. The bioretention stormwater facility is not proposed and has been removed from the plan.

2. The curb ramps are identified on the plan.

3. ADA signage is now provided on the plan.

4. The FDC connection location will be coordinated with the Fire Chief.

5. All retaining walls are now provided on the plan.

6. The sidewalk has been adjusted to full 5-foot width.

Landscaping Plan (Sheet 3 of 12):

1. Aryeh Siegel has responded to this comment under separate cover.

2. Aryeh Siegel has responded to this comment under separate cover.

Building Plans (Sheet 4 of 12):

1. Aryeh Siegel has responded to this comment under separate cover.

Grading & Utility Plan (Sheet 6 of 12):

1. The infiltration system has been moved 25 feet away from the building.

2. The valley is created for drainage purposes and that there are compound grades along the parking lot.

3. The catch basins have been adjusted. Existing catch basins are no longer proposed to be used.

4. The compound grade within the parking lot create a small valley which cannot be fully avoided. The watershed to the valley is rather small and icing in this location is not a concern.

5. Additional catch basins have been added in the front parking lot.

6. An additional catch basin has been added to the south side of the site entrance.

7. Hydrant flow tests will be conducted on Harbor View Court to verify available pressures and flows and coordinated with the sprinkler designer. The data will also be discussed with the Fire Chief.

8. The existing water service to the north building is 1" copper and will remain in-use for domestic service.

9. ADA ramps are now identified on the plan.

10. Additional spots have been added to the ramps.

Construction Details (Sheet 10 of 12):

1. A noted has been added to the retaining wall detail stating that all walls shall be designed by a licensed professional engineer in the State of New York. All wall designs and calculations shall be submitted to the Building Inspector Prior to the construction of any walls on the site.

2. The concrete sidewalk detail has been revised to reflect a maximum cross-slope of 1.5%.

Construction Details (Sheet 11 of 12):

1. The bio-retention stormwater detail has been replaced with an underground stormwater infiltration detail as the bioretention detail is no longer proposed.

SWPPP Comments:

1. The bioretention area is no longer proposed and has been removed from the plans and SWPPP.

2. The catch basin that was connected to the underground detention system in the previous design was a set up as a control structure for inlet and outlet control. An additional catch basin has been added to be connected to the detention system. One is an inlet catch basin and the other and outlet catch basin.

3. The current permit is now referenced in the revised SWPPP.

4. Northeast Regional Climate Center rainfall data was used and modeled in accordance with section 4.9 of the 2024 design manual. The reference to Type I, II and III were removed from the SWPPP.

5. 100% of the redeveloped WQv is treated through the underground infiltration system and the hydrodynamic separator. Supporting calculations are provided in the revised SWPPP.

6. The underground detention system has been added to the profile.

7. Infiltration testing will be conducted. The testing will be coordinated with Lanc & Tully.

8. The infiltration system has been moved to 25 feet from the building.

9. The underground infiltration system is designed with a isolator row which provides the required pre-treatment.

10. A concrete washout detail has been added to sheet CD-3.

KARC February 11, 2025 Comment Memorandum

1. Comment noted.
2. Comment noted. Aryeh Siegel has responded to this comment under separate cover.
3. Aryeh Siegel has responded to this comment under separate cover.
4. Comment noted. A variance will be requested.
5. Tree removal will be indicated on the demolition plan once the surveyor provides the information. Tree removal information will be provided in a future submission.
6. The Applicant is currently working with a lighting company. A lighting plan will be provided in a future submission. Lighting pole and building mounted light fixtures are shown on the plan.
7. Aryeh Siegel has responded to this comment under separate cover.
8. Aryeh Siegel has responded to this comment under separate cover. This comment has also been addressed in the Traffic and Parking Evaluation, prepared by Colliers Engineering & Design.
9. Revised Application Forms are provided with this submission.
10. Comment noted.

Five copies of the following materials are submitted in support of the project:

- Updated Site Plan Set
- Updated EAF
- I&I Study
- Updated Water and Sewer Report (3 copies)
- Updated SWPPP (3 copies)

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 845-440-6926.

Sincerely,

Michael A. Bodendorf, P.E.
Principal

cc: JMARKMNG, LLC (via email)
Aryeh Siegel, AIA
Daniel G. Koehler, P.E. (HLD file)

400 Columbus Avenue
Suite 180E
Valhalla New York 10595
Main: 877 627 3772
colliersengineering.com

Colliers
Engineering & Design

March 21, 2025

Mr. John Gunn, Board Chair
City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

Proposed Hotel – 1064 Wolcott Avenue
Traffic and Parking Evaluation
City of Beacon, Dutchess County, New York
Colliers Engineering & Design Project No. 24010794A

Dear Chairperson Gunn and Members of the Planning Board:

Colliers Engineering & Design CT, P.C. has conducted an evaluation of the potential traffic and parking impacts of the proposed 1064 Wolcott Avenue redevelopment ("the Project"). The Project proposes to redevelop the property, which currently contains the existing Rose Hill Manor Day School with a 42-room hotel including accessory guest amenities comprised of a 56-seat restaurant, a gym, a spa, and a conference area. The Project is located at 1064 Wolcott Avenue in Town of City of Beacon, Dutchess County, New York and falls within the City's R1-40 Zoning District and the Historic District and Landmark Overlay Zone (HDLO).

The existing Rose Hill Manor Day School accommodates approximately 120 daycare students in the two (2) existing buildings. The proposed hotel will consist of 42 rooms with an accessory gym, spa and conference room for use of Hotel guests only. In addition, the Project proposes a 56-seat restaurant that will be open to the public. The Project also proposes an expansion of the existing on-site parking areas to provide a total 50 parking spaces, including 2 ADA spaces, under proposed conditions.

The hotel will operate 365 days per year 24 hours per day while the restaurant is also anticipated to be open 7-days per week with typical hours of 5 PM to 10 PM Monday through Thursday and 5 PM to 11 PM on Friday. On Saturday and Sunday, brunch service is anticipated to be provided between 11 AM to 2 PM therefore, weekend hours are expected to be 11 AM to 11 PM on Saturday and 11 AM to 10 PM on Sunday. It should be also noted that breakfast service to hotel guests only is anticipated to be provided daily.

Colliers Engineering & Design

Traffic Comparison

In order to assess the potential traffic impacts associated with the Project, peak hour traffic generation estimates associated with the existing day school and the proposed hotel development were identified based on information published by the Institute of Transportation Engineers (ITE) as contained in the report entitled "Trip Generation", 11th Edition, 2021, based on Land Use 565 – Day Care Center for the existing use and Land Use Categories 310 – Hotel and 931 – Quality Restaurant for the proposed development. Table No. 1-E contained in Appendix A, summarizes the Weekday AM, Weekday PM, and Saturday Peak Hour traffic generation estimates for the existing daycare use, while Table No. 1-P, also contained in Appendix A, summarizes the traffic generation estimates for the proposed redevelopment for the same peak hours. It should be noted that in order to account for the likelihood that hotel guests will also frequent the restaurant, a 5% internal credit has been applied to the traffic generation estimates for the proposed use. This credit is based on the NCHRP Report 684 Internal Trip Capture Estimation Tool, which is utilized to estimate internal trips between uses. These calculations for the Weekday PM and Saturday Peak Hours, which support the 5% internal credit, are provided in Appendix A for reference. Note that no internal credit has been assumed for the Weekday AM Peak Hour since the restaurant will not be open to the public during the weekday mornings.

Exhibit No. 1 below provides a comparison of the existing Rose Hill Manor Day School traffic generation to the proposed redevelopment traffic generation.

Exhibit No. 1 – Existing vs. Proposed Traffic Generation Comparison

	Entering Volume	Exiting Volume	Total Volume
Weekday AM Peak Hour			
Existing Daycare	50	44	94
Proposed Hotel/Restaurant	12	8	20
Differential	-38	-36	-74
Weekday PM Peak Hour			
Existing Daycare	45	50	95
Proposed Hotel/Restaurant	23	16	39
Differential	-22	-34	-56
Saturday Peak Hour			
Existing Daycare	8	5	13
Proposed Hotel/Restaurant	29	21	50
Differential	+21	+16	+37

Colliers Engineering & Design

The table indicates that the proposed Project use is estimated to result in a decrease of trip generation during the Weekday AM Peak Hour (74 total fewer trips) and during the Weekday PM Peak Hour (56 total fewer trips). Therefore, the proposed Project would not have an impact on traffic operating conditions in the vicinity of the site during the Weekday AM and PM Peak Hours. During the Saturday Peak Hour, an increase of approximately 34 total trips is anticipated due to the fact that the existing daycare use is generally inactive on weekends. This increase in traffic generation from the site on Saturday, and generally on weekends, is not considered significant. In fact, the total traffic generation from the proposed site during all peak hours is less than the NYSDOT and ITE threshold of 100 site generate trips, which typically indicates a need for further off-site intersection analysis.

Parking Evaluation

As indicated previously, the Project development area falls within the City of Beacon R1-40 Zoning District. The City of Beacon Zoning Code (the "Zoning Code") provides specific off-street parking requirements in Section 223-26 – Off Street Parking, Loading and Vehicular Access. The Zoning Code specifies both a minimum and maximum parking standard for various uses for properties located in the R1-40 District, within which the Project is located. Exhibit No. 2 below summarizes the minimum and maximum parking standards, and the resulting minimum required and maximum allowable parking spaces for the Project.

Exhibit No. 2 – City of Beacon Code Required Parking

Proposed Use	Size	Code Minimum Parking Standard		Code Maximum Parking Standard	
Hotel	42 Rooms	0.5 Space/ Guest Room	21 Spaces	1.5 Spaces/ Guest Room	63 Spaces
Restaurant	2,188 Sq. Ft. (1,888 Sq. Ft.)[1]	3 spaces Per 1000 SF GFA	6 Spaces	5 spaces Per 1000 SF GFA	10 Spaces
		Total Parking Spaces	**27 Spaces**	---	**73 Spaces**

Notes:

1. Reduced size for the Restaurant space accounts for the total Gross Floor Area without utility and other space.
2. City of Beacon Code Minimum and Maximum Parking Standards are based on Section 223-26.D of the City Code.

As indicated in the table above, the Zoning Code requires that the Project provide a minimum of 27 parking spaces up to a maximum of 73 parking spaces. Therefore, the 50 parking spaces proposed to be provided on the site would be considered zoning compliant. Note that since the gym, spa and conference space are proposed to be for the use of Hotel guests only, these areas would not generate any separate additional parking demand.

Colliers Engineering & Design

As is specified in the Code, the Planning Board shall make the ultimate determination of the appropriate number of parking spaces for a Project based on the context of the property, including but not limited to, as applicable, the size of the parcel, proposed uses, existing buildings on the parcel, especially if they are designated as historic, availability of public and street parking in the area, access to public transit, a parking study submitted by the applicant, shared parking arrangements, land-banking authorized under § 223- 26C(2), compliance with the Americans with Disabilities Act (ADA) and any state requirements for accessible parking, and input from any public hearing.

In order to determine an appropriate number of parking spaces for the Project, a shared parking analysis has been conducted based on parking demand and hourly occupancy data provided by the Institute of Transportation Engineers (ITE) as contained in the ***Parking Generation Manual, 6th Edition.*** ITE provides parking demand data and hourly parking occupancy distributions for Land Use 310 – Hotel, and 931 – Quality Restaurant, which was referenced for this analysis. The relevant ITE parking data for each land use is provided in Appendix B of this report for reference. Note that hourly distribution data for Land Use 932 – High-Turnover Site-Down Restaurant was also referenced for the weekend (Saturday) parking analysis to account for weekend brunch service. It should also be noted that the ITE data accounts for parking utilization of both patrons of the hotel and restaurant as well as employee parking. Therefore, the parking analysis is inclusive of all anticipated parking needs for the development.

The resulting shared parking analysis, which was conducted for a typical weekday and a typical weekend (Saturday) is summarized in Tables P-1 and P-2, contained in Appendix B. Note that a similar 5% credit as discussed previously was assumed for the parking analysis to account for the likelihood of hotel guests also frequenting the restaurant, which will reduce the overall parking demand. As indicated in the tables, the peak parking demand for the Project when accounting for the shared use of parking between the various uses will result in a total parking demand of 52 parking spaces on a weekday, occurring between 8PM – 9PM and 64 parking spaces on a Saturday occurring between 7PM – 11PM. As shown on the Site Plans, the Project proposes to provide a total of 50 parking spaces, which based on the above analysis is considered code compliant.

In order to accommodate the excess parking demands, the Applicant proposes to implement a valet parking strategy on Friday through Sunday evenings to accommodate this additional excess parking demand utilizing both available onsite parking as well as additional offsite parking at a nearby private parking lot. Onsite parking will generally be offered to hotel guests first, while the remaining on-site and off-site parking spaces will be available for patrons of the restaurant via valet parking on Friday through Sunday evenings.

Summary and Conclusion

As summarized above, the proposed redevelopment of the 1064 Wolcott Avenue property to include a hotel and restaurant is not anticipated to result in significant additional traffic generation over existing conditions and therefore is not anticipated to result in any significant traffic impacts on the surrounding roadway network.

In addition, Applicant proposes to implement a valet parking strategy on Friday through Sunday evenings to accommodate this additional excess parking demand utilizing both available onsite parking as well as additional offsite parking at a nearby private parking lot.

Sincerely,

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.

Richard G. D'Andrea, P.E., PTOE
Department Manager

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Colliers Engineering & Design

Appendix

Appendix A | Traffic Generation Analysis

Table No. 1E
Hourly Trip Generation Rates (HTGR) and
Anticipated Site Generated Traffic Volumes

1064 Wolcott Avenue City of Beacon, NY	Entry		Exit	
	HTGR[1]	Volume	HTGR1	Volume
Existing Daycare (120 Students)				
Peak AM Hour	0.42	50	0.37	44
Peak PM Hour	0.38	45	0.42	50
Saturday Peak Hour	0.07	8	0.04	5

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 11TH EDITION, 2021. ITE LAND USE CODE - 565 - DAY CARE CENTER.

Table No. 1-P
Hourly Trip Generation Rates (HTGR) and
Anticipated Site Generated Traffic Volumes

1064 Wolcott Avenue City of Beacon, NY	Entry			Exit		
	HTGR[1]	Volume	New Trips[2]	HTGR1	Volume	New Trips[2]
Hotel (42 Rooms)						
Peak AM Hour	0.27	11	11	0.20	8	8
Peak PM Hour	0.32	13	12	0.29	12	11
Saturday Peak Hour	0.49	20	19	0.37	15	14
Quality Restaurant (56 Seats)						
Peak AM Hour	0.01	1	1	0.00	0	0
Peak PM Hour	0.11	11	10	0.05	5	5
Saturday Peak Hour	0.11	11	10	0.07	7	7
Total						
Peak AM Hour	-	12	12	-	8	8
Peak PM Hour	-	24	23	-	17	16
Saturday Peak Hour	-	31	29	-	22	21

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 11TH EDITION, 2021. ITE LAND USE CODE - 310 - HOTEL AND ITE LAND USE CODE - 931 - QUALITY RESTAURANT.

2) FOR THE AM PEAK HOUR NO INTERNAL CREDIT IS USED HOWEVER THE PEAK PM AND SATURDAY HOUR "NEW TRIPS" INCLUDE A 5% INTERNAL TRIP CREDIT BASED ON NCHRP REPORT 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	1064 Wolcott Avenue	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Weekday AM	**Date:**	3/21/2025
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				0		
Restaurant	931	100		16	11	5
Cinema/Entertainment				0		
Residential				0		
Hotel	310		41	25	13	12
All Other Land Uses[2]				0		
				41	24	17

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	1	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	41	24	17
Internal Capture Percentage	5%	4%	6%
External Vehicle-Trips[5]	39	23	16
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	N/A	N/A
Restaurant	9%	0%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	0%	8%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	1064 Wolcott Avenue
Analysis Period:	**Weekday PM**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	11	11	1.00	5	5
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	13	13	1.00	12	12

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	2	8	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		3	0	0	2
Restaurant	0	0		0	0	9
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		2
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	1	10	11	10	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	13	13	13	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	5	5	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	1	11	12	11	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	1064 Wolcott Avenue	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Weekday AM	**Date:**	3/21/2025
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**Saturday Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				0		
Restaurant	931	100		18	11	7
Cinema/Entertainment				0		
Residential				0		
Hotel	310		41	35	20	15
All Other Land Uses[2]				0		
				53	31	22

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	1	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	53	31	22
Internal Capture Percentage	4%	3%	5%
External Vehicle-Trips[5]	51	30	21
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	N/A	N/A
Restaurant	9%	0%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	0%	7%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	1064 Wolcott Avenue
Analysis Period:	**Saturday Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	11	11	1.00	7	7
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	20	20	1.00	15	15

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	3		1	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	2	10	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		3	0	0	3
Restaurant	0	0		0	0	14
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		2
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	1	10	11	10	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	20	20	20	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	7	7	7	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	1	14	15	14	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

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Appendix

Appendix B | Parking Analysis

TABLE P-1
SHARED PARKING ANALYSIS
WEEKDAY

Use		Hotel		Restaurant		Total Peak
Size		42 Rooms		56 Seats		Demand Per
Peak Hour Demand		37 Spaces		29 Spaces		Hour
Time of Day		% of Peak	Parking	% of Peak	Parking	Parking
Start	End	Demand	Spaces	Demand	Spaces	Spaces
12:00 AM	1:00 AM	100%	37	0%	-	37
1:00 AM	2:00 AM	100%	37	0%	-	37
2:00 AM	3:00 AM	100%	37	0%	-	37
3:00 AM	4:00 AM	100%	37	0%	-	37
4:00 AM	5:00 AM	100%	37	0%	-	37
5:00 AM	6:00 AM	100%	37	10%	3	40
6:00 AM	7:00 AM	90%	34	10%	3	37
7:00 AM	8:00 AM	90%	34	10%	3	37
8:00 AM	9:00 AM	90%	34	10%	3	37
9:00 AM	10:00 AM	80%	30	10%	3	33
10:00 AM	11:00 AM	74%	28	10%	3	31
11:00 AM	12:00 PM	67%	24	17%	5	29
12:00 PM	1:00 PM	65%	24	39%	11	35
1:00 PM	2:00 PM	61%	22	53%	15	37
2:00 PM	3:00 PM	59%	21	47%	13	34
3:00 PM	4:00 PM	58%	21	35%	10	31
4:00 PM	5:00 PM	61%	22	41%	11	33
5:00 PM	6:00 PM	60%	22	50%	14	36
6:00 PM	7:00 PM	62%	22	70%	20	42
7:00 PM	8:00 PM	65%	24	94%	27	50
8:00 PM	9:00 PM	70%	25	100%	28	52
9:00 PM	10:00 PM	75%	27	87%	25	51
10:00 PM	11:00 PM	88%	31	57%	16	48
11:00 PM	12:00 AM	97%	34	0%	-	34
				Max Parking Demand		52

Note:

1) Parking Demand Calculations include a 5% internal credit applied to the Hotel and Restaurant uses for the Hours from 11:00 AM to 11:00 PM when the restaurant is open. The 5% internal credit is based on NCHRP Report 684 Internal Trip Estimation Tool.

TABLE P-2
SHARED PARKING ANALYSIS
WEEKEND

Use		Hotel		Restaurant		Total Peak
Size		42 Rooms		56 Seats		Demand Per
Peak Hour Demand		41 Spaces		35 Spaces		Hour
Time of Day		% of Peak	Parking	% of Peak	Parking	Parking
Start	End	Demand	Spaces	Demand	Spaces	Spaces
12:00 AM	1:00 AM	100%	41	0%	-	41
1:00 AM	2:00 AM	100%	41	0%	-	41
2:00 AM	3:00 AM	100%	41	0%	-	41
3:00 AM	4:00 AM	100%	41	0%	-	41
4:00 AM	5:00 AM	100%	41	0%	-	41
5:00 AM	6:00 AM	100%	41	10%	4	45
6:00 AM	7:00 AM	80%	33	10%	4	37
7:00 AM	8:00 AM	81%	34	10%	4	38
8:00 AM	9:00 AM	80%	33	10%	4	37
9:00 AM	10:00 AM	79%	33	10%	4	37
10:00 AM	11:00 AM	70%	29	25%	9	38
11:00 AM	12:00 PM	65%	26	35%	12	38
12:00 PM	1:00 PM	61%	25	56%	19	44
1:00 PM	2:00 PM	57%	23	69%	24	47
2:00 PM	3:00 PM	48%	19	58%	20	39
3:00 PM	4:00 PM	50%	20	49%	17	37
4:00 PM	5:00 PM	55%	22	66%	23	45
5:00 PM	6:00 PM	59%	24	79%	27	50
6:00 PM	7:00 PM	66%	27	85%	29	55
7:00 PM	8:00 PM	76%	30	99%	33	64
8:00 PM	9:00 PM	76%	30	99%	33	64
9:00 PM	10:00 PM	78%	30	100%	33	64
10:00 PM	11:00 PM	87%	34	88%	29	64
11:00 PM	12:00 AM	95%	37	0%	-	37
				Max Parking Demand		64

Note:

1) Parking Demand Calculations include a 5% internal credit applied to the Hotel and Restaurant uses for the Hours from 11:00 AM to 11:00 PM when the restaurant is open. The 5% internal credit is based on NCHRP Report 684 Internal Trip Estimation Tool.

Land Use: 310 Hotel

Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, concierge service, valet parking, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (four study sites) and a Saturday (three study sites) in a general urban/suburban setting.

Hour Beginning	Percent of Peak Parking Demand	
	Weekday	Saturday
12:00–4:00 a.m.	100	100
5:00 a.m.	—	—
6:00 a.m.	90	80
7:00 a.m.	90	81
8:00 a.m.	90	80
9:00 a.m.	80	79
10:00 a.m.	74	70
11:00 a.m.	67	65
12:00 p.m.	65	61
1:00 p.m.	61	57
2:00 p.m.	59	48
3:00 p.m.	58	50
4:00 p.m.	61	55
5:00 p.m.	60	59
6:00 p.m.	62	66
7:00 p.m.	65	76
8:00 p.m.	70	76
9:00 p.m.	75	78
10:00 p.m.	88	87
11:00 p.m.	97	95

Additional Data

Parking demand at a hotel is related to the presence of supporting facilities. A hotel with a convention facility, meeting rooms, restaurant, or banquet space, may include parking demand generated by event attendees who are not hotel guests. As a result, peak parking demand for the hotel may occur during the afternoon or evening instead of the typical hotel peak parking demand that occurs overnight. To illustrate, for four of the 12 study sites in the database, the time-of-day parking demand distribution clearly demonstrates that an event took place during the evening of the study period. The peak parking demand at these four sites ranged between 50 and 100 percent greater than that of the peak overnight parking demand for hotel guests.

The database for this land use does not include information on potential independent variables for the generation of event-related parking demand (such as meeting facility GFA or event attendees) during the count period. For that reason, the peak parking demand displayed in the data plots only includes a site's overnight peak parking demand (i.e., parking demand associated with overnight guests and hotel staff). The plots do not contain peak parking demands generated by other supporting facilities or events that occur outside of the typical overnight peak parking period.

Parking demand at all lodging land uses may be related to the recent emergence of transportation network companies (TNCs) (also referred to as ride-share or ride-hailing companies). Hotel parking demand may be reduced if a hotel guest uses a TNC service for hotel drop-off or pick-up rather than using a rental car and parking on-site. Additional data are needed in order to measure and understand the potential impact of TNCs on lodging land use parking demand.

The average parking supply ratio for the nine study sites with parking supply information is 1.1 spaces per room. The average peak parking occupancy at the four sites with event parking is 69 percent. For the nine sites with overnight parking demand counted, the average peak parking occupancy is 54 percent.

The sites were surveyed in the 1990s, the 2000s, and the 2020s in California, and Washington.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms. Future data submissions should indicate the presence of supporting facilities and the level of activity/event taking place during the count period (e.g., full, empty, partially active; number of people attending a meeting/banquet). Data on the presence and usage of TNC service should be documented for all lodging land uses for future analysis purposes.

Source Numbers

217, 315, 401, 438, 603

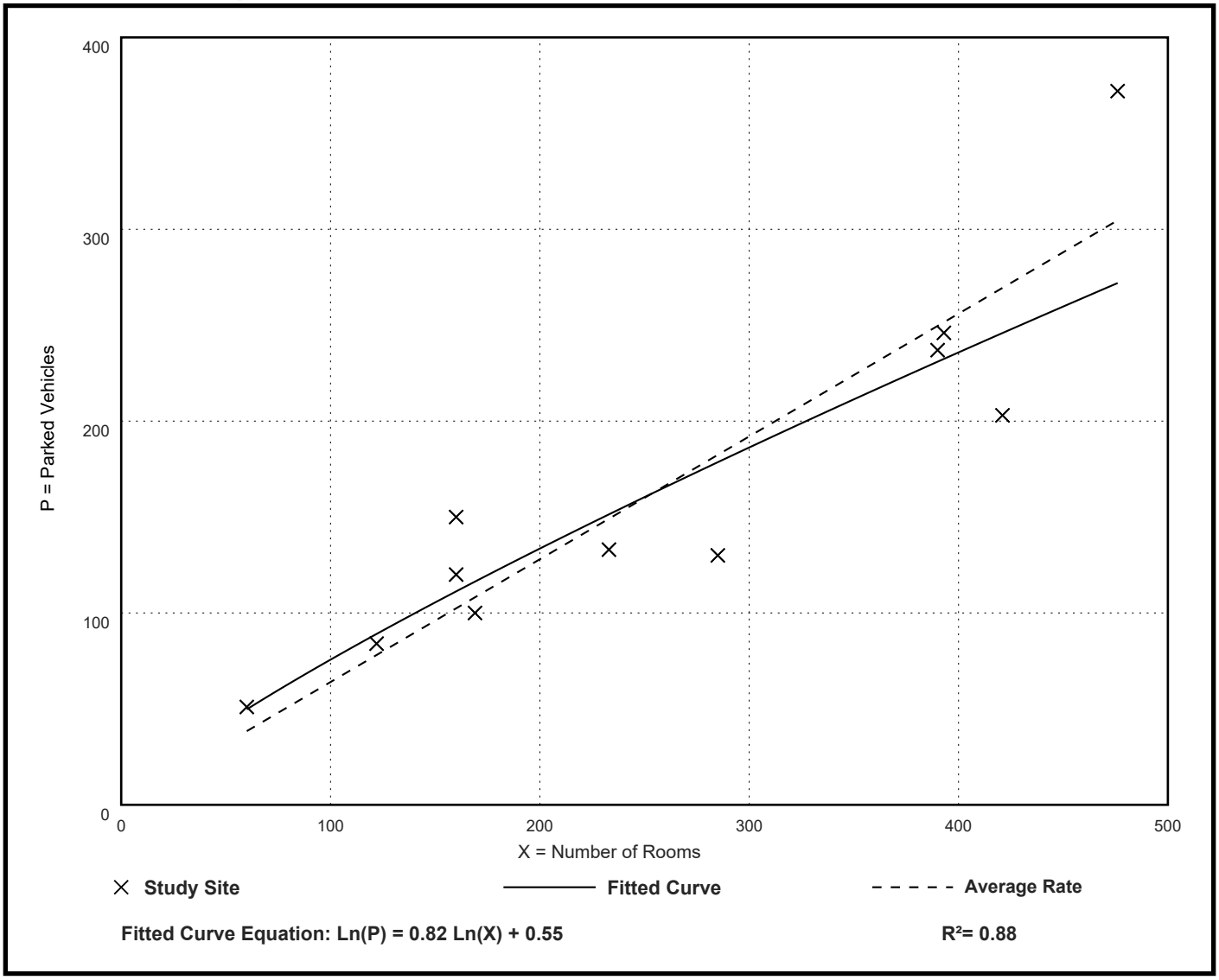
Hotel
(310)

Peak Period Parking Demand vs: Rooms
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Rooms: 261

Peak Period Parking Demand per Room

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.64	0.46 - 0.94	0.59 / 0.87	***	0.14 (22%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.82 Ln(X) + 0.55

R^2= 0.88

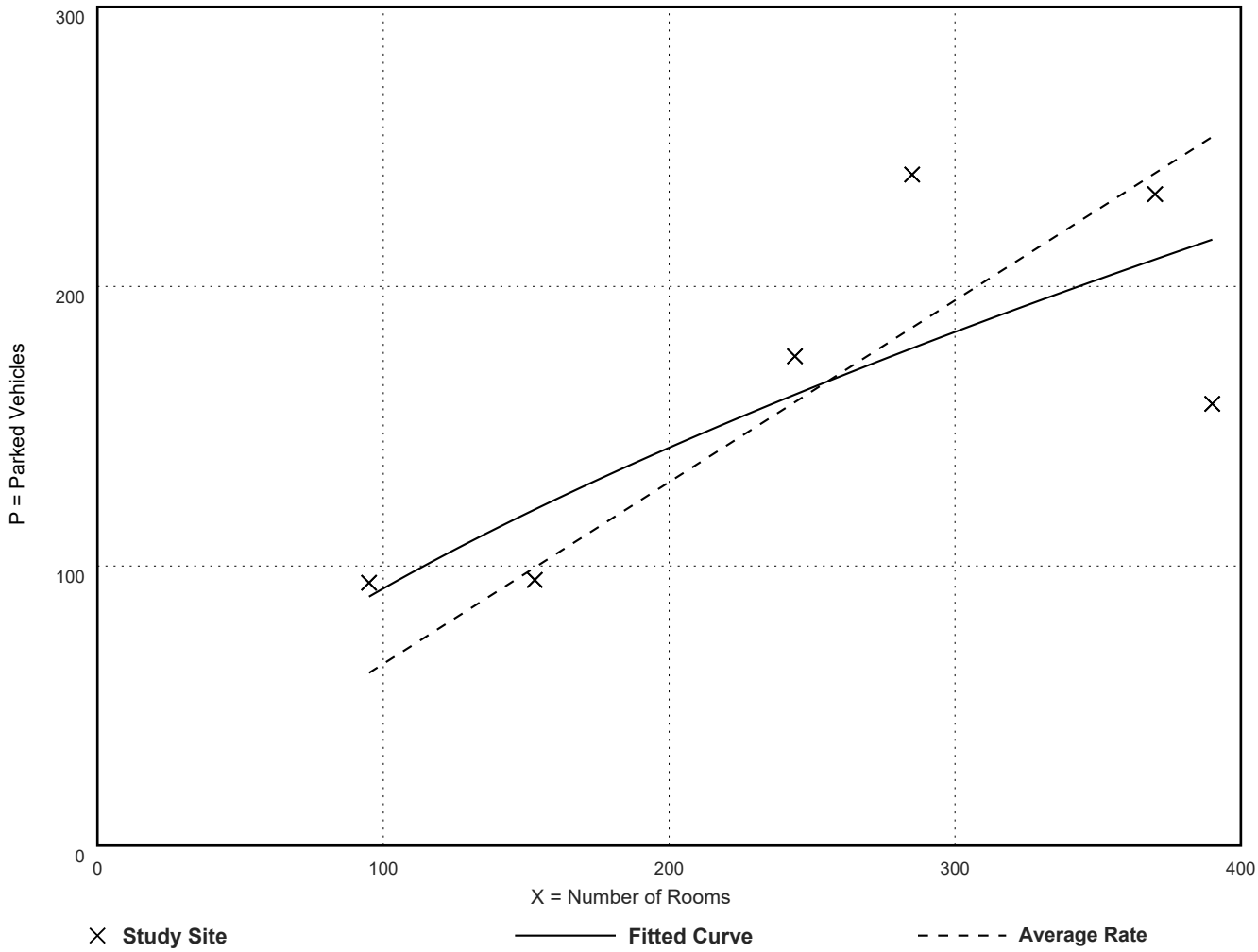
Hotel
(310)

Peak Period Parking Demand vs: Rooms
On a: Saturday
Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Rooms: 256

Peak Period Parking Demand per Room

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.65	0.41 - 0.99	0.62 / 0.98	***	0.19 (29%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.63 Ln(X) + 1.62

R^2= 0.69

Land Use: 931 Fine Dining Restaurant

Description

A fine dining restaurant is a full-service eating establishment with a typical duration of stay of at least 1 hour. A fine dining restaurant generally does not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires a reservation and is generally not part of a chain. A patron commonly waits to be seated, is served by wait staff, orders from a menu and pays after the meal. Some of the study sites have lounge or bar facilities (serving alcoholic beverages), but meal service is the primary draw to the restaurant.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand for three study sites in a general urban/suburban setting on a Monday-through-Thursday, a Friday, a Saturday, and a Sunday.

Hour Beginning	Percent of Peak Parking Demand			
	Monday through Thursday	Friday	Saturday	Sunday
12:00–4:00 a.m.	–	–	–	–
5:00 a.m.	–	–	–	–
6:00 a.m.	–	–	–	–
7:00 a.m.	–	–	–	–
8:00 a.m.	–	–	–	–
9:00 a.m.	–	–	–	–
10:00 a.m.	–	–	–	–
11:00 a.m.	17	13	20	21
12:00 p.m.	39	38	40	47
1:00 p.m.	53	43	62	69
2:00 p.m.	47	39	69	75
3:00 p.m.	35	32	49	76
4:00 p.m.	41	33	66	74
5:00 p.m.	50	41	79	69
6:00 p.m.	70	78	85	88
7:00 p.m.	94	95	99	100
8:00 p.m.	100	100	99	88
9:00 p.m.	87	88	100	71
10:00 p.m.	57	64	88	35
11:00 p.m.	–	–	–	–

Additional Data

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may have a more direct relationship to site-generated parking demand than GFA.

The average parking supply ratio for the seven study sites in a general urban/suburban setting and with parking supply information is 22 spaces per 1,000 square feet GFA. The average peak parking occupancy at these sites is 78 percent. The average parking supply ratio for the five study sites in a dense multi-use urban setting and with parking supply information is 12 spaces per 1,000 square feet GFA. The average peak parking occupancy at these sites is 100 percent.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in California, Illinois, Indiana, Maine, New Jersey, Oregon, and Pennsylvania.

Source Numbers

168, 274, 418, 431, 531, 606, 619

Fine Dining Restaurant
(931)

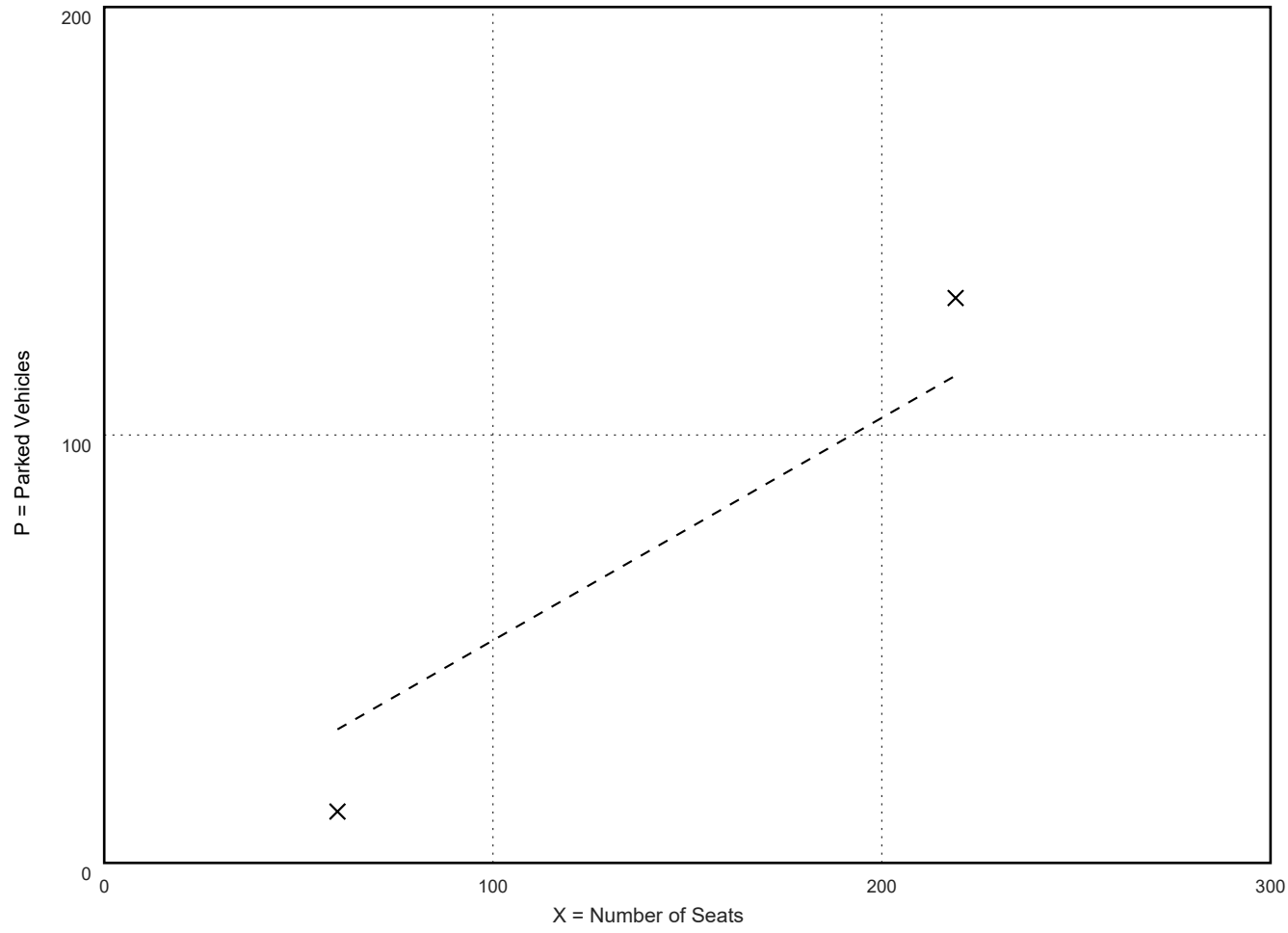
Peak Period Parking Demand vs: Seats
On a: Weekday (Monday - Thursday)
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Seats: 140

Peak Period Parking Demand per Seat

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.52	0.20 - 0.60	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: *

R^2= *

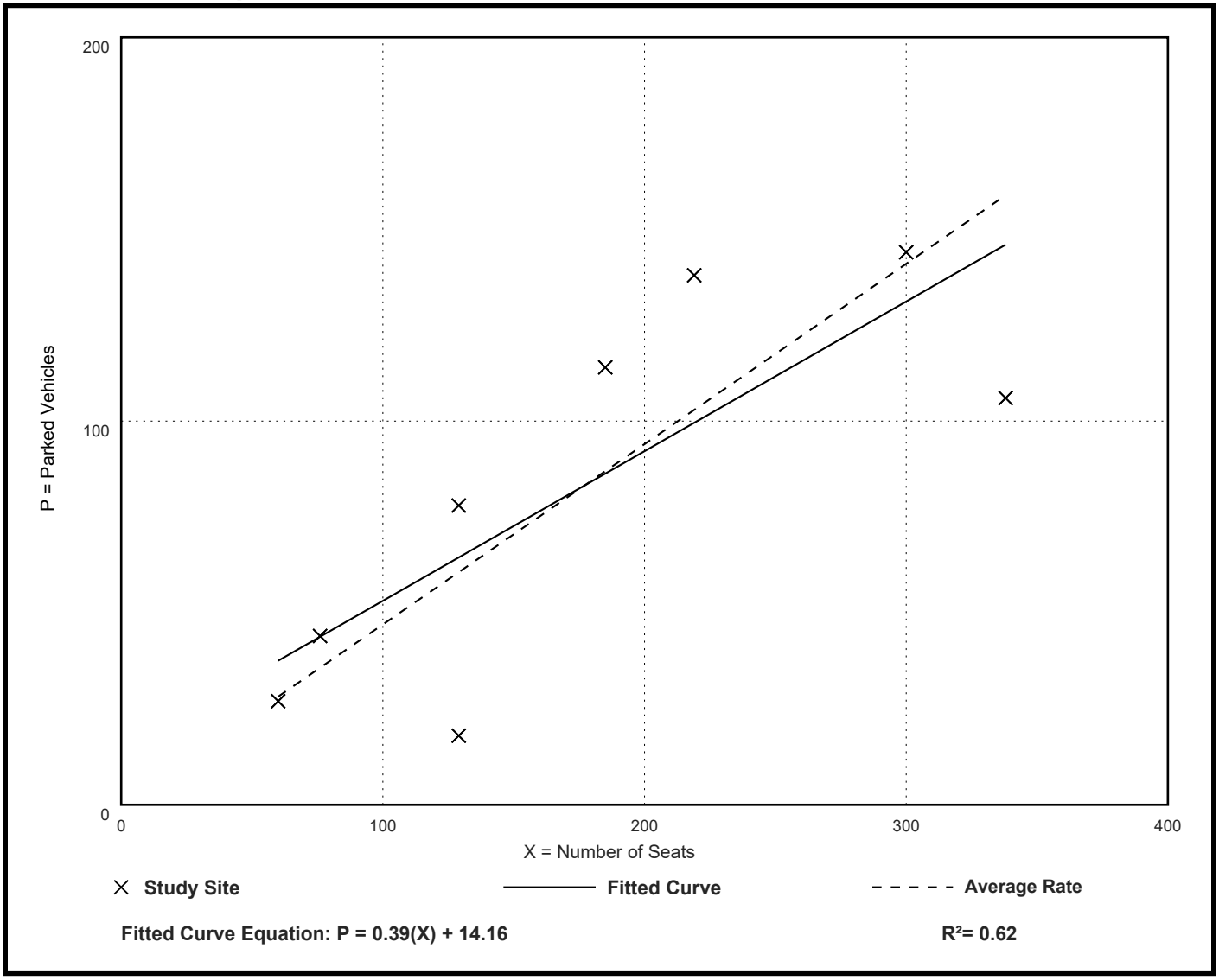
Fine Dining Restaurant
(931)

Peak Period Parking Demand vs: Seats
On a: Saturday
Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. Num. of Seats: 180

Peak Period Parking Demand per Seat

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.47	0.14 - 0.63	0.45 / 0.63	***	0.17 (36%)

Data Plot and Equation



Fitted Curve Equation: P = 0.39(X) + 14.16

R^2= 0.62

Land Use: 932 High-Turnover (Sit-Down) Restaurant

Description

A high-turnover (sit-down) restaurant is full-service eating establishment with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal. Some facilities offer carry-out for a small proportion of their customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Land Use Subcategory

Data are separated into two subcategories for this land use:

- Restaurants that serve breakfast
- Restaurants that do not serve breakfast

The “serves breakfast” subcategory includes restaurants that serve customers during breakfast, lunch, and dinner; during breakfast and lunch; and during breakfast only. The “does not serve breakfast” subcategory includes restaurants that serve customers during lunch and dinner, during dinner only, and during lunch only.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (Monday–Thursday) at restaurants that serve breakfast, lunch, and dinner (10 study sites) and at restaurants that serve only lunch and dinner (25 sites). The following table also presents a time-of-day distribution of parking demand on a Saturday at restaurants that serve breakfast, lunch, and dinner (nine study sites) and at restaurants that serve only lunch and dinner (six sites).

Hour Beginning	Percent of Monday–Thursday Peak Parking Demand		Percent of Saturday Peak Parking Demand	
	Serving Breakfast, Lunch, and Dinner	Serving Lunch and Dinner	Serving Breakfast, Lunch, and Dinner	Serving Lunch and Dinner
12:00–4:00 a.m.	–	–	–	–
5:00 a.m.	–	–	–	–
6:00 a.m.	–	–	–	–
7:00 a.m.	–	–	–	–
8:00 a.m.	64	–	55	–
9:00 a.m.	74	–	76	–
10:00 a.m.	82	–	91	–
11:00 a.m.	89	28	100	33
12:00 p.m.	100	96	97	56
1:00 p.m.	86	100	91	69
2:00 p.m.	57	51	73	58
3:00 p.m.	44	37	51	49
4:00 p.m.	39	34	43	63
5:00 p.m.	62	56	57	77
6:00 p.m.	73	87	66	100
7:00 p.m.	95	91	80	100
8:00 p.m.	76	73	62	85
9:00 p.m.	–	–	–	55
10:00 p.m.	–	–	–	35
11:00 p.m.	–	–	–	–

Additional Data

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may have a more direct relationship to site-generated parking demand than GFA.

The average parking supply ratio for the 55 study sites with parking supply information in a general urban/suburban setting is 16 spaces per 1,000 square feet GFA. The average parking supply ratio for the five study sites with parking supply information in a dense multi-use urban setting is 11 spaces per 1,000 square feet GFA. The average peak parking occupancy is 74 percent at the general urban/suburban sites and 88 percent at the dense multi-use urban sites.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Arizona, British Columbia (CAN), California, Florida, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Texas, Virginia, Washington, and Wisconsin.

Source Numbers

168, 218, 274, 276, 299, 527, 531, 556, 557, 567, 568, 618, 619, 620, 622, 626, 628, 637

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Civil & Environmental Engineering Consultants
174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)
13 Chambers Street, Newburgh, New York 12550 (Satellite Office)
Phone: 845-440-6926
www.HudsonLandDesign.com

March 25, 2025

Mr. Bryan Murphy
City of Beacon Building Inspector
1 Municipal Center
Beacon, NY 12508

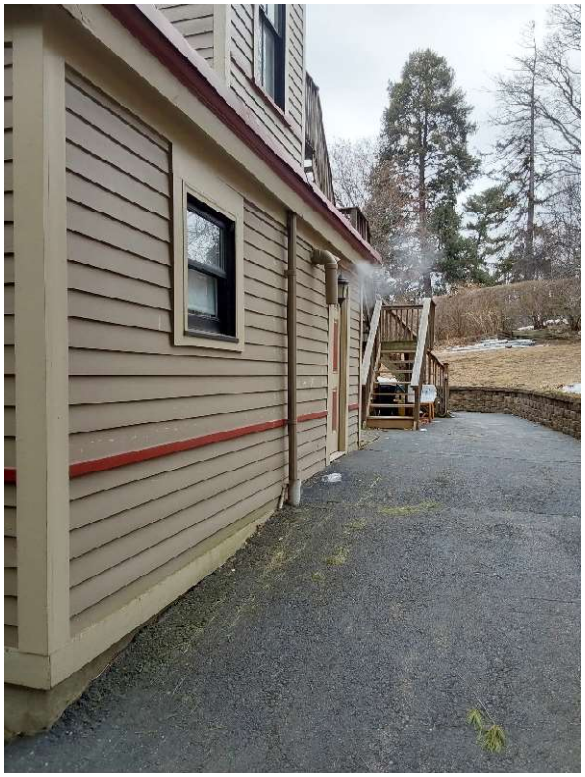
Re: Infiltration and Inflow Investigation-1064 Wolcott Ave
1064 Wolcott Avenue
Tax ID: 5954-34-641767 (±1.767 Acres)
City of Beacon, New York

Dear Mr. Murphy,

Hudson Land Design (HLD) has completed an infiltration and inflow investigation at the above-referenced parcel as required by the City of Beacon. The investigation was conducted on March 4th, 2025 at the existing buildings and manholes located on the subject property. The developed site consists of one three-story and one two-story mixed use buildings commonly known as "The Rose Hill Manor Day School" child care center.

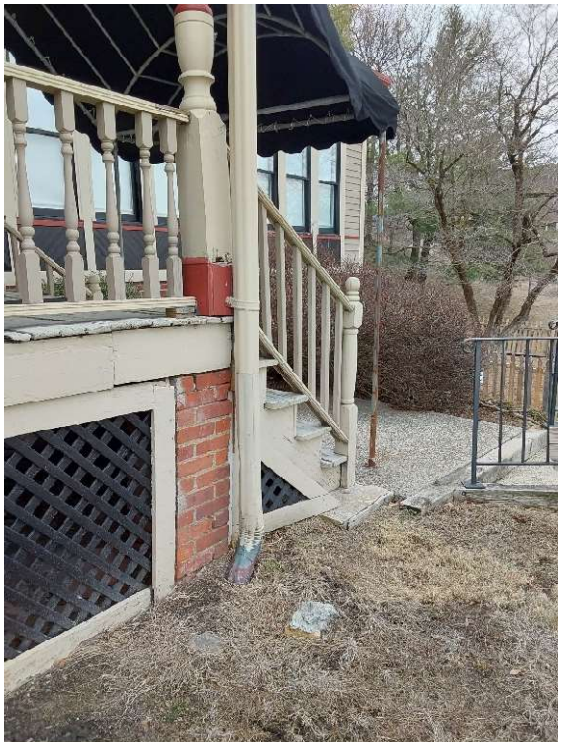
The first phase of the study consisted of an exterior inspection of the buildings to determine the location of roof leader discharge points. Both of the existing buildings have sloped roofs along with gutters for capturing rainwater runoff and directing the stormwater flow to downspouts which either discharge onto the ground surface or connect to underground pipes that lead to the existing stormwater management system (existing catch basins on the subject property). There is an existing manhole for the south building on the subject parcel that conveys sewage to the sewer main located on Harbor View Court. The manhole was opened and investigated to ensure that none of the underground stormwater pipes connect to the manhole. It was determined that there are no illicit connections between the buildings' exterior rainwater management system and the site's/City's sanitary sewage system. All roof leaders either discharge to ground surface or to the onsite stormwater management system. Please refer to the following photos for our observations.

View looking at east elevation of the northern building (downspout connects to pipe header that connects to nearby catch basin).



View looking at east elevation of the northern building (downspout connects to pipe header that connects to nearby catch basin).

View looking at north elevation of the northern building (downspout discharges onto ground).



View looking at west elevation of the northern building. Pipe daylights approximately 30 feet from building.

View looking at south elevation of the southern building (downspout connects to pipe header that connects to nearby stormwater control system).

View looking at downspout on southeast corner of southern building (downspout connects to pipe header that connects to nearby stormwater control system).

View into south sewer manhole on site.

The second phase of the study consisted of an interior inspection of the buildings to determine if there are any illicit connections to the buildings' sewer lines from sump pumps, floor drains and/or any other illicit discharge sources. No sump pumps or floor drains were observed within either basement. The buildings' internal sewage lines were inspected to determine if there were any illicit sources (wastewater sources other than the buildings' sanitary wastewater-generating water fixtures) connected to the lines. The south building doesn't have a basement, so the sewer line is not visible. No illicit connections were found along the lines of either building.

A view of the sewer pipe and building outlet point in the basement of the northern building. The sewer pipe leads toward Wolcott Avenue.

HLD did not discover any illicit connections from the buildings located at 1064 Wolcott Avenue to the City of Beacon's sanitary sewer collection system. Should you have any questions, please feel free to call my direct line at 845-765-8956.

Sincerely,

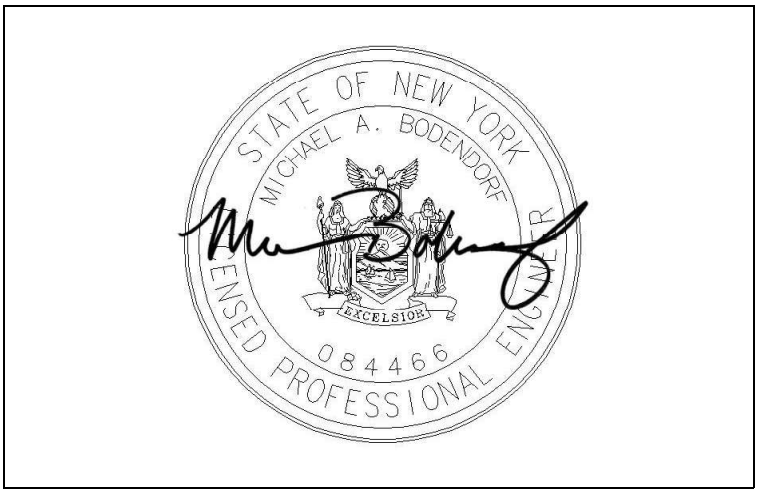
Michael A. Bodendorf, P.E.
Principal

cc: Mark DeFabio, JMARKMNG LLC (via email)
Beacon Planning Board
Daniel G. Koehler, P.E. (HLD file)

Preliminary Water and Sewer Engineer's Report: for 1064 Wolcott Avenue-Hotel & Accessory Restaurant

Prepared for:
JMARKMNG LLC
1064 Wolcott Avenue
Beacon, NY 12508

January 28, 2025
Revised on March 25, 2025



Prepared by:
Hudson Land Design Professional Engineering, P.C.
174 Main Street
Beacon, NY 12508 (Main Office and Mailing Address)
13 Chambers Street
Newburgh, NY 12550 (Satellite Office)
Phone: 845-440-6926

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1.0 PROJECT LOCATION

The project site is a developed commercial parcel located at 1064 Wolcott Avenue in the City of Beacon, Dutchess County, New York. The property is identified as parcel number 5954-34-641767 in the City of Beacon Tax Maps and is currently the location of the Rose Hill Manor Day School, a daycare facility. The parcel consists of 1.767 acres of land upon which there are 2 multi-story buildings, 2 parking lots, and an access entrance to/from Route 9D/Wolcott Avenue. The northern existing building on the site is a 3-story framed building, and the southern building is a 2-story framed building. The current use of the project site includes, 2 residential apartments with 2-bedrooms each, a daycare facility that serves a maximum of 120 children and has a 20 member staff.

2.0 PROJECT DESCRIPTION

The project consists of the closing of the apartments & daycare facility and the renovation and adaptive re-use of the 2 existing buildings on the property along with the construction of a new interconnecting building in between the existing structures to accommodate a proposed hotel & restaurant. Additional general improvements to be constructed at the site include landscaping, an expanded parking area, and stormwater management practices on the site. The proposed improvements to new and existing buildings are as follows:

1. Hotel & Restaurant

A new building will be constructed between the two existing buildings and will connect to the separate buildings to create one single large structure for the planned hotel and restaurant. The new interconnecting building will comprise the central portion of the new hotel & restaurant. The 2 existing buildings will be renovated to convert them to the new planned use.

The new large structure will contain a hotel, restaurant and spa along with other amenity spaces. At the lower level, the hotel consists of a spa, massage room, gym, and other amenity spaces. On the first floor, the restaurant, reception desk and additional amenity spaces as well as guest rooms will be located. The 2nd and 3rd floor will contain guest rooms.

For water and sewer use purposes, the hotel & restaurant will consist of 42 guest rooms, a 56 seat restaurant, and a spa.

2. Employees

The hotel & restaurant are expected to have up to a maximum of 10 employees on the premises at any one time per shift; this would include the times where there may be shift

overlap therefore, the water and sewer usage is based upon 10 employees on the premises per day.

2.1 Design Standards

This report summarizes all data and information necessary for the design of the water and sewer infrastructure that will serve the project.

The project has been designed in accordance with the following:

- New York State Department of Health (NYSDOH) Standards for Individual Water Supply and Individual Sewage Treatment Systems Appendix 75-A
- Dutchess County Department of Health (DCDOH) Water and Wastewater Systems Design and Construction Standards
- New York State Department of Environmental Conservation (NYSDEC) "Design Standards for Wastewater Treatment Works" for Intermediate Sized Sewage Facilities.
- Recommended Standards For Wastewater Facilities (Ten States Standards)

3.0 Estimated water & wastewater generation rates are taken from the NYSDEC "Design Standards for Intermediate Sized Wastewater Treatment Systems, 2014 Edition"

Currently the project site is in use as a child day care facility. The wastewater generation rate for the project site's current use can be quantified as below:

Rose Hill Manor Day School Existing Conditions

Flow Component	# of Units	Flow Rate per Unit - gallons per day (gpd)	Total Component Flow (gpd)	Total Reduced Component Flow (gpd)
Maximum Number of Children at the Daycare[1]	120	20	2,400	1,920
Maximum Number of Employees[2]	20	15	300	240
Bedrooms (Total # of Bedrooms in the 2 Existing Apartments)	4	110	440[3]	440[3]

Total Flow (for Current Use) with 20% Reduction for Water Saving Fixtures:

= 2,600[4] gpd

[1]Flow calculations are based upon the highest number of children at the day care, per day, during peak times.

[2]Flow calculations are based upon the highest number of employees (20 employees), per day, during peak times.

[3] The 20% reduction is already figured into the flowrate. No further reduction can be taken.

[3]20% reduction taken for Children and Employees only.

The proposed development for the site into a hotel and restaurant will increase the water demand/wastewater generations which is quantified below:

1064 Wolcott Avenue Hotel & Restaurant Proposed Conditions

Flow Component	# of Units	Flow Rate per Unit - gallons per day (gpd)	Total Component Flow (gpd)	Total Reduced Component Flow (gpd)
Hotel Rooms	42	110	4,620[1]	4,620[1]
Restaurant Seats	56	35	1,960	1,568
Employees[2]	10	15	150	120

Total Flow (for Hotel & Restaurant Use) with 20% Reduction for Water Saving Fixtures:

= 6,306 gpd[3]

[1] The 20% reduction is already figured into the flowrate. No further reduction can be taken.

[2]Flow calculations are based upon up to 10 employee shifts per day during peak times.

[3]20% reduction taken for Restaurant and Employees only.

As shown in the Day Rose Hill Manor Day School table, the property's current wastewater generation (and equal water demand) is 2,600 gpd. The proposed hotel & restaurant will in turn use about 6,306 gpd, which results in a net increase of 3,706 gpd from the existing use.

3.1 Existing City Sewer Infrastructure

The City's Water and Sewer Superintendent will be contacted in order to verify that the City's sewage treatment system has the existing capacity for the proposed project. The sewage treatment plant has capacity for up to 6 million gallons/day (MGD) and is currently operating at 3.2 MGD to 3.5 MGD. In the past, there have been reported sewer surcharges during unique storm events in the City's sewer system.

Much of the City of Beacon's sewer infrastructure is old and has many old sewer service connections from buildings and residential homes. In addition, there are likely illegal stormwater and sump pump discharges to the city sewer from both commercial and residential properties. As such, during these storm events, and the ground being saturated, the City's sewer system is overburdened with these additional flows. The City has been working for some time smoke testing the sewer lines in order to identify where illicit connections are. Whenever an illicit connection has been found involving City-owned stormwater/roof leader/sump pump connections to the sewer system, they have been eliminated. The City has also been mandating that these types of connections be eliminated from any existing developed property seeking a building permit. The City continues to work toward eliminating all illicit connections, and infiltration problems with their existing infrastructure. Before the improvements began, the City sewer plant would receive upwards of 12 MGD during storm events. Currently, the City's efforts in correcting the problem have reduced the flow during storm events to between 6 and 8 MGD. The City has been working extensively to eliminate I&I problems within it's sewer system through Capital Improvement Projects, and has recently reconstructed the dividing weir at the plant where the North Interceptor and the South Interceptor sewers meet at the plant.

3.2 Inflow and Infiltration on the Site

An inflow and infiltration (I&I) inspection of the site and existing buildings was conducted on March 4th, 2025 to ascertain if there are illicit connections to the City of Beacon's sanitary sewer system. The inspection revealed that the site has no illicit connections/discharges from stormwater or other sources to the public sewer system. Please refer to the I&I Report under separate cover, dated March 24th, 2025, for details of the inspection and findings.

4.0 WATER SUPPLY

The project is expected to require 6,336 gallons of water per day. The net gain of the water usage, from the property current use, is 3,736 gallons per day. The City's Water and Sewer Superintendent will be contacted to verify if the anticipated increase in daily water demand can be met by the City's water system.. According to the 2021 City of Beacon Annual Water Quality Report, the entire water district currently consumes an average of 2.28 million gallons per day (MGD). The total capacity of the water supply system is approximately 4 MGD.

Therefore, after full build-out, the City's water supply will still have an excess of 1.7 MGD capacity.

There is an existing 12" ductile iron (DI) water main located within Wolcott Avenue. The north building at the site has an existing water service connection to the main on Wolcott Avenue. The south building has a 4" DIP connection to a water main located on Harbor View Court through a utility easement.

Water supply to the existing buildings/end portions of the hotel will be provided by the existing service connections that are already in use. Water for the building addition will be provided by an internal connection of the new structure's internal plumbing to the plumbing of the south building.

The current 4" water service line to the south building is 4" class 52 ductile iron which provides adequate water for sprinkler systems within the existing building. This water line will provide domestic and fire suppression service to the proposed building addition. The water service line for fire suppression will split within the south building for domestic service. A minimum pressure of 20 pounds per square inch shall be maintained at the furthest point in the distribution.

5.0 SEWAGE CONVEYANCE

The project is expected to generate 6,336 gallons of wastewater per day, with a net gain of the wastewater generation, from the property current use, of +3,736 gallons per day. Sewage collection for the project will be handled by the existing sewer service connections for the 2 existing buildings on the property. The proposed building addition will be provided with a new 6" SDR 35 PVC sewer service line that will be connected to the existing 6" SDR 35 sewer service line for the existing north building which will then convey sewage to the City's sewer main on Wolcott Avenue. Raw line inverts that will provide for acceptable pitch from the building addition to the existing sewer service line have been provided on the plans. The minimum slope on the 6" sewer lines shall be 1.0%.

Two (2) sanitary manholes are proposed at changes of direction and pipe slope from the building addition's raw sewage line to the northern building's sewage service line.

5.1 Grease Trap

Based upon the proposed restaurant within the hotel, which will serve food, a grease trap is recommended. At this time, the kitchen for the proposed restaurant is still in the design phase and proposed flowrate volume is unknown. Once the design is finalized and the flowrate is known, a grease trap will be designed for the restaurant and sized per DC53 of the DCDBCH Design and Construciton Standards for Plan Submission Guide dated September 1st, 2016.

Stormwater Pollution Prevention Plan
for
1064 Wolcott Avenue

Prepared for:
JMARKMNG LLC
1064 Wolcott Avenue
Beacon, NY 12508

January 24, 2025
Revised
March 25, 2025

HUDSON
LAND DESIGN

Prepared by:
Hudson Land Design Professional Engineering, P.C.
174 Main Street
Beacon, NY 12508 (Main Office and Mailing Address)
13 Chambers Street
Newburgh, NY 12550 (Satellite Office)

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1.0 INTRODUCTION

1.1 Overview

This preliminary Stormwater Pollution Prevention Plan (SWPPP) has been developed in accordance with New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-25-001, which authorizes stormwater discharges to surface waters of the State from the following construction activities identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. Construction activities involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land; excluding routine maintenance activity that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. Construction activities involving soil disturbances of less than one (1) acre where the Department has determined that a SPDES permit is required for stormwater discharges based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to surface waters of the State.
3. Construction activities located in the New York City, East of Hudson watershed, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

This project qualifies for SPDES coverage under provision 1 as stated above.

The objectives of this SWPPP are as follows:

- To develop a sediment and erosion control plan in accordance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, which implements best management practices to stabilize disturbed areas, protect off site areas and sensitive areas and minimize the transport of sediment.
- To demonstrate that the resulting stormwater runoff from the development exiting the site will not adversely impact offsite properties, stormwater conveyance systems or receiving water bodies, and that temporary and permanent stormwater systems and facilities are designed in accordance with the latest revision to the New York State Stormwater Management Design Manual.
- To demonstrate that runoff reduction measures have been implemented into the design of the site.
- To demonstrate that the required runoff from the development is captured and treated through approved water quality measures.
- To demonstrate consideration of the future physical risks due to climate change pursuant to the CRRA, 6 NYCRR Part 490, and associated guidance.

Construction activities are not permitted to begin until such time that authorization is obtained under the General Permit. This project is located within a Municipal Separate Storm Sewer System (MS4) area. Authorization to commence construction activities may commence as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by the NYSDEC after the completed eNOI is submitted. As the project is located within a traditional MS4 with review authority, an electronic copy of the LOA shall be provided to the MS4 (the City of Beacon) within five business days of the LOA's receipt.

A copy of the General Permit, SWPPP, eNOI, LOA, signed MS4 SWPPP Acceptance form, inspection reports, accompanying plans and all relevant documents required per GP-0-25-001 Part I.E.3 & 4, shall be maintained on-site or be available electronically as described in GP-0-25-001 Part I.E.5, from the date of initiation of construction activities until final stabilization of all disturbed areas has been achieved and the electronic Notice of Termination (eNOT) has been submitted.

1.2 Land Disturbance

Per the General Permit, no more than five (5) acres of land disturbance may occur at any one time without written approval from the NYSDEC. At a minimum, the owner or operator must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

a. The owner or operator shall have a qualified inspector conduct at least two (2) site inspections every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.

c. The owner or operator shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The owner or operator shall install any additional site-specific practices needed to protect water quality.

Disturbance of more than five (5) acres at any one time is not anticipated for this project. Phasing of the construction activities is planned to limit the amount of disturbance at any one time.

1.2.1 Special Habitat Considerations

The NYSDEC EAF Mapper identifies the following species as a species of concern, threatened, endangered, or rare: Atlantic Sturgeon, Shortnose Sturgeon, Minute Duckweed, Estuary Beggar Ticks. All identified species exist in aquatic habitats, which are not present on the site.

1.3 Redevelopment Activity

Projects that occur on previously developed sites can follow the redevelopment guidelines described in the New York State Stormwater Management Design Manual. Redevelopment projects are encouraged to follow same guidelines for new development, but are required to follow alternate guidelines. Sizing criteria for redevelopment activities is described below:

a. Water Quality shall be achieved by use of the following options:

I. The plan proposed to reduce existing impervious by a minimum of 25% of the total disturbed impervious area. This reduction allows the project to meet the quality and quantity criteria.

II. 100% of the WQv is captured and treated for a minimum of 25% of the disturbed redevelopment impervious area using a standard SMP or runoff reduction volume. The remaining 75% of the arrow can remain untreated if the project meets the quantity criteria. If the project contains both new impervious and disturbed redeveloped impervious, 100% WQv treatment is required for the new impervious areas.

III. 100% of the WQv is captured and treated for a minimum of 75% of the disturbed redevelopment impervious area by implementation of a volume-based SMP. If the project contains both new impervious and disturbed redeveloped impervious, 100% WQv treatment is required for the increase in impervious area using runoff reduction techniques and/or standard SMPs.

IV. 100% of the WQv is captured and treated for a minimum of 75% of the disturbed redevelopment impervious area by implementation of a flow-through alternative SMP. If the project contains both new impervious and disturbed redeveloped impervious, 100% WQv treatment is required for the increase in impervious areas using runoff reduction techniques and/or standard SMPs.

V. The plan proposes a combination of the above options including impervious cover reduction, standard SMPs, runoff reduction or alternative SMPs using a weighted average of at least two of the above options.

b. Runoff Reduction is encouraged but not required for the redevelopment activity portion of the project. For design points with an increase in impervious area, runoff reduction is required for the net increase area only. Runoff reduction is not required if there is a decrease in impervious area.

c. Water Quantity:

VI. Channel protection for redevelopment activities is not required if there is no increase in discharge rate and volume from the site.

VII. Overbank Flood and Extreme Flood Control for redevelopment activities is not required if there are no increases in discharge rate from the project site.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The project site is located at 1064 Wolcott Avenue in the City of Beacon, Dutchess County, New York and consists of 1.767 acres. The project site is located on the east side of Wolcott Avenue (NYS Route 9D). The Dutchess County Parcel viewer website lists the parcel's tax parcel number is 5954-64-641767. The project site is currently used as the Rose Hill Manor Day School, functioning as a day care and children education facility. The premises currently has two existing structures and onsite parking.

2.2 Project Scope and Description

The scope of the project includes a building addition between the two existing buildings, conversion of the site use to a hotel, and expansion/reconfiguration of the existing parking area to accommodate additional vehicles. The proposed project will disturb approximately 50,200 square feet. The project site currently has 0.60 acres of impervious cover and will increase to 0.90 acres of impervious cover, an additional 0.29 acres. Option IV of the redevelopment options will be followed for this project.

2.3 Surface Water Bodies

2.3.1 Wetlands

The NYSDEC Resource Mapper indicates that there are no State regulated wetlands on the site. Please refer to Appendix C for mapping.

2.3.2 Streams

NWI mapping and the NYSDEC mapping indicates no streams located on the premises. Please refer to Appendix C for mapping.

2.3.3 Floodplains

FEMA mapping indicates no flood zones on the premises. Please refer to Appendix C for supporting information and details regarding flood hazard zones on site (FEMA FIRMette).

2.4 State Historic Preservation Office (SHPO)

This project will be submitted to SHPO for review. Information from the SHPO review will be provided in a future submission.

3.0 NOTICE OF INTENT

Prior to commencement of construction activities, the Owner/Operator shall submit an electronic Notice of Intent (eNOI) to the NYSDEC for authorization through the NYSDEC NForm portal. The NYSDEC authorization schedule is as follows:

For construction activities that are not subject to the requirements of a regulated, traditional land use control MS4:

- As of the authorization date indicated in the Letter of Authorization (LOA), which is sent to the NYSDEC after a completed eNOI is submitted, for a SWPPP that has been prepared in conformance with the technical standards, or
- Sixty (60) business days from the date the NYSDEC receives a complete eNOI for construction activities with a SWPPP that deviates from one of the technical standards but demonstrates equivalence with the New York State Standards and Specification for Erosion and Sediment Control manual and/or the New York State Stormwater Management Design Manual.

For construction activities that are subject to the requirements of a regulated, traditional land use control MS4:

- A copy of the LOA must be sent to the MS4 within five (5) business days of receipt of the LOA.

The project area is under the control of a regulated MS4, therefore the eNOI shall be submitted directly to the NYSDEC along with the MS4 SWPPP Acceptance Form. A draft completed eNOI is included in Appendix A of this SWPPP.

4.0 SOILS

The hydrologic soil characteristics of the watershed areas were obtained from Web Soil Survey Mapping of Dutchess County, New York, and available Geographical Information Systems (GIS) and are as follows:

Symbol	Description	Hydrologic Soil Group
DwB	Dutchess-Cardigan complex, undulating, rocky	B
HvD	Hudson and Vergennes soils, hilly	D

Supporting soils information is provided in Appendix B of this SWPPP.

5.0 RAINFALL

5.1 Overview

The rainfall data utilized in the analysis of the watershed was obtained from Extreme Precipitation Tables from the Northeast Regional Climate Center (NRCC). Supporting information is provided in Appendix C of this SWPPP. The storm events are as follows:

Storm Event	24-Hour Rainfall (in)
1 - year	2.61
10 - year	4.70
100 – year	8.34

The rainfall distribution data from the NRCC was used in the hydrologic modelling.

5.2 Rainfall Event Sizing Criteria

The stream channel protection volume (Cpv) criteria, intended to protect stream banks from erosion, will be demonstrated by providing 24 hour extended detention of the 1-year, 24-hour

storm event, or by infiltrating the entire volume. When providing extended detention, the channel protection volume criterion is not required where the resulting diameter of the stormwater management basin orifice is less than three (3) inches with a trash rack. Cpv can be met by use of green infrastructure treatment practices described in greater detail in Section 6 of this report.

The overbank flood control (Qp) criteria, intended to prevent an increase in frequency and magnitude of out of bank flooding generated by new development, will be demonstrated by attenuating the 10-year, 24-hour peak discharge rate to pre-development conditions. The overbank flood criteria can be waived if the project site discharges to a tidal water or fifth order stream.

The extreme flood control (Qf) criteria, intended to prevent the increased risk of flood damage from large storm events, maintain the boundaries of pre-development conditions, and protect the physical integrity of stormwater management practices, will be demonstrated by attenuating the 100-year, 24 hour peak discharge rate to pre-development conditions. The extreme flood control criteria can be waived if the project site discharges to a tidal water or fifth order stream. The use of on-site green infrastructure stormwater treatment practices can mitigate post-developed Qp and Qf rates and volumes.

The pre and post-development runoff rates will be compared utilizing the 1-year (channel protection), 10-year (overbank flood control), and 100-year (extreme flood control) year, 24-hour storm events. The pre- versus post-development analysis will include the analysis of the Qp and Qf storm events.

6.0 STORMWATER ANALYSIS AND MANAGEMENT

6.1 Methodology

6.1.1 Hydrologic Analysis

The HydroCAD stormwater modeling system computer program by Applied Microcomputer Systems will be used to analyze, design and document the complete drainage system. The program uses standard hydrograph generation and routing techniques based on the USDA-NRCS Technical Releases TR-20 and TR-55 to develop stormwater runoff rates and volumes.

The program determines the rate and volume of runoff based on inputs of the watershed area, and characteristics of the land including vegetative coverage, slope, soil type, and impervious area.

6.1.2 Stormwater Design Points

Design Points represent the location where the majority of runoff from an area exits the site. The same design points are identified in post-development conditions so that a comparison can be made between the pre-development and post-development conditions. Three design points for the project were selected, as follows:

Stormwater Discharge Points	
SDP	**Description**
1	Existing stormwater collection system along Wolcott Avenue

6.2 Pre-Development Watershed Conditions

The pre-developed site is broken into one watershed to the design point located Wolcott Avenue which is summarized below:

Subcatchment 1 is comprised of approximately ±1.77 acres of onsite area tributary to SDP 1 consisting of the site area tributary to Wolcott Avenue and the stormwater collection system in in Wolcott Avenue. The area consists of the two existing buildings, parking, play areas, lawn, and woods. The majority of soils in this subcatchment area are hydrologic soil group B, with a small amount at the south end of the site in hydrologic soil group D. Runoff from the site travels via sheet flow and shallow concentrated flow to existing stormwater collection system in Wolcott Avenue. Runoff from the existing parking area is captured by an existing onsite stormwater collection system and directly conveyed to the existing stormwater collection system in Wolcott Avenue.

Detailed stormwater calculations and routing for the pre-development conditions have been included in Appendix D.

The following table summarizes the pre-development watershed conditions:

Pre-Development Watershed Conditions					
Subcatchment	**Area**	**Cover**	**Average Curve #**	**Hydrologic Soil Group(s)**	**Time of Concentration**
1	1.77 ac.	Impervious, lawn, & woods	74	B & D	8.7 min.

6.3 Post-Development Watershed Conditions

The post-developed site is broken into two (2) on-site subcatchments. Stormwater treatment will be provided through an underground infiltration system and a hydrodynamic separator. The following is a description of the subcatchments:

Subcatchment 10 is comprised of approximately ±1.38 acres of onsite area tributary to SDP 1 consisting of the area tributary to Wolcott Avenue and the stormwater collection system in in Wolcott Avenue. The area consists of mostly wooded areas, open field areas, water, and the Craig House grounds. Runoff from this subcatchment follows pre-development conditions. Runoff from the redeveloped impervious areas, primarily the reconfigured parking area, flows through a proposed hydrodynamic separator, before discharging to the existing stormwater collection system in Wolcott Avenue. The remainder of the runoff in this subcatchment follows pre-development conditions.

Subcatchment 11 is comprised of ±0.38 acres of onsite area. Land cover consists of the proposed building addition and parking area expansion. Runoff from the subcatchment travels via sheet flow, shallow concentrated flow and pipe flow to a proposed underground infiltration chamber system. Overflow from the underground infiltration system will travel the onsite stormwater collection system in subcatchment 10 to existing stormwater collection system in Wolcott Avenue.

Detailed stormwater calculations and routing for the post-development condition have been included in Appendix D.

The following table summarizes the post-development watershed conditions:

Post-Development Watershed Conditions					
Subcatchment	**Area (ac)**	**Cover**	**Average Curve #**	**Hydrologic Soil Group(s)**	**Time of Concentration**
10	1.38	Existing buildings, lawns, & woods	76	B & D	8.7 min.
11	0.38	Proposed building addition & parking area expansions	91	B	2.7 min.

6.4 Hydrologic Review

The stormwater runoff volumes at design point under pre-development and post-development conditions are summarized below.

SDP	1 – Year		10 - Year		100 - Year	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
Site Only	1.78	1.62	5.99	5.15	14.51	14.27
Change	-0.16 -8.99%		-0.84 -14.02%		-0.24 -1.65%	

As shown above, post-development peak flow rates are less than pre-development rates for all analyzed design storms.

Cpv control for a redevelopment activity must show no increase in discharge rate or volume from the project site. The stormwater Cpv computations are summarized below.

Discharge Rate		Discharge Volume	
Pre	**Post**	**Pre**	**Post**
1.78 cfs	1.62 cfs	0.088 ac.ft	0.079 ac.ft

6.5 Stormwater Management System

The stormwater management system will consist of an onsite closed pipe network that will collect site runoff from impervious and pervious surfaces and convey it to the various stormwater practices prior to discharge to stormwater discharge points under overflow conditions.

6.6 Green Infrastructure for Stormwater Management

The SDM encourages the use of green infrastructure (GI) practices for stormwater management. Green infrastructure approach for stormwater management reduces a site's impact on an aquatic ecosystem through the use of site planning techniques, runoff reduction techniques, and certain standard stormwater management practices. The objective is to replicate the pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow, discharge volume, and minimizing concentrated runoff by use of runoff control techniques. When implemented, green infrastructure can reduce volume, peak flow, and flow duration, promote infiltration and evapotranspiration, improve groundwater recharge, reduce downstream flooding, and protect downstream water and wetlands.

6.6.1 Green Infrastructure Practices

Green infrastructure consists of implementing several techniques during the site planning process which are:

- Preservation of Natural Resources – Preservation of undisturbed areas; preservation of buffers; reduction of clearing and grading; locating development in less sensitive areas; open space (park) design; soil restoration.
- Reduction of Impervious Cover – Roadway reduction; sidewalk reduction; driveway reduction; building footprint reduction; parking reduction.
- Runoff Reduction Techniques – Conservation of natural areas; sheet flow to riparian buffers or filter strips; vegetated open swale; tree planting/tree box; disconnection of roof runoff; stream daylighting for redevelopment projects; bioretention areas; rain gardens; green roofs; stormwater planters; rain tank/cistern; pervious pavement.

Runoff from the new impervious portion of the proposed development will be directed to an underground infiltration system providing 100% RRv capacity.

6.6.2 Five Step Process for Stormwater Site Planning and Selection Design

Stormwater management using GI is summarized in the five-step process described below.

Step 1: Site Planning
The site design will incorporate the preservation of natural resources including protection of natural areas, avoidance of sensitive areas, minimizing grading and soil disturbance, minimizing impervious areas on roads, driveways and parking lots. The site layout will avoid wetlands, waterways, buffers, areas of highly erodible soils and critical areas. The site design will also maintain natural drainage design points.

Step 2: Determine Water Quality Volume (WQv)
The WQv will be calculated for the site prior to implementation of GI practices. The calculated WQv must be reduced by implementation of GI & SMP's.

Step 3: Runoff Reduction by Applying Green Infrastructure Techniques
Green infrastructure practices will be implemented wherever possible to reduce runoff from the site. GI for this site will consist of reduction of roadway widths, providing parking beneath buildings and the use of infiltration practices.

Step 4: Apply Standard SMP's to Address Remaining WQv
Standard SMP's such as ponds, filtering practices or stormwater wetlands to meet additional water quality volume requirements. It is not anticipated that additional standard SMP's will be required for this project based upon the reduction of impervious surfaces.

Step 5: Apply Volume and Peak Rate Control Practices (if needed)
Cpv, Qp and Qf must also be met, either by standard practices, or other accepted techniques such as meeting criteria set forth in the NYS SWDM, where Cpv, Qp and Qf are required. Cpv, Qp and

Qf are met by the installation of the stormwater pond with an outlet control structure on the east side and bioretention basin with outlet control structure on the west side which reduce the peak flows associated with each criterion.

6.7 Qualitative Practices

Small sized, frequently occurring storms account for the majority of runoff events that generate stormwater runoff. As a result, the runoff from these storms is recognized as a major contributor of pollutants. Therefore, treating these frequently occurring smaller rainfall events and a portion of the larger events offers an opportunity to minimize the water quality impacts associated with developed areas.

The water quality volume, denoted as WQ_v, specifies a treatment volume required to be captured and treated by intercepting 90% of the average annual stormwater runoff volume. This criterion strives to achieve an 80% Total Suspended Solids (TSS) removal and 40% Total Phosphorous (TP) removal on an annual basis.

In numerical terms, it is calculated using the formula below which was obtained from Section 4.2 of the New York State Stormwater Management Design Manual:

$$WQ_v = (P \times R_v \times A) / 12$$

Where:

WQ_v = Water Quality Volume (acre-feet)

P = 90% Rainfall Event Number

$R_v = 0.05+0.009 \times I$, where I is percent impervious (minimum $R_v = 0.2$)

A = Site area in acres (contributing area)

The following table has been developed summarizing the pre-treatment volume, water quality volume and treatment practices for the project area.

Watershed	Total Required WQv (cf)	Required Pre-Treatment Volume (cf)	Pre-Treatment Practice	Treatment Practice	WQv Provided (cf)
10 (to HDS)	2,210	N/A	N/A	Hydrodynamic Separator*	3,725
11	1,515	379	Separator Row	Underground Infiltration	1,587
Total	**3,725**				**5,312**

*Flow-through treatment device (hydrodynamic separator) sized for all upstream areas including watershed 11. Hydrodynamic separator sized to treat the 1-year design storm and pass the 100-year design storm. See Appendix E for sizing calculations.

A major concern with runoff into waterbodies is phosphorus loading. Phosphorus, like nitrogen, is an essential nutrient for aquatic life in waterbodies. However, increased amounts of phosphorus entering surface waters promotes excessive algae growth, which decreases water clarity, causes variations in dissolved oxygen, disagreeable odors, habitat loss and fish kills. The protection of waterbodies from the harmful effects of phosphorus can be accomplished from reducing the runoff

volume entering surface waters. Reduction of runoff volume reduces the concentrations of pollutants entering the surface water and thus decreases harmful effects. The removal of enhanced phosphorus can be accomplished using stormwater management practices. Whether in particulate or dissolved speciation, phosphorus can be removed using unit operations. Particulate phosphorus in particular can be removed using bioretention areas and through sedimentation of runoff before entering surface water. Primarily, reducing the WQv entering a surface water body will lower phosphorus pollutant loading.

6.7.2 Pre-Treatment Practices

The following pre-treatment practices have been incorporated into the design of this project. Preventative and corrective maintenance measures to provide long-term effectiveness of stormwater attenuation practices if properly implemented will be included in Appendix G.

6.7.2.1 Overland Flow

A significant portion of the runoff will flow overland to receiving water bodies or offsite properties. Much of the site's existing natural vegetation is proposed to remain, and the post developed land cover will be restored to turf grass and landscaped areas. The meadow and landscaped areas will capture sediment and floatables prior to discharge at the stormwater discharge point.

6.7.2.3 Grass Filter Strips

Grass filter strips are gently sloped vegetated areas designed to treat sheet flow runoff from adjacent impervious areas. Filter strips (also known as vegetated filter strips and grassed filters) function by slowing runoff velocities, filtering out sediment and other pollutants, and providing some infiltration into underlying soils. Because they use sheet flow and not channelized flow, filter strips are often more effective than swales at removing suspended solids and trash from runoff.

6.7.3 Treatment Practices

The following treatment practices have been incorporated into the design of this project. Preventative and corrective maintenance measures to provide long-term effectiveness of stormwater attenuation practices if properly implemented are included in Appendix G.

6.7.3.1 Underground Infiltration

Stormwater infiltration practices capture and temporarily store the water quality volume before allowing it to infiltrate through the floor of each practice into the soil over a two-day period. In areas where the subsurface soils exhibit high infiltration rates, the channel protection volume may also be infiltrated. Infiltration facilities are not typically capable of infiltrating the overbank flood or extreme flood volumes. Adequate outflows are required for these larger storm events. Soil testing to obtain infiltration rates are required as part of the design of infiltration facilities. Varying degrees of pre-treatment of the water quality are required based on the field determined infiltration rate of the subsurface soils. 25% of the water quality volume is required where the infiltration rate is less than 10 inches per hour and 50% for infiltration rates greater than 10 inches per hour. Pre-treatment is accomplished through separator row in the underground chamber system. This row is placed in the inlet row and is lined with a woven fabric to allow for cleaning. Infiltration practices must be isolated and protected from stormwater run-off during construction. The contributory drainage area shall be completely constructed and stabilized before connection of the

stormwater conveyance system to the infiltration practice. Proper maintenance of the contributing conveyance system and pre-treatment practice are important in maintaining infiltration rates.

6.7.3.2 Hydrodynamic Devices

Hydrodynamic devices are designed to intercept and store pollutants such as sediment and floatables for later removal and safe disposal. Hydrodynamic separators are sized to treat volume based on the flowrate. If the device is located online, it must be able to safely pass the 100-year design storm without resuspending the removed contaminants. Sizing information is provided by the manufacturer of the device.

6.8 Runoff Reduction Volume (RRv)

RRv is not required for re-development projects. Typically, RRv is met with the use of individual treatment practices since the re-development project meets the criteria set forth in the NYS SWDM §9.3.3. An underground infiltration area is proposed to manage and treat the runoff generated from the new impervious areas of the site.

RRv (measured in acre-feet) is reduction of the total WQv by application of GI techniques and SMP's to replicate the pre-development hydrology. The minimum required RRv is defined as the specified Reduction Factor (S), provided objective technical justification is documented.

RRv must be achieved by infiltration, groundwater recharge, reuse, recycle, evaporation/evapotranspiration of 100% of the post-developed WQv to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow, discharge volume, as well as minimizing concentrated flow by using runoff control techniques to provide treatment in a distributed manner before runoff reaches the collection system.

RRv is calculated based upon three methods:

1. Reduction of the practice contributing area in WQv computation.
2. Reduction of runoff volume by storage capacity of the practice.
3. Reduction using standard SMP's with runoff reduction capacity.

Projects that cannot meet 100% of the runoff reduction requirement must provide a justification that evaluates each of the GI planning and reduction techniques and identify the specific limitations of the site according to which application of this criterion is technically infeasible. Projects that do not achieve runoff reduction to pre-construction must, at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S).

The following lists the specific reduction factors for the HSG's.

HSG A = 0.55

HSG B = 0.40

HSG C = 0.30

HSG D = 0.20

The specific reduction factor (S) is based on the HSG's present at the site. The values are defined based on a hydrology analysis of low, medium, and high imperviousness. The reduction is achieved when runoff from a percentage of the impervious area on a site is captured, routed through GI or an SMP, infiltrated to the ground, reused, reduced by evapotranspiration, and eventually removed from the stormwater discharge from the site.

The following equation is used to determine the minimum RRv:

$$RRv \text{ (in acre-feet of storage)} = [(P)(Rv^*)(Ai)]/12$$

$$Ai = (S)(Aic)$$

Ai = impervious cover targeted for runoff reduction

(Aic) = total area of new impervious cover

$Rv^* = 0.05+0.009(I)$ where I is 100% impervious

S = Hydrologic Soil Group (HSG) Specific Reduction Factor (S)

The goal of the SWPPP is to utilize as many runoff reduction methods as possible on a site. All GI practices will be quantified and compared to the overall WQv for the site. If the RRv is greater than or equal to the WQv, then standard SMP's can be implemented to control peak rate leaving the site if applicable.

The following table summarizes the required 100% RRv, minimum RRv, RRv reduced by use of runoff reduction techniques, RRv provided by standard SMP's with RRv and provided RRv for the main project area. The table will be completed after calculation of RRv for the approved layout.

Watershed	Required Total RRv (cf)	Required Minimum RRv (cf)	RRv reduced by use of runoff reduction techniques (cf)	RRv provided by standard SMP with RRv (cf)*	RRv (cf) Provided*
10(to HDS)	0**	-	-	-	-
11	1,515	599	-	1,515	1,515
Total	**1,515**	**599**	**-**	**1,515**	**1,515**

* Treatment practices can be oversized to provide additional runoff reduction (RRv); however, they can only be oversized to provide up to 100% of the RRv. No additional credit can be taken for RRv for practices that provide greater than 100% RRv.

** RRV is not required for redevelopment projects and is not provided for this watershed.

6.9 Soil Restoration

Soils within disturbed areas tend to over compact as a result of heavy construction traffic; thus, limiting their infiltrative capacity. Under the GP-0-25-001 permit, soil restoration is required in disturbed areas that will be vegetated in order to recover the original properties and porosity of the

soil, especially in areas that receive high construction traffic, or areas that have soils that are poorly drained.

Many runoff reduction practices need Soil Restoration measures applied over and adjacent to the practice to achieve runoff reduction performance. Some key benefits of soil restoration are less runoff, better water quality; healthier, aesthetically pleasing landscapes; increased porosity on redevelopment sites where impervious cover is converted to pervious; decreases runoff volume generated and lowers the demand on runoff control structures; enhances direct groundwater recharge; promotes successful long-term re-vegetation by restoring soil organic matter, permeability, drainage and water holding capacity for healthy root system development of trees, shrubs and deep-rooted ground covers, minimizing lawn chemical requirements, plant drowning during wet periods, and burnout during dry periods.

Soil restoration is required on redevelopment projects in areas where existing impervious areas will be converted to pervious area.

6.9.1 Soil Restoration Methods

- Topsoil Application – Applying 6" of topsoil in soils with an HSG of A & B and have only been stripped, cut or filled. Soils with HSG of C or D that have only been stripped require aeration in addition to topsoil.
- Aeration - Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
- Tilling – Tilling includes the use of a cat-mounted ripper, tractor mounted disc, or tiller in order to expose the compacted soil devoid of oxygen to air an recreates temporary air space which allows for infiltration.
- Full Soil Restoration - Consists of Deep Ripping and De-Compaction, Compost Enhancement, and/or Deep Subsoiling. Deep Ripping includes the use of a cat mounted ripper, and is typically done at 12" to 24" depths. Compost Enhancement is done by using a deep subsoiler after topsoil has been applied. The goal is to alleviate the compaction that may have occurred during the placement of topsoil. This method mixes the topsoil and compost with subsoils.

Restoration techniques shall not be done until construction is complete and traffic will not travel through green areas. It is expected that full soil restoration will be required in areas around residential dwellings where undisturbed soil existed proposed to landscaped. These areas are shown on the erosion and sediment control plan. Other soil restoration techniques are shown where light grading, or minor cuts and fills are proposed. The type of soil restoration in these areas depends on the hydrologic soil group.

7.0 EROSION AND SEDIMENT CONTROL

7.1 Overview

The most sensitive stage of the development cycle is the period when vegetation is cleared and a site is graded. The potential impacts to on-site and off-site receiving waters and adjoining properties are particularly high at this stage. For example, trees and topsoil are removed, soils are

exposed to erosion, and natural topography and drainage patterns are altered. Control of erosion and sediment during these periods is an essential function of this SWPPP and accompanying plans.

Effective and practical measures employed to minimize the erosion potential and prevent sediment from leaving the construction site and reaching streams or other water bodies have been recommended in accordance with:

- New York State Standards and Specifications for Erosion and Sediment Control, November, 2016

In order to ensure the effectiveness of the measures recommended herein, routine inspections and documentation, along with procedures for monitoring the findings, maintenance, and corrective actions resulting from each inspection are outlined within this section of the SWPPP.

7.2 Temporary Erosion and Sediment Control Measures

The following temporary measures have been incorporated into the erosion and sediment control plans for the site construction activities. These measures are also detailed on the site plans.

7.2.1 Silt Fence

A silt fence is a temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts, entrenched, and supported with woven wire fence. Silt fences are installed on the contours across a slope and used to trap sediment by intercepting and detaining sediment laden runoff from disturbed areas in order to promote sedimentation on the uphill side of the fence.

Silt fences are suitable for perimeter and interior control, placed below areas where runoff may occur in the form of sheet flow. It should not be placed in channels or areas where flow is concentrated. In addition to interior and perimeter control a silt fence can be applied in the following applications:

- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels banks.
- Around temporary spoil area and stockpiles.

7.2.2 Stabilized Construction Entrance

A stabilized construction entrance consists of a pad of aggregate overlaying a geotextile fabric located at a point where construction vehicles enter or exit a site to reduce or eliminate the tracking of sediment onto public right of ways, street, alleys or parking areas, thereby preventing the transportation of sediment into local stormwater collection systems. Efficiency is greatly increased when a washing area is included as part of a stabilized construction entrance.

Stabilized construction entrances shall be a minimum of fifty (50) feet long and twelve (12) feet wide, but not less than the full width of points where vehicles enter and exit the site. Where there is only one access point to the site, the stabilized construction entrance shall be a minimum of twenty-four (24) feet wide. Stabilized construction entrances shall be a minimum of six (6) inches in depth consisting of one (1) to four (4) inch stone or reclaimed or recycled equivalent.

7.2.3 Check Dams

Check dams shall be placed in channels to reduce scour and erosion by reducing flow velocity and promoting sediment settlement. Check dams shall be spaced in the channel so that the crest of the downstream dam is at the elevation of the toe of the upstream dam. Check dams, consisting of a well-graded stone two (2) – nine (9) inches in size (NYSDOT – Light Stone) shall maintain a height of two (2) feet with side slopes of 2:1 extending beyond the bank of the channel by a minimum of one and a half (1.5) feet. Check dams shall be anchored in the channel by a cutoff trench of one and a half (1.5) feet in width by a half (0.5) foot in depth.

7.2.4 Inlet Protection

Inlet protection consists of a filtering measure placed around or upstream of a storm drain used to trap sediment by temporary ponding runoff before it enters the storm drain. Inlet protection is not considered to be a primary means of sediment control and should be used with an overall integrated sediment control program. There are four types of storm drain inlet protection consisting of: excavated drop inlet protection, fabric drop inlet protection, stone and block drop inlet protection and curb drop inlet protection.

Inlet protection shall be implemented for all inlets that could potentially be impacted by sediment laden runoff.

7.2.5 Temporary Channels

Temporary channels in the form of diversion swales or berms may be used to intercept and direct runoff under the following applications:

- Above disturbed areas in order to direct and prevent clean runoff from flowing over disturbed areas until the area is permanently stabilized.
- Below disturbed areas to convey sediment laden runoff to sediment traps.
- Across disturbed slopes to reduce slope lengths.

Where used to convey sediment laden runoff, temporary channels shall be equipped with check dams.

7.2.6 Water Bars

Water bars are temporary earth barriers constructed across construction roads used to intercept and divert roadway runoff toward temporary sediment traps or channels, prevent runoff from concentrating, and minimize the potential of gullies from forming. Spacing of water bars is dependent upon the road slope and shall be installed in accordance with the schedule depicted on the Erosion and Sediment Control detail sheet.

7.2.7 Straw Bale Barriers

Straw bale barriers are used to intercept and contain sediment from disturbed areas of limited size in order to prevent sediment from exiting the site. Bales should be placed in a single row lengthwise along the contour, with ends abutting one another. Straw bales shall be bound and installed so that the bindings are oriented around the sides. Straw bales shall be entrenched a minimum of four (4) inches, backfilled, and anchored using either two stakes or rebar driven through the straw bales to a depth of one and a half (1.5) to two (2) feet below grade.

Straw bales shall be used where no other measure is feasible. They shall not be used where there is a concentration of flow within a channel or other area.

The useful life of a straw bale barrier is three (3) months.

7.2.8 Temporary Soil Stockpiles

Stockpiling of soil is a method of preserving soil and topsoil for regrading and vegetating disturbed areas. Stockpiles shall be located away from environmentally sensitive areas (i.e. wetlands and associated buffers, streams, water bodies) and shall be protected with a peripheral silt fence. Slopes of stockpiles shall not exceed 2:1. Temporary stabilization measures shall be completed within fourteen (14) days of stockpile formation.

7.2.9 Dust Control

Dust control measures reduce the surface and air transport of dust, thereby preventing pollutants from mixing into stormwater. Dust control measures for the construction activities associated within this project consist of windbreaks, minimization of soil disturbance (preserving buffer areas of vegetation where practical), mulching, temporary and permanent vegetation cover, barriers (i.e. geotextile on driving surfaces) and water spraying.

Construction activities shall be scheduled to minimize the amount of area disturbed at any one time.

7.2.10 Temporary Soil Stabilization Practices

Stabilization practices reduce the potential for soil detachment by shielding the soil surface from the impact of rainfall and reducing overland flow velocity.

The Contractor shall initiate stabilization measures as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. This requirement does not apply where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions.

Temporary stabilization practices may include:

7.2.10.1 Mulching

Mulching is a temporary soil stabilization practice. Mulching prevents erosion by protecting soil from raindrop impact and by reducing the velocity of overland flow. Mulching also retains moisture within the soil surface and prevents germination. Where mulching consists of wood chips or shavings, it shall be applied at a rate of 500-900 lbs per 1000 s.f. Where mulching consists of straw, it shall be applied at a rate of 90-100 lbs. per 1000 s.f. All temporary grass areas shall receive a standard application of mulch consisting of straw, unless the area is hydroseeded.

7.2.10.2 Temporary Seeding

Temporary seeding provides additional benefits over other stabilization practices by creating a vegetation system holding soil particles in place with root systems and maintaining the soils capacity to absorb runoff. Temporary vegetation shall be placed in accordance with project plans. Irrigation shall be used when the soil is dry or when summer plantings are done.

7.2.10.3 Temporary Erosion Control Blanket

A temporary erosion control blanket is a degradable erosion control blanket used to hold seed and soil in place until vegetation is established in disturbed areas. Temporary erosion control blankets insulate and conserve seed moisture thus reducing evaporation and increasing germination rates and protect seeds from birds. Temporary erosion control blankets may consist of straw blankets, excelsior blankets (curled wood excelsior), coconut fiber blankets, or wood fiber blankets (reprocessed wood fibers which do not possess or contain any growth or germination inhibiting factors).

7.3 Permanent Erosion and Sediment Control Measures

The following permanent measures have been incorporated into the erosion and sediment control plans for the site construction activities.

7.3.1 Permanent Soil Stabilization Practices

Stabilization practices reduce the potential for soil detachment by shielding the soil surface from the impact of rainfall and reducing overland flow velocity.

The Contractor shall initiate stabilization measures as soon as possible in portions of the site where construction activities have permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has permanently ceased.

Permanent stabilization practices may include:

7.3.1.1 Sod

Where exposed soils have the potential to generate off-site sediment loading, sod can provide a immediate form of stabilization and extra protection to a disturbed area. Where applied, sod shall be blue grass or a bluegrass/red fescue mixture or a perennial ryegrass and machine cut with a uniform soil thickness of ¾ inch, plus or minus ¼ inch. Sod shall be used at the discretion of the Owner, unless specifically required by the plans.

7.3.1.2 Permanent Vegetation

Permanent vegetation shall be used to provide a protective cover for exposed areas that have received final grading. Permanent stabilization shall be applied where topsoil has been placed or returned and incorporated into the soil surface. When used, this process shall be followed with the application of straw mulch to protect soil from erosion and seed from drying out. Irrigation shall be used when the soil is dry or when summer plantings are done. Permanent vegetation shall be placed in accordance with project plans.

7.3.1.3 Hydroseeding

Hydroseeding is the hydraulic application of seed and fertilizer onto prepared seed beds. When used, this process shall be followed with the application of straw mulch to protect soil from erosion and seed from drying out. Irrigation shall be used when the soil is dry or when summer plantings are done. Hydroseeding shall be used at the discretion of the Contractor, unless specifically required by the plans.

7.3.1.4 Permanent Erosion Control Blankets

Permanent erosion control blankets are comprised of synthetic materials that form a high strength mat that helps prevent soil erosion in channels and on steep slopes. Stems and roots become intertwined within the matrix, thus reinforcing the vegetation and anchoring the mat. Permanent erosion control blankets insulate and conserve seed moisture thus reducing evaporation and increasing germination rates and protect seeds from birds. When used within channels, permanent erosion control blankets can aid in the establishment of vegetation and increase the maximum permissible velocity of the given channel by reinforcing the soil and vegetation to resist the forces of erosion during runoff events.

7.4 Erosion and Sediment Control Sequencing Schedule

Implementation schedules for the installation of erosion and sediment control measures prior to and during the course of construction will depend greatly on the actual construction schedule and the varying field conditions that may warrant temporary construction stops and/or work commencing in other locations. A construction sequence is provided demonstrating how the project will be phased to limit to soil disturbance to less than 5-acres at any one time.

Erosion control measures shall be inspected and repaired as needed during construction activities and based on the maintenance schedule. Additional erosion control measures based on site conditions shall be provided as necessary in order to protect adjacent parcels and waters.

7.5 Maintenance Schedules

Maintenance of the erosion and sediment controls incorporated into this project shall be performed on a regular basis to assure continued effectiveness. This includes repairs and replacement to all erosion and sediment control practices, including cleanout of all sediment retaining measures. Those measures found to be ineffective during routine inspections shall be repaired or replaced and cleaned out (where applicable) before the next anticipated storm event or within 24-hours of being notified, whichever comes first. A more detailed description of the maintenance procedures for the site-specific erosion and sediment control practices has been provided on the plan set.

7.6 Construction Staging Areas

Construction staging areas are areas designated within construction sites where most equipment and materials are stored. The locations of the construction staging areas for this project have been shown on the plan set.

7.7 Site Assessments, Inspections and Reporting

Regular inspections of the construction site shall be performed by a qualified professional who is familiar with all aspects of the SWPPP and the implemented control practices. Inspections are intended to identify areas where the pollutant control measures at the site are ineffective and have the potential to allow pollutants to enter water bodies or adjoining properties.

7.7.1 Prior to Construction

Prior to the commencement of construction, a qualified professional shall conduct an inspection of the site and certify in an inspection report that the appropriate erosion and sediment control measures have been installed as indicated by the project plan set and SWPPP. This certification

shall be forwarded to the Owner's Representative and Contractor for filing in the construction logbook.

