



CITY OF BEACON, NEW YORK
COURTROOM, CITY HALL
1 MUNICIPAL PLAZA
BEACON, NY 12508

Len Warner
Karen Quiana
Kevin Byrne
Jill Reynolds
J. Randall Williams
J.C. Calderon
Chair John Gunn

**August 10, 2021
7:00 PM
Planning Board Agenda**

Regular Meeting

1. Public hearing on application for Special Use Permit and Site Plan Approval, accessory apartment, 1 Wilson Street, submitted by Jon Moss
2. Public hearing on application for Subdivision Approval, two residential lots, 32 North Cedar Street, submitted by MLM Property Management, LLC
3. Public hearing on application for Subdivision Approval, two residential lots, 52 Dennings Avenue, submitted by Angela Ingham
4. Public hearing on application for Special Use Permit and Site Plan Approval, accessory apartment, 10 Herbert Street, submitted by Katharine Baker & Gamble Staempfli
5. Public hearing on application to amend existing Site Plan Approval, Mixed Use Development, 248 Tioronda Avenue, submitted by 248 Beacon Holdings, LLC
6. Review elevations for Certificate of Appropriateness related to Special Use Permit and Site Plan Approval, retail/residential, 416-420 Main Street, mixed-use commercial, office & residential development, submitted by 416 Main Street Beacon, LLC & 420 Main Street, LLC (d/b/a 420 Main St., LLC)
7. Continue review of application for Site Plan Approval, multi-family residential (62 units), 16 West Main Street, submitted by Farrell Building Company
8. Continue review of application for Site Plan Approval, mixed-use multi-family residential and commercial uses, 364 Main Street, submitted by O'Donnell Construction Corp.

Miscellaneous Business

1. Zoning Board of Appeals - August Meeting
2. Continue review of Small Cell Wireless Facility Design and Review Guideline Policy

Architectural Review

1. Certificate of Appropriateness - 199 Main Street; new facade color
2. Certificate of Appropriateness - 475 Main Street; mural
3. Certificate of Appropriateness - 5 Leonard Street; exterior improvements

City of Beacon Planning Board Agenda
08/10/2021

Title:

Public hearing on application for Special Use Permit and Site Plan Approval, accessory apartment, 1 Wilson Street, submitted by Jon Moss

ATTACHMENTS

[1 Wilson Street Site Plan.pdf](#)

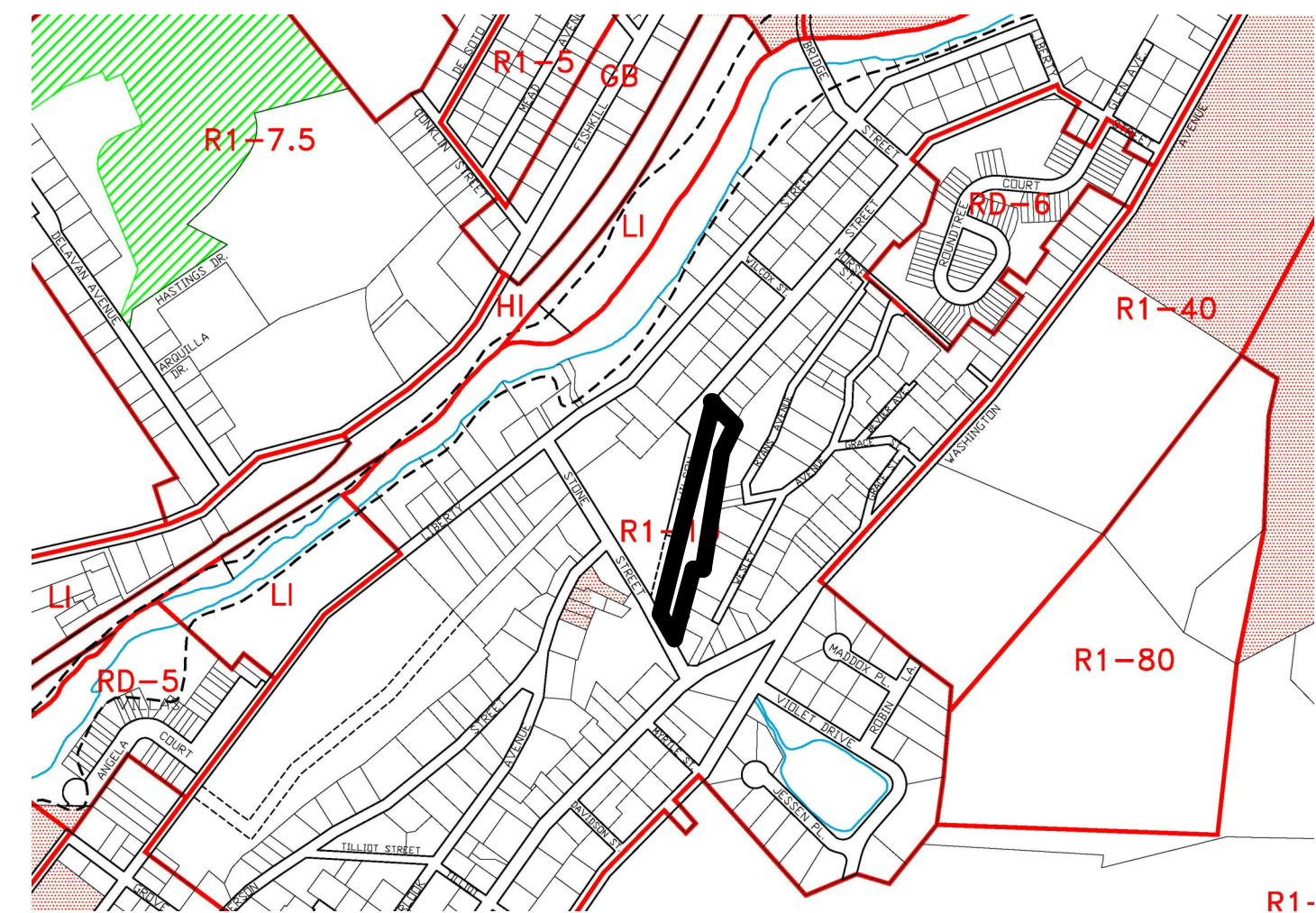
[Planner Review Letter.pdf](#)

[1 Wilson Street Draft Resolution Special Permit and Site Plan Approval.doc](#)

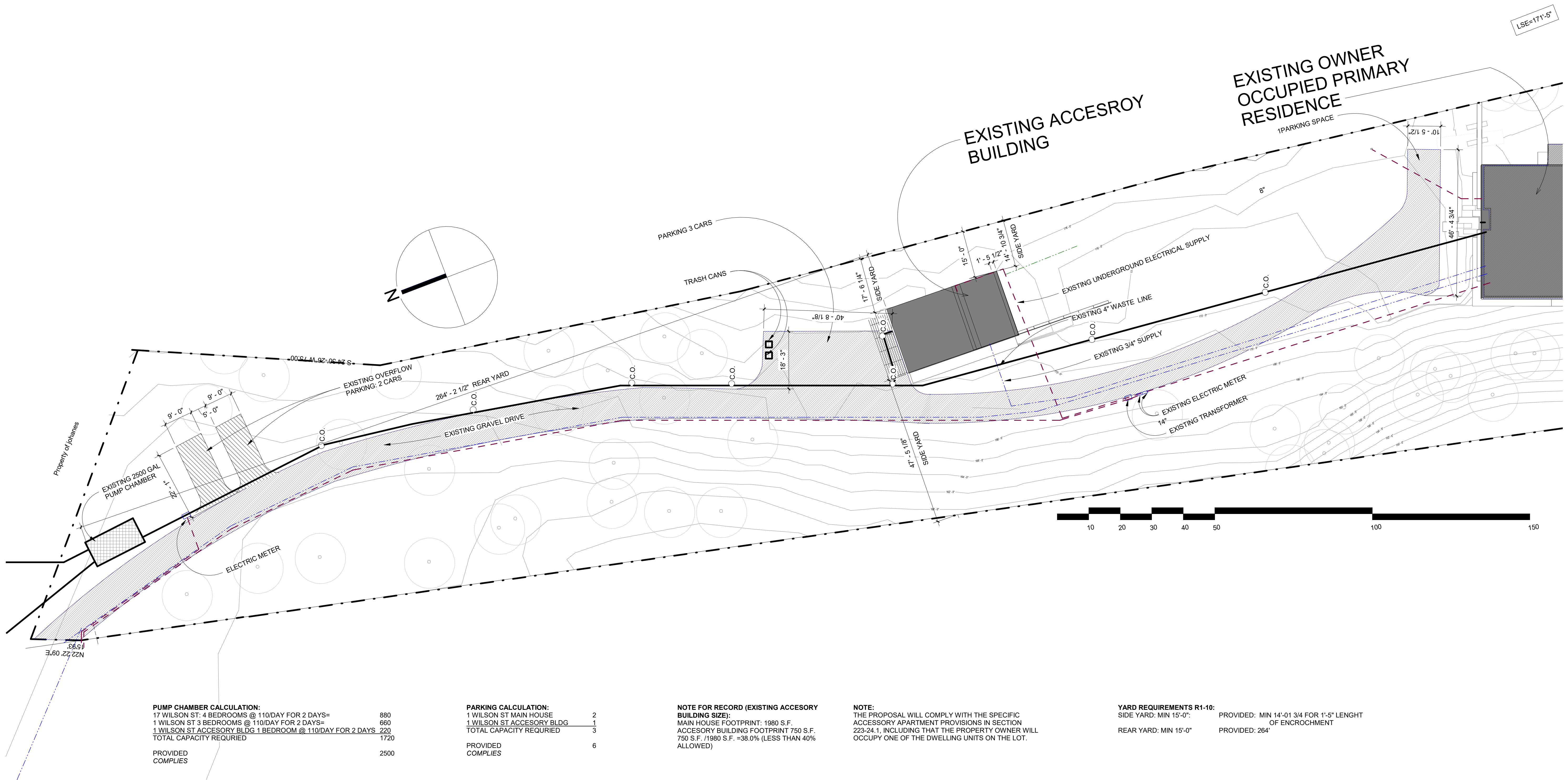
OWNER/ APPLICANT:
JONATHAN MOSS
1 WILSON ST, BEACON , NY

ACCESORY APARTMENT	
Sheet Number	Sheet Name

AC-01	SITE PLAN, DIAGRAMS
AC-02	SURVEY
AC-03	ACCESORY BUILDING PLANS



ZONE R1-10



BMA

BERG + MOSS ARCHITECTS PC
THE BEACON BUILDING
427 MAIN STREET No. 104
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

[illegible]

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1 WILSON ST.
BEACON, NY

DRAWING TITLE

SITE PLAN, DIAGRAMS

DRAWING NO.

AC-01

SEAL & SIGNATURE



ISSUE DATE: Issue Date
SCALE: 1/16" = 1'-0"
DRAWN BY: Author
CHECKED BY: Checker

To: John Gunn, Chair, and the City of Beacon Planning Board

Date: August 5, 2021

Re: **1 Wilson Street, Site Plan and Special Permit for Accessory Apartment**

I have reviewed the 3-sheet Site Plan set, dated July 27, 2018. No updated documents were provided since the previous Planning Board meeting.

Proposal

The applicant is proposing to create an accessory apartment in an existing accessory building. The parcel is in the R1-10 zoning district

Comments and Recommendations

1. Sheet AC-01 should include a note confirming that the proposal will comply with the specific accessory apartment provisions in Section 223-24.1, including that the property owner will occupy one of the dwelling units on the lot.
2. All my other comments have been addressed.

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Jonathan Moss, Berg Moss Architects

RESOLUTION
PLANNING BOARD
BEACON, NEW YORK
GRANTING A SPECIAL PERMIT AND
SITE PLAN APPROVAL FOR
1 WILSON STREET

Parcel ID# 6054-24-466926

WHEREAS, the Beacon Planning Board received an application for a Special Permit and Site Plan Approval from Jon Moss, Berg Moss Architects (the “Applicant”), to convert an existing home office in an existing accessory building (750 square feet) into an accessory apartment that is 536 square feet and a home office that is 214 square feet (the “Proposed Action” or “Project”) on a 1.509-acre parcel of property located at 1 Wilson Street in the R1-10 Zone, and designated on the City tax map as Parcel ID# 6054-24-466926 (the “Property”); and

WHEREAS, the Planning Board is the approval authority for the Special Permit for an accessory apartment pursuant to City of Beacon Zoning Code § 223-17; and

WHEREAS, the Planning Board is the approval authority for the Site Plan pursuant to City of Beacon Zoning Code § 223-25; and

WHEREAS, the application consists of application materials, correspondence, and professional studies and reports submitted to the Planning Board; and

WHEREAS, the Site Plan is shown on the following plan set titled “1 Wilson Street – Application for Accessory Apartment Use in Existing Accessory Building”, prepared by Berg & Moss Architects consisting of three (3) sheets dated July 27, 2018:

<u>Sheet</u>	<u>Title</u>
AC-01	<i>Site Plan, Diagrams</i>
AC-02	<i>Survey</i>
AC-03	<i>Accessory Building Plans; and</i>

WHEREAS, the Proposed Action is a Type II Action, pursuant to 6 NYCRR 617.5(c)(11) and (12) of the New York State Environmental Quality Review Act (“SEQRA”) requiring no further environmental review; and

WHEREAS, on August 10, 2021, the Planning Board opened a public hearing on the Special Permit and Site Plan applications, at which times all interested parties were given the opportunity to be heard and the public hearing was closed on August 10, 2021; and

Special Permit and Site Plan Approvals

1 Wilson Street

WHEREAS, the public hearing was duly noticed by publication, mailing and signage in accordance with notice requirements of the Zoning Code of the City of Beacon; and

WHEREAS, the Planning Board has reviewed the application for approval of a Special Permit to allow for an accessory apartment and compared the application against the standards set forth in the City of Beacon Zoning Code §§ 223-18.B and 223-24.1; and

WHEREAS, the Planning Board has reviewed the application for approval of a Site Plan and considered the standards as set forth in the City of Beacon Zoning Code § 223-25.E; 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.

NOW, THEREFORE, BE IT RESOLVED, that upon review of the Special Permit application to allow an accessory apartment, the Planning Board hereby finds pursuant to Sections 223-18.B and 223-24.1 of the City of Beacon Zoning Code:

1. The location and size of the use, the nature, hours and intensity of the operations involved in or conducted in connection with it, the size of the site in relation to it and the location of the site with respect to streets giving access to it are such that it will be in harmony with the appropriate and orderly development of the site and the existing adjacent permitted uses.
2. The location, nature and height of the buildings, and the nature and extent of the landscaping on the site are such that the use will not conflict with the existing permitted uses on adjacent lots and will not hinder or discourage the appropriate development use of adjacent land and buildings. The proposed accessory apartment use is compatible with the surrounding residential uses in the neighborhood.
3. Operations in connection with the accessory apartment will not be more objectionable to nearby properties by reason of noise, fumes, vibration or other characteristic than would be the operations of any permitted use, not requiring a special permit.
4. Parking areas will be of adequate size for the particular use and properly located and suitably screened from the adjoining residential uses, the entrance and exit drives are laid out in a manner that achieves maximum safety, and uses will not cause unreasonable traffic congestion or create a traffic hazard.
5. The detached accessory apartment is located in an accessory building on a lot with an owner-occupied single-family residence and is the only accessory apartment on the lot.

Special Permit and Site Plan Approvals

1 Wilson Street

6. The owner of the single-family lot upon which the accessory apartment is located shall occupy at least one of the dwelling units.
7. The minimum floor area for an accessory apartment located in an accessory building shall be 300 square feet. The maximum floor area shall be 600 square feet. The proposed accessory apartment is 536 square feet.
8. The site provides for six (6) parking spaces, three (3) more than the amount of parking spaces required for the site.

BE IT FURTHER RESOLVED, that the Planning Board hereby grants Special Permit and Site Plan Approvals to convert an existing home office in an existing accessory building (750 square feet) into an accessory apartment that is 536 square feet and a home office which is 214 square feet as shown on the application materials enumerated above, subject to compliance with the following conditions and any other requirements which must be met by law:

A. Prior to signing of the Site Plan Drawings by the Planning Board Chairman, the following conditions shall be fulfilled:

1. All application review fees shall be paid in full.
2. The Applicant shall seek and obtain all required permits and/or approvals from the appropriate agencies for the Project and satisfy all conditions contained in such approvals, as required therein.
3. The comments contained in the City Planner's letter to the Planning Board dated August 5, 2021, and all comments in any subsequent letter(s) issued, shall be fulfilled to the satisfaction of the City Planner.

When the conditions above have been satisfied, six (6) sets of the above referenced plans revised as per the conditions above shall be submitted for endorsement 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. The following are general conditions which shall be fulfilled:

1. 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.
2. A copy of this Resolution shall be attached to the Certificate of Occupancy.

Special Permit and Site Plan Approvals

1 Wilson Street

3. The accessory apartment shall be inspected by the Building Department every two years in order to determine whether the apartment remains in compliance with § 223-24.1 of the City of Beacon Zoning Code. Upon a satisfactory inspection report, the accessory apartment owner shall be reissued a certificate of occupancy. In the event that the inspection indicates that the apartment is no longer in compliance, the certificate of occupancy shall be revoked until the violations are cured.
4. The Building Inspector may revoke this Special Permit Approval where it is found that the use of the premises does not conform to the limitations and conditions contained in the Special Permit Approval.
5. The accessory apartment shall not be used for short term rentals unless a short term rental permit is obtained pursuant to Section 223-26.5 of the City Code.
6. In accordance with Section 223-18.F(1) of the Zoning Law, this Special Permit Approval authorizes only the particular use specified in the permit and shall expire if:
 - a. A bona fide application for a Building Permit is not filed within one (1) year of the issuances of this Special Permit Approval; or
 - b. If all required improvements are not made within two (2) years from the date of issuance of the Building Permit; or
 - c. If said use ceases for more than six (6) months for any reason.
7. In accordance with Section 223-18.F(2) of the Zoning Law, the Planning Board may grant one (1) or more extensions of up to six (6) months each, to (a) complete the conditions of approval for the special permit use, upon a finding that the applicant is working toward completion of such conditions with due diligence and has offered a reasonable explanation of its inability to complete such improvements and file a bona fide application for a building permit, and (b) to complete construction of the improvements, upon a finding that the Applicant is prosecuting construction with due diligence and has offered a reasonable explanation of its inability to complete the Project. The Planning Board may impose such conditions as it deems appropriate upon the grant of any extension. The granting of an extension of time shall not require a public hearing.
8. 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 Applicant 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)

1 Wilson Street

9. As used herein, the term “Applicant” shall include the Applicant and the Applicant’s heirs, successors and assigns, and where applicable their contractors and employees.
10. 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.
11. The approval granted by this resolution does not supersede the authority of any other entity.
12. 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, further project review and/or a public hearing, as it may deem appropriate.

Resolution:

City of Beacon Planning Board Agenda
08/10/2021

Title:

Public hearing on application for Subdivision Approval, two residential lots, 32 North Cedar Street, submitted by MLM Property Management, LLC

ATTACHMENTS

[32 North Cedar Street Cover Letter.pdf](#)

[32 North Cedar Street I & I Report.pdf](#)

[32 North Cedar Street Subdivision Sheet Set.pdf](#)

[Engineer Review Letter.pdf](#)

[Planner Review Letter.pdf](#)

[32 North Cedar Street Short Form EAF Parts 2 and 3.pdf](#)

[32 North Cedar Street Subdivision SEQRA Negative Declaration.docx](#)



*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 Fax: 845-440-6637
www.HudsonLandDesign.com*

July 27, 2021

Mr. John Gunn, Chairman
City of Beacon Planning Board
1 Municipal Center
Beacon, NY 12508

Re: 32 North Cedar Street: Subdivision
Tax ID: 5954-28-978920 (±0.33 Acres)
City of Beacon, New York

Dear Chairman Gunn:

On behalf of the Applicant for the above referenced project, Hudson Land Design (HLD) has enclosed the following materials for the Planning Board's consideration at your next available regularly scheduled meeting:

- Preliminary Subdivision Plat and Plan Set – 3 Sheets (5 copies); and
- Infiltration and Inflow Investigation Report (5 copies).

Please note that the above materials have been emailed directly to the City via egrogan@beaconny.gov. The documents have been revised based on comment letters from the City's professional consultants. The following is a point-by-point response to each of the comments within those letters.

Lanc & Tully's July 7, 2021 Comment Letter:

General Comments:

1. The infiltration and inflow report has been updated to include the estimated volume of water that can be pumped by the existing sump pump.
2. The plans have been updated to show the revised discharge location of the sump pump.
3. The note has been moved into the view port.
4. The driveway reflects future conditions on Lot 1.
5. A curb detail has been provided.

6. There is a robust shrub line along Oak Street. There are no proposed additional landscape features along that side. However, a street tree has been added to the corner of Oak and N. Cedar, one along N. Cedar, and screening landscaping has been added between the proposed property lines.

John Clarke Planning and Design's July 8, 2021 Comment Letter:

1. The approximate diameter and species of the trees has been shown.
2. The bulk table reference note has been added.
3. The viewport has been expanded to fully show the note.
4. Additional trees have been shown (2 street trees plus 12 screening trees).
5. The driveway area has been slightly expanded. The turnaround area is shown.
6. Per the Planning Board conversation, the applicant has approached the prospective buyer for lot 2 about the potential driveway from Oak Street, and the preference to utilize N. Cedar Street remains.

We look forward to further discussing the design details of the project with you and your Board members at the scheduled public hearing.

Should you have any questions or require additional information, please feel free to call my direct line at 845-765-8955.

Sincerely,

A handwritten signature in dark ink, appearing to read "Daniel G. Koehler", with a long horizontal flourish extending to the right.

Daniel G. Koehler, P.E.
Principal

cc: MLM Property Management, LLC (via email)
Brendan Johnson, L.S., Project Surveyor (via email)
Michael A. Bodendorf, P.E. (HLD File)



*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 Fax: 845-440-6637
www.HudsonLandDesign.com*

June 29, 2021
Revised July 27, 2021

Mr. John Gunn, Chairman
City of Beacon Planning Board
1 Municipal Center
Beacon, NY 12508

Re: Infiltration and Inflow Investigation
32 North Cedar Street Subdivision
Tax ID: 5954-28-978920 (± 0.33 Acres Total)
City of Beacon, New York

Dear Chairman Gunn,

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 June 29, 2021 at the existing residence located at 32 North Cedar Street, which consists of a two-story framed building.

The first phase of the study consisted of an exterior inspection of the building to determine the location of roof leader discharge points. The existing two-story building on site does not have a gutter system or any roof leaders to account for (reference picture below) so no water from the roof will enter the City of Beacon's sewer system.

No gutters or roof leaders were found on the existing building on site.



The second phase of the study consisted of interior inspection of the building to determine if there are any illicit connections to the building sewer line from sump pumps, floor drains and the like. HLD personnel were able to observe sections of interior sanitary sewer plumbing to the point where the piping was routed through the northeast foundation wall of the residence (located generally in the center of the building). The pipe collects the wastewater from the residence and then presumably flows northeasterly toward North Cedar Street's sanitary sewer collection system. HLD observed a clean-out in the basement on the interior sanitary sewer plumbing along the northeast foundation wall of the residence. A note has been added to the plan set requiring that the sump pump be removed prior to subdivision approval.

View of the sewer outlet and sump pump by the building's northeast wall (towards North Cedar Street)



The daily capacity of the sump pump has been estimated for purposes of understanding the potential amount of gallons being removed from the City's sanitary sewer system. Since the pump is old, and an identification plate with the specifications is not visible, HLD has made several assumptions and applied them to create a system curve. The assumptions are as follows:

- static head is approximately 2 feet (the discharge is to the gravity sewer service line adjacent to the pump)
- there is 3 feet of discharge pipe, with two 90-degree elbows – the effective length is 11 feet (4feet of effective length for each 90-degree elbow)
- the pump is 1/3 horsepower

Using an equivalent type of submersible effluent pump, Gould's model LSP03, and since the total dynamic head will be low, the friction head is expected to produce approximately 15 feet per 100 feet of forcemain at 36 gallons per minute (gpm). The resulting total dynamic head is then approximately 3.7 feet. The pump is capable of 36 gpm at 5 feet of total dynamic head (see attached pump curve). Based on the age of the pump, the estimated pump rate due to lost efficiency and older technology is 25 gpm. The first floor of the house is approximately elevation 141, and the basement floor is approximately 133 (approximately 5.5 feet below existing surrounding grade). Based on soils mapping, the area is expected to have Dutchess-Cardigan Complex. The Cardigan component is shallow to bedrock, which is not expected. The Dutchess component is relatively deep silt loam with groundwater being greater than 80 inches. It is expected that this pump serves purpose only during those periods of high seasonal groundwater in combination with storm events. The slab is approximately 660 square feet. Assuming 4" stone layer beneath the gravel, and 40% void ratio, the volume of the stone beneath the slab is approximately 660 gallons. The pump cycle to drain the entire volume (without considering recharge during the pumping) is 26 minutes. The recharge is expected to be slow as the silt loam nature of the soil is lower permeability, 0.57 inches per hour per the soil survey. It is expected that the recharge time would take 7 hours. Therefore, we estimate a maximum potential of 3 pump cycles per day, or a total of 1,980 gallons per day during periods of high groundwater concurrent with long-duration storm events.

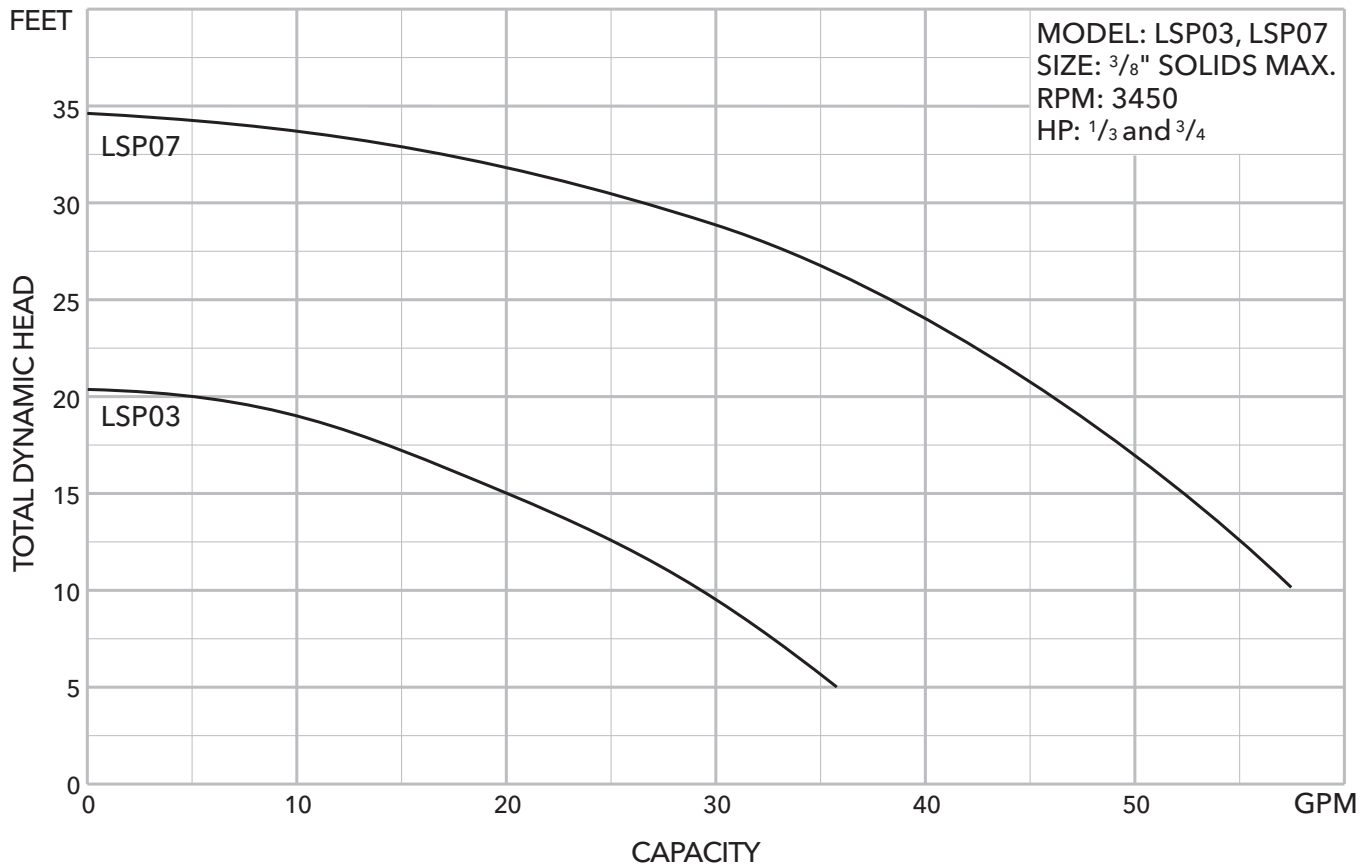
Other than the sump pump, HLD did not find any other illicit connections from the building located at 32 North Cedar Street to the City of Beacon's sanitary sewer collection system. Should you have any questions, please feel free to call my direct line at 845-765-8955.

Sincerely,



Daniel G. Koehler, P.E.

cc: MLM Property Management, LLC. (via email)
Michael A. Bodendorf, P.E. (HLD file)



MODEL INFORMATION

Order No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	Min. On Level	Min. Off Level	Minimum Basin Diameter	Maximum Solids Size	Shipping Weight lbs/kg
LSP0311	1/3	115	2.9	10	1	Plug / No Switch	10'	1 1/2"	Manual	Manual	9"	3/8"	11 / 5
LSP0311A						Built-In Wide Angle			11"	5"	12"		
LSP0311AT						Piggyback Wide Angle			11"	5"	12"		
LSP0311AV						Piggyback Vertical			8.5"	2"	12"		
LSP0311F						Plug / No Switch	20'		Manual	Manual	9"		
LSP0311AF						Built-In Wide Angle			11"	5"	12"		
LSP0311ATF						Piggyback Wide Angle			11"	5"	12"		
LSP0711F	3/4	115	7.1			Plug / No Switch	20'		Manual	Manual	9"	15 / 6.8	
LSP0711AF						Built-In Wide Angle			12.5"	6.5"	12"		
LSP0711ATF						Piggyback Wide Angle			12.5"	6.5"	12"		
LSP0712F		Plug / No Switch	Manual			Manual			9"				
LSP0712AF		Built-In Wide Angle	12.5"			6.5"			12"				
LSP0712ATF		Piggyback Wide Angle	12.5"			6.5"			12"				

1. "BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR DILELLO HOMES" DATED JUNE 20, 2021 AS PREPARED BY JOHNSON SURVEYING, (845) 380-0528.

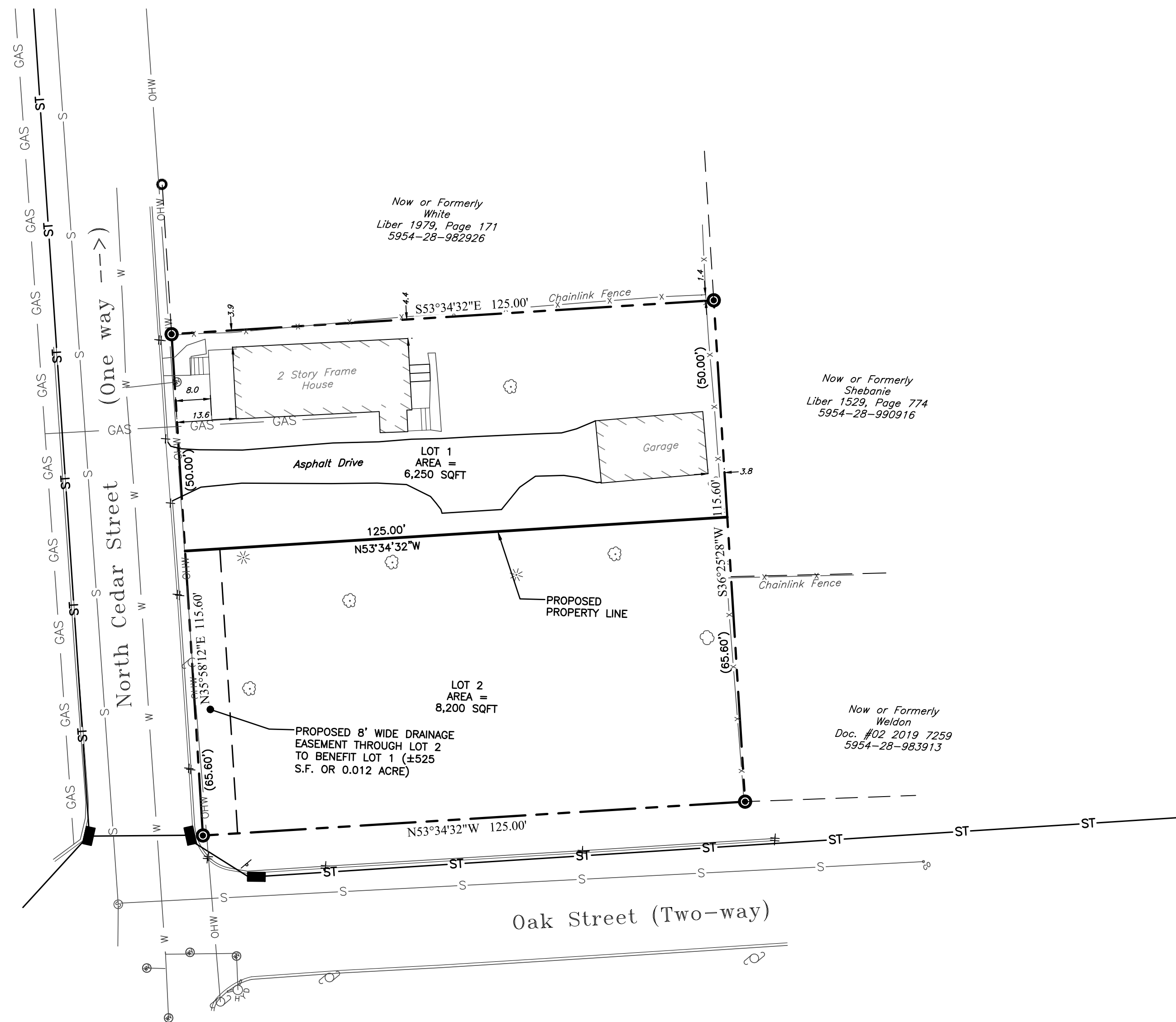
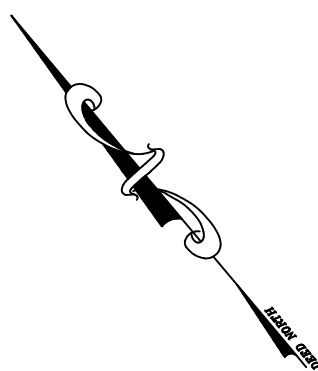
1. FILED MAP REFERRED: MAP ENTITLED "MAP OF LOTS OF PROPERTY OF HUSTIS & YOUMANS" PREPARED BY S. SCOFIELD AND FILED IN THE DUTCHESS COUNTY CLERKS' OFFICE ON MARCH 28, 1865 AS FILED MAP 178..
2. BEARINGS AND NORTH SHOWN HEREON ARE REFERENCED TO NAD 83--N9Y EAST USING NYSNET RTN GPS.
3. CONTOUR INTERVAL IS ONE FOOT. ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD 88 USING NYSNET RTN GPS.

±14,450.0 S.F. OR ± 0.33 ACRE

CITY OF BEACON 5954-28-978920

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.

NO NYSDEC OR FEDERAL WETLANDS WERE FOUND ONSITE



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.

SHEET 1: PRELIMINARY SUBDIVISION PLAT (PL-1)

SHEET 2: PRELIMINARY SUBDIVISION PLAN (SP-1)

SHEET 3: CONSTRUCTION DETAILS (CD-1)

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.

I HEREBY CERTIFY THAT THE SURVEY SHOWN
HEREON IS BASED ON AN ACTUAL FIELD SURVEY
COMPLETED ON JUNE 16, 2021.

BY: Brendan Johnson, L.L.S. N.Y. State Lic. no. 50919

DRAWN BY: LGP				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	7/27/21	PER PLANNING BOARD COMMENTS	DGK				

BEFORE UNDERTAKING ANY DIGGING, DRILLING,
BLASTING OR DISTURBANCE TO THE GROUND IN
ANY WAY, FOR ANY REASON, ALL INDIVIDUALS
MUST CONTACT
DIG SAFELY NEW YORK
AT
811 OR WWW.CALL811.COM



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

32 N. CEDAR STREET SUBDIVISION

32 N. CEDAR STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-28-978920

JOB #: 2021:023

DATE: 6/29/2021

SCALE: AS SHOWN

TITLE: PL-1

SHEET: 1 OF 3

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

SCHEDULE OF REGULATIONS (R1-5 ZONING DISTRICT)
AND LOT CONFORMANCE TABLE:

PARAMETER	REQUIREMENT	LOT #1	LOT #2
LOT AREA:	5,000 SQUARE FEET MIN	6,250 S.F.	8,200 S.F.
LOT WIDTH:	50 FEET MINIMUM	50.0 FEET	65.6 FEET
LOT DEPTH:	100 FEET MINIMUM	125.0 FEET	125.0 FEET
YARD SETBACKS (RESIDENTIAL USE):			
FRONT YARD:	15 FEET MINIMUM	8.0 FEET*	8.0 FEET** / 15.7 FEET
SIDE YARD:	10 FEET MINIMUM	3.9 FEET*	21.9 FEET
REAR YARD:	20 FEET MINIMUM	70.8 FEET	62.0 FEET
MAX. BUILDING HEIGHT:	MAX 35 FEET, 2.5 STORIES	<35 FEET	<35 FEET
DWELLING UNITS PER LOT:	MAX 1	1	1

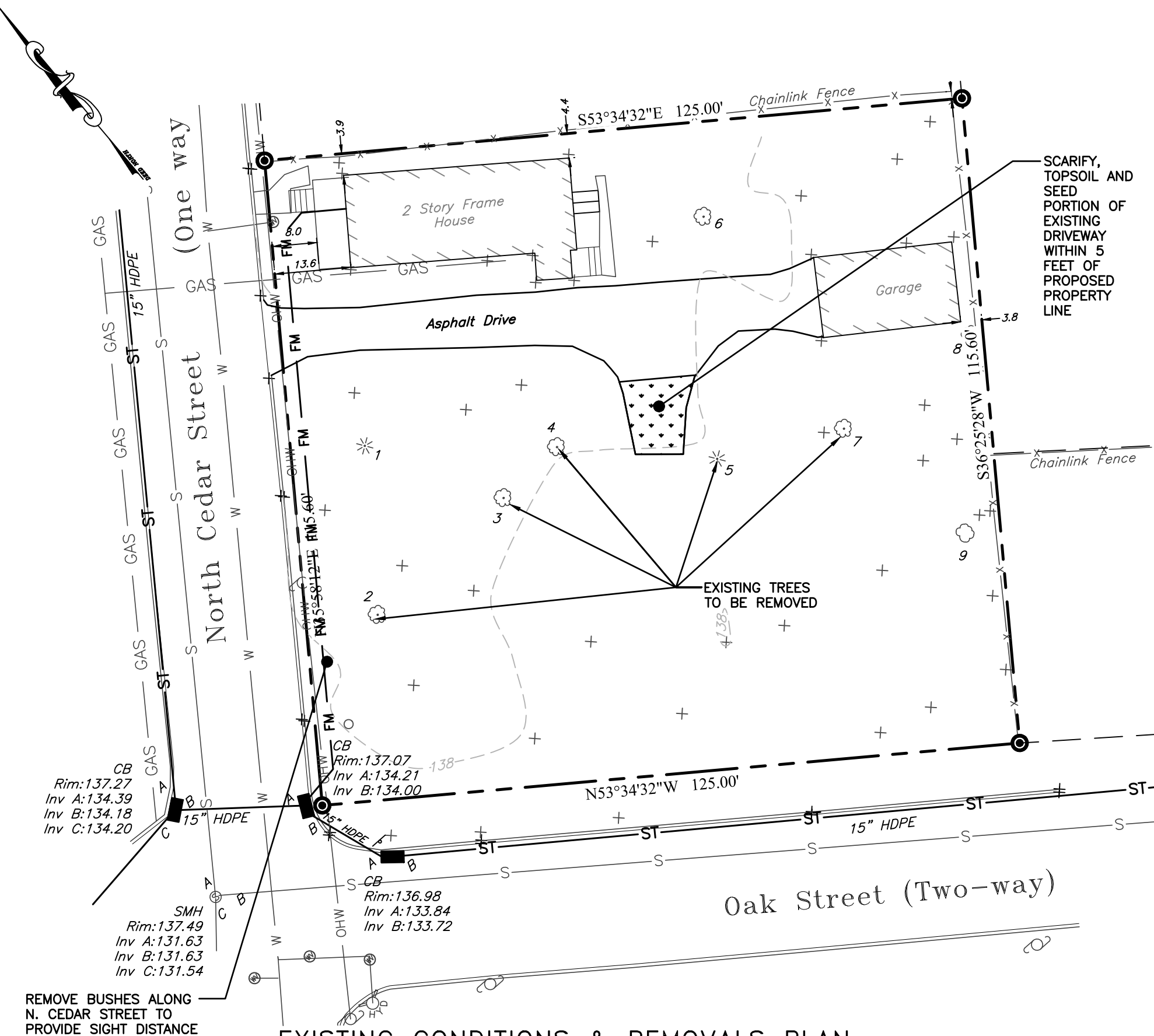
*PRE-EXISTING, NON-CONFORMING

** LOT 2 IS A CORNER LOT WITH FRONTAGE ON TWO STREETS (N. CEDAR & OAK STREET) A 15 FOOT SETBACK HAS BEEN APPLIED TO THE TWO SIDES OF THE LOT ADJACENT TO THESE STREETS. THE FRONT SETBACK TO N. CEDAR STREET HAS BEEN LINED UP TO GENERALLY MATCH ADJACENT STRUCTURES, CONSISTENT WITH SECTION 223-13K.

EXISTING TREE & REMOVAL SCHEDULE:

1. 10" SPRUCE	6. 30" MAPLE
2. 12" QUINTUPLE MAGNOLIA TBR	7. 20" APPLE TBR
3. 36" TRIPLE MULBERRY TBR	8. 16" WALNUT
4. 18" CHERRY TBR	9. 6" TRIPLE JAPANESE MAPLE
5. 8" SPRUCE TBR	

- NOTES:
- TREE LOCATIONS BY JOHNSON SURVEYING, EXCEPT #9 LOCATED BY HUDSON LAND DESIGN.
 - SPECIES ID PER HUDSON LAND DESIGN.
 - TBR = TO BE REMOVED

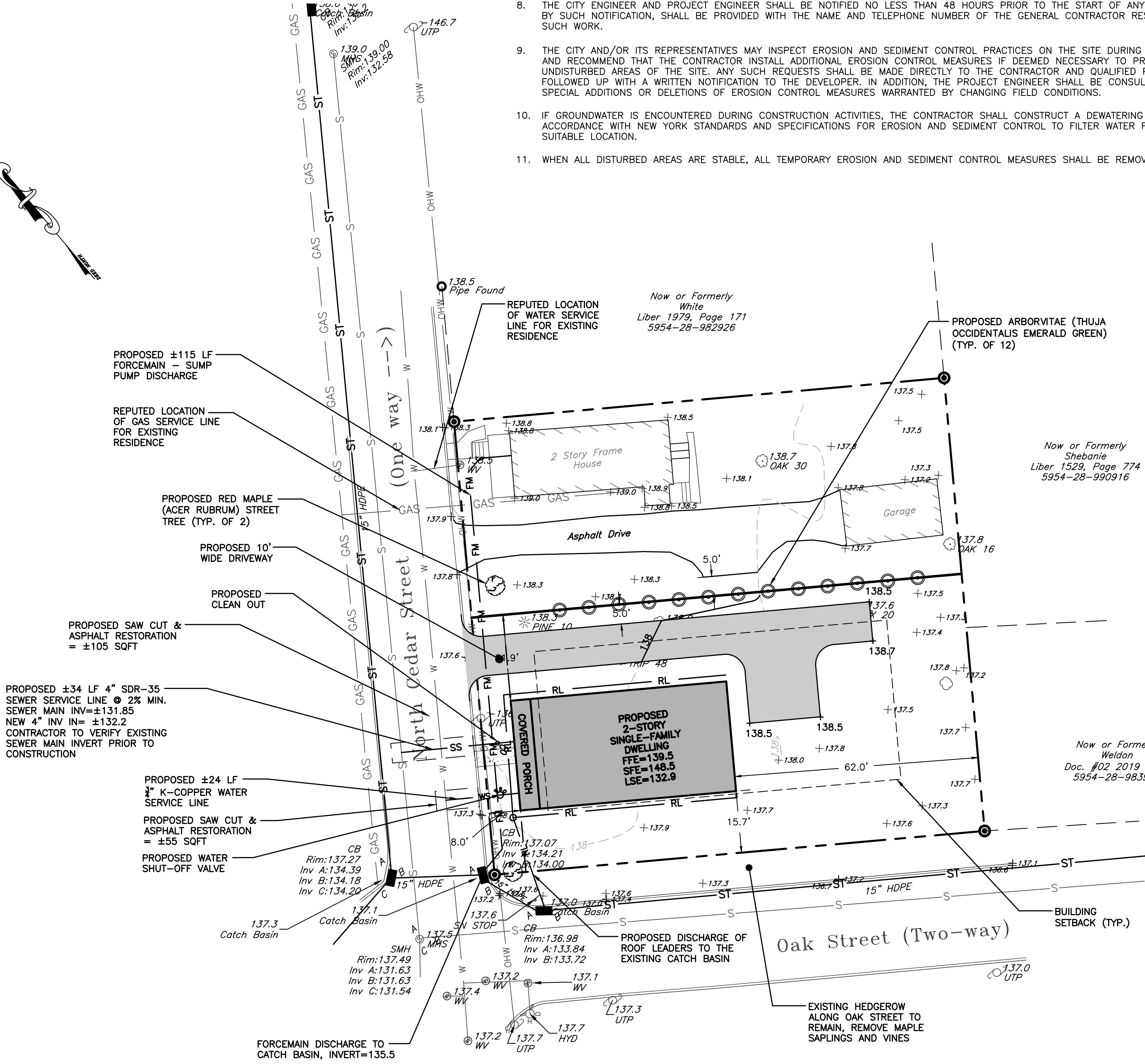


EXISTING CONDITIONS & REMOVALS PLAN

SCALE: 1" = 20'
GRAPHIC SCALE

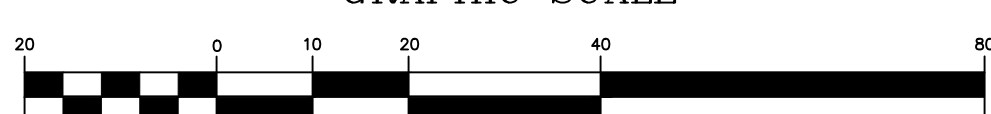


(IN FEET)
1 inch = 20 ft.



PRELIMINARY SUBDIVISION PLAN

SCALE: 1" = 20'
GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

EROSION AND SEDIMENT CONTROL NOTES:

- 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.
- 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.
- ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- ANY PILE OF POTENTIALLY ERODIBLE 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.
- PERMANENT SEEDING AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THIS PLAN.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 REESTABLISHED 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 ALL REPAIRS 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:

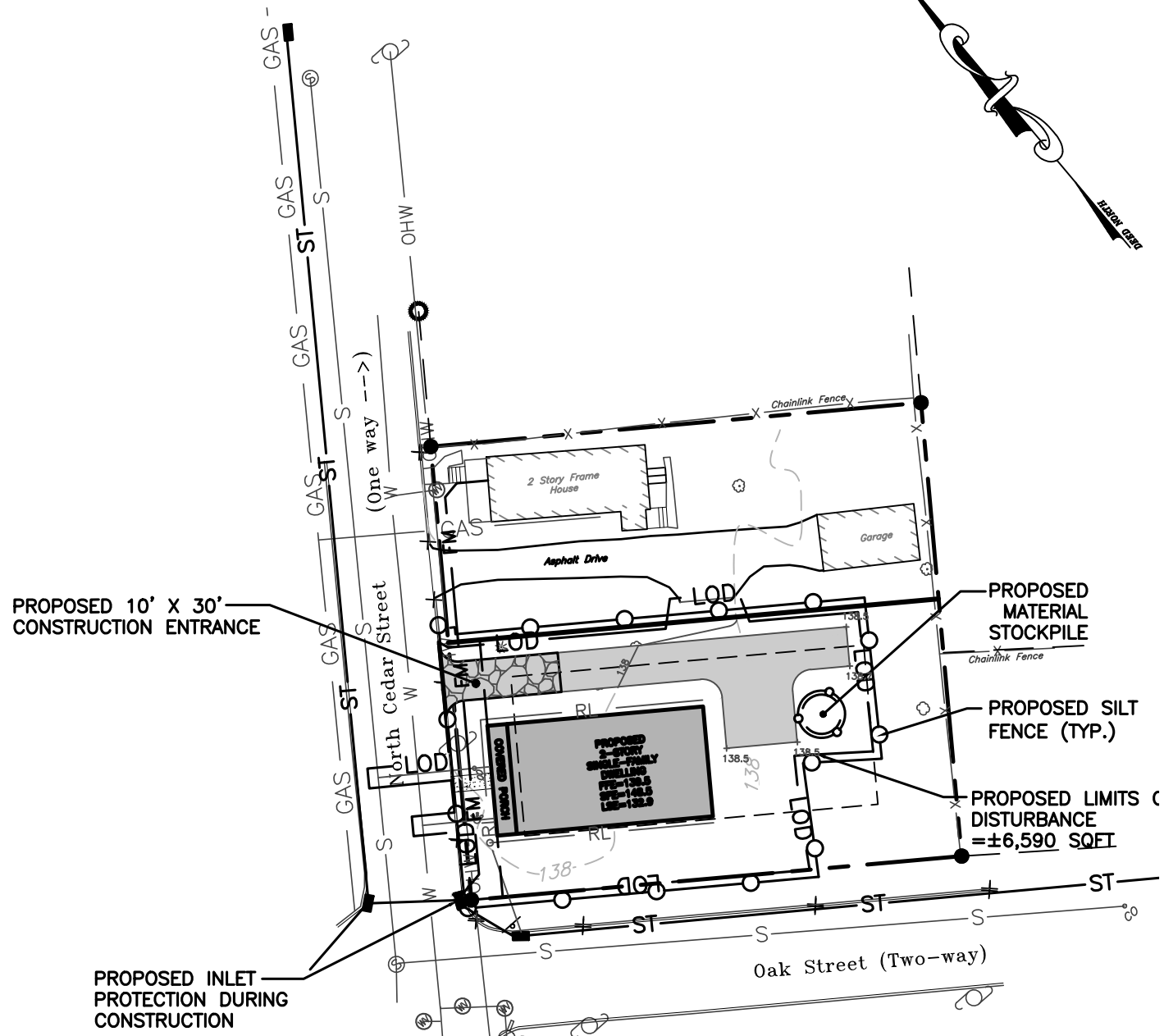
INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS 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.



EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 40'

GRAPHIC SCALE



(IN FEET)
1 inch = 40 ft.

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:

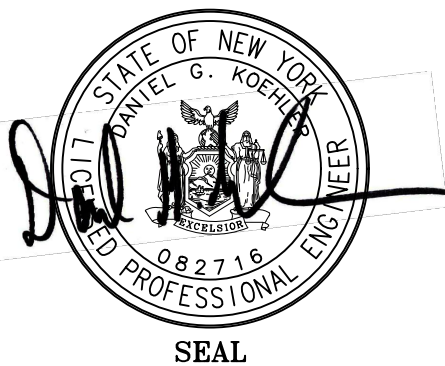
THE UNDERSIGNED OWNER OF THE PROPERTY HERON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

MLM PROPERTY MANAGEMENT, LLC.

DATE



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



SEAL

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DIG SAFELY NEW YORK
AT
811 OR WWW.CALL811.COM



DRAWN BY: LGP				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	7/27/21	PER PLANNING BOARD COMMENTS	DGK				

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

SEE PAVEMENT SECTION, OR IN GRASSED AREAS, COMPLETE BACKFILL WITH A MINIMUM OF 3" TOPSOIL & SEED

PLAN VIEW

PROFILE VIEW

NOTES:

- EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
- 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.
- TAPPING SADDLE FOR CONNECTION OF THE PROPOSED SERVICE LINE TO THE EXISTING SEWER MAIN TO BE A 4" PREDCO HUB TAP SADDLE - MODEL #HTS4/C.

SANITARY SEWER SERVICE LINE TRENCH DETAIL

NOT TO SCALE

PLAN VIEW

SECTION VIEW

NOTES:

- A MINIMUM 5' COVER SHALL BE PROVIDED ON THE WATER SERVICE LINE (CONDITIONED ON ACTUAL 5' MIN. WATER MAIN DEPTH).
- CORPORATION STOP TO BE COMPRESSION TYPE BY MUELLER.
- WATER SERVICE LINE TO HAVE A 'GOOSENECK' NEAR CORPORATION STOP.
- CORPORATION STOP TO BE INSTALLED IN THE UPPER HALF OF THE WATER MAIN AT AN ANGLE OF APPROXIMATELY 45° FROM HORIZONTAL.
- THE CONTRACTOR SHALL INSTALL A FULL BODIED STAINLESS STEEL TAPPING SLEEVE AT THE PROPOSED WATER SERVICE LOCATION.

WATER SERVICE CONNECTION DETAIL

NOT TO SCALE

NOTES:

- 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.
- FURNISH, PLACE, AND COMPACT SUBBASE.
- TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
- FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.

PAVEMENT RESTORATION DETAIL

NOT TO SCALE

NOTES:

- SEED: PENALAWN RED FESCUE 25%, KENTUCKY BLUE GRASS 55%, PERENNIAL RYE 20% (170 POUNDS PURE LIVE SEED PER ACRE)
- FERTILIZER: COMMERCIAL 30-10-20, SLOW RELEASE. APPLICATION RATE AS PER MANUFACTURER'S RECOMMENDATIONS (NO MORE THAN 1LB NITROGEN PER 1000SF)
- MULCH: LAYER OF COMMON HAY OR STRAW, 2 TONS PER ACRE
- TOPSOIL: MIN. OF 4" DEPTH, A NATURAL, FERTILE, AGRICULTURAL SOIL CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH.

TOPSOIL SEED, FERTILIZER AND MULCH DETAIL

NOT TO SCALE

PLAN VIEW

PROFILE VIEW

NOTES:

- EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
- 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.
- IN AREAS WHERE 5' COVER REQUIREMENT CANNOT BE MET, THE CONTRACTOR SHALL PROVIDE PIPE INSULATION TO PREVENT FREEZING.
- IF WATER SERVICE AND SEWER SERVICE LINE CROSSINGS ARE NEEDED, PROVIDE 18" OF VERTICAL SEPARATION

WATER SERVICE LINE TRENCH DETAIL

NOT TO SCALE

PLAN VIEW

PROFILE VIEW

NOTES:

- 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.

CLEANOUT DETAIL

NOT TO SCALE

PLAN VIEW

PROFILE VIEW

NOTES:

- 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.
- CURB STOP TO BE COMPRESSION TYPE BY MUELLER.
- AREA AROUND CURB BOX TO BE BACKFILLED WITH GRAVELLY MATERIAL.

WATER SHUT-OFF VALVE DETAIL

NOT TO SCALE

NOTES:

- MINIMUM NYSDOT ITEM NO. 304.12 SUBBASE COURSE COMPACTED TO 95% MODIFIED PROCTOR
- 1" NYSDOT ASPHALT CONCRETE TOP COURSE, TYPE 6F
- 2" NYSDOT ASPHALT CONCRETE BINDER COURSE, TYPE 3

PAVED DRIVEWAY SECTION DETAIL

NOT TO SCALE

PLAN VIEW

SECTION VIEW

NOTES:

- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- 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.
- PREFABRICATED UNITS SHALL BE GEOTAB, ENVIROFENCE OR APPROVED EQUAL
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

NOT TO SCALE

PLAN VIEW

PROFILE VIEW

NOTES:

- PROPOSED TREES TO BE RED MAPLE. REFER TO SHEET 2 PLANS FOR LOCATIONS.

TREE PLANTING DETAIL

NOT TO SCALE

NOTES:

- CONCRETE CURB SHALL BE 4,000 PSI CAST-IN-PLACE, AND IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
- EXPANSION JOINTS OF 1/2" CELLULOSE OR SIMILAR MATERIAL SHALL BE PLACED AT 10 FOOT INTERVALS.
- FOR MOUNTABLE CURBS ABUTTING SIDEWALK OR OTHER HARDSCAPE, REFER TO "ABUTTING SIDEWALK" DETAIL.
- CONCRETE SHALL BE SEALED WITH A SALT RESISTANT SEALER.

ABUTTING GRASS OR LANDSCAPE

NOT TO SCALE

NOTES:

- CONCRETE CURB SHALL BE 4,000 PSI CAST-IN-PLACE, AND IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
- EXPANSION JOINTS OF 1/2" CELLULOSE OR SIMILAR MATERIAL SHALL BE PLACED AT 10 FOOT INTERVALS.
- FOR MOUNTABLE CURBS ABUTTING SIDEWALK OR OTHER HARDSCAPE, REFER TO "ABUTTING SIDEWALK" DETAIL.
- CONCRETE SHALL BE SEALED WITH A SALT RESISTANT SEALER.

CAST-IN-PLACE CONCRETE CURB DETAIL

NOT TO SCALE

PLAN VIEW

PROFILE VIEW

NOTES:

- EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
- 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.
- CONTRACTOR TO VERIFY ALL PIPE CROSSINGS PRIOR TO CONSTRUCTION (E.G., WATER SERVICES, SEWER SERVICES, GAS LINES, ETC.).
- WHERE MINIMUM 4.5' COVER REQUIREMENT CANNOT BE MET, PROVIDE PIPE INSULATION BOARD CERTIFOAM 40 OR APPROVED EQUAL, CLOSED CELL EXTRUDED POLYSTYRENE FOAM MEETING ASTM C578 TYPE VI WITH MINIMUM 40 PSI COMPRESSIVE STRENGTH PER ASTM D1621, 0.1% MAXIMUM WATER ABSORPTION PER ASTM C272, PROVIDE TWO 2" THICK BOARDS, OVERLAP ALL INSULATION BOARD JOINTS.

SUMP PUMP FORCEMAIN TRENCH DETAIL

NOT TO SCALE

DRAWN BY: LGP

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	7/27/21	PER PLANNING BOARD COMMENTS	DGK

CHECKED BY: DGK

REVISIONS:

NO.	DATE	DESCRIPTION	BY
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before you dig

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STATE OF NEW YORK

DANIEL G. KOPPEL

PROFESSIONAL ENGINEER

082716

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

CONSTRUCTION DETAILS

32 N. CEDAR STREET SUBDIVISION

32 N. CEDAR STREET

CITY OF BEACON

DUTCHESS COUNTY, NEW YORK

TAX ID: 5954-28-978920

JOB #: 2021-023

DATE: 6/29/2021

SCALE: AS SHOWN

TITLE: CD-1

SHEET: 3 OF 3

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20

LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal
John Queenan, P.E., Principal

Rodney C. Knowlton, L.S., Principal
Jerry A. Woods, L.S., Principal

John D. Russo, P.E., Principal
John Lenc, P.E., L.S.
Arthur R. Tully, P.E.

August 2, 2021

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 32 North Cedar Subdivision
Tax No. 5954-28-978920
City of Beacon

Dear Mr. Gunn:

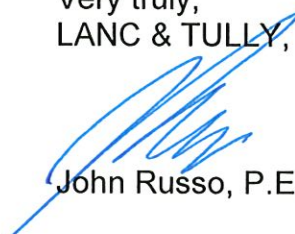
My office has received the following in regard to the above application:

- Correspondence dated July 27, 2021, as prepared by Hudson Land Design.
- Report titled "Infiltration and Inflow Investigation – 32 North Cedar Street", with latest revision date of July 27, 2021, as prepared by Hudson Land Design.
- Plan set titled "32 N. Cedar Street Subdivision", consisting of 3 sheets with the latest revision date of July 27, 2021, as prepared by Hudson Land Design.

The proposed subdivision is located at the intersection of North Cedar Street and Oak Street, is located in the R1-5 Zone, and entails the subdivision of a 0.332± acre (14,450 square feet) parcel into 2 parcels, with Lot 1 being 6,250 square feet and the Lot 2 being 8,200 square feet in size. Based upon our review of the submitted documents and plans, we offer the following comments:

Based upon our review of the submitted documents and revised plans, all outstanding engineering items have been addressed at this time. 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: John Clarke, Planner
Jennifer Gray, Esq.
David Buckley, Building Inspector

To: John Gunn, Chair, and the City of Beacon Planning Board

Date: August 5, 2021

Re: **32 North Cedar Street Subdivision**

I have reviewed the response letter from Hudson Land Design and a 3-sheet Subdivision Plan set, all dated July 27, 2021.

Proposal

The applicant is proposing to subdivide a 0.33-acre parcel with one existing house into two lots for the construction of an additional house. Parcel 1 would have 6,250 square feet and Parcel 2 would contain 8,200 square feet. The parcel is in the R1-5 zoning district.

Comments and Recommendations

1. The proposed red maple shown near the corner should be planted at least 25 feet from the intersection and the hedge removed or trimmed to be consistent with 223-13 I, Visibility at intersections.
2. I suggest one or two additional canopy trees be planted along Oak Street. Street trees near the curb line provide shade for the street, help to slow traffic, and have a wide variety of other environmental benefits.
3. All my other previous comments have been addressed.

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Daniel G. Koehler, P.E., Project Engineer

Project: 32 North Cedar Street Subdivision

Date: August 10, 2021

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?	☒	☐

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 the attached addendum.

☐ 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	August 10, 2021
Name of Lead Agency John Gunn	Date Chairman
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)

**ATTACHMENT TO
NEGATIVE DECLARATION
REASONS SUPPORTING DETERMINATION**

**APPLICATION FOR SUBDIVISION APPROVAL
FOR 32 NORTH CEDAR STREET**

Parcel No. 5954-28-978920

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 0.33-acre parcel with one existing house and a detached garage into two lots for the construction of an additional house. Parcel 1 will have 6,250 feet and Parcel 2 will have 8,200 feet. The property is located at 32 North Cedar Street in the R1-5 Zoning District on property known and designated on the Tax Map as Parcel No. **5954-28-978920** (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. On July 13, 2021, the Planning Board declared itself Lead Agency and proceeded to review the application pursuant to SEQRA.

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 R1-5 Zoning District and is currently improved with a single family dwelling. The Proposed Action would involve the subdivision of the existing lot and the construction of one new single family dwelling with typical grading and site work associated with such construction. There are no wetlands, water bodies, very steep slopes or other environmentally sensitive areas on the Property. 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, including stormwater management structures. 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. 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 or serve as habitat for the Indiana Bat. The Project proposes the removal of 5 trees to accommodate construction of the new single family dwelling and associated improvements. Tree removal at the Project Site will take place between October 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.

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 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 between 7:00 a.m. and 7:00 p.m. It is not anticipated that blasting will be necessary during the proposed construction. If blasting does become necessary, it will be performed in accordance with all applicable state and local requirements. 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. Although the EAF Mapper Summary Report identified DEC Remediation Site B00130 as being located within 2,000 feet of the Property at 33 North Cedar Street, review of reports from DEC's Environmental Site Remediation Database reveal that the site has been closed out.

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 and consistent with the character of the existing neighborhood.

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: August 10, 2021
Beacon, New York

Motion by _____, seconded by _____:

Kevin Byrne
J.C. Calderon
Karen Quiana
Jill Reynolds

Voting:
Voting:
Voting:
Voting:

Len Warner
Randall Williams
John Gunn, Chairman Voting:

Voting:
Voting:

City of Beacon Planning Board Agenda
08/10/2021

Title:

Public hearing on application for Subdivision Approval, two residential lots, 52 Dennings Avenue, submitted by Angela Ingham

ATTACHMENTS

[52 Dennings Avenue Cover Letter.pdf](#)

[52 Dennings Avenue Exhibit A - Consultant Response Letter.pdf](#)

[52 Dennings Avenue Exhibit B - Coastal Assessment Form and LWRP Consistency Statement.pdf](#)

[52 Dennings Avenue Exhibit C - Approval Letter Dutchess County Dept. of Behavioral and Community Health.pdf](#)

[52 Dennings Avenue Site Plan Sheet Set.pdf](#)

[52 Dennings Avenue Subdivision Plat.pdf](#)

[Engineer Review Letter.pdf](#)

[Planner Review Letter.pdf](#)

[52 Dennings Avenue Short Form EAF Parts 2 and 3.pdf](#)

[52 Dennings Avenue SEQRA Negative Declartion.docx](#)



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White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

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

July 27, 2021

**VIA HAND DELIVERY
AND E-MAIL**

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

Re: Re-Application for Proposed Two-Lot Residential Subdivision
Supplemental Submission
Premises: 52 Dennings Avenue, Beacon, New York
Tax Parcel ID: (5954-50-687603)

Dear Chairman Gunn and Members of the Planning Board:

We are writing on behalf of Angela Ingham (the "Applicant"), the owner of the above-referenced Premises, in connection with the Applicant's Re-Application for Subdivision Approval requesting to subdivide the existing one (1) lot into two (2) resultant residential single-family lots (the "Re-Application" or "Project").

This letter and its enclosures formally respond to the comments from the Planning Board at its July 13, 2021 meeting and to the comments in the letters prepared by the Board's consultant's John Clarke Planning and Design (dated July 8, 2021) and Lanc & Tully (dated July 7, 2021) (collectively the "Consultant Memoranda").

UPDATES TO THE PROPOSED TWO (2)-LOT SUBDIVISION PLAT & RESPONSES TO COMMENTS:

As is more fully shown on the enclosed updated Site Plans, the Applicant updated the Site Plan drawings to incorporate the changes and clarifications that were requested in the Consultant Memoranda. To further assist the Board in its review of the Application, we also respectfully submit a letter from the Project Engineer, Arden Consulting Engineers, PLLC, which includes written responses to the Consultant Memoranda and further describes the associated updates to



7/27/2021
Page 2

the Site Plan drawings. See **Exhibit A** – Responses to Planning Board’s Consultants.¹

In further support of this supplemental submission, we respectfully submit a copy of the Coastal Assessment Form (“CAF”) and Local Waterfront Revitalization Program (“LWRP”) Consistency Statement, which confirm that the instant Application for a two (2) lot residential subdivision is consistent with the Policies in the City’s LWRP and will not impact any relevant viewsheds identified in the LWRP. See **Exhibit B** – CAF and LWRP Consistency Statement. We are also pleased to report that the Applicant received written confirmation and approval of the Applicant’s Re-Application for Subdivision Approval from the Dutchess County Department of Behavioral and Community Health in a letter prepared by James A. Upright, P.E., Senior Public Health Engineer, dated July 26, 2021. See **Exhibit C** – County Health Department Letter.

As requested at the Board’s July 13, 2021 meeting, please find enclosed a copy of the Subdivision Plat that was also included in the set of Site Plan drawings that the Applicant previously submitted on June 29, 2021 – now as a standalone document. It is respectfully submitted that, with the exception of the minor forthcoming updates noted herein, the enclosures address the comments in the Consultant Memoranda pertaining to the Re-Application.

CONCLUSION AND INDEX OF ENCLOSURES:

In support of this Re-Application submission, please find enclosed five (5) copies of the following documents:

- Exhibit A:** Letter Prepared by Arden Consulting Engineers, PLLC, dated July 27, 2021 in Response to the Planning Board’s Consultant Memoranda (with original Consultant Memoranda also included);
- Exhibit B:** Coastal Assessment Form and Local Waterfront Revitalization Program Consistency Statement; and

¹ Please note that the Applicant’s Surveyor, Darren J. Stridiron, PLS, conducted a site visit to the Premises on July 26, 2021 to confirm the location and species of the trees currently on the Premises. We understand that the Surveyor will be making very minor changes to the subdivision plat to add the trees, as well as a shed and short retaining wall that exist on the Premises. These details will be included in a supplemental submission to this Board before the Planning Board’s August 10th, 2021 Public Hearing.



7/27/2021

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Exhibit C: Approval Letter from Dutchess County Department of Behavioral and Community Health, dated July 26, 2021.

In further support of this Re-Application, the Applicant respectfully submits five (5) copies of the following updated Site Plan drawings entitled "2-Lot Subdivision for Angela Ingham," prepared by Arden Consulting Engineers, PLLC, dated June 23, 2021 and last revised July 23, 2021, numbered and titled as follows:

- Sheet 1 of 6 - Existing Conditions;
- Sheet 2 of 6 - Subdivision Plan;
- Sheet 3 of 6 - Driveway & Utility Easements;
- Sheet 4 of 6 - Grading & Utility Plan;
- Sheet 5 of 6 - Erosion & Sediment Control Plan & Landscaping Details; and
- Sheet 6 of 6 - Construction Details.

In addition, as noted herein, the Applicant respectfully submits five (5) copies of the Subdivision Plat entitled "Two Lot Subdivision Prepared for Angela Ingham," dated July 26, 2021, prepared by Heritage Land Surveying, PC.

We look forward to appearing at the Public Hearing regarding this Re-Application for Subdivision Approval scheduled for August 10th, 2021. 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,

A handwritten signature in black ink, appearing to read 'T. Palmer', with a long, sweeping horizontal line extending to the right.

Taylor M. Palmer

Enclosures



7/27/2021

Page 4

cc: Jennifer L. Gray, Esq., Planning Board Attorney
David Buckley, Building Inspector
John Clarke Planning and Design
Lanc & Tully Engineering and Surveying, P.C.
Michael Morgante, P.E.
Maximillian R. Mahalek, Esq.

July 27, 2021

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

Re: Proposed 2-Lot Residential Subdivision
SBL: 5954-50-687603
52 Dennings Avenue
City of Beacon, NY

Response to Comments

Dear Mr. Gunn & Planning Board Members:

We are seeking to continue the two-lot subdivision process (“Project”) at 52 Dennings Avenue (“Premises”). We are providing this response letter on behalf of the Applicant, Angela Ingham, to address the latest comments in both John Clarke Planning and Design’s July 8, 2021 Memorandum and Lanc & Tully’s July 7, 2021 Letter.

Responses to the John Clarke Planning and Design’s Memorandum dated July 8, 2021

1. Sheet 1 should show the size and species of any existing trees over 6 inches in diameter within the area of disturbance and indicate any major trees that will be removed.

Response: We are in collaboration with the Surveyor to have such trees shown on Sheet 1 or a similar Subdivision Plan.

2. The Zoning Table on Sheet 2 should be updated to reflect the current required setbacks in Section 223-17D, Schedule of Dimensional Regulations, which was amended in 2020.

Response: Sheet 2 has been updated to include the current setback requirements.

3. The proposed privacy fence should be clearly marked on the plans as to where it begins and ends.

Response: The beginning and end of the Stockade Privacy Fence have been highlighted on Sheet 2.

4. The proposed line of spruce trees should be shown on Sheet 2, along with the typical planting distance from the property lines.

Response: The proposed Norway Spruce Trees and planting distance have been added to Sheet 2.

5. The fence detail on Sheet 6 refers to a retaining wall that is not indicated on the plans. Also, a note should be added that the finished side of the fence will face the neighboring property.

Response: The Privacy Fence detail has been updated.

6. The draft Access and Utility Easement will need to be reviewed by the Planning Board Attorney.

Response: Comment noted.

7. Since the proposal is within the City's LWRP boundary, the applicant should provide a Coastal Assessment Form and a short consistency statement for the proposal. The Planning Board will need to issue an LWRP Consistency Determination as part of the review process.

Response: A Coastal Assessment Form and Consistency Statement have been provided.

Responses to Lanc & Tully's July 7, 2021 Letter:

1. A correspondence shall be provided from the Dutchess County Department of Health noting their requirements for the proposed utilities and their acceptance of what is proposed.

Response: We have received written Approval from Jim Upright, P.E., P.G., Senior Public Health Engineer for the Dutchess County Department of Behavioral and Community Health, of our subdivision proposal. Said Approval is enclosed.

2. The "Drainage Analysis Plan" attached as the last sheet to the plan set should be removed.

Response: The Drainage Analysis has been removed.

3. Sheet 1 of 6, Existing Conditions: The location map in the upper right corner shall be revised to show the neighboring parcels and roads.

Response: Neighboring parcels and roads are now shown on the Location Map on Sheet 1.

4. Sheet 2 of 6, Subdivision Plan: What does the dashed line with "E's" incorporated between the dashes represent? If this is to represent an easement line, then it should be noted as such on the plan.

Response: The legend found on Sheet 2 notes that this dashed line is an easement line, which comprises the entire area that is a part of the proposed Access & Utility Easement.

5. Sheet 3 of 6, Access & Utility Easements: The existing cleanout (CO) located to the east of the residence on Lot I should be removed from the plan, as the line is proposed to be removed.

Response: The existing cleanout has been removed from Sheet 3.

6. Sheet 4 of 6, Grading & Utility Plan: The curb box, water valve, and service line for the water service to Lot I should be located further away from the existing utility pole so that the utility pole is not compromised when digging next to the pole. We would further recommend this relocation so that in the event the pole is removed, it does not compromise the water service line.

Response: The proposed curb box with valve and water service line have been relocated. The water service line will have a two-foot clearance from the utility pole.

7. Sheet 4 of 6, Grading & Utility Plan: It is unclear as to how the water service line for Lot I will be installed without encroaching on to the neighbor's parcel with equipment to allow for excavation of the trench since it is approximately 1 foot off the property line. The water service should be shifted further away from the property line, or a construction easement obtained from the Lamb parcel to allow for the installation of the service line.

Response: Pursuant to the notes added to Sheet 4, the water service line will be installed with a mini-excavator in order to avoid encroachment onto adjacent parcels during construction.

8. Sheet 4 of 6, Grading & Utility Plan: The storm drainage line running along the south side of the driveway along the DeCampo parcel is within 1-foot of the property line. In the event that this line needs to be excavated to allow for repair or replacement, how will this be accomplished without encroaching on the neighbor's parcel?

Response: Pursuant to the note added to Sheet 4, repairs, replacement, and maintenance to the existing drainage pipe that traverses the Premises shall be performed with a mini-excavator and hand digging in order to prevent encroachment onto adjacent parcels.

9. Sheet 4 of 6, Grading & Utility Plan: The location of the front door and stairs required to entire the proposed residence on Lot 2 should be provided on the plan. There is a 3.5-foot grade change from the grade on the exterior of the proposed residence to the first-floor elevation.

Response: The front door and stairs for the proposed residence have been added to Sheet 4.

10. Sheet 6 of 6, Construction Details: The "Typical Water Service Detail" shall be updated to note the make, model and size of the corporation valve.

Response: This information has been provided on the Typical Water Service Detail.

11. Sheet 6 of 6, Construction Details: The "Curb Stop & Valve Box" detail shall be revised to show an actual valve box located over the curb stop box. This is to ensure that vehicles are not directly riding on the curb stop box and putting pressure on the curb valve or water service line.

Response: This information has been provided on the Curb Stop & Valve Box Detail.

12. Sheet 6 of 6, Construction Details: The "Stockade Privacy Fence" detail notes the posts to be set into a concrete wall and also notes "Top of retaining wall" at the bottom of the fence. Is a concrete wall to be installed? If so, this should be shown on the plans along with the construction detail for the wall. If no wall is proposed, then the detail shall be revised accordingly.

Response: No concrete wall is to be installed. The reference to the concrete wall and retaining wall have been removed from the Privacy Fence Detail.

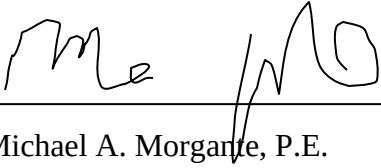
13. Sheet 6 of 6, Construction Details: The "Driveway Detail" notes the driveway to be 12-foot wide. A common driveway is required to be 16-feet in width and can be reduced in width where the driveway branches off. The detail shall be corrected accordingly.

Response: The Driveway Detail has been revised to reflect a 16-foot width.

We look forward to the Public Hearing scheduled for August 10th, 2021. Do not hesitate to contact us if there are any questions or concerns.

Sincerely,

Arden Consulting Engineers, PLLC



Michael A. Morgante, P.E.

C:\USERS\MICHAEL\DROPBOX\JOBS\14-006\DELLAPORTAS\DENNINGS\COMMENT
LETTERS\CONSULTANT RESPONSE LETTER 7-23.DOC

To: John Gunn, Chair, and the City of Beacon Planning Board

Date: July 8, 2021

Re: **52 Dennings Avenue Subdivision**

I have reviewed the June 29, 2021 cover letter from Cuddy+Feder, response letter to previous December 7, 2018 consultant comments by Arden Consulting Engineers, June 29, 2021 Subdivision Application, June 25, 2021 Short EAF Part 1, undated draft Access and Utility Easement, a 6-sheet Subdivision Plan, dated June 23, 2021, and a Drainage analysis Map, dated January 14, 2016.

Proposal

The applicant is proposing to subdivide a 1.07-acre parcel with one existing house into two lots for the construction of an additional house. Parcel 1 would have 0.404 acres and Parcel 2 would contain 0.663 acres. The parcel is in the R1-10 zoning district and is within the City's Local Waterfront Revitalization Program (LWRP) boundary.

Comments and Recommendations

1. Sheet 1 should show the size and species of any existing trees over 6 inches in diameter within the area of disturbance and indicate any major trees that will be removed.
2. The Zoning Table on Sheet 2 should be updated to reflect the current required setbacks in Section 223-17D, Schedule of Dimensional Regulations, which was amended in 2020.
3. The proposed privacy fence should be clearly marked on the plans as to where it begins and ends.
4. The proposed line of spruce trees should be shown on Sheet 2, along with the typical planting distance from the property lines.
5. The fence detail on Sheet 6 refers to a retaining wall that is not indicated on the plans. Also, a note should be added that the finished side of the fence will face the neighboring property.
6. The draft Access and Utility Easement will need to be reviewed by the Planning Board Attorney.
7. Since the proposal is within the City's LWRP boundary, the applicant should provide a Coastal Assessment Form and a short consistency statement for the proposal. The Planning Board will need to issue 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.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Taylor M. Palmer, Esq., Project Attorney
Michael A. Morgante, P.E., Project Engineer

LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal
John Queenan, P.E., Principal

Rodney C. Knowlton, L.S., Principal
Jerry A. Woods, L.S., Principal

John D. Russo, P.E., Principal
John Lenc, P.E., L.S.
Arthur R. Tully, P.E.

July 7, 2021

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: Dellaportas Subdivision
Dennings Avenue
City of Beacon
Tax Map No. 5954-50-687603

Dear Mr. Gunn:

We have reviewed the following plans and documents in relation to the proposed 2-lot subdivision proposed on Dennings Avenue.

- Correspondence dated June 29, 2021 as prepared by Taylor Palmer, Esq. of Cuddy & Feder, LLP.
- Correspondence dated June 29, 2021 as prepared by Arden Consulting Engineers.
- Application for Subdivision Approval.
- Short Environmental Assessment Form dated June 25, 2021.
- Draft Declaration of Access and Utility Easement.
- Plans titled "2-Lot Subdivision for Dellaportas Enterprises I", consisting of 6 sheets dated June 23, 2021, as prepared by Arden Consulting Engineers.

The applicant is proposing to create a 2-lot subdivision of a 1.07± acre parcel that lies between Dennings Avenue and South Avenue in the R1-10 Zone, with access off of Dennings Avenue to serve both lots. Based upon our review of the submitted plans and documents, we offer the following comments:

General Comments:

1. A correspondence shall be provided from the Dutchess County Department of Health noting their requirements for the proposed utilities and their acceptance of what is proposed.
2. The "Drainage Analysis Plan" attached as the last sheet to the plan set should be removed.

Sheet 1 of 6 – Existing Conditions:

1. The location map in the upper right corner shall be revised to show the neighboring parcels and roads.

Sheet 2 of 6 – Subdivision Plan:

1. What does the dashed line with “E’s” incorporated between the dashes represent? If this is to represent an easement line, then it should be noted as such on the plan.

Sheet 3 of 6 – Driveway & Utility Easements:

1. The existing cleanout (CO) located to the east of the residence on Lot 1 should be removed from the plan, as the line is proposed to be removed.

Sheet 4 of 6 – Grading & Utility Plan:

1. The curb box, water valve, and service line for the water service to Lot 1 should be located further away from the existing utility pole so that the utility pole is not compromised when digging next to the pole. We would further recommend this relocation so that in the event the pole is removed, it does not compromise the water service line.
2. It is unclear as to how the water service line for Lot 1 will be installed without encroaching on to the neighbor’s parcel with equipment to allow for excavation of the trench since it is approximately 1-foot off the property line. The water service should be shifted further away from the property line, or a construction easement obtained from the Lamb parcel to allow for the installation of the service line.
3. The storm drainage line running along the south side of the driveway along the DeCampo parcel is within 1-foot of the property line. In the event that this line needs to be excavated to allow for repair or replacement, how will this be accomplished without encroaching on the neighbor’s parcel?
4. The location of the front door and stairs required to entire the proposed residence on Lot 2 should be provided on the plan. There is a 3.5-foot grade change from the grade on the exterior of the proposed residence to the first-floor elevation.

Sheet 6 of 6 – Construction Details:

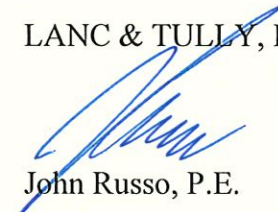
1. The “Typical Water Service Detail” shall be updated to note the make, model and size of the corporation valve.
2. The “Curb Stop & Valve Box” detail shall be revised to show an actual valve box located over the curb stop box. This is to ensure that vehicle are not directly riding on the curb stop box and putting pressure on the curb valve or water service line.

3. The "Stockade Privacy Fence" detail notes the posts to be set into a concrete wall and also notes "Top of retaining wall" at the bottom of the fence. Is a concrete wall to be installed? If so, this should be shown on the plans along with the construction detail for the wall. If no wall is proposed, then the detail shall be revised accordingly.
4. The "Driveway Detail" notes the driveway to be 12-foot wide. A common driveway is required to be 16-feet in width and can be reduced in width where the driveway branches off. The detail shall be corrected accordingly.