A copy of the "Pre-Construction Site Assessment Checklist" has been provided in Appendix F.

7.7.2 During Construction

Following the commencement of construction, a qualified professional shall perform inspections of site construction activities in accordance with the SPDES General Permit. Inspections shall occur every seven (7) calendar days. Refer to Section 1.2 of this SWPPP for additional inspection requirements associated with disturbance of greater than five (5) acres at any time.

For project areas where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the qualified inspector shall conduct a site inspection at least once every thirty (30) calendar days. The owner or operator shall notify the Regional Office stormwater contact person in writing prior to reducing the frequency of inspections.

For project areas where soil disturbance activities have been shut down with partial project completion, the qualified inspector can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The owner or operator shall notify the Regional Office stormwater contact person in writing prior to the shutdown.

The inspections shall include observation of installed and maintained erosion and sediment control measures for consistency with project specifications and documentation of items to be corrected and recommendations for mitigating concerns. The following information, at minimum, shall be recorded during each inspection:

- Date and time of inspection;
- Name and title of person(s) performing inspection;
- A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- A description of the condition of all-natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody.
- Identification of all erosion and sediment control practices that need repair or maintenance.

- Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

- Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

- Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

- Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water (where applicable);

- Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume;

- Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

- Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report being maintained on site within seven (7) calendar days of the date of the inspection. The qualified inspector shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection;

- A brief description of any erosion and sediment control practice repairs, maintenance or installations made as a result of previous inspection; and

- All deficiencies that are identified with the implementation of the SWPPP.

Summary reports shall be forwarded to the Owner's Representative and Contractor. Reports shall be incorporated into the construction logbook. Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor or subcontractor shall

begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

A copy of the "Construction" inspection report has been provided in Appendix L.

7.7.3 Quarterly Report

The Owner shall prepare a written summary of its status with respect to compliance with the SPDES General Permit at a minimum frequency of every three months during which coverage under the permit exists. The summary should address the status of achieving each component of the SWPPP. The report shall include the overall performance of the stormwater facilities, average, minimum and maximum depths of sediment within the stormwater facilities, the physical condition of all drainage structures, maintenance reports from the previous year, and any recommendations for any repairs, modifications or adjustments to the stormwater facilities.

7.7.4 End of Term

Termination of coverage under SPDES General Permit is accomplished by filing a Notice of Termination with the NYSDEC. Prior to the filing of the Notice of Termination (NOT), the Owner shall have a qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods, that all temporary erosion and sediment control structures have been removed, and that all permanent erosion control and stormwater facilities have been installed and are operational in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The owner or operator shall then submit the completed NOT form to the NYSDEC. "Final stabilization" means that all soil disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextile) have been employed on all unpaved areas and area not covered by permanent structures.

A NOT is provided in Appendix M.

7.8 Construction Logbook

The construction logbook shall be maintained on-site from the date of initiation of construction activities to the date of final stabilization and shall be made available to the permitting authority upon request. The construction logbook shall contain a record of all inspections; preparer's, qualified professional's, owner's/operator's, contractor's, and sub-contractor's (if applicable) certifications; and weekly and quarterly reports.

7.9 Long Term Operation and Maintenance Plan of Stormwater System and Landscape Areas

All stormwater facilities and infrastructure shall be inspected on a yearly basis by a licensed professional engineer. A copy of the inspection report, along with findings and recommendations, shall be submitted to the Beacon Building Department and City Engineer's office.

7.9.1 Catch Basins and Piping

Catch basins shall be inspected after every storm event and remove trash and debris that may be blocking the flow capability of the structure. The owner should pay close attention during the fall months where leave debris will be heavy. The catch basins and piping shall be inspected for sediment accumulation at least once a year, and utilize vacuum trucks as necessary to remove the accumulated sediment.

7.9.2 Hydrodynamic Separator

The manufacturer recommends that the units be inspected bi-annually (once in the spring and once in the fall). The structure shall be visually inspected for blockages or obstructions in the inlet or separation screen. The inspection should also quantify accumulation of hydrocarbons, sediment and trash within the system. Inspections and maintenance shall be performed by qualified personnel with adequate training in these types of units. A record of inspections and scheduled cleanings shall be kept on site at all times. Manufacturer's inspection recommendations and a sample report is provided in Appendix G.

7.9.3 Underground Infiltration Chambers

CULTEC recommends inspection of the Separator Row to be performed every six months for the first year of service. Future inspection frequency can be adjusted based upon previous inspection observations. However annual inspections are recommended. Inspection of the Separator Row can be achieved via an inspection port riser installed during construction. This inspection port riser will connect the top of the Separator Row chambers to finished grade with a removable lid.

To inspect:
• Remove the inspection port lid from the floor box frame.
• Remove the riser pipe cap.
• With a flashlight and stadia rod, measure the depth of sediment.
• Record results in a maintenance log.
• When depth of sediment exceeds 3" (76 mm), use the JetVac procedure described below.
The JetVac process utilizes a high pressure water nozzle controlled from the surface. The high pressure nozzle is introduced down the Separator Row via the access manhole(s). The high pressure water cleans all sediment and debris from the Separator Row as the nozzle is retrieved. Captured pollutants are flushed into the sumped access manhole for vacuuming. This process is repeated until the Separator Row is completely free of sediment and debris. A small diameter culvert cleaning nozzle is recommended for this procedure. Manufacture's inspection recommendations and a sample report are provided in Appendix G.

8.0 GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES

The following good housekeeping and material management practices shall be followed to reduce the risk of spills or exposure of materials to stormwater runoff.

8.1 Waste Materials

All waste material, including but not limited to trash and construction debris, generated during construction shall be collected and stored in a proper receptacle in accordance with Federal, State,

County and Local regulations. No waste material shall be buried on-site. All collected waste material shall be hauled to an approved waste disposal facility.

8.2 Chemical

Chemicals used on-site shall be kept in small quantities and stored in closed watertight containers undercover in a neat and orderly manner and kept out of direct contact with stormwater. Chemical products shall not be mixed with one another unless recommended by manufacturer.

All on-site personnel shall have access to material safety data sheets (MSDS) and National Institute for Occupational Safety and Health (NIOSH) Guide to Chemical Hazards (latest edition) for all chemicals stored and used on-site.

Manufacturer's and/or Federal, State, County and Local guidelines for proper use and disposal shall be followed. Any spills or contamination of runoff with chemicals shall be contained, collected, cleaned up immediately and disposed of in accordance with Federal, State, County and Local regulations.

8.3 Fuels and Oil

All on-site vehicles, tools, and construction equipment shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. On-site vehicle and equipment refueling shall be conducted at a location away from access to surface waters and runoff. Any on-site storage tanks shall have a means of secondary containment. Oil products shall be kept in their original containers with original manufacturer's label. In the event of a spill, it shall be contained, cleaned up immediately and the material, including any contaminated soil, shall be disposed of in accordance with Federal, State, County and Local regulations.

Fuel and oil spills in excess of reportable quantities shall be reported to the NYSDEC as soon as the discharge is discovered.

8.4 Fertilizers

Fertilizers used on-site shall be stored in closed watertight containers undercover in a neat orderly manner and kept out of direct contact with stormwater. Manufacturer's and/or Federal, State, County and Local guidelines for proper use and disposal shall be followed. Any spills or contamination of runoff with fertilizers shall be contained, collected, cleaned up immediately, and disposed of in accordance with Federal, State, County and Local regulations.

8.5 Paint

Paints used on-site shall be stored in closed, watertight containers undercover in a neat and orderly manner and kept out of direct contact with stormwater. Manufacturer's and/or Federal, State, County and Local guidelines for proper use and disposal shall be followed. Any spills or contamination of runoff with paint shall be contained, collected, cleaned up immediately, and disposed of in accordance with Federal, State, County and Local regulations.

8.6 Sanitary Waste Facilities

Should portable units be located on-site, they shall be placed in upland areas away from direct contact with surface waters. They shall be serviced and cleaned on a weekly basis by a licensed

portable toilet and septic disposal service. Any spills occurring during service shall be cleaned up immediately and disposed of in accordance with Federal, State, County, and Local regulations.

8.7 Container Disposal

All of a product shall be used up before disposal of the container. Empty containers that may contain chemical residue shall be disposed of in accordance with Federal, State, County and Local regulations.

8.8 Concrete and Asphalt Trucks

Concrete and asphalt trucks shall not be allowed to wash out or discharge surplus material on-site.

8.9 Site Supervisor

It shall be the responsibility of the Contractor's Site Supervisor to inspect daily and ensure the proper use, storage and disposal of all on-site materials.

9.0 SWPPP AMENDMENT

The SWPPP shall be updated by a licensed professional engineer whenever any of the following apply:

1) There is a significant change in design, construction, operation or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP.
2) The SWPPP proves to be ineffective in:
    - Eliminating or significantly minimizing pollutants from sources identified in the SWPPP required by the SPDES Permit; or
    - Achieving the general objective of controlling pollutants in stormwater discharges from permitted construction activity.
3) Identify any new contractor or subcontractor that will implement any measure of the SWPPP.
4) NYSDEC notifies the Permittee that the SWPPP does not meet one or more of the minimum requirements of the SPDES Permit. Within seven (7) days of such notification or as provided for by the NYSDEC, the Permittee shall make amendments to the SWPPP and submit to the NYSDEC a written certification that the requested changes have been made.

Since this project is subject to the requirements of a regulated, traditional land use control MS4, the owner or operator shall notify the MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP. Unless otherwise notified by the MS4, the owner or operator shall have the SWPPP amendments or modifications reviewed and accepted by the MS4 prior to commencing construction of the post-construction stormwater management practice.

10.0 CONTRACTOR CERTIFICATIONS

All contractors and subcontractors that have any responsibility to install, inspect or maintain erosion or sediment control measures shall sign a copy of the certification statement included in Appendix H before undertaking any construction activity at the site identified in the SWPPP.

11.0 OWNER/OPERATOR CERTIFICATION

The Owner/Operator must review and sign the owner/operator certification statement included in Appendix J.

12.0 CONCLUSIONS

This SWPPP demonstrates that the proposed project generally meets the requirements of SPDES GP-0-25-001, as follows:

- An erosion and sediment control plan in accordance with the latest revision to the New York State Standards and Specifications for Erosion and Sediment Control, November 2016, has been developed for the project and is included in the site plan set.
- Hydrologic and Hydraulic calculations for all storm events modeled will demonstrate that the resulting stormwater runoff from the development, exiting the site will not adversely impact offsite properties, stormwater conveyance systems or receiving water bodies. Temporary and permanent stormwater systems and facilities are designed in accordance with the latest revision to the New York State Stormwater Management Design Manual.
- The project has been designed to capture and treat 90% of the average annual stormwater runoff from the development through approved water quality measures in all available areas.
- The standard stormwater management practices provide more than the required minimum runoff reduction volume (RRv).

APPENDIX A

NOTICE OF INTENT & MS4 ACCEPTANCE FORM

(to be provided)

APPENDIX B

SOILS DATA

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Dutchess County, New York

1064 Wolcott Ave.

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

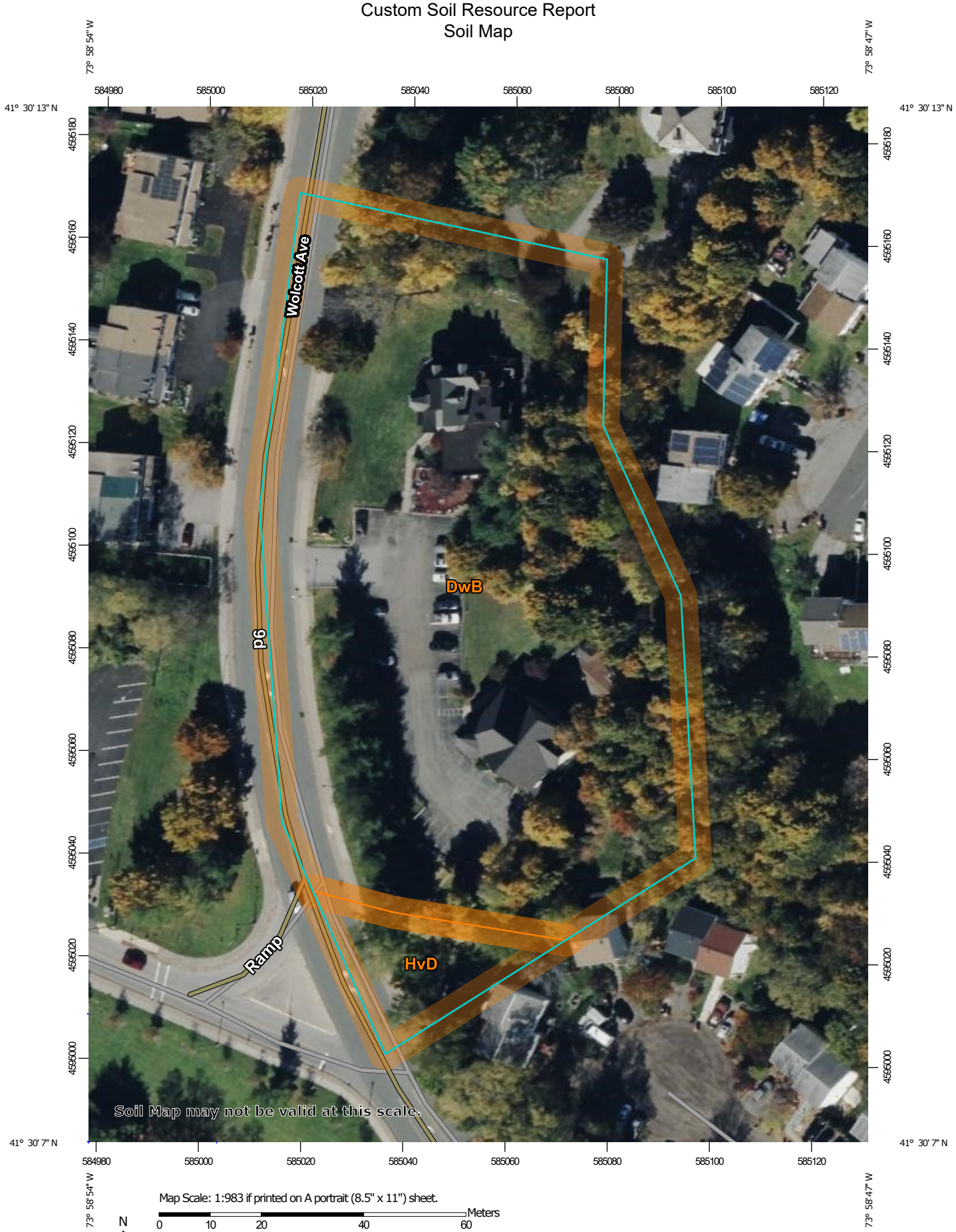
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:983 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dutchess County, New York
Survey Area Data: Version 21, Aug 29, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	2.4	93.4%
HvD	Hudson and Vergennes soils, hilly	0.2	6.6%
Totals for Area of Interest		**2.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Dutchess County, New York

DwB—Dutchess-Cardigan complex, undulating, rocky

Map Unit Setting

National map unit symbol: 9rfn
Elevation: 0 to 1,330 feet
Mean annual precipitation: 41 to 47 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dutchess and similar soils: 40 percent
Cardigan and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dutchess

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived mainly from phyllite, slate, schist, and shale

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 28 inches: silt loam
H3 - 28 to 86 inches: channery silt loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Cardigan

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till or colluvium derived from phyllite, slate, shale, and schist

Typical profile

H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 20 inches: channery loam
H3 - 20 to 30 inches: channery silt loam
H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Georgia

Percent of map unit: 10 percent
Hydric soil rating: No

Massena

Percent of map unit: 9 percent
Hydric soil rating: No

Nassau

Percent of map unit: 9 percent
Hydric soil rating: No

Sun

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: Unranked

HvD—Hudson and Vergennes soils, hilly

Map Unit Setting

National map unit symbol: 9rgw
Elevation: 50 to 1,800 feet
Mean annual precipitation: 41 to 47 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Hudson and similar soils: 45 percent
Vergennes and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hudson

Setting

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey and silty glaciolacustrine deposits

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 18 inches: silty clay loam
H3 - 18 to 25 inches: silty clay loam
H4 - 25 to 72 inches: stratified silt loam to silty clay loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C/D
Ecological site: F144AY018NY - Moist Lake Plain

Hydric soil rating: No

Description of Vergennes

Setting

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 11 inches: silty clay loam
H2 - 11 to 28 inches: clay
H3 - 28 to 37 inches: clay
H4 - 37 to 80 inches: stratified clay to silt loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F142XB005VT - Clayplain
Hydric soil rating: No

Minor Components

Rhinebeck

Percent of map unit: 10 percent
Hydric soil rating: No

Kingsbury

Percent of map unit: 9 percent
Hydric soil rating: No

Livingston

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Water Management

Water Management interpretations are tools for evaluating the potential of the soil in the application of various water management practices. Example interpretations include pond reservoir area, embankments, dikes, levees, and excavated ponds.

Stormwater Management - Infiltration (NY)

Proper management of stormwater runoff from construction sites and developed areas is an issue of growing importance in New York State. During construction, exposed soil is subject to a greater risk of erosion, resulting in a greater potential for sedimentation in waterways. Stormwater runoff increases on the rooftops of buildings, paved parking lots, and other impervious surfaces, and thus increases the potential for flooding and discharge of polluted runoff into open water. Management of stormwater runoff can prevent or reduce the availability, release, or transport of substances that can degrade surface and ground waters. Guidelines and design criteria for stormwater management practices have been established by the New York State Department of Environmental Conservation (2008).

This interpretation is designed to evaluate the limitations of soils for stormwater management practices. The purpose of the interpretation is to help decision makers use soil survey information in the selection and implementation of the stormwater management practices best suited to a particular location. The information in the interpretations is intended for planning purposes and does not eliminate the need for on-site investigation of the soil.

Rating class terms indicate the extent to which the soils are limited by the soil features that influence the design, construction, and performance of stormwater management practices. "Least limited" indicates that the soil has features that are

very favorable for this practice. Good performance and low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the practice. The limitations can be overcome or minimized by special planning, design, or construction. Fair performance and moderate maintenance can be expected. "Most limited" indicates that the soil has one or more features that are unfavorable for the practice. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive construction procedures. Poor performance and high maintenance can be expected.

The rating class is based on the maximum value of the rating indices generated for each soil feature considered. Where the rating value is:

equal to 0.0, the rating class is "least limited."

greater than 0 and less than 1.0, the rating class is "somewhat limited."

equal to 1.0, the rating class is "most limited."

Design criteria in the "New York State Stormwater Management Design Manual" (New York State Department of Environmental Conservation, 2008) were used to guide the selection of potentially limiting soil properties. Additional limiting features incorporated into the interpretations are based on soil function for the specific practice.

Infiltration Practices

This interpretation evaluates the limitations of soils for stormwater management infiltration practices. Infiltration practices collect stormwater runoff in basins (or trenches) for storage prior to filtration through undisturbed soil in the basin (or trench) floor and sides. Deep, well drained, and permeable soils are required for implementing infiltration practices. Following is a synopsis of the soil features considered in this interpretation.

Excessive permeability: Excessive permeability in one or more layers may allow stormwater to move rapidly through the soil without sufficient filtering, resulting in a potential for groundwater contamination. Additional pretreatment or soil amendments may be required as part of an infiltration practice. The interpretation evaluates the range (low to high) of permeability values for the most transmissive layer in the soil.

Low permeability: Low permeability restricts movement of water through the soil, impeding the infiltration function. The interpretation evaluates the range (low to high) of permeability values for the least transmissive layer in the soil.

Slope gradient: Excessive slope limits the functionality of an infiltration practice. The representative slope gradient percent for the soil component is the property evaluated.

Depth to bedrock: Limited depth to bedrock impedes excavation and restricts infiltration. The minimum depth to bedrock is the property evaluated.

Depth to manufactured layer: In urban areas, some anthropogenic (human-altered) soils have a restrictive layer, such as pavement, below the surface. Limited depth to this feature impedes excavation and restricts infiltration. The minimum depth to a manufactured layer is the property evaluated.

Depth to saturation: A seasonal high water table in the upper part of the soil limits the storage capacity of an infiltration practice. The interpretation evaluates the minimum depth to a zone of saturation.

Excessive fines: Soils with a high content of silt and clay may become plugged with sediment from stormwater, resulting in restricted infiltration. The interpretation evaluates the weighted average of the percent clay and percent silt, for depths greater than 36 inches.

In addition to soil characteristics, other attributes of the site and the surrounding area are important factors in planning and implementing stormwater management practices. For example, proximity and slope direction from the installation practice to a drinking water well are important considerations when sites for infiltration practices are selected.

The components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed in the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one listed for the map unit. The percent composition of these components is described. As a result, the percentage of the rating class in the map unit is indicated.

Other components with different ratings may occur in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the "Stormwater Management (NY)" report from the Soil Reports tab in Web Soil Survey.

References:

New York State Department of Environmental Conservation. April 2008. New York State Stormwater Management Design Manual.

New York State Department of Environmental Conservation. June 2000. Urban/ Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State.

Map—Stormwater Management - Infiltration (NY)

Map Scale: 1:983 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Most limited
- Somewhat limited
- Least limited
- Not rated or not available

Soil Rating Lines
- Most limited
- Somewhat limited
- Least limited
- Not rated or not available

Soil Rating Points
- Most limited
- Somewhat limited
- Least limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dutchess County, New York
Survey Area Data: Version 21, Aug 29, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Stormwater Management - Infiltration (NY)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	Somewhat limited	Dutchess (40%)	Excessive fines (0.50)	2.4	93.4%
HvD	Hudson and Vergennes soils, hilly	Most limited	Hudson (45%)	Low permeability (1.00)	0.2	6.6%
				Depth to saturation (1.00)		
				Slope (1.00)		
				Excessive fines (1.00)		
			Vergennes (35%)	Low permeability (1.00)		
				Depth to saturation (1.00)		
				Slope (1.00)		
				Excessive fines (1.00)		
Totals for Area of Interest					**2.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Somewhat limited	2.4	93.4%
Most limited	0.2	6.6%
Totals for Area of Interest	**2.6**	**100.0%**

Rating Options—Stormwater Management - Infiltration (NY)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

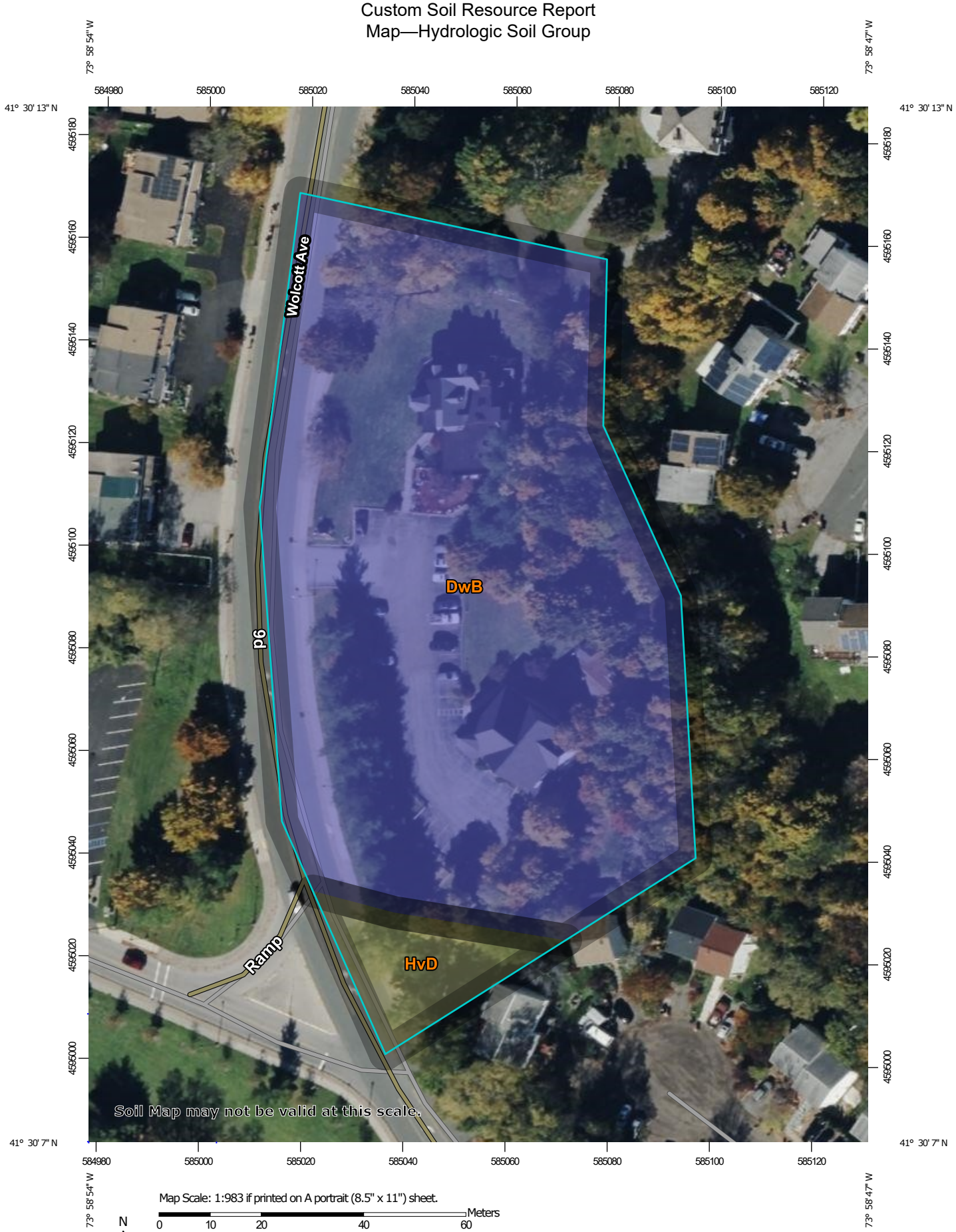
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at

or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



Map Scale: 1:983 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

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- Interstate Highways
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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 21, Aug 29, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

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The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	B	2.4	93.4%
HvD	Hudson and Vergennes soils, hilly	C/D	0.2	6.6%
Totals for Area of Interest			**2.6**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

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APPENDIX C

RAINFALL DATA, NYSDEC ERM, FLOOD MAP, WETLAND MAP, AND SHPO INFORMATION

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing	Yes
State	New York
Location	New York, United States
Latitude	41.503 degrees North
Longitude	73.981 degrees West
Elevation	30 feet
Date/Time	Thu Jan 23 2025 14:37:44 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.33	0.50	0.62	0.82	1.02	1.27	**1yr**	0.88	1.19	1.45	1.77	2.15	2.61	2.96	**1yr**	2.31	2.85	3.29	3.95	4.59	**1yr**
2yr	0.39	0.60	0.74	0.98	1.23	1.53	**2yr**	1.06	1.43	1.75	2.14	2.61	3.16	3.57	**2yr**	2.80	3.43	3.93	4.63	5.28	**2yr**
5yr	0.46	0.71	0.89	1.19	1.52	1.91	**5yr**	1.31	1.76	2.20	2.70	3.28	3.96	4.52	**5yr**	3.51	4.34	4.99	5.77	6.53	**5yr**
10yr	0.51	0.80	1.02	1.38	1.79	2.27	**10yr**	1.55	2.07	2.62	3.22	3.90	4.70	5.40	**10yr**	4.16	5.20	5.98	6.81	7.67	**10yr**
25yr	0.60	0.95	1.21	1.67	2.23	2.85	**25yr**	1.92	2.56	3.30	4.06	4.93	5.90	6.85	**25yr**	5.22	6.59	7.61	8.48	9.49	**25yr**
50yr	0.68	1.09	1.39	1.95	2.63	3.39	**50yr**	2.27	3.00	3.93	4.84	5.86	7.02	8.20	**50yr**	6.21	7.89	9.14	10.03	11.16	**50yr**
100yr	0.77	1.24	1.61	2.28	3.10	4.03	**100yr**	2.68	3.53	4.68	5.77	6.99	8.34	9.83	**100yr**	7.38	9.45	10.98	11.85	13.14	**100yr**
200yr	0.87	1.43	1.85	2.66	3.67	4.79	**200yr**	3.17	4.15	5.58	6.89	8.33	9.93	11.78	**200yr**	8.79	11.33	13.19	14.02	15.47	**200yr**
500yr	1.05	1.73	2.26	3.28	4.59	6.03	**500yr**	3.96	5.15	7.04	8.70	10.51	12.51	14.98	**500yr**	11.07	14.40	16.84	17.51	19.22	**500yr**

Lower Confidence Limits

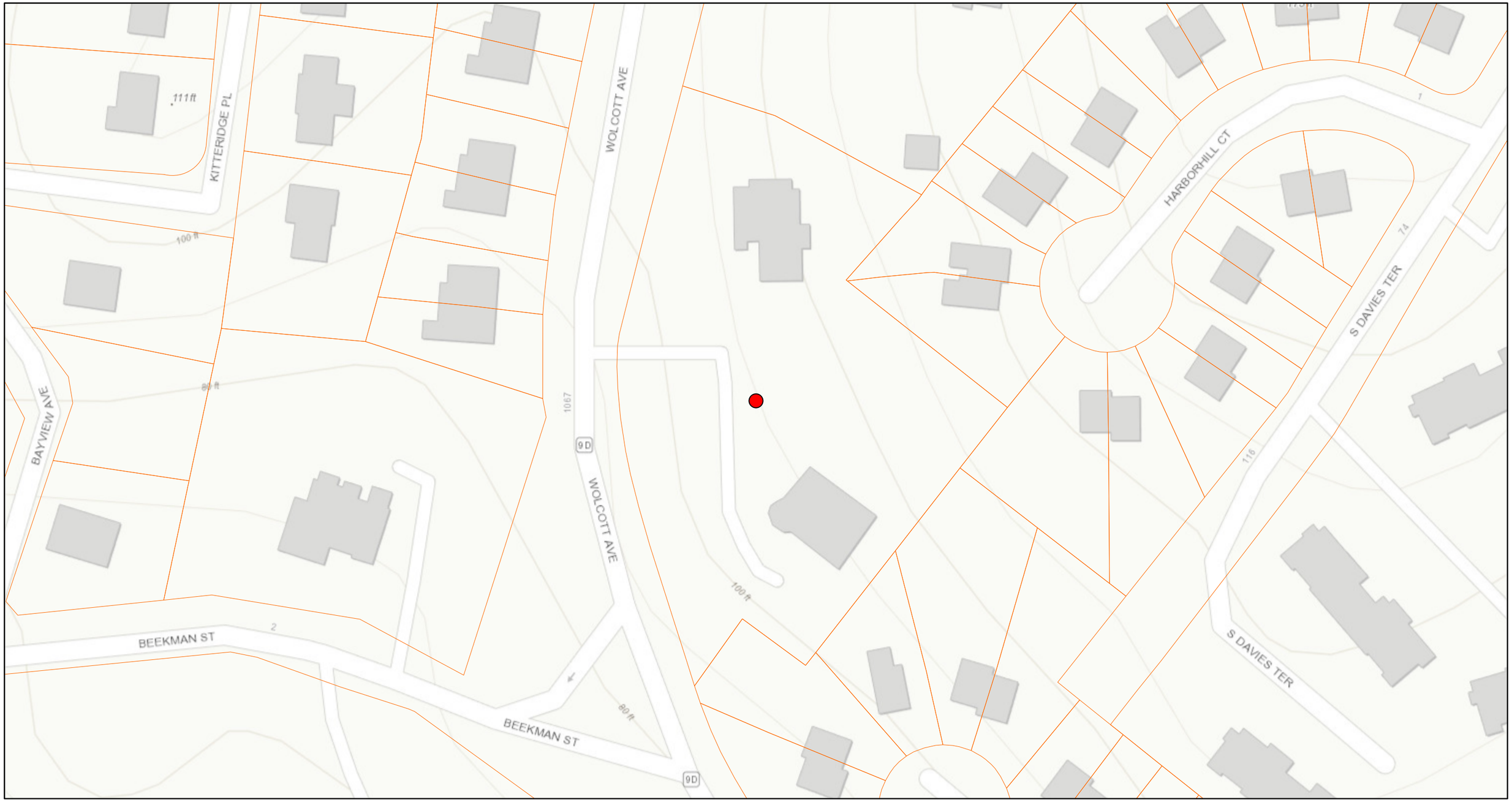
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.54	0.72	0.89	1.09	**1yr**	0.76	1.06	1.24	1.59	2.01	2.08	2.36	**1yr**	1.84	2.27	2.54	3.33	4.08	**1yr**
2yr	0.37	0.58	0.71	0.96	1.19	1.42	**2yr**	1.03	1.39	1.61	2.05	2.58	3.07	3.45	**2yr**	2.71	3.32	3.77	4.47	5.13	**2yr**
5yr	0.42	0.65	0.81	1.11	1.41	1.65	**5yr**	1.22	1.62	1.88	2.42	3.01	3.65	4.16	**5yr**	3.23	4.00	4.56	5.28	6.06	**5yr**
10yr	0.47	0.72	0.89	1.25	1.61	1.85	**10yr**	1.39	1.81	2.11	2.72	3.38	4.14	4.80	**10yr**	3.66	4.62	5.25	5.98	6.87	**10yr**
25yr	0.54	0.82	1.02	1.46	1.92	2.13	**25yr**	1.66	2.09	2.45	3.06	3.94	4.85	5.80	**25yr**	4.30	5.57	6.30	7.03	8.14	**25yr**
50yr	0.60	0.92	1.14	1.64	2.21	2.38	**50yr**	1.91	2.32	2.76	3.42	4.43	5.50	6.70	**50yr**	4.87	6.44	7.25	7.96	9.27	**50yr**
100yr	0.68	1.03	1.29	1.86	2.55	2.66	**100yr**	2.20	2.61	3.12	3.81	5.01	6.19	7.75	**100yr**	5.48	7.46	8.33	9.00	10.56	**100yr**
200yr	0.77	1.16	1.47	2.12	2.96	2.98	**200yr**	2.56	2.91	3.52	4.28	5.66	6.92	9.00	**200yr**	6.12	8.65	9.59	10.17	12.06	**200yr**
500yr	0.92	1.36	1.75	2.55	3.62	3.47	**500yr**	3.13	3.39	4.15	4.99	6.68	8.03	10.97	**500yr**	7.11	10.55	11.57	11.94	14.39	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.36	0.56	0.68	0.91	1.12	1.36	**1yr**	0.97	1.33	1.52	1.96	2.42	2.82	3.22	**1yr**	2.49	3.09	3.58	4.24	4.96	**1yr**
2yr	0.40	0.62	0.77	1.04	1.28	1.54	**2yr**	1.10	1.50	1.74	2.25	2.80	3.33	3.70	**2yr**	2.95	3.56	4.11	4.82	5.47	**2yr**
5yr	0.49	0.76	0.94	1.29	1.65	1.96	**5yr**	1.42	1.91	2.25	2.88	3.66	4.26	4.88	**5yr**	3.77	4.70	5.41	6.29	7.01	**5yr**
10yr	0.58	0.89	1.11	1.55	2.00	2.37	**10yr**	1.73	2.32	2.74	3.53	4.48	5.21	6.02	**10yr**	4.61	5.78	6.71	7.69	8.49	**10yr**
25yr	0.72	1.10	1.37	1.96	2.57	3.05	**25yr**	2.22	2.99	3.57	4.73	5.87	6.81	7.93	**25yr**	6.03	7.63	8.93	10.06	10.93	**25yr**
50yr	0.85	1.30	1.62	2.32	3.13	3.72	**50yr**	2.70	3.63	4.36	5.83	7.19	8.35	9.78	**50yr**	7.39	9.40	11.10	12.33	13.24	**50yr**
100yr	1.01	1.53	1.91	2.76	3.79	4.52	**100yr**	3.27	4.42	5.32	7.19	8.81	10.24	12.05	**100yr**	9.06	11.59	13.81	15.13	16.05	**100yr**
200yr	1.19	1.80	2.27	3.29	4.59	5.49	**200yr**	3.96	5.37	6.49	8.86	10.79	12.58	14.87	**200yr**	11.13	14.29	17.18	18.57	19.45	**200yr**
500yr	1.50	2.23	2.87	4.17	5.92	7.11	**500yr**	5.11	6.95	8.45	11.70	14.12	16.55	19.60	**500yr**	14.64	18.84	22.96	24.39	25.07	**500yr**

Powered by ACIS
Northeast Regional Climate Center

1064 Wolcott Avenue



January 23, 2025

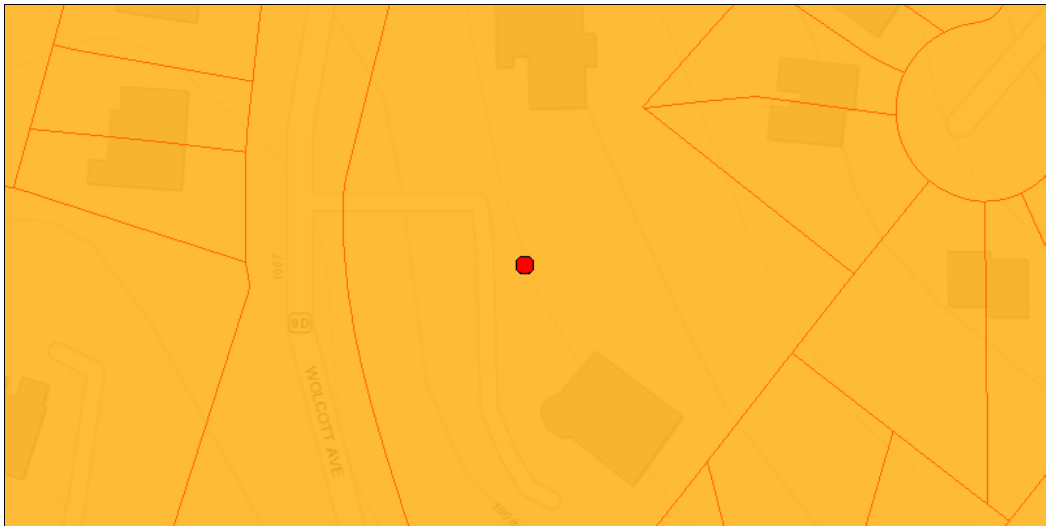
1:1,128

0 0.01 0.02 0.04 mi

0 0.01 0.03 0.06 km

Orange County, NY, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	585048.3081768118	**Northing:**	4595086.739523401
Longitude/Latitude	**Longitude:**	-73.98096582293299	**Latitude:**	41.50290260694385

The approximate address of the point you clicked on is:
Rose Hill Manor Day School

County: Dutchess
City: Beacon
USGS Quad: WAPPINGERS FALLS

Natural Communities in the Vicinity

Natural Community Name: Tidal river
Location: Hudson River Estuary
Significance: High Quality Occurrence of Uncommon Community Type

Natural Community Name: Brackish subtidal aquatic bed
Location: Hudson River Newburgh-Beacon Bridge to Piermont
Significance: Uncommon Community Type

Rare Plants and Rare Animals

This location is in the vicinity of Plants Listed as Endangered, Threatened, or Rare by NYS

This location is in the vicinity of Atlantic Sturgeon – Listed as Endangered – Contact NYSDEC Regional Office

This location is in the vicinity of Shortnose Sturgeon – Listed as Endangered – Contact NYSDEC Regional Office

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

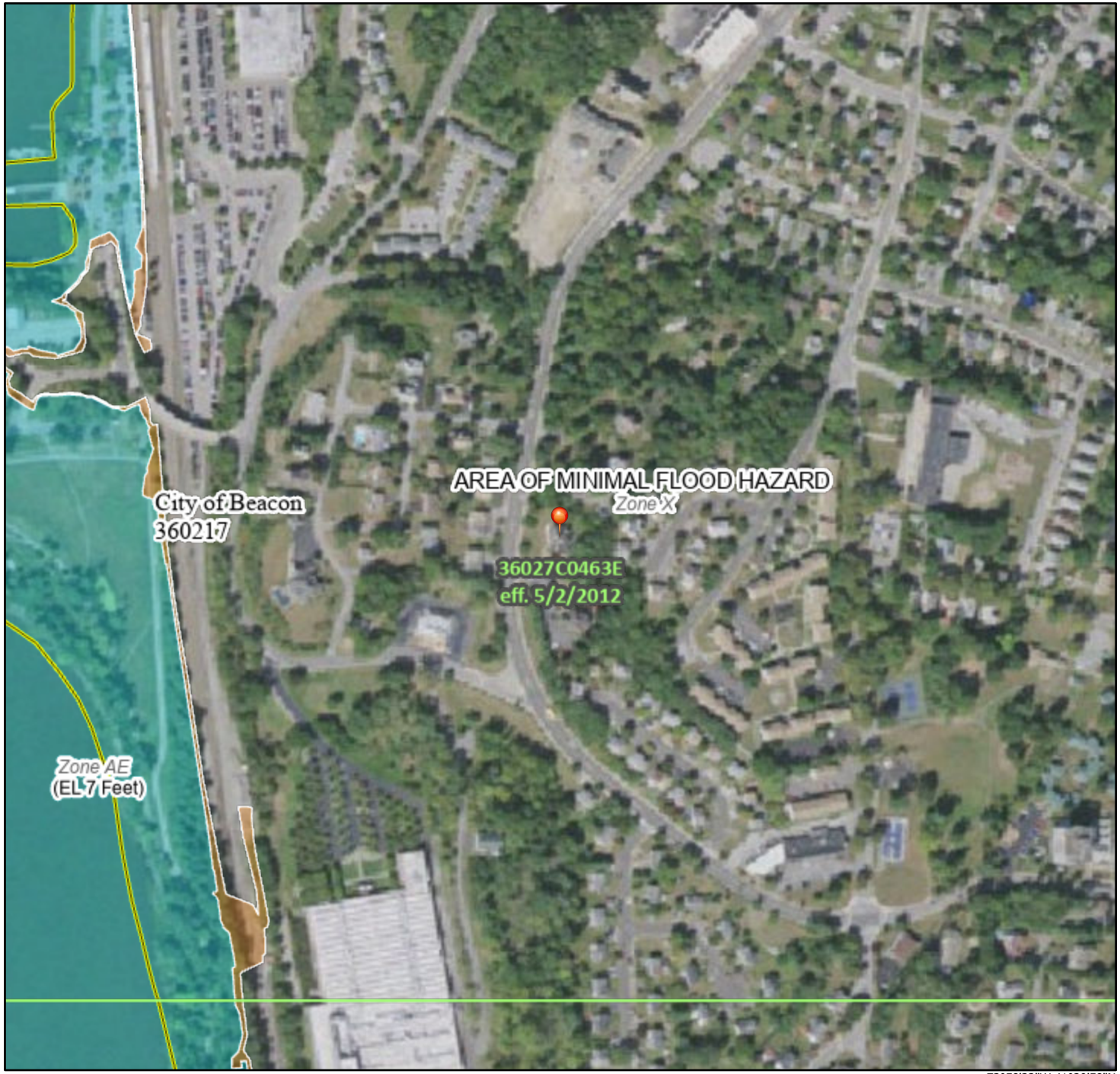
Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Print Preview

National Flood Hazard Layer FIRMette

FEMA

73°59'10"W 41°30'25"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

73°58'33"W 41°29'58"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/23/2025 at 8:30 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used f regulatory purposes.

U.S. Fish and Wildlife Service

National Wetlands Inventory

1064 Wolcott Avenue

January 23, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

APPENDIX D

HYDROCAD MODEL

Summary for Subcatchment 1: DA 1

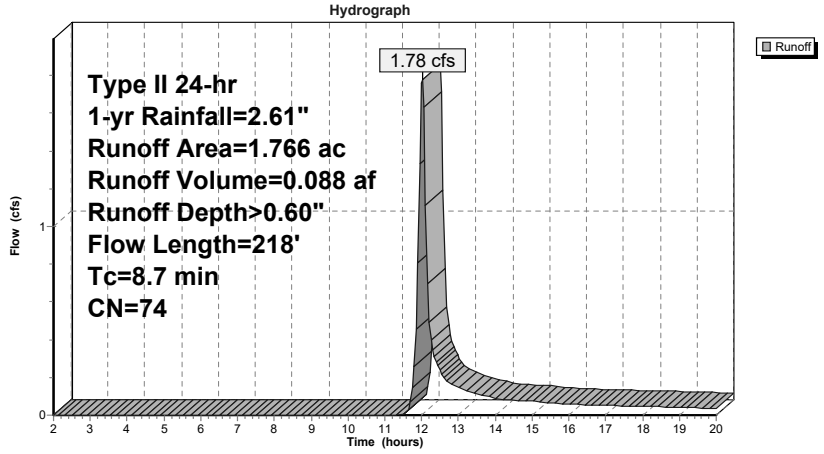
Runoff = 1.78 cfs @ 12.01 hrs, Volume= 0.088 af, Depth> 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.61"

Area (ac)	CN	Description
0.602	98	Paved parking, HSG B
0.529	55	Woods, Good, HSG B
0.531	61	>75% Grass cover, Good, HSG B
0.104	96	Gravel surface, HSG B
1.766	74	Weighted Average
1.164		65.91% Pervious Area
0.602		34.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.2100	0.20		**Sheet Flow, S1** Woods: Light underbrush n= 0.400 P2= 3.17"
0.3	118	0.1530	6.30		**Shallow Concentrated Flow, S2** Unpaved Kv= 16.1 fps
8.7	218	Total			

Subcatchment 1: DA 1



Summary for Subcatchment 10: DA 10

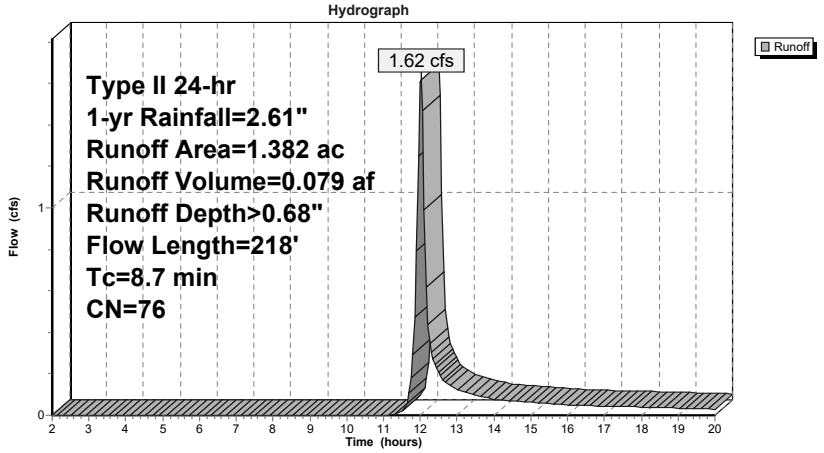
Runoff = 1.62 cfs @ 12.01 hrs, Volume= 0.079 af, Depth> 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.61"

Area (ac)	CN	Description
0.584	98	Paved parking, HSG B
0.234	55	Woods, Good, HSG B
0.564	61	>75% Grass cover, Good, HSG B
1.382	76	Weighted Average
0.798		57.74% Pervious Area
0.584		42.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.2100	0.20		**Sheet Flow, S1** Woods: Light underbrush n= 0.400 P2= 3.17"
0.3	118	0.1530	6.30		**Shallow Concentrated Flow, S2** Unpaved Kv= 16.1 fps
8.7	218	Total			

Subcatchment 10: DA 10



Summary for Subcatchment 11: DA 11

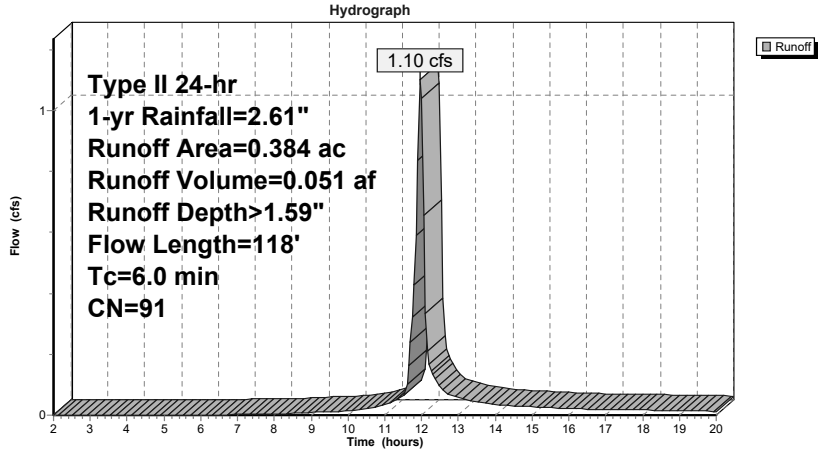
Runoff = 1.10 cfs @ 11.97 hrs, Volume= 0.051 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.61"

Area (ac)	CN	Description
0.310	98	Roofs, HSG B
0.074	61	>75% Grass cover, Good, HSG B
0.384	91	Weighted Average
0.074		19.27% Pervious Area
0.310		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	25	0.2000	0.22		**Sheet Flow, S1** Grass: Dense n= 0.240 P2= 3.17"
0.7	75	0.0400	1.71		**Sheet Flow, S2** Smooth surfaces n= 0.011 P2= 3.17"
0.1	18	0.0200	2.87		**Shallow Concentrated Flow, S3** Paved Kv= 20.3 fps
2.7	118	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 11: DA 11



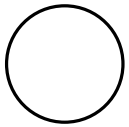
Summary for Reach R: REACH

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

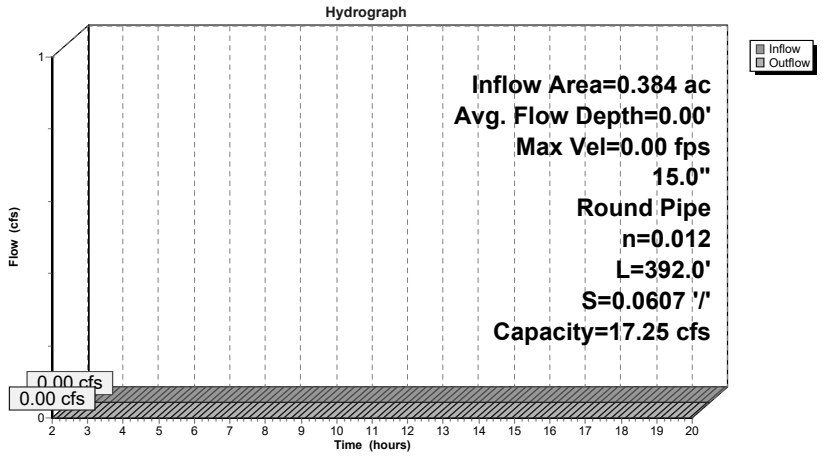
Routing by Stor-Ind+Trans method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 2.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 17.25 cfs

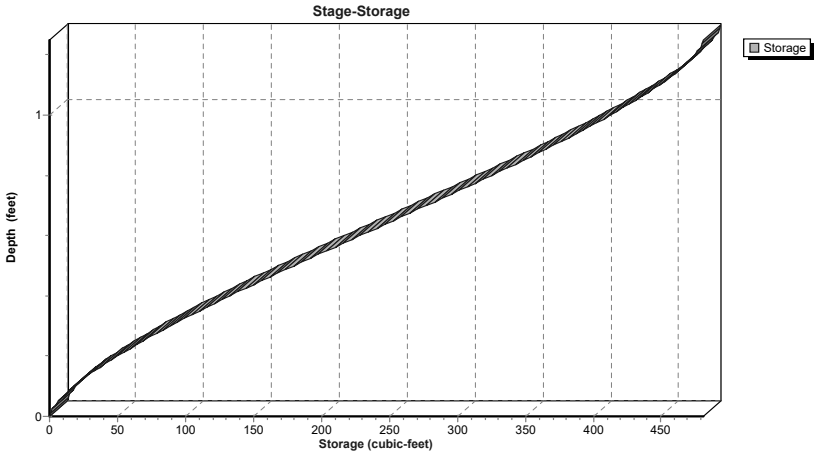
15.0" Round Pipe
n= 0.012
Length= 392.0' Slope= 0.0607 '/'
Inlet Invert= 116.37', Outlet Invert= 92.56'



Reach R: REACH



Reach R: REACH



Summary for Pond UG: UG

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth > 1.59" for 1-yr event
Inflow = 1.10 cfs @ 11.97 hrs, Volume= 0.051 af
Outflow = 0.04 cfs @ 11.25 hrs, Volume= 0.031 af, Atten= 97%, Lag= 0.0 min
Discarded = 0.04 cfs @ 11.25 hrs, Volume= 0.031 af
Primary = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 117.24' @ 13.87 hrs Surf.Area= 1,601 sf Storage= 1,245 cf

Plug-Flow detention time= 197.9 min calculated for 0.031 af (60% of inflow)
Center-of-Mass det. time= 124.9 min (894.7 - 769.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	116.05'	1,365 cf	**30.50'W x 52.50'L x 3.54'H Field A** 5,671 cf Overall - 2,258 cf Embedded = 3,413 cf x 40.0% Voids
#2A	116.55'	2,258 cf	**Cultec R-330XLHD** x 42 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 6 rows
		3,623 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.05'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	117.50'	**10.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.04 cfs @ 11.25 hrs HW=116.09' (Free Discharge)
↑└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 2.00 hrs HW=116.05' (Free Discharge)
↑└**2=Orifice/Grate** (Controls 0.00 cfs)

Pond UG: UG - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 6 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

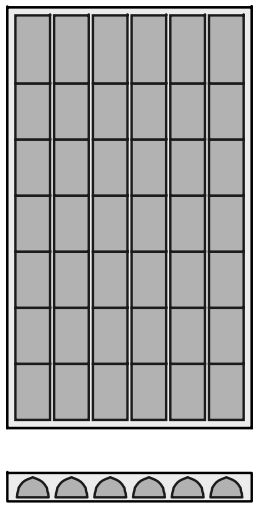
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
6 Rows x 52.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.50' Base Width
6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

42 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 6 Rows = 2,257.7 cf Chamber Storage

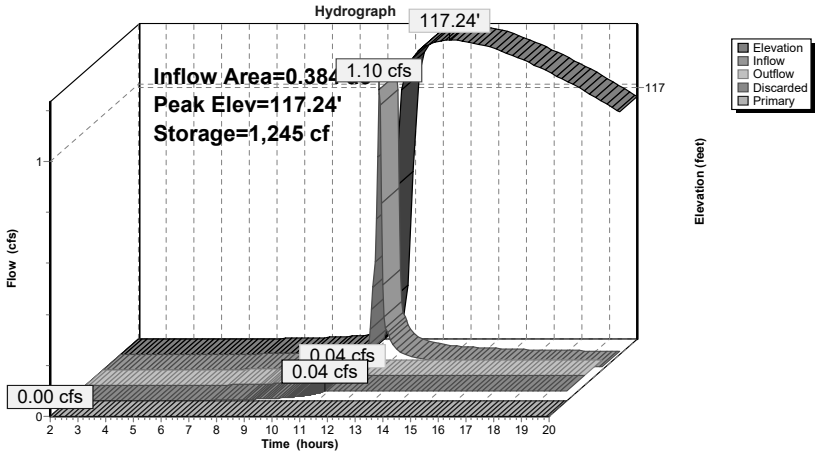
5,671.1 cf Field - 2,257.7 cf Chambers = 3,413.4 cf Stone x 40.0% Voids = 1,365.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,623.0 cf = 0.083 af
Overall Storage Efficiency = 63.9%
Overall System Size = 52.50' x 30.50' x 3.54'

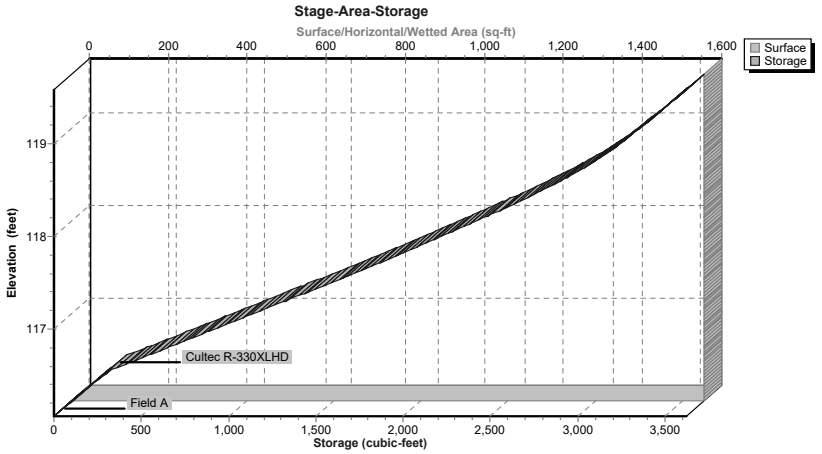
42 Chambers
210.0 cy Field
126.4 cy Stone



Pond UG: UG



Pond UG: UG

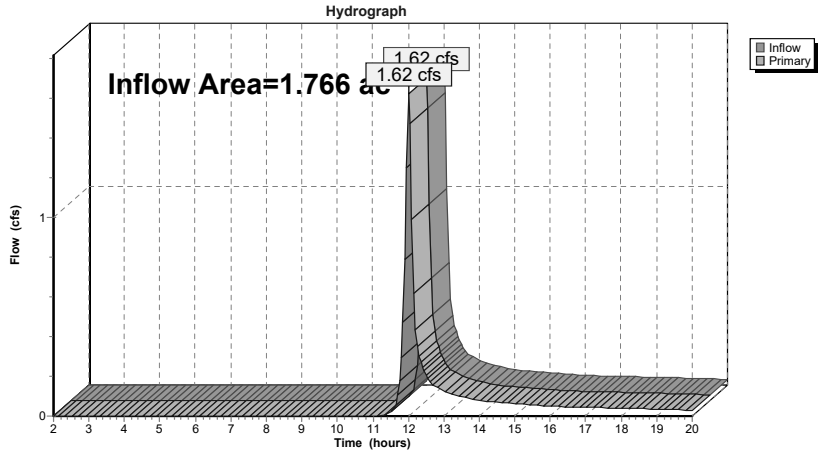


Summary for Link SDP: SDP

Inflow Area = 1.766 ac, 50.62% Impervious, Inflow Depth > 0.53" for 1-yr event
Inflow = 1.62 cfs @ 12.01 hrs, Volume= 0.079 af
Primary = 1.62 cfs @ 12.01 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs

Link SDP: SDP



Summary for Subcatchment 1: DA 1

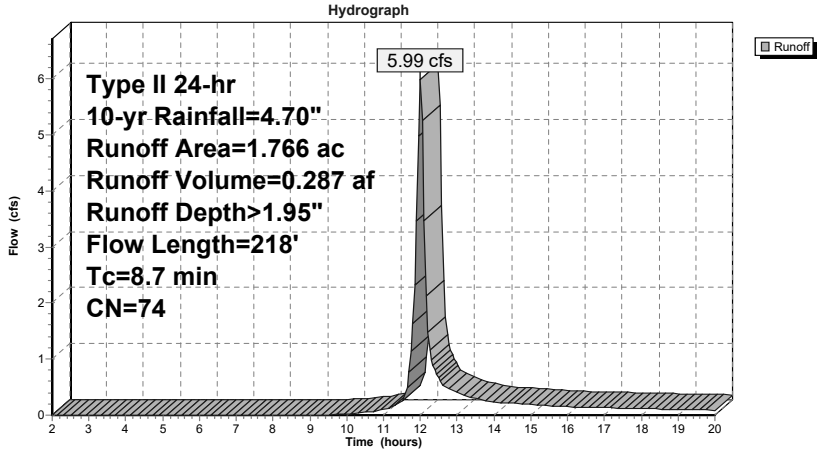
Runoff = 5.99 cfs @ 12.00 hrs, Volume= 0.287 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.70"

Area (ac)	CN	Description
0.602	98	Paved parking, HSG B
0.529	55	Woods, Good, HSG B
0.531	61	>75% Grass cover, Good, HSG B
0.104	96	Gravel surface, HSG B
1.766	74	Weighted Average
1.164		65.91% Pervious Area
0.602		34.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.2100	0.20		**Sheet Flow, S1** Woods: Light underbrush n= 0.400 P2= 3.17"
0.3	118	0.1530	6.30		**Shallow Concentrated Flow, S2** Unpaved Kv= 16.1 fps
8.7	218	Total			

Subcatchment 1: DA 1



Summary for Subcatchment 10: DA 10

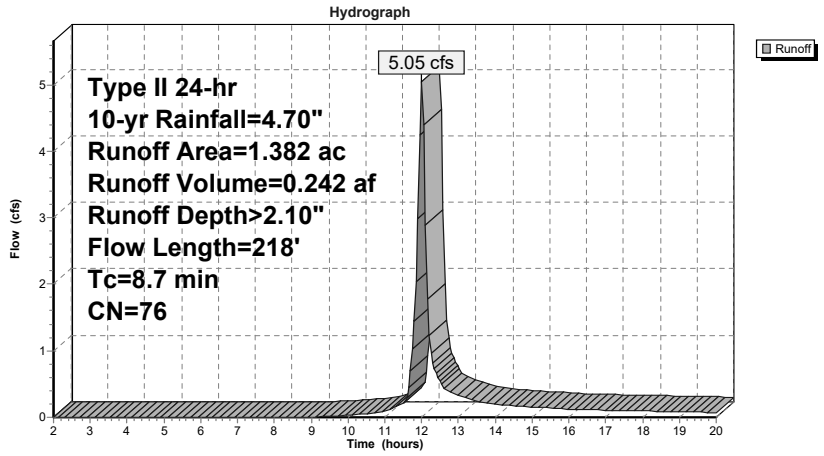
Runoff = 5.05 cfs @ 12.00 hrs, Volume= 0.242 af, Depth> 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.70"

Area (ac)	CN	Description
0.584	98	Paved parking, HSG B
0.234	55	Woods, Good, HSG B
0.564	61	>75% Grass cover, Good, HSG B
1.382	76	Weighted Average
0.798		57.74% Pervious Area
0.584		42.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.2100	0.20		**Sheet Flow, S1** Woods: Light underbrush n= 0.400 P2= 3.17"
0.3	118	0.1530	6.30		**Shallow Concentrated Flow, S2** Unpaved Kv= 16.1 fps
8.7	218	Total			

Subcatchment 10: DA 10



Summary for Subcatchment 11: DA 11

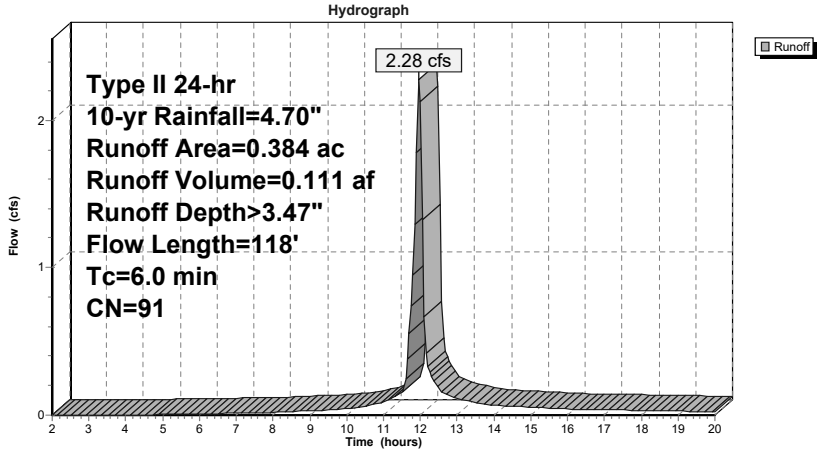
Runoff = 2.28 cfs @ 11.96 hrs, Volume= 0.111 af, Depth> 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.70"

Area (ac)	CN	Description
0.310	98	Roofs, HSG B
0.074	61	>75% Grass cover, Good, HSG B
0.384	91	Weighted Average
0.074		19.27% Pervious Area
0.310		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	25	0.2000	0.22		**Sheet Flow, S1** Grass: Dense n= 0.240 P2= 3.17"
0.7	75	0.0400	1.71		**Sheet Flow, S2** Smooth surfaces n= 0.011 P2= 3.17"
0.1	18	0.0200	2.87		**Shallow Concentrated Flow, S3** Paved Kv= 20.3 fps
2.7	118	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 11: DA 11



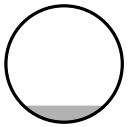
Summary for Reach R: REACH

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth = 1.18" for 10-yr event
Inflow = 0.72 cfs @ 12.11 hrs, Volume= 0.038 af
Outflow = 0.69 cfs @ 12.14 hrs, Volume= 0.038 af, Atten= 4%, Lag= 2.0 min

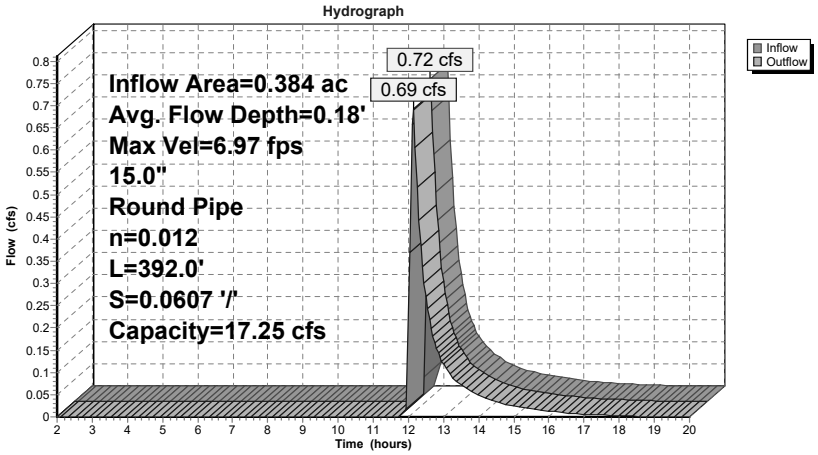
Routing by Stor-Ind+Trans method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.97 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 2.67 fps, Avg. Travel Time= 2.4 min

Peak Storage= 42 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 17.25 cfs

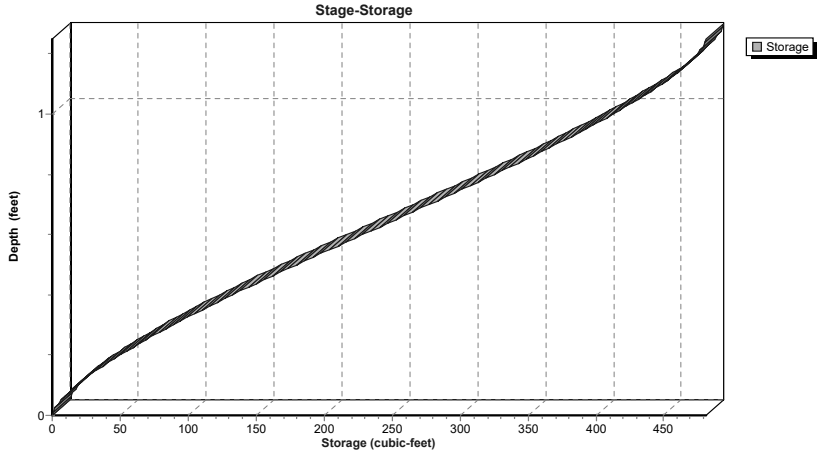
15.0" Round Pipe
n= 0.012
Length= 392.0' Slope= 0.0607 '/'
Inlet Invert= 116.37', Outlet Invert= 92.56'



Reach R: REACH



Reach R: REACH



Summary for Pond UG: UG

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth > 3.47" for 10-yr event
Inflow = 2.28 cfs @ 11.96 hrs, Volume= 0.111 af
Outflow = 0.76 cfs @ 12.11 hrs, Volume= 0.076 af, Atten= 67%, Lag= 8.5 min
Discarded = 0.04 cfs @ 9.85 hrs, Volume= 0.038 af
Primary = 0.72 cfs @ 12.11 hrs, Volume= 0.038 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 117.96' @ 12.11 hrs Surf.Area= 1,601 sf Storage= 2,178 cf

Plug-Flow detention time= 113.6 min calculated for 0.076 af (68% of inflow)
Center-of-Mass det. time= 47.2 min (798.6 - 751.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	116.05'	1,365 cf	**30.50'W x 52.50'L x 3.54'H Field A** 5,671 cf Overall - 2,258 cf Embedded = 3,413 cf x 40.0% Voids
#2A	116.55'	2,258 cf	**Cultec R-330XLHD** x 42 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 6 rows
		3,623 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.05'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	117.50'	**10.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.04 cfs @ 9.85 hrs HW=116.09' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.72 cfs @ 12.11 hrs HW=117.96' (Free Discharge)
↑**2=Orifice/Grate** (Orifice Controls 0.72 cfs @ 2.31 fps)

Pond UG: UG - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 6 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

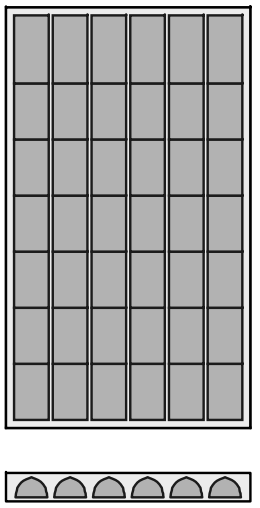
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
6 Rows x 52.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.50' Base Width
6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

42 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 6 Rows = 2,257.7 cf Chamber Storage

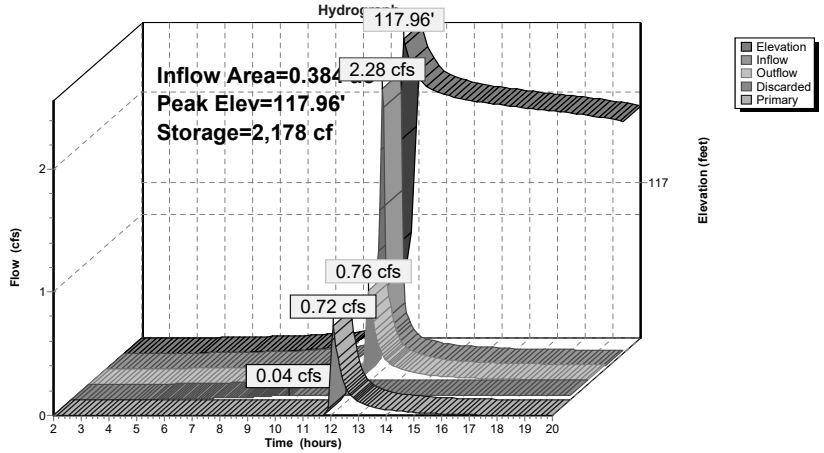
5,671.1 cf Field - 2,257.7 cf Chambers = 3,413.4 cf Stone x 40.0% Voids = 1,365.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,623.0 cf = 0.083 af
Overall Storage Efficiency = 63.9%
Overall System Size = 52.50' x 30.50' x 3.54'

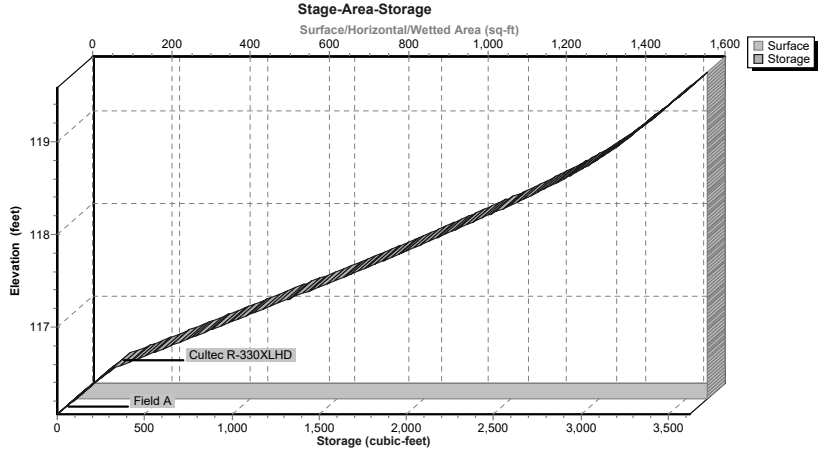
42 Chambers
210.0 cy Field
126.4 cy Stone



Pond UG: UG



Pond UG: UG

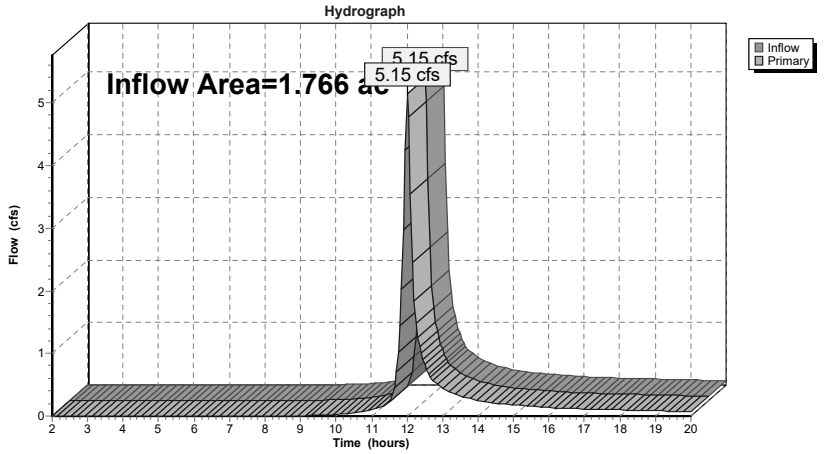


Summary for Link SDP: SDP

Inflow Area = 1.766 ac, 50.62% Impervious, Inflow Depth > 1.90" for 10-yr event
Inflow = 5.15 cfs @ 12.01 hrs, Volume= 0.280 af
Primary = 5.15 cfs @ 12.01 hrs, Volume= 0.280 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs

Link SDP: SDP



Summary for Subcatchment 1: DA 1

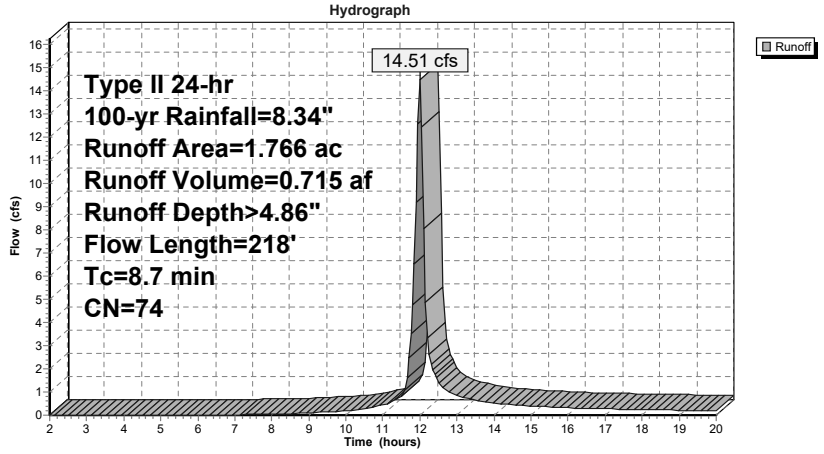
Runoff = 14.51 cfs @ 12.00 hrs, Volume= 0.715 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=8.34"

Area (ac)	CN	Description
0.602	98	Paved parking, HSG B
0.529	55	Woods, Good, HSG B
0.531	61	>75% Grass cover, Good, HSG B
0.104	96	Gravel surface, HSG B
1.766	74	Weighted Average
1.164		65.91% Pervious Area
0.602		34.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.2100	0.20		**Sheet Flow, S1** Woods: Light underbrush n= 0.400 P2= 3.17"
0.3	118	0.1530	6.30		**Shallow Concentrated Flow, S2** Unpaved Kv= 16.1 fps
8.7	218	Total			

Subcatchment 1: DA 1



Summary for Subcatchment 10: DA 10

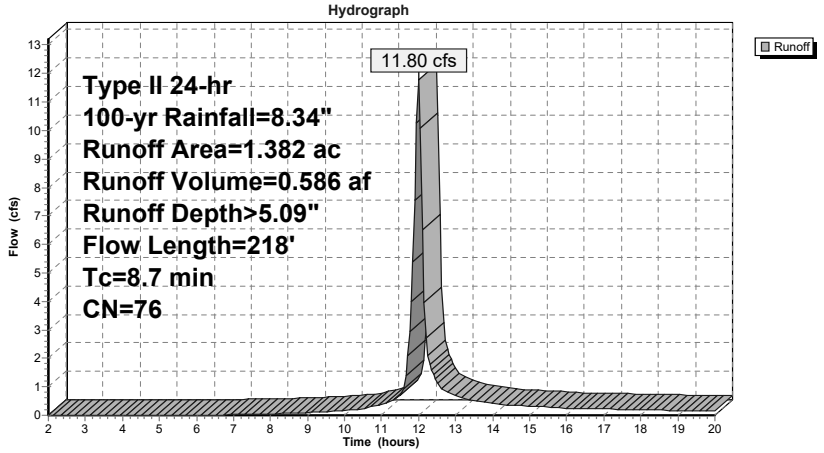
Runoff = 11.80 cfs @ 12.00 hrs, Volume= 0.586 af, Depth> 5.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=8.34"

Area (ac)	CN	Description
0.584	98	Paved parking, HSG B
0.234	55	Woods, Good, HSG B
0.564	61	>75% Grass cover, Good, HSG B
1.382	76	Weighted Average
0.798		57.74% Pervious Area
0.584		42.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.2100	0.20		**Sheet Flow, S1** Woods: Light underbrush n= 0.400 P2= 3.17"
0.3	118	0.1530	6.30		**Shallow Concentrated Flow, S2** Unpaved Kv= 16.1 fps
8.7	218	Total			

Subcatchment 10: DA 10



Summary for Subcatchment 11: DA 11

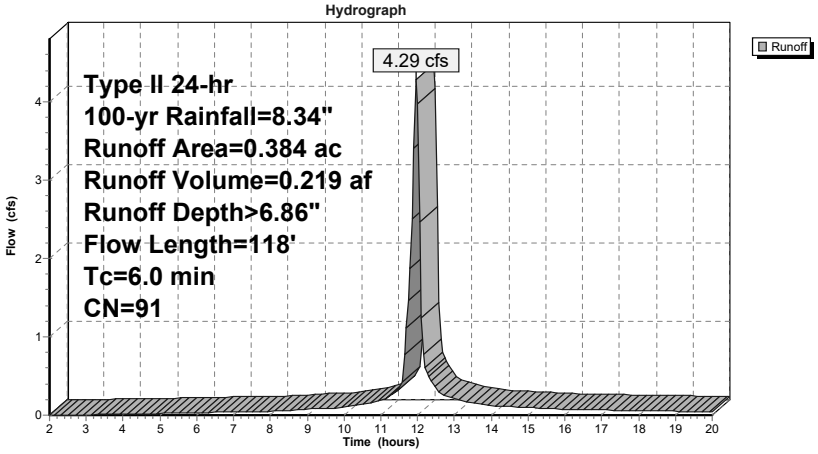
Runoff = 4.29 cfs @ 11.96 hrs, Volume= 0.219 af, Depth> 6.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=8.34"

Area (ac)	CN	Description
0.310	98	Roofs, HSG B
0.074	61	>75% Grass cover, Good, HSG B
0.384	91	Weighted Average
0.074		19.27% Pervious Area
0.310		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	25	0.2000	0.22		**Sheet Flow, S1** Grass: Dense n= 0.240 P2= 3.17"
0.7	75	0.0400	1.71		**Sheet Flow, S2** Smooth surfaces n= 0.011 P2= 3.17"
0.1	18	0.0200	2.87		**Shallow Concentrated Flow, S3** Paved Kv= 20.3 fps
2.7	118	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 11: DA 11



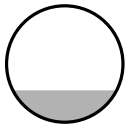
Summary for Reach R: REACH

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth > 4.21" for 100-yr event
Inflow = 2.79 cfs @ 12.04 hrs, Volume= 0.135 af
Outflow = 2.75 cfs @ 12.06 hrs, Volume= 0.135 af, Atten= 1%, Lag= 1.0 min

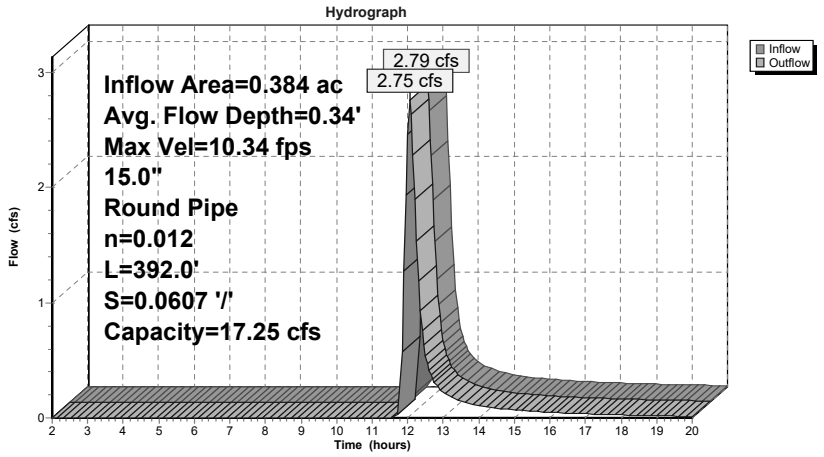
Routing by Stor-Ind+Trans method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.34 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 3.63 fps, Avg. Travel Time= 1.8 min

Peak Storage= 106 cf @ 12.05 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 17.25 cfs

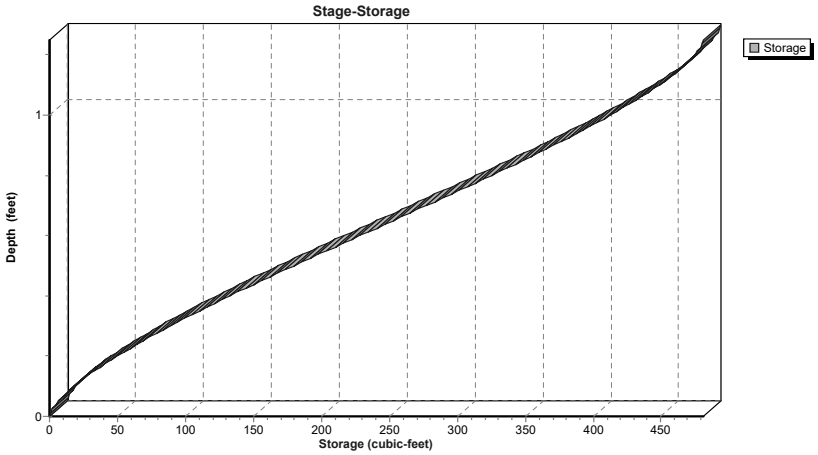
15.0" Round Pipe
n= 0.012
Length= 392.0' Slope= 0.0607 '/'
Inlet Invert= 116.37', Outlet Invert= 92.56'



Reach R: REACH



Reach R: REACH



Summary for Pond UG: UG

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth > 6.86" for 100-yr event
Inflow = 4.29 cfs @ 11.96 hrs, Volume= 0.219 af
Outflow = 2.83 cfs @ 12.04 hrs, Volume= 0.182 af, Atten= 34%, Lag= 4.8 min
Discarded = 0.04 cfs @ 6.90 hrs, Volume= 0.047 af
Primary = 2.79 cfs @ 12.04 hrs, Volume= 0.135 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.05' @ 12.04 hrs Surf.Area= 1,601 sf Storage= 3,275 cf

Plug-Flow detention time= 78.9 min calculated for 0.181 af (82% of inflow)
Center-of-Mass det. time= 28.6 min (764.1 - 735.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	116.05'	1,365 cf	**30.50'W x 52.50'L x 3.54'H Field A** 5,671 cf Overall - 2,258 cf Embedded = 3,413 cf x 40.0% Voids
#2A	116.55'	2,258 cf	**Cultec R-330XLHD** x 42 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 6 rows
		3,623 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.05'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	117.50'	**10.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.04 cfs @ 6.90 hrs HW=116.09' (Free Discharge)
↑└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=2.77 cfs @ 12.04 hrs HW=119.03' (Free Discharge)
↑└**2=Orifice/Grate** (Orifice Controls 2.77 cfs @ 5.08 fps)

Pond UG: UG - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 6 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

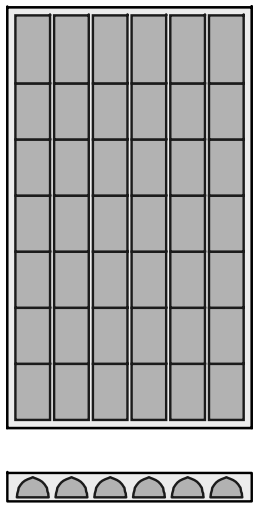
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
6 Rows x 52.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.50' Base Width
6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

42 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 6 Rows = 2,257.7 cf Chamber Storage

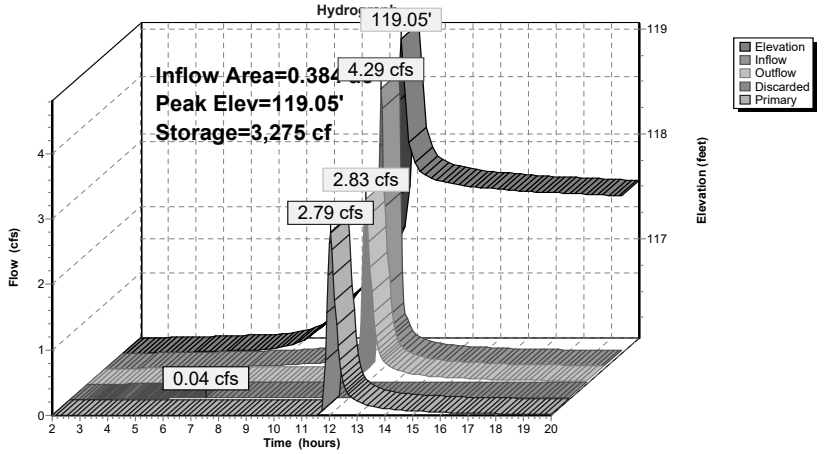
5,671.1 cf Field - 2,257.7 cf Chambers = 3,413.4 cf Stone x 40.0% Voids = 1,365.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,623.0 cf = 0.083 af
Overall Storage Efficiency = 63.9%
Overall System Size = 52.50' x 30.50' x 3.54'

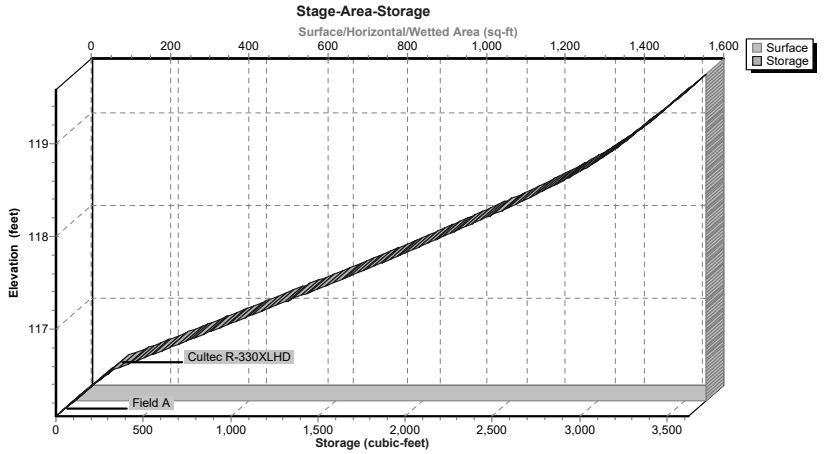
42 Chambers
210.0 cy Field
126.4 cy Stone



Pond UG: UG



Pond UG: UG

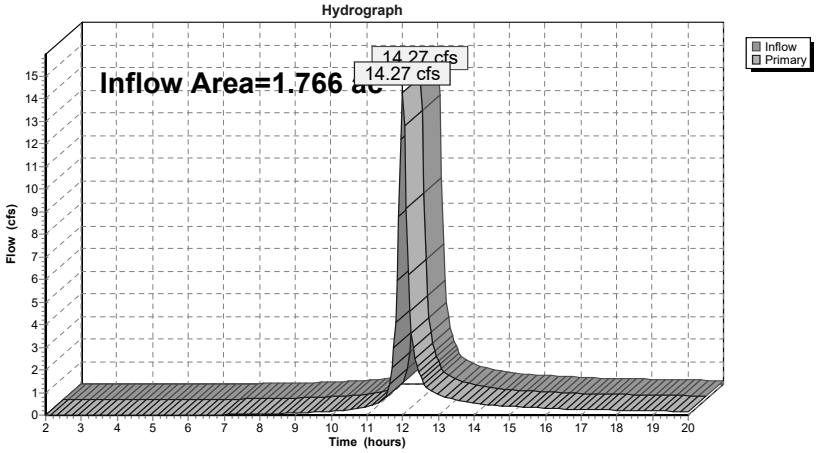


Summary for Link SDP: SDP

Inflow Area = 1.766 ac, 50.62% Impervious, Inflow Depth > 4.90" for 100-yr event
Inflow = 14.27 cfs @ 12.00 hrs, Volume= 0.721 af
Primary = 14.27 cfs @ 12.00 hrs, Volume= 0.721 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs

Link SDP: SDP



APPENDIX E

STORMWATER MANAGEMENT PRACTICE DESIGN

Project:	1064 Wolcott Avenue			
Description:	Stormwater Quality Design			
By/Date:	ESR	1/23/2025	Reviewed/Date:	MAB

Hudson Land Design, P.C.
174 Main Street
Beacon, NY 12508
845-440-6926

Underground Infiltration

1) Determine Water Quality Volume

Water quality volume to be treated will be calculated using the 90% rule from Section 4.2 of the New York State Storm Water Design Manual (January 2015), hereinafter referred to as NYSSDM.

$WQ_V = 43,560 \times [P \times Rv \times A] / 12$

Where:
WQ_V = Water quality volume (cf)
P = 90 % Rainfall Event Number (in), per Figure 4.1
Rv = 0.05 + 0.009 x I , where I is % impervious area
A = Watershed (ac)

Watershed	P (in)	Impervious Area (ac)	Impervious (Coverage %)	Rv	Total Area (ac)	WQv (cf)	Pre-Treatment Practice	Treatment Practice
11	1.40	0.31	81	0.78	0.38	1,515	Separator Row	Underground Infiltration

2) Determine Required Pre-Treatment Volume

Determine Pre-Treatment Volume

Watershed	Required WQv (cf)	Required Pre-Treatment Volume (cf)	Pre-Treatment Practice	Provided Pre-Treatment Volume (cf)	
11	1,515	379	Separator Row	572	11.32ft^3/ft x 50.5 LF x 1 row

2) Determine Minimum Runoff Reduction Volume (RR_V)

Goal: Provide 100% RR_V by implementing Green Infrastructure techniques and Stormwater Management Practices

$RR_V = 43,560 \times [P \times Rv \times A] / 12$

Where:
RR_V = Runoff Reduction Volume (cf)
P = 90 % Rainfall Event Number (in), per Figure 4.1
Rv = 0.05 + 0.009 x I , where I is % impervious area — R_V: 0.78
A = Watershed (ac)

100% RR_V: 1,515 cf

* Minimum Rv of of 0.2 not applicable to RR_V calculations (use actual calculated Rv).

Project:	1064 Wolcott Avenue			
Description:	Stormwater Quality Design			
By/Date:	ESR	1/23/2025	Reviewed/Date:	MAB

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174 Main Street
Beacon, NY 12508
845-440-6926

Underground Infiltration

For projects that cannot meet 100% RR_V: Implement Specific Reduction Factor (S), which provides an absoulte minimum acceptable RR_V.

Drainage Area with Hydrologic Soil Group A:	0.000 acres	Corresponding S:	0.55
Drainage Area with Hydrologic Soil Group B:	0.384 acres	Corresponding S:	0.40
Drainage Area with Hydrologic Soil Group C:	0.000 acres	Corresponding S:	0.30
Drainage Area with Hydrologic Soil Group D:	0.000 acres	Corresponding S:	0.20
Total Area:	0.384 acres		
	Total Area Matches	Calculated S:	0.4

Minimum RR_V (acre-feet) = [(P)(Rv*)(Ai)]/12

Calculated Ai: 0.1240
Calculated Rv*: 0.95
Calculated Minimum RR_V: 599 cf

Where:
P = 90 % Rainfall Event Number (in), per Figure 4.1
Rv* = 0.05 + 0.009 x I , where I is % impervious area (100%)
Ai = (S)(Aic)
Aic = Total area of new impervious cover

4) Stormwater Management Practice Design

Design Infiltration Basin

WQ_V = Remaining Water Quality Volume (cf) =	1,515 cf	
◆ Storage volume within infiltration bed:	1,587 cf	(volume below lowest outlet)
(from HydroCad Model)		
◆ Infiltration rate for design:	1.0 inches/hour	(based on soil mapping)
◆ Infiltration area :	1,601 sf	
◆ Calculated exfiltration rate:	0.04 cfs	(during all storms)
◆ Calculated time to infiltrate WQv:	11.36 hours	

5) Tabulate Provided Runoff Reduction Volume (RR_V)

Infiltration Basin

Storage provided within practice:	**1,587 cf**	
For infiltration practices:	100% reduction	(from Table 3.5 Runoff Reduction Capacity for Standard SMPs)
		RR_V Reduction Factor: 100%
RR_V Provided by implementing infiltration:	1,587 cf	
TOTAL RR_V PROVIDED:	**1,515 cf**	
Calculated 100%RR_V:	1,515 cf	
Is 100% RR_V met:	Yes	acceptable
If 100% RR_V is not met, is Minimum RR_V met:	N/A	
WQ_V TREATED:	**72 cf**	

Project:	1064 Wolcott Avenue			
Description:	Stormwater Quality Design			
By/Date:	ESR	1/23/2025	Reviewed/Date:	MAB

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Underground Infiltration

6) Channel Protection Volume (CPv) Design

Determine Stream Channel Protection Volume (CPv)

1-Year Storm Runoff Volume	2,222 cf	(From HydroCAD Model)

Compute the CPv Release Rate

The Stream Channel Protection Volume (Cpv) shall be released over 24 hours

Q(CPv)=CPv/(24 hrs X 3,600 sec/hr)	0.03	cfs

Determine Required Orifice Size To Release CPv over 24-hours

CPv orifice elevation	N/A	feet
CPv orifice diameter	N/A	inches
1-Year Storm Release Rate	0.00 cfs	From HydroCAD Model - 1 Year Storm is Infiltrated
Is CPv 100% controlled?	yes - acceptable	

7) See HydroCAD model for Overbank Flood Control (Qp) and Extreme Flood Control (Qf) computations

CULTEC Recharger® 330XLHD Stormwater Chamber

The Recharger® 330XLHD is a 30.5" (775 mm) tall, high capacity chamber. Typically when using this model, fewer chambers are required resulting in less labor and a smaller installation area. The Recharger® 330XLHD has the side portal internal manifold feature. HVLV® FC-24 Feed Connectors are inserted into the side portals to create the internal manifold.

Size (L x W x H)	8.5' x 52" x 30.5" 2.59 m x 1321 mm x 775 mm
Installed Length	7' 2.13 m
Length Adjustment per Run	1.50' 0.46 m
Chamber Storage	7.46 ft³/ft 0.69 m³/m 52.21 ft³/unit 1.48 m³/unit
Min. Installed Storage	11.32 ft³/ft 1.05 m³/m 79.26 ft³/unit 2.24 m³/unit
Min. Area Required	33.83 ft² 3.14 m²
Chamber Weight	73.0 lbs 33.11 kg
Shipping	30 chambers/skid 2,335 lbs/skid 10 skids/48' flatbed
Min. Center-to-Center Spacing	4.83' 1.47 m
Max. Allowable Cover	12' 3.66 m
Max. Inlet Opening in End Wall	24" HDPE, PVC 600 mm HDPE, PVC
Max. Allowable O.D. in Side Portal	10" HDPE, 12" PVC 250 mm HDPE, 300 mm PVC
Compatible Feed Connector	HVLV FC-24 Feed Connector

Calculations are based on installed chamber length.
All above values are nominal.
Min. installed storage includes 6" (152 mm) stone base, 6" (152 mm) stone above crown of chamber and typical stone surround at 58" (1473 mm) center-to-center spacing.

	Stone Foundation Depth		
	6" 152 mm	12" 305 mm	18" 457 mm
Chamber and Stone Storage Per Chamber	79.26 ft³ 2.24 m³	86.03 ft³ 2.44 m³	92.79 ft³ 2.63 m³
Min. Effective Depth	3.54' 1.08 m	4.04' 1.23 m	4.54' 1.38 m
Stone Required Per Chamber	2.50 yd³ 1.91 m³	3.13 yd³ 2.39 m³	3.76 yd³ 2.87 m³

Calculations are based on installed chamber length.
Includes 6" (305 mm) stone above crown of chamber and typical stone surround at 58"(1473 mm) center-to-center spacing and stone foundation as listed in table.
Stone void calculated at 40%.

Recharger® 330XLHD Bare Chamber Storage Volumes

Elevation		Incremental Storage Volume				Cumulative Storage	
in.	mm	ft³/ft	m³/m	ft³	m³	ft³	m³
30.5	775	0.000	0.000	0.000	0.000	52.213	1.479
30	762	0.019	0.002	0.133	0.004	52.213	1.479
29	737	0.051	0.005	0.357	0.010	52.080	1.475
28	711	0.084	0.008	0.588	0.017	51.723	1.465
27	686	0.124	0.012	0.868	0.025	51.135	1.448
26	660	0.150	0.014	1.05	0.030	50.267	1.424
25	635	0.173	0.016	1.211	0.034	49.217	1.394
24	609	0.191	0.018	1.337	0.038	48.006	1.360
23	584	0.207	0.019	1.449	0.041	46.669	1.322
22	559	0.221	0.021	1.547	0.044	45.220	1.281
21	533	0.233	0.022	1.631	0.046	43.673	1.237
20	508	0.244	0.023	1.708	0.048	42.042	1.191
19	483	0.254	0.024	1.778	0.050	40.334	1.142
18	457	0.264	0.025	1.848	0.052	38.556	1.092
17	432	0.271	0.025	1.897	0.054	36.708	1.040
16	406	0.283	0.026	1.981	0.056	34.811	0.986
15	381	0.294	0.027	2.058	0.058	32.830	0.930
14	356	0.296	0.027	2.072	0.059	30.772	0.871
13	330	0.299	0.028	2.093	0.059	28.700	0.813
12	305	0.301	0.028	2.107	0.060	26.607	0.754
11	279	0.303	0.028	2.121	0.060	24.500	0.694
10	254	0.304	0.028	2.128	0.060	22.379	0.634
9	229	0.306	0.028	2.142	0.061	20.251	0.574
8	203	0.313	0.029	2.191	0.062	18.109	0.513
7	178	0.321	0.030	2.247	0.064	15.918	0.451
6	152	0.322	0.030	2.254	0.064	13.671	0.387
5	127	0.323	0.030	2.261	0.064	11.417	0.323
4	102	0.324	0.030	2.268	0.064	9.156	0.259
3	76	0.325	0.030	2.275	0.064	6.888	0.195
2	51	0.327	0.030	2.289	0.065	4.613	0.131
1	25	0.332	0.031	2.324	0.066	2.324	0.066
Total		**7.459**	**0.693**	**52.213**	**1.479**	**52.213**	**1.479**

Calculations are based on installed chamber length.

Visit http://cultec.com/downloads/
for Product Downloads and CAD details.