This completes our review at this time. Further comments may be forth coming based upon more detailed 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: John Clarke, Planner
Jennifer Grey, Esq.
David Buckley, Building Inspector

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM

Coastal Assessment Form

A. INSTRUCTIONS (Please print or type all answers)

1. State agencies shall complete this CAF for proposed actions which are subject to Part 600 of Title 19 of the NYCRR. This assessment is intended to supplement other information used by a state agency in making a determination of significance pursuant to the State Environmental Quality Review Act (see 6 NYCRR, Part 617). If it is determined that a proposed action will not have a significant effect on the environment, this assessment is intended to assist a state agency in complying with the certification requirements of 19 NYCRR Section 600.4.
2. If any question in Section C on this form is answered "yes", then the proposed action may affect the achievement of the coastal policies contained in Article 42 of the Executive Law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to either (a) making a certification of consistency pursuant to 19 NYCRR Part 600 or, (b) making the findings required under SEQR, 6 NYCRR, Section 617.11, if the action is one for which an environmental impact statement is being prepared. If an action cannot be certified as consistent with the coastal policies, it shall not be undertaken.
3. Before answering the questions in Section C, the preparer of this form should review the coastal policies contained in 19 NYCRR Section 600.5. A proposed action should be evaluated as to its significant beneficial and adverse effects upon the coastal area.

B. DESCRIPTION OF PROPOSED ACTION

1. Type of state agency action (check appropriate response):
- (a) Directly undertaken (e.g. capital construction, planning activity, agency regulation, land transaction) _____
- (b) Financial assistance (e.g. grant, loan, subsidy) _____
- (c) Permit, license, certification X
2. Describe nature and extent of action: Re-application for Subdivision Approval requesting to subdivide the existing 1 lot into 2 resultant residential single-family lots, permitting the construction of 1 new single-family home.
3. Location of action:
- | | | |
|-----------------|-----------------------|----------------------------|
| <u>Dutchess</u> | <u>Beacon</u> | <u>52 Dennings Avenue</u> |
| County | City, Town or Village | Street or Site Description |
4. If an application for the proposed action has been filed with the state agency, the following information shall be provided:
- (a) Name of applicant: Angela Ingham Dellaportas
- (b) Mailing address: 52 Dennings Avenue, Beacon, NY 12508
- (c) Telephone Number: Area Code (845) 916-3845
- (d) State agency application number: N/A
5. Will the action be directly undertaken, require funding, or approval by a federal agency?
- Yes _____ No X If yes, which federal agency? _____

C. COASTAL ASSESSMENT (Check either "YES" or "NO" for each of the following questions)

YES NO

1. Will the proposed activity be located in, or contiguous to, or have a significant effect upon any of the resource areas identified on the coastal area map:
- (a) Significant fish or wildlife habitats? X
- (b) Scenic resources of statewide significance? X
- (c) Important agricultural lands? X
2. Will the proposed activity have a significant effect upon:
- (a) Commercial or recreational use of fish and wildlife resources? X
- (b) Scenic quality of the coastal environment? X
- (c) Development of future, or existing water dependent uses? X
- (d) Operation of the State's major ports? X
- (e) Land and water uses within the State's small harbors? X
- (f) Existing or potential public recreation opportunities? X
- (g) Structures, sites or districts of historic, archeological or cultural significance to the State or nation? X

3. Will the proposed activity involve or result in any of the following:
- (a) Physical alteration of two (2) acres or more of land along the shoreline, land under water or coastal waters? X
 - (b) Physical alteration of five (5) acres or more of land located elsewhere in the coastal area? X
 - (c) Expansion of existing public services of infrastructure in undeveloped or low density areas of the coastal area? X
 - (d) Energy facility not subject to Article VII or VIII of the Public Service Law? X
 - (e) Mining, excavation, filling or dredging in coastal waters? X
 - (f) Reduction of existing or potential public access to or along the shore? X
 - (g) Sale or change in use of state-owned lands located on the shoreline or under water? X
 - (h) Development within a designated flood or erosion hazard area? X
 - (i) Development on a beach, dune, barrier island or other natural feature that provides protection against flooding or erosion? X
4. Will the proposed action be located in or have a significant effect upon an area included in an approved Local Waterfront Revitalization Program? X

D. SUBMISSION REQUIREMENTS

If any question in Section C is answered "Yes", AND either of the following two conditions is met:

Section B.1(a) or B.1(b) is checked; or
Section B.1(c) is checked AND B.5 is answered "Yes",

THEN a copy of this completed Coastal Assessment Form shall be submitted to:

New York State Department of State
Office of Coastal, Local Government and Community Sustainability
One Commerce Plaza
99 Washington Avenue, Suite 1010
Albany, New York 12231-0001

If assistance or further information is needed to complete this form, please call the Department of State at (518) 474-6000.

E. REMARKS OR ADDITIONAL INFORMATION

See attached LWRP Consistency Statement

Preparer's Name: Taylor M. Palmer
(Please print)

Title: Attorney Agency: Cuddy + Feder (Attorney for the Applicant)

Telephone Number: (914) 761-1300 Date: July 12, 2021

Local Waterfront Revitalization Plan

Consistency Statement

52 Dennings Avenue, Beacon, NY (Parcel ID: 5954-50-687603):

The 1.07-acre Dennings Avenue property (the “Property”) is presently improved by a single-family residence. The Property is set down the hill from South Avenue to the east in the location of similarly situated single-family homes in the area. The Property is classified in the One-Family Residence (R1-10) Zoning District and is located within the City of Beacon’s Waterfront Revitalization Management Area, as is more fully shown in the below map (*Image 1*) that is excerpted from the City’s Local Waterfront Revitalization Plan (“LWRP”). The Harbor Management Area encompasses “... both surface waters and the lands adjacent to the surface waters that can influence what takes place on the surface waters and whose use may be influenced by what takes place on the surface waters.”

Image 1 -Harbor Management Area:



Note: The **yellow** circle shows the approximate location of the Property within the Harbor Management Area, similarly situated to other single-family residences in the area.

This LWRP Consistency Statement analyzes the manner in which the proposed residential subdivision of 52 Dennings Avenue to create two (2) total residential lots is consistent with the LWRP coastal policies related to viewsheds and environmental protection.¹ This LWRP Consistency Statement is submitted by the Applicant in furtherance of the environmental review of the project and the SEQR documentation submitted by the Applicant.

¹ CITY OF BEACON ZONING CODE Sections 220-5, 220-6 (all reviewing agencies must ensure actions impacting this coastal area are consistent with the City’s LWRP).

THE PROPOSED TWO LOT SUBDIVISION IS CONSISTENT WITH THE POLICIES IN THE LWRP:

The below map in Image 2 represents the location of the Property taken from the Dutchess County Tax Parcel Viewer:

Image 2 – Tax Parcel Viewer Image of Premises & Intersection of South Ave. & Dennings Ave.:



The proposed one (1) lot subdivision Application to develop one (1) single-family home lot is consistent with the Policies in the City's LWRP for the following reasons:

POLICY 5 Encourage the location of development in areas where public services and facilities essential to such development are adequate, except when such development has special functional requirements or other characteristics which necessitates its location in other coastal areas.

The explanation of Policy 5 in the LWRP states that public services shall be improved to support development in the Waterfront Revitalization Area. The Project will not place undue pressure on the public water distribution and sanitary sewer system.

POLICY 13 The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs *POLICY 13 The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.*

There will be no measurable increase in erosion or flooding generated by the Project. No steep slopes will be impacted by the Project, and stormwater control will be managed through best management practices.

POLICY 14 Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development or at other locations.

No steep slopes will be impacted by the Project. No erosion protection structures are required, and there will be no measurable increase in erosion or flood as a result of the Project. The Project will not result in any increased risk to surrounding properties. Proper drainage and land restoration practices will be followed.

POLICY 25 Protect, restore and enhance natural and manmade resources which are not identified as being of state-wide significance, but which contribute to the scenic quality of the coastal area.

The explanation of Policy 25 in the LWRP states that “the scenic qualities of Beacon results from the combination of clustered buildings (many historic) and wooded hillsides against the backdrop of the Hudson Highlands. The height, bulk, scale of future building will be important factors in maintaining the character of the City, as will the preservation of the wooded hillsides that intersperse the developed areas.”

The relevant viewshed articulated in the LWRP is the viewshed located at the intersection of South Avenue at Dennings Avenue, as shown in *Image 3* below. The LWRP describes the viewpoint as follows: “[t]he view is to the west between houses. In the foreground is a historic house and the Fishkill Landing Duplex development. The middle ground is wooded. The background is Newburgh Bay and the City of Newburgh.”

Image 3: Google Street View of Intersection of South Ave. & Dennings Ave.:



Note: as this view of Dennings Avenue, looking southwest from South Avenue, illustrates, the new proposed residential structure will *not* be visible from the origin of the pertinent viewshed.

This described viewshed is located to the north of the Property. The Property is located downhill from the viewshed, as one travels southwest along Dennings Avenue. The proposed subdivision will result in the creation of a new residential lot ("Lot 2"), comprising the eastern half of the Property, which may be improved with a single-family structure that complies with the applicable zoning regulations of the R1-10 Zoning District.

The proposed Project will have no impact on the relevant viewshed. The new home will be located well over 100 feet east of Dennings Avenue, and its two-story height will be similar to the heights of the structures found nearby along Dennings Avenue and South Avenue. In addition, Lot 2 will have landscaping along its northern boundary (these trees will also run along a portion of the western boundary of the western lot ("Lot 1")). As a result, the proposed subdivision and any future improvement will be sufficiently screened and have no impact on the public viewshed, including towards the historic house located at the intersection of South Avenue and Dennings Avenue, the property eligible for formal historic designation located at 123 South Avenue, the Fishkill Landing Duplex development, or the river.

In addition, the Project is consistent with Policy 25 in that the minimal planned disturbance of approximately 0.75 acres, the erection of a privacy fence along the southern driveway, the lack of impact on steep slopes or other natural resources, the proposed retaining wall on Lot 2, and the proposed landscaping as described herein will minimize any impact on the natural resources of the area, helping to preserve the scenic quality of this residential area.

POLICY 33 Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.

Best management practices will be used to ensure the control of stormwater runoff.

POLICY 37 Best management practices will be utilized to minimize the nonpoint discharge of excess nutrients, nonpoint discharge of excess nutrients, organics and eroded soils into coastal waters. In addition, there will be no development on steep slopes, further avoiding soil erosion.

Best management practices will be utilized to minimize the nonpoint discharge of excess nutrients, organics, and eroded soils into coastal waters.

POLICY 38 The quality and quantity of surface water and groundwater supplies will be conserved and protected particularly where such waters constitute the primary or sole source of water supply.

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 does not include or require wastewater discharged to groundwater, and is not located within 100 feet of potable drinking water or irrigation sources. The Project will be connected to the existing public water distribution system.

POLICY 41 Land use or development in the coastal area will not cause national or state air quality standards to be violated.

The Project will not lead to any violation of the National and State Air Quality Standards, and will comply with the State Implementation Plan.

CONCLUSION:

Accordingly, for the reasons set forth herein, the Applicant requests that this Board consider finding that the Application for a two (2) lot residential subdivision is consistent with the Policies in the City's LWRP.



COUNTY OF DUTCHESS
DEPARTMENT OF BEHAVIORAL AND COMMUNITY HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES

July 26, 2021

Michael A. Morgante, P.E.
Arden Consulting Engineers, PLLC
P.O. Box 340
Monroe, NY 10950

Re: Dellaportas 2 Lot Subdivision
Tax Id No.: 130200-5954-50-687603
City of Beacon

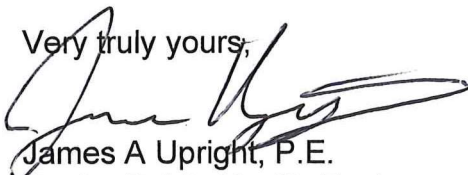
Dear Mr. Morgante:

On July 23, 2021, this Department received the plans you re-submitted for approval of the above referenced project. I have reviewed the submission and offer the following comments:

- The application, plans and report are ready for approval by this Department. Following City/Town approval, please submit a mylar and a bond plan set for final sign off.
- Note: If the City/Town approval process requires any changes, include a signed and sealed letter documenting all changes.

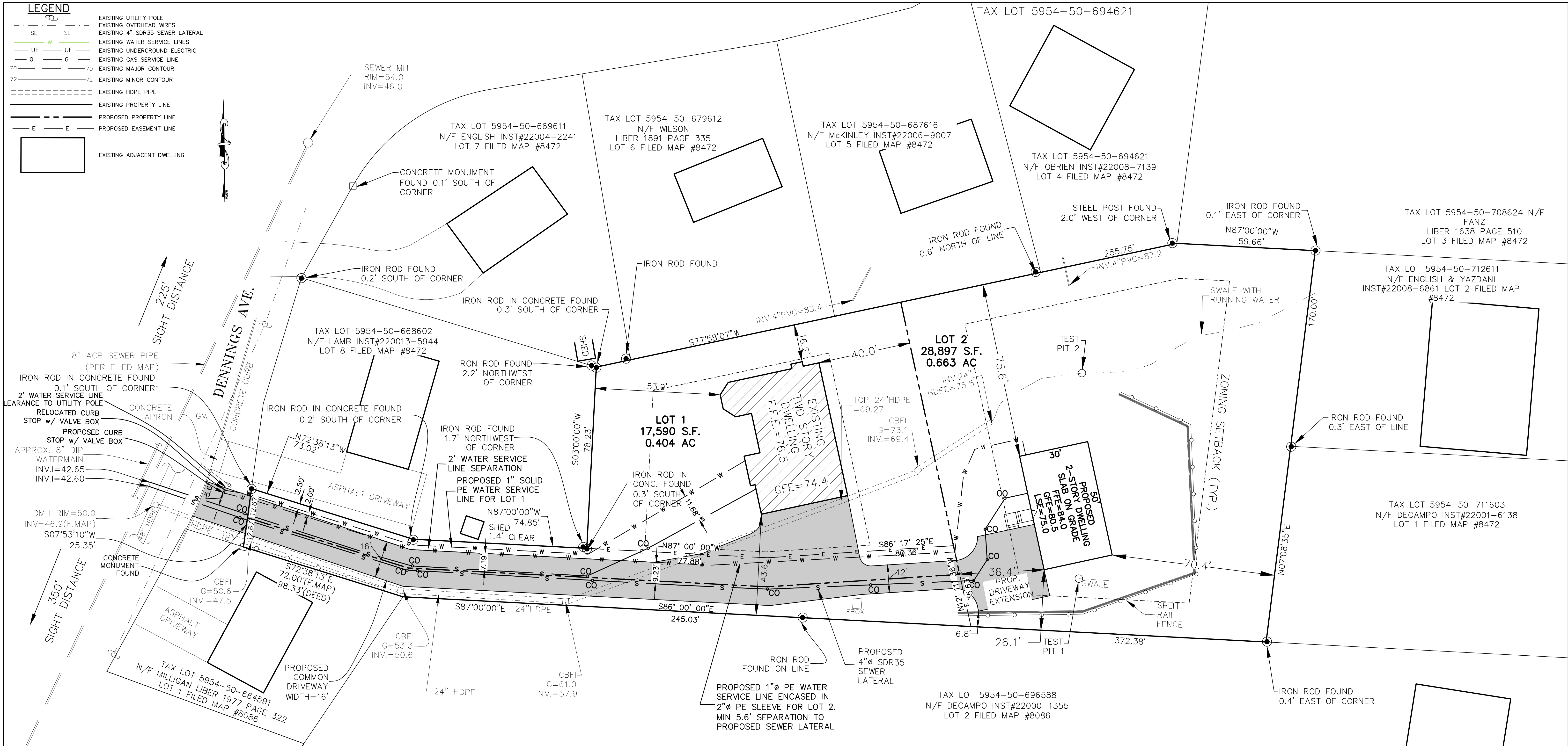
Should you have any questions regarding the above, please feel free to contact me at 486-3404.

Very truly yours,



James A. Upright, P.E.
Senior Public Health Engineer
Environmental Health Services

cc: File 47339
John Russo – Lanc & Tully



ACCESS & UTILITY EASEMENTS

SCALE: 1"=20'

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Call 811
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REVISION	BY	DATE	DESCRIPTION
2	MM	7/23/21	PER 7/23/21 DOH COMMENTS
1	MM	7/14/21	PER L&T 7/7/21 & JC 7/8/21 COMMENT LETTERS

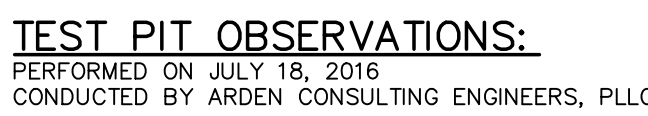
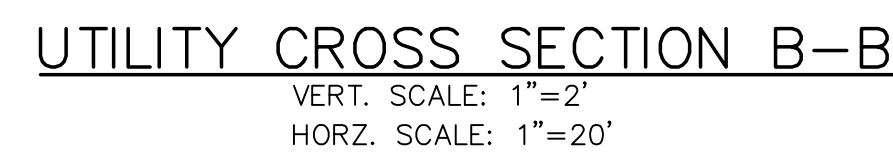
THIS SHEET IS NOT VALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SET

ARDEN CONSULTING ENGINEERS, PLLC
P.O. BOX 340 MONROE, N.Y.
TEL: (845) 782-8114 FAX: (845) 238-3527
WWW.ARDENCONSULTING.NET

2-LOT SUBDIVISION FOR
ANGELA INGHAM
CITY OF BEACON
COUNTY OF DUTCHESS, NEW YORK

DRIVEWAY & UTILITY EASEMENTS

JOB#:
14-006
SCALE:
AS NOTED
DATE:
6-23-21
DRAWN:
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SHEET NO.
3 of 6



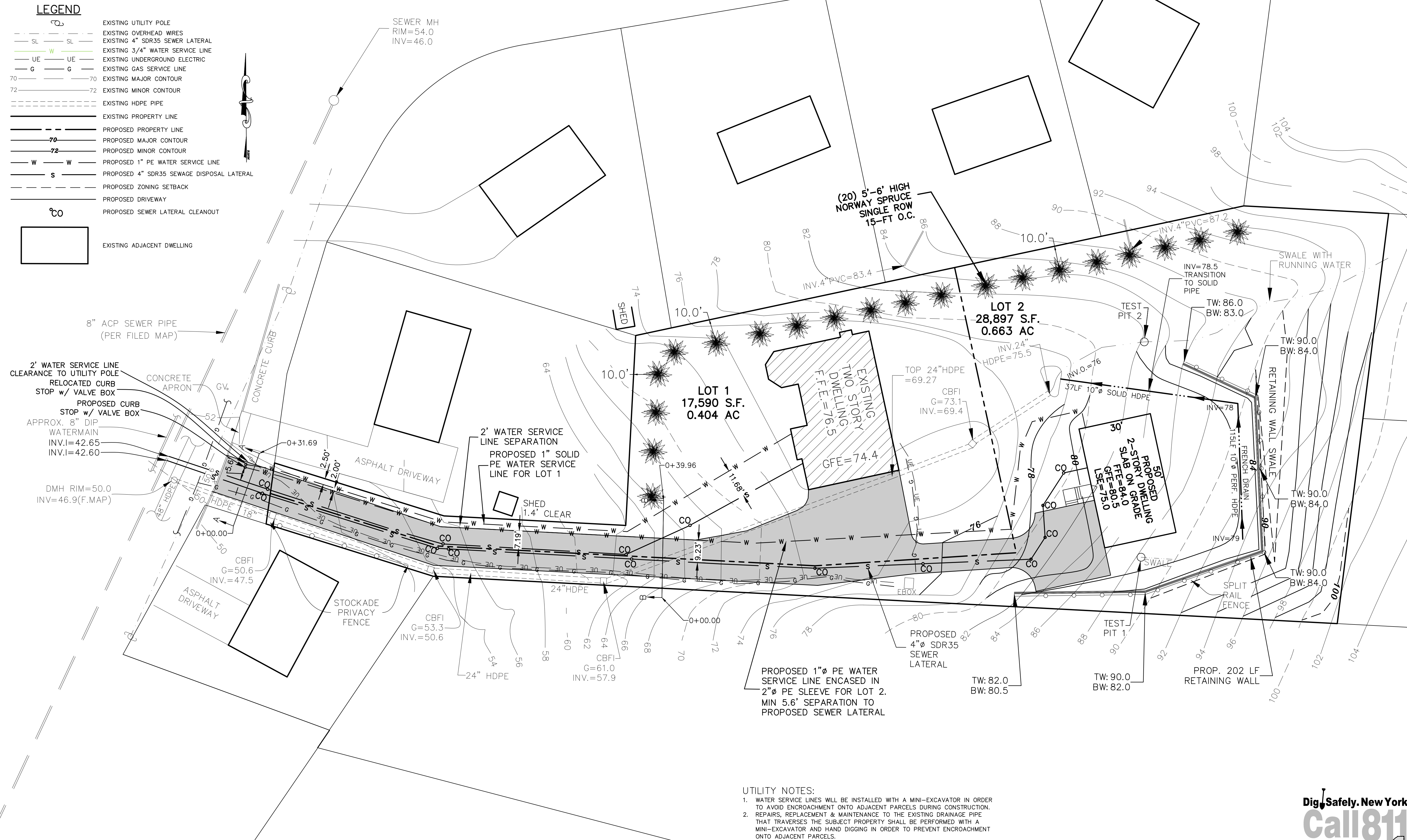
PIT NO.	DEPTH	DESCRIPTION
TEST	0"-6"	T.S.
PIT 1	6"-24"	SILT LOAM
	24"-36"	SILTY CLAY LOAM SEEPAGE @ 36"
TEST	0"-6"	T.S.
PIT 2	6"-12"	SILT LOAM SEEPAGE @ 12"

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SEWER MH
RIM=42.0
INV=38.0

- | LEGEND | |
|---|---|
|  | EXISTING UTILITY POLE |
|  | EXISTING OVERHEAD WIRES |
|  | EXISTING 4" SDR35 SEWER LATERAL |
|  | EXISTING 3/4" WATER SERVICE LINE |
|  | EXISTING UNDERGROUND ELECTRIC |
|  | EXISTING GAS SERVICE LINE |
|  | EXISTING MAJOR CONTOUR |
|  | EXISTING MINOR CONTOUR |
|  | EXISTING HDPE PIPE |
|  | EXISTING PROPERTY LINE |
|  | PROPOSED PROPERTY LINE |
|  | PROPOSED MAJOR CONTOUR |
|  | PROPOSED MINOR CONTOUR |
|  | PROPOSED 1" PE WATER SERVICE LINE |
|  | PROPOSED 4" SDR35 SEWAGE DISPOSAL LATERAL |
|  | PROPOSED ZONING SETBACK |
|  | PROPOSED DRIVEWAY |
|  | PROPOSED SEWER LATERAL CLEANOUT |
|  | EXISTING ADJACENT DWELLING |



UTILITY NOTES:

1. WATER SERVICE LINES WILL BE INSTALLED WITH A MINI-EXCAVATOR IN ORDER TO AVOID ENCROACHMENT ONTO ADJACENT PARCELS DURING CONSTRUCTION.
2. REPAIRS, REPLACEMENT & MAINTENANCE TO THE EXISTING DRAINAGE PIPE THAT TRAVERSES THE SUBJECT PROPERTY SHALL BE PERFORMED WITH A MINI-EXCAVATOR AND HAND DIGGING IN ORDER TO PREVENT ENCROACHMENT ONTO ADJACENT PARCELS.

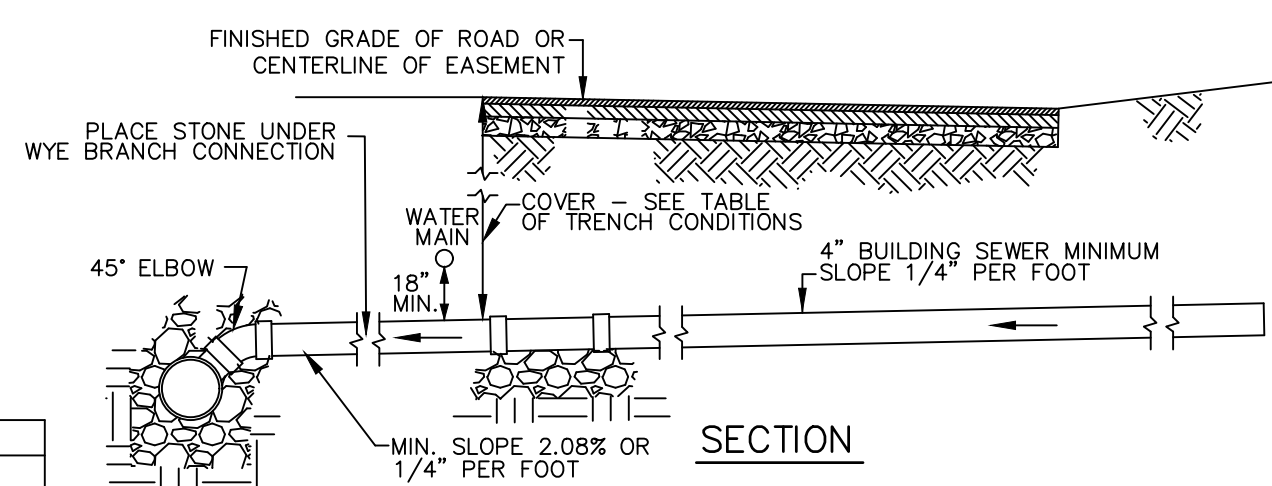
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GRADING & UTILITY PLAN

SCALE: 1"=20'

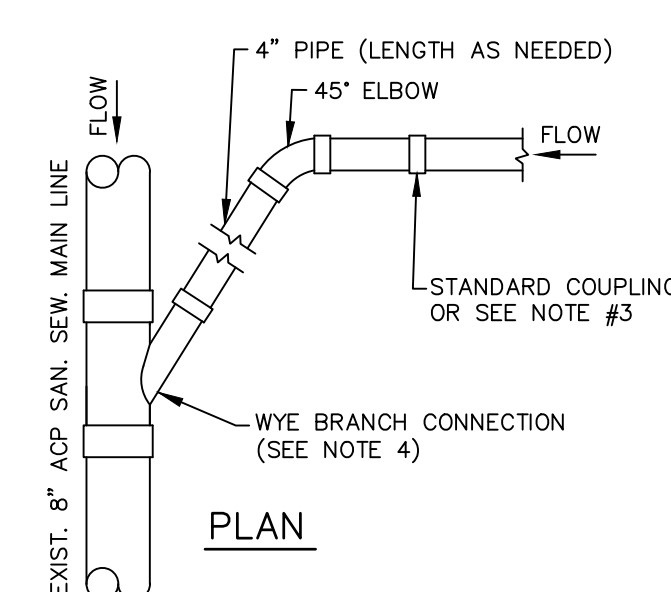
NOTE:

1. ALL APPROVED BUILDING SEWER PIPE MATERIAL FOR EACH CONNECTION MADE SHALL BE CONSTRUCTED FROM THE SAME MATERIAL.
2. MINIMUM HORIZONTAL SEPARATION BETWEEN SPUR CAP AND SIDEWALK SHALL BE 2'-0". IN ALL CASES THE SPUR CAP LOCATION SHALL EXTEND A MINIMUM HORIZONTAL DISTANCE OF 2'-0" ONTO ALL BUILDING LOT PRIMES.
3. TRANSITION BETWEEN DIFFERENT PIPE MATERIAL (AS APPROVED) SHALL BE MADE BY INSTALLING A TYPE 1, STYLE 62 DRESSER COUPLING OR DRESSER STYLE 262 HYMAX COUPLING (OR APPROVED EQUAL).
4. WYE BRANCH CONNECTION SHALL BE A FITTING CONSTRUCTION SPECIFICALLY FOR THE INSTALLED MAIN LINE SEWER MATERIAL CLASS OR APPROVED EQUAL.
5. THE BUILDING SEWER SHOWN FROM THE MAIN LINE SEWER WYE BRANCH CONNECTION FITTING TO THE SPUR CAP SHALL MEET THE 6" SEWER SERVICE LATERAL SPECIFICATION.
6. THE BUILDING SEWER MATERIAL & CLEANOUTS FOR LOT 1 SHALL BE REMOVED IN ITS ENTIRETY PRIOR TO CONSTRUCTION OF THE NEW LATERALS.



BUILDING SEWER CONNECTION

NOT TO SCALE



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REVISION	BY	DATE	DESCRIPTION
2	MM	7/23/21	PER 7/23/21 DOH COMMENTS
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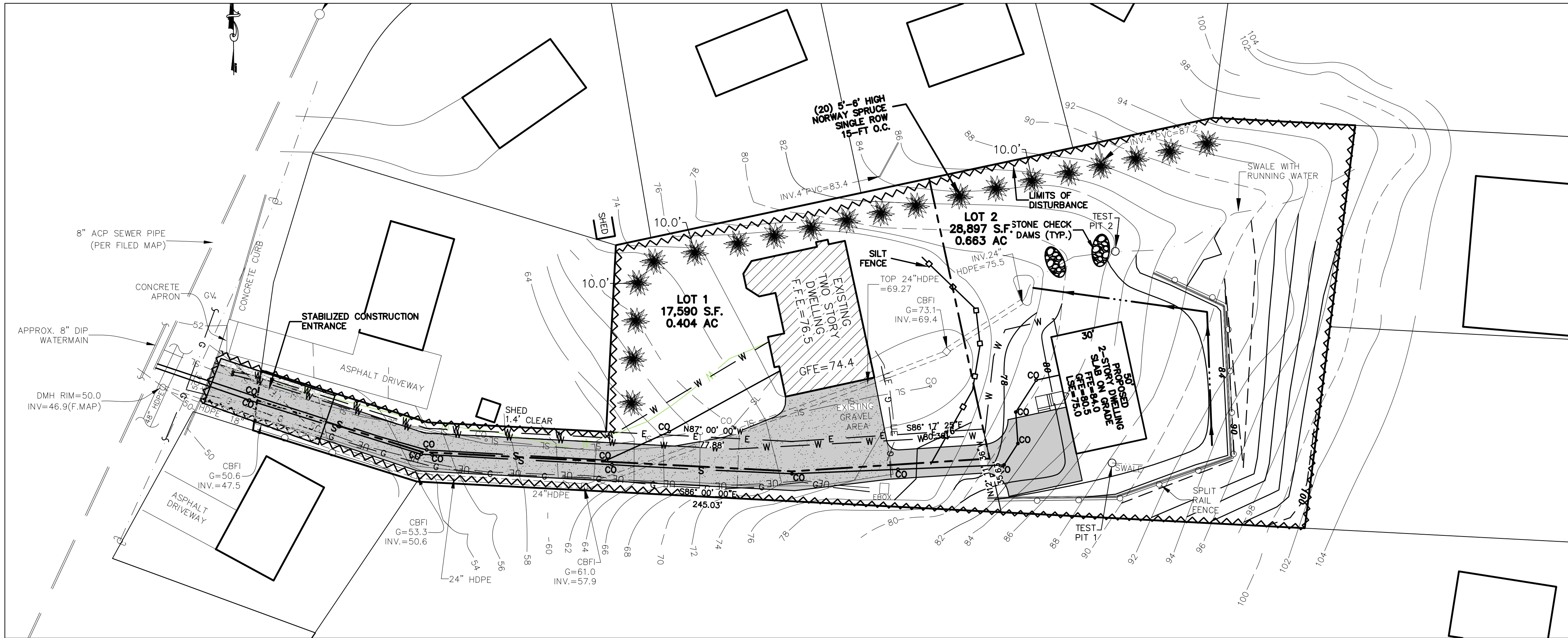


2-LOT SUBDIVISION FOR
ANGELA INGHAM
CITY OF BEACON
COUNTY OF DUTCHESS, NEW YORK

GRADING & UTILITY PLAN

MICHAEL A. MORGANTE, P.E.

JOB#:
14-006
SCALE:
AS NOTED
DATE:
6-23-21
DRAWN:
MM
CHECKED:
MM
SHEET NO.



EROSION & SEDIMENT CONTROL PLAN

SCALE: 1"=30'

LIMITS OF DISTURBANCE = 38,000 SF or 0.87 AC.

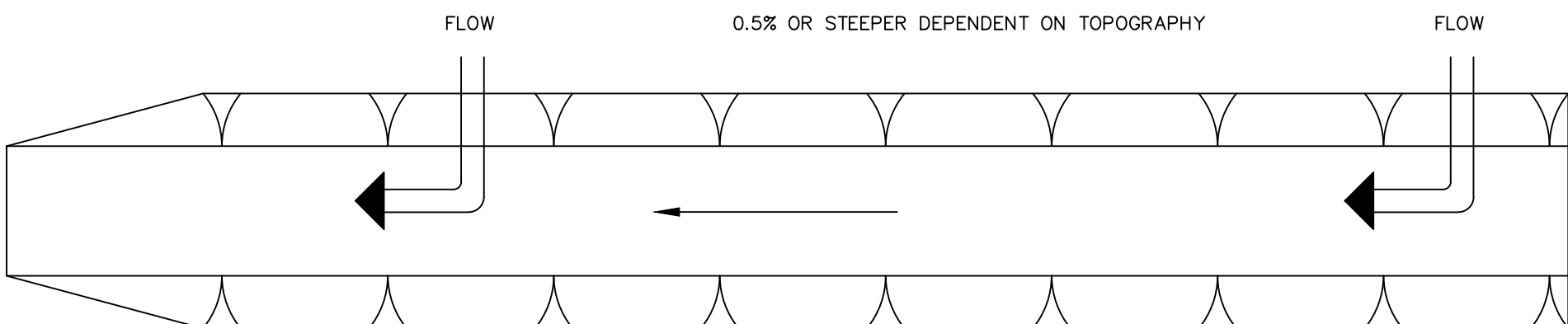
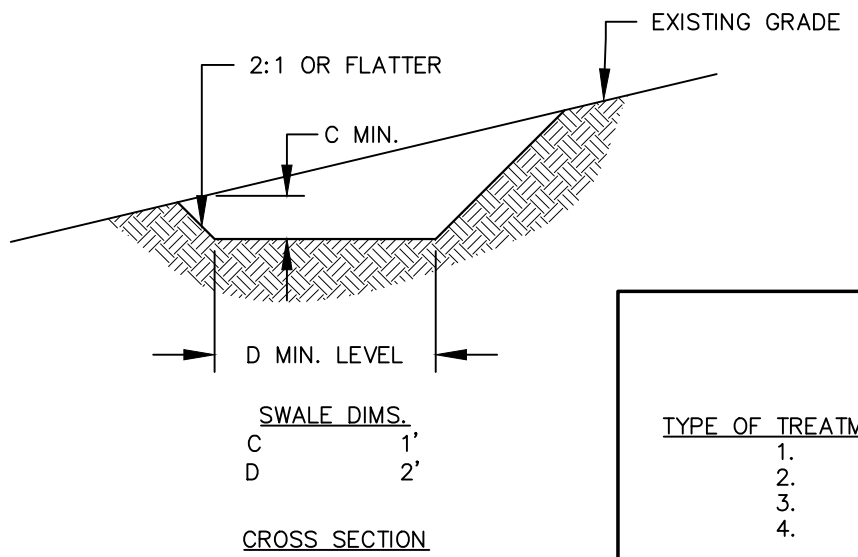
NOTE: INCLUDES APPROXIMATE SOIL DISTURBANCE LIMITS FROM PREVIOUSLY CONSTRUCTED DWELLING.

CONSTRUCTION SPECIFICATIONS:

1. ALL SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED AREA.
4. ALL TREES, BRUSHES, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONAL MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH IMPEDE NORMAL FLOW.
6. ALL FILLS ARE TO BE MECHANICALLY COMPACTED.
7. ALL EARTH REMOVED AND NOT NEEDED SHALL BE PLACED AS NOT TO INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. REFER TO CHART FOR STABILIZATION OF FLOW CHANNEL.
9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

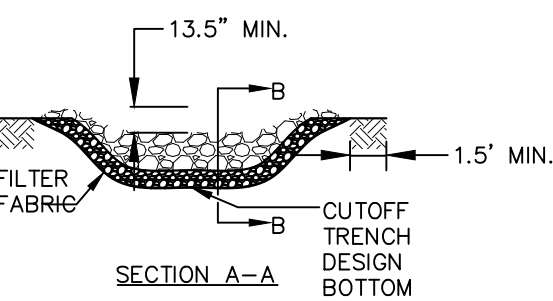
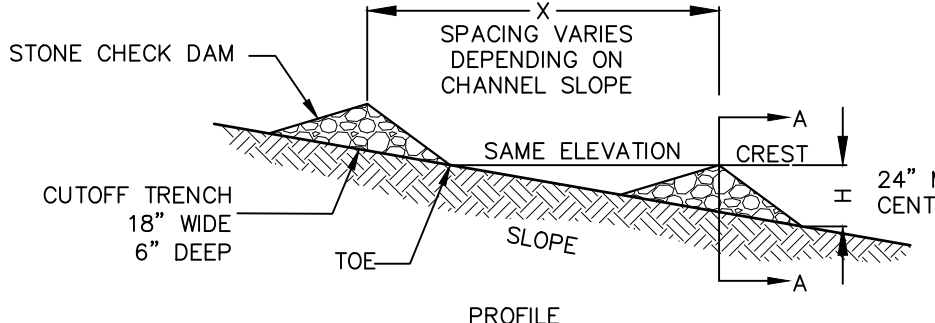
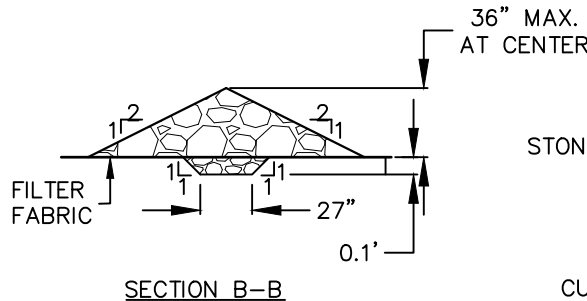
FLOW CHART STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC - 10 AC)
1.	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2.	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3.	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR: SOD	LINED RIP-RAP
4.	8.1-20%	LINED 4-8" RIP-RAP	4-8" RECYCLED CONCRETE EQUIVALENT ENGINEERED DESIGN



RETAINING WALL SWALE DETAIL

NOT TO SCALE

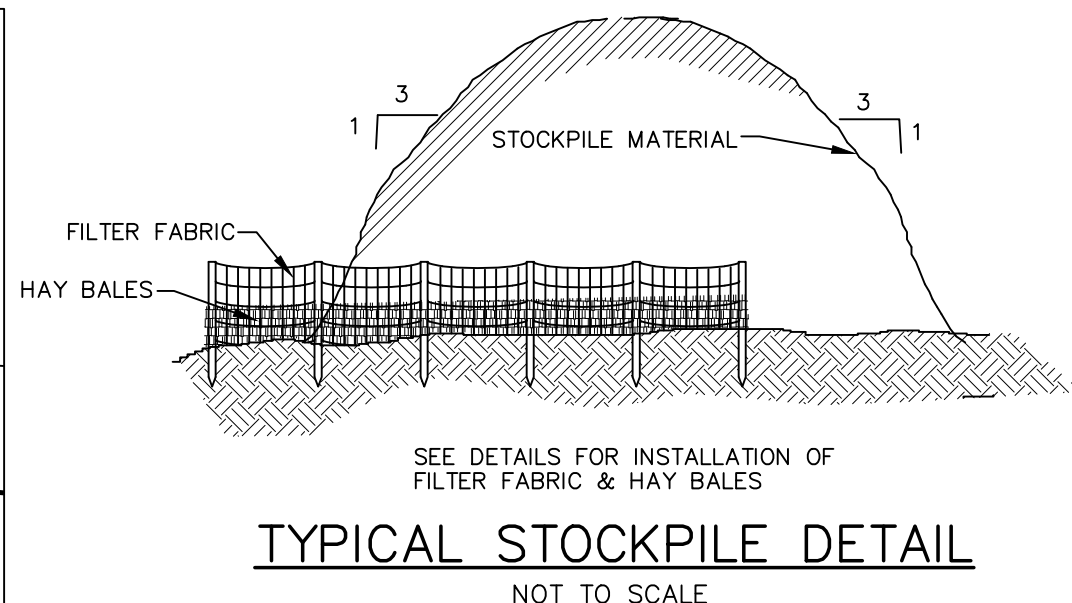


CONSTRUCTION SPECIFICATIONS:

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATION OF THE CREST OF THE DOWN STREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
6. MAXIMUM DRAINAGE AREA IS 2 ACRES ABOVE THE CHECK DAM.

CHECK DAM DETAILS

NOT TO SCALE

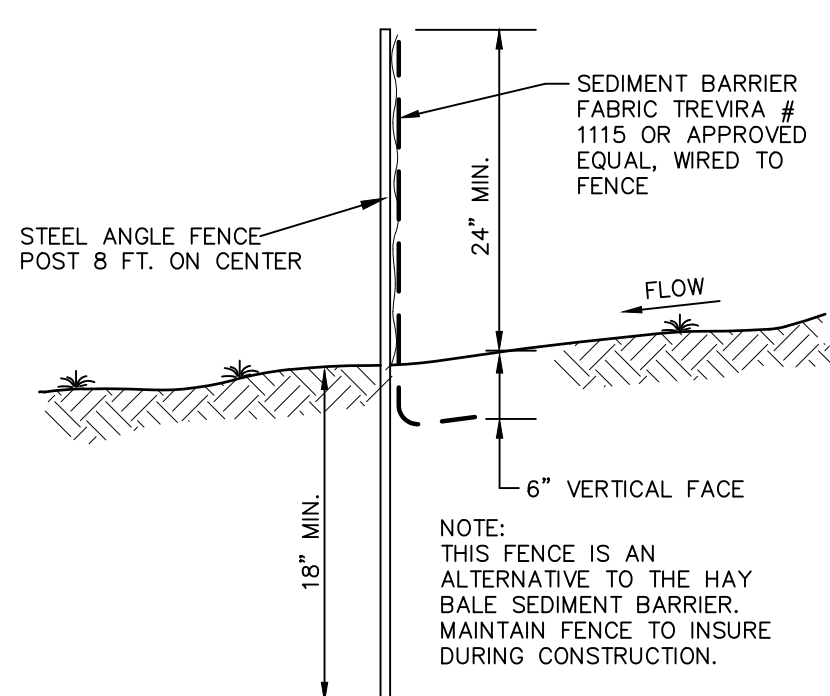


TYPICAL STOCKPILE DETAIL

NOT TO SCALE

CONSTRUCTION SEQUENCE

1. CLEAR ALL AREAS OF THE SITE THAT WILL BE AFFECTED BY THE PROPOSED DRIVEWAY AND BUILDING CONSTRUCTION. [3 DAYS]
2. INSTALL SEDIMENT BARRIERS AS SHOWN ON THESE PLANS AND DETAIL SHEETS. [1 DAY]
3. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE AS SHOWN. [1 DAY]
4. STRIP AND GRADE DRIVEWAY TO SUBGRADE AND STOCKPILE TOPSOIL IN APPROVED LOCATIONS. STABILIZE STOCKPILE WITH TEMPORARY SEEDING AND CONSTRUCTION SEDIMENT BARRIER AROUND STOCKPILE. TOPSOIL STOCKPILES SHOWN ARE LOCATED 10- FEET FROM THE DWELLING TO PERMIT CONSTRUCTION ACTIVITIES AND ARE OF ADEQUATE SIZE TO ACCOMMODATE ALL REQUIRED TOPSOIL THAT IS STRIPPED. [3 DAYS]
5. STABILIZE ALL DISTURBED AREAS NOT AFFECTED BY BUILDING CONSTRUCTION WITH TEMPORARY SEEDING AND MULCHING MIXTURE. INSTALL EROSION CONTROL MATTING ON SEED STEEP SLOPES. [2 DAYS]
6. CONSTRUCT ALL UNDERGROUND UTILITIES AND DRAINAGE FACILITIES WITHIN THE PROPOSED ROADWAYS, REPLACING CONSTRUCTION PAD ENTRANCE AS REQUIRED. INSTALL SILTATION BARRIERS AROUND ANY INLETS. [3 DAYS]
7. BEGIN CONSTRUCTION OF INDIVIDUAL DWELLING. [120 DAYS]
8. AFTER COMPLETION OF INDIVIDUAL LOT IMPROVEMENTS, REPLACE TOPSOIL STOCKPILES, INSTALL DRIVEWAY BASE AND SURFACE COURSE. [7 DAYS]
9. PERFORM FINE GRADING, CONSTRUCT RAIN GARDEN AND INSTALL TREES. [5 DAYS]
10. AFTER PERMANENT PLANTING & SEED HAVE BECOME ESTABLISHED, REMOVE SEDIMENT BARRIERS AND PERMANENTLY SEED ANY REMAINING DISTURBED AREAS. [2 DAYS]

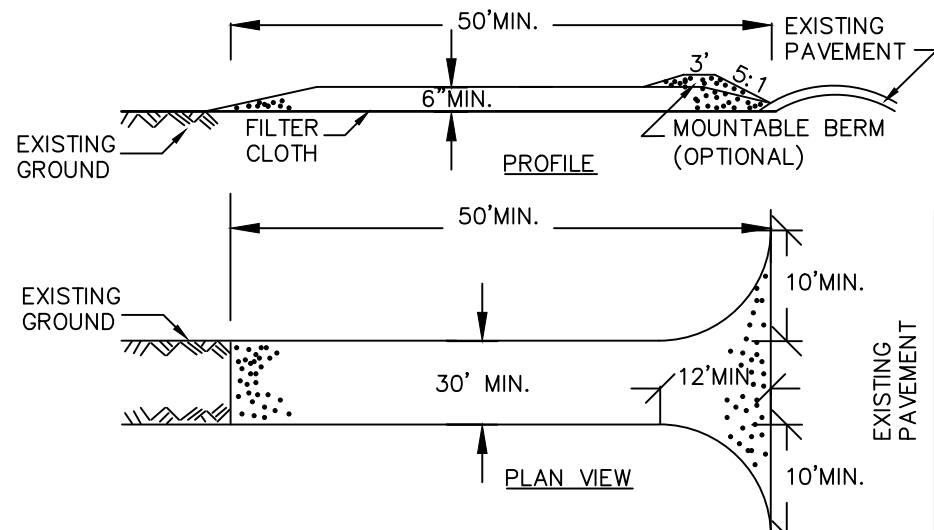


SILT FENCE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "I" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOTAB, ENVIROFAB, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

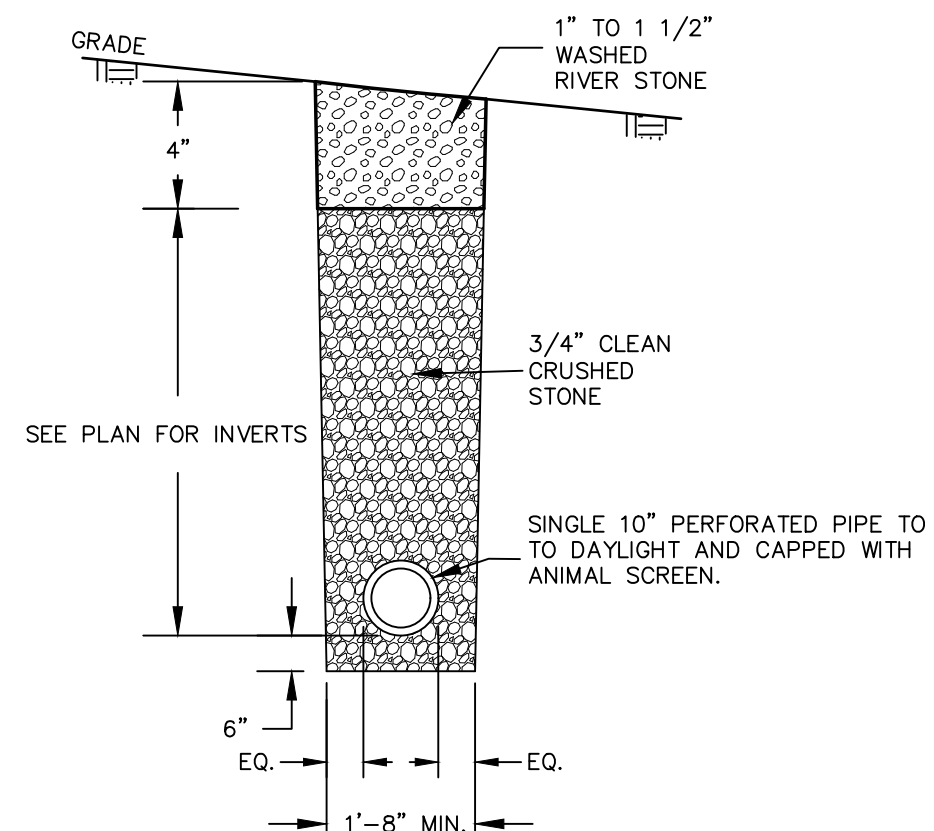


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS, TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - 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 ACROSS 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. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A 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

NOT TO SCALE

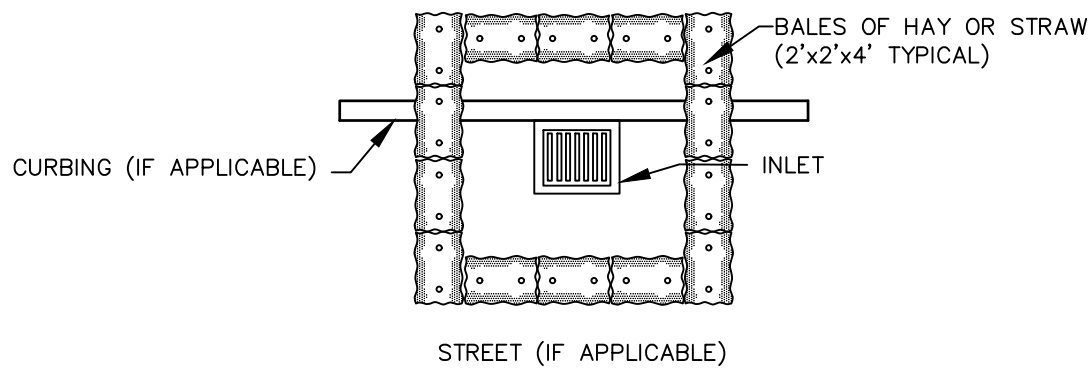


SINGLE PIPE DRAIN

FRENCH DRAIN DETAIL

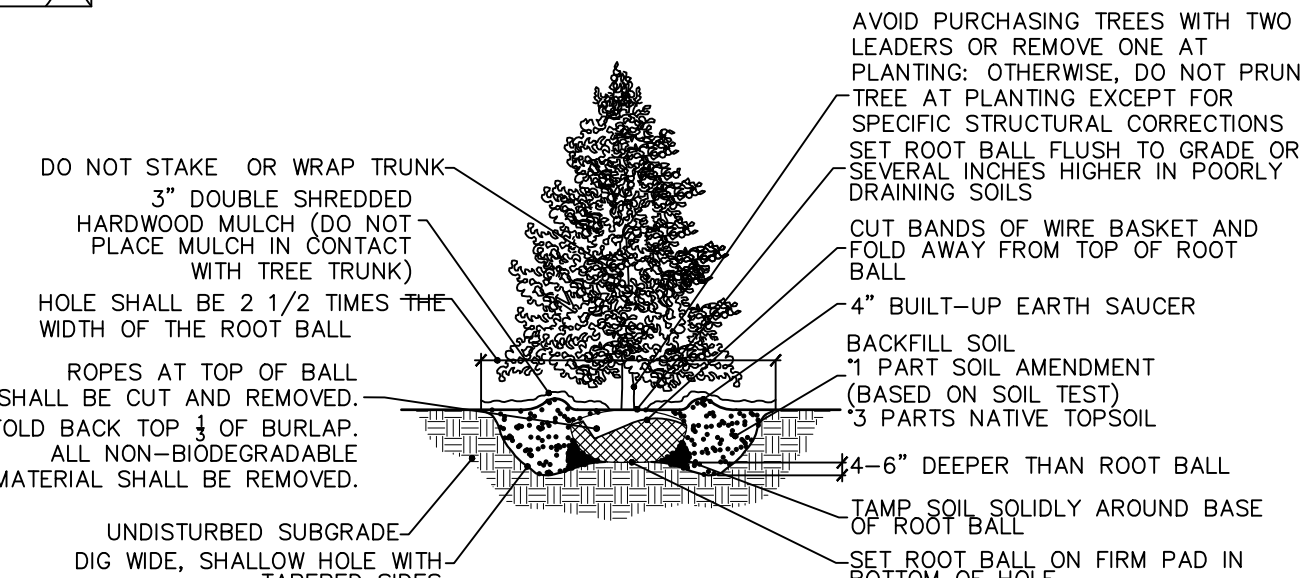
NOT TO SCALE

- NOTES:
1. INSTALL CLEANOUT AT HIGHEST INVERT ELEVATION.
 2. WRAP ENTIRE TRENCH IN FILTER FABRIC WHERE PERFORATED PIPE IS CALLED FOR.
 3. GRAVEL COVER OVER PIPE SHALL BE ONLY 8" IN TRENCHES WHERE SOLID PIPE IS SPECIFIED, COMMON BACKFILL SHALL EXTEND FROM GRAVEL COVER TO 4" TOPSOIL IN TRENCHES WHERE SOLID PIPE IS SPECIFIED.



INLET PROTECTION DETAIL

NOT TO SCALE



EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

- NOTES:
1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
 2. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
 3. SOIL AMENDMENTS:
 - *MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSON
 - *MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX



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FOR ALL CONSTRUCTION SPECIFICATIONS REFER TO "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL"

THIS EROSION CONTROL PLAN SHALL BE USED FOR EROSION CONTROL METHODS AND LOCATIONS ONLY. DO NOT USE THIS PLAN FOR BUILDING, PAVED AREA, UTILITY LOCATIONS, etc.

THE OWNER IS ASSIGNED THE RESPONSIBILITY FOR THE CONSTRUCTION & MAINTENANCE OF THE MEASURES AS DETAILED ON THIS PLAN INCLUDING THE TECHNICAL SPECIFICATIONS ON THIS PLAN

WARNING- IT IS A VIOLATION OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2

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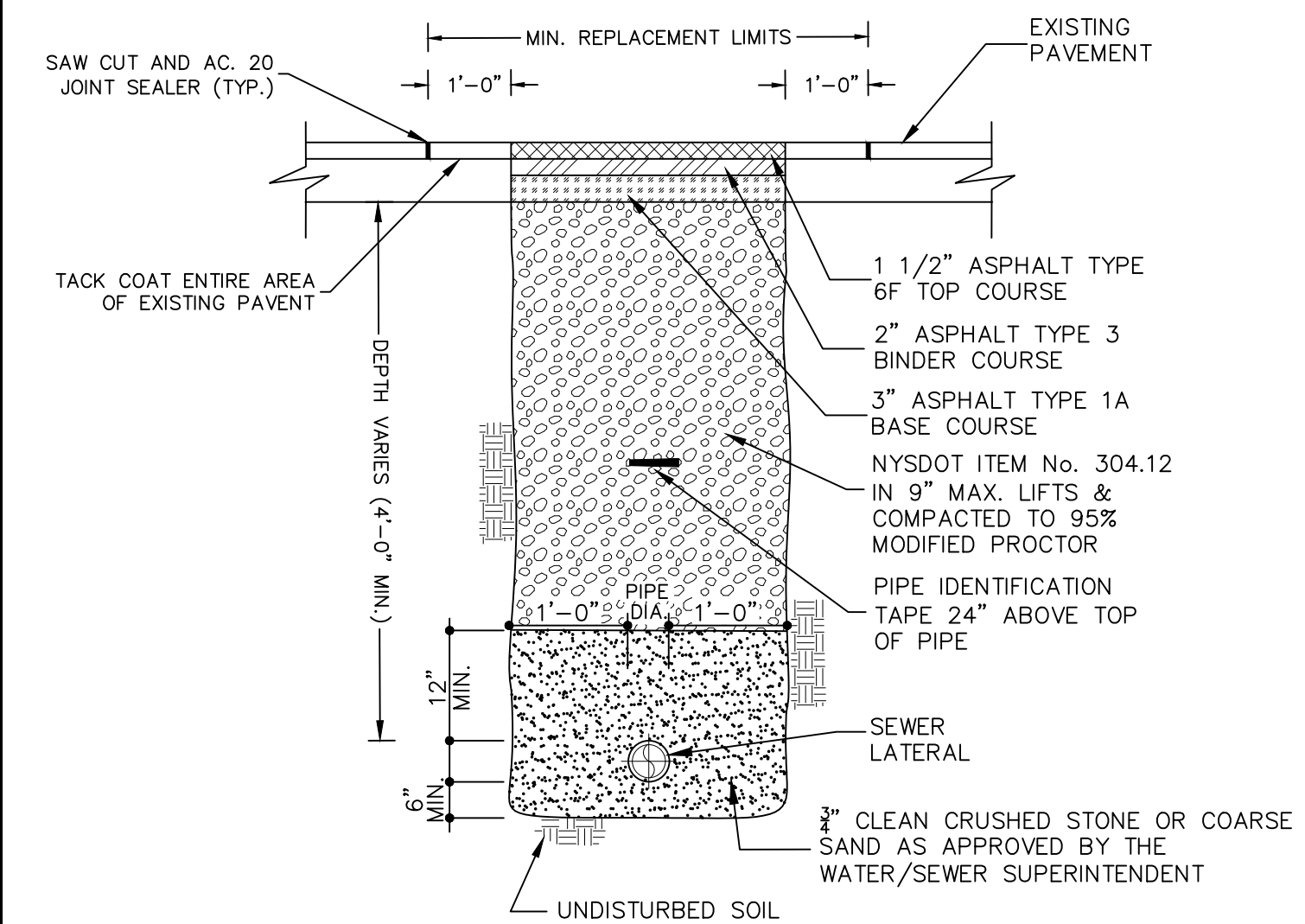
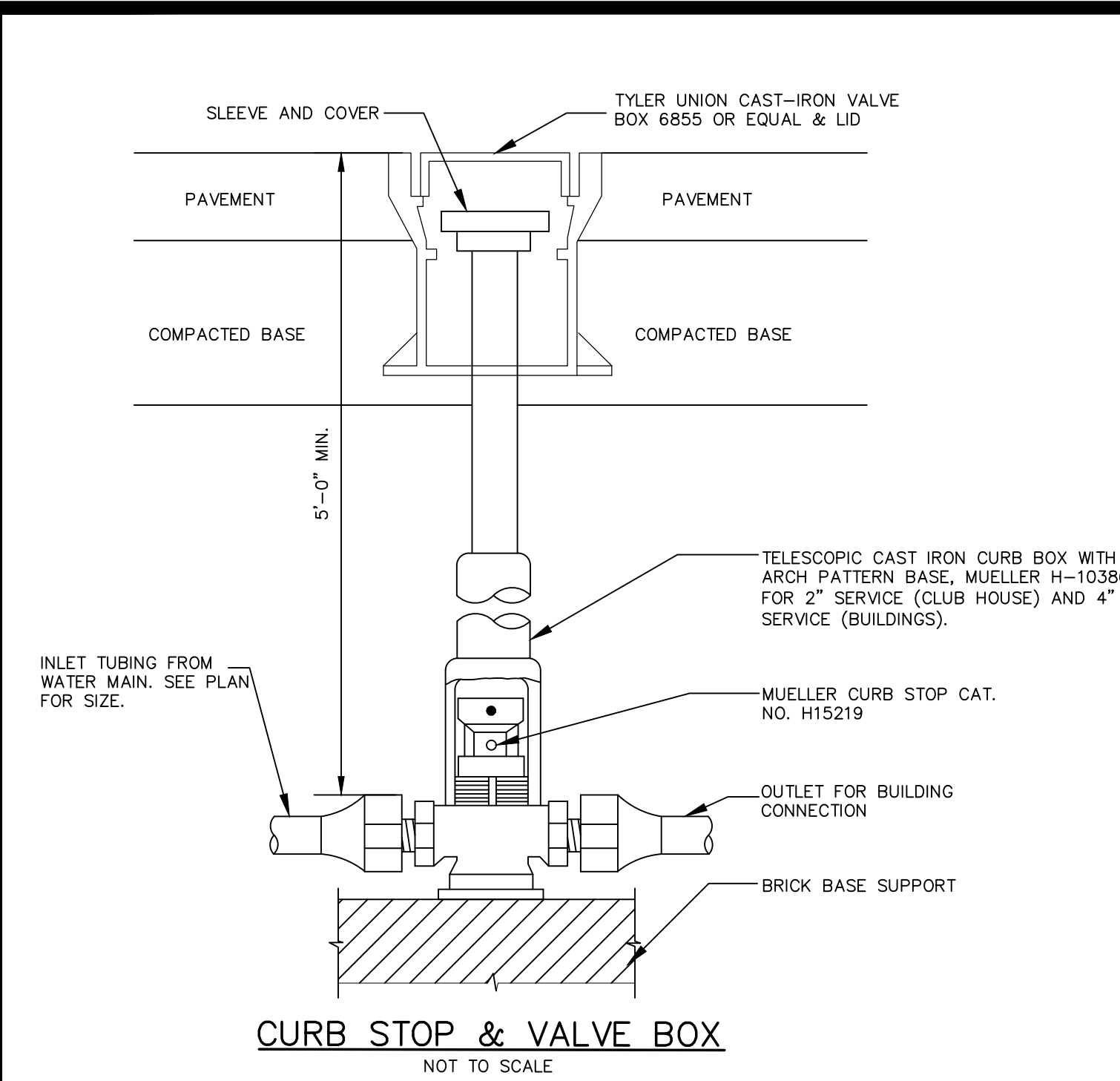
REVISION	BY	DATE	DESCRIPTION
2	MM	7/23/21	PER 7/23/21 DOH COMMENTS
1	MM	7/14/21	PER L&T 7/7/21 & JC 7/8/21 COMMENT LETTERS

THIS SHEET IS NOT VALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SET

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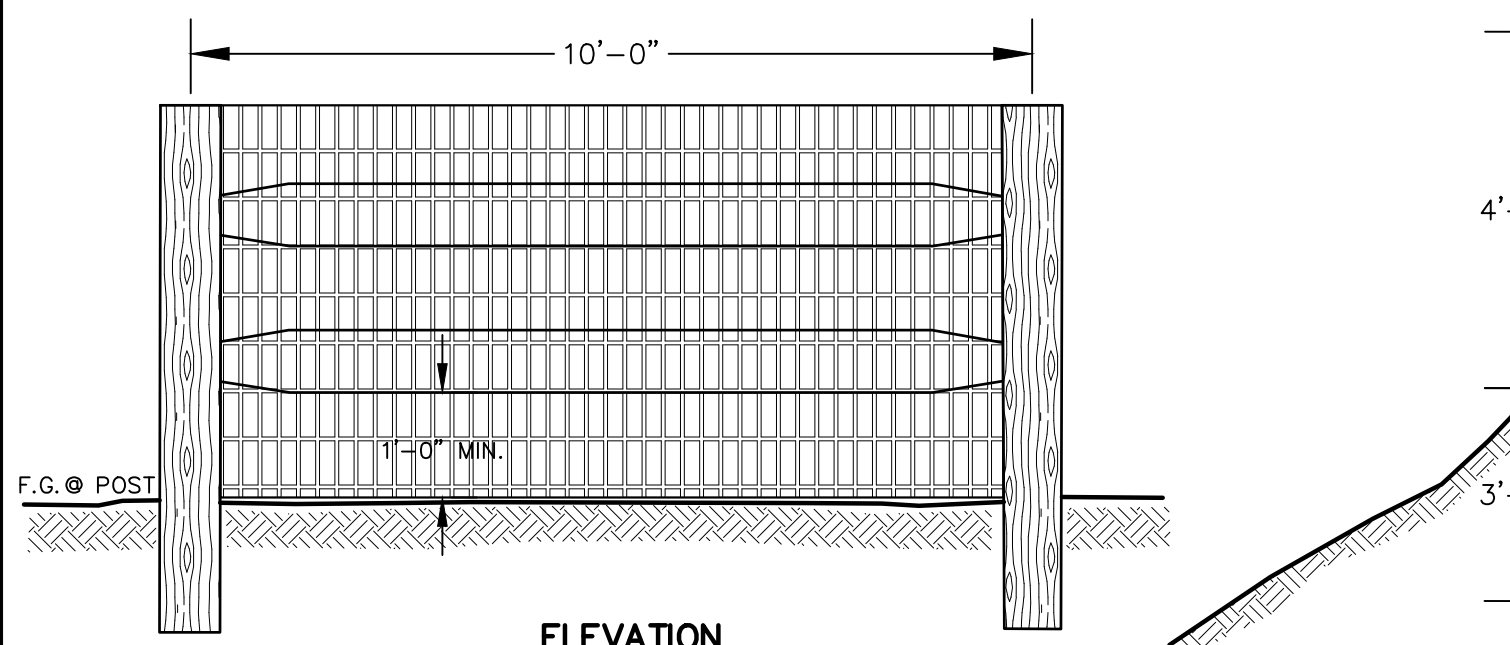
2-LOT SUBDIVISION FOR
ANGELA INGHAM
CITY OF BEACON
COUNTY OF DUTCHESS, NEW YORK

JOB#:
14-008
SCALE:
AS NOTED
DATE:
6-23-21
DRAWN:
MM
CHECKED:
MM
SHEET NO.
5 of 6



TYPICAL SEWER LATERAL INSTALLATION/RESTORATION DETAIL
NOT TO SCALE

NOTE:
1. PAVEMENT AND SUBBASE MATERIAL SHALL, AT A MINIMUM, MATCH THE EXISTING TYPES AND THICKNESSES FOUND WITHIN ANY TOWN, COUNTY OR STATE HIGHWAY, WHICHEVER IS GREATER.



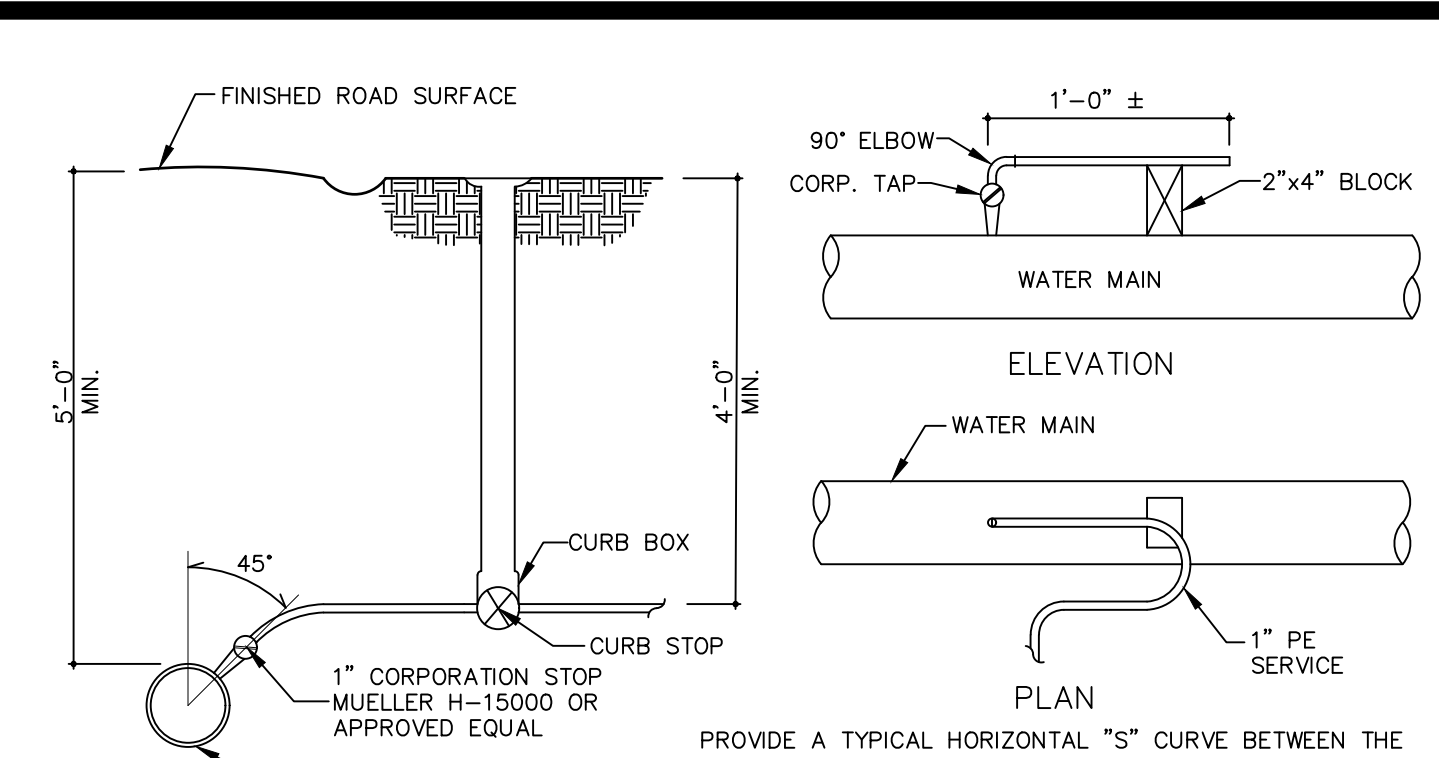
- NOTES:
1. TWO POST SPLIT RAIL RUSTIC FENCE TO BE CEDAR.
2. 2"x4" X 14 GAUGE PVC BLACK VINYL COATED WELDED WIRE FENCE TO BE ATTACHED TO INTERIOR OF SPLIT RAIL FENCEING.
3. FENCING TO INCLUDE 10' WIDE DOUBLE SWING GATE AROUND STORMWATER MANAGEMENT FACILITIES.
4. ALL FENCING TO BE INSTALLED WITH WELDED WIRE FENCE AROUND STORMWATER MANAGEMENT FACILITIES, ALONG RETAINING WALLS AND AROUND AREAS AS INDICATED ON PLAN.
5. FENCE TO BE INSTALLED AROUND PLAY AREAS WITH BREAK IN FENCE AS INDICATED ON PLAN.

SPLIT POST FENCE DETAIL
NOT TO SCALE

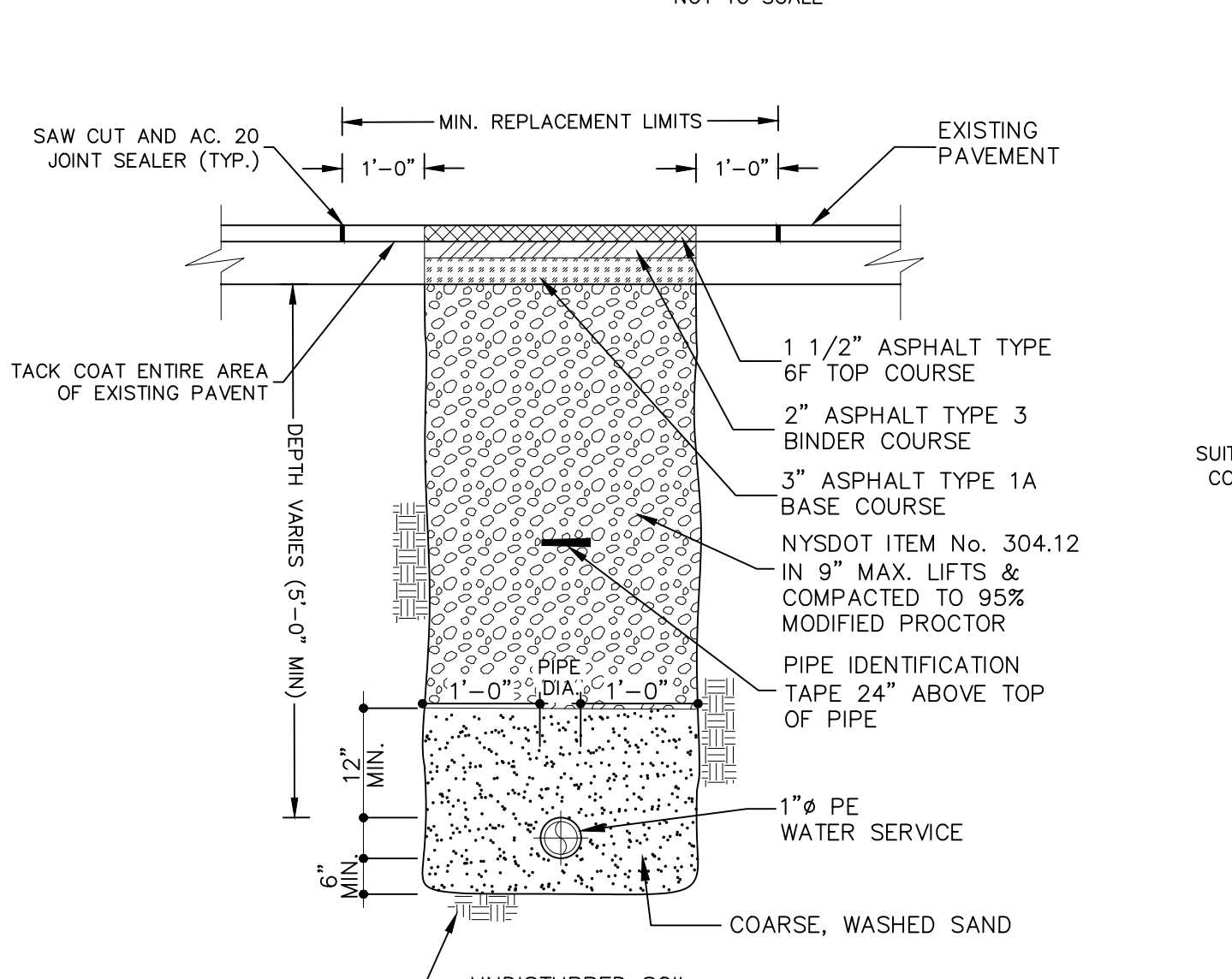
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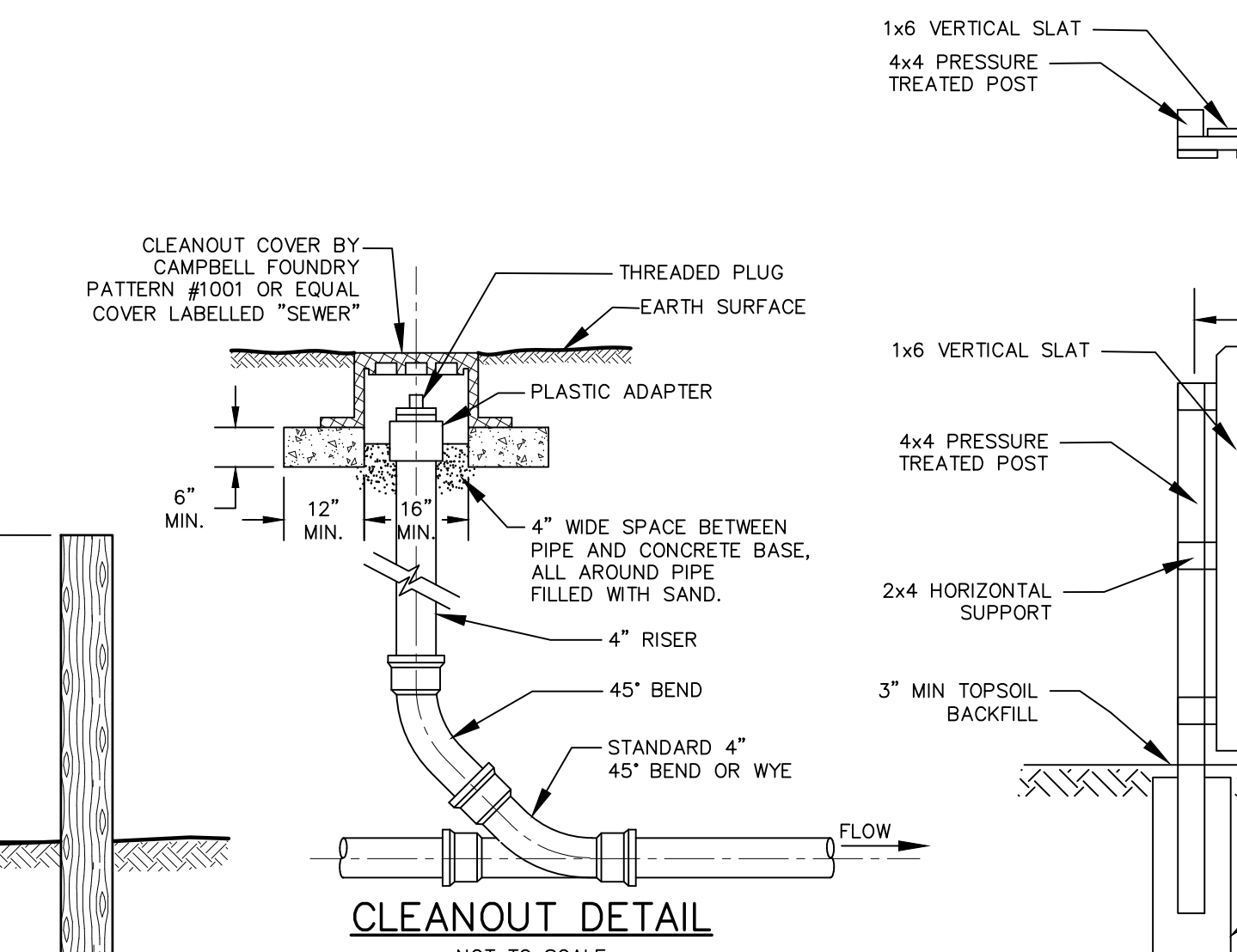


TYPICAL WATER SERVICE DETAIL
NOT TO SCALE

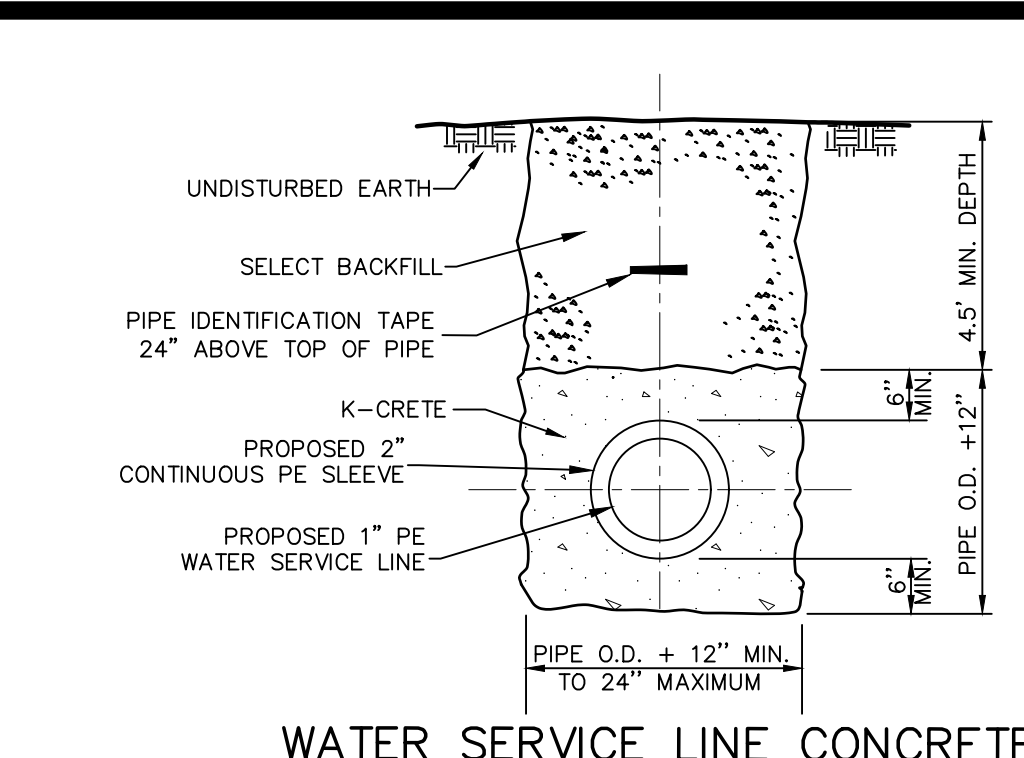
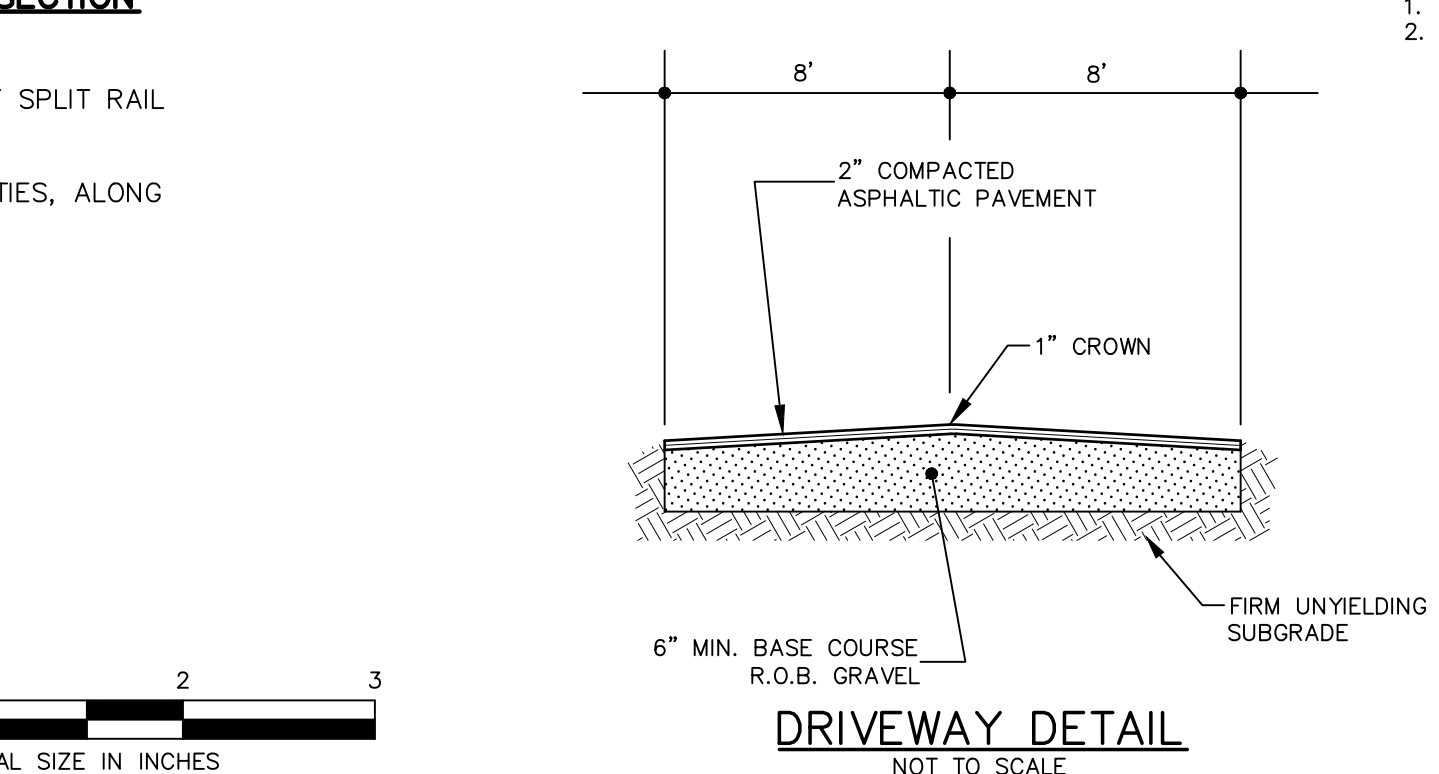


TYPICAL WATER SERVICE INSTALLATION/RESTORATION DETAIL
NOT TO SCALE

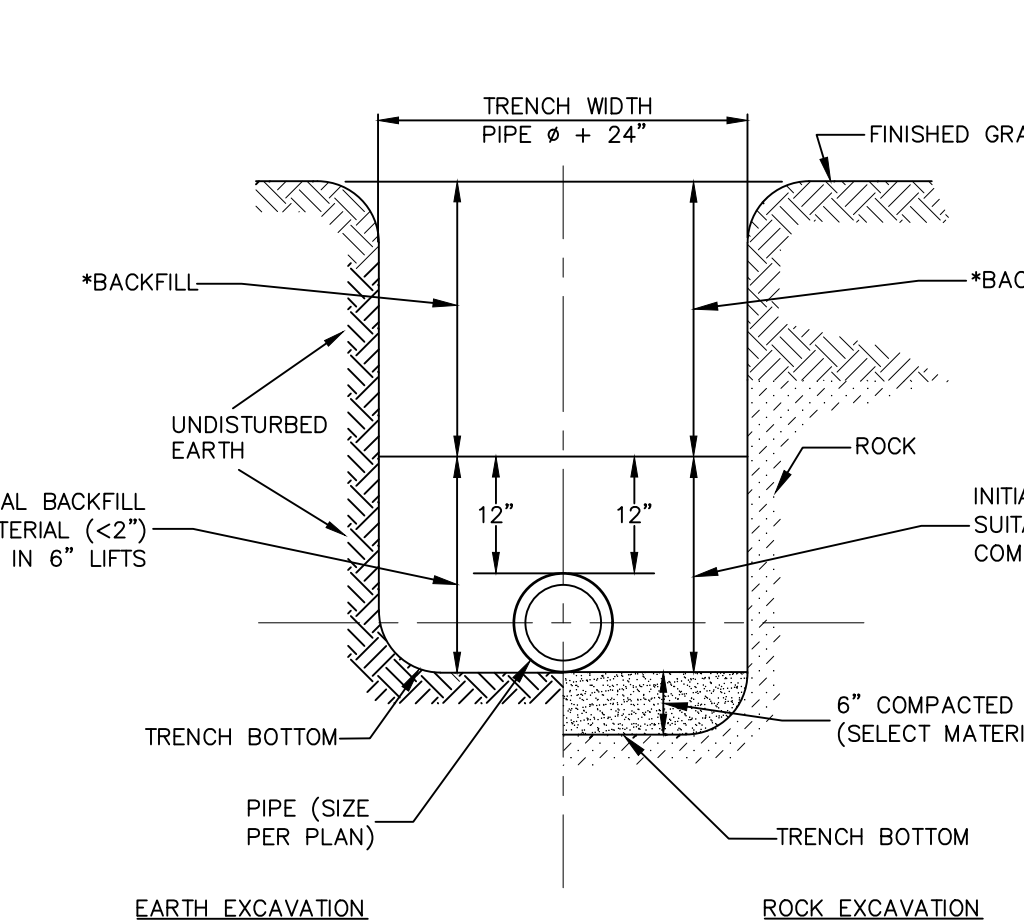
- NOTE:
1. PAVEMENT AND SUBBASE MATERIAL SHALL, AT A MINIMUM, MATCH THE EXISTING TYPES AND THICKNESSES FOUND WITHIN ANY TOWN, COUNTY OR STATE HIGHWAY, WHICHEVER IS GREATER.
2. INTENDED ONLY FOR SERVICES LESS THAN 2" IN DIAMETER.
3. WATER SERVICE LINES MUST BE CONTINUOUS FROM HOUSE TO PUBLIC UTILITY CONNECTION.



- NOTE:
1. CLEANOUT LOCATED IN A ROAD, DRIVEWAY OR PARKING AREA SHALL REQUIRE A CAMPBELL FOUNDRY #4164 CAST IRON FRAME AND COVER, (OR APPROVED EQUAL).



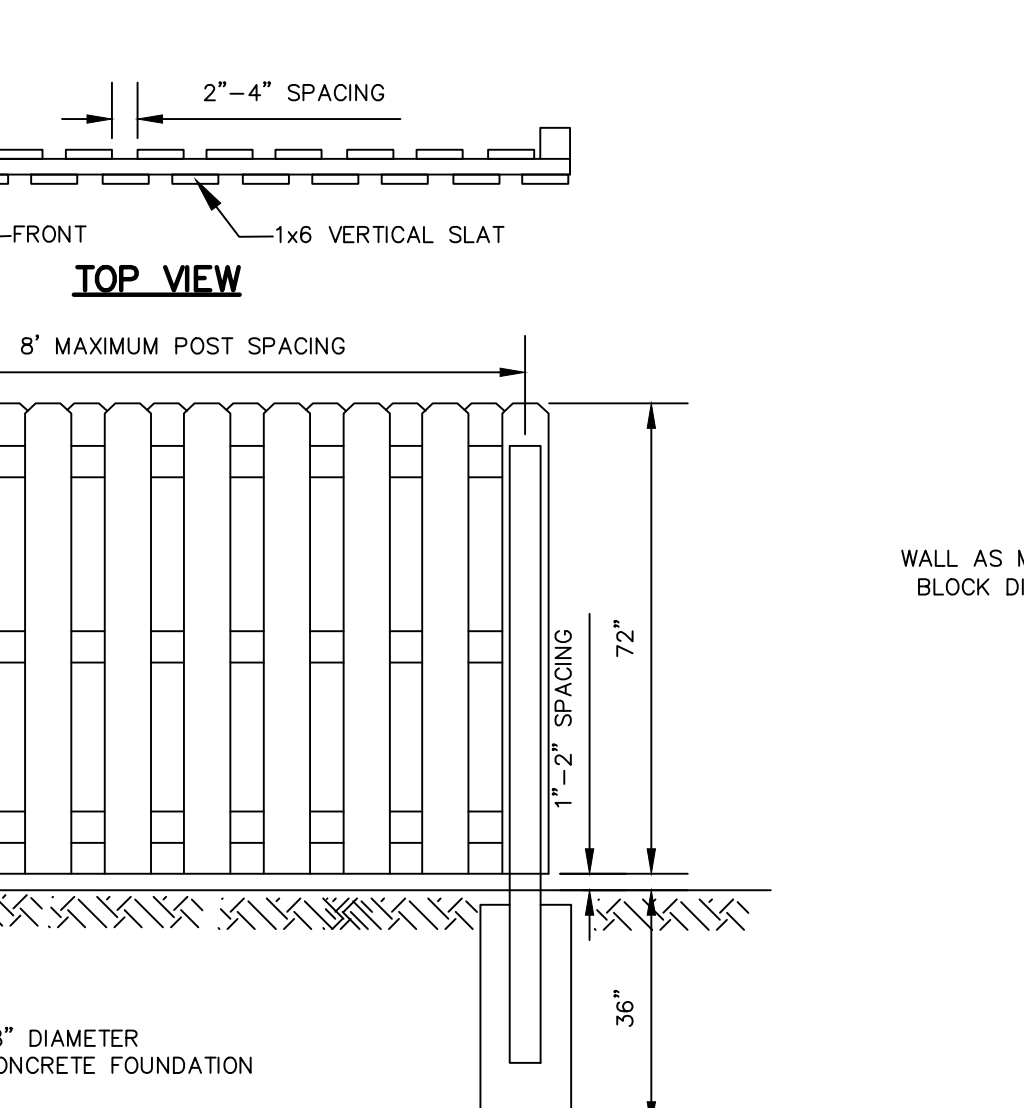
WATER SERVICE LINE CONCRETE ENCASMENT DETAIL
NOT TO SCALE



- * BACKFILL TO BE COMPACTED IN 8" LIFTS WITH NO STONES OVER 8" IN ANY DIMENSION.

TRENCH CROSS SECTION
NOT TO SCALE

- NOTES:
1. TRENCHES IN PAVED AREAS SHALL UTILIZE THE PAVEMENT REPLACEMENT DETAIL FOUND ON THIS SHEET.
2. FULL DEPTH ROB GRAVEL OR ITEM 4 COMPACTED TO 95% MODIFIED PROCTOR UNDER PAVED AREAS.
3. CONTRACTOR SHALL PROVIDE PIPE IDENTIFICATION TAPE WITHIN TRENCHES FOR BOTH WATER SERVICE LINES & SEWER LATERALS.



TOP VIEW

- NOTES:
1. WOOD TO BE TREATED PINE. USE GALVANIZED NAILS FOR FASTENING
2. NUMBER OF BOARDS WILL VARY BASED UPON SPACE BETWEEN BOARDS & WIDTH OF BOARDS

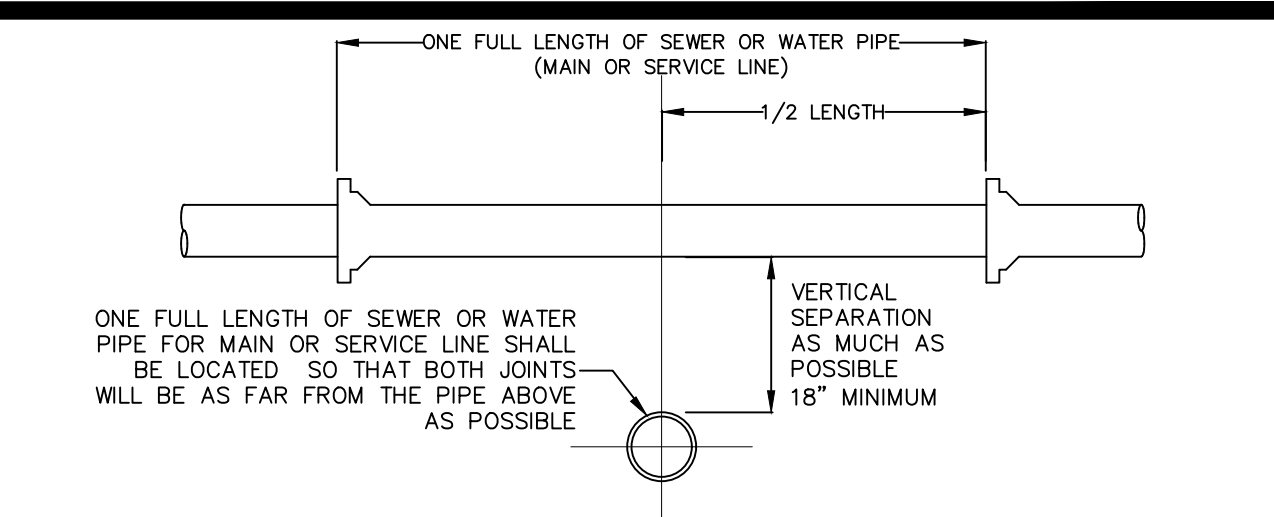
FRONT VIEW

PRIVACY FENCE DETAIL
NOT TO SCALE

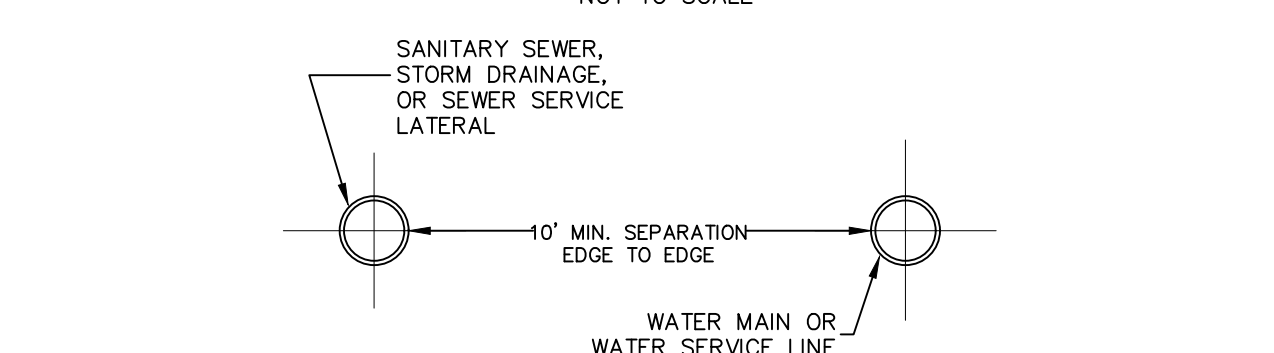


DC EHSD WAIVER NOTE:
THE WAIVER FROM THE DC EHSD IS REQUIRED SINCE THE "FLAG POLE" PORTION OF THE PROPOSED SUBDIVISION IS TOO NARROW & HAS MULTIPLE UTILITIES WITHIN IT. THE PROPOSED WATER SERVICE LINES SHALL BE SLEEVED IN A 2" PE PIPE & ENCASED IN CONCRETE FOR ITS ENTIRE LENGTH WHERE A 10' HORIZONTAL SEPARATION CAN NOT BE MAINTAINED.

SURVEY NOTE:
PRIOR TO CONSTRUCTION, THE PROPERTY LINES SHALL BE STAKED OUT BY A NEW YORK STATE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER.



WATER & SEWER CROSSING DETAIL
NOT TO SCALE



WATER & SEWER HORIZONTAL SEPARATION
NOT TO SCALE

- SEWER & WATER SEPARATION NOTES**
1. WHEN IT IS IMPOSSIBLE TO MAINTAIN PROPER HORIZONTAL OR VERTICAL SEPARATION AS SHOWN, THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER MAIN, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
2. A FULL LENGTH OF BOTH PIPES CROSSING MUST BE CENTERED AT THE CROSSING.
3. BEDDING MATERIAL SHALL BE INCREASED TO 12" BELOW THE LENGTH OF WATER MAIN PIPE FOR 10' ON EITHER SIDE OF THE CROSSING.
4. TWO LAYERS OF CAUTION TRACER TAPE SHALL BE PLACED 18" MINIMUM ABOVE STORM SEWER MAINS.

- NOTES**
1. SEPARATION DISTANCE BETWEEN WATER MAINS AND STORM/SEWER MAINS SHALL BE 10' HORIZONTAL AND 18" AT CROSSINGS. THESE SEPARATION DISTANCES MUST BE MAINTAINED SPECIFICALLY SHOWN AND UNLESS OTHERWISE ON THE PLANS. THE PREFERRED CROSSING OPTION IS FOR THE WATER MAIN TO BE CONSTRUCTED ABOVE STORM/SEWER MAINS.
2. SEWER MAIN INCLUDES SEWER LATERALS AND STORM DRAIN.
3. WATER MAIN INCLUDES WATER SERVICE LATERALS.
4. DEFLECT WATER MAIN IN AN ARC BENEATH THE SEWER/STORM LINE. DO NOT USE FITTINGS TO DEFLECT THE WATER MAIN.

- WATER OVER SEWER SEPARATION NOTES**
1. FULL LENGTH OF BOTH PIPES CROSSING MUST BE CENTERED AT THE CROSSING SO THAT PIPE JOINTS WILL BE AS FAR FROM EACH OTHER AS POSSIBLE (10' MIN.).
2. CONTRACTOR SHALL PROVIDE STRUCTURAL SUPPORT FOR EXISTING WATER MAIN OVER THE ENTIRE TRENCH WIDTH TO PREVENT DAMAGE TO THE WATER MAIN.
3. WATER TIGHT JOINTS WHERE WATERLINES ARE CROSSED ABOVE OR BELOW.

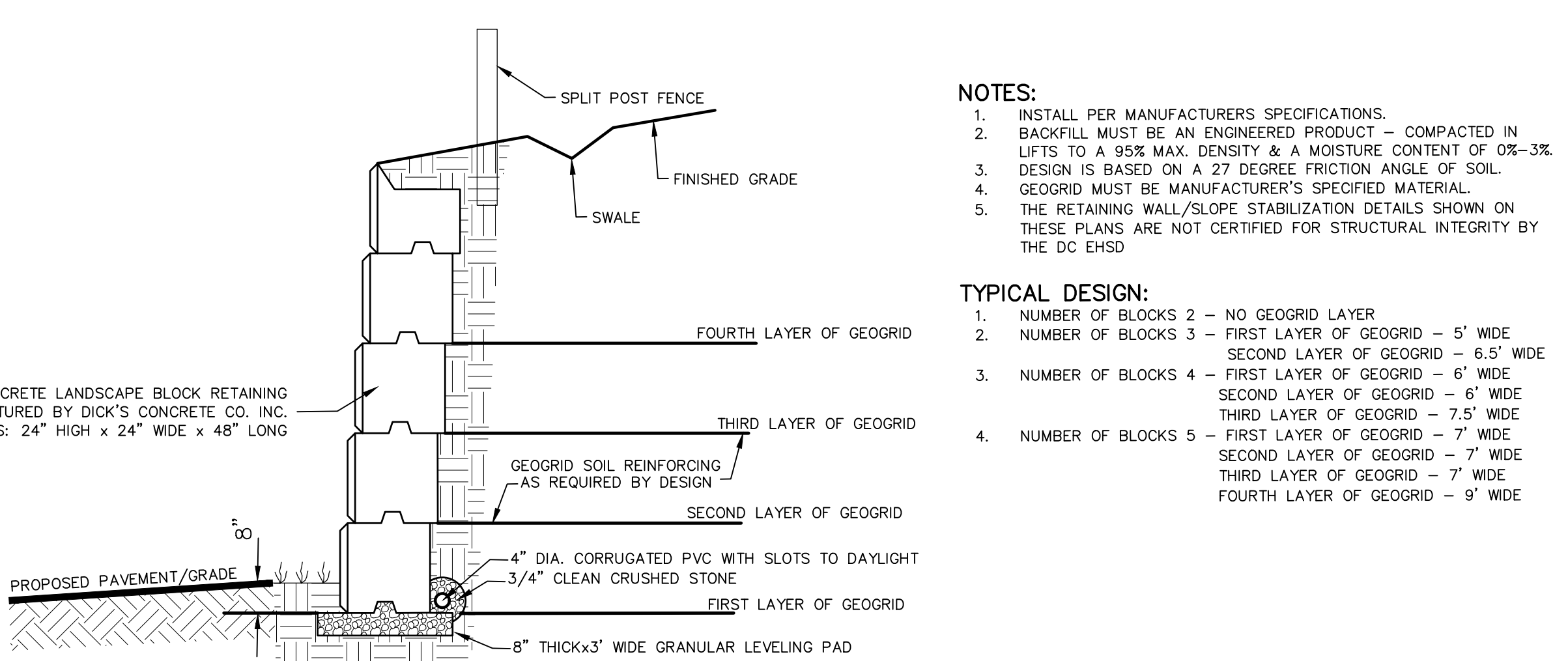
PRESSURE TESTING OF SANITARY SEWER & STORM SEWERS
LOW PRESSURE AIR TESTING SHALL BE EMPLOYED PRIOR TO ISSUANCE OF AUTHORIZATION TO OPERATE. LOW PRESSURE AIR TESTS SHALL CONFORM TO ASTM SPECIFICATION C 828. ALL SECTIONS TO BE TESTED SHALL BE CLEANED AND FLUSHED. AIR SHALL HAVE BEEN BACKFILLED. PRIOR TO TESTING, AIR SHALL BE ADDED UNTIL THE INTERNAL PRESSURE OF THE TEST SECTION IS RAISED TO APPROXIMATELY 4.0 PSIG. THE AIR PRESSURE TEST SHALL BE BASED ON THE TIME, MEASURED IN SECONDS, FOR THE AIR PRESSURE TO DROP FROM 3.5 PSIG TO 2.5 PSIG.

ACCEPTANCE IS BASED ON LIMITS TABULATED IN THE "SPECIFICATION TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP" IN THE UNI-BELL PVC PIPE ASSOCIATION "RECOMMENDED PRACTICE FOR LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE".

BEFORE PRESSURE IS APPLIED TO THE LINE ALL CONNECTIONS SHALL BE FIRMLY PLUGGED. BEFORE THE TEST PERIOD STARTS, THE AIR SHALL BE GIVEN SUFFICIENT TIME TO COOL TO AMBIENT TEMPERATURE IN THE TEST SECTION.

IF THE TEST SECTION IS BELOW GROUNDWATER, THE TEST PRESSURE SHALL BE INCREASED BY AN AMOUNT SUFFICIENT TO COMPENSATE FOR GROUNDWATER HYDROSTATIC PRESSURE, HOWEVER, THE TEST PRESSURE SHALL NOT EXCEED 10 PSI, OR A LOWER PRESSURE AS REQUIRED BY THE SUPERINTENDENT.

THE PRESSURE TEST GAUGE SHALL HAVE BEEN RECENTLY CALIBRATED, AND A COPY OF THE CALIBRATION RESULTS SHALL BE MADE AVAILABLE TO THE SUPERINTENDENT PRIOR TO TESTING.



TERRA-CRETE RETAINING WALL
NOT TO SCALE

NOTES:
1. INSTALL PER MANUFACTURERS SPECIFICATIONS.
2. BACKFILL MUST BE AN ENGINEERED PRODUCT - COMPACTED IN LIFTS TO A 95% MAX. DENSITY & A MOISTURE CONTENT OF 0%-3%.
3. DESIGN IS BASED ON A 27 DEGREE FRICTION ANGLE OF SOIL.
4. GEOGRID MUST BE MANUFACTURER'S SPECIFIED MATERIAL.
5. THE RETAINING WALL/SLOPE STABILIZATION DETAILS SHOWN ON THESE PLANS ARE NOT CERTIFIED FOR STRUCTURAL INTEGRITY BY THE DC EHSD

TYPICAL DESIGN:

1. NUMBER OF BLOCKS 2 - NO GEOGRID LAYER	SECOND LAYER OF GEOGRID - 5' WIDE
2. NUMBER OF BLOCKS 3 - FIRST LAYER OF GEOGRID - 5' WIDE	SECOND LAYER OF GEOGRID - 6.5' WIDE
3. NUMBER OF BLOCKS 4 - FIRST LAYER OF GEOGRID - 6' WIDE	SECOND LAYER OF GEOGRID - 6' WIDE
4. NUMBER OF BLOCKS 5 - FIRST LAYER OF GEOGRID - 7' WIDE	SECOND LAYER OF GEOGRID - 7' WIDE
	THIRD LAYER OF GEOGRID - 7.5' WIDE
	THIRD LAYER OF GEOGRID - 7' WIDE
	FOURTH LAYER OF GEOGRID - 9' WIDE

THIS SHEET IS NOT VALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SET

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2-LOT SUBDIVISION FOR ANGELA INGHAM
CITY OF BEACON
COUNTY OF DUTCHESS, NEW YORK

CONSTRUCTION DETAILS

JOB#: 14-006
SCALE: AS NOTED
DATE: 6-23-21
DRAWN: MM
CHECKED: MM
SHEET NO. 6 of 6

MICHAEL A. MORGANTE, P.E.
LIC. NO. 78577

LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal
John Queenan, P.E., Principal

Rodney C. Knowlton, L.S., Principal
Jerry A. Woods, L.S., Principal

John D. Russo, P.E., Principal
John Lenc, P.E., L.S.
Arthur R. Tully, P.E.

August 2, 2021

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: Dellaportas Subdivision
52 Dennings Avenue
City of Beacon
Tax Map No. 5954-50-687603

Dear Mr. Gunn:

We have reviewed the following plans and documents in relation to the proposed 2-lot subdivision proposed at 52 Dennings Avenue.

- Correspondence dated July 27, 2021 as prepared by Taylor Palmer, Esq. of Cuddy & Feder, LLP.
- Correspondence dated July 27, 2021 as prepared by Arden Consulting Engineers.
- Correspondence from Dutchess County Department of Health dated July 26, 2021.
- Draft Declaration of Access and Utility Easement.
- Plans titled "2-Lot Subdivision for Dellaportas Enterprises I", consisting of 6 sheets dated June 23, 2021, as prepared by Arden Consulting Engineers.
- Plan titled "Two Lot Subdivision prepared for Angela Ingham", dated July 26, 2021, as prepared by Darren Stridiron, PLS.

The applicant is proposing to create a 2-lot subdivision of a 1.07± acre parcel that lies between Dennings Avenue and South Avenue in the R1-10 Zone, with access off of Dennings Avenue to serve both lots. Based upon our review of the submitted documents and revised plans, we offer the following comments:

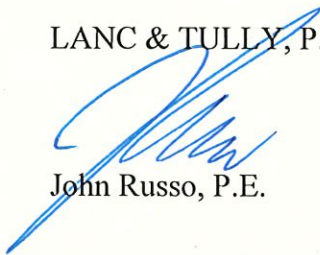
Subdivision Plan Comments:

1. The access and utility easement shall be labeled as such on the plan.
2. The "Standard Notes for Projects w/Central Water & Sewer" be removed, as these proposed improvements are not shown on the plan.
3. Several of the "General Notes" should be removed from the plan.

This completes our review at this time. Further comments may be forth coming based upon more detailed 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: John Clarke, Planner
Jennifer Grey, Esq.
David Buckley, Building Inspector

To: John Gunn, Chair, and the City of Beacon Planning Board

Date: August 5, 2021

Re: **52 Dennings Avenue Subdivision**

I have reviewed the July 27, 2021 cover letter from Cuddy+Feder, July 27, 2021 response letter by Arden Consulting Engineers, July 12, 2021 NYS Coastal Assessment Form and LWRP Consistency Statement, July 26, 2021 Subdivision Plat, and a 6-sheet Subdivision Plan, dated July 23, 2021.

Proposal

The applicant is proposing to subdivide a 1.07-acre parcel with one existing house into two lots for the construction of an additional house. Parcel 1 would have 0.404 acres and Parcel 2 would contain 0.663 acres. The parcel is in the R1-10 zoning district and is within the City's Local Waterfront Revitalization Program (LWRP) boundary.

Comments and Recommendations

1. Sheet 1 should show the size and species of any existing trees over 6 inches in diameter within the area of disturbance and indicate any major trees that will be removed.
2. The proposed privacy fence should be described on the plans as to where it begins and ends, preferably from the front property line of the subject parcel to the rear line of the adjacent lot.
3. The applicant has provided a Coastal Assessment Form and a Consistency Statement for the proposal, demonstrating no conflicts with the adopted LWRP policies. The Planning Board should issue 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.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Taylor M. Palmer, Esq., Project Attorney
Michael A. Morgante, P.E., Project Engineer

Project:

52 Dennings Avenue Subdivision

Date:

August 10, 2021

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?	☒	☐

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 the attached addendum.

☐	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	August 10, 2021
Name of Lead Agency	Date
John Gunn	Chairman
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)

**ATTACHMENT TO
NEGATIVE DECLARATION
REASONS SUPPORTING DETERMINATION**

**APPLICATION FOR SUBDIVISION APPROVAL
FOR 52 DENNINGS AVENUE**

Parcel No. 5954-50-687603

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 the 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 1.07-acre parcel with one existing house into two lots for the construction of an additional house. Parcel 1 will have 0.404 acres and Parcel 2 will have 0.663 acres. The property is located at 52 Dennings Avenue in the R1-10 Zoning District on property known and designated on the Tax Map as Parcel No. **5954-50-687603** (the “Property”).

The Proposed Action is an Unlisted action. The Planning Board at its July 13, 2020 meeting determined to undertake an uncoordinated review.

The Proposed Action includes a request for Subdivision approval and a Certificate of Appropriateness. The Planning Board is the approval authority for the Subdivision and Certificate of Appropriateness. The Property is located in the Coastal Management Zone as defined by the City’s Local Waterfront Revitalization Program (LWRP) so the Proposed Action also requires an LWRP Consistency Determination.

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 and the construction of one new single family dwelling with typical grading and site work associated with such construction. There are no wetlands, water bodies, very steep slopes or other environmentally sensitive areas on the Property.

For these reasons, 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 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. The applicant obtained Dutchess County Health Department waivers for water and sewer separation distances associated with the Proposed Action.

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 EAF mapper the Property is not located within a flood zone and the proposed stormwater drainage measures include on-site catch basins to direct stormwater and runoff to the City stormwater system. For these reasons, 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 vegetation on the site has been largely removed. The Applicant proposes a single row of 20 Norway Spruces in the right-of-way, approximately 5-6 feet in height. Although the Short EAF indicates that the Property may contain or serve as habitat for the endangered Atlantic Sturgeon and Shortnose Sturgeon there are no water bodies on or near the Property which would serve as habitat for sturgeon. Further, the Short EAF indicates that the Property may contain or serve as habitat for Bald Eagles. Due to the fact that the site is already cleared and no further tree removal is proposed any bald eagle habitats in the immediate area will not be disturbed and the Project is not likely to impact the species.

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 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 between 7:00 a.m. and 7:00 p.m. It is not anticipated that blasting will be necessary during the proposed construction. If blasting does become necessary, it will be performed in accordance with all applicable state and local requirements. 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. Although the EAF Mapper Summary Report identified DEC Spills or Remediation Sites within 2,000 feet of the Property, review of reports from DEC's Environmental Site Remediation Database reveal that the sites have either been closed out or would not affect the Property due to intervening topography or distance.

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 and consistent with the character of the existing neighborhood.

Based upon this information and the information in the Short 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: August 10, 2021
Beacon, New York

Motion by _____, seconded by _____:

Kevin Byrne Voting:
J.C. Calderon Voting:
Karen Quiana Voting:
Jill Reynolds Voting:

Len Warner Voting:
Randall Williams Voting:
John Gunn, Chairman Voting:

City of Beacon Planning Board Agenda
08/10/2021

Title:

Public hearing on application for Special Use Permit and Site Plan Approval, accessory apartment, 10 Herbert Street, submitted by Katharine Baker & Gamble Staempfli

ATTACHMENTS

[10 Herbert Street Cover Letter.pdf](#)

[10 Herbert Street - Sheet 1 Site Plan.pdf](#)

[10 Herbert Street - Sheet 2 Existing Conditions Demolition Plan.pdf](#)

[10 Herbert Street - Sheet 3 Building Plans.pdf](#)

[10 Herbert Street - Sheet 4 Grading & Utilities.pdf](#)

[Engineer Review Letter.pdf](#)

[Planner Review Letter.pdf](#)

ARYEH SIEGEL
ARCHITECT

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

Re: 10 Herbert Street, Beacon, New York
Site Plan Application – Responses to Comments

July 27, 2021

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 June 3, 2021, and Lanc & Tully's letter dated June 1, 2021.

John Clarke Planning and Design Comment Responses:

1. The Zoning Table has been corrected
2. A note has been added to the Site Plan to include the Accessory Apartment provisions
3. The calculation for the 30% maximum for attached accessory apartments has been corrected.
4. The plan has been updated to allow for parking so that no cars are in front of the front wall of the house.
5. A detail for the proposed privacy fence is shown on Sheet 1
6. Proposed lighting locations are shown on the plans.
7. The Zoning Board of Appeals approved the requested rear yard setback variance at their July meeting.

Lanc & Tully Comment Responses:

General Comments

1. The side yard and rear yard setbacks have been revised.
2. Areas have been corrected on the Zoning Regulations Table
3. Note 3 has been removed.
4. Spot elevations have been removed from Sheet 1 – Site Plan
5. A note will be added regarding the encroachments.
6. The spot elevation note has been removed from the floor plan
7. The plan has been updated to provide interior dimensions
8. The plan has been updated to reflect the window layout on the elevations
9. Grading has been updated on Sheet 4
10. Construction details for the fence have been added to Sheet 1
11. The retaining wall detail has been revised to refer to the Keystone Compac III blocks.
12. Retaining wall leveling pad thickness and drainage layer thickness have been added to the construction detail.
13. The retaining wall footing drain and drain outlet location have been labeled on Sheet 4.

Thank you. Please let me know if you have any questions.

Sincerely,

ARYEH SIEGEL

ARCHITECT

A handwritten signature in black ink, reading "Aryeh Siegel". The script is fluid and cursive, with the first name "Aryeh" and last name "Siegel" clearly distinguishable.

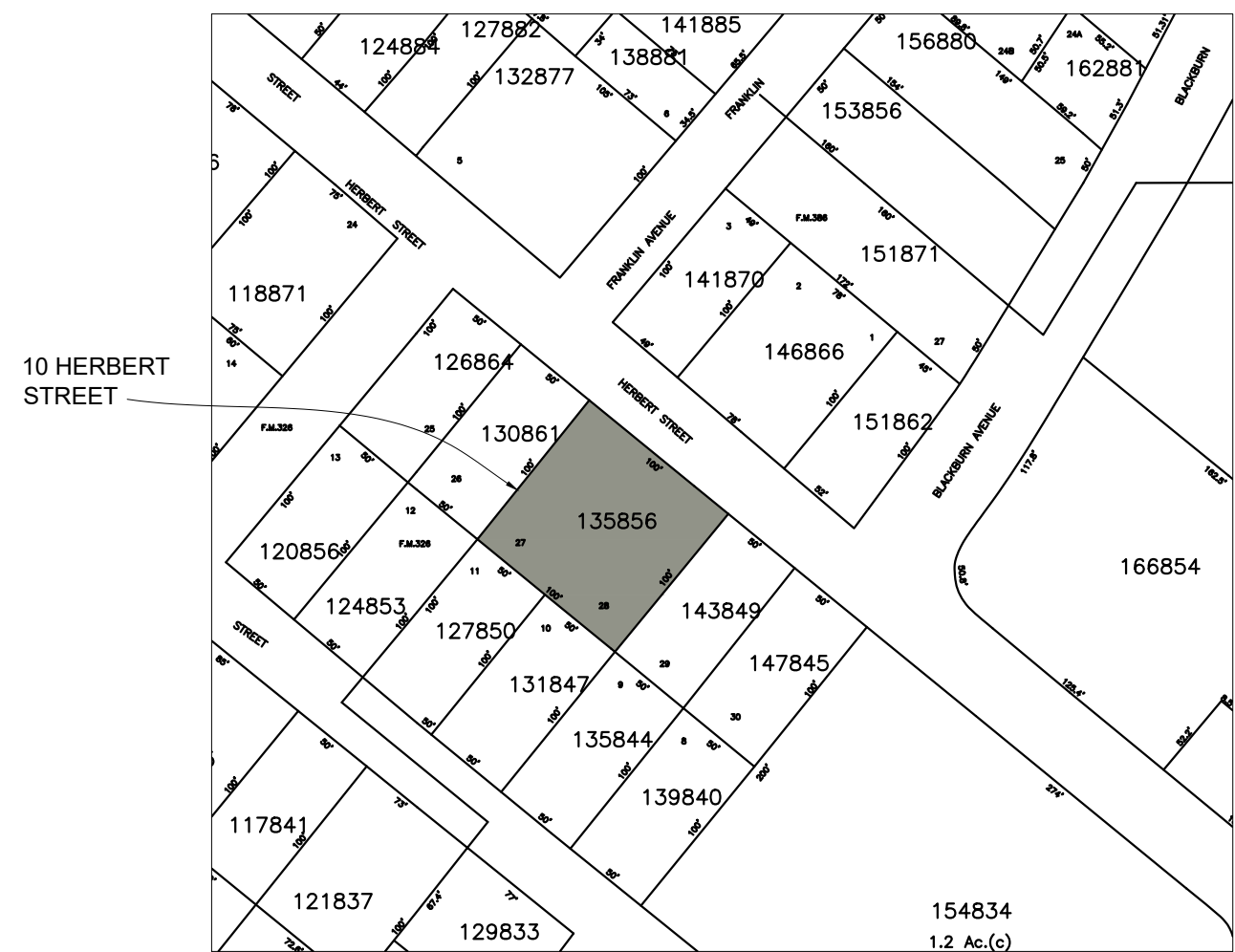
Aryeh Siegel

Aryeh Siegel, Architect

[illegible]

Zoning Regulations Table																	
	Required Setbacks Main Structure			Existing Setbacks Main Building			Proposed Setbacks Addition			Maximum Cumulative Square Footage for All Accessory Buildings	Proposed Cumulative Square Footage for All Accessory Buildings	Maximum Square Footage Permitted For Accessory Apartment (and % based on total area of building)	Proposed Square Footage For Accessory Apartment (and % based on total area of principal building)	Proposed Building Coverage	Maximum Main Building Height	Existing Main Building Height	Proposed Addition Height
	Front	Side	Rear	Front	Side	Rear	Front	Side	Rear								
Zoning District																	
R1-5	15'	10'	20'	16.8'	11.8'	31.1'	NA	10.0'	8.8' *	720 sf	84 sf existing shed	650 sf	650 sf	27% including pool and shed	2.5 Stories 35'	2.5 Stories 26' existing	15'
					51.3'												

*Note that the proposed rear setback follows the line of the existing garage to be demolished and replaced by the proposed addition.



Location Plan

Not to Scale

Zoning Summary

Zoning District:	R1-5
Tax Map No.:	6054-30-135856
Lot Area:	9,998 square feet
Existing Building Footprint:	1,247 square feet
Total Proposed Building Area:	3,191 square feet, including existing house, existing shed, and existing pool
Proposed Accessory Apartment :	650 square feet
Historical Overlay District:	No
Parking Overlay District:	No
Existing Use:	Single Family Residential
Proposed Use:	Single Family Residential with Accessory Apartment and Studio

Parking & 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 Required Parking Spaces		3 Parking Spaces
Total Existing Parking Spaces		3 Parking Spaces

Notes:

1. Apartment size. The minimum floor area for an accessory apartment within a detached single-family dwelling shall be 400 square feet. The maximum floor area shall be 650 square feet, but in no case shall the floor area of the apartment exceed 30% of the total floor area of the dwelling building in which it is located.

The proposed Accessory Apartment area is 650 square feet. The total floor area of the dwelling is 3,191 square feet. The Accessory Apartment is approximately 22% of the total floor area of the dwelling building in which it is located. Therefore, the size of the accessory apartment complies with the maximum floor area and the maximum allowable percentage
2. 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.

The required parking is provided in the existing driveway.
3. The Zoning Board of Appeals granted a variance (#2021-05) to allow the addition to maintain the existing 8.8' rear yard setback that the existing garage currently has.
4. Note that exterior lighting fixtures located on the plans shall comply with the requirements of Section 223-14B, specifically:
 - a. 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.
 - b. 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.
 - 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.

Index of Drawings

Sheet 1 of 4	Site Plan
Sheet 2 of 4	Existing Conditions & Demolition Plan
Sheet 3 of 4	Building Plan and Elevations
Sheet 4 of 4	Grading and Utility Plan

Stockade Privacy Fence

Scale: NTS

Site Plan

Scale: 1" = 10'

Special Use Permit - Accessory Apartment

Sheet 1 of 4 - Site Plan

10 Herbert Street

Beacon, New York

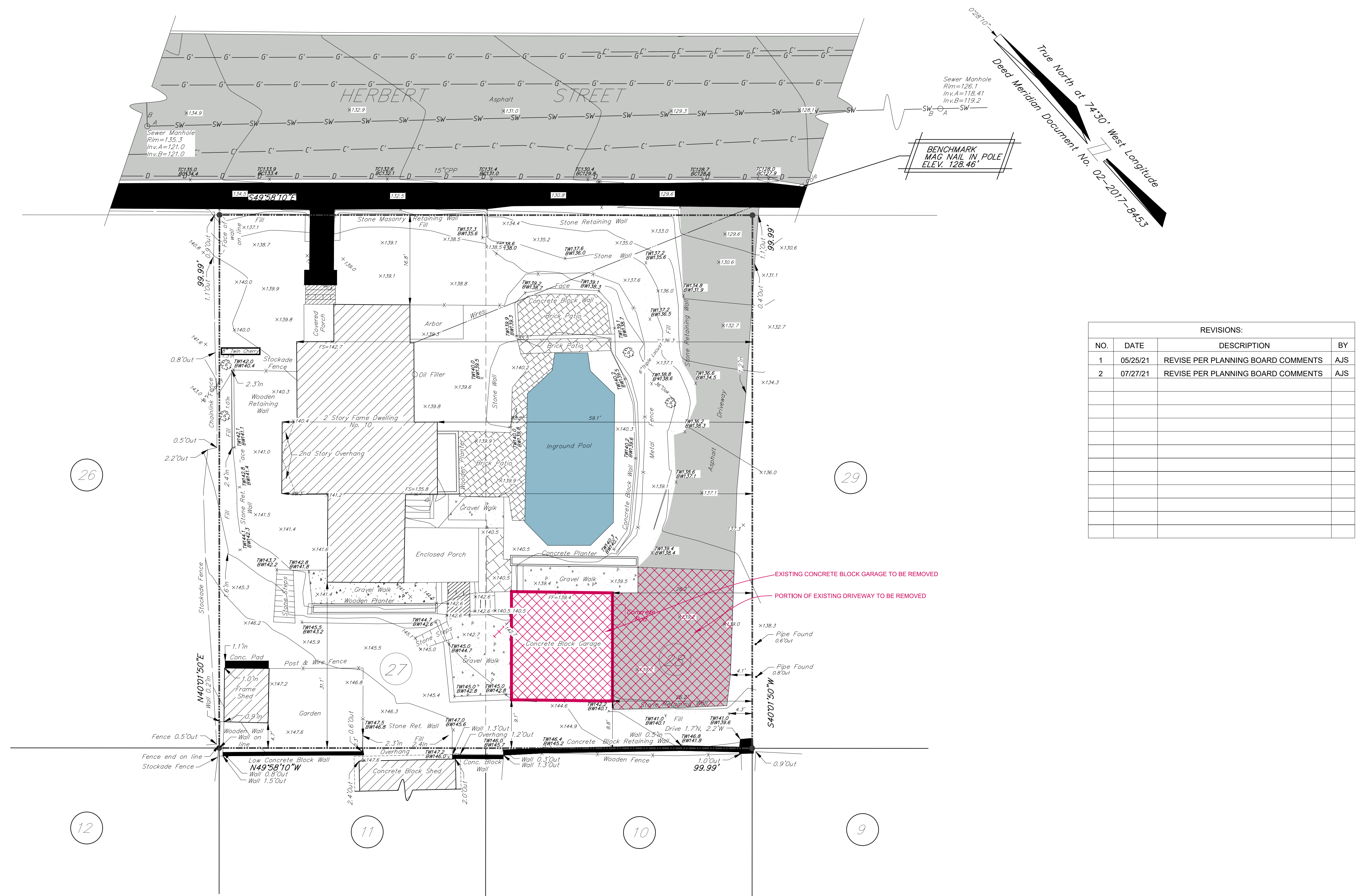
Scale: As Noted

March 16, 2021

Owner:
Katharine Baker & Gamble Staempfli
10 Herbert 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



Existing Conditions & Demolition Plan

Scale: 1" = 10'

Special Use Permit - Accessory Apartment

Sheet 2 of 4 - Existing Conditions & Demolition Plan



Scale: $\frac{1}{4}" = 1'-0"$

Special Use Permit - Accessory Apartment

Sheet 3 of 4 - Building Plans

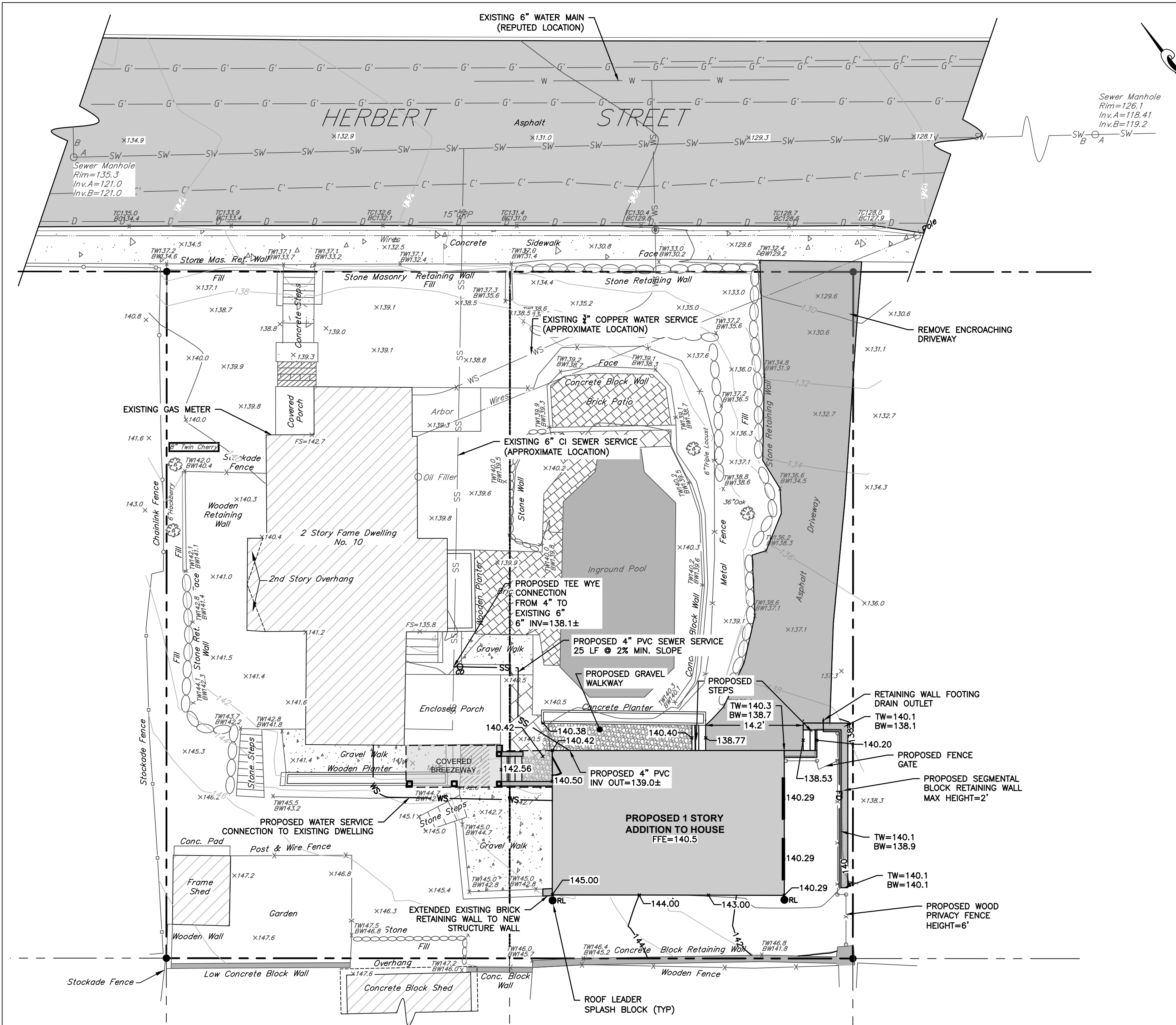
10 Herbert Street

Scale: As Noted
March 16, 2021

Owner:
Katharine Baker & Gamble Staempfli
10 Herbert Street
Beacon, NY 12508

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

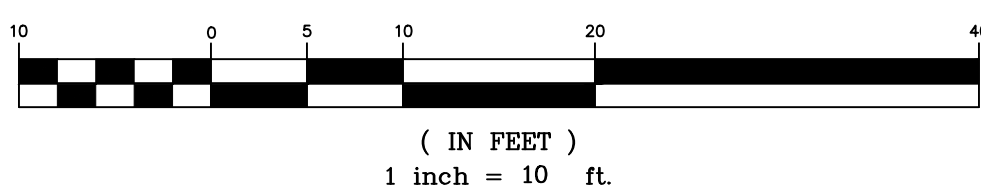
Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508



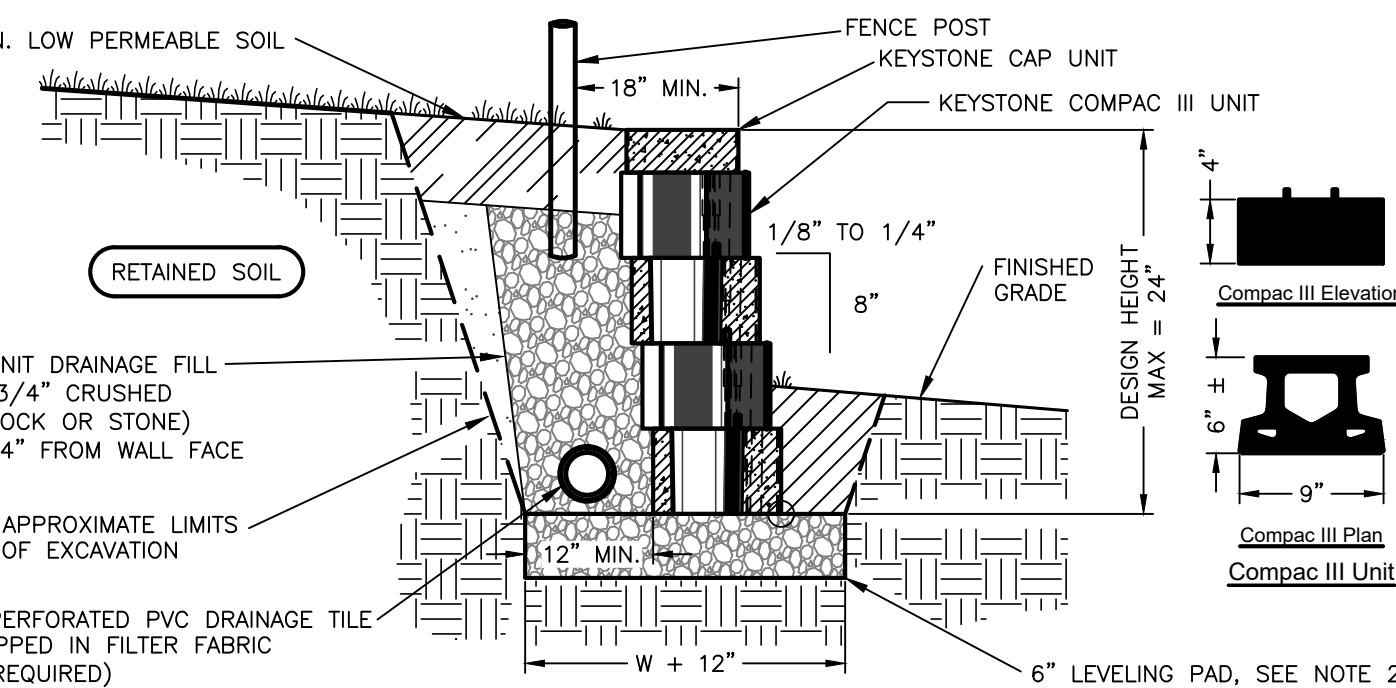
GRADING & UTILITY PLAN

SCALE: 1" = 10'

GRAPHIC SCALE



DRAWN BY: CMB				CHECKED BY: ESR			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
1	7/27/21	PER PB COMMENTS	ESR				



- NOTES:
- RETAINING WALL TO BE KEYSTONE COMPAC III BLOCK OR APPROVED EQUAL INSTALLED IN THE NEAR VERTICAL CONFIGURATION.
 - THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2,000 PSI± UNREINFORCED CONCRETE

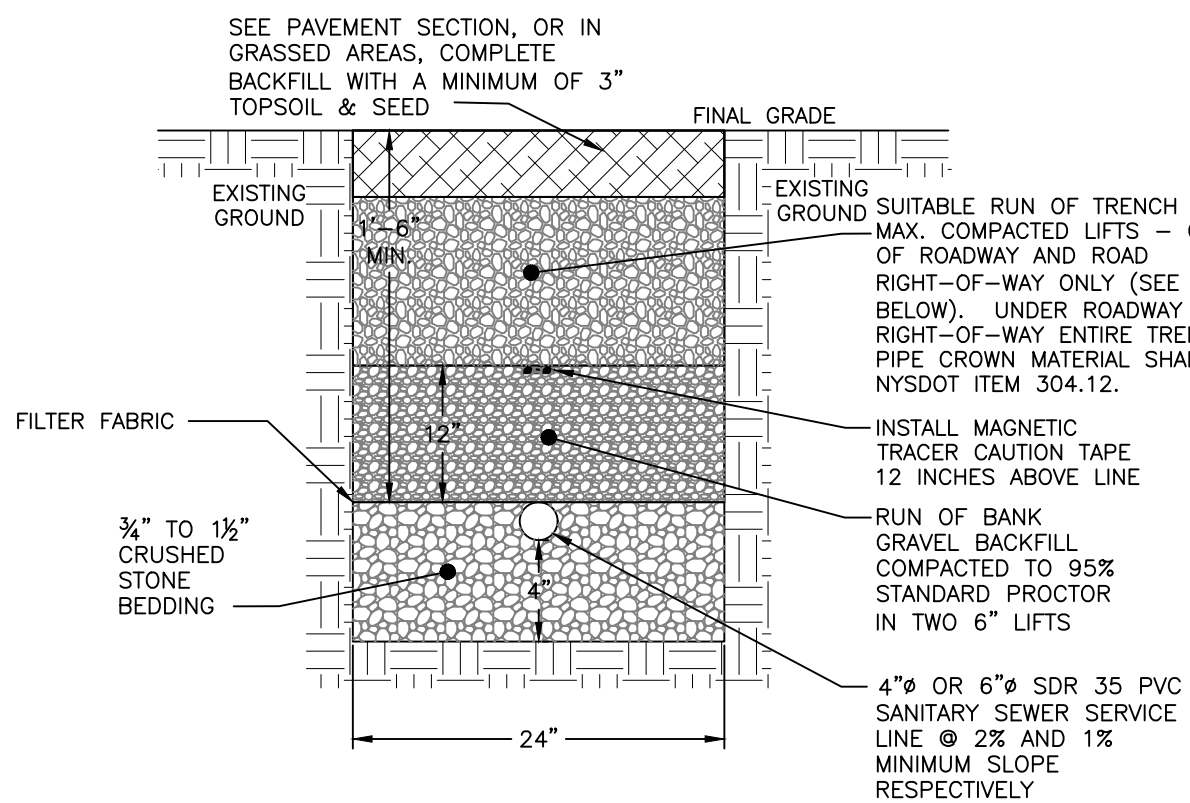
SEGMENTAL BLOCK GRAVITY RETAINING WALL DETAIL
SCALE: NOT TO SCALE



BEFORE UNDERTAKING ANY DIGGING, DRILLING, BLASTING OR DISTURBANCE TO THE GROUND IN ANY WAY, FOR ANY REASON, ALL INDIVIDUALS MUST CONTACT
DIG SAFELY NEW YORK
AT
811 OR WWW.CALL811.COM

LEGEND:

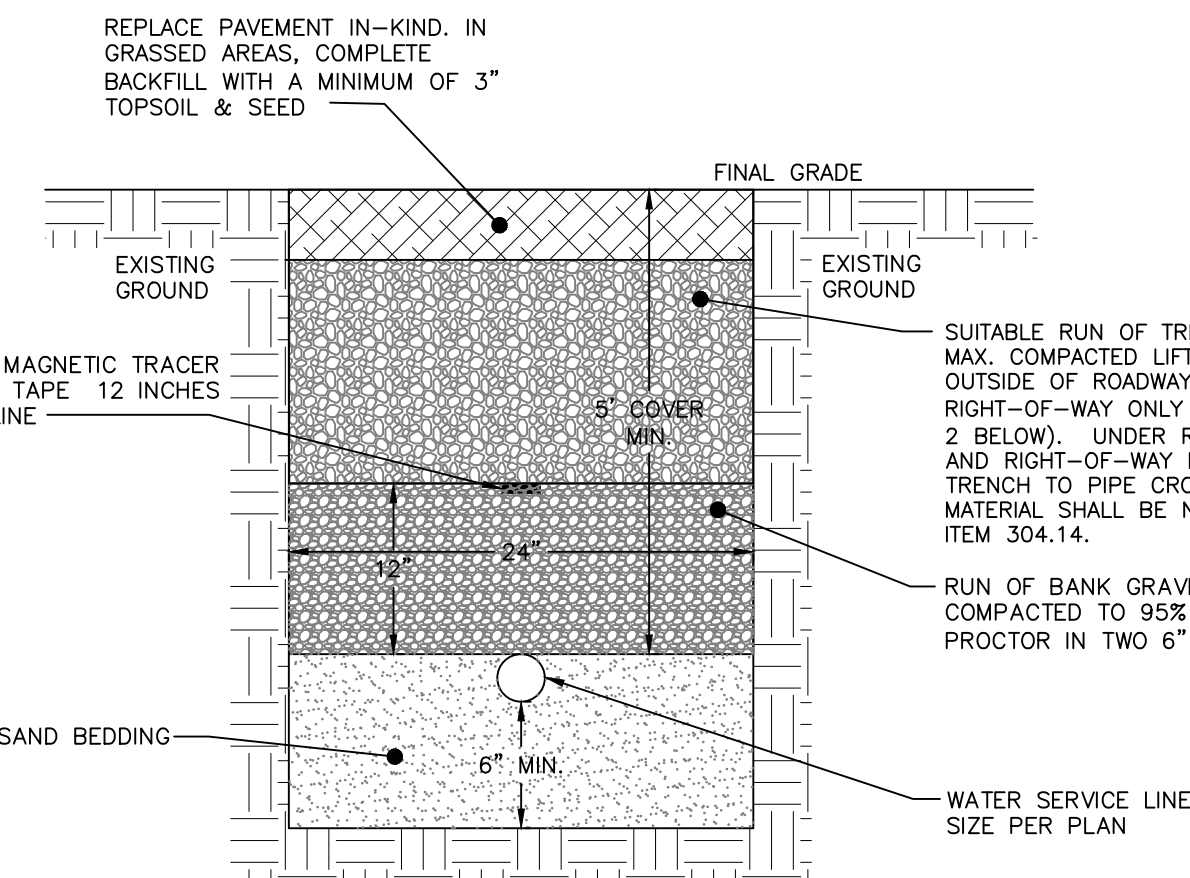
---	EXISTING PROPERTY LINE
---	ADJOINING PROPERTY LINE
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	EXISTING OVER HEAD WIRE
---	EXISTING UTILITY POLE
---	EXISTING SEWER LINE
---	EXISTING SEWER MANHOLE
---	EXISTING STORM WATER LINE
---	PROPOSED SET BACK LINE
---	PROPOSED PROPERTY LINE
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	PROPOSED SEWER SERVICE LINE
---	PROPOSED SEWER CLEAN OUT
---	PROPOSED ROOF LEADER
---	PROPOSED WATER SERVICE LINE



NOTES:

- EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
- 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.

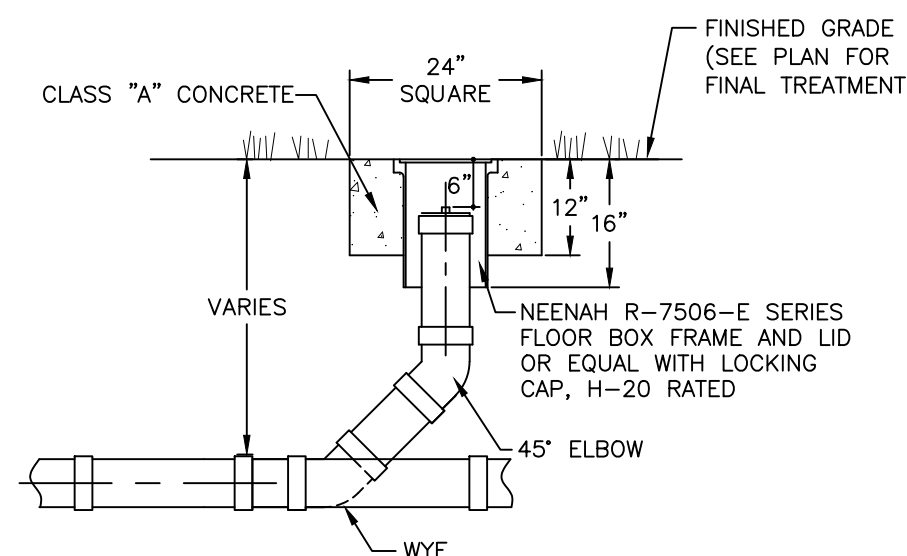
SANITARY SEWER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



NOTES:

- EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
- SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ENLARGED 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.
- 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



CLEANOUT DETAIL
NOT TO SCALE

PROJECT INFORMATION:

PARCEL OWNER:	KATHERINE BAKER & GAMBLE STAEMPFLI; 10 HERBERT STREET BEACON, NY 12508
PROJECT ENGINEER:	HUDSON LAND DESIGN P.C.; 174 MAIN STREET, BEACON, NY 12508
PROJECT ARCHITECT:	ARYEH SIEGEL ARCHITECT; 84 MASON CIRCLE, BEACON, NY 12508
PARCEL LOCATION:	10 HERBERT STREET BEACON, NY 12508
TAX PARCEL ID:	6054-30-135856
PARCEL AREA:	±0.23-ACRES
WATER SUPPLY:	MUNICIPAL
SEWAGE DISPOSAL:	MUNICIPAL

GENERAL CONSTRUCTION NOTES:

- 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.
- THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962.
- 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.
- 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).

UTILITY NOTES:

- THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL CATCH BASINS, STORM SEWER LINES, SANITARY MANHOLES, SEWER LINES, WATERLINES, AND 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 AND DEPTHS.
- THE DEPTH OF THE EXISTING STORMWATER, SEWER AND WATER LINES WITH PROPOSED CONNECTIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION OF THE STORMWATER SYSTEM TO VERIFY THAT THERE WILL NOT BE CONFLICTS WITH CROSSINGS OR CONNECTIONS.

SITE SPECIFIC NOTES:

- 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.
- 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.
- THE PROPOSED PROJECT SHALL BE SERVED BY THE CITY OF BEACON MUNICIPAL WATER AND SEWER SERVICES.
- THE WATER SERVICE LINE AND METER SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BEACON WATER DEPARTMENT REQUIREMENTS.
- THE WATER SERVICE LINE FROM THE ADDITION TO THE EXISTING DWELLING SHALL BE 3/4" K-COPPER.
- THE EXISTING WATER & SEWER SERVICES SHALL REMAIN..
- THE SEWER SERVICE LINE FROM THE ADDITION TO THE EXISTING DWELLING SERVICE SHALL BE 4" SCH-40 PVC PIPE WITH PITCH AS SHOWN ON THE PLAN (MINIMUM OF 1/4" PER FOOT SHALL BE MAINTAINED).
- ROOF LEADER CONNECTIONS TO BE MINIMUM 4" PVC OR HDPE @ 2.0% MIN, IF NECESSARY.
- 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.
- EXISTING DRIVEWAY SHALL REMAIN.
- 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.

EROSION AND SEDIMENT CONTROL NOTES

- DUE TO THE SMALL SIZE OF THE DISTURB AND THE SURROUNDING RETAINING WALLS, NO SPECIFIC EROSION AND SEDIMENT CONTROL HAVE BEEN SPECIFIED ON THIS PLAN. DURING THE COURSE OF CONSTRUCTION IF EROSION BEGINS TO OCCUR, THE CONTRACTOR SHALL INSTALL SILT FENCE IN LOCATIONS TO PREVENT THE TRANSPORT OF SILT OR SEDIMENT.
- ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.
- THE SITE, ADJACENT AREAS, AND NEARBY CATCH BASINS SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. SEDIMENT AND TRASH SHALL BE REMOVED, AS NECESSARY.
- ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- ANY PILE OF POTENTIALLY ERODIBLE 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.
- AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND WILL NOT BE REDISTRIBUTED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE COVER WITHIN 14 DAYS.
- 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.
- 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.
- 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.
- WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED PER THE APPROVAL OF THE ENGINEER SUPERVISING CONSTRUCTION.

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.

GRADING & UTILITY PLAN

BAKER & STAEMPFLI

10 HERBERT STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-30-135856

JOB #: 2021-019

DATE: 05/25/21

SCALE: 1" = 10'

TITLE: GU-1

SHEET: 4 OF 4



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



LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal
John Queenan, P.E., Principal

Rodney C. Knowlton, L.S., Principal
Jerry A. Woods, L.S., Principal

John D. Russo, P.E., Principal
John Lenc, P.E., L.S.
Arthur R. Tully, P.E.

August 2, 2021

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 10 Herbert Street – Apartment
Tax No. 6054-30-135856
City of Beacon

Dear Mr. Gunn:

My office has received the following in regard to the above application:

- Correspondence dated July 27, 2021, from Aryeh Siegel, Architect.
- Plans titled "Special Use Permit – Accessory Apartment – 10 Herbert Street" and consisting of 4 sheets, with the latest revision date of July 27, 2021, as prepared by Aryeh Siegel, Architect and Hudson Land Design.

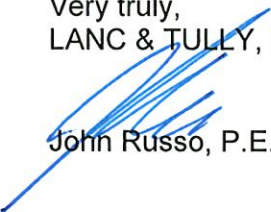
The proposed project is located in the R1-5 Zone and entails the proposed construction of an accessory apartment structure at 10 Herbert Street. Based on our review of the above document and revised plans, we would like to offer the following comments:

General Comments:

1. The Planning Board should be aware that the existing driveway encroaches onto the neighbors' parcel to the east and that the stone retaining wall system at the rear of the parcel also encroaches between the parcels. As previously stated, a note shall be added to the plan regarding these existing encroachments and that approval of the project by the Planning Board does not reflect approval of these encroachments. The wording of this note should be worked out with the Planning Board Attorney. ***The applicant's consultant states that a note will be added to the plans regarding the encroachments.***

This completes our review at this time. Further comments may be provided based on future submissions. 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: John Clarke, Planner
Jennifer Gray, Esq.
David Buckley, Building Inspector

To: John Gunn, Chair, and the City of Beacon Planning Board

Date: August 5, 2021

Re: **10 Herbert Street, Accessory Apartment Special Permit and Site Plan**

I have reviewed a response letter from Aryeh Siegel and 4-sheet Special Permit set, all dated July 27, 2021.

Proposal

The applicant is proposing to replace an existing rear-yard garage with a one-story attached building for a one-bedroom accessory apartment. The 9,998 square foot parcel is in the R1-5 district.

Comments and Recommendations

1. The 30% maximum standard for the attached apartment size refers to the total floor area of the dwelling building, which should not include the accessory shed or pool. Please provide the calculation using the total floor area of the existing house.
2. The dimensions for the proposed addition on Sheet 1 should match the dimensions on Sheet 3.
3. Any proposed exterior lighting fixture should be shown on the plans (see Section 223-14B for standards).

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Aryeh Siegel, Project Architect

City of Beacon Planning Board Agenda
08/10/2021

Title:

Public hearing on application to amend existing Site Plan Approval, Mixed Use Development, 248 Tioronda Avenue, submitted by 248 Beacon Holdings, LLC

ATTACHMENTS

[248 Tioronda Cover Letter.pdf](#)

[248 Tioronda Site Plan Full Set.pdf](#)

[248 Tioronda Building 100 Plans & Elevations.pdf](#)

[248 Tioronda Parking Plan.pdf](#)

[Engineer Review Letter.pdf](#)

[Planner Review Letter.pdf](#)

July 27, 2021

Mr. John Gunn, Chairman
and Members of the Beacon Planning Board
Beacon City Hall
1 Municipal Center
Beacon, New York 12508

VIA EMAIL DELIVERY

Re: **Response to Lanc & Tully Comments dated 07/07/21 and John Clarke comments dated 07/08/21**
*248 Beacon Holdings LLC - Fishkill Creek Development Amended Site Plan for 248 Tioronda Avenue
(Formerly Beacon 248 Development, LLC, Multifamily Development)
248 Tioronda Avenue, City of Beacon, Dutchess County, NY
Chazen Project #81750.00*

Dear Mr. Gunn,

Please find below a point-by-point response to the above referenced comments along with the revised Amended Site Plan set.

LANC & TULLY COMMENTS DATED July 7, 2021

Comments and Recommendations

General Comments:

1. With the proposed elimination of the access to Wolcott Avenue, how is the applicant proposing secondary emergency access to the site. The proposed secondary emergency access should be shown on the plans.

Response: The emergency access to Wolcott Avenue was planned for the possibility that an MTA train could block the main site entrance. The Applicant worked with City building officials to come up with an acceptable alternative to the Wolcott access drive. That alternative is the hammerhead turn around at the north end of building 300 making a secondary entry unnecessary for this site.

2. A comparison between the approved plan set and the proposed amended project shall be provided showing the reduction in pervious area for the project.

Response: The amended site plan proposes a reduction in the pervious area of approximately 14,450 SF.

3. Although the plans show the Greenway Trail to cross through the MTA parcel and then into the 23 – 28 Creek Drive project, who will be constructing the Greenway Trail across the MTA parcel and has the revised trail location been coordinated with the owner of the 23 – 28 Creek Drive project?

Response: The applicant is currently working with the Chazen survey team, Rodney Weber from Weber Projects, LLC, Hudson Land Design and the Greenway Trail Committee and will be coordinating with MTA to finalize the easement and trail route.

4. On the Sheet G001 Title Page:
 - a. The Bulk Table shall be updated to reflect the revised location of the accessible parking stalls under the proposed column.

Response: The bulk table has been updated to reflect the revised location of the parking spaces.

- b. The “Index of Drawings” shall be updated to reflect the latest date on the submitted sheets.

Response: The index of drawings has been updated to reflect the latest date on the submitted sheets.

- c. The title on the sheet shall be revised to include the word “Amended”.

Response: The title has been revised to include the word ‘Amended’.

5. On Site Plan Sheet C130:
 - a. In the south corner of the exterior of Building 300 there appears to be stairs that lead to no-where. If these are stairs, then sidewalk should be shown from the stairs to the paved area out front and the Greenway Trail to the rear of the building.

Response: A path has been shown connecting the Bldg 300 staircase to the Greenway Trail.

6. On Grading Plan Sheet C140:
 - a. Top and bottom wall elevations shall be provided on the proposed retaining wall located to the west of Building 300.

Response: Top and Bottom of wall elevation points have been provided at five different points along the retaining wall.

- b. The proposed grading shall be blended better in the area near Wolcott Avenue.

Response: The grading plan has been revised to connect the proposed topographic lines to the existing topo lines.

7. On Erosion and Sediment Control Plan Sheet C150:

- a. The plans shall be revised to eliminate in-let protection where it is not needed. The plan currently shows in-let protection along the previously approved access road from Wolcott, along with a stabilized construction entrance Wolcott. Since this entrance is proposed not to be constructed and the drainage system has been removed, the proposed erosion control shall be revised to match the proposed project.

Response: The Erosion and Sediment Control Plan has been revised to remove the inlet protection graphic symbols in that location.

- b. The total area of site disturbance, as defined by the limits of disturbance line, should be noted on the plans.

Response: The Limit of Disturbance Line has been added to the key and the total area of disturbance has been added to the Erosion and Sediment Control Plan.

8. On the Utility Plan C160:

- a. The stairs on the Greenway Trail behind Building 100 should be relocated so that they are further from proposed sewer manhole SMH-5, to avoid creating a hazard.

Response: The stairs on the Greenway Trail have been shifted to the west so that they are further from the proposed sewer manhole SMH-5.

John Clarke comments dated 07/08/21

Comments and Recommendations

1. For Sheet 1, the Bulk Table should be revised to reflect the change in parking distribution of surface and below-building spaces.

Response: The bulk table has been updated to reflect the revised location of the parking spaces.

2. For Sheet 3:

- a. Building 100 still is labeled as a 3-story building and the Site Plan should be updated to indicate the location of the exterior staircase approved as part of the later architectural review process.

Response: Building 100 is now labeled as a 2-story building. The building footprint has been updated to include the exterior staircase on the south side.

- b. If five parking spaces are to be relocated under the residential buildings, the labeling in Building 200 should be changed to 78 total spaces with 6 ADA compliant.

Response: There have been several parking changes since the June Site Plan Amendment submission. Due to solid rock encountered to the west of Bldg. 200 the retaining wall and two ADA spaces that had been proposed in that location have been moved to an alternate surface parking location south of that area. The current Site Plan proposes 73 spaces in the building of which 4 will be ADA. To reach a total of 217 spaces total, 7 additional landbanked spaces are proposed north of building 300.

- c. The previously approved northern spur off the main Greenway Trail should be included on the new plans. All changes in the trail need to be reviewed by the Greenway Trail Committee.

Response: The northern spur was erroneously removed during changes made to the Greenway Trail. The spur has been replaced as it had been on the approved site plan.

- 3. The applicant should submit revised parking-level floor plans to show the location of the new spaces below the residential buildings.

Response: A Parking Level Floor plan will be submitted under separate cover to this Amended Site Plan Set.

- 4. New architectural elevations/sections and floor plans should be provided for Building 100 to clarify the reduction in height. Rather than expanding the width of the building and losing 15 feet of the adjacent central green space, the applicant and Board should consider designating a portion of the lower terrace floor for active commercial use, not just accessory and storage space.

Response: Architectural elevations/sections will be submitted under separate cover to this Amended Site Plan Set.

- 5. The applicant should be prepared to update the Board on the grading and construction process now underway on the site.

Response: The applicant provided the Board with a complete update of the grading and construction progress at the July 14, 2021 Planning Board Meeting.

If you have any questions or need anything further, please email me at lboudreau@chazencompanies.com call me on my cell at 404-357-9789. Thank you and be safe.

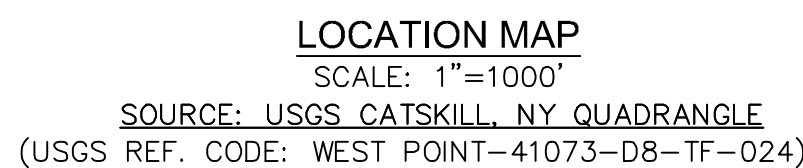
Sincerely,

A handwritten signature in black ink, reading "Larry Boudreau". The signature is written in a cursive, flowing style with a large initial "L".

Larry Boudreau, RLA (GA & NY), MBA
Director of Land Development

PREPARED FOR
CHAI BUILDERS
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK

LAST REVISED: JULY 2021



**CITY OF BEACON
PLANNING BOARD APPROVAL
CITY OF BEACON, NEW YORK**

APPROVED BY RESOLUTION NUMBER _____

OF THE PLANNING BOARD OF BEACON, NEW YORK ON THE _____

_____ DAY OF _____, 2015, 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 _____

_____, 2015.

CHAIRMAN _____

CITY OF BEACON PLANNING BOARD APPROVAL OWNER / APPLICANT SIGNATURE	
THE UNDERSIGNED APPLICANT FOR THE PROPERTY AND THE UNDERSIGNED OWNER OF THE PROPERTY SHOWN HEREON, STATE THAT THEY ARE FAMILIAR WITH THIS MAP, ITS NOTES AND ITS CONTENTS, AND HEREBY CONSENT TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON. THE APPLICANT AND OWNER UNDERSTAND THEIR OBLIGATION TO THE CITY TO KEEP THIS SITE AS PER SITE PLAN APPROVAL, BY THE CITY PLANNING BOARD UNTIL A NEW OR REVISED SITE PLAN IS APPROVED FOR THE SITE. THE APPLICANT AND OWNER UNDERSTAND THEIR OBLIGATION TO THE TOWN NOT TO OCCUPY THE PREMISES BEFORE A CO IS ISSUED BY THE TOWN CODE ENFORCEMENT OFFICER.	
APPLICANT	DATE
OWNER	DATE

INDEX OF DRAWINGS			
PAGE NO.	SHEET NO.	DATE	DESCRIPTION
1	G001	07/27/21	TITLE SHEET
2	C101	04/30/19	EXISTING CONDITIONS PLAN
3	C130	07/27/21	SITE PLAN
4	C140	07/27/21	GRADING PLAN
5	C150	07/27/21	EROSION & SEDIMENT CONTROL PLAN
6	C160	07/27/21	UTILITY PLAN
7	C161	08/07/20	UTILITY PROFILES
8	C162	08/07/20	UTILITY PROFILES
9	C180	07/27/21	LANDSCAPE PLAN
10	C190	07/27/21	PHOTOMETRIC LIGHTING PLAN
11	C200	08/07/20	VEHICLE MANEUVERING PLAN
12	C530	08/07/20	SITE DETAILS
13	C540	08/07/20	STORM SEWER DETAILS
14	C550	08/07/20	EROSION & SEDIMENT CONTROL DETAILS & NOTES
15	C560	08/07/20	WATER SYSTEM DETAILS & NOTES
16	C570	08/07/20	SANITARY SEWER DETAILS & NOTES
17	C580	08/07/20	LANDSCAPE DETAILS & NOTES

Allowable Residential Units		
1	Total lot area	9.18 acres
2	Lot area with slopes over 25%, covered by surface water, within a federal regulatory floodway, or within a state or federally regulated wetland.	2.98 acres
3	Remaining lands for dwelling unit calculation (line 1 - line 2)	6.2 acres
4	Maximum dwelling units (line 3 x 11)	68 units

SITE STATISTICS FOR PROPOSED MULTIFAMILY HOUSING & NON-RESIDENTIAL	
PROPOSED USE	MULTIFAMILY HOUSING & NON-RESIDENTIAL
ZONING DISTRICT	FISHKILL CREEK DEVELOPMENT
TOTAL BUILDING FLOOR AREA (SF)	101,602 SF (64 UNITS + NON RESIDENTIAL USE)
PARKING PROVIDED	217

DEVELOPMENT SCHEDULE					
BUILDING	UNITS	1-BR	2-BR	APPROX. SQUARE FT	% OF PROJECT AREA
RES.	64	28	36	76,202	75
NON-RES.	-	-	-	25,400	25
TOTAL	64	28	36	101,602	100

THE PROJECT SHALL NOT EXCEED A TOTAL OF 64 UNITS, IN A MIX OF ONE AND TWO BEDROOM UNITS. TEN PERCENT (10%) OF THE UNITS WILL MEET THE REQUIREMENTS OF ARTICLE 16B, AFFORDABLE-WORKFORCE HOUSING, OF THE ZONING LAW.

ZONING DISTRICT:
FISHKILL CREEK DEVELOPMENT (FCD) ZONING DISTRICT

WATER & SEWER DISTRICT:
CITY OF BEACON



BULK TABLE		
FISHKILL CREEK DEVELOPMENT DISTRICT: FCD		
ZONING REQUIREMENTS:	REQUIRED	PROVIDED
MINIMUM LOT AREA	2 ACRES	9.18 ACRES
MAXIMUM # OF DWELLINGS*	64 UNITS	64 UNITS
NON-RESIDENTIAL FLOOR AREA	25,400 SF	25,400 SF
MAXIMUM BUILDING COVERAGE	35%	9.5%
MINIMUM OPEN SPACE	30%	70.8%
MINIMUM FRONTAGE OF OVERALL FCD SITE ON PUBLIC STREET ROW	50 FT	135'
MINIMUM BUILDING SETBACK FROM EDGE OF PAYEMENT OF PUBLIC AND PRIVATE STREETS	12 FT	700'
MINIMUM SETBACK AND BUFFER WIDTH ALONG FISHKILL CREEK	AVG 50 FT MIN 25 FT	AVG = 75 FT MIN. = 45 FT
MAXIMUM BUILDING HEIGHT	3 STORIES (40')	3 STORIES (36')
MINIMUM NUMBER OF PARKING SPACES		
RESIDENTIAL:	1 SPACE PER DWELLING UNIT PLUS 1/4 SPACE FOR EACH BEDROOM =89 SPACES	89 SPACES TOTAL (WHICH INCLUDES 12 SURFACE SPACES, AND 77 SPACES BELOW BUILDING)
NON-RESIDENTIAL:	1 SPACE PER 200 SF GROSS FLOOR AREA EXCLUDING UTILITY AREAS -127 SPACES	97 SPACES TOTAL
LAND BANKED:	0 SPACES	31 SPACES
TOTAL:	216 SPACES 9 ACCESSIBLE SPACES REQUIRED	217 SPACES 13 ACCESSIBLE SPACES PROVIDED 4 OF 9 ACCESSIBLE SPACES BELOW RESIDENTIAL BUILDING

CHAZEN ENGINEERING, LAND SURVEYING

Office locations:

Duluth County Office:
 21 East
 Springfield, Ohio 43081
 Phone: (603) 544-3980

Capital District Office:
 845
 Troy, New York 12180
 Phone: (518) 273-0025



LANDSCAPE ARCHITECTURE CO., D.P.C.