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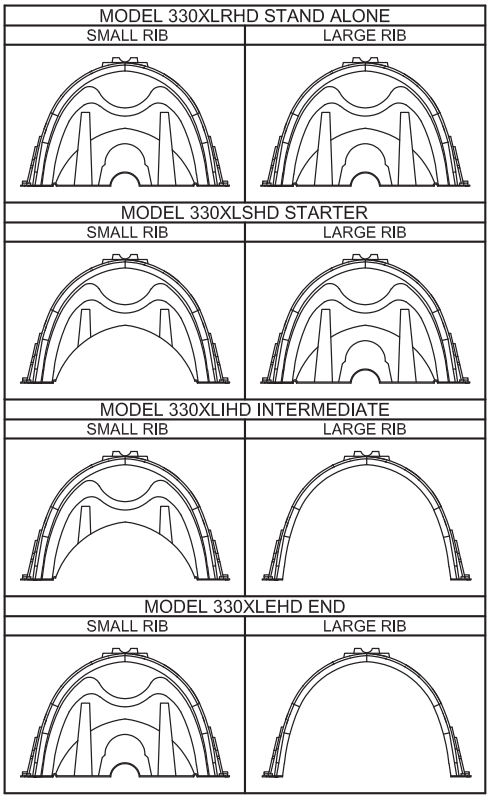
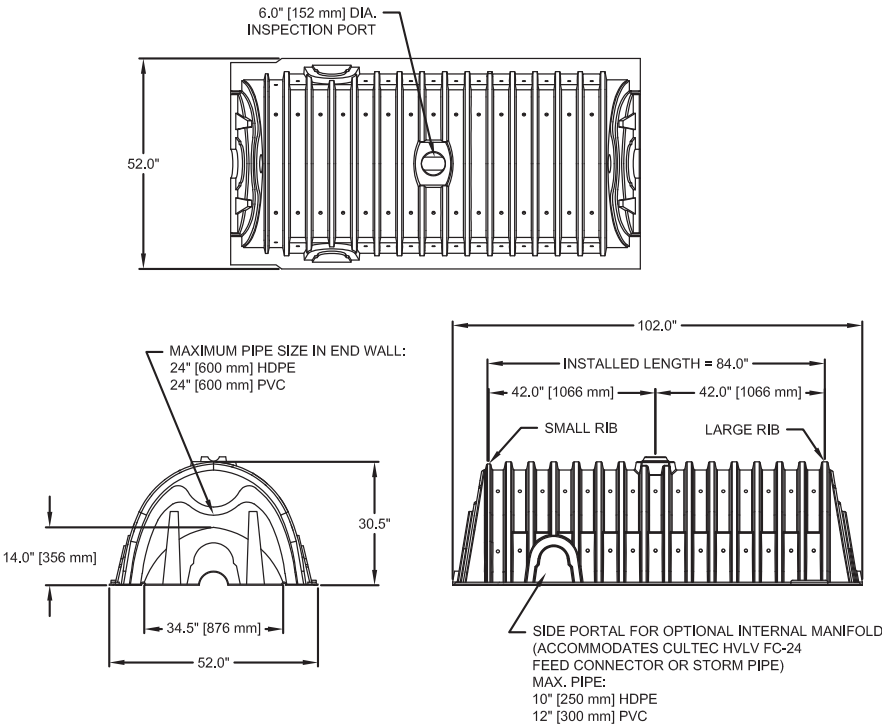
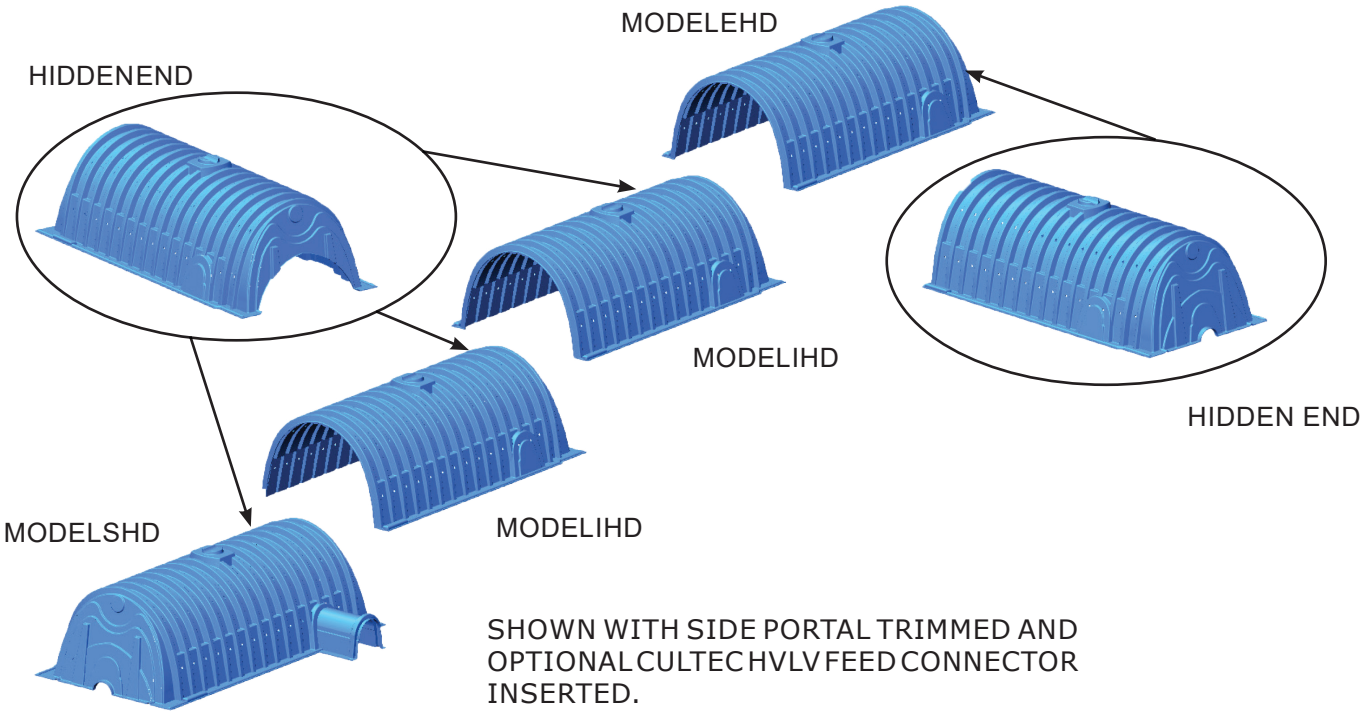
Three View Drawing





CULTEC RECHARGER 330XLHD CHAMBER STORAGE = 7.459 CF/FT [0.693 m³/m]
INSTALLED LENGTH ADJUSTMENT = 1.5' [0.46 m]
SIDE PORTAL ACCEPTS CULTEC HVLV FC-24 FEED CONNECTOR

Typical Interlock Installation



SHOWN WITH SIDE PORTAL TRIMMED AND OPTIONAL CULTEC HVLV FEED CONNECTOR INSERTED.

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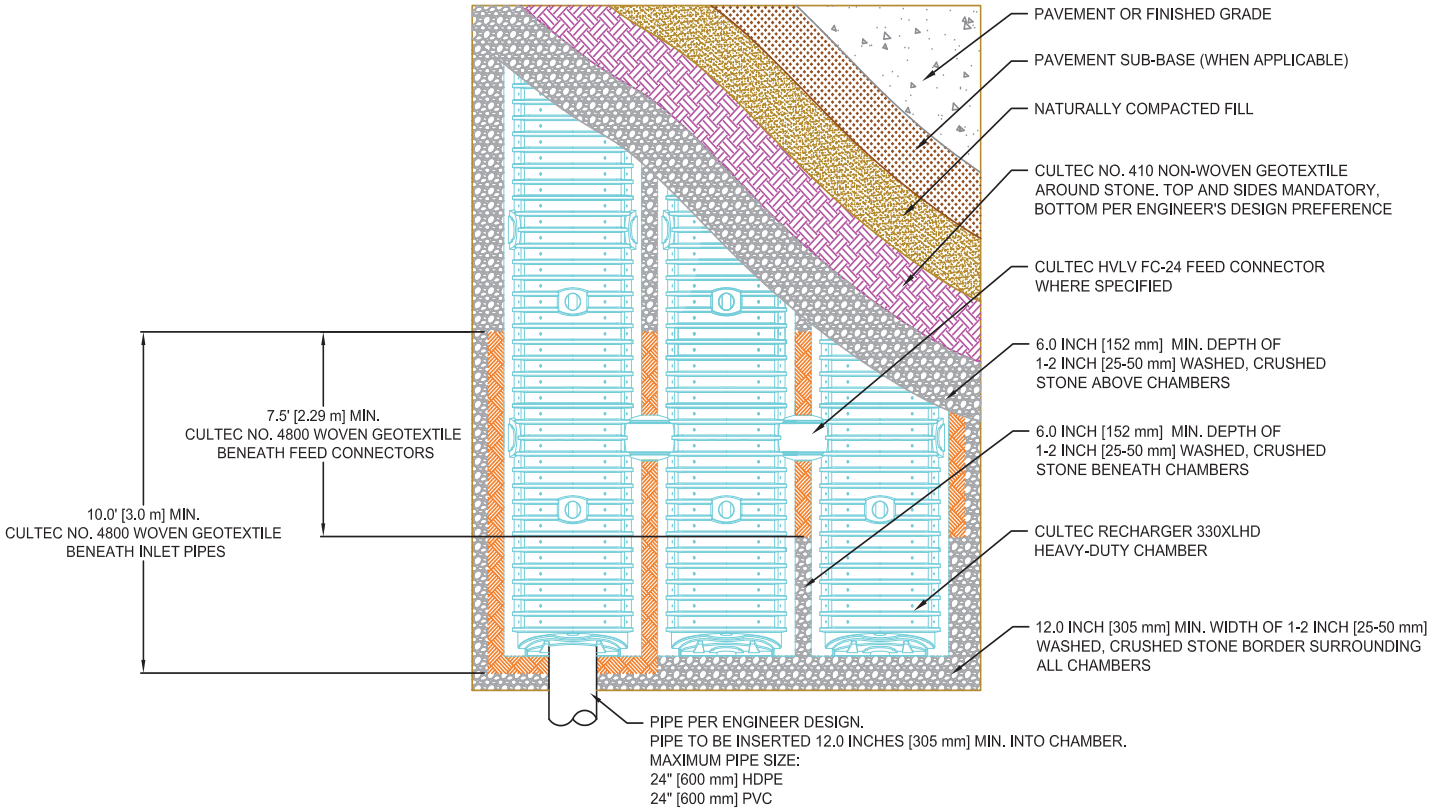
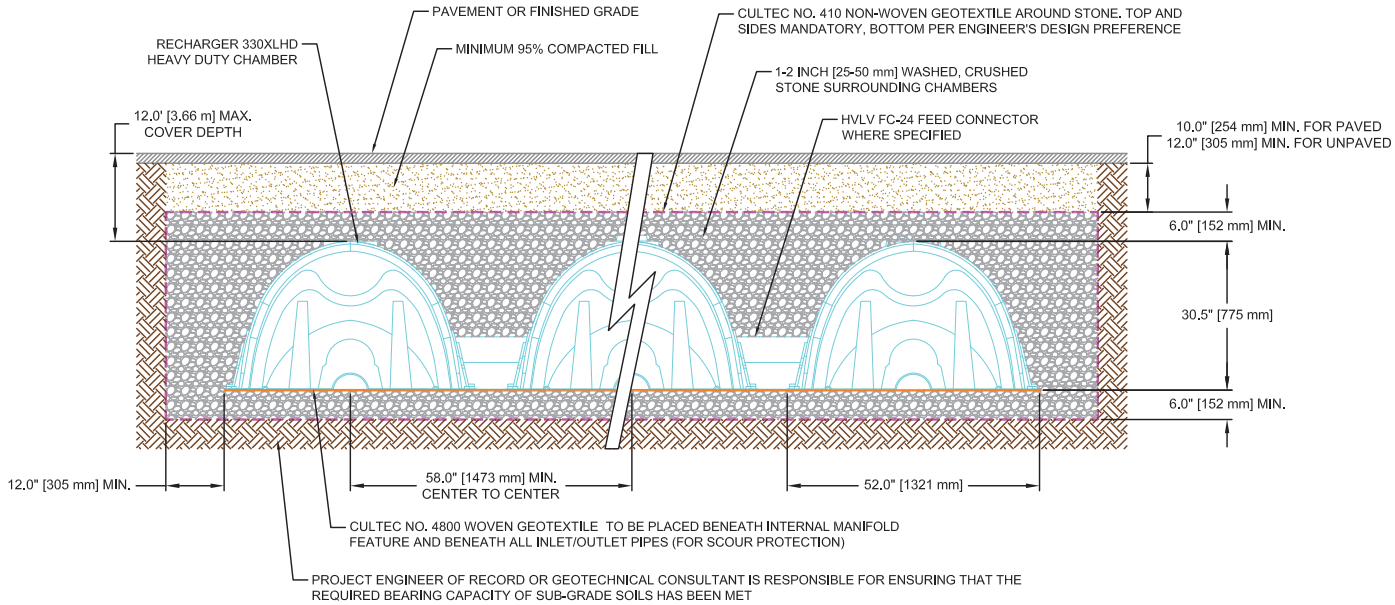
Plan View Drawing



Typical Cross Section for Traffic Application



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CULTEC Recharger® 330XLHD Specifications

GENERAL

CULTEC Recharger® 330XLHD chambers are designed for underground stormwater management. The chambers may be used for retention, recharging, detention or controlling the flow of on-site stormwater runoff.

CHAMBER PARAMETERS

1. The chambers shall be manufactured in the U.S.A. by CULTEC, Inc. of Brookfield, CT (cultec.com, 203-775-4416).
2. The chamber shall be vacuum thermoformed of polyethylene with a black interior and blue exterior.
3. The chamber shall be arched in shape.
4. The chamber shall be open-bottomed.
5. The chamber shall be joined using an interlocking overlapping rib method. Connections must be fully shouldered overlapping ribs, having no separate couplings or separate end walls.
6. The nominal chamber dimensions of the CULTEC Recharger® 330XLHD shall be 30.5 inches (775 mm) tall, 52 inches (1321 mm) wide and 8.5 feet (2.59 m) long. The installed length of a joined Recharger® 330XLHD shall be 7 feet (2.13 m).
7. Maximum inlet opening on the chamber end wall is 24 inches (600 mm) HDPE, PVC.
8. The chamber shall have two side portals to accept CULTEC HVLV® FC-24 Feed Connectors to create an internal manifold. Maximum allowable O.D. in the side portal is 10 inches (250 mm) HDPE and 12 inches (300 mm) PVC.
9. The nominal chamber dimensions of the CULTEC HVLV® FC-24 Feed Connector shall be 12 inches (305 mm) tall, 16 inches (406 mm) wide and 24.2 inches (614 mm) long.
10. The nominal storage volume of the Recharger® 330XLHD chamber shall be 7.459 ft^3 / ft (0.693 m^3 / m) - without stone. The nominal storage volume of a single Recharger® 330XLRHD Stand Alone unit shall be 63.40 ft^3 (1.80 m^3) - without stone. The nominal storage volume of a joined Recharger® 330XLIHD Intermediate unit shall be 52.213 ft^3 (1.478 m^3) - without stone. The nominal storage volume of the length adjustment amount per run shall be 11.19 ft^3 (1.04 m^3) - without stone.
11. The nominal storage volume of the HVLV® FC-24 Feed Connector shall be 0.913 ft^3 / ft (0.026 m^3 / m) - without stone.
12. The Recharger® 330XLHD chamber shall have fifty-six discharge holes bored into the sidewalls of the unit's core to promote lateral conveyance of water.
13. The Recharger® 330XLHD chamber shall have 16 corrugations.
14. The end wall of the chamber, when present, shall be an integral part of the continuously formed unit. Separate end plates cannot be used with this unit.
15. The Recharger® 330XLRHD Stand Alone unit must be formed as a whole chamber having two fully formed integral end walls and having no separate end plates or separate end walls.
16. The Recharger® 330XLSHD Starter unit must be formed as a whole chamber having one fully formed integral end wall and one partially formed integral end wall with a lower transfer opening of 14 inches (356 mm) high x 34.5 inches (876 mm) wide.
17. The Recharger® 330XLIHD Intermediate unit must be formed as a whole chamber having one fully open end wall and one partially formed integral end wall with a lower transfer opening of 14 inches (356 mm) high x 34.5 inches (876 mm) wide.
18. The Recharger® 330XLEHD End unit must be formed as a whole chamber having one fully formed integral end wall and one fully open end wall and having no separate end plates or end walls.
19. The HVLV® FC-24 Feed Connector must be formed as a whole chamber having two open end walls and having no separate end plates or separate end walls. The unit shall fit into the side portals of the Recharger® 330XLHD and act as cross feed connections.
20. Chambers must have horizontal stiffening flex reduction steps between the ribs.
21. The chamber shall have a raised integral cap at the top of the arch in the center of each unit to be used as an optional inspection port or clean-out.
22. The units may be trimmed to custom lengths by cutting back to any corrugation on the large rib end.
23. The chamber shall be manufactured in an ISO 9001:2015 certified facility.
24. The chamber shall be designed and manufactured to meet the material and structural requirements of IAPMO PS 63-2019, including resistance to AASHTO H-10 and H-20 highway live loads, when installed in accordance with CULTEC's installation instructions.
25. The chamber shall be designed and manufactured in accordance with the specifications of NSAI Irish Agrement Board Certificate for Cultec Attenuation and Infiltration.
26. Maximum allowable cover over the top of the chamber shall be 12' (3.66 m).
27. The chamber shall be designed to withstand traffic loads when installed according to CULTEC's recommended installation instructions.

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Project:	1064 Wolcott Avenue			
Description:	Stormwater Quality Design			
By/Date:	ESR	3/25/2025	Reviewed/Date:	MAB

Hudson Land Design, P.C.
174 Main Street
Beacon, NY 12508
845-440-6926

Hydrodynamic Separator

1) Determine Water Quality Volume

Water quality volume to be treated will be calculated using the 90% rule from Section 4.2 of the New York State Storm Water Design Manual (January 2015), hereinafter referred to as NYSSDM.

$WQ_V = 43,560 \times [P \times Rv \times A] / 12$

Where:
WQ_V = Water quality volume (cf)
P = 90 % Rainfall Event Number (in), per Figure 4.1
Rv = 0.05 + 0.009 x I , where I is % impervious area
A = Watershed (ac)

Watershed	P (in)	Impervious Area (ac)	Impervious (Coverage %)	Rv	Total Area (ac)	WQv (cf)	Pre-Treatment Practice	Treatment Practice
10	1.40	0.46	90	0.86	0.51	2,210	N/A	HDS

2) Provied Treatment Volume

Determine treatment flowrate
To be conservative the 1-year design storm was used for HDS sizing
1-year design storm flowrate = 1.63 cfs (from attached HydroCAD model)
HDS is located online and must be able to pass the 100-year design storm
100-Year design storm flowrate = 7.96 cfs (from attached HydroCAD model)

Selected Hydrodynamic Separator:
FD-4Optimum by Hydro International, see attached calculations and specifications

Summary for Subcatchment 11(HDS): DA 10 (TO HDS)

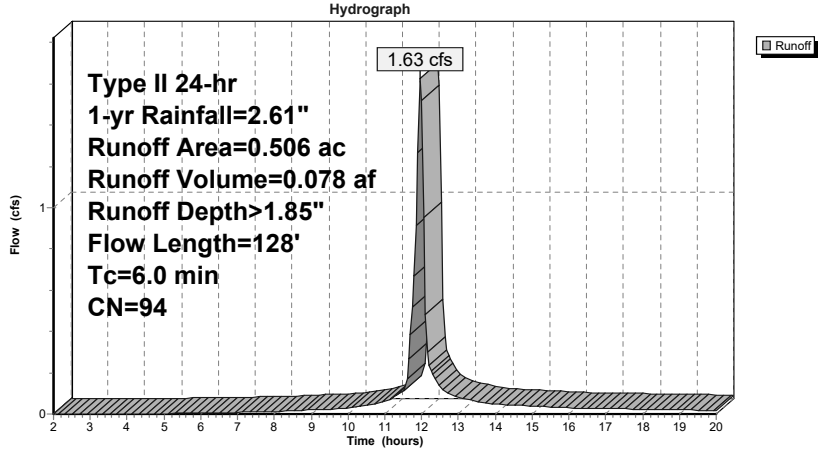
Runoff = 1.63 cfs @ 11.96 hrs, Volume= 0.078 af, Depth> 1.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.61"

Area (ac)	CN	Description
0.455	98	Paved parking, HSG B
0.051	61	>75% Grass cover, Good, HSG B
0.506	94	Weighted Average
0.051		10.08% Pervious Area
0.455		89.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	22	0.1350	0.18		**Sheet Flow, S1** Grass: Dense n= 0.240 P2= 3.17"
0.5	53	0.0420	1.62		**Sheet Flow, S2** Smooth surfaces n= 0.011 P2= 3.17"
0.1	53	0.0580	13.73	16.85	**Pipe Channel, S3** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.6	128	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 11(HDS): DA 10 (TO HDS)



Summary for Subcatchment 11S: DA 11

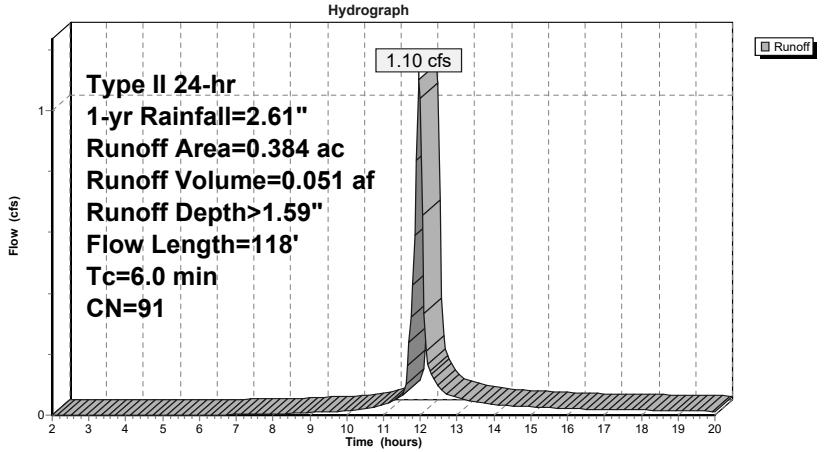
Runoff = 1.10 cfs @ 11.97 hrs, Volume= 0.051 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.61"

Area (ac)	CN	Description
0.310	98	Roofs, HSG B
0.074	61	>75% Grass cover, Good, HSG B
0.384	91	Weighted Average
0.074		19.27% Pervious Area
0.310		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	25	0.2000	0.22		**Sheet Flow, S1** Grass: Dense n= 0.240 P2= 3.17"
0.7	75	0.0400	1.71		**Sheet Flow, S2** Smooth surfaces n= 0.011 P2= 3.17"
0.1	18	0.0200	2.87		**Shallow Concentrated Flow, S3** Paved Kv= 20.3 fps
2.7	118	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 11S: DA 11



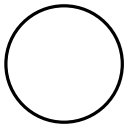
Summary for Reach 12R: REACH

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

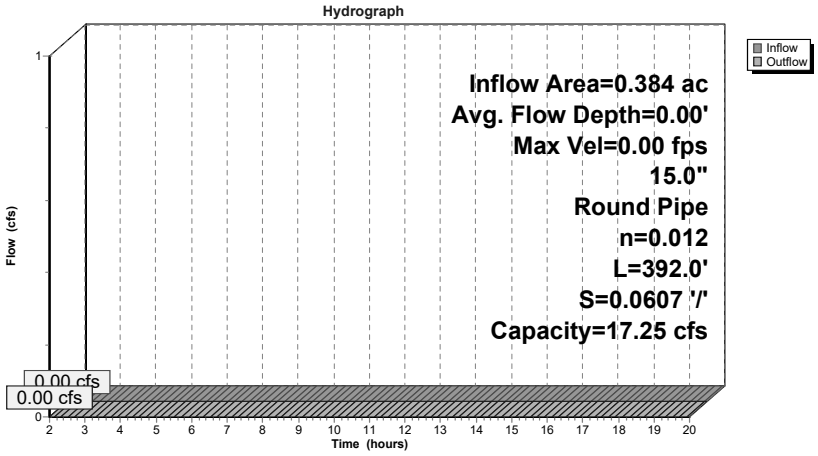
Routing by Stor-Ind+Trans method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 2.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 17.25 cfs

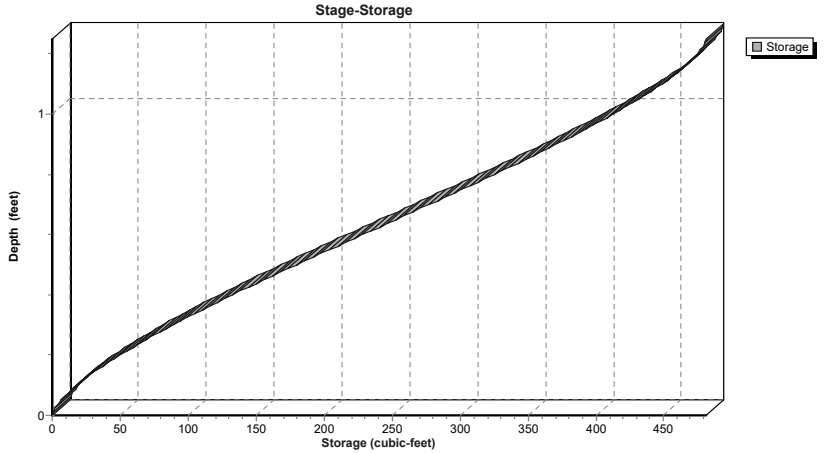
15.0" Round Pipe
n= 0.012
Length= 392.0' Slope= 0.0607 '/'
Inlet Invert= 116.37', Outlet Invert= 92.56'



Reach 12R: REACH



Reach 12R: REACH



Summary for Pond 13P: UG

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth > 1.59" for 1-yr event
Inflow = 1.10 cfs @ 11.97 hrs, Volume= 0.051 af
Outflow = 0.04 cfs @ 11.25 hrs, Volume= 0.031 af, Atten= 97%, Lag= 0.0 min
Discarded = 0.04 cfs @ 11.25 hrs, Volume= 0.031 af
Primary = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 117.24' @ 13.87 hrs Surf.Area= 1,601 sf Storage= 1,245 cf

Plug-Flow detention time= 197.9 min calculated for 0.031 af (60% of inflow)
Center-of-Mass det. time= 124.9 min (894.7 - 769.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	116.05'	1,365 cf	**30.50'W x 52.50'L x 3.54'H Field A** 5,671 cf Overall - 2,258 cf Embedded = 3,413 cf x 40.0% Voids
#2A	116.55'	2,258 cf	**Cultec R-330XLHD** x 42 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 6 rows
		3,623 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.05'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	117.50'	**10.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.04 cfs @ 11.25 hrs HW=116.09' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 2.00 hrs HW=116.05' (Free Discharge)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 13P: UG - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 6 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

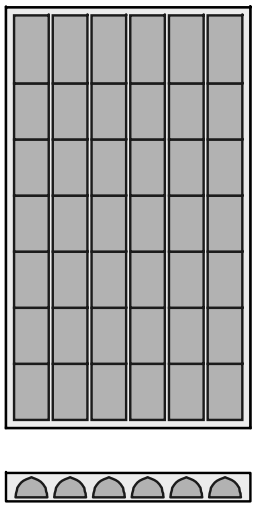
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
6 Rows x 52.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.50' Base Width
6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

42 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 6 Rows = 2,257.7 cf Chamber Storage

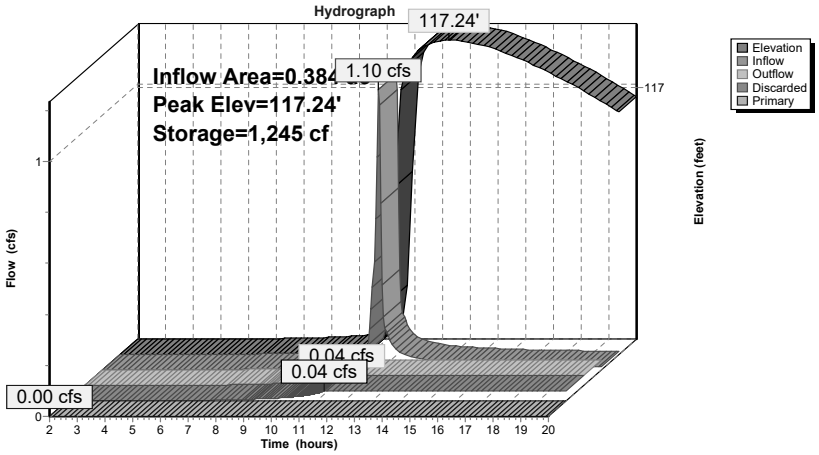
5,671.1 cf Field - 2,257.7 cf Chambers = 3,413.4 cf Stone x 40.0% Voids = 1,365.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,623.0 cf = 0.083 af
Overall Storage Efficiency = 63.9%
Overall System Size = 52.50' x 30.50' x 3.54'

42 Chambers
210.0 cy Field
126.4 cy Stone



Pond 13P: UG



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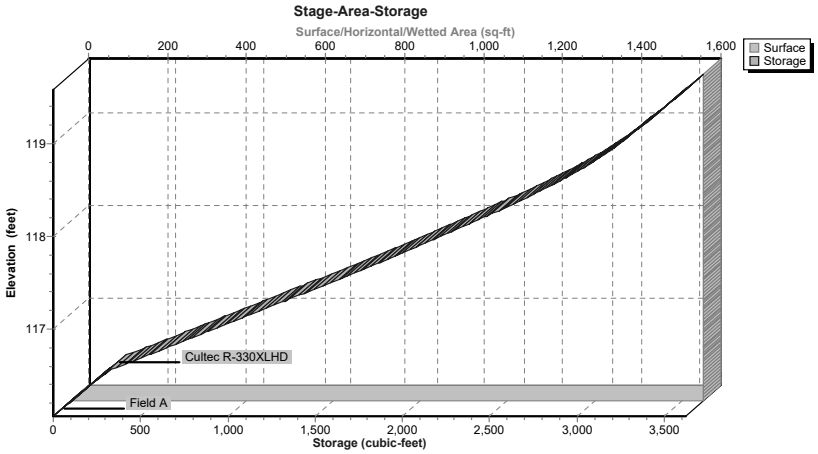


Summary for Pond HDS: HDS

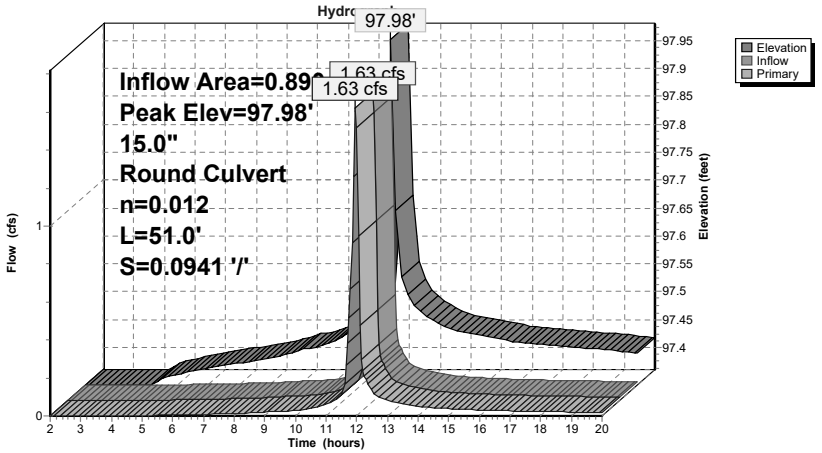
Inflow Area = 0.890 ac, 85.96% Impervious, Inflow Depth > 1.05" for 1-yr event
Inflow = 1.63 cfs @ 11.96 hrs, Volume= 0.078 af
Outflow = 1.63 cfs @ 11.96 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 1.63 cfs @ 11.96 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 97.98' @ 11.97 hrs

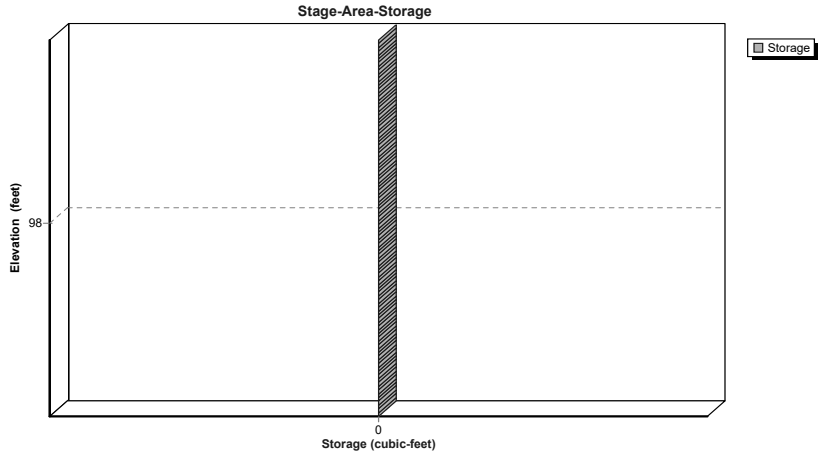
Device	Routing	Invert	Outlet Devices
#1	Primary	97.36'	**15.0" Round Culvert** L= 51.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 97.36' / 92.56' S= 0.0941 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.58 cfs @ 11.96 hrs HW=97.97' (Free Discharge)
1=Culvert (Inlet Controls 1.58 cfs @ 2.66 fps)

Pond HDS: HDS



Pond HDS: HDS



Summary for Subcatchment 11(HDS): DA 10 (TO HDS)

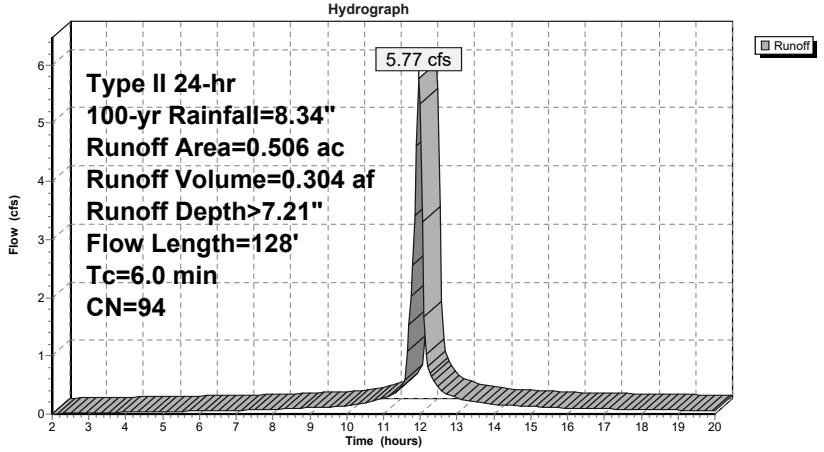
Runoff = 5.77 cfs @ 11.96 hrs, Volume= 0.304 af, Depth> 7.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=8.34"

Area (ac)	CN	Description
0.455	98	Paved parking, HSG B
0.051	61	>75% Grass cover, Good, HSG B
0.506	94	Weighted Average
0.051		10.08% Pervious Area
0.455		89.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	22	0.1350	0.18		**Sheet Flow, S1** Grass: Dense n= 0.240 P2= 3.17"
0.5	53	0.0420	1.62		**Sheet Flow, S2** Smooth surfaces n= 0.011 P2= 3.17"
0.1	53	0.0580	13.73	16.85	**Pipe Channel, S3** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.6	128	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 11(HDS): DA 10 (TO HDS)



Summary for Subcatchment 11S: DA 11

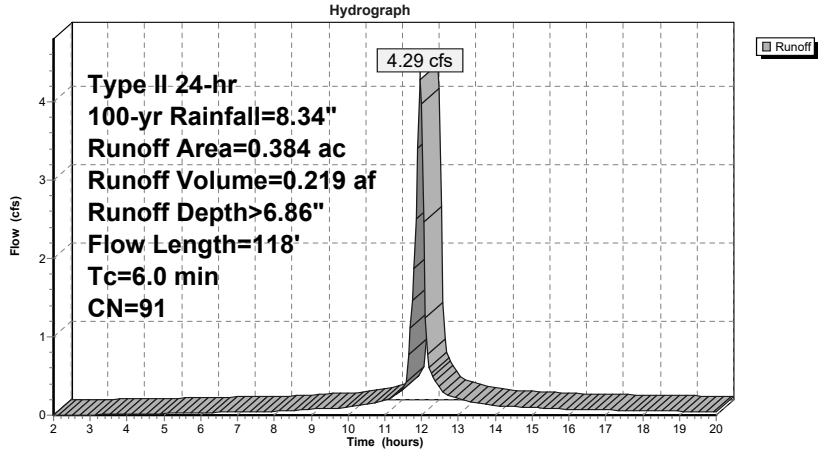
Runoff = 4.29 cfs @ 11.96 hrs, Volume= 0.219 af, Depth> 6.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=8.34"

Area (ac)	CN	Description
0.310	98	Roofs, HSG B
0.074	61	>75% Grass cover, Good, HSG B
0.384	91	Weighted Average
0.074		19.27% Pervious Area
0.310		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	25	0.2000	0.22		**Sheet Flow, S1** Grass: Dense n= 0.240 P2= 3.17"
0.7	75	0.0400	1.71		**Sheet Flow, S2** Smooth surfaces n= 0.011 P2= 3.17"
0.1	18	0.0200	2.87		**Shallow Concentrated Flow, S3** Paved Kv= 20.3 fps
2.7	118	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 11S: DA 11



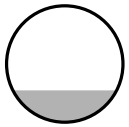
Summary for Reach 12R: REACH

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth > 4.21" for 100-yr event
Inflow = 2.79 cfs @ 12.04 hrs, Volume= 0.135 af
Outflow = 2.75 cfs @ 12.06 hrs, Volume= 0.135 af, Atten= 1%, Lag= 1.0 min

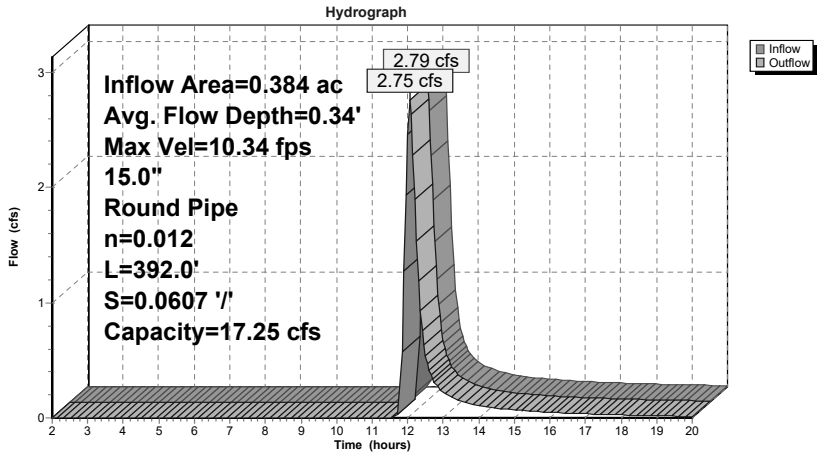
Routing by Stor-Ind+Trans method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.34 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 3.63 fps, Avg. Travel Time= 1.8 min

Peak Storage= 106 cf @ 12.05 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 17.25 cfs

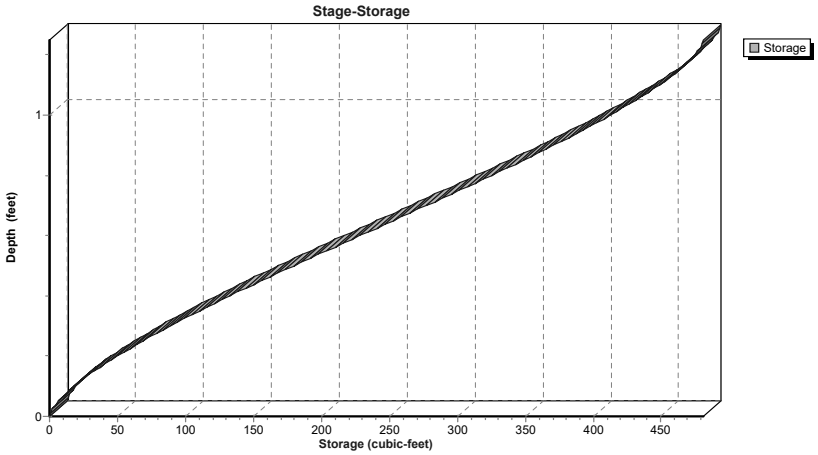
15.0" Round Pipe
n= 0.012
Length= 392.0' Slope= 0.0607 '/'
Inlet Invert= 116.37', Outlet Invert= 92.56'



Reach 12R: REACH



Reach 12R: REACH



Summary for Pond 13P: UG

Inflow Area = 0.384 ac, 80.73% Impervious, Inflow Depth > 6.86" for 100-yr event
Inflow = 4.29 cfs @ 11.96 hrs, Volume= 0.219 af
Outflow = 2.83 cfs @ 12.04 hrs, Volume= 0.182 af, Atten= 34%, Lag= 4.8 min
Discarded = 0.04 cfs @ 6.90 hrs, Volume= 0.047 af
Primary = 2.79 cfs @ 12.04 hrs, Volume= 0.135 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 119.05' @ 12.04 hrs Surf.Area= 1,601 sf Storage= 3,275 cf

Plug-Flow detention time= 78.9 min calculated for 0.181 af (82% of inflow)
Center-of-Mass det. time= 28.6 min (764.1 - 735.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	116.05'	1,365 cf	**30.50'W x 52.50'L x 3.54'H Field A** 5,671 cf Overall - 2,258 cf Embedded = 3,413 cf x 40.0% Voids
#2A	116.55'	2,258 cf	**Cultec R-330XLHD** x 42 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 6 rows
		3,623 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.05'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	117.50'	**10.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.04 cfs @ 6.90 hrs HW=116.09' (Free Discharge)
↑└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=2.77 cfs @ 12.04 hrs HW=119.03' (Free Discharge)
↑└**2=Orifice/Grate** (Orifice Controls 2.77 cfs @ 5.08 fps)

Pond 13P: UG - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 6 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

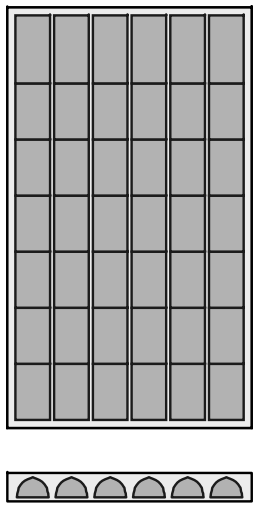
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
6 Rows x 52.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.50' Base Width
6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

42 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 6 Rows = 2,257.7 cf Chamber Storage

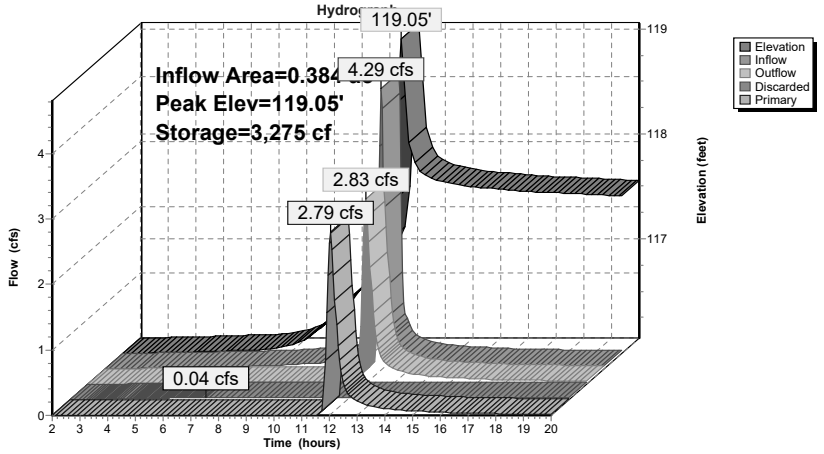
5,671.1 cf Field - 2,257.7 cf Chambers = 3,413.4 cf Stone x 40.0% Voids = 1,365.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,623.0 cf = 0.083 af
Overall Storage Efficiency = 63.9%
Overall System Size = 52.50' x 30.50' x 3.54'

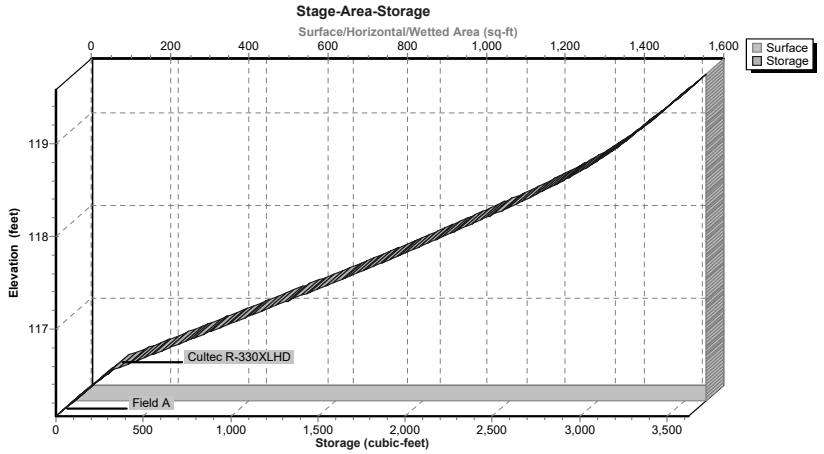
42 Chambers
210.0 cy Field
126.4 cy Stone



Pond 13P: UG



Pond 13P: UG



Summary for Pond HDS: HDS

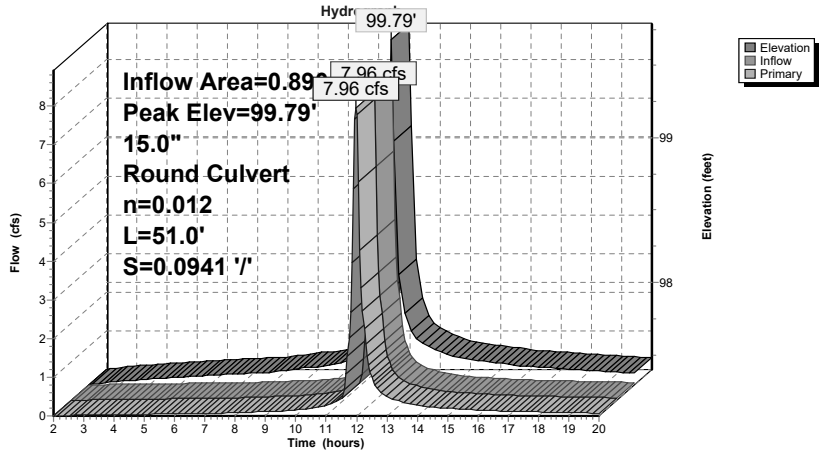
Inflow Area = 0.890 ac, 85.96% Impervious, Inflow Depth > 5.91" for 100-yr event
Inflow = 7.96 cfs @ 11.98 hrs, Volume= 0.439 af
Outflow = 7.96 cfs @ 11.98 hrs, Volume= 0.439 af, Atten= 0%, Lag= 0.0 min
Primary = 7.96 cfs @ 11.98 hrs, Volume= 0.439 af

Routing by Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 99.79' @ 11.98 hrs

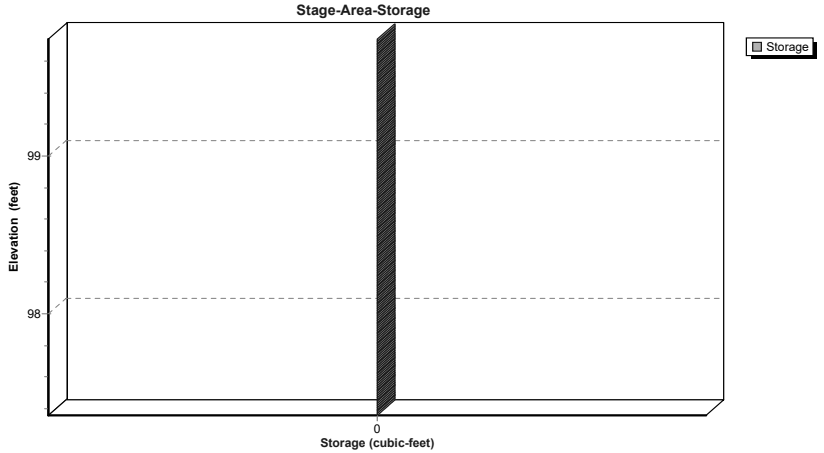
Device	Routing	Invert	Outlet Devices
#1	Primary	97.36'	**15.0" Round Culvert** L= 51.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 97.36' / 92.56' S= 0.0941 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=7.74 cfs @ 11.98 hrs HW=99.70' (Free Discharge)
1=Culvert (Inlet Controls 7.74 cfs @ 6.30 fps)

Pond HDS: HDS



Pond HDS: HDS



DESIGN SUMMARY

PROJECT INFORMATION

Reference	HDS-1
Site	1064 Wolcott
Designer	Eric Rogge
Date	3/24/2025 8:16 PM

DESIGN INPUTS

Regulatory Agency	NJDEP Certified 50% TSS
Water Quality Flow Rate (cfs)	1.63

DESIGN OUTPUTS

Product	
Unit Reference	FD-4Optimum

* Approved for use in NJDEP Certified 50% TSS

UNIT WEIGHTS AND DIMENSIONS

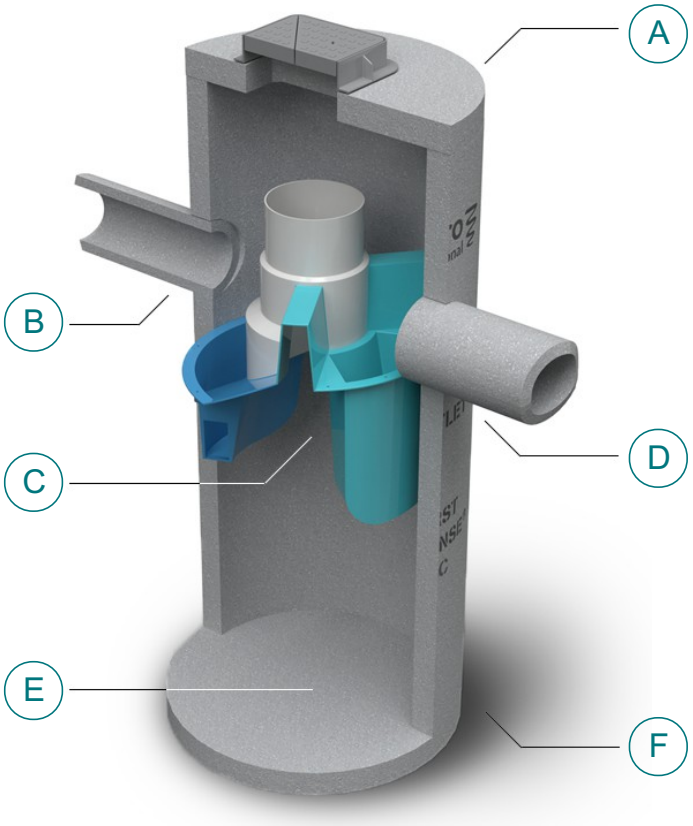
(A) Unit Size (ft)	4.00
(B) Inlet Pipe Size (in)	15
(D) Outlet Pipe Size (in)	15
(F) Unit Depth (ft)	9.07
Inlet Invert Elevation (ft)	4.97
Outlet Invert Elevation (ft)	4.97

PERFORMANCE AND HYDRAULICS

Max. Treatment Flow Rate (cfs)	1.81
Hydraulic Capacity Flow Rate (cfs)	7.97
Typical Operating Headloss (in)	
Maximum Headloss (in)	

STORAGE

(C) Min. Oil Storage Capacity (gal)	191
(E) Min.Sediment Storage Capacity (yd³)	0.7



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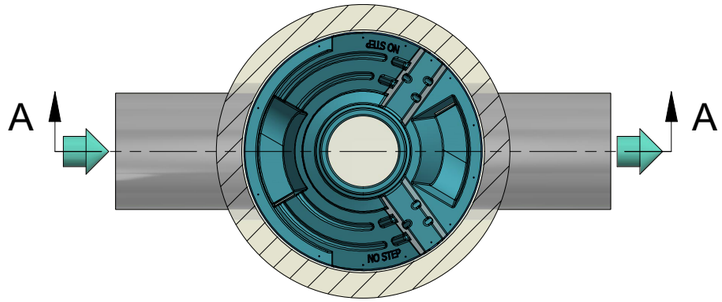
NOT FOR CONSTRUCTION

CONTACT HYDRO FOR A SITE SPECIFIC DRAWING



PLAN VIEW

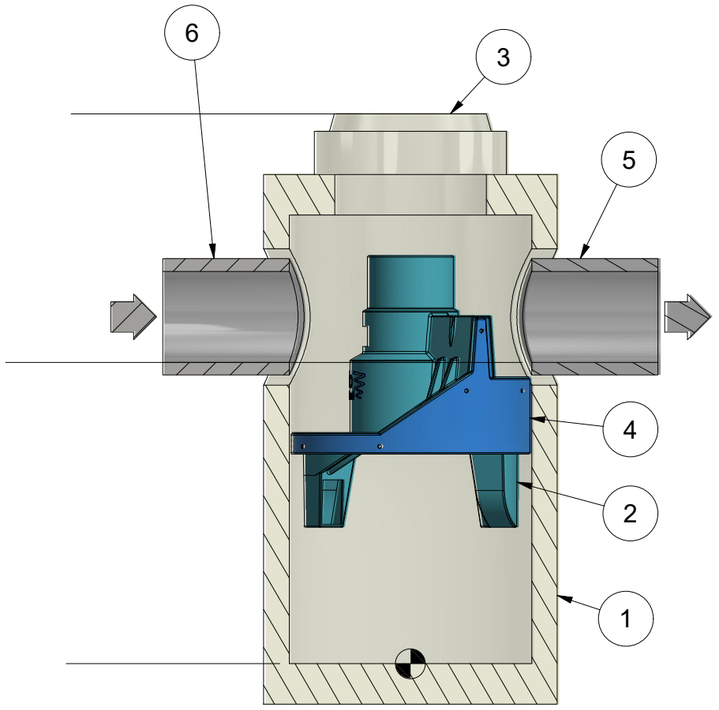
HYDRO FRAME AND COVER (INCLUDED)

GRADE RINGS BY OTHERS AS REQUIRED

RIM: 9.07 FT

OUTLET 4.97 FT

SUMP: 0 FT



SECTION A-A

CONTRACTOR NOTES:

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.

2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.

3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE Ø AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

4. CONTRACTOR IS RESPONSIBLE FOR MATERIALS AND LABOR TO BRING CASTINGS TO FINISHED GRADE.

5. ACTUAL DEPTH OF STRUCTURE MAY VARY DEPENDING ON AVAILABLE PRECAST FORMS. CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.

PRODUCT NOTES:

1. GENERAL ARRANGEMENT DRAWING ONLY. CONTACT HYDRO INTERNATIONAL FOR SITE SPECIFIC DRAWINGS.
2. PEAK HYDRAULIC FLOW: 7.97 cfs
3. MIN SEDIMENT STORAGE CAPACITY: 0.7 cu. yd. (0.5 cu. m.)
4. MAXIMUM INLET/OUTLET PIPE DIAMETERS: 24 in. (600 mm)
5. THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF.
6. MULTIPLE INLET PIPES POSSIBLE.
7. INLET/OUTLET PIPE ANGLE CAN VARY TO ALIGN WITH DRAINAGE NETWORK.
8. PEAK FLOW RATE AND MINIMUM HEIGHT LIMITED BY AVAILABLE COVER AND PIPE DIAMETER.
9. LARGER SEDIMENT STORAGE CAPACITY CAN BE PROVIDED WITH A DEEPER SUMP DEPTH.
10. UNIT SHALL CONFORM TO HS20-44 LOAD RATINGS.
11. FOR MORE PRODUCT INFORMATION INCLUDING REGULATORY ACCEPTANCES, PLEASE VISIT: https://hydro-int.com/en/products/first-defense

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	48	1200	I.D. PRECAST MANHOLE
2	1			SEPARATION MODULE
3	1	30	750	FRAME AND COVER (ROUND)
4	1			LEDGER SUPPORT
5	1	15		OUTLET PIPE (BY OTHERS)
6	1	15		INLET PIPE (BY OTHERS)

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
3/24/2025	1:30

DRAWN BY:	CHECKED BY:	APPROVED BY
WCS	MJ	PT

Title
4-ft DIAMETER
FIRST DEFENSE

Site
1064 Wolcott

Structure Number
HDS-1

Patent: www.hydro-int.com/patents

Hydro International
A CRH COMPANY
hydro-int.com
HYDRO INTERNATIONAL

WEIGHT:	MATERIAL:

REFERENCE NUMBER:

DRAWING NO.:
4ft FD GA

SHEET SIZE:	SHEET:	Rev:
B	1 OF 1	-

1197

APPENDIX F

PRE-CONSTRUCTION SITE ASSESSMENT CHECKLIST

I. **PRE-CONSTRUCTION MEETING DOCUMENTS**

Project Name _____

Permit No. _____ **Date of Authorization** _____

Name of Operator _____

Prime Contractor _____

a. **Preamble to Site Assessment and Inspections**

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector[1] conduct an assessment of the site prior to the commencement of construction[2] and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization[3] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to "Qualified Inspector" inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.
2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.
3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

b. Pre-construction Site Assessment Checklist
(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

[ ] [ ] [ ] Has a Notice of Intent been filed with the NYS Department of Conservation?
[ ] [ ] [ ] Is the SWPPP on-site? Where?_____
[ ] [ ] [ ] Is the Plan current? What is the latest revision date?_____
[ ] [ ] [ ] Is a copy of the NOI (with brief description) onsite? Where?_____
[ ] [ ] [ ] Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

[ ] [ ] [ ] Are construction limits clearly flagged or fenced?
[ ] [ ] [ ] Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
[ ] [ ] [ ] Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

[ ] [ ] [ ] Clean stormwater runoff has been diverted from areas to be disturbed.
[ ] [ ] [ ] Bodies of water located either on site or in the vicinity of the site have been identified and protected.
[ ] [ ] [ ] Appropriate practices to protect on-site or downstream surface water are installed.
[ ] [ ] [ ] Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Access

Yes No NA

[ ] [ ] [ ] A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
[ ] [ ] [ ] Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
[ ] [ ] [ ] Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Sediment Controls

Yes No NA

[ ] [ ] [ ] Silt fence material and installation comply with the standard drawing and specifications.
[ ] [ ] [ ] Silt fences are installed at appropriate spacing intervals
[ ] [ ] [ ] Sediment/detention basin was installed as first land disturbing activity.
[ ] [ ] [ ] Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

[ ] [ ] [ ] The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
[ ] [ ] [ ] The plan is contained in the SWPPP on page _____
[ ] [ ] [ ] Appropriate materials to control spills are onsite. Where? _____

APPENDIX G

STORMWATER CONSTRUCTION INSPECTION CHECKLISTS

Infiltration Basin Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Runoff diverted		
Soil permeability tested		
Groundwater / bedrock depth		
2. Excavation		
Size and location		
Side slopes stable		
Excavation does not compact subsoils		
3. Embankment		
Barrel		
Anti-seep collar or Filter diaphragm		
Fill material		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Final Excavation		
Drainage area stabilized		
Sediment removed from facility		
Basin floor tilled		
Facility stabilized		
5. Final Inspection		
Pretreatment device in place		
Inlets / outlets		
Contributing watershed stabilized before flow is routed to the facility		

Comments:

Actions to be Taken:

APPENDIX H

CONTRACTOR AND SUBCONTRACTOR CERTIFICATIONS

CERTIFICATION STATEMENT

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

Contractor:

Name:_____

Signature:_____

Title:_____

Company Name:_____

Company Address:_____

_____

_____

_____

Company Phone Number:_____

Site Address:_____

_____

_____

_____

Specific SWPPP Responsibilities:

_____

_____

_____

_____

_____

Date of Certification: _____

Name and Title of Trained Contractor for SWPPP Implementation:_____

_____

CERTIFICATION STATEMENT

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

Sub-Contractor:

Name:_____

Signature:_____

Title:_____

Company Name:_____

Company Address:_____

_____

_____

_____

Company Phone Number:_____

Site Address:_____

_____

_____

_____

Specific SWPPP Responsibilities:

_____

_____

_____

_____

_____

Date of Certification: _____

Name and Title of Trained Contractor for SWPPP Implementation:_____

_____

APPENDIX I

QUALIFIED PROFESSIONAL'S CERTIFICATION

QUALIFIED PROFESSIONAL'S CERTIFICATION

"I hereby certify that I meet the criteria set forth in the General Permit to conduct site inspections for this project and that the appropriate erosion and sediment controls described in the SWPPP and as described in the Pre-Construction Site Assessment Checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction."

Name (Print):_____

Title:_____

Date:_____

Company Name:_____

Company Address:_____

_____

_____

_____

Company Phone Number:_____

Company Email:_____

Signature:_____

APPENDIX J

OWNER/OPERATOR CERTIFICATION

CERTIFICATION STATEMENT

"I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I also certify under penalty of law that that this document and the corresponding documents were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, I am acknowledging that this SWPPP has been developed and will be implemented as the first element of construction and agree to comply with all the terms and conditions of the general permit for which the NOI is being submitted."

Name (Print):_____

Title:_____

Date:_____

Company Name:_____

Company Address:_____

_____

_____

_____

Company Phone Number:_____

Company Email:_____

Signature:_____

APPENDIX K

POST-DEVELOPMENT MAINTENANCE AND INSPECTION CHECKLIST

Infiltration Stormwater Management Practices Level 1 Inspection Checklist

SMP ID #		**SMP Owner**		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		**Longitude**	

Party Responsible for Maintenance	**System Type**		**Type of Site**
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State

Inspection Date		**Inspection Time**	
Inspector			
Date of Last Inspection			

IN Drainage Area

Look for both pervious and impervious areas that are uphill from the Infiltration cell.

Problem (Check if Present)		**Follow-Up Actions**
	☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and straw areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to get vegetation established. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other:

IN Drainage Area

Look for both pervious and impervious areas that are uphill from the Infiltration cell.

Problem (Check if Present)		Follow-Up Actions
		☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
☐ For Dry Wells: Leaves, sticks, or other debris in gutters and downspouts		☐ Remove all debris by hand. ☐ Other:
	☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
	☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

IN Inlets

Look for all the places where water flows into the Infiltration practice.

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets are collecting grit and debris or grass/weeds are growing. Some water may not be getting into the Infiltration practice.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Infiltration practice. ☐ Dispose of all material properly in an area where it will not re-enter the practice. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Infiltration practice.
☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Infiltration practice.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)	Follow-Up Actions
 ☐ For grass-covered Infiltration practices: grass has grown very tall, *Photo credit: Stormwater Maintenance, LLC*	☐ Mow infiltration area at least twice per year. ☐ Other:
 ☐ For grass-covered Infiltration practices: sparse vegetation cover or bare spots	☐ Add topsoil (as needed), grass seed, straw, and water during the growing season to re-establish consistent grass coverage. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sparse vegetation cover can be a sign that the infiltration area is not infiltrating at the proper rate and water is standing too long after a storm. The surface may be saturated or squishy, and the conditions do not enable grass to grow. This situation should be evaluated by a Level 2 Inspection and likely corrected by a qualified contractor.
☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the surface.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Infiltration practice. ☐ If removing the material creates a hole or low area, rake the surface smooth and level. ☐ Remove trash, debris, and other undesirable materials. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the surface of the Infiltration area.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)	Follow-Up Actions
 ☐ There is erosion on the surface; water seems to be carving out rills as it flows across the surface of the Infiltration area or sinkholes are forming in certain areas.	☐ For minor areas of erosion, try filling the eroded areas with clean topsoil, sand, or stone (whatever the existing cover is). ☐ If the problem recurs, you may have to use larger stone (e.g., river cobble) to fill in problem areas. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the infiltration area. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
 ☐ Observation well is damaged or cap is missing	☐ Kick-Out to Level 2 Inspection: Requires replacing pipes or caps.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)	Follow-Up Actions
 ☐ Water still visible in the observation well more than 72 hours after a rain storm. The Infiltration practice does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

IN Outlets

Locate and inspect all outlets.

Problem (Check if Present)	Follow-Up Actions
 ☐ Outlet obstructed with sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the infiltration area. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Outlet is completely obstructed; there is too much material to remove by hand or with simple hand tools.
☐ Rills or gullies are forming at outlet.	☐ For minor rills, fill in with soil, compact, and seed and straw to establish vegetation. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Rills are more than 2" to 3" deep and require more than just hand raking and re-seeding.

Additional Notes:

Inspector:_____ Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____ Date: _____

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Infiltration Stormwater Management Practices Level 2 Inspection Checklist

SMP ID #		**SMP Owner**		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		**Longitude**	

Party Responsible for Maintenance	**System Type**		**Type of Site**
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State

Inspection Date		**Inspection Time**	
Inspector			
Date of Last Inspection			

Level 2 Inspection: INFILTRATION

Recommended Repairs	Triggers for Level 3 Inspection
Observed Condition: Water Stands on Surface for More than 72 Hours after Storm	
☐ Condition 1: Small pockets of standing water For infiltration basins with soil, use a soil probe or auger to examine the soil profile. For gravel infiltration trenches or basins, use a shovel to dig into the gravel layer where the problem is occurring. If isolated areas have accumulated grit, fine silt, or vegetative debris or have bad soil or clogged gravel, try removing and replacing with clean material. If the practice is supposed to have grass cover, it will likely be necessary to replant once the problem is resolved. ☐ Condition 2: Standing water is widespread or covers entire surface Look in the observation well (if it exists) and use a tape measure to estimate the depth of water standing in the soil or gravel. Requires diagnosis and resolution of problem: • Too much sediment/grit washing in from drainage area? • Too much ponding depth? • Improper infiltration media? • Underlying soil not suitable for infiltration? As above, the resolution will likely require replanting and re-establishment of good grass cover if this is part of the design.	• Infiltration media is clogged and problem cannot be diagnosed from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or it is associated with the original design of the practice. ☐ Level 3 Inspection necessary
Observed Condition: Severe erosion of infiltration bed, inlets, or around outlets	
☐ Condition 1: Erosion at inlets The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a less erosive lining and/or extending the lining further down to where inlet slopes meet the infiltration surface. If problem persists, analysis by a Qualified Professional is warranted. ☐ Condition 2: Erosion of infiltration bed This is often caused by “preferential flow paths” along the surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads).	• Erosion (rills, gullies) is more than 12 inches deep • The issue is not caused by moving water but some sort of subsurface defect, which may manifest as a sinkhole or linear depression and be associated with problems with the underlying stone or soil. ☐ Level 3 Inspection necessary

Notes:

Inspector:_____ Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

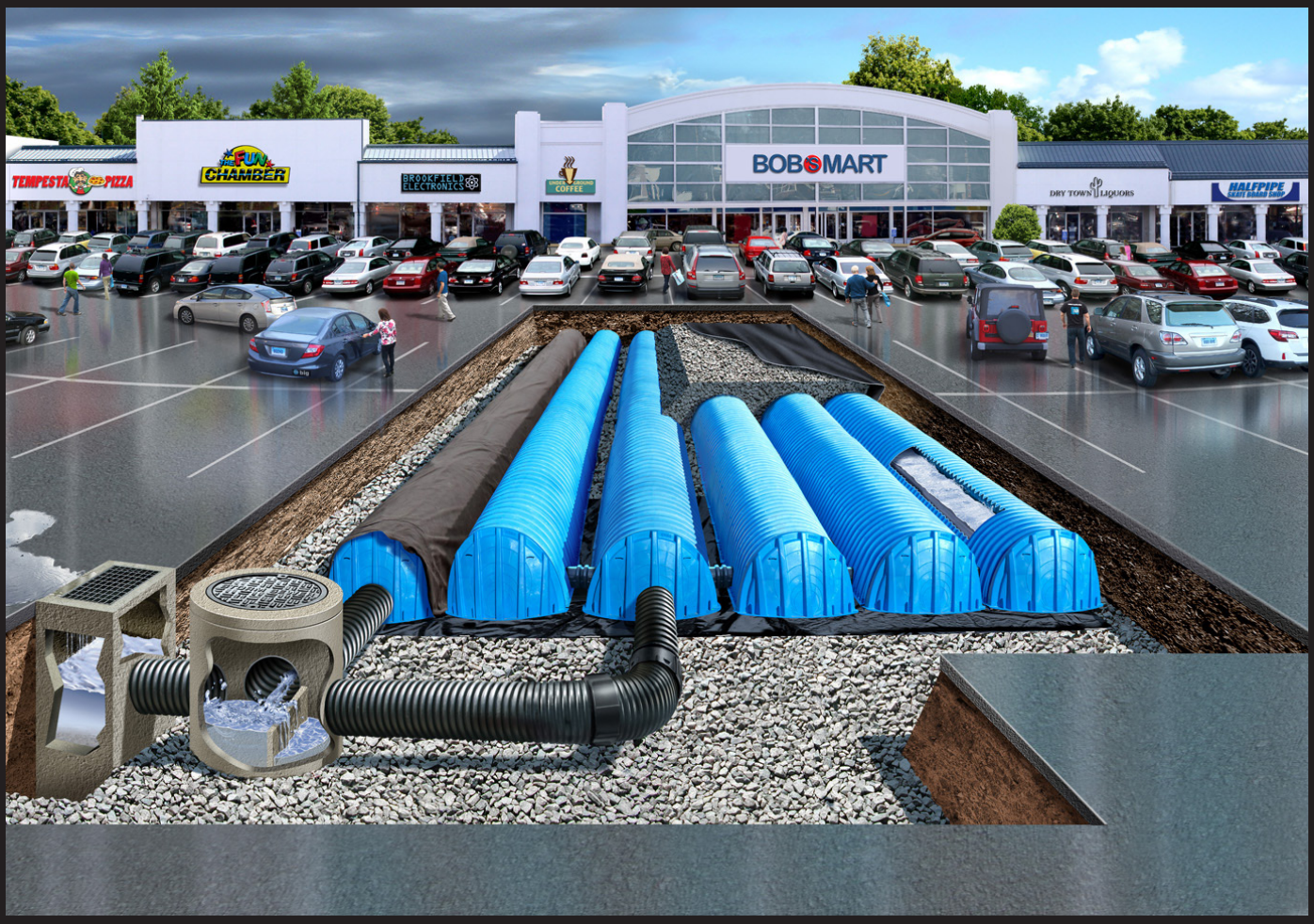
Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____ Date: _____

CULTEC SEPARATOR™ ROW

WATER QUALITY SYSTEM



OPERATION & MAINTENANCE GUIDE

FOR CULTEC STORMWATER MANAGEMENT SYSTEMS

GLOBE VERIFIED VÉRIFIÉ

STORMWATER MANAGEMENT SOLUTIONS

CULTEC®

1222

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CULTEC, Inc.
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Doc ID: CLT043 02-22
Feb 2022

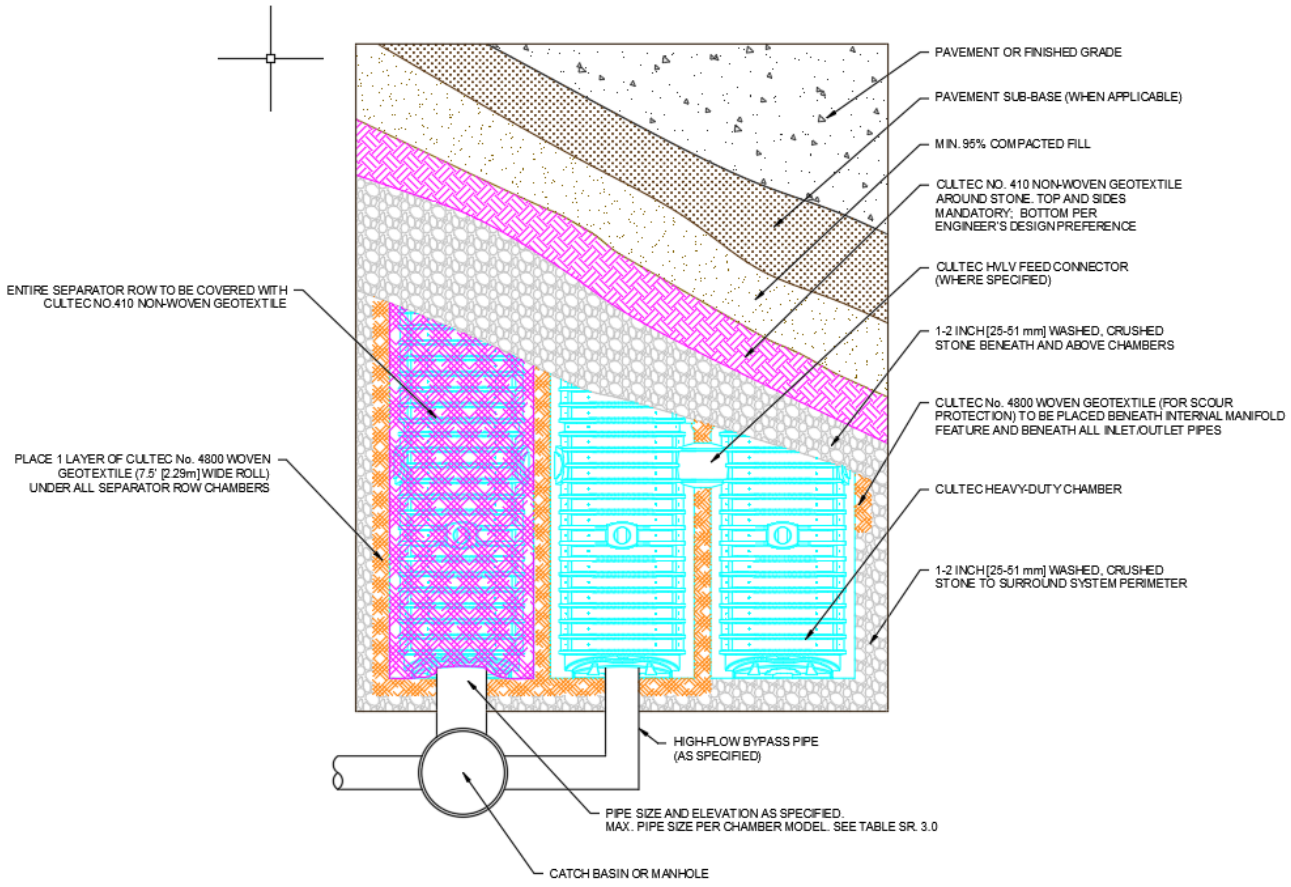
Introduction

CULTEC's Separator™ Row is an inexpensive means of removing Total Suspended Solids from the CULTEC chamber system, as well as providing easier access for inspection and maintenance. The Separator Row is designed to capture the First Flush of a rain event and is typically included as part of the "Treatment Train" for water quality.

The CULTEC Separator Row is a row of CULTEC Contactor or Recharger Chambers that are surrounded on all sides by filter fabric. One layer of CULTEC No. 4800™ Woven Geotextile are placed between the clean foundation stone and the chamber feet. The chambers are then completely wrapped with CULTEC No. 410™ non-woven geotextile. This configuration is designed to trap any sediment and/or debris that may pass through the upstream water-quality structures and into the chamber system.

A manhole is typically located adjacent to the separator row for ease of inspection and maintenance. This manhole is placed upstream of the system and can include a high-flow bypass pipe to pass peak-flows onto adjacent rows of chambers. The upstream manhole is designed with a sump to trap heavier sediment and allow for proper cleaning of the Separator Row. A JetVac process with a high pressure water nozzle is introduced down the Separator Row via the access manhole to clean all sediment and debris from the Separator Row. Captured pollutants are flushed into the sumped access manhole for vacuuming, and the process is repeated until the Separator Row is completely free of sediment and debris.

The Separator Row performance has been tested and verified to the protocols and procedures as defined by Environmental Technology Verification (ETV) Canada to achieve 80% TSS removal.



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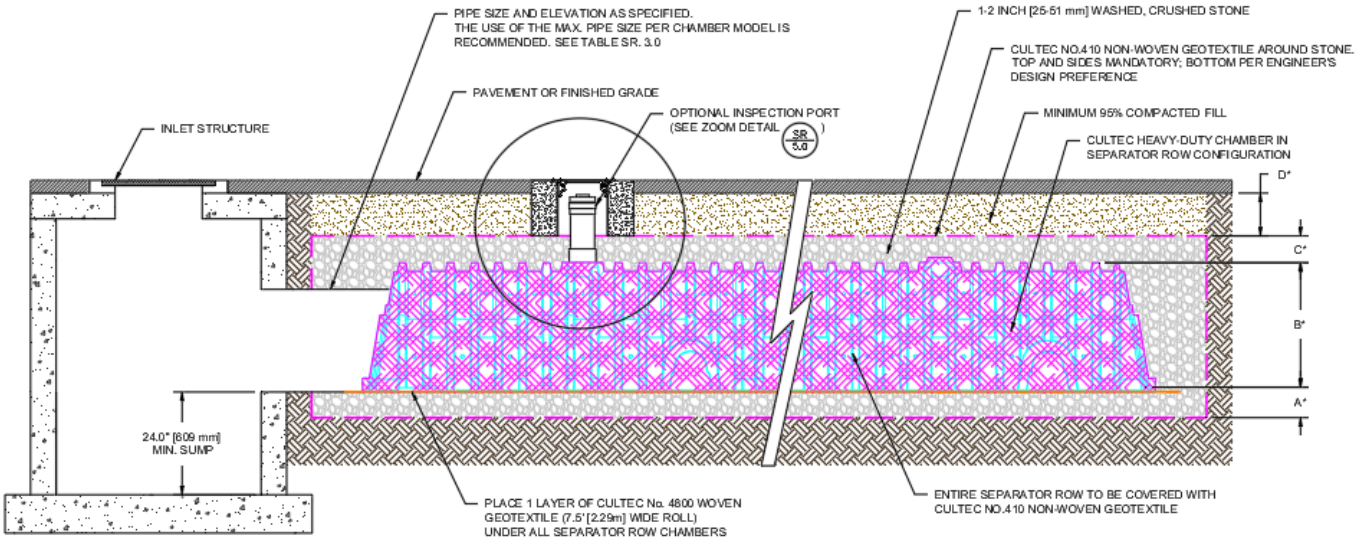
Design

There is no single design to achieve a high level of water quality. The CULTEC Separator Row should be designed as part of an overall best management practices water quality system. Pre-treatment devices such as sump catch basins, inlet baffles and proprietary oil-grit separators and filter systems can all be incorporated upstream of the CULTEC Separator Row. Sumped access/diversion manholes should be installed directly upstream of the Separator Row.

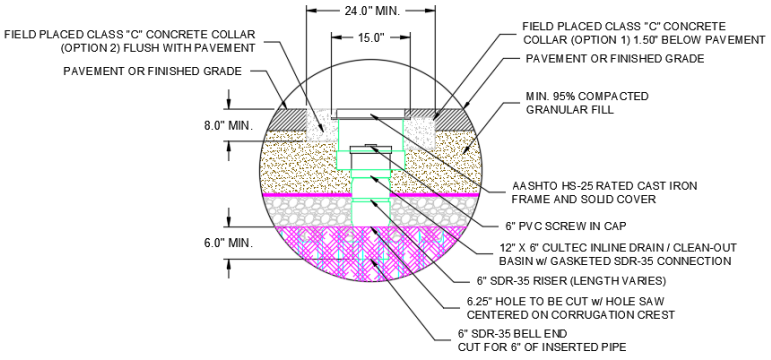
The following is a list of recommended design practices to ensure proper maintenance for the life of the system:

- Install sumped access/diversion manholes, including a minimum 24” (600 mm) sump, directly upstream of the Separator Row.
- Include a high-flow bypass pipe to divert peak flows that exceed the capacity of the Separator Row to adjacent rows.
- Connect the access manhole to the Separator Row with the largest diameter pipe allowable based on the CULTEC chamber model used.
- Maintain a minimum distance between the access manhole and the Separator Row to promote efficient maintenance.
- Include at least one inspection port per Separator Row for periodic inspection.

Note: Typical JetVac maintenance reels have a maximum of 400 feet (121.9 m) of available hose. Consider this when designing the length of the CULTEC Separator Rows.



*SEE SR 3.0 - CROSS SECTION TABLE REFERENCE



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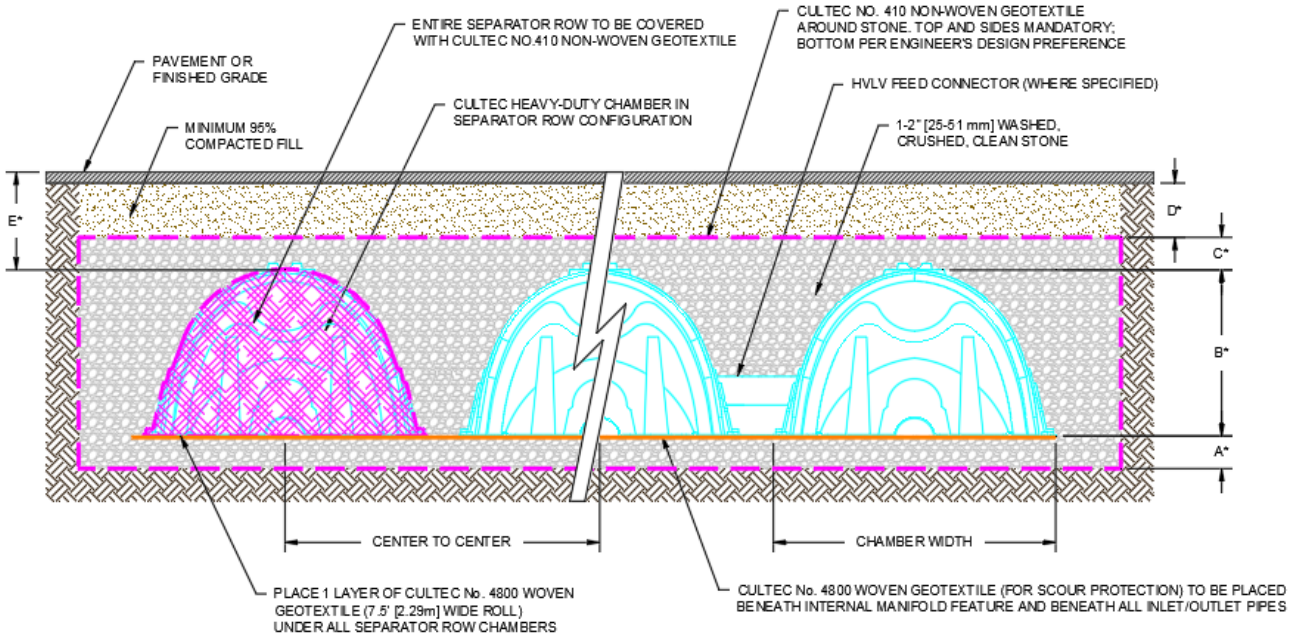

*SEE SR 3.0 - CROSS SECTION TABLE REFERENCE

Table SR 3.0

	Description	Contactor 100HD	Recharger 150XLHD	Recharger 280HD	Recharger 330XLHD	Recharger 360HD	Recharger 902HD
A	Min. depth of stone base	6″ 152 mm	6″ 152 mm	6″ 152 mm	6″ 152 mm	6″ 152 mm	9″ 229 m
B	Chamber height	12.5″ 318 mm	18.5″ 470 mm	26.5″ 673 mm	30.5″ 775 mm	36″ 914 mm	48″ 1219 mm
C	Min. depth of stone required above units for traffic applications	6″ 152 mm	6″ 152 mm	6″ 152 mm	6″ 152 mm	6″ 152 mm	12″ 305 mm
D	Min. depth required of 95% compacted fill for paved traffic application	8″ 203 mm	8″ 203 mm	8″ 203 mm	10″ 254 mm	12″ 305 mm	12″ 305 mm
E	Max. depth of cover allowed above crown of chamber	12′ 3.65 m	12′ 3.65 m	12′ 3.65 m	12′ 3.65 m	12′ 3.65 m	8.5′ 2.59 m
	Max. allowable pipe size into chamber end wall/end cap	10″ 250 mm	12″ 300 mm	18″ 450 mm	24″ 600 mm	24″ 600 mm	24″ 600 mm

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Inspection and Maintenance

CULTEC recommends inspection of the Separator Row to be performed every six months for the first year of service. Future inspection frequency can be adjusted based upon previous inspection observations. However annual inspections are recommended. Inspection of the Separator Row can be achieved via an inspection port riser installed during construction. This inspection port riser will connect the top of the Separator Row chambers to finished grade with a removable lid. Alternatively the Separator Row may be inspected via the manhole(s) located at the end(s) of the Separator Row. However this method of inspection requires confined space entry. If entry into the manhole is required, all local and OSHA rules for confined space entries must be strictly followed.

To inspect:

- Remove the inspection port lid from the floor box frame.
- Remove the riser pipe cap.
- With a flashlight and stadia rod, measure the depth of sediment.
- Record results in a maintenance log.
- When depth of sediment exceeds 3” (76 mm), use the JetVac procedure described below.

The JetVac process utilizes a high pressure water nozzle controlled from the surface. The high pressure nozzle is introduced down the Separator Row via the access manhole(s). The high pressure water cleans all sediment and debris from the Separator Row as the nozzle is retrieved. Captured pollutants are flushed into the sumped access manhole for vacuuming. This process is repeated until the Separator Row is completely free of sediment and debris. A small diameter culvert cleaning nozzle is recommended for this procedure.

High pressure water nozzle

Cleaning Separator Row and pipes with high pressure water nozzle

SEPARATOR ROW: Separator Row prior to cleaning

ADJACENT ROW: When the Separator Row is working properly, the adjacent rows will not show signs of sediment.

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Inspection and Maintenance Record

Date	Mode of Access	Frequency	Depth of Sediment	Actions	Expenses	Inspector	Notes
Ex.	Inspection Port	Semi-annually	2”	Measure sediment depth with stadia rod. Visually inspect	$100	DPG	Depth of Sediment was measured via Northeast Inspection Port Adjacent to MH-1. Sediment depth was found to be 2”. No further action required at this time.
Ex.	Access Manhole	Annually					

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CULTEC, Inc.
878 Federal Road • P.O. Box 280 • Brookfield, CT 06804 USA
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RETENTION • DETENTION • INFILTRATION • WATER QUALITY

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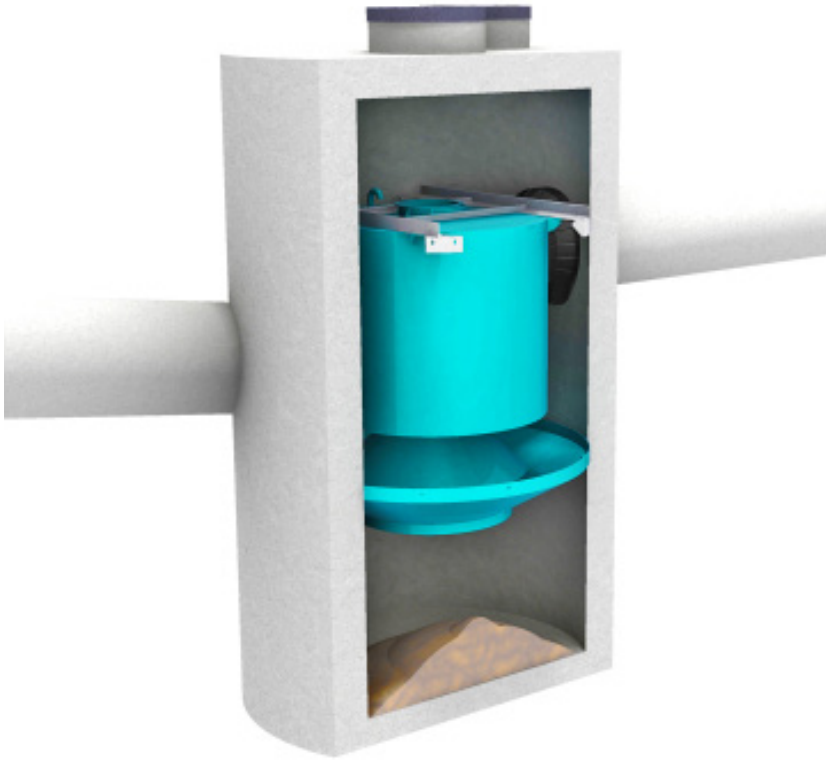

Operation and Maintenance Manual

Downstream Defender®

Vortex Separator for Stormwater Treatment

Turning Water Around ...®

1230

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Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Downstream Defender® by Hydro International

The Downstream Defender® is an advanced Hydrodynamic Vortex Separator designed to provide high removal efficiencies of settleable solids and their associated pollutants, oil, and floatables over a wide range of flow rates.

The Downstream Defender® has unique, flow-modifying internal components developed from extensive full-scale testing, CFD modeling and over thirty years of hydrodynamic separation experience in wastewater, combined sewer and stormwater applications. These internal components distinguish the Downstream Defender® from simple swirl-type devices and conventional oil/grit separators by minimizing turbulence and headlosses, enhancing separation, and preventing washout of previously stored pollutants.

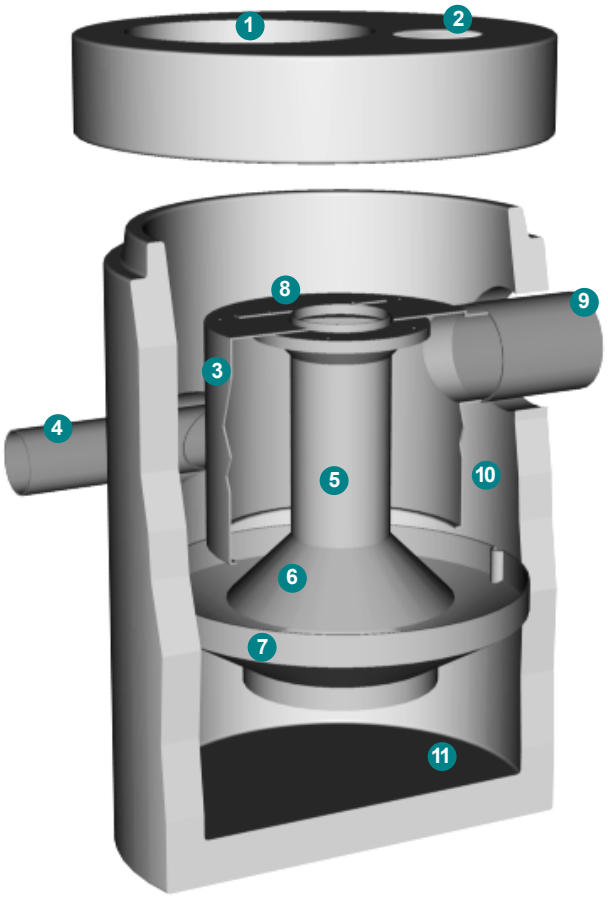
The high removal efficiencies and inherent low headlosses of the Downstream Defender® allow for a small footprint making it a compact and economical solution for the treatment of non-point source pollution.

Benefits of the Downstream Defender®

- Removes sediment, floatables, oil and grease
- No pollutant washouts
- Small footprint
- No loss of treatment capacity between clean-outs
- Low headloss
- Efficient over a wide ranges of flows
- Easy to install
- Low maintenance

Applications

- New developments and retrofits
- Utility yards
- Streets and roadways
- Parking lots
- Pre-treatment for filters, infiltration and storage
- Industrial and commercial facilities
- Wetlands protection



Downstream Defender® Components

1. Central Access Port
2. Floatables Access Port (6-ft., 8-ft. and 10-ft. models only)
3. Dip Plate
4. Tangential Inlet
5. Center Shaft
6. Center Cone
7. Benching Skirt
8. Floatables Lid
9. Outlet Pipe
10. Floatables Storage
11. Isolated Sediment Storage Zone

Operation

Introduction

The Downstream Defender® operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The Downstream Defender® has been designed to allow for easy and safe access for inspection/monitoring and clean-out procedures. Entry into the unit or removal of the internal components is not necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

Pollutant Capture and Retention

The internal components of the Downstream Defender® have been designed to protect the oil, floatables and sediment storage volumes so that separator performance is not reduced as pollutants accumulate between clean-outs. Additionally, the Downstream Defender® is designed and installed into the storm drain system so that the vessel remains wet between storm events. Oil and floatables are stored on the water surface in the outer annulus separate from the sediment storage volume in the sump of the unit providing the option for separate oil disposal, and accessories such as adsorbant pads. Since the oil/floatables and sediment storage volumes are isolated from the active separation region, the potential for re-suspension and washout of stored pollutants between clean-outs is minimized.

Wet Sump

The sump of the Downstream Defender® retains a standing water level between storm events. The water in the sump prevents stored sediment from solidifying in the base of the unit. The clean-out procedure becomes more difficult and labor intensive if the system allows fine sediment to dry-out and consolidate. Dried sediment must be manually removed by maintenance crews. This is a labor intensive operation in a hazardous environment.

Blockage Protection

The Downstream Defender® has large clear openings and no internal restrictions or weirs, minimizing the risk of blockage and hydraulic losses. In addition to increasing the system headloss, orifices and internal weirs can increase the risk of blockage within the unit.

Maintenance

Overview

The Downstream Defender® protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the Downstream Defender®. The Downstream Defender® will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the Downstream Defender® will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

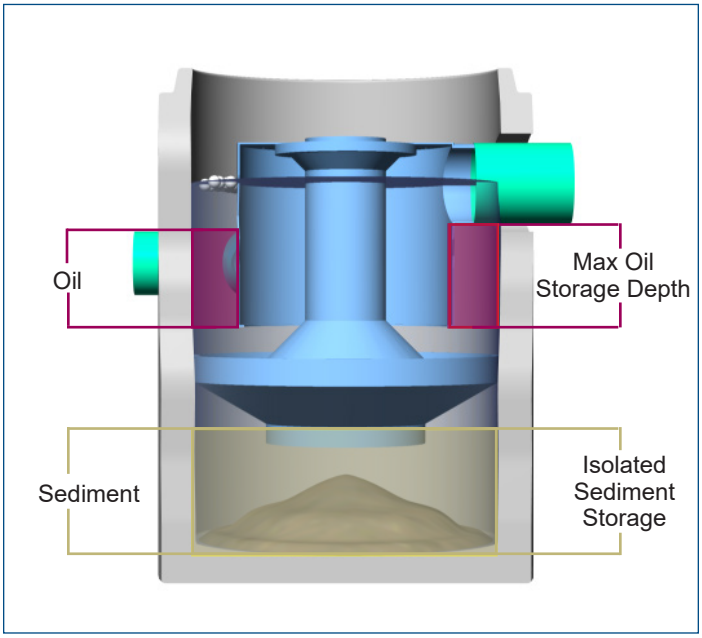


Fig.1 Pollutant storage volumes of the Downswtream Defender®.

The Downstream Defender® allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole. On the 6-ft, 8-ft and 10-ft units, the floatables access port is above the outlet pipe between the concrete manhole wall and the dip plate. The sediment removal access ports for all Downstream Defender® models are located directly over the hollow center shaft.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the Downstream Defender®, nor do they require the internal components of the Downstream Defender® to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

Determining Your Maintenance Schedule

The frequency of cleanout is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil/flotables removal, for a 6-ft Downstream Defender® typically takes less than 30 minutes and removes a combined water/oil volume of about 500 gallons.

Inspection Procedures

Inspection is a simple process that does not involve entry into the Downstream Defender®. Maintenance crews should be familiar with the Downstream Defender® and its components prior to inspection.

Scheduling

- It is important to inspect your Downstream Defender® every six months during the first year of operation to determine your site-specific rate of pollutant accumulation
- Typically, inspection may be conducted during any season of the year
- Sediment removal is not required unless sediment depths exceed 75% of maximum clean-out depths stated in Table 1

Recommended Equipment

- Safety Equipment and Personal Protective Equipment (traffic cones, work gloves, etc.)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net
- Sediment probe (such as a Sludge Judge®)
- Trash bag for removed floatables
- Downstream Defender® Maintenance Log

Table 1. Downstream Defender® Pollutant Storage Capacities and Max. Cleanout Depths.

Unit Diameter	Total Oil Storage	Oil Clean-out Depth	Total Sediment Storage	Sediment Clean-out Depth	Max. Liquid Volume Removed
(feet)	(gallons)	(inches)	(gallons)	(inches)	(gallons)
4	70	<16	141	<18	384
6	216	<23	424	<24	1,239
8	540	<33	939	<30	2,884
10	1,050	<42	1,757	<36	5,546
12	1,770	<49	2,970	<42	9,460

NOTES

1. Refer to Dowmstream Defender® Clean-out Detail (Fig. 1) for measurement of depths.

2. Oil accumulation is typically less than sediment, however, removal of oil and sediment during the same service is recommended.

3. Remove floatables first, then remove sediment storage volume.

4. Sediment removal is not required unless sediment depths exceed 75% of maximum clean-out depths stated in Table 1.

Fig.4

Fig.5

Fig.6

Inspection Procedures

1. Set up any necessary safety equipment around the access port or grate of the Downstream Defender® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.

2. Remove the lids to the manhole (Fig. 4). NOTE: The 4-ft Downstream Defender® will only have one lid.

3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. See Fig.7 and 8 for typical inspection views.

4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the outer annulus of the chamber.

5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel (Fig.5).

6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.

7. Securely replace the grate or lid.

8. Take down safety equipment.

9. Notify Hydro International of any irregularities noted during inspection.

Floatables and Sediment Cleanout

Floatables cleanout is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables (Fig.6).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vactor hose and skimmer pole to be lowered to the base of the sump.

Scheduling

- Floatables and sump cleanout are typically conducted once a year during any season.
- If sediment depths are greater than 75% of maximum clean-out depths stated in Table 1, sediment removal is required.
- Floatables and sump cleanout should occur as soon as possible following a spill in the contributing drainage area.

Fig.7 View over center shaft into sediment storage zone.

Fig.8 View of outer annulus of floatables and oil collection zone.

Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vactor truck (6-inch flexible hose recommended)
- Downstream Defender® Maintenance Log

1. Set up any necessary safety equipment around the access port or grate of the Downstream Defender® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the lids to the manhole (NOTE: The 4-ft Downstream Defender® will only have one lid).
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
4. Using the Floatables Port for access, remove oil and floatables stored on the surface of the water with the vactor hose or the skimmer net (Fig.9).
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (Pg.9).
6. Once all floatables have been removed, drop the vactor hose to the base of the sump via the Central Access Port. Vactor out the sediment and gross debris off the sump floor (Fig.6).
7. Retract the vactor hose from the vessel.
8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.
9. Securely replace the grate or lid.

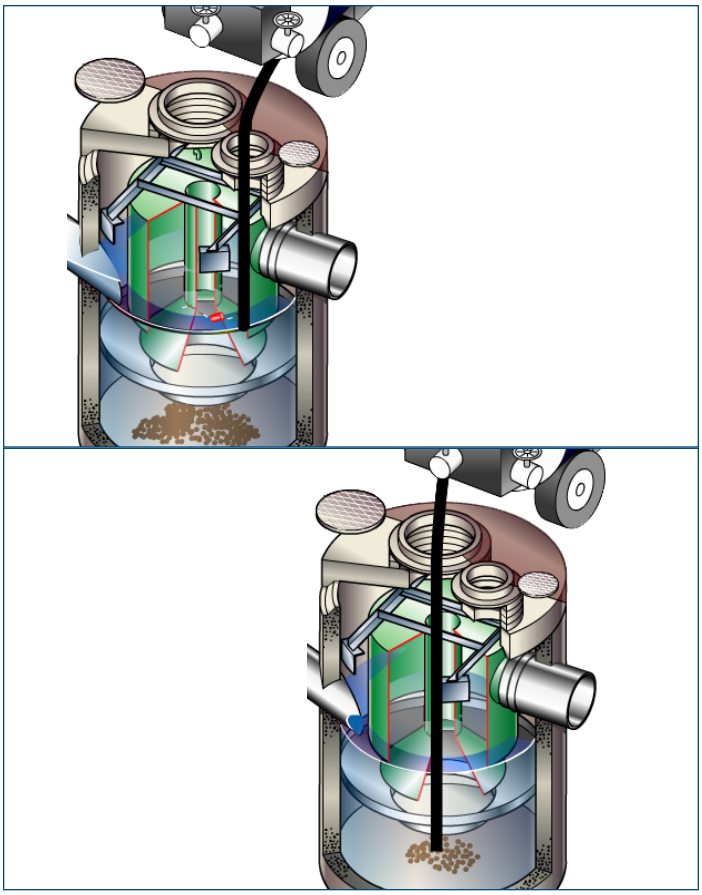


Fig.9 Floatables and sediment are removed with a vactor hose

Maintenance at a Glance

Activity	Frequency
Inspection	- Regularly during first year of installation - Every 6 months after the first year of installation
Oil and Floatables Removal	- Once per year, with sediment removal - Following a spill in the drainage area
Sediment Removal	- Once per year or as needed - Following a spill in the drainage area
NOTE: For most cleanouts it is not necessary to remove the entire volume of liquid in the vessel. Only removing the first few inches of oils/floatables and the sediment storage volume is required.	

Downstream Defender® Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:	
SITE NAME:	
SITE LOCATION:	
OWNER:	CONTRACTOR:
CONTACT NAME:	CONTACT NAME:
COMPANY NAME:	COMPANY NAME:
ADDRESS:	ADDRESS:
TELEPHONE:	TELEPHONE:
FAX:	FAX:

INSTALLATION DATE: / /

MODEL (CIRCLE ONE): **4-FT** **6-FT** **8-FT** **10-FT** **CUSTOM**

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Downstream Defender® Inspection and Maintenance Log

Date	Initials	Depth of Floatables and Oils	Sediment * Depth Measured	Volume of Sediment Removed	Site Activity and Comments

*Note: Sediment removal is not required unless sediment depths exceed 75% of maximum clean-out depths stated in Table 1.