North County Office:
 20 Elm Street (Suite 110)
 Glen Falls, New York 12061
 Phone: (518) 812-0513

Westchester NY Office:
 1 North Broadway, Suite 803
 White Plains, New York 10601
 Phone: (914) 997-8510

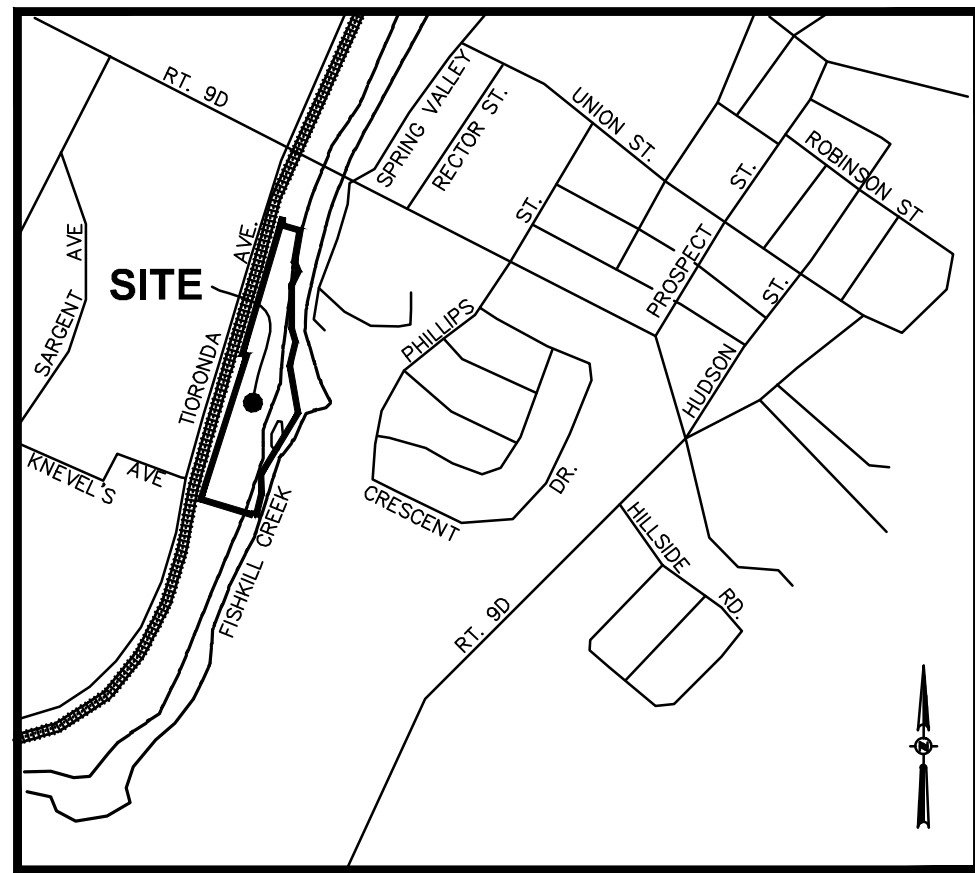
Nashville Tennessee Office:
 2416 21st Ave. S. (Suite 103)
 Nashville, Tennessee 37212
 Phone: (615) 380-1359

Chattanooga Tennessee Office:
 427 E. 5TH ST. (Suite 202)
 Chattanooga, Tennessee 37403
 Phone: (423) 421-6576

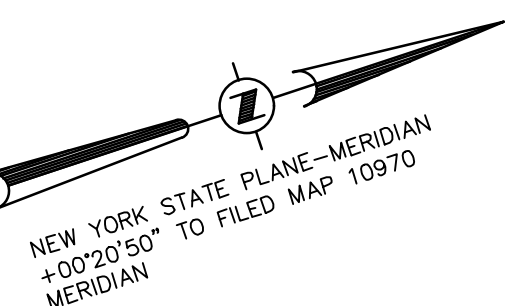
9	08/07/20	REVISED FOR DOH COMMENTS
8	02/25/20	REVISED FOR PLANNING BOARD COMMENTS
7	01/28/20	REVISED FOR PLANNING BOARD COMMENTS
6	12/20/19	REVISED FOR PLANNING BOARD COMMENTS
5	04/30/19	REVISED FOR PLANNING BOARD COMMENTS
4	02/26/19	REVISED FOR CITY COUNCIL COMMENTS
13	07/27/11	AMENDED SITE PLAN
11	06/28/21	SITE PLAN AMENDMENT
10	09/19/20	REVISED FOR PLANNING BOARD COMMENTS
0001	0001	description

CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

designed C.L.	checked CL
date 09/10/18	scale AS NOTED
project no. 81750.00	
sheet no. G001 1 of 17	



VICINITY MAP
SCALE: 1"=1000'
SOURCE:USGS WEST POINT QUADRANGLE



LEGEND:

- NO PHYSICAL BOUNDS
- ADJACENT PROPERTY LINE
- EDGE OF CREEK
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING OVERHEAD WIRES
- EXISTING WATER LINE
- EXISTING UNDERGROUND SEWER LINE
- EXISTING UNDERGROUND STORM LINE
- EXISTING RAILROAD TRACKS
- EXISTING SIGN
- EXISTING BENCHMARK
- EXISTING BOLLARD
- EXISTING CATCH BASIN
- EXISTING DECIDUOUS TREE
- EXISTING GUY WIRE
- EXISTING GAS VALVE
- EXISTING HYDRANT
- EXISTING MONUMENT
- EXISTING SANITARY MANHOLE
- EXISTING UNKNOWN MANHOLE
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE W/ LIGHT
- EXISTING WATER VALVE
- EXISTING MONITORING WELL
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE PEDESTAL

TITLE REPORT SCHEDULE B-1

REGARDING CHICAGO TITLE INSURANCE COMPANY POLICY #3706-00688, EFFECTIVE OCTOBER 15, 2006:

ITEM 14. EASEMENT GRANTED IN FAVOR OF CH.G. & E. LIBER 959 PAGE 376, DOCUMENT STATES THAT CH.G. & E. RESERVES A RIGHT TO HAVE CLEARANCE OF 10 FEET BETWEEN ALL WIRE AND CONDUCTORS OF ELECTRICITY AND ANY STRUCTURE HEREAFER CONSTRUCTED. (EASEMENT SHOWN HEREON.)

ITEM 15. EASEMENTS CONTAINED IN LIBER 1042 PAGE 205, AS REPEATED IN LIBER 1328 PAGE 118. (TOGETHER WITH RIGHTS RESERVED TO THE GRANTOR, (NEW YORK RUBBER COMPANY), THE RIGHT TO CONSTRUCT, MAINTAIN AND USE DRIVEWAYS AND FOOT WALKS OVER THE PARCEL, HEREBY CONVEYED. (EXISTING DRIVES SHOWN HEREON), TOGETHER WITH POWER AND LIGHT SUBSTITUTION, TRANSFORMERS, PLUMBING, HEATING AND LIGHTING EQUIPMENT ON THE PREMISES, CANNOT IDENTIFY SUBSTATION LOCATION.)

ITEM 16. RESERVATION TO THE NEW YORK RUBBER CORPORATION IN LIBER 1328 PAGE 118. (DOCUMENT NOT INCLUDED IN SCHEDULE B-1); SEE ITEM 15 FOR SUMMATION OF EASEMENTS IN LIBER 1042 PAGE 205.

ITEM 17. EASEMENTS AND RECTALS CONTAINED IN LIBER 1936 PAGE 229:

RIGHTS OF WAY IN GRANTED TO THE NEW YORK RUBBER COMPANY BY THE DUTCHESS AND COLUMBIA RAILROAD COMPANY LIBER 257 PAGE 32. (DOCUMENT REFERS TO THE GRANTING OF MULTIPLE CROSSINGS OVER AND UNDER SAID RAILROAD. AFFECTS SUBJECT PARCEL. ACCESS EASEMENTS NOT PROTRACTABLE.)

RIGHT OF WAY GRANTED TO THE CITY OF BEACON IN LIBER 556 PAGE 508, (DOES NOT AFFECT SUBJECT PARCEL).

LIBER 959 PAGE 373, EXCEPTS AND RESERVES FROM THE CH.G. & E. PARCEL TO THE NORTH OF THE SUBJECT SITE, "THE SHOULDERS AND OTHER PARTS OF THE ACCESS ROAD LYING ON THE WESTERN SIDE OF SAID PARCEL," (AFFECTS SUBJECT PARCEL, AND SHOWN HEREON.)

ITEM 18. PERMANENT AND TEMPORARY EASEMENTS CONTAINED IN APPROPRIATION NOTICE RECORDED IN LIBER 2002 PAGE 036. (PERMANENT EASEMENT MAP NO. 18, PARCEL NO. 28 AFFECTS SUBJECT PARCEL AND SHOWN HEREON. TEMPORARY EASEMENTS SHOWN ON MAP NO. 19, PARCEL NO. 27 AND 28 WERE TERMINATED ON NOVEMBER 16, 1999.)

ITEM 19. ACCESS EASEMENT OVER PARCEL 1B, (F.M. #10970), GRANTED IN FAVOR OF PARCEL 1A, (F.M. #10970). EASEMENT IS SHOWN ON FILED MAP #10970. AFFECTS SUBJECT PARCEL AND SHOWN HEREON.

ITEM 20. NOTES AND EASEMENTS SHOWN ON FILED MAP #10970:

MAP DEPICTS 6 FOOT WIDE "GREENWAY EASEMENT", GRANTED IN FAVOR OF THE CITY OF BEACON FOR PUBLIC ACCESS AND IS LOCATED ALONG THE FISHKILL CREEK, (AFFECTS SUBJECT PARCEL AND SHOWN HEREON.)

ACCESS EASEMENT GRANTED IN FAVOR OF PARCEL 1A, OVER PARCEL 1B, AFFECTS SUBJECT PARCEL AND SHOWN HEREON-SEE ITEM 19.

ITEM 21. LEASE AND EASEMENT RECORDED IN DOCUMENT #02-2003-9779, AS MODIFIED IN DOCUMENT #02-2005-7449, AS ASSIGNED AND ASSUMED IN DOCUMENT #02-2005-7449, AS MODIFIED IN DOCUMENT #02-2005-7448 AND AS MODIFIED IN DOCUMENT #02-2005-7450.

DOCUMENT #02-2003-9779 RESERVES TO THE LANDLORD THE RIGHT TO PASS THROUGH AND ACROSS THE LEASED PREMISES TO TIORONDA AVENUE. THE LEASE PARCEL IS SHOWN ON A PORTION OF A MAP PREPARED BY BADEY & WATSON SURVEYING AND LANDSCAPE ARCHITECTURE, P.C. (BEING AN UNRECORDED MAP). (AFFECTS SUBJECT PARCEL AND SHOWN HEREON.)

DOCUMENT #02-2005-7447 DESCRIBES CONSENT TO ASSIGNMENT OF LEASE TO "SISTERS PROPERTIES, LLC" AS ASSIGNED.

DOCUMENT #02-2005-7449 AS ASSIGNED AND ASSUMED BY "SISTERS PROPERTIES, LLC".

DOCUMENT #02-2005-7448, BEING A MODIFICATION OF THE LEASE AGREEMENT.

DOCUMENT #02-2005-7450 PROVIDES A METES AND BOUNDS DESCRIPTION OF THE LEASE PARCEL. (AFFECTS SUBJECT PARCEL AND SHOWN HEREON.)

DEED REFERENCE

JOSEPH RENDERO
TO
BEACON 248 DEVELOPMENT, LLC
DOC# 02-2006-4859
FILED JUNE 20, 2006

MAP REFERENCE

REFERENCE IS HEREBY MADE TO A MAP ENTITLED "SUBDIVISION PLAT PREPARED FOR ADVANTAGE MORTGAGE", PREPARED BY BADEY & WATSON SURVEYING & ENGINEERING P.C., DATED APRIL 16, 1991 AND FILED IN THE DUTCHESS COUNTY CLERK'S OFFICE ON FEBRUARY 22, 2000 AS FILED MAP #10970.

MAP REFERENCE

1. SUBJECT PROPERTY IS DESIGNATED AS PARCEL 1B AS SHOWN ON A MAP ENTITLED, "SUBDIVISION PLAT PREPARED FOR ADVANTAGE MORTGAGE", PREPARED BY BADEY & WATSON SURVEYING AND ENGINEERING, P.C. FILED IN THE DUTCHESS COUNTY CLERK'S OFFICE AS FILED MAP #10970 ON FEBRUARY 22, 2000.

2. REFERENCE IS HEREBY MADE TO A CERTAIN MAP ENTITLED "BEACON 248 DEVELOPMENT, LLC, MAP OF BOUNDARY & TOPOGRAPHIC SURVEY OF LANDS OF CENTRAL HUDSON GAS & ELECTRIC CORP., DATED 02/25/2013, PREPARED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., P.C.

FLOOD ZONE NOTE:

THE FLOODWAY LINE AND FLOOD ZONE LINE "ZONE X OTHER FLOOD AREAS" SHOWN HEREON ARE AS SCALING FROM FLOOD INSURANCE RATE MAPPING LISTED BELOW, THE "ZONE AE" 100 YEAR FLOOD LINE WITHIN THE SUBJECT PARCEL WAS DRAWN AT ELEVATION 85.9 (NGVD29) PER THE TOPGRAPHY SHOWN HEREON.

THE PARCEL SHOWN HEREON LIES WITHIN "SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD" ZONE AE WITHIN "OTHER FLOOD AREAS, ZONE X", "OTHER AREAS, ZONE X", AND WITHIN FLOODWAY AREAS IN ZONE AE, AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) MAPPING FOR THE CITY OF BEACON COMMUNITY NUMBER 36027C0577E, HAVING AN EFFECTIVE DATE OF MAY 2, 2012.

"ZONE AE" BEING DESCRIBED THEREON AS "BASE FLOOD ELEVATIONS DETERMINED", THE BASE FLOOD ELEVATION BEING SHOWN THEREON AS ELEVATIONS 85 NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH TRANSLATES TO ELEVATION 85.9 NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD29) BEING THE DATUM OF TOPOGRAPHY SHOWN HEREON.

"OTHER FLOOD AREAS, ZONE X" BEING DESCRIBED THEREON AS "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD".

"OTHER AREAS, ZONE X" BEING DESCRIBED THEREON AS "AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN".

FLOODWAY AREAS IN ZONE AE" BEING DESCRIBED THEREON AS "THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS".

VERTICAL DATUM NOTE

TOPOGRAPHY IS BASED REFERENCE MARK (RM 4, ELEVATION 3.92'), AS SHOWN ON FLOOD INSURANCE RATE MAP, CITY OF BEACON COMMUNITY PANEL A36027-0003-B, DATED MARCH 1, 1984. VERTICAL DATUM IS NGVD 1929. CONTOUR INTERVAL: 5 FEET.

NOTES

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S INKED SEAL OR HIS EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

CERTIFICATIONS INDICATED HEREON SIGNIFY THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE EXISTING CODE OF PRACTICE FOR PROFESSIONAL LAND SURVEYORS AS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS. SAID CERTIFICATIONS SHALL RUN ONLY TO THE PERSON SO NOTED; CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS, THEIR SUCCESSORS AND/OR ASSIGNS, OR SUBSEQUENT OWNERS, EXCEPT AS INDICATED HEREON.

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SURVEYED FROM RECORD DESCRIPTION AND AS IN POSSESSION.

THE BOUNDARY SURVEY FOR THE SUBJECT SITE WAS COMPLETED ON DECEMBER 13, 2006.

BOUNDARY SURVEY FIELD UPDATED APRIL 6, 2011.

ORDINARY HIGH WATER NOTE:

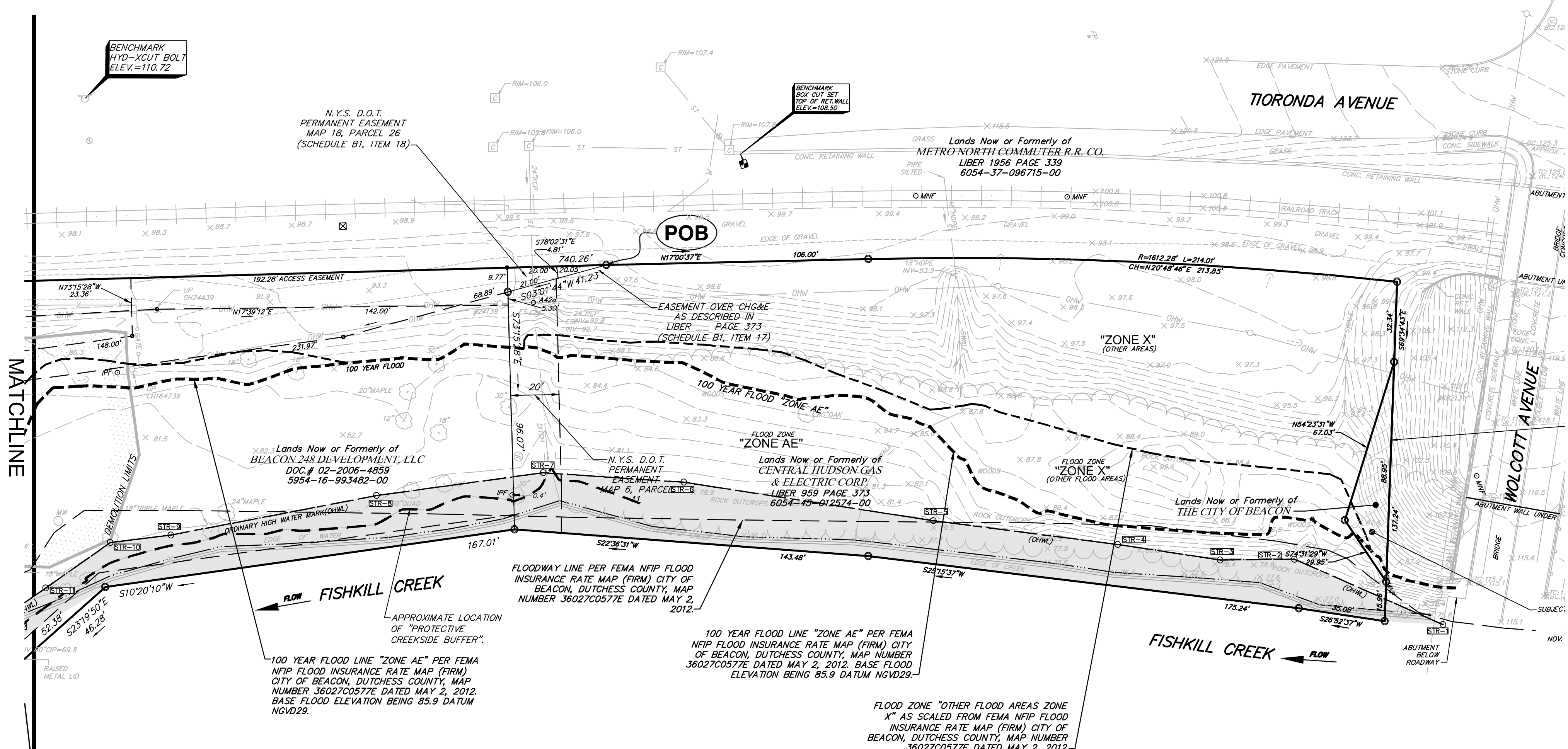
ORDINARY HIGH WATER LINE SHOWN HEREON AS MARKED ON JULY 10, 2019 BY DAVE MACDOUGALL OF CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C., AND LOCATED ON JULY 25, 2019 BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C..

TAX PARCEL NUMBER

132200-5954-16-993482-00

AREA: 8.175 ACRES

356,099 SQ.FT.



SEWER NOTE

27" FORCE MAIN SHOWN ON THESE PLANS IS REPUTED TO BE INSTALLED IN A 12" STEEL GALVANIZED PIPE UNDER THE RAILROAD PROPERTY WHERE SHOWN PURSUANT TO LICENSE AGREEMENT NUMBER 240 047 MADE WITH THE PREVIOUS OWNERS TUCK INDUSTRIES, INC. AND CONSOLIDATED RAILROAD DATED 30 JUNE 1980.

"GRADE CROSSING EASEMENT"
GRANTED BY METRO NORTH COMMUTER RAILROAD
CITY OF BEACON 248 DEVELOPMENT, LLC IN
DOCUMENT #02 2009 1123 DATED 03/12/2009.

AREA=8.175 ACRES
356,099 SQ. FT.

CHG&E EASEMENT
LIBER 959 PAGE 376
ITEM 14 SCHEDULE B-1

BENCHMARK
RIP-1011 BOLT
ELEV=97.85

PER FILED MAP
#10970
DOCUMENT #02-2002-4366
ITEM 19 SCHEDULE B-1

6 FOOT WIDE GREENWAY EASEMENT
PER FILED MAP #10970
ITEM 20 SCHEDULE B-1

FLOODWAY LINE PER FEMA NFIP FLOOD
INSURANCE RATE MAP (FIRM) CITY OF
BEACON, DUTCHESS COUNTY, MAP
NUMBER 36027C0577E DATED MAY 2,
2012.

100 YEAR FLOOD LINE "ZONE AE" PER FEMA NFIP FLOOD
INSURANCE RATE MAP (FIRM) CITY OF BEACON, DUTCHESS
COUNTY, MAP NUMBER 36027C0577E DATED MAY 2, 2012.
POSITION SCALED TO THE "BASE FLOOD ELEVATIONS
DETERMINED" AS INTERPOLATED ALONG CONTOUR DATA.
NOTE: THE FLOODING IS APPROXIMATE AND WILL REQUIRE A
DETAILED HYDRAULIC AND ACCURATE FLOOD LINE
CONTRIBUTION. INVESTIGATION IN ORDER TO DETERMINE

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Confirm Utility Response
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Chazen
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& LANDSCAPE ARCHITECTURE CO., D.P.C.

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Nashville, Tennessee 37212
Phone (615) 380-1358

Chattanooga Tennessee Office:
437 E. 9th St. (Suite 201)
Chattanooga, Tennessee 37403
Phone (423) 241-6252

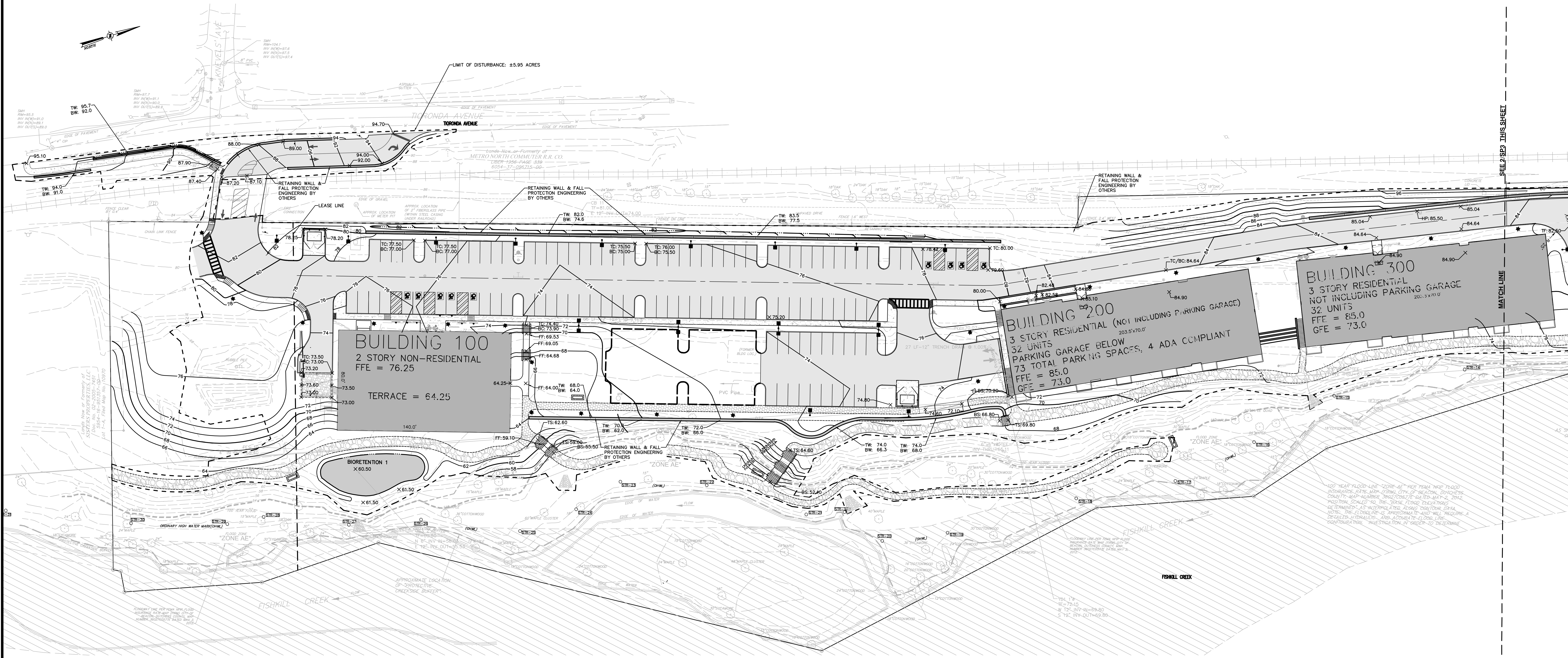
REV.	DATE	DESCRIPTION
2	09/19/20	REVISED PER PLANNING BOARD COMMENTS
1	11/22/23	REVISED PER PLANNING BOARD COMMENTS DATED SEPTEMBER 2013
REV.	DATE	DESCRIPTION

248 TIORONDA AVE., BEACON, N.Y.

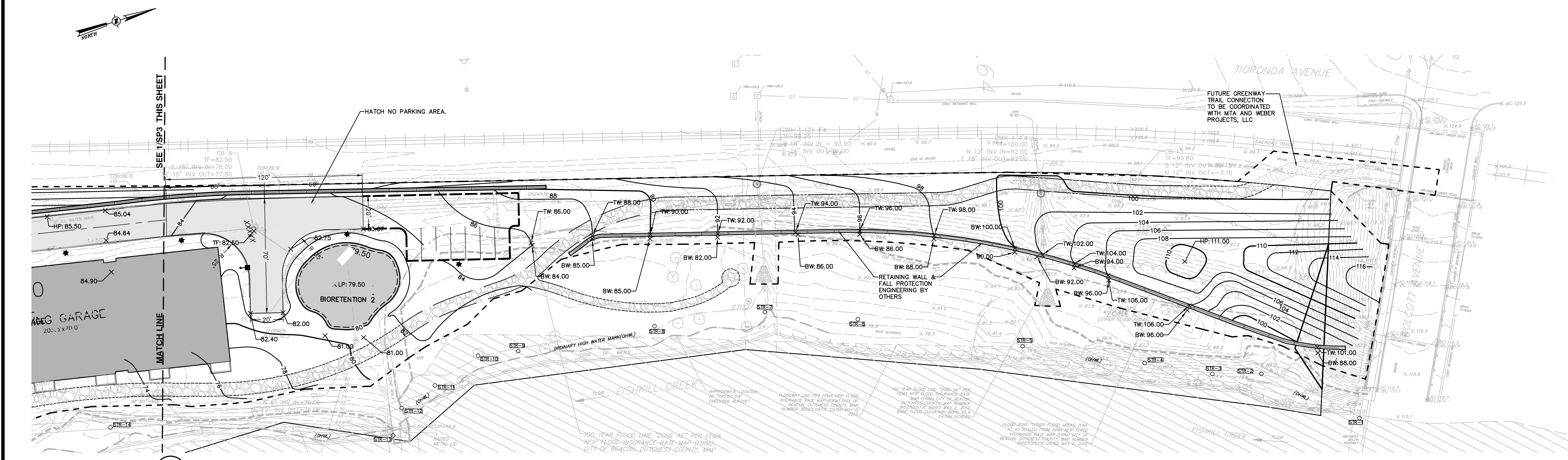
EXISTING CONDITIONS

CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

designed
A/B
date
09/16/18
scale
1"=20'
projection
817550.00
sheet no.
C101
2 of 17

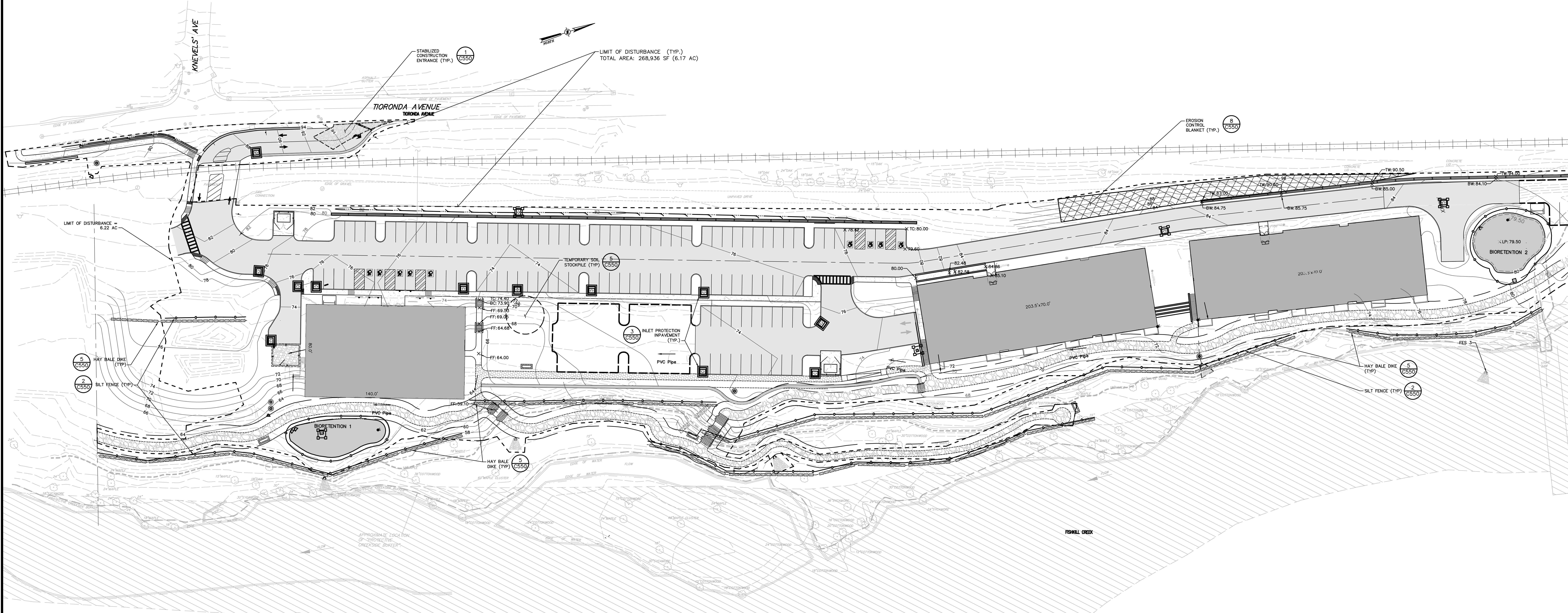


1 GRADING PLAN
SCALE: 1"=30'



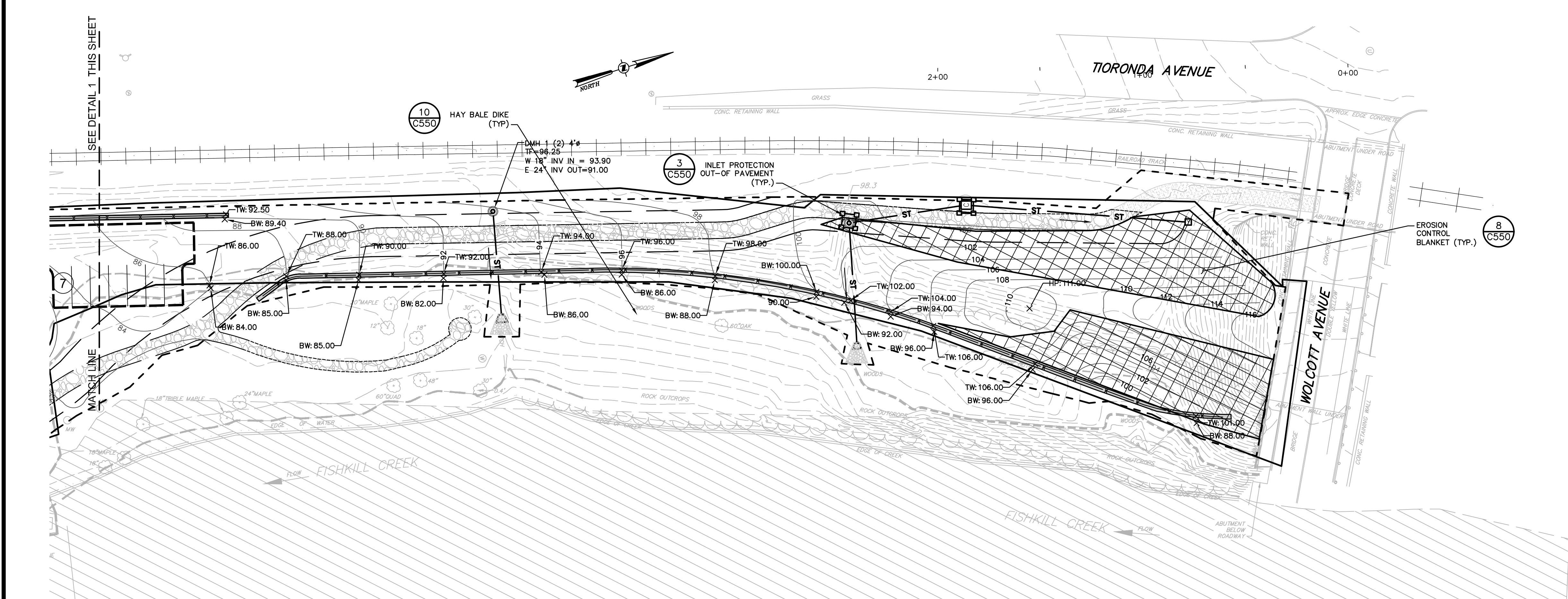
2 GRADING PLAN
SCALE: 1"=30'

- GRADING & DRAINAGE LEGEND:**
- PROPOSED PROPERTY LINE
 - PROPOSED BUILDING
 - PROPOSED PAVEMENT
 - PROPOSED 10 FT CONTOUR
 - PROPOSED 2 FT CONTOUR
 - PROPOSED SPOT GRADE
 - PROPOSED TREE LINE
 - PROPOSED SHRUB LINE
 - PROPOSED DRAINAGE SWALE
 - PROPOSED WORK LIMIT LINE
 - PROPOSED SANITARY SEWER LINE
 - PROPOSED FORCE MAIN
 - PROPOSED WATER LINE
 - PROPOSED STORM DRAIN LINE
 - PROPOSED HYDRANT
 - PROPOSED SANITARY MANHOLE
 - PROPOSED CATCH BASIN
 - PROPOSED DRAINAGE MANHOLE

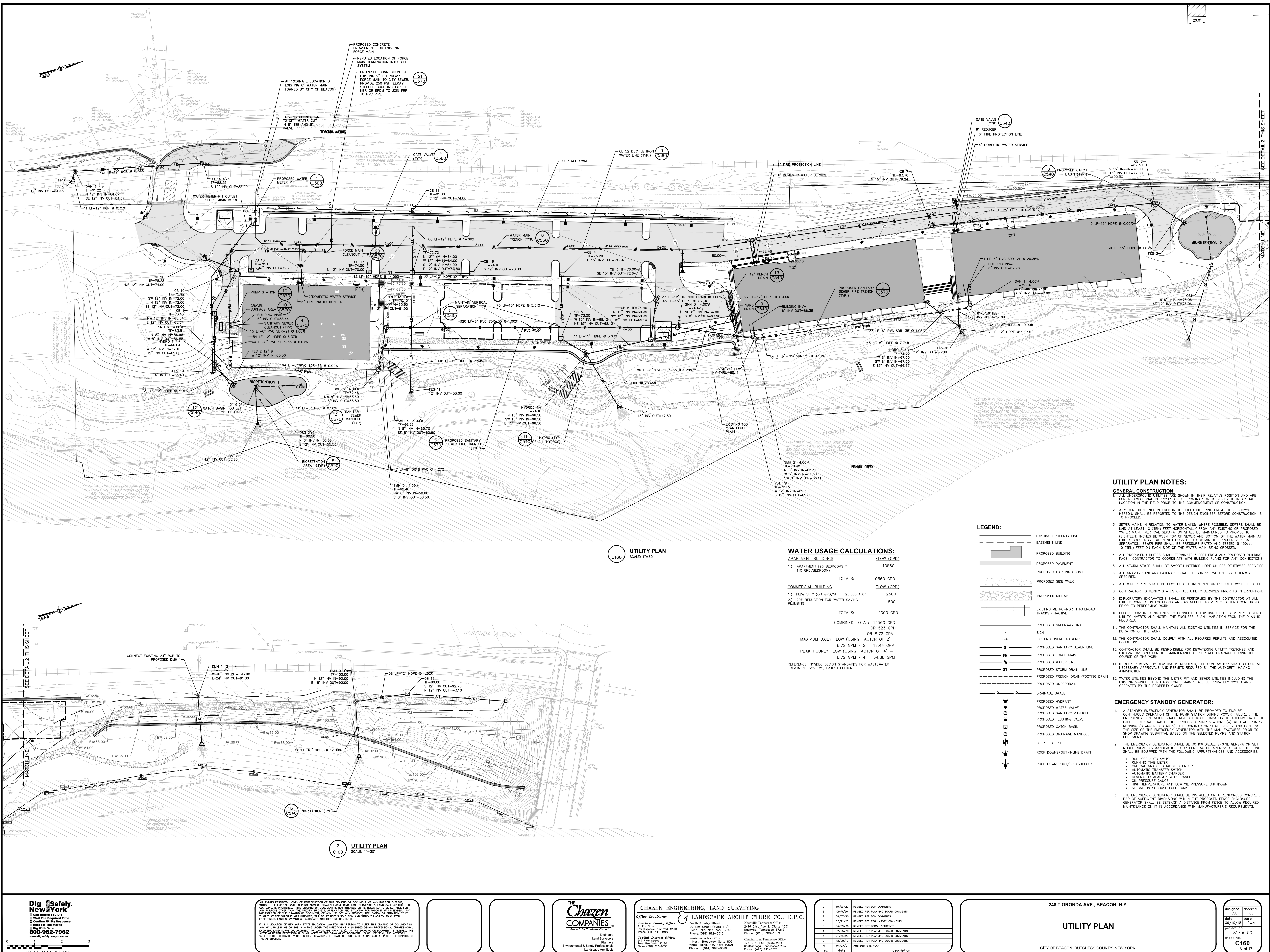


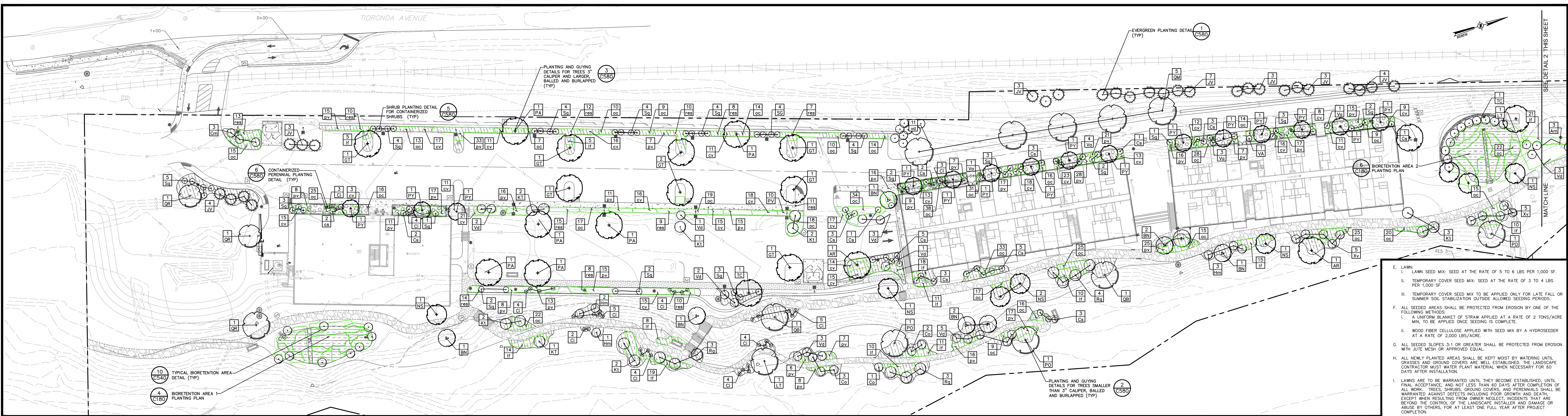
1
C150
EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=30'

- LEGEND:**
- EXISTING 100-YEAR FLOOD PLAIN
 - EXISTING PROPERTY LINE
 - EASEMENT LINE
 - PROPOSED BUILDING
 - PROPOSED PAVEMENT
 - PROPOSED PARKING COUNT
 - PROPOSED SIDE WALK
 - EXISTING METRO-NORTH RAILROAD TRACKS (INACTIVE)
 - PROPOSED CURB
 - PROPOSED RETAINING WALL
 - PROPOSED EROSION BLANKET
 - PROPOSED STABILIZED CONSTRUCTION ENTRANCE
 - PROPOSED OUT-OF PAVEMENT INLET PROTECTION
 - PROPOSED IN-PAVEMENT INLET PROTECTION
 - PROPOSED SILT FENCE
 - LIMIT OF DISTURBANCE
 - PROPOSED STRAW BALE DIKE
 - PROPOSED TEMPORARY SOIL STOCKPILE



2
C150
EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=30'





- E. LAWN:
I. LAWN SEED MIX: SEED AT THE RATE OF 5 TO 6 LBS PER 1,000 SF.
II. TEMPORARY COVER SEED MIX: SEED AT THE RATE OF 3 TO 4 LBS PER 1,000 SF.
III. TEMPORARY COVER SEED MIX TO BE APPLIED ONLY FOR LATE FALL OR SUMMER SOIL STABILIZATION OUTSIDE EROSION BY ONE OF THE FOLLOWING METHODS:
F. ALL SEEDS ARE TO BE APPLIED TO THE SOIL BY ONE OF THE FOLLOWING METHODS:
I. A UNIFORM BLANKET OF STRAW APPLIED AT A RATE OF 2 TONS/ACRE MIN. TO BE APPLIED ONCE SEEDING IS COMPLETE.
II. WOOD FIBER CELLULOSE APPLIED WITH SEED MIX BY A HYDROSEEDER AT A RATE OF 2,000 LBS/ACRE.
G. ALL SEEDS SLOPES 3:1 OR GREATER SHALL BE PROTECTED FROM EROSION WITH A 15% MESH OR APPROVED EQUAL.
H. ALL NEWLY PLANTED AREAS SHALL BE KEPT MOIST BY WATERING UNTIL GRASSES AND GROUND COVERS ARE WELL ESTABLISHED. THE LANDSCAPE CONTRACTOR MUST WATER PLANT MATERIAL WHEN NECESSARY FOR 60 DAYS AFTER INSTALLATION.
I. LAWN ARE TO BE MAINTAINED UNTIL THEY BECOME ESTABLISHED. UNTIL FINAL ACCEPTANCE AND NOT LESS THAN 60 DAYS AFTER COMPLETION OF ALL WORK, TREES, SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE MAINTAINED AGAINST DEFECTS INCLUDING POOR GROWTH AND DEATH, EXCEPT WHEN RESULTING FROM OWNER NEGLIGENCE, INCIDENTS THAT ARE BEYOND THE CONTROL OF THE LANDSCAPE INSTALLER AND DAMAGE OR ABUSE BY OTHERS, FOR AT LEAST ONE FULL YEAR AFTER PROJECT COMPLETION.
ALL LANDSCAPING SHOWN ON THESE PLANS SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION THROUGHOUT THE DURATION OF THE PROPOSED USE OF THE SITE. ALL VEGETATION NOT SO MAINTAINED SHALL BE REPLACED WITH NEW COMPARABLE VEGETATION AT THE BEGINNING OF THE NEXT GROWING SEASON.

SITE LEGEND:

- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED SIDEWALK
- PROPOSED CURB
- PROPOSED 10 FT CONTOUR
- PROPOSED 2 FT CONTOUR
- PROPOSED SPOT GRADE
- PROPOSED PERMEABLE ASPHALT PAVEMENT
- PROPOSED PARKING LOT
- PROPOSED TREES
- PROPOSED SHRUBS
- MULCH BED
- RIVERSTONE BED
- PLANT QUANTITY
- PLANT NAME

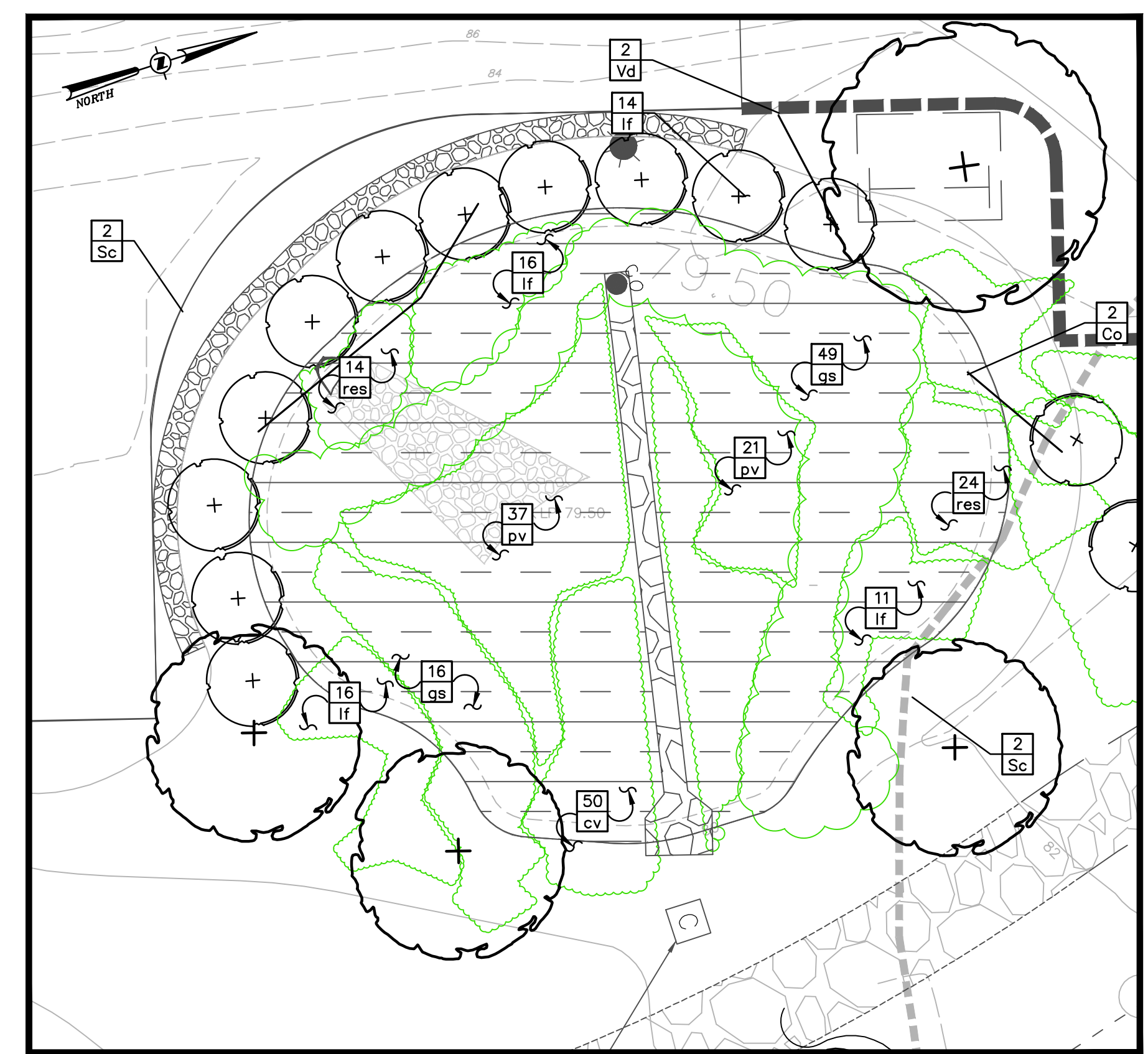
SOIL RESTORATION NOTES:

- IN AREAS WHERE SOIL RESTORATION HAS OCCURRED OUTSIDE OF BUILDINGS AND PAVEMENT AREAS, THE DISTURBED SUB-SOILS SHALL BE RETURNED TO ROUGH GRADE AND THE FOLLOWING SOIL RESTORATION STEPS APPLIED:
- APPLY THREE INCHES OF COMPOST OVER SOIL. COMPOST SHALL BE SIZED FROM PLANT DERIVED MATERIALS, FREE OF VIABLE WEED SEEDS, HAVE NO VISIBLE FREE WATER OR OIL, AND BE PROUDLY HANDLED, PASS THROUGH A HALF INCH SCREEN AND HAVE A PH SUITABLE TO GROW DESIRED PLANTS.
 - TILL COMPOST INTO THE SUBSOIL TO A DEPTH OF AT LEAST 12-INCHES USING A CAT-MOUNTED RIPPER, TRACTOR MOUNTED DISC, OR TILLER, MIXING AND CIRCULATING AIR AND COMPOST INTO SUB-SOILS.
 - ROCK-PICK UNTIL UPLIFTED STONE/ROCK MATERIALS OF FOUR INCHES AND LARGER SIZE ARE CLEARED OFF THE SITE.
 - APPLY TOPSOIL TO A DEPTH OF SIX INCHES.
- NOTES:
- BROADCAST DENSITY, MULCHING, AND FIRST & SECOND SEASON MAINTENANCE TO MATCH MANUFACTURER'S RECOMMENDATIONS TO ENSURE PROPER ESTABLISHMENT.
 - OWNER TO FOLLOW GROWING SEASON MAINTENANCE RECOMMENDATIONS AFTER 1 YEAR TO ACHIEVE PROPER ESTABLISHMENT. CONTRACTOR TO INSTALL A 3"-4" SPADE CUT EDGE AT ALL LAWN/MULCH INTERFACES (TYP). CONTRACTOR TO ROUGHLY STAKE OUT AREA FOR OWNER APPROVAL PRIOR TO EDGING AND MULCHING.
 - ALL AREAS DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES AND WHICH ARE NOT OTHERWISE CALLED OUT AS HARDSCAPE OR LANDSCAPE PLANTING AREAS SHALL BE HYDRO-SEED TO ESTABLISH LAWN PER LANDSCAPING NOTES.

PLANT LIST							
QTY	ABRV	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING	REMARKS
TREES							
8	AR	Acer rubrum 'October Glory'	October Glory Red Maple	3" Cal.	B&B	As Shown	
10	BN	Betula nigra	River Birch	8"-10" Clump	B&B	As Shown	Multi-Stem Clump
2	LT	Liriodendron tulipifera	Tuliptree	3" Cal.	B&B	As Shown	
36	JV	Juniperus virginiana	Eastern Red Cedar	8"-10"	B&B	As Shown	
8	GT	Gleditsia triacanthos 'cutler'	Honeylocust	3" Cal.	B&B	As Shown	
8	NS	Nyssa sylvatica	Sour Gum	3" Cal.	B&B	As Shown	Fall Digging Hazard
7	PA	Platanus x acerifolia 'Bloodgood'	Bloodgood London Planetree	3" Cal.	B&B	As Shown	
7	PO	Platanus occidentalis	American Sycamore	2" - 2.5" Cal.	B&B	As Shown	
13	PT	Prunus melanocarpa	Yapok Cherry	2" Cal.	B&B	As Shown	
3	QR	Quercus rubra borealis	Northern Red Oak	3" Cal.	B&B	As Shown	Fall Digging Hazard
7	QB	Quercus bicolor	Swamp White Oak	3" Cal.	B&B	As Shown	Fall Digging Hazard
3	TC	Tilia cordata 'Greenspire'	Greenspire Linden	3" Cal.	B&B	As Shown	
SHRUBS							
3	Am	Amelanchier canadensis	Servicberry	30"-36"	Cont.	As Shown	
63	GI	Comptonia peregrina	Sweet Fern	#3 Cont.	As Shown		
6	Om	Cornus sericea	Silky Dogwood	24"-30"	Cont.	As Shown	
20	Co	Cornus sericea	Red-Osier Dogwood	30"-36"	Cont.	As Shown	
35	Ca	Cornus sanguinea 'Cato'	Arctic Sun Dogwood	18"-24"	Cont.	As Shown	
12	Hm	Hamelia virginiana	Witchhazel	3" - 4"	Cont.	As Shown	
13	Kl	Kalmia latifolia	Mountain Laurel	30"-36"	Cont.	As Shown	
3	Lb	Lindera benzoin	Salebrush	36"	Cont.	As Shown	
21	Rg	Rhus typhina 'Laciniata'	Cutleaf Staghorn Sumac	36"	Cont.	As Shown	
56	Sp	Spiraea x bumalda 'Gold Flame'	Gold Flame Spirea	#3 Cont.	As Shown		
13	Va	Viburnum acerifolium	Mapleleaf Viburnum	24"-30"	Cont.	As Shown	
24	Vd	Viburnum dentatum	Dashleaf Viburnum	30"-36"	Cont.	As Shown	
10	Xv	Xylocarpus 'Winter Red'	Winter Red Winterberry	18"-24"	Cont.	As Shown	
PERENNIALS/GRASSES							
374	cv	Carex vulpinoidea	Fox Sedge	#1 Cont.	8" O.C.		
300	It	Loach Compositus	Blindfold deer-weed	#1 Cont.	16"-18" O.C.		
703	oc	Osmunda cinnamomea	Osmunda Fern	#2 Cont.	2-3' O.C.		
452	pv	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	#2 Cont.	2-3' O.C.		
133	res	Rudbeckia laciniata	Cutleaf Coneflower	#1 Cont.	18" O.C.		

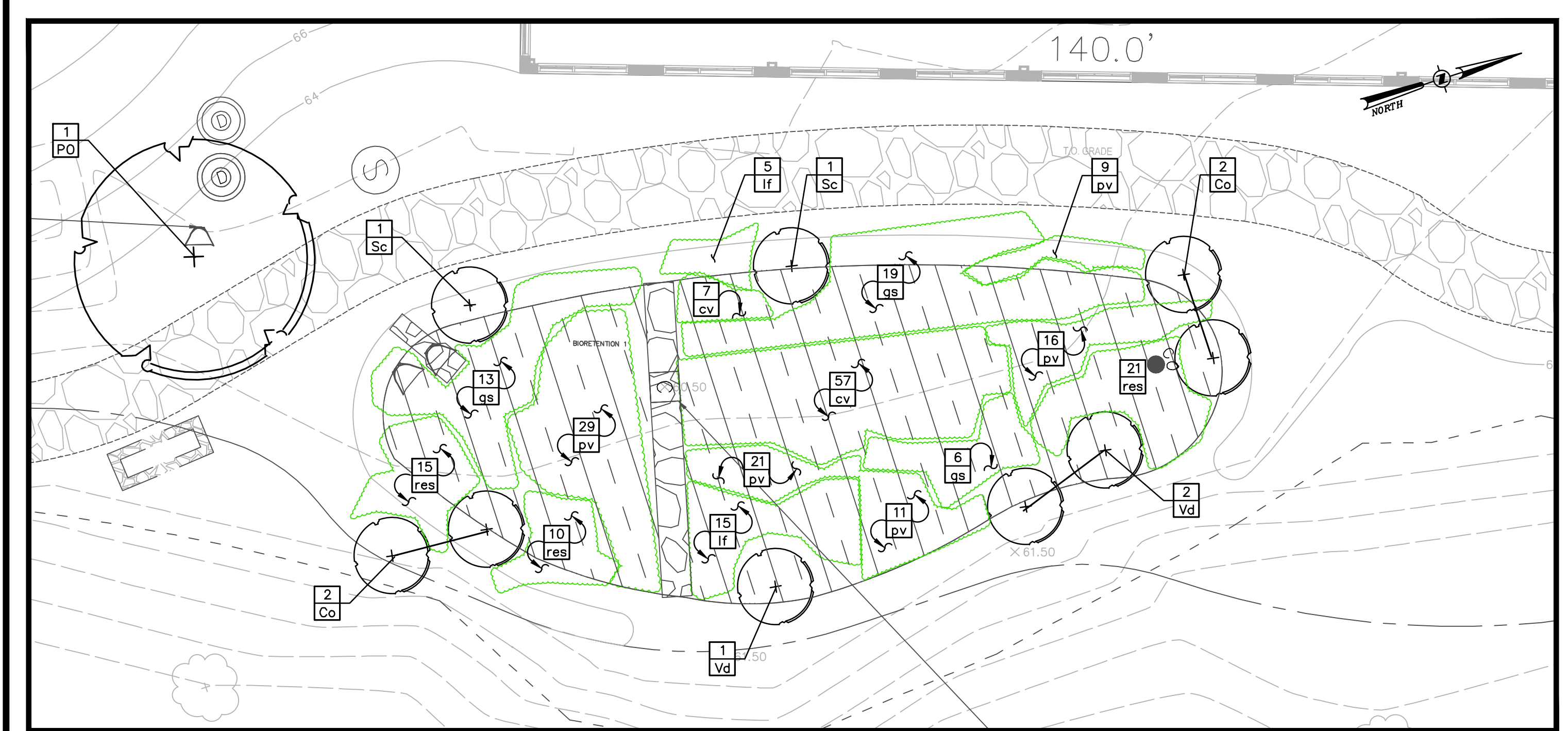
OVERALL PLANT LIST

SCALE: NTS



BIORETENTION AREA 2 PLANTING PLAN

SCALE: 1"=10'



BIORETENTION AREA 1 PLANTING PLAN

SCALE: 1"=10'

PLANT LIST							
QTY	ABRV	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING	REMARKS
TREES							
1	PO	Platanus occidentalis	American Sycamore	2" - 2.5" Cal.	B&B	As Shown	
SHRUBS							
4	Co	Cornus sericea	Red-Osier Dogwood	30"-36"	Cont.	As Shown	
2	Sc	Sambucus canadensis	Black Elderberry	12" - 18"	Cont.	As Shown	
3	Vd	Viburnum dentatum	Arrowwood Viburnum	30" - 36"	Cont.	As Shown	
PERENNIALS/GRASSES							
58	cv	Carex vulpinoidea	Fox Sedge	#1 Cont.	8" O.C.		
40	It	Loach Compositus	Blindfold deer-weed	#1 Cont.	16"-18" O.C.		
20	It	Loach Compositus	Blindfold deer-weed	#1 Cont.	16"-18" O.C.		
79	pv	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	#2 Cont.	2-3' O.C.		
46	res	Rudbeckia laciniata	Cutleaf Coneflower	#1 Cont.	18" O.C.		

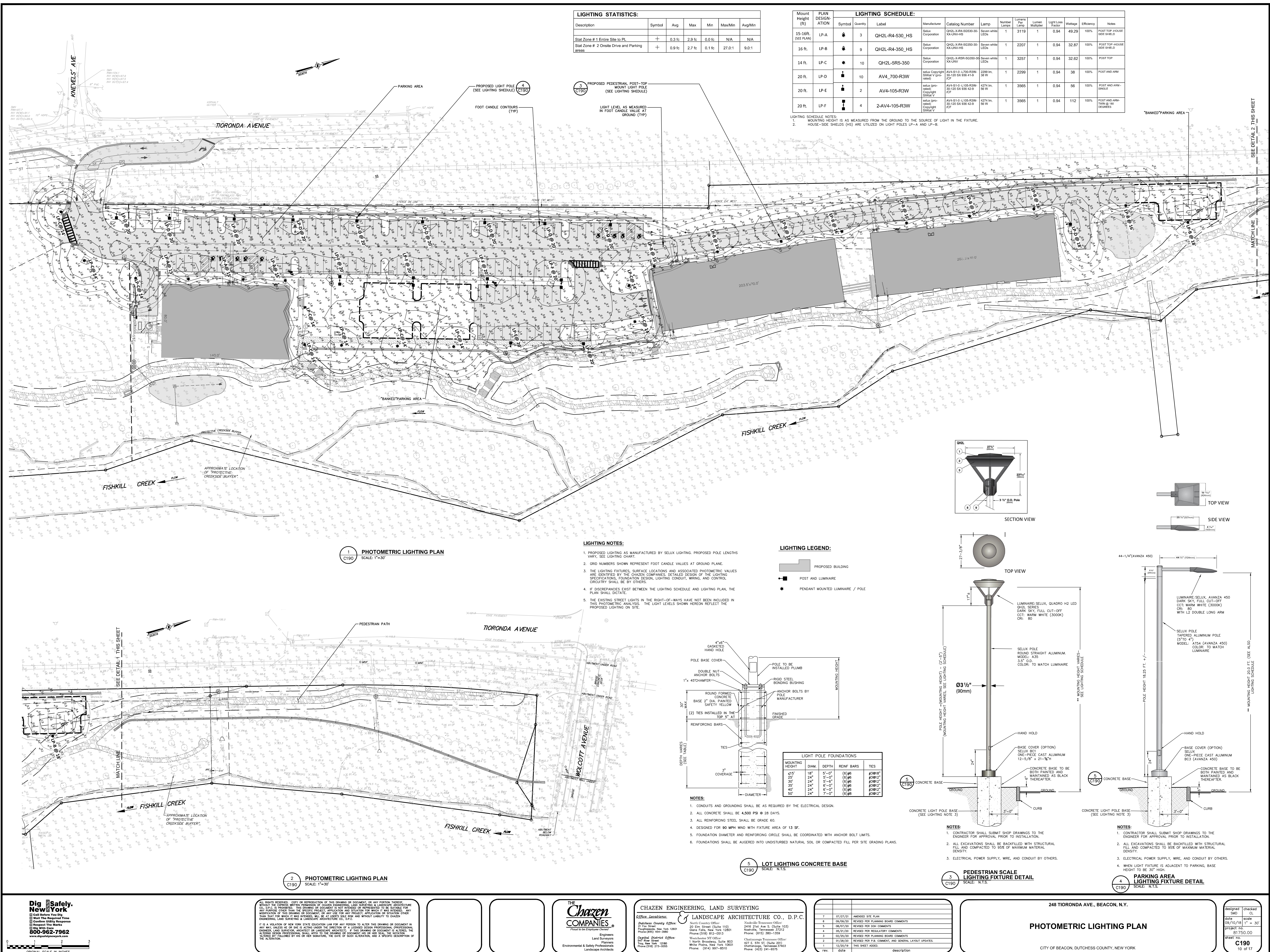
BIORETENTION AREA 1 PLANT LIST

SCALE: NTS

PLANT LIST							
QTY	ABRV	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING	REMARKS
TREES							
1	NS	Nyssa sylvatica	Sour Gum	2"-2.5" Cal.	B&B	As Shown	Fall Digging Hazard
SHRUBS							
2	Co	Cornus sericea	Red-Osier Dogwood	30"-36"	Cont.	As Shown	
4	Sc	Sambucus canadensis	Black Elderberry	12" - 18"	Cont.	As Shown	
3	Vd	Viburnum dentatum	Arrowwood Viburnum	30" - 36"	Cont.	As Shown	
PERENNIALS/GRASSES							
51	cv	Carex vulpinoidea	Fox Sedge	#1 Cont.	8" O.C.		
67	It	Loach Compositus	Blindfold deer-weed	#1 Cont.	16"-18" O.C.		
58	It	Loach Compositus	Blindfold deer-weed	#1 Cont.	16"-18" O.C.		
79	pv	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	#2 Cont.	2-3' O.C.		
46	res	Rudbeckia laciniata	Cutleaf Coneflower	#1 Cont.	18" O.C.		

BIORETENTION AREA 2 PLANT LIST

SCALE: NTS



LIGHTING STATISTICS:						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Stat Zone # 1 Entire Site to PL	+	0.3 fc	2.9 fc	0.0 fc	N/A	N/A
Stat Zone # 2 Onsite Drive and Parking areas	+	0.9 fc	2.7 fc	0.1 fc	27.0:1	9.0:1

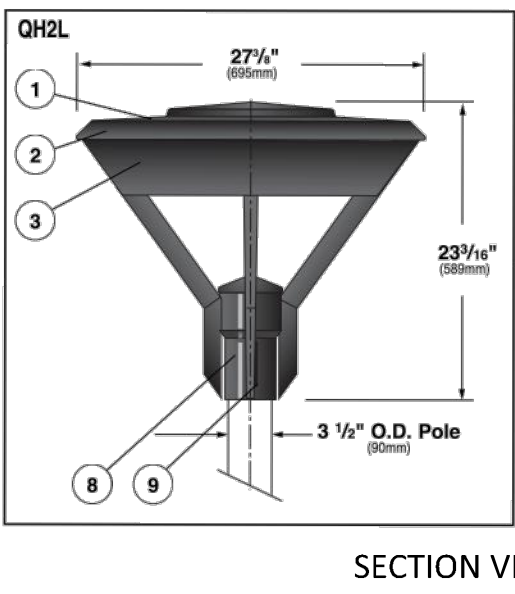
Mount Height (ft)		LIGHTING SCHEDULE:										
		Symbol	Quantity	Label	Manufacturer	Catalog Number	Lamp	Number Lamps	Lumens Per Lamp	Lumen Multiplier	Light Loss Factor	Wattage
15-16ft (SEE PLAN)	LP-A	⬤	3	QH2L-R4-530_HS	Selux Corporation	QH2L-R4-530-30-XC-UV-HS	Seven white LEDs	1	3119	1	0.94	49.29
16 ft.	LP-B	⬤	9	QH2L-R4-350_HS	Selux Corporation	QH2L-R4-350-30-XC-UV-HS	Seven white LEDs	1	2207	1	0.94	32.87
14 ft.	LP-C	⬤	10	QH2L-5R5-350	Selux Corporation	QH2L-5R5-350-30-XC-UV	Seven white LEDs	1	3257	1	0.94	32.62
20 ft.	LP-D	⬤	10	AV4_700-R3W	Selux Corporation	AV4-51-0-1-105-R3W-30-120 SX 938 41-9 CSP	2299 lm 38 W	1	2299	1	0.94	38
20 ft.	LP-E	⬤	2	AV4-105-R3W	Selux Corporation	AV4-51-0-1-105-R3W-30-120 SX 938 42-9 CSP	4274 lm 56 W	1	3565	1	0.94	56
20 ft.	LP-F	⬤	4	2-AV4-105-R3W	Selux Corporation	AV4-51-0-1-105-R3W-30-120 SX 938 42-9 CSP	4274 lm 56 W	1	3565	1	0.94	112

LIGHTING SCHEDULE NOTES:
1. MOUNTING HEIGHT IS AS MEASURED FROM THE GROUND TO THE SOURCE OF LIGHT IN THE FIXTURE.
2. HOUSE-SIDE SHIELDS (HS) ARE UTILIZED ON LIGHT POLES LP-A AND LP-B.

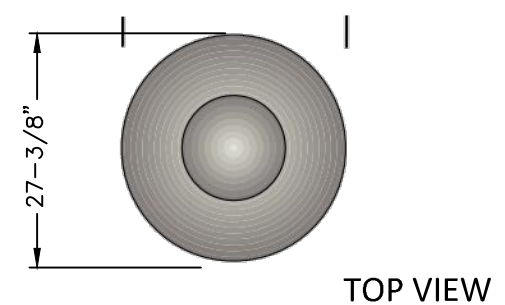
- LIGHTING NOTES:**
- PROPOSED LIGHTING AS MANUFACTURED BY SELUX LIGHTING. PROPOSED POLE LENGTHS VARY, SEE LIGHTING CHART.
 - GRID NUMBERS SHOWN REPRESENT FOOT CANDLE VALUES AT GROUND PLANE.
 - THE LIGHTING FIXTURES, SURFACE LOCATIONS AND ASSOCIATED PHOTOMETRIC VALUES ARE IDENTIFIED BY THE CHAZEN COMPANIES DETAILED DESIGN OF THE LIGHTING SPECIFICATIONS, FOUNDATION DESIGN, LIGHTING CONDUIT, WIRING, AND CONTROL CIRCUITRY SHALL BE BY OTHERS.
 - IF DISCREPANCIES EXIST BETWEEN THE LIGHTING SCHEDULE AND LIGHTING PLAN, THE PLAN SHALL DICTATE.
 - THE EXISTING STREET LIGHTS IN THE RIGHT-OF-WAYS HAVE NOT BEEN INCLUDED IN THIS PHOTOMETRIC ANALYSIS. THE LIGHT LEVELS SHOWN HEREON REFLECT THE PROPOSED LIGHTING ON SITE.

LIGHTING LEGEND:

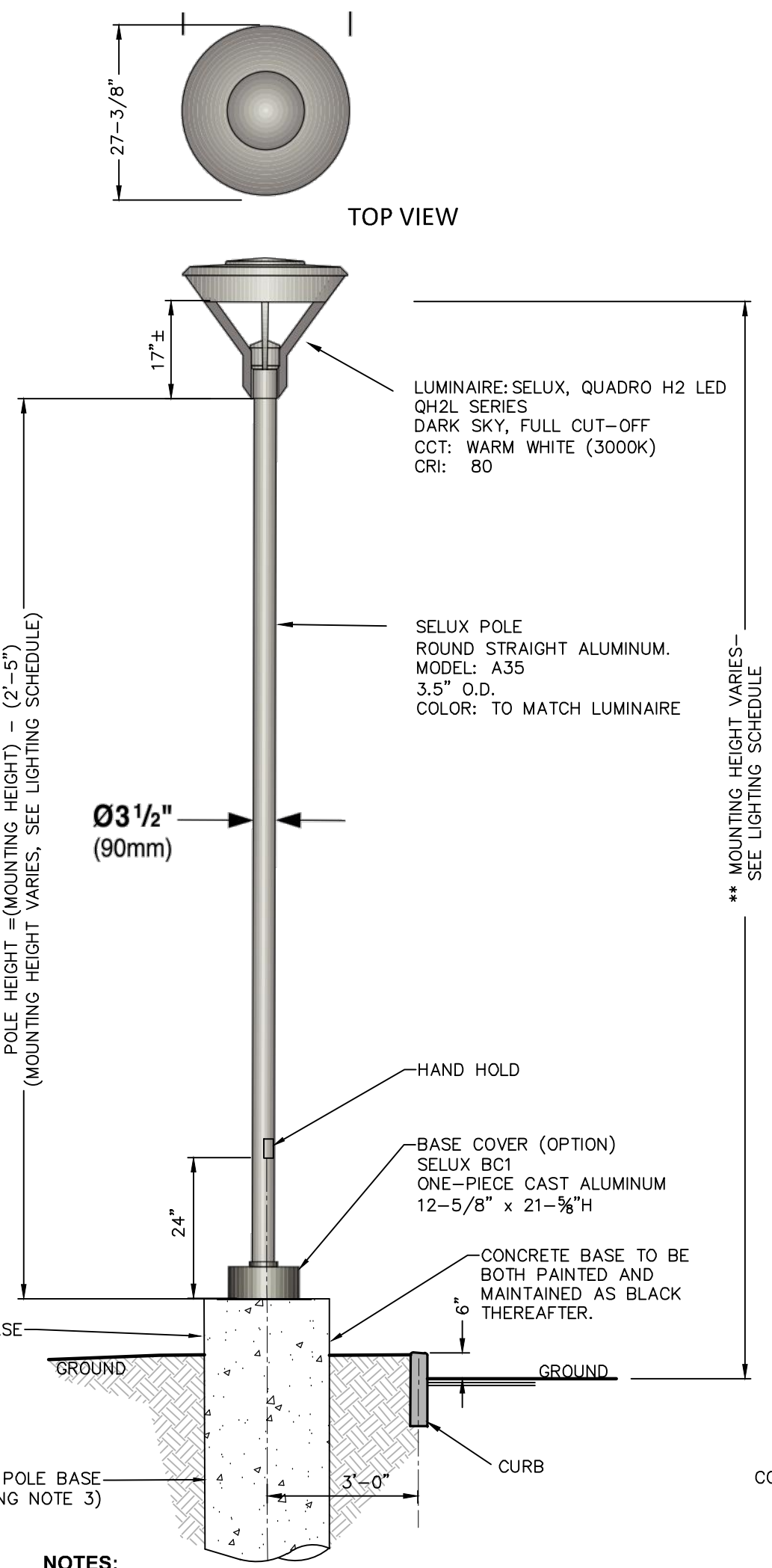
- PROPOSED BUILDING
- POST AND LUMINAIRE
- PENDANT MOUNTED LUMINAIRE / POLE



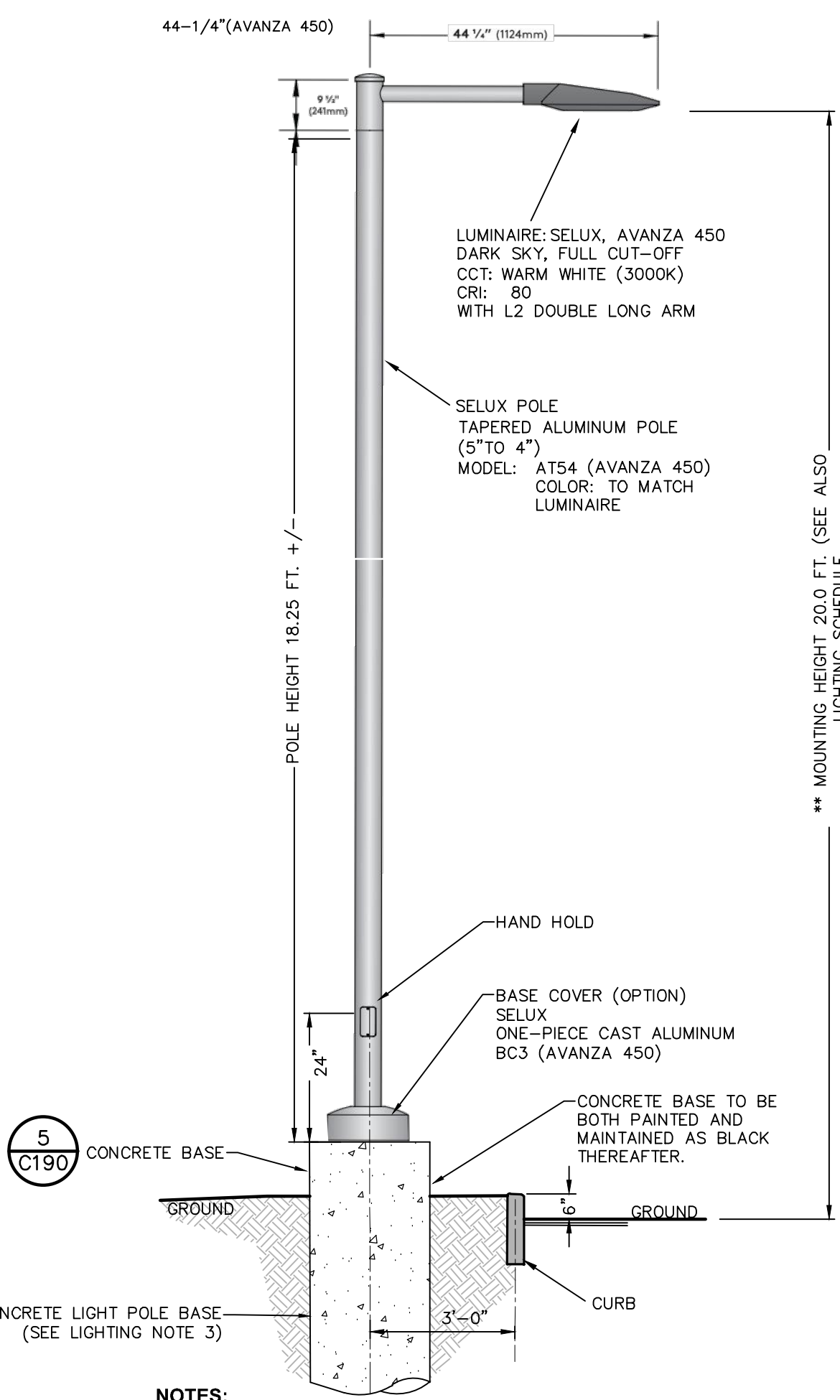
SECTION VIEW



TOP VIEW



- NOTES:**
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
 - ALL EXCAVATIONS SHALL BE BACKFILLED WITH STRUCTURAL FILL AND COMPACTED TO 95% OF MAXIMUM MATERIAL DENSITY.
 - ELECTRICAL POWER SUPPLY, WIRE, AND CONDUIT BY OTHERS.



- NOTES:**
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
 - ALL EXCAVATIONS SHALL BE BACKFILLED WITH STRUCTURAL FILL AND COMPACTED TO 95% OF MAXIMUM MATERIAL DENSITY.
 - ELECTRICAL POWER SUPPLY, WIRE, AND CONDUIT BY OTHERS.
 - WHEN LIGHT FIXTURE IS ADJACENT TO PARKING, BASE HEIGHT TO BE 30" HIGH.

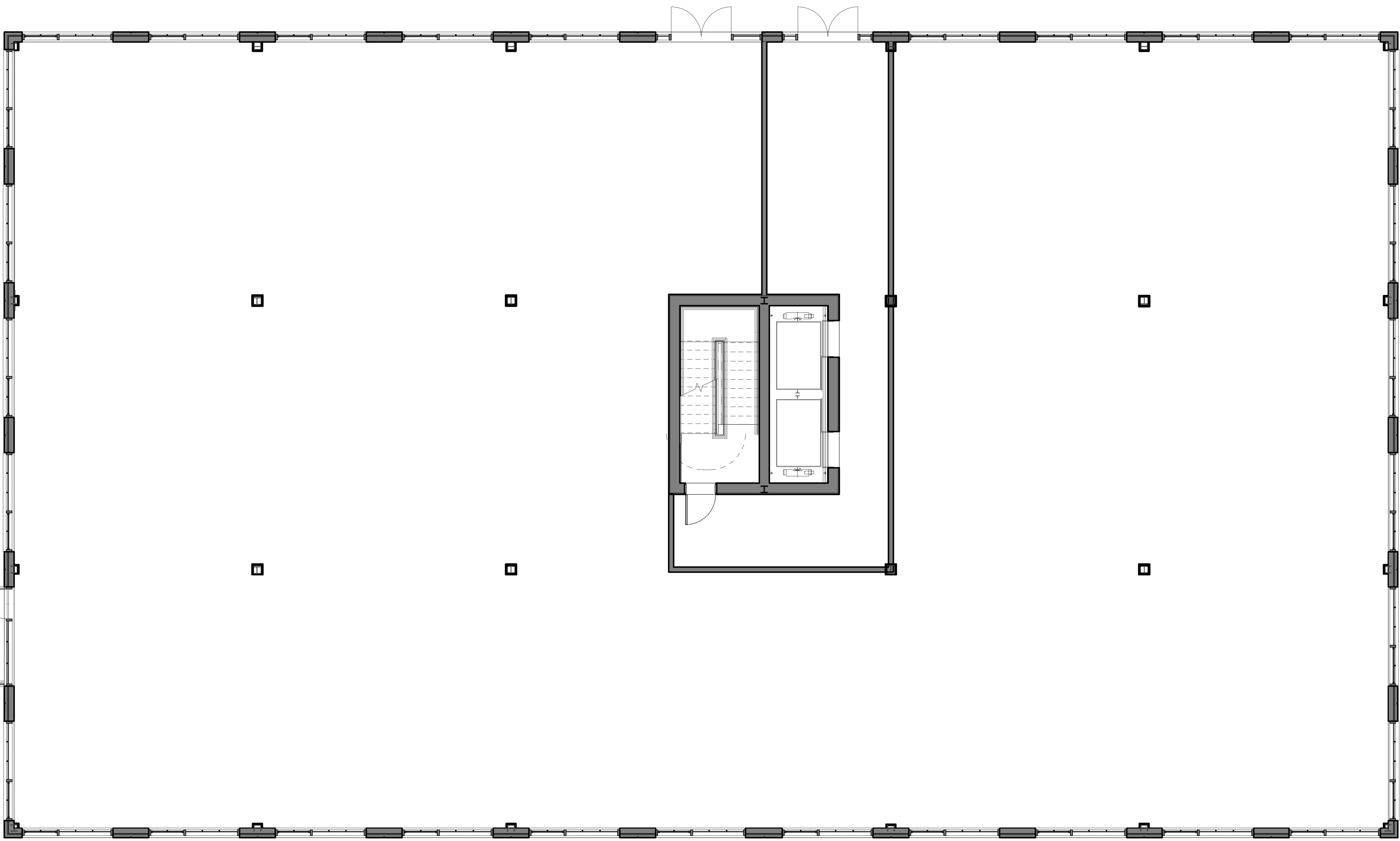
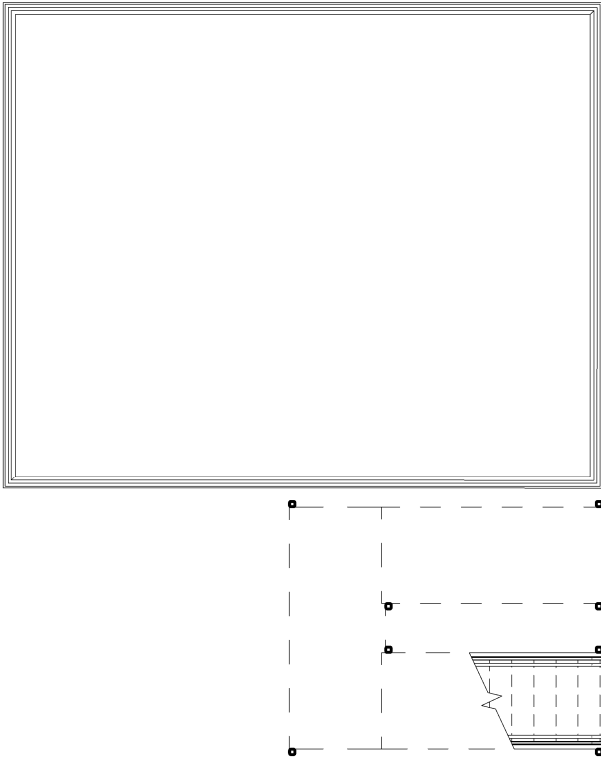
1 PHOTOMETRIC LIGHTING PLAN
SCALE: 1"=30'

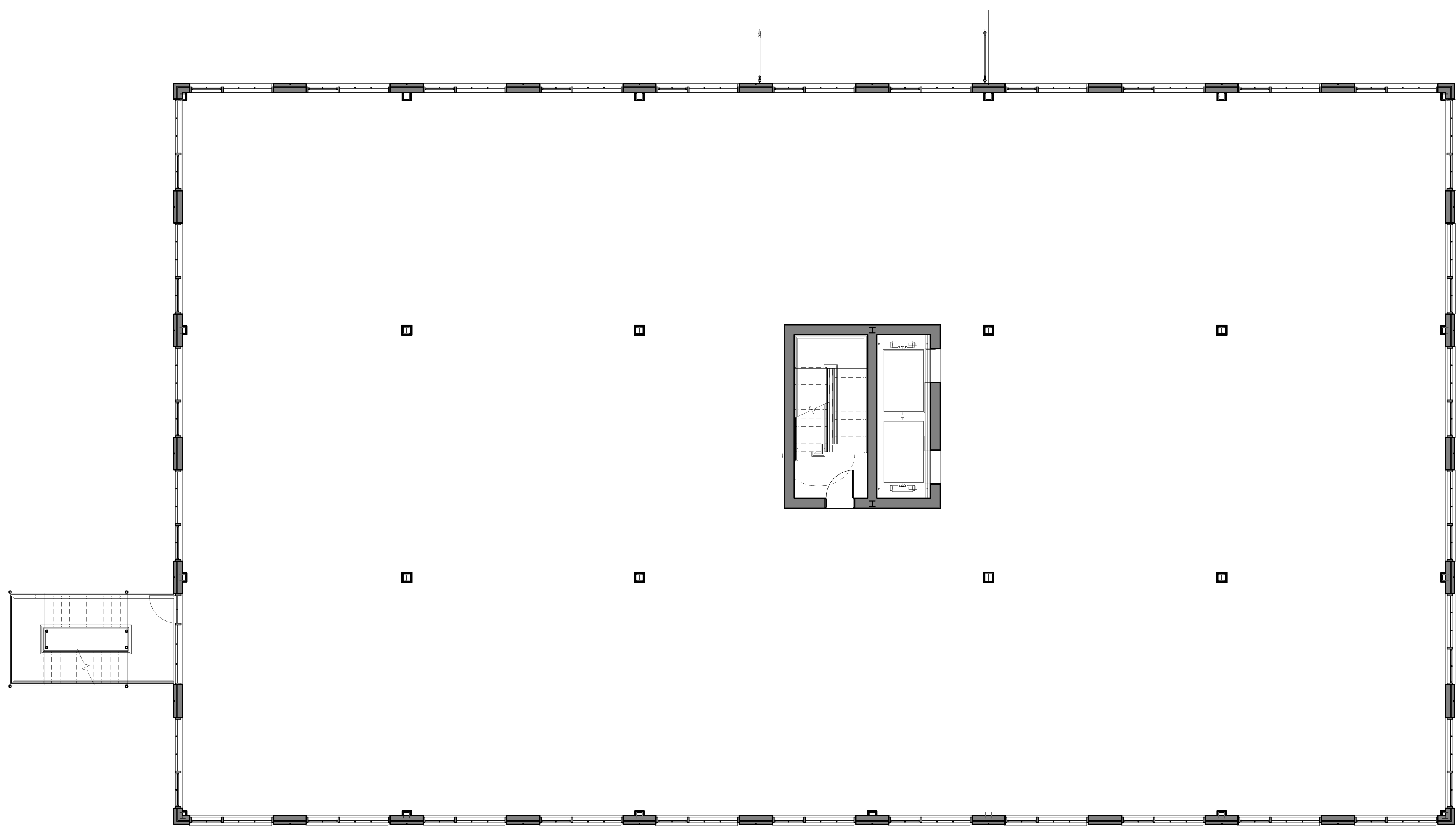
2 PHOTOMETRIC LIGHTING PLAN
SCALE: 1"=30'

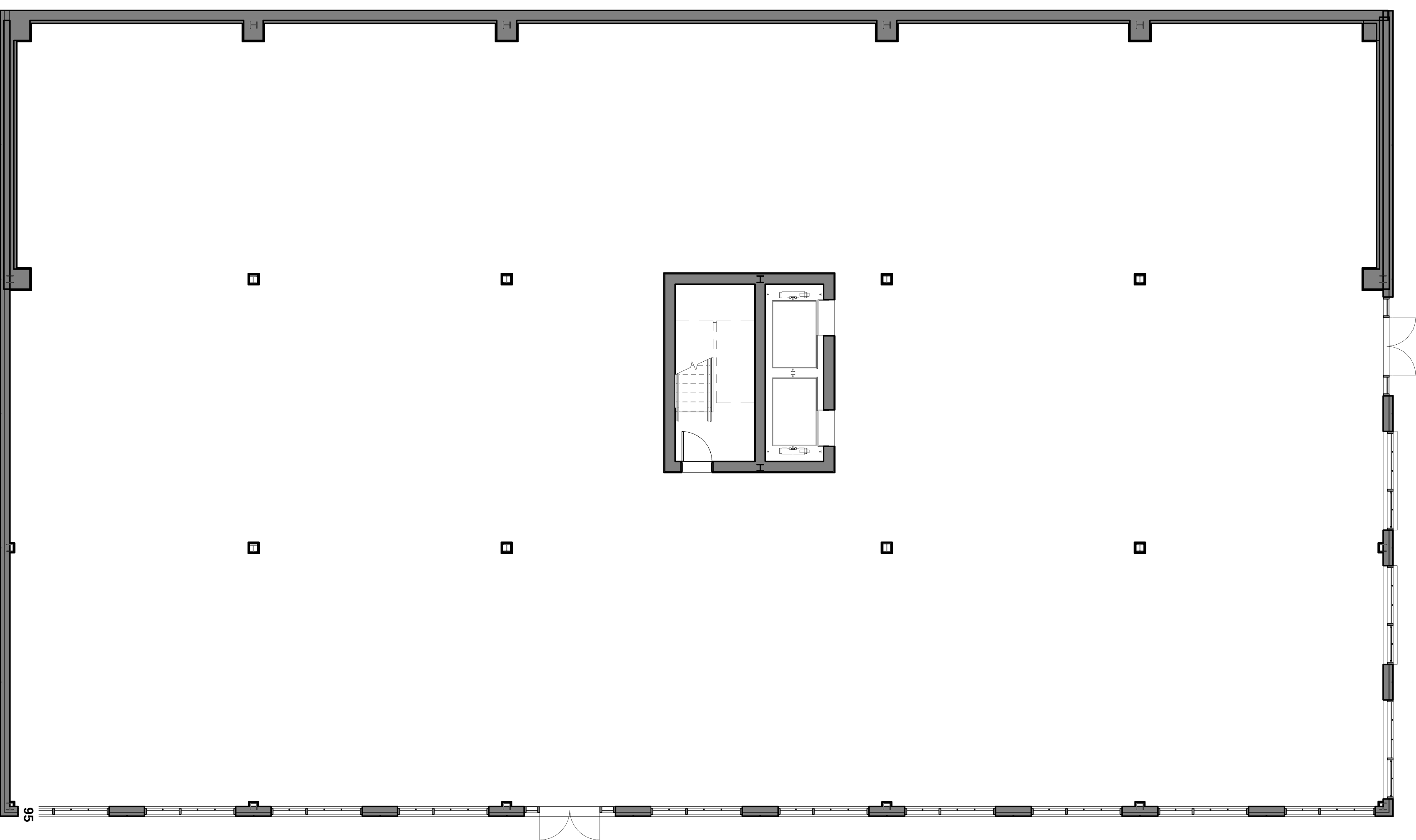
5 LOT LIGHTING CONCRETE BASE
SCALE: N.T.S.

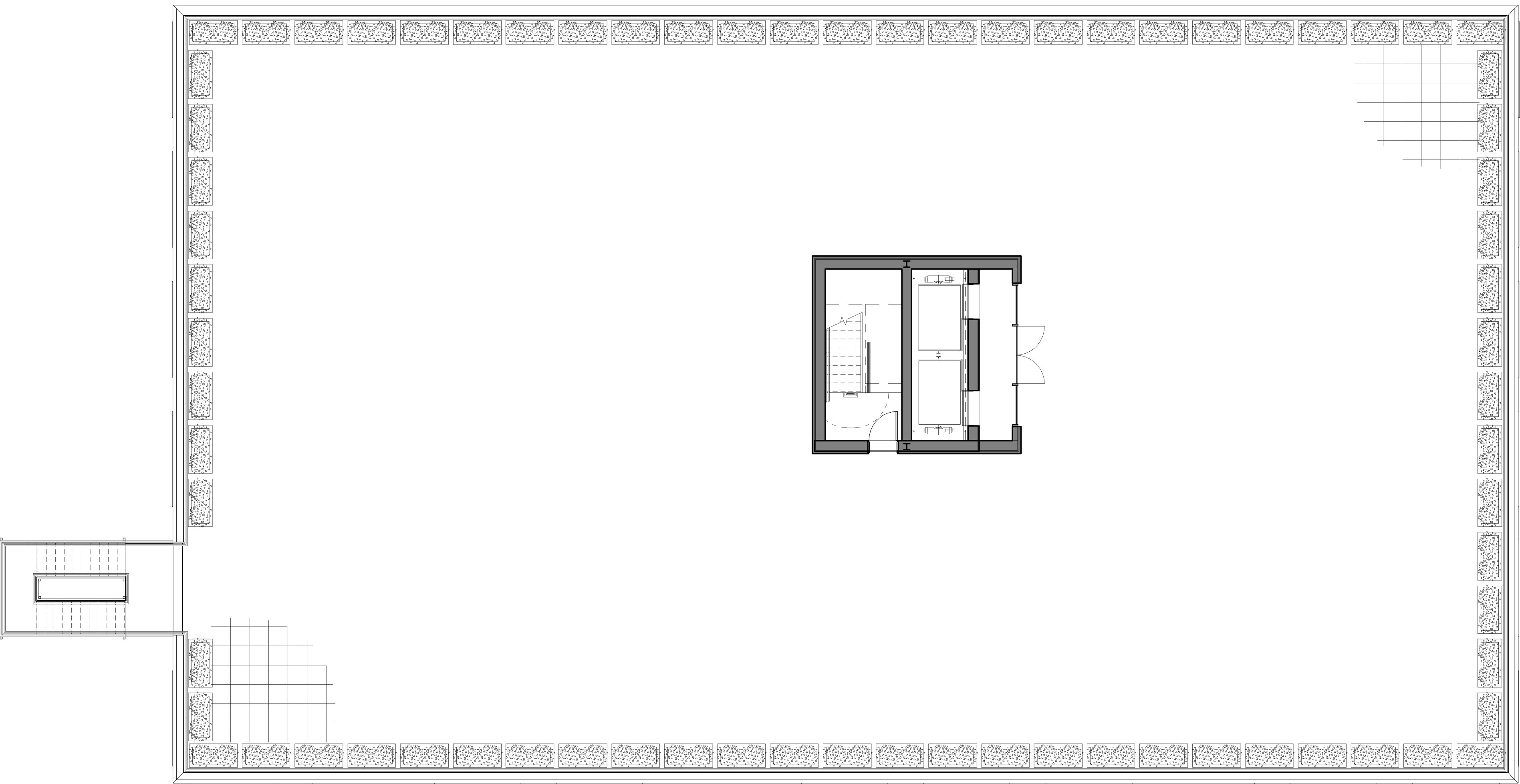
3 PEDESTRIAN SCALE LIGHTING FIXTURE DETAIL
SCALE: N.T.S.

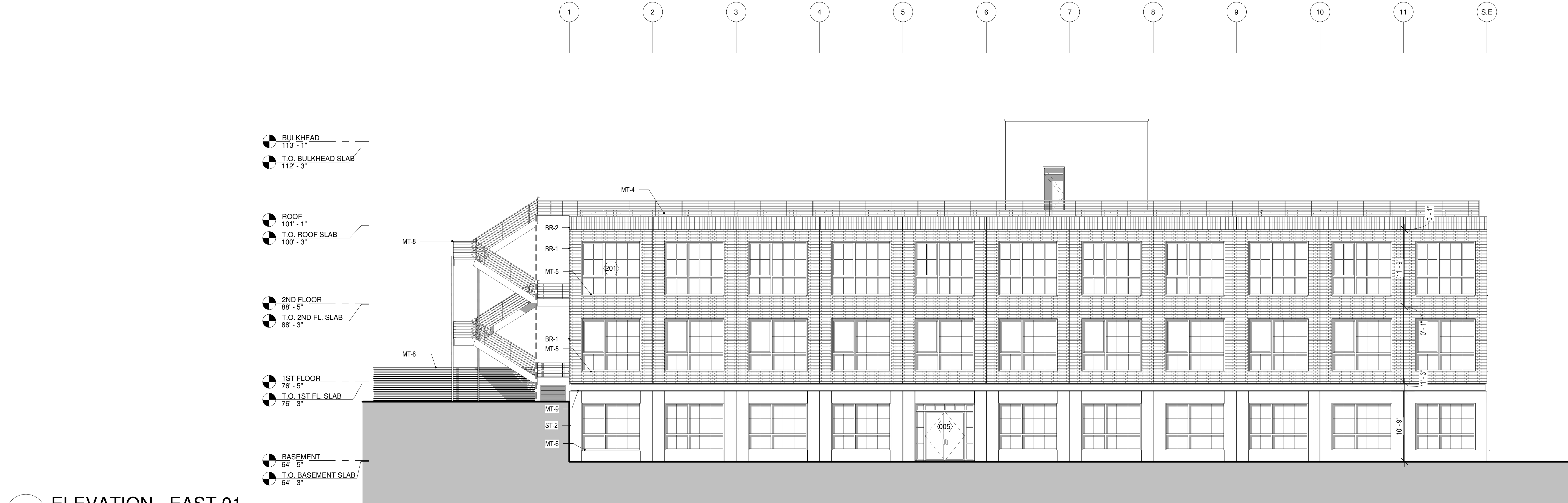
4 PARKING AREA LIGHTING FIXTURE DETAIL
SCALE: N.T.S.



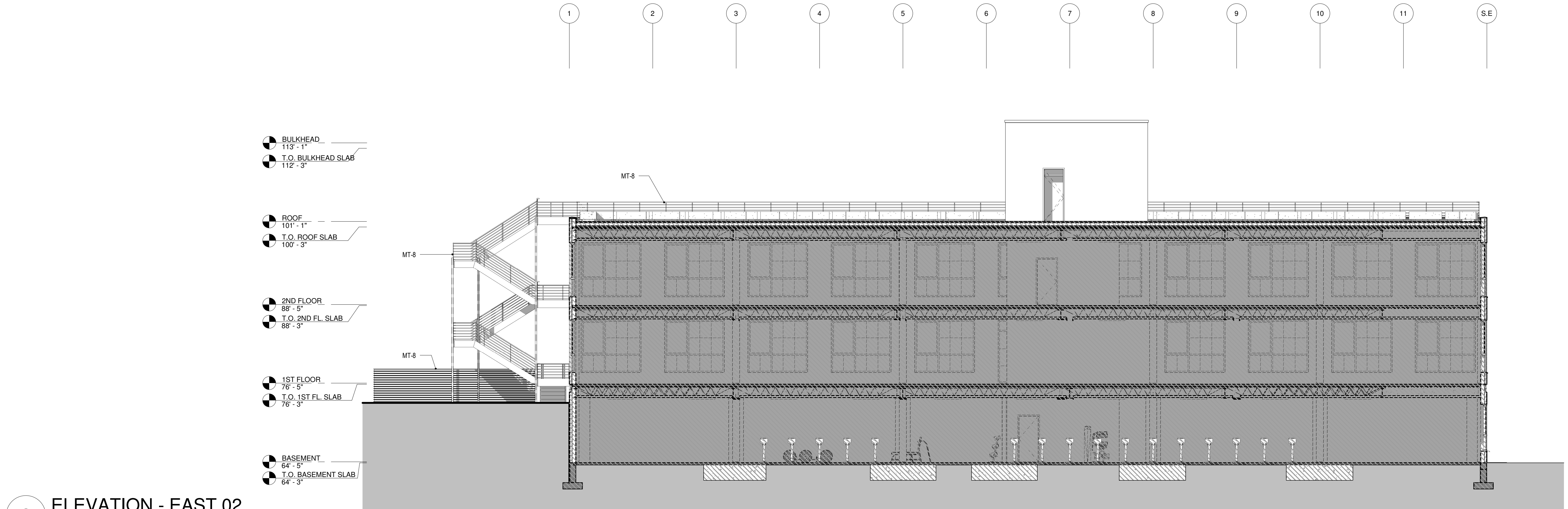








1 ELEVATION - EAST 01
1/8" = 1'-0"



2 ELEVATION - EAST 02
1/8" = 1'-0"

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BERRY KOHN, BEACON 248 HOLDINGS, LLC.
15 SYCAMORE LANE
SUFFERN, NY 10901

OWNER

CHAI BUILDERS & DEVELOPERS
120 ROUTE 59, SUITE 201
SUFFERN, NY 10901

DEVELOPER

NLG ENGINEERING
3062 ROUTE 9W, SUITE 500
NEW WINDSOR, NY 12553

MEP ENGINEER

DAY + STOKOSA ENGINEERING
3 VAN WYCK LN #2
WAPPINGERS FALLS, NY 12590

STRUCTURAL ENGINEER

CHAZEN ENGINEERING, LAND SURVEYING, &
LANDSCAPE ARCHITECTURE D.P.C.
21 FOX STREET, FOUGHKEEPSIE, NY 12601

SITE ENGINEER

10	
9	
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3	
2	03/25/21 100% CD SET
1	02/25/21 70% CD SET
#	DATE DESCRIPTION

ISSUES / REVISIONS

abarchitekten
62 Allen Street, 2nd Fl
New York New York 10002
T 212.334.1232
F 212.334.4520
www.abarchitekten.com

248 DEVELOPMENT,
BEACON, NY

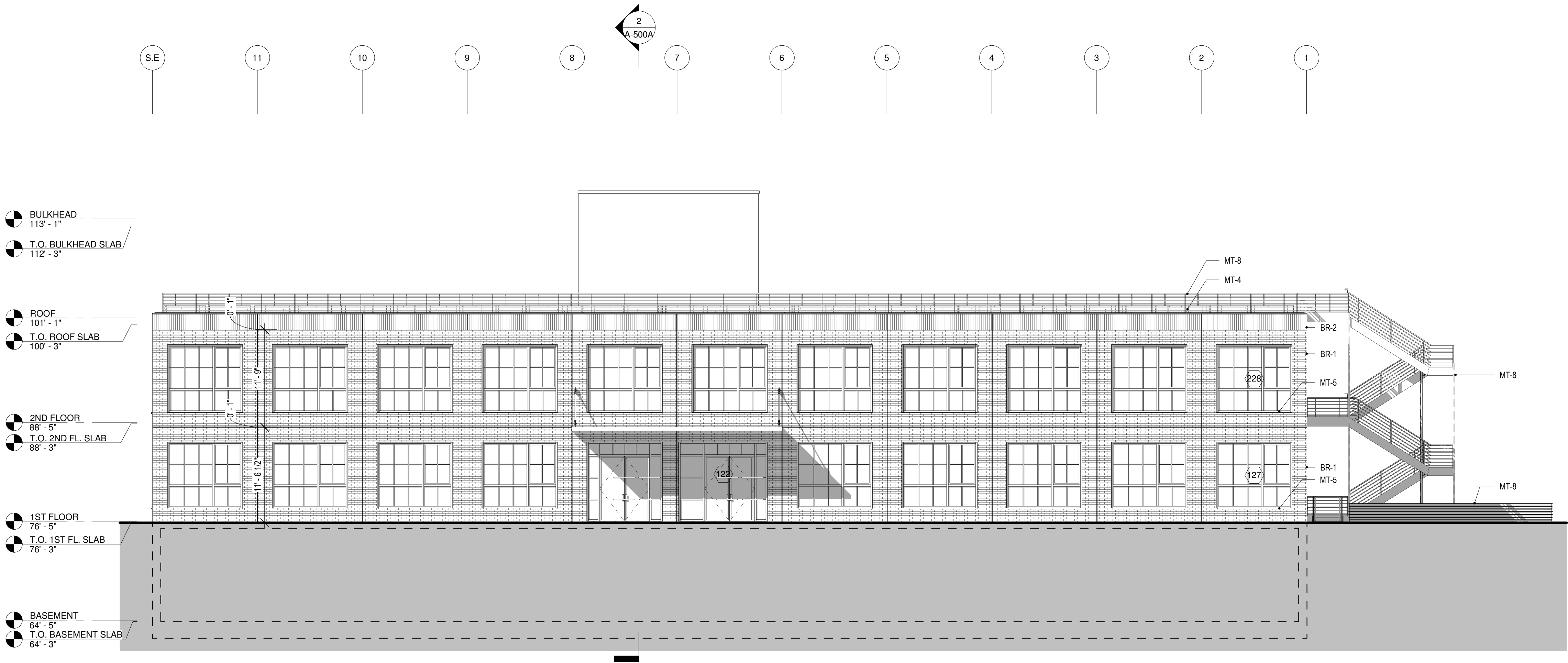
ELEVATIONS

BLDG 100

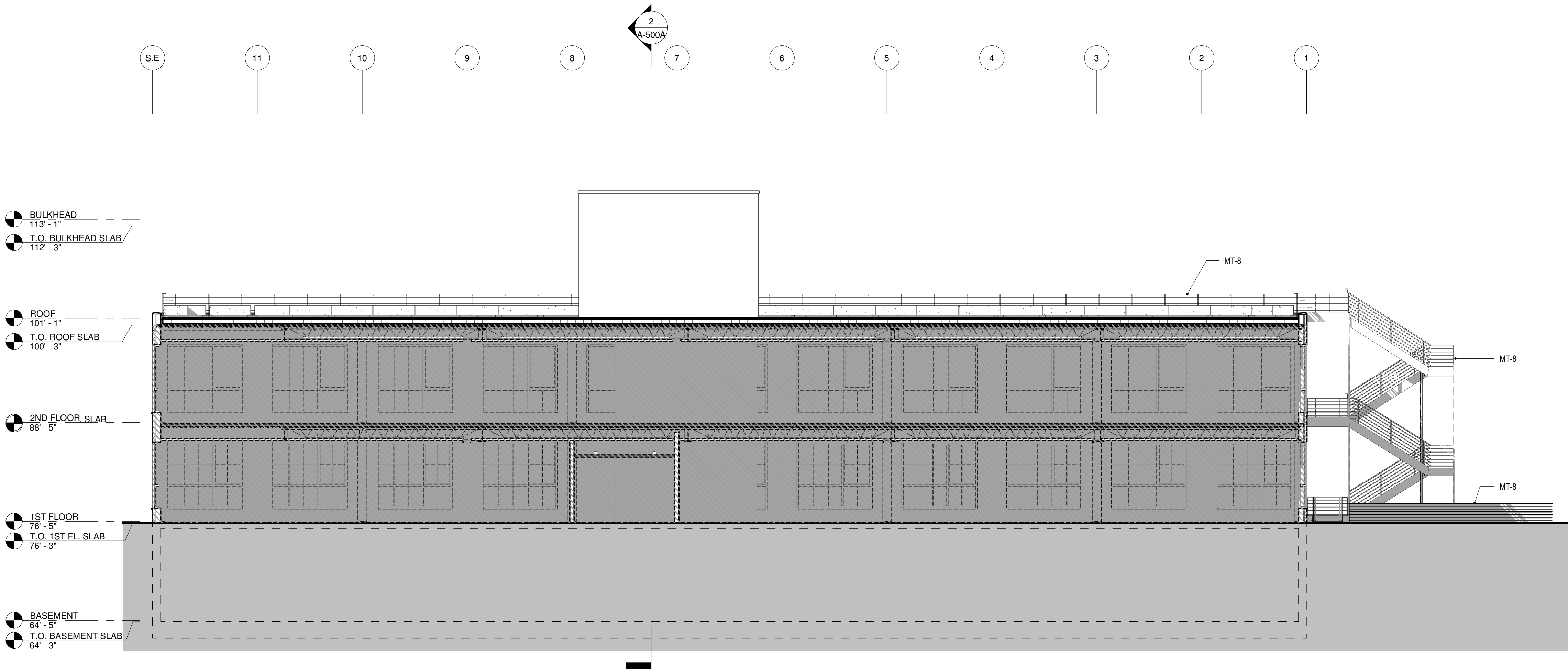
DRAWING TITLE

AB
CHECKED BY PROJECT #
1/8" = 1'-0" 12/23/20
SCALE DATE

A-401A.00
DRAWING # 60 OF 110



1 ELEVATION - WEST 01
1/8" = 1'-0"



2 ELEVATION - WEST 02
1/8" = 1'-0"

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BERRY KOHN, BEACON 248 HOLDINGS, LLC.
15 SYCAMORE LANE
SUFFERN, NY 10901

OWNER

CHAI BUILDERS & DEVELOPERS
120 ROUTE 59, SUITE 201
SUFFERN, NY 10901

DEVELOPER

NLG ENGINEERING
3062 ROUTE 9W, SUITE 500
NEW WINDSOR, NY 12553

MEP ENGINEER

DAY + STOKOSA ENGINEERING
3 VAN WYCK LN #2
WAPPINGERS FALLS, NY 12590

STRUCTURAL ENGINEER

CHAZEN ENGINEERING, LAND SURVEYING, &
LANDSCAPE ARCHITECTURE D.P.C.
21 FOX STREET, FOUGHKEEPSIE, NY 12601

SITE ENGINEER

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2	03/25/21 100% CD SET
1	02/25/21 70% CD SET
#	DATE DESCRIPTION

ISSUES / REVISIONS

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248 DEVELOPMENT,
BEACON, NY

ELEVATIONS

BLDG 100

DRAWING TITLE

AB

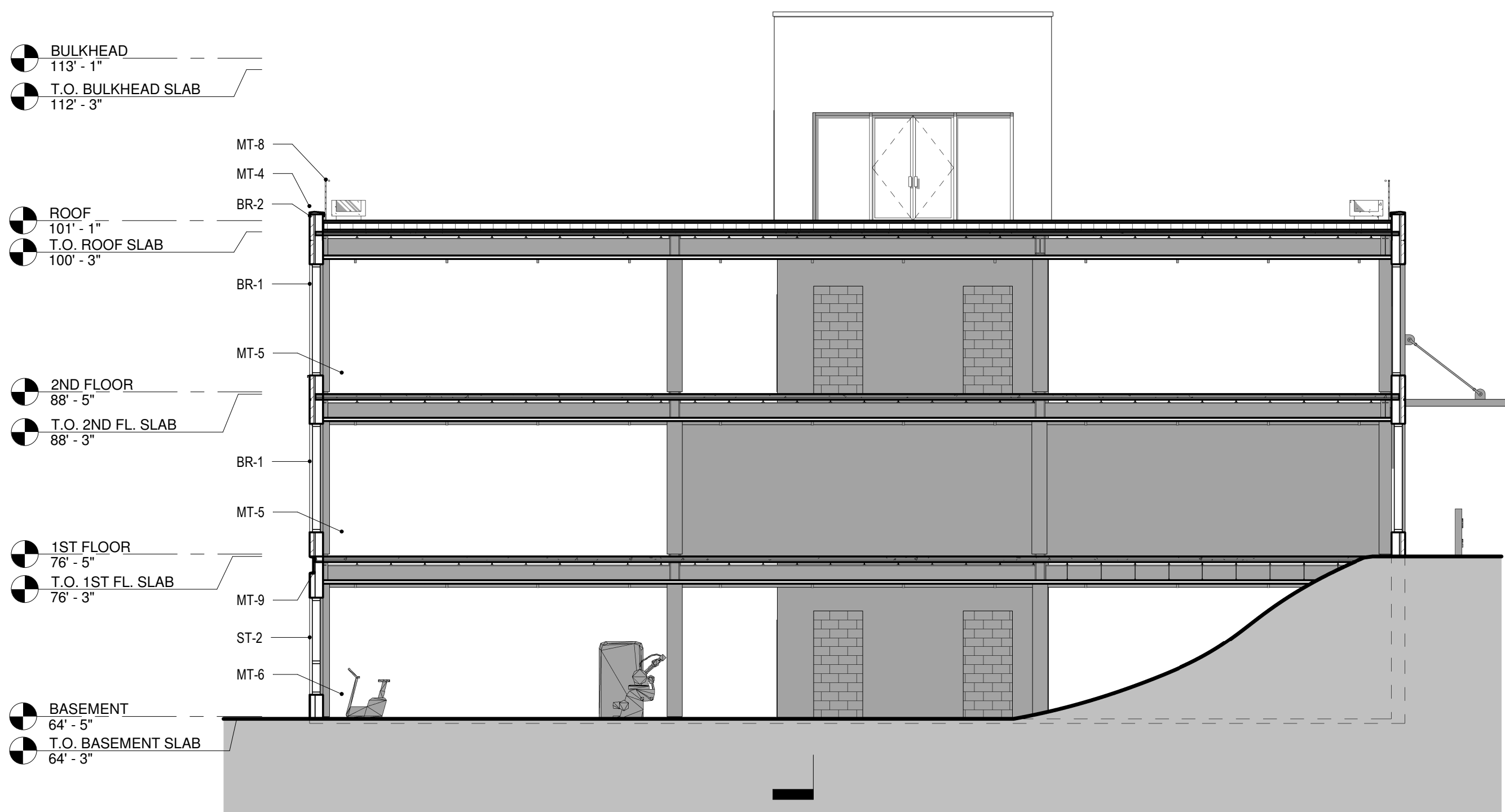
CHECKED BY PROJECT #

1/8" = 1'-0" 12/23/20

SCALE DATE

A-402A.00

DRAWING # 61 OF 110



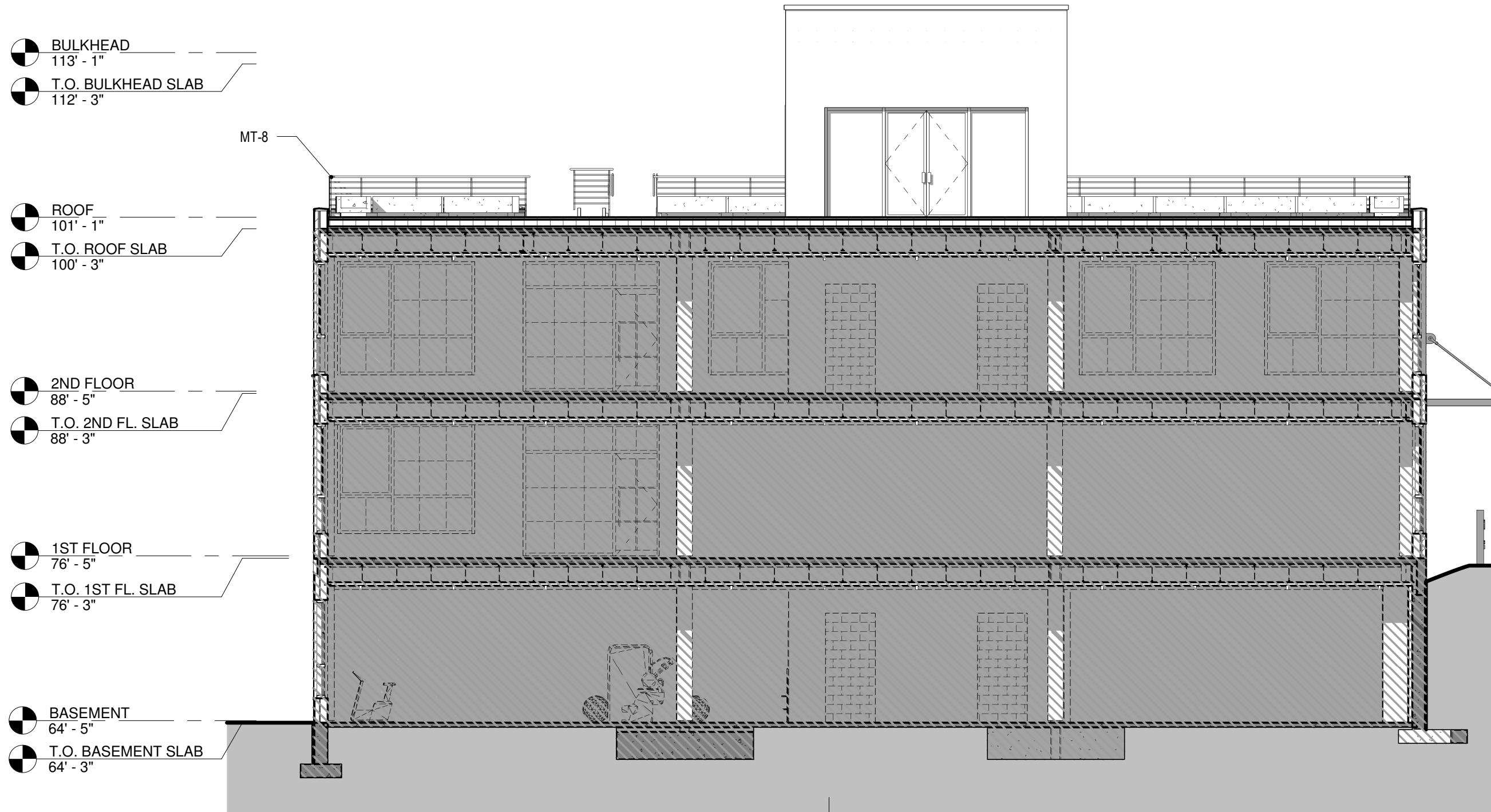
1 ELEVATION - NORTH 01

1/8" = 1'-0"



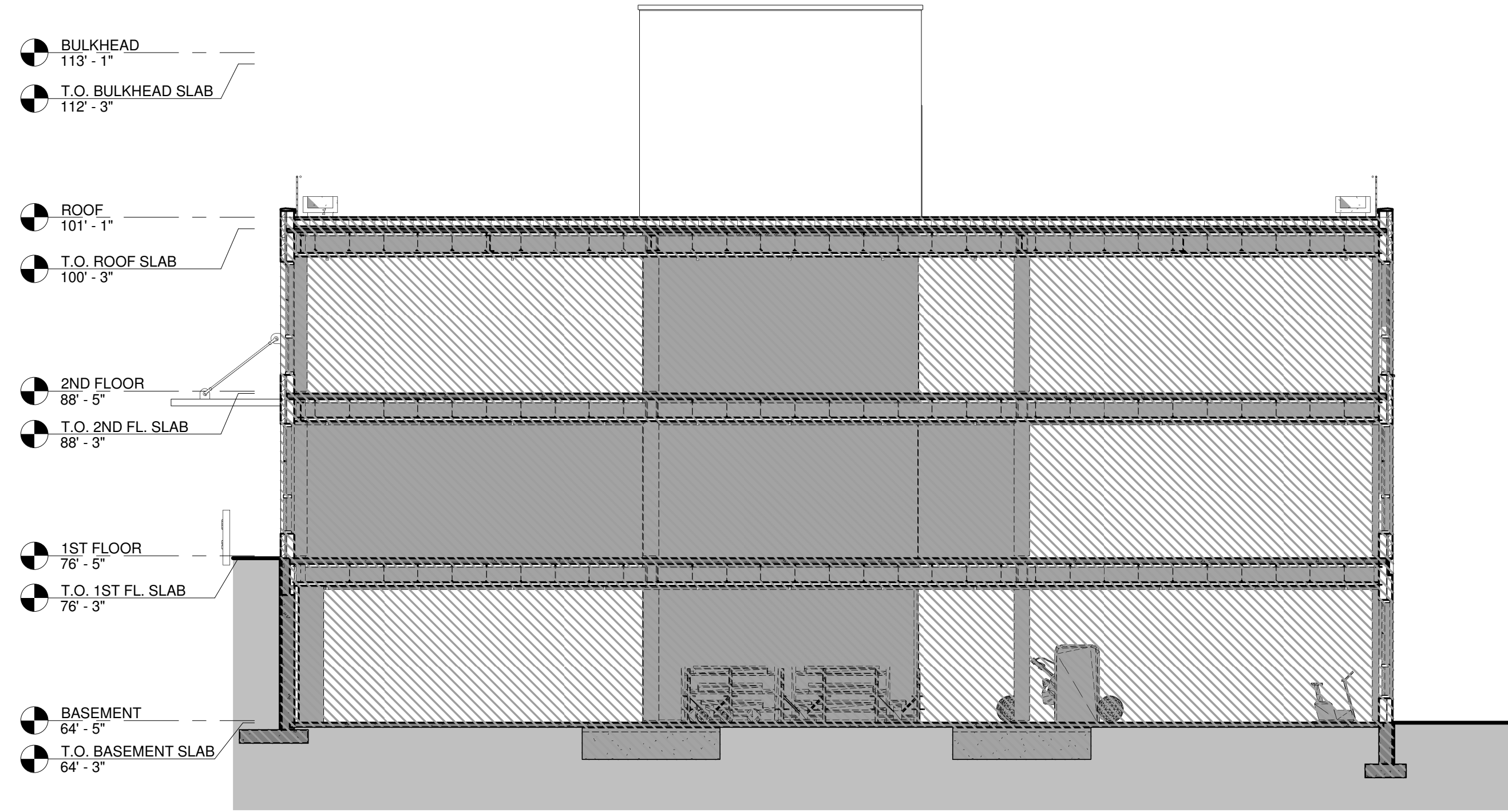
3 ELEVATION - SOUTH 01

1/8" = 1'-0"



2 ELEVATION - NORTH 02

1/8" = 1'-0"



4 ELEVATION - SOUTH 02

1/8" = 1'-0"

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BERRY KOHN, BEACON 248 HOLDINGS, LLC.
15 SYCAMORE LANE
SUFFERN, NY 10901

OWNER

CHAI BUILDERS & DEVELOPERS
120 ROUTE 59, SUITE 201
SUFFERN, NY 10901

DEVELOPER

NLG ENGINEERING
3062 ROUTE 9W, SUITE 500
NEW WINDSOR, NY 12553

MEP ENGINEER

DAY + STOKOSA ENGINEERING
3 VAN WYCK LN #2
WAPPINGERS FALLS, NY 12590

STRUCTURAL ENGINEER

CHAZEN ENGINEERING, LAND SURVEYING, &
LANDSCAPE ARCHITECTURE D.P.C.
21 FOX STREET, POUGHKEEPSIE, NY 12601

SITE ENGINEER

10	
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2	03/25/21 100% CD SET
1	02/25/21 70% CD SET
#	DATE DESCRIPTION

ISSUES / REVISIONS

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F 212.334.4520
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248 DEVELOPMENT,
BEACON, NY

ELEVATIONS

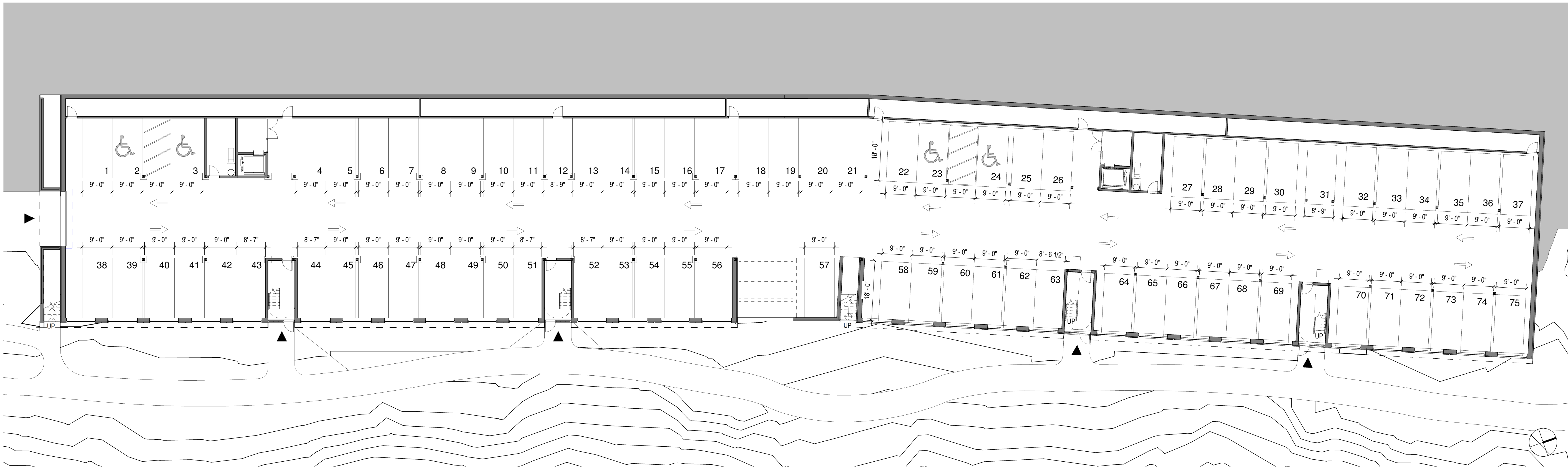
BLDG 100

DRAWING TITLE

AB
CHECKED BY PROJECT #
1/8" = 1'-0" 12/23/20
SCALE DATE

A-403A.00

DRAWING # 62 OF 110



1 BASEMENT
1/16" = 1'-0"

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BERRY KOHN, BEACON 248 HOLDINGS, LLC.
15 SYCAMORE LANE
SUFFERN, NY 10901

OWNER

CHAI BUILDERS & DEVELOPERS
120 ROUTE 59, SUITE 201
SUFFERN, NY 10901

DEVELOPER

NLG ENGINEERING
3062 ROUTE 9W, SUITE 500
NEW WINDSOR, NY 12553

MEP ENGINEER

DAY + STOKOSA ENGINEERING
3 VAN WYCK LN #2
WAPPINGERS FALLS, NY 12590

STRUCTURAL ENGINEER

CHAZEN ENGINEERING, LAND SURVEYING, &
LANDSCAPE ARCHITECTURE D.P.C.
21 FOX STREET, FOUCHKEEPSIE, NY 12601

SITE ENGINEER

10		
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3		
2	03/25/21	100% CD SET
1	02/25/21	70% CD SET
#	DATE	DESCRIPTION

ISSUES / REVISIONS

abarchitekten

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F 212.334.4520
www.abarchitekten.com

248 DEVELOPMENT,
BEACON, NY

PARKING PLAN

BLDG 200 & 300

DRAWING TITLE

AB

CHECKED BY PROJECT #

1/16" = 1'-0" 09/23/20

SCALE DATE

S-101.00

DRAWING # 19 OF 110

LANC & TULLY
ENGINEERING AND SURVEYING, P.C.

101

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal
John Queenan, P.E., Principal

Rodney C. Knowlton, L.S., Principal
Jerry A. Woods, L.S., Principal

John D. Russo, P.E., Principal
John Lenc, P.E., L.S.
Arthur R. Tully, P.E.

August 5, 2021

Mr. John Gunn
Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: Beacon 248 Development
City of Beacon
Tax Map Nos. 5954-10-993482,
6054-45-012574

Dear Mr. Gunn:

Our office has reviewed the following documents as submitted for the 248 Tioronda Avenue Development project.

- Correspondence dated July 27, 2021 from The Chazen Companies.
- Report titled "Full Environmental Assessment Form Part 1 for Amended Site Plan – Multifamily Development and Office Building – 248 Tioronda Avenue", dated July 28, 2021, as prepared by The Chazen Companies.
- Plans titled "Site Plan – 248 Tioronda Ave., Beacon NY – prepared for Chai Builders" as prepared by the Chazen Companies and consisting of the following sheets:
 - Sheet G001 titled "Title Sheet" with the latest revision date of July 27, 2021.
 - Sheet C101 titled "Existing Conditions" with the latest revision date of September 9, 2020.
 - Sheet C130 titled "Site Plan" with the latest revision date of July 27, 2021.
 - Sheet C140 titled "Grading Plan" with the latest revision date of June 29, 2021.
 - Sheet C150 titled "Erosion and Sediment Control Plan" with the latest revision date of July 27, 2021.
 - Sheet C160 titled "Utility Plan" with the latest revision date of July 27, 2021.
 - Sheet C180 titled "Landscape Plan" with the latest revision date of July 27, 2021.
 - Sheet C190 titled "Photometric Lighting Plan" with the latest revision date of July 27, 2021.

Based upon our review of the above referenced document and plans, we offer the following comments:

General Comments:

1. A comparison between the approved plan set and the proposed amended project shall be provided showing the reduction in pervious area for the project. **The applicant notes that there will be a reduction in pervious area of approximately 14,450 square feet.** Although we have been provided with a total area, we were asking for a plan comparison showing the locations where impervious is being removed across the site.

2. Although the plans show the Greenway Trail to cross through the MTA parcel and then into the 23-28 Creek Drive project, who will be constructing the Greenway Trail across the MTA parcel and has the revised trail location been coordinated with the owner of the 23-28 Creek Drive project? **The applicant states that they are currently working with Weber Projects, Hudson Land Design, the Greenway Trail Committee and the MTA to finalize the easement and trail route.** Although I am glad to see all the parties working together to coordinate the location of the trail easement, the question remains as to who will be constructing this trail interconnection?
3. An amended Stormwater Pollution Prevention Plan (SWPPP) shall be prepared for the project.

Sheet G001 – Title Sheet:

1. The “Index of Drawings” shall be updated to reflect the latest date on the submitted sheets. Sheet No. C101 should have the latest date of September 9, 2020, per the revision box on that sheet.

Sheet C160 – Utility Plan:

1. The information for storm structure CB-13 should be checked. The pipe invert for the north pipe notes an invert of -3.10.
2. Rim and pipe invert information shall be provided on the plan for what appears to be a yard basin at the far end of the trail near Wolcott, which connects to CB-13.

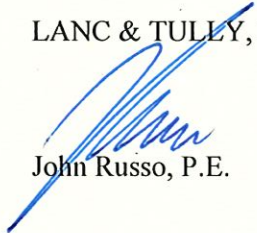
Sheet C180 – Landscape Plan:

1. Several conflicts were noted between proposed utilities and proposed tree plantings. The utility plan should be overlaid onto the landscape plan, and the landscape plan adjusted accordingly to avoid planting trees over or directly next to utility lines.

This completes our review at this time. Further comments may be forth coming based upon future plan submissions to the City. **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.
John Clarke, Planner
David Buckley, Building Inspector

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: August 5, 2021
Re: **248 Tioronda Avenue, Amended Site Plan**

I have reviewed the July 27, 2021 letter from The Chazen Companies and sheets 1-6 and 9-10 of a previous 17-sheet Site Plan set from The Chazen Companies with sheets 1, 3, 5, 6, 9, and 10 having a revision date of July 27, 2021.

Proposal

The applicant is proposing to amend a previously approved Site Plan to eliminate the extended ramp up to Wolcott Avenue and replace it with an emergency vehicle turnaround north of Building 300. Parking spaces will be relocated and Building 100 will be reduced to two stories with an expanded footprint to contain the required commercial square footage. The Greenway Trail north will now use the MTA right-of-way, rather than the ramp up to Wolcott Avenue.

Comments and Recommendations

1. The Bulk Table on Sheet 1 includes 77 total parking spaces below the residential buildings, but sheets 3 and 4 show 73 total below-building spaces and the Parking Plan for Buildings 200 and 300 shows 75 spaces.
2. For Sheet 3:
 - a. All changes in the trail need to be reviewed by the Greenway Trail Committee.
 - b. There is a new pedestrian curb cut and ramps south of the entrance to Building 200. The Board should consider a crosswalk between the ADA spaces and sidewalk.
3. The scale is mis-labeled for the top drawing on Sheet 4.
4. For the Buildings 200 and 300 Parking Plan:
 - a. The ADA spaces should be located as close to the elevator doors as possible. It seems that ADA spaces 2 and 3 could be switched to spaces 4-6 and spaces 23-24 to 24-26.
 - b. Section 223-41.13 I(11)(d) allows up to 20% compact car spaces less than 9 feet wide. However, the 8' 7" spaces should be specifically designated for compact cars and should not be next to stairwell walls. For example, the width of spaces 42 and 43 could be switched.
5. All the floor plans and elevations should be incorporated into the final Site Plan set of drawings with properly labels and scale information.

Page 2, August 5, 2021 Memo for 248 Tioronda Avenue

If you have any questions or need additional information, please feel free to email me.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
 Jennifer L. Gray, Esq., City Attorney
 Arthur R. Tully, P.E., City Engineer
 John Russo, P.E., City Engineer
 Larry Boudreau, RLA, Project Representative

City of Beacon Planning Board Agenda
08/10/2021

Title:

Review elevations for Certificate of Appropriateness related to Special Use Permit and Site Plan Approval, retail/residential, 416-420 Main Street, mixed-use commercial, office & residential development, submitted by 416 Main Street Beacon, LLC & 420 Main Street, LLC (d/b/a 420 Main St., LLC)

ATTACHMENTS

[416 Main Street Cover Letter.pdf](#)

[416 Main Street - Sheet 4 Building Plans.pdf](#)

[416 Main Street - Sheet 5 Building Elevations and Views.pdf](#)

[Planner Review Letter.pdf](#)

ARYEH SIEGEL
ARCHITECT

Etha Grogan
Planning Board Secretary
City of Beacon
One Municipal Plaza
Beacon, NY 12508

Re: 416-420 Main Street
Architectural Review Board for Artist Live Work Building

July 27, 2021

Dear Etha,

This submittal is for the Architectural Review Board's review of the proposed Artist Live Work Building only. The main building was previously approved. The Applicant would like to be on the August Planning Board agenda for this review.

The revisions include changing the window proportions to vertical. Creating an 8" knee wall below the glazed areas so that they are not fully glazed, and adding gutters and an eave to the roof edges.

We will submit updated plans in response to the consultant's comments once the ARB approves the Artist Live Work Building Design.

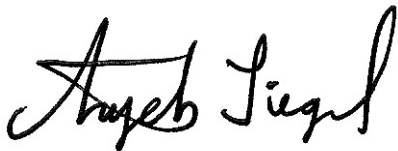
Please forward a copy of the enclosed to John Clarke. John Russo doesn't need to review this submission since it's only ARB.

Please find enclosed:

- (5) sets of Sheet 4 – Building Plans, and Sheet 5 – Building Elevations and Views
- CD-ROM

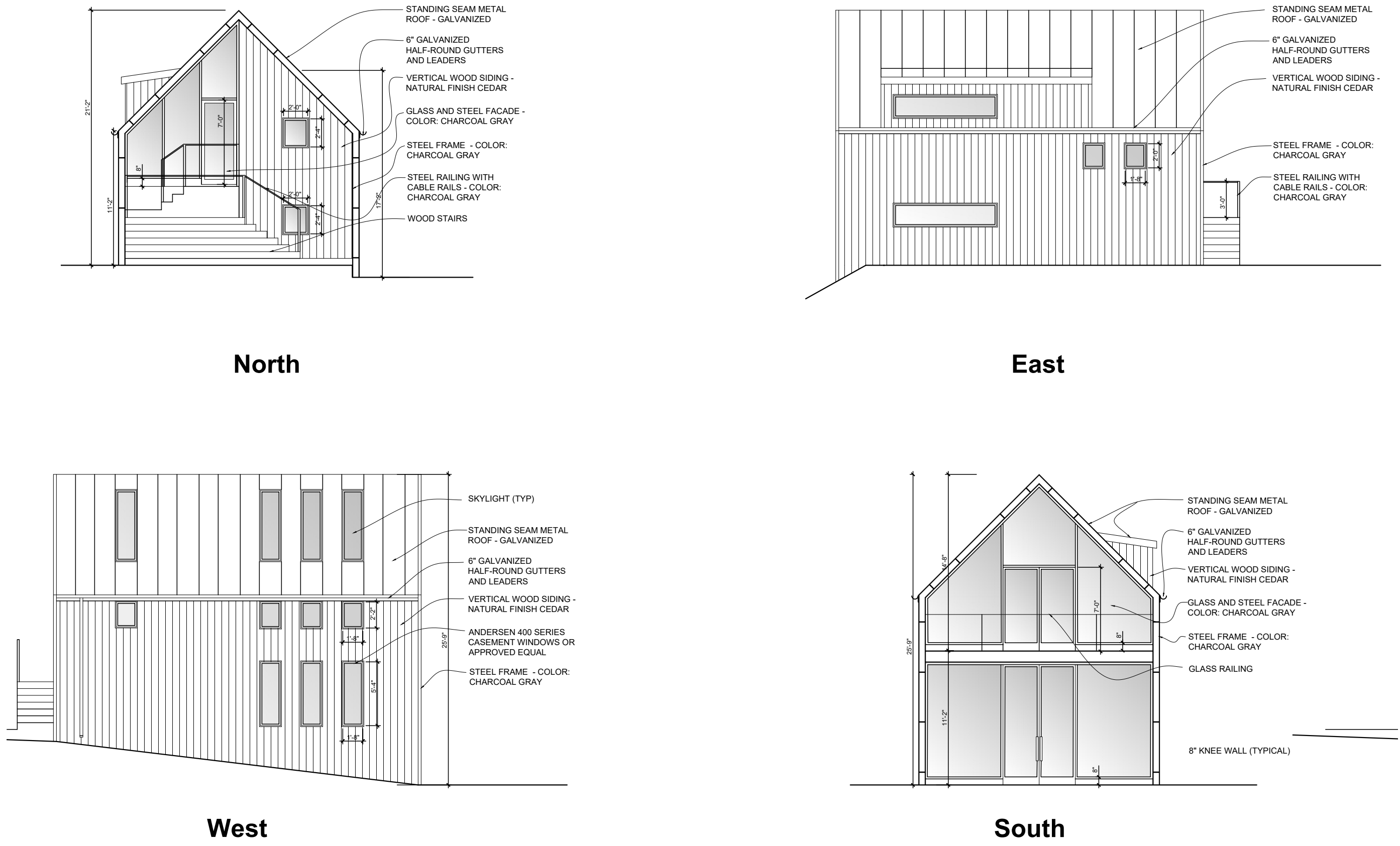
Thank you. Please let me know if you have any questions.

Sincerely,

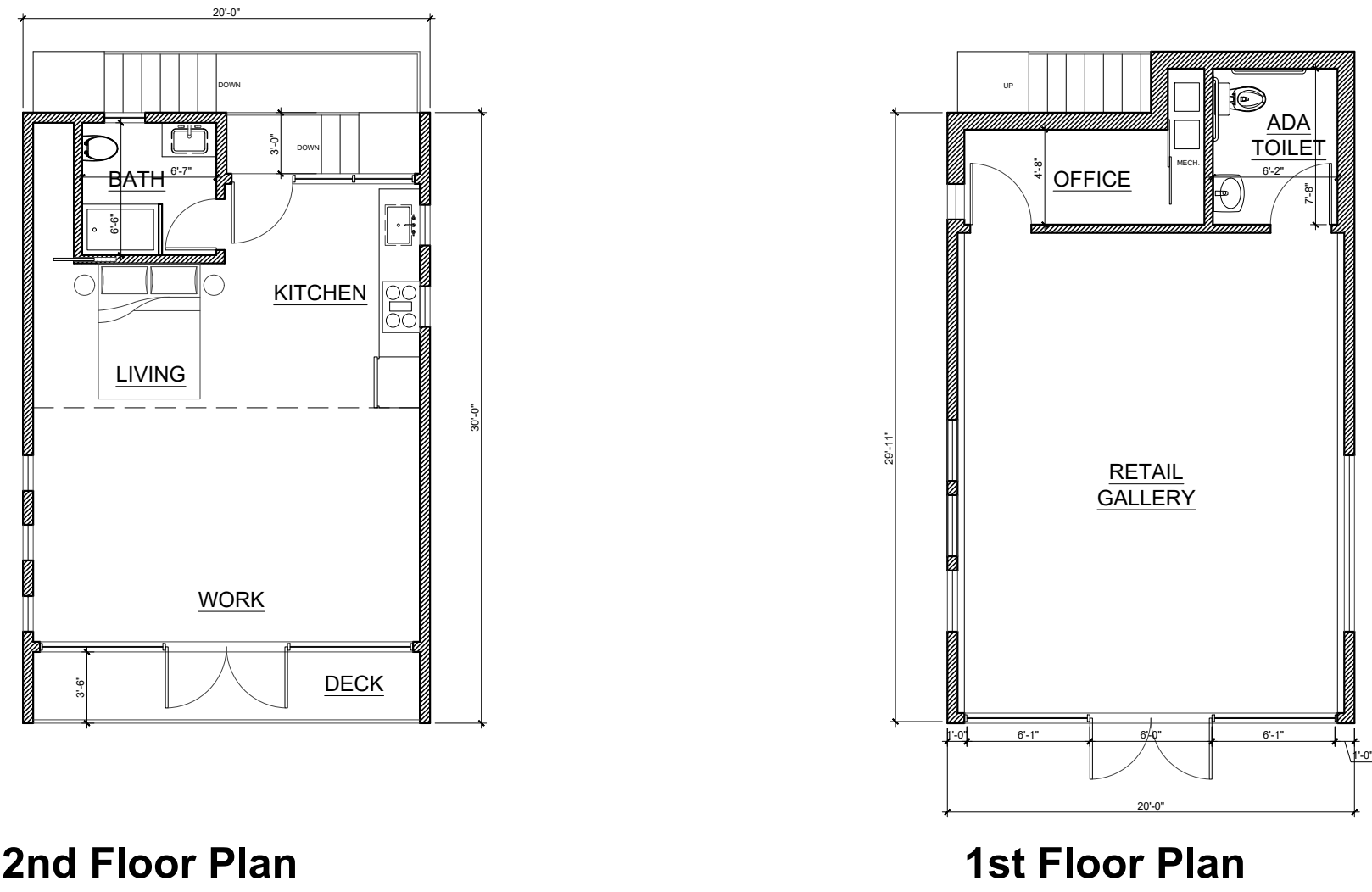


Aryeh Siegel
Aryeh Siegel, Architect

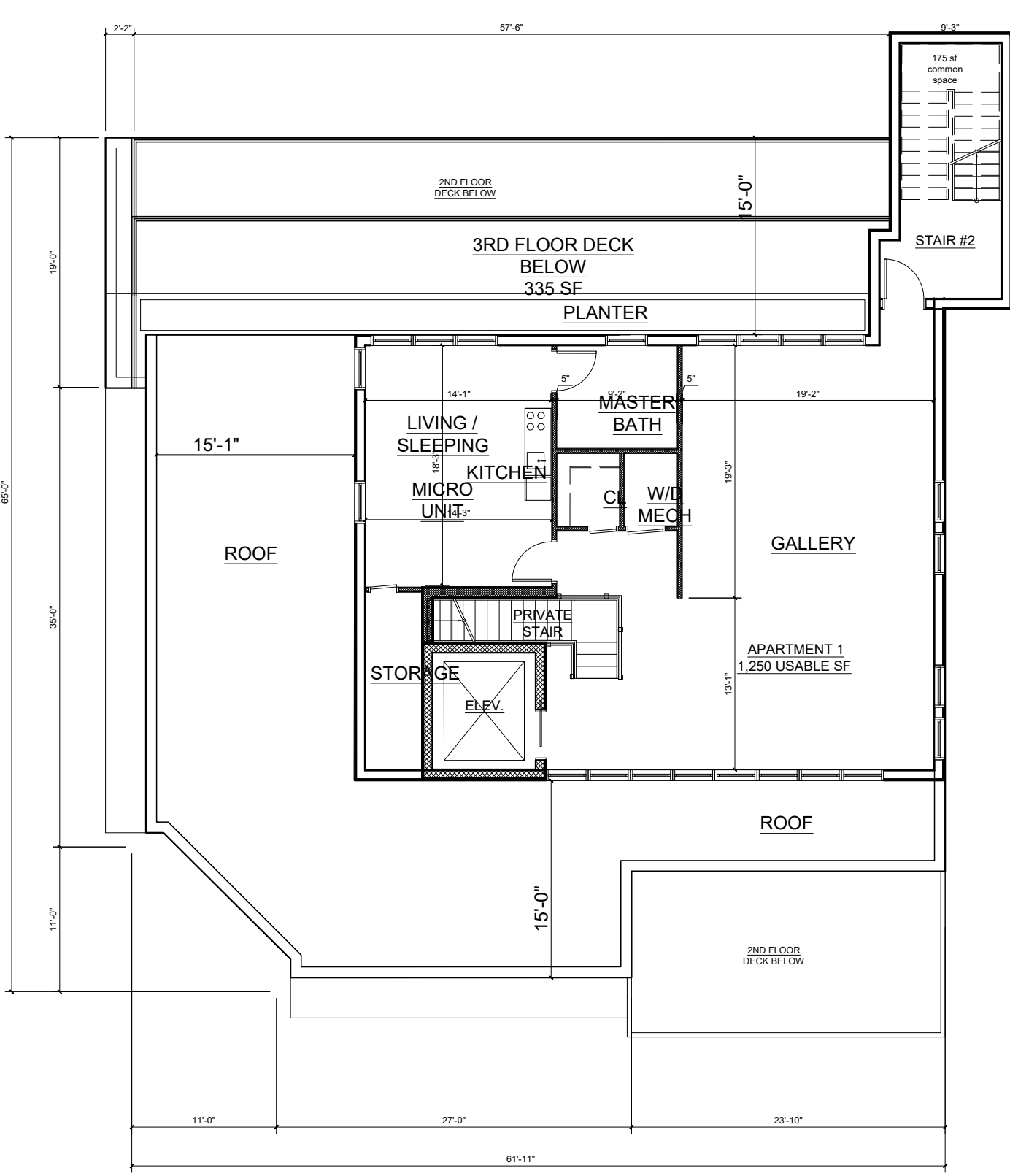
REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	06/24/20	CITY COUNCIL PRESENTATION	AJS
2	06/30/20	REVISED PER PLANNING BOARD COMMENTS	AJS
3	07/28/20	REVISED PER PLANNING BOARD COMMENTS	AJS
4	08/25/20	REVISED PER PLANNING BOARD COMMENTS	AJS
6	09/28/20	NO CHANGE	AJS
7	01/06/21	REVISED PER CITY COUNCIL COMMENTS	AJS
8	01/28/21	REVISED PER CITY COUNCIL COMMENTS	AJS
9	03/30/21	REVISED PER PLANNING BOARD COMMENTS	AJS
10	04/27/21	REVISED PER PLANNING BOARD COMMENTS	AJS
11	07/27/21	REVISED PER ARB COMMENTS	AJS



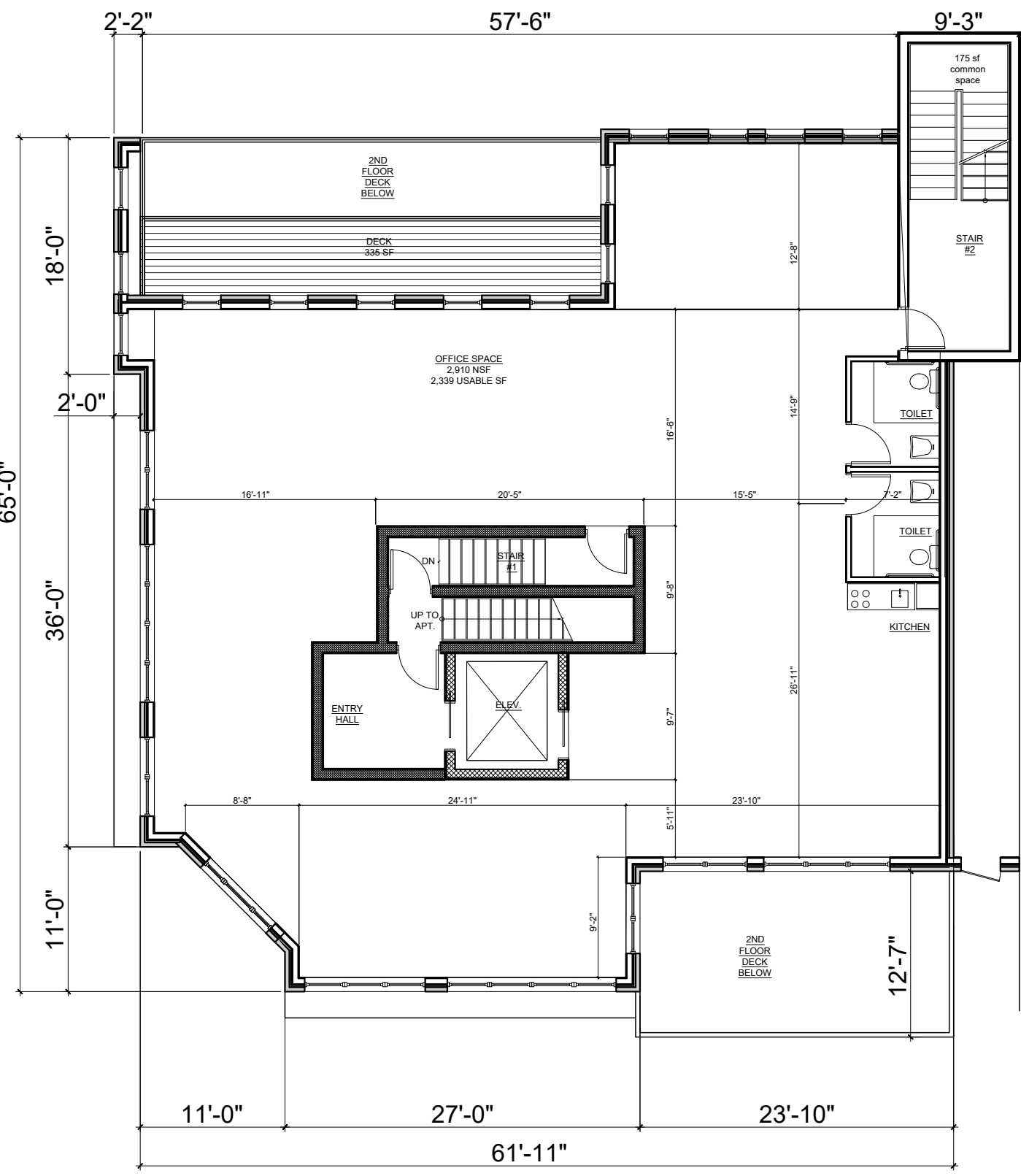
Live/Work Space Elevations



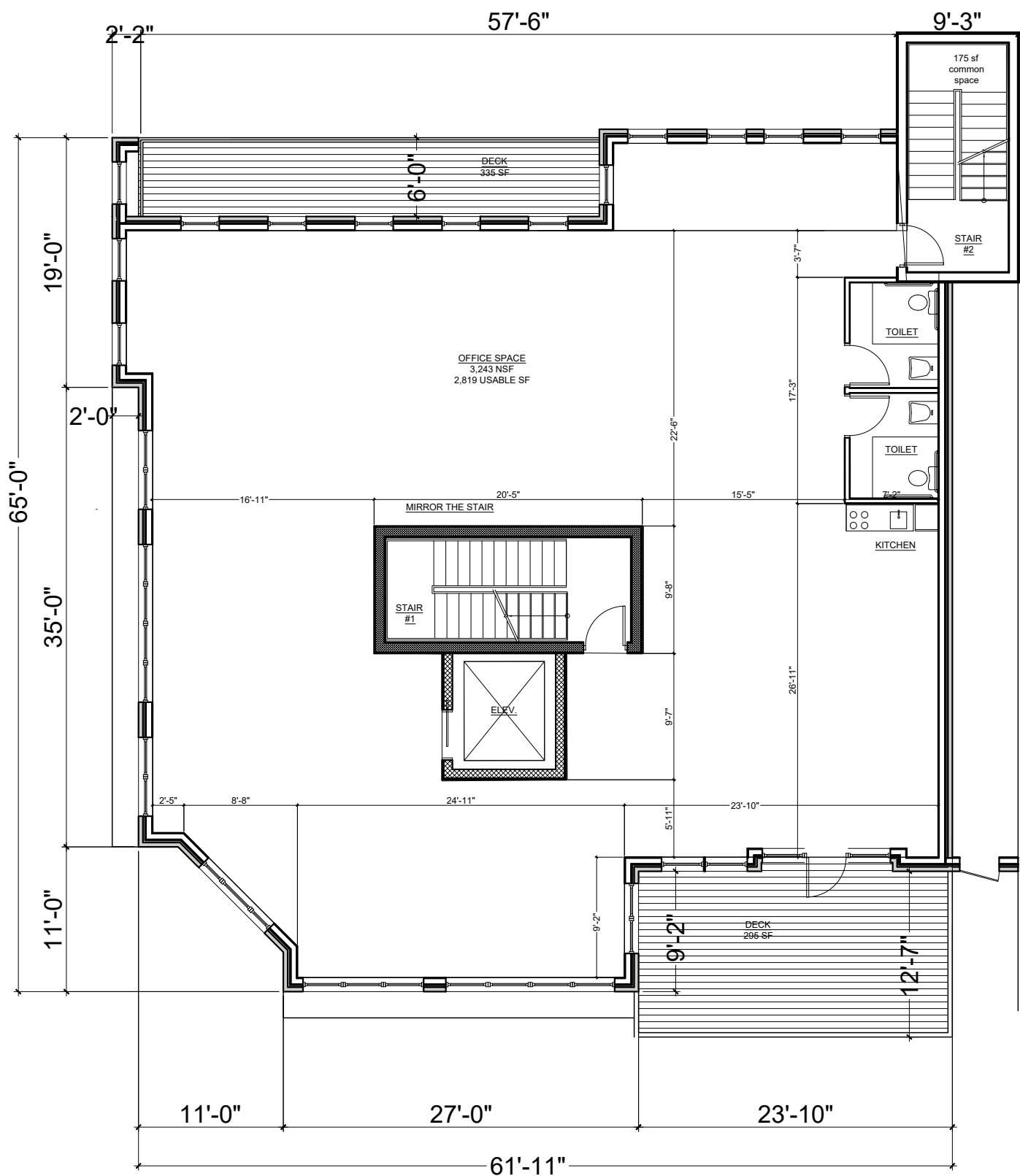
Live/Work Space Floor Plans



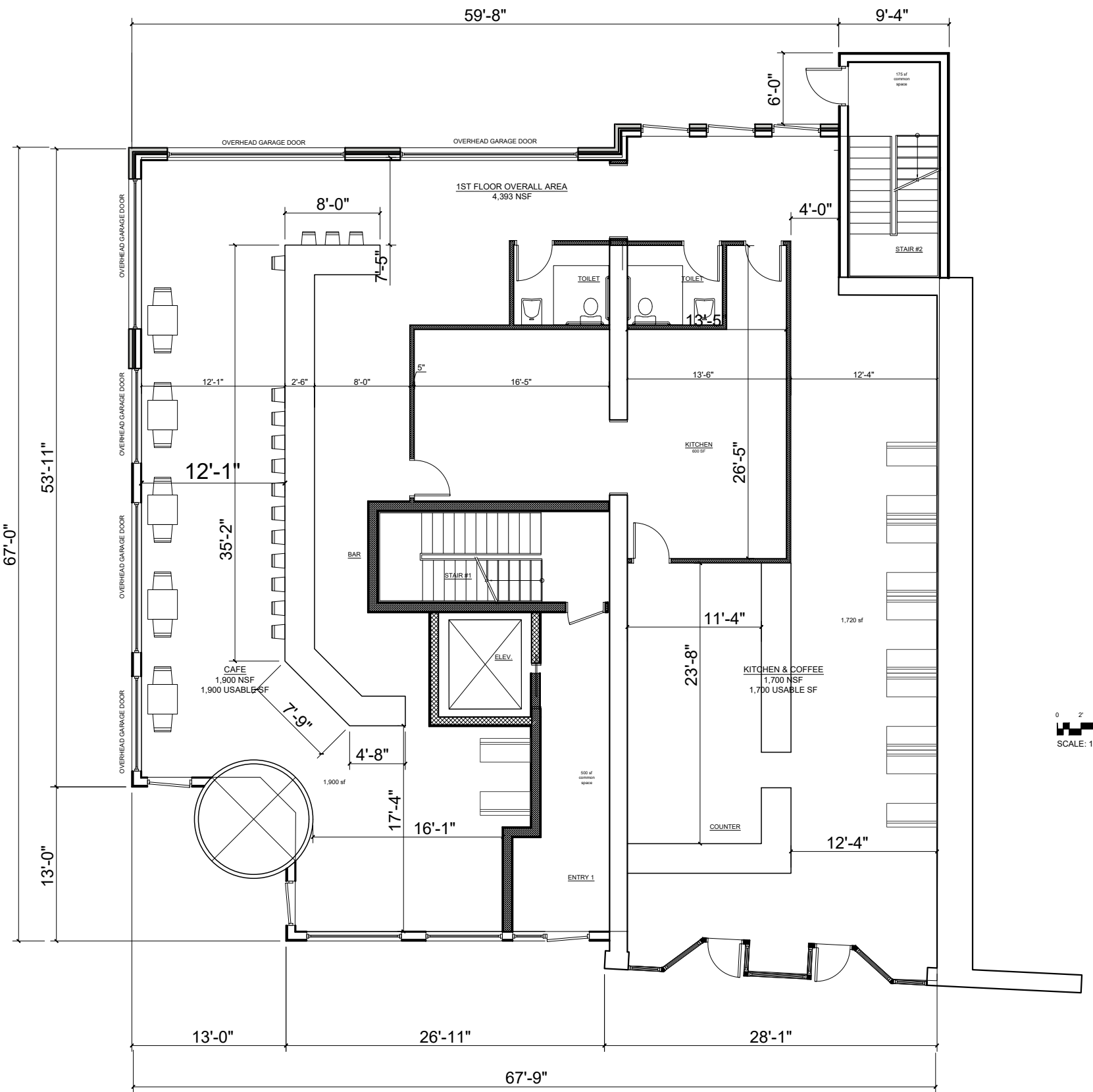
4th Floor Plan



3rd Floor Plan



2nd Floor Plan



1st Floor Plan

Main Building Floor Plans

Site Plan Application

Sheet 4 of 11 - Building Plans

Owner:
416 Main Street Beacon, LLC and 420 Main St. Beacon, LLC
C/O Cuddy & Feder LLP
445 Hamilton Avenue
White Plains, NY 10601

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:
TEC Surveying
831 Route 52, Suite 2C
Fishkill, New York 12524

Landscape Design:
Landscape Restorations
P.O. Box 286
Beacon, New York

416-420 Main Street
Beacon, New York
Scale: $\frac{3}{32}" = 1'-0"$
April 28, 2019

ROOF:
GREENHOUSE ENCLOSURE.
COLOR: COPPER GREEN

CORNICE:
PAINTED AZEK TRIM AND
PAINTED STEEL CORBELS.
COLOR: DARK GRAY

WINDOWS:
CASEMENT WINDOWS BY
ANDERSEN OR APPROVED
EQUAL. COLOR: BLACK

SIDING:
CORTEN STEEL PANELS

GLEN GARY 56DD BRICK
AT EXTERIOR WALLS

CANOPY:
SHEET METAL & GLASS.
COLOR: COPPER GREEN

STOREFRONTS:
ALUMINUM & GLASS.
COLOR: MOSS GREEN



Elevation: Main Street

Scale: 1/16" = 1'-0"

ROOF:
GREENHOUSE ENCLOSURE.
COLOR: COPPER GREEN

CORNICE:
PAINTED AZEK TRIM AND
PAINTED STEEL CORBELS.
COLOR: DARK GRAY

WINDOWS:
CASEMENT WINDOWS BY
ANDERSEN OR APPROVED
EQUAL. COLOR: BLACK

SIDING:
CORTEN STEEL PANELS

GLEN GARY 56DD BRICK
AT EXTERIOR WALLS

RAILINGS:
CABLE RAILINGS AND
POSTS - BRUSHED
STAINLESS FINISH

CANOPY:
SHEET METAL & GLASS.
COLOR: COPPER GREEN

STOREFRONTS:
ALUMINUM & GLASS.
COLOR: MOSS GREEN



Elevation: Rear

Scale: 1/16" = 1'-0"

ROOF:
GREENHOUSE ENCLOSURE.
COLOR: COPPER GREEN

CORNICE:
PAINTED AZEK TRIM AND
PAINTED STEEL CORBELS.
COLOR: DARK GRAY

WINDOWS:
CASEMENT WINDOWS BY
ANDERSEN OR APPROVED
EQUAL. COLOR: BLACK

SIDING:
CORTEN STEEL PANELS

GLEN GARY 56DD BRICK
AT EXTERIOR WALLS

CANOPY:
SHEET METAL & GLASS.
COLOR: COPPER GREEN



Elevation: Schenck Avenue

Scale: 1/16" = 1'-0"

T.O. UPPER ROOF - EL. 50'-0"

T.O. MAIN ROOF - EL. 38'-0"

T.O. 3RD FLOOR - EL. 26'-0"

T.O. 2ND FLOOR - EL. 14'-0"

T.O. 1ST FLOOR - EL. 0'-0"

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	06/24/20	CITY COUNCIL PRESENTATION	AJS
2	06/30/20	REVISED PER PLANNING BOARD COMMENTS	AJS
3	07/28/20	REVISED PER PLANNING BOARD COMMENTS	AJS
4	08/25/20	REVISED PER PLANNING BOARD COMMENTS	AJS
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8	01/28/21	REVISED PER CITY COUNCIL COMMENTS	AJS
9	03/30/21	REVISED PER PLANNING BOARD COMMENTS	AJS
10	04/27/21	REVISED PER PLANNING BOARD COMMENTS	AJS
11	07/27/21	REVISED PER ARB COMMENTS	AJS

NOTE: RENDERINGS ARE ARTISTIC
INTERPRETATIONS OF THE PROPOSED BUILDING
DESIGN TO AID IN REVIEWING THE PROPOSED
DESIGN OF THE BUILDINGS ONLY; AND ARE NOT
INTENDED AS DETAILED REPRESENTATIONS OF
SITE CONDITIONS. NOTE THAT THE LABELED LIVE
WORK BUILDING IMAGES REPRESENT THE DESIGN
INTENT FOR THE LIVE WORK BUILDING. MAIN
BUILDING RENDERINGS MAY NOT REFLECT THE
LATEST DESIGN FOR THE LIVE WORK BUILDING



Main Building: View from Schenck Avenue at Rear



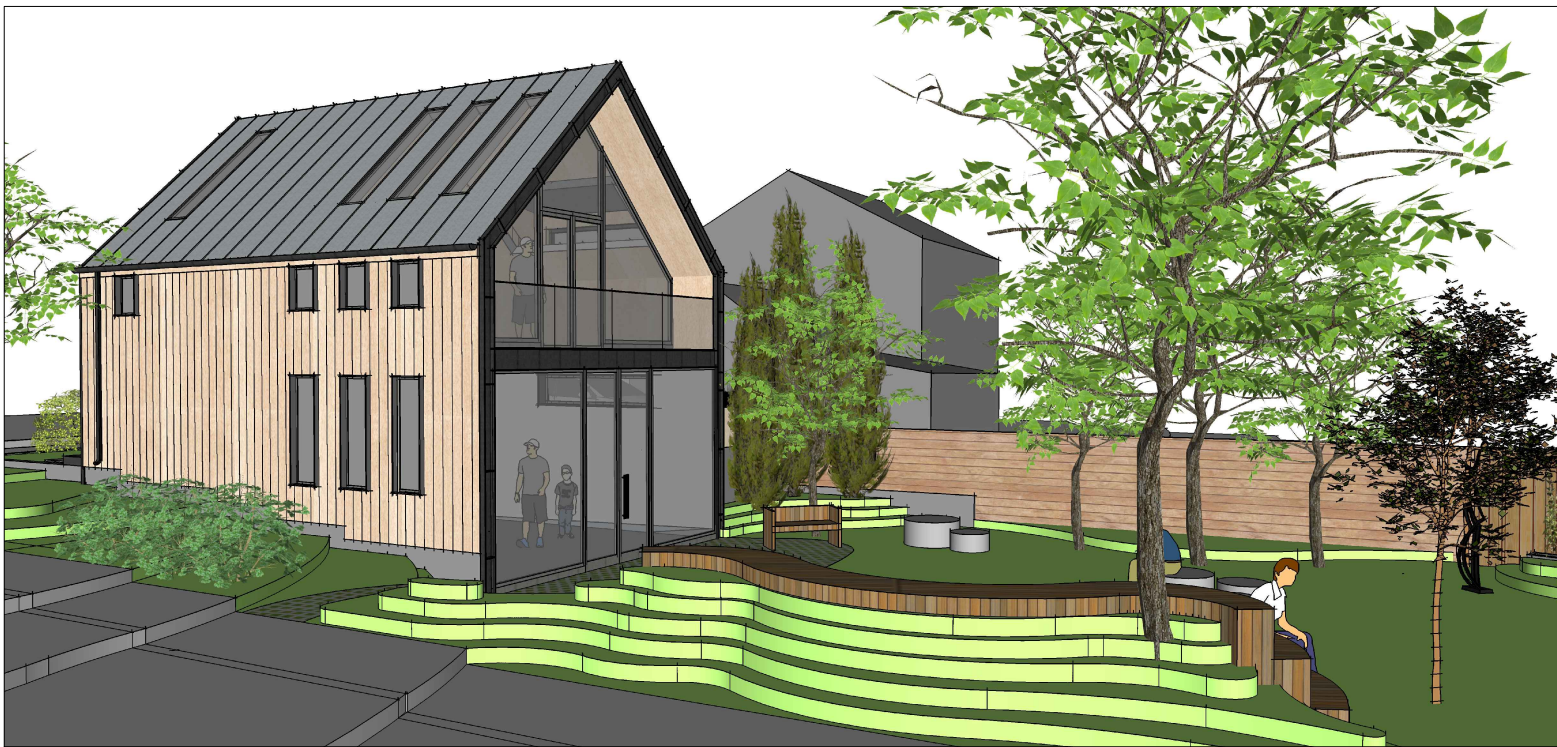
Main Building: View from Main Street



Main Building: View from Across Main Street



Main Building: View from Corner



Live Work - View from Schenck Avenue



Live Work - Garden View

NOTE: THE KNEE WALL IS 8" HIGH AT GLAZED
LIVE-WORK BUILDING FACADES

Site Plan Application

Sheet 5 of 11 - Building Elevations & Renderings

Owner:
416 Main Street Beacon, LLC and 420 Main St. Beacon, LLC
C/O Cuddy & Feder LLP
445 Hamilton Avenue
White Plains, NY 10601

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:
TEC Surveying
831 Route 52, Suite 2C
Fishkill, New York 12524

Landscape Design:
Landscape Restorations
P.O. Box 286
Beacon, New York

416-420 Main Street
Beacon, New York
Scale: 1/16" = 1'-0"
April 28, 2019

To: John Gunn, Chair, and the City of Beacon Planning Board

Date: August 5, 2021

Re: **416-420 Main Street Architectural Review**

I have reviewed the July 27, 2021 cover letter from Aryeh Siegel and revised sheets 4 and 5, dated July 27, 2021, from a previous 11-sheet Site Plan set by Aryeh Siegel and Hudson Land Design.

Proposal

The applicant is proposing to construct a 4-story, mixed-use building with 11,715 square feet on the front portion of the parcel in the Central Main Street (CMS) district and a 1,320 square foot live/work building on the rear portion of the parcel in the Transitional (T) district. The entire 0.245-acre site is also in the Historic District and Landmark Overlay (HDLO) zone.

Comments and Recommendations

The Site Plan was previously approved, but a Certificate of Appropriateness is needed for the rear live/work structure. The live/work building is new construction in the HDLO district, so it must be consistent with the specific design standards in Section 134-7. Two conflicts still remain:

1. Primary individual window proportions are required to be greater in height than width, with certain exceptions, but on the east elevation the dormer window and the window below it are both horizontally proportioned.
2. All-glass walls are not permitted. For the south elevation, the applicant has proposed an 8-inch frame "knee wall" on otherwise all-glass walls. The addition of knee walls or panels below the windows was suggested as an option to bring the building into compliance with the all-glass prohibition. However, knee walls are typically at least 18 inches high.

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Aryeh Siegel, Project Architect

City of Beacon Planning Board Agenda
08/10/2021

Title:

Continue review of application for Site Plan Approval, multi-family residential (62 units), 16 West Main Street, submitted by Farrell Building Company

ATTACHMENTS

[16 West Main Street Cover Letter.pdf](#)

[16 West Main Street Site Plan.pdf](#)

[16 West Main Street Architect Drawings.pdf](#)

[16 West Main Street Stormwater Pollution Prevention Plan.pdf](#)

[Planner Review Letter.pdf](#)

[Engineer Review Letter.pdf](#)



Site Planning	Environmental Studies
Civil Engineering	Entitlements
Landscape Architecture	Construction Services
Land Surveying	3D Visualization
Transportation Engineering	Laser Scanning

July 27, 2021

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

Re: JMC Project 18119
Beacon Commons
16 West Main Street
City of Beacon, NY 12508

Site Plan Approval

Dear Chairman Gunn and Members of the Planning Board:

On behalf of Farrell Building Company, we are pleased to provide five (5) signed/sealed sets of the following revised documents in support of Site Plan Approval for the above captioned project:

I. JMC Site Plans

<u>Dwg</u>	<u>Title</u>	<u>Last Revised Date</u>
C-000	Cover Sheet	07/27/2021
C-010	Existing Conditions Plan	07/27/2021
C-020	Demolition Plan	07/27/2021
C-100	Site Plan	07/27/2021
C-200	Grading Plan	07/27/2021
C-300	Utilities Plan	07/27/2021
C-310	Storm Profiles	07/27/2021
C-400	Sediment and Erosion Control Plan	07/27/2021
C-600	Lighting Plan	07/27/2021
C-700	Garbage Truck Turning Plan (Front-Loading)	07/27/2021
C-701	Garbage Truck Turning Plan (Rear-Loading)	07/27/2021
C-702	Fire Truck Turning Plan (Scenario 1)	07/27/2021
C-703	Fire Truck Turning Plan (Scenario 2)	07/27/2021
C-704	Fire Truck Turning Plan (Scenario 3)	07/27/2021
C-800	Aerial Site Plan	07/27/2021
C-801	Sight Distance Plan	07/27/2021
C-900	Construction Details	07/27/2021
C-901	Construction Details	07/27/2021

C-902	Construction Details	07/27/2021
C-903	Construction Details	07/27/2021
C-904	Construction Details	07/27/2021
C-905	Construction Details	07/27/2021
C-906	Construction Details	07/27/2021
C-907	Construction Details	07/27/2021
C-908	Construction Details	07/27/2021
L-100	Landscaping Plan	07/27/2021

2. Aryeh Siegel Architect Drawing List:

<u>Dwg</u>	<u>Title</u>	<u>Last Revised Date</u>
A-100	Building Plans	07/27/2021
A-101	Building Plans	07/27/2021
A-200	Elevations	07/27/2021

3. Stormwater Pollution Prevention Plan, revised 07/27/2021.

Below please find our responses to the comments within the Lanc & Tully Letter, dated October 12, 2020.