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Do it Right the First Time

Learn more at hydro-int.com/service

CALL **1 (888) 382-7808** TO SCHEDULE AN INSPECTION

Stormwater Solutions

94 Hutchins Drive
Portland, ME 04102

Tel: (207) 756-6200
Fax: (207) 756-6212
stormwaterinquiry@hydro-int.com

www.hydro-int.com

Turning Water Around...®

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APPENDIX L

CONSTRUCTION INSPECTION REPORT

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:

Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and

6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

Inspector (print name)	**Date of Inspection**
Qualified Inspector (print name)	**Qualified Inspector Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA

[ ] [ ] [ ] Is there an increase in turbidity causing a substantial visible contrast to natural conditions at the outfalls?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease at the outfalls?
[ ] [ ] [ ] All disturbance is within the limits of the approved plans.
[ ] [ ] [ ] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA

[ ] [ ] [ ] Is construction site litter, debris and spoils appropriately managed?
[ ] [ ] [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ] [ ] [ ] Is construction impacting the adjacent property?
[ ] [ ] [ ] Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA

[ ] [ ] [ ] Maximum diameter pipes necessary to span creek without dredging are installed.
[ ] [ ] [ ] Installed non-woven geotextile fabric beneath approaches.
[ ] [ ] [ ] Is fill composed of aggregate (no earth or soil)?
[ ] [ ] [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

3. Stabilized Construction Access

Yes No NA

[ ] [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.
[ ] [ ] [ ] Installed per standards and specifications?
[ ] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

Runoff Control Practices

1. Excavation Dewatering

Yes No NA

[ ] [ ] [ ] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ] [ ] [ ] Clean water from upstream pool is being pumped to the downstream pool.
[ ] [ ] [ ] Sediment laden water from work area is being discharged to a silt-trapping device.
[ ] [ ] [ ] Constructed upstream berm with one-foot minimum freeboard.

Runoff Control Practices (continued)

2. Flow Spreader

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ] [ ] [ ] Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

[ ] [ ] [ ] Installed per plan with minimum side slopes 2H:1V or flatter.
[ ] [ ] [ ] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ] [ ] [ ] Sediment-laden runoff directed to sediment trapping structure

4. Stone Check Dam

Yes No NA

[ ] [ ] [ ] Is channel stable? (flow is not eroding soil underneath or around the structure).
[ ] [ ] [ ] Check is in good condition (rocks in place and no permanent pools behind the structure).
[ ] [ ] [ ] Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

[ ] [ ] [ ] Stockpiles are stabilized with vegetation and/or mulch.
[ ] [ ] [ ] Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

[ ] [ ] [ ] Temporary seedings and mulch have been applied to idle areas.
[ ] [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Silt Fence and Linear Barriers

Yes No NA

[ ] [ ] [ ] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ] [ ] [ ] Joints constructed by wrapping the two ends together for continuous support.
[ ] [ ] [ ] Fabric buried 6 inches minimum.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

2. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated; Filter Sock or Manufactured practices)

Yes No NA

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre or less.
[ ] [ ] [ ] Excavated area is 900 cubic feet.
[ ] [ ] [ ] Excavated side slopes should be 2:1.
[ ] [ ] [ ] 2" x 4" frame is constructed and structurally sound.
[ ] [ ] [ ] Posts 3-foot maximum spacing between posts.
[ ] [ ] [ ] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
[ ] [ ] [ ] Manufactured insert fabric is free of tears and punctures.
[ ] [ ] [ ] Filter Sock is not torn or flattened and fill material is contained within the mesh sock.

Sediment accumulation ___% of design capacity.

3. Temporary Sediment Trap

Yes No NA

[ ] [ ] [ ] Outlet structure is constructed per the approved plan or drawing.
[ ] [ ] [ ] Geotextile fabric has been placed beneath rock fill.
[ ] [ ] [ ] Sediment trap slopes and disturbed areas are stabilized.

Sediment accumulation is ___% of design capacity.

4. Temporary Sediment Basin

Yes No NA

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
[ ] [ ] [ ] Sediment basin dewatering pool is dewatering at appropriate rate.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design. All practices shall be maintained in accordance with their respective standards.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

APPENDIX M

NOTICE OF TERMINATION

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

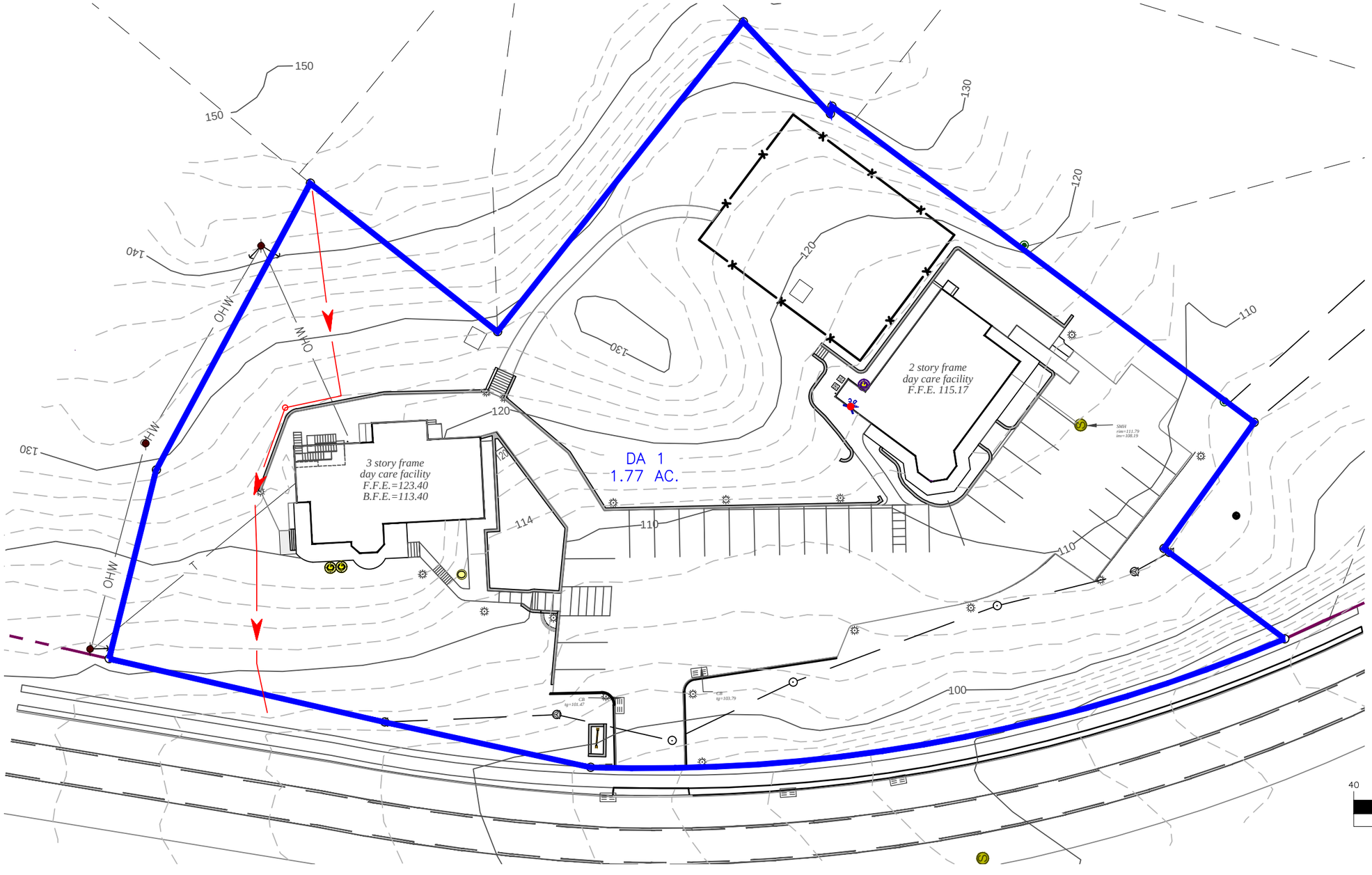
I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

APPENDIX N

WATERSHED MAPS



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

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REVISIONS:			
NO.	DATE	DESCRIPTION	BY

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

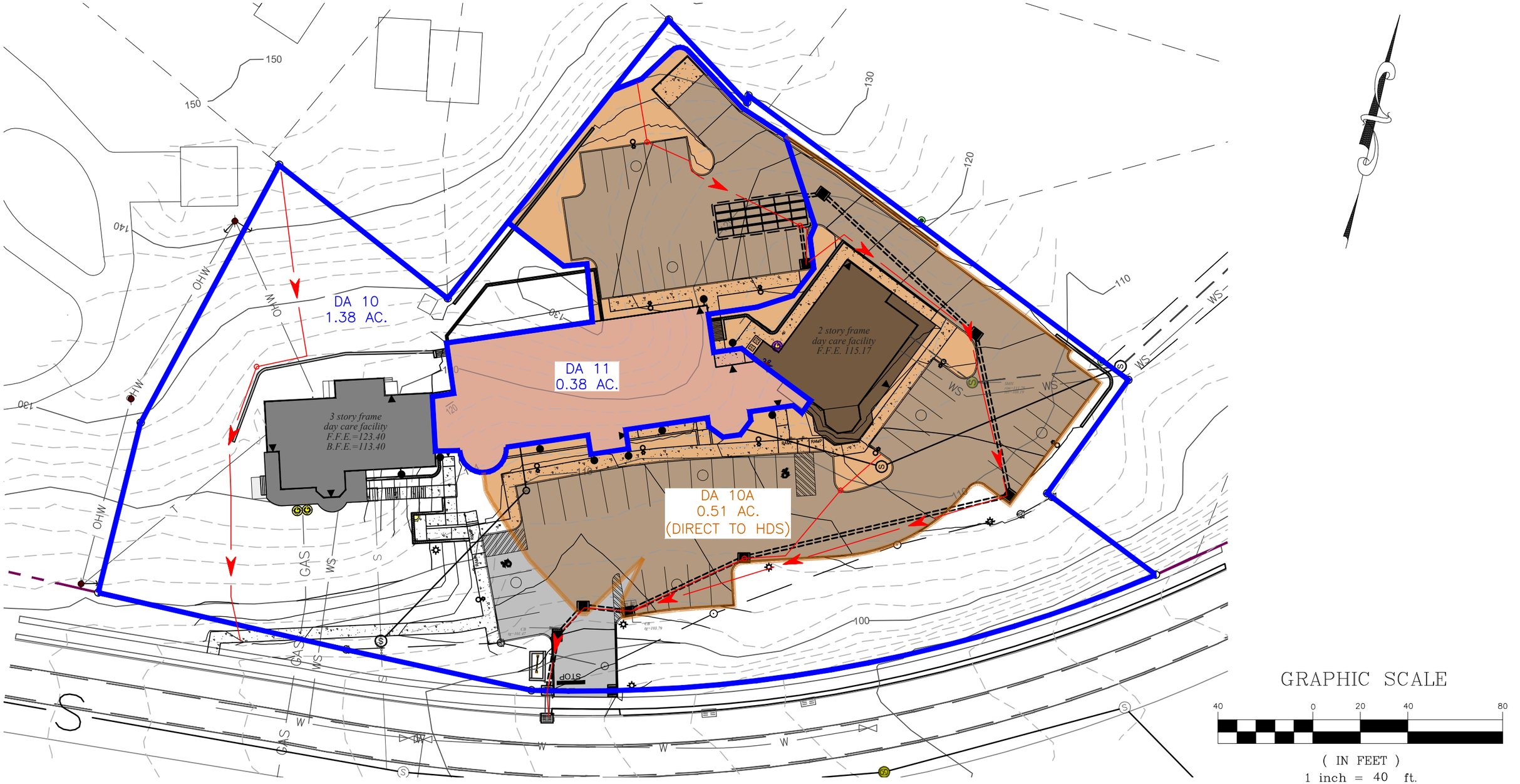
PRE-DEVELOPMENT CONDITIONS MAP

1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/25/23
SCALE:	1" = 40'
TITLE:	DR-1
SHEET:	1 OF 2

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

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REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/25/25	REVISED PER PB COMMENTS	ESR

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

POST-DEVELOPMENT CONDITIONS MAP

1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/25/23
SCALE:	1" = 40'
TITLE:	DR-2
SHEET:	2 OF 2

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION

Bulk Zoning Regulations Table

	Mininum Lot Size Required	Actual Lot Size	Minumum Width	Actual Width	Minimum Depth	Actual Depth	Required Setbacks			Actual & Proposed Setbacks			Minimum Distance Between Buildings Same Lot	Allowable Building Height	Proposed Building Height	Maximum Building Coverage	Proposed Building Coverage
							Front	Side	Rear	Front	Side	Rear					
Zoning District																	
R1-40	40,000 sf	77101.2 sf	150'	385', Varies	150'	154'+, Varies										15%	15%
Proposed Addition and Existing buildings							40'	25'	50'	62.3'	45.7', 30.3'	18.6'**	NA	2.5 stories / 35'	2.5 stories / 35'		

* Existing Condition to remain

Location Map

Scale: 1" = 400'

Zoning Summary

Zoning District:	R1-40
Tax Map No.:	5954-34-641767
Lot Area:	1.77 Acres
Building Footprint:	11,600 square feet (Proposed Addition + Existing Buildings on Site)
Historical Overlay District:	Yes
Parking Overlay District:	No
Existing Use:	Daycare
Proposed Use:	Hotel, Restaurant

Parking & Loading

Use & Parking Requirements	Proposed Area / Count	Parking Requirement
Lodging		
0.5 space per guest room (minimum) 1.5 space per guest room (maximum)	42 Guest Rooms	21 parking spaces minimum 61 parking spaces maximum
Commercial (Restaurant)		
3 spaces per 1,000 sf GFA (minimum) 5 spaces per 1,000 sf GFA (maximum)	1,220 gsf	6 parking spaces minimum 10 parking spaces maximum
Total Required		**27 parking spaces minimum** **71 parking spaces maximum**
Total Provided		**50 parking spaces** See Notes Below

Notes:

1. 50 parking spaces are provided on site.
2. Maximum proposed occupancy for the Restaurant is 56 people.
3. Hours of Operation:
   a. The Restaurant shall operate between 8am and 10pm Sunday through Thursday & Friday/Saturday between 7am and 10:00pm, 7 days a week, 365 days a year.
   b. The Hotel shall operate 24 hours per day, 7 days a week, 365 days a year.
4. The Applicant and project shall comply with the final approved version of the Traffic and Parking Management Plan, as prepared by Colliers Engineering & Design.
5. Zoning variance required for rear setback. Existing building within current setback.

Index of Drawings

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Sheet 5 of 12	Elevations and Images
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Sheet 7 of 12	Erosion & Sediment Control Plan (ESC-1)
Sheet 8 of 12	Truck Turning Plan (TR-1)
Sheet 9 of 12	Construction Details (CD-1)
Sheet 10 of 12	Construction Details (CD-2)
Sheet 11 of 12	Construction Details (CD-3)

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	3/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

N

Site Plan

Scale: 1" = 20'

Special Use Permit Application

Sheet 1 of 12 - Site Plan

1064 Wolcott Avenue

Beacon, New York
Scale: 1" = 20'
January 31, 2025

Owner:
JMARKMNG, LLC
1064 Wolcott Avenue
Beacon, New York 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

1256

N

Site Plan

Scale: 1" = 20'

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NO.	DATE	DESCRIPTION	BY
1	3/25/25	NO CHANGE	AJS

Special Use Permit Application

Sheet 2 of 12 - Existing Conditions and Demolition Plan

1064 Wolcott Avenue

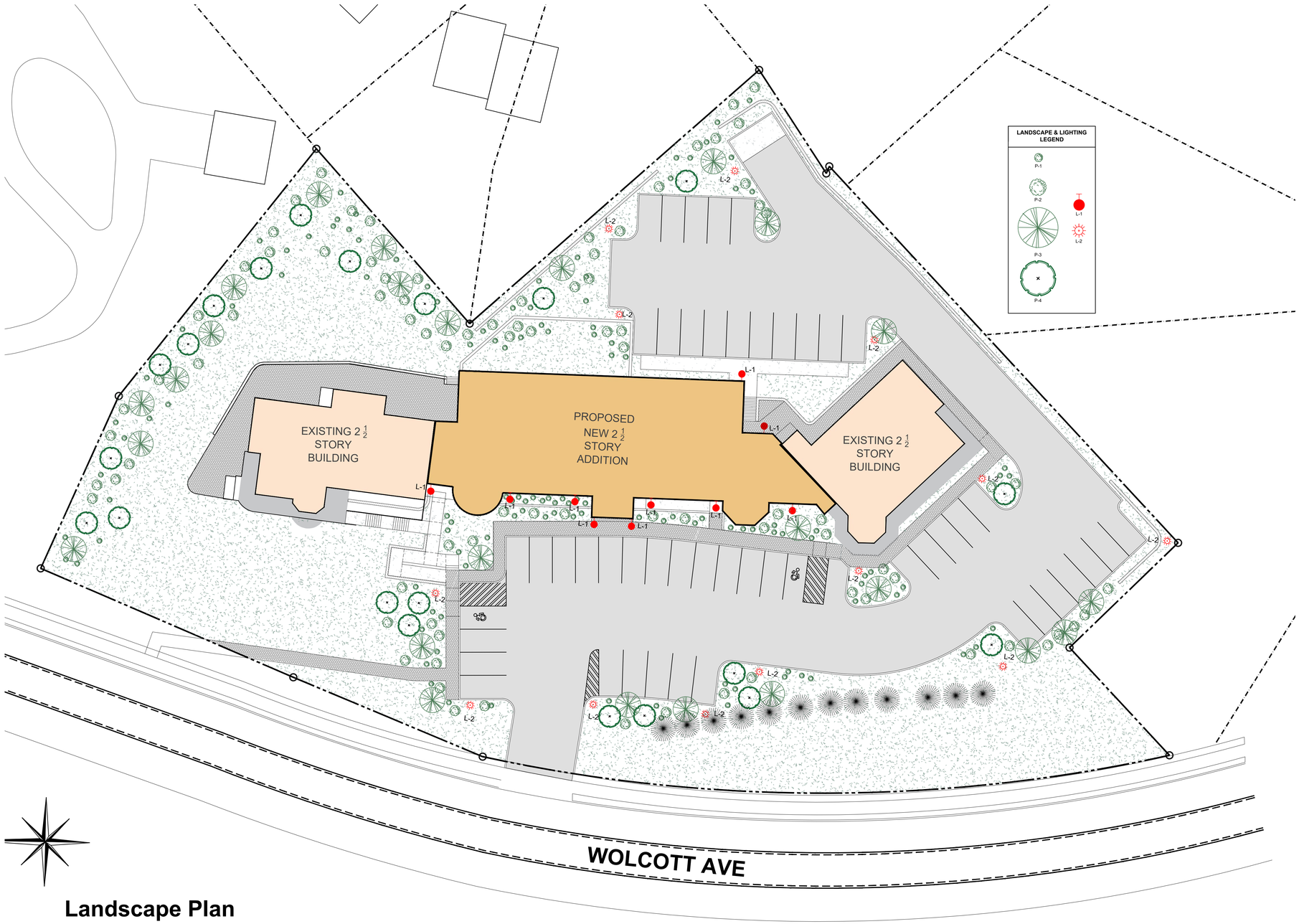
Beacon, New York
Scale: 1" = 20'
January 31, 202

1257

Owner:
JMARKMNG, LLC
1064 Wolcott Avenue
Beacon, New York 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508



Landscape Plan

Scale: 1" = 20'

L-1
Generation Lighting
Brentwood 2-Light 10.25-in H Black Outdoor Wall Light

L-2
Z-Lite Wakefield 90-in H Black Hardwired Incandescent Post Light

LIGHTING NOTES:
ALL EXTERIOR LIGHTING ON THE SITE SHALL CONFORM TO BEACON ZONING CODE SECTION 223-14B: EXTERIOR LIGHTING. ALL EXTERIOR LIGHTING ACCESSORY TO A RESIDENTIAL, INDUSTRIAL, MULTIFAMILY OR NONRESIDENTIAL USE, INCLUDING THE LIGHTING OF SIGNS, SHALL BE SUBJECT TO THE FOLLOWING STANDARDS:
[AMENDED 12-9-2019 BY L.L. NO. 11-2019]

(1) THE TYPE, LOCATION, AND SHADING OF SUCH LIGHTING SHALL PREVENT THE SPILLOVER OF LIGHT ONTO ANY ADJACENT RESIDENTIAL OR MULTIFAMILY PROPERTY OR DIRECT GLARE ONTO ANY PUBLIC SIDEWALK OR STREET.
(2) SUCH LIGHTING SHALL USE FULL CUTOFF FIXTURES THAT DO NOT EMIT LIGHT ABOVE THE HORIZONTAL PLANE INTO THE NIGHT SKY, EXCEPT FOR LIGHTING FOR SHORT-TERM EVENTS OR HOLIDAYS, FLAGPOLE LIGHTING, DECORATIVE LIGHT SOURCES UNDER 600 LUMENS, PUBLIC PARKS AND OTHER PUBLIC SPECIALTY LIGHTING, AS DETERMINED BY THE BUILDING INSPECTOR.
(3) HOURS OF LIGHTING AND FIXTURE HEIGHT, TYPE, DESIGN, INTENSITY, AND COLOR TEMPERATURE MAY BE DETERMINED BY THE PLANNING BOARD IN ACTING ON ANY SITE DEVELOPMENT PLAN UPON CONSIDERATION OF THE FOLLOWING CONSIDERATIONS:
(a) LIGHTING FIXTURES IN PEDESTRIAN AREAS SHOULD BE A MAXIMUM OF 15 FEET IN HEIGHT AND PARKING LOT LIGHTING FIXTURES SHOULD BE A MAXIMUM OF 20 FEET.
(b) PEDESTRIAN AND PARKING LOT AREAS SHOULD AVERAGE APPROXIMATELY ONE FOOTCANDLE. ONLY HIGH SECURITY AREAS MAY REQUIRE LIGHTING IN THE TWO TO FIVE FOOTCANDLE RANGE, WHILE OVER FIVE FOOTCANDLES IS USUALLY A WASTE OF ENERGY AND A SOURCE OF GLARE.
(c) COLOR TEMPERATURES SHOULD BE IN THE RANGE OF 2,400 TO 4,000 KELVIN DEGREES.
(d) THE COLOR RENDERING INDEX SHOULD BE IN THE RANGE OF 80 TO 100.
(e) ADAPTIVE CONTROLS, SUCH AS DIMMERS, TIMERS, AND MOTION SENSOR SHUT-OFF LIGHTING, SHOULD BE USED WHENEVER APPROPRIATE.

P-1
Blue Wood Aster
Herbaceous

P-2
Hayscented Fern
Fern

P-3
Gray Birch
Tree

P-4
Gray Dogwood
Shrub

PLANTING and LANDSCAPE NOTES

1. Contractors shall enter and exit site through pre-approved routes only.
2. No non-native plant species shall be introduced onto the site. All species shall be indigenous to the northeast region of North America.
3. If a straight specie is specified, no cultivars will be accepted without prior approval of designer.
4. No plants will be accepted that display mechanical injury, disease or specie irregularities.
5. Soil shall be prepped by removing all construction debris, loose roots and stones larger than 3".
6. All plants must be labeled when delivered to site.
7. Areas to be planted shall be marked and labeled by designer.
8. All plant locations and orientations in the field require approval from designer and owner prior to installation.
9. Test tree-pit for drainage before planting. Do not plant tree in pit if water is still evident after one hour. Contact site engineer or landscape designer if this condition is encountered.
10. All tree-planting to be coordinated with as-built utilities. Trees to be located minimum of 5' from active lines.
11. All trees shall be ball and burlap unless otherwise specified on Plant List.
12. Each new tree hole tree shall be twice the width of the rootball.
13. Burlap, wire, cords, ties and any wrapping materials must be removed from all rootballs before backfilling.
14. Plant all plants so top of rootball is slightly above surrounding soil(small and large plants)
15. No planting shall be done in muddy, rainy or frozen conditions.
16. All plants calling for "Overflowing" in the notes shall not be accepted by designer if plants are thin.
17. If planting is delayed for more than 3 hours after delivery, set plants in shade. Protect from weather and mechanical damage. Keep roots moist and cover with mulch.
18. Contractors shall leave site neat and orderly during course of project, and store materials and equipment in owner-approved locations away from all trees and plants. Store all unplanted plant material away from damaging sun.
19. If site conditions conflict with intended design, contractor shall alert Owner and designer.
20. No substitutions are to be made without the written or verbal consent of landscape designer and owner.
21. Create a size-specific water-well around each plant, 3' from center of tree, and mulch from the outside. Do not mulch crown.
22. Water thoroughly after planting each plant. Water schedule to be determined.
23. Spray for deer if planted in fall. Sometimes bucks mark their territory with their antlers.
24. Keep planting areas weed-free until plant is established.
25. Eco Lawn seeding shall be implemented by contractor familiar with this specie mix and with the process, and approved by designer. This is not the same as casting contractor grass seed.
26. Pervious/Permeable Pavers and associated grass seeding shall be installed by contractor with experience in this process. This process requires establishment maintenance, in order to succeed.
27. Bermed areas shall be built with designer directing construction.
28. Street tree and surrounding tree-pit shall be installed by contractor experienced with these materials and approved by designer.
29. All plants require regular watering for the first two seasons in order to succeed.
30. See separate Green Roof Notes.

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	3/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

Special Use Permit Application

Sheet 3 of 12 - Landscape Plan

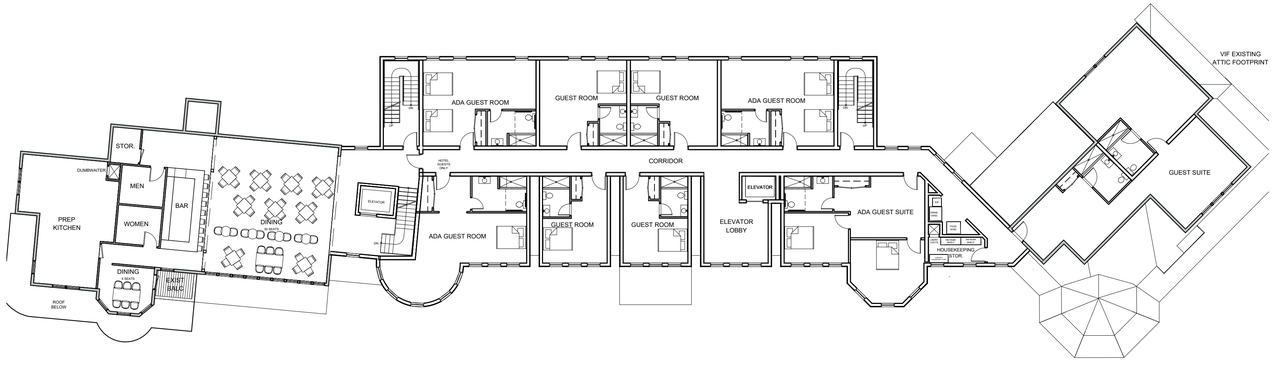
Owner:
JMARKMNG, LLC
1064 Wolcott Avenue
Beacon, New York 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

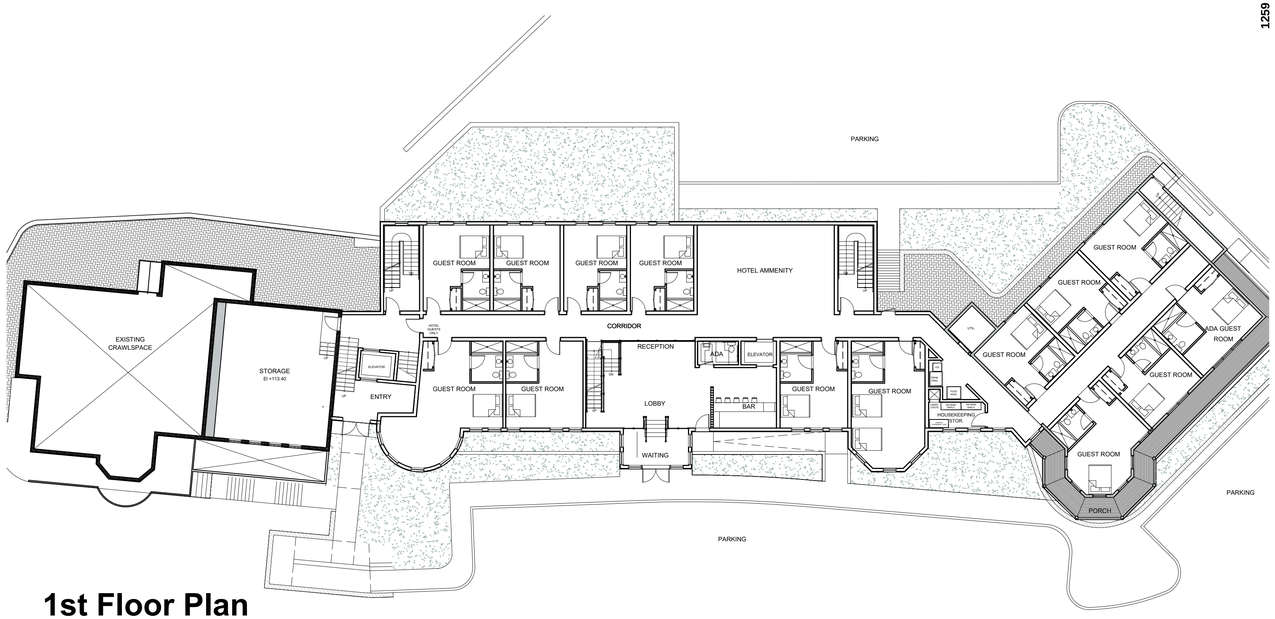
1064 Wolcott Avenue

Beacon, New York
Scale: 1" = 20'
January 31, 202



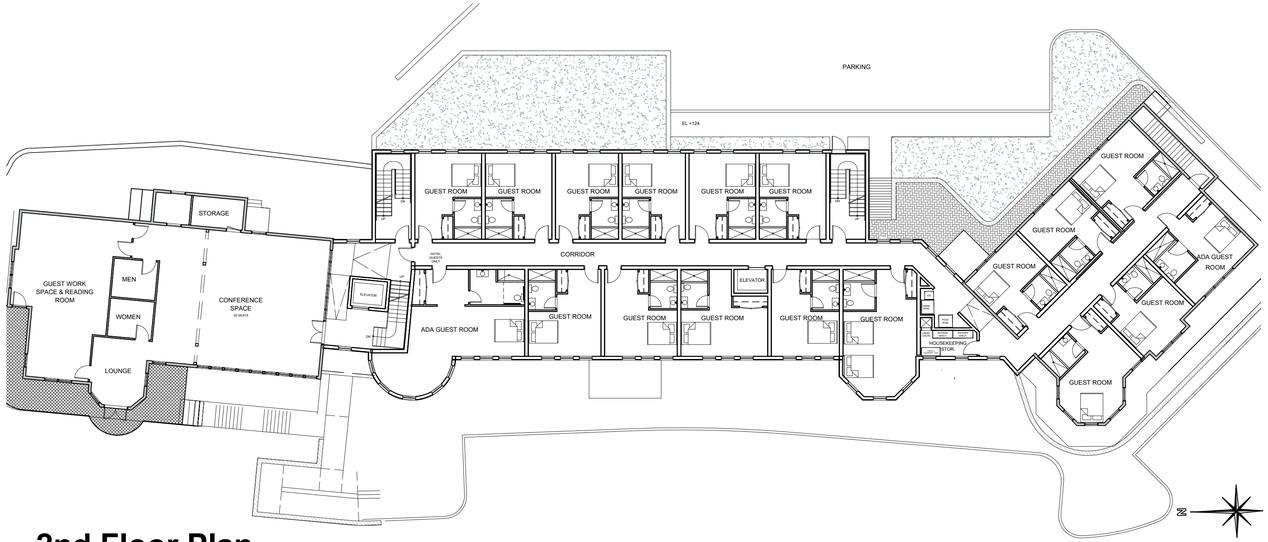
3rd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



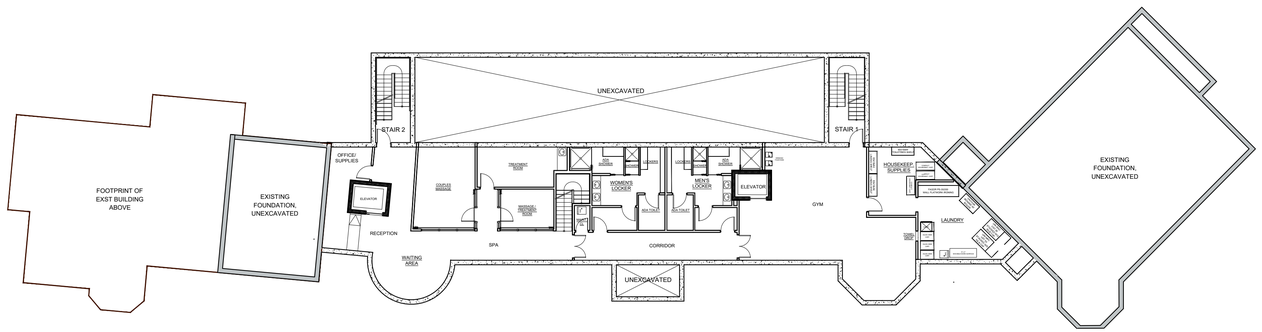
1st Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



2nd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



Basement Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	3/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

Special Use Permit Application

Sheet 4 of 12 - Building Plans

Owner:
JMARKMNG, LLC
1064 Wolcott Avenue
Beacon, New York 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

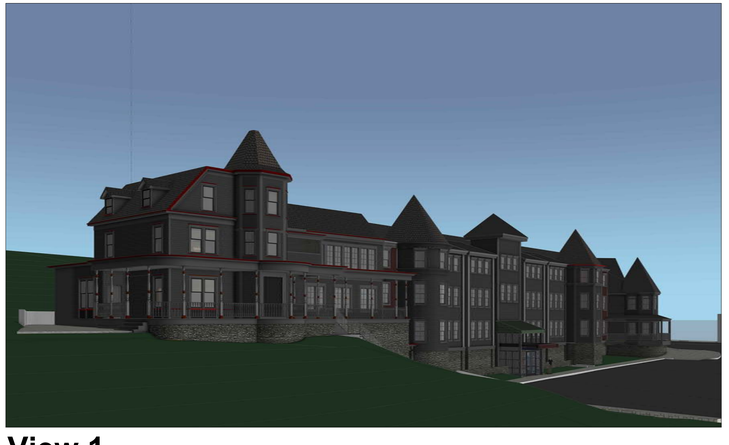
Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

1064 Wolcott Avenue

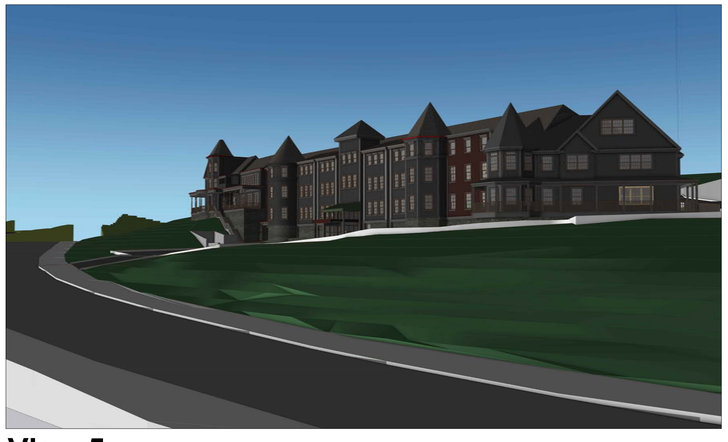
Beacon, New York
Scale: $\frac{1}{16}$" = 1'-0"
January 28, 2025

View 2

View 1 - Previous Version



View 1



View 5

View 4

View 3

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	3/25/25	REVISED PER PLANNING BOARD COMMENTS	AJS

Building Elevations & Images

Sheet 5 of 12 - Building Elevations & Images

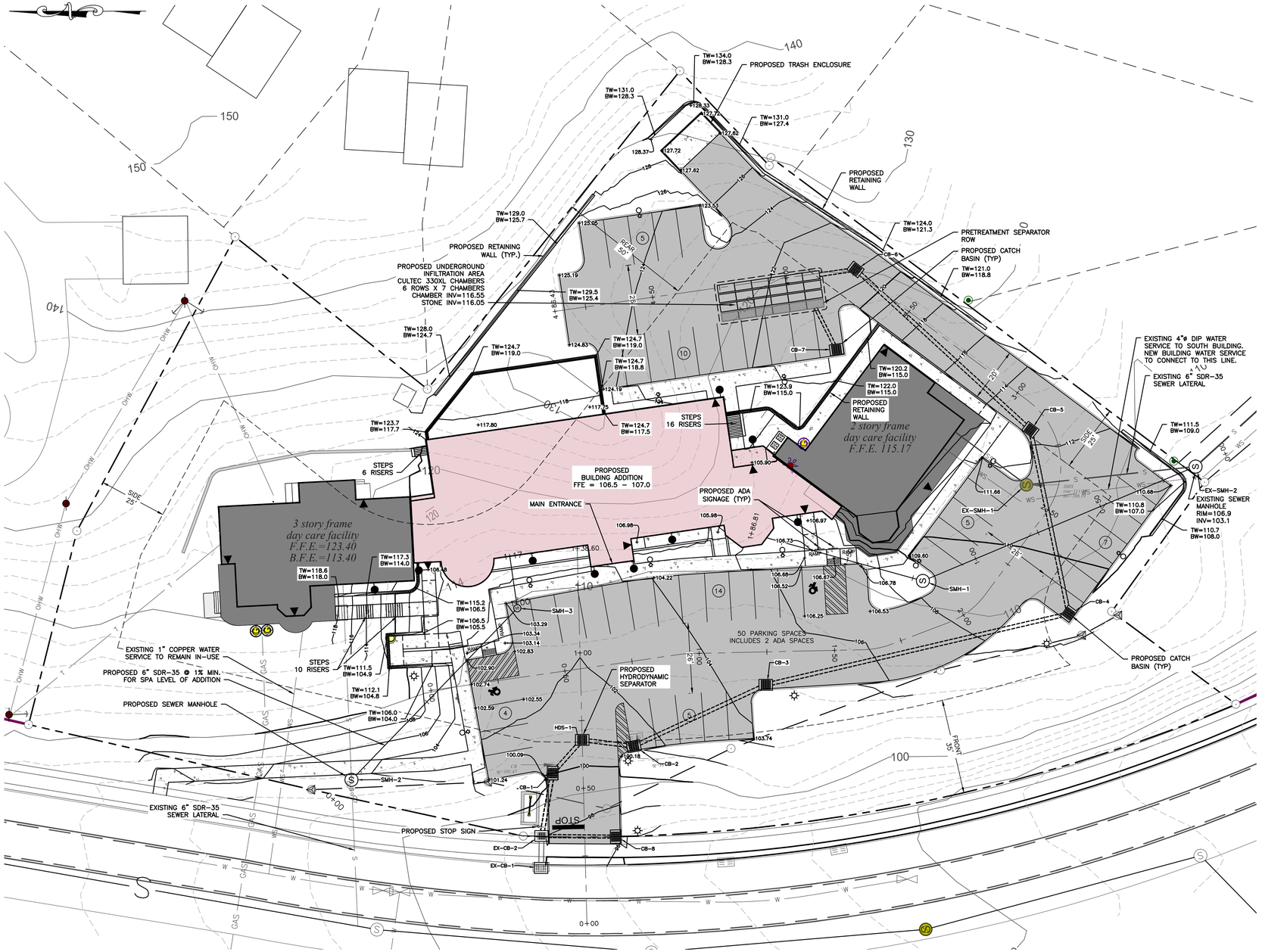
Owner:
JMARKMNG, LLC
1064 Wolcott Avenue
Beacon, New York 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

1064 Wolcott Avenue

Beacon, New York
Scale: $\frac{1}{16}$" = 1'-0"
January 28, 2025



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING STREAM
- EXISTING WETLAND BOUNDARY
- 100' WETLAND BUFFER
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- OHW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- SS EXISTING SEWER SERVICE LINE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- W EXISTING WATER LINE
- WS EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- EXISTING WATER SHUT OFF VALVE
- EXISTING WATER VALVE
- EXISTING WATER METER LINE
- EXISTING ROOF LEADER
- EXISTING CATCH BASIN

- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- 250 PROPOSED MAJOR CONTOUR
- 252 PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- S PROPOSED SEWER LINE
- SS PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED SDS LATERAL
- PROPOSED SDS SOLID LINE
- ST PROPOSED STORM WATER LINE
- RL PROPOSED ROOF LEADER LINE
- PROPOSED ROOF LEADER
- W PROPOSED WATER LINE
- WS PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE

STORM SEWER STRUCTURE TABLE	
STRUCTURE	STRUCTURE DETAILS
CB-1	RIM = 100.01 SUMP = 95.00 HDS1-CB1 INV IN = 97.01 CB1-EXCB2 INV OUT = 95.00
CB-2	RIM = 101.34 SUMP = 98.27 CB3-CB2 INV IN = 98.37 CB2-HDS1 INV OUT = 98.27
CB-3	RIM = 104.79 SUMP = 100.50 CB3 - CB2 INV IN = 101.60 CB3-CB2 INV OUT = 101.50
CB-4	RIM = 108.97 SUMP = 104.67 CB4-CB3 INV IN = 104.77 CB3 - CB2 INV OUT = 104.67
CB-5	RIM = 112.41 SUMP = 105.50 CB5-CB4 INV IN = 109.00 CB4-CB3 INV OUT = 105.50
CB-6	RIM = 120.80 SUMP = 116.07 UG-CB6 INV IN = 117.42 CB5-CB4 INV OUT = 116.07
CB-7	RIM = 120.79 SUMP = 116.68 CB7-INF INV OUT = 116.68
CB-8	RIM = 96.50 SUMP = 92.85 CB8-CB2 INV OUT = 93.85
EX-CB-1	RIM = 96.89 SUMP = 91.56 EXCB2-EXCB1 INV IN = 92.56
EX-CB-2	RIM = 97.43 SUMP = 92.06 CB1-EXCB2 INV IN = 94.33 CB8-CB2 INV IN = 93.58 EXCB2-EXCB1 INV OUT = 93.08
HDS-1	RIM = 100.56 SUMP = 96.36 CB2-HDS1 INV IN = 97.50 HDS1-CB1 INV OUT = 97.36

STORM SEWER PIPE TABLE			
PIPE NAME	LENGTH	SIZE AND MATERIAL	SLOPE
CB1-EXCB2	24 LF	15" ø RCP	2.84%
CB2-HDS1	19 LF	15" ø CORR HDPE	4.02%
CB3-CB2	54 LF	15" ø CORR HDPE	5.82%
CB3 - CB2	115 LF	15" ø CORR HDPE	2.67%
CB4-CB3	69 LF	15" ø CORR HDPE	1.05%
CB5-CB4	88 LF	15" ø CORR HDPE	8.07%
CB7-INF	17 LF	12" ø CORR HDPE	0.47%
CB8-CB2	27 LF	12" ø CORR HDPE	1.00%
EXCB2-EXCB1	12 LF	18" ø RCP	4.41%
HDS1-CB1	16 LF	15" ø CORR HDPE	2.13%
UG-CB6	13 LF	15" ø CORR HDPE	0.59%

INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES

CATCH BASINS PIPING AND FLARED END SECTIONS:

ALL CATCH BASINS, PIPING AND FLARED END SECTIONS SHALL BE INSPECTED EVERY SPRING AND FALL. LOOK FOR OBSTRUCTIONS, VEGETATION, DEBRIS, LITTER, SEDIMENT, ETC. BLOCKING THE STRUCTURES OR PIPES. UTILIZE VACUUM TRUCK IF NECESSARY. OBSERVE THE FLOW OF WATER AFTER A RAINFALL EVENT. ANY EVIDENCE OF PONDING IN THE STRUCTURE INDICATES A POTENTIAL BLOCKAGE. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED.

RIP RAP OUTLET PROTECTION AND EMERGENCY OVERFLOW WEIR:

RIP RAP OUTLET PROTECTION AND THE EMERGENCY OVERFLOW WEIR SHALL BE INSPECTED QUARTERLY FOR SEDIMENT BUILD-UP, VEGETATION, DEBRIS, LITTER, AND OBSTRUCTIONS. IF SEDIMENT BUILDS UP ENOUGH TO FILL IN THE VOID SPACE BETWEEN THE STONES OR GRASS PAVERS, THEN THE RIP RAP OR PAVERS SHALL BE CLEANED OR REPLACED.

BIORETENTION AREA:

THE BIORETENTION AREA SHALL BE INSPECTED MONTHLY FOR SEDIMENT AND DEBRIS ACCUMULATION. ANY ACCUMULATED SEDIMENT OR DEBRIS SHOULD BE REMOVED AS NECESSARY. AFTER STORM EVENTS, THE BIORETENTION AREA'S DEWATERING DURATION SHOULD ALSO BE MONITORED. THE BIORETENTION AREA'S FLOOR SHALL BE MOWED WHEN THE GRASS REACHES A HEIGHT OF 18"(ONLY IF LAWN GRASS IS PRESENT). CUT ORNAMENTAL GRASSES ANNUALLY IN THE LATE FALL. SEDIMENT SHALL BE CLEANED OUT OF THE BASIN ANNUALLY. IN THE SPRING AND FALL, INSPECT INFLOW AND OUTFLOW POINTS FOR EROSION OR CLOGGING. INSPECT TREES, SHRUBS AND OTHER VEGETATION TO EVALUATE THEIR HEALTH AND REPLACE ANY DEAD OR DISEASED VEGETATION. INSPECT SURROUNDING DRAINAGE AREA FOR EROSION OR SIGNS OF SEDIMENT DELIVERY TO THE BIORETENTION AREA. REMOVE ANY INVASIVE PLANT SPECIES. REMOVE CLOGS FROM THE STORMWATER SYSTEM INFLOW AND OUTFLOW COMPONENTS. CHECK FOR SIGNS OF VEGETATION OVERGROWTH, OBSERVE DEWATERING CAPABILITY, CHECK FERTILIZER, AND TEST SOILS FOR PH ANNUALLY. HARVEST OVERGROWN VEGETATION AND REMOVE FROM THE BIORETENTION AREA. IF IT TAKES LONGER THAN 24 HOURS TO DEWATER THE BIORETENTION AREA, THE VALVE ON THE UNDERDRAIN SHALL BE OPENED SLIGHTLY TO PROVIDE FULL DEWATERING IN 24 HOURS. IF THE PH IS BELOW 5.2, LIME SHOULD BE APPLIED. IF THE PH IS ABOVE 7.0 TO 8.0, IRON SULFATE PLUS SULFUR CAN BE APPLIED TO REDUCE THE PH. REPLACE MULCH OVER ENTIRE AREA EVERY TWO TO THREE YEARS. IF DEWATERING IS A PROBLEM, CORE AERATION OF CULTIVATING UN-VEGETATED AREAS MAY BE REQUIRED TO ENSURE ADEQUATE FILTRATION.

UNDERGROUND DETENTION/INFILTRATION SYSTEM:

INFILTRATION BASINS SHALL BE INSPECTED MONTHLY FOR SEDIMENT AND DEBRIS ACCUMULATION DURING THE FIRST YEAR OF OPERATION. AFTER 50 YEARS OF SERVICE LIFE THE SYSTEM SHOULD BE EVALUATED. IF THE SYSTEM IS NO LONGER FUNCTIONING IN ACCORDANCE WITH THE ORIGINAL DESIGN, THE SYSTEM SHALL BE RESTORED OR REPLACED. THERE ARE FOUR INSPECTION PORTS AT THE CORNERS OF THE SYSTEM TO PROVIDE FOR VISUAL INSPECTION, AND A MEANS OF CLEANING SYSTEM WITH A VACUUM TRUCK. IN THE SPRING AND FALL, INSPECT THE INLET AND OUTLET FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS, DEBRIS, ETC.. INSPECT THE INTERIOR OF THE STORMWATER MANAGEMENT CHAMBERS THROUGH INSPECTION PORT FOR DEBRIS EVERY FIVE YEARS. CLEAN DEBRIS FROM CHAMBERS AND FEED CONNECTORS.

SANITARY SEWER STRUCTURE TABLE	
STRUCTURE	STRUCTURE DETAILS
EX-SMH-1	RIM = 112.37 EX BLDG LAT N INV IN = 107.84 EXSMH1-EXSMH2 INV OUT = 108.19
EX-SMH-2	RIM = 107.55 EXSMH1-EXSMH2 INV IN = 103.31 SMH1-EXSMH2 INV IN = 103.20 EXSMH2-EXSMH1 INV OUT = 103.10
EX-SMH-3	RIM = 105.38 EXSMH2-EXSMH1 INV IN = 100.38
SMH-1	RIM = 109.27 BLDG LAT S INV IN = 104.39 SMH1-EXSMH2 INV OUT = 104.29
SMH-2	RIM = 105.00 SMH3-SMH2 INV IN = 100.02
SMH-3	RIM = 103.32 BLDG LAT N INV IN = 101.00 SMH3-SMH2 INV OUT = 100.90

SANITARY SEWER PIPE TABLE			
PIPE NAME	LENGTH	SIZE AND MATERIAL	SLOPE
BLDG LAT N	19 LF	6 inch PVC Pipe	1.00%
BLDG LAT S	60 LF	6 inch PVC Pipe	1.00%
EXSMH2-EXSMH1	141 LF	6 inch PVC Pipe	1.93%
SMH1-EXSMH2	109 LF	6 inch PVC Pipe	1.00%
SMH3-SMH2	88 LF	6 inch PVC Pipe	1.00%

GENERAL CONSTRUCTION NOTES:

1. ALL OTHER UTILITIES (TELEPHONE, ELECTRIC, GAS, CABLE, ETC.) SHALL BE INCORPORATED PRIOR TO CONSTRUCTION. ALL SUCH UTILITY DESIGNS SHALL BE DEVELOPED IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANIES.
2. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962.
3. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL CATCH BASINS & STORM SEWER LINES, SANITARY MANHOLES & SEWER LINES, WATERLINES AND OTHER UNDERGROUND UTILITY LINES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT. INVESTIGATIVE TEST PITS MAY BE REQUIRED TO VERIFY LOCATIONS.
4. PIPE CONNECTIONS TO ALL CATCH BASINS SHALL BE MADE WATERTIGHT, WITH PARTICULAR ATTENTION BEING PAID TO CONNECTIONS LOCATED WITHIN 10 FEET OF SEWER MAINS (AND SERVICE LATERALS).

EXISTING UNDERGROUND UTILITY NOTES:

1. CONTRACTOR SHALL DIG TEST PITS TO VERIFY LOCATION, SIZE AND PIPE MATERIAL OF EXISTING UNDERGROUND UTILITIES. IF ANY EXISTING UTILITIES ARE NOT IN THE LOCATION WHERE THEY ARE SHOWN ON THE PLAN, IT SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.

WATER METER NOTES:

1. THE APPLICANT/APPLICANT'S PLUMBER SHALL ACQUIRE WATER METERS AND MXU UNITS (SIGNAL SENDING AND RECEIVING UNIT) FOR ADVANCED METERING INFRASTRUCTURE (AMI) SYSTEM FROM THE CITY OF BEACON WATER DEPARTMENT. THE MXU UNIT SHALL BE INSTALLED ON THE EXTERIOR OF THE BUILDING AND SHALL BE LOCATED 2 TO 3 FEET ABOVE THE EXTERIOR GROUND ELEVATION. IN CASE OF A METER LOCATED WITHIN AN UNDERGROUND CHAMBER, THE WIRING FOR THE MXU UNIT SHALL BE RUN UP THROUGH THE VENT PIPING AND THE MXU UNIT MOUNTED TO THE EXTERIOR OF THE VENT PIPE.

POST CONSTRUCTION NOTES:

1. UPON COMPLETION OF CONSTRUCTION OF THE STORMWATER FACILITIES, AS-BUILT DRAWINGS OF ALL STORMWATER PRACTICES AND AN OPERATION AND MAINTENANCE PLAN MANUAL SHALL BE PROVIDED TO THE CITY OF BEACON.

BUILDING SPRINKLER NOTES:

1. THE NEW BUILDING SHALL BE PROVIDED WITH A FIRE SUPPRESSION SPRINKLING SYSTEM.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Dig Safely. New York. Call 811 before you dig

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

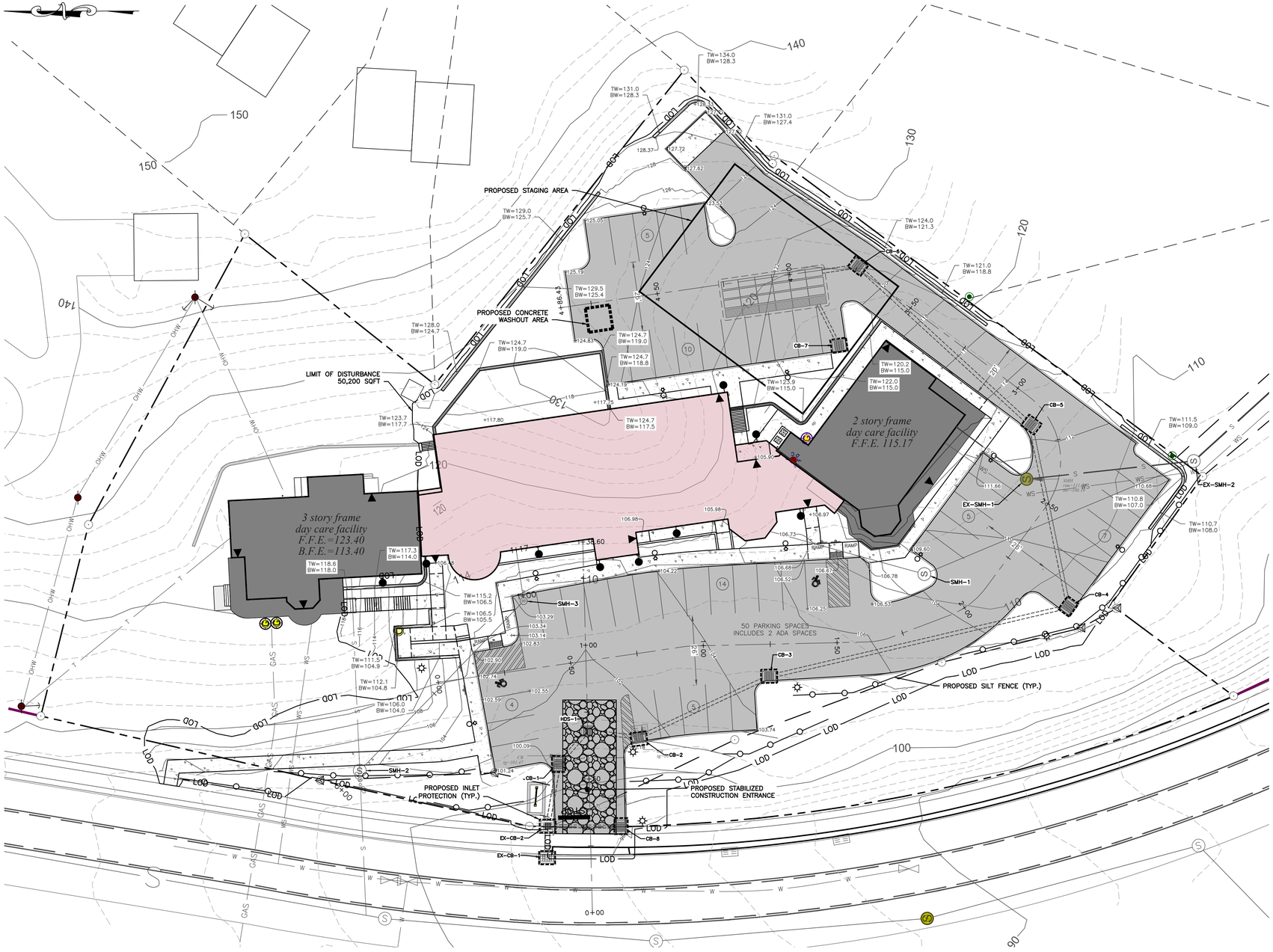
GRADING & UTILITY PLAN

1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/28/25
SCALE:	1" = 20'
TITLE:	GU-1
SHEET:	6 OF 12

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING STREAM
- EXISTING WETLAND BOUNDARY
- 100' WETLAND BUFFER
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- EXISTING SEWER SERVICE LINE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- EXISTING WATER LINE
- EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- EXISTING WATER SHUT OFF VALVE
- EXISTING WATER VALVE
- EXISTING STORM WATER LINE
- EXISTING ROOF LEADER
- EXISTING CATCH BASIN

- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- PROPOSED SEWER LINE
- PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED SDS LATERAL
- PROPOSED SDS SOLID LINE
- PROPOSED STORM WATER LINE
- PROPOSED ROOF LEADER LINE
- PROPOSED ROOF LEADER
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED CATCH BASIN INLET PROTECTION
- PROPOSED CONSTRUCTION ENTRANCE

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.
2. ALL STORMWATER MANAGEMENT STRUCTURES (E.G. CATCH BASINS) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. CATCH BASINS SHALL BE CLEANED WHEN SEDIMENT DEPTH REACHES A MAXIMUM OF ONE-HALF THE AVAILABLE SUMP DEPTH.
3. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
4. ANY PILE OF POTENTIALLY EROSIVE MATERIAL TEMPORARILY STOCKPILED ON THE SITE DURING THE CONSTRUCTION PROCESS SHALL BE LOCATED IN AN AREA AWAY FROM STORM DRAINAGE AND SHALL BE PROPERLY PROTECTED FROM EROSION BY A SURROUNDING SILT FENCE.
5. PERMANENT SEEDED AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THE DETAILS SHEET.
6. AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND WILL NOT BE REDISTURBED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE COVER WITHIN 14 DAYS.
7. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY STANDARD METHODS OF LIGHTLY WATERING ALL EXPOSED SOIL AND RAPIDLY STABILIZING THE REGRADED AREAS WITH TOPSOIL, LOAM AND/OR SEEDING.
8. THE TOWN ENGINEER AND PROJECT ENGINEER SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE START OF ANY SITE WORK, AND BY SUCH NOTIFICATION, SHALL BE PROVIDED WITH THE NAME AND TELEPHONE NUMBER OF THE GENERAL CONTRACTOR RESPONSIBLE FOR SUCH WORK.
9. THE TOWN AND/OR ITS REPRESENTATIVES MAY INSPECT EROSION AND SEDIMENT CONTROL PRACTICES ON THE SITE DURING CONSTRUCTION AND RECOMMEND THAT THE CONTRACTOR INSTALL ADDITIONAL EROSION CONTROL MEASURES IF DEEMED NECESSARY TO PROTECT ANY UNDISTURBED AREAS OF THE SITE. ANY SUCH REQUESTS SHALL BE MADE DIRECTLY TO THE CONTRACTOR AND QUALIFIED PROFESSIONAL AND FOLLOWED UP WITH A WRITTEN NOTIFICATION TO THE DEVELOPER. IN ADDITION, THE PROJECT ENGINEER SHALL BE CONSULTED ON ANY SPECIAL ADDITIONS OR DELETIONS OF EROSION CONTROL MEASURES WARRANTED BY CHANGING FIELD CONDITIONS. THE NOTICE OF INTENT (NOI) MAY NEED TO BE UPDATED AS A RESULT OF THE CHANGES.
10. THE CONTRACTOR/OWNER SHALL MAINTAIN A RECORD OF ALL EROSION AND SEDIMENT CONTROL INSPECTION REPORTS AT THE SITE IN A LOG BOOK. THE SITE LOG BOOK SHALL BE MAINTAINED ON SITE AND BE MADE AVAILABLE TO THE PERMITTING AUTHORITY. THE OWNER/CONTRACTOR SHALL, ON A MONTHLY BASIS, POST AT THE SITE A SUMMARY OF THE SITE INSPECTION ACTIVITIES IN A PUBLICLY ACCESSIBLE LOCATION.
11. THE OWNER SHALL FILE A NOI WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES AND A NOTICE OF TERMINATION (NOT) WITH THE NYSDEC FOLLOWING CONSTRUCTION ACTIVITIES.
12. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL TO FILTER WATER FOR PUMPING TO A SUITABLE LOCATION.
13. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED PER THE APPROVAL OF THE TOWN ENGINEER AND QUALIFIED PROFESSIONAL.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

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DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

EROSION & SEDIMENT CONTROL PLAN

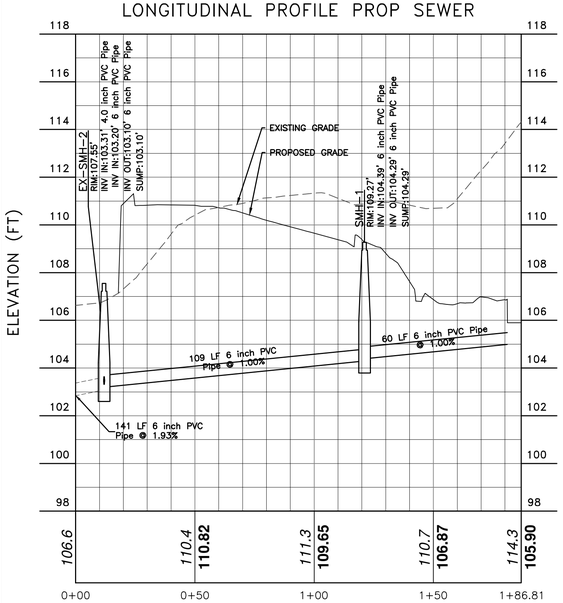
1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/28/25
SCALE:	1" = 20'
TITLE:	ESC-1
SHEET:	7 OF 12

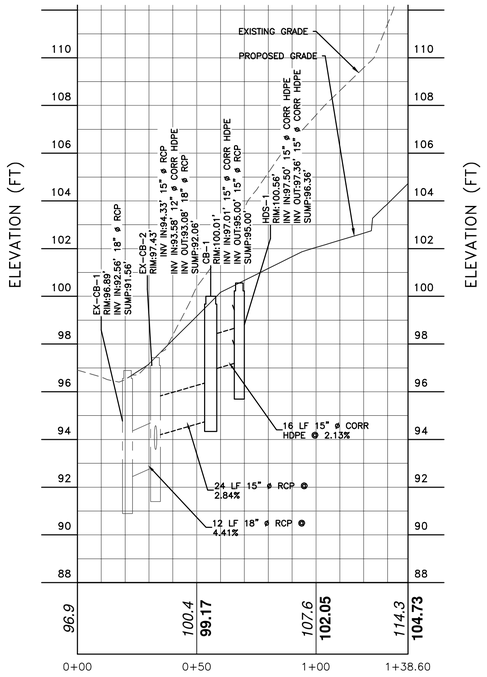
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LONGITUDINAL PROFILE PROP SEWER



SOUTH SEWER PROFILE

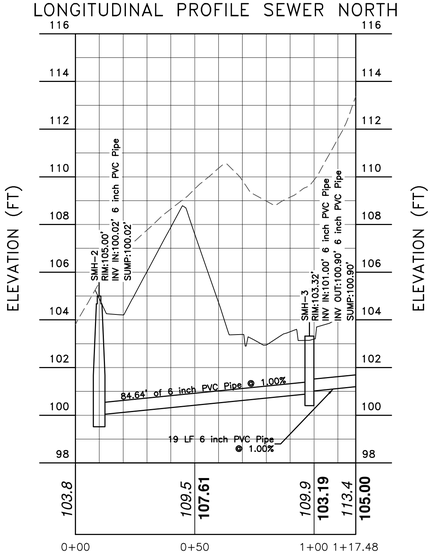
SCALE:1" = 30' H / 1" = 3' V



DRIVEWAY ENTRANCE PROFILE

SCALE:1" = 30' H / 1" = 3' V

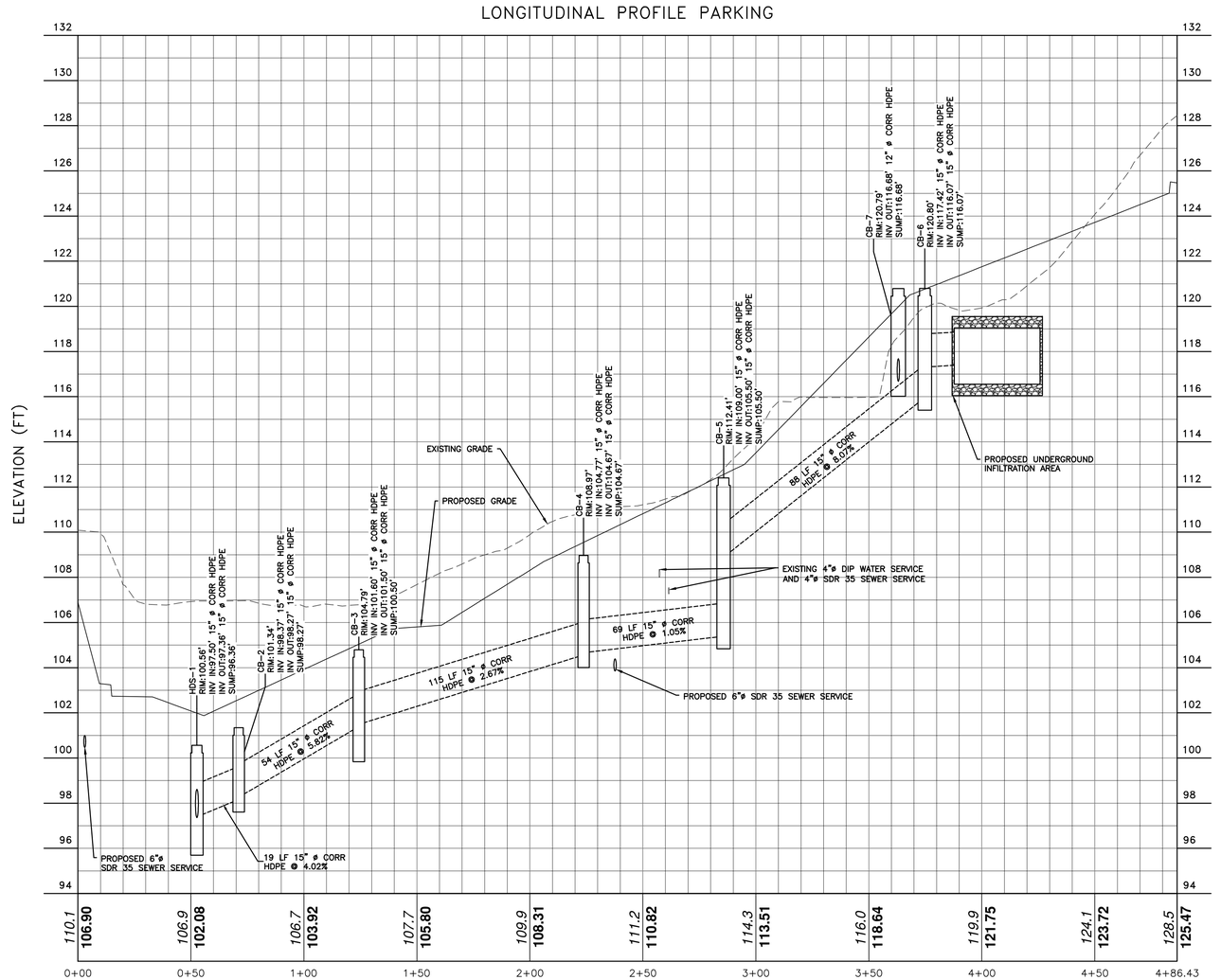
LONGITUDINAL PROFILE SEWER NORTH



NORTH SEWER PROFILE

SCALE:1" = 30' H / 1" = 3' V

LONGITUDINAL PROFILE PARKING



DRIVEWAY PROFILE

SCALE: 1" = 30' H / 1" = 3' V

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

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DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Dig Safely. New York Call 811 before you dig

STATE OF NEW YORK MICHAEL A. BOGDANOFF 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

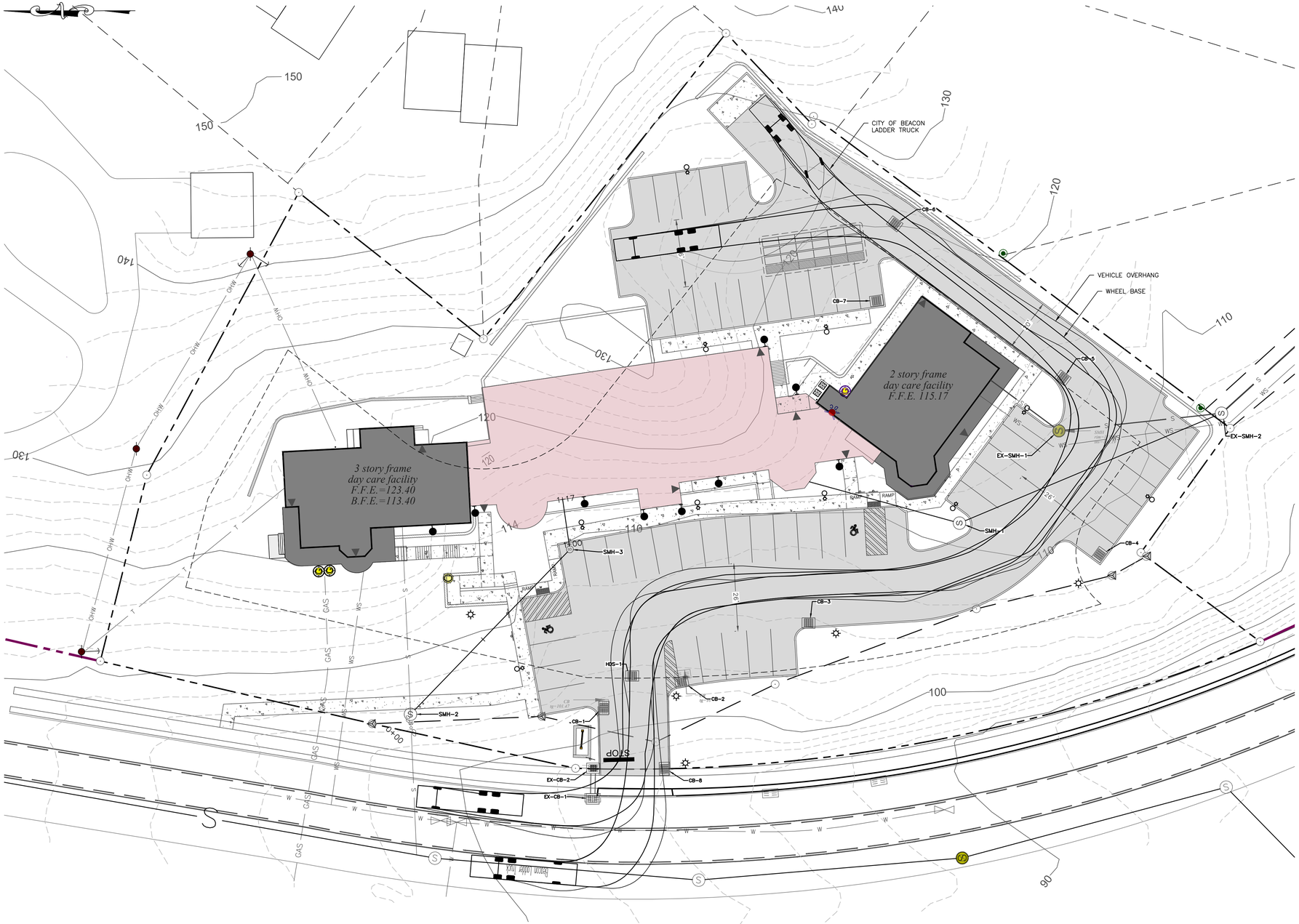
PROFILE SHEET

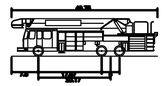
1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/28/25
SCALE:	AS SHOWN
TITLE:	PR-1
SHEET:	8 OF 12

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW





Beacon Ladder Truck	
Overall Length	40.750ft
Overall Width	8.500ft
Overall Body Height	10.500ft
Min. Body Ground Clearance	1.417ft
Track Width	8.317ft
Lock-to-Lock time	4.0s
Curb to Curb Turning Radius	34.833ft

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

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_____ SECRETARY

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DRAWN BY: CMB | CHECKED BY: MAB

REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Dig Safely. New York. Call 811 before you dig

STATE OF NEW YORK · MICHAEL A. BOEHNKE · 084466 · LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

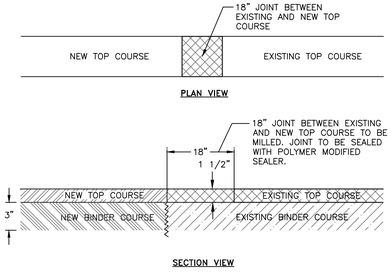
TRUCK TURNING PLAN

1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/28/25
SCALE:	1" = 20'
TITLE:	TR-1
SHEET:	9 OF 12

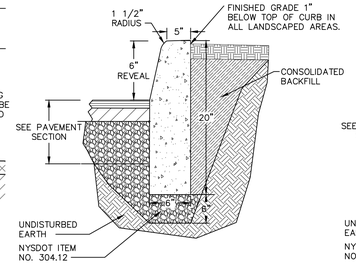
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



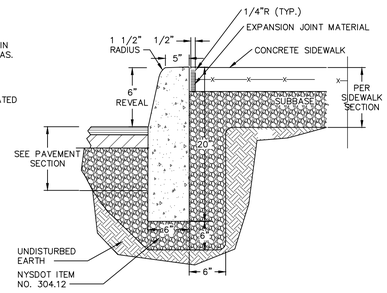
NOTES:

1. 3" BINDER COURSE AND 1½" TOP COURSE TO BE USED FOR RESTORATION OF PAVEMENT WITHIN CITY ROADS.
2. EXCAVATIONS ARE TO BE SAW CUT SMOOTH, ALL EDGES TACK COATED, AND ALL SEAMS SEALED WITH A HOT POLYMER MODIFIED CRACK SEALANT.
3. IF EXISTING ASPHALT PAVEMENT DEPTH IS GREATER THAN THE PROPOSED ASPHALT PAVEMENT SECTION, INCREASE PROPOSED ASPHALT BINDER THICKNESS TO MATCH EXISTING.

MILLED KEYWAY DETAIL
NOT TO SCALE



ABUTTING GRASS OR LANDSCAPE

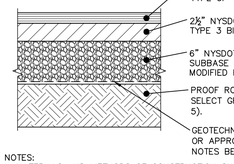


ABUTTING SIDEWALK

NOTES:

1. CONCRETE CURB SHALL BE 4,000 PSI CAST-IN-PLACE, AND IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. EXPANSION JOINTS OF 1/2" CELLULOSE OR SIMILAR MATERIAL SHALL BE PLACED AT 10 FOOT INTERVALS.
3. FOR MOUNTABLE CURBS ABUTTING SIDEWALK OR OTHER HARDSCAPE, REFER TO "ABUTTING SIDEWALK" DETAIL.

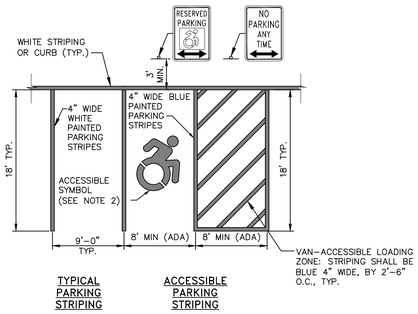
CAST-IN-PLACE CONCRETE CURB DETAIL
NOT TO SCALE



NOTES:

1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST REVISION.
2. SUBGRADE SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS.
3. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407-TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
4. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203-EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
5. IT IS EXPECTED THAT THE EXISTING SITE SUB-SOILS ARE SUITABLE. IF UNSUITABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR POSSIBLE MODIFICATIONS TO THE PAVEMENT DETAIL.

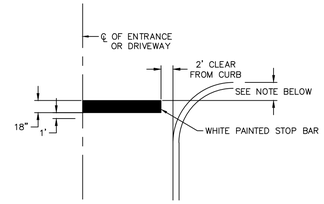
PAVEMENT SECTION DETAIL
NOT TO SCALE



NOTES:

1. ALL DIMENSIONS SUBJECT TO CURRENT MUNICIPALITY ZONING AND SITE REGULATIONS.
2. PAINTED ACCESSIBLE SYMBOL TO BE IN ACCORDANCE WITH NYSDOT AND ADA STANDARDS.
3. IF PARKING ABUTS A SIDEWALK, THEN THE REGULATORY SIGNS SHALL BE PLACED BEHIND THE SIDEWALK.

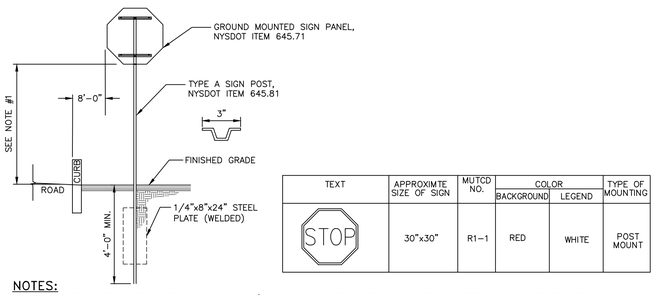
PARKING AND STRIPING DETAIL
NOT TO SCALE



NOTE:

1. THE STOP BAR SHALL BE LOCATED NO CLOSER THAN 5' TO THE WHITE LINE OF THE INTERSECTING ROAD, OR SHALL BE LOCATED 4 FEET BEHIND THE EDGE OF THE CROSSWALK OR SIDEWALK WHERE APPLICABLE.

STOP BAR DETAIL
NOT TO SCALE

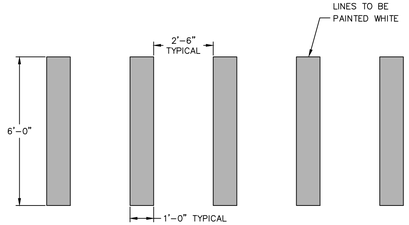


TEXT	APPROXIMTE SIZE OF SIGN	MUTCD NO.	COLOR		TYPE OF MOUNTING
			BACKGROUND	LEGEND	
STOP	30"x30"	R1-1	RED	WHITE	POST MOUNT

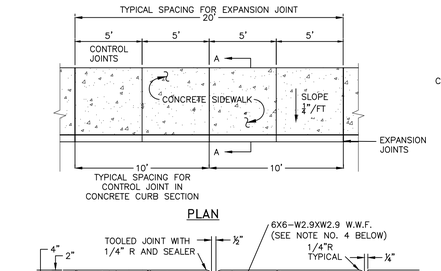
NOTES:

1. SIGN MOUNTING HEIGHT SHALL BE A MINIMUM OF 7'. MINIMUM MOUNTING HEIGHT MAY BE ADJUSTED ONLY IN ACCORDANCE WITH PROVISIONS OUTLINED IN "NYCRR, CHAPTER V-UNIFORM TRAFFIC CONTROL DEVICES."
2. SIGN POST SHALL BE IN ACCORDANCE W/ NYSDOT STANDARD SPECS SECTION 730.
3. SIGN BRACING PER NYSDOT STANDARD SHEETS.
4. SIGN POSTS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE BREAKAWAY TYPE MEETING THE REQUIREMENTS OF THE NYSDOT.

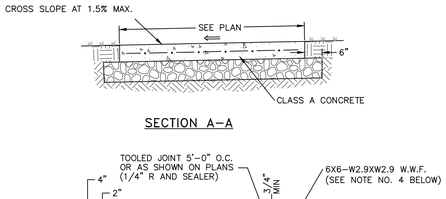
SINGLE POST SIGN DETAIL
NOT TO SCALE



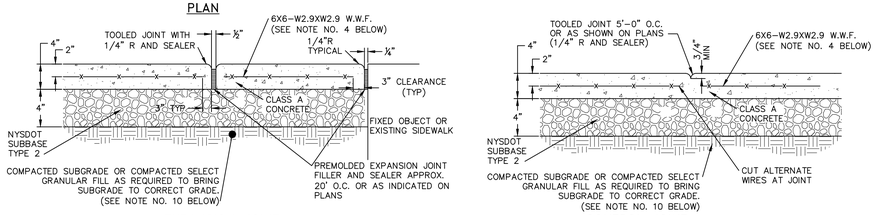
PAINTED CROSSWALK DETAIL
NOT TO SCALE



PLAN



SECTION A-A



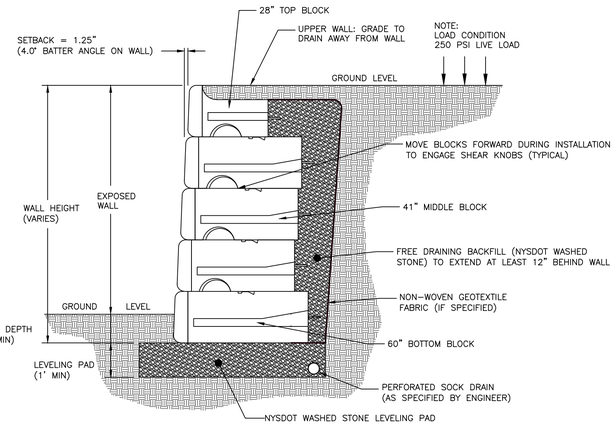
EXPANSION JOINT

CONTROL JOINT

NOTES:

1. 10' SPACING OF CONTROL JOINTS SHALL BE USED FOR CAST IN PLACE CONCRETE CURBS.
2. MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST REVISION.
3. ALL CONCRETE SHALL BE 3,500 PSI CLASS A CONCRETE. CONCRETE MATERIALS, PLACEMENT, AND CONSTRUCTION SHALL CONFORM WITH SECTION 500 OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
4. REINFORCING STEEL FOR CONCRETE SHALL CONFORM WITH SECTION 556 - REINFORCING STEEL FOR CONCRETE STRUCTURES OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND AS SPECIFICALLY CALLED OUT IN THE DRAWINGS.
5. ALL EXPOSED SURFACED SHALL HAVE A BROOM TEXTURED FINISH.
6. EXPANSION JOINTS SHALL BE LOCATED A MAXIMUM OF 20' ON CENTER, OR AS INDICATED ON PLANS.
7. JOINTS SHALL NOT BE SAW CUT.
8. EXPOSED CONCRETE SURFACES SHALL BE TREATED WITH "SUREBOND"/"SAFEBOND" SB-7000 INTENSIFIER BRIGHT PROTECTOR AND SIDEWALK SEALER, OR EQUAL. RATE AND METHOD OF APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS.
9. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 OF THE ABOVE REFERENCED NYSDOT STANDARD.
10. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSE OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMATION WITH SECTION 203-EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
11. ALL WORK SHALL CONFORM WITH SECTION 608-SIDEWALK, DRIVEWAYS, AND BICYCLE PATHS OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.

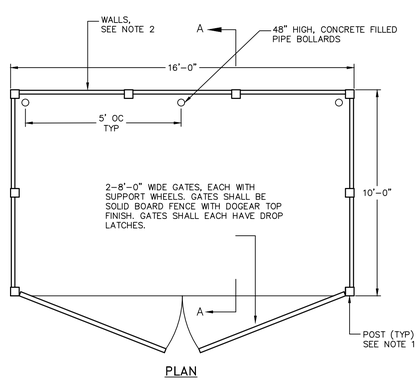
CONCRETE SIDEWALK DETAIL
NOT TO SCALE



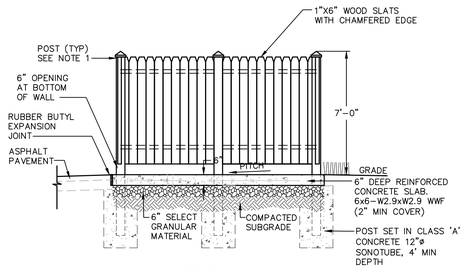
NOTES:

1. RETAINING WALL MANUFACTURED BY REDI-ROCK OR APPROVED EQUAL.
2. THIS DETAIL FOR SITE PLAN APPROVAL ONLY TO SHOW GENERAL WALL ASSEMBLY. REFER TO THE FINAL DESIGN DOCUMENTS RELATED TO THE RETAINING WALL AS PREPARED BY TALCOTT ENGINEERING DESIGN PLLC.
3. WALLS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK. ALL WALL DESIGNS AND CALCULATIONS SHALL BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO CONSTRUCTION OF ANY WALLS ON SITE.

TYPICAL REDI-ROCK GRAVITY WALL
NOT TO SCALE



PLAN



SECTION A-A

NOTES

1. POSTS SHALL HAVE A DECORATIVE CAP, CONSISTENT WITH THE ARTS & CRAFTS STYLE, AS APPROVED BY OWNER. POST SPACING SHALL BE AS REQUIRED BY WALL CONSTRUCTION.
2. WALLS OF DUMPSTER ENCLOSURE SHALL BE A SOLID WOOD PRIVACY FENCING NATURAL STAIL OR PAINT TO COMPLEMENT BUILDING.

TRASH ENCLOSURE DETAILS
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

Dig Safely. New York. Call 811 before you dig

STATE OF NEW YORK MICHAEL A. BIDERMAN 086486 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

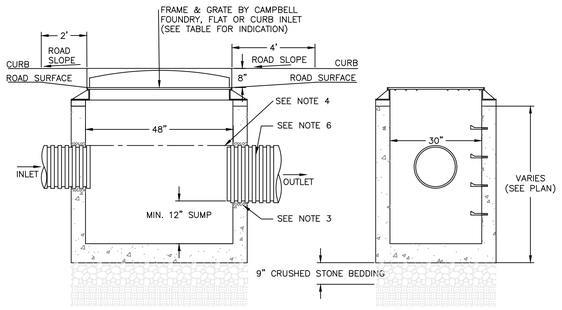
CONSTRUCTION DETAILS

1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/28/25
SCALE:	AS SHOWN
TITLE:	CD-1
SHEET:	10 OF 12

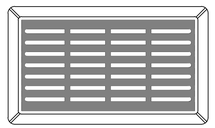
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



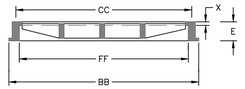
FRONT VIEW SIDE VIEW

NOTES:
1. PRECAST CONCRETE CATCH BASIN WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. CONNECTIONS MADE WITHIN 10 FEET OF A WATER MAIN (OR SERVICE LINE) OR A SEWER MAIN (OR SERVICE LATERAL) SHALL BE MADE WATERTIGHT.
4. PROVIDE A MINIMUM 0.1' DROP BETWEEN INLET AND OUTLET INVERTS (MATCH CROWNS FOR PIPES WITH DIFFERENT SIZE) UNLESS OTHERWISE NOTED ON THE PLAN.
5. CATCH BASINS WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.
6. HDPE PIPE SHALL BE PROVIDED WITH WATERTIGHT CONNECTIONS. ADS MODEL N12 WT IB OR APPROVED EQUAL.

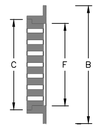
CATCH BASIN DETAIL
NOT TO SCALE



PLAN VIEW



SECTION VIEW 1



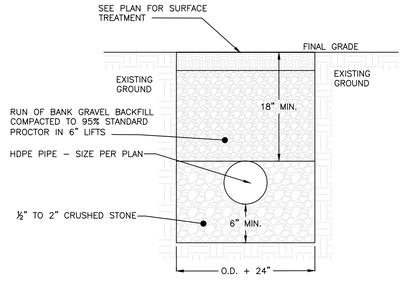
SECTION VIEW 2

DIMENSION TABLE:

B	C	E	F	X	BB	CC	FF
30"	24"	4"	22"	1"	41"	36"	34"

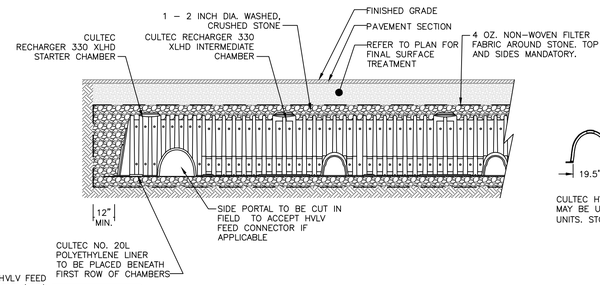
NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 3433, OR APPROVED EQUAL.
2. STMH1 AND STMH 2 RECEIVE SOLID CAST IRON COVERS.

CAST IRON STORMWATER FLAT INLET GRATE DETAIL
NOT TO SCALE



NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

STORMWATER PIPE IN TRENCH DETAIL
NOT TO SCALE

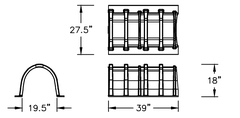


SECTION VIEW

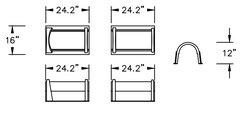
NOTES:
1. CULTEC RECHARGER 330XLHD CHAMBERS BY CULTEC, INC. OF BROOKFIELD, CT. ALL CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH CULTEC INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
2. THE BED OF THE SYSTEM FOOTPRINT SHALL BE LAID NEARLY LEVEL.
3. EACH ROW OF CHAMBERS SHALL BE FED VIA A 12" MANIFOLD WITH TEE CONNECTIONS BY CULTEC OR EQUAL.
4. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IF SUBSURFACE CONDITIONS IN THE AREAS OF THE INFILTRATOR TRENCHES IS NOT CONSISTENT WITH THE TEST PIT OR PERCOLATION DATA (E.G. GROUNDWATER OR BEDROCK ENCOUNTERED, SOIL PROPERTIES ARE NOT CONSISTENT, ETC.)
5. SEPARATOR ROWS AS INDICATED ON THE PLAN TO FULLY WRAPPED WITH WOVEN GEOTEXTILE, MIRAFI 500X OR APPROVED EQUAL.

SYSTEM ID	BOTTOM OF STONE BED ELEVATION	CHAMBER INVERT	TOP OF STONE BED ELEVATION	STONE BED FOOTPRINT	STONE BED DIMENSIONS	NO. OF CHAMBERS
A	116.05	116.55	119.55	1,601.25 SF	52.5'X30.5'	42

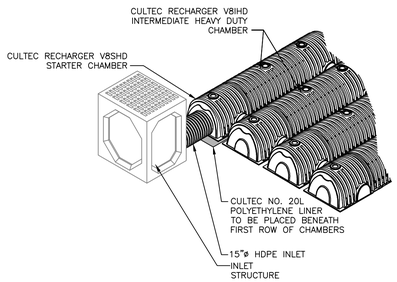
UNDERGROUND INFILTRATION SYSTEM DETAIL
NOT TO SCALE

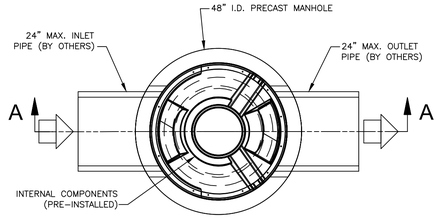


CULTEC HVLV F–110x4 FEED CONNECTOR CHAMBER MAY BE USED ON V8SHD STARTER AND V8EHD END UNITS. STORAGE = 1.968 CF/FT [0.18 m3/m]

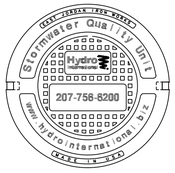


CULTEC HVLV FC–24 FEED CONNECTOR CHAMBER MAY BE USED ON V8IHD INTERMEDIATE UNITS. STORAGE = 0.913 CF/FT [0.08 m3/m]

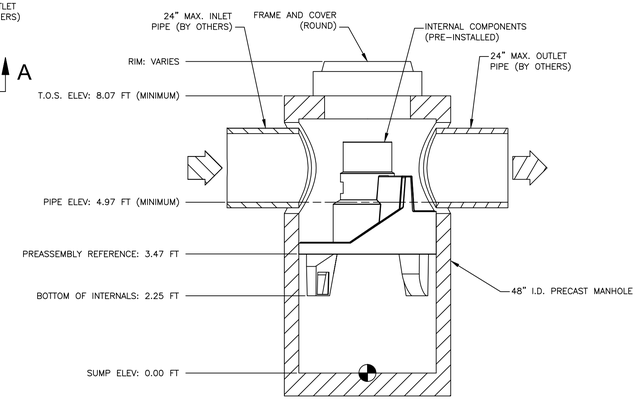




PLAN VIEW



HYDRO FRAME AND COVER (INCLUDED)



SECTION A–A

PRODUCT SPECIFICATION:
1. PEAK HYDRAULIC FLOW: 7.97 CFS.
2. MINIMUM SEDIMENT STORAGE CAPACITY: 0.7 CUBIC YARD.
3. MAXIMUM INLET/OUTLET PIPE DIAMETERS: 24".
4. THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUN OFF.
5. FOR MORE PRODUCT INFORMATION INCLUDING REGULATORY ACCEPTANCES, PLEASE VISIT HTTPS://HYDRO-INT.COM/EN/PRODUCTS/FIRST-DEFENSE

GENERAL NOTES:
1. GENERAL ARRANGEMENT DRAWINGS ONLY. CONTACT HYDRO INTERNATIONAL FOR SITE SPECIFIC DRAWINGS.
2. THE DIAMETER OF THE INLET AND OUTLET PIPES MAY BE NO MORE THAN 24".
3. MULTIPLE INLET PIPES POSSIBLE (REFER TO PROJECT PLAN).
4. INLET/OUTLET PIPE ANGLE CAN VARY TO ALIGN WITH DRAINAGE NETWORK (REFER TO PROJECT PLANS).
5. PEAK FLOW RATE AND MINIMUM HEIGHT LIMITED BY AVAILABLE COVER AND PIPE DIAMETER.
6. LARGER SEDIMENT STORAGE CAPACITY MAY BE PROVIDED WITH A DEEPER SUMP DEPTH.

WATER QUALITY UNIT DETAIL
HYDRO INTERNATIONAL MODEL FDHC–4
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

Dig Safely. New York. Call 811 before you dig

STATE OF NEW YORK MICHAEL A. BOEHNER 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

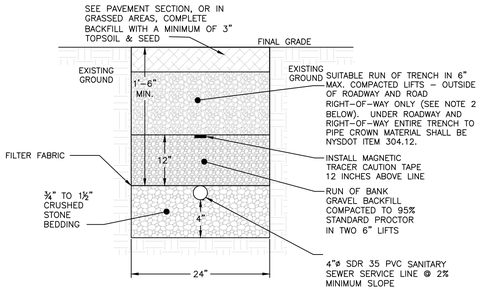
CONSTRUCTION DETAILS

1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/28/25
SCALE:	AS SHOWN
TITLE:	CD–2
SHEET:	11 OF 12

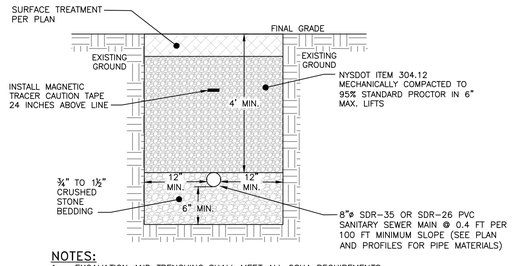
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

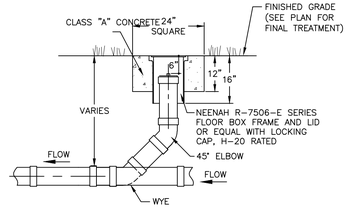
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

SANITARY SEWER SERVICE LINE TRENCH DETAIL
NOT TO SCALE

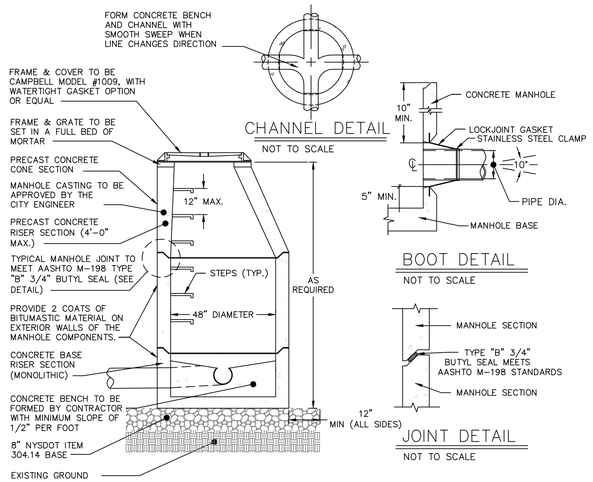


NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SEWER MAIN MATERIAL SHALL BE 8" DIAMETER SDR-26 PVC BELL AND SPIGOT GRAVITY SEWER PIPE, WITH GASTIGHT AND WATERTIGHT JOINTS.

SANITARY SEWER MAIN TRENCH DETAIL
NOT TO SCALE



CLEANOUT DETAIL
NOT TO SCALE



CHANNEL DETAIL
NOT TO SCALE

BOOT DETAIL
NOT TO SCALE

JOINT DETAIL
NOT TO SCALE

NOTES:

1. PIPE CONNECTION TO BE STANDARD "LOCKJOINT" BOOT 5" OFF BASE OF MANHOLE (SEE DETAIL).

2. CONCRETE STRENGTH OF MANHOLE COMPONENTS TO BE 4000 PSI @ 28 DAYS IN ACCORDANCE WITH ASTM C-478-86.

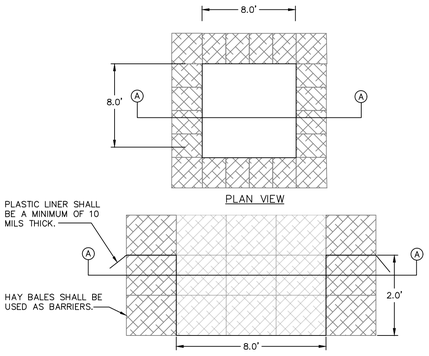
3. STEEL REINFORCMENT OF MANHOLE COMPONENTS TO MEET ASTM A615-A497 REQUIREMENTS.

4. LOADING OF MANHOLE COMPONENTS TO MEET H-20 REQUIREMENTS.

5. CONCRETE USED IN MANHOLE COMPONENTS TO CONTAIN 6% AIR ENTRAINMENT.

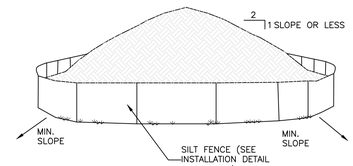
6. 4' MAXIMUM FROM MANHOLE TO PIPE JOINT.

PRE-CAST CONCRETE SANITARY MANHOLE DETAIL
NOT TO SCALE



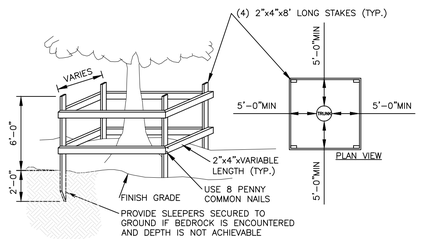
NOTES:
1. WASHOUT STATION SHALL BE LOCATED 100' FROM ANY STORMWATER FEATURE ON SITE OR NATURAL WATERWAYS OR WETLANDS.
2. INSPECT WASHOUT STATION DAILY AND REPLACE PLASTIC LINER WHEN ANY RIPS OR TEARS ARE OBSERVED.
3. REPLACE WASHOUT STATION WHEN IT IS AT 75% OF ITS CAPACITY WITH HARDENED MATERIAL.
4. WATER ACCUMULATION IN WASHOUT AREA FROM RAINWATER SHALL BE PUMPED FROM THE STATION INTO A GRASSED AREA.

CONCRETE WASHOUT STATION DETAIL
NOT TO SCALE



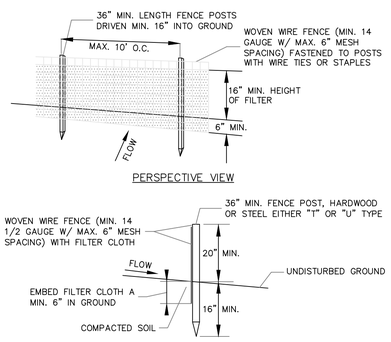
NOTES:
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

TEMPORARY SOIL STOCKPILE DETAIL
NOT TO SCALE



NOTES:
1. TREES TO REMAIN NOTED ON EXISTING CONDITIONS PLAN.
2. NOT ALL TREES TO REMAIN REQUIRE PROTECTION. TREE PROTECTION TO BE UTILIZED ON TREES WHERE CONSTRUCTION TRAFFIC WOULD COMPACT THE ROOT ZONE OF THE TREE.

TEMPORARY TREE PROTECTION DETAIL
NOT TO SCALE



PERSPECTIVE VIEW

SECTION VIEW

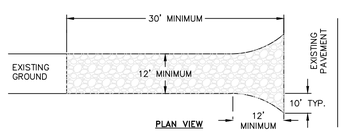
NOTES:
1. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.

2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.

3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.

4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL
NOT TO SCALE



NOTES:
1) STONE SIZE – USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2) LENGTH – NOT LESS THAN 30 FEET FOR A SINGLE RESIDENCE LOT.

3) THICKNESS – NOT LESS THAN SIX (6) INCHES.

4) WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.