General Comments:

Comment No. 1

Sheet C-310 and Sheet C-400 are both labeled as Sheet 7 of 26 and the Sheet to be labeled 14 of 26 has been skipped. The Sheet numbering shall be corrected on future submissions.

Response No. 1

Sheet numbering has been reviewed and corrected.

Comment No. 2

The architectural building plans should be made part of the overall plan set for the project and shall be numbered in accordance with the overall plan set.

Response No. 2

The architectural plans have been labeled as 'Sheet No. of No.' in a fashion like the civil site plans. However, the numbers have not been combined as part of the overall set since additional drawings will likely be added to both sets of drawings and combining the numbering is not practical.

Comment No. 3

As discussed at the December 10, 2019 Planning Board meeting, the application should be referred to the Fire Chief with regard to emergency access. The applicant has stated that they have sent the plans to the Fire Chief twice and have not heard back as of yet.

Response No. 3

The proposed plans are being coordinated with Dave Buckley who is in contact with the fire chief. Email comments have been received and plans have been updated in accordance with those comments. The revised plans have been sent to Dave Buckley for further coordination. The revised plans are included with this submission.

Comment No. 4

A Performance Bond will need to be posted for all public improvements proposed as part of the project. As the project progresses, the applicant's engineer should prepare an itemized cost estimate for all public improvements and submit to the City Engineer's office for review.

Response No. 4

The comment is so noted.

Comment No. 5

The size of the existing drainage lines running along Bank Street should be verified, as the utilities as located and sized during the development of the Edgewater project do not correspond with several of the line sizes shown.

Response No. 5

The existing conditions plan references the survey titled “Topographic Survey” last revised 03/02/2020. It is our belief that all information depicted from these plans are accurate. However, during construction, and in necessary locations, the drainage lines will be confirmed. With our revised design, the drainage improvements along Bank Street are no longer planned to be effected and therefore it is unnecessary to field verify the sizes of most (if not any) of the drainage lines.

Comment No. 6

A hydraulic report shall be provided for the sizing of the proposed drainage pipes and shall be included in the SWPPP. It appears that some of the proposed piping may be larger than required.

Response No. 6

A stormwater pipe calculations appendix is now included as part of the SWPPP. Stormwater pipe routing has been revised and pipe sizes have been revised as well. The proposed system now includes maximum of 24" lines.

Geotechnical Report:

Comment No. 1

The "Boring Location Plan" presented in the geotechnical report should be provided at a larger scale for legibility and clarity.

Response No. 1

The full geotechnical report, including a full sized copy of the "Boring Location Plan," is now included as Appendix C of the SWPPP.

Comment No. 2

The report notes several times that "New fill to raise site grades must be placed early in the project schedule to induce any settlements of the underlying soft sandy clays and silts." How far in advance of construction must this material be placed? Will the consolidation of the soft soils be monitored once the fill has been placed?

Response No. 2

The fill should be placed 2 to 3 months before construction of the building. The soils will be monitored and assessed by Carlin Simpson & Associates.

Comment No. 3

The report notes the removal of existing fill material from the site and the importing and installation of new fill material at the site. How much material is to be exported from the site and how much material is to be imported to the site? How does this relate to the number of trucks to and from the site?

Response No. 3

Based on a cut and fill analysis performed on the site, we estimate approximately 1,000 cy of material is to be exported from the site, which is approximately 50 trucks.

Comment No. 4

The report recommends driving piles to support the new buildings. How many piles are to be driven at the site, how long will the process take to install all piles, what are the noise impacts on the neighboring residents during the pile driving process and what will be the vibration impacts on

the neighbors from the driving process? Have other methods, such as auger piles, been looked at to reduce the noise impacts from the site during the driving of the piles?

Response No. 4

Number of piles to be coordinated with the structural engineer. The process is expected to take 3 to 6 weeks (30 to 40 drive piles per day). Driven piles are the best method because it is quick, easy, and can measure capacity from hammer.

Comment No. 5

The report discusses the possibility of needing to install sumps with pumps to control groundwater at the site. Where will this ground water be discharged to and how will it be treated, if necessary, to ensure that turbid waters are not leaving the site?

Response No. 5

Temporary foundation drains and sump pumps will be used in conjunction with soil erosion and sediment control measures proposed for the site in order to prevent turbid waters leaving the site.

Demolition Plan (Sheet 3 of 26):

Comment No. 1

The existing water, sewer and any other service connections shall be disconnected at the main from which the service is leaving. Construction details shall be added to the plans at this time as to how the water service connection and sewer service connection shall be cut and capped at their respective mains. This should be discussed with the City's Water and Sewer Superintendent at this time.

Response No. 1

The demolition plan has been revised to indicate all services to be removed in accordance with the City of Beacon requirements. JMC will further coordinate with the city superintendents to confirm any additional requirements.

Comment No. 2

Note No. 10 on this sheet discusses the possibility of recycling concrete on site for use as compacted fill. How will the recycling of the concrete be achieved? Will a grinder and screening system be present on site? If so, this should be noted in the EAF, along with the possible impacts from the noise generated by these units when in operation.

Response No. 2

The note being referenced in this comment has been removed from the plans. Concrete will be removed from the site and disposed of.

Site Plan (Sheet 4 of 26):

Comment No. 1

The traffic sign labels should be clear and not hidden by the various masking on the plan.

Response No. 1

The traffic sign labels have been adjusted to be clear and legible. Additionally, the symbol for traffic signs has been modified to be grey, outlined in black to more easily visible in all proposed locations.

Comment No. 2

Radius callouts for the curb line should not be hidden by the various masks.

Response No. 2

Curb radius callouts have been adjusted to be more easily legible.

Comment No. 3

The sidewalk along Bank Street should be coordinated with the final plans for the Edgewater project, as an ADA compliant accessible ramp is to be installed on Bank Street across from Branch Street.

Response No. 3

The plans now show a drop curb and ramps to be installed and coordinated with the final design of the Edgewater project. However, it should be noted that the sidewalk, crosswalk, and ramp on Bank Street will not be ADA compliant since existing grades along Bank Street exceed six percent.

Comment No. 4

The plan notes in several locations that the proposed retaining walls and fencing atop of these walls is to be designed by others. Construction details should be added to the plan at this time to show the specific type of retaining wall to be used, along with the proposed safety fence atop of the wall. Although construction easements are called out on Sheet 6 of 26 to allow for the construction of these walls, without knowing the type of wall to be used and the requirements for the construction of that wall, it is unclear as to whether the proposed easements are large enough.

Response No. 4

The proposed wall design plans and details to be provided by a structural engineer. Wall types and fall protection will be evaluated based on the site constraints and available easement areas.

Comment No. 5

The "Sign Table" on the sheet should be updated to reflect the actual mounting type to occur for each sign type. It appears that "One Way" sign located on the lower left side of the site entrance from Bank Street will be mounted to the proposed retaining wall.

Response No. 5

The "one way" sign will be steel channel mounting type, as specified. Signs, where the steel channel is to be placed on or near walls, will be coordinated with the proposed wall design.

Grading Plan (Sheet 5 of 26):

Comment No. 1

The grading plan should be cleaned up for legibility. Information that is not pertinent to the grading plan should be removed.

Response No. 1

The grading plan has been revised. This plan is now more legible and easier to follow. All unnecessary information has been removed from this plan.

Utilities Plan (Sheet 6 of 26):

Comment No. 1

A significant number of labels are overlapping one another, making pertinent information illegible. The plan shall be revised to ensure labels do not overlap one another and to ensure labeling is not obscured by hatching.

Response No. 1

The utilities plan has been revised to have labels and all pertinent information clear and legible.

Comment No. 2

The proposed easements shall note who they are to benefit.

Response No. 2

The Utilities plan has been updated to include notes referring who easements are to benefit.

Comment No. 3

The applicant may wish to consider acquiring permanent easements in the areas of the retaining walls to allow for future maintenance of the walls if they become damaged or need maintenance. It is further noted that the size of the proposed construction easements for the retaining walls should be verified at this time based upon the type of retaining wall to be installed and the walls specifics for construction, as noted in Comment No. 4 above for Sheet 4 of 26.

Response No. 3

The proposed wall design plans and details to be provided by a structural engineer. Wall types and fall protection will be evaluated based on the site constraints and available easement areas. As the site plans continue to evolve and all technical comments have been addressed, the applicant will finalize the easement areas dedications for the wall construction and future maintenance requirements.

Comment No. 4

Construction details shall be added to the plans to show how the new water service line and sewer service line will be connected to the City's water and sewer mains.

Response No. 4

The JMC Site plans have been revised to indicate utility services connections to be installed in accordance with the city of Beacon requirements. JMC will further coordinate with both agencies for standard details to be used.

Comment No. 5

The applicant should verify the pressures within the water mains along Bank Street and West Main Street, along with the available fire flows from the hydrants. This information will be required for the design of the sprinkler system that will be required in the building.

Response No. 5

The comment is so noted. The MEP engineer will coordinate with the city to obtain fire flow data and the design of the sprinkler system.

Comment No. 6

If underdrains are to be constructed as part of the retaining wall system to ensure hydrostatic pressure does not build behind the walls, the plan shall show where these lines will drain to.

Response No. 6

The utilities plan has been updated to call out which structures the proposed wall underdrain system will drain to.

Construction Details (Sheet 19 of 26):

Comment No. 1

The "Pavement over Trench Detail" shall be revised so that labels are not over lapping so that information is legible. If this is the repair detail for work within the City's roads, the detail shall reflect a 1.5" top course, 3" binder course, and 3" base course. The subbase material shall be NYSDOT Item No. 304.12 (Item No. 4, Type 2).

Response No. 1

The "pavement replacement over trench" detail has been revised to remove overwritten information. The top course, binder course, and subbase course have been specified as stated in the comment.

Comment No. 2

A monolithic curb and sidewalk detail shall be provided or the proposed curb and sidewalk to be installed within the City's right-of-way The detail shall note that the concrete shall be a minimum of 4,000 psi, shall have wire mesh reinforcing and fiber mesh reinforcing, and shall be sealed to protect against de-icing agents. Expansion joints shall be placed every 10-feet, with fake contraction joints placed at the mid-point between expansion joints.

Response No. 2

A "monolithic concrete curb and sidewalk" detail has been added to drawing C-904. The detail specifies class "A" concrete (4000 psi) and 6"x6" 10/10 welded wire fabric. The notes specify expansion joints every 10 feet (and scores at midpoints between) and sealant to protect against de-icing agents.

Stormwater Pollution Prevention Plan (SWPPP):

Comment No. 1

SWPPP report references previous GP#. The report should be updated to reference the current permit: GP-0-20-001.

Response No. 1

The report has been updated to reference the current permit GP-0-20-001 in all locations.

Comment No. 2

SWPPP report states that infiltration practices are proposed but it also states that on-site testing indicated that a subsurface infiltration practice is not an ideal practice. Please clarify if subsurface infiltration is proposed.

Response No. 2

There are no infiltration practices being proposed. The current design proposes water quality structures, a subsurface detention practice and flow through stormwater planters.

Comment No. 3

Provide the Web Soil Survey Report within the SWPPP.

Response No. 3

The Web Soil Survey Report is now provided as Appendix D of the SWPPP.

Comment No. 4

It appears that the site survey ends just outside of the property lines and alternate survey information is used beyond this point, a line should be added to delineate the change in survey data and should state where the information was obtained. A copy of the information should be provided with the SWPPP.

Response No. 4

A line and callout notes have been added to the Existing Conditions Plan and Grading Plan drawings. The notes state “Approximate delineation of surveyed and GIS topography (typical).” Additionally, note number 3 on the Existing Conditions Plan now states “Supplemental Topography beyond the limit of surveyed topography is taken from Dutchess County GIS.”

Comment No. 5

The provided drainage maps did not show the full extent of the overall site drainage catchment areas (i.e. OFFSITE catchment was not fully shown). Pre and Post development maps should include the entirety of the overall site drainage catchment.

Response No. 5

The drainage area maps now show the full extent of the site drainage catchment area.

Comment No. 6

Pre-Dev catchment "OFFSITE" does not appear to be a separate catchment from EDA-1 A as all of the "OFFSITE" area enters EDA-1A via overland flow.

Response No. 6

The existing and proposed drainage area maps have been updated. There are now two drainage areas analyzed for existing conditions, where overland flow areas have been combined.

Comment No. 7

SWPPP Report - PG 13 - Step 2 - No information was provided.

Response No. 7

SWPPP section referenced in the comment has been filled in. this section references the 90% rule and states the required water quality volume.

Comment No. 8

On the proposed drainage area map, DI-8 appears to be collecting offsite drainage, but appears in the PDA-1A onsite catchment area. We believe that DI-8 should be shown in the offsite.

Response No. 8

The structure referenced (previously DI-8) is currently proposed as DI-A4-2. This structure does collect offsite drainage and is shown in that fashion now (drainage area PDA-1D).

Comment No. 9

The proposed building roof top is shown to go to multiple post development catchments and separate treatment practices. Please indicate how the stormwater flows will be separated on the roof, as well as how it is to be conveyed, to ensure they will discharge to the indicated post development stormwater practices.

Response No. 9

The proposed rooftop drainage is to be collected by the proposed stormwater planters, as shown on the roof drainage figure. This design has been modified and coordinated with the architect who indicated that pitching rooftop areas to discharge to the planter areas as proposed is achievable and will be designed accordingly.

Comment No. 10

PDA-1A should include portions of the two residential lots located directly north that will drain onto the site.

Response No. 10

The wall design is proposed to include a gravel underdrain system that will route stormwater to structure DI-A4-1.

Comment No. 11

PDA-1 B does not seem to respect the proposed grading shown. Provided grading indicates that the small rectangular area in the rear of the proposed building and the triangular area just above that in the vicinity of the underground storage should be removed from this area, but some area should be added to PDA-1 B where storm water will not enter CI-5-5 and DI-5-6.

Response No. 11

Proposed drainage design has been revised and the area referred to in this comment has been checked to ensure the drainage/catchment areas match the grading design.

Comment No. 12

Water is proposed to sheet flow along the pavement in the area that will be covered by the proposed building. This could potentially create icing concerns if this is to be a pickup/drop off area and it is recommended that additional drainage be provided in this area to intercept surface runoff prior to running through this area.

Response No. 12

The design has been revised to include a structure at the building overhang limit.

Comment No. 13

Is stormwater proposed to sheet flow over the steps/walkway to the proposed rain garden in post development area PDA-1C? This could potentially create icing concerns on the proposed steps and sidewalk.

Response No. 13

A slotted drain is now proposed in that area which will discharge into stormwater planter #9.

Comment No. 14

The small portion of the site at the South West property corner should be added to PDA-I E and should also be included in the pre-development calculations.

Response No. 14

The area mentioned in the comment is included in pre development as part of drainage area EDA-1 B and post development as part of drainage area PDA-1 E.

Comment No. 15

A legend or callouts indicating what each color represents should be provided on the roof drainage figure.

Response No. 15

The roof drainage figure has been revised and clearly states what areas of the roof (including square footage) or sidewalk goes to which stormwater planter.

Comment No. 16

Swales should be provided on the East side of the proposed building to route stormwater around either side of the proposed building, so that runoff does not reach the buildings edge.

Response No. 16

A swale is now proposed in that location, routing stormwater to structure DI-B1.

Comment No. 17

Time of Concentration for EDA-1 A should be revised as the shallow concentrated flow scaled to be about 25' less than the value used in the Pond Pack model. Additionally, the channel flow should be split into two separate Channel Flows (Last 50' +/- is through a 24" pipe).

Response No. 17

The time of concentration for the referenced drainage area has been updated to reflect the changes made to the analysis. It is now being analyzed with the offsite area and the time of concentration calculations separate out all the different types of flows.

Comment No. 18

A reach should be applied to the outlet of the existing rain garden, the rain garden does not directly discharge to the study point.

Response No. 18

A junction point has been added at the existing catch basin that the existing rain garden discharges to. From there a reach was added to the design point. The existing pipe resulted in invalid results beyond the 10 year storm event (due to being surcharged) and therefore the travel time results, from the successful 1 through 10 year storms, was used for the reach which is now being analyzed as a translation of 0.004 hours.

Comment No. 19

The existing curb inlet where the time of concentration paths converge should be a junction within the stormwater model.

Response No. 19

Refer to response No. 18 above. The curb inlet is now being analyzed as a junction in the model.

Comment No. 20

Post development time of concentrations should be added to show that they do not exceed the minimum T_c value.

Response No. 20

Post development time of concentration is calculated for PDA-ID and PDA-1A. Area PDA-1A resulted in using minimum time of concentration. The calculations are provided in the hydraulic calculations appendix of the SWPPP.

Comment No. 21

Since the offsite catchment is not large in size, it should be broken down to Woods, Lawn, and Impervious (like EDA-1A & EDA-18) to obtain a more accurate CN value.

Response No. 21

The offsite areas within the residential district have not been surveyed and therefore a break down of that area would not provide accurate results. The offsite residential district area is being analyzed as Residential Districts of 1/3 acre lots and B type soils resulting in a curve number of 72.

Comment No. 22

No data was provided for Outlet structures for proposed stormwater practices.

Response No. 22

The proposed detention system, outlet structure and stormwater practices are discussed in the proposed condition section of the SWPPP. Drainage area PDA-1A now discusses relevant practices and all the proposed infrastructure are shown on the site plans and included in the construction details.

Comment No. 23

No pre-development "OFFSITE" T_c calculation provided.

Response No. 23

All necessary calculations are now provided. The pre development offsite area is now included as part of area EDA-1A and the time of concentration calculations are provided.

Comment No. 24

Time of concentration paths were not provided on the post development map. The plan should be updated to reflect this information.

Response No. 24

The time of concentration path for area PDA-1D is provided on the proposed drainage area map. As a response to a prior comment the time of concentration for area PDA-1A is calculated but results in minimum time of concentration. The time of concentration used for all other areas (including PDA-1A) is 5 minutes.

Comment No. 25

The proposed DMH-1 is shown to have two 30" drainage pipes entering the structure but has a single 24" drainage pipe leaving the structure. Will the 24" drainage line be able to handle the flows that will be delivered to it from the two 30" pipes.

Response No. 25

The current design does not propose any replacements of pipes or structures on Bank Street and therefore the existing conditions will remain. Additionally, the current design proposes to route flows (5+ acres of offsite area), previously routed through the 24" pipe, directly into the 48" pipe on Main Street, while adding a significantly lower flow to the catch basins uphill from the 24" pipe referenced.

Comment No. 26

A pipe capacity analysis shall be provided for the proposed drainage system on site and shall run out to the 48" drainage line located in West Main Street.

Response No. 26

A stormwater pipe calculations appendix is now included as part of the SWPPP.

Comment No. 27

The EAF indicated the presence of a NYSDEC Remediation site within 2,000 feet of the site, the potential of endangered or threatened species, A National or State Register of Historic Places or State Eligible site, and that the site is in an archeological sensitive site. Potential restrictions due to the presence of these items should be addressed within the SWPPP report.

Response No. 27

The SWPPP have been revised to include the following recommendations:

According to the NYSDEC Environmental Mapper, the site may contain endangered or threatened species of wild life. According to the database, Atlantic Sturgeon, Shortnose Sturgeon and Indiana Bat are listed. The project site does not contain any streams or waterbodies that would be inhabited by Atlantic Sturgeon or Shortnose Sturgeon. However, the existing trees to be removed could be inhabited by Indiana Bats. According to the U.S. Fish and Wildlife Service (USFWS), tree removal should be conducted during the winter time frame of November 1st to March 31st to avoid adverse impacts to the bats. If tree removal is planned outside of this time frame, a site assessment by a bat biologist or a qualified bat surveyor should be performed. Such a survey will identify potential concerns and allow for implementation of site activity protections.

Comment No. 28

A Construction Schedule should be provided within the SWPPP report. The first item of the Construction Schedule should be a pre-construction meeting with the site contractor, City of Beacon personnel, and the site engineer to discuss general construction procedures and sequencing.

Response No. 28

The SWPPP have been revised to include the sequence of construction which indicates the requirements for a preconstruction meeting.

Comment No. 29

Line types used in the Erosion Control Plan should be revised, as a number of the lines are very similar, making it hard to distinguish between the lines.

Response No. 29

The Erosion control plan has been revised to be more legible.

Comment No. 30

The Erosion Control Plan could have some unneeded information removed to make the plan clearer and easier to read. Additionally, there are multiple text masking issues.

Response No. 30

The Erosion control plan has been revised to be more legible.

Comment No. 31

A concrete washout is discussed within the SWPPP report but is not shown on the Erosion Control Plan. The location of the concrete washout should be shown on the plans, along with a construction detail for the concrete washout.

Response No. 31

The Erosion control plan has been revised to include a concrete washout area.

Comment No. 32

Two manholes, a hydrodynamic separator, replacement of three existing catch basins and approximately 225 linear feet of pipe are proposed to be replaced or constructed outside of the property and within the City of Beacons property, please explain why these improvements could not be constructed within the existing site property.

Response No. 32

The current design reduces the number of structures and lengths of pipes outside the property limits. Existing utility crossings within Main Street and existing stormwater infrastructure creates a need for additional structures. Utility crossings in Main Street were field measured (where possible) and proved the need for an additional manhole structure in Main Street to drop under the existing gas line.

Comment No. 33

Pre and post development maps have multiple text masking issues and unneeded background information. This information should be removed for plan clarity.

Response No. 33

These plans have been revised and all relevant information is clear and legible.

Comment No. 34

Two catch basins and pipe are proposed on the property neighboring the site to the East. Has an easement been obtained for this work?

Response No. 34

The applicant has coordinated with adjacent neighbor to obtain required easement. All proposed easement dedication will be finalized prior to the commencement of construction.

Comment No. 35

Information showing that the proposed Hydro International - First Defense hydrodynamic separator is a NYSDEC approved unit should be provided.

Response No. 35

The proposed water quality structure has been revised to a Cascade Separator Unit. Testing information is provided as requested.

We trust that the enclosed documents and above responses are sufficient for the Planning Board's review and we look forward to discussing the project at the next meeting. In the interim, if you have questions or require additional information, please do not hesitate to contact our office at (914) 273-5225.

Sincerely,

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

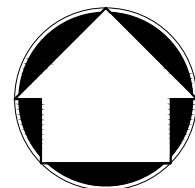


Umberto Baldinucci
Project Manager

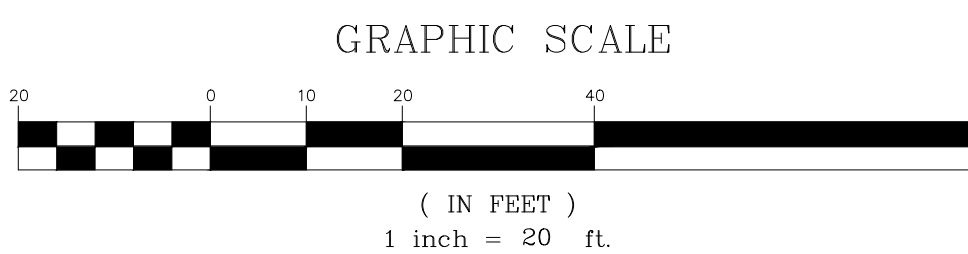
cc: Mr. Steve Zagoren
Mr. Aryeh Siegel

TAX MAP SECTION 5954 | BLOCK 25 | LOT 616969
DUTCHESS COUNTY
16 WEST MAIN STREET
BEACON, NY 12508

ZONING / VICINITY MAP
SCALE: 1" = 500'
CITY OF BEACON.ORG
ZONING / 10/04/2017



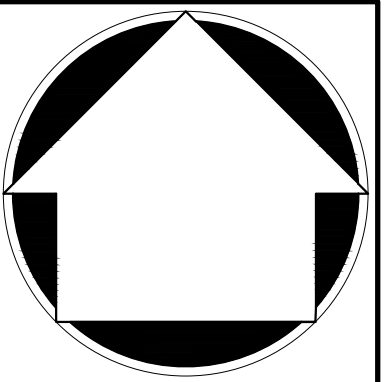
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Drawn:	BMS	Approved:	SS
Scale:	1" = 20'		
Date:	10/29/2019		
Project No:	18119		
18119-EXISTING:	EXIST	EXIST.scr	
Drawing No:			
C-010 (Sheet 2 of 26)			

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

BEACON COMMONS
16 WEST MAIN STREET



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APPLICANT/OWNER: **FARRELL BUILDING COMPANY**
2317 MONTAUK HIGHWAY
BRIDGEHAMPTON, NY 11932

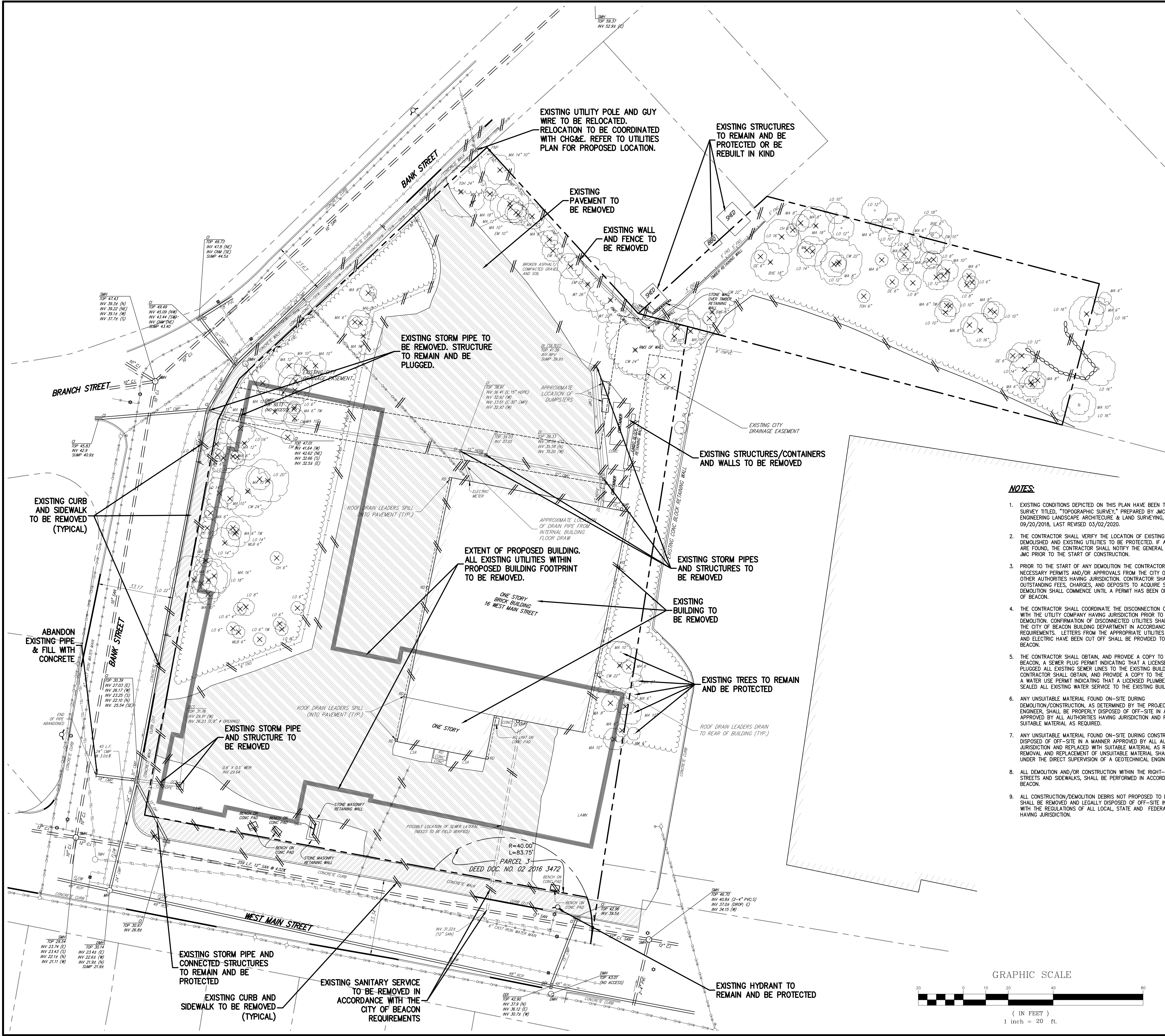
ARCHITECT: **ARYEH SIEGEL ARCHITECT**
84 MASON CIRCLE
BEACON, NY 12508

<i>LEGEND</i>	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING INDEX CONTOUR
	EXISTING CONTOUR
	EXISTING SPOT GRADE
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING FENCE
	EXISTING TREE AND DESIGNATION
	EXISTING TREE LINE
	EXISTING PARKING
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING BORING LOCATION & DESIGNATION

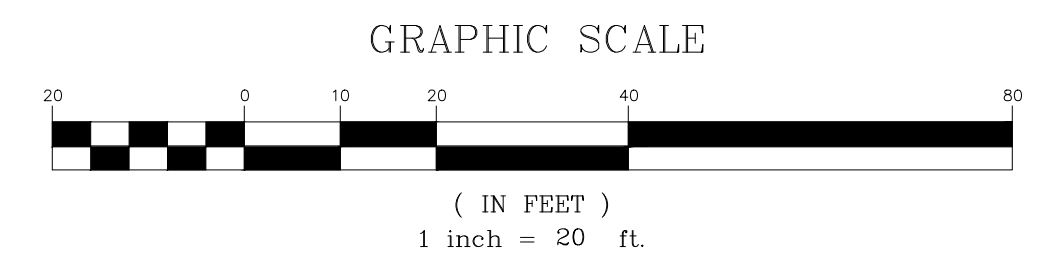
1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY," PREPARED BY JMC PLANNING ENGINEERING LANDSCAPE ARCHITECTURE & LAND SURVEYING, PLLC, DATED 09/20/2018, LAST REVISED 03/02/2020.
2. THE TOPOGRAPHY SHOWN IS REFERENCED FROM NAVD83 VERTICAL DATUM AS SHOWN ON THE ABOVE TOPOGRAPHIC SURVEY.
3. SUPPLEMENTAL TOPOGRAPHY BEYOND THE LIMIT OF SURVEYED TOPOGRAPHY IS TAKEN FROM DUTCHESS COUNTY GIS.
4. THE PROJECT SITE IS LOCATED IN ZONE X, "AREA OF MINIMAL FLOOD HAZARD," ACCORDING TO FEMA MAP NO. 36027-04-036, EFFECTIVE 05/02/2012.
5. THE EXISTING SANITARY SEWER SERVICE LATERAL WAS NOT LOCATED AND IS PROPOSED TO BE REMOVED. IT IS ASSUMED TO BE LOCATED FROM THE SOUTH SIDE OF THE BUILDING TO THE MAIN WASTEWATER MAIN STREET. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE IN ACCORDANCE WITH DUTCHESS COUNTY HEALTH DEPARTMENT AND CITY OF BEACON STANDARDS.

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- NOTES:**
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 - THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC PRIOR TO THE START OF CONSTRUCTION.
 - PRIOR TO THE START OF ANY DEMOLITION THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF BEACON AND ALL OTHER AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL PAY ALL OUTSTANDING FEES, CHARGES, AND DEPOSITS TO ACQUIRE SAID PERMITS. NO DEMOLITION SHALL COMMENCE UNTIL A PERMIT HAS BEEN OBTAINED FROM CITY OF BEACON.
 - THE CONTRACTOR SHALL COORDINATE THE DISCONNECTION OF ALL UTILITIES WITH THE UTILITY COMPANY HAVING JURISDICTION PRIOR TO THE START OF DEMOLITION. CONFIRMATION OF DISCONNECTED UTILITIES SHALL BE PROVIDED TO THE CITY OF BEACON BUILDING DEPARTMENT IN ACCORDANCE WITH THEIR REQUIREMENTS. LETTERS FROM THE APPROPRIATE UTILITIES STATING THAT GAS AND ELECTRIC HAVE BEEN CUT OFF SHALL BE PROVIDED TO THE CITY OF BEACON.
 - THE CONTRACTOR SHALL OBTAIN, AND PROVIDE A COPY TO THE CITY OF BEACON, A SEWER PLUG PERMIT INDICATING THAT A LICENSED PLUMBER HAS PLUGGED ALL EXISTING SEWER LINES TO THE EXISTING BUILDING. THE CONTRACTOR SHALL OBTAIN, AND PROVIDE A COPY TO THE CITY OF BEACON, A WATER USE PERMIT INDICATING THAT A LICENSED PLUMBER HAS CUT AND SEALED ALL EXISTING WATER SERVICE TO THE EXISTING BUILDING.
 - ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING DEMOLITION/CONSTRUCTION, AS DETERMINED BY THE PROJECT'S GEOTECHNICAL ENGINEER, SHALL BE PROPERLY DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED.
 - ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING CONSTRUCTION SHALL BE DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED. ALL REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER.
 - ALL DEMOLITION AND/OR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, INCLUDING STREETS AND SIDEWALKS, SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF BEACON.
 - ALL CONSTRUCTION/DEMOLITION DEBRIS NOT PROPOSED TO BE RECYCLED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH THE REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AGENCIES HAVING JURISDICTION.
 - PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF BEACON, AS REQUIRED AND/OR DIRECTED BY THE CITY OF BEACON OR JMC.
 - EXISTING DRAINAGE PATTERNS ON SITE SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE.
 - ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN SHALL BE REMOVED AND RESET TO THE NEW PROPOSED GRADES IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER'S FIELD REPRESENTATIVE. EXISTING CASTINGS WHICH ARE DAMAGED OR UNFIT FOR INSTALLATION IN THE NEW CONSTRUCTION, AS DETERMINED BY THE OWNER'S FIELD REPRESENTATIVE, SHALL BE REPLACED.
 - ALL EXISTING SIDEWALKS, CURBS, PAVEMENT, ETC. TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DUE TO THE NEW CONSTRUCTION, ARE TO BE REPLACED WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
 - THESE PLANS ARE TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND THE SITE CONTRACTOR FOR THEIR USE, INFORMATION AND COORDINATION. ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
 - THE OWNER SHALL RETAIN A LICENSED AND QUALIFIED PROFESSIONAL, CERTIFIED BY THE CITY OF BEACON, TO INSPECT FOR THE PRESENCE OF ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS WITHIN DEMOLITION AREAS PRIOR TO THE COMMENCEMENT OF DEMOLITION. IF REMEDIATION IS REQUIRED, THE OWNER SHALL DO SO IN ACCORDANCE WITH THE NYS ASBESTOS RULES AND REGULATIONS AND/OR ANY AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED DOCUMENTATION TO THE NYS PRIOR TO OBTAINING A DEMOLITION PERMIT.
 - THE CONTRACTOR SHALL EXTERMINATE RODENTS AS REQUIRED BY THE DUTCHESS COUNTY DEPARTMENT OF HEALTH AND MENTAL HYGIENE. A LETTER FROM THE HEALTH DEPARTMENT CERTIFYING THAT A LICENSED EXTERMINATOR HAS TREATED THE EXISTING BUILDING SHALL BE PROVIDED TO THE CITY OF BEACON DEPARTMENT OF BUILDINGS.
 - PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR MUST PROVIDE 24-HOUR NOTIFICATION TO THE CITY OF BEACON.
 - THE CONTRACTOR SHALL PROVIDE VERIFICATION TO THE CITY OF BEACON THAT FIVE (5) DAYS' PRIOR NOTIFICATION WAS GIVEN TO ALL ADJOINING OWNERS AND THAT NOTIFICATION WAS GIVEN TO THE APPROPRIATE COMMUNITY BOARD PRIOR TO THE COMMENCEMENT OF DEMOLITION.



LEGEND

	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING RETAINING WALL
	EXISTING FENCE
	EXISTING TREE AND DESIGNATION
	EXISTING TREE TO BE REMOVED
	EXISTING TREE LINE
	EXISTING PARKING
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING FEATURE TO BE REMOVED
	PAVEMENT REMOVAL
	CONCRETE REMOVAL
	PROPOSED BUILDING FOOTPRINT

No.	Revision	Date	By
1.	REVISED PER CITY COMMENTS	12/30/19	AH
2.	REVISED PER CITY COMMENTS	02/24/2020	AH
3.	REVISED PER CITY COMMENTS	09/29/2020	AH
4.	REVISED PER CITY COMMENTS	07/27/2021	BMS

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Drawing No: **C-020** (Sheet 3 of 26)

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APPLICANT/OWNER:
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2317 MONTAUK HIGHWAY
BRIDGEHAMPTON, NY 11932

ARCHITECT:
ARYEH SIEGEL ARCHITECT
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BEACON, NY 12508

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DEMOLITION PLAN

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508



NOTES:

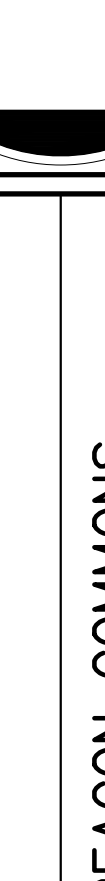
1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY," PREPARED BY JMC PLANNING ENGINEERING LANDSCAPE ARCHITECTURE & LAND SURVEYING, PLLC, DATED 09/20/2018, LAST REVISED 03/02/2020.

GRAPHIC SCALE



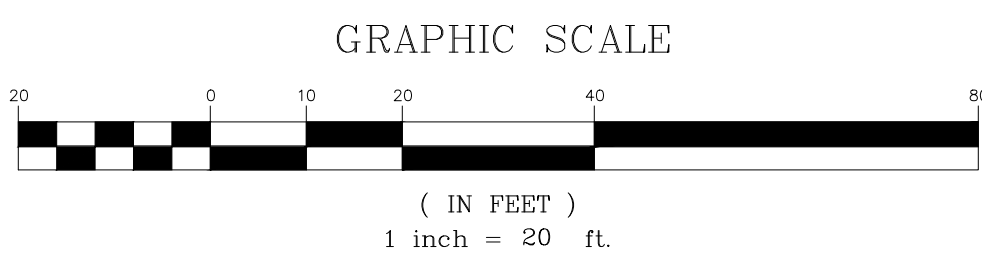
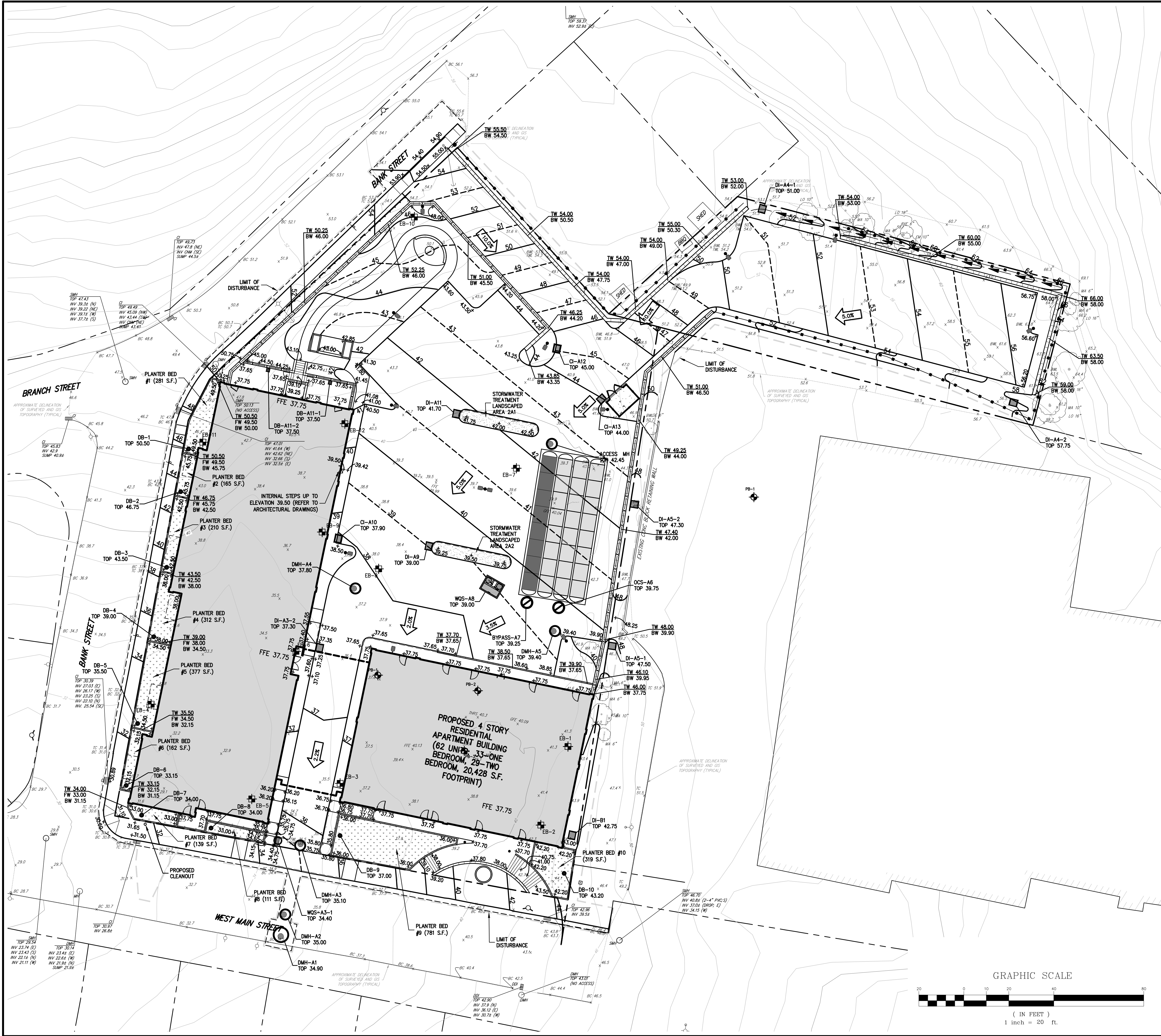
(IN FEET)
1 inch = 20 ft.

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APPLICANT/TOWNER: FARRELL BUILDING COMPANY 2317 MONTAUK HIGHWAY BRIDGEHAMPTON, NY 11932		ARCHITECT: ARYEH SIEGEL ARCHITECT 84 MASON CIRCLE BEACON, NY 12508																
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SITE PLAN		BEACON COMMONS 16 WEST MAIN STREET BEACON, NY 12508																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Drawing: BMS</td> <td style="width: 30%;">Approved: SS</td> <td style="width: 40%;"></td> </tr> <tr> <td>Scale: 1" = 20'</td> <td colspan="2"></td> </tr> <tr> <td>Date: 11/26/2019</td> <td colspan="2"></td> </tr> <tr> <td>Project No: 18119</td> <td colspan="2"></td> </tr> <tr> <td>18119-SITE</td> <td style="text-align: center;">LAY</td> <td style="text-align: center;">LAY.scr</td> </tr> </table>				Drawing: BMS	Approved: SS		Scale: 1" = 20'			Date: 11/26/2019			Project No: 18119			18119-SITE	LAY	LAY.scr
Drawing: BMS	Approved: SS																	
Scale: 1" = 20'																		
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18119-SITE	LAY	LAY.scr																
Drawing No: C-100 (Sheet 4 of 26)																		

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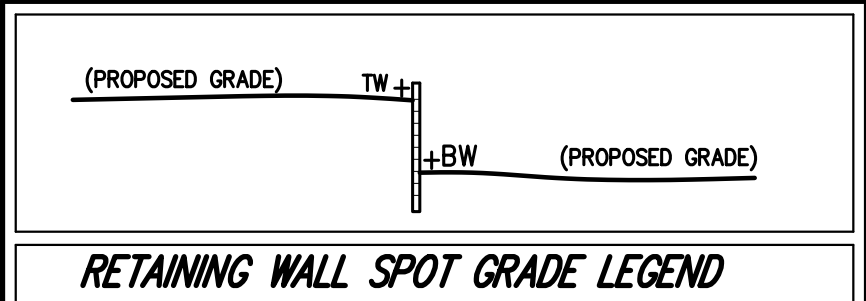
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LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- EXISTING CURB LINE
- EXISTING INDEX CONTOUR
- EXISTING CONTOUR
- EXISTING SPOT GRADE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING BORING LOCATION & DESIGNATION
- PROPOSED BORING LOCATION & DESIGNATION
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED FINISHED GRADE
- PROPOSED SPOT GRADE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED TYPE CI DRAIN INLET
- PROPOSED TYPE DI DRAIN INLET
- PROPOSED TYPE DB DRAIN BASIN
- PROPOSED WATER QUALITY STRUCTURE
- PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED WOOD GUIDE RAIL
- PROPOSED RETAINING WALL AND SAFETY FENCE (DESIGN BY OTHERS)
- PROPOSED PRIVACY RAIL
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LIGHTING STANDARD (DESIGN BY OTHERS)

- NOTES:**
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 - ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
 - ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT SETTLEMENT.
 - EXCAVATIONS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTIES, NOR DIVERT WATER ONTO THE PROPERTY OF OTHERS AT ANY TIME DURING THE COURSE OF CONSTRUCTION.
 - CONTRACTOR SHALL REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR FURTHER DIRECTION REGARDING SITE STABILIZATION THROUGHOUT THE COURSE OF CONSTRUCTION.



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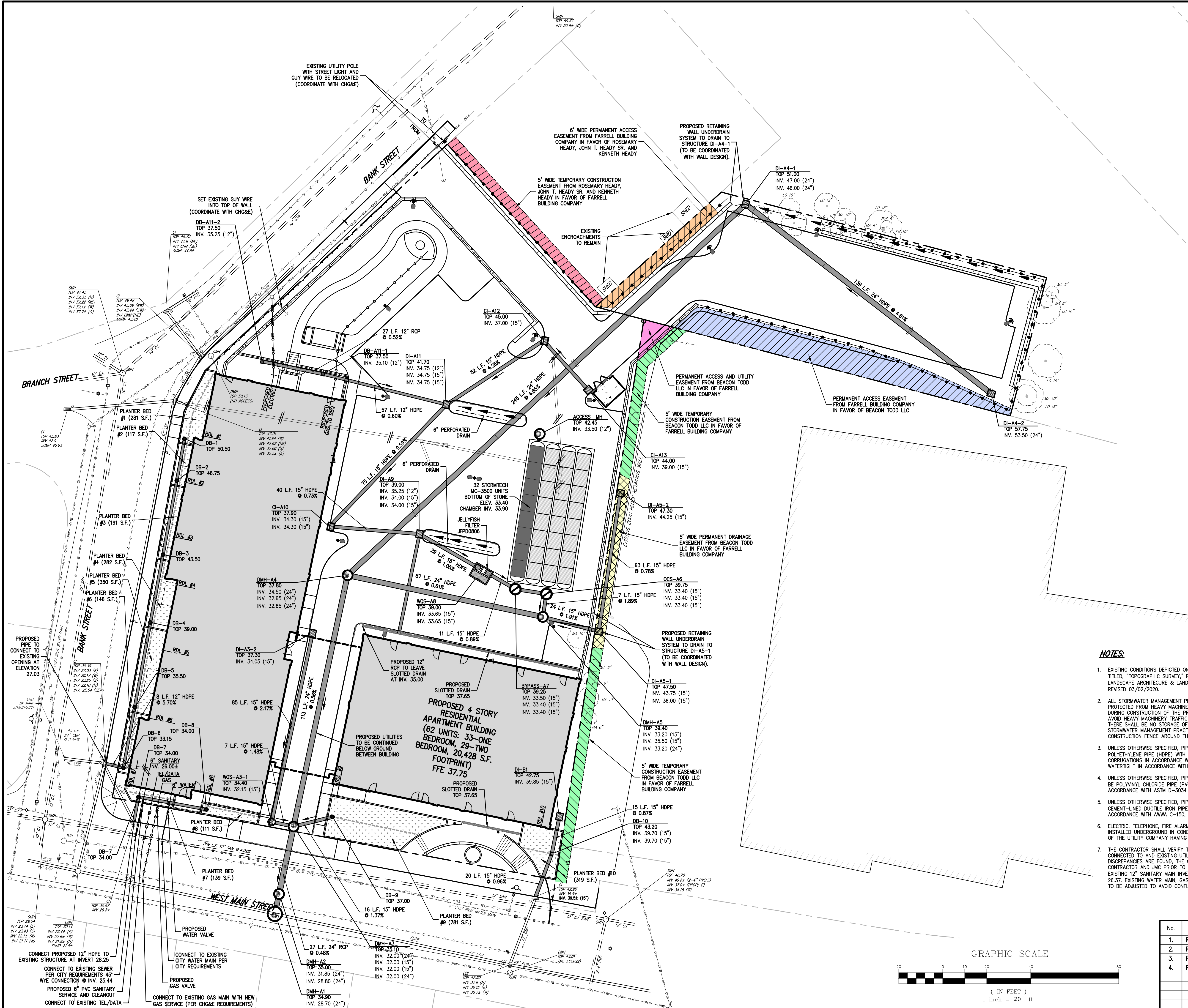
GRADING PLAN

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

Drawn: **BMS** Approved: **SS**
Scale: **1" = 20'**
Date: **10/29/2019**
Project No: **18119**
1819-SITE GRAD GRAD.scr
Drawing No:
C-200
(Sheet 5 of 26)

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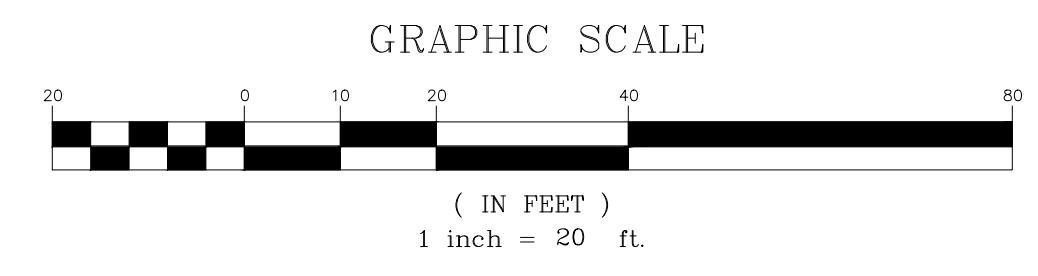
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LEGEND

---	EXISTING PROPERTY LINE
---	ADJACENT PROPERTY LINE
---	EXISTING EASEMENT LINE
---	EXISTING BUILDING LINE
---	EXISTING PAVEMENT EDGE
---	EXISTING CURB LINE
---	EXISTING STONE WALL
---	EXISTING RETAINING WALL
---	EXISTING FENCE
---	EXISTING TREE AND DESIGNATION
---	EXISTING STORM DRAIN LINE AND SIZE
---	EXISTING SANITARY LINE AND SIZE
---	EXISTING WATER LINE
---	EXISTING GAS LINE
---	EXISTING OVERHEAD WIRES
---	EXISTING DRAIN INLET
---	EXISTING MANHOLE
---	EXISTING FIRE HYDRANT
---	EXISTING GAS VALVE
---	EXISTING WATER VALVE
---	EXISTING UTILITY POLE
---	EXISTING LIGHT POLE
---	EXISTING SIGN
---	PROPOSED BUILDING LINE
---	PROPOSED CONCRETE CURB
---	PROPOSED EASEMENT LINE
---	PROPOSED CONCRETE SIDEWALK
---	PROPOSED DROP CURB AND RAMP
---	PROPOSED STORM DRAIN MANHOLE
---	PROPOSED TYPE CI DRAIN INLET
---	PROPOSED TYPE DI DRAIN INLET
---	PROPOSED TYPE DB DRAIN BASIN
---	PROPOSED WATER QUALITY STRUCTURE
---	PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
---	PROPOSED CLEANOUT
---	PROPOSED STORM DRAIN LINE & SIZE
---	PROPOSED SANITARY SEWER LINE & SIZE
---	PROPOSED WATER LINE & SIZE
---	PROPOSED GAS LINE
---	PROPOSED OVERHEAD WIRES
---	PROPOSED WATER VALVE
---	PROPOSED GAS VALVE
---	PROPOSED WOOD GUIDE RAIL
---	PROPOSED RETAINING WALL AND SAFETY FENCE (DESIGN BY OTHERS)
---	PROPOSED PRIVACY FENCE
---	PROPOSED UTILITY POLE

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 - ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
 - UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH A SMOOTH INTERIOR AND ANNUAL EXTERIOR CORRUGATIONS IN ACCORDANCE WITH ASTM F-2648. JOINTS SHALL BE WATERTIGHT IN ACCORDANCE WITH ASTM D-3212.
 - UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER GRAVITY LINES SHALL BE POLYVINYL CHLORIDE PIPE (PVC), SDR-35, WITH PUSH-ON JOINTS IN ACCORDANCE WITH ASTM D-3034 AND D-3212.
 - UNLESS OTHERWISE SPECIFIED, PIPE FOR WATER LINES SHALL BE DOUBLE CEMENT-LINED DUCTILE IRON PIPE (DIP), CLASS 54, WITH MECHANICAL JOINTS IN ACCORDANCE WITH AWWA C-150, C-151, C-104 AND C-111.
 - ELECTRIC, TELEPHONE, FIRE ALARM AND CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND IN CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.
 - THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE CONNECTED TO AND EXISTING UTILITIES TO REMAIN AND BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC PRIOR TO THE START OF CONSTRUCTION. EXISTING 12" SANITARY MAIN INVERT AT CROSSING OF NEW 30" STORM PIPE IS 26.37. EXISTING WATER MAIN, GAS MAIN, AND TELEPHONE/DATA LINE MAY NEED TO BE ADJUSTED TO AVOID CONFLICT WITH PROPOSED STORM.
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UTILITIES PLAN

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

Drawn: **BMS** Approved: **SS**
Scale: **1" = 20'**
Date: **10/29/2019**
Project No: **18119**
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Drawing No: **C-300**
(Sheet 6 of 26)



SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 6'

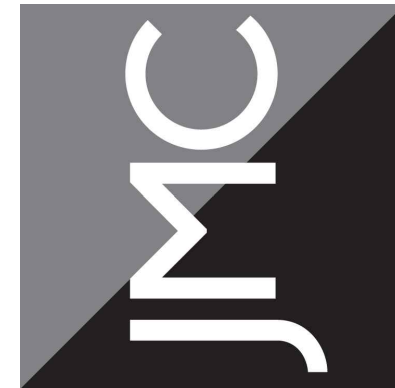
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Project No:	18119		
18119-SITE	STORM PROFILE	UTIL.scr	
Drawing No:	C-310 (Sheet 7 of 26)		

STORM PROFILE

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508



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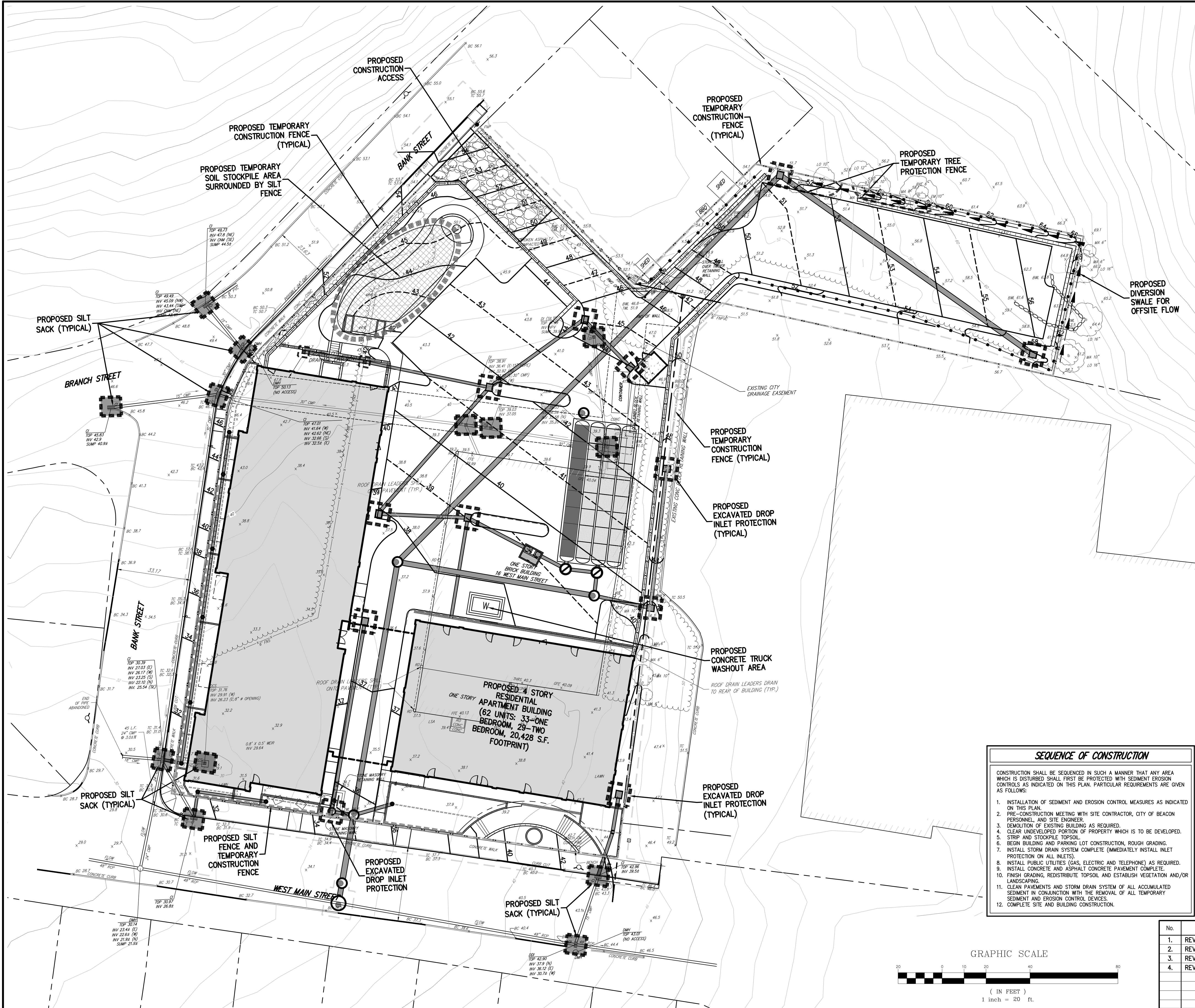
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LEGEND

- PROPOSED EXCAVATED DROP INLET PROTECTION
- PROPOSED SILT SACK
- PROPOSED CONSTRUCTION FENCE
- PROPOSED TEMP. TREE PROTECTION FENCE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED STOCKPILE AREA
- EXISTING TREE AND DESIGNATION

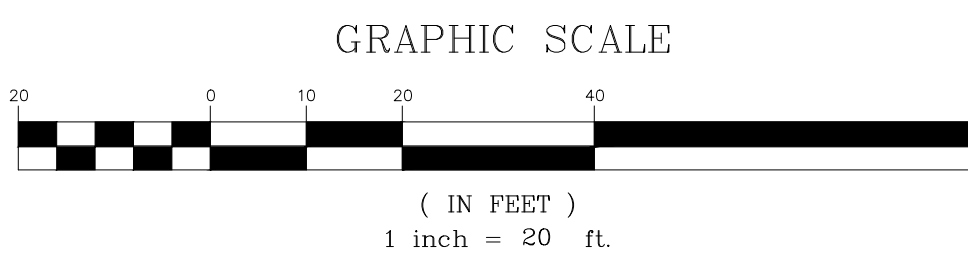
- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY," PREPARED BY JMC PLANNING ENGINEERING LANDSCAPE ARCHITECTURE & LAND SURVEYING, PLLC, DATED 09/20/2018, LAST REVISED 03/02/2020.
 - THIS PLAN IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL INFORMATION ONLY.
 - PRIOR TO BEGINNING ANY CLEARING, GRUBBING OR EXCAVATION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE PLANS AND SPECIFICATIONS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE PLAN.
 - THE CONTRACTOR SHALL INSPECT AND MAINTAIN ON-SITE EROSION AND SEDIMENT CONTROL MEASURES ON A DAILY BASIS. ALL COLLECTED SEDIMENT WITHIN SEDIMENT BARRIERS SHALL BE REMOVED PERIODICALLY AS REQUIRED TO MAINTAIN THE FUNCTION OF THE SEDIMENT BARRIERS. ALL SEDIMENT COLLECTED SHALL BE RESPAID ON-SITE WITHIN STABILIZED AREAS AS DIRECTED BY THE OWNERS REPRESENTATIVE.
 - THE CONTRACTOR SHALL INSPECT DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A WEEKLY BASIS, AFTER EACH RAINSTORM, AND AS MAY BE REQUIRED OR DIRECTED BY ALL APPLICABLE APPROVALS AND PERMITS. THE CONTRACTOR SHALL IMMEDIATELY PROVIDE A WRITTEN REPORT ON FINDINGS OF SEDIMENT IN DOWNSTREAM AREAS TO ALL AUTHORITIES HAVING JURISDICTION AND MAKE REPAIRS AS REQUIRED OR DIRECTED.
 - ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED/WARRANTED BY FIELD CONDITIONS AND AS DIRECTED BY THE OWNERS REPRESENTATIVE, JMC, AND/OR ANY AUTHORITY HAVING JURISDICTION.
 - STOCKPILING OF CONSTRUCTION MATERIAL SHALL BE PLACED ON-SITE IN THE AREA DESIGNATED ON THIS PLAN OR AS APPROVED BY THE OWNERS REPRESENTATIVE. STOCKPILED EXCAVATED MATERIAL SHALL HAVE TWO ROWS OF SILT FENCE LOCATED AROUND ITS PERIMETER. ALL STOCKPILED MATERIAL SHALL BE MAINTAINED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE ON PEDESTRIAN AND/OR VEHICULAR TRAFFIC CIRCULATION ROUTES.
 - DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNERS REPRESENTATIVE.
 - ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
 - ALL EXPOSED SLOPES AND GRADED/DISTURBED AREAS, THAT WILL NOT BE FURTHER DISTURBED WITHIN 14 CALENDAR DAYS (7 DAYS FOR CONSTRUCTION SITES THAT EITHER DIRECTLY DISCHARGE TO ONE OF THE 303(d) SEGMENTS LISTED IN APPENDIX E OF THE GENERAL PERMIT OR ARE LOCATED WITHIN ONE OF THE WATERSHEDS LISTED IN APPENDIX C OF THE GENERAL PERMIT), SHALL BE TEMPORARILY SEED WITHIN 24 HOURS OF DISTURBANCE, IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) "EROSION AND SEDIMENT CONTROL GUIDELINES" AND THE ANSI A300 "BEST MANAGEMENT PRACTICES FOR TREE AND SHRUB PLANTING, TRANSPLANTING, MAINTENANCE AND CARE," PREPARED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), LATEST EDITIONS, AS FOLLOWS:
A. SEED MIXTURE AND RATE OF APPLICATION:
A.1. IN SPRING, SUMMER OR EARLY FALL, SEED THE AREA WITH RYEGRASS (ANNUAL OR PERENNIAL) AT 30 POUNDS PER ACRES (APPROXIMATELY 0.7 POUNDS/1000 SQUARE FEET OR USE 1 POUND/1000 SQUARE FEET).
A.2. IN LATE FALL OR EARLY WINTER, SEED THE AREA WITH CERTIFIED "AROSTOOK" WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE (2.5 POUNDS/1000 SQUARE FEET).
B. APPLICATION SHALL BE UNIFORM BY MECHANICAL OR HYDROSEED METHODS.
C. MULCH ALL SEEDED AREAS WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 POUNDS PER 1,000 SQUARE FEET) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
D. ALL SEEDED AREAS SHALL BE FERTILIZED, RESEED, AND MULCHED AS NECESSARY TO MAINTAIN VIGOROUS, DENSE VEGETATIVE COVER.
E. TEMPORARY SEED MIXTURES SHALL NOT BE PLACED ON AREAS WHERE FINAL GRADE HAS BEEN ESTABLISHED AND TOPSOIL HAS BEEN PLACED UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.

SEQUENCE OF CONSTRUCTION

CONSTRUCTION SHALL BE SEQUENCED IN SUCH A MANNER THAT ANY AREA WHICH IS DISTURBED SHALL FIRST BE PROTECTED WITH SEDIMENT EROSION CONTROLS AS INDICATED ON THIS PLAN. PARTICULAR REQUIREMENTS ARE GIVEN AS FOLLOWS:

- INSTALLATION OF SEDIMENT AND EROSION CONTROL MEASURES AS INDICATED ON THIS PLAN.
- PRE-CONSTRUCTION MEETING WITH SITE CONTRACTOR, CITY OF BEACON PERSONNEL, AND SITE ENGINEER.
- DEMOLITION OF EXISTING BUILDING AS REQUIRED.
- CLEAR UNDEVELOPED PORTION OF PROPERTY WHICH IS TO BE DEVELOPED.
- STRIP AND STOCKPILE TOPSOIL.
- BEGIN BUILDING AND PARKING LOT CONSTRUCTION, ROUGH GRADING.
- INSTALL STORM DRAIN SYSTEM COMPLETE (IMMEDIATELY INSTALL INLET PROTECTION ON ALL INLETS).
- INSTALL PUBLIC UTILITIES (GAS, ELECTRIC AND TELEPHONE) AS REQUIRED.
- INSTALL CONCRETE AND ASPHALT CONCRETE PAVEMENT COMPLETE.
- FINISH GRADING, REDISTRIBUTE TOPSOIL AND ESTABLISH VEGETATION AND/OR LANDSCAPING.
- CLEAR PAVEMENTS AND STORM DRAIN SYSTEM OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE REMOVAL OF ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES.
- COMPLETE SITE AND BUILDING CONSTRUCTION.

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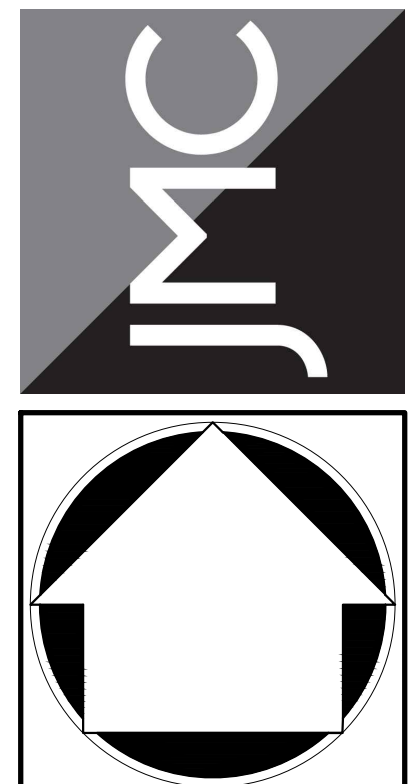
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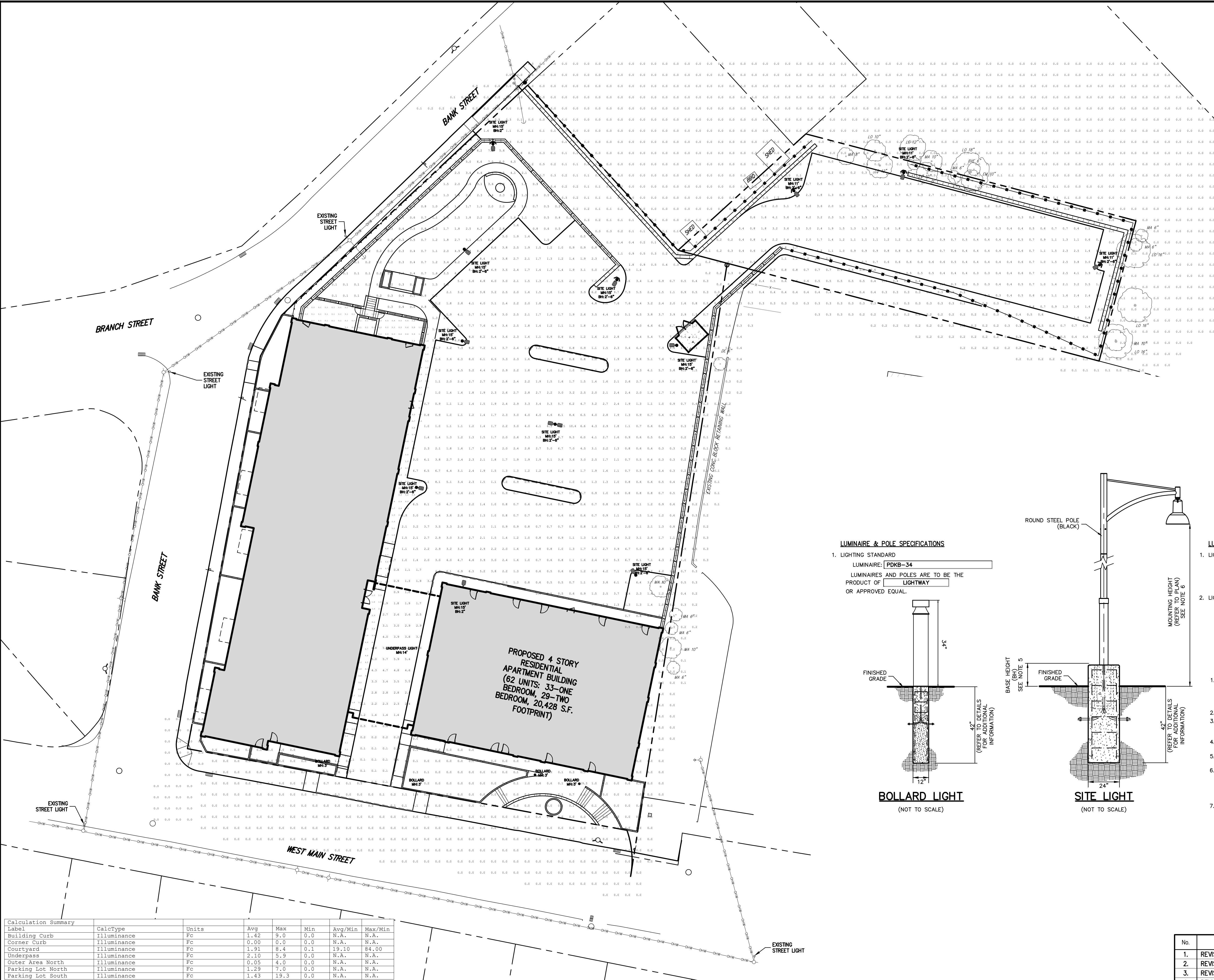
SEDIMENT AND EROSION CONTROL PLAN

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

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Scale: **1" = 20'**
Date: **10/29/2019**
Project No: **18119**
1819-SITE S&E S&E.scr
Drawing No:
C-400
(Sheet 8 of 26)

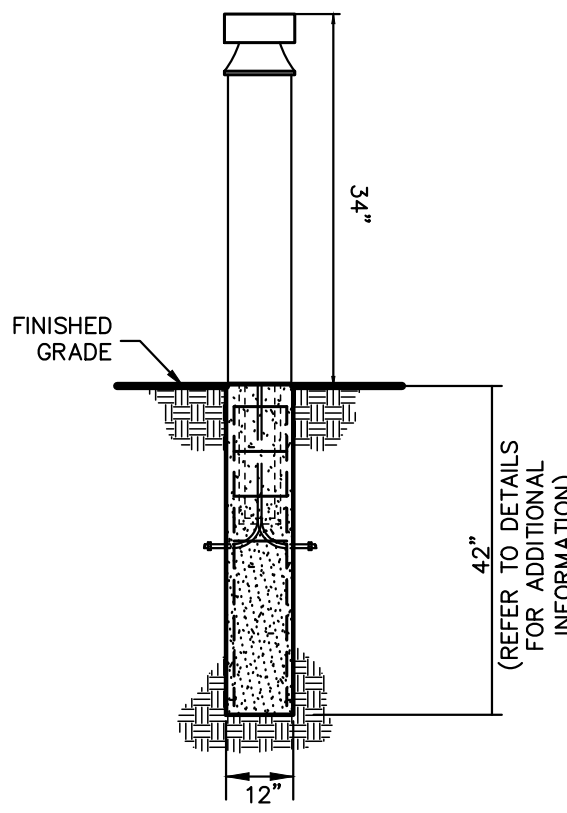
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Label	CalcType						
Building Curb	Illuminance	Fc	1.42	9.0	0.0	N.A.	N.A.
Corner Curb	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
Courtyard	Illuminance	Fc	1.91	8.4	0.1	19.10	84.00
Underpass	Illuminance	Fc	2.10	5.9	0.0	N.A.	N.A.
Outer Area North	Illuminance	Fc	0.05	4.0	0.0	N.A.	N.A.
Parking Lot North	Illuminance	Fc	1.29	7.0	0.0	N.A.	N.A.
Parking Lot South	Illuminance	Fc	1.43	19.3	0.0	N.A.	N.A.

Luminaire Schedule		Units	Avg	Max	Min	Avg/Min	Max/Min
Symbol	Qty	Model #	LLF	Description	Color Temperature		
●	4	PDKB-34	0.900	PDKB-34 (Bollard Light)	4000K		
★	1	CPG-LED-7L-CA-W-40	0.900	CPG-LED-7L-CA-W-40 (Canopy Light)	4000K		
●	8	1113.501-4105.190.500-SN03	0.900	Nova N4 7500lm 4K NLG17 (Site Light)	4000K		
●	5	1113.501-4105.190.500-SN03	0.900	Nova N4 7500lm 4K NLG17 HSS (Site Light with House Side Shield)	4000K		

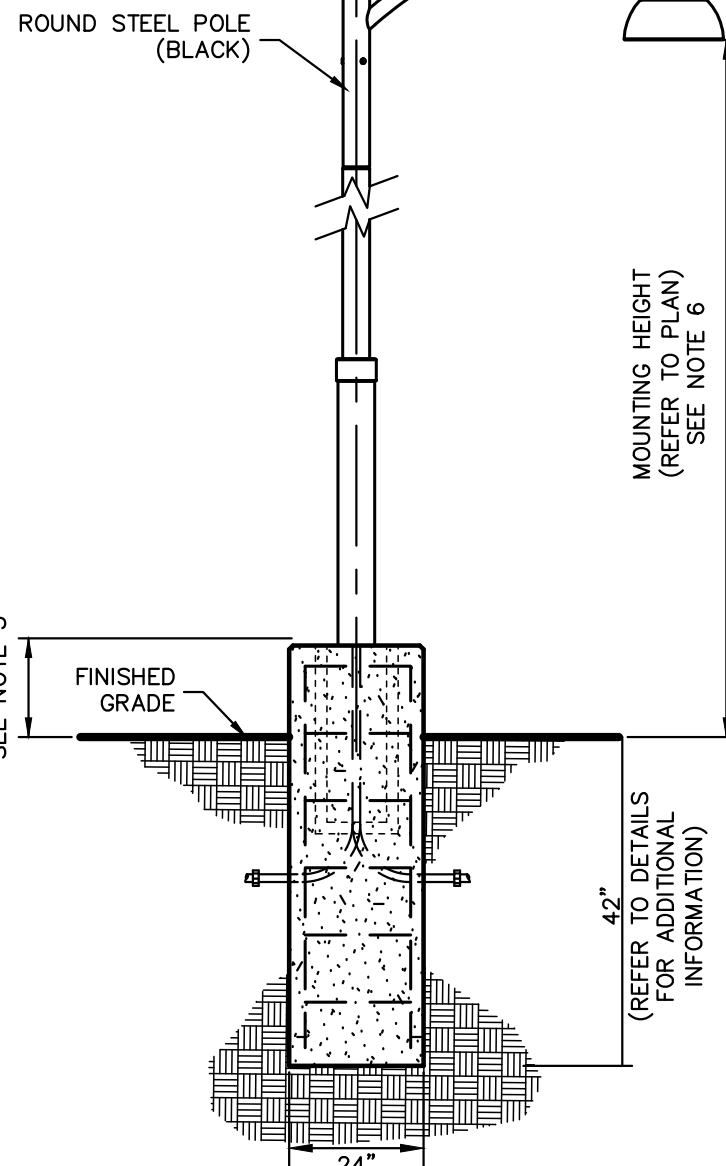


LUMINAIRE & POLE SPECIFICATIONS

1. LIGHTING STANDARD
LUMINAIRE: [PDKB-34]
LUMINAIRES AND POLES ARE TO BE THE PRODUCT OF [LIGHTWAY] OR APPROVED EQUAL.



BOLLARD LIGHT
(NOT TO SCALE)



SITE LIGHT
(NOT TO SCALE)

LUMINAIRE & POLE SPECIFICATIONS

1. LIGHTING STANDARD (DOUBLE ARM-MOUNTED)
POST: [1113.501]
TOP: [4105.190.500]
LANTERN: [SN03]
2. LIGHTING STANDARD (SINGLE ARM-MOUNTED)
POST: [1113.501]
TOP: [4105.190.500]
LANTERN: [SN03]
LUMINAIRES AND POLES ARE TO BE THE PRODUCT OF [NERI] OR APPROVED EQUAL.

NOTES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSIONS (SIZE, BOLT CIRCLE, ETC.) WITH THE POLE MANUFACTURER PRIOR TO INSTALLATION OF THE FOUNDATIONS.
2. CHAMFER EXPOSED EDGES OF ALL FOUNDATIONS.
3. PROVIDE INSULATED GROUNDING BUSHING ON EXPOSED ENDS (IN BASE OF POLE) OF ALL GALVANIZED STEEL BENDS.
4. COLOR OF LUMINAIRE SHALL MATCH COLOR OF POLE.
5. CONCRETE BASE IN PARKING AREAS: 2'-6" CONCRETE BASE IN LANDSCAPED AREAS: 2'
6. LIGHT POLE LENGTHS SHALL BE ADJUSTED DEPENDING ON MOUNTING APPLICATION SUCH AS LAWN AREAS, IN PARKING AREAS, AND MH: MOUNTING HEIGHT IS THE DISTANCE FROM THE GROUND BELOW THE LIGHT TO THE TOP OF THE LIGHT FIXTURE.
7. LIGHT FIXTURES ARE DARK SKY COMPLIANT WITH FULL CUT-OFF SHIELDS.