5) GEOTEXTILE – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

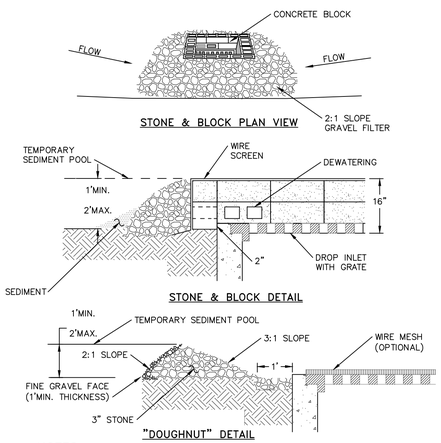
6) SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

7) MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

8) WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

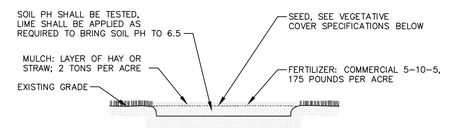
9) PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



NOTES:
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS. MAXIMUM DRAINAGE AREA 1 ACRE

CATCH BASIN INLET PROTECTION DETAIL
NOT TO SCALE



NOTES:
1. TOPSOIL, SEED, MULCH, AND FERTILIZE DISTURBED SOIL AREAS THAT WILL BE LEFT EXPOSED FOR 14 DAYS OR MORE.
2. SEED MIXTURE FOR USE ON LAWNS IN SUNNY AREAS:

65% KENTUCKY BLUE GRASS BLEND	114 POUNDS PER ACRE
20% PERENNIAL RYEGRASS	35 POUNDS PER ACRE
15% FINE FESCUE	26 POUNDS PER ACRE
	175 POUNDS PER ACRE

3. SEED MIXTURE FOR USE IN SHADY AREAS:

80% BLEND OF SHADE TOLERANT KENTUCKY BLUEGRASS	138 POUNDS PER ACRE
20% FINE FESCUE	37 POUNDS PER ACRE
	175 POUNDS PER ACRE

4. SEED BETWEEN APRIL 1ST AND MAY 15TH OR AUGUST 15TH AND OCTOBER 15TH. SEEDING MAY OCCUR BETWEEN MAY 15TH AND AUGUST 15TH IF ADEQUATE IRRIGATION IS PROVIDED.
5. TOPSOIL SHALL HAVE AT LEAST 6% BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATERIAL, AND NO GREATER THAN 20%. TOPSOIL SHALL HAVE NOT LESS THAN 20% FINE TEXTURED MATERIAL (PASSING THE NO. 200 SIEVE) AND NOT MORE THAN 15% CLAY.

TOPSOIL, SEED AND MULCH DETAIL
NOT TO SCALE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	3/25/25	PER PLANNING BOARD COMMENTS	CMB				

Dig Safely. New York. Call 811 before you dig

STATE OF NEW YORK MICHAEL A. BRENNAN 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

CONSTRUCTION DETAILS

1064 WOLCOTT AVENUE

1064 WOLCOTT AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-34-641767

JOB #:	2022:030
DATE:	1/28/25
SCALE:	AS SHOWN
TITLE:	CD-3
SHEET:	12 OF 12

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LANC & TULLY
Engineering and Surveying, P.C.

April 4, 2025

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 1064 Wolcott Avenue
Tax No. 5954-34-641767
City of Beacon

Dear Mr. Gunn:

My office has received the following regarding the proposed hotel with accessory restaurant to be located at 1064 Wolcott Avenue:

- Correspondence dated March 25, 2025, from Cuddy & Feder, LLP.
- Application for Special Use Permit.
- Application for Site Plan Approval.
- Full Environmental Assessment Form with a revision date of March 24, 2025.
- Response correspondence dated March 25, 2025, from Aryeh Siegel, Architect.
- Response correspondence dated March 25, 2025, from Hudson Land Design.
- Traffic & Parking evaluation correspondence dated March 21, 2025, from Colliers Engineering & Design.
- Infiltration and Inflow (I&I) Investigation report, dated March 25, 2025, as prepared by Hudson Land Design.
- Report titled "Preliminary Water & Sewer Engineer's Report for 1064 Wolcott Avenue-Hotel & Accessory Restaurant", with the latest revision date of March 25, 2025, as prepared by Hudson Land Design.
- Stormwater Pollution Prevention Plan (SWPPP) for 1064 Wolcott Avenue, with a revision date of March 25, 2025, as prepared by Hudson Land Design.
- Plan set titled "Special Use Permit Application – 1064 Wolcott Avenue", consisting of Sheets 1 of 12 through 12 of 12, with the latest revision date of March 25, 2025, as prepared by Aryeh Siegel, Architect and Hudson Land Design.

The proposed project is the redevelopment of an existing site with two existing structures and entails the construction of a building to interconnect the two existing structures on the site, and development of the overall building for a hotel with an accessory restaurant. The project site consists of a single tax parcel that is located in R1-40 Zone and Historic District & Landmark Overlay (HDLO) Zone. The proposed hotel and accessory restaurant are allowable uses in the HDLO Zone by Special Permit in accordance with Section 223-24.7, Paragraph B of the Zoning Code.

Based on our review of the above documents and plans, we would like to offer the following comments:

General Comments:

1. The applicant will need to seek a variance from the Zoning Board of Appeals for the required rear-yard setback. The required rear-yard setback in the R1-40 Zone is 50 feet, whereas the applicant is currently proposing a setback of 18.6 feet. ***Applicant's consultant notes that they are trying to acquire property from the adjacent parcel to the rear of the site to reduce or eliminate the need for an area variance.***

2. An Inflow & Infiltration (I&I) study of the existing sites was conducted by Hudson Land Design, and it was found that there was no I&I entering the City's sanitary sewer system from the project site.

3. A separate lighting plan shall be prepared that provides photometrics across the site. ***Applicant's consultant notes that a lighting plan will be provided in the future as the building design is developed.***

4. The project should be referred to the Beacon Fire Chief to see if there are any concerns that should be incorporated in the design, such as providing an additional fire hydrant in front of the site or on the site, recommended location for fire department connection (FDC) to sprinkler system, etc. ***Applicant's consultant notes that they will review the project with the Fire Chief as the building design is developed.***

Engineer's Water & Sewer Report:

1. The total flow for hotel and restaurant use should be revised to reflect 6,308 gpd based upon the totals in the chart above.

2. The last sentence of the first paragraph at the top of Page 4 should have the hotel and restaurant usage revised to reflect the total of 6,308 gpd.

3. Sections 4.0 and 5.0 note usage at 6,336 gpd, where the previous sections of the report note a usage of 6,308 gpd. All sections should be coordinated with regards to the actual proposed usage of water and sewer conveyance.

Site Plan (Sheet 1 of 12):

1. The proper signage for the ADA accessible parking areas shall be provided on the plan.

2. The ADA ramping on this sheet is inconsistent with the ADA ramping layout as shown on Sheet 6 of 12. The plans shall be coordinated.

Landscape Plan (Sheet 3 of 12):

1. It is recommended that additional landscaping be provided along the parking lot on the rear side of the hotel to provide additional screening for the adjacent residents from vehicle headlights. We would further recommend that some year-round landscaping be used in this area to provide screening during the winter months. ***Applicant's consultant notes that they are working with a landscape designer to coordinate planting and screening in this area and will provide the information in a future submission.***

2. The landscape plan shall include a planting schedule identifying the number of each planting, as well as the size of each planting to be installed. ***Applicant's consultant notes that this will be provided in a future submission.***

Building Plans (Sheet 4 of 12):

1. Given the proposed uses within the facility, the building will be required to be sprinklered. The current floor plans do not show a sprinkler room, nor do they show a mechanical or electrical room. The floor plans should be revised to reflect all utility rooms that will be required for the project. ***Applicant's consultant has acknowledged the comment and notes that they will provide the required rooms on the floor plans.***

Grading & Utility Plan (Sheet 6 of 12):

1. As the project will need to be sprinklered, is the 4" water service large enough to service the project? ***Applicant's consultant notes that hydrant flow testing will be conducted and coordinated with the sprinkler designer.***

2. Fall protection should be provided along the top of retaining walls that are more than 30 inches in height. Construction details for the fall protection shall be provided on the plans.

3. Consideration should be given to providing drainage in the lower areas along the back of the building, between the buildings and retaining walls, to ensure that stormwater does not get impounded in the areas.

Erosion & Sediment Control Plan (Sheet 7 of 12):

1. Notes 8 and 9 shall be revised to reflect "City" not Town.

2. Additional notes shall be added to the plan stating the following:

    a) The road and sidewalk at the construction entrance of the project shall be swept daily of all sediment and debris.

b) A stormwater pre-construction meeting shall be conducted at the site prior to any work occurring at the site in accordance with General Permit GP-0-24-001, Municipal Separate Storm Sewer Systems (MS4s).

Truck Turning Plan (Sheet 9 of 12):

1. The Aerial Fire Truck information in the upper right-hand corner of the sheet should be increased in size so that all information as related to the fire truck is legible.

SWPPP Comments:

1. A stormwater maintenance and easement agreement shall be prepared for the project and submitted for review.

2. Applicant shall show roof leaders/stormwater routing from the proposed building addition into the underground infiltration practice, since the current post-development plan shows the entirety of the proposed building being directed into the underground infiltration practice.

3. In section "12.0 Conclusion," of the Stormwater Pollution Prevention Plan (SWPPP) report, the applicant states that "... stormwater facilities are designed in accordance with the latest version of the New York State Stormwater Design Manual." Which indicates that the proposed stormwater practices were designed to the requirements set forth in the 2024 Stormwater Design Manual. The Water Quality Calculation Sheets shall refer to the 2024 Stormwater Design Manual where ever the 2015 design manual is referenced.

4. Per the 2024 Stormwater Design Manual, page 6-45, there is a requirement for a minimum bottom area for an underground infiltration practice. Applicant shall show that this requirement has been met within the stormwater practice sizing calculations. Please also refer to the New York State Department of Environmental Conservation (NYSDEC) Green Infrastructure Worksheets (G.I.) found in their official website (https://dec.ny.gov/environmental-protection/water/water-quality/stormwater/construction-stormwater-toolbox). Where the way that this requirement is applied can be found.

5. In the previous review, dated 02/06/2025, SWPPP comment number 8, it was stated that in the 2024 NYSDEC Stormwater Design Manual, Table 6.10 – "Infiltration Practice Minimum Separation Requirements" on page 6-41, Note 4 at the bottom of the table states "infiltration practices shall be located downgradient of structures and septic systems." Based on this note, the location of the proposed infiltration system is not compliant and needs to be relocated on the site. This note has not been addressed.

6. Location of the temporary soil stockpile shall be shown on the Erosion and Sediment Control plan.

7. Applicant to provide HydroCAD cover for both the pre- and post-development model for visual representation of how the watershed routing was modeled.

This completes our review at this time. Further comments may be provided based on future submissions. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: Natalie Quinn, Planner
Jennifer Gray, Esq.
Bryan Murphy, Building Inspector

KARC
PLANNING CONSULTANTS, INC.

TO: John Gunn, Chair, and the City of Beacon Planning Board

FR: KARC Planning Consultants, Inc.

DATE: April 8, 2025

RE: 1064 Wolcott Ave Site Plan/Special Use Permit Amendment, JMARKMNG, LLC (Mark DiFabio)

I have reviewed the following materials regarding the proposed site plan and special use permit for the project located at 1064 Wolcott Ave:

- Cover letter by Taylor Palmer of Cuddy + Feder, dated March 25, 2025
- Preliminary Water and Sewer Report, prepared by Hudson Land Design, dated January 24, 2025 last revised March 25, 2025 (Attachment 1)
- Stormwater Pollution Prevention Plan (SWPPP), prepared by Hudson Land Design, dated January 24, 2025 last revised March 25, 2025 (Attachment 2)
- Site Plan Set, prepared by Aryeh Siegel Architect and Hudson Land Design, dated January 31, 2025 last revised March 25, 2025 (Attachment 3)
- Exhibit A: Updated Application for Special Use Permit, prepared by Mark DiFabio, dated March 24, 2025
- Exhibit B: Updated Application for Site Plan Approval Form, prepared by Mark DiFabio, dated March 24, 2025
- Exhibit C: Updated Full Environmental Assessment Form, prepared by Hudson Land Design, dated January 28, 2025 last revised March 24, 2025
- Exhibit D: Responses to Comments Memorandum, prepared by Aryeh Siegel Architect, dated March 25, 2025
- Exhibit E: Responses to Comments Memorandum, prepared by Hudson Land Design, dated March 25, 2025
- Exhibit F: Traffic and Parking Evaluation, prepared by Colliers Engineering, dated March 21, 2025
- Exhibit G: Inflow and Infiltration Report, prepared by Hudson Land Design, dated March 25, 2025

Project Description:

The proposed project entails adaptive reuse of two existing buildings that compromise the Rose Hill Manor Day School and construction of an addition linking the two buildings for redevelopment of the overall site into a 32,556 square foot2.5-story hotel. The hotel will include 42 guest rooms, associated

guest amenity spaces such as gym and conference area, a 56-seat accessory restaurant, and a spa. Site improvements including new retaining walls, concrete sidewalks, landscaping, 50 off-street parking spaces, and parking lot modifications are also proposed. The proposed project is located on a 1.77-acre lot in the R1-40 zoning district and Historic District and Landmark Overlay Zone (HLDO).

Comments & Recommendations:

1. **Proposed Use & Screening of New Structures:** Certain commercial uses are permitted by Special Permit in the HDLO under Section 223-24.7, as an incentive for the preservation of historic structures. Among the listed uses are "hotel and hotel-related accessory uses and structures with adequate screening of any new structures from surrounding public street views." The new addition connecting the two existing structures is screened to the north and south during the summer months by existing trees and the existing buildings themselves. However, the new construction is highly visible from Wolcott Avenue to the west. The Board should discuss whether the proposed placement of the new construction and proposed landscaping provide adequate screening of the new structure. Per Section 134-7(B), as elevations and renderings are further developed, care should be taken to ensure that the existing historic three (3) story building on the northern portion of the site remains the most prominent feature of the site and new construction is sufficiently recessed.

2. **Special Permit in HDLO – Compatible New Construction:** Section 223-24.7(D) outlines findings that the Planning Board must make before granting special permit approval for an HDLO property. Criteria 223-24.7(D)(1)(a) requires that new construction shall be compatible with neighboring structures. The applicant has made changes to the proposed addition's architecture in terms of design and height. However, the provided renderings are too small and dark to adequately review.

3. **Special Permit in HDLO – Undue Enlargement:** Criteria 223-24.7(D)(1)(d) requires that the Planning Board find that the proposed use is appropriate and will not result in undue alterations or enlargements of the structure. The current gross floor area of the existing structures is 10,153 square feet. The proposed addition of 22,413 square feet is a significant enlargement which will more than doubles the existing floor area. The Planning Board should discuss whether an enlargement of this size is appropriate, proportionate, and warranted.

4. **Special Permit in HDLO - Restoration:** Section 223-24.7(D) outlines findings that the Planning Board must make before granting special permit approval for an HDLO property. Criteria 223-24.7(D)(1)(a) requires that the existing architectural and historic integrity shall be maintained. Proposed elevations will need to be provided with notes and callouts provided to identify

proposed restoration work and modifications. The elevations should also include proposed colors, materials, and major dimensions ensure compliance with portions of Section 134-7(C).

5. **Special Permit in HDLO – Uses within the structure:** Section 223-24.7(D) outlines findings that the Planning Board must make before granting special permit approval for an HDLO property. Criteria 223-24.7(D)(1)(b) requires that "activities permitted within the structure can be adequately buffered from any surrounding residential homes." The board should discuss whether restrictions regarding hours of operation, noise, lighting, etc. are appropriate for this specific use and setting.

6. **Rear Yard Setback:** The applicant has noted that a variance from the ZBA will be required to permit an 18.6 ft rear yard setback, a 63% reduction from the required 50 ft rear yard setback. **The Applicant has noted that a variance will be requested.**

7. **Tree Removal:** Neither the Existing Conditions and Demolition Plan (sheet 2 of 12) nor the Landscape Plan (sheet 3 of 12) note existing trees to be retained or removed. Existing trees to be removed should be shown on the demolition plan, and it would be helpful if existing trees to be retained were indicated on the landscaping plan. **The Applicant has noted that tree removal information will be provided in a future submission.**

8. **Lighting Plan:** A photometric plan will be required to ensure compliance with SECTION 223-14(B). The location of pole and building mounted fixtures are show on the Landscape Plan (sheet 3 of 12). **The Applicant has noted that a lighting photometric plan will be provided in a future submission.**

9. **Screening of Parking Facilities:** Per Section 223-14.2, outdoor parking areas and recreational facilities for hotels shall be screened with fencing, landscaping and/or buildings on all sides toward adjoining residential lots. Where hotel buildings are set back less than 100 feet from one-family residential lots, such buildings shall be suitably screened with planting. The proposed parking expansion on the eastern portion of the site, including the proposed refuse area, are less than 20 feet from the property line abutting the rear yard of residential properties on Harborhill Court.

10. The Planning Board may require a visual analysis of the area to ensure appropriate screening via landscaping or fencing is provided. **The Applicant has stated that they are working with a Landscape Designer to coordinate planting and screening between the hotel and residential properties.**

11. **Traffic & Parking:** The Zoning Code requires that the project provide a minimum of 27 parking spaces up to a maximum of 73 parking spaces. A total of 50 parking spaces are proposed on-

site, including 2 ADA accessible parking spaces. The revised demand calculations and Traffic & Parking Analysis should be reviewed by the Board's Traffic Consultant.

12. **Local Waterfront Redevelopment Program**: The proposal is within the City's LWRP Boundary. The applicant has provided a Coastal Assessment Form and a consistency statement for the proposal. These documents are sufficient for the Planning Board to declare an LWRP Consistency Determination as part of the review process.

If you have any questions or need additional information, please feel free to contact me.

Natalie Quinn
Beacon Planning Consultant

Cc: Byran Murphy, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer

City of Beacon Planning Board Agenda
04/08/2025

Title:

Review of application for Site Plan Approval, accessory apartment, 10 Ackerman Street, submitted by Rachel Hutami.

ATTACHMENTS

10 Ackerman PB 4.8.25 app.pdf

10 Ackerman PB 4.8.25 site plan.pdf

Lanc & Tully 10 Ackerman ADU 04-03-25 review.pdf

KARC Review PB_10 Ackerman Street_w attach_2025.04.07.pdf

APPLICATION FOR SITE PLAN APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: Rachel Hutami

Address: 10 Ackerman Street

Beacon, NY 12508

Signature: Rachel Hutami

Date: 03/16/2006

Phone: 917-968-8350

(For Official Use Only)

	Date	Initials
Application & Fee Rec'd		
Initial Review		
Public Hearing		
Conditional Approval		
Final Approval		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PROFESSIONAL

Name: Aryeh Siegel, Architect

Address: 84 Mason Circle

Beacon, NY 12508

Phone: 845-838-2490

Fax:

Email address: ajs@ajsarch.com

IDENTIFICATION OF SUBJECT PROPERTY:

Property Address: 10 Ackerman Street, Beacon, NY 12508

Tax Map Designation: Section 6054 Block 30 Lot(s) 142820

Land Area: 0.15 Acres Zoning District(s) R1-5

DESCRIPTION OF PROPOSED DEVELOPMENT:

Proposed Use: Add Accessory Apartment over Existing Garage

Gross Non-Residential Floor Space: Existing Proposed

TOTAL:

Dwelling Units (by type): Existing 1 Proposed 1

TOTAL: 2

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** paper copies of a site location sketch showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. One electronic and five (5) **folded** paper copies of the proposed site development plan, consisting of sheets, showing the required information as set forth on the back of this form and other such information as deemed necessary by the City Council or the Planning Board to determine and provide for the property enforcement of the Zoning Ordinance.

c. One electronic and five (5) **folded** paper copies of additional sketches, renderings or other information.

d. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

e. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

INFORMATION TO BE SHOWN ON SITE LOCATION SKETCH

a. Property lines, zoning district boundaries and special district boundaries affecting all adjoining streets and properties, including properties located on the opposite sides of adjoining streets.
b. Any reservations, easements or other areas of public or special use which affect the subject property.
c. Section, block and lot numbers written on the subject property and all adjoining properties, including the names of the record owners of such adjoining properties.

INFORMATION TO BE SHOWN ON THE SITE DEVELOPMENT PLAN

a. Title of development, date and revision dates if any, north point, scale, name and address of record owner of property, and of the licensed engineer, architect, landscape architect, or surveyor preparing the site plan.
b. Existing and proposed contours at a maximum vertical interval of two (2) feet.
c. Location and identification of natural features including rock outcrops, wooded areas, single trees with a caliper of six (6) or more inches measured four (4) feet above existing grade, water bodies, water courses, wetlands, soil types, etc.
d. Location and dimensions of all existing and proposed buildings, retaining walls, fences, septic fields, etc.
e. Finished floor level elevations and heights of all existing and proposed buildings.
f. Location, design, elevations, and pavement and curbing specifications, including pavement markings, of all existing and proposed sidewalks, and parking and truck loading areas, including access and egress drives thereto.
g. Existing pavement and elevations of abutting streets, and proposed modifications.
h. Location, type and design of all existing and proposed storm drainage facilities, including computation of present and estimated future runoff of the entire tributary watershed, at a maximum density permitted under existing zoning, based on a 100 year storm.
i. Location and design of all existing and proposed water supply and sewage disposal facilities.
j. Location of all existing and proposed power and telephone lines and equipment, including that located within the adjoining street right-of-way. All such lines and equipment must be installed underground.
k. Estimate of earth work, including type and quantities of material to be imported to or removed from the site.
l. Detailed landscape plan, including the type, size, and location of materials to be used.
m. Location, size, type, power, direction, shielding, and hours of operation of all existing and proposed lighting facilities.
n. Location, size, type, and design of all existing and proposed business and directional signs.
o. Written dimensions shall be used wherever possible.
p. Signature and seal of licensed professional preparing the plan shall appear on each sheet.
q. Statement of approval, in blank, as follows:

Approved by Resolution of the Beacon Planning Board
on the _____ day of _____, 20_____
subject to all conditions as stated therein

_____ _____
Chairman, City Planning Board **Date**

APPLICATION FEES

Site Plan	**Residential** **$500 + $250 per dwelling unit** **Commercial** **$500 + $250 per 1,000 s.f.**
Special Use Permit	**Residential** **$500 + $250 per dwelling unit** **Commercial** **$500 + $250 per 1,000 s.f.**
Subdivision	**$ 750 for 2-4 lots + $100 per lot** **$1,000 for 5 or more lots + $300 per lot**

ESCROW FEES

ALL SUBDIVISIONS, AND RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

No. of Lots or Dwelling Units	Initial Deposit	Depleted to	Replenishment
1-5 (including lot-line realignment)	$ 3,000	$ 1,000	Current bills + $1,200
6-15	$ 9,000	$ 2,500	Current bills + $1,200
Over 15	$ 18,000	$ 5,000	Current bills + $6,000

NON-RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

	Initial Deposit	Depleted to	Replenishment
Existing Buildings/Change of Use with no site development	$ 1,800	$ 1,000	Current bills + $600
Up to 3,000 s.f. gross floor area	$ 3,125	$ 1,000	Current bills + $1,200
3,000 to 10,000 s.f. gross floor area	$ 3,000 + $0.50 per sq.ft. over 3,000	$ 2,500	Current bills + $3,000
Over 10,000 s.f. gross floor area	$ 9,000 + $0.50 per sq.ft. over 10,000	$ 2,500	Current bills + $3,000

ARCHITECTURAL REVIEW OR CERTIFICATE OF APPROPRIATENESS ***(if not currently before PB)***

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: Rachel Hutami

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.

N/A

List all properties in the City of Beacon that you hold a 5% interest in:

N/A

Applicant Address: 10 Ackerman Street, Beacon, NY 12508

Project Address: 10 Ackerman Street, Beacon, NY 12508

Project Tax Grid # 6054-30-142820

Type of Application Add Accessory Apartment over Existing Garage

Please note that the property owner is the applicant. "Applicant" is defined as any individual who owns at least five percent (5%) interest in a corporation or partnership or other business.

I, Rachel Hutami, the undersigned owner of the above referenced property, hereby affirm that I have reviewed my records and verify that the following information is true.

1. No violations are pending for ANY parcel owned by me situated within the City of Beacon — YES
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon — NO
3. ALL tax payments due to the City of Beacon are current — YES
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon — NO
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon — NO
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current — YES

Rachel Hutami

Signature of Owner

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	X		MP
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)		✓	KLM
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)		✓	KLM

CITY OF BEACON
SITE PLAN SPECIFICATION FORM

Name of Application: Rachel Hutami

PLEASE INDICATE WHETHER THE SITE PLAN DRAWINGS SHOW THE SUBJECT INFORMATION BY PLACING A CHECK MARK IN THE APPROPRIATE BOXES BELOW.		
	YES	**NO**
The site plan shall be clearly marked "Site Plan", it shall be prepared by a legally certified individual of firm, such as a Registered Architect or Professional Engineer, and it shall contain the following information:	YES	
LEGAL DATA		
Name and address of the owner of record.	YES	
Name and address of the applicant (if other than the owner).	YES	
Name and address of person, firm or organization preparing the plan.	YES	
Date, north arrow, and written and graphic scale.	YES	
NATURAL FEATURES		
Existing contours with intervals of two (2) feet, referred to a datum satisfactory to the Planning Board.		NO
Approximate boundaries of any areas subject to flooding or stormwater overflows.		NO
Location of existing watercourses, wetlands, wooded areas, rock outcrops, isolated trees with a diameter of eight (8) inches or more measured three (3) feet above the base of the trunk, and any other significant existing natural features.		NO
EXISTING STRUCTURES, UTILITIES, ETC.		
Outlines of all structures and the location of all uses not requiring structures. Paved areas, sidewalks, and vehicular access between the site and public streets.	YES	
Locations, dimensions, grades, and flow direction of any existing sewers, culverts, water lines, as well as other underground and above ground utilities within and adjacent to the property.		NO
Other existing development, including fences, retaining walls, landscaping, and screening.		NO
Sufficient description or information to define precisely the boundaries of the property.	YES	
The owners of all adjoining lands as shown on the latest tax records.	YES	
The locations, names, and existing widths of adjacent streets and curb lines.	YES	
Location, width, and purpose of all existing and proposed easements, setbacks, reservations, and areas dedicated to private or public use within or adjacent to the		NO

properties.		
PROPOSED DEVELOPMENT	**YES**	**NO**
The location, use and design of proposed buildings or structural improvements.	YES	
The location and design of all uses not requiring structures, such as outdoor storage (if permitted), and off-street parking and unloading areas.	YES	
Any proposed division of buildings into units of separate occupancy.		NO
The location, direction, power, and time of use for any proposed outdoor lighting.	YES	
The location and plans for any outdoor signs.		NO
The location, arrangement, size(s) and materials of proposed means of ingress and egress, including sidewalks, driveways, or other paved areas.	YES	
Proposed screening and other landscaping including a planting plan and schedule prepared by a qualified individual or firm.		NO
The location, sizes and connection of all proposed water lines, valves, and hydrants and all storm drainage and sewer lines, culverts, drains, etc.		NO
Proposed easements, deed restrictions, or covenants and a notation of any areas to be dedicated to the City.		NO
Any contemplated public improvements on or adjoining the property.		
Any proposed new grades, indicating clearly how such grades will meet existing grades of adjacent properties or the street.		NO
Elevations of all proposed principal or accessory structures.	YES	
Any proposed fences or retaining walls.		NO
MISCELLANEOUS		
A location map showing the applicant's entire property and adjacent properties and streets, at a convenient scale.	YES	
Erosion and sedimentation control measures.		NO
A schedule indicating how the proposal complies with all pertinent zoning standards, including parking and loading requirements.	YES	
An indication of proposed hours of operation.		NO
If the site plan only indicates a first stage, a supplementary plan shall indicate ultimate development.	YES	

For all items marked "NO" above, please explain below why the required information has not been provided:

1. The survey doesn't have any information of existing contours, the proposed addition is located above the existing garage
2. The property is not located near any areas subject to flooding or stormwater overflows.
3. The property doesn't have any existing watercourses, wetlands, wooded areas, rock outcrops, isolated trees with a diameter of eight (8) inches or more measured three (3) feet above the base of the trunk, and any other significant existing natural features.
4. We don't have any information of the locations, dimensions, grades, and flow direction of any existing sewers, culverts, water lines, as well as other underground and above ground utilities within and adjacent to the property. *The proposed addition will not affected any of those above*
5. No other existing development, including fences, retaining walls, landscaping, and screening.
6. No existing and proposed easements, setbacks, reservations, and areas dedicated to private or public use within or adjacent to the property.
7. The application is not intended for proposed division of buildings into units of separate occupancy.
8. No proposed screening and other landscaping including a planting plan and schedule prepared by a qualified individual or firm.
9. Not proposing any connection to all proposed water lines, valves, and hydrants and all storm drainage and sewer lines, culverts, drains, etc.
10. Not proposing any easements, deed restrictions, or covenants and a notation of any areas to be dedicated to the City.
11. No any contemplated public improvements on or adjoining the property.
12. Not proposing any new grades, indicating clearly how such grades will meet existing grades of adjacent properties or the street.
13. Not proposing any fences or retaining walls.
14. The proposed addition would not need any erosion and sedimentation control measures
15. The project would not have any indication of proposed hours of operation.

Applicant/Sponsor Name: Rachel Hutami

Signature: Rachel Hutami

Date: 3/24/2025

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
1 Municipal Plaza, Beacon, NY
Telephone (845) 838-5000 • http://beaconny.gov/

INDIVIDUAL DISCLOSURE FORM

(This form must accompany every land use application and every application for a building permit or certificate of occupancy submitted by any person(s))

Disclosure of the names and addresses of all persons) filing a land-use application with the City is required pursuant to Section 223-62 of the City Code of the City of Beacon. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A

Name of Applicant: Rachel Hutami

Address of Applicant: 10 Ackerman Street, Beacon, NY 12508

Telephone Contact Information: 917-968-8350

SECTION B. List all owners of record of the subject property or any part thereof.

Name	Residence or Business Address	Telephone Number	Date and Manner title was acquired	Date and place where the deed or document of conveyance was recorded or filed.
Rachel Hutami	10 Ackerman Street, Beacon, NY 12508	917-968-8350		

SECTION B. Is any owner of record an officer, elected or appointed, or employee of the City of Beacon or related, by marriage or otherwise, to a City Council member, planning board member, zoning board of appeals member or employee of the City of Beacon ?

☐ **YES** ☑ **NO**

If yes, list every Board, Department, Office, agency or other position with the City of Beacon with which a party has a position, unpaid or paid, or relationship and identify the agency, title, and date of hire.

Agency	Title	Date of Hire, Date Elected, or Date Appointed	Position or Nature of Relationship

SECTION C. If the applicant is a contract vendee, a duplicate original or photocopy of the full and complete contract of purchase, including all riders, modification and amendments thereto, shall be submitted with the application.

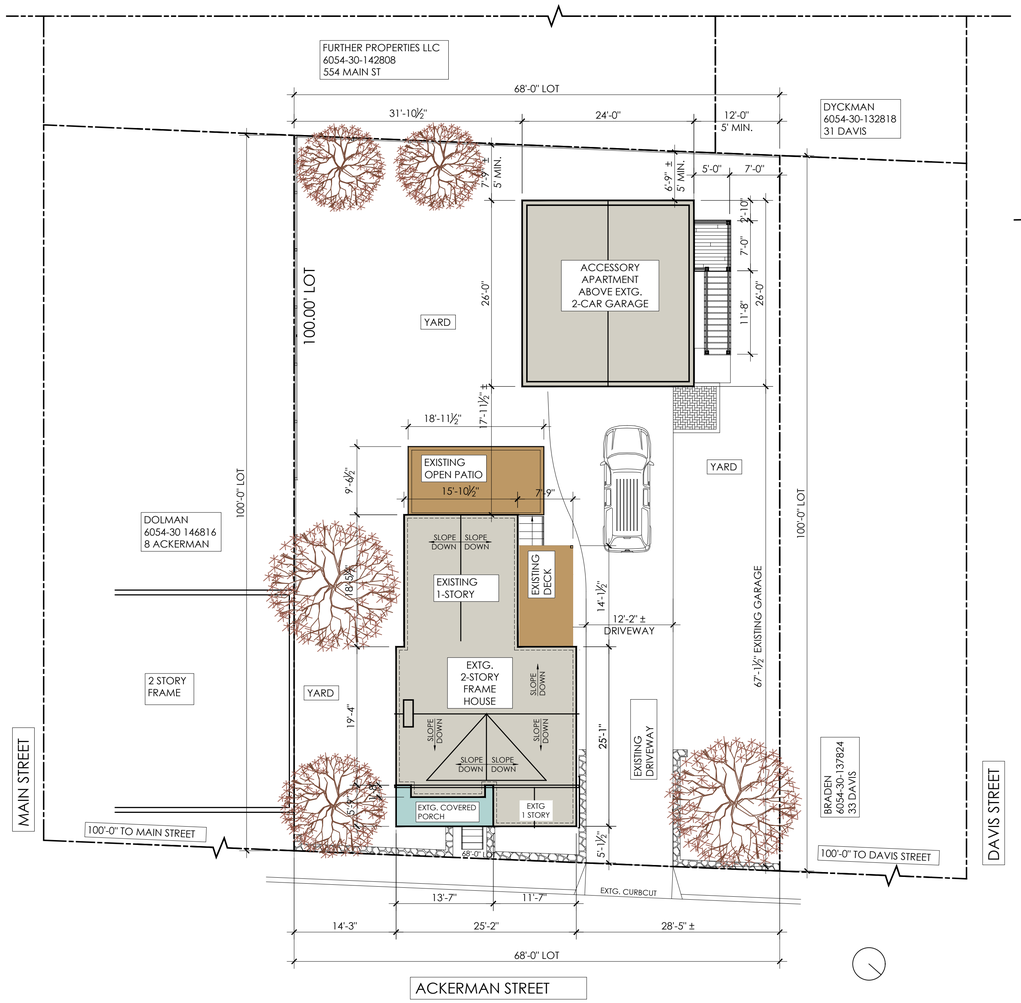
SECTION D. Have the present owners entered into a contract for the sale of all or any part of the subject property and, if in the affirmative, please provide a duplicate original or photocopy of the fully and complete contract of sale, including all riders, modifications and amendments thereto.

☐ **YES** ☑ **NO**

I, Rachel Hutami being first duly sworn, according to law, deposes and says that the statements made herein are true, accurate, and complete.

(Print) Rachel Hutami

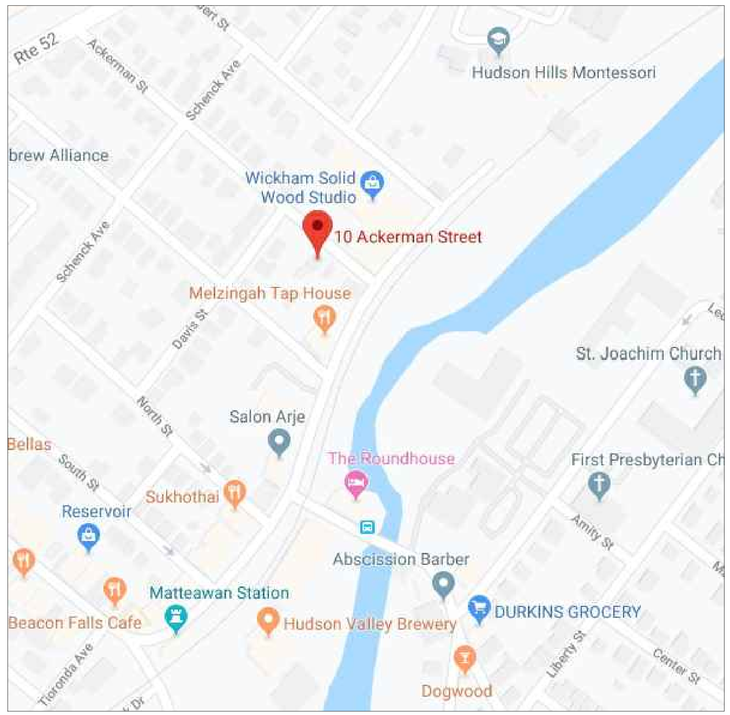
(Signature) Rachel Hutami



ALL SITE PLAN INFORMATION TAKEN FROM A SURVEY
PREPARED BY:
PETER R. HUSTIS, LLS.
33 HENRY ST, BEACON, NEW YORK 12508
PHONE (845) 831-0100
DATE: AUGUST 31, 2004

1 PLOT PLAN
SCALE : 1" = 10'-0"

3 STREET ELEVATION
N.T.S.



2 LOCATION MAP
N.T.S.

10 Ackerman Street, City of Beacon § 223-17. Schedule of Dimensional Regulations 223 Attachment 1			
Zoning **District R1-5 1-Family Residence District**			
	Req'd	**Extg.**	**Prop.**
PRINCIPAL BUILDING			
Min. Lot Size Area			
Area (square feet)	5,000	6,970	
Per Unit (square feet)	5,000	6,970	
Width (feet)	50	68	
Depth (feet)	100	100	
Min. Yards			
Front (feet)	10	5	no change
Side (feet)	10	14.8 & 28.6	no change
Rear (feet)	20	52.2	no change
Max. Height Main Building (stories/feet)	2.5/ 35'	2.5 / 27.75'	no change
Max. % Building Coverage	40%	23%	no change
Main house (incl. porch and deck)		980	
Garage		600	
Max. # of Units per Building	1	1	no change
PRINCIPAL F.A.			
1ST FLOOR (not incl. open deck)	**861**	**SF.**	
2ND FLOOR	**440**	**SF.**	
	1,301	**SF.**	no change
ACCESSORY BUILDING			
Min. Yards			
Front (feet)	N/P		
Side (feet)	5		12
Rear (feet)	5		7
Max. Sq. Ft. For Accessory Building (Based on footage of principal building) 50% [223 Attachment 3]	651	600	no change
Max. # of Sheds Permitted	1		
Accessory Building Ht. [the mean level between the eaves & the highest point of the roof]		13'-4"	17'-10 1/2"
ACCESSORY APARTMENT			
Proposed Accessory Apartment above existing detached garage	>200 S.F.	<1000 S.F.	600 S.F.

ZONING SUMMARY		
Zoning District	R1-5	
Tax Map No.:	6054-30-142820	
Lot Area:	6,970	square feet
Existing Building Footprint:	980	square feet
Total Existing Residence Area:	1,301	square feet
Proposed Accessory Apartment:	600	square feet
Historical Overlay District:	No	
Parking Orverlay District:	No	
Existing Use:	Single Family Residential	
Proposed Use:	Single Family Residential with Accessory Apartment	

Parking and Loading

Use & Parking Requirements	**Proposed Area**	**Parking Requirement**
Residential		
2 spaces for each dwelling unit + 1 space for accessory apartment	1 dwelling unit + 1 accessory apartment	3 parking spaces
Total Req'd Parking Spaces		3 parking spaces
Total Existing Parking Spaces		3 parking spaces

Notes

1. Maximum Square Footage Permitted for Each Accessory Building (Based on total square footage of principal building) for zoning R1-5 is 50%.
2. Apartment size. The floor area of an accessory apartment shall not exceed a maximum of 1,000 square feet or be less than a minimum of 200 square feet.
3. The proposed accessory apartment area is 600 square feet. The total floor area of both floors of the dwelling is 1301 square feet. The accessory apartment is approximately 46% of the total floor area of the dwelling building in which it is located. Therfore, the size of the accessory apartment coplies with the maximum floor area and the maximum allowable percentage.

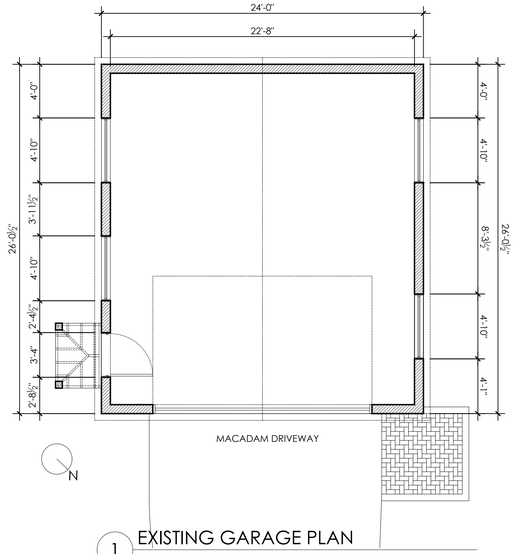
SITE PLAN APPROVAL - Accessory Apartment

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

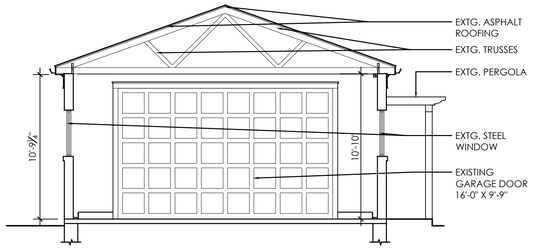
Owner:
Rachel Hutami
10 Ackerman Street
Beacon, NY 12508

PLOT PLAN, LOCATION MAP
STREET ELEVATION, ZONING SUMMARY

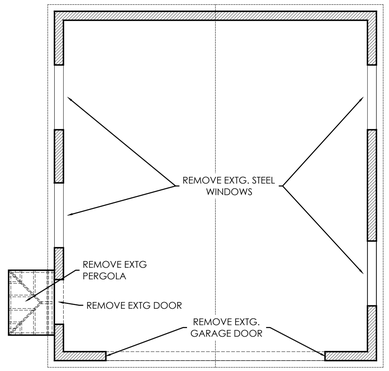
10 Ackerman Street
Beacon, New York
2/26/2025



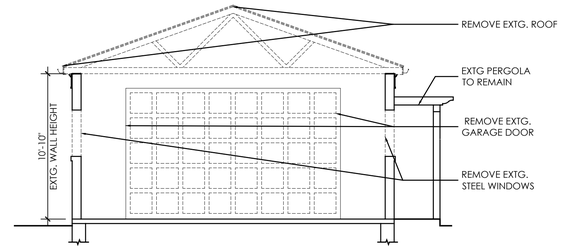
1 EXISTING GARAGE PLAN
SCALE : 3/16" = 1'-0"



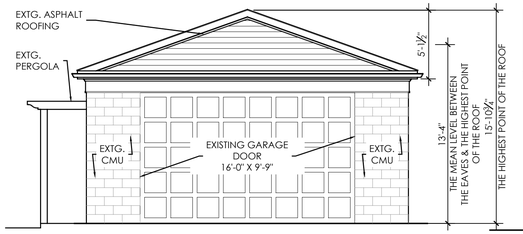
6 EXISTING GARAGE SECTION
SCALE : 3/16" = 1'-0"



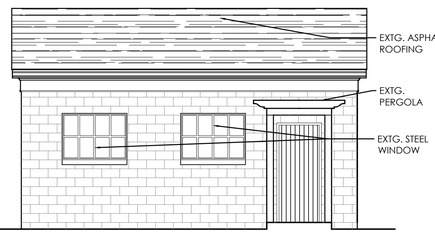
7 DEMOLITION GARAGE PLAN
SCALE : 3/16" = 1'-0"



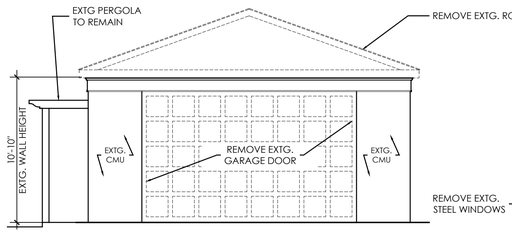
12 DEMOLITION GARAGE SECTION
SCALE : 3/16" = 1'-0"



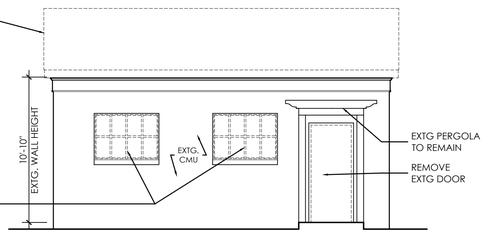
2 EXISTING NORTH-EAST ELEVATION
SCALE : 3/16" = 1'-0"



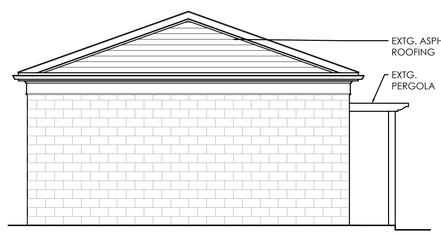
3 EXISTING SOUTH-EAST ELEVATION
SCALE : 3/16" = 1'-0"



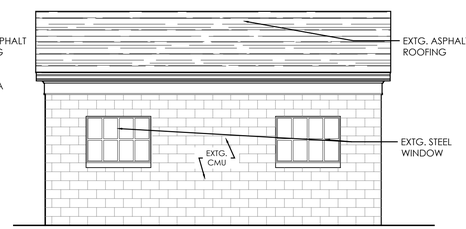
8 DEMOLITION NORTH-EAST ELEVATION
SCALE : 3/16" = 1'-0"



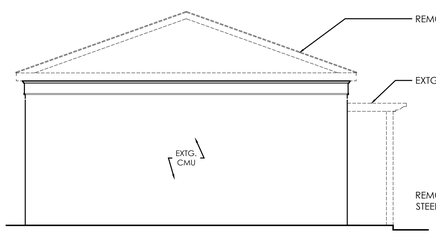
9 DEMOLITION SOUTH-EAST ELEVATION
SCALE : 3/16" = 1'-0"



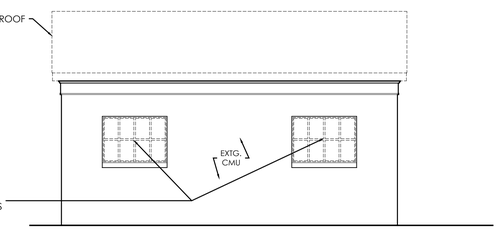
4 EXISTING SOUTH-WEST ELEVATION
SCALE : 3/16" = 1'-0"



5 EXISTING NORTH-WEST ELEVATION
SCALE : 3/16" = 1'-0"



10 DEMOLITION SOUTH-WEST ELEVATION
SCALE : 3/16" = 1'-0"



11 DEMOLITION NORTH-WEST ELEVATION
SCALE : 3/16" = 1'-0"

SITE PLAN APPROVAL - Accessory Apartment

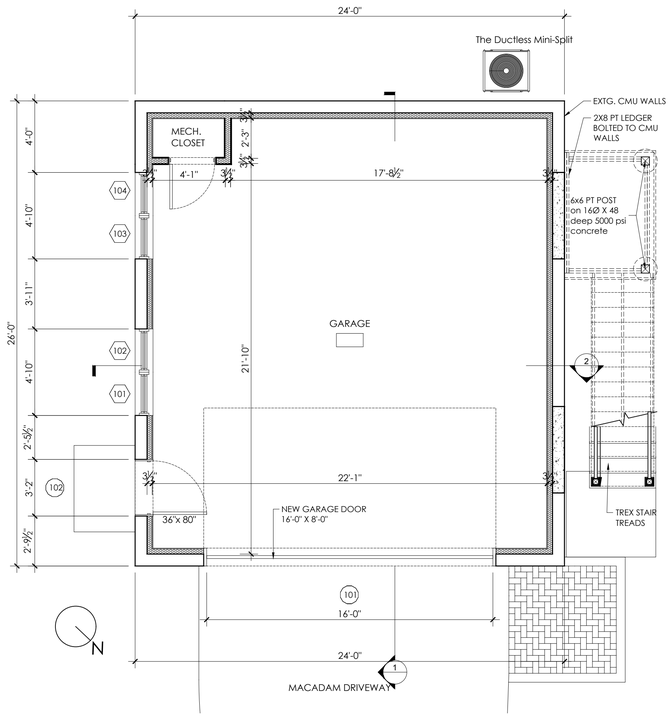
Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Owner:
Rachel Hutami
10 Ackerman Street
Beacon, NY 12508

EXISTING AND DEMOLITION
FLOOR PLAN, ELEVATIONS AND SECTIONS

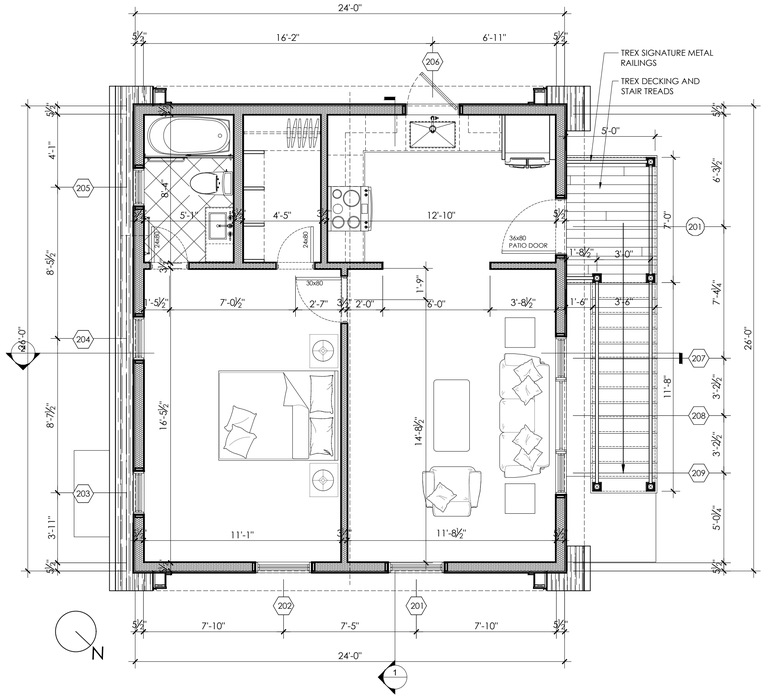
10 Ackerman Street
Beacon, New York
2/26/2025

1288



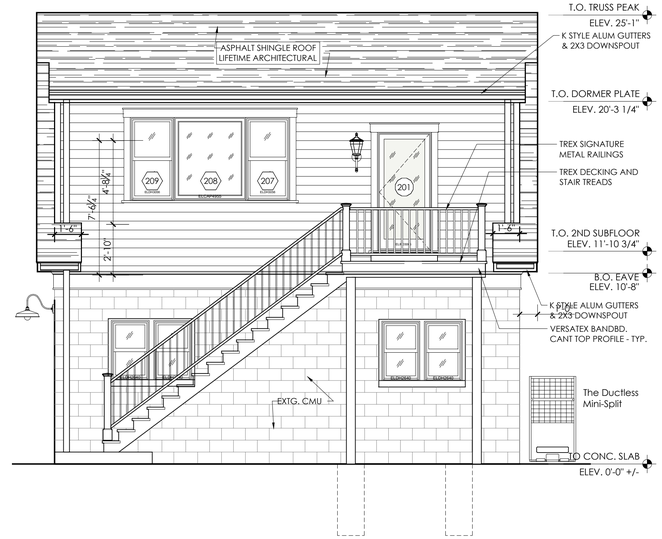
1 FIRST FLOOR PLAN - GARAGE

SCALE :1/4" = 1'-0"



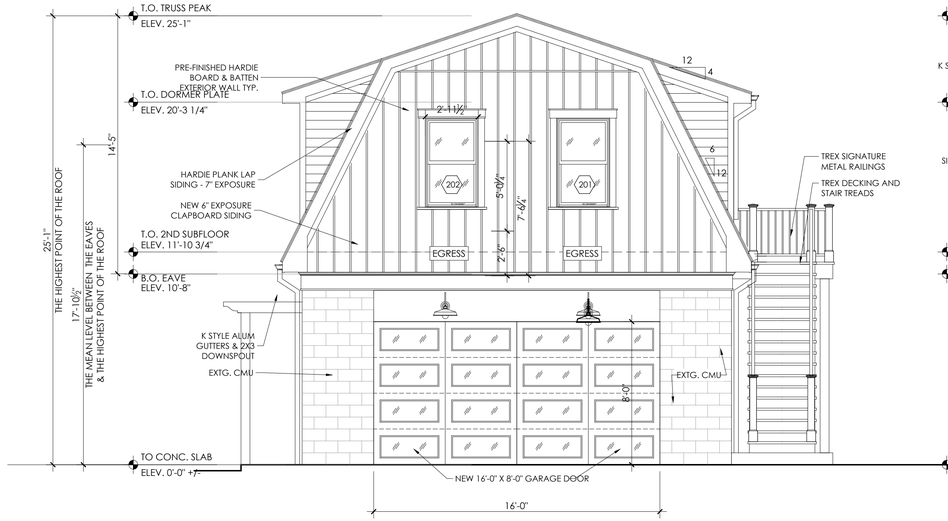
2 2ND FLOOR PLAN - APARTMENT

SCALE :1/4" = 1'-0"



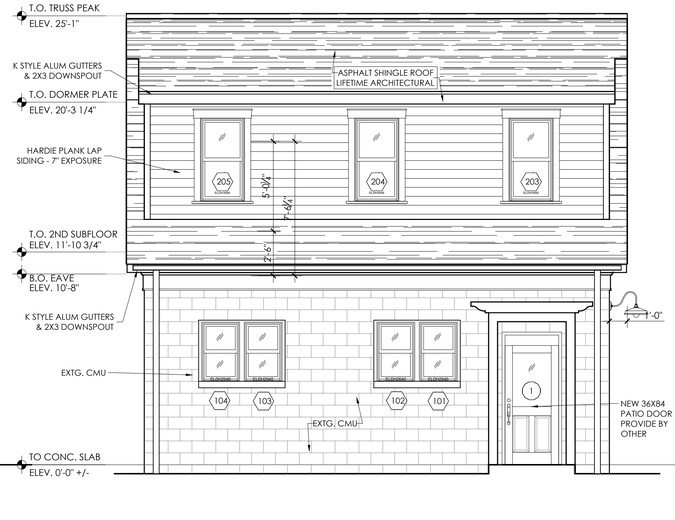
6 NORTH WEST ELEVATION

SCALE :1/4" = 1'-0"



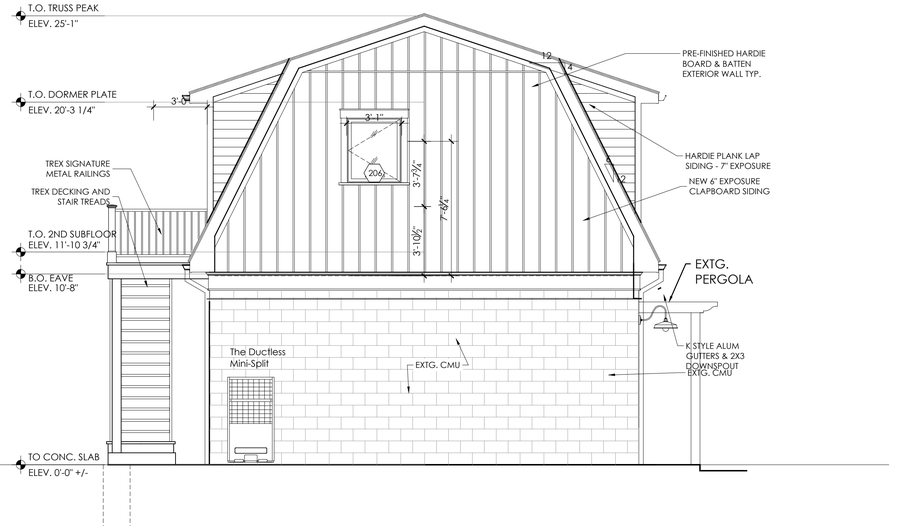
3 NORTH-EAST ELEVATION

SCALE :1/4" = 1'-0"



4 SOUTH-EAST ELEVATION

SCALE :1/4" = 1'-0"



5 SOUTH WEST ELEVATION

SCALE :1/4" = 1'-0"

SITE PLAN APPROVAL - Accessory Apartment

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Owner:
Rachel Hutami
10 Ackerman Street
Beacon, NY 12508

GARAGE-ACCESSORY APARTMENT

FLOOR PLAN AND ELEVATIONS

10 Ackerman Street

Beacon, New York

2/26/2025

1289

LANC & TULLY
Engineering and Surveying, P.C.

April 3, 2025

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 10 Ackerman Street
Accessory Dwelling Unit
Tax No. 6054-30-142820
City of Beacon

Dear Mr. Gunn:

My office has received the following regarding the modification of an existing garage to an accessory dwelling unit at 10 Ackerman Street:

- Application for Site Plan Approval
- Plan set titled "Site Plan Approval – Accessory Apartment – 10 Ackerman Street", consisting of 1 of 3 through 3, dated February 26, 2025, as prepared by Aryeh Siegel, Architect.

The project is located in the R1-5 zone. Based upon the above submitted document and plans for the proposed project, we offer the following comments:

1. The following notes shall be added to the plans:
   a) "*Owner occupancy required. The owner of the single-family lot upon which an accessory apartment is located shall occupy at least one of the dwelling units on said lot.*"

   b) "*The accessory apartment shall not be used for short-term rentals.*"

2. A plan shall be submitted showing how the proposed accessory dwelling unit, which is noted as a garage, will be serviced by sewer and water, as well as the existing water and sewer services servicing the existing dwelling unit. The plans shall also include construction details for the installation of proposed water and sewer utilities, as well as details for the restoration of any disturbed areas for the installation of these utilities.

This completes our review at this time. Further comments may be provided based on future submissions. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: Natalie Quinn, Planner
Jennifer Gray, Esq.
Bryan Murphy, Building Inspector

KARC
PLANNING CONSULTANTS, INC.

TO: John Gunn, Chair, and the City of Beacon Planning Board

FR: KARC Planning Consultants, Inc.

DATE: April 7, 2025

RE: 10 Ackerman Street Site Plan Application for Accessory Apartment, Rachel Hutami

---

I have reviewed the following materials regarding the proposed accessory apartment located at 10 Ackerman Street:

- Site Plan Application, prepared by Rachel Hutami, dated March 24, 2025
- Site Plan by Aryeh Siegel, Architect, dated February 26, 2025

Project Description:

The applicant is proposing a 600 square foot accessory dwelling unit above an existing detached garage located at 10 Ackerman Street. The proposed project is in the R1-5 zoning district. The existing 0.15-acre site contains a 1,301 square foot single-family home with a detached garage.

Comments & Recommendations:

1. **Size and Setbacks:** The proposed accessory apartment complies with all code regulations regarding minimum size (200 sq. ft.), maximum size (1,000 sq. ft.), percentage of primary residence floor area (max 50%), max building coverage (40%), and minimum setbacks (5ft rear and 5 ft side).

2. **Application Form:** Page 7 of the application states that "the property is not located near any areas subject to flooding or stormwater overflows." This information should be corrected to document that the property is located within the city's historical flood area (see attached flood Areas Map).

3. **Occupancy:**
    a. Per Section 223-24.1(B) owner occupancy of either the primary unit or accessory apartment is required. Sheet 1 of 3 should include a note confirming that the proposal will comply.
    b. Per Section 223-24.1(G), accessory apartments cannot be used for short-term rentals as defined in § 223-26.5. Sheet 1 of 3 should include a note confirming that the proposal will comply.

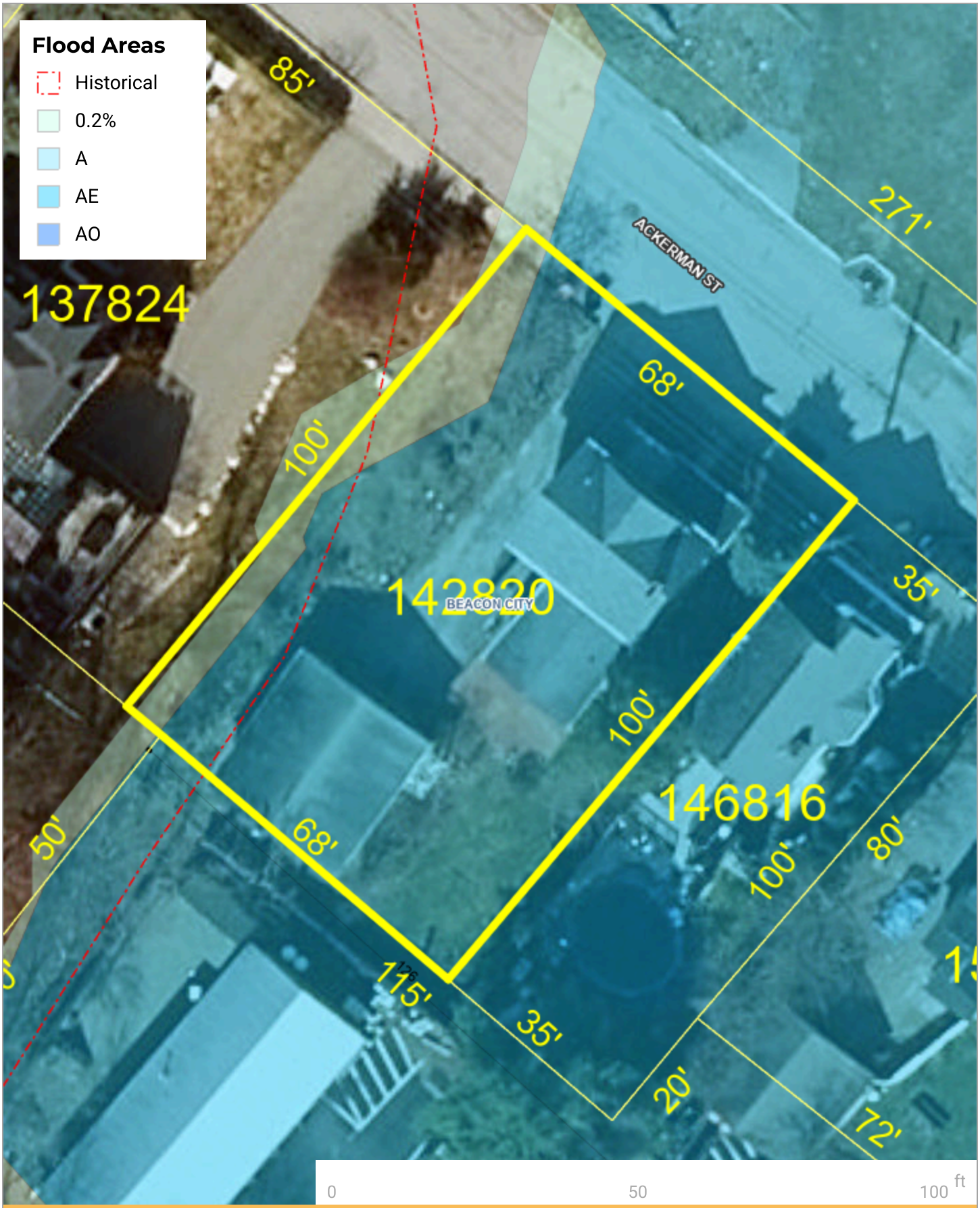
4. **Exterior Appearance.** The Board may wish to discuss whether the proposed stairs to the accessory apartment could be located on the other side of the garage structure, hidden behind

the primary residence, to ensure that the exterior appearance of the building will remain that of a single-family residence, as required by Section 223-24.1(E).

If you have any questions or need additional information, please feel free to contact me.

Natalie Quinn
Beacon Planning Consultant

Cc: Bryan Murphy, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer



Dutchess County
New York

Parcel Lines

Dutchess County, NY

Printed By:
ParcelAccess

N

ParcelAccess
4/6/2025

City of Beacon Planning Board Agenda
04/08/2025

Title:

Certificate of Appropriateness - 181-183 Main Street; Facade

ATTACHMENTS

181-183 Main PB 4.8.25 ARB app.pdf

1296

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: 03/06/2025

Project Address: 181-183 Main St Beacon, NY 12508

Project Architect/Engineer: _____

Owner/Builder: Laurie Riehle

Contact Phone No.: 845-545-5558 Email: Laurie@Luxeoptique.com

Approval Requested: ✓ Certificate of Appropriateness (sign or façade change) _____ New Single-Family House

Color/Materials:

Siding: _____

Roofing: _____

Windows: Color: Black + Gold Type: _____

Trim: Black + Gold HC-190 / HC-10 / Rich Gold

Garage Door: Samples included

Stone/Brick: _____

Laurie Riehle

Signature of Owner

Applications for sign approval must also submit a sign permit application & supporting documents

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____ (Date)

Plan Approved _____ (Date)

Subject to the following:

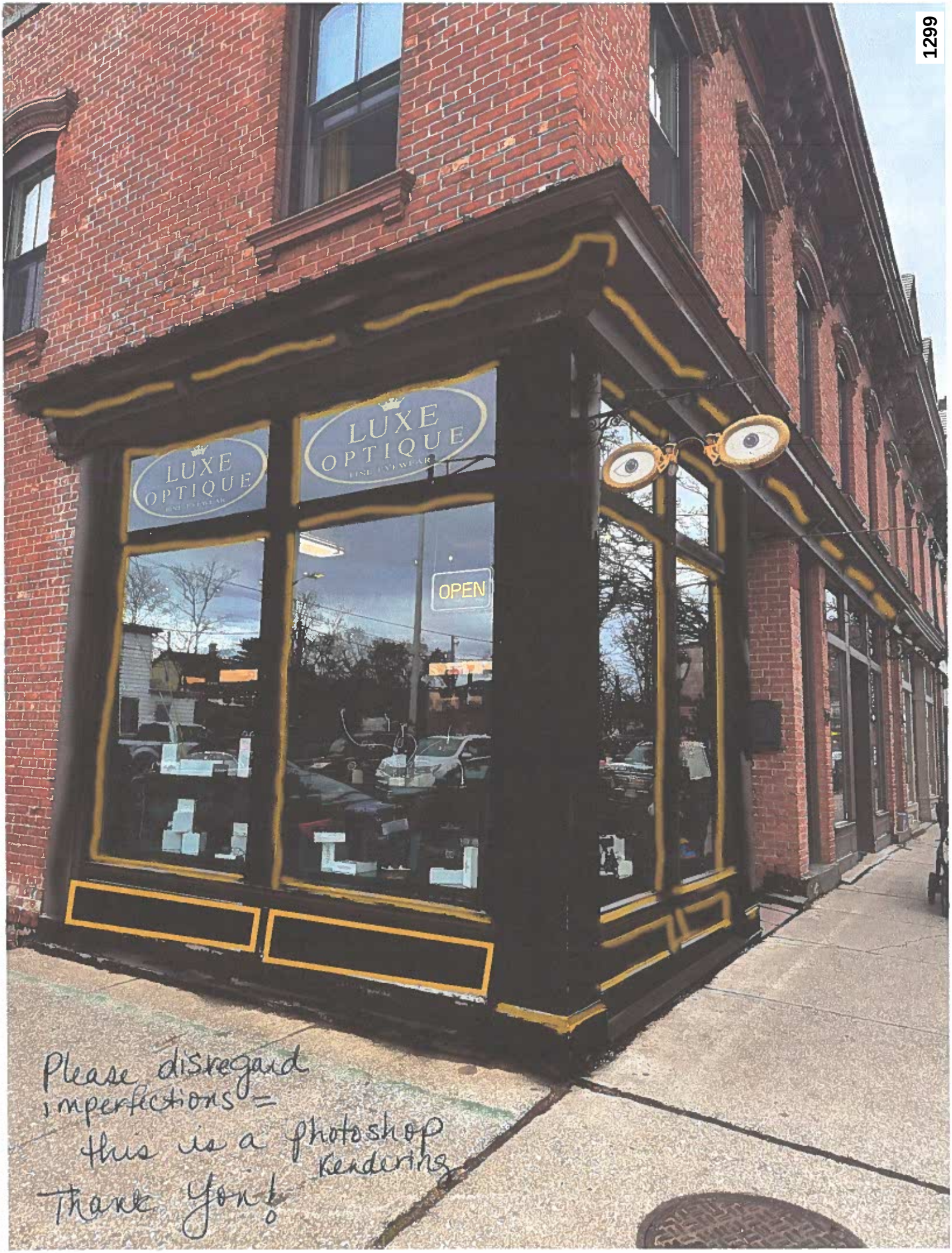
_____

_____

FEE: $100.00 PAID 3/7/25, chk #1467

LUXE
OPTIQUE
FINE EYEWEAR
LUXE
OPTIQUE
FINE EYEWEAR
OPEN

1298



Please disregard imperfections =
this is a photoshop rendering
Thank You!

LUXE
OPTIQUE
LUXE
OPTIQUE
LUXE
OPTIQUE
OPEN

City of Beacon Planning Board Agenda
04/08/2025

Title:

Certificate of Appropriateness - 232 Main Street; Facade

ATTACHMENTS

232 Main PB 4.8.25 ARB app.pdf

Dave the Butcher
Architectural Review Application
232 Main Street
Beacon, NY 12508

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: 3/14/25

Project Address: 232 Main Street, Beacon, NY 12508

Project Architect/Engineer: Allyson Welch

Owner/Builder: Lauren DeBellis Aviv and Frank DeBellis

Contact Phone No.: 845-641-5517 Email: lauren@dapllp.com

Approval Requested: X Certificate of Appropriateness (sign or façade change) ____ New Single-Family House

Color/Materials:

Siding: n/a

Roofing: No change to existing roof

Windows: Color: Window trim will be painted Benjamin Moore Rainy Afternoon 1575 Type: No change to existing windows

Trim: Trim will be painted Benjamin Moore Rainy Afternoon 1575

Garage Door: n/a

Stone/Brick: Brick will be painted Benjamin Simply White OC-117

X _____

Signature of Owner

Applications for sign approval must also submit a sign permit application & supporting documents

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

_____

_____

FEE: $100.00

HR
ARKING
- 5 PM
RKING
9 AM
HURS
232
232

232

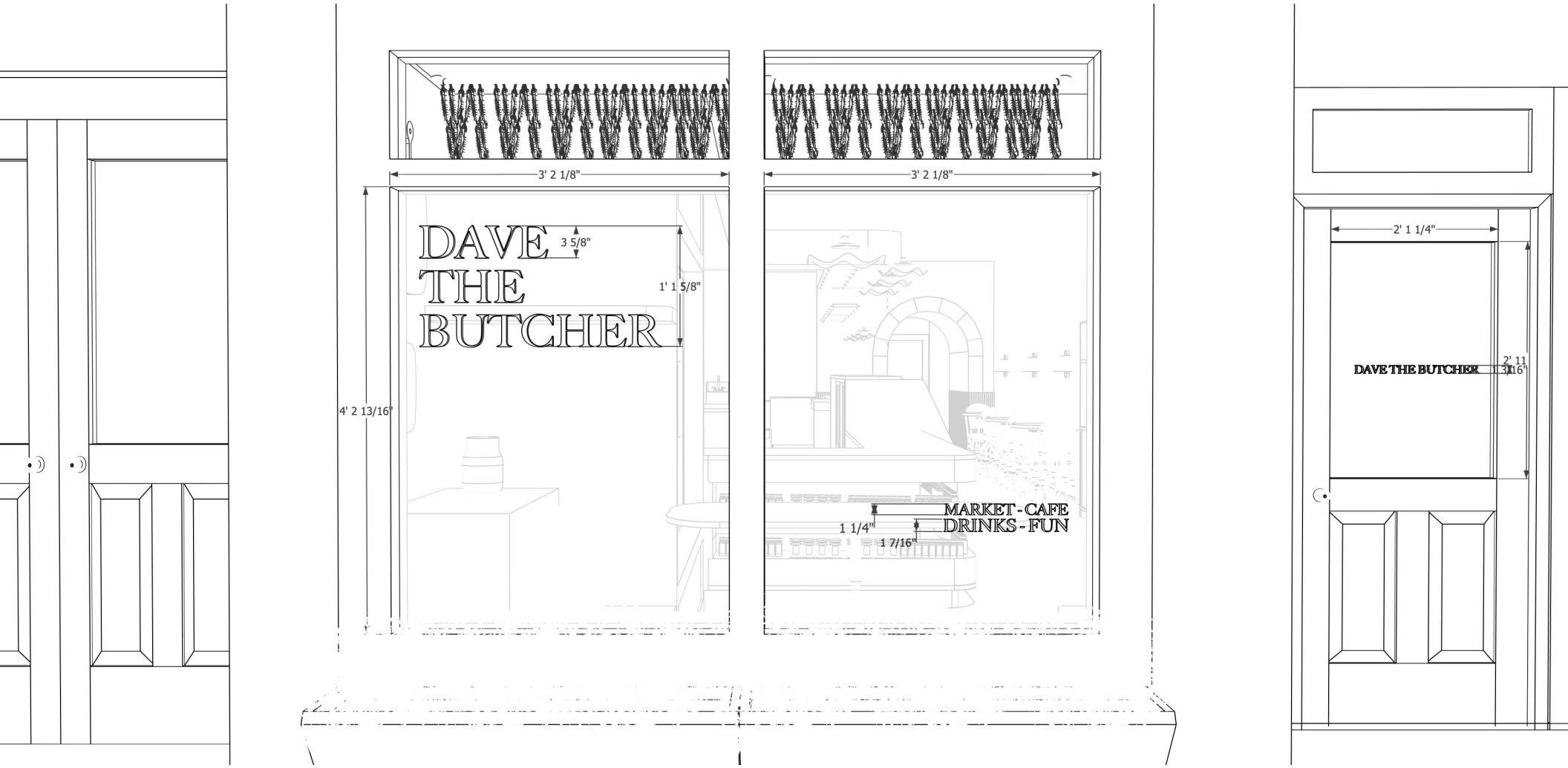
DAVE
THE
BUTCHER

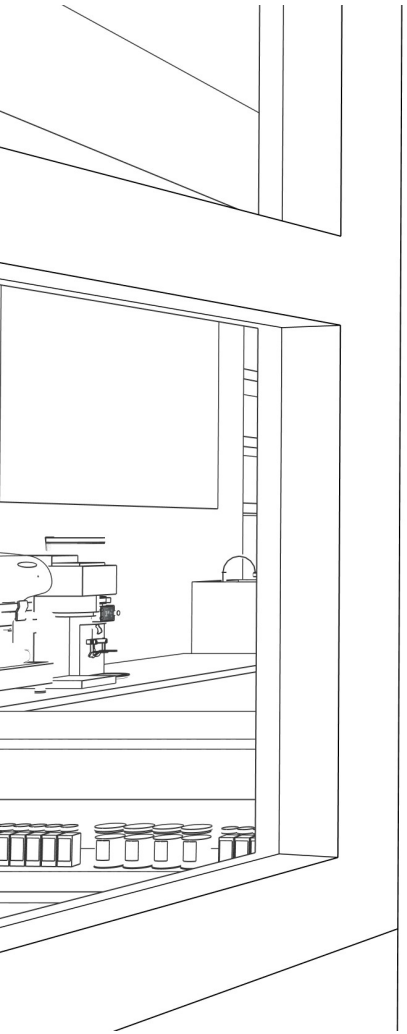
DAVE
THE
BUTCHER

DAVE
THE
BUTCHER
MARET - CAFE
DRINKS - FUN
THE BUTCHER

DAVE
THE
BUTCHER

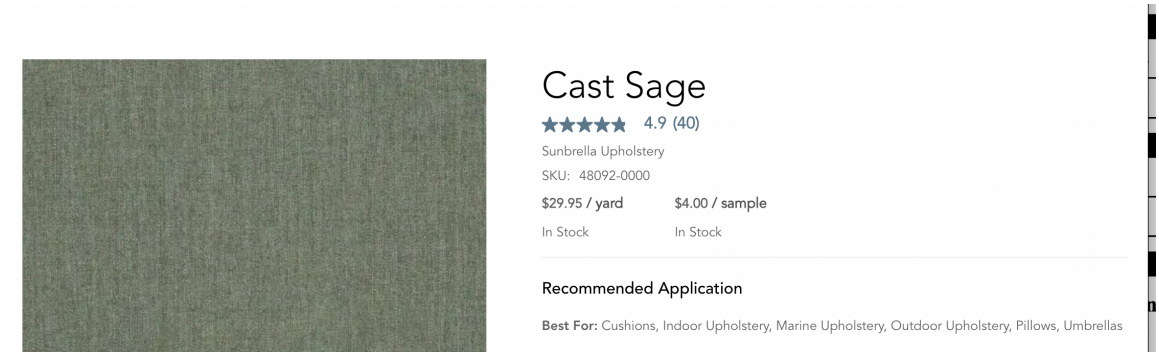
22' 6 3/8"
16' 3 13/16"
2' 3/4"
12' 2 7/8"
10' 7 7/8"
8' 1 1/16"
4' 10 15/16"
DAVE
THE
BUTCHER


3' 2 1/8"
3' 2 1/8"
DAVE
THE
BUTCHER
3 5/8"
1' 1 5/8"
4' 2 13/16"
MARKET - CAFE
DRINKS - FUN
1 1/4"
1 7/16"
2' 1 1/4"
DAVE THE BUTCHER

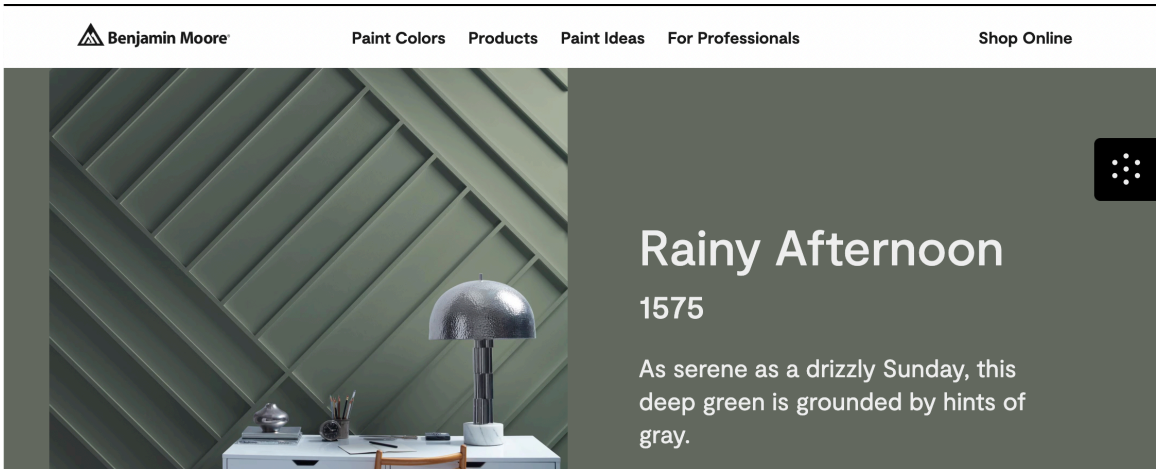


1313

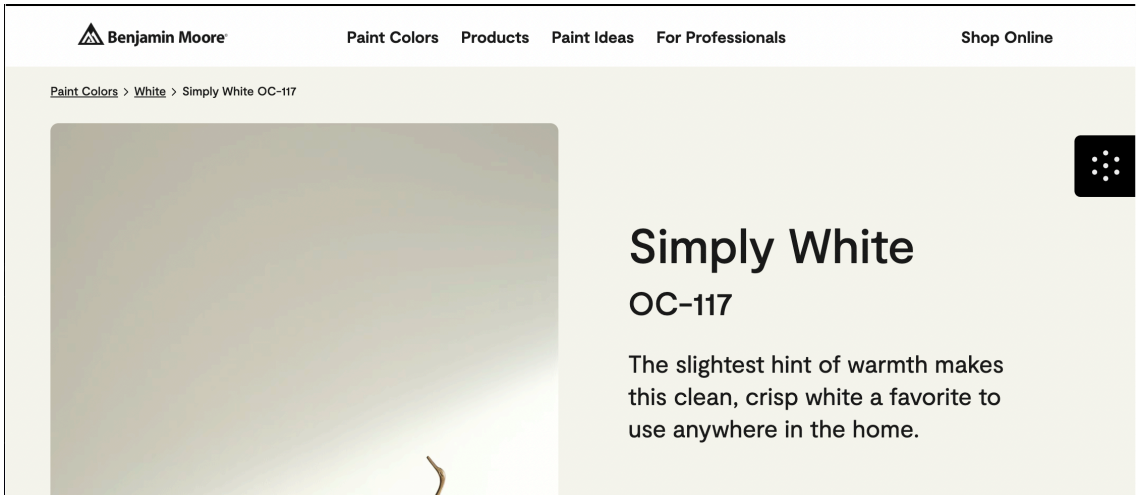
Awning Fabric (front exterior 232 Main Street):



Green Paint (front exterior 232 Main Street):



White Paint (front exterior 232 Main Street):



City of Beacon Planning Board Agenda
04/08/2025

Title:

Certificate of Appropriateness - 139 Main Street; Sign

ATTACHMENTS

139 Main PB 4.8.25 ARB app.pdf

1316

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: 3/24/25

Project Address: 139 Main Street Beacon NY 12508

Project Architect/Engineer: self

Owner/Builder: The Lindley LLC

Contact Phone No.: 917-841-6942 Email: sarah@savagewonder.org

Approval Requested: ✓ Certificate of Appropriateness (sign or façade change) _____ New Single-Family House

Color/Materials:

Received: MAR 24 2025 MP
City of Beacon Building/Planning/Zoning

Siding: N/A

Roofing: N/A

Windows: Color: #086764, #5c055.1 #bf6a10 #ffde59 Type: signs

Trim: N/A

Garage Door: N/A

Stone/Brick: N/A

Signature of Owner

Applications for sign approval must also submit a sign permit application & supporting documents

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

FEE: $100.00 PAID 3/24/25, CASH

ARCHITECTURAL REVIEW BOARD APPLICATION

APPFEE $100

1317

Date: 3/24/25

Project Address: 139 Main Street Beacon NY 12508

Project Architect/Engineer: Self

The City of Beacon
MAR 24 2025
Paid

Owner/Builder: The Lindley LLC

Contact Phone No.: 917-841-8942 Email: sarah@savagewonder.org

Approval Requested: ✓ Certificate of Appropriateness (sign or façade change) _____ New Single-Family House

Color/Materials:

Siding: N/A

Roofing: N/A

Windows: Color: #0867bd, #5c055.1 #bf6n10 #ffde59 Type: Signs

Trim: N/A

Garage Door: N/A

Stone/Brick: N/A

Signature of Owner

Applications for sign approval must also submit a sign permit application & supporting documents

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

FEE: $100.00

1318

Gmail

Sarah Ordaz <saraho@savagewonder.org>

Hex Codes Signage

1 message

Christopher Cuccolo <ChristopherC@savagewonder.org> Thu, Mar 20, 2025 at 10:26 AM
To: Sarah Ordaz <saraho@savagewonder.org>

#08676d: "TEAL"
#5c055d: "PURPLE"
#bf6a10: "ORANGE"
#ffde59: "YELLOW"

SAVAGE
WONDER
Coming Soon
BEACON SAVINGS

Side Panel Window 102" x 22.5"

Door Window (Octopi) 22" x 19".

Door Window (Octopi) 22" x 19"

Side Panel Window 102" x 22.5"

Above Door Window (Coming Soon) 64" x 17.5"

102" x 22.5"

102" x 22.5"

1322

City of Beacon Planning Board Agenda
04/08/2025

Title:

Certificate of Appropriateness - 432 Main Street; Facade

ATTACHMENTS

432 Main PB 4.8.25 ARB app.pdf

1326

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: 3/24/25

Project Address: 432 Main Street Beacon NY 12508

Project Architect/Engineer:

Owner/Builder: Neil Vaughn

Contact Phone No.: 914 489 2399 Email: 432main@gmail.com

Approval Requested: ✓ Certificate of Appropriateness (sign or façade change) ____ New Single-Family House

Color/Materials:

Siding: Board and Batten pine painted

Roofing: black asphalt 20yr shingles

Windows: Color: white exterior Type: 400 series Anderson gliders

Trim: pine painted

Garage Door:

Stone/Brick:

Received:
MAR 25 2025 MP
City of Beacon
Building/Planning/Zoning

Signature of Owner

Applications for sign approval must also submit a sign permit application & supporting documents

FOR OFFICE USE ONLY:

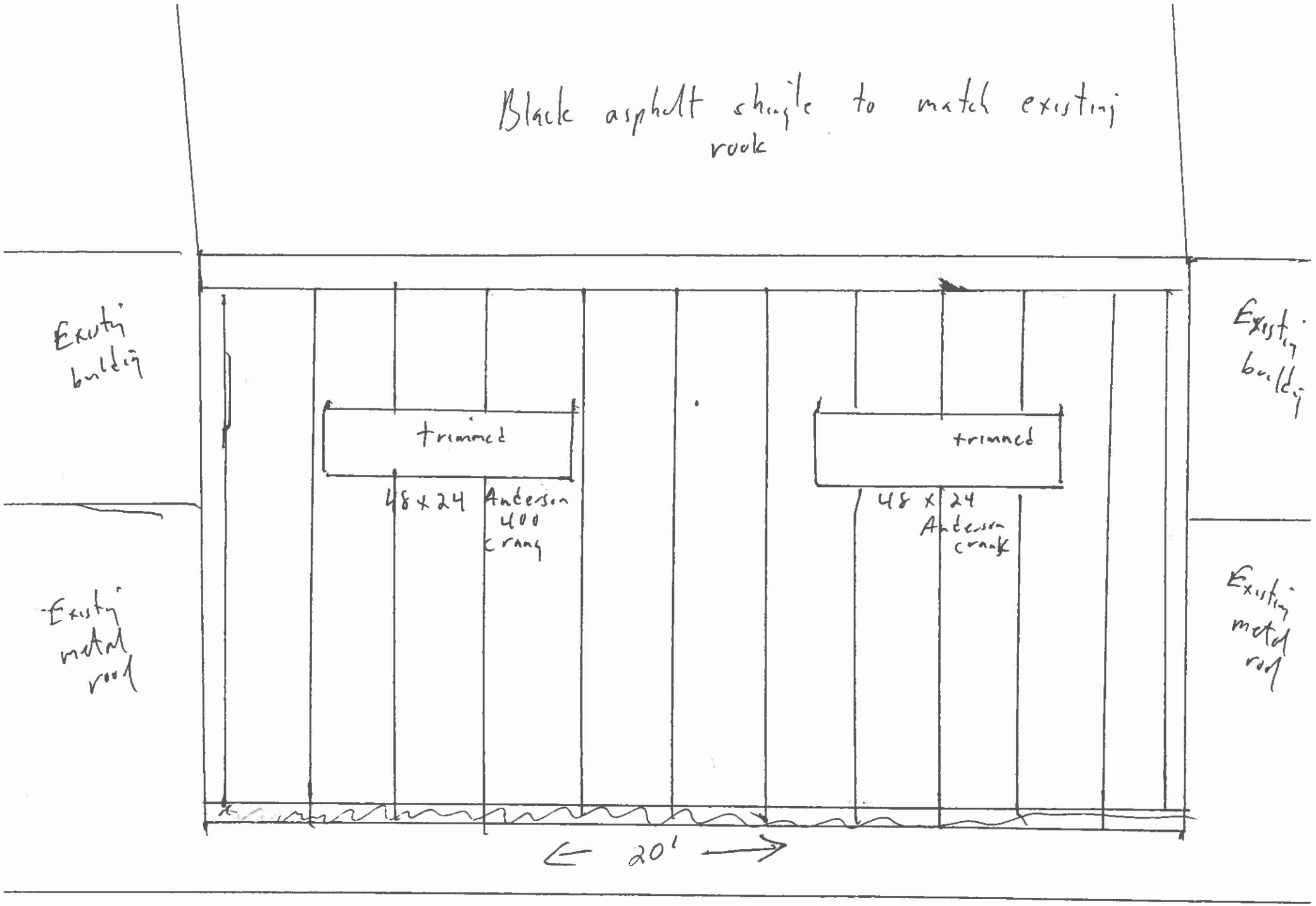
The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____ (Date)

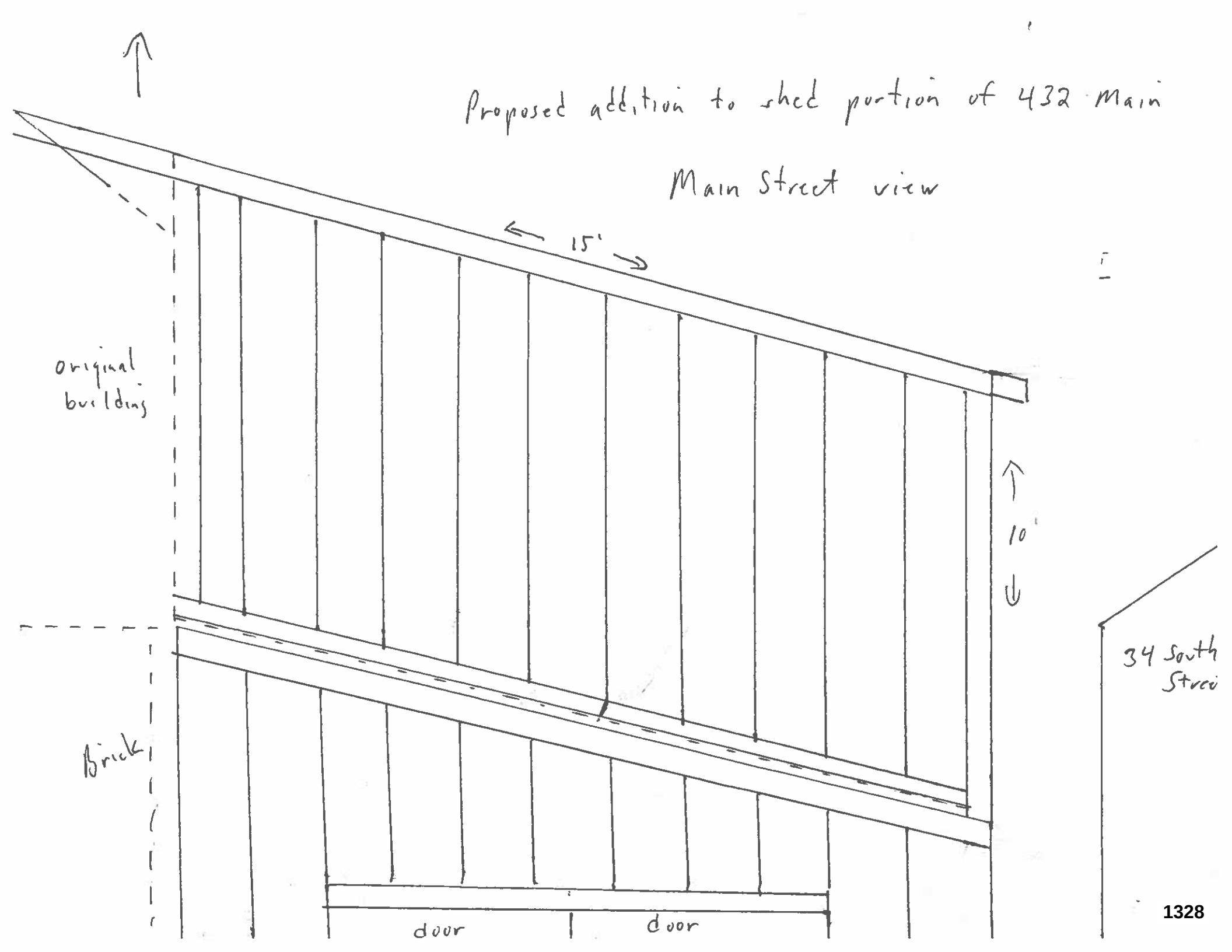
Plan Approved _____ (Date)

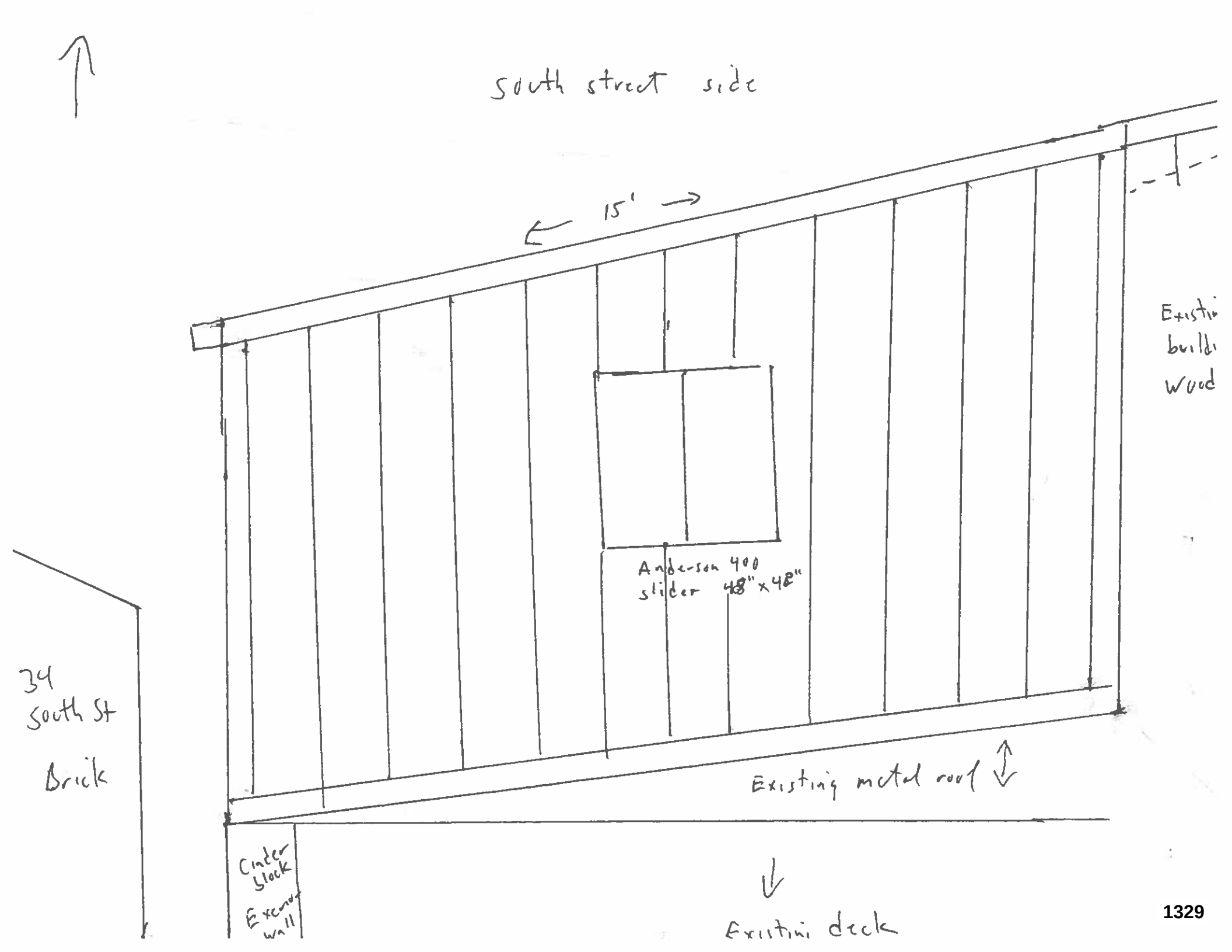
Subject to the following:

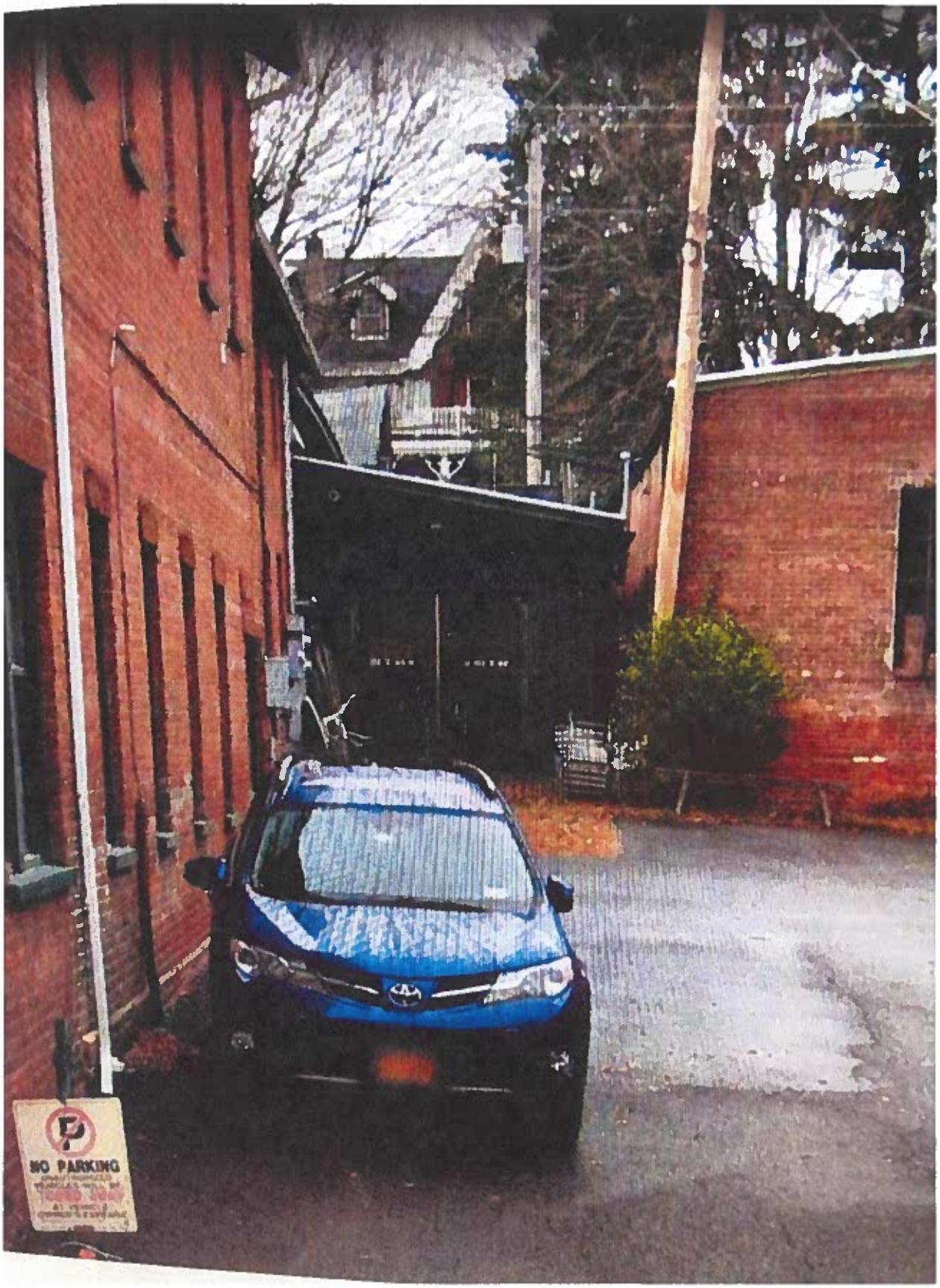
FEE: $100.00 PAID 3/25/25, CHK # 1939

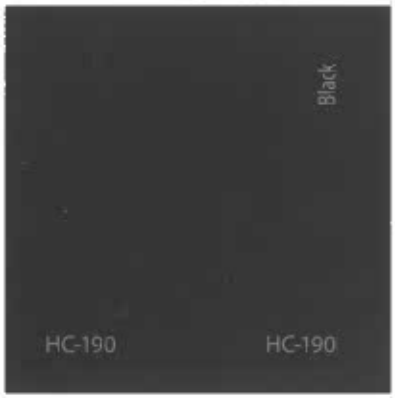


34 South street roof
East side view


Proposed addition to shed portion of 432 Main
Main Street view
15'
original building
10'
Brick
door
door
34 South Stree


South street side
15'
Existin
buildi
Wood
Anderson 400
slider 48" x 48"
34
South St
Brick
Existing metal roof
Cinder
block
Existing deck


NO PARKING



HC Benjamin Moore HC

City of Beacon Planning Board Agenda
04/08/2025

Title:

Certificate of Appropriateness - 288 Main Street; Facade

ATTACHMENTS

288 Main PB 4.8.25 ARB app.pdf

1334

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: March 25, 2025

Project Address: 288 Main Street - Beacon, NY 12508

Project Architect/Engineer: Aryeh Siegel Architect

Owner/Builder: Movil Development Corp.

Approval Requested: ☑ Certificate of Appropriateness ☐ New Single Family House

Color/Materials:

Siding: N/A

Roofing: N/A

Windows: Color: Black Type: Aluminum Storefront

Trim: White trim board @ top of wall, horizontal accents, and door & window headers.

Garage Door: N/A

Stone/Brick: Existing Red Brick (No change)

Signature of Owner

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

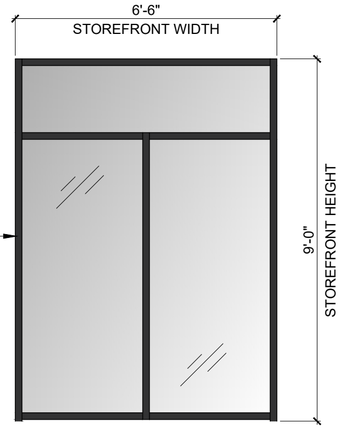
Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

FEE: $100.00 PAID 3/25/25, CHK #148

KAWNEER STOREFRONT ALUMINUM FRAMING SYSTEM.
TRIFAB 450 VG FRAMING SYSTEM
WITH 1" INFILL TEMPERED GLAZING.
COLOR: ANODIZED BLACK



Storefront Elevation

3/8" = 1'-0"

PAINT COLOR #1:
ANODIZED BLACK

KAWNEER STOREFRONT
ALUMINUM FRAMING SYSTEM.
TRIFAB 450 VG FRAMING SYSTEM
WITH 1" INFILL TEMPERED
GLAZING. COLOR: ANODIZED BLACK

South Elevation: (Main Street)

1/4" = 1'-0"

Certificate of Appropriateness Application

Owner:
Movil Development Corp.
288 Main Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

288 Main Street
Beacon, New York
Scale: As Noted
March 25, 2025

City of Beacon Planning Board Agenda
04/08/2025

Title:

Consider request for two (2) 90-day extensions of Subdivision and Site Plan Approval, 2 1/2 story mixed-use building, 152-158 Fishkill Avenue, submitted by 152-158 Fishkill LLC.

ATTACHMENTS

152-158 Fishkill PB 4.8.25 ext request.pdf

CUDDY +FEDER LLP

445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

Taylor M. Palmer
tpalmer@cuddyfeder.com

March 5, 2025

VIA EMAIL AND FEDERAL EXPRESS
Hon. John Gunn, Chairman
and Members of the Planning Board
City of Beacon
One Municipal Plaza
Beacon, New York 12508

Re: 152-158 Fishkill LLC – Mixed-Use Development Project
Request for Extension – Subdivision & Site Plan Approval
Property: 152-158 Fishkill Avenue, City of Beacon, County of Dutchess, State of New York

Dear Chairman Gunn and Members of the Planning Board:

We are writing on behalf of our client, 152-158 Fishkill Avenue LLC (the "Applicant") the owner of the above-referenced Property, to request two (2) ninety (90)-day extensions of the Planning Board's Preliminary & Final Subdivision Plat and Site Plan Approval for the above-referenced matter (the "Approval"), which Subdivision Approval was last extended through March 5, 2025 and Site Plan Approval was last extended through March 11, 2025. *See* **Exhibit A** – City of Beacon Planning Board Minutes for September 12, 2024 Regular Meeting Agenda.

The Applicant continues to work diligently towards obtaining a Building Permit, which efforts include, but are not limited to, a submission on February 21, 2025 of finalized plans and draft agreements to the City's Staff and Consultants to enable signature of the Site Plan and Subdivision Plat by the Planning Board Chairman. The Applicant therefore respectfully requests that the Planning Board grant two (2) ninety (90)-day extensions for both Approvals, thus extending the Subdivision Approval through to September 1, 2025 and Site Plan Approval through to September 7, 2025. Accordingly, the Applicant respectfully requests that this matter be calendared for the next available Planning Board Meeting for consideration.[1]

In the meantime, if the Planning Board or City Staff have any questions or comments with regard to the foregoing, please do not hesitate to contact me. Thank you in advance for your consideration in this matter.

Very truly yours,

Taylor M. Palmer
Enclosures
cc: 152-158 Fishkill LLC, Hudson Engineering and Consulting, P.C., Nexus Creative Design

[1] Note: There are no changes proposed to the parameters of the Project, nor have there been any material changes to the facts and circumstances that existed when the Planning Board approved the project. *See St. Onge v. Donovan*, 71 N.Y.2d 507 (N.Y. 1988).

EXHIBIT A

CITY OF BEACON
ONE MUNICIPAL PLAZA - SUITE 1
BEACON, NEW YORK 12508
Phone (845) 838-5002 Fax (845) 838-5026

MINUTES OF THE PLANNING BOARD

The Planning Board met on **Tuesday, September 10, 2024,** at 7:00 p.m., in the Municipal Center Courtroom.

A video of this meeting is available in its entirety through the City of Beacon website:
https://beaconny.gov/index.php/government/boards-committees/planning-board/

The video can also be found on YouTube:
https://www.youtube.com/playlist?list=PLhEUshaB9yYr8xfNxmalstjUY6bniLsCE

Present: John Gunn, Donna Francis, Karen Quiana, Len Warner, J. Randall Williams, Kevin Byrne, David Jensen, Jennifer Gray, John Russo, Bruce Flower, Mercedes Perez

Absent: Natalie Quinn

TRAINING WORKSHOP
Began at 7:00 p.m.
Presented by Jennifer Gray, Attorney
Subject: Adopted Local Law establishing maximum parking requirements

The Planning Board Attorney discussed the final draft of the adopted local law and how it affects Planning board reviews. The local law creates maximum parking in some zoning districts and a range in others. In the CMS (Central Main Street), L (Linkage), and WD (Waterfront Development) districts, there are no minimum parking requirements, unless otherwise determined by the Planning Board. In all other districts there's a range. The local law also eliminated the 1964 parking exemption, increased landscaping requirements within parking areas, and made green stormwater practices for parking areas, other than in single-family and two-family homes, a requirement.

Ended at 7:33 p.m.

The meeting was called to order at 7:34 p.m.

Motion to approve the June 11, 2024, minutes:
Motion: Len Warner
Second: David Jensen
6 in favor – 1 abstained
Abstained: Karen Quiana

Motion to approve the July 9, 2024, minutes:
Motion: Karen Quiana
Second: Kevin Byrne
6 in favor – 1 abstained
Abstained: David Jensen

Approval of August 13, 2024, minutes
The August meeting minutes were not made available to the board and will be moved to the October 8, 2024, agenda.

PUBLIC HEARINGS

Public hearing and continue review of application for Site Plan Approval, accessory dwelling unit, 16 Rock Hill Road, submitted by Donna Schiehsl.

- Donna Schiehsl, owner and applicant, provided details on the proposed accessory dwelling unit. She confirmed that the property will be owner occupied and not used as a short-term rental, and that there will be no changes to the exterior.

Motion to open the public hearing:
Motion: Karen Quiana
Second: Kevin Byrne
All in favor – none opposed

- Comments from the City Planner and the City Engineer have been addressed by the applicant.
- The chair opened the floor to the public: none

Motion to close the public hearing:
Motion: Karen Quiana
Second: Len Warner
All in favor – none opposed

Motion to adopt the resolution:
Motion: Randall Williams
Second: Karen Quiana
All in favor – none opposed

Public hearing and continue review of application for Site Plan Approval, 19 Henry Street, townhomes, submitted by Lori Joseph Builders, Inc.

Motion to open the public hearing:
Motion: David Jensen
Second: Karen Quiana
All in favor – none opposed

- Taylor Palmer, of Cuddy & Feder, attorney for the applicant, discussed the proposed project and changes to the design. He also commented on the City Council's recent adoption of changes to the T (Transitional) zoning district, applicable to townhouses. The applicant has now amended their application to include subdivision approval.
- Mike Bodendorf, of Hudson Land Design, engineer for the applicant, explained how each townhome will have its own water and sewer connection to the city sewers and water system, and that there will be a drainage system.
- Comments by the City Planner and City Engineer have been addressed by the applicant.
- The board discussed drainage.
- The applicant will submit an updated site plan reflecting the changes related to the subdivision.
- The chair opened the floor to the public: Carl Schaefer of 86 Catherine Street; Matt Keaveney of 94 Catherine Street.
- The board discussed landscaping and screening, and requested recommendations from the applicant.

Motion to authorize draft SEQR documents:
Motion: Randall Williams
Second: Karen Quiana
All in favor – none opposed

- The board agreed to leave the public hearing open and have the notice republished to include the subdivision approval.

Motion to authorize republication of the public hearing notice to include the subdivision approval, conditioned on the filing of the local law:
Motion: Len Warner
Second: Karen Quiana
All in favor – none opposed

CONTINUED APPLICAITONS

Continue review of application for Site Plan and Subdivision Approval, Mixed-Use Commercial and Residential, 45 Beekman Street, High Street, and High Street, submitted by Beekman Arts Center LLC and Bay Ridge Studios LLC.

Donna Francis, board member, recused herself for this application.

- Taylor Palmer, of Cuddy & Feder, attorney for the applicant, discussed changes to the design and requested a referral to the Architectural Review Board. He also noted that the applicant has had a meeting with DOT (Department of Transportation) staffers.
- Philip Grealy, of Colliers Engineering and Design, traffic engineer for the applicant, discussed the surplus land, scheduling an additional meeting with DOT, and potential mitigation measures for the signal at Beekman Street.
- Justin Dates, of Colliers Engineering and Design, engineer for the applicant, discussed modifications to the site plan that include changes to erosion control, stormwater, catch

basins, the lighting plan, and some landscaping. He also noted that they are pursuing dye tests.

- Aryeh Siegel, architect for the applicant, discussed the revised renderings.

Motion to refer the applicant to the Architectural Review Board Subcommittee:
Motion: Randall Williams
Second: Len Warner
All in favor – none opposed

Donna Francis, board member, rejoined the meeting.

Continue review of application for Site Plan Approval, 14 N Cedar Street, 4-unit multi-family dwelling, submitted by Cervone-Perrucci Realty.

- Angelo Perrucci, owner and applicant, representing the applicant, discussed the proposed project and explained that it will be a modular build.
- The board confirmed that a modular build is still subject to architectural review.
- The board shared their concerns with the design.

MISCELLANEOUS BUSINESS

Consider request for two (2) 90-day extensions of Subdivision and Site Plan Approval, 2 ½ story mixed-use building, 152-158 Fishkill Avenue, submitted by 152-158 Fishkill LLC.

- The board discussed the request for extension and agreed to approve.

Motion to approve two (2) 90-day extensions:
Motion: Len Warner
Second: David Jensen
All in favor – none opposed

Consider request for two (2) 90-day extensions of Internal Property Subdivision Approval, 7-lot internal property subdivision, 18-30 Edgewater Place, submitted by Scenic Beacon Developments.

- The board discussed the request for extension and agreed to approve.

Motion to approve two (2) 90-day extensions:
Motion: David Jensen
Second: Len Warner
All in favor – none opposed

BREAK AT 8:58 PM
MEETING RESUMED AT 9:00 PM

ARCHITECTURAL REVIEW

New Single-Family House – 39 Howland Avenue

- Gary Joseph, owner and applicant, discussed the proposed design and provided material samples.
- The board reviewed the modifications made.

Motion to approve with modifications proposed (windows added, siding changed, front porch materials provided):
Motion: Randall Williams
Second: David Jensen
All in favor – none opposed

New Single-Family House – 144 Spring Valley Street

- Paula Dowd, owner and applicant, discussed the proposed changes to the previously approved design. She explained that the changes to the roof was necessary to accommodate HVAC units.
- The board expressed concerns with the new design and materials proposed. Samples were not provided.
- The applicant agreed to keep the design that was previously approved.

Motion to disapprove the applicant's material, as submitted:
Motion: Karen Quiana
Second: Len Warner
All in favor – none opposed

Motion to adjourn the meeting:
Motion: Karen Quiana
Second: Kevin Byrne
All in favor – none opposed

The meeting was adjourned at 9:18 p.m.

Received
Office of the City Clerk
9/22/2023

RESOLUTION

PLANNING BOARD
BEACON, NEW YORK

PRELIMINARY & FINAL SUBDIVISION PLAT APPROVAL AND SITE PLAN APPROVAL FOR 152 AND 158 FISHKILL AVENUE

Parcel No. 6054-29-041801 (152 Fishkill Avenue)
Parcel No. 6054-29-042814 (158 Fishkill Avenue)

WHEREAS, the City of Beacon Planning Board received applications for Site Plan and Subdivision Plat (lot merger) Approvals from 152-158 Fishkill LLC (the "Applicant") for the construction of a 2 ½ story mixed-use building consisting of approximately 8,071 gross square feet of commercial areas on the first floor and a total of 16 residential units (8 1-bedroom units and 8 2-bedroom units), including two (2) Below Market Rate units, with associated off-street parking on a combined parcel consisting of 43,885 square feet, (the "Project" or "Proposed Action"), located at 152 Fishkill Avenue (Parcel ID No. 6054-29-041801) and 158 Fishkill Avenue (Parcel ID No. 6054-29-042814) within the Transitional (T) Zoning District (the "Property"); and

WHEREAS, the Applicant is proposing to remove two (2) exiting buildings, as well as any accessory structures and impervious surfaces thereto, and merge both lots into a single parcel, with a combined area of 43,885 square feet or approximately 1.01 acres; and

WHEREAS, the Applicant reduced the originally proposed grade changes between Fishkill Avenue sidewalk and revised the proposed first floor and the elevations so that the proposed building height does not exceed what is permitted under the City of Beacon Code; and

WHEREAS, the Planning Board is the approval authority for the Subdivision (lot merger) pursuant to the City of Beacon Code § 195-2; and

WHEREAS, the Planning Board is the approval authority for the Site Plan pursuant to the City of Beacon Code §223-25; and

WHEREAS, the application consists of application forms, correspondence, Full Environmental Assessment Form, as well as professional studies and reports submitted to the Planning Board; and

WHEREAS, the Project is shown on a (i) subdivision plat entitled "Subdivision Plat – Lot Line Consolidation Plan," dated August 16, 2023, prepared by Heritage Land Surveying, P.C., (ii) plan set entitled "Site Plan & Lot Merger for 152-158 Fishkill Avenue" dated February 27, 2023, last revised August 27, 2023, sheets 1 to 18, as prepared by Arden Consulting Engineers, PLLC, Monroe, NY, and (iii) architectural drawings entitled "Architectural Site

Plan" dated February 27, 2023, last revised August 25, 2023, as prepared by Nexus Creative Architecture Planning Design, D.P.C., Tarrytown, NY, as follows:

"Site Plan & Lot Merger for 152-158 Fishkill Avenue" dated February 27, 2023, last revised August 27, 2023, sheets 1 to 18, as prepared by Arden Consulting Engineers, PLLC, Monroe, NY:

Sheet	Title
1 of 18	*Title Sheet*
2 of 18	*Existing Conditions Map*
3 of 18	*Demolition Plan*
4 of 18	*Site Plan*
5 of 18	*Grading & Utility Plan*
6 of 18	*Vehicle Turning Diagrams*
7 of 18	*Lighting Plan*
8 of 18	*Lighting Details*
9 of 18	*Landscaping Plan*
10 of 18	*Landscaping Details*
11 of 18	*Erosion and Sediment Control Plan*
12 of 18	*Orthoimagery*
13 of 18	*Site Construction Details 1*
14 of 18	*Site Construction Details 2*
15 of 18	*Water Supply and Sewage Disposal Details*
16 of 18	*Stormwater Construction Details 01*
17 of 18	*Stormwater Construction Details 02*
18 of 18	*Construction Specifications*

"Architectural Site Plan" dated February 27, 2023, last revised August 25, 2023, as prepared by Nexus Creative Architecture Planning Design, D.P.C., Tarrytown, NY:

1 of 11	*SK0 – Conceptual Rendered Site Plan*
2 of 11	*SK1 – Conceptual First Floor Plan*
3 of 11	*SK2 – Conceptual Second Floor Plan*
4 of 11	*SK3 – Conceptual Half Story Floor Plan*
5 of 11	*SK4 – Conceptual Roof Terrance Plan*
6 of 11	*SK5 – Conceptual East and West Elevation*
7 of 11	*SK6 – Conceptual North and South Elevation*
8 of 11	*SK7 – Conceptual 3D Renderings*
9 of 11	*SK8 – Conceptual 3D Renderings and Materials*
10 of 11	*SK9 – Conceptual Streetscape Diagrams*
11 of 11	*SK10 – Average Natural Grade and Building Height*

WHEREAS, the Proposed Action is an Unlisted Action pursuant to the New York State Environmental Quality Review Act ("SEQRA"); and

WHEREAS, the Planning Board reviewed the application at its meetings on March 28, 2023, April 11, 2023, May 9, 2023, June 13, 2023, July 11, 2023, August 8, 2023, and September 12, 2023; and

WHEREAS, the Planning Board referred the Project to the City of Beacon Architectural Review Board Subcommittee, which discussed the proposed design with the Applicant's Project Architects and Landscape Designers at its April 28, 2023 and July 21, 2023 meetings, and the Subcommittee thereafter provided its Recommendations and Reports to the Applicant and members of the Planning Board in advance of the Planning Board meetings on May 9, 2023 and August 8, 2023; and

WHEREAS, on July 11, 2023, after circulating its Notice of Intent to Declare Lead Agency and receiving no objections, and after taking a "hard look" at each of the relevant areas of environmental concern through review of the FEAF and all associated materials prepared in connection with the Proposed Action the Planning Board, as Lead Agency, adopted a Negative Declaration pursuant to SEQRA finding that the Proposed Action will not result in any significant adverse environmental impacts; and

WHEREAS, after referral from the Planning Board, on July 18, 2023 the City of Beacon Zoning Board of Appeals granted the Applicant's request for variances from Beacon City Code § 223-13.G(G) to allow for a maximum proposed retaining wall height ranging from seven-and-a-half feet (7.5') to fifteen and four-tenths feet (15.4') in height in the area of the parking lot located north of the newly proposed building and two (2) segments to the east of the proposed structure; and

WHEREAS, a total of sixty-three (63) off-street parking spaces are required under Beacon City Code § 223-26.F and the Applicant has proposed a total of fifty-three (53) off-street parking spaces and six (6) on-street parking spaces along the frontage of Fishkill Avenue; and

WHEREAS, Beacon City Code § 223-26.C(6) authorizes the Planning Board to approve the joint use, or shared use, of parking spaces by two or more uses on the same lot or on contiguous lots, the total capacity of which is less than the spaces required for each, provided the Board finds that the number of parking spaces provided will substantially meet the intent of the Zoning Code by reason of variation in the probable time and maximum use and provided that such approval shall be automatically terminated upon a change of use at the Property; and

WHEREAS, the Applicant submitted a Shared Parking Analysis, prepared by Colliers Engineering & Design, dated March 8, 2023, last revised April 23, 2023, which provides in relevant part that the parking needs of the residential units and commercial units are varied from each other in terms of the probable time and maximum use, and fifty-three (53) off-street parking spaces is sufficient for the proposed uses, to which the City's Traffic Consultant opined that the proposed number of off-street parking spaces is expected to accommodate the parking demand of the Proposed Action; and

WHEREAS, Section 223-26.E of the Zoning Code authorizes the Planning Board to waive the initial improvement of up to 50% of the required parking spaces provided that the property owners are able to provide for such improvements within six months being notified by Planning Board that such waived improvements are deemed necessary; and

WHEREAS, on August 8, 2023, the Planning Board opened and closed a duly noticed public hearing on the Site Plan and Subdivision (lot merger) application, at which time all those interested were given an opportunity to be heard; and

WHEREAS, the Planning Board is fully familiar with the Project and has reviewed the Project relative to all applicable provisions of the City Code; and

NOW THEREFORE BE IT RESOLVED, in accordance with the Beacon City Code § 223-26.C(6), the Planning Board hereby finds that the joint use of the off-street parking spaces by the proposed residential and commercial uses will substantially meet the intention of the of Beacon Zoning Code based upon the Shared Parking Analysis provided by reason of variation in the probable time of peak demand and therefore, the Applicant may provide for fifty-three (53) off-street parking spaces for joint use of the residential and commercial uses on the condition that the Planning Board's approval of such joint use shall automatically terminate upon a change of use at the Property.

BE IT FURTHER RESOLVED, pursuant to Section 223-26.E of the Zoning Code the Planning Board waives the initial improvement of four (4) of the fifty-three (53) off-street parking spaces.

BE IT FURTHER RESOLVED, the Planning Board hereby grants Preliminary Subdivision Plat (lot merger) Approval for the Project, as shown on the application materials referenced above.

BE IT FURTHER RESOLVED, the Planning Board finds that the Final Subdivision Plat will not be substantially changed from the Preliminary Subdivision Plat and hereby determines that a public hearing on the Final Plat is not required.

BE IT FURTHER RESOLVED, the Planning Board hereby grants Final Subdivision Plat (lot merger) and Site Plan Approval, as shown on the application materials referenced above, subject to the follow conditions and modifications set forth below and any other requirements which must be met by law:

A. The following conditions shall be fulfilled prior to the signing of the Final Subdivision Plat and Site Plan by the Chairman of the Planning Board:

1. All application review fees shall be paid in full.

2. The Applicant shall seek and obtain all required permits and/or approvals form the appropriate agencies for the Project, and shall meet all conditions contained in such approvals, as required therein.

3. The comments contained in the City Planner's letter to the Planning Board dated September 8, 2023, and all comments in any subsequent letter(s) issued shall be fulfilled to the satisfaction of the City Planner.

4. The comments contained in the City Engineer's letter to the Planning Board dated September 8, 2023, and all comments in any subsequent letter(s) issued shall be fulfilled to the satisfaction of the City Engineer.

5. The Applicant shall submit in a form acceptable to the City Attorney, a Stormwater Control Facility Maintenance Agreement and Easement for signature of the City Administrator which shall be recorded by the Applicant in the Dutchess County Clerk's Office simultaneously with the Subdivision Plat.

6. The Applicant shall provide a revised Site Plan showing the first four (4) parking spaces at the entrance driveway at Fishkill Avenue as remaining unimproved until deemed necessary, to the satisfaction of the City Planner, City Engineer, and City Traffic Consultant. A landbanked parking agreement shall be submitted to the City Attorney for review and approval.

7. The Applicant shall review the Site Plan to determine whether the proposed ADA parking spaces can be more centrally located at the rear of the proposed building rather than on either end of the building. Any such relocation shall be to the satisfaction of the City Building Inspector and/or City Engineer.

When the above conditions have been satisfied, six (6) sets of the above references plans, revised as per the conditions above, shall be submitted for enforcement by the Planning Board Chairman. One set of the endorsed plans will be returned to the Applicant, one set will be retained by the City Clerk, one set will be provided to the Planning Board, and one set each will be forwarded to the Building Inspector, City Engineer, and City Planner.

B. Prior to the issuance of the Building Permit, the following conditions shall be fulfilled:

1. Pursuant to City of Beacon Code Section 223-41.10.A, the Applicant shall submit plans which indicate the location of each of the BMR unit to be provided which shows a mix of unit types in the same proportion as all other units in the development to the satisfaction of the Building Inspector.

C. The following are general conditions which shall be fulfilled:

1. Based on the current and anticipated future need for park and recreational opportunities in the City of Beacon, as set forth in the analysis provided by BFJ

Planning, and the demands of the future population of the Project, the Planning Board hereby finds that additional recreation/parkland should be created as a condition of approval. However, the Planning Board hereby determines that recreation/parkland of adequate size and location cannot be provided on the Project Site. Therefore, that Applicant shall pay a Recreation Fee as prescribed under Sections 223-25.H(4) and 223-61.A(7) of the Zoning Law for each of the 12 new residential units (16 proposed units minus 4 existing residential units). The Planning Board hereby requires that, prior to the issuance of the Certificate of Occupancy for each unit, the Applicant shall pay a Recreation Fee as per the City's Fee Schedule in effect at the time of payment.

2. The Project shall comply in all respects with Article IVB, Affordable-Workforce Housing, of the City of Beacon Zoning Law Chapter 223. Such units designated as Affordable Workforce Housing shall remain affordable in accordance with Article IVB of Chapter 223 of the City of Beacon Zoning Law for a minimum of fifty (50) years from the date of issuance of the initial certificate of occupancy for rental units and/or date of the original sale for owner-occupied units. The Applicant shall be responsible for the payment of any and all fees established by the City Council now or in the future or as otherwise required for the ongoing implementation of the provisions of Article IVB, Affordable-Workforce Housing, of the City of Beacon Zoning Law as said Article applies to the Project.

3. In accordance with Section 223-26.E of the Zoning Code, the Applicant shall provide for the construction and use of the four (4) unimproved off-street parking spaces as shown on the approved site plan referenced herein within six (6) months of such spaces being deemed necessary.

4. The Building Inspector and the City Engineer shall have the right to direct the Applicant to cause the placement, cleaning and/or repair of sedimentation and erosion control devices wherever and whenever deemed necessary during construction.

5. The Applicant shall be responsible for the payment of all application review costs incurred by the City in its review and approval of this project. Such fees shall be paid by the Applicants within thirty (30) days of each notification by the City that such fees are due. If such fees are not paid within the thirty (30) day period, and an extension therefore has not been granted by the City, this Resolution shall be rendered null and void.

6. Prior to the issuance of a building permit, pursuant to the City Code § 195-15, the Applicant shall a file a performance bond with the City of Beacon to guarantee the satisfactory construction, installation, and completion of any required improvements within the City right-of-way in an amount acceptable to

the City Engineer based on review of a cost estimate to be prepared by the Applicant.

7. Prior to the issuance of a building permit, pursuant to the City Code § 195-16.E, the Applicant shall establish an escrow with the City of Beacon for the inspection of the improvements in the amount acceptable to the City Engineer based on review of a cost estimate to be prepared by the Applicant's professional engineer, which amount shall be equivalent of 6% of the amount of the estimated construction cost.

8. Prior to the issuance of a building permit, pursuant to City Code 190-13, the Applicant shall establish an escrow for stormwater inspections by the City Engineer on behalf of the City of Beacon.

9. Rock removal, if encountered, shall be done by mechanical means on weekdays (excluding State holiday) between the hours of 8 a.m. and 4 p.m. No rock processing is permitted on-site. No blasting shall be permitted without the prior written approval from the City of Beacon Building Department after preparation of a blasting plan. Any blasting required shall be performed in accordance with all applicable local, state, and federal laws, regulations, and standards.

10. Pursuant to the City of Beacon Code § 223-25.J, the Site Plan Approval granted herein shall expire in the event the Applicant does not submit a bona fide building permit application to the Building Department within one year of the adoption date of this Resolution, provided however, that the Planning Board may extend such time period from time to time for good cause shown upon written request from the Applicant.

11. As used herein, the term "Applicant" shall include 152-158 Fishkill LLC, and their successors and assigns, and where applicable, their agents, contractors and employees.

12. If any of the conditions enumerated in this Resolution upon which this approval is granted are found to be invalid or unenforceable, then the integrity of this Resolution and the remaining conditions shall remain valid and intact.

13. The approvals granted by this Resolution do not supersede the authority of any other entity.

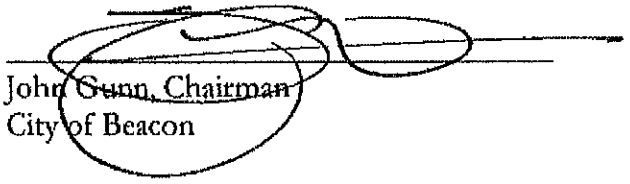
14. Pursuant to City of Beacon Code § 195-14.D, conditional approval of the Final Subdivision Plat shall expire one hundred eighty (180) days from the date of the adoption of this Resolution unless all items in Condition A above have been certified as completed and the Final Plat has been submitted for endorsement by the Planning Board Chairman, or unless a written request for an extension

of Final Subdivision Plat Approval is granted. The Planning Board may grant ninety (90) day extensions to said time period.

15. Once the Final Subdivision Plat has been endorsed by the Planning Board Chairman, said Plat must be filed in the Dutchess County Clerk's Office within sixty-two (62) days. After said filing, two (2) copies of the Final Plat certified by Dutchess County shall be submitted to the Planning Board Secretary. One (1) certified copy of the Final Plat shall be retained by the Planning Board and the other certified copy shall be transmitted to the City Clerk along with a signed copy of this Resolution and proof of recording of the easement documents described above.

16. The Applicant must return for approval from the Planning Board if any changes to the endorsed plans and/or this Resolution of approval are subsequently desired other than changes determined to be field changes by the Building Inspector or City Engineer. The Planning Board, in its discretion, shall determine the appropriate procedures for consideration of the proposed revision, and whether such revision is material enough to require further environmental analysis and/or further project review, as the Board may deem appropriate.

Resolution Adopted: September 12, 2023
Beacon, New York



John Gunn, Chairman
City of Beacon

9/22, 2023
Date

Motion by Mr. Jensen, seconded by Mr. Warner:

Kevin Byrne	Voting AYE	Leonard Warner	Voting AYE
Donna Francis	Voting AYE	J. Randall Williams	Voting EXCUSED
David Jensen	Voting AYE	John Gunn, Chairman	Voting AYE
Karen Quiana	Voting EXCUSED		

Resolution: Approved

City of Beacon Planning Board Agenda
04/08/2025

Title:

City Council request to review proposed Local Law to amend Chapter 223 concerning accessory apartment requirements.

ATTACHMENTS

LL ADU PB 4.8.25 Mayor and Council Memo to PB.pdf

PB 4.8.25 CC Res Refer Proposed LL to amend Zoning Code - Acc Apt Requirements.pdf

LL ADU PB 4.8.25 FEAF Part 1 Narrative.pdf

LL ADU PB 4.8.25 Full EAF Part 1.pdf

LL ADU PB 4.8.25 Bldg Inspector Memo.pdf

LL ADU PB 4.8.25 City Planner ADU Decision Tree Memo.pdf

LL ADU PB 4.8.25 Draft 223-17E Schedule of Use Regs.pdf

LL ADU PB 4.8.25 Draft 223b Schedule of Use Regs.pdf

LL ADU PB 4.8.25 Draft ADU Setbacks Diagrams.pdf

PB 4.8.25 Proposed LL amending Zoning Code Concerning Acc Apt Requirements.pdf

CITY OF BEACON
New York

CITY COUNCIL
One Municipal Plaza, Beacon NY 12508 845-838-5000

TO: John Gunn, Chair
City of Beacon Planning Board

FROM: City of Beacon City Council

DATE: 4/2/2025

RE: Proposed Local Law to Amend the Zoning Code Concerning Accessory Apartment Requirements

I am writing on behalf of the City Council with some specific feedback that we are requesting as part of your more holistic review of the proposed local law.

In referring the proposed local law concerning accessory apartments to Planning Board for review and comment, the City Council has requested that the City Planning Board specifically consider the language in Section 223-24.1(D), which states that if an accessory apartment exceeds 50% of the primary building's footprint, site plan approval from the Planning Board is required.

The Council seeks the Planning Board's opinion on whether site plan approval should be required in such cases. Alternatively, should these applications be referred to the City's Architectural and Community Appearance Board of Review with design guidelines similar to those set forth in Section H? Or should they be permitted as-of-right, with only a Building Department review for compliance with the New York State Building Code and no review by a land use board?

The Council has referred the attached Local Law amending the City's zoning code regarding accessory apartments to the City Planning Board for a report and recommendation. The Council requests the proposed Local Law be considered at the Planning Board's April 8th meeting. Although the Council scheduled the public hearing for April 21st, the Council understands if the Planning Board does not complete its review and report until its May 13th meeting. The Council has the option of continuing the April 21st hearing to a date in May, which would allow the Planning Board sufficient time to complete its review, if necessary.

Thank you in advance for your consideration and recommendations.

Sincerely,

Lee Kyriacou
Mayor

CITY OF BEACON
CITY COUNCIL

RESOLUTION NO. 34 OF 2025

RESOLUTION REFERRING A PROPOSED LOCAL LAW AMENDING THE ZONING CODE CONCERNING ACCESSORY APARTMENT REQUIREMENTS TO THE CITY OF BEACON PLANNING BOARD AND DUTCHESS COUNTY PLANNING BOARD FOR REPORT AND RECOMMENDATION

WHEREAS, the City of Beacon is considering a local law which would amend the City of Beacon Zoning Code concerning accessory apartment requirements; and

WHEREAS, the City Council wishes for both the City of Beacon and Dutchess County Planning Boards to provide a report and recommendation on the proposed local law.

NOW THEREFORE, BE IT RESOLVED THAT, the City Council hereby refers a Proposed Local Law amending the City of Beacon Zoning Code concerning accessory apartment requirements to the City of Beacon Planning Board and the Dutchess County Planning Board for a report and recommendation to the City Council; and

BE IT FURTHER RESOLVED THAT the City Council hereby schedules a public hearing for April 21, 2025 at 7:00 pm for a Proposed Local Law which would amend the City of Beacon Zoning Code concerning accessory apartment requirements.

Resolution No. 34 of 2025		**Date: March 17, 2025**					
☐ Amendments						**☐ 2/3 Required**	
☐ On roll call						**☐ 3/4 Required**	
Motion	Second	Council Member	Yes	No	Abstain	Reason	Absent
	x	**Paloma Wake**	x				
x		**Amber Grant**	x				
		Molly Rhodes					x
		Jeffrey Domanski	x				
		Pam Wetherbee	x				
		George Mansfield	x				
		Mayor Lee Kyriacou	x				
		Motion Carried	x				

Beacon – FEAF Part 1 Narrative

Proposed Local Law Concerning Accessory Apartment Requirements

On March 10, 2025 a draft local law was introduced to amend the City of Beacon's (the "City") requirements and regulations for accessory apartments, also known as accessory dwelling units ("ADUs"). This proposed local law was introduced as a result of the City Council's continued discussion on potential amendments to City's Zoning Code, Chapter 223 of the Beacon City Code, to improve housing availability and affordability. The proposed local law is also intended to amend the Zoning Code to align with and leverage the City's recent application to the New York State's "Plus One ADU Program."

ADUs are an important tool to increase housing stock as well as to lower housing costs for tenants/renters and to provide homeowners with a potential source of revenue. ADUs may also permit the elderly to age in home and/or to move into an ADU located at a family member's home. ADUs also increase housing stock without necessarily requiring the development of new land as ADUs are generally constructed within a single-family home, attached to the existing home, or as a separate building in close proximity to the principal dwelling. As such, ADUs are a valuable tool to help broaden housing choices in single-family neighborhoods and thereby further the City Council's goals of improving housing availability and affordability within the City.

Particularly, the proposed local law is intended to increase the number of single-family properties which can satisfy the requirements to construct an ADU. For example, ADUs will now be permitted in all zoning districts when such are currently permitted in all R1, RD and Transitional (T) zoning districts. Furthermore, ADUs will not be considered an impermissible expansion of a nonconforming use if developed on a legal nonconforming single-family residential property. The minimum size of ADUs would now be regulated by the New York State Building Code. The proposed local law would also amend the schedule of regulations for ADUs within the R1-10 and RD-5 to reduce the minimum rear and side yard setbacks. There would also be no minimum off-street parking requirements for ADUs, except that the Planning Board has the discretion to require parking if an owner seeks approval for an ADU with a maximum square footage that is greater than 50% of the primary building's footprint.

The proposed local law will keep in place several important provisions intended to ensure that ADUs have as little impact on neighboring properties as possible while also balancing the need for additional and affordable housing within the City. Specifically, the owner of the single-family property must reside on the property in which the ADU is constructed. ADUs may not be utilized for short-term rentals. Additionally, only one ADU is permitted on each lot and ADUs are subject to approval by the City's Building Inspector or the Planning Board if the ADU does not meet the minimum setback requirements. Furthermore, ADUs will require approval from the City's Architectural and Community Appearance Board of Review if the ADU is proposed to be less an 10 feet from the property line and within 20 feet of another dwelling on an adjacent lot.

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Proposed Local Law Concerning Accessory Apartment Requirements		
Project Location (describe, and attach a general location map): City of Beacon		
Brief Description of Proposed Action (include purpose or need): A proposed local law to amend the City of Beacon's Zoning Code, Chapter 223 of the City Code, concerning Accessory Apartments requirements and regulations in the City of Beacon. Specifically, the proposed local law would permit accessory apartments on properties containing detached single-family residences in all zoning districts when such accessory use is currently permitted in all R1, RD, and Transitional (T) zoning districts. Furthermore, the proposed local law would amend the dimensional requirements applicable to accessory apartments to enable such accessory use to be permitted on more properties. The proposed local law is intend to increase the number of accessory apartment dwellings in the City to increase housing availability and affordability . Finally, the proposed local law provides that accessory apartments shall not be considered an impermissible expansion of an legal nonconforming use if developed and maintained on legal nonconforming detached single-family properties.		
Name of Applicant/Sponsor: City Council of the City of Beacon	Telephone: (845) 838-5000 E-Mail: cityofbeacon@beaconny.gov	
Address: 1 Municipal Plaza		
City/PO: Beacon	State: NY	Zip Code: 12508
Project Contact (if not same as sponsor; give name and title/role): Mayor Lee Kyriacou	Telephone: (845) 838-5000 E-Mail: cityofbeacon@beaconny.gov	
Address: 1 Municipal Plaza		
City/PO: Beacon	State: NY	Zip Code: 12508
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes ☐No	City Council - Legislative Action re Adoption of Local Law.	Proposed local law first introduced at the March 10, 2025 City Council Meeting.
b. City, Town or Village Planning Board or Commission ☐Yes ☐No		
c. City, Town or Village Zoning Board of Appeals ☐Yes ☐No		
d. Other local agencies ☐Yes ☐No		
e. County agencies ☐Yes ☐No		
f. Regional agencies ☐Yes ☐No		
g. State agencies ☐Yes ☐No		
h. Federal agencies ☐Yes ☐No		

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes ☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☑Yes ☐No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Accessory apartments are currently permitted in all R1, RD, and Transitional (T) zoning districts. The proposed local law would expand this to permit accessory apartments in all other zoning districts.

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☑ Yes ☐ No
If Yes,
i. What is the proposed new zoning for the site? To permit accessory apartments in the GB, CMS, L, WD, WP, FCD, LI and HI zoning districts.

C.4. Existing community services.

a. In what school district is the project site located? Beacon City School District.

b. What police or other public protection forces serve the project site?
City of Beacon Police Department.

c. Which fire protection and emergency medical services serve the project site?
City of Beacon Fire Department and various emergency medical service providers, including the Beacon Volunteer Ambulance Corps.

d. What parks serve the project site?
Beacon City Parks.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)?

b. a. Total acreage of the site of the proposed action? _____ acres
b. Total acreage to be physically disturbed? _____ acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☐Yes☐No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes☐No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes☐No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐Surface water streams ☐Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐Yes☐No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i. What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
_____
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes☐No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes☐No
ix. Summarize site reclamation goals and plan: _____
_____
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes☐No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

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ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☐No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☐No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

_____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

_____

_____

- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☐No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes☐No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes☐No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐Yes ☐No

If yes:

i. Provide details including sources, time of day and duration:

_____

_____

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐Yes ☐No

Describe: _____

_____

n. Will the proposed action have outdoor lighting? ☐Yes ☐No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

_____

_____

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐Yes ☐No

Describe: _____

_____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐Yes ☐No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

_____

_____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐Yes ☐No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

_____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☐No

If Yes:

i. Describe proposed treatment(s):

_____

_____

_____

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____

_____

- Operation: _____

_____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____

_____

- Operation: _____

_____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☐ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☐ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____			

c. Is the project site presently used by members of the community for public recreation? ☐Yes☐No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes☐No
If Yes,
i. Identify Facilities:
_____
_____

e. Does the project site contain an existing dam? ☐Yes☐No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:
_____
_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes☐No
If Yes:
i. Has the facility been formally closed? ☐Yes☐ No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:
_____
_____
iii. Describe any development constraints due to the prior solid waste activities: _____
_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes☐No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:
_____
_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes☐ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes☐No
☐ Yes – Spills Incidents database Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____
_____
_____
iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐Yes☐No
If yes, provide DEC ID number(s): _____
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):
_____
_____

v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☐No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ feet

b. Are there bedrock outcroppings on the project site? ☐Yes ☐No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: _____ _____%
_____ _____%
_____ _____%

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils: ☐ Well Drained: _____% of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes: ☐ 0-10%: _____% of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐Yes ☐No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐Yes ☐No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐Yes ☐No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐Yes ☐No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐Yes ☐No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐Yes ☐No

j. Is the project site in the 100-year Floodplain? ☐Yes ☐No

k. Is the project site in the 500-year Floodplain? ☐Yes ☐No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐Yes ☐No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

_____ _____ _____

_____ _____ _____

n. Does the project site contain a designated significant natural community? ☐Yes ☐No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

_____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☐No

If Yes:

i. Species and listing (endangered or threatened): _____

_____

_____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☐No

If Yes:

i. Species and listing: _____

_____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☐No

If yes, give a brief description of how the proposed action may affect that use: _____

_____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☐No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☐No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☐No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

_____

_____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☐No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☐ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☐ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☐ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name City Council of the City of Beacon Date March 21, 2025

Signature _____ Title City Attorney

PRINT FORM

CITY OF BEACON
New York
Building Department

Bruce Flower
Building Inspector

845-838-5020
Email: bflower@beaconny.gov

To: Christopher White, City Administrator

From: Bruce Flower, Building Inspector

Re ADU Data from Building Department

Date: January 31, 2025

Cost for a detached accessory dwelling unit application which could be brought in front of the Planning Board for an approval. Planning board approval is only required for when ADU's are proposed in detached accessory structures or when proposed to be placed in a new addition to the existing home on the property as per Section 223-24.1 I of the City of Beacon Zoning Code.

Application fee	$750	Fee which goes to the Planning Department
Escrow account initial	$3,000	Escrow to cover the Planner, Engineer and Attorney

- Total application fee and establishing an escrow account would be $3750 and must be submitted with the application and plans prior to be put on the agenda.
- The average amount of escrow used for the 3 projects which were presented to the Planning Board since January 2022 was $2619.53. Once to approval is granted and all professional staff fees have been paid, the applicant will receive any unused escrow funds.
- There is also the cost for the owner to hire an Architect or Engineer to provide a site plan to be presented to the Planning Board for approval. Possible estimated cost $5,00 to 10,000.

Additionally, I have calculated the building and associated permit fees which would be collected by the Building Department. I have estimated the cost based upon a 500-sf detached accessory dwelling unit which is newly constructed. The cost of a permit to renovate and existing structure would be less as the renovation cost per square foot would be .25/sf as opposed to .50/sf. Also, the plans for the building permit would need to come from an Architect or Engineer as per the

requirements of NYCRR title VIII Article 145 and Article 147. The architectural plans could be included in the cost of the Site Plan Approval or separately could cost around $2,000 to 4,000.

BP Application and CO Fee	120
Fee based upon square footage @ .50 for new construction	250
Electrical Permit	60
Plumbing Permit bases upon 5 fixtures	70
HVAC Permit	60
Total fees	$460

Permits which have been issued from 2022-2024 for ADU's

Detached ADU's	1
ADU's in new additions	2
ADU's within existing home	1

KARC
PLANNING CONSULTANTS, INC.

MEMORANDUM

TO: Lee Kyriacou, Mayor
Beacon City Council

FR: Natalie Quinn, KARC Planning Consultants, Inc.

DATE: March 7, 2025

RE: Legislative Amendments to the City's Accessory Apartment Regulations

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At the January 27, 2025, City Council workshop, Council members continued their discussion on potential zoning code changes aimed at improving housing availability and affordability in the City of Beacon. The Council specifically explored measures to further encourage the development of accessory apartments, also known as accessory dwelling units (ADUs), within the city. These regulatory improvements will align with and leverage the city's recent application to New York State Homes and Community Renewal's (HCR) Plus One ADU Program.

At the February 24, 2025, City Council workshop meeting, the City Council discussed amendments to the City Code to revise accessory apartment regulations in the City of Beacon. This memorandum outlines the questions the City Council considered, and the decisions rendered concerning such legislation. The City Council's decisions pertaining to each question are incorporated into the attached proposed local law.

1. Accessory apartments are currently permitted in all R1, RD, and T Districts. Does the City want to expand the districts where ADUs are permitted? For example, one-family attached/semidetached structures are also permitted in the L and FCD districts. Does the City want to permit accessory apartments on single-family lots in the L and FCD districts?

   - **Answer:** At the City Council's recommendation, accessory apartments are proposed to be permitted on detached single-family properties in all districts.

2. Is the City satisfied with the requirement that the owner of a single-family lot must reside in either the primary or the accessory unit on said lot?

   - **Answer:** The City Council decided it did not want to remove the owner occupancy requirement at this time. It was discussed that in the future the Council may consider allowing accessory apartments regardless of owner-occupancy by special permit, with criteria for special consideration of impacts to parking and community character. A definition for "owner" and "occupied primary residence" has been added to Section 223-63.

3. Based on the response above, if any property owner can build an accessory apartment (regardless of whether it is owner-occupied), does the City want to set restrictions based on whether one of the units onsite is owner-occupied or not owner-occupied?

    - **Answer:** See previous answer.

4. Accessory apartments are currently regulated by a minimum square foot requirement of 200 sq ft. Does the City feel this requirement is necessary? It should be noted that the NYS Building Code also regulates the minimum size of dwelling units.

    - **Answer:** At the City Council's recommendation, the minimum unit size requirement for accessory apartments has been removed. Dwelling unit sizes will now be regulated solely by the NYS Building Code, which currently permits a minimum size of 120 square feet for a studio or efficiency apartment, with additional square footage required per occupant or bedroom.

5. Is the City satisfied with the maximum 1000 sq ft requirement for accessory apartments? As the code stands, the Planning Board may permit larger apartments in existing accessory buildings that are larger than 1,000 sq ft if said structure was issued a certificate of occupancy more than five (5) years prior to filing application for an accessory apartment.

    - **Answer:** At the City Council's recommendation, the maximum 1000 sq ft requirement for accessory apartments has been removed. Clarification was added to indicate that the maximum square footage permitted for accessory buildings is 50% of the total square footage of a principal building in all districts. For accessory apartments greater than 50% of the primary building, site plan approval from the Planning Board is required.

6. Does the City want to maintain the requirement for one (1) parking space per accessory apartment? As the code stands, the Planning Board may waive all parking requirements for an accessory apartment when deemed appropriate by the Board.

    - **Answer:** At the City Council's recommendation, the minimum parking requirement of one space per accessory apartment has been removed. If an applicant is seeking site plan approval for an accessory apartment that is greater than 50% of the primary building, the Planning Board has the authority to require parking.

7. Are the minimum setback requirements for accessory buildings listed in section 223-17E appropriate for accessory apartments? Note that existing non-complying accessory structures may be utilized for accessory apartments without a variance from the ZBA as long as a structure is not being further enlarged or the non-compliance increased.

    - **Answer:** At the City Council's recommendation, diagrams have been prepared to assist the Council in visualizing the required setback requirements in each district. Potential modifications to Section 223-17(E), Attachment 3 entitled "Schedule of Regulations for Accessory Buildings on Residential Lots" requires additional discussion.

8. Does the City wish to further streamline the approval process for accessory apartments? The City Building Inspector currently has the authority to issue permits for accessory apartments entirely contained within an existing single-family home, if all other provisions are met. Accessory apartments requiring exterior additions, conversions of existing accessory buildings, or new accessory buildings require site plan approval from the Planning Board. Should any of these typologies also be subject to permits by the Building Inspector without application to the Planning Board?

    - **Answer:** At the City Council's recommendation, the proposed local law streamlines the approval process by granting additional authority to the Building Inspector to issue permits for accessory apartments in existing accessory buildings as well as accessory apartments in expanded primary or secondary buildings if all setback requirements and other provisions are met. The City Council decided to retain the requirement for Planning Board approval of new accessory buildings dependent upon additional discussion of setback requirements.

9. Should the city provide financial incentives such as fee reductions for accessory apartment construction?

    - **Answer:** The City Council noted that eliminating the site plan approval requirement for accessory apartments would provide the greatest cost savings for potential applicants as there would not be the need to retain design professionals to prepare a site plan and appear before the planning board. In lieu of lowering or waiving application fees, the proposed changes outlined above aim to ease the financial burden on homeowners developing accessory apartments. Eliminating site plan approval will also reduce the time to obtain approval to construct an accessory apartment by several months.

223 Attachment 3

CITY OF BEACON
§ 223-17E, SCHEDULE OF REGULATIONS FOR ACCESSORY BUILDINGS ON RESIDENTIAL LOTS
[Added 1-19-2016 by L.L. No. 2-2016; amended 9-19-2022 by L.L. No. 8-2022]

Zoning District	Minimum Front Yard	Minimum Rear Yard	Minimum Side Yard	Maximum Square Footage Permitted for Each Accessory Building (Based on total square footage of principal building)	Maximum Number of Sheds Permitted
R1-120 1-Family Residence District	Not permitted in front yard	50	50	50%	2
R1-80 1-Family Residence District	Not permitted in front yard	30	30	50%	2
R1-40 1-Family Residence District	Not permitted in front yard	25	25	50%	2
R1-20 1-Family Residence District	Not permitted in front yard	20	20	50%	2
R1-10 1-Family Residence District	Not permitted in front yard	~~1~~5	~~1~~5	50%	2
R1-7.5 1-Family Residence District	Not permitted in front yard	5	5	50%	1
R1-5 1-Family Residence District	Not permitted in front yard	5	5	50%	1

Zoning District	Minimum Front Yard	Minimum Rear Yard	Minimum Side Yard	Maximum Cumulative Square Footage for All Accessory Buildings	Maximum Square Footage Permitted For Each Accessory Building (Based on footprint[a] of principal building)[b]	Maximum Number of Sheds Permitted
RD-6 Designed Residence District	Not permitted in front yard	50	50	2,775	40%	2
RD-5 Designed Residence District	Not permitted in front yard	15~~30~~	10~~30~~	2,125	40%	2
RD-4 Designed Residence District	Not permitted in front yard	25	25	1,625	40%	2
RD-3 Designed Residence District	Not permitted in front yard	20	20	1,250	40%	2
RD-1.8 Designed Residence District	Not permitted in front yard	15	15	960	40%	2
RD-1.7 Designed Residence District	Not permitted in front yard	5	5	720	40%	1
R1-5 Designed Residence District	Not permitted in front yard	5	5	720	40%	1

NOTES:

The following districts were not included in the Planning Board's recommendation: RMF-1.5 (Multifamily Residence District), SAHO (Senior Affordable Housing Overlay District.

[a] Footprint includes attached garages but excludes open porches/decks.

[b] The maximum square footage of each accessory building for any single-family dwelling located in the RD Zoning District shall be 50% based on the total square footage of the principal building.

223 Attachment 2

City of Beacon

§ 223-17. City of Beacon Schedule of Use Regulations
[Added 6-15-2020 by L.L. No. 7-2020;[1] amended 2-16-2021 by L.L. No. 2-2021; 9-19-2022 by L.L. No. 8-2022; 9-19-2022 by L.L. No. 9-2022]

Permitted Uses by District	Reference Notes	All R1	All RD	T	GB	CMS	L	WD	WP	FCD	LI	HI
Residential												
One-family detached dwelling		P	P	P	X	X	X	X	X	X	X	X
One-family attached/semidetached	Including townhouses	X	P	P	X	X	P	X	X	P	X	X
Two-family dwelling		X	P	P	X	X	X	X	X	X	X	X
Multifamily dwelling		X	SP*	P	P	P	P	P	X	P	X	X
Artist live/work space	Subject to § 223-14.2	X	X	P	P	P	P	P	X	P	P	X
Retail/Office/Service												
Retail, personal service, or bank		X	X	X	P	P	P	P	X	X	P	X
Office		X	X	P	P	P	P	P	X	P	P	X
Artist studio, art gallery/exhibit space		X	X	P	P	P	P	X	X	P	P	X
Funeral home		X	X	X	P	X	X	X	X	X	P	X
Commercial recreation, indoor		X	X	X	P	P	X	X	X	X	P	P
Auction gallery		X	X	X	P	X	X	X	X	X	P	P
Adult use	Subject to § 223-20.1	X	X	X	X	X	X	X	X	X	SP	X
Food/Lodging												
Restaurant or coffee house		X	X	X	P	P	P	P	SP*	P	X	X
Bar/brew pub/microbrewery/microdistillery		X	X	X	P	P	P	P	X	P	P	P
Food preparation business		X	X	X	P	SP	SP	X	X	X	P	P
Short-term rental	Subject to § 223-26.5	P	P	P	P	P	P	P	P	P	P	P
Bed-and-breakfast	Subject to § 223-24.4	SP	SP	SP	P	X	P	X	SP*	P	P	X
Inn		X	X	X	P	P	P	P	SP*	P	P	X
Hotel	Subject to § 223-14.1	X	X	X	P	P	P	P	X	X	P	X
Social/Community												
Spa/fitness center/exercise studio		X	X	SP	P	P	P	P	X	P	P	X
Day-care center		X	X	P	P	X	P	P	X	P	SP	X
Park, preserve, community garden		P	P	P	P	P	P	P	P	P	P	X
Theater, concert or conference space		X	X	X	P	P	P	P	X	P	P	X
Museum		SP*	SP*	SP*	P	P	P	P	X	P	P	SP
Place of worship/religious facility		P	P	P	P	X	X	X	X	X	P	X
Social club	Subject to § 223-24.2	SP	SP	SP	SP	P	X	X	X	X	SP	X
X = Use Not Permitted P = Permitted Use SP = Special Permit Use by Planning Board SP* = Special Permit Use by City Council	For specific standards see -->					Article IVD	Article IVE	Article IVA	Article IVA	Article IVC		

[1] Editor's Note: This local law also repealed former 223 Attachment 2, § 223-17D, Schedule of Regulations for Nonresidential Districts, as amended.

Permitted Uses by District	Reference Notes	All R1	All RD	T	GB	CMS	L	WD	WP	FCD	LI	HI
Government facility		P	P	P	P	P	P	P	P	P	P	P
Golf course		SP*	SP*	X	X	X	X	X	X	X	X	X
Health Care												
Hospital or nursing home	Subject to 223-21.1/22	SP*	SP*	X	X	X	X	X	X	P	P	P
Animal care facility		SP	SP	X	SP	X	X	X	X	X	SP	X
Educational												
College or university		SP*	SP*	X	P	P	P	X	X	P	P	P
Trade school or training program		X	X	X	P	P	P	X	X	P	P	P
Private school or nursery school		SP	SP	SP	P	X	P	X	X	P	SP	X
Parking/Auto-Oriented												
Off-street parking or parking structure	Subject to § 223-26	X	X	SP	SP	SP	X	X	X	X	X	X
Vehicle sales or rental lot		X	X	X	SP	X	X	X	X	X	SP	X
Gas filling station and/or car wash	Subject to Ch. 210/§ 223-21	X	X	X	SP	X	X	X	X	X	SP	X
Auto body or repair shop	Subject to Chapter 210	X	X	X	SP	X	X	X	X	X	SP	X
Ambulance service		SP	SP	SP	P	X	X	X	X	X	P	X
Industrial or Assembly												
Wholesale, warehouse storage or self-storage business		X	X	X	P	X	X	X	X	X	P	P
Workshop		X	X	SP	P	P	P	X	X	P	P	P
Industrial or manufacturing use		X	X	X	X	X	SP	X	X	P	P	P
Other												
Wireless communication facility	Subject to § 223-26.4	P	P	P	P	P	P	P	P	P	P	P
Small cell wireless facility	Subject to § 223-26.4	P	P	P	P	P	P	P	P	P	P	P
Farm		P	X	X	X	X	X	X	X	X	X	X
Horticultural nursery		P	P	X	P	X	X	X	X	X	P	X
Historic District Overlay Use	Subject to § 223-24.7	SP*	SP*	SP*	SP*	SP*	SP*	SP*	SP*	SP*	SP*	SP*
Permitted Accessory Uses (includes uses/structures customarily incidental to a permitted principal use, but not an activity for commercial gain in a residential district)												
Accessory apartment	Subject to § 223-24.1	P	P	P	~~X~~P	~~X~~P	~~X~~P	~~X~~P	~~X~~P	~~X~~P	~~X~~P	~~X~~P
Private tennis court or pool	Subject to § 223-13	P	P	P	X	X	X	X	X	X	X	X
Home occupation or artist studio	Subject to § 223-17.1	P	P	P	X	X	X	X	X	X	X	X
Parking structure		X	X	SP	X	P	P	P	X	P	X	X
Garden, roof garden, or greenhouse		P	P	P	P	P	P	P	P	P	P	P
Solar collectors	Subject to Article X	P	P	P	P	P	P	P	P	P	P	P
X = Use Not Permitted P = Permitted Use SP = Special Permit Use by Planning Board SP* = Special Permit Use by City Council	For specific standards see -->					Article IVD	Article IVE	Article IVA	Article IVA	Article IVC		

Notes:

GENERAL
- Yellow box shows permitted location of ADU based on the minimum required lot width/depth.
- Dark grey box shows location of primary structure based on minimum front yard requirement.
- Light grey box shows minimum setback of the ADU from the rear and side yards.
- ALL R1 and RD Districts permit single-family as a use, therefore all are permitted ADU's.
- Minimum requirements for the lot are shown for all examples unless otherwise noted (subdivided townhome examples)

R1-120
- Most parcels in this district are (much) larger than the minimum requirements.

R1-80
- Many parcels are the minimum required width but are typically deeper than the requirement.

RD-7.5
- The parcels associated with this district are all linked via a filed map. Smaller parcels (townhomes/apartments) were subdivided off the larger parcel in this district.
- There are no ADU requirements for this district on *223 Attachment 3*.
- The diagram shown mimics the townhomes/apartments on the smaller lots in this district. It should be noted that these lots are much smaller than the requirements set forth in *223 Attachment 1*.
- Due to the configuration/size of the lots/primary structures, ADU's are unlikely to fit on these lots.
- All setback requirements are not met for the townhome/apartment lots)

R1-5
- The ADU requirements for this district are listed twice on *223 Attachment 3*. We believe that one of these is meant to be RD-7.5 as there are no ADU requirements listed for that district.
- Setbacks listed on *223 Attachment 3* are the same for both listings, but the permitted size is different.

RD-6
- Some parcels in this district are either much larger than the requirements or much smaller (like RD-7.5).
- There is a group of lots that are smaller than the requirements, but all structures on these parcels are duplexes split into their own lots.
- The minimum requirements for lot area is shown in the diagram, with an example of both above-mentioned scenarios.

RD-5
- The setbacks for this district don't necessarily make sense. The minimum width is 50 feet and the setbacks for an ADU is 30 feet for the rear and 30 feet from the side. So, on a lot that is the minimum 50 feet wide, you can't fit an ADU on it without needing a variance for the setbacks.
- This district also has townhomes in the same situation as mentioned above.

RD-4
- Same situation as RD-7.5 with the parcels in this district being linked via a filed map. Smaller parcels were subdivided off the larger parcel.
- ADU requirements are listed but are not feasible on the subdivided lots as the lot coverage is too large and the lots are too small to accommodate an ADU.

RD-3
- The setbacks for this district don't necessarily make sense. The minimum width is 50 feet and the setbacks for an ADU is 20 feet for the rear and 20 feet from the side. So, on a lot that is the minimum 50 feet wide, you can only fit a small ADU in a small area (see diagram).
- All existing parcels in this district are larger than the minimum lot requirements.

RD-1.8
- All parcels in this district are much larger than what is required. The minimum required lot area is depicted in the diagrams.
- Minimum required setbacks do not make sense for this district. If the minimum setbacks are applied, a primary building would only be permitted to be 10 feet wide (see diagram).

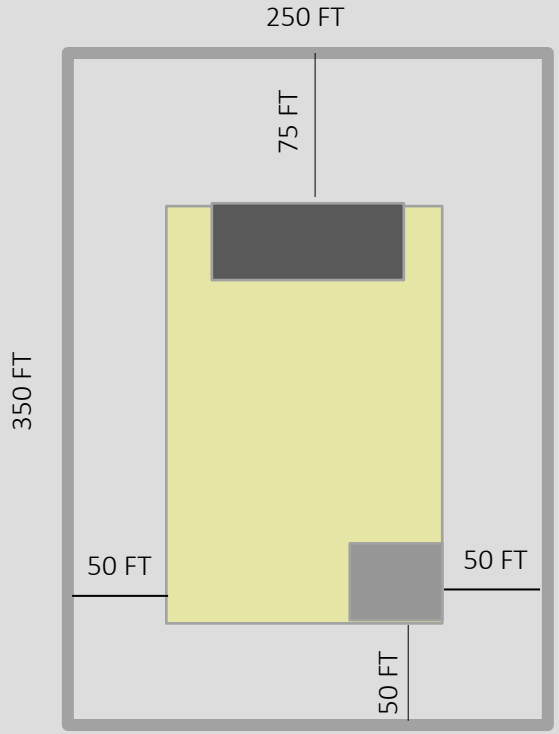
RD-1.7
- There is only one parcel in this district, and it is much larger than the requirements.
- Minimum required setbacks do not make sense for this district. If the minimum setbacks are applied, a primary building would only be permitted to be 10 feet wide (see diagram).

R1-120 District

Area where Accessory Apartment can be located

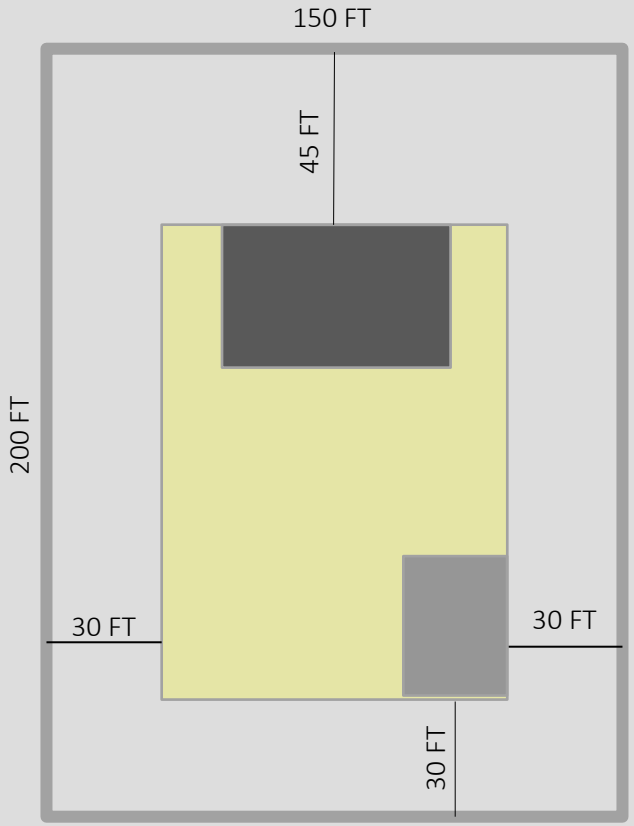
Primary Dwelling

Accessory Dwelling



Parcel # 130200-6054-02-723821

R1-80 District



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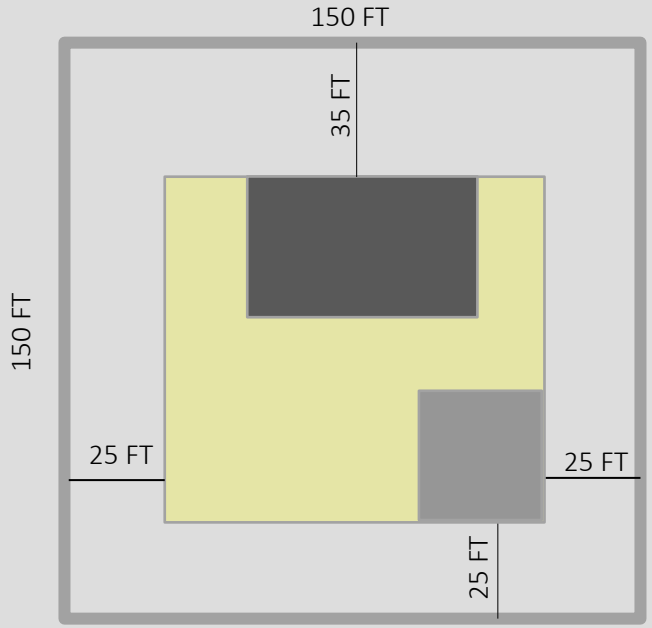
R1-40 District



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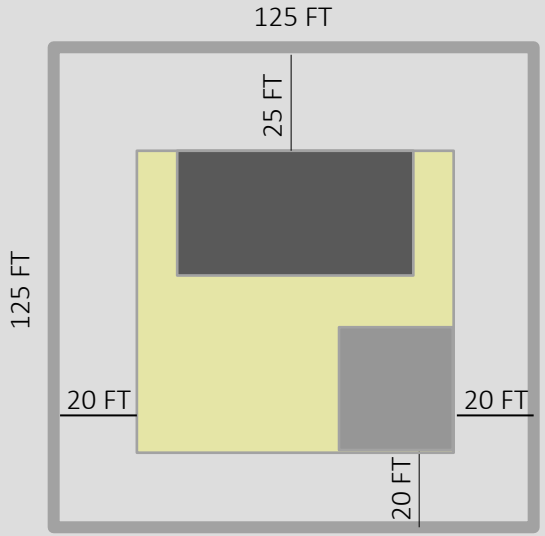
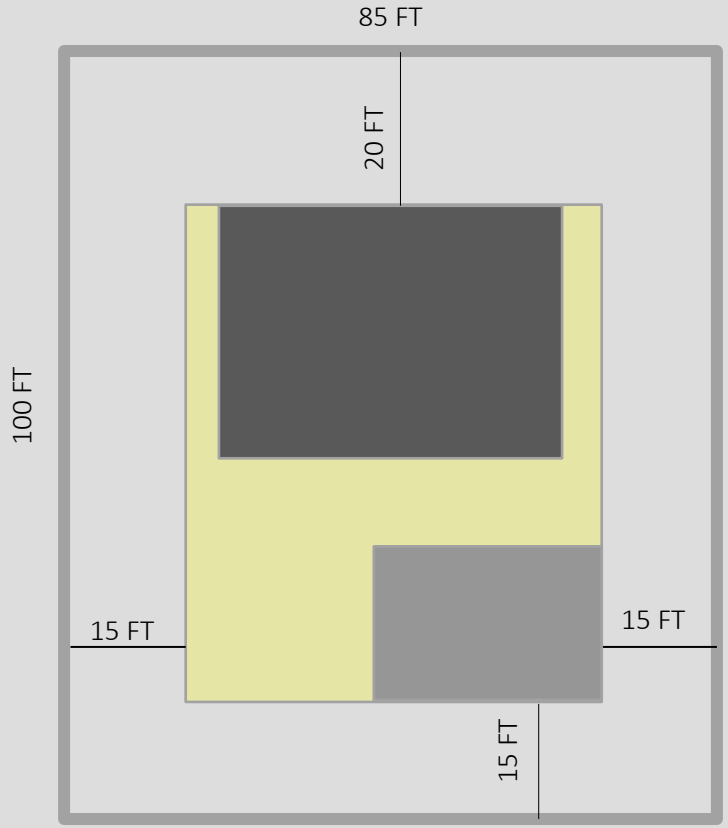
R1-20 District



Parcel # 130200-5955-04-647233

R1-10 District



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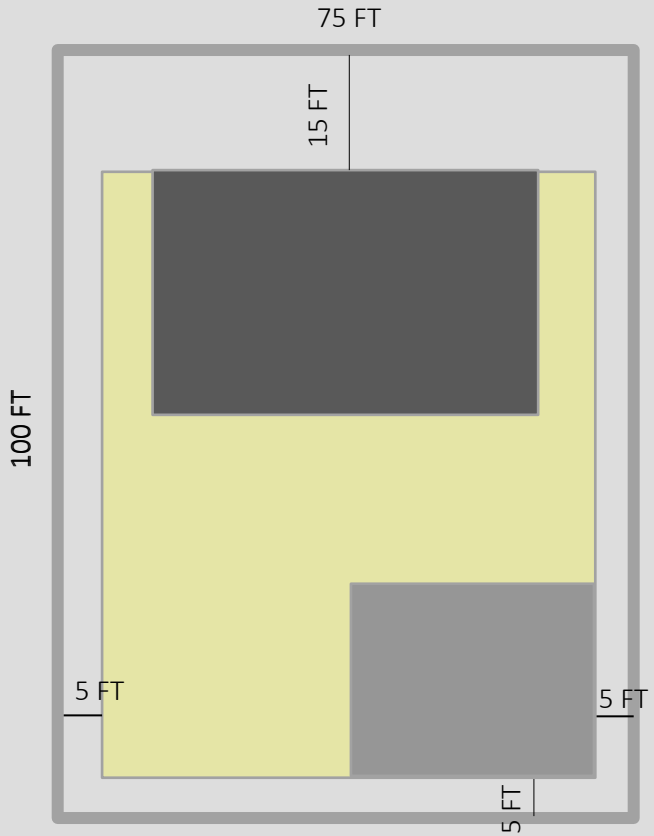
R1-7.5 District



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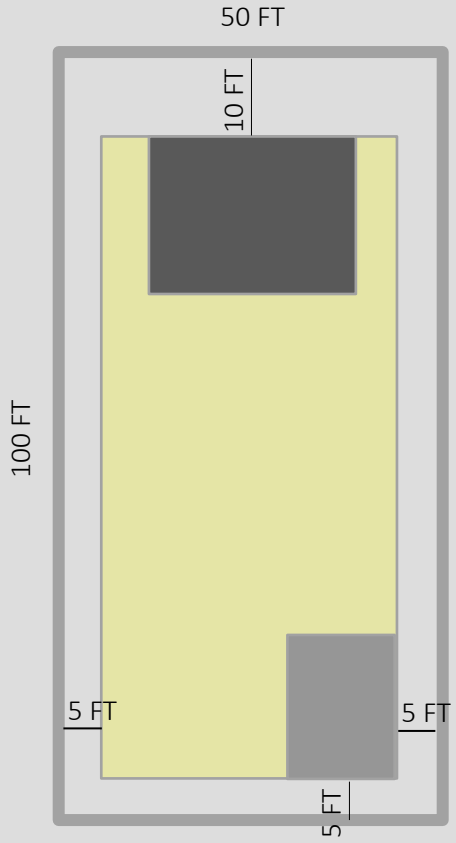
R1-5 District



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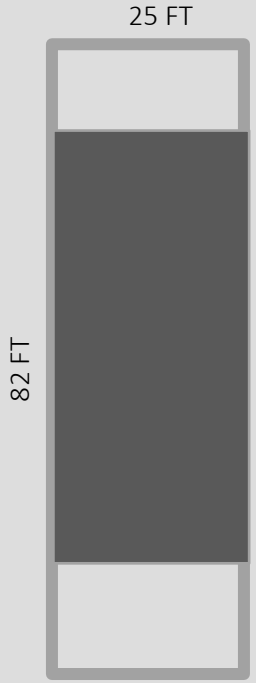
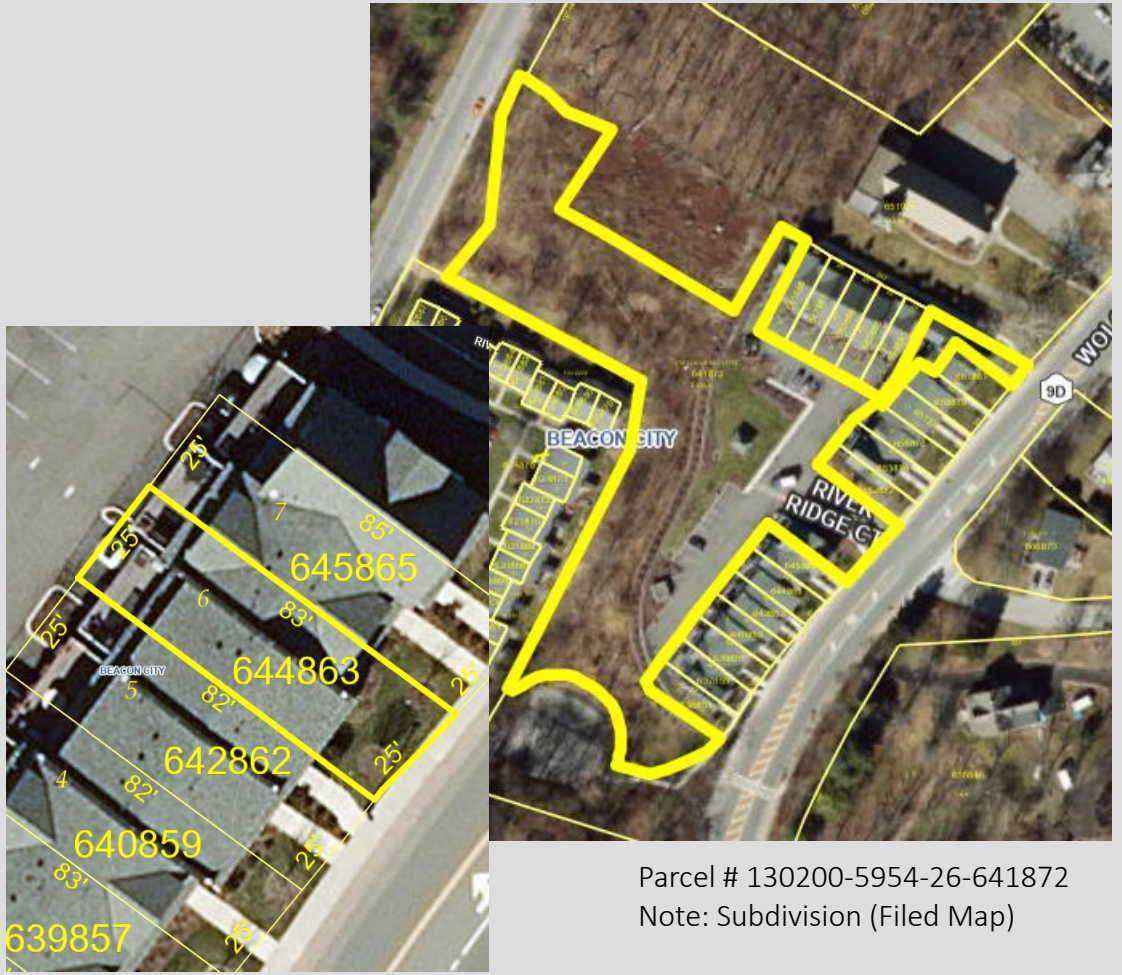
RD-7.5 District





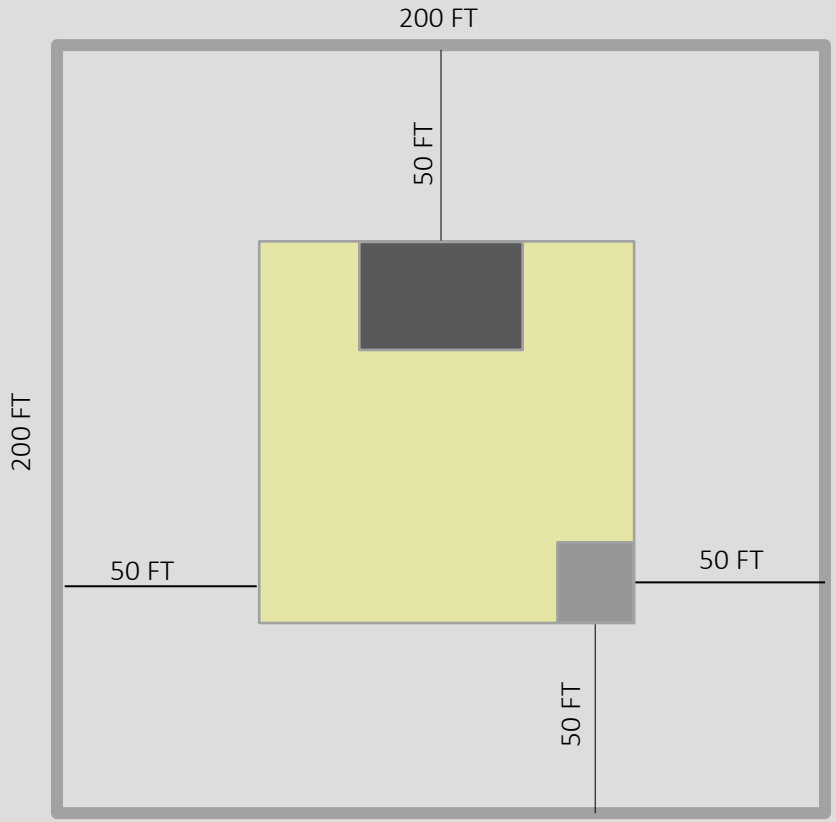
Parcel # 130200-5954-34-644863

Parcel # 130200-5954-26-641872
Note: Subdivision (Filed Map)

Note: No requirements for Accessory Dwelling Units are included for this district. Bulk requirements for this district include a front yard setback of 20-35 feet, a side yard setback of 25 feet and a rear yard setback of 50 feet. None of these setbacks are met for any of the townhome/apartment lots.

Pictured is one of the subdivided townhome lots.

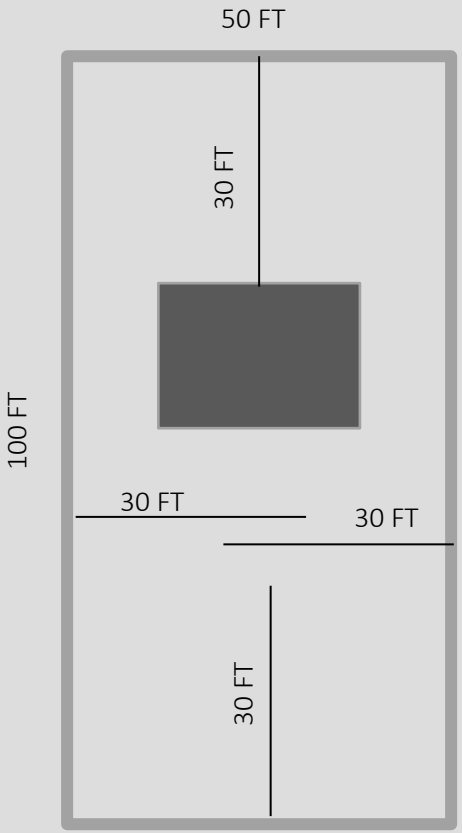
RD-6 District

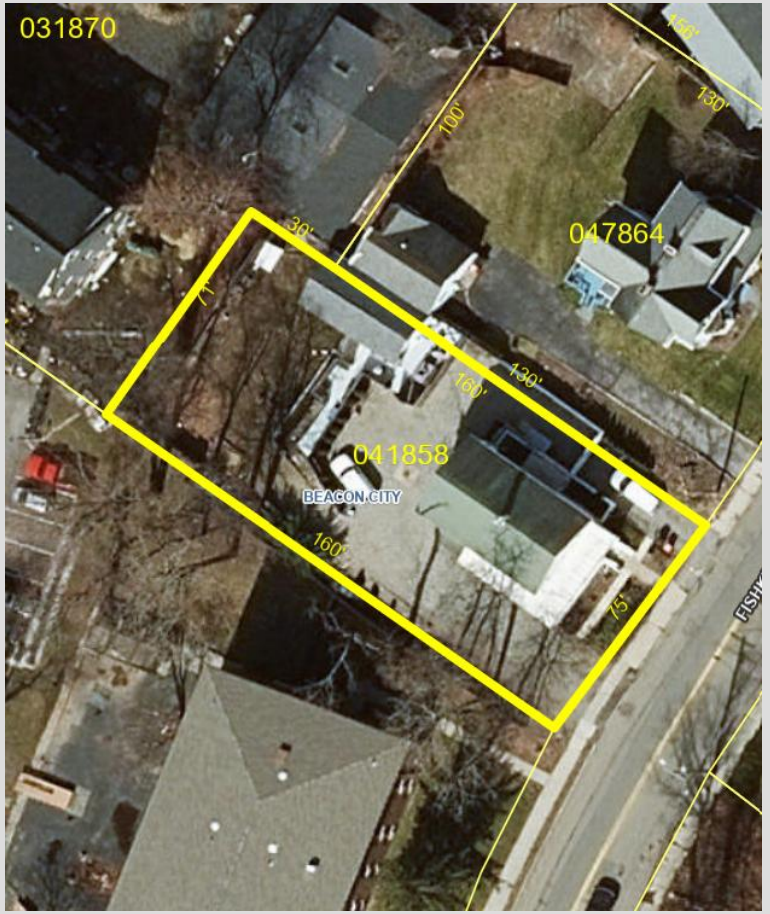


Parcel # 130200-6055-03-217160 (apartments)

Parcel # 130200-5954-42-667670

RD-5 District

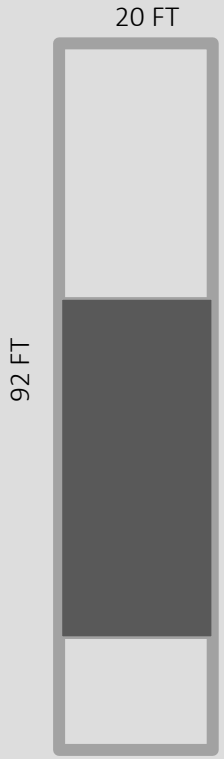




Parcel # 130200-6054-29-041858

Note: Minimum requirements for this district do not make sense with the minimum setbacks for an ADU.

RD-4 District



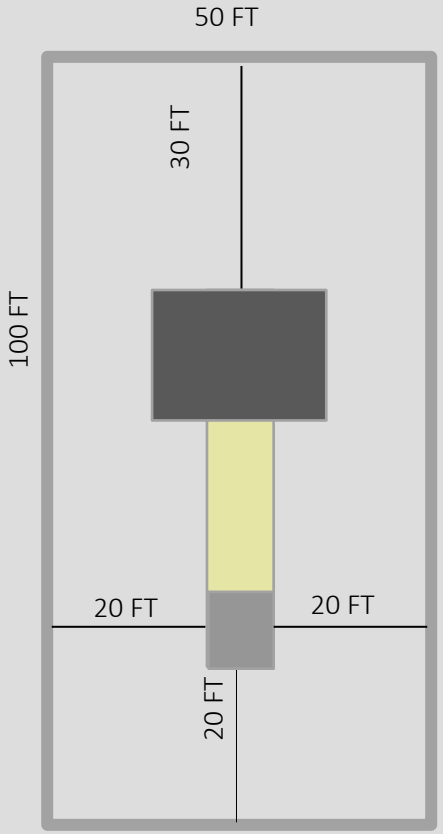
Parcel # 130200-6054-29-067809

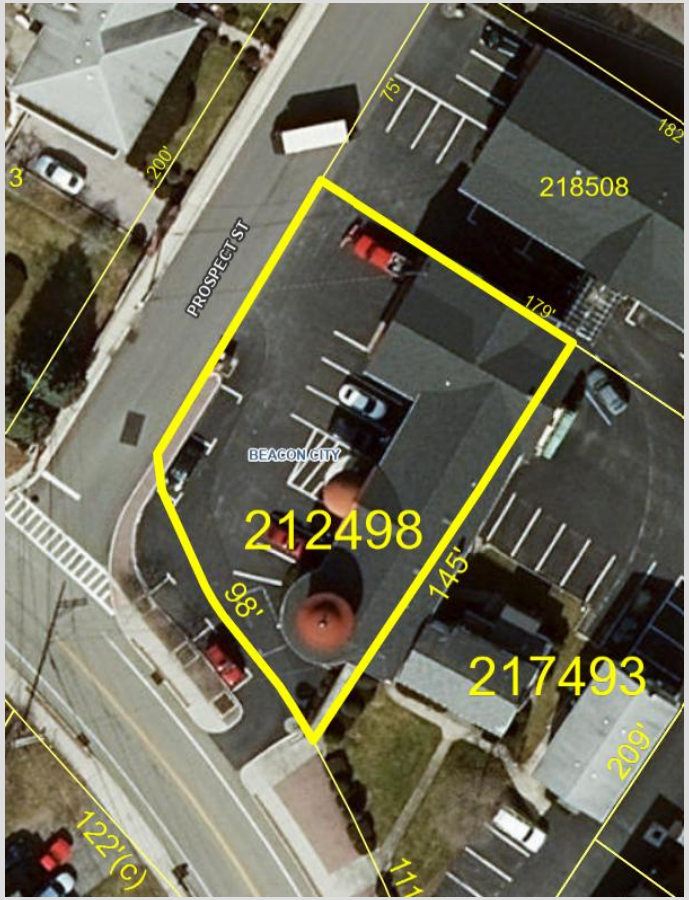
Parcel # 130200-6054-29-067824
Note: Subdivision (Filed Map)

Note: Bulk requirements for this district include a front yard setback of 40 feet, a side yard setback of 20 feet and a rear yard setback of 40 feet. None of these setbacks are met for any of the townhome/apartment lots.

Pictured is one of the subdivided townhome lots.

RD-3 District





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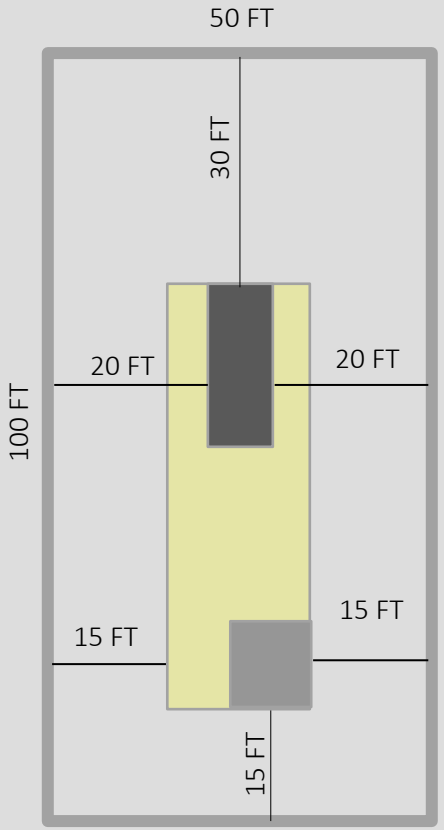
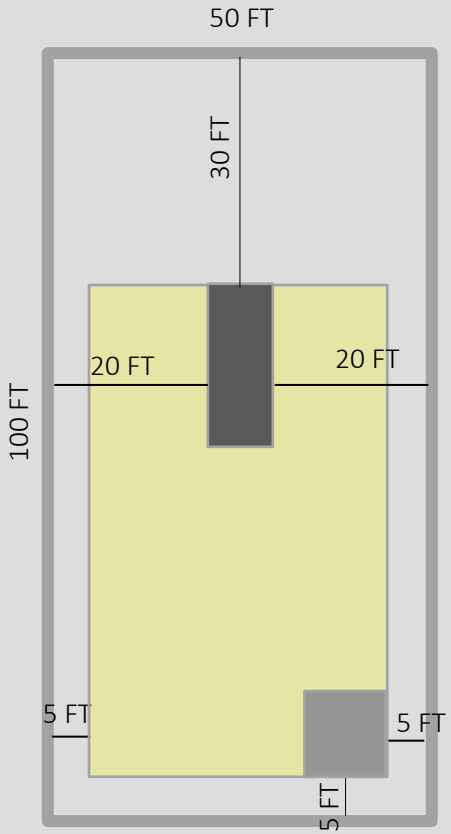
RD-1.8 District



Parcel # 130200-5954-42-746730

Note: Minimum requirements for this district do not make sense with the minimum setbacks for the primary building. The building would only be permitted to be a width of 10 feet on the minimum size lot.

RD-1.7 District



Parcel # 130200-5955-19-590022

Note: Minimum requirements for this district do not make sense with the minimum setbacks for the primary building. The building would only be permitted to be a width of 10 feet on the minimum size lot.

LOCAL LAW NO. ____ OF 2025

CITY COUNCIL
CITY OF BEACON

A LOCAL LAW TO AMEND THE BEACON CITY CODE CONCERNING ACCESSORY APARTMENT REQUIREMENTS

A LOCAL LAW to amend the Beacon City Code Chapter 223, Zoning, concerning accessory apartments.

BE IT ENACTED by the City Council of the City of Beacon as follows:

Section 1. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-24.1, entitled "Accessory apartments" is hereby amended as follows:

§ 223-24.1 **Accessory apartments.**

A. Purpose and intent. It is the purpose and intent of allowing accessory apartments on all existing detached single-family properties in all ~~residence~~ districts ~~and the Transitional District~~ to provide the opportunity and encouragement for the development of small, rental housing units designed to meet the special housing needs of single persons, couples, other small households, the young, the elderly, persons of low and moderate income and relatives of families presently living in Beacon. It is the further purpose and intent of this provision to allow the more efficient use of the City's existing stock of dwellings and accessory buildings, to provide economic support for present resident families of limited income and to otherwise help to protect and preserve property values.

B. Owner occupancy required. The owner of the single-family lot upon which an accessory apartment is located shall occupy at least one of the dwelling units on said lot.

C. Location on the lot. An accessory apartment may be located either in or attached to a detached single-family dwelling or in an accessory building on such a single-family lot.

D. Apartment size. ~~The floor area of an accessory apartment shall not exceed a maximum of 1,000 square feet or be less than a minimum of 200 square feet. Notwithstanding the foregoing, the Planning Board may permit a larger accessory apartment where appropriate in an existing accessory building which was issued a certificate of occupancy more than five years before the date of application to construct accessory apartment.~~ For accessory apartments with a total square footage that is greater than 50% of the primary building footprint, site plan approval from the Planning Board is

DRAFT

required. There shall be no more than one accessory apartment permitted per single-family lot.

E. Exterior appearance. If an accessory apartment is located in a detached single-family dwelling, the entry to such unit and its design shall be such that, to the degree reasonably feasible, the exterior appearance of the building will remain that of a single-family residence.

F. Off-street parking. ~~A minimum of one off-street parking space shall be provided for each accessory apartment in addition to the off-street parking required for other uses existing on the lot.~~There is no minimum off-street parking requirement for accessory apartments. The Planning Board may, in its discretion, ~~waive all parking requirements~~require parking for an accessory apartment ~~when deemed appropriate~~that is seeking site plan approval for an unit with a maximum square footage that is greater than 50% of the primary building's footprint.

G. The accessory apartment shall not be used for short-term rentals as defined in § 223-26.5.

H. An existing structure that does not conform to the yard requirements of Chapter 223 may be converted into an accessory apartment without a variance from the Zoning Board of Appeals if the proposed use will not enlarge or increase the dimensional nonconformity. However, an application to the City's Architectural and Community Appearance Board of Review ~~certificate of appropriateness from the Planning Board~~ shall be required if the proposed use is less than 10 feet from the property and within 20 feet of any dwelling unit on an adjacent property. The Architectural and Community Appearance Board of Review shall consider the bulk, height, window placement and other design feature considerations to minimize visual, aesthetic and quality of life impacts associated with the accessory apartment being located within the proximity set forth above.

~~H.~~**I.** In the R1-10, R1-7.5 and R1-5 zoning districts, where a side and rear setback of 5 feet is required for accessory apartments, ~~a certificate of appropriateness from the Planning Board~~ review by the Architectural and Community Appearance Board of Review is required if the proposed accessory apartment is less than 10 feet from a dwelling unit on an adjacent property, using the design considerations set forth in Section (H) agove..

~~I.~~**J.** The Building Inspector shall have approval authority for all accessory apartments ~~entirely contained within an existing single-family dwelling and meeting~~provided that all setback requirements and ~~the~~ provisions of this section are met. ~~All other~~ Pproposed accessory apartments, whether expansions or new construction, that do not meet the setback requirements of this section~~, including any accessory apartments requiring exterior additions, conversions of existing accessory buildings, or new accessory buildings,~~ shall require site plan approval from the Planning Board.

Section 2. Chapter 223 of the City Code of the City of Beacon, Article VI, Definitions and Word Usage, Section 223-63, entitled "Definitions," is hereby amended to add definitions for "Occupied Primary Residence" and "Owner" as follows:

§ 223-63 Definitions.

For the purposes of this chapter, certain words and terms used herein are defined as follows:

• • •

OCCUPIED PRIMARY RESIDENCE
A dwelling unit used by the owner or tenant as his or her or their primary residence. All owners of the business entity must use the premises as his or her or their primary residence. When a property is titled in the name of a trust, the property shall be considered an occupied primary residence if the grantor or grantee is the occupant of the property. When a property is occupied by an individual(s) who has a life estate, the property shall be considered an occupied primary residence.

• • •

OWNER
Any individual or individuals, partnership or corporation or other organization in possession of and having a fee interest in the real property. The term "owner" shall include a corporation, limited-liability company, partnership, association, trust, or other business entity or nonbusiness forms of ownership.

• • •

Section 3. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-26, entitled "Off-street parking, loading and vehicular access," Subsection D(4) is hereby amended as follows:

§ 223-26 **Schedule of Off-Street Parking Standards.**

• • •

D. Schedule of off-street parking standards.

(1) In order to promote walkability and other transportation alternatives and to avoid excessive automobile traffic and unnecessarily large paved parking lots, parking maximums have been established for all uses. Unless otherwise determined by the Planning Board, no minimum number of off-street parking spaces are required within the CMS, L, and WD districts due to the proximity of these districts to municipal parking areas, public transportation, and pedestrian-oriented streetscapes.

(2) The Planning Board shall determine the appropriate number of off-street parking spaces within the range provided in the table at § **223-26D(4)** as part of

its application review and based on the context of the property, including but not limited to, as applicable, the size of the parcel, proposed uses, existing buildings on the parcel, especially if they are designated as historic, availability of public and street parking in the area, access to public transit, a parking study submitted by the applicant, shared parking arrangements, land-banking authorized under § **223-26C(2)**, compliance with the Americans with Disabilities Act (ADA) and any state requirements for accessible parking, and input from any public hearing. The number of off-street parking spaces determined by the Planning Board to be appropriate shall become the required number of off-street parking spaces for the proposed use of the subject property.

(3) Any professional parking study submitted by the applicant shall be based primarily on specific site-related information, a comparable analysis of similar uses and properties in the area or region, and an examination of demand reduction strategies, including such elements as promotion of walking, bicycle parking or storage facilities, alternative mobility options, transit access opportunities, car-share rentals, and ride-sharing or carpooling services.

(4) The following table establishes the range of the minimum and maximum number of off-street parking spaces within which the Planning Board has discretion to determine the required number of such spaces based on the considerations set forth at § **223-26D(2)**. Where more than the maximum or less than the minimum number of off-street parking spaces are provided an area variance from the Zoning Board of Appeals shall be required. An area variance may also be sought from the required number of parking spaces determined to be appropriate by the Planning Board.

Schedule of Off-Street Parking Standards[1]				
Building Use	**CMS, L, WD**		**R1, RD, LI, HI, WP, FCD, GB, T[2]**	
	Min	**Max**	**Min**	**Max**
Residential[3] ~~(Including accessory apartment)~~	–	1 space per dwelling unit	1 space per dwelling unit	3 spaces per dwelling unit
Lodging	–	0.75 space per guest room	0.5 space per guest room	1.5 space per guest room

Commercial (Retail / Office / Service / Food / Auto-Oriented/ Social and Community)	–	3 spaces Per 1000 SF GFA	3 spaces Per 1000 SF GFA	5 spaces Per 1000 SF GFA
Health Care and Educational		4 spaces per 1000 SF GFA	1 space per 1000 SF GFA	4 spaces per 1000 SF GFA
Industrial (Industrial or Assembly)	–	–	0.25 space per 1,000 SF GFA	2.5 spaces per 1,000 SF GFA
Other Uses		Shall be determined by the Planning Board or the Building Inspector, as appropriate depending upon the permit or approval sought and upon consideration of relevant factors dictating the parking needs of each such use.		

NOTES:

1. The calculation of Gross Floor Area ("GFA") shall exclude utility space. Pursuant to § **223-26B(3)(a)**, no more than 30% of the provided parking may be designated for compact automobiles at the sole discretion of and in accordance with the standards set forth in § **223-26D**, as determined by the Planning Board.

2. Where the Planning Board determines that a property within the T District is in proximity to available municipal parking, public transportation, and pedestrian-oriented streetscapes, parking standards from the CMS district may be applied to all proposed uses on said property.

3. There is no minimum number of off-street parking spaces required for accessory apartments.

• • •

Section 4. Chapter 223 of the Beacon City Code, Article III – General Regulations, Section 223-17, Subsection C, Attachment 2 entitled "Schedule of Use Regulations", is hereby

amended to permit accessory apartments in all Zoning Districts as provided on the attached Schedule of Use Regulations.

SEE ATTACHED SCHEDULE OF USE REGULATIONS

• • •

Section 5. Chapter 223 of the Beacon City Code, Article III – General Regulations, Section 223-17, Subsection E, Attachment 3 entitled "Schedule of Use Regulations For Accessory BuildingS on Residential Lots", is hereby amended to modify setback requirements in the R1-10 and RD-5 Zoning Districts.

SEE ATTACHED SCHEDULE OF USE REGULATIONS FOR ACCESORY BUILDINGS ON RESIDENITAL LOTS

Section 6~~5~~. Applicability.

This local law shall apply to all land use applications received on or after the effective date of this local law as set forth in Section 8 below. Notwithstanding the aforementioned, this local law shall also apply to pending and/or approved land use applications on the effective date of this local law unless a final certificate of occupancy is issued within one calendar year of the effective date of this local law as set forth in Section 8 below.

Section 7~~5~~. Ratification, Readoption and Confirmation.

Except as specifically modified by the amendments contained herein, Chapter 223 of the City of Beacon Zoning Code is otherwise to remain in full force and effect and is otherwise ratified, readopted and confirmed.

Section 8~~6~~. Numbering for Codification.

It is the intention of the City of Beacon and it is hereby enacted that the provisions of this Local Law shall be included in the Code of the City of Beacon; that the sections and subsections of this Local Law may be re-numbered or re-lettered by the Codifier to accomplish such intention; that the Codifier shall make no substantive changes to this Local Law; that the word "Local Law" shall be changed to "Chapter," "Section" or other appropriate word as required for codification; and that any such rearranging of the numbering and editing shall not affect the validity of this Local Law or the provisions of the Code affected thereby.

Section 9~~7~~. Severability.

The provisions of this Local Law are separable and if any provision, clause, sentence, subsection, word or part thereof is held illegal, invalid or unconstitutional, or inapplicable

to any person or circumstance, such illegality, invalidity or unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, subsections, words or parts of this Local Law or their petition to other persons or circumstances. It is hereby declared to be the legislative intent that this Local law would have been adopted if such illegal, invalid or unconstitutional provision, clause, sentence, subsection, word or part had not been included therein, and if such person or circumstance to which the Local Law or part hereof is held inapplicable had been specifically exempt there from.

Section 10~~8~~. Effective Date.

This local law shall take effect immediately upon filing with the Office of the Secretary of State.

DRAFT

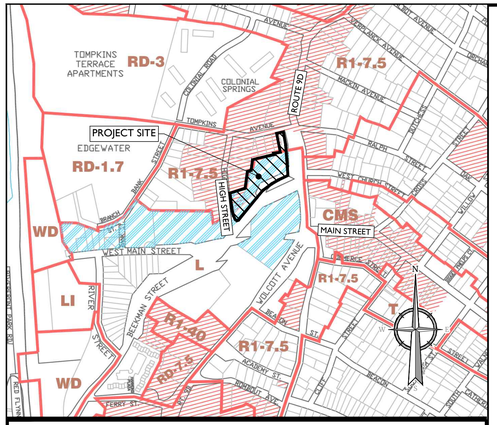
PRELIMINARY SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS: 5955-19-706012, 5954-26-689990, 5954-26-781983

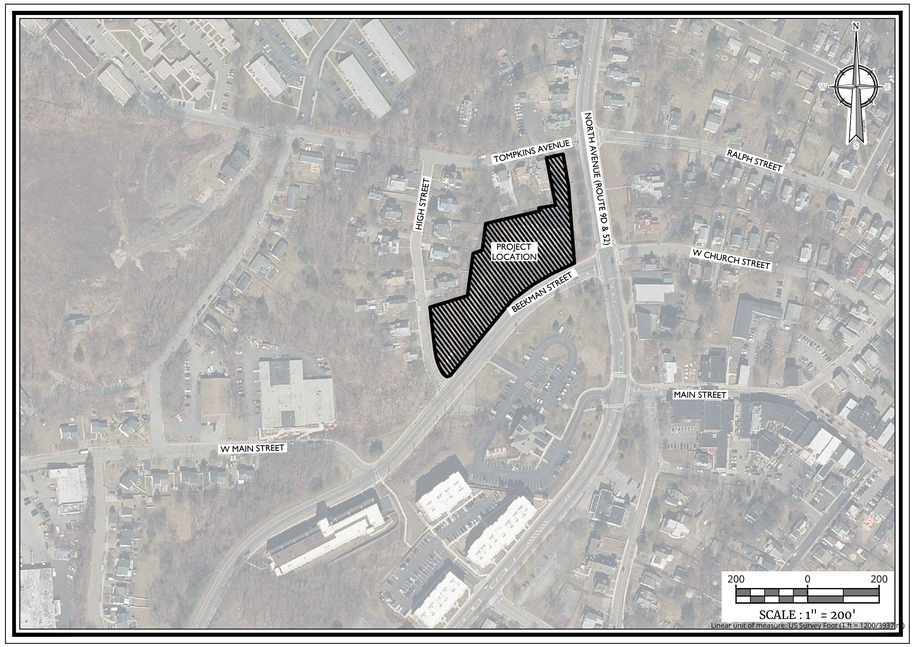
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE



ZONING MAP

SCALE: 1" =500'

SOURCE: CITY OF BEACON ZONING MAP



LOCATION MAP

SOURCE: NEW YORK STATE G.I.S. CLEARINGHOUSE

INDEX OF SHEETS

SHT. No.	DESCRIPTION	LATEST REVISION
1	COVER SHEET	3/25/2025
2	EXISTING CONDITIONS & SITE DEMOLITION PLAN	3/25/2025
3	TREE REMOVAL PLAN	3/25/2025
4	DIMENSION PLAN	3/25/2025
5-7	GRADING PLANS	3/25/2025
8-9	UTILITY PLANS	3/25/2025
10	SOIL EROSION & SEDIMENT CONTROL PLAN	3/25/2025
11	SOIL EROSION & SEDIMENT CONTROL DETAILS	3/25/2025
12	LANDSCAPE PLAN	3/25/2025
13	LIGHTING PLAN	3/25/2025
14-19	CONSTRUCTION DETAILS	3/25/2025

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

GENERAL INFORMATION

1. THE SUBJECT PROPERTIES ARE KNOWN BY THE FOLLOWING TAX IDS: 5955-19-706012, 5954-26-689990, 5954-26-781983 AS SHOWN ON THE DUTCHESS COUNTY TAX MAP OF THE CITY OF BEACON, DUTCHESS COUNTY, NEW YORK, TAX YEAR 2023.
2. THE PROPERTY IS LOCATED IN THE L (LINKAGE) ZONING DISTRICT AND IN THE R1-7.5 (RESIDENTIAL) CONTAINS A TOTAL TRACT AREA OF 2.06 ACRES.