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Project No: 18119
Drawing No: 1819-LIGHTING
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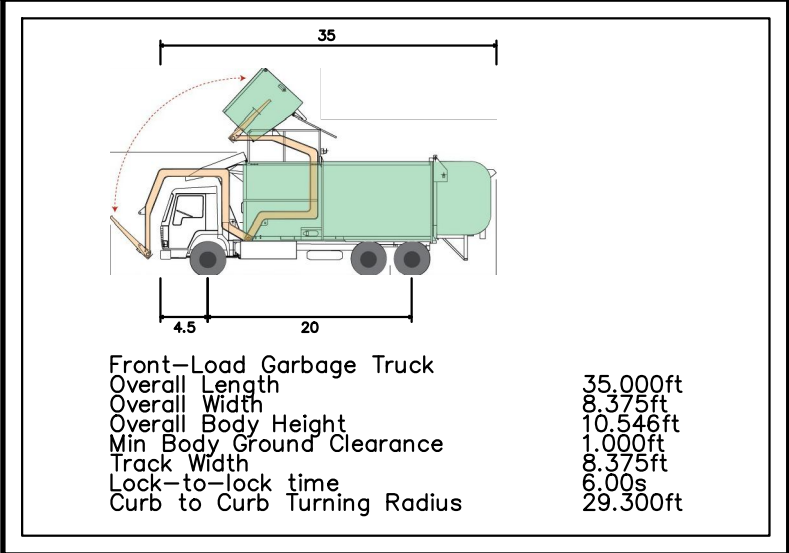
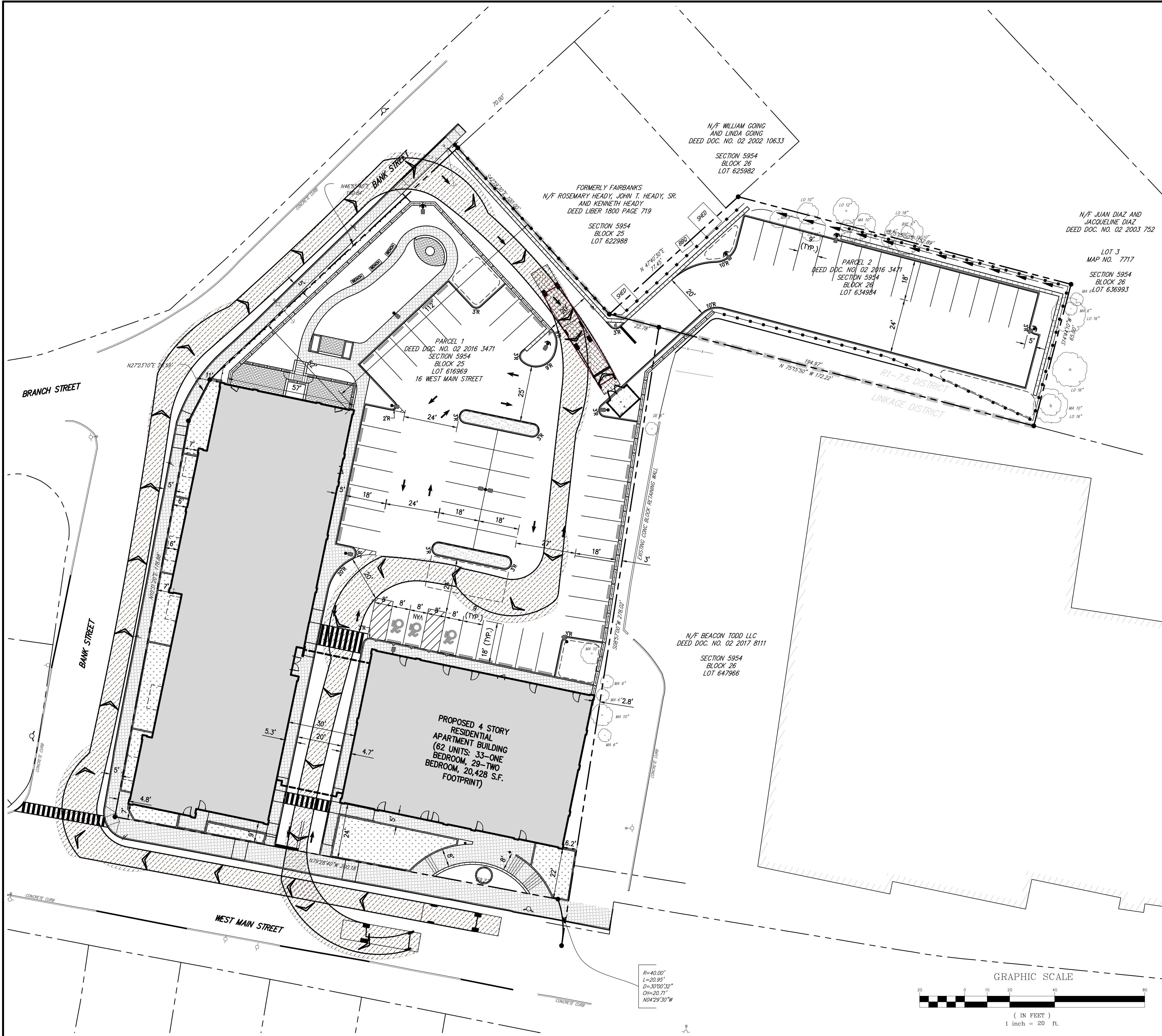
LIGHTING PLAN

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

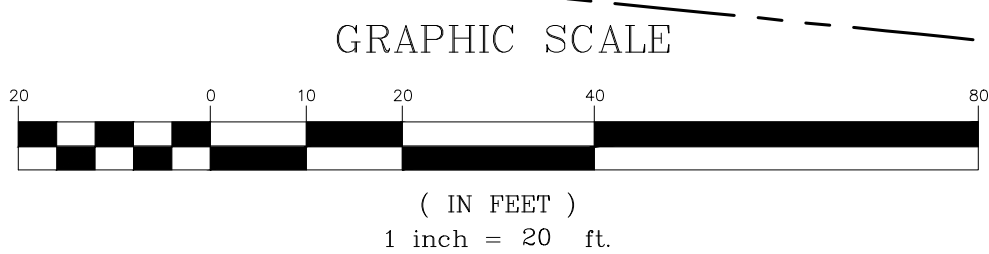
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Project No: **18119**
Drawing No: **1819-LIGHTING**
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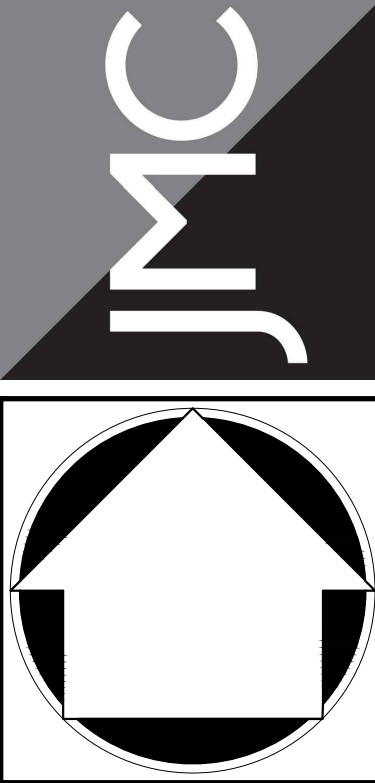
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Scale: 1" = 20'	
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18119-SITE	TRUCK-1
TRUCK.scr	
Drawing No: C-700	
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GARBAGE TRUCK TURNING
PLAN (FRONT LOADING)

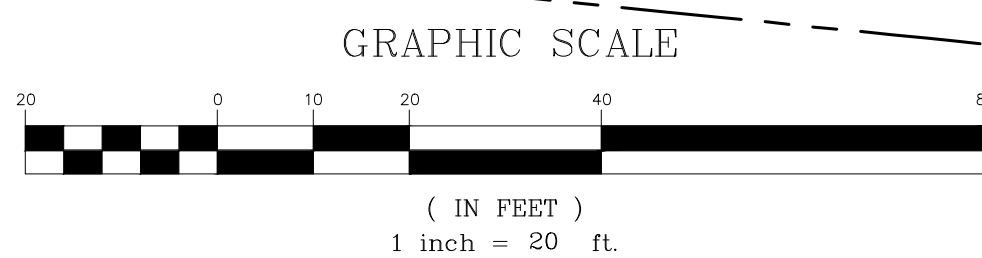
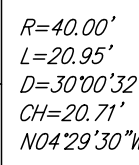
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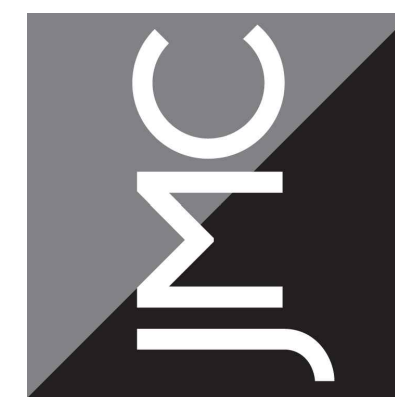
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18119-SITE	TRUCK-2	TRUCK.scr	
Drawing No:	C-701 (Sheet 11 of 26)		

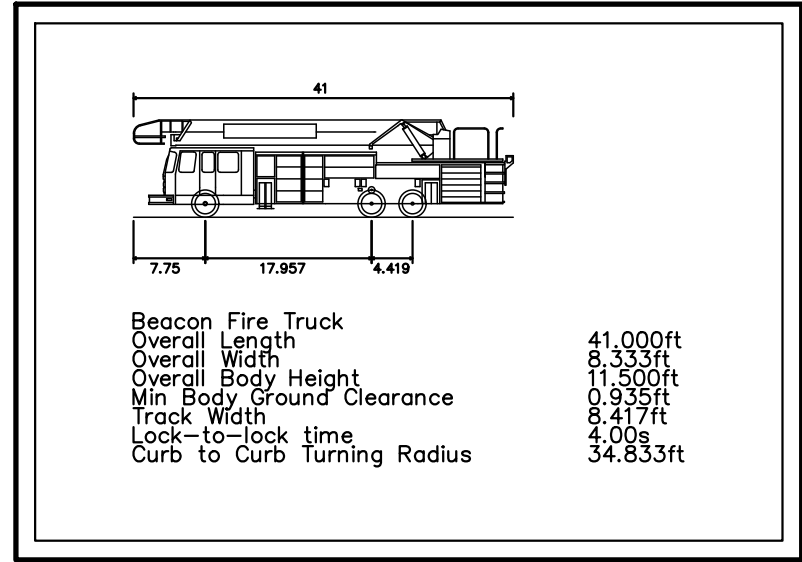
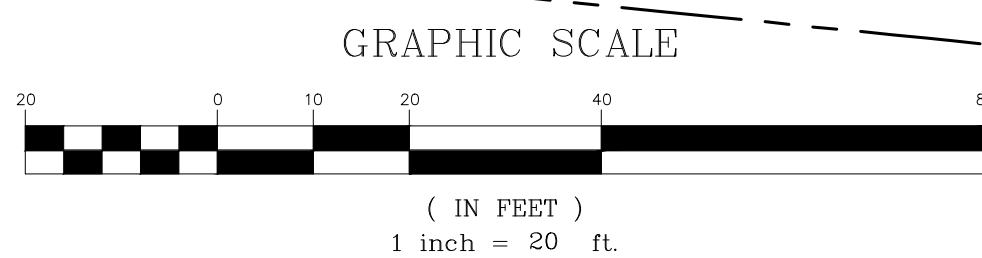
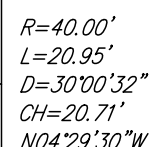
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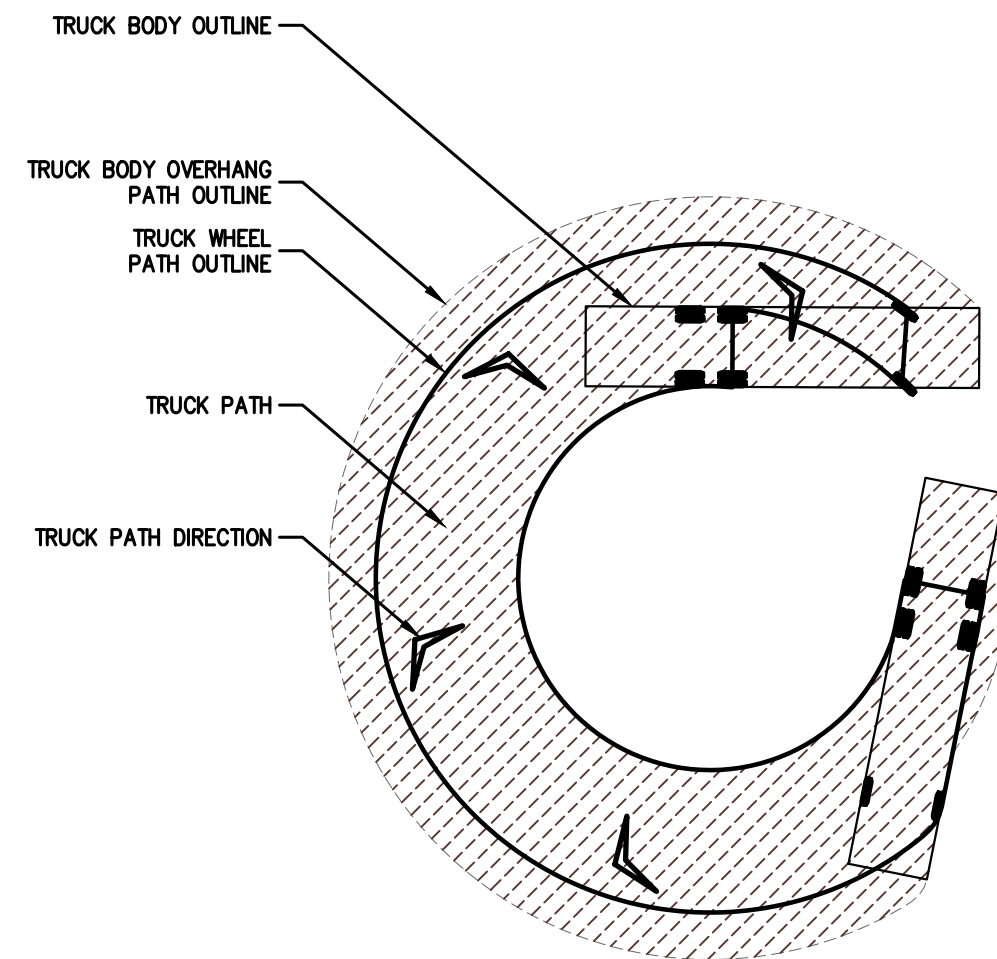
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PROFILE

SCALE: NTS



*MINIMUM HEIGHT CLEARANCE FOR THE DRIVEWAY UNDER THE BUILDING WILL BE 12'-8"

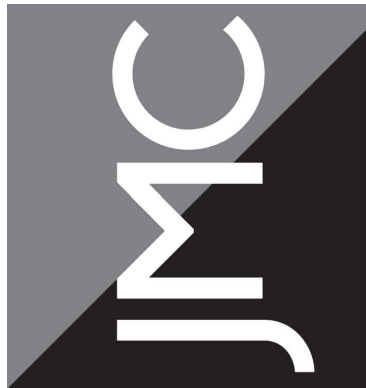
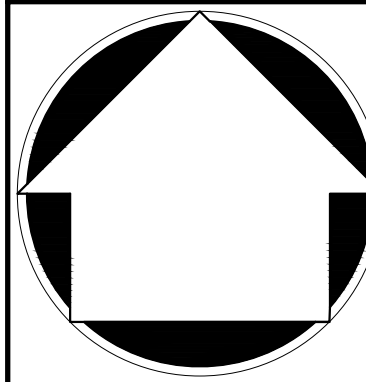
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C-702 (Sheet 12 of 26)			

FIRE TRUCK TURNING PLAN (SCENARIO 1)

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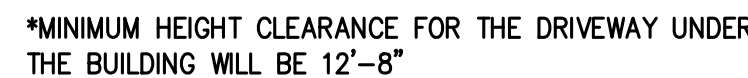
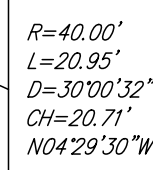


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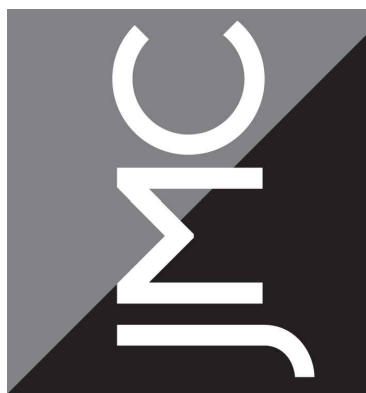
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Drawing No:			
C-703 (Sheet 13 of 26)			

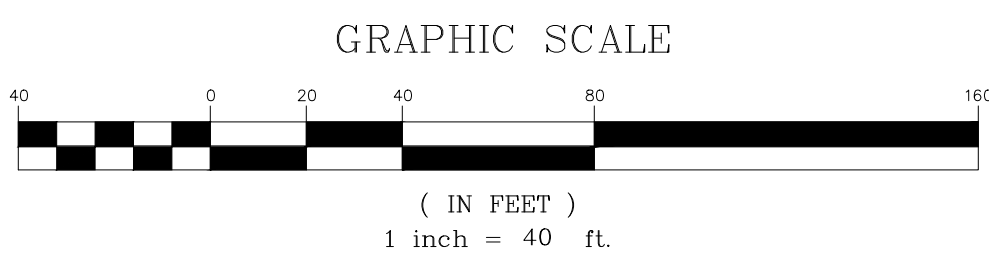
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Architecture & Land Surveying, PLLC**
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
1120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcplic.com

APPLICANT/OWNER:
FARRELL BUILDING COMPANY
2317 MONTAUK HIGHWAY
BRIDGEHAMPTON, NY 11932

ARCHITECT:
ARYEH SIEGEL ARCHITECT
84 MASON CIRCLE
DEALON, NY 12608

[illegible]

Drawn:	BMS	Approved:	SS
Scale:	1" = 40'		
Date:	12/30/2019		
Project No:	18119		
18119-SITE	AERIAL	AERIAL.scr	

Drawing No:

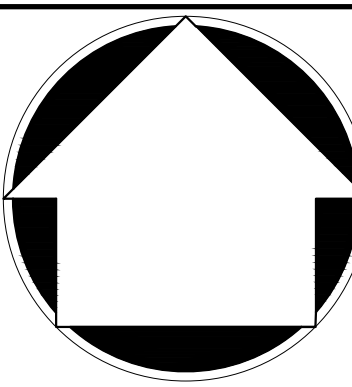
C-800

(Sheet 15 of 26)

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

AERIAL SITE PLAN

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508



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Architecture & Land Surveying, PLLC
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John Meyer Consulting, Inc.
20 BEDFORD ROAD • ARMONK, NY 10504
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www.jmcp LLC.com

APPLICANT/OWNER:
FARRELL BUILDING COMPANY
2317 MONTAUK HIGHWAY
BRIDGEHAMPTON, NY 11932

ARCHITECT: ARYEH SIEGEL ARCHITECT
84 MASON CIRCLE
BEACON, NY 12508

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY," PREPARED BY JMC PLANNING, ENGINEERING LANDSCAPE ARCHITECTURE & LAND SURVEYING, PLLC, DATED 09/20/2018, REVISED 09/23/2019.
2. THE INTERSECTION AND STOPPING SIGHT DISTANCES HAVE BEEN CALCULATED FOLLOWING THE PROCEDURE OUTLINED IN "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS 2018, 7TH EDITION" PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
3. INTERSECTION SIGHT DISTANCE CALCULATIONS

ONTO WEST MAIN STREET:

POSTED SPEED LIMIT = 25 MPH
DESIGN SPEED = 35 MPH

MINOR ROAD APPROACH GRADE = 3% DOWNGRADE

LEFT TURN (LOOKING RIGHT) (PER AASHTO TABLE 9-7)

CALCULATED: 385.9 FT
PROVIDED: 390 FT

RIGHT TURN (LOOKING LEFT) (PER AASHTO TABLE 9-9)

CALULATED: 334.4 FT
PROVIDED: 335 FT

- #### 4. STOPPING SIGHT DISTANCE CALCULATIONS

$$SSD = 1.47 \sqrt{t} + \frac{V^2}{30[(\sigma/32.2) \pm G]}$$

V = DESIGN SPEED, 35 MPH
t = BRAKE REACTION TIME, 2.5 S
a = DECELERATION RATE, 11.2 FT/S²
G = MAJOR ROAD APPROACH GRADE, RISE/RUN, FT/FT

ONTO WEST MAIN STREET:

POSTED SPEED LIMIT = 25 MPH
DESIGN SPEED = 35 MPH

LEFT TURN (LOOKING RIGHT):

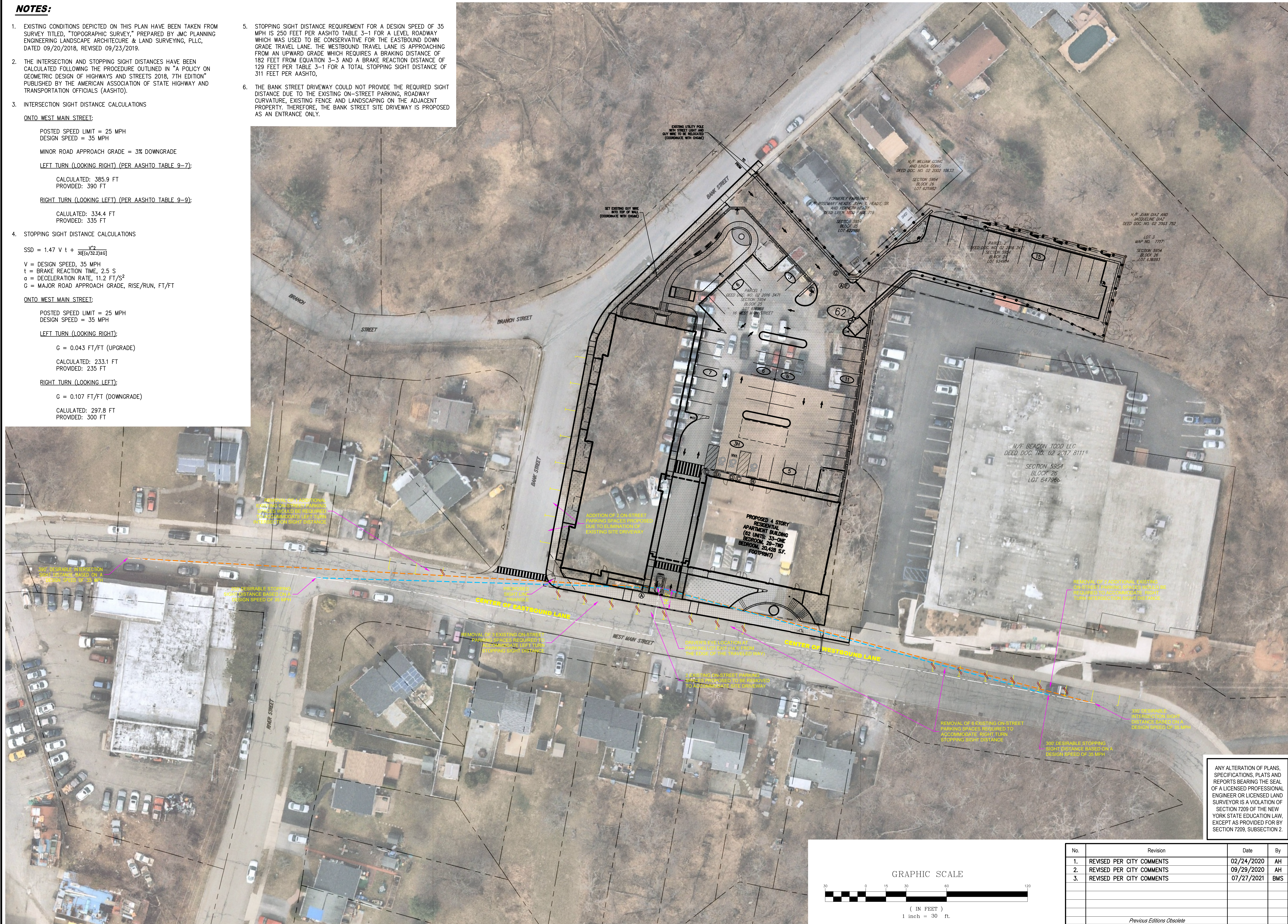
G = 0.043 FT/FT (UPGRADE)

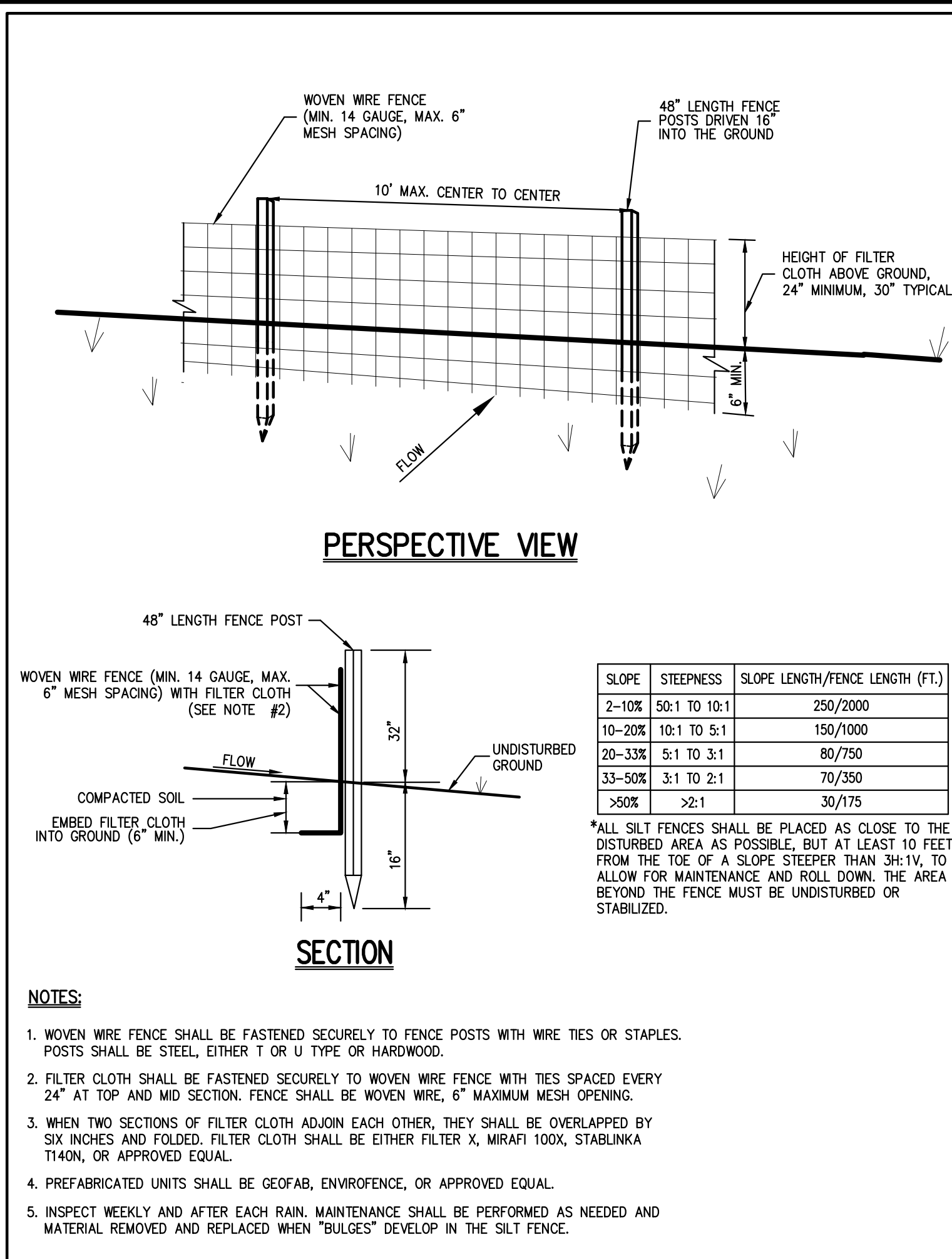
CALCULATED: 233.1 FT
PROVIDED: 235 FT

RIGHT TURN (LOOKING LEFT):

$G = 0.107 \text{ FT/FT (DOWNGRADE)}$

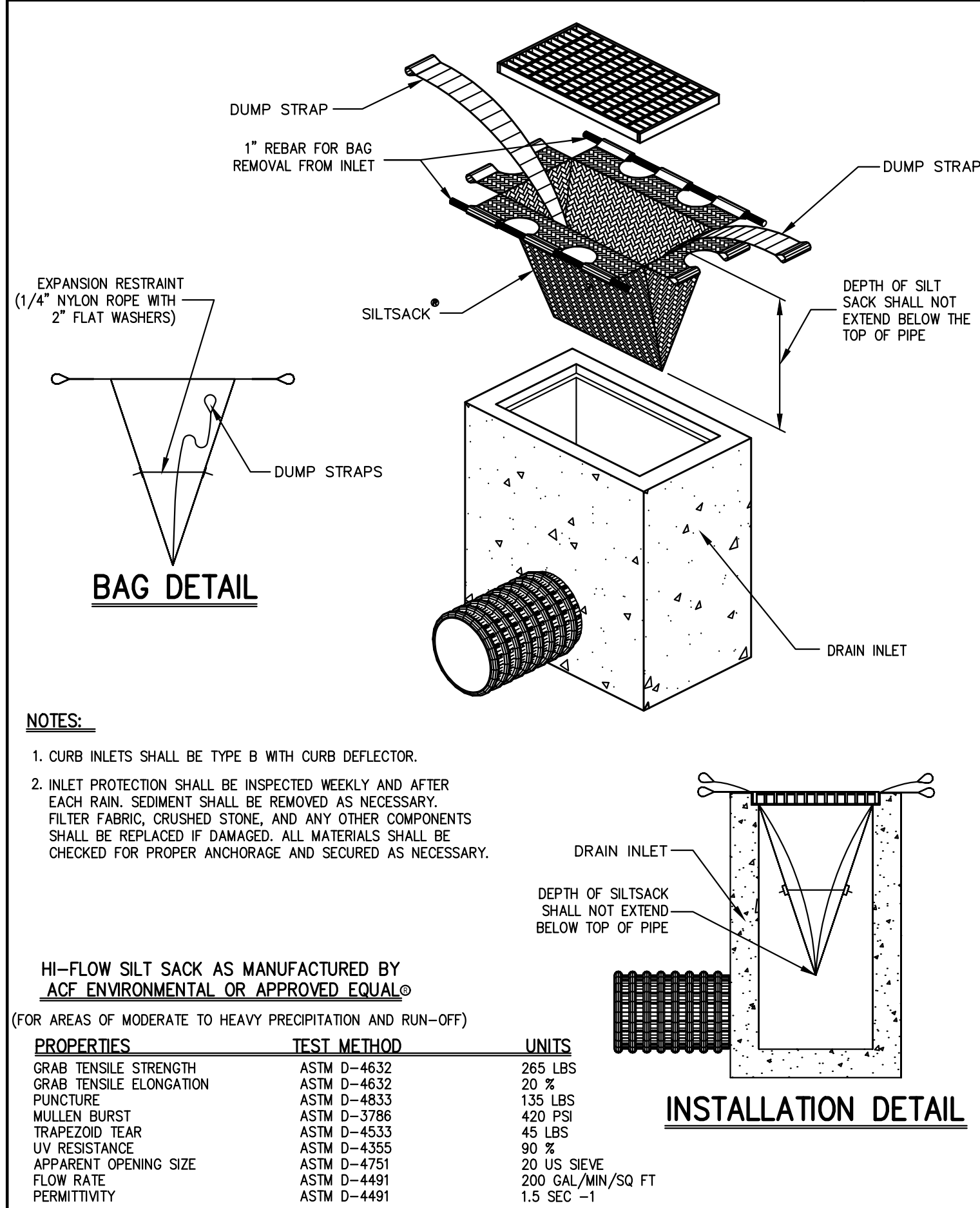
CALULATED: 297.8 FT
PROVIDED: 300 FT

[illegible]



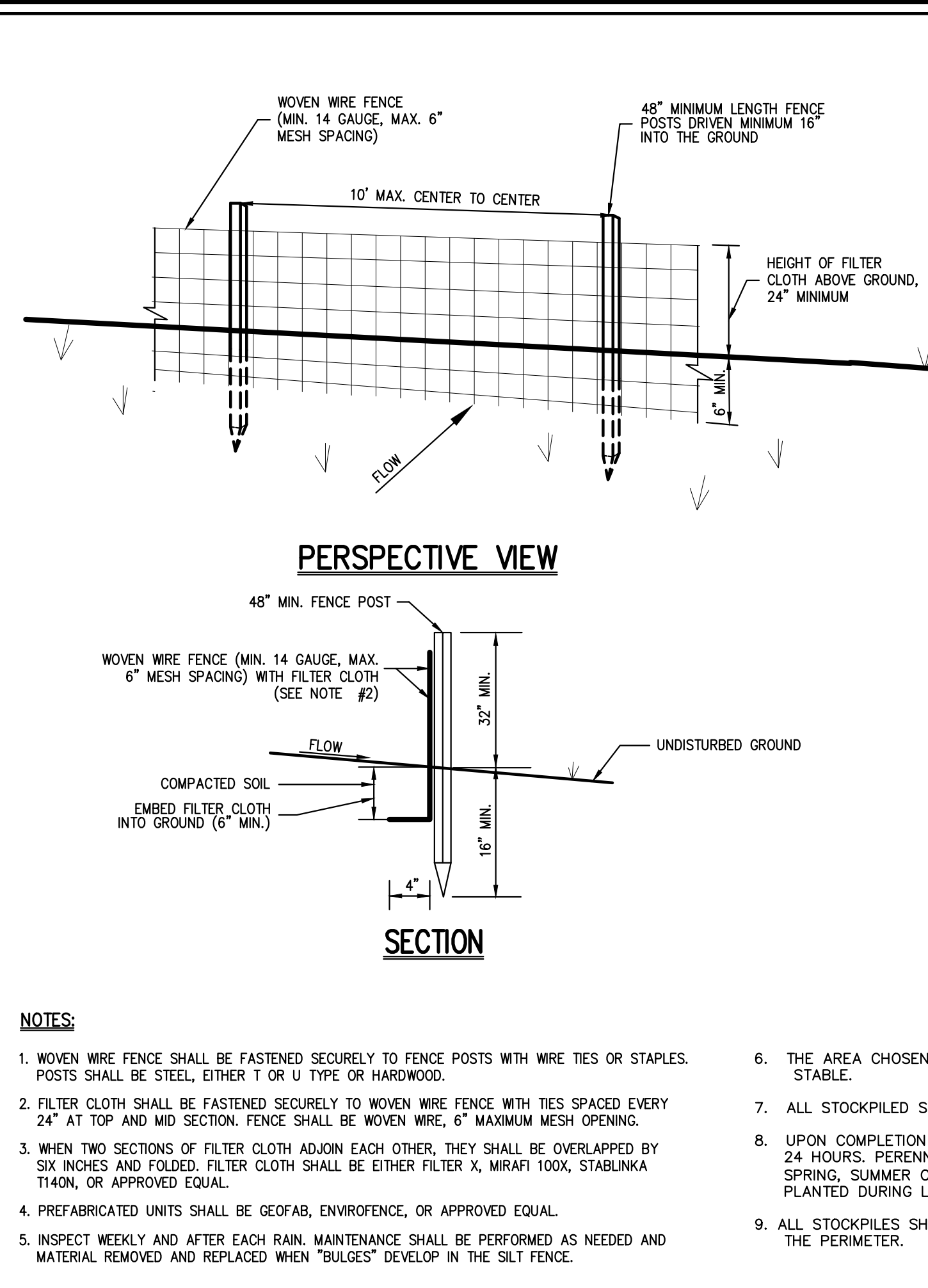
SILT FENCE

1



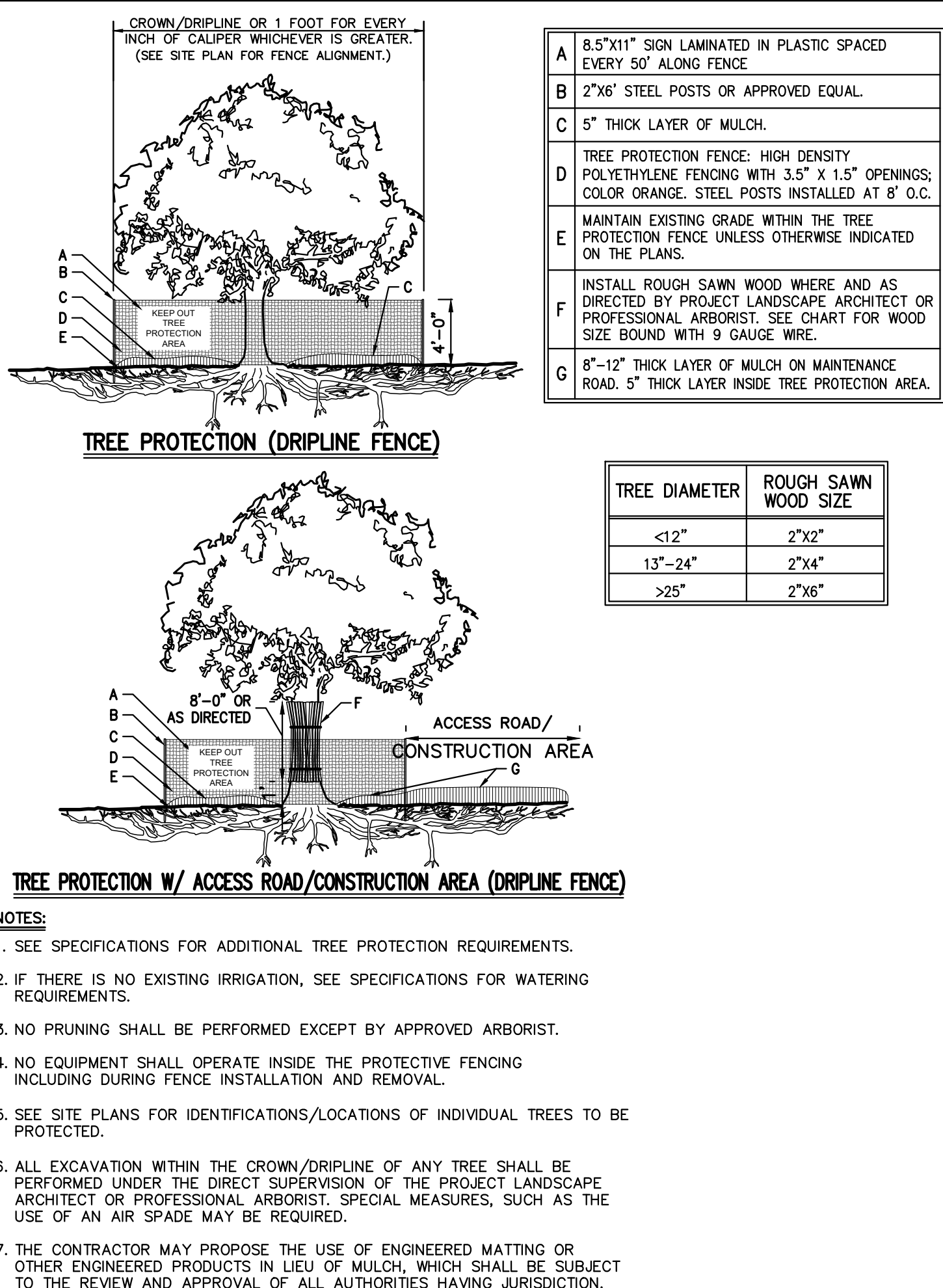
SILT SACK

4



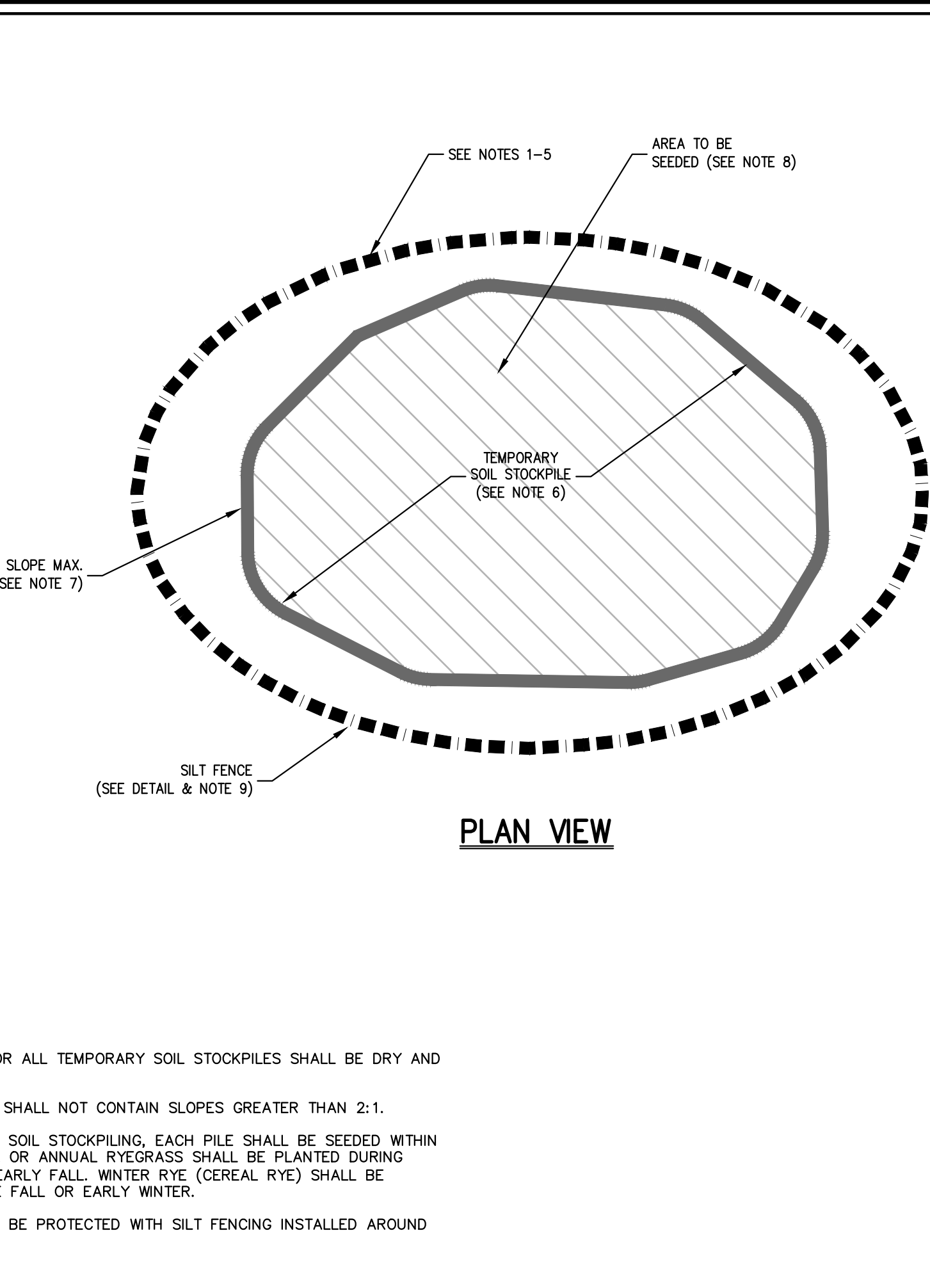
TEMPORARY SOIL STOCKPILE WITH SILT FENCE

2



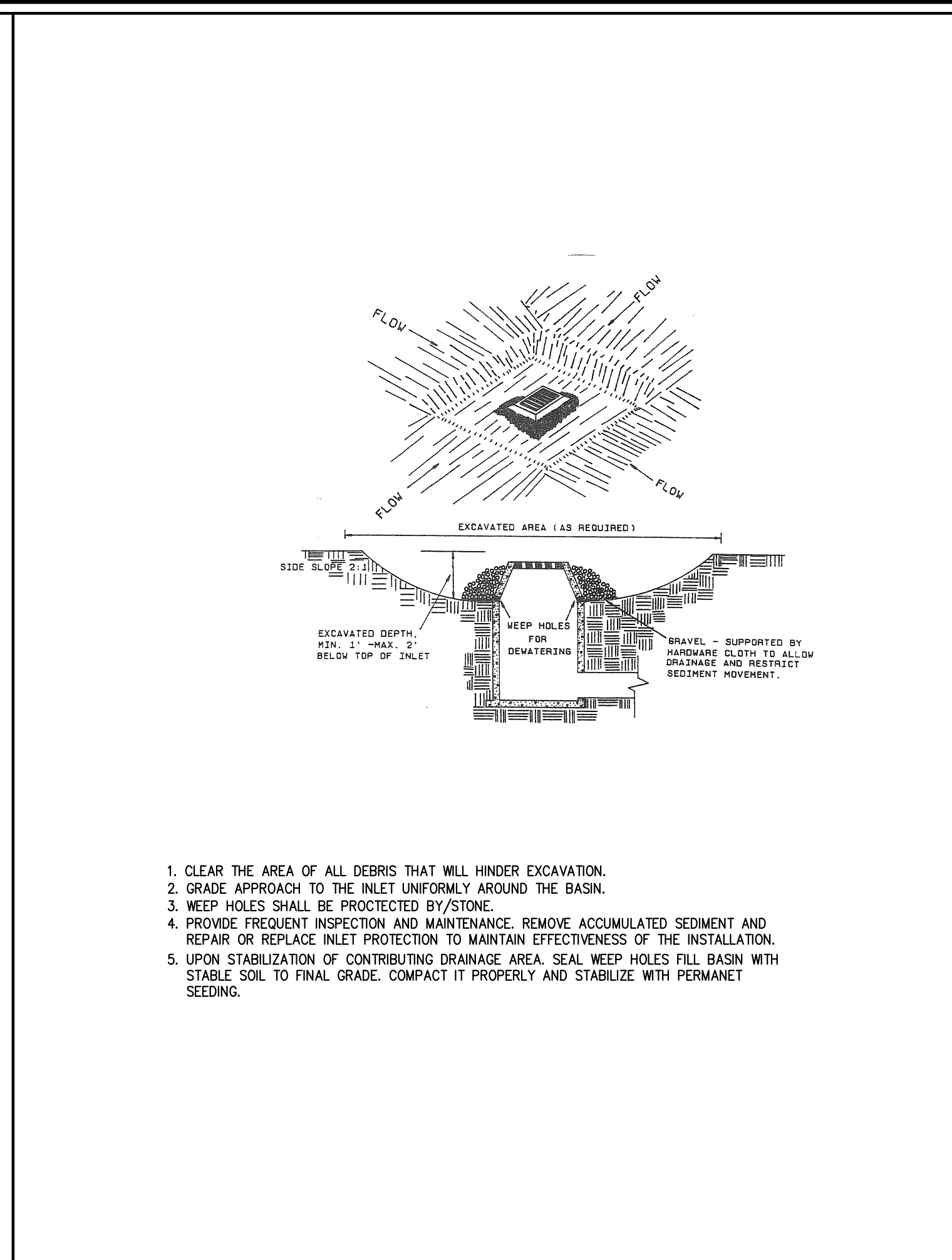
TREE PROTECTION

5



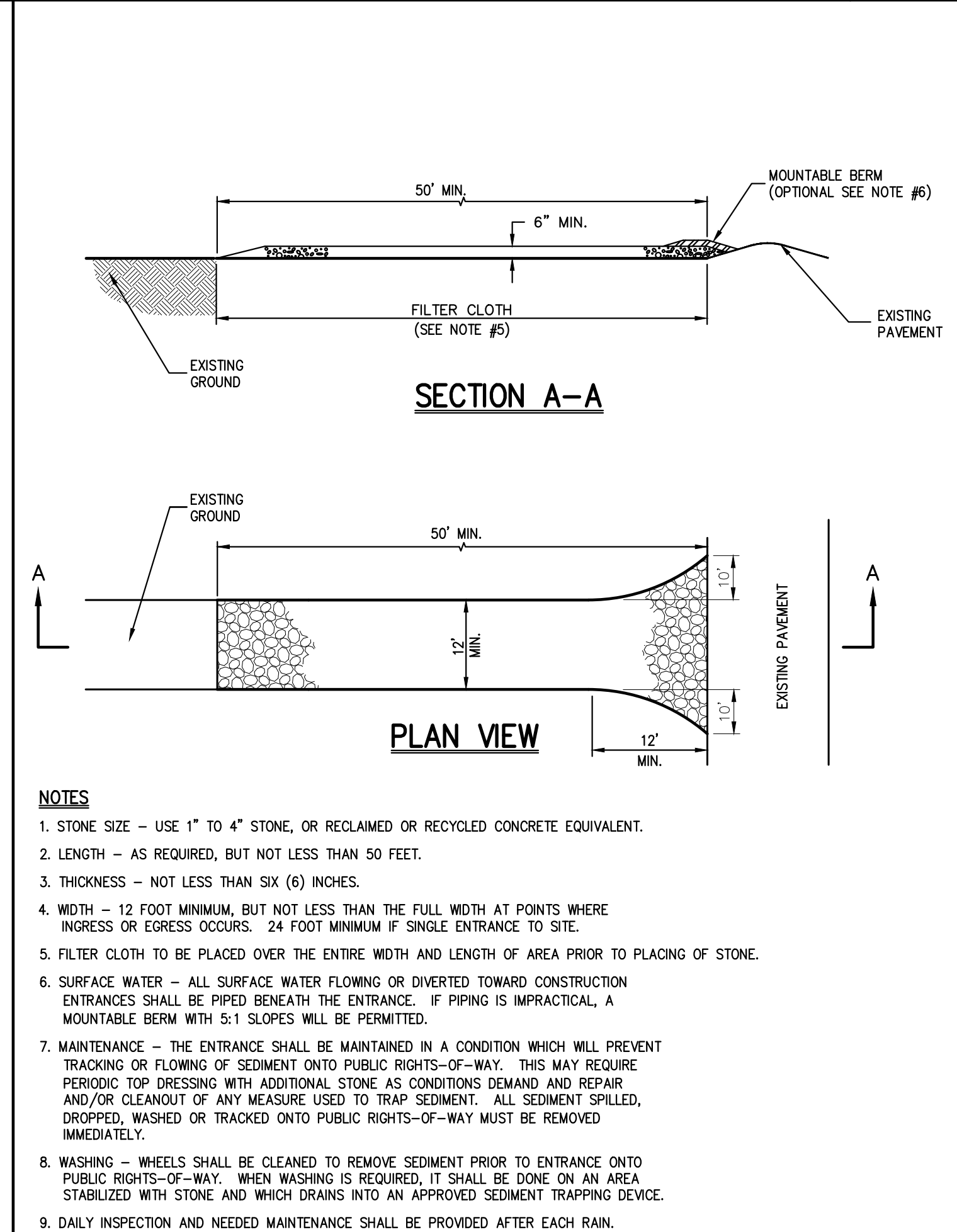
CONSTRUCTION FENCE

6



EXCAVATED DROP INLET PROTECTION

3



STABILIZED CONSTRUCTION ENTRANCE

7

Date

12/30/19

Revision

1. REVISED PER CITY COMMENTS

No.

1.

2.

REVISED PER CITY COMMENTS

3.

REVISED PER CITY COMMENTS

4.

REVISED PER CITY COMMENTS

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JMC

BEACON COMMONS

16 WEST MAIN STREET

BEACON, NY 12508

CONSTRUCTION DETAILS

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Drawn: BMS

Approved: SS

Scale: NOT TO SCALE

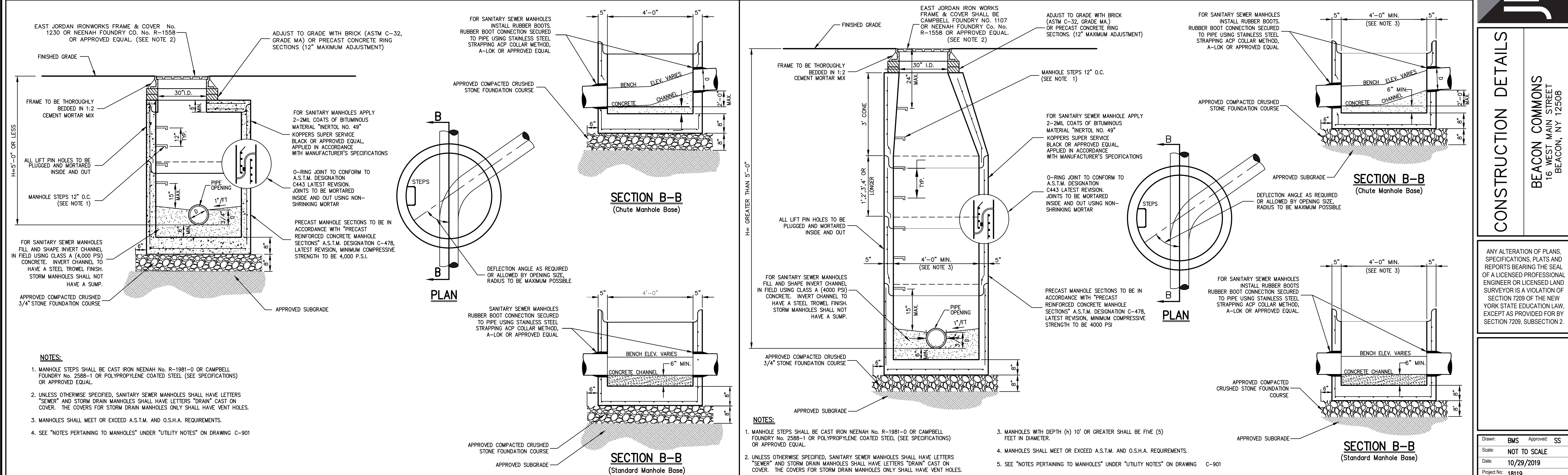
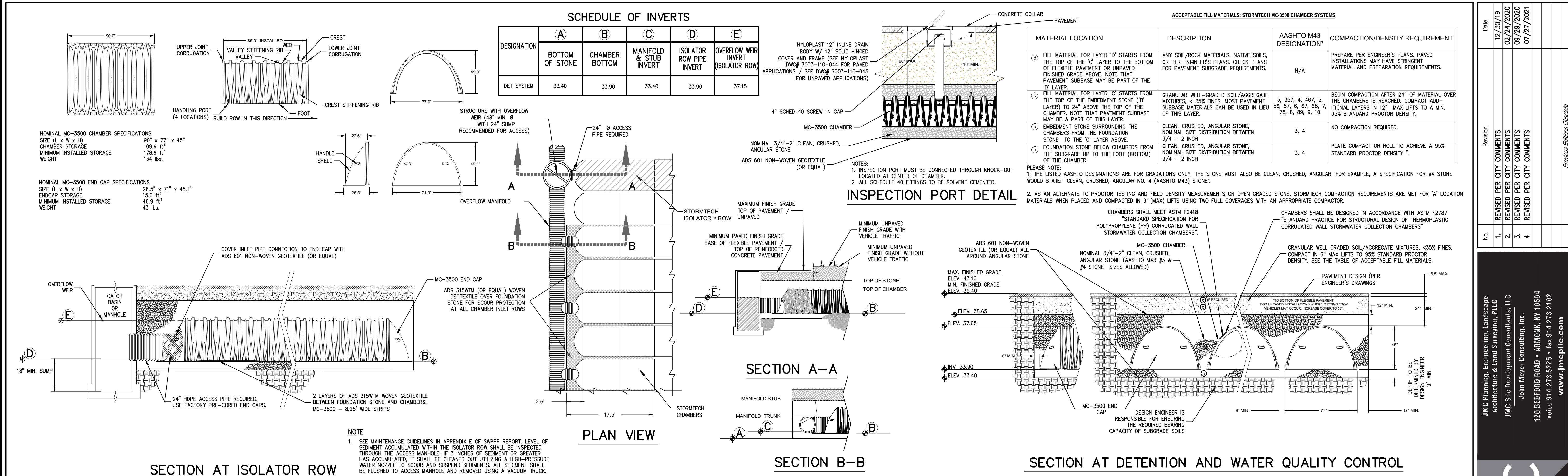
Date: 10/29/2019

Project No: 18119

18119-ITEMS C-900 -

Drawing No: C-900

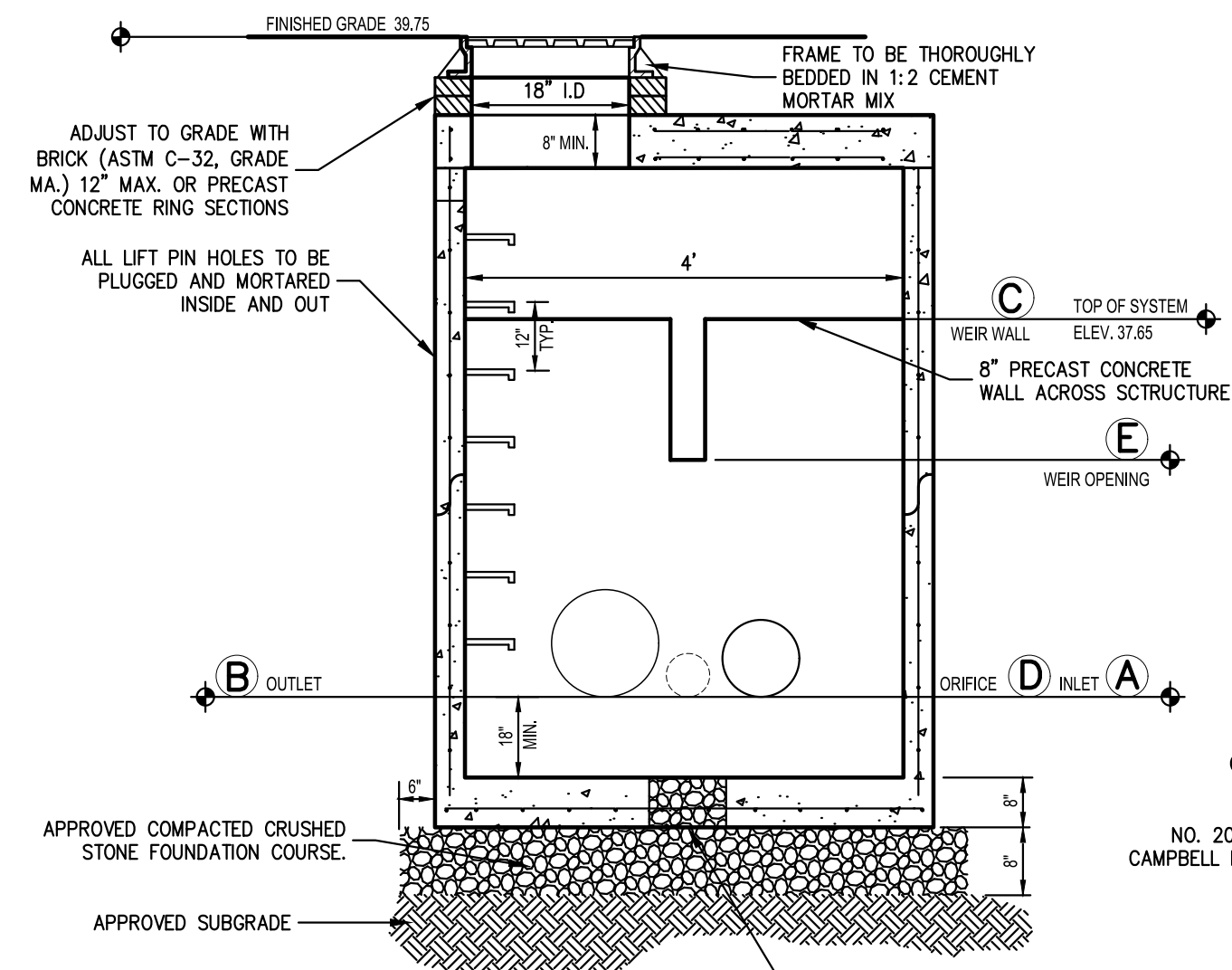
(Sheet 17 of 26)



No.	Revision	Date
1.	REVISED PER CITY COMMENTS	12/30/19
2.	REVISED PER CITY COMMENTS	02/24/2020
3.	REVISED PER CITY COMMENTS	09/29/2020
4.	REVISED PER CITY COMMENTS	07/27/2021

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15
CONSTRUCTION DETAILS
BEACON COMMONS 16 WEST MAIN STREET BEACON, NY 12508
ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.
Drawn: BMS Approved: SS Scale: NOT TO SCALE Date: 10/29/2019 Project No: 18119 1819-ITEMS C-902 - Drawing No: C-902
C-902 (Sheet 19 of 26)



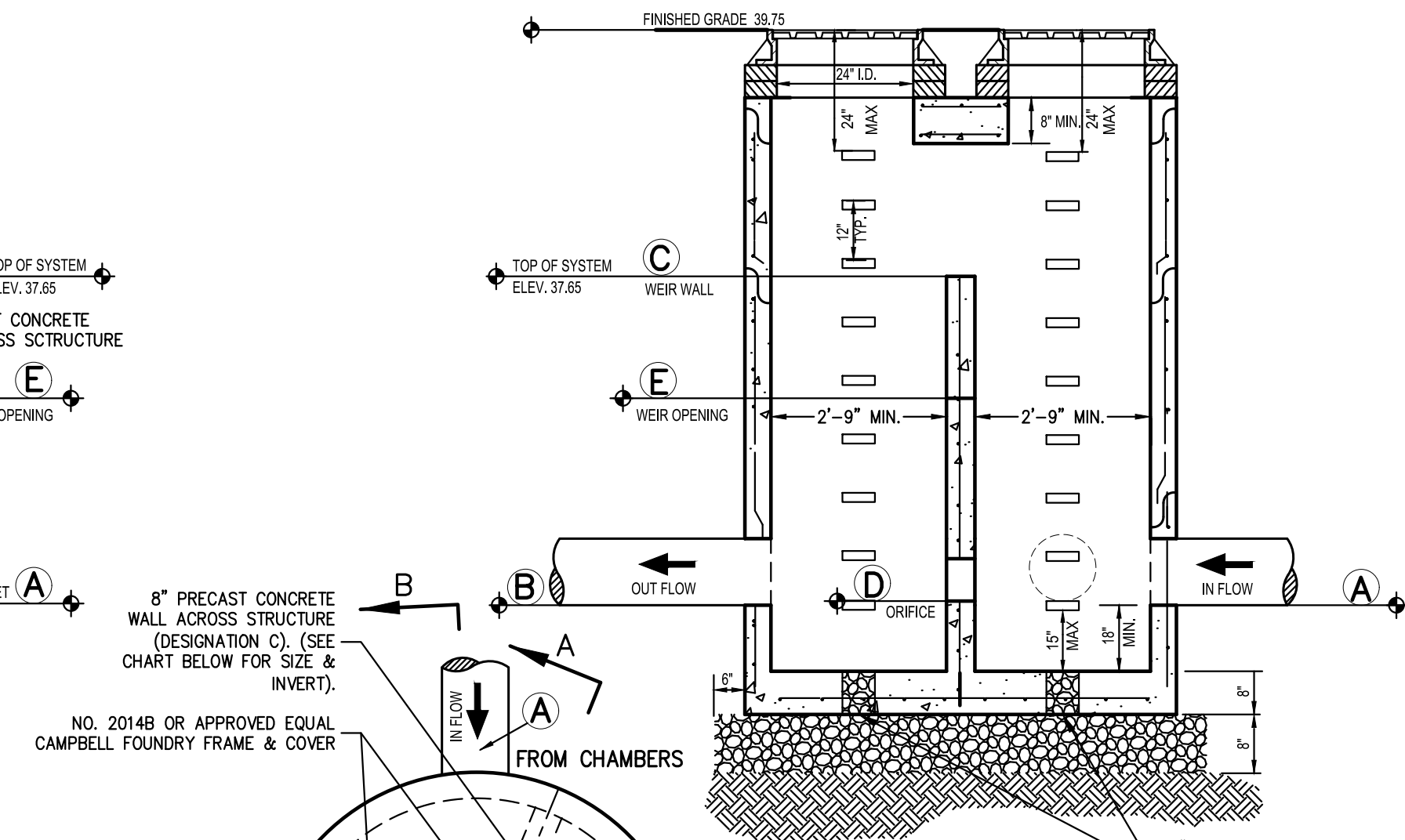
SECTION A-A
N.T.S.

SCHEDULE OF INVERTS

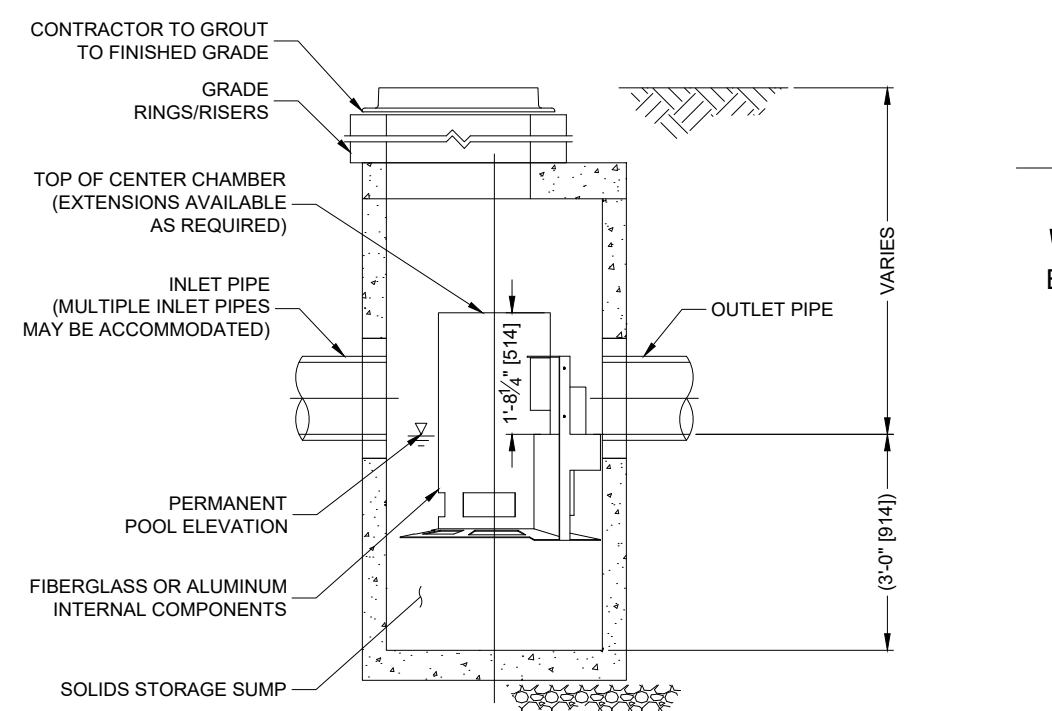
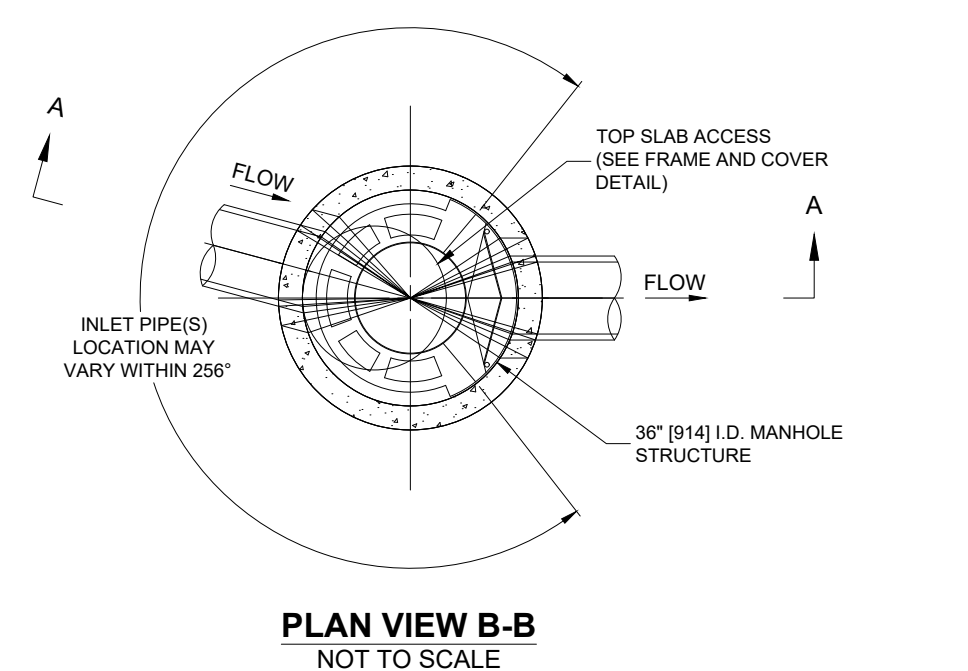
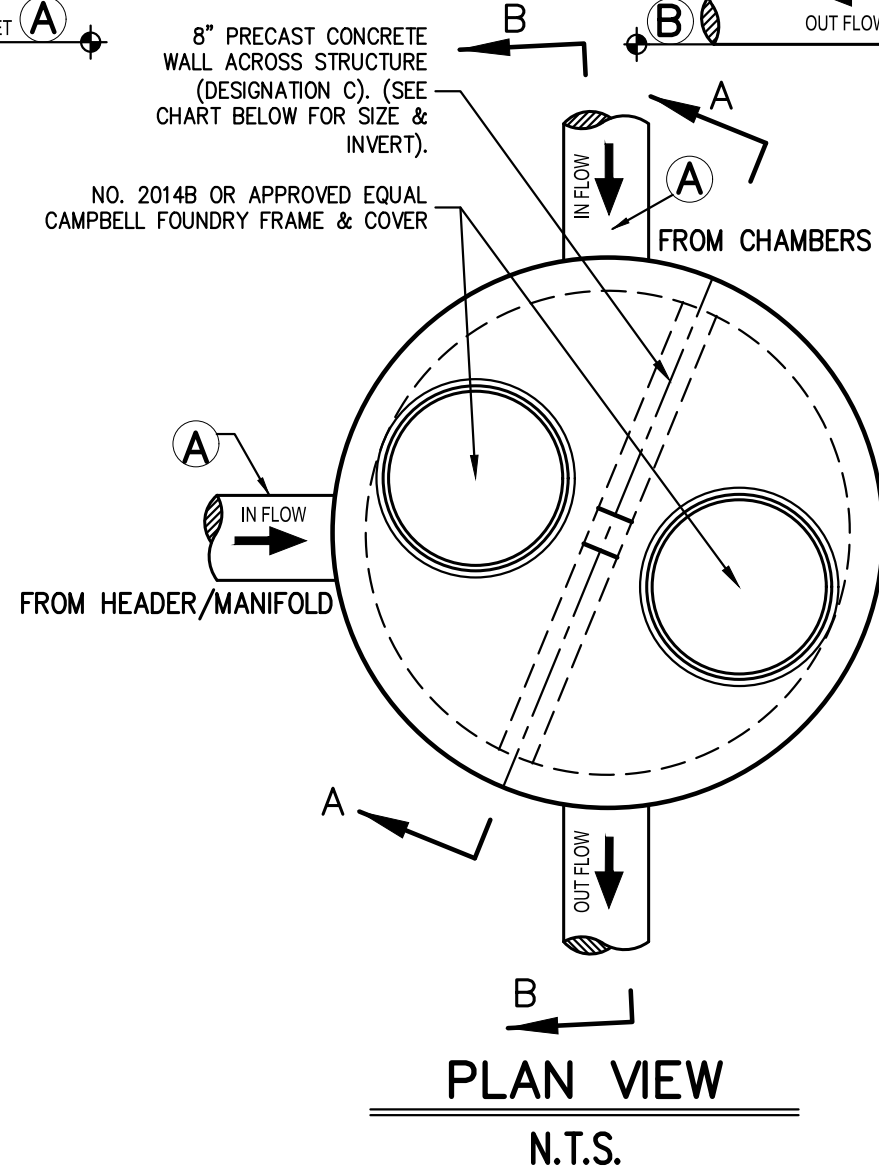
DESIGNATION	(A)		(B)		(C)		(D)		(E)	
	INLET		OUTLET		WEIR TOP		ORIFICE		WEIR OPENING	
	SIZE	INVERT	SIZE	INVERT	SIZE	INVERT	SIZE	ELEVATION	SIZE	ELEVATION
OCS-5-1	15" HDPE	33.40	24" HDPE	33.40	WEIR WALL	37.65	3.5"	33.40	4"	36.50

NOTES:

1. STEPS SHALL BE CAST IRON NEENAH No. R-1981-O OR CAMPBELL FOUNDRY No. 258B-1 OR POLYPROPYLENE COATED STEEL (SEE SPECIFICATIONS) OR APPROVED EQUAL.
2. STRUCTURES SHALL MEET OR EXCEED A.S.T.M AND O.S.H.A REQUIREMENTS.
3. STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE H=20 LOADING.
4. SEE UTILITY NOTES ON DRAWING C-901.



SECTION B-B
N.T.S.



CASCADE
separator™

CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-3 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

- GRATED INLET ONLY (NO INLET PIPE)
- GRATED INLET WITH INLET PIPE OR PIPES
- CURB INLET ONLY (NO INLET PIPE)
- CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC
DATA REQUIREMENTS

STRUCTURE ID	WQS-A3-1
WATER QUALITY FLOW RATE (cfs [L/s])	1.02
PEAK FLOW RATE (cfs [L/s])	1.02
RETURN PERIOD OF PEAK FLOW (yrs)	1
RIM ELEVATION	34.40
PIPE DATA	
INLET PIPE 1	32.15 HOPE 15"
INLET PIPE 2	
OUTLET PIPE	32.15 HOPE 15"

NOTES / SPECIAL REQUIREMENTS:

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

NOTE

1. SEE MAINTENANCE GUIDELINES IN APPENDIX E OF SWPPP REPORT. OPEN ACCESS COVER FOR VISUAL INSPECTION AND MEASURE THE DISTANCE FROM THE STANDING WATER SURFACE TO THE SEDIMENT PILE WITH A MEASURING STICK OR TAPE. IF LESS THAN 4 FEET, INSERT HOSE FROM VACUUM TRUCK INTO THE SUMP AND SCREEN THROUGH BOTH ACCESS COVERS TO CLEAN OUT THE STANDING WATER, LAYER OF OIL, SEDIMENT, TRASH, ETC. THE SCREEN MUST BE POWERWASHED TO ENSURE IT IS FREE OF TRASH AND DEBRIS.

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0'-2' (610), AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M240 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES

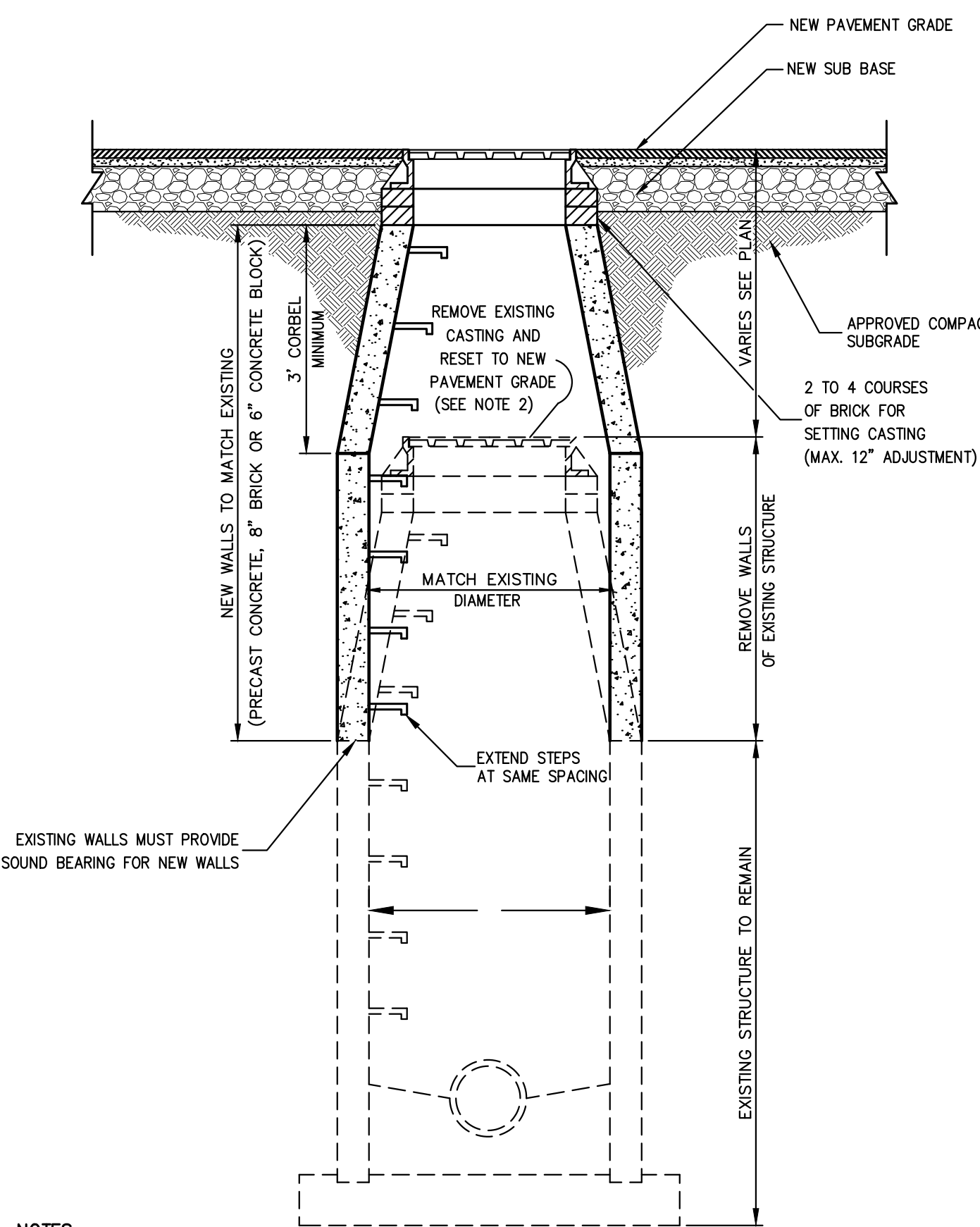
- A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
- C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPES(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
- E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC
www.contechES.com

CS-3
CASCADE SEPARATOR
STANDARD DETAIL

OUTLET CONTROL STRUCTURE

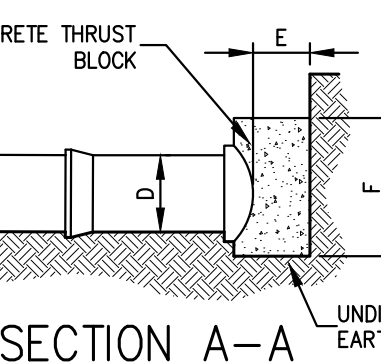
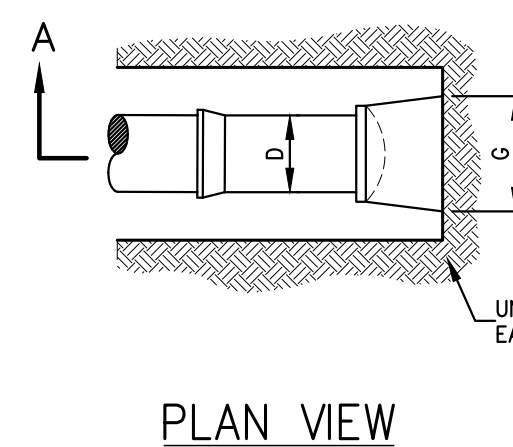
18



NOTES:

1. SEE "UTILITY NOTES" ON DRAWING C-901 WHICH SHALL APPLY TO THIS DETAIL.
2. IF EXISTING CASTING IS UNFIT FOR RESETTING IN THE NEW CONSTRUCTION, AS DETERMINED BY THE OWNER'S FIELD REPRESENTATIVE, CONTRACTOR SHALL FURNISH AND SET NEW CASTING.

END CAP



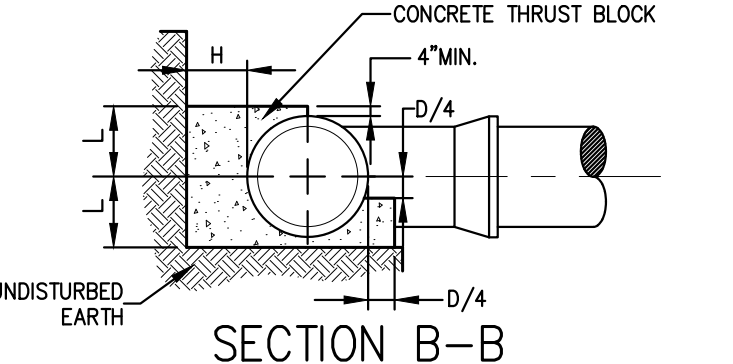
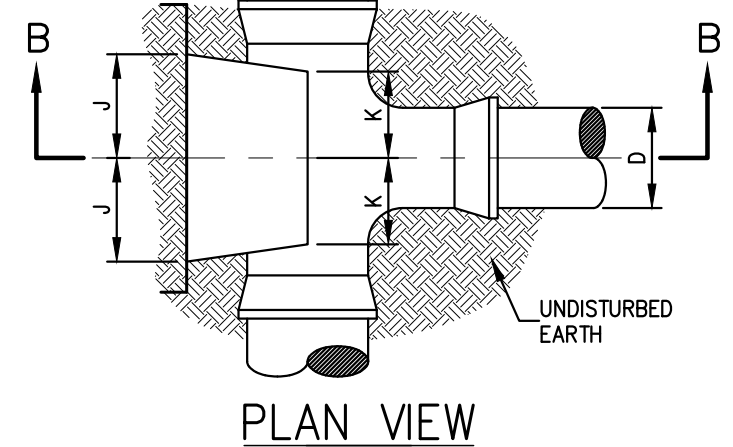
END CAP CHART

D	4"	6"	8"	10"	12"
E	6"	6"	8"	8"	10"
F	12"	12"	1'-4"	1'-8"	2'-0"
G	1'-5"	1'-5"	2'-0"	2'-5"	3'-0"

NOTES:

1. ALL CONCRETE TO BE CLASS A (4,000 PSI).
2. ALL DIMENSIONS ARE MINIMUMS; ALL ANCHOR AND THRUST BLOCKS SHALL BEAR ON UNDISTURBED EARTH.
3. IN ALL CASES SHOWN, MEASUREMENT "D" REFERS TO THE INSIDE OF THE FITTING AT THE FITTING MIDPOINT.
4. ANCHOR AND THRUST BLOCK DIMENSIONS SHOWN ARE MINIMUM FOR 100 PSI WATER PRESSURE AND SOIL RESISTANCE OF 2 KIPS PER SQ. FT. CONTRACTOR SHALL ADJUST FOR OTHER CONDITIONS AND SUBMIT FOR APPROVAL.
5. IF THE OWNER OF THE WATER SYSTEM REQUIRES A METHOD THAT RESTRAINS INDIVIDUAL JOINTS, EACH JOINT THAT FALLS WITHIN THE MINIMUM RESTRAINED LENGTH, MEASURED FROM THE CENTER OF THE FITTING, AS SHOWN ON THESE SHEETS SHALL BE RESTRAINED, AND SHALL WITHSTAND THE MAXIMUM PRESSURE APPLIED TO THE SYSTEM.
6. CLASS A CONCRETE SHALL NOT BE PLACED UNDER WATER. THE CONTRACTOR SHALL Dewater THE EXCAVATION OR PLACE TYPE C CONCRETE USING APPROPRIATE UNDERWATER PLACEMENT TECHNIQUES.

TEE

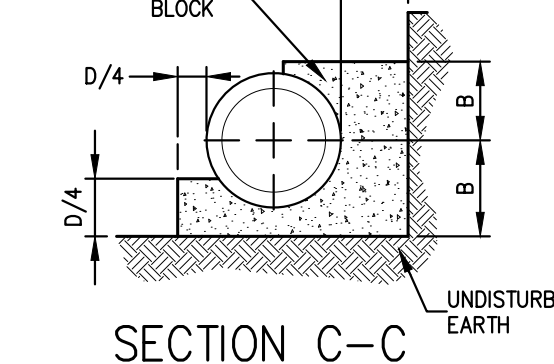
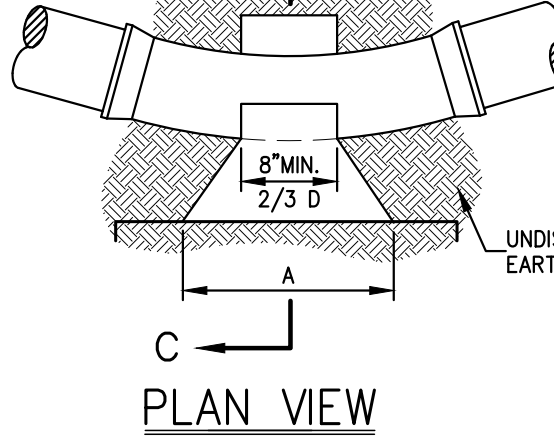


TEE CHART

D	4"	6"	8"	10"	12"
H	6"	7"	9"	10"	12"
L	8"	8"	10"	12"	1'-3"
J	7"	7"	9"	12"	1'-2"
K	6"	6"	8"	8"	8"

7. CONCRETE FOR THRUST BLOCKS SHALL NOT BE ALLOWED TO COVER OR INTERFERE WITH JOINT OR RESTRAINT HARDWARE, PLASTIC SHEETING OR BUILDING FELT MAY BE PLACED OVER PIPE OR FITTINGS TO PREVENT CONCRETE FROM ADHERING TO SURFACES.
8. FOR BENDS, BEARING AREA SHALL BE PARALLEL TO THE EDGE OF THE FITTING AT THE FITTING MIDPOINT.
9. FOR TEES, BEARING AREA SHALL BE PERPENDICULAR TO THE BRANCH (SINGLE LEG) AXIS.
10. FOR REDUCERS, BEARING AREA SHALL BE PERPENDICULAR TO THE FITTING AXIS. THE MINIMUM THICKNESS ALONG THE FITTING AXIS SHALL BE 1'-0" OR THE LENGTH BETWEEN THE BELLS, WHICHEVER IS SMALLER.
11. THRUST RESTRAINTS FOR SIZES OR FITTINGS NOT SHOWN ON THESE SHEETS WILL BE DESIGNED ON A CASE BY CASE BASIS, AND WILL BE SHOWN IN THE CONTRACT DOCUMENTS.