OWNERS/APPLICANTS: BEEKMAN ARTS CENTER LLC (TAX ID: 5955-19-706012)
268 MAIN STREET
BEACON, NY 12508

BAY RIDGE STUDIOS LLC (TAX ID: 5954-26-781983 & 5954-26-689990)
268 MAIN STREET
BEACON, NY 12508

3. BOUNDARY AND TOPOGRAPHICAL MAPPING IS TAKEN FROM A SURVEY TITLED "BOUNDARY SURVEY OF THE LANDS OF BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC" PREPARED BY JONATHAN N. MILLEN NY, P.L.S. (LICENSE NO. 050746) OF AUTOMATED CONSTRUCTION ENHANCED SOLUTIONS, INC., DATED NOVEMBER 03, 2023 AND REVISED TO JUNE 06, 2024.
4. THIS SET OF PLANS IS NOT DEPICTING ENVIRONMENTAL CONDITIONS OR A CERTIFICATION/WARRANTY REGARDING THE PRESENCE OR ABSENCE OF ENVIRONMENTALLY IMPACTED SITE CONDITIONS. COLLIERS ENGINEERING & DESIGN HAS PERFORMED NO EXPLORATORY OR TESTING SERVICES, INTERPRETATIONS, CONCLUSIONS OR OTHER SITE ENVIRONMENTAL SERVICES RELATED TO THE DETERMINATION OF THE POTENTIAL FOR CHEMICAL, TOXIC, RADIOACTIVE OR OTHER TYPE OF CONTAMINANTS AFFECTING THE PROPERTY AND THE UNDERSIGNED PROFESSIONAL IS NOT QUALIFIED TO DETERMINE THE EXISTENCE OF SAME. SHOULD ENVIRONMENTAL CONTAMINATION OR WASTE BE DISCOVERED, THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LAWS AND REGULATIONS.
5. THIS IS A SITE DEVELOPMENT PLAN AND UNLESS SPECIFICALLY NOTED ELSEWHERE HERON, IS NOT A SURVEY.
6. NO 100 YEAR FLOOD PLAINS ARE KNOW TO EXIST ON THE SITE PER THE FLOOD INSURANCE RATE MAP 36027C0463E DATED 05/02/2012, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
7. DO NOT SCALE DRAWINGS AS THEY PERTAIN TO ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS, STRUCTURES, ETC. THEY ARE SCHEMATIC ONLY, EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.
8. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL APPROVALS REQUIRED HAVE BEEN OBTAINED, ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND THE DRAWINGS HAVE BEEN STAMPED "ISSUED FOR CONSTRUCTION". THIS SHALL INCLUDE APPROVAL OF ALL CATALOG CUTS, SHOP DRAWINGS AND/OR DESIGN CALCULATIONS AS REQUIRED BY THE PROJECT OWNER AND/OR MUNICIPAL ENGINEER.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY, INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAINING REQUIRED.
10. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL 811 TO REQUEST A UTILITY MARKOUT.
11. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED IN ACCORDANCE WITH MS4'S GP-0-24-001. PRESENT AT THE MEETING SHALL BE THE MS4 OPERATOR, CONTRACTOR(S) RESPONSIBLE FOR IMPLEMENTING THE SWPPP FOR CONSTRUCTION ACTIVITY, AND QUALIFIED STORMWATER INSPECTOR FOR THE PROJECT.
12. UPON COMPLETION OF PROJECT CONSTRUCTION, AN AS-BUILT SURVEY SHALL BE PREPARED OF THE PROJECT. THE AS-BUILT SURVEY SHALL INCLUDE THE LOCATION, SIZE, AND MATERIAL OF ALL UTILITIES INSTALLED ON THE PROJECT SITE.
13. INFORMATION HEREON INCORPORATES THE CONTENT IN THE FOLLOWING REPORTS:
    - "PRELIMINARY STORMWATER POLLUTION PREVENTION PLAN (PRELIMINARY SWPPP)" PREPARED FOR BEEKMAN ARTS CENTER LLC & BAYRIDGE STUDIOS LLC PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED JANUARY 30, 2024.
    - "TRAFFIC & PARKING STUDY" PREPARED FOR BEEKMAN ARTS CENTER LLC & BAYRIDGE STUDIOS LLC PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED NOVEMBER 28, 2023 AND REVISED TO JUNE 24, 2024.

SITE NOTES

1. BUILDING FOOTPRINT DIMENSIONS SHOWN HEREON ARE APPROXIMATE. FINAL BUILDING FOOTPRINT DIMENSIONS FOR EACH BUILDING SHALL BE FURNISHED ON THE INDIVIDUAL ARCHITECTURAL PLANS AT THE TIME OF APPLICATION FOR A BUILDING PERMIT. ALL STRUCTURES SHALL CONFORM TO THE APPROVED BULK ZONING REQUIREMENTS.
2. CURBS SHALL BE DEPRESSED FLUSH WITH PAVEMENT, AND ACCESSIBLE RAMPS INSTALLED WHERE SIDEWALKS AND CROSSWALKS INTERSECT SAME. DETECTABLE WARNINGS SHALL BE INCLUDED ON ACCESSIBLE RAMPS.
3. TRAFFIC SIGNAGE AND STRIPING SHALL CORRESPOND TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. REFUSE AND RECYCLABLES SHALL BE STORED WITHIN OUTSIDE SCREENED TRASH ENCLOSURES AS NOTED ON THE PLANS, AND PICKED UP BY PRIVATE WASTE DISPOSAL HAULER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL WASTE MATERIALS IN ACCORDANCE WITH GOVERNING REGULATIONS AND AGENCIES.
6. THERE SHALL BE NO ON-SITE BURIAL OF CONSTRUCTION MATERIALS, TREE BRANCHES, STUMPS, OR OTHER DELETERIOUS MATERIALS.
7. MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
    A. NEW YORK STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", 2018; AS SUPPLEMENTED.
    B. CURRENT PREVAILING MUNICIPAL, COUNTY, AND/OR STATE AGENCY SPECIFICATIONS, STANDARDS, CONDITIONS, AND REQUIREMENTS.
    C. CURRENT PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
    D. CURRENT MANUFACTURER SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

UTILITY NOTES

1. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTIONS, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS, AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE UNDER SIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER MATERIALLY FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGNS HEREON INAPPROPRIATE OR INEFFECTIVE.
2. UTILITY RELOCATIONS SHOWN HEREON, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANY/AUTHORITIES.
3. STORM SEWERS SHALL BE CLASS III (OR HIGHER IF NOTED) REINFORCED CONCRETE PIPE (RCP) WITH "O" RING GASKETS OR INTERNALLY PRELUBRICATED GASKET (TYLOX SUPERSEAL OR EQUIVALENT. ADS N-12 HIGH DENSITY POLYETHYLENE PIPE (HDPE), AS NOTED ON THE PLAN, OR APPROVED EQUAL. PROPER PIPE COVERAGE SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. PIPE LENGTHS SHOWN HEREON ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. WATER SERVICE SHALL BE PROVIDED FROM THE CITY OF BEACON. THE PROJECT SHALL CONNECT TO THE MUNICIPAL SYSTEM VIA THE EXISTING WATER MAINS IN TOMPKINS AVENUE AND HIGH STREET SUBJECT TO THE APPLICABLE REGULATIONS AND THE APPROVAL OF THE MUNICIPALITY & THE DUTCHESS COUNTY DEPARTMENT OF HEALTH.
5. SANITARY SEWER SERVICE SHALL BE PROVIDED BY CONNECTION TO THE EXISTING CITY OF BEACON SANITARY MAIN LOCATED IN HIGH STREET.
6. ALL WATER MAINS SHOULD BE SEPARATED FROM SANITARY SEWER LINES BY A MINIMUM HORIZONTAL DISTANCE OF 10 FEET. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN ENCASED IN CONCRETE OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE MUNICIPALITY.
7. AT THE CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN (SEWER SERVICE LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT). IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE WATER LINE SHALL BE ENCASED IN CONCRETE.
8. GAS, ELECTRIC, LIGHTING, CABLE TELEVISION, AND ELECTRICAL SERVICE PLANS, IF REQUIRED, SHALL BE PREPARED BY THE RESPECTIVE UTILITY COMPANIES THAT SERVICE THE AREA PRIOR TO SITE CONSTRUCTION AND SHALL BE INSTALLED PER ORDINANCE OR LOCAL UTILITY COMPANIES REQUIREMENTS.
9. ALL UTILITY CONNECTION LOCATIONS MUST BE CONFIRMED WITH THE GOVERNING AUTHORITY & WITH A TEST PIT BY THE CONTRACTOR PRIOR TO INSTALLATION.
10. UTILITY INSTALLATION WITHIN THE NYSDOT RIGHT-OF-WAY TO BE COORDINATED WITH THE APPLICABLE NYSDOT PERMIT PLANS.

THESE GENERAL NOTES SHALL APPLY TO ALL SHEETS IN THIS SET.

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Engineering & Design
www.colliersengineering.com

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:04-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-COVER

SHEET TITLE: COVER SHEET

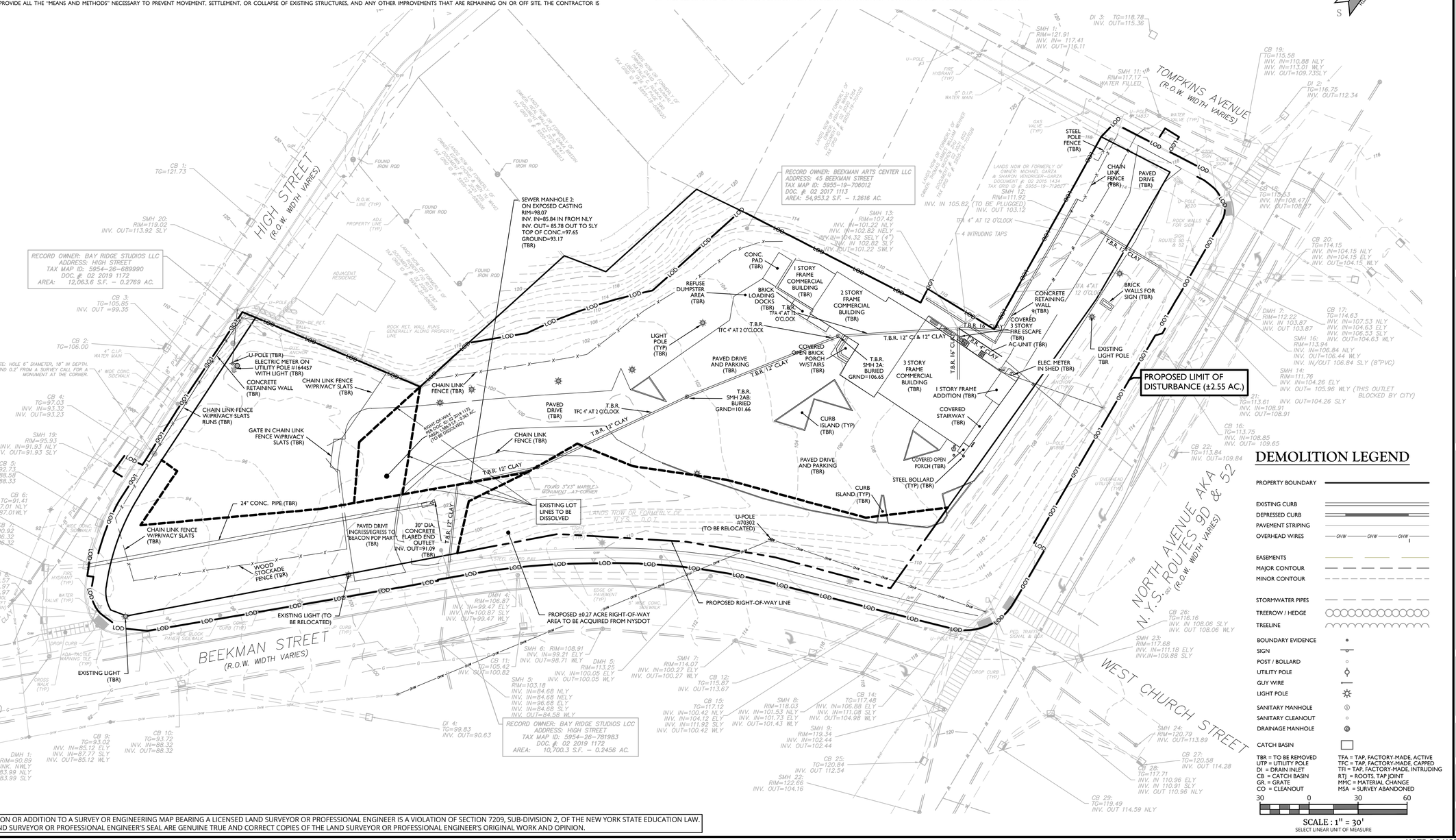
SHEET NUMBER: 01 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIC 1400

2023\23010468A\Engineering\Site Plans\C-COVER.dwg|C-01 COVER By: KYLE SHALLOW

DEMOLITION NOTES:

1. THIS PLAN REFERENCES THE FOLLOWING DOCUMENTS AND INFORMATION:
   A. BOUNDARY AND TOPOGRAPHICAL MAPPING IS TAKEN FROM A SURVEY TITLED "BOUNDARY SURVEY OF THE LANDS OF BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC" PREPARED BY JONATHAN N. MILLEN NY, P.L.S. (LICENSE NO. 050746) OF AUTOMATED CONSTRUCTION ENHANCED SOLUTIONS, INC., DATED NOVEMBER 03, 2023.
2. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (29 U.S.C. 651 ET SEQ.) AND THE NEW YORK PROTECTION OF UNDERGROUND FACILITIES ACT (DIG SAFE LAW, 16 NYCRR PART 753) AS AMENDED.
3. THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR SHALL ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE IN DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
4. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMING THE WORK OF THIS PROJECT SHALL BE RAISED WITH ENGINEER, IN WRITING AND RESPONDED TO BY ENGINEER, IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY.
5. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR/TO:
   A. OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND OTHER PUBLIC AGENCIES HAVING JURISDICTION.
   B. NOTIFYING, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL DEPARTMENT OF PUBLIC WORKS, 72 HOURS PRIOR TO START OF WORK.
   C. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
   D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR SHALL BE REQUIRED TO CALL THE BOARD OF PUBLIC UTILITIES ONE CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT IN ADVANCE OF ANY EXCAVATION.
   E. LOCATING AND PROTECTING ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
   F. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
   G. ARRANGING FOR AND COORDINATING WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE THE UTILITY ENGINEER AND OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.
   H. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES. WORK REQUIRED TO BE DONE "OFF-PEAK" SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
   I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL WORK AND NOTIFY THE OWNER AND ENGINEER OF THE DISCOVERY OF SUCH MATERIALS.
6. COLLIERS ENGINEERING & DESIGN IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
7. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION. SUCH REPAIRS SHALL BE PERFORMED AT THE CONTRACTOR'S SOLE EXPENSE.
8. THE CONTRACTOR SHALL NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE UNLESS IT IS IN STRICT ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, AND/OR UNDER THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
9. CONTRACTOR SHALL BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL SHALL BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS, AND SHALL BE SUFFICIENTLY COMPACTED TO SUPPORT NEW IMPROVEMENTS AND IN COMPLIANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. BACKFILLING SHALL OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES, AND SHALL BE DONE SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE.
10. EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND ALL APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
11. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AS WELL AS FEDERAL, STATE AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHT-OF-WAY.
12. CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
13. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE AND/OR LIMIT OF DISTURBANCE, WITHOUT WRITTEN PERMISSION OF THE OWNER AND ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION.
14. THE CONTRACTOR SHALL USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
15. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
16. CONTRACTOR IS RESPONSIBLE FOR SITE JOB SAFETY, WHICH SHALL INCLUDE BUT NOT LIMITED TO THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING AND OTHER APPROPRIATE SAFETY ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITY.
17. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION AS TO THE MEANS AND METHODS TO BE USED TO ACCOMPLISH THAT WORK. ALL MEANS AND METHODS UTILIZED ARE TO BE IN STRICT ACCORDANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
18. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES. THE CONTRACTOR SHALL MAINTAIN RECORDS TO DEMONSTRATE PROPER DISPOSAL ACTIVITIES, TO BE PROVIDED TO THE OWNER UPON REQUEST.
19. CONTRACTOR SHALL MAINTAIN A RECORD SET OF PLANS UPON WHICH IS INDICATED THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT SHALL BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER, AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK.
20. CONTRACTOR IS RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS, PAVEMENT, DRAINAGE STRUCTURES, ETC. WHICH ARE TO REMAIN. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING DAMAGE DONE TO THE AFOREMENTIONED ITEMS. THE REPAIR SHALL RESTORE SUCH TO A CONDITION EQUIVALENT TO OR BETTER THAN THE EXISTING CONDITIONS AND IN ACCORDANCE WITH ALL APPLICABLE CODES.
21. TREE CLEARING AND REMOVAL SHALL OCCUR BETWEEN OCTOBER 1ST TO MARCH 31ST, TO MITIGATE POTENTIAL IMPACTS TO THE INDIANA BAT.


HIGH STREET (R.O.W. WIDTH VARIES)
BEEKMAN STREET (R.O.W. WIDTH VARIES)
TOMPKINS AVENUE (R.O.W. WIDTH VARIES)
NORTH AVENUE AKA N.Y.S. ROUTES 9D & 52 (R.O.W. WIDTH VARIES)
WEST CHURCH STREET
RECORD OWNER: BAY RIDGE STUDIOS LLC
ADDRESS: HIGH STREET
TAX MAP ID: 5954-26-689990
DOC. #: 02 2019 1172
AREA: 12,063.6 S.F. – 0.2769 AC.
RECORD OWNER: BEEKMAN ARTS CENTER LLC
ADDRESS: 45 BEEKMAN STREET
TAX MAP ID: 5955-19-706012
DOC. # 02 2017 1113
AREA: 54,953.2 S.F. – 1.2616 AC.
RECORD OWNER: BAY RIDGE STUDIOS LCC
ADDRESS: HIGH STREET
TAX MAP ID: 5954-26-781983
DOC. #: 02 2019 1172
AREA: 10,700.3 S.F. – 0.2456 AC.
PROPOSED LIMIT OF DISTURBANCE (±2.55 AC.)
EXISTING LOT LINES TO BE DISSOLVED
PROPOSED ±0.27 ACRE RIGHT-OF-WAY AREA TO BE ACQUIRED FROM NYSDOT
PROPOSED RIGHT-OF-WAY LINE
SEWER MANHOLE 2: ON EXPOSED CASTING RIM=98.07 INV. IN=85.84 IN FROM NLY INV. OUT= 85.78 OUT TO SLY TOP OF CONC.=97.65 GROUND=93.17 (TBR)
CHAIN LINK FENCE W/PRIVACY SLATS (TBR)
CHAIN LINK FENCE (TBR)
STEEL POLE FENCE (TBR)
WOOD STOCKADE FENCE (TBR)
24" CONC. PIPE (TBR)
30" DIA. CONCRETE FLARED END OUTLET INV. OUT=91.09 (TBR)
PAVED DRIVE INGRESS/EGRESS TO "BEACON POP MART" (TBR)
U-POLE (TBR) ELECTRIC METER ON UTILITY POLE #164457 WITH LIGHT (TBR)
CONCRETE RETAINING WALL (TBR)
GATE IN CHAIN LINK FENCE W/PRIVACY SLATS (TBR)
CHAIN LINK FENCE RUNS (TBR)
U-POLE (TO BE RELOCATED)
EXISTING LIGHT (TO BE RELOCATED)
EXISTING LIGHT (TBR)
CONC. PAD (TBR)
REFUSE DUMPSTER AREA (TBR)
BRICK LOADING DOCKS (TBR)
1 STORY FRAME COMMERCIAL BUILDING (TBR)
2 STORY FRAME COMMERCIAL BUILDING (TBR)
3 STORY FRAME COMMERCIAL BUILDING (TBR)
1 STORY FRAME ADDITION (TBR)
COVERED 3 STORY FIRE ESCAPE (TBR)
AC-UNIT (TBR)
COVERED OPEN BRICK PORCH W/STAIRS (TBR)
COVERED STAIRWAY (TBR)
COVERED OPEN PORCH (TBR)
CONCRETE RETAINING WALL W/SHED (TBR)
BRICK WALLS FOR SIGN (TBR)
EXISTING LIGHT POLE TBR
ELEC. METER IN SHED (TBR)
PAVED DRIVE AND PARKING (TBR)
CHAIN LINK FENCE (TBR)
CURB ISLAND (TYP) (TBR)
STEEL BOLLARD (TYP) (TBR)
PAVED DRIVE (TBR)
T.B.R. 4" CLAY
T.B.R. 12" CLAY
T.B.R. 17" CLAY
T.B.R. 16" CLAY
T.B.R. 8" CLAY
T.B.R. 14" CLAY
T.B.R. 16" CLAY
T.B.R. 12" CLAY & 12" CLAY
T.B.R. SMH 2A: BURIED GRND=106.65
T.B.R. SMH 2AB: BURIED GRND=101.66
T.B.R. TFA 4" AT 12 O'CLOCK
T.B.R. TFC 4" AT 2 O'CLOCK
T.B.R. TFA 4" AT 7 O'CLOCK
LIGHT POLE (TYP) (TBR)
U-POLE #70302 (TO BE RELOCATED)
SMH 1: RIM=121.91 INV. IN= 117.41 INV. OUT=116.11
SMH 11: RIM=117.17 WATER FILLED
SMH 12: RIM=111.92 (TO BE PLUGGED) INV. OUT 103.12
SMH 13: RIM=107.42 INV. IN=101.22 NLY INV. IN=102.82 NELY INV. IN=104.32 SELY (4") INV. IN 102.82 SLY INV. OUT=101.22 SWLY
INV. IN 105.82 (TO BE PLUGGED)
4 INTRUDING TAPS
DI 3: TG=118.78 INV. OUT=115.36
CB 19: TG=115.58 INV. IN=110.88 NLY INV. IN=113.01 WLY INV. OUT=109.73SLY
DI 2: TG=116.75 INV. OUT=112.34
CB 18: TG=115.53 INV. IN=108.47 INV. OUT=108.27
CB 20: TG=114.15 INV. IN=104.15 NLY INV. IN=104.15 ELY INV. OUT=104.15 WLY
DMH 7: RIM=112.22 INV. IN 103.87 INV. OUT 103.87
CB 17: TG=114.63 INV. IN=107.53 NLY INV. IN=104.63 ELY INV. IN=106.53 SLY INV. OUT=104.63 WLY
SMH 16: RIM=113.94 INV. IN=106.84 NLY INV. OUT=106.44 WLY INV. IN/OUT 106.84 SLY (8"PVC)
SMH 14: RIM=111.76 INV. IN=104.26 ELY INV. OUT= 105.96 WLY (THIS OUTLET BLOCKED BY CITY)
21: TG=113.61 INV. IN=108.91 INV. OUT=108.91
INV. OUT=104.26 SLY
CB 16: TG=113.75 INV. IN=108.85 INV. OUT= 109.65
CB 22: TG=113.84 INV. OUT=109.84
CB 26: TG=116.16 INV. IN 108.06 SLY INV. OUT 108.06 WLY
SMH 23: RIM=117.68 INV. IN=111.18 ELY INV.=109.88 SLY
CB 27: TG=120.58 INV. OUT 114.28
CB 28: TG=117.71 INV. IN 110.96 ELY INV. IN 110.91 SLY INV. OUT 110.96 NLY
CB 29: TG=119.49 INV. OUT 114.59 NLY
SMH 24: RIM=120.79 INV. OUT=113.89
SMH 20: RIM=119.02 INV. OUT=113.92 SLY
CB 1: TG=121.73
CB 3: TG=105.85 INV. OUT =99.35
CB 2: TG=106.00
CB 4: TG=97.03 INV. IN=93.32 INV. OUT=93.23
SMH 19: RIM=95.93 INV. IN=91.93 NLY INV. OUT=91.93 SLY
CB 5: TG=92.73 INV. IN=88.58 INV. OUT=88.33
CB 6: TG=91.41 INV. IN=87.01 NLY INV. OUT=87.01WLY
CB 7: TG=90.92 INV. IN=86.32 INV. OUT=86.32
SMH 18: RIM=91.79 INV. IN=86.79 NLY INV. IN=86.79 SLY
CB 8: TG=90.57 INV. IN= 85.97 INV. OUT=85.97
SMH 3: RIM=89.82 INV. IN=80.82 NLY INV. OUT=80.82 SLY
CB 23: TG=88.69 INV. IN= 80.09
CB 9: TG=93.02 INV. IN=85.12 ELY INV. IN=87.77 SLY INV. OUT=85.12 WLY
CB 10: TG=93.72 INV. IN=88.32 INV. OUT=88.32
DMH 1: RIM=90.89 INV. IN=UNK. NWLY INV. IN=83.99 NLY INV. OUT=83.99 SLY
CB 11: TG=105.42 INV. OUT=100.82
SMH 5: RIM=103.18 INV. IN=84.68 NLY INV. IN=84.68 NELY INV. IN=96.68 ELY INV. IN=84.68 SLY INV. OUT=84.58 WLY
DMH 4: RIM=106.87 INV. IN=99.47 ELY INV. IN=100.87 SLY INV. OUT=99.47 WLY
SMH 6: RIM=108.91 INV. IN=99.21 ELY INV. OUT=98.71 WLY
DMH 5: RIM=113.25 INV. IN=100.05 ELY INV. OUT=100.05 WLY
DI 4: TG=99.83 INV. OUT=90.63
SMH 7: RIM=114.07 INV. IN=100.27 ELY INV. OUT=100.27 WLY
CB 12: TG=115.87 INV. OUT=113.67
CB 15: TG=117.12 INV. IN=100.42 NLY INV. IN=104.12 ELY INV. IN=111.92 SLY INV. OUT=100.42 WLY
SMH 8: RIM=118.03 INV. IN=101.53 NLY INV. IN=101.73 ELY INV. OUT=101.43 WLY
CB 14: TG=117.48 INV. IN=106.88 ELY INV. IN=111.08 SLY INV. OUT=104.98 WLY
SMH 9: RIM=119.34 INV. IN=102.44 INV. OUT=102.44
CB 25: TG=120.84 INV. OUT 112.54
SMH 22: RIM=122.66 INV. OUT=104.16
CHAIN LINK FENCE W/PRIVACY SLATS RUNS (TBR)
RIGHT-OF-WAY PER DOC. 02 2019 1172 (TO BE DISSOLVED)
FOUND IRON ROD
FOUND 3"X3" MARBLE MONUMENT AT CORNER
LANDS NOW OR FORMERLY OF NYS D.O.T.
LANDS NOW OR FORMERLY OF OWNER: BAY RIDGE STUDIOS LLC TAX MAP ID: 5954-26-689990 DOC. # 02 2019 1172
LANDS NOW OR FORMERLY OF OWNER: BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC TAX MAP ID: 5955-19-706012 DOC. # 02 2017 1113
LANDS NOW OR FORMERLY OF OWNER: MICHAEL GARZA & SHARON VENDRIGER-GARZA DOCUMENT # 02 2015 1434 TAX ORDID #: 5955-19-712007
LANDS NOW OR FORMERLY OF OWNER: BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC TAX MAP ID: 5955-19-706012 DOC. # 02 2017 1113
ADJACENT RESIDENCE
ROCK RET. WALL RUNS GENERALLY ALONG PROPERTY LINE
NOTE: HOLE 6" DIAMETER, 18" IN DEPTH. FOUND 0.2' FROM A SURVEY CALL FOR A MONUMENT AT THE CORNER.
4" C.I.P. WATER MAIN
4' WIDE CONC. SIDEWALK
8" D.I.P. WATER MAIN
GAS VALVE (TYP)
WATER VALVE (TYP)
FIRE HYDRANT (TYP)
U-POLE #1463
U-POLE #1464
U-POLE #1465
U-POLE #1466
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U-POLE #1468
U-POLE #1469
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U-POLE #1474
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DEMOLITION NOTES:

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
1	9"	BRADFORD PEAR
2	23"	RED OAK
3	14"	WHITE PINE
4	19"	RED OAK
5	13"/9"	WHITE PINE
6	19.5"	RED OAK
7	8"	BRADFORD PEAR
8	7.5"	WHITE PINE
9	10"/8"	WHITE PINE
10	15.5"	RED OAK
11	7"	BRADFORD PEAR
12	18"	NORWAY MAPLE
13	15"	NORWAY MAPLE
14	26"	BLACK LOCUST
15	24"/18"	BLACK LOCUST
16	6"	BLACK CHERRY
17	20"	BLCK LOCUST
18	6"	BLACK LOCUST
19	6"	BLACK WALNUT
20	20"	NORWAY MAPLE
21	16"	NORWAY MAPLE
22	6"/8"	NORWAY MAPLE
23	15"	NORWAY MAPLE
24	8"	BLACK LOCUST
25	23"	NORWAY MAPLE
26	6"	NORWAY MAPLE

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
27	7"	NORWAY MAPLE
28	7"	NORWAY MAPLE
29	6"/7"	NORWAY MAPLE
30	23"	BIGTOOTH ASPEN
31	23"	BIGTOOTH ASPEN
32	11"	NORWAY MAPLE
33	12"	BOX ELDER
34	12"	NORWAY MAPLE
35	8"	MULBERRY
36	6"	NORWAY MAPLE
37	6"	NORWAY MAPLE
38	6"	NORWAY MAPLE
39	12"	RED OAK
40	6"	BOX ELDER
41	6"/8"	NORWAY MAPLE
42	6"	NORWAY MAPLE
43	12"	RED OAK
44	6"/6"	NORWAY MAPLE
45	6"/6"/7"	NORWAY MAPLE
46	14"	RED OAK
47	6"	NORWAY MAPLE
48	6"	NORWAY MAPLE
49	12"	BLACK CHERRY
50	11"/17"	BLACK LOCUST
51	8"	BLACK LOCUST
52	8"	NORWAY MAPLE

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
53	8"	BLACK LOCUST
54	9"	NORWAY MAPLE
55	16"	BLACK WALNUT
56	15"/11"/11"	BLACK LOCUST
57	6"	NORWAY MAPLE
58	13"	BLACK LOCUST
59	16"	CATALPLA
60	14"/14"/14"	SYCAMORE
61	6"	CATALPLA
62	15"	RED OAK
63	15"	WHITE PINE
64	16"	LITTLELEAD LINDEN
65	14"	WHITE PINE
66	11"	WHITE PINE
67	17"	LITTLELEAF LINDEN
68	11"	WHITE PINE
69	10"	WHITE PINE
70	17"	LITTLELEAF LINDEN
71	11"	WHITE PINE
72	15"	LITTLELEAF LINDEN
73	15"	WHITE PINE
74	16"	LITTLELEAF LINDEN
75	10"	WHITE PINE
76	16"	LITTLELEAF LIDNEN
77	18"	LITTLELEAF LINDEN
78	24"/20"	NORWAY SPRUCE

TREE NUMBER	TREE SIZE IN INCHES AT DBH	COMMON NAME
79	18"	BRADFORD PEAR
80	30"	NORWAY MAPLE
81	13"	CATALPA
82	6"	NORWAY MAPLE
83	6"/8"	NORWAY MAPLE
84	24"	NORWAY MAPLE
85	12"	NORWAY MAPLE
86	10"	NORWAY MAPLE
87	10"	BRADFORD LOCUST
88	17"	NORWAY MAPLE
89	6"	NORWAY MAPLE
90	30"	NORWAY MAPLE
91	6"	NORWAY MAPLE
92	24"	NORWAY MAPLE
93	12"/14"	NORWAY MAPLE
94	10"	NORWAY MAPLE
95	31"	NORWAY MAPLE

PLAN NOTE

1. IDENTIFICATION OF EXISTING TREE SPECIES AND LOCATION CONDUCTED BY COLLIERS ENGINEERING & DESIGN, JUNE 2024.
2. CONTRACTOR TO STAKE-OUT L.O.D. ALONG THE NORTHERN SIDE OF THE PROJECT SITE AND EXISTING TREES IN CLOSE PROXIMITY TO THE L.O.D. SHALL BE REVIEWED FOR POTENTIAL PRESERVATION.

LEGEND

- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN

SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Site Plans\C-DEMO.dwg|C-03 TREE REMOVAL By: KYLE SHALLOW

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:23-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

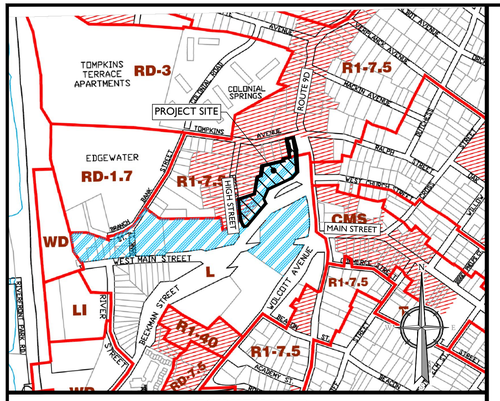
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING, CT, DBA NJ DOING BUSINESS AS DBA CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER: 23010468A	DRAWING NAME: C-DEMO		

SHEET TITLE:
TREE REMOVAL PLAN

SHEET NUMBER:
03 of 19



VICINITY MAP
SCALE: 1" = 500'
SOURCE: CITY OF BEACON ZONING MAP

ZONING DISTRICT:

L: (LINKAGE DISTRICT)
USE PERMITTED BY RIGHT: RETAIL
USE PERMITTED BY RIGHT: OFFICE
USE PERMITTED BY RIGHT: MULTIFAMILY DWELLING
-IF THE BUILDING FACES THE NORTH SIDE OF BEEKMAN STREET BETWEEN ROUTE 9D AND WEST MAIN STREET
-SUBJECT TO A REQUIREMENT THAT ANY DWELLING UNIT SHALL ONLY BE LOCATED ON THE UPPER STORIES OR AT LEAST 50 FEET BEHIND THE FACADE IN THE REAR PORTION OF THE GROUND FLOOR

HDLO: (HISTORIC DISTRICT AND LANDMARK OVERLAY ZONE)

TABLE OF BULK REQUIREMENTS

L - LINKAGE DISTRICT

MINIMUM	REQUIRED	PROVIDED	REMARKS
LANDSCAPED AREA	15%	35.5%	OK
LOT AREA	N/A	N/A	OK
LOT AREA PER UNIT	N/A	N/A	OK
LOT WIDTH	N/A	N/A	OK
LOT DEPTH	75 FT.	143 FT.	OK
FRONT YARD SETBACK	0 FT.	1 FT.	OK
SIDE YARD SETBACK	0 FT.	N/A	OK
REAR YARD SETBACK	25 FT.	46.7 FT.	OK
DISTANCE BETWEEN BUILDINGS SAME LOT	N/A	N/A	OK
MAXIMUM			
BUILDING HEIGHT	4 STORIES AND 48 FT.	4 STORIES AND ≤48 FT.	OK
BUILDING COVERAGE	N/A	N/A	OK
UNITS PER BUILDING	N/A	N/A	OK
FRONT YARD SETBACK	20 FT.	19.6 FT.	OK
SIDE YARD SETBACK	30 FT.	N/A	OK

ZONING DISTRICT:

R1-7.5: (ONE FAMILY RESIDENTIAL DISTRICT (7,500 SF/DWELLING))
NO USE PROPOSED IN R1-7.5 DISTRICT

TABLE OF BULK REQUIREMENTS

R1-7.5 - ONE FAMILY RESIDENTIAL DISTRICT

MINIMUM	REQUIRED	PROVIDED	REMARKS
LANDSCAPED AREA	15%	NO STRUCTURE PROPOSED IN R1-7.5 DISTRICT	OK
LOT AREA	7,500 SF		OK
LOT AREA PER UNIT	7,500 SF		OK
LOT WIDTH	75 FT.		OK
LOT DEPTH	100 FT.		OK
FRONT YARD SETBACK	15 FT.		OK
SIDE YARD SETBACK	10 FT.		OK
REAR YARD SETBACK	25 FT.		OK
DISTANCE BETWEEN BUILDINGS SAME LOT	N/A		OK
WELL-DESIGNED AND LANDSCAPED RECREATION OR USABLE OPEN SPACE AREA IN REAR YARD	100 SF PER DWELLING UNIT		OK
MAXIMUM			
BUILDING HEIGHT	2.5 STORIES AND 35 FT.		OK
BUILDING COVERAGE	30%		OK
UNITS PER BUILDING	N/A		OK
FRONT YARD SETBACK	35 FT.		OK
SIDE YARD SETBACK	N/A		OK

PARKING REQUIREMENTS:

MAXIMUM PERMITTED:

RESIDENTIAL:
1 SPACE PER UNIT
64 DWELLING UNITS = 64 SPACES

RETAIL:
3 SPACES PER 1,000 SF OF GFA
13,671 SF OF RETAIL SPACE = 42 SPACES

TOTAL MAXIMUM PARKING PERMITTED = 106 SPACES

PROVIDED

TOTAL PARKING PROVIDED = 91 SPACES
(BASED ON SHARED PARKING ANALYSIS)

LOADING REQUIREMENTS:

REQUIRED

RETAIL:
1 SPACE FOR THE FIRST 7,500 SF OF GFA AND 1 SPACE FOR EACH ADDITIONAL 10,000 SF OF GFA OR MAJOR PORTION THEREOF, EXCEPT THAT NO BERTHS SHALL BE REQUIRED FOR BUILDINGS OF LESS THAN 5,000 SQUARE FEET OF GFA

BUILDING 1: 10,566 SF OF RETAIL SPACE = 1 LOADING SPACE
BUILDING 2: 4,326 SF OF RETAIL SPACE = 0 LOADING SPACES

PROVIDED

TOTAL LOADING SPACES PROVIDED:
EAST BLDG: = 1 LOADING SPACE
WEST BLDG: = 1 LOADING SPACE

LEGEND

EXISTING		PROPOSED
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE	CURB	FACE
BACK		BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	ROADWAY SIGNS	
	ZONING BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	LIGHT POLE	
	FLUSH CURB	FC
	SIGN	

OWNERS/APPLICANTS:

BEEKMAN ARTS CENTER LLC (TAX ID: 5955-19-706012)
268 MAIN STREET
BEACON, NY 12508

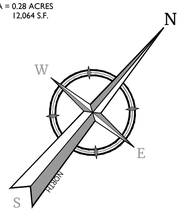
BAYRIDGE STUDIOS LLC (TAX ID: 5954-26-781983 & 5954-26-689990)
268 MAIN STREET
BEACON, NY 12508

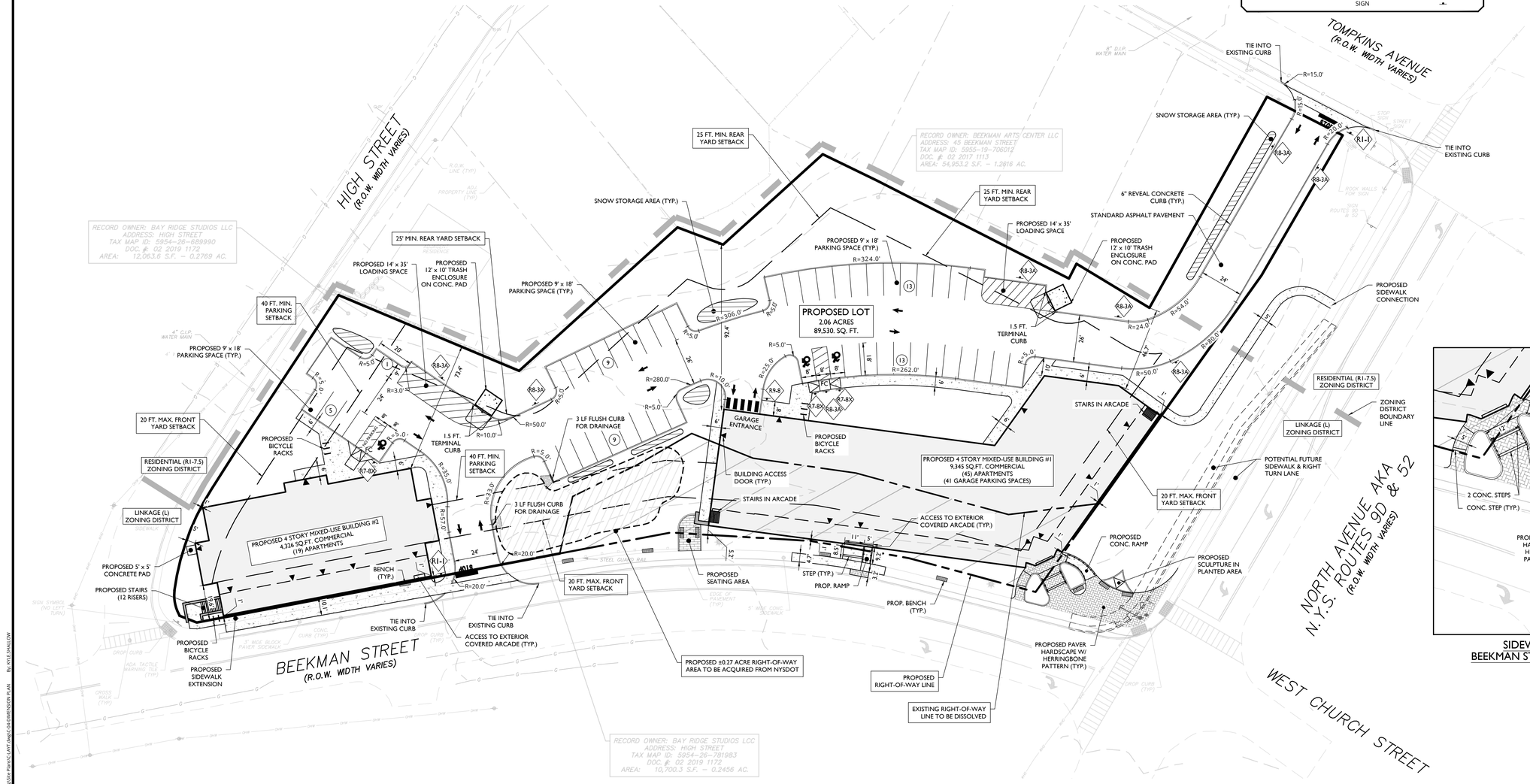
TAX LOTS:

5955-19-706012
AREA = 1.26 ACRES
54,953 S.F.

5954-26-781983
AREA = 0.25 ACRES
10,700 S.F.

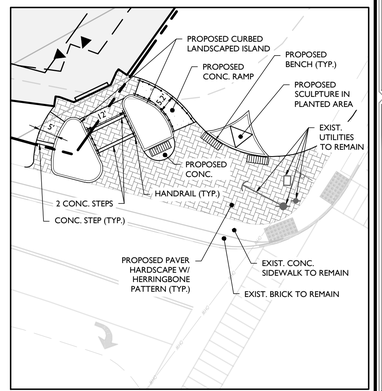
5954-26-689990
AREA = 0.28 ACRES
12,064 S.F.





SIGN LEGEND:

STOP	R1-1
ACCESSIBLE PARKING	R7-8X
NO PARKING	R8-3A
PEDESTRIAN CROSSWALK	R9-8



SIDEWALK ENTRANCE AT
BEEKMAN STREET AND NYS ROUTE 9D

SCALE: 1' = 20'

30 0 30 60
SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

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Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:23-04'00'

Justin Eric Dates
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LICENSE NUMBER: 001964-01
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FOR

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5955-19-706012
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5954-26-781983

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AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:	DRAWING NAME:		
23010468A	C-LAYT		

SHEET TITLE:
DIMENSION PLAN

SHEET NUMBER:
04 of 19

2023\23010468A\Engineering\Site Plans\C-LAYT.dwg|C-04-DIMENSION PLAN By: KYLE.SHALLOW

GRADING NOTES:

1. PROPOSED GRADE ELEVATIONS SHOWN AT BUILDING LINE ARE GROUND ELEVATIONS.
2. PROPOSED SPOT ELEVATIONS IN PAVEMENT AREAS ARE TOP OF FINISHED PAVEMENT.
3. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATION.
4. LANDSCAPED AND LAWN AREAS THAT ARE COMPACTED DURING CONSTRUCTION SHALL BE RESTORED PER THE NYS DEC DEEP-RIPPING AND DECOMPACTION MANUAL. (SEE SWPPP APPENDIX 12)

ADA INSTRUCTIONS TO CONTRACTOR:

1. CONTRACTOR SHALL EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA ACCESSIBLE COMPONENTS FOR THE SITE. THESE COMPONENTS, AS CONSTRUCTED, MUST COMPLY WITH THE LATEST ADA STANDARDS FOR ACCESSIBLE DESIGN. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EGRESS, SHALL COMPLY WITH THESE ADA CODE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

   (NOTE: THIS LIST IS NOT INTENDED TO CAPTURE EVERY APPLICABLE FEDERAL, STATE AND LOCAL RULE AND REGULATION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE LAW, WHETHER OR NOT STATED SPECIFICALLY HEREIN):

   A. PARKING SPACES AND PARKING AISLES - SLOPE SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

   B. CURB RAMPS- SLOPES SHALL NOT EXCEED 1:12 (8.3%).

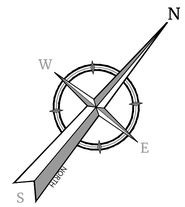
   C. LANDINGS -SHALL BE PROVIDED AT EACH END OF RAMPS, SHALL PROVIDE POSITIVE DRAINAGE, AND SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

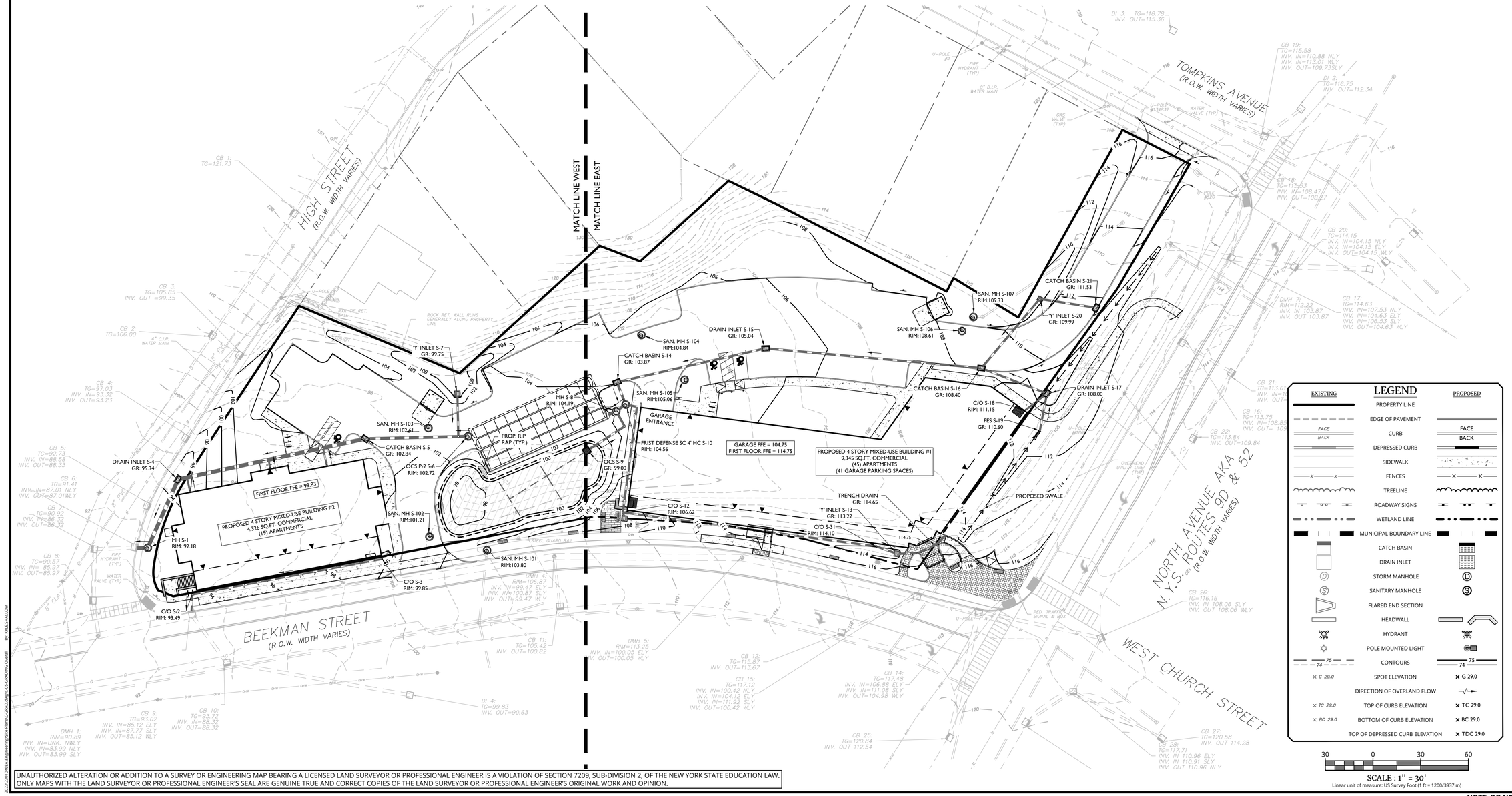
   D. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE - SHALL PROVIDE A 36 INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL. (CAR OVERHANGS CANNOT REDUCE THIS MINIMUM WIDTH), THE SLOPE SHALL BE NO GREATER THAN 1 :20 (5.0%) IN THE DIRECTION OF TRAVEL, AND SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN CROSS SLOPE.

   E. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), AN ADA RAMP WITH A MAXIMUM SLOPE OF 1:12 (8.3%), FOR A MAXIMUM DISTANCE OF 30 FEET, SHALL BE PROVIDED. THE RAMP SHALL HAVE ADA HAND RAILS AND "LEVEL" LANDINGS ON EACH END THAT ARE SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE.

   F. DOORWAYS - SHALL HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NORMALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA SHALL BE NO LESS THAN 60 INCHES (5 FEET) LONG, EXCEPT WHERE OTHER WISE PERMITTED BY ADA STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS (SEE APPLICABLE CODE SECTIONS).

2. IT IS RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE OFFICIAL PRIOR TO COMMENCING WORK.





LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

30 0 30 60

SCALE : 1" = 30'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
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5954-26-689990
5954-26-781983

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23010468A	C-GRAD

SHEET TITLE:

GRADING PLAN (OVERALL)

SHEET NUMBER:

05 of 19

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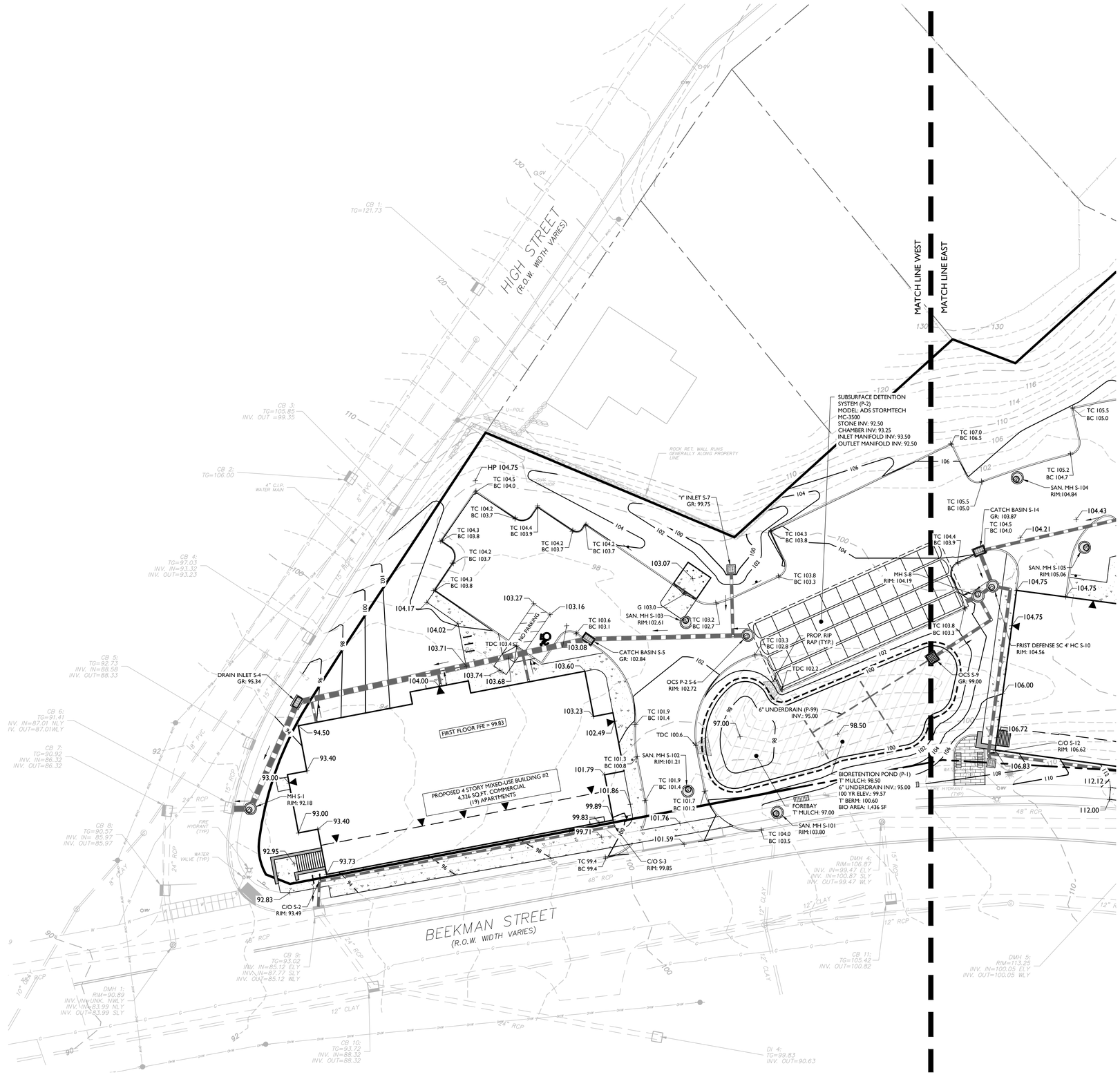

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LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

20 0 20 40

SCALE : 1" = 20'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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SITE PLAN

FOR

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TAX LOTS:
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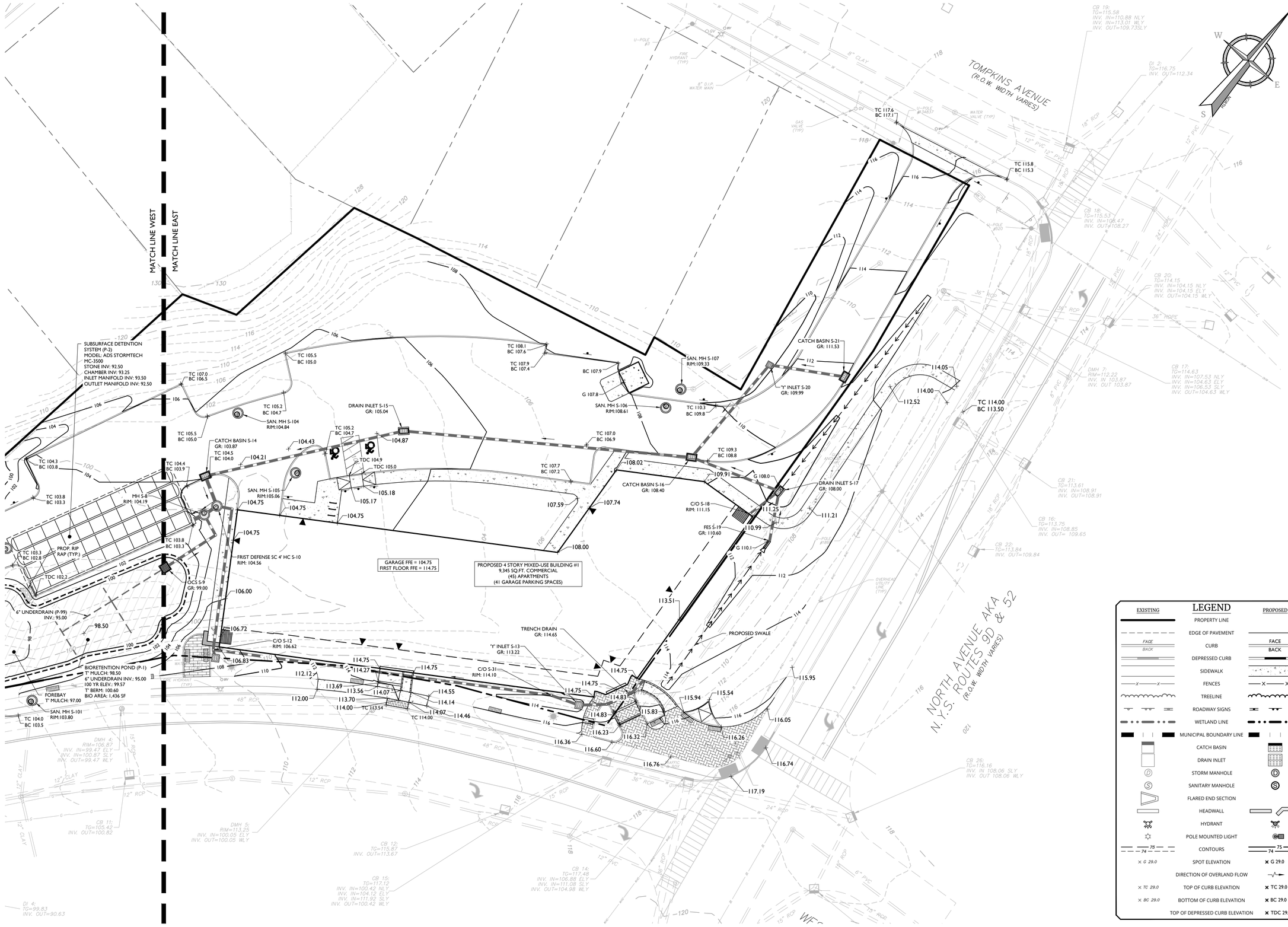
SHEET TITLE:
GRADING PLAN (WEST)

SHEET NUMBER:
06 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION



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LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
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FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
(D)	STORM MANHOLE	(D)
(S)	SANITARY MANHOLE	(S)
	FLARED END SECTION	
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20 0 20 40

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23010468A	C-GRAD		

SHEET TITLE:

GRADING PLAN (EAST)

SHEET NUMBER:

07 of 19

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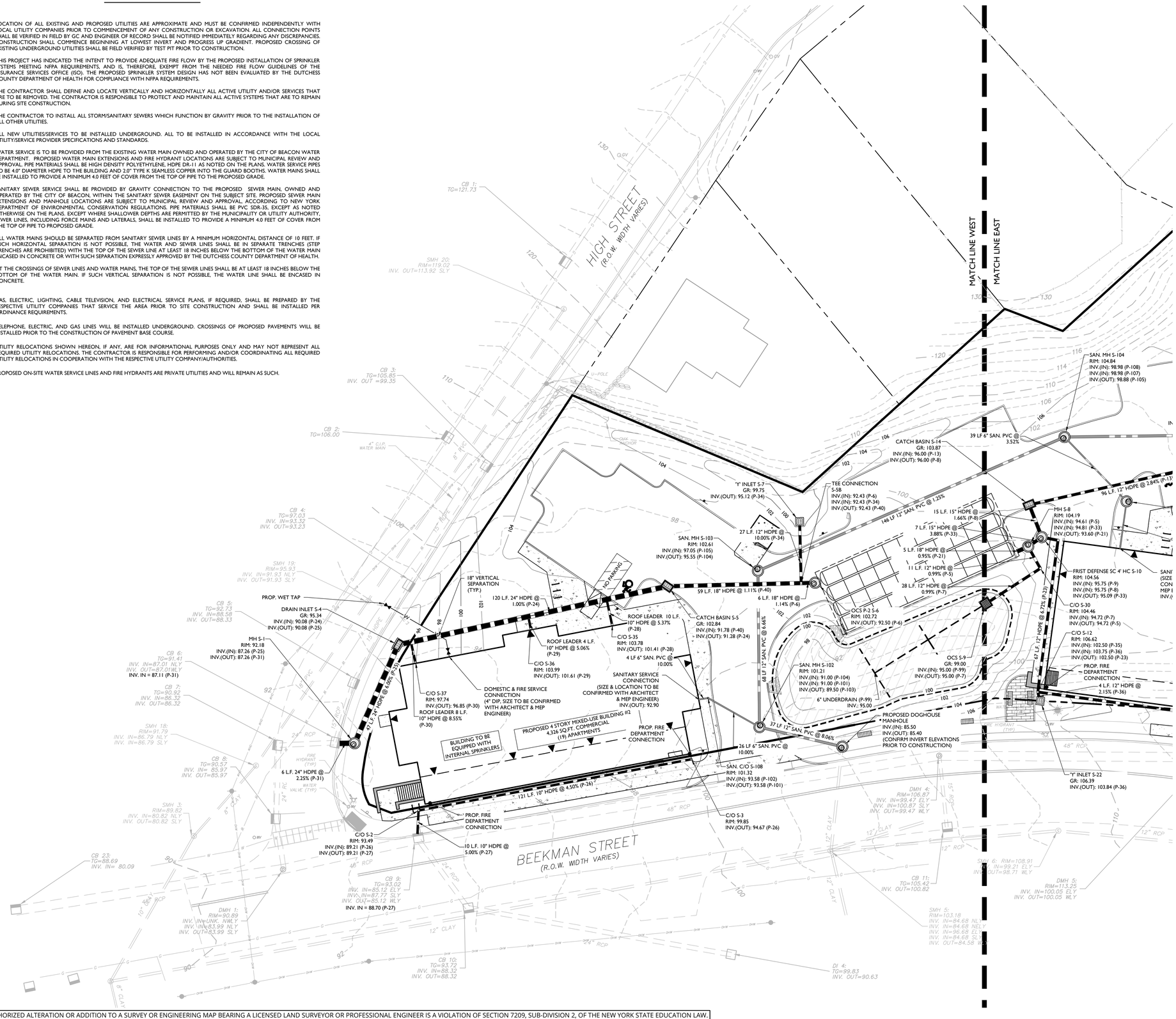
By: KYLE SHALLOW

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

UTILITY NOTES

1. LOCATION OF ALL EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. ALL CONNECTION POINTS SHALL BE VERIFIED IN FIELD BY GC AND ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY REGARDING ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT LOWEST INVERT AND PROGRESS UP GRADIENT. PROPOSED CROSSING OF EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO CONSTRUCTION.
2. THIS PROJECT HAS INDICATED THE INTENT TO PROVIDE ADEQUATE FIRE FLOW BY THE PROPOSED INSTALLATION OF SPRINKLER SYSTEMS MEETING NFPA REQUIREMENTS, AND IS, THEREFORE, EXEMPT FROM THE NEEDED FIRE FLOW GUIDELINES OF THE INSURANCE SERVICES OFFICE (ISO). THE PROPOSED SPRINKLER SYSTEM DESIGN HAS NOT BEEN EVALUATED BY THE DUTCHESS COUNTY DEPARTMENT OF HEALTH FOR COMPLIANCE WITH NFPA REQUIREMENTS.
3. THE CONTRACTOR SHALL DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICES THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE TO REMAIN DURING SITE CONSTRUCTION.
4. THE CONTRACTOR TO INSTALL ALL STORM/SANITARY SEWERS WHICH FUNCTION BY GRAVITY PRIOR TO THE INSTALLATION OF ALL OTHER UTILITIES.
5. ALL NEW UTILITIES/SERVICES TO BE INSTALLED UNDERGROUND. ALL TO BE INSTALLED IN ACCORDANCE WITH THE LOCAL UTILITY/SERVICE PROVIDER SPECIFICATIONS AND STANDARDS.
6. WATER SERVICE IS TO BE PROVIDED FROM THE EXISTING WATER MAIN OWNED AND OPERATED BY THE CITY OF BEACON WATER DEPARTMENT. PROPOSED WATER MAIN EXTENSIONS AND FIRE HYDRANT LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL. PIPE MATERIALS SHALL BE HIGH DENSITY POLYETHYLENE, HDPE DR-11 AS NOTED ON THE PLANS. WATER SERVICE PIPES TO BE 4.0" DIAMETER HDPE TO THE BUILDING AND 2.0" TYPE K SEAMLESS COPPER INTO THE GUARD BOOTHS. WATER MAINS SHALL BE INSTALLED TO PROVIDE A MINIMUM 4.0 FEET OF COVER FROM THE TOP OF PIPE TO THE PROPOSED GRADE.
7. SANITARY SEWER SERVICE SHALL BE PROVIDED BY GRAVITY CONNECTION TO THE PROPOSED SEWER MAIN, OWNED AND OPERATED BY THE CITY OF BEACON, WITHIN THE SANITARY SEWER EASEMENT ON THE SUBJECT SITE. PROPOSED SEWER MAIN EXTENSIONS AND MANHOLE LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL, ACCORDING TO NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION REGULATIONS. PIPE MATERIALS SHALL BE PVC SDR-35, EXCEPT AS NOTED OTHERWISE ON THE PLANS. EXCEPT WHERE SHALLOWER DEPTHS ARE PERMITTED BY THE MUNICIPALITY OR UTILITY AUTHORITY, SEWER LINES, INCLUDING FORCE MAINS AND LATERALS, SHALL BE INSTALLED TO PROVIDE A MINIMUM 4.0 FEET OF COVER FROM THE TOP OF PIPE TO PROPOSED GRADE.
8. ALL WATER MAINS SHOULD BE SEPARATED FROM SANITARY SEWER LINES BY A MINIMUM HORIZONTAL DISTANCE OF 10 FEET. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN ENCASED IN CONCRETE OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE DUTCHESS COUNTY DEPARTMENT OF HEALTH.
9. AT THE CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE WATER LINE SHALL BE ENCASED IN CONCRETE.
10. GAS, ELECTRIC, LIGHTING, CABLE TELEVISION, AND ELECTRICAL SERVICE PLANS, IF REQUIRED, SHALL BE PREPARED BY THE RESPECTIVE UTILITY COMPANIES THAT SERVICE THE AREA PRIOR TO SITE CONSTRUCTION AND SHALL BE INSTALLED PER ORDINANCE REQUIREMENTS.
11. TELEPHONE, ELECTRIC, AND GAS LINES WILL BE INSTALLED UNDERGROUND. CROSSINGS OF PROPOSED PAVEMENTS WILL BE INSTALLED PRIOR TO THE CONSTRUCTION OF PAVEMENT BASE COURSE.
12. UTILITY RELOCATIONS SHOWN HEREON, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANY/AUTHORITIES.
13. PROPOSED ON-SITE WATER SERVICE LINES AND FIRE HYDRANTS ARE PRIVATE UTILITIES AND WILL REMAIN AS SUCH.



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LEGEND

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	PROPERTY LINE	
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FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
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75 / 74	CONTOURS	75 / 74
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NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

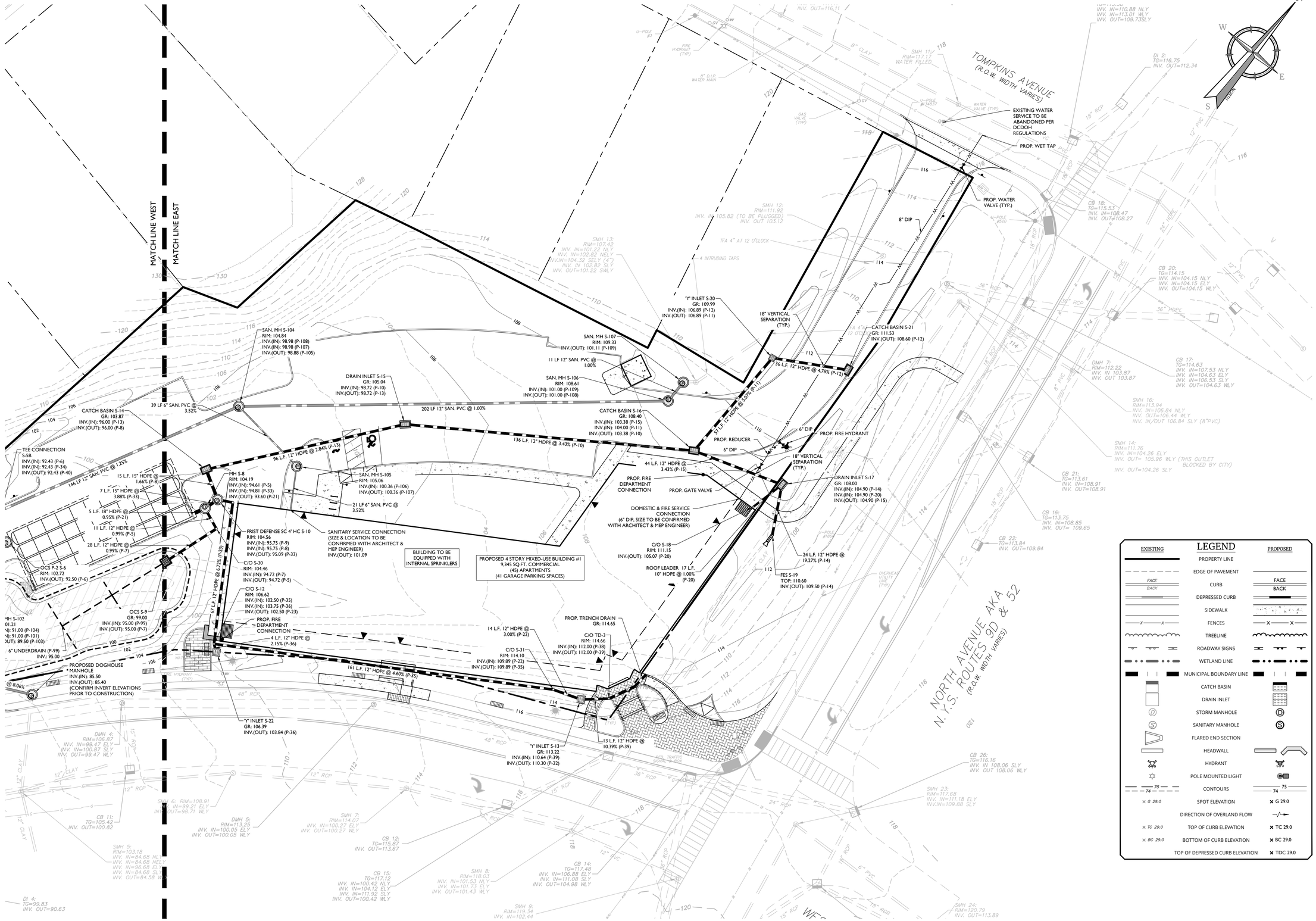
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-UTIL

SHEET TITLE: UTILITIES PLAN (WEST)

SHEET NUMBER: 08 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIC



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	CATCH BASIN	
	DRAIN INLET	
(D)	STORM MANHOLE	(D)
(S)	SANITARY MANHOLE	(S)
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

SCALE : 1" = 20'
20 0 20 40
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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2023\23010468A\Engineering\Site Plans\C-UTIL.dwg\C-09-UTILITY By: KYLE SHALLOW

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8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:23-04'00'

Justin Eric Dates
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PROJECT NUMBER:	DRAWING NAME:
23010468A	C-UTIL

SHEET TITLE:
UTILITIES PLAN (EAST)

SHEET NUMBER:
09 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIO

GENERAL SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN FOURTEEN (14) DAYS FOR DISTURBANCES LESS THAN FIVE (5) ACRES AND SEVEN (7) DAYS FOR DISTURBANCES GREATER THAN FIVE (5) ACRES, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
3. PERMANENT VEGETATION TO BE SEEDED ON ALL EXPOSED AREAS WITHIN FIVE (5) DAYS AFTER FINAL GRADING. MULCHING IS REQUIRED ON ALL SEEDING. WHEN HYDROSEEDING, MULCH SHALL NOT BE INCLUDED IN THE TANK WITH THE SEED.
4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE 2016 NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL OR AS AMENDED.
5. A SUBBASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUBBASE SHALL BE INSTALLED WITHIN FIVE (5) DAYS OF THE PRELIMINARY GRADING.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION CONTINUES (I.E. SLOPES GREATER THAN 3:1).
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A STONE PAD, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
9. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF TWENTY-FOUR (24) INCHES OF SOIL HAVING A PH OF 5 OR MORE.
10. AT THE TIME THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER.
11. CONDUIT OUTLET PROTECTION MUST BE REVIEWED & SUPPLEMENTED AT ALL OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
12. UNFILTERED DEWATERING IS NOT PERMITTED. TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STATE STANDARDS.
13. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
14. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAY WILL BE REMOVED IMMEDIATELY.
15. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION AND SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
16. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMITS OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN.
17. CONCRETE WASHOUT, DUMPSTER, & STAGING AREA LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED AT THE PRE-CONSTRUCITON MEETING. THEY SHALL BE PLACED IN THE PROXIMITY OF THE CONSTRUCTION ENTRANCE AND STAGING AREAS AND SHALL BE USED PRIOR TO EXITING THE PROJECT SITE. THE LOCATION SHALL BE IN A PRACTICAL, CLEARLY DELINEATED, AREA AND BE MAINTAINED THROUGHOUT CONSTRUCTION.
18. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
19. ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE PROPERTY OWNER, AND SHALL BECOME THEIR RESPONSIBILITY.
20. PAVEMENT AREAS ARE TO BE KEPT CLEAN AT ALL TIMES.
21. DURING CONSTRUCTION, ANY ADDITIONAL CONTROL MEASURES AS DEEMED NECESSARY TO PREVENT EROSION OR CONTROL SEDIMENT BEYOND THOSE MEASURES SHOWN ON THE APPROVED PLAN SHALL BE INSTALLED OR EMPLOYED AT THE DIRECTION OF THE MUNICIPAL ENGINEER.
22. ALL TEMPORARY, STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED, WHEN ALL CONSTRUCTION ACTIVITY IDENTIFIED IN THE SWPPP HAS BEEN COMPLETED, ALL AREAS OF DISTURBANCE HAVE ACHIEVED FINAL STABILIZATION** AND ALL POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE SWPPP AND ARE OPERATIONAL.
23. BOTTOM AND BERM ELEVATIONS OF TEMPORARY SEDIMENT BASINS TO BE REVIEWED WITH THE CONTRACTOR BASED ON THEIR PROPOSED CONSTRUCTION SEQUENCE FOR THE PROJECT.

CONSTRUCTION SEQUENCE

- INSTALL CONSTRUCTION ENTRANCES.
- STAKE LIMITS OF DISTURBANCE AND ORANGE CONSTRUCTION FENCE.
- INSTALL PERIMETER SILT FENCING ON DOWNHILL AREAS AS SHOWN ON PLAN.
- INSTALL SEDIMENT PONDS. INSTALL TEMPORARY SWALES TO DIRECT ALL OPEN SOIL AREA DISTURBANCE TO SEDIMENT PONDS, AS NECESSARY. LOCATIONS AND SIZE OF THE EROSIONS AND SEDIMENT CONTROL PRACTICES ARE NOTED ON THE PLAN. THESE MAY VARY DEPENDING ON THE CONTRACTOR'S SCHEDULE AND APPROACH BUT 3,600 CF OF STORAGE MUST BE PROVIDED AT A MINIMUM PER ACRE OF UPSTREAM DISTURBANCE. SEDIMENT TRAPS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS AND DETAILS. SEDIMENT TRAPS AND BASINS SHALL BE SIZED IN ACCORDANCE WITH THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL MANUAL.
- SEDIMENT POND RESTORATION: WHEN TEMPORARY STRUCTURES HAVE SERVED THEIR INTENDED PURPOSE AND THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, THE EMBANKMENT AND RESULTING SEDIMENT DEPOSITS ARE TO BE LEVELED OR OTHERWISE DISPOSED OF. SEDIMENT CAN BE DISPOSED OF BY EXPORTING IT OFF SITE FOR DISPOSAL OR BE USED AS FILL IN LAWN AREAS. SEDIMENT PONDS IN FUTURE OPEN SPACE OR LAWN AREAS MAY BE PUMPED DRY, GRADED, AND BACKFILLED. SEDIMENT PONDS IN PAVED OR STRUCTURAL AREAS MUST HAVE THE BASIN MATERIAL AND TRAPPED SEDIMENTS REMOVED, SAFELY DISPOSED OF, AND BACKFILLED WITH STRUCTURAL FILL. SEDIMENT PONDS IN LOCATIONS OF FUTURE STORMWATER PONDS MUST HAVE THE TRAPPED SEDIMENT REMOVED LEAVING THE BASIN AREA OPEN FOR THE DEVELOPMENT OF THE FINAL STORMWATER POND.
- ROUGH GRADE PROPOSED DRIVEWAY/ROAD.
- DISTURBED SOILS SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICAL. MATERIALS STORED IN STOCKPILES SHALL BE CORDONED OFF WITH SILT FENCE PER THE APPROPRIATE SPECIFICATIONS AND DETAILS. THE OPERATOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- CONSTRUCT ROADS, DRIVES, BUILDINGS, PARKING AREAS AND INSTALL DRAINAGE SYSTEMS.
- TOPSOIL/HAYSEED LAWN AREAS.
- THE PROJECT SITE MUST MEET FINAL STABILIZATION CRITERIA PRIOR TO REMOVING ALL EROSION AND SEDIMENT CONTROL DEVICES AND CLOSING OUT THE PROJECT. LITTER AND CONSTRUCTION DEBRIS SHALL BE REMOVED AS PRACTICAL THROUGHOUT THE LIFE OF THE PROJECT.
- UPON FINAL STABILIZATION BEING MET, THE CONTRACTOR SHALL CLEAR DRAINAGE PIPES AND STRUCTURES OF ANY SEDIMENT WHICH MAY HAVE ACCUMULATED. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED, AS MAY BE NECESSARY, REQUIRED AND/OR REQUESTED BY AUTHORITIES, TO PREVENT THE INCIDENTAL DISCHARGE OF SILT LADEN RUNOFF FROM ENTERING A WATER COURSE OR A DRAINAGE SYSTEM. THE GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES STATES THAT IT IS UNLAWFUL FOR ANY PERSON TO CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS.
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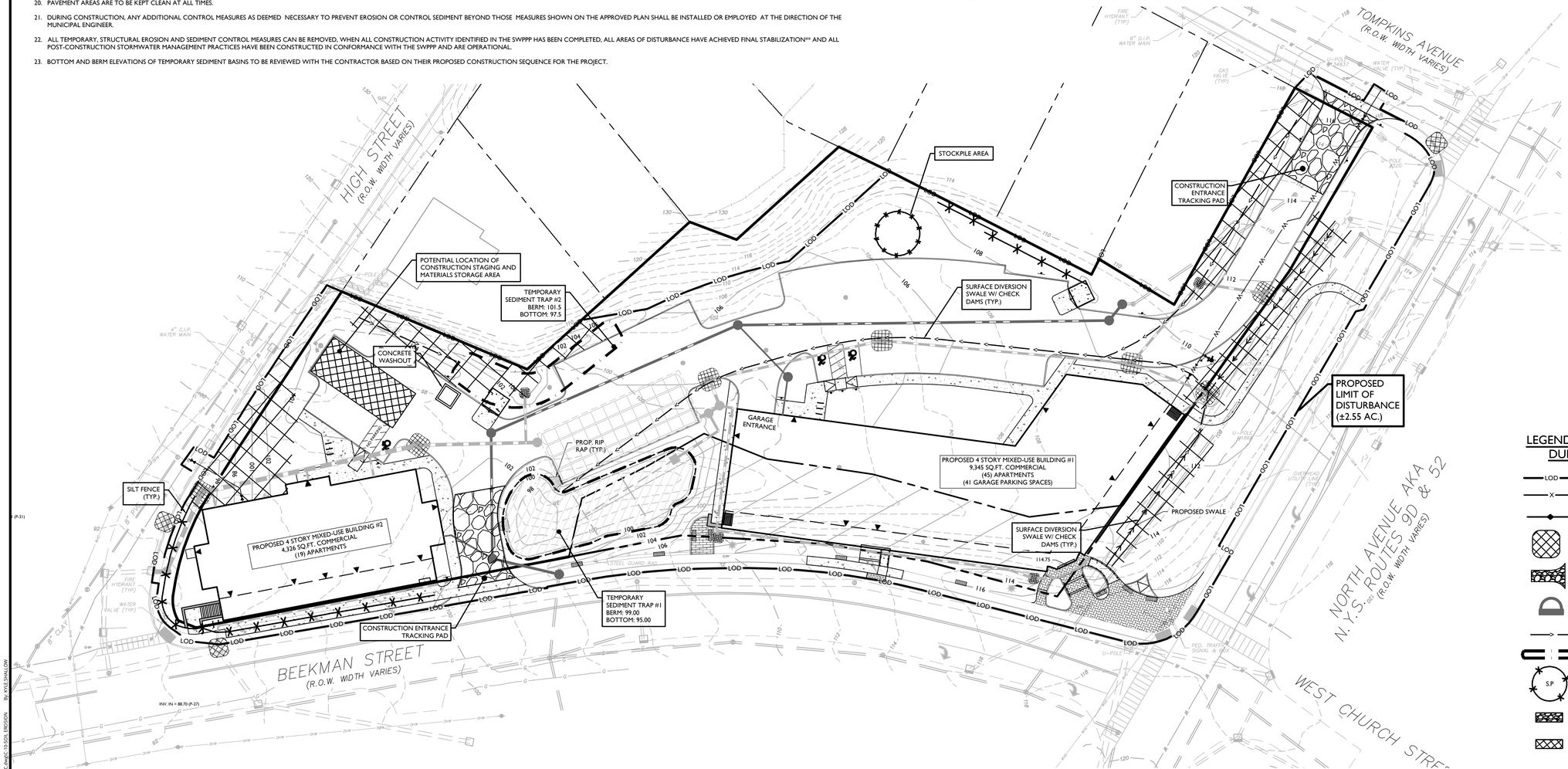
**FINAL STABILIZATION - MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.

MAINTENANCE PLAN DURING CONSTRUCTION:

INSPECTION AND MAINTENANCE SHALL BE PERFORMED IN CONFORMANCE WITH GP-0-20-001 OR AS AMENDED. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED AND INSTALLED FOR THE PROJECT. THE SEDIMENT TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 25% OF ITS' CAPACITY. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES APPROXIMATELY 6" DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. ALL SEEDED AREAS WILL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE LANDSCAPE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

MAINTENANCE AGREEMENT NOTE:

THE OWNER/APPLICANT SHALL ENTER INTO AN ENFORCEABLE MAINTENANCE AGREEMENT WITH THE MUNICIPALITY (IF AN MS4 COMMUNITY). RELATED TO MAINTENANCE OF STORMWATER FACILITIES. THE OWNER/APPLICANT IS RESPONSIBLE TO PERFORM ALL REQUIRED MAINTENANCE BOTH DURING CONSTRUCTION AND LONG-TERM. THE NATURE OF THE AGREEMENT IS TO ALLOW THE MUNICIPALITY TO PERFORM MAINTENANCE AT THEIR OPTION SHOULD THE OWNER/APPLICANT FAIL TO ADEQUATELY MAINTAIN THE SYSTEM AS DETERMINED BY THE MUNICIPAL ENGINEER. MAINTENANCE OF THE STORMWATER SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED SWPPP AND DETAIL SHEETS.



LEGEND FOR EROSION CONTROL DURING CONSTRUCTION

- LOD — CONSTRUCTION LIMIT LINE
- x — SILT FENCE
- ORANGE CONSTRUCTION FENCE
- STORM INLET SEDIMENT TRAP
- STABILIZED CONSTRUCTION ENTRANCE
- SEDIMENT TRAP OUTLET
- TEMPORARY SWALE
- TEMPORARY SEDIMENT BASIN
- S.P — MATERIAL STOCKPILE
- CHECK DAM
- SLOPE MATTING

30 0 30 60

SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

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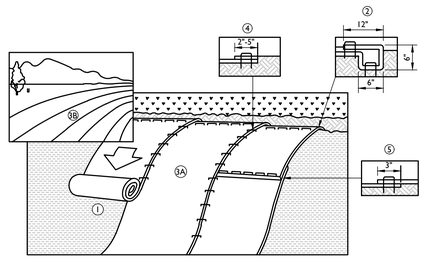
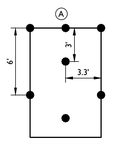
2023\23010468A\Engineering\Site Plans\C-SESC.dwg|C-10-SOIL EROSION By: KYLE SHALLOW

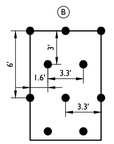


SLOPE INSTALLATION

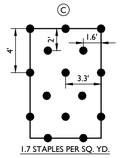
STAPLES PATTERN GUIDE
6.67' WIDE ROLLS



0.7 STAPLES PER SQ. YD.



1.15 STAPLES PER SQ. YD.



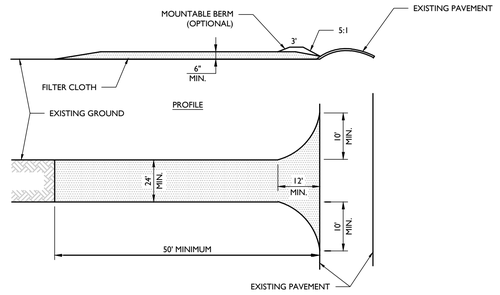
1.7 STAPLES PER SQ. YD.

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
   * WHEN USING MATTING WITH SEED, DO NOT SEED THE AREA. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECPS BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY STEP BY STEP ACROSS THE SLOPE TAMPERING IT DOWN ALONG THE WAY. RECP'S SHALL UNROLL WITH APPROPRIATE SIDE TIGHTLY AGAINST THE SOIL SURFACE. RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKESSHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAKED WITH APPROXIMATELY 2" TO 5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
6. MATTING SHALL BE 100% BIODEGRADABLE
   * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

EROSION MATTING DETAIL

NOT TO SCALE | MCNY-SOIL-EROS-2200 | 07/01/19



PLAN VIEW

NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. LENGTH: NOT LESS THAN 50 FEET. THICKNESS: NOT LESS THAN (6) INCHES.
2. WIDTH - 24'
3. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTING BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
6. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

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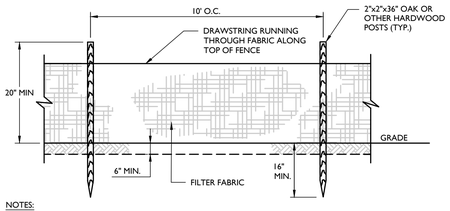

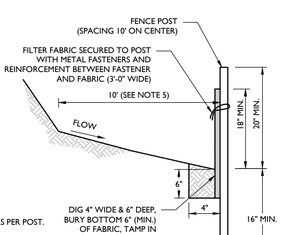

NOTES:

1. GEOTEXTILE TO BE FASTENED SECURELY TO FENCE POST BY USING WIRE TIES OR HOG RINGS. USE 3 FASTENERS PER POST.
2. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
3. ALL SILT FENCE TO BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR AS REQUIRED. MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
4. WHEN TWO SECTIONS OF FILTER FABRIC ARE JOINED, THEY SHALL BE OVER-WRAPPED BY SIX INCHES AND FOLDED.
5. FILTER FABRIC TO BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
6. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
7. IF SPACE PERMITTED, LOCATE SILT FENCE 10' AWAY FROM TOE OF SLOPE IF THE SLOPE IS STEEPER THAN 1:1.

STANDARD SILT FENCE DETAIL

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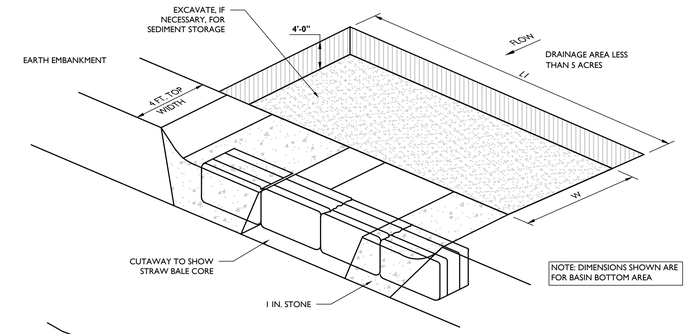

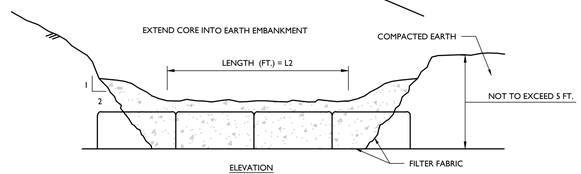

ELEVATION

TO BE INSTALLED PRIOR TO GRADING OR FILLING IN THE DRAINAGE AREA THEY ARE TO PROTECT. TRAPS THAT ARE TO FUNCTION DURING BUILDING CONSTRUCTION MUST NOT BE LOCATED WITHIN 20 FEET OF A PROPOSED BUILDING FOUNDATION. WHILE TRAPS SHOULD BE SITED TO MAXIMIZE STORAGE BENEFIT, THEY SHOULD NOT BE LOCATED IN WETLANDS OR WETLAND BUFFER AREAS, OR IN EXISTING WATERCOURSES.

SEE EROSION AND SEDIMENT CONTROL PLAN FOR LOCATIONS.

INSTALLATION NOTES:

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS WELL.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER SIZED STONES, ROCKS, ORGANIC MATERIAL AND OTHER QUESTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
6. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
7. ALL CUT AND FILL SLOPES SHALL BE 1 : 2 OR FLATTER.
8. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.

SIZING CALCULATIONS

NOTE:

1. 3,600 CUBIC FEET OF STORAGE REQUIRED PER ACRE OF DISTURBANCE.

*THIS IS THE MINIMUM AMOUNT OF SEDIMENT TRAPS, ADDITIONAL MAY BE REQUIRED BASED UPON OTHER ON-SITE CONDITIONS AND CONTRACTOR SCHEDULE AND PHASING ACTIVITIES.

STONE OUTLET SEDIMENT TRAP DETAIL

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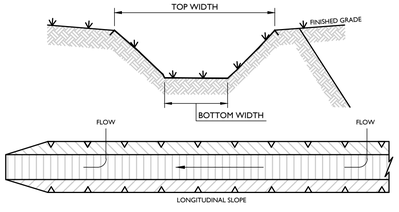
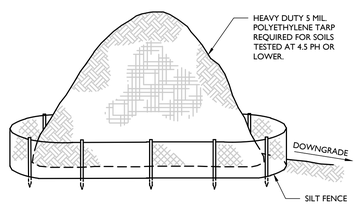


PLAN

VEGETATED SWALE					
SWALE	BOTTOM WIDTH	SIDE SLOPE	LONGITUDINAL SLOPE	DEPTH	LENGTH
1R	2.0 FT	50%	2.00%		506'

VEGETATIVE SWALE DETAIL



NOTES:

1. ALL STOCKPILES SHALL NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY.

TOPSOIL STOCKPILE DETAIL

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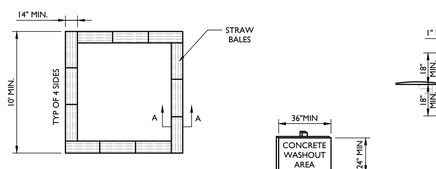

DETAIL NOTES:

1. FACE SIGN TOWARDS NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FT. MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES.

NOTES:

1. CONCRETE WASHOUTS ARE REQUIRED ON ALL CONSTRUCTION SITES INVOLVING CONCRETE AND STUCCO USE.
2. THE CONTRACTOR SHALL REQUIRE ALL CONCRETE DRIVERS TO UTILIZE THE CONCRETE WASHOUTS ONSITE.
3. WASHOUT FACILITIES SHALL BE LOCATED AT LEAST 50 FEET AWAY FROM STORM SEWER DRAIN INLETS, GUTTERS, OPEN DITCHES, AND WATER COURSES.
4. APPROPRIATE STONE SHOULD COVER PATHS TO CONCRETE WASHOUT.
5. THE NUMBER OF CONCRETE WASHOUTS DEPENDS ON THE EXPECTED DEMAND FOR STORAGE CAPACITY. LARGE SITES WITH EXTENSIVE CONCRETE WORK SHALL BE PLACED AT MULTIPLE LOCATIONS FOR USE BY CONCRETE TRUCK DRIVERS.
6. CONCRETE WASHOUT AREAS SHALL BE IDENTIFIED BY POSTING SIGNS ONSITE.
7. CONCRETE WASHOUTS ARE TO BE INSPECTED DAILY BY THE CONTRACTOR FOR LEAKS OR TEARS IN PLASTIC LINER.
8. REMOVE AND DISPOSE OF ALL MATERIAL WHEN THE WASHOUT HAS BEEN FILLED TO 75% CAPACITY.
9. PRIOR TO ANY RAINFALL, ALL CONCRETE WASHOUTS ARE TO BE CLEANED OUT OR COVERED.
10. ONCE THE MATERIAL HAS BEEN CLEANED OUT OF THE CONCRETE WASHOUT FACILITY, THE FACILITY MUST BE INSPECTED FOR REPAIR, RECONSTRUCTION OR REPLACEMENT. ALL PLASTIC LINING SHALL BE REMOVED AND REPLACED.
11. PRE-FABRICATED OR ONSITE FABRICATED CONCRETE WASHOUTS MAY BE USED.
12. OPTIONS FOR ONSITE CONCRETE WASHOUTS:
    A. DIG A PIT AND LINE WITH 10 MIL PLASTIC SHEETING.
    B. CREATE AN ABOVE-GROUND STRUCTURE FROM STRAW BALES OR SANDBAGS WITH 10 MIL PLASTIC LINING.

CONCRETE WASHOUT DETAIL

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2023\23010468A\Engineering\Site Plans\C-SESC.dwg|C-11 SOIL EROSION DETAILS By:KYLE SHALLOW

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
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8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
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Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN
FOR
BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
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NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
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PROJECT NUMBER:	DRAWING NAME:
23010468A	C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL DETAILS

SHEET NUMBER:
11 of 19

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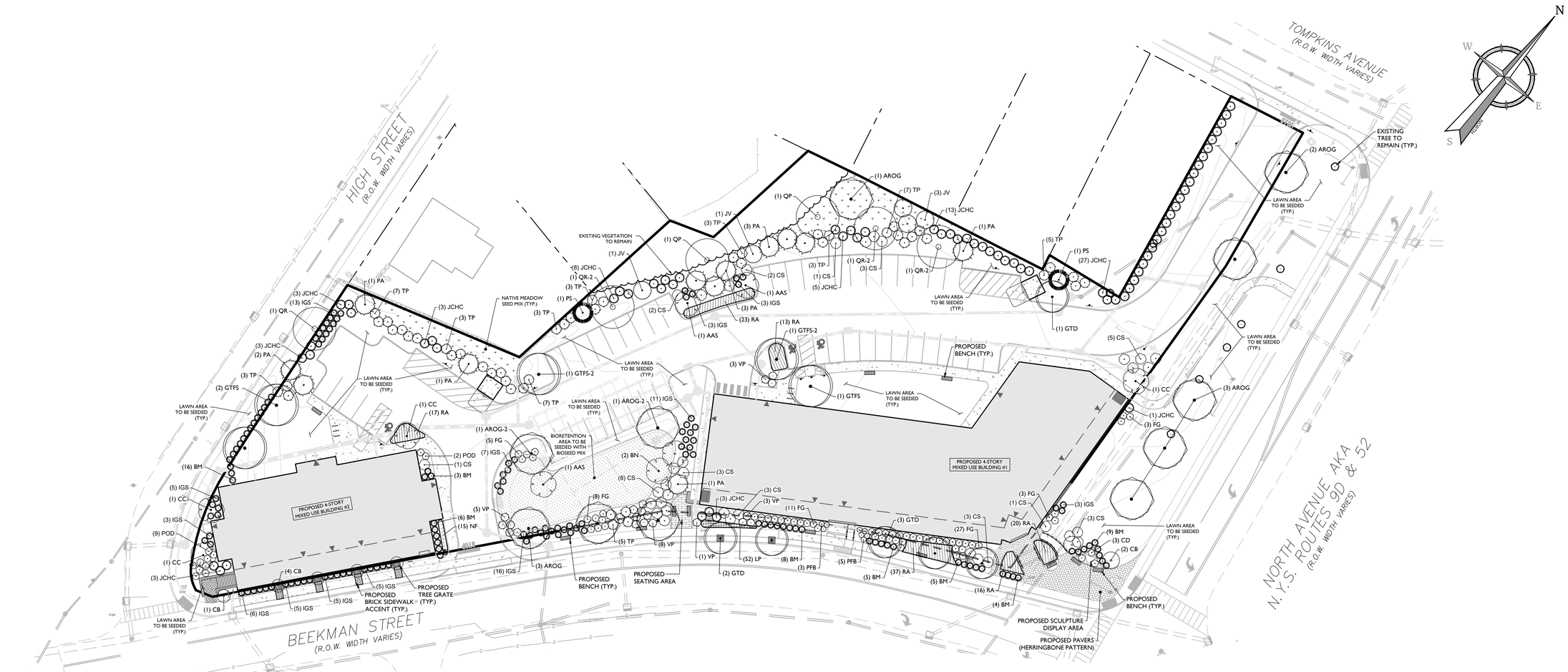


SITE PLANTING SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
AROG	9	Acer rubrum 'Octobor Glory'	October Glory Red Maple	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
AROG-2	2	Acer rubrum 'October Glory'	October Glory Red Maple	B & B	3"-3-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
GTD	6	Gleditsia triacanthos 'Draves'	Street Keeper Honeylocust	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
GTFS	3	Gleditsia triacanthos 'Skyline'	Skyline Honey Honeylocust	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
GTFS-2	2	Gleditsia triacanthos 'Skyline'	Skyline Honey Honeylocust	B & B	3"-3-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
QP	2	Quercus palustris	Pin Oak	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
QR	1	Quercus rubra	Red Oak	B & B	2"-2-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
QR-2	3	Quercus rubra	Red Oak	B & B	3"-3-1/2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	**REMARKS**
JV	5	Juniperus virginiana	Eastern Red Cedar	B & B	6-8` Ht.	DENSE / TYP. SPECIES HABIT
PA	12	Picea abies	Norway Spruce	B & B	6-8` Ht.	DENSE / TYP. SPECIES HABIT
PS	2	Pinus strobus	Eastern White Pine	B & B	6-8` Ht.	DENSE / TYP. SPECIES HABIT
ORNAMENTAL TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	**REMARKS**
AAS	3	Amelanchier alnifolia	Serviceberry	B & B	6-7` Ht.	MULTISTEM / TYP. SPECIES HABIT
BN	2	Betula nigra	River Birch	B & B	6-7` Ht.	MULTISTEM / TYP. SPECIES HABIT
CB	7	Carpinus betulus 'Frans Fontaine'	Frans Fontaine Hornbeam	B & B	1-3/4"-2" Cal.	STRAIGHT LEADER/SYM. BRANCHING
CC	4	Cercis canadens	Eastern Redbud	B & B	6-7` Ht.	STRAIGHT LEADER/SYM. BRANCHING
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	**REMARKS**
CD	3	Cotoneaster dammeri 'Coral Beauty'	Coral Beauty Cotoneaster	CONT	18" - 24" SPREAD	TYPICAL SPECIES HABIT
CS	35	Cornus sericea	Red Twig Dogwood	CONT	24" - 30"	TYPICAL SPECIES HABIT
BM	44	Buxus microphylla var. japonica 'Winter Gem'	Winter Gem Boxwood	CONT	18" - 24"	TYPICAL SPECIES HABIT
FG	57	Fothergilla gardenii	Dwarf Fothergilla	CONT	18" - 24"	TYPICAL SPECIES HABIT
IGS	85	Ilex glabra `Shamrock`	Inkberry	CONT	18" - 24"	TYPICAL SPECIES HABIT
JCHC	64	Juniperus chinensis 'Hetzii Columnaris'	Hetzi Column Juniper	CONT	6-8` Ht.	TYPICAL SPECIES HABIT
PFB	11	Potentilla fruticosa	Bush Cinquefoil	CONT	18" - 24"	TYPICAL SPECIES HABIT
POD	11	Physocarpus opulifolius 'Diabolo'	Diabolo Ninebark	CONT	24" - 30"	TYPICAL SPECIES HABIT
RA	126	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	CONT	12" - 18" SPREAD	TYPICAL SPECIES HABIT, 3.5' O.C.
TP	49	Thuja x plicata 'Green Giant'	Green Giant Arborvitae	CONT	5-6' Ht.	TYPICAL SPECIES HABIT
VP	20	Viburnum prunifolium	Blackhaw Viburnum	CONT	24" - 30"	TYPICAL SPECIES HABIT
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**SPACING**	
LP	52	Liriope platyphylla	Liriope Grass	SPS	18" o.c.	
NF	15	Nepeta x faassenii	Catmint	1 gal.	24" o.c.	

PLAN NOTE

1. THIS PLAN IS TO BE USED FOR LANDSCAPE PURPOSES ONLY. REFER TO DETAIL SHEETS FOR GENERAL NOTES AND LANDSCAPE DETAILS.

PARKING AREA TREES

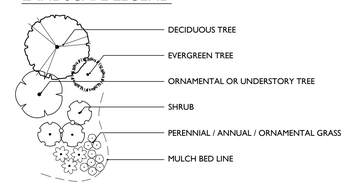
REQUIRED: ONE (1) TREE (MIN. 3" CALIPER) PER EIGHT (8) PARKING SPACES
47 PARKING SPACES / 8 = 6 TREES

PROVIDED: 7 TREES (COMPLIES)

LANDSCAPE NOTES

1. LOCATIONS OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES IS APPROXIMATE AND MAY VARY DUE TO THE LOCATIONS OF SITE IMPROVEMENTS AND/OR BUILDING.
2. FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE PROJECT LANDSCAPE ARCHITECT.
3. ALL AREAS WITHIN THE PLANTING BED LIMITS SHALL BE MULCHED WITH 3" OF SHREDDED HARDWOOD BARK MULCH.
4. PROPOSED LAWN AREAS AROUND BUILDINGS SHALL BE STABILIZED WITH SEED. SEED MIXTURE #1 TO BE USED ON NORTHERN & WESTERN LAWN AREAS AND SEED MIXTURE #2 TO BE USED ON SOUTHERN & EASTERN LAWN AREAS.
5. ANY PROPOSED IRRIGATION DESIGN AND/OR SYSTEM WILL BE DETERMINED IN THE FIELD BY THE IRRIGATION CONTRACTOR.
6. ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK.
7. NO SUBSTITUTIONS OF PLANT MATERIALS ARE TO BE MADE WITHOUT THE WRITTEN CONSENT OF THE OWNER AND PROJECT LANDSCAPE ARCHITECT.
8. ALL VEGETATION SHOWN ON THIS PLAN WILL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION THROUGHOUT THE DURATION OF THE PROPOSED USE.

LANDSCAPE LEGEND



NOTE:
1. LANDSCAPE SYMBOLS ON THE PLAN VARY AND MAY DEVIATE FROM THE LANDSCAPE LEGEND SYMBOLS SHOWN ABOVE.

LAWN SEED MIX

NATIVE MEADOW MIX

BIORETENTION SEED MIX

30 0 30 60

SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

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NEW YORK REGISTERED LANDSCAPE ARCHITECT
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SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

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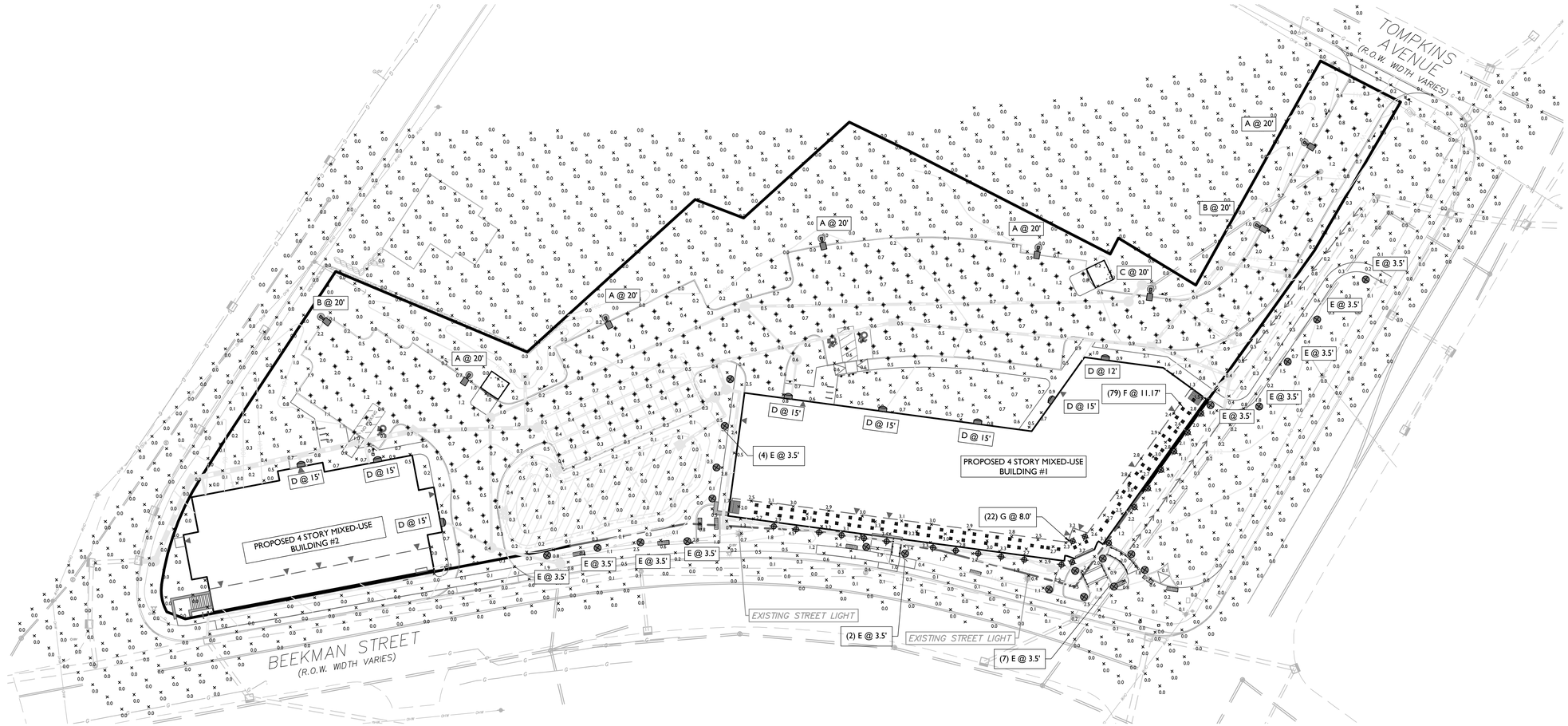
PROJECT NUMBER:		DRAWING NAME:	
23010468A		C-LAND	

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
12 of 19



LUMINAIRE SCHEDULE

KEY	QTY.	DESCRIPTION	ARRANGEMENT	MTG. HT.	LUMENS/LAMP	COLOR TEMPERATURE	CRI	LLF	CATALOG #
A	5	LITHONIA LIGHTING D-SERIES SIZE 0 LED AREA LUMINAIRE	SINGLE	20'	4,044	3000K	80	0.9	DSX0 LED-P2-30K-80CRI-BLC4-MVOLT-SPA-DBLXD-PER5
B	2	LITHONIA LIGHTING D-SERIES SIZE 0 LED AREA LUMINAIRE	SINGLE	20'	3,951	3000K	80	0.9	DSX0 LED-P2-30K-80CRI-LCCO-MVOLT-SPA-DBLXD-PER5
C	1	LITHONIA LIGHTING D-SERIES SIZE 0 LED AREA LUMINAIRE	SINGLE	20'	3,951	3000K	80	0.9	DSX0 LED-P2-30K-80CRI-RCCO-MVOLT-SPA-DBLXD-PER5
D	8	LITHONIA LIGHTING D-SERIES SIZE 1 LED WALL LUMINAIRE	SINGLE (WALL PACK)	12',15'	1,357	3000K	80	0.9	DSXW1 LED-10C-350-30K-T4M-MVOLT-PE-DBLXD
E	22	LITHONIA LIGHTING RADEAN BOLLARD LED SITE LUMINAIRE	SINGLE (BOLLARD)	3.5'	532	3000K	80	0.9	RADB LED-P2-30K-ASY-MVOLT-BTT-BCF-DBLXD
F*	79	TROY RLM - LAGUNA OUTDOOR PENDANT LIGHT	SINGLE-CEILING MOUNT (ARCADE)	11.17'	738	3000K	80	0.9	7721401057325
G*	22	CESAR AMP WALL SCONCE	SINGLE-WALL SCONCE	8'	2357	2700K	90	0.9	CESAR-AMP-L-DWN-1L-927-FM-HFX-BK

* REFER TO FINAL ARCHITECTURAL PLANS FOR FIXTURE DETAILS.

CALCULATION SUMMARY

DESCRIPTION	CALC. TYPE	UNITS	AVG.	MAX.	MIN.	AVG. / MIN.
PARKING, DRIVE & SIDEWALK (EXCLUDES ARCADE)	ILLUMINANCE	FC	0.9	4.5	0.3	3.0:1

LIGHTING NOTES:

1. THIS PLAN IS TO BE USED FOR LIGHTING PURPOSES ONLY.
2. POLES AND FIXTURES AS SUPPLIED BY:
   FIXTURES - LITHONIA LIGHTING
   POLE - HOLOPHANE
   BOLLARD FIXTURES - HYDREL
3. LAMPS ARE TO BE LEDs. A LIGHT LOSS FACTOR (LLF) WAS USED AS SHOWN IN THE LUMINARIES SCHEDULE.
4. FIXTURES AND POLES ARE TO BE BLACK.
5. POLE MOUNTED FIXTURES SHALL BE PLACED A MINIMUM OF TWO (2) FEET BEHIND CURBS, EDGE OF PAVEMENT OR RETAINING WALLS IN CAR PARKING AREAS.
6. PROPOSED LIGHT FIXTURE LOCATIONS ARE CRITICAL TO PROVIDE THE LIGHTING LEVELS DEPICTED ON THIS PLAN. THE LIGHTING CONTRACTOR SHALL FIELD VERIFY FIXTURE LOCATIONS PRIOR TO INSTALLATION. IF ADJUSTMENT TO ANY LIGHT FIXTURE LOCATION IS REQUIRED DUE TO FINAL CONSTRUCTION OF UTILITIES AND SITE IMPROVEMENTS, THE LIGHTING CONTRACTOR SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
7. LIGHTING SHOWN ON PLAN DEPICTS AVERAGE MAINTAINED FOOTCANDLE LEVELS AT GRADE.
8. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
9. ELECTRICAL PLANS FOR WIRING LAYOUT BY OTHERS.
10. POLE BASE INSTALLATION SHALL INCLUDE A SUPPLEMENTARY GROUND ROD AND WIRE LEAD TO BASE FOR POWER CONNECTION. DETAILS PER PROJECT ELECTRICAL ENGINEER.
11. ALL LIGHTING FIXTURES WILL BE DARK SKY COMPLIANT.

LIGHTING LEGEND:

- SINGLE FIXTURE POLE LIGHT
- WALLPACK
- BOLLARD LIGHT
- WALL SCONCE
- CEILING FIXTURE
- *0.0 LIGHT LEVEL AT GRADE (IN FOOTCANDLES)

30 0 30 60
SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Site Plans\C-LGHT.dwg|C-13 LIGHTING By: KYLE SHALLOW

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	06/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
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8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
.	.	.	.

Digitally signed by Justin E. Dates
Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

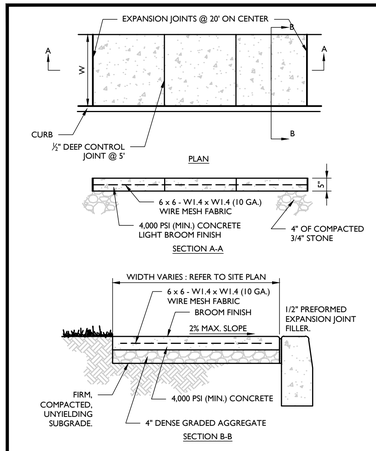
Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	XXXXXX	XXXXXX

PROJECT NUMBER: 23010468A
DRAWING NAME: C-LGHT

SHEET TITLE: LIGHTING PLAN

SHEET NUMBER: 13 of 19

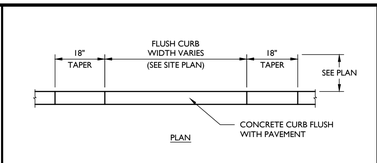


NOTES:

1. A PREFORMED, BITUMINOUS EXPANSION JOINT 1/2" THICK, 4" WIDE AND EXTENDING THE FULL WIDTH OF THE SIDEWALK (UNBROKEN) SHALL BE INSTALLED.
2. ½" DEEP CONTROL JOINTS INSTALLED AT AN INTERVAL OF EVERY 5'.
3. JOINT FILLER SHALL CONFORM TO AASHTO M-33. SURFACE OF CONCRETE SHALL BE BROOM FINISH. ROUND EDGES USING AN EDGING TOOL WITH A 1/4" RADIUS.
4. CONCRETE SIDEWALK SHALL BE CONSTRUCTED PER THE LATEST ADA REQUIREMENTS.

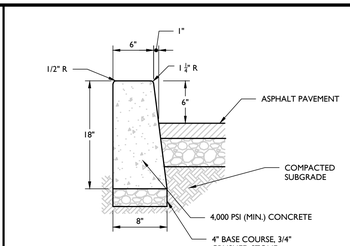
REINFORCED CONCRETE SIDEWALK (NEXT TO CURB) DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1800 | 07/01/19



CONCRETE FLUSH CURB DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1300 | 07/01/19

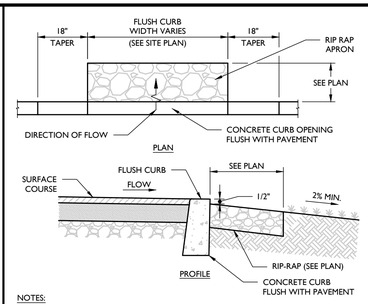


NOTES:

1. PREFORMED BITUMINOUS FIBER EXPANSION JOINTS, 1/2" THICK AT 20' MAX. INTERVALS ALONG THE CURB. PROVIDE CONTROL JOINTS @ 10 FEET MAX. BETWEEN EXPANSION JOINTS.

CONCRETE CURB (ASPHALT PAVEMENT) DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1000 | 07/01/19

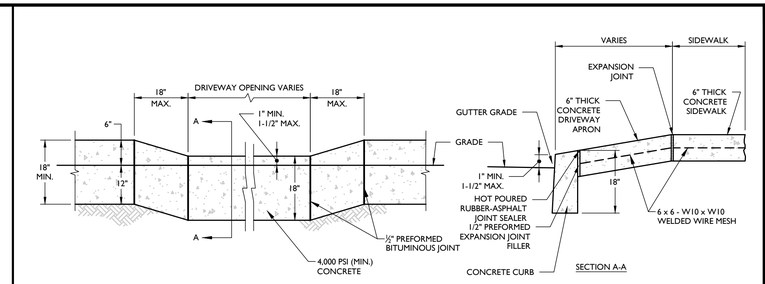


NOTES:

1. FLUSH CURB FOR OVERLAND FLOW TO BE USED AT DESIGNATED LOCATIONS ONLY AS SHOWN ON SITE PLANS.
2. CONTRACTOR SHALL ENSURE THAT THERE IS POSITIVE DRAINAGE FROM THE PAVEMENT TO THE GRASSED AREA.

FLUSH CURB FOR DRAINAGE DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1400 | 07/01/19

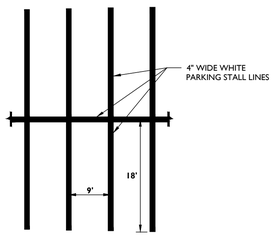


NOTES:

1. DEPRESSED VERTICAL CURB AT DRIVEWAY AND RAMP AREAS SHALL BE FULL DEPTH OF 18".

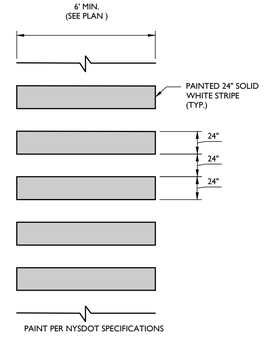
DEPRESSED CONCRETE CURB AT DRIVEWAY DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1700 | 07/01/19



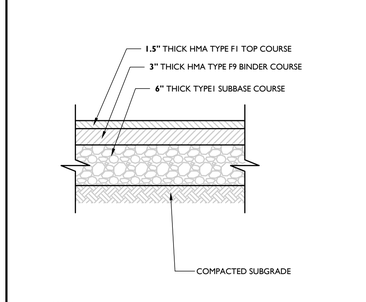
TYPICAL PARKING STALL STRIPING DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-1000 | 07/01/19



PEDESTRIAN CROSSWALK DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-1401 | 07/01/19

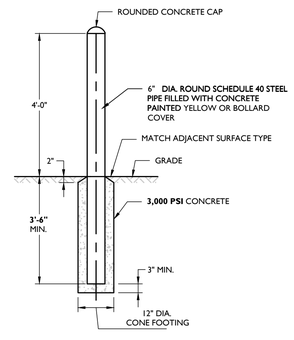


NOTES:

1. PAVEMENT TYPES TO BE IN ACCORDANCE WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS.

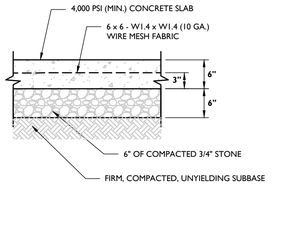
ON-SITE STANDARD ASPHALT PAVEMENT DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1000 | 07/01/19



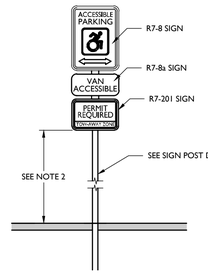
BOLLARD DETAIL

NOT TO SCALE | MCCM-SITE-FNCE-2300 | 07/01/19



TRASH ENCLOSURE CONCRETE PAD DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-2100 | 07/01/19

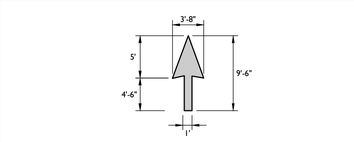


NOTES:

1. INSTALL SIGN WHERE NOTED ON PLAN.
2. THE BOTTOM OF THE LOWEST SIGN SHALL BE MOUNTED 60" ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN THE SIGN IS PARALLEL TO THE SIDEWALK AND 72" ABOVE THE PARKING LOT OR SIDEWALK WHEN THE SIGN IS PERPENDICULAR TO THE SIDEWALK.

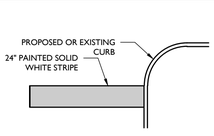
ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-2200 | 07/01/19



STRAIGHT PAVEMENT ARROW DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-1200 | 07/01/19



TYPICAL STOP BAR DETAIL

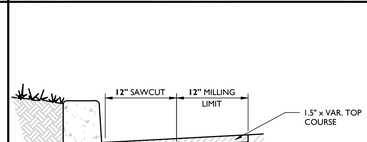
NOT TO SCALE | MCNY-SITE-MRKG-1100 | 07/01/19

NOTES:

1. 4.0' ON CENTER
2. 4" YELLOW AT 45 DEGREES
3. WIDTH TO BE CONFIRMED WITH LOCAL JURISDICTIONAL ENTITY.

FIRE ZONE / LOADING AREA STRIPING DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-2100 | 07/01/19



NOTE:

1. IF PAVEMENT THICKNESS IS FOUND TO BE THICKER THAN THAT SPECIFIED, THE DEPTH OF PAVEMENT SHALL MEET THAT AS EXISTS IN THE ROADWAY

SAWCUT AND PAVEMENT RESTORATION DETAIL

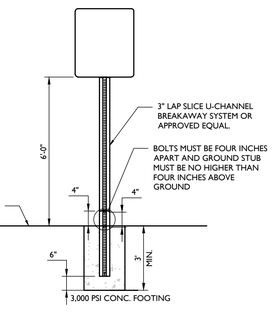
NOT TO SCALE | MCNY-SITE-PVMT-2800 | 07/01/19

30" x 30"

COLORS:
LEGEND = WHITE (RETROREFLECTIVE)
BACKGROUND = RED (RETROREFLECTIVE)

R1-1 SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R1-1 | 12/01/20

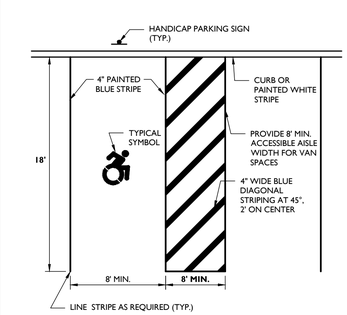


NOTE:

1. ALL SIGNS SHALL CONFORM TO THE CURRENT MANUAL ON "UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS AND CURRENT MUNICIPAL SPECIFICATIONS FOR COLOR, DESIGN AND EXACT WORDING.

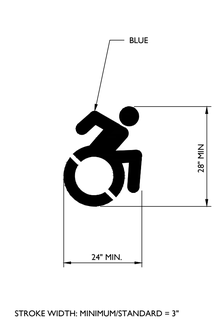
BREAKAWAY SIGN POST DETAIL

NOT TO SCALE | MCCM-SITE-SIGN-6102 | 07/01/19



ACCESSIBLE PARKING LINE STRIPE STALL DETAIL

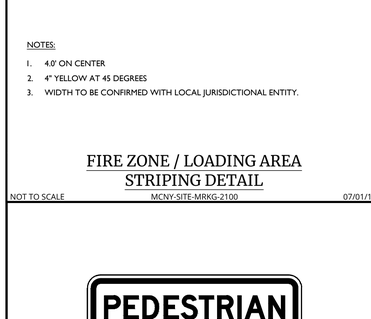
NOT TO SCALE | MCNY-SITE-MRKG-1801 | 07/01/19



STROKE WIDTH: MINIMUM/STANDARD = 3"

ACCESSIBLE SYMBOL DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-2000 | 07/01/19

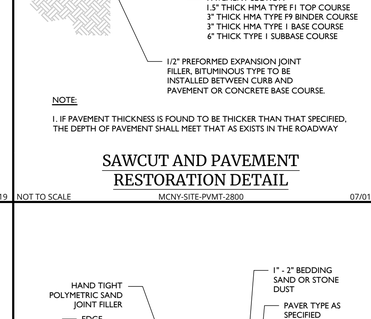


36" x 18"

COLORS:
LEGEND = BLACK
BACKGROUND = WHITE (RETROREFLECTIVE)

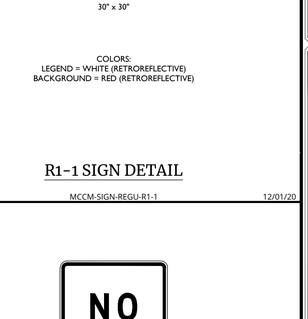
R9-8 SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R9-8 | 01/01/23



TYPICAL STANDARD PAVER SECTION DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-2600 | 07/01/19



24" x 30"

COLORS:
LEGEND = RED (RETROREFLECTIVE)
BACKGROUND = WHITE (RETROREFLECTIVE)

R8-3a SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R8-3A | 01/01/23

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REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
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-	-	-	-

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

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Date: 2025.03.25 10:08:24-04'00'

LICENSED LANDSCAPE ARCHITECT — STATE OF NEW YORK

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
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COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

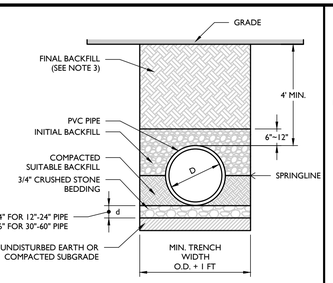
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER:	DRAWING NAME:
23010468A	C-DTLS

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
14 of 19

By: KYLE.SHALLOW
2023\23010468A\Engineering\Site Plans\C-DTLS.dwg|C-14-DETAILS

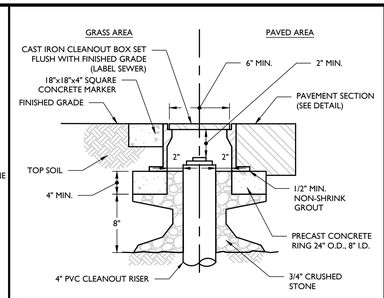


NOTES:

1. ALL PVC GRAVITY PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.
2. GRAVITY SANITARY PIPE SHALL BE PVC SDR 35 PER ASTM D3034 OR AS REQUIRED BY THE GOVERNING AUTHORITY.
3. INITIAL & FINAL BACKFILL MATERIAL SHALL BE SITE SOILS FREE OF LARGE STONES. CLEAN FILL, OR ITEM 4.

PVC SANITARY PIPE BEDDING (GRAVITY) DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-2803 | 07/01/19

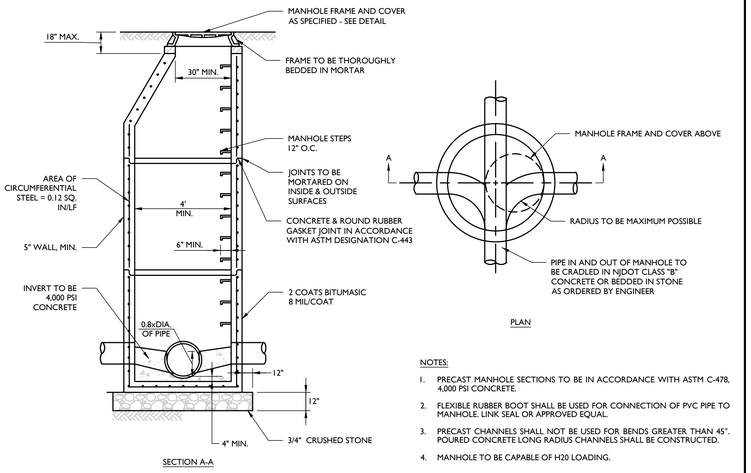


NOTES

1. ALL PVC CLEANOUTS TO HAVE CAST IRON FRAME AND COVER PROTECTION BOX. DESIGN FOR H20 LOADING.

CLEANOUT PROTECTION BOX DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1600 | 07/01/19

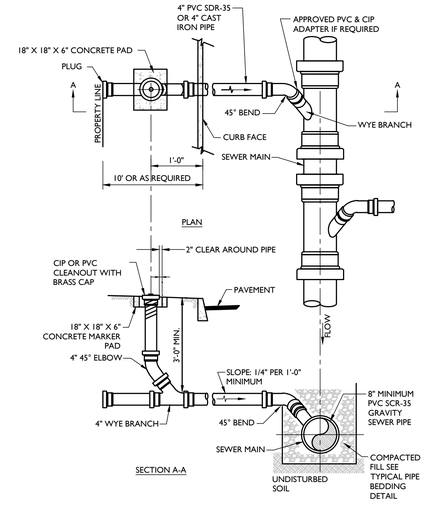


NOTES:

1. PRECAST MANHOLE SECTIONS TO BE IN ACCORDANCE WITH ASTM C-478, 4,000 PSI CONCRETE.
2. FLEXIBLE RUBBER BOOT SHALL BE USED FOR CONNECTION OF PVC PIPE TO MANHOLE. LINK SEAL OR APPROVED EQUAL.
3. PRECAST CHANNELS SHALL NOT BE USED FOR BENDS GREATER THAN 45°. POURED CONCRETE LONG RADIUS CHANNELS SHALL BE CONSTRUCTED.
4. MANHOLE TO BE CAPABLE OF H20 LOADING.

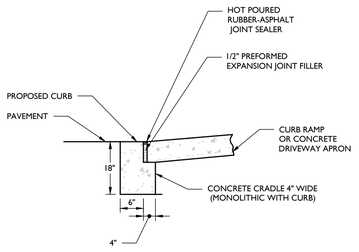
SANITARY PRECAST MANHOLE DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1000 | 07/01/19



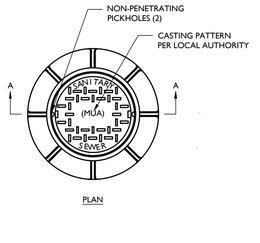
SANITARY SEWER LATERAL & CLEANOUT DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1601 | 07/01/19



ADA FLUSH CURB AND CRADLE DETAIL

NOT TO SCALE | MCNY-SITE-HADA-2300 | 07/01/19

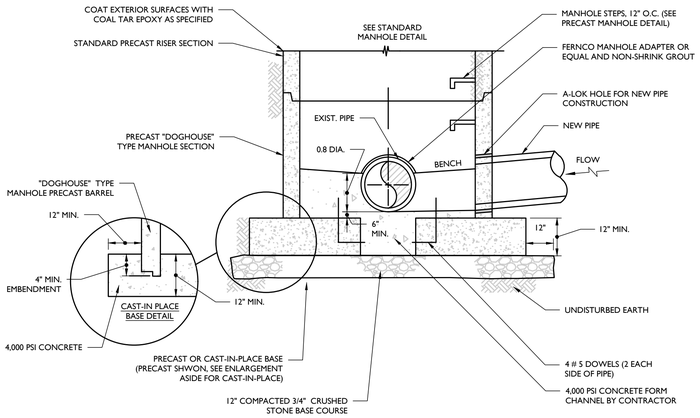


NOTES:

1. MANHOLE FRAME AND COVER SHALL BE CAMPBELL FOUNDRY PATTERN # **1012B** WITH FLOW-SEAL COVER OR APPROVED EQUAL OR AS OTHERWISE REQUIRED BY JURISDICTIONAL AUTHORITY.
2. MANHOLE FRAME AND COVER TO BE HEAVY DUTY, CONFORMING TO ASTM SPECIFICATION A-48 CLASS 30-B WITH SHOP COAT OF ASPHALTIC PITCH.
3. IN EASEMENTS AND REMOTE AREAS, COVER LOCKING DEVICES OF BRONZE AND KEY SHALL BE PROVIDED.
4. WATERTIGHT MANHOLE FRAME AND COVER SHALL BE PATTERN # **6548** AS MANUFACTURED BY CAMPBELL FOUNDRY COMPANY OR APPROVED EQUAL.

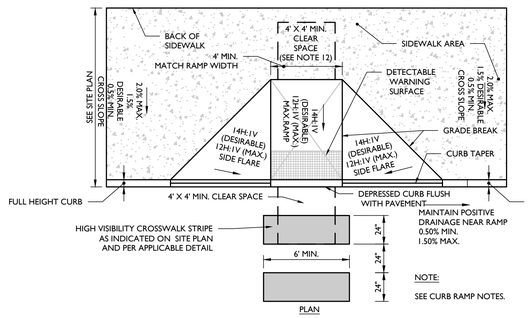
SANITARY MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1001 | 07/01/19



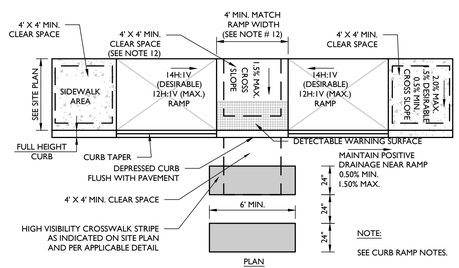
DOGHOUSE MANHOLE DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1100 | 07/01/19



CURB RAMP TYPE 1 DETAIL

NOT TO SCALE | MCNY-SITE-HADA-1000 | 07/01/19



CURB RAMP TYPE 7 DETAIL

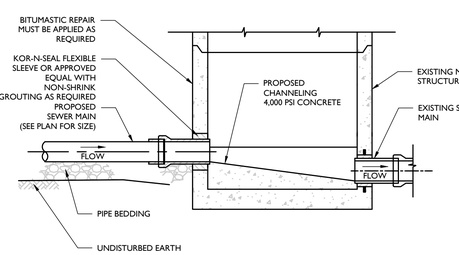
NOT TO SCALE | MCNY-SITE-HADA-1600 | 07/01/19

NOTES:

1. CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF EACH CURB RAMP FOR SUBMISSION AND APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
2. LANDING AREA, APPROACH SIDEWALK TRANSITIONS AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
3. CURB AT RAMP OPENING (FLUSH CURB) TO BE FLUSH WITH ROADWAY PAVEMENT.
4. CROSSWALKS AND PAVEMENT MARKINGS TO BE INSTALLED AS DENOTED ON SITE PLAN.
5. MAXIMUM RAMP SLOPE MAY BE 12H:1V UPON APPROVAL OF ENGINEER. RAMP SLOPES SHOWN ARE THE PREFERRED SLOPE. SIDE FLARE SLOPES MAY BE 10H:1V UPON APPROVAL OF THE ENGINEER.
6. MINIMUM RAMP CROSS-SLOPE SHALL BE 0.50%. THE MAXIMUM RAMP CROSS-SLOPE MAY BE 2.00% UPON APPROVAL OF THE ENGINEER. CROSS-SLOPES SHOWN IN THE DETAILS ARE THE PREFERRED SLOPES TO MAINTAIN A LEVEL OF CONSTRUCTION TOLERANCE.
7. ACCESSIBLE RAMPS SHALL BE INSTALLED PURSUANT WITH THE CURRENT UNITED STATES ACCESS BOARD ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES AND THE ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE AND OTHER APPLICABLE LOCAL AND STATE STANDARDS IN EFFECT AT THE DATE OF CONSTRUCTION.
8. DEVIATIONS FROM THE CURB RAMP DETAILS REQUIRE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
9. THE RAMP SURFACE SHALL HAVE A NON-SLIP, HAND BROOMED FINISH.
10. CONCRETE EXPANSION JOINTS SHALL HAVE A FIRM SURFACE WITH 1/4" BEVELED CONCRETE EDGES. THE JOINT SURFACE SHALL NOT BE MORE THAN 1/4" BELOW THE ADJOINING CONCRETE SURFACE.
11. CURB RAMP MUST BE WHOLLY CONTAINED WITHIN THE CROSSWALK CROSSING.
12. THE CLEAR SPACE SHALL BE INCREASED TO 5 FEET WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF THE SIDEWALK.
13. THE MAXIMUM SEPARATION BETWEEN THE BACK OF CURB AND DETECTABLE WARNING SURFACE SHALL NOT EXCEED 5 FEET. THE MAXIMUM SEPARATION AREA MAY BE WITHIN THE 4' X 4' CLEAR SPACE.
14. SEE SEPARATE DETAILS FOR "DETECTABLE WARNING SURFACE" AND "CURB RAMP SECTIONS".
15. WHERE SIDE FLARES ARE NOT REQUIRED, PROVIDE AN 18" CURB TAPER TO THE FLUSH CURB.
16. ALL CURB RAMP FLUSH CURB SHALL BE MADE WITH CONCRETE CURB CRADLE, REGARDLESS OF THE CURB MATERIAL USED THROUGHOUT THE SITE.

CURB RAMP NOTES

MCNY-SITE-HADA-2500 | 07/01/19



NOTES:

1. CONSTRUCTION OF THE NEW SEWER MAIN SHALL NOT IMPEDE THE OPERATION OF THE EXISTING SEWER.
2. WHERE NEW PIPE IS TO BE CONNECTED INTO AN EXISTING MANHOLE, THE CONTRACTOR SHALL CORE DRILL ALL HOLES INTO MANHOLE AND SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY FOR CHANNEL AND BENCH RECONSTRUCTION TO CHANNEL FLOW INTO EXISTING SEWER.
3. PIPE SHALL BE SEALED USING KOR-N-SEAL MANHOLE ADAPTERS OR APPROVED EQUAL, AND NON-SHRINK GROUT.
4. EXISTING BENCH SHALL BE CHIPPED AND CUT AWAY TO ALLOW FOR NEW CHANNEL TO BE CONSTRUCTED AND TO PROVIDE GOOD, SOUND SURFACE FOR BONDING WITH NEW CONCRETE CHANNEL AND BENCH. REMOVE ALL LOOSE MATERIALS AND CLEAN INSIDE OF THE STRUCTURE.
5. THE CONCRETE USED TO CONSTRUCT BENCHES AND CHANNELS SHALL BE 4,000 PSI CONCRETE APPLY EPOXY BONDING AGENT PRIOR TO POURING CONCRETE.
6. ANY DAMAGE TO THE EXISTING MANHOLE CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR.

CONNECTION TO EXISTING MANHOLE DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-2000 | 07/01/19

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

20252912406\Engineering\Site Plans\C-DTLS.dwg|C-15 DETAILS By: KYLE SHALLOW

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER:	DRAWING NAME:
23010468A	C-DTLS

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
15 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTIO

WATER NOTES:

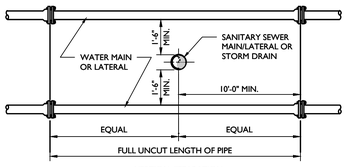
1. ALL METHODS, MATERIALS, FITTINGS, DEVICES, DIMENSIONAL REQUIREMENTS AND PROCEDURES NECESSARY TO COMPLETE THE WORK SHOWN HEREON SHALL MEET THE APPROPRIATE CURRENT AWWA SPECIFICATIONS IN EFFECT AS WELL AS ALL REQUIREMENTS DEEMED APPLICABLE BY THE MUNICIPALITY OR ANY OTHER GOVERNMENTAL BODY HAVING JURISDICTION OVER SAID WORK.
2. ALL WATER MAIN PIPE SHALL BE DUCTILE IRON (DIP).
3. ALL PIPE FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE AWWA SPECIFICATION C153/A21.53-00.
4. ALL GATE VALVES SHALL BE "MUELLER", RESILIANT-SEATED GATE VALVES WITH MECHANICAL JOINT CONNECTIONS. OPENING SHALL BE LEFT (CCW) AND OPERATION SHALL BE BY 2" SQUARE WRENCH NUT. MINIMUM WORKING PRESSURE SHALL BE 250 PSI. GATE VALVES ARE TO BE IN ACCORDANCE WITH LATEST REVISION OF AWWA SPECIFICATION C509.
5. ALL VALVE BOXES SHALL BE EXTENSION TYPE BY MUELLER SET ON BRICKS AND POSITIONED PERPENDICULAR TO THE PIPE AND ON COMPACTED BACKFILL.
6. ALL CHANGES IN PIPE LINE DIRECTION, BOTH HORIZONTAL AND VERTICAL SHALL BE TIE-RODDED AND THRUST BLOCKED WITH CONCRETE AGAINST UNDISTURBED EARTH AS DIRECTED BY THE ENGINEER.
7. FLUSH OUT ALL WATER MAINS AND APPURTENANCES AS DIRECTED BY THE MUNICIPALITY UNTIL THE WATER RUNS CLEAN AND FREE OF RUST AND DIRT. PRESSURIZE ALL LINES AND APPURTENANCES FOR FORTY-EIGHT (48) HOURS, OR AS DIRECTED BY THE MUNICIPALITY, TO REVEAL ANY LEAKS OR BROKEN PIPE. THIS SHALL ALL BE DONE EITHER AS A TOTAL PROJECT OR BETWEEN VALVED SECTIONS AS DIRECTED BY THE TOWN. IF PRESSURE TESTING REVEALS ANY LEAKS OR DIFFICULTIES THE CONTRACTOR SHALL PROMPTLY UNCOVER THE LEAK OR BROKEN PIPE AND IMMEDIATELY REPAIR AND RETEST SAME. THIS SHALL BE REPEATED AS MANY TIMES AS MAY BE REQUIRED TO DEMONSTRATE A TIGHT LINE TO THE SATISFACTION OF THE TOWN. THE NEW WATER MAIN AND APPURTENANANCES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C-600. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY.
8. THE MUNICIPAL ENGINEER MUST BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO PRESSURE TESTING.
9. ALL WATER LINES AND APPURTENANCES SHALL BE DISINFECTED TO THE SATISFACTION OF THE MUNICIPALITY, AND IN ACCORDANCE WITH THE STANDARDS OF THE OCDOH. THIS SHALL ALSO BE DONE IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C651. A MINIMUM OF TWO (2) BACTERIAL TESTS TAKEN TWENTY-FOUR (24) HOURS APART ARE REQUIRED. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY.
   AS PER AWWA C651, LATEST REVISION, WATER MAIN DISINFECTION PROCEDURE SHALL, GENERALLY, BE AS FOLLOWS, EXCLUDING THE TABLET METHOD:
   A. INSPECTING MATERIALS TO BE USED TO ENSURE THEIR INTEGRITY.
   B. PREVENTING CONTAMINATING MATERIALS FROM ENTERING THE WATER MAIN DURING STORAGE, CONSTRUCTION, OR REPAIR AND NOTING POTENTIAL CONTAMINATION AT THE CONSTRUCTION SITE.
   C. REMOVING, BY FLUSHING OR OTHER MEANS, THOSE MATERIALS THAT MAY HAVE ENTERED THE WATER MAIN.
   D. CHLORINATING ANY RESIDUAL CONTAMINATION THAT MAY REMAIN, AND FLUSHING THE CHLORINATED WATER FROM THE MAIN.
   E. PROTECTING THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW CAUSED BY HYDROSTATIC PRESSURE TEST AND DISINFECTION PROCEDURES.
   F. DOCUMENTING THAT AN ADEQUATE LEVEL OF CHLORINE CONTACTED EACH PIPE TO PROVIDE DISINFECTION.
   G. DETERMINING THE BACTERIOLOGICAL QUALITY BY LABORATORY TEST AFTER DISINFECTION.
   H. FINAL CONNECTION OF THE APPROVED NEW WATER SERVICE TO THE ACTIVE DISTRIBUTION SYSTEM.

THE CONTINUOUS-FEED METHOD SHALL BE IMPLEMENTED FOR CHLORINATION, AS DESCRIBED IN AWWA C651, LATEST REVISION. AFTER CHLORINATION, THE CONTRACTOR SHALL FLUSH THE MAINS AS PER FINAL FLUSHING REQUIREMENTS OF AWWA C651, LATEST REVISION. WHEN CUTTING INTO OR REPAIRING AN EXISTING MAIN, DISINFECTION PROCEDURES SHALL BE OBSERVED AS DETAILED IN DISINFECTION PROCEDURES WHEN CUTTING INTO OR REPAIRING EXISTING MAINS OF AWWA C651, LATEST REVISION.

VERIFICATION SHALL BE ACCOMPLISHED VIA BACTERIOLOGICAL TESTS. AFTER FINAL FLUSHING AND BEFORE THE NEW WATER MAIN IS CONNECTED TO THE DISTRIBUTION SYSTEM, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN AT LEAST 24 HR APART, SHALL BE COLLECTED FROM THE NEW MAIN. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1,200 FT OF THE NEW WATER MAIN, PLUS ONE SET FROM THE END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH. SAMPLES SHALL BE TESTED FOR BACTERIOLOGICAL (CHEMICAL AND PHYSICAL) QUALITY IN ACCORDANCE WITH STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, AND SHALL SHOW THE ABSENCE OF COLIFORM ORGANISMS AND THE PRESENCE OF A CHLORINE RESIDUAL. SAMPLES FOR BACTERIOLOGICAL ANALYSIS SHALL BE COLLECTED IN STERILE BOTTLES TREATED WITH SODIUM THIOSULFATE, AS REQUIRED BY STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER. NO HOSE OR FIRE HYDRANT SHALL BE USED IN THE COLLECTION OF SAMPLES. THERE SHOULD BE NO WATER IN THE TRENCH UP TO THE CONNECTION FOR SAMPLING. THE SAMPLING PIPE MUST BE DEDICATED AND CLEAN AND DISINFECTED AND FLUSHED PRIOR TO SAMPLING. A CORPORATION COCK MAY BE INSTALLED IN THE MAIN WITH A COPPER-TUBE GOOSENECK ASSEMBLY. AFTER SAMPLES HAVE BEEN COLLECTED, THE GOOSENECK ASSEMBLY MAY BE REMOVED AND RETAINED FOR FUTURE USE. IF SAMPLES RESULTS FROM THE LAB INDICATE A MEASURED HPC GREATER THAN 500 COLONY-FORMING UNITS (CFU) PER ML, FLUSHING SHOULD BE RESUMED AND ANOTHER COLIFORM AND HPC SET OF SAMPLES SHOULD BE TAKEN UNTIL NO COLIFORMS ARE PRESENT AND THE HPC IS LESS THAN 500 CFU/ML THE RECORD OF COMPLIANCE SHALL BE THE BACTERIOLOGICAL TEST RESULTS CERTIFYING THAT THE WATER SAMPLED FROM THE NEW WATER MAIN IS FREE OF COLIFORM BACTERIA CONTAMINATION AND IS EQUAL TO OR BETTER THAN THE BACTERIOLOGIC WATER QUALITY IN THE DISTRIBUTION SYSTEM.

ALL OTHER REQUIREMENTS OF AWWA C651, LATEST REVISION, SHALL BE OBSERVED.

10. WATER SERVICE SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER MAIN OR SERVICE.
11. ALL WATER MAINS SHOULD BE SEPARATED FROM SANITARY SEWER LINES BY A MINIMUM HORIZONTAL DISTANCE OF 10 FEET. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN ENCASED IN CONCRETE OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH.
12. AT THE CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE WATER LINE SHALL BE ENCASED IN CONCRETE.
13. WATER TIGHT PLUGS ARE TO BE INSTALLED IN THE ENDS OF PIPES WHEN WORK IS NOT IN PROGRESS.
14. LEAKAGE AND HYDROSTATIC PRESSURE TESTING SHALL BE PERFORMED AT 1.5 TIMES THE WORKING PRESSURE.
15. THE MAXIMUM DEFLECTION ALLOWED ALLOWED AT PIPE JOINTS SHALL BE LIMITED TO 80% OF THAT ALLOWED BY AWWA OR IN ACCORDANCE WITH THE MUNICIPALITY. FOR AWWA ALLOWABLE JOINT DEFLECTIONS SEE LATEST REVISION OF AWWA SPECIFICATION C600.
16. CONSTRUCTION MUST CONFORM TO ALL ORDINANCES.
17. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING WATER AND OTHER UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
18. CONTRACTOR TO CALL UNDERGROUND MARK-OUT PRIOR TO COMMENCEMENT OF CONSTRUCTION AT 1-800-962-7962 FOR COMPLETE UTILITIES MARK-OUT.
19. CONTRACTOR TO CONTACT MUNICIPAL WATER DEPARTMENT AT LEAST 2 DAYS PRIOR TO CONSTRUCTION.
20. ALL IMPROVEMENTS SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK AND CERTIFICATION SHALL BE PROVIDED TO THE MUNICIPALITY THAT THE SUBJECT IMPROVEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS.
21. CONTRACTOR TO NOTIFY ENGINEER OF ANY DEVIATION FROM THE HORIZONTAL OR VERTICAL ALIGNMENTS WITH REGARDS TO EXISTING UTILITIES.
22. ANY BACKFLOW PREVENTION DEVICE(S) DETERMINED TO BE REQUIRED BY THE WATER SUPPLIER WILL BE DESIGNED BY OTHERS IN ACCORDANCE WITH OCDOH REQUIREMENTS AND THAT APPLICATION FOR ANY SUCH BACKFLOW PREVENTION DEVICE SHALL BE SUBMITTED TO THE OCDOH FOR REVIEW AND APPROVAL UNDER SEPARATE COVER.
23. A CERTIFIED AS-BUILT MAP OF THE WATER SYSTEM IMPROVEMENTS SHALL BE PROVIDED TO THE MUNICIPALITY'S WATER DEPARTMENT BY A LICENSED DESIGN PROFESSIONAL.

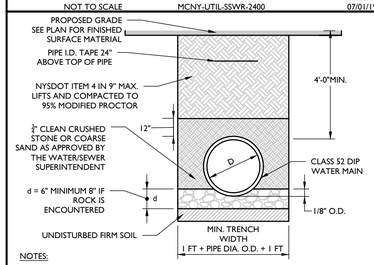


NOTE :
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE ENGINEER.

SANITARY/STORM SEWER-WATER MAIN SEPARATION DETAIL

MOD: 04/23/21

NOT TO SCALE MCNY-UTIL-SSWR-2400 07/01/19



NOTES:
1. ALL PIPE SYSTEMS AND BACKFILL SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600.
2. WATER MAIN PIPE SHALL BE CEMENT LINED DUCTILE IRON PIPE (DIP) PRESSURE CLASS 150, THICKNESS CLASS 52 WITH ASPHALTIC EPOXY TYPE COATING & TYTON JOINTS.
3. MAXIMUM ALLOWABLE DEFLECTION AT PIPE JOINTS SHALL BE LIMITED TO 80% OF THE VALUES PUBLISHED IN AWWA C600, LATEST REVISION.
4. IF ROCK IS ENCOUNTERED, THE EXCAVATION SHALL BE CARRIED 8" BELOW THE BOTTOM OF THE PIPE.

DIP WATER PIPE BEDDING DETAIL

MOD: 07/28/21

NOT TO SCALE MCNY-UTIL-WATR-1900 07/01/19

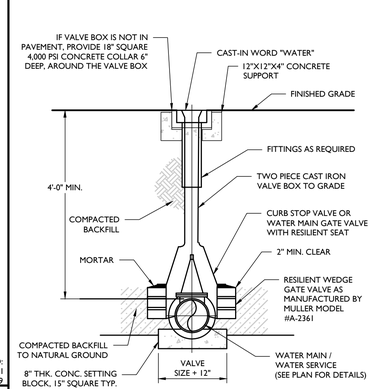
PIPE SIZE IN INCHES	NUMBER AND SIZE OF RODS REQUIRED AND PIPE LENGTH IN FEET TO BE RESTRAINED								
	90° TEE OR DEAD END PLUG			45° BEND			22½° BEND		
	No.	SIZE	L*	No.	SIZE	L*	No.	SIZE	L*
4	2	¾"	28'	2	¾"	6'	2	¾"	3'
6	2	¾"	40'	2	¾"	8'	2	¾"	4'
8	4 or 2	¾" or ⅞"	52'	2	¾"	10'	2	¾"	5'
10	4	¾"	63'	2	¾"	12'	2	¾"	6'
12	4	⅞"	74'	2	¾"	14'	2	¾"	7'
14	4	1"	86'	2	¾"	16'	2	¾"	8'
16	4	1"	96'	2	¾"	18'	2	¾"	9'

L* = LENGTH OF PIPE TO BE RESTRAINED IS FOR EACH SIDE OF BEND

NOTES:
1. USE OF MECHANICAL JOINT RETAINER GLANDS SHALL PROVIDE A THRUST RESTRAINT SYSTEM EQUIVALENT TO THAT LISTED IN THE TABLE FOR CLAMPS AND RODS.
2. LENGTHS ARE BASED ON THE FOLLOWING CRITERIA: 150 PSI MAXIMUM PRESSURE AND 4'-6" OF COVER. TABLE IS FOR USE WITH HDPE OR PVC PIPE ONLY. IF TEST CONDITIONS ARE MORE SEVERE OR LARGER PIPES ARE PROPOSED, THEN SPECIAL COMPUTATIONS MUST BE PROVIDED BY LICENSED PROFESSIONAL ENGINEER.

JOINT RESTRAINT SCHEDULE DETAIL

NOT TO SCALE HDPE PVP JOINT RESTRAINT 03/23/23

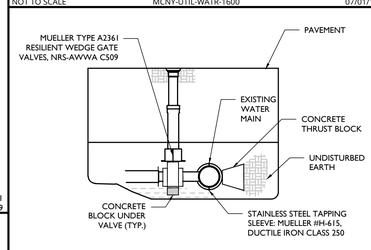


NOTES:
1. ALL VALVES TO INCLUDE MEGA-LUG RETAINER GLANDS AND BE RODDED BACK TO THE ADJACENT TEE IN THE WATER MAIN. INLINE VALVES NEED NOT BE RODDED. CONTRACTOR TO UTILIZE ¾" ON CENTER GALVANIZED STEEL RODS WITH MALLEABLE IRON NUTS AT 108° SPACING.
2. WATER MAIN VALVES FOR FOUR INCH THROUGH FOURT-EIGHT INCH SHALL BE RESILIENT WEDGE GATE VALVES AS MANUFACTURED BY MULLER, MODEL #A-2361. VALVES SHALL BE PROVIDED WITH AN EXTENSION SERVICE BOX TO GRADE.
3. MAIN LINE VALVES TO BE SPACED NO FURTHER THAN 500' APART IN COMMERCIAL DISTRICTS AND 800' IN OTHER DISTRICTS.

WATER VALVE BOX DETAIL

MOD: 09/09/22

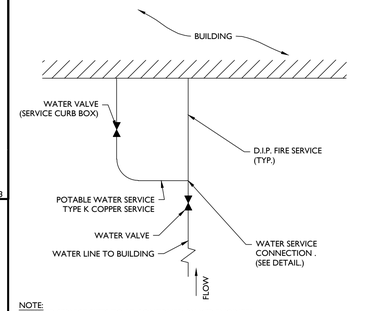
NOT TO SCALE MCNY-UTIL-WATR-1600 07/01/19



NOTES:
1. MEGA LUGS TO BE USED ON ALL MECHANICAL JOINT FITTINGS.
2. MULLER STAINLESS STEEL, MECHANICAL JOINT TAPPING SLEEVE MODEL #H-615 AND VALVE, MODEL A2361 IS TO BE USED IN ALL CASES, ALL HARDWARE INCLUDING, BUT NOT LIMITED TO NUTS, BOLTS, ECT SHALL BE STAINLESS STEEL.
3. CONCRETE BLOCK SHALL BE UNDER VALVE.

WET TAP DETAIL

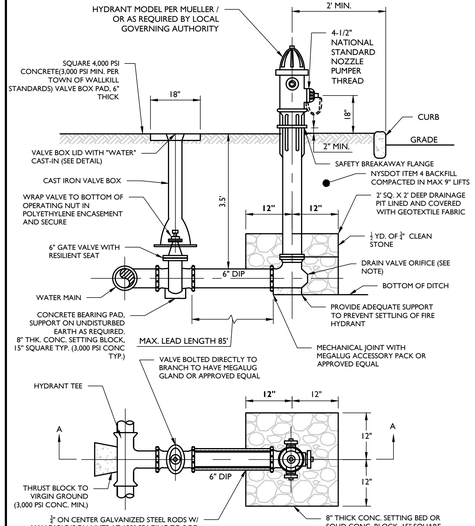
NOT TO SCALE WET TAP 07/01/19



NOTE:
1. WATER SERVICE SIZES TO BE CONFIRMED BY MEP ENGINEER.
2. VALVING MUST BE ARRANGED SO THAT POTABLE WATER IS TERMINATED IF FIRE PROTECTION LINE IS TURNED OFF.

FIRE PROTECTION & SERVICE CONNECTION TO BUILDING DETAIL

NOT TO SCALE

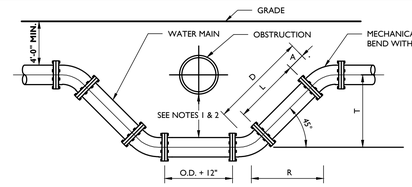


NOTES:
1. HYDRANT SHALL BE MUELLER SUPER CENTURION MODEL A-423 INCLUDING INTEGRAL MULLER "STORZ" CONNECTION ON THE NOZZLE. DESIGN WITH THE FOLLOWING SPECIFICATIONS.
   A. SAFETY COUPLED STANDPIPE.
   B. 6" MECHANICAL JOINT INLET CONNECTION
   C. TWO 2-1/2" NATIONAL STANDARD THREAD HOSE NOZZLES.
   ONE 4-1/2" NATIONAL STANDARD THREAD STEAMER NOZZLE, FACING THE ROAD.
   D. HYDRANT OPERATORS AND HYDRANT NOZZLE CAP NUTS SHALL BE IN ACCORDANCE WITH AWWA#AND STANDARD C502.
   E. HYDRANT HOSE CAPS SHALL BE ATTACHED BY MEANS OF CHAINS.
   F. HYDRANT BARRELS SHALL BE PAINTED - RED, BONNETS - YELLOW, AND NOZZLE CAPS - BLACK TO INDICATE THE AVAILABLE FIRE FLOW OR AS IN ACCORDANCE WITH THE LOCAL REQUIREMENTS.
   G. HYDRANTS SHALL OPEN COUNTER CLOCKWISE.
2. STANDPIPE (BREAK-AWAY) COUPLING SHALL NOT EXCEED A MAXIMUM OF 2 INCHES FROM THE TOP OF THE CURB TO THE BOTTOM OF COUPLING.
3. THE DRAIN VALVE SHALL BE CLEAR OF ANY OBSTRUCTIONS, AND 3/4" CLEAN GRAVEL BE PLACED FROM THE BOTTOM OF THE HYDRANT TO A POINT 6" ABOVE THE HYDRANT LATERAL PIPE.
4. THRUST BLOCKS SHALL BE MADE OF 4,000 PSI CONCRETE, PROVIDED BEHIND THE HYDRANT SHOE.
5. BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH THE LOCAL JURISDICTION.
6. GATE VALVE SHALL BE T.W.W. 6" U.S. PIPE METROSEAL 250 R/S (RESILIENT SEALED) MECHANICAL JOINT END (RIGHT HAND).
7. WATER LATERAL SHALL BE 6" DUCTILE IRON CEMENT LINED CLASS 52 PIPE.
8. TIE ROD SHALL BE 3/4" DIAMETER TIE ROD WITH EYE BOLTS - TWO REQUIRED (SIDE VIEW SHOWN). RESTRAIN ALL JOINTS ON HYDRANT TEE, VALVE, AND HYDRANT LEAD.
9. HYDRANT TEE SHALL BE U.S. PIPE CATALOG #LU592 TRIM.TYTE DUCTILE IRON. MECHANICAL JOINT ON AN T.W.W. APPROVED SUBSTITUTE.
10. HYDRANT SPACING MAY RANGE FROM 350' TO A MAX OF 600'
11. HYDRANTS SHALL BE DRY-BARREL HYDRANTS, TYPE MULLER SUPER CENTURION IN ACCORDANCE WITH AWWA C502. HYDRANTS SHALL HAVE A MAIN VALVE SIZE OPENING OF 5" NOMINAL, ONE FOUR-AND-ONE-HALF INCH NST PUMPER NOZZLE TWO TWO-AND-ONE-HALF-INCH NST HOSE NOZZLES. A ONE-AND-ONE-HALF-INCH PENTAGON OPERATING NUT AND A SIX-INCH MECHANICAL JOINT INLET SHOW CONNECTION WITH ACCESSORIES.
12. ALL TEES, VALVES AND FITTINGS TO INCLUDE RESTRAINT IN THE FORM OF MEGA-LUG RETAINER GLANDS AND RODS.
13. WHEN HIGH GROUND WATER IS ENCOUNTERED WITHIN 2 FEET OF THE HYDRANT BOWL, THE WEEP HOLE IS TO REMAIN PLUGGED AND APPROPRIATELY WORDED SIGNAGE SHALL BE PERMANENTLY SECURED TO THE HYDRANT SPECIFYING THAT THE HYDRANT IS TO BE PUMPED DRY AFTER USE TO PREVENT DAMAGE DUE TO FREEZING TEMPERATURES.

FIRE HYDRANT (VALVE IN GRASS) DETAIL

MOD: 01/09/23

NOT TO SCALE MCNY-UTIL-WATR-1000 07/01/19



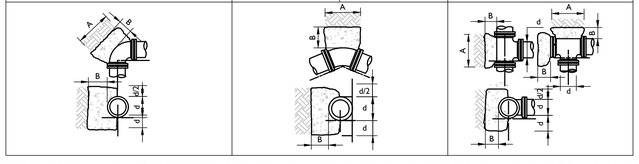
MECHANICAL JOINTS			
ANGLE	D =	R =	L =
45°	T x 1.414	T x 1.000	D-2A
22.5°	T x 2.613	T x 2.414	D-2A
11.25°	T x 5.126	T x 5.027	D-2A

NOTES:
1. WATER MAIN MAY CROSS ABOVE OBSTRUCTION IF **4'-0"** MINIMUM COVER IS MAINTAINED ABOVE THE WATER MAIN AND FINISH GRADE.
2. MINIMUM VERTICAL SEPARATION BETWEEN SANITARY OR STORM SEWER TO WATER MAIN SHALL BE 18" IF THE HORIZONTAL SEPARATION IS LESS THAN 10'. BETWEEN WATER MAIN AND OTHER UTILITIES, THE MINIMUM VERTICAL SEPARATION SHALL BE 12".
3. WATER MAIN SHALL BE SIZE AND MATERIAL SPECIFIED ON THE PLAN, WITH MECHANICAL JOINT OR PUSH-ON AND ALL FITTINGS BE CAST IRON MECHANICALLY JOINT.
4. OFFSETS MAY BE SUBSTITUTED FOR A "T" OF UP TO 24" IF APPROVED BY THE ENGINEER.
5. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS OR OTHER POINTS OF PIPE DIRECTION CHANGE.
6. TIE RODS SHALL BE UTILIZED TO RESTRAIN PIPE JOINTS IF THRUST BLOCK IS NOT USED. DETAILS OF THE TIE ROD ASSEMBLY SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. TIE RODS SHALL BE SUFFICIENT TO RESTRAIN THE THRUST DEVELOPED AT 100 PSI WORKING PRESSURE. MEGALUG RESTRAINT ALSO ACCEPTABLE IN PLACE OF TIE RODS.

WATER CROSSING UNDER UTILITY DETAIL

NOT TO SCALE MCNY-UTIL-WATR-1300 07/01/19

d	A	B	A	B	A	B	A	B
6"	30"	24"	24"	18"	18"	12"	27"	21"
8"	42"	30"	30"	24"	24"	18"	36"	27"
12"	66"	42"	45"	33"	33"	24"	48"	42"
16"	84"	48"	51"	39"	39"	30"	60"	48"
24"	102"	75"	78"	60"	60"	39"	108"	108"
30"	136"	84"	97"	64"	71"	44"	112"	120"
90° BENDS			45° BEND		22½° & 11¼° BENDS		TEE & PLUG	



NOTES:
1. ALL HORIZONTAL BENDS SHALL HAVE CONCRETE THRUST BLOCKS WITH MINIMUM BEARING AREAS AGAINST UNDISTURBED SOIL AND NO JOINT SHALL BE COVERED WITH CONCRETE.
2. TWO FORMS OF RESTRAINTS ARE REQUIRED ON ALL BENDS, OFFSETS, DEAD ENDS AND/ OR TEMPORARY DEAD ENDS FOR FUTURE EXPANSION. HYDRANTS WILL REQUIRE HYDRANTS WILL REQUIRE ADDITIONAL RESTRAINTS IN ACCORDANCE WITH "TYPICAL FIRE HYDRANT ASSEMBLY" DETAIL.
3. RESTRAINTS APPROVED FOR USE ARE THRUST BLOCKS, MEGA LUG RETAINER, GLANDS, TIE RODS AND FIELD LOCK GASKETS.
4. BEARING AREAS ARE BASED UPON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY OF 0.5 TONS PER SQUARE FOOT. FOR A LESSER SOIL BEARING CAPACITY THESE AREAS SHALL BE INCREASED ACCORDINGLY.
5. THRUST BLOCKS SHALL BE POURED DIRECTLY AGAINST TRENCH WALLS AND SHALL BE 4,000 PSI CONCRETE (3,000 PSI MIN.).
6. DETAILS FOR SUPPORTS AND BRACING FOR VERTICAL BENDS FOR 12" DIAMETER OR LARGER SHALL BE APPROVED BY THE AUTHORITY PRIOR TO CONSTRUCTION.

THRUST BLOCKS DETAIL

NOT TO SCALE MCNY-UTIL-WATR-1400 07/01/19

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:	DRAWING NAME:		
23010468A	C-DTLS		

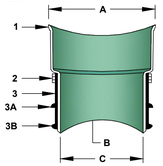
SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
16 of 19

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2025\25010468A\Engineering\Site Plans\C-DTLS.dwg C-16-DETAILS By: KYLE SHALLOW

CORRUGATED HDPE/PP BELL GRAVITY APPLICATIONS



A. BELL END ACCEPTS CORRUGATED HDPE/PP DUAL WALL PIPE--ADS/HANCOR INC. SPECIFICATIONS IN 4", 6", 8", 10", 12", 15", 18", 21", 24", AND 30" SIZES.

B. CURVATURE VARIES WITH MAINLINE DIAMETERS.

C. SPIGOT END PVC SDR 35, ASTM D3034 DIAMETERS: 4", 6", 8", 10", 12", 15", 18", 21", 24" AND 30"

PART	PART NAME
1	HUB ADAPTOR
2	SECURING CLAMP*
3	RUBBER SLEEVE (AVAILABLE IN NITRILE AND EPDM BY SPECIAL ORDER)
3A	UPPER SEGMENT**
3B	LOWER SEGMENT***
4	(NOT SHOWN) ADS/HANCOR INC. SUPPLIES VALLEY GASKET

MATERIALS
PVC SDR 26 ASTM D3034
BAND SS #301
SCREW SS #305
HOUSING SS #301
ASTM F477

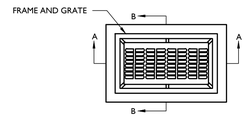
* OPTIONAL: #316 STAINLESS STEEL BAND, SCREW AND HOUSING
** DISTANCE BETWEEN 4A AND 4B WILL VARY BY PRODUCT TYPE
*** WILL NOT APPEAR ON RUBBER SLEEVES FOR CONCRETE OR CLAY PIPE

NOTE: RECOMMENDED METHOD OF CUTTING HOLE IS WITH HOLE SAW FOR PVC AND OTHER PLASTICS, AND DIAMOND BIT FOR CONCRETES, CLAY, FRP AND D.I. (SEE INSTALLATION INSTRUCTIONS. HOLE SAWS ARE AVAILABLE FOR PURCHASE OR RENT.)

INSERTA TEE SIZE		HOLE DIAMETER	
4"	(100 mm)	4 ½"	(114 mm)
6"	(150 mm)	6 ½"	(165 mm)
8"	(200 mm)	8 ¾"	(222 mm)
10"	(250 mm)	10 ⅞"	(276 mm)
12"	(300 mm)	12 ⅞"	(327 mm)
15"	(375 mm)	15 ¹³⁄₁₆"	(402 mm)
18"	(450 mm)	19 ¾"	(503 mm)
21"	(525 mm)	22 ⅝"	(573 mm)
24"	(600 mm)	25 ⅜"	(643 mm)
30"	(750 mm)	32 ¹⁷⁄₃₂"	(826 mm)

INSERTA TEE DETAIL

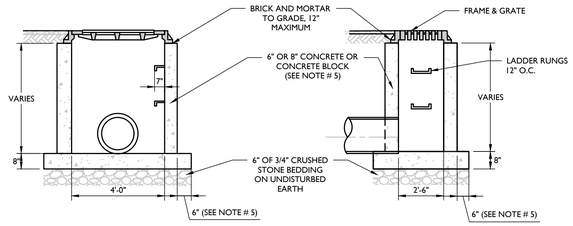
NOT TO SCALE — GNRL-DTLS-STND-GRID — MOD: 09/11/19, 7/01/19



PLAN

NOTES:

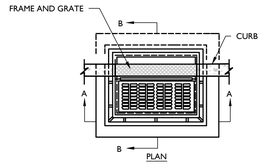
1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. MINIMUM DIFFERENCE IN INVERTS TO BE 0.1 FEET
2. THIS INLET SHALL BE CONSTRUCTED OF PRECAST CONCRETE OR SOLID CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR, THE INSIDE WALLS JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT BY M.A. INDUSTRIES, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY **# 3408** OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THEN 12' THE WALLS SHOULD BE EITHER 8" THICK CONCRETE OR 8" SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE 4,000 PSI.
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.



SECTION A-A — SECTION B-B

SINGLE DRAIN INLET DETAIL

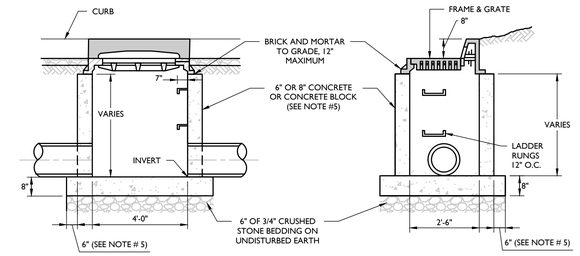
NOT TO SCALE — MCNY-UTIL-STRM-1000 — 07/01/19



PLAN

NOTES:

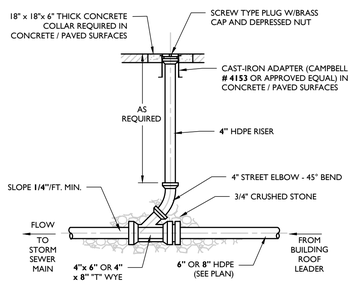
1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. MINIMUM DIFFERENCE IN INVERTS TO BE 0.1 FEET.
2. THIS INLET SHALL BE CONSTRUCTED OF PRECAST CONCRETE OR SOLID CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR. THE INSIDE WALL JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT BY M.A. INDUSTRIES, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, 12" O.C. OR APPROVED EQUIVALENT.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY **# 2617**, OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THAN 12' THE WALLS SHOULD BE 8" THICK CONCRETE OR SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE 4,000 PSI.
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.



SECTION A-A — SECTION B-B

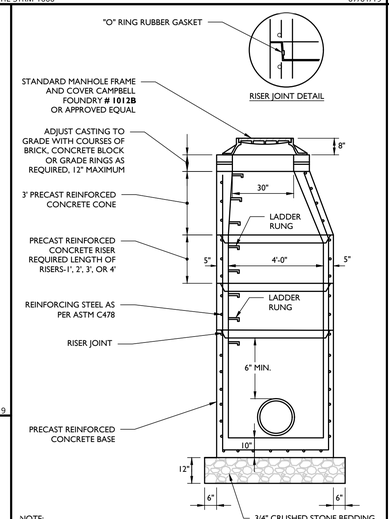
SINGLE CATCH BASIN DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1100 — 07/01/19



ROOF LEADER CLEANOUT DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1900 — 07/01/19

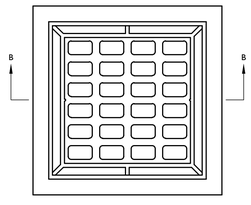


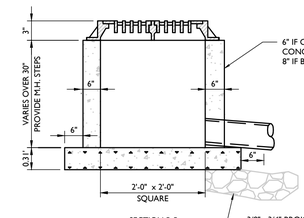
NOTE:

1. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
2. ALL CONCRETE TO BE 4,000 PSI.

PRECAST CONCRETE STORM MANHOLE 4' DIA. DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1600 — 07/01/19





SECTION B-B

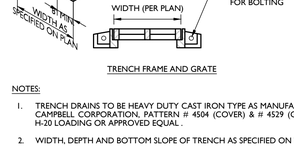
3/8" - 3/4" BROKEN STONE BASE IF DIRECTED BY THE ENGINEER

GENERAL CONSTRUCTION NOTES:

1. FOOTER TO BE CONCRETE.
2. INVERT TO BE 4000 PSI CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. FRAME AND GRATE TO BE **#3193** AS MANUFACTURED BY CAMPBELL FOUNDRY CO., OR APPROVED EQUAL.
5. PROVIDE 3/4" DIAMETER W.I. LADDER RUNGS, 12" O.C. (IF OVER 30" DEEP)
6. EXTERIOR OF ALL CONCRETE SHALL HAVE 2 COATS OF KOPPERS BITUMASTIC #5, OR EQUAL.
7. ALL WORK SHALL BE WATERTIGHT. NOT FOR USE IN PAVED AREAS.

YARD INLET DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1400 — 07/01/19

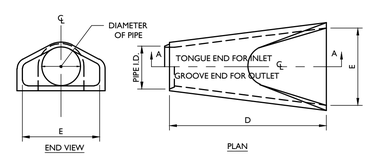


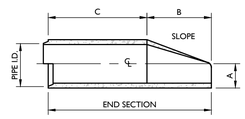
NOTES:

1. TRENCH DRAINS TO BE HEAVY DUTY CAST IRON TYPE AS MANUFACTURED BY CAMPBELL CORPORATION, PATTERN # 4504 (COVER) & # 4529 (GRATE) FOR H-20 LOADING OR APPROVED EQUAL .
2. WIDTH, DEPTH AND BOTTOM SLOPE OF TRENCH AS SPECIFIED ON THE PLANS.
3. MINIMUM BOTTOM SLOPE = 0.50%

HEAVY DUTY TRENCH DRAIN DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1700 — 07/01/19





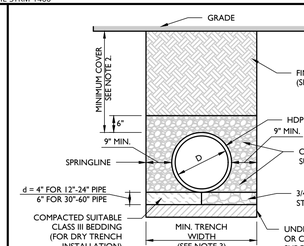
PIPE INNER DIA.	WALL THICK	A	B	C	D	E	SLOPE
12"	2"	4"	24"	48 7/8"	72 7/8"	30"	3:1
15"	2 1/4"	6"	27"	46"	73"	30"	3:1
18"	2 1/2"	9"	27"	46"	73"	36"	3:1
24"	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3:1
30"	3 1/2"	12"	54"	19 3/4"	73 3/4"	60"	3:1
36"	4"	15"	63"	34 3/4"	97 3/4"	72"	3:1
42"	4 1/2"	21"	63"	35"	98"	78"	3:1
48"	5"	24"	72"	26"	98"	84"	3:1
54"	5 1/2"	27"	65"	35"	100"	90"	2.4:1
60"	6"	30"	60"	39"	99"	96"	2:1
66"	6 1/2"	32"	78"	21"	99"	102"	2:1
72"	7"	34"	78"	21"	99"	108"	2:1

NOTES:

1. REINFORCING IN THE "C" PORTION SHALL BE THE SAME AS SPECIFIED FOR CONCRETE PIPE ASTM C76 AND AASHTO M170 CLASS III FOR THE SIZE OF CONNECTING PIPE.
2. ALL CONCRETE SHALL BE 4,000 PSI.
3. VARIATIONS IN MANUFACTURING DIMENSIONS SHALL BE AS CALLED FOR IN ASTM C76 AND AASHTO M170.
4. PIPE END SECTION CONNECTION SHALL MATCH JOINTS OF STANDARD PIPE DETAILS.

CONCRETE FLARED END SECTION DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-2200 — 07/01/19



NOTES:

1. ALL PIPE SYSTEMS AND BACKFILL SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.
2. MINIMUM COVER FOR HDPE PIPES IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR UP TO 60" DIAMETER PIPE. PIPE COVER IS MEASURED FROM TOP OF PIPE TO THE BOTTOM OF FLEXIBLE PAVEMENT, OR TO THE TOP OF RIGID PAVEMENT, OR TO THE GROUND SURFACE.
3. MINIMUM TRENCH WIDTH PER MANUFACTURER'S RECOMMENDATIONS.
4. SUITABLE AND FINAL BACKFILL MATERIAL SHALL BE SITE SOILS FREE OF LARGE STONES. CLEAN FILL, OR ITEM 4.

HDPE STORM PIPE BEDDING DETAIL

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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

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9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Date: 2025.03.25 10:08:24-04'00'

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
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5954-26-781983

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Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-DTLS

SHEET TITLE: CONSTRUCTION DETAILS

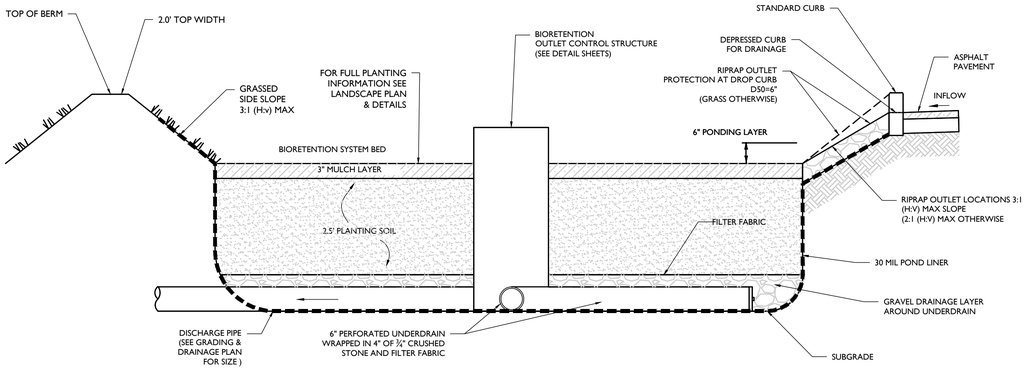
SHEET NUMBER: 17 of 19

2023\23010468A\Engineering\Site Plans\C-DTLS.dwg, C-17 DETAILS, By: KYLE.SHALLOW

BIORETENTION ELEVATIONS					
SYSTEM	OUTLET NAME	OUTLET SIZE	BED ELEVATION	100 YR PEAK ELEVATION	TOP OF BERM ELEVATION
P-1	OCS S-8	4'X4'	98.50	99.57	100.60

PLANTING SOIL NOTE:

THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME. SOILS SHOULD FALL WITHIN THE SM, OR ML CLASSIFICATIONS OD THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5"/HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER, AND BRUSH OR SEED FROM NOXIOUS WEEDS. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED (TAMPED LIGHTLY WITH A DOZER OR BACKHOE BUCKET). THE SPECIFIC CHARACTERISTICS ARE AS FOLLOWS:



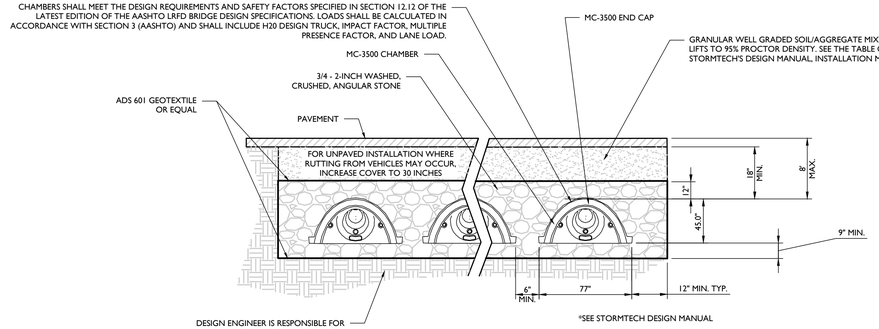
NOTES:

1. SEE PLAN FOR DROP CURB LOCATIONS AND BIORETENTION AREA CONFIGURATION.
2. PLANTING SOIL TO BE IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOUND WITHIN THE PROJECT SWPPP.

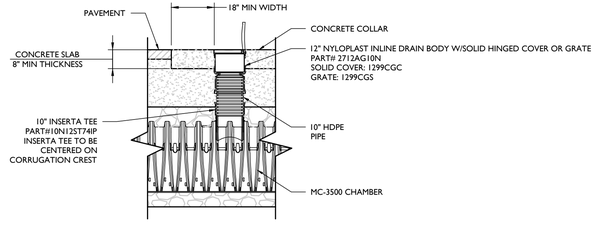
BIORETENTION SYSTEM CROSS SECTION DETAIL

NOT TO SCALE MCNY-UTIL-STMW-24001 07/01/19

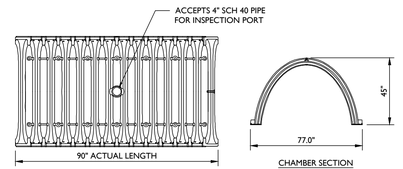
CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND SAFETY FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. LOADS SHALL BE CALCULATED IN ACCORDANCE WITH SECTION 3 (AASHTO) AND SHALL INCLUDE H20 DESIGN TRUCK, IMPACT FACTOR, MULTIPLE PRESENCE FACTOR, AND LANE LOAD.



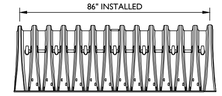
SYSTEM SECTION



STORMTECH STORM CHAMBER INSPECTION PORT DETAIL



CHAMBER SECTION



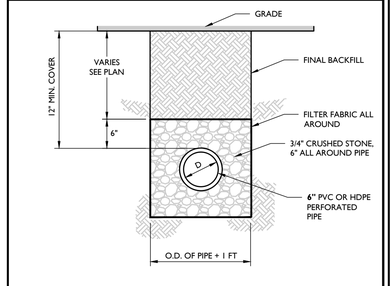
STORMTECH MC-3500 STORM CHAMBER DETAIL
N.T.S.

STORMTECH NOTES:

1. CHAMBERS SHALL BE STORMTECH MC-3500 OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MADE FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.
6. THE STONE USED FOR FILLING THE SUBSURFACE SYSTEM MUST BE CLEAN WASHED STONE FREE OF ALL SEDIMENT, FINES, AND DUST. THE CONTRACTOR MAY BE REQUIRED TO WASH THE STONE ON SITE UNTIL IT IS CLEAN TO THE TOUCH LEAVING NO RESIDUE BEHIND PRIOR TO PLACEMENT IN THE SYSTEM FOOTPRINT.
7. THE PROPOSED SUBSURFACE STORMWATER SYSTEM BOTTOM MUST BE PROTECTED FROM STORM RUNOFF AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE INFILTRATION CAPACITY OF THE VIRGIN SOIL IS NOT COMPROMISED.
8. VEHICLE TRAFFIC MUST AVOID THE CHAMBER FOOTPRINT DURING CONSTRUCTION.
9. CONTRACTOR MUST SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW & APPROVAL.
10. END STONE TO BE 6" MIN. BEYOND END OF CHAMBER CAPS WITH 12" MIN. SIDE STONE TO PROVIDE MIN.

STORMTECH SUBSURFACE DETAIL

NOT TO SCALE MCNY-UTIL-STMW-3500 MOD: 01/20/21 07/01/19



UNDERDRAIN DETAIL

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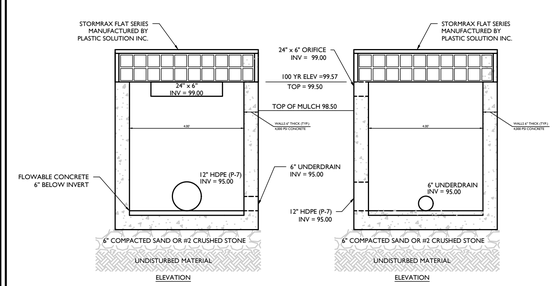
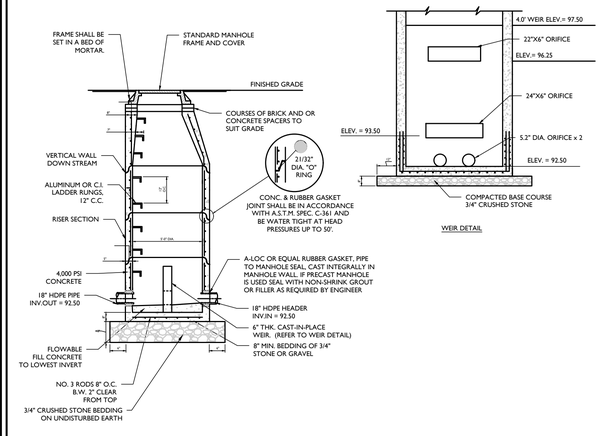
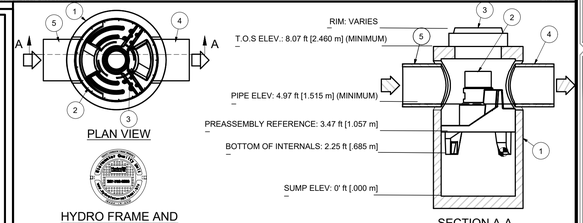


BIORETENTION BASIN P-1 OUTLET CONTROL STRUCTURE (S-9) DETAIL



OUTLET CONTROL STRUCTURE (S-6) DETAIL



HYDRO FRAME AND COVER (INCLUDED) GRADE RINGS BY OTHERS AS REQUIRED

NOTE: ADDITIONAL HEIGHT MAY BE REQUIRED DEPENDING ON PIPE SIZE

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 18.0 cfs (510 l/s)
2. Min Sediment Storage Capacity: 0.7 cu. yd. (0.5 cu. m.)
3. Maximum Inlet/Outlet Pipe Diameters: 24 in. (600 mm)
4. The Treatment System Shall Use An Induced Vortex To Separate Pollutants From Stormwater Runoff.
5. For More Product Information Including Regulatory Acceptances, Please Visit https://hydro-int.com/en/products/first-defense

GENERAL NOTES:
1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 24".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plans).
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	48	1200	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	24 (MAX)	600 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	24 (MAX)	600 (MAX)	INLET PIPE (BY OTHERS)

4' DIAMETER FIRST DEFENSE STORMWATER SEPARATOR

MOD: 09/25/20 07/01/19

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2023\23010468A\Engineering\Site Plans\C-DTLS.dwg|C-18 DETAILS By: KYLE SHALLOW

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Justin Eric Dates
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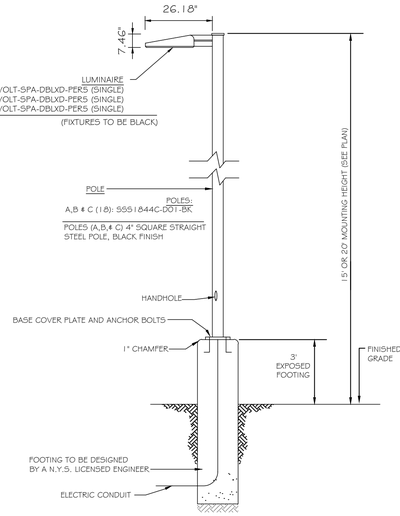
AS SHOWN	01/30/2024	KAS	CPM

PROJECT NUMBER: 23010468A
DRAWING NAME: C-DTLS

SHEET TITLE: CONSTRUCTION DETAILS

SHEET NUMBER: 18 of 19

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION



NOTES:

1. LUMINAIRES TO BE MANUFACTURED BY LITHONIA LIGHTING AND POLES BY HOLOPHANE (MANUFACTURER TO CONFIRM POLE SIZE) OR APPROVED EQUAL.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
3. FOOTING TO BE DESIGNED, SIGNED, AND SEALED BY A N.Y.S. LICENSED ENGINEER.
4. *VOLTAGE TO BE CONFIRMED BY ELECTRICIAN CONTRACTOR.
5. PROPOSED POLES HEIGHT TO BE MODIFIED IN FIELD TO MEET DESIGN. (AS REQUIRED)

POLE MOUNTED FIXTURE DETAIL

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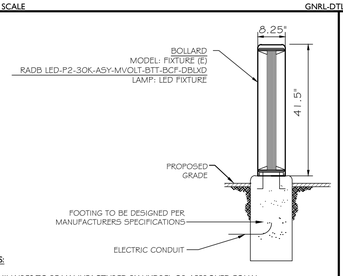

NOTES:

1. LUMINAIRES TO BE MANUFACTURED BY HYDREL OR APPROVED EQUAL.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
3. FOOTING TO BE DESIGNED PER MANUFACTURERS SPECIFICATIONS.
4. * - VOLTAGE TO BE PROVIDED BY ELECTRICIAN.

BOLLARD LIGHT DETAIL

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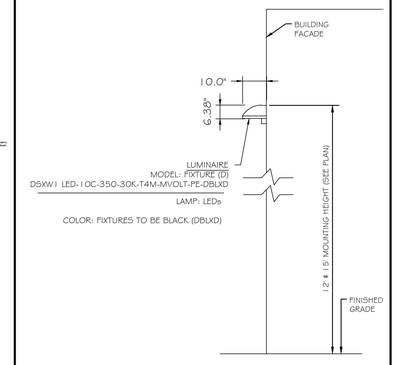


NOTES:

1. LUMINAIRES TO BE MANUFACTURED BY LITHONIA LIGHTING OR APPROVED EQUAL.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
3. *VOLTAGE TO BE CONFIRMED BY ELECTRICIAN CONTRACTOR.

WALL MOUNTED FIXTURE DETAIL

NOT TO SCALE | GNRL-DTLS-LGHT | 09/21/23

1. THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
2. THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND VERIFY LOCATION OF ALL UTILITIES ON SITE PRIOR TO CONSTRUCTION.
3. ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
4. NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARD TO SIZE, SPECIES, OR VARIETY WITHOUT WRITTEN PERMISSION OF THE LANDSCAPE CONSULTANT. WRITTEN PROOF OF PLANT MATERIAL UNAVAILABILITY MUST BE DOCUMENTED.
5. THE LOCATION OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE FINAL LOCATION OF ALL PLANT MATERIAL, AND PLANTING BED LINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
6. ALL STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. ALL PLANT MATERIAL LOCATED WITHIN SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30" ABOVE THE ELEVATION OF THE ADJACENT CURB. ALL STREET TREES PLANTED IN SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED TO NOT HAVE BRANCHES BELOW 10'-0".
7. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
8. ALL PLANT MATERIAL SHALL BE PROPERLY INSTALLED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. CUT AND REMOVE JUTE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL. WIRE BASKETS AND NOT JUTE BURLAP SHALL BE COMPLETELY REMOVED PRIOR TO BACKFILLING THE PLANT PIT.
9. BRANCHES OF DECIDUOUS TREES SHALL BE PRUNED BACK BY NO MORE THAN ONE QUARTER (1/4) TO BALANCE THE TOP GROWTH WITH ROOTS AND TO PRESERVE THEIR CHARACTER AND SHAPE. THE CENTRAL LEADER OF TREE SHALL NOT BE PRUNED.
10. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOPSOIL, PEAT MOSS AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH CRUSHED STONE OR UNTIL FREE DRAINING.
11. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT NURSERY.
12. OPTIMUM PLANTING TIME: DECIDUOUS - APRIL 1 TO JUNE 1 & OCTOBER 15 TO NOVEMBER 30, CONIFEROUS - APRIL 1 TO JUNE 1 & SEPTEMBER 1 TO NOVEMBER 1. PLANTING OUTSIDE OF THE OPTIMUM DATES SHALL NOT BE CONDUCTED WITH OUT PRIOR APPROVAL FROM THE LANDSCAPE CONSULTANT.
13. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS. WATERING AMOUNTS SHOULD BE ADJUSTED AS RAIN EVENTS OCCUR. WATERING AFTER THE INITIAL 4 WEEKS SHALL BE ADJUSTED BASED ON SEASONAL CONDITIONS. WATERING SHALL NOT TAKE PLACE DURING THE HOTTEST POINT OF THE DAY.
14. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR TWO YEARS AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED BY A TREE OF SIMILAR SIZE AND SPECIES AT NO EXPENSE TO THE OWNER.
15. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 12" OF TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS SHALL BE CONDUCTED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED. SOIL PH SHOULD BE 5.5-6.5.
16. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH SEED AS INDICATED ON THE LANDSCAPE PLANS. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH THE GENERAL SEEDING NOTES ON THIS SHEET. ALL DISTURBED LAWN AREAS SHALL BE TOPSOILED, LIMED, FERTILIZED AND FINE GRADED PRIOR TO LAWN INSTALLATION.
17. ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED HARDWOOD BARK MULCH.
18. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
19. ALL PLANTING DEBRIS (WIRE, TWINE, RUBBER HOSE, BACKFILL ETC.) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. PROPERTY IS TO BE LEFT IN A NEAT ORDERLY CONDITION IN ACCORDANCE WITH ACCEPTED PLANTING PRACTICES.

GENERAL PLANTING NOTES

NOT TO SCALE | GNRL-PLNT-NOTE | 01/29/24

1. TEMPORARY SEEDING: REFER TO SOIL EROSION AND SEDIMENT CONTROL PLANS.
2. PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE OR APPROVED EQUAL; OPTIMUM SEEDING DATES ARE BETWEEN APRIL 1 AND MAY 31; AND AUGUST 16 AND OCTOBER 15. SEEDING OUTSIDE OF THE OPTIMUM DATES SHALL NOT BE CONDUCTED WITH OUT PRIOR APPROVAL. PERMANENT SEEDING TO BE APPLIED BY RAKING OR DRILLING INTO THE SOILS AT THE RATE GIVEN ABOVE.

TURF MIX

-TALL FESCUE, 'STINGRAY' (34%)
-TALL FESCUE, RAPTOR III (33%)
-HARD FESCUE, 'RIDU' (33%)

SEEDING RATE: 7-10 LBS./1,000 S.F. MIN

BIORETENTION AREA SEED MIXTURE
(NEW ENGLAND WETLAND PLANTS, INC. - NEW ENGLAND WETMIX, OR APPROVED EQUAL)

SPECIES LIST:

- FOX SEDGE, (CAREX VULPINIOIDEA)
- BLUNT BROOM SEDGE (CAREX SCOPARIA)
- LURID SEDGE (CAREX LURIDA)
- HOP SEDGE (CAREX LUPULINA)
- FOWL BLUEGRASS (POA PALUSTRIS)
- BEGGAR TICKS (BIDENS FRONDOSA)
- GREEN BULRUSH (SCIRPUS ATROVIRENS)
- SWAMP MILKWEED (ASCLEPIAS INCARNATA)
- FRINGED SEDGE (CAREX CRINITA)
- NEW YORK IRONWEED (VERONIA NOVEBORACENSIS)
- SOFT RUSH (JUNCUS EFFUSUS)
- STARVED/CALICO ASTER (ASTER LATERIFLORUS)
- BLUE FLAG (IRIS VERSICOLOR)
- AMERICAN MANNAGRASS (GLYCERIA GRANDIS)
- SQUARE STEMMED MONKEY FLOWER (MIMULUS RINGENS)
- SPOTTED JOE PYE WEED (EUPATORIUM MACULATUM)

SEEDING RATE: 18 LBS PER ACRE.

NATIVE UPLAND WILDLIFE FORAGE & COVER MEADOW MIX
(ERNST CONSERVATION SEEDS - ERNMX-123, OR APPROVED EQUAL)

SPECIES LIST:

- BIG BLUESTEM, (ANDROPOGON GERARDII)	34.4%
- SWITCHGRASS (PANICUM)	27.0%
- VIRGINIA WILDRYE (ELYMUS VIRGINICUS)	21.0%
- INDIANGRASS (SORGHASTRUM NUTANS)	9.0%
- PARTRIDGE PEA (CHAMAECRISTA FASCICULATA)	3.0%
- BLACKEYED SUSAN (RUDBECKIA HIRTA)	3.0%
- OXEYE SUNFLOWER (HELIOPSIS HELIANTHOIDES)	1.5%
- PLAINS COREOPSIS (COREOPSIS TINCTORIA)	0.5%
- SHOWY TICKTREFOIL (DESMODIUM CANADENSE)	0.4%
- COMMON MILKWEED (ASCLEPIAS SYRIACA)	0.1%
- WILD BERGAMOT (MONARDA FISTULOSA)	0.1%

SEEDING RATE: 20 LBS PER ACRE

3. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE IN COMPLIANCE WITH THE LATEST NYSDEC REGULATIONS. THIS INCLUDES, BUT LIMITED TO:
   1. NO FERTILIZER SHALL BE APPLIED BETWEEN DEC. 1 AND APRIL 1 IN ANY YEAR.
   2. SHALL NOT BE APPLIED WITHIN 20 FEET OF A WATER BODY.
   3. ONLY LAWN FERTILIZER WITH LESS THAN 0.67% BY WEIGHT PHOSPHATE CONTENT MAY BE APPLIED.
   (A SOIL TEST PRIOR TO FERTILIZER APPLICATION IS RECOMMENDED.)
4. IF SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 4.
5. MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL. MULCH WILL BE SPREAD AT RATES PER NYSDEC STANDARDS AND ANCHORED WITH A MULCH ANCHORING TOOL OR LIQUID MULCH BINDER, AND SHALL BE PROVIDED ON ALL SEEDLINGS. HYDROMULCH SHALL ONLY BE USED DURING OPTIMUM GROWING SEASONS.
6. AS NEEDED, WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
7. REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
8. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.

GENERAL SEEDING NOTES

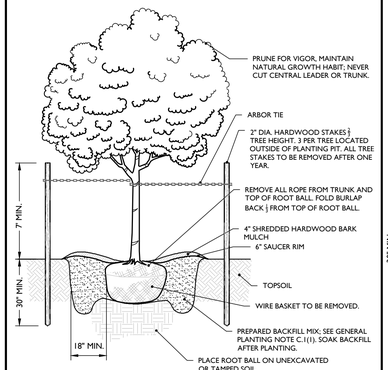
NOT TO SCALE | GNRL-SEED-NOTE | 01/29/24

PLANT DETAIL NOTES

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT. MULCH SHALL NOT TOUCH THE TREE TRUNK.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.
3. WIRE BASKETS AND NON-JUTE BURLAP MUST BE ENTIRELY REMOVED FROM THE ROOT BALL. JUTE BURLAP MUST BE REMOVED FROM THE TOP 1/3 OF THE ROOT BALL.
4. DEPTH OF PLANT PIT SHALL BE INCREASED BY 12" WHEREVER POOR SOIL CONDITIONS OCCUR, WITH THE ADDITION OF LOOSE AGGREGATE.
5. CONTRACTOR SHALL PARTIALLY FILL WITH WATER A REPRESENTATIVE NUMBER OF PITS IN EACH AREA OF THE PROJECT PRIOR TO PLANTING TO DETERMINE IF THERE IS ADEQUATE PERCOLATION. IF PIT DOESN'T PERCOLATE, MEASURES MUST BE TAKEN TO ASSURE PROPER DRAINAGE BEFORE PLANTING.
6. PLANTING MUST BE GUARANTEED FOR TWO FULL GROWING SEASONS FROM THE TIME OF FINAL ACCEPTANCE BY THE LANDSCAPE CONSULTANT. CONTRACTOR SHALL REMOVE ALL WRAPPING AT THE END OF GUARANTEE PERIOD OR SOONER PER PROJECT LANDSCAPE ARCHITECT.
7. BACKFILL MIXTURE TO BE SPECIFIED BASED UPON SOIL TEST AND CULTURAL REQUIREMENTS OF PLANT.
8. PRUNE DAMAGED AND CONFLICTING BRANCHES MAINTAINING NORMAL TREE SHAPE. NEVER CUT CENTRAL TRUNK OR LEADER.

PLANT DETAIL NOTES

NOT TO SCALE | PLNT-NOTE | 01/29/24

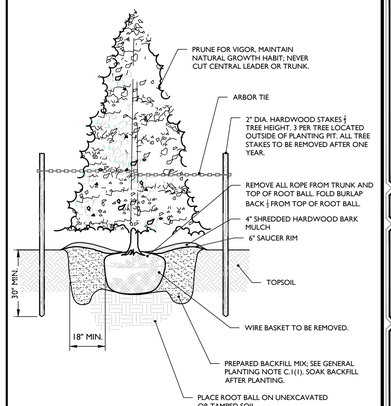


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

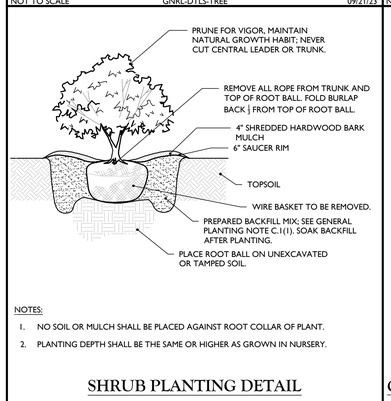


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

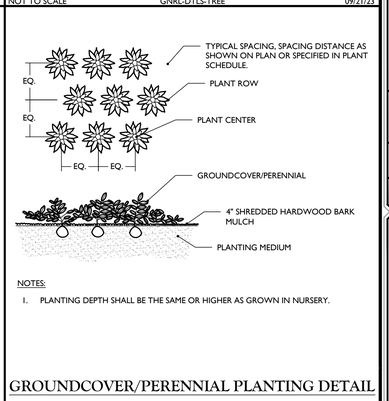


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

SHRUB PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

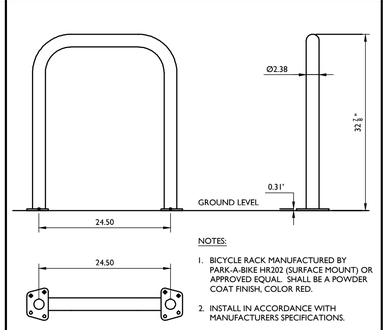


NOTES:

1. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

GROUNDCOVER/PERENNIAL PLANTING DETAIL

NOT TO SCALE | GNRL-DTLS-TREE | 09/21/23

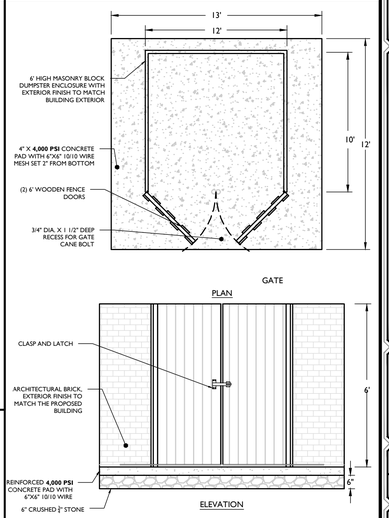


NOTES:

1. BICYCLE RACK MANUFACTURED BY PARK-A-BIKE HR202 (SURFACE MOUNT) OR APPROVED EQUAL. SHALL BE A POWDER COAT FINISH, COLOR RED.
2. INSTALL IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

INVERTED 'U' BICYCLE RACK DETAIL

NOT TO SCALE | MCCM-SITE-FNCE-2401 | 07/01/19



NOTES:

1. GATE TO REMAIN CLOSED WHEN NOT IN USE. HINGES TO INCLUDE SELF-CLOSING MECHANISM.

MASONRY TRASH ENCLOSURE (10' X 12') DETAIL

NOT TO SCALE | GNRL-DTLS-STND-GRID | 01/30/24

REV	DATE	DRAWN BY	DESCRIPTION
1	05/25/24	KAS	REVISED PER PLANNING BOARD COMMENTS
2	08/27/24	KAS	REVISED PER PLANNING BOARD COMMENTS
3	09/23/24	JED	REVISED PER PLANNING BOARD COMMENTS
4	10/29/24	JED	REVISED PER PLANNING BOARD COMMENTS
5	11/26/24	KAS	REVISED PER PLANNING BOARD COMMENTS
6	12/31/24	KAS	REVISED PER PLANNING BOARD COMMENTS
7	02/05/25	KAS	REVISED PER PLANNING BOARD COMMENTS
8	02/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
9	03/25/25	KAS	REVISED PER PLANNING BOARD COMMENTS
-	-	-	-

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Date: 2025.03.25 10:08:24-04'00'

STATE OF NEW YORK

Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SITE PLAN

FOR

BEEKMAN ARTS CENTER LLC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/30/2024	KAS	CPM
PROJECT NUMBER:	DRAWING NAME:		
23010468A	C-DTLS		

SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER:

19 of 19

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

2023\23010468A\Engineering\Site Plans\C-DTLS.dwg|C-19-DETAILS By: KYLE SHALLOW