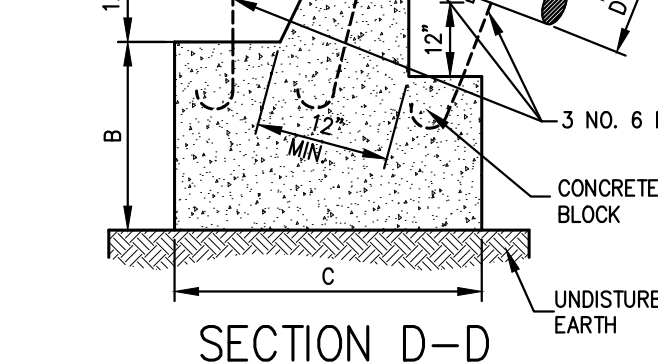
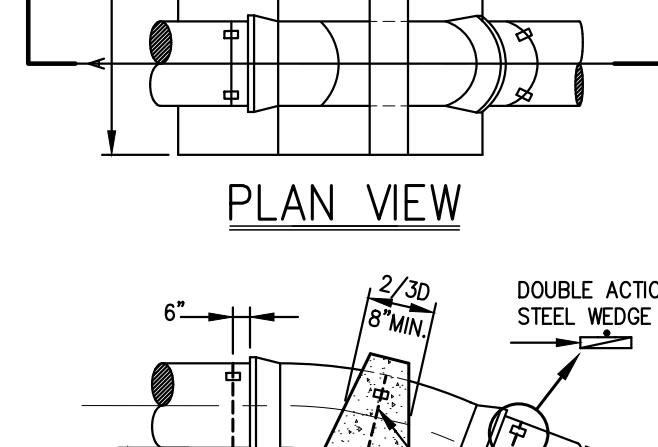
HORIZONTAL BEND



HORIZONTAL BEND CHART

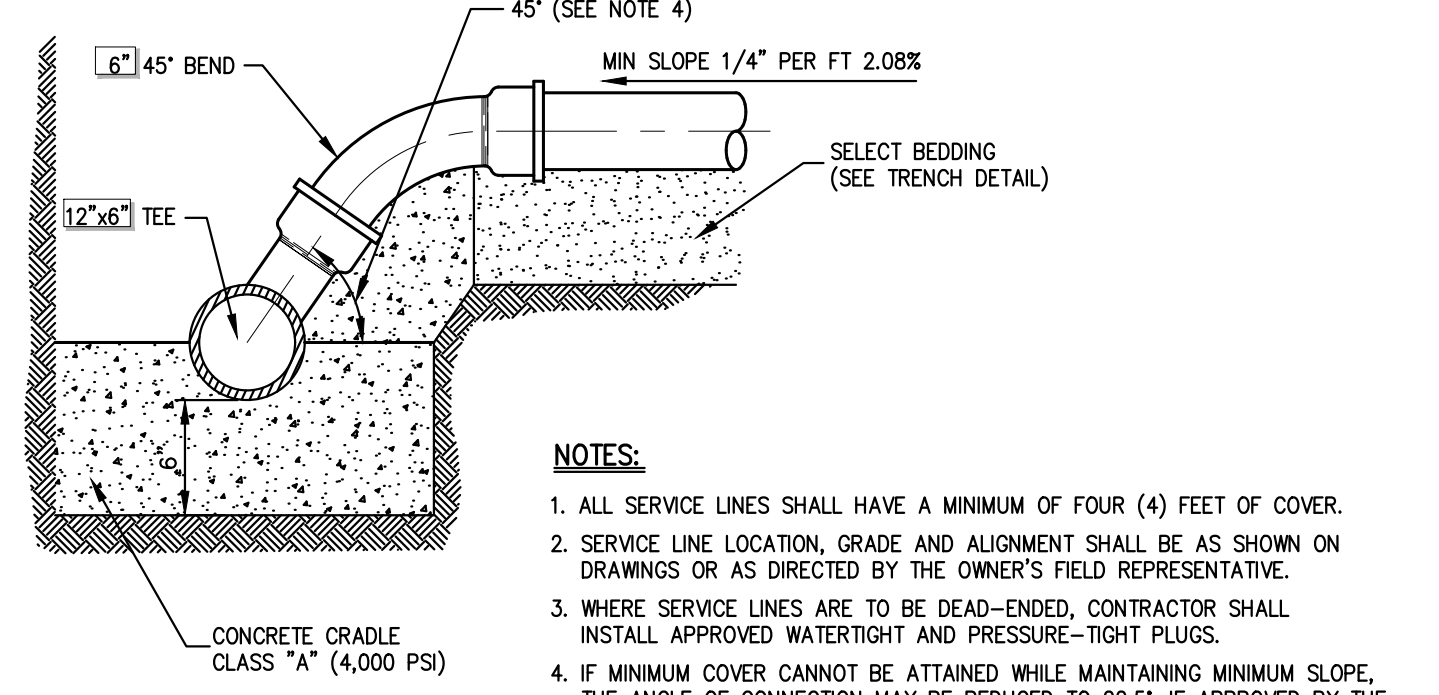
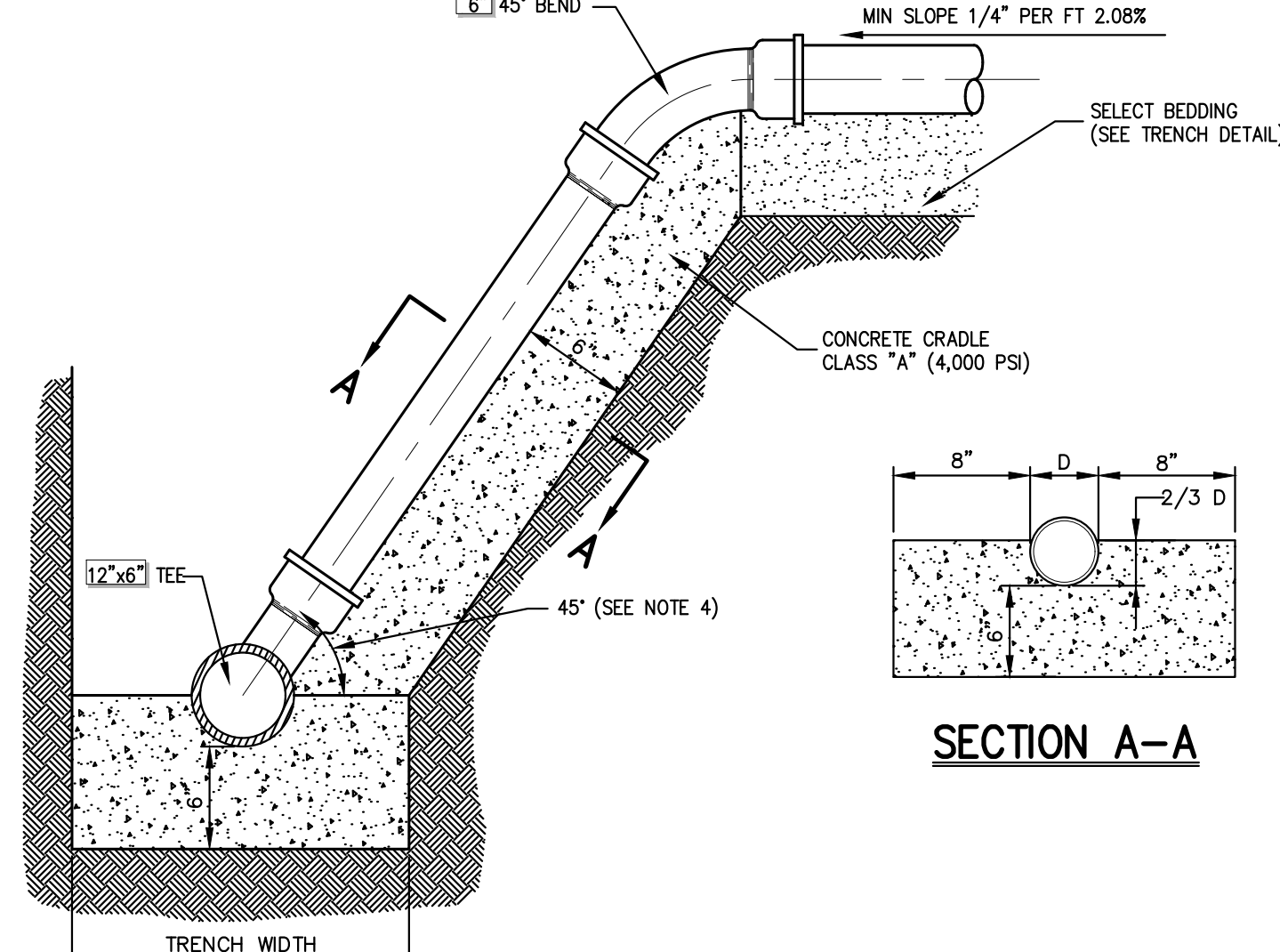
BEND (DEGREES)	4"	6"	8"	10"	12"
1/32 (14)	A 8"	8"	8"	10"	12"
	B 7"	7"	8"	9"	10"
	C 7"	7"	7"	8"	8"
	A 9"	9"	12"	1'-6"	1'-9"
1/16 (22)	B 7"	7"	8"	9"	10"
	C 8"	8"	9"	10"	11"
	A 1'-3"	1'-3"	1'-8"	2'-1"	2'-6"
1/8 (45)	B 7"	7"	8"	9"	11"
	C 8"	8"	9"	10"	11"
	A 2'-0"	2'-0"	2'-6"	3'-0"	3'-6"
1/4 (90)	B 7"	7"	9"	12"	1'-3"
	C 2'-0"	2'-0"	1'-9"	1'-8"	1'-7"

VERTICAL BEND



VERTICAL BEND CHART

BEND (DEGREES)	4"	6"	8"	10"	12"	16"
1/32 (14)	A 1'-6"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"
	B 1'-3"	1'-3"	1'-9"	1'-3"	2'-0"	2'-0"
	C 2'-0"	2'-0"	2'-6"	2'-9"	3'-0"	4'-0"
	A 2'-0"	2'-0"	3'-4"	3'-8"	4'-0"	4'-4"
1/16 (22)	B 1'-9"	1'-9"	2'-3"	2'-6"	2'-6"	2'-6"
	C 2'-6"	2'-6"	2'-8"	4'-0"	4'-0"	6'-6"
	A 2'-6"	2'-6"	3'-0"	4'-0"	4'-6"	5'-2"
1/8 (45)	B 2'-6"	2'-6"	2'-9"	3'-0"	3'-6"	4'-0"
	C 3'-0"	3'-0"	4'-0"	4'-6"	4'-9"	6'-6"



NOTES:

1. ALL SERVICE LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
2. SERVICE LINE LOCATION, GRADE AND ALIGNMENT SHALL BE AS SHOWN ON DRAWINGS OR AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.
3. WHERE SERVICE LINES ARE TO BE DEAD-ENDED, CONTRACTOR SHALL INSTALL APPROVED WATERTIGHT AND PRESSURE-TIGHT PLUGS.
4. IF MINIMUM COVER CANNOT BE ATTAINED WHILE MAINTAINING MINIMUM SLOPE, THE ANGLE OF CONNECTION MAY BE REDUCED TO 22.5° IF APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND GOVERNING BODY WITH JURISDICTION.
5. SANITARY SEWER SERVICE LINE INCLUDING FITTINGS SHALL BE PVC, SDR 35.

EXISTING MANHOLE
RECONSTRUCTED AND RAISED

20

ANCHOR AND THRUST BLOCKS

21

SANITARY SEWER
SERVICE CONNECTION

22

NOT FOR CONSTRUCTION

CONSTRUCTION DETAILS

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

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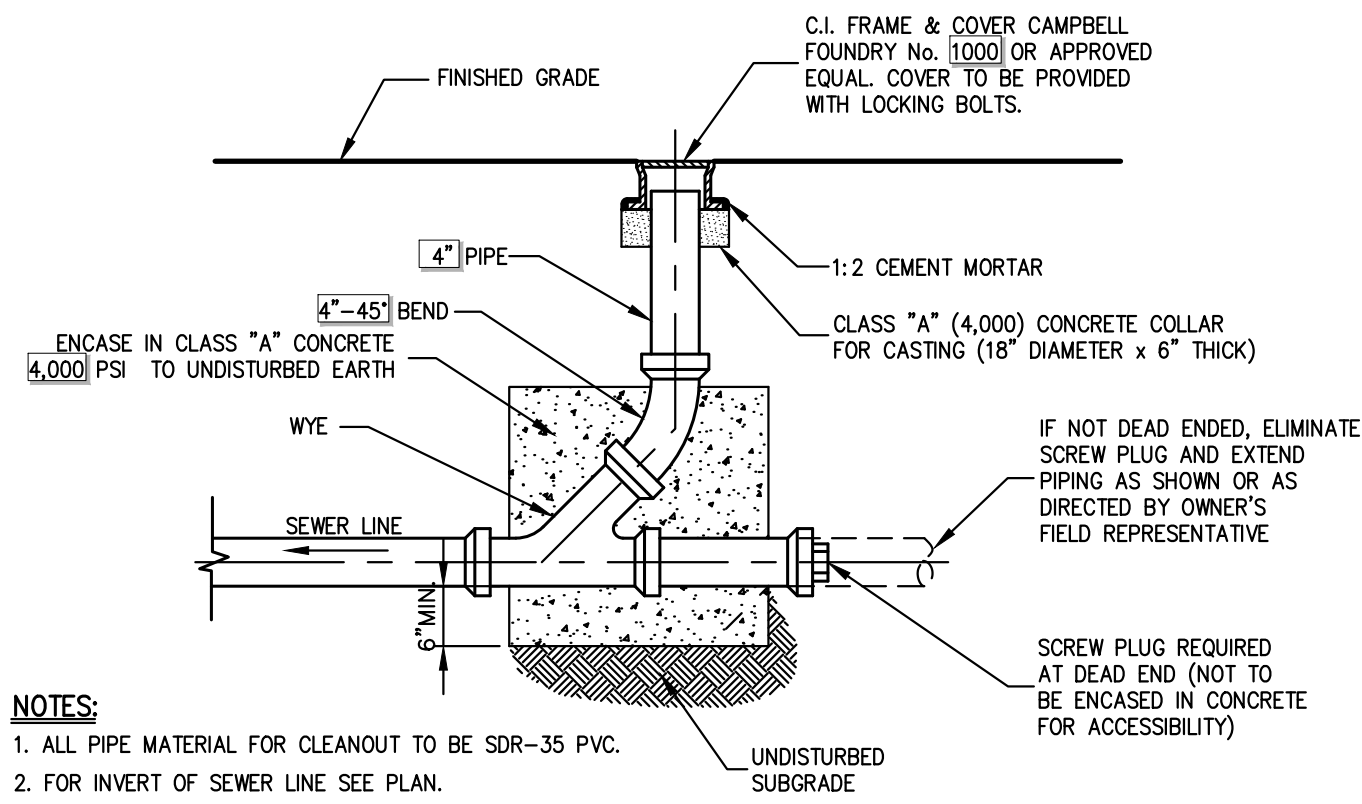
Drawn: **BMS** Approved: **SS**
Scale: **NOT TO SCALE**
Date: **10/29/2019**
Project No: **18119**
18119-ITEMS C-903 -
Drawing No: **C-903**
(Sheet 20 of 26)

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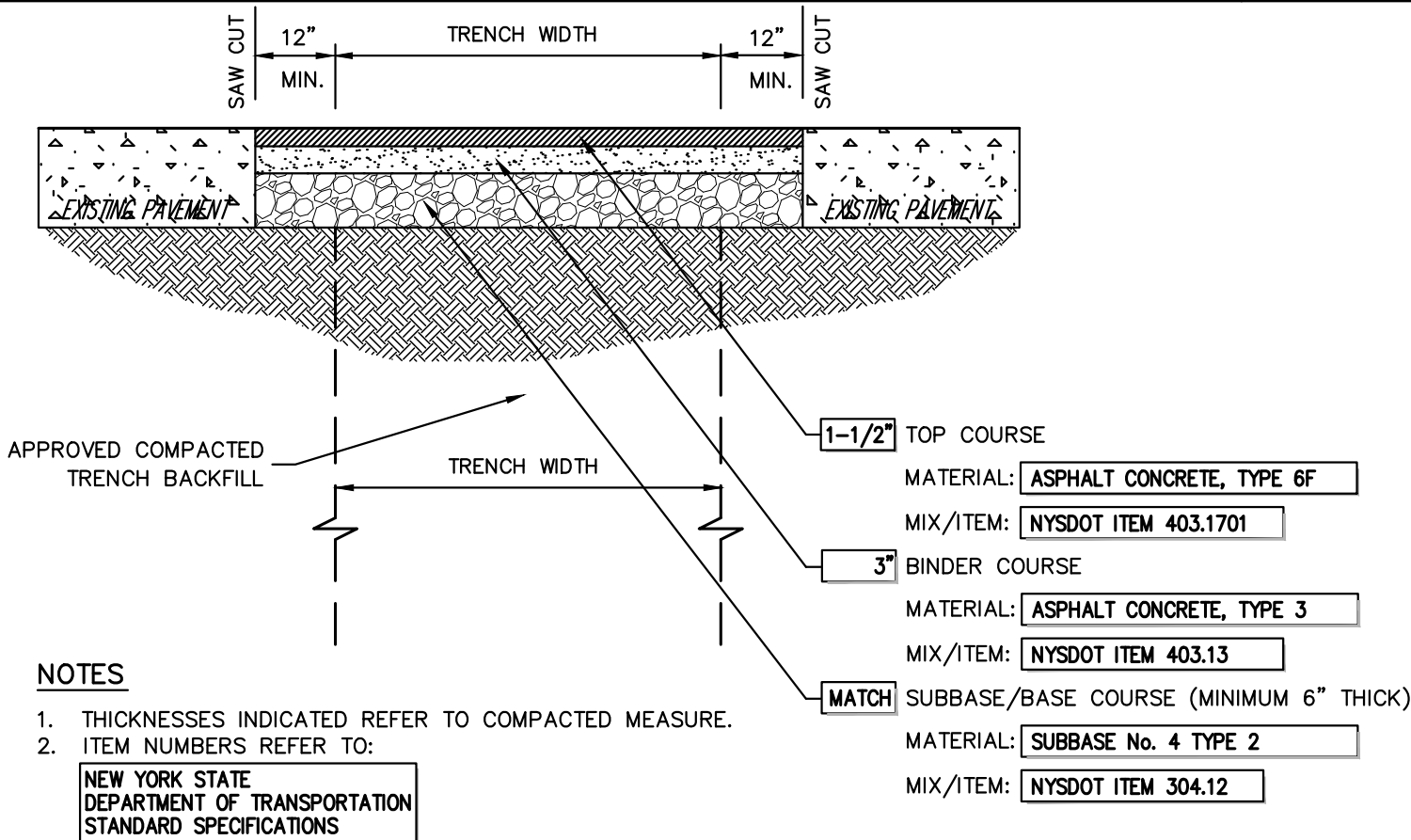
Previous Editions Obsolete



- NOTES:**
1. ALL PIPE MATERIAL FOR CLEANOUT TO BE SDR-35 PVC.
 2. FOR INVERT OF SEWER LINE SEE PLAN.

CLEANOUT W/O MANHOLE

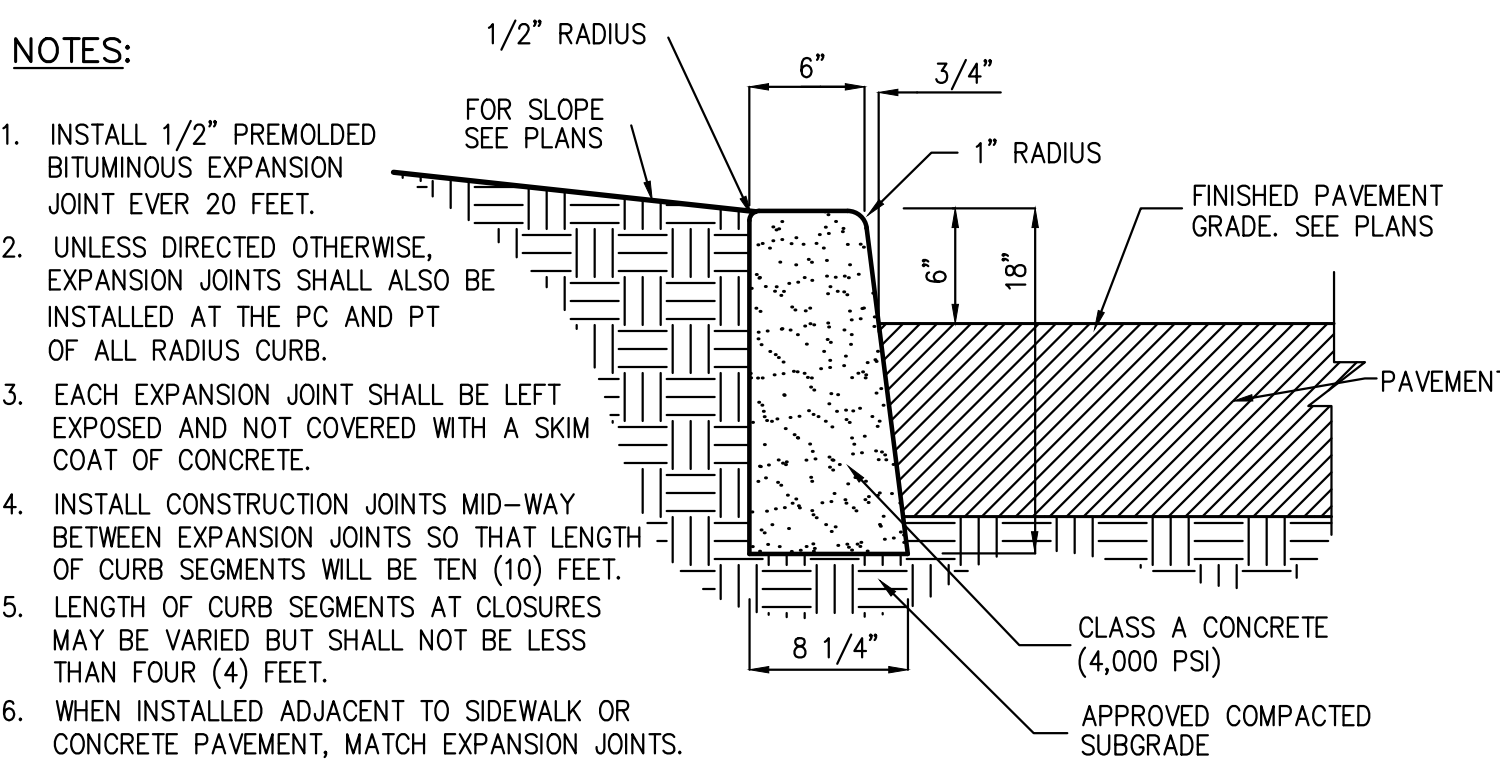
23



- NOTES:**
1. THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
 2. ITEM NUMBERS REFER TO:
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS

PAVEMENT REPLACEMENT OVER TRENCH

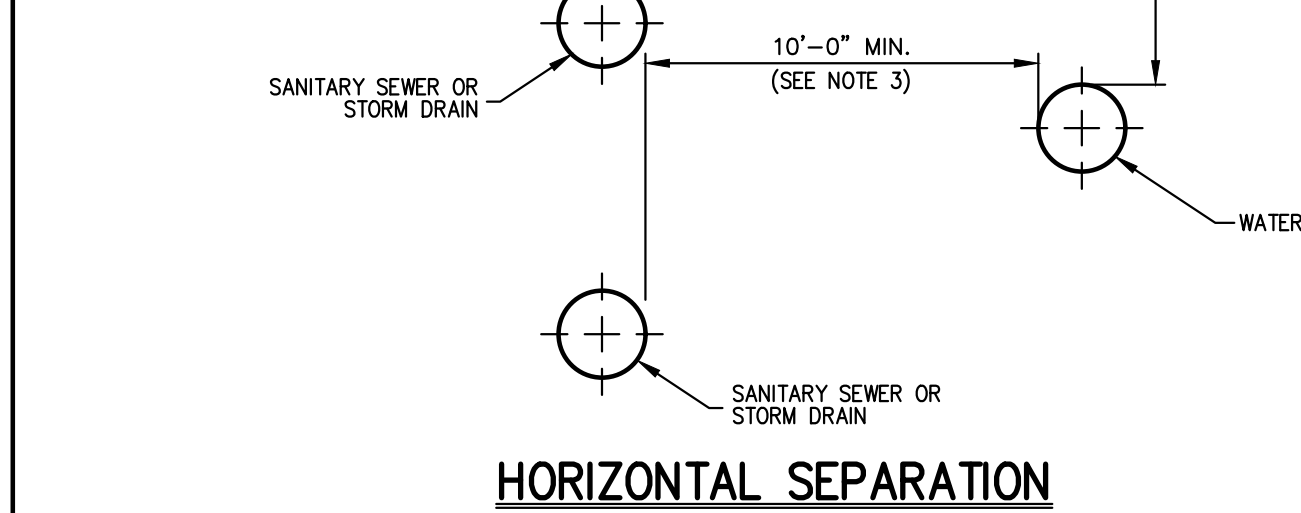
27



- NOTES:**
1. INSTALL 1/2" PREMOULDED BITUMINOUS EXPANSION JOINT EVERY 20 FEET.
 2. UNLESS DIRECTED OTHERWISE, EXPANSION JOINTS SHALL ALSO BE INSTALLED AT THE PC AND PT OF ALL RADII CURB.
 3. EACH EXPANSION JOINT SHALL BE LEFT EXPOSED AND NOT COVERED WITH A SKIM COAT OF CONCRETE.
 4. INSTALL CONSTRUCTION JOINTS MID-WAY BETWEEN EXPANSION JOINTS SO THAT LENGTH OF CURB SEGMENTS WILL BE TEN (10) FEET.
 5. LENGTH OF CURB SEGMENTS AT CLOSURES MAY BE VARIED BUT SHALL NOT BE LESS THAN FOUR (4) FEET.
 6. WHEN INSTALLED ADJACENT TO SIDEWALK OR CONCRETE PAVEMENT, MATCH EXPANSION JOINTS.

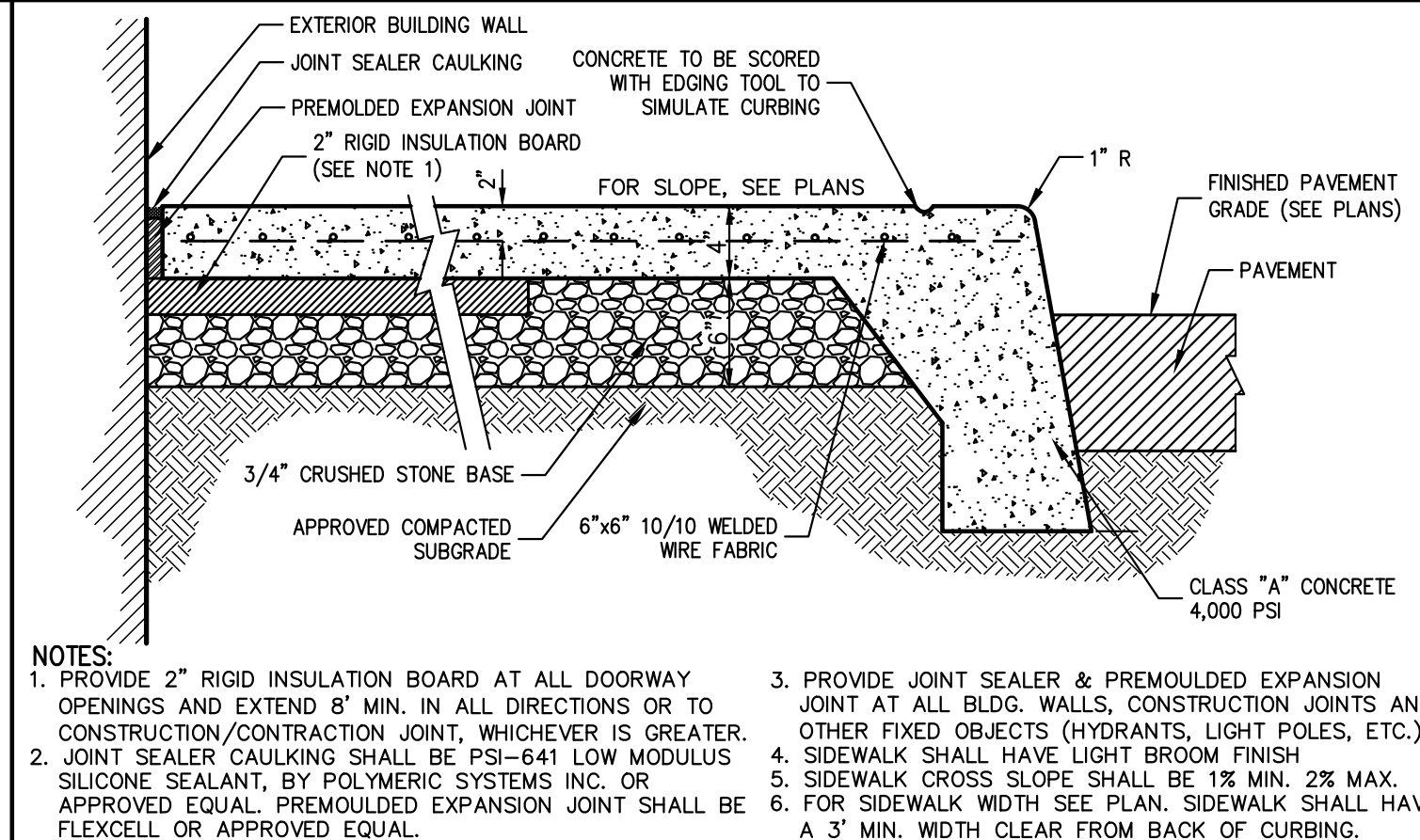
CAST-IN-PLACE CONCRETE CURB

28



HORIZONTAL SEPARATION

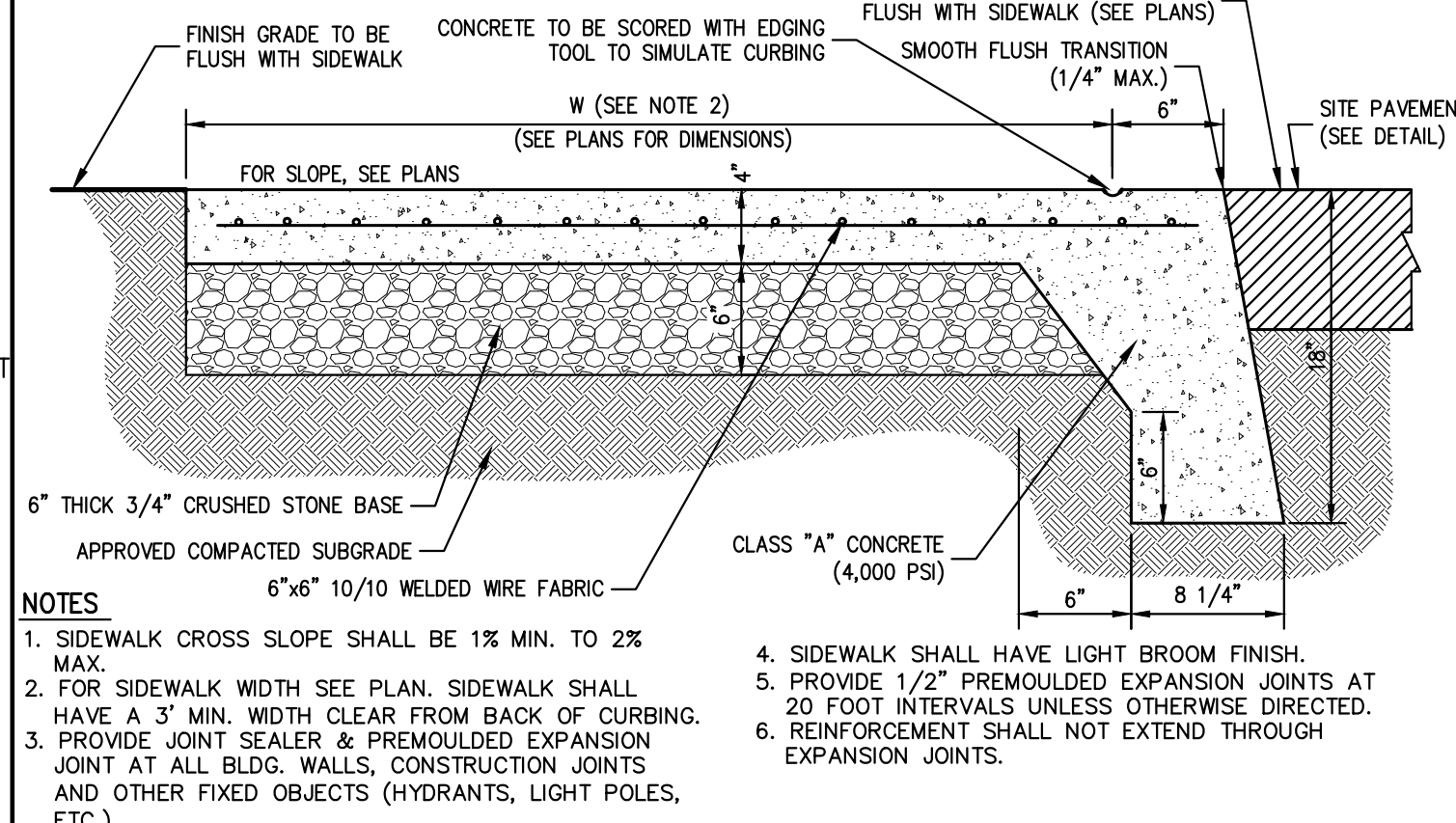
- NOTES:**
1. NORMAL CONDITIONS:
 - A. WHENEVER A WATER MAIN MUST CROSS OVER OR UNDER A SANITARY SEWER OR STORM DRAIN, THE PIPES SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION BETWEEN THEM OF AT LEAST 18 INCHES, AS MEASURED FROM THE BOTTOM OF THE HIGHER PIPE TO THE CROWN OF THE LOWER PIPE.
 - B. FULL LENGTH OF WATER PIPE MUST BE CENTERED AT THE POINT OF CROSSING; NO JOINTS WILL BE PERMITTED AT THE POINT OF CROSSING.
 2. WATER MAIN CROSSING UNDER SANITARY SEWERS:
 - A. VERTICAL SEPARATION OF 18 INCHES MUST BE PROVIDED.
 - B. ADEQUATE STRUCTURAL SUPPORT MUST BE PROVIDED FOR THE SANITARY SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING.
 - C. FULL LENGTH OF WATER PIPE MUST BE CENTERED AT THE POINT OF CROSSING; NO JOINTS WILL BE PERMITTED AT THE POINT OF CROSSING.
 3. IF DURING CONSTRUCTION IT IS FOUND THAT THE REQUIRED SEPARATION OF WATER MAINS, SANITARY SEWERS, STORM SEWERS AND BUILDING SANITARY SEWERS CANNOT BE MET, THE CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL IN WRITING ADVISE JMC OF THE SPECIFIC CONDITIONS ENCOUNTERED. APPROVAL OF ALTERNATIVE SEPARATION CRITERIA SHALL BE OBTAINED FROM THE DUTCHESS COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION.



- NOTES:**
1. PROVIDE 2" RIGID INSULATION BOARD AT ALL DOORWAY OPENINGS AND EXTEND 8" MIN. IN ALL DIRECTIONS OR TO CONSTRUCTION/CONTRACTION JOINT, WHICHEVER IS GREATER.
 2. JOINT SEALER CAULKING SHALL BE PSI-641 LOW MODULUS SILICONE SEALANT, BY POLYMERIC SYSTEMS INC. OR APPROVED EQUAL. PREMOULDED EXPANSION JOINT SHALL BE FLEXCELL OR APPROVED EQUAL.
 3. PROVIDE JOINT SEALER & PREMOULDED EXPANSION JOINT AT ALL BLDG. WALLS, CONSTRUCTION JOINTS AND OTHER FIXED OBJECTS (HYDRANTS, LIGHT POLES, ETC.)
 4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH
 5. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. 2% MAX.
 6. FOR SIDEWALK WIDTH SEE PLAN. SIDEWALK SHALL HAVE A 3' MIN. WIDTH CLEAR FROM BACK OF CURBING.

BUILDING PERIMETER MONOLITHIC CURB & SIDEWALK

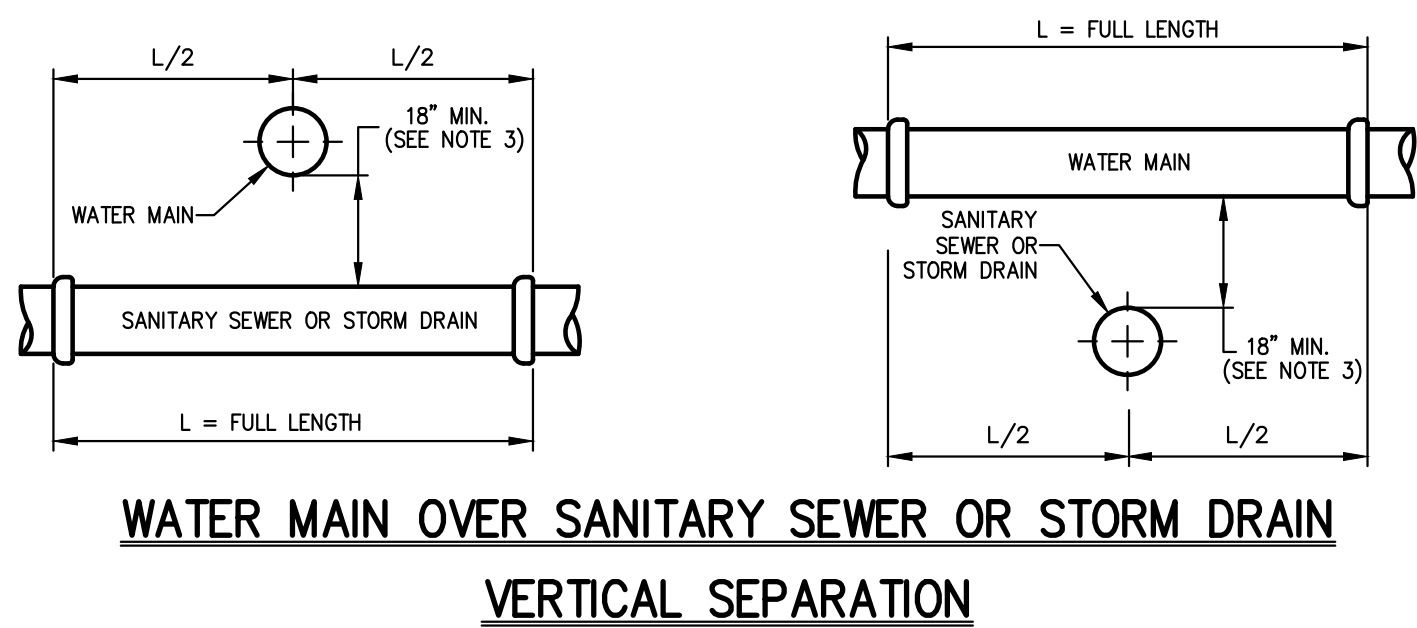
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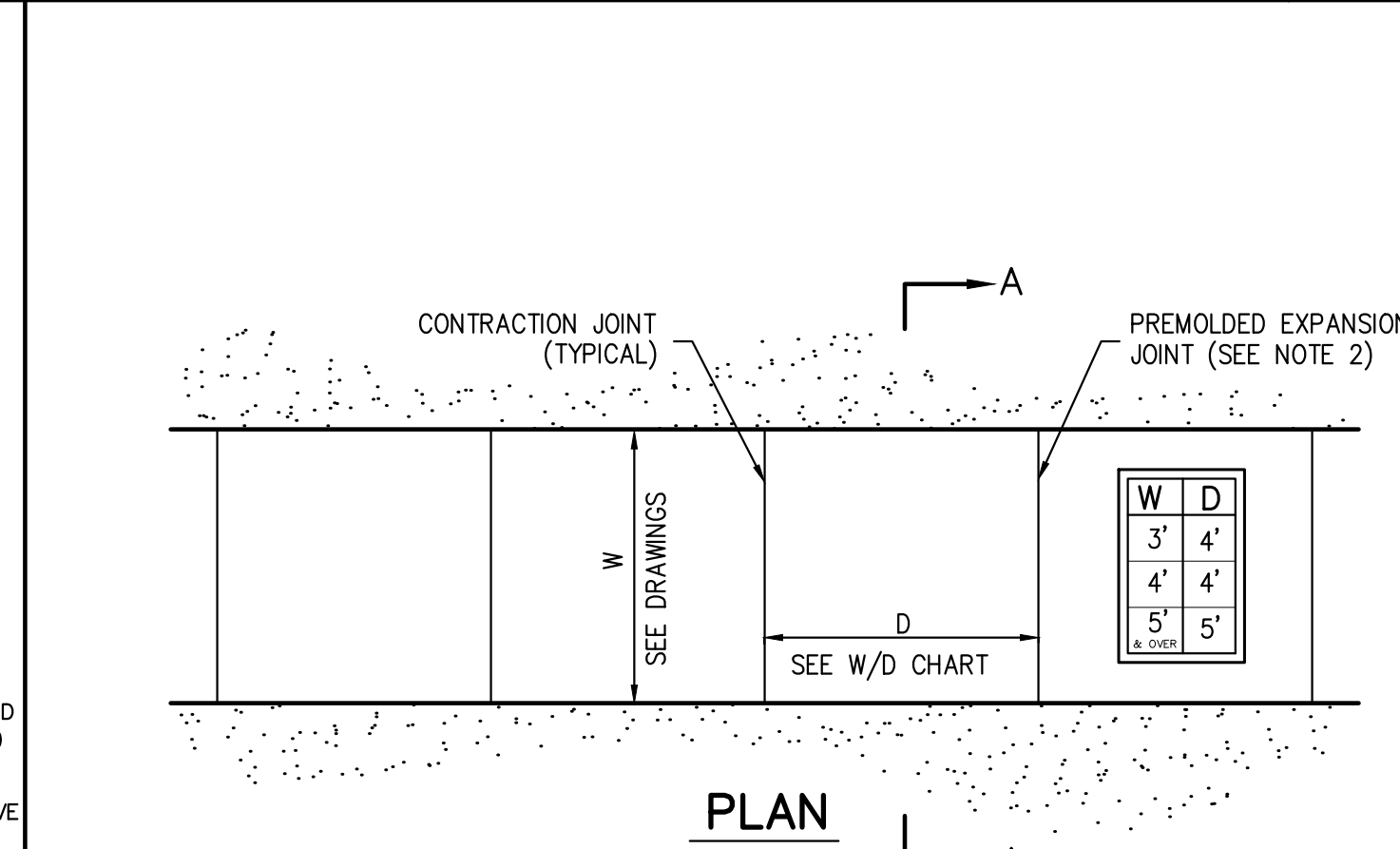
- NOTES:**
1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
 2. FOR SIDEWALK WIDTH SEE PLAN. SIDEWALK SHALL HAVE A 3' MIN. WIDTH CLEAR FROM BACK OF CURBING.
 3. PROVIDE JOINT SEALER & PREMOULDED EXPANSION JOINT AT ALL BLDG. WALLS, CONSTRUCTION JOINTS AND OTHER FIXED OBJECTS (HYDRANTS, LIGHT POLES, ETC.)
 4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH.
 5. PROVIDE 1/2" PREMOULDED EXPANSION JOINTS AT 20 FOOT INTERVALS UNLESS OTHERWISE DIRECTED.
 6. REINFORCING SHALL NOT EXTEND THROUGH EXPANSION JOINTS.

MONOLITHIC CONCRETE FLUSH CURB AND SIDEWALK

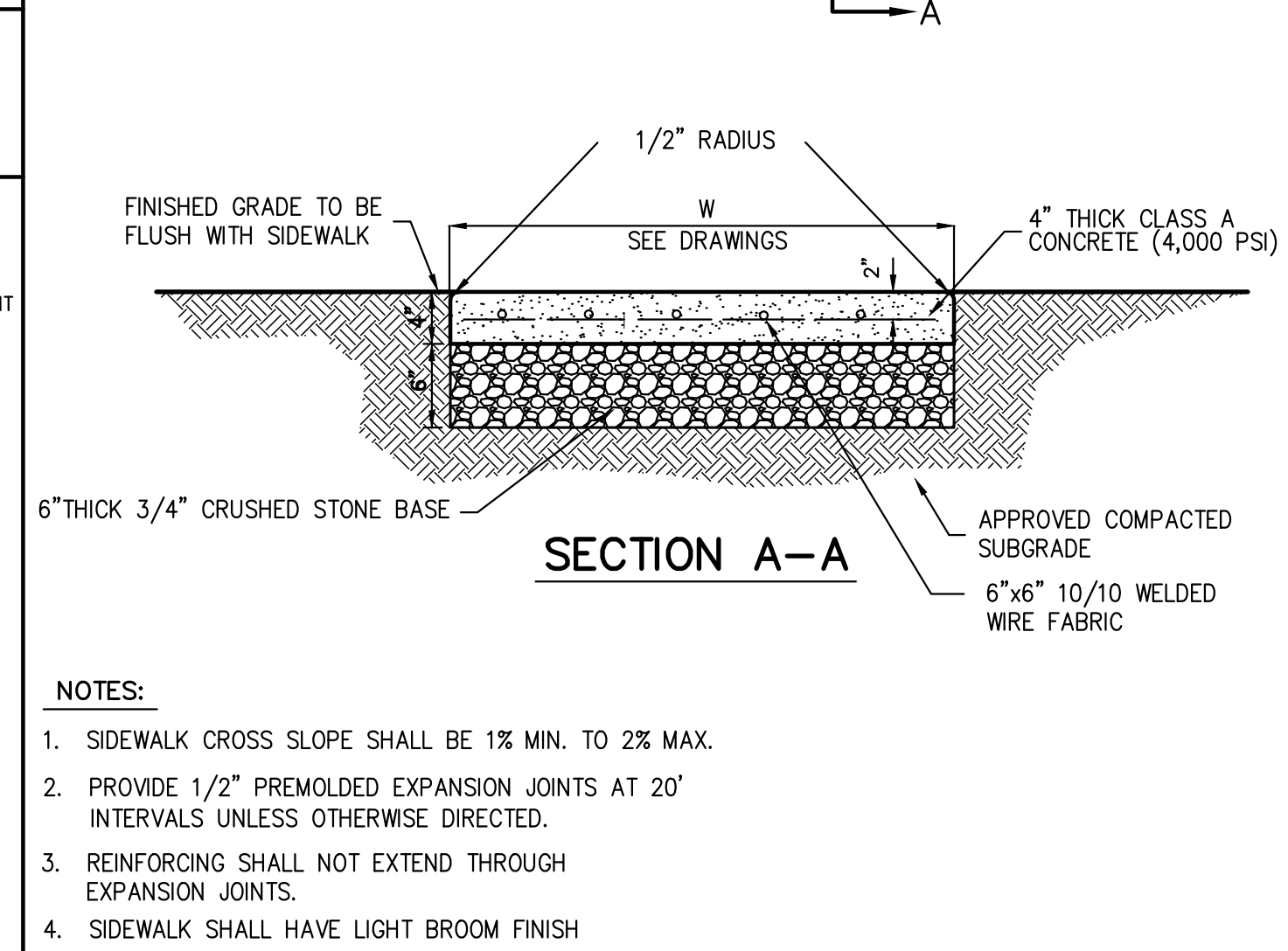
30



WATER MAIN OVER SANITARY SEWER OR STORM DRAIN VERTICAL SEPARATION



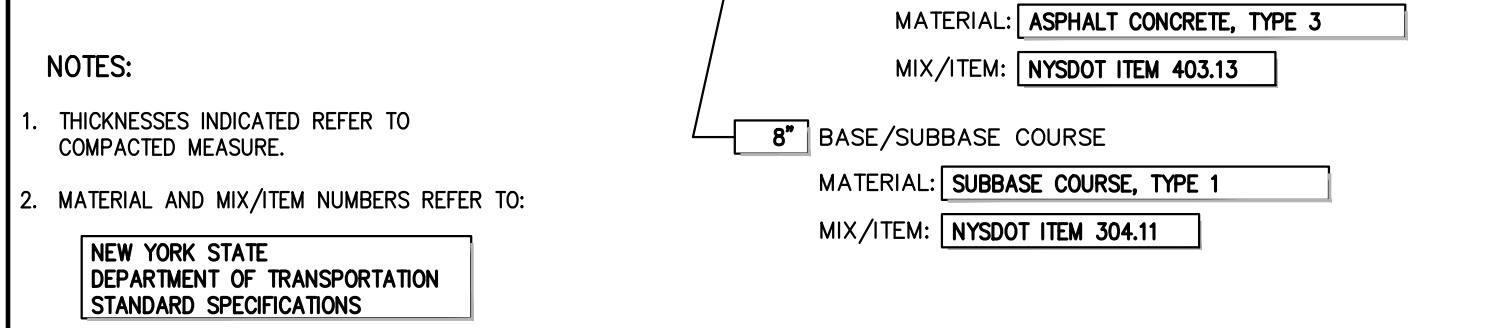
- NOTES:**
1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
 2. PROVIDE 1/2" PREMOULDED EXPANSION JOINTS AT 20' INTERVALS UNLESS OTHERWISE DIRECTED.
 3. REINFORCING SHALL NOT EXTEND THROUGH EXPANSION JOINTS.
 4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH



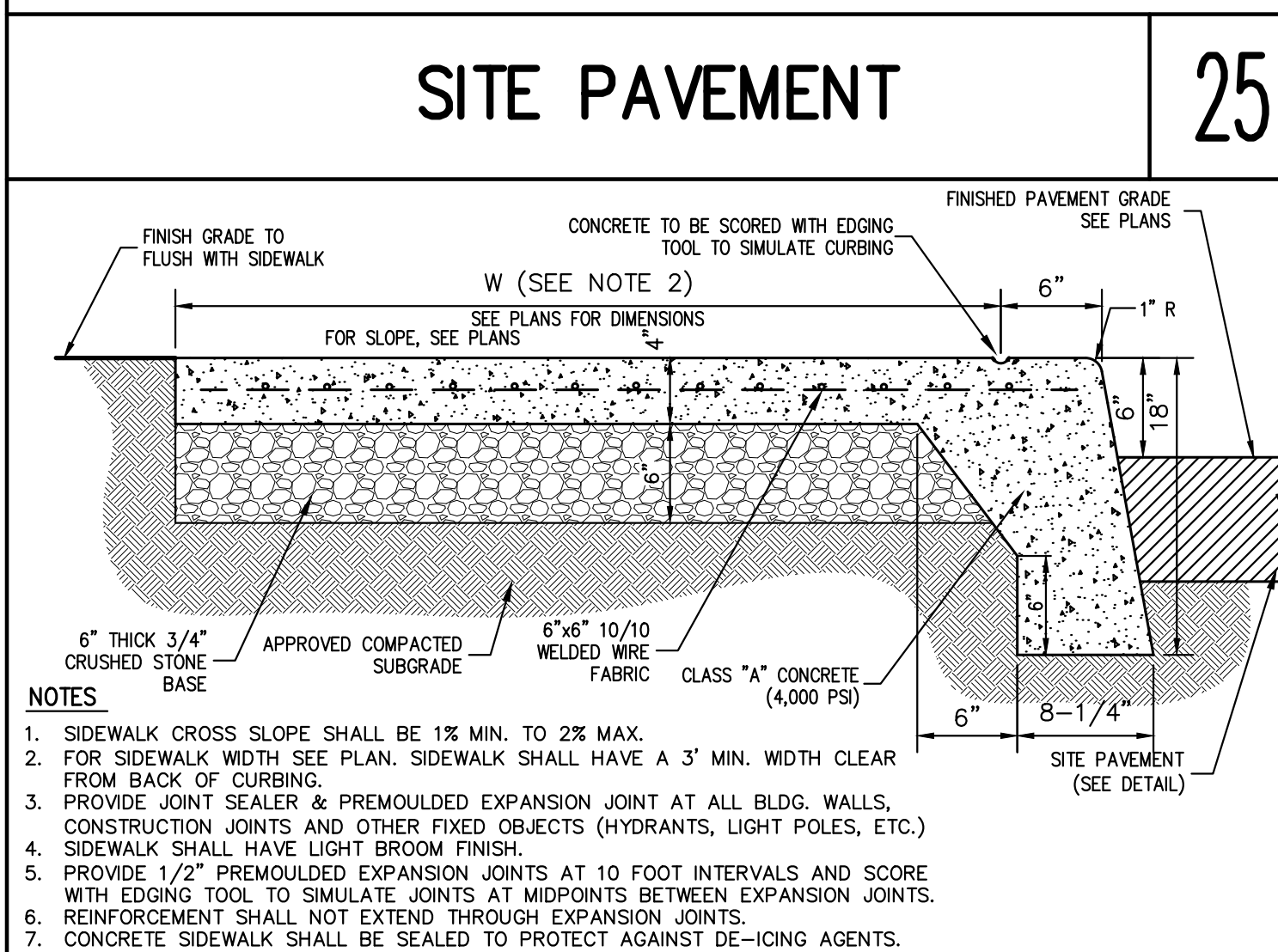
- NOTES:**
1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
 2. PROVIDE 1/2" PREMOULDED EXPANSION JOINTS AT 20' INTERVALS UNLESS OTHERWISE DIRECTED.
 3. REINFORCING SHALL NOT EXTEND THROUGH EXPANSION JOINTS.
 4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH

CONCRETE SIDEWALK

31



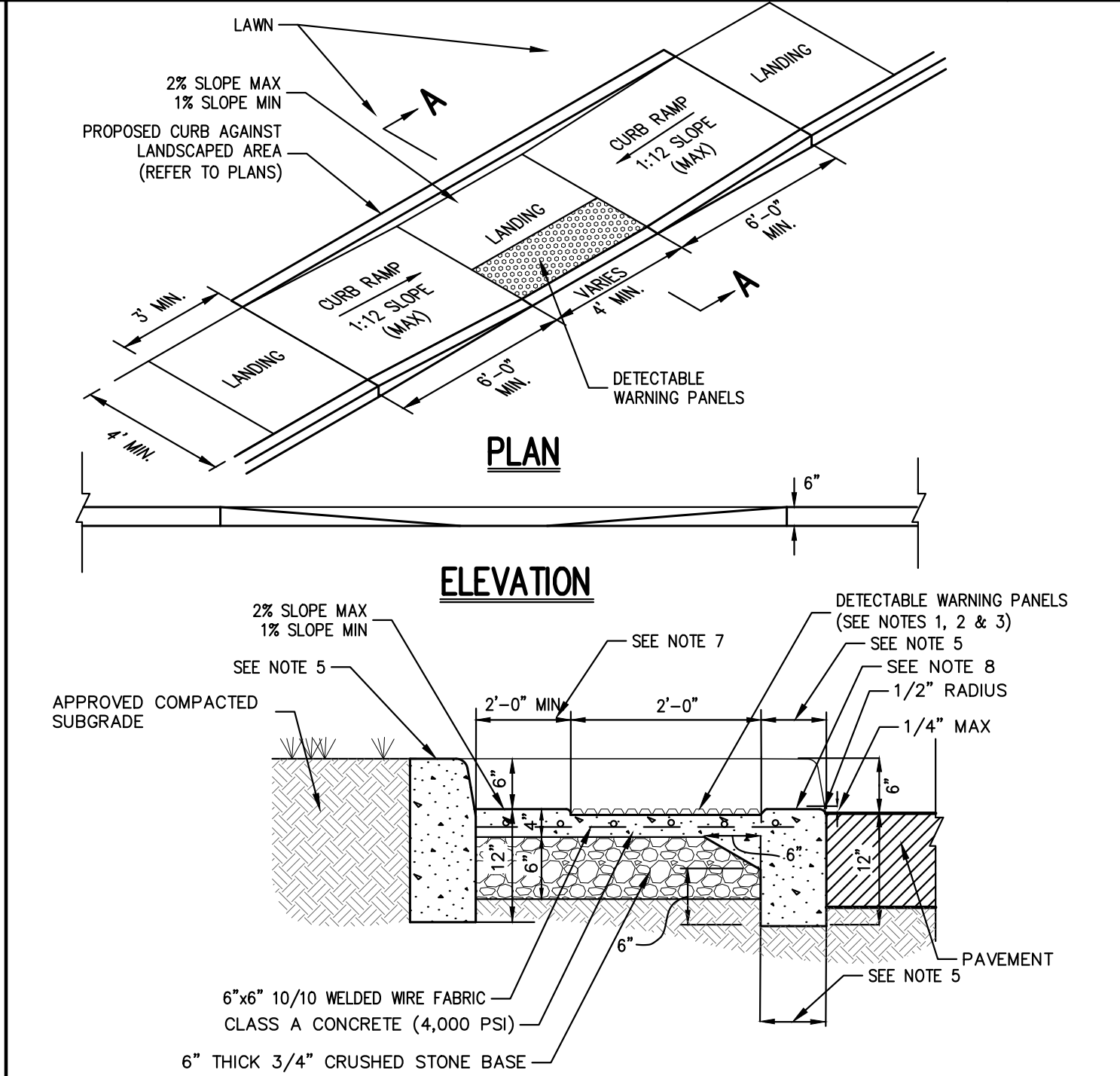
- NOTES:**
1. THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
 2. MATERIAL AND MIX/ITEM NUMBERS REFER TO:
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS



- NOTES:**
1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
 2. FOR SIDEWALK WIDTH SEE PLAN. SIDEWALK SHALL HAVE A 3' MIN. WIDTH CLEAR FROM BACK OF CURBING.
 3. PROVIDE JOINT SEALER & PREMOULDED EXPANSION JOINT AT ALL BLDG. WALLS, CONSTRUCTION JOINTS AND OTHER FIXED OBJECTS (HYDRANTS, LIGHT POLES, ETC.)
 4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH.
 5. PROVIDE 1/2" PREMOULDED EXPANSION JOINTS AT 10 FOOT INTERVALS AND SCORE WITH EDGING TOOL TO SIMULATE JOINTS AT MIDPOINTS BETWEEN EXPANSION JOINTS.
 6. REINFORCEMENT SHALL NOT EXTEND THROUGH EXPANSION JOINTS.
 7. CONCRETE SIDEWALK SHALL BE SEALED TO PROTECT AGAINST DE-ICING AGENTS.

MONOLITHIC CONCRETE CURB AND SIDEWALK (WITHIN RIGHT-OF-WAY)

26



- NOTES:**
1. RAMPS SHALL HAVE CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILES AS MANUFACTURED BY ARMOR-TILE (OR APPROVED EQUAL) AND SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES.
 2. DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT IN ACCORDANCE WITH SECTION 4.29.2, FEDERAL REGISTER, VOLUME 56, NO. 144, RULES AND REGULATIONS, APPENDIX A TO PART 36 - STANDARDS FOR ACCESSIBLE DESIGN (AMERICANS WITH DISABILITIES ACT), LATEST EDITION.
 3. 24" WIDTH OF PANELS TO BE INSTALLED DIRECTLY BEHIND CURB AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
 5. CURB TREATMENT VARIES. SEE PLANS FOR CURB TYPE AND SEE CURB DETAIL FOR DIMENSIONS.
 6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT FLOODING.
 7. WHEN LANDING OF RAMP ADJONS A DOORWAY THEN THE MINIMUM DOORWAY MANUEVERING AREA SHALL BE AT LEAST THE WIDTH OF THE DOORWAY AND SHALL HAVE A MINIMUM DEPTH OF:
MANUAL SWING DOORS = 60" MIN.
FULL POWERED AUTOMATIC SLIDING DOORS = 48" MIN.
 8. CONTRACTOR TO ENSURE TOP OF CURB MATCHES SLOPE OF RAMP.

DROP CURB & RAMP (TYPE B) WITH DETECTABLE WARNING

32

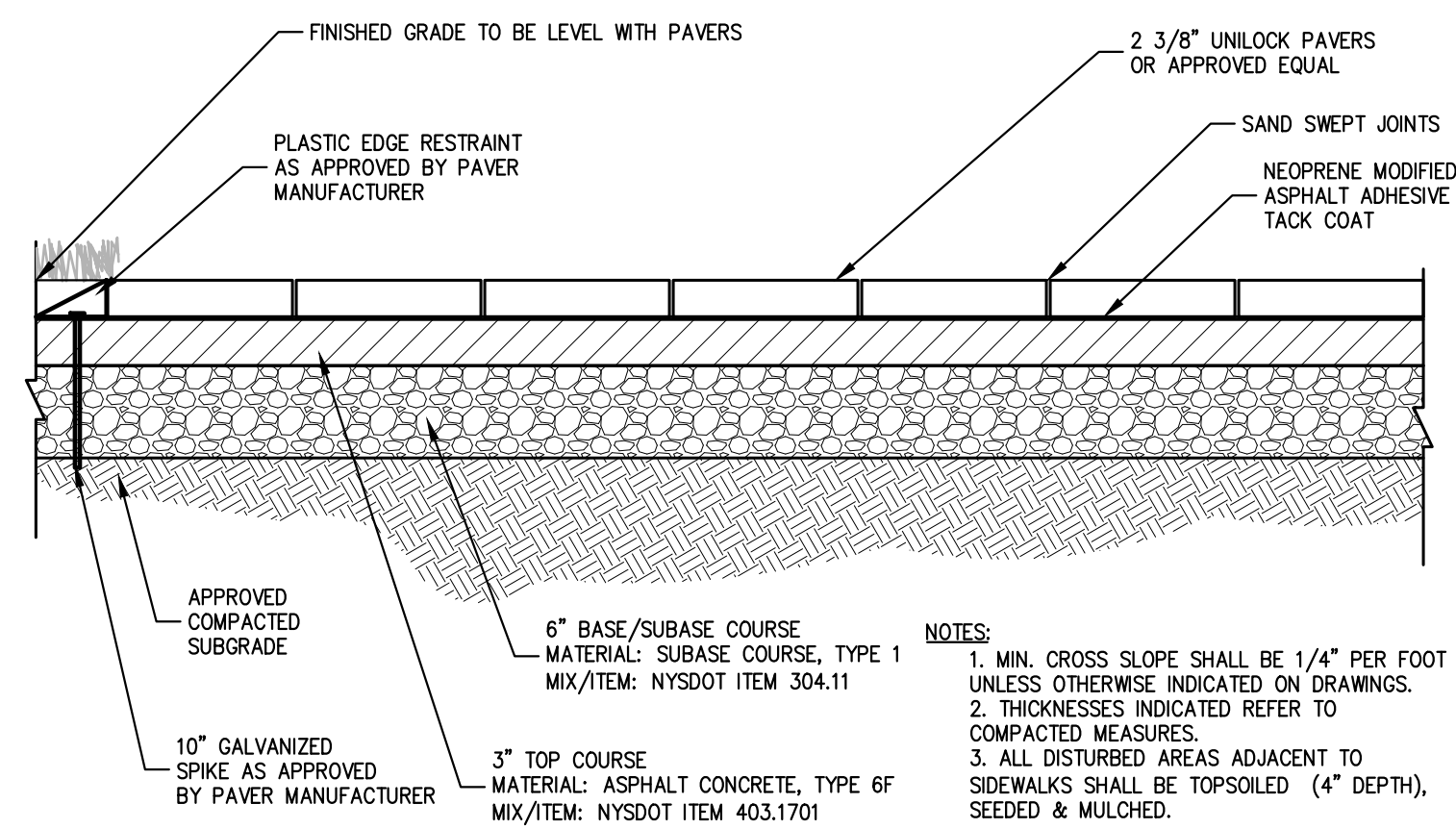
No.	Revision	Date
1.	REVISED PER CITY COMMENTS	12/30/19
2.	REVISED PER CITY COMMENTS	02/24/2020
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4.	REVISED PER CITY COMMENTS	07/27/2021

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CONSTRUCTION DETAILS
BEACON COMMONS 16 WEST MAIN STREET BEACON, NY 12508

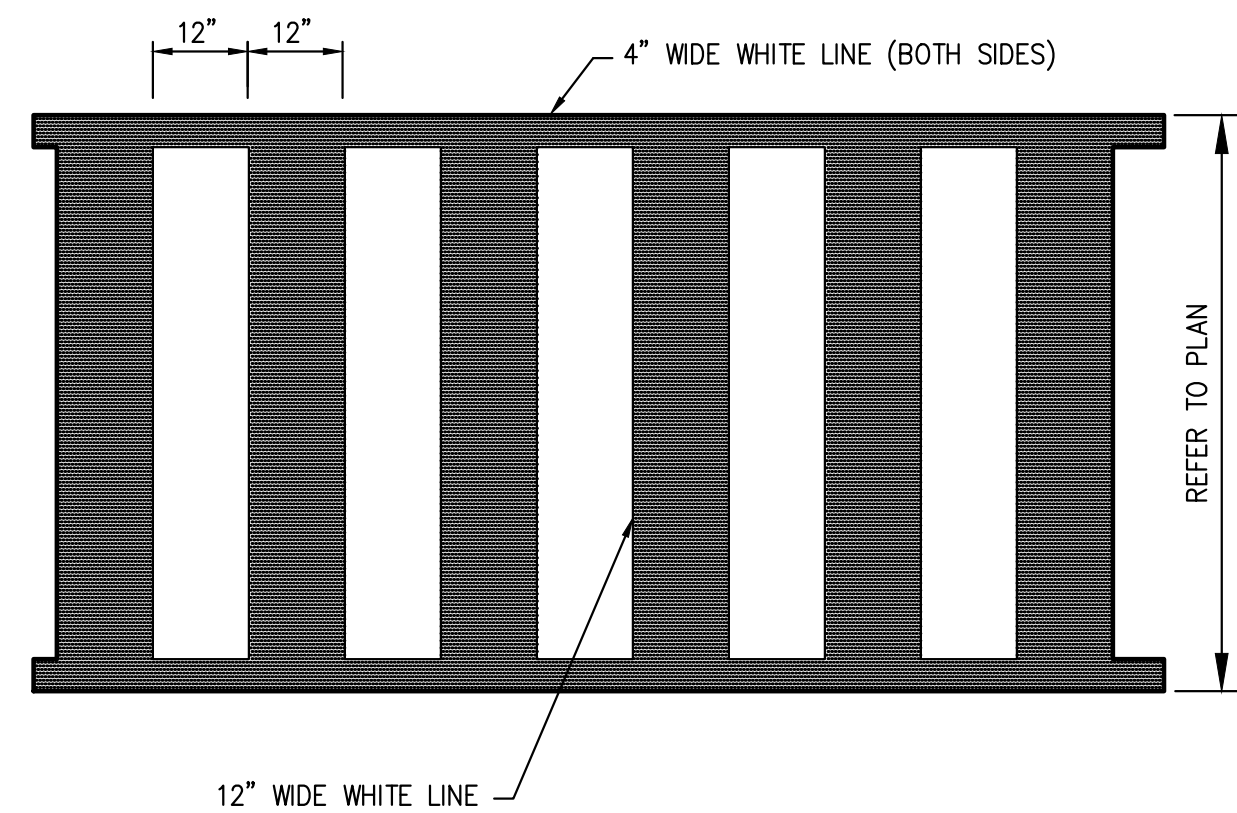
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Scale: NOT TO SCALE	
Date: 10/29/2019	
Project No: 18119	
1819-ITEMS: C-904	
Drawing No: C-904	
(Sheet 21 of 26)	



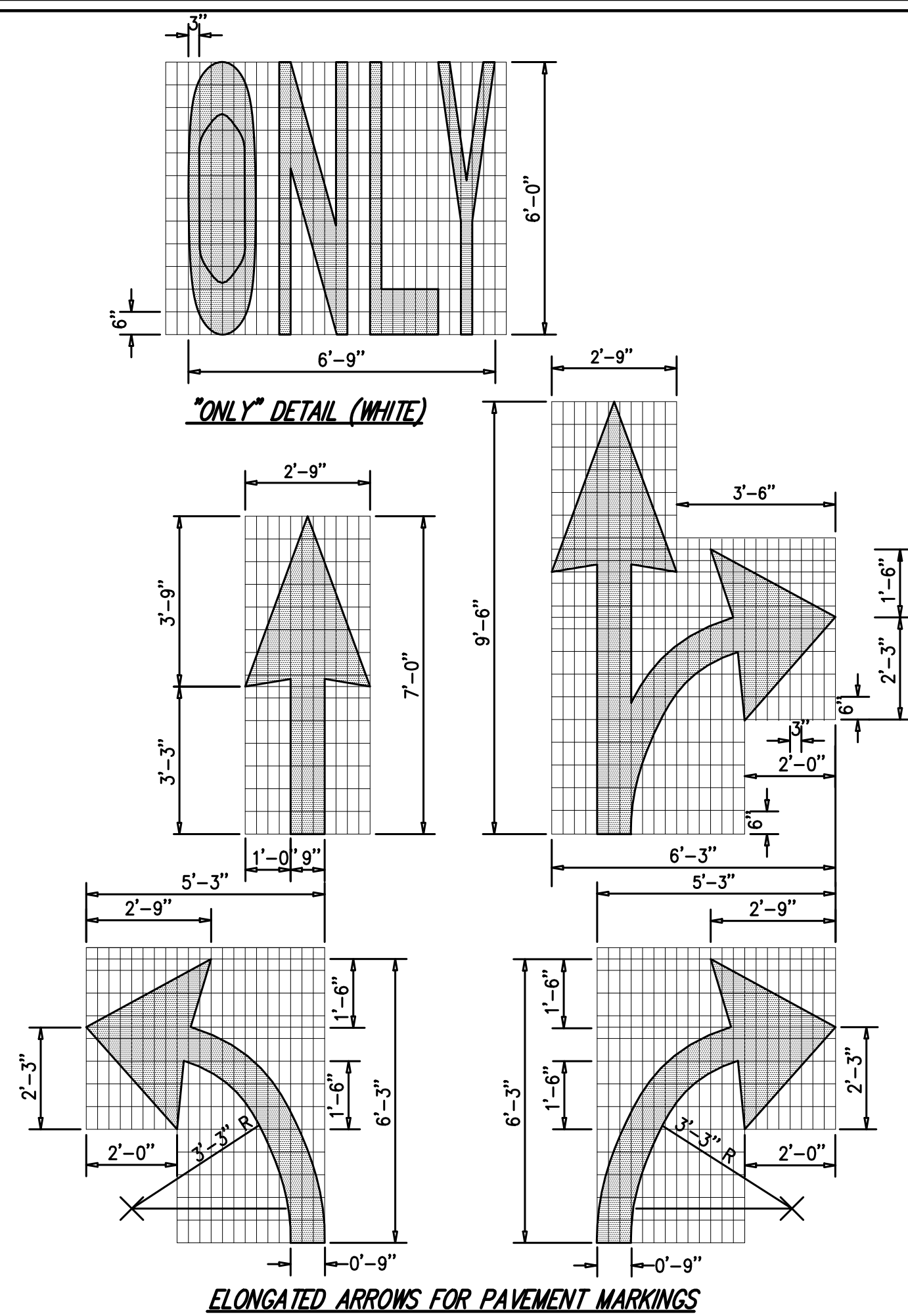
PAVER WALKWAY

33



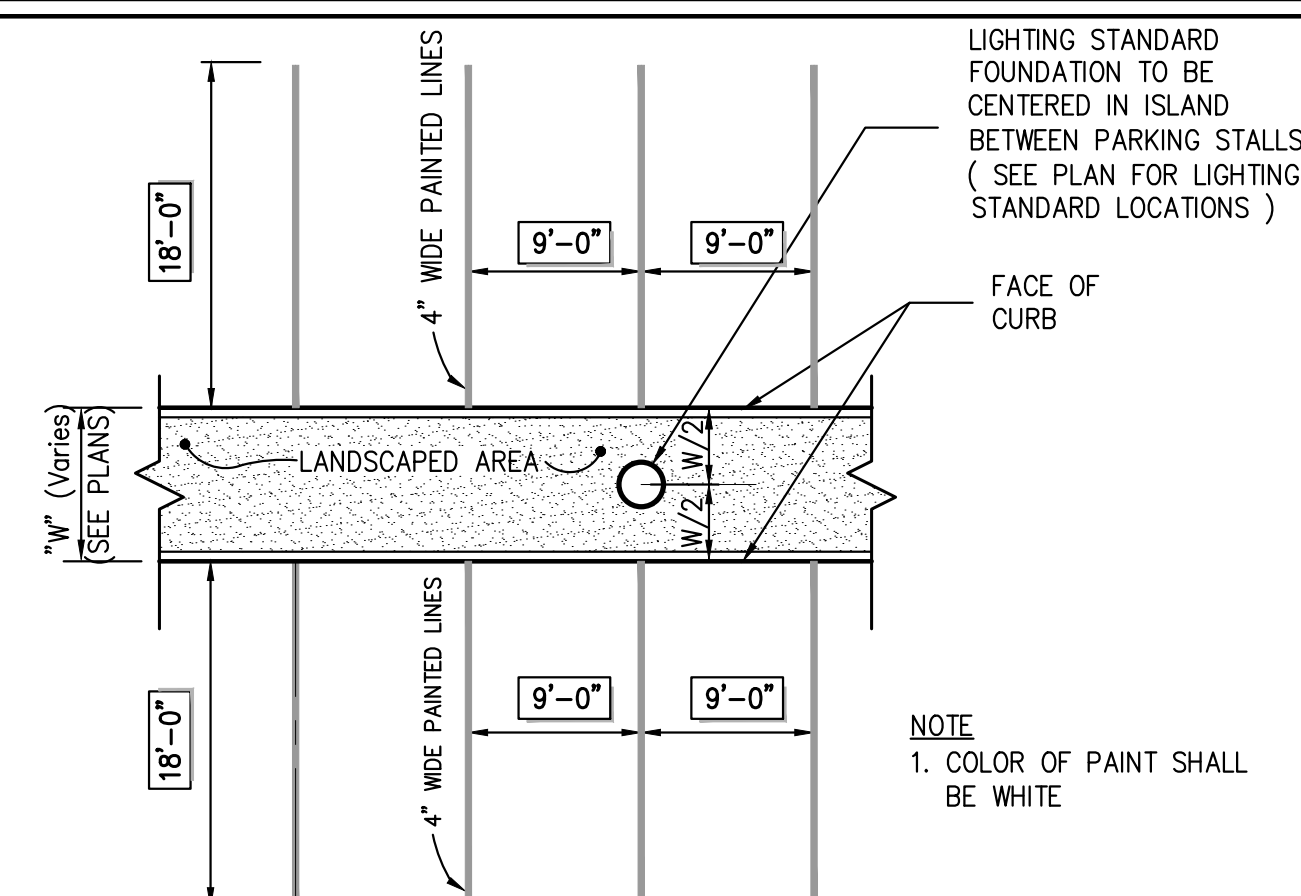
PEDESTRIAN CROSSING

34



PAVEMENT TEXT & ARROWS (ON-SITE)

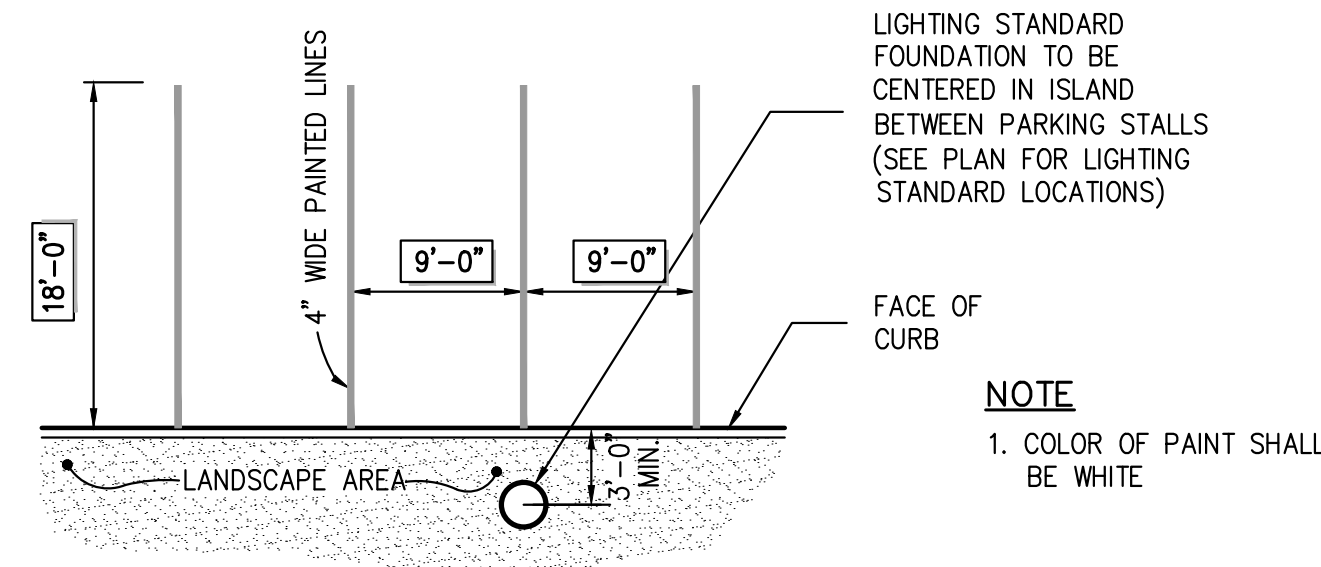
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90° PARKING

(SINGLE STRIPING – CURBED ISLAND)

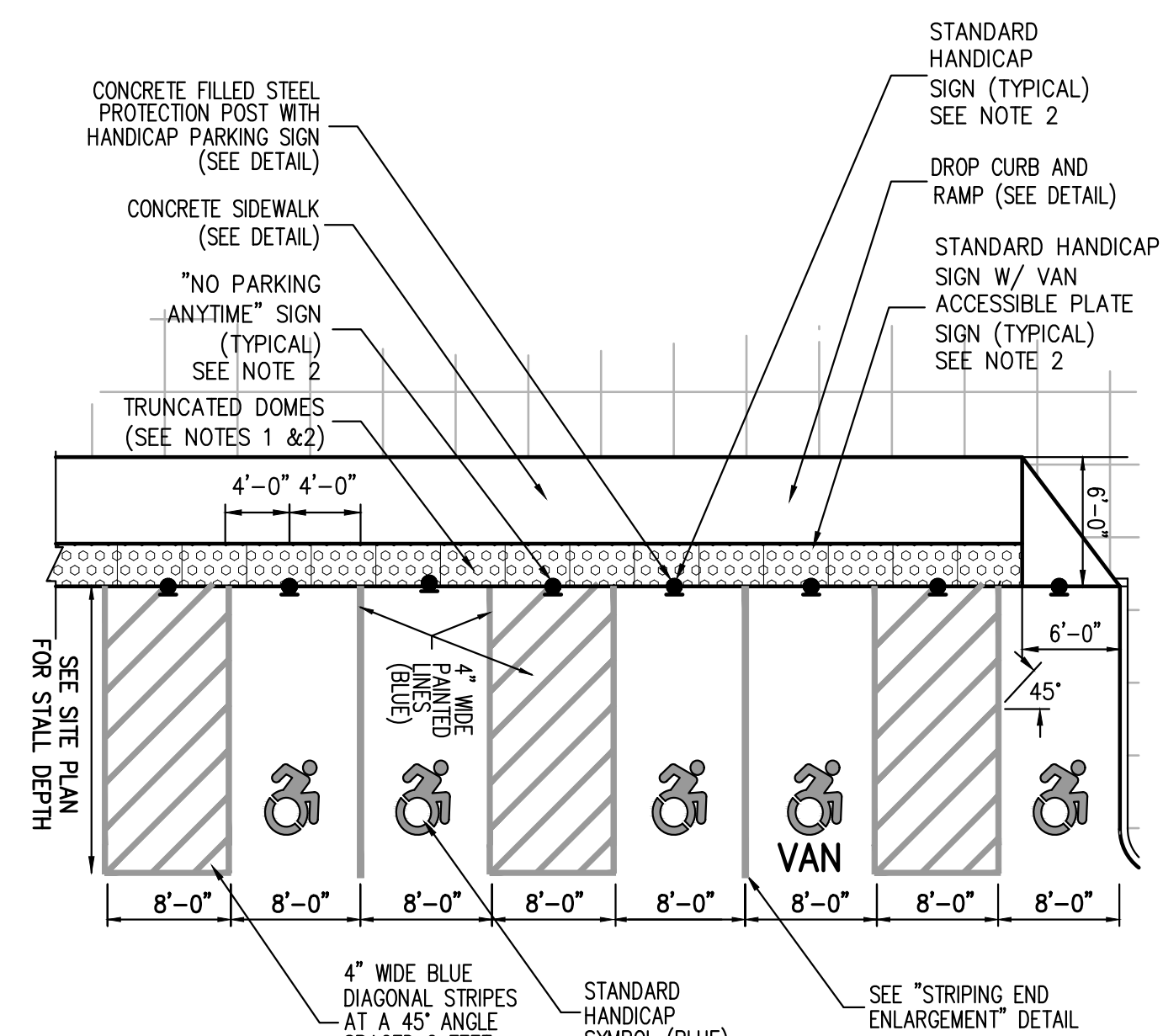
36



90° PARKING

(SINGLE STRIPING – CURBED PERIMETER)

37

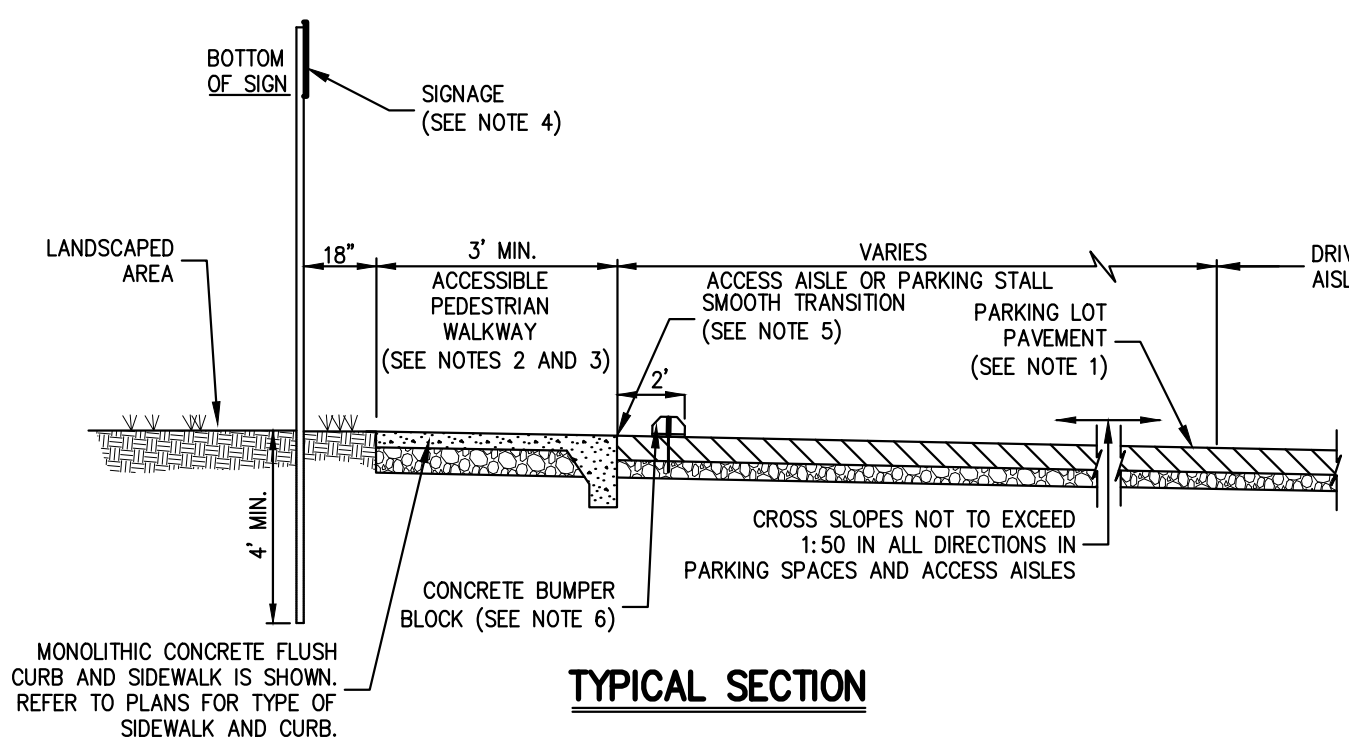


HANDICAP PARKING

*SINGLE STRIPING - CURBLINE ALIGNMENT - W/SIDEWALK)
(NEW YORK)*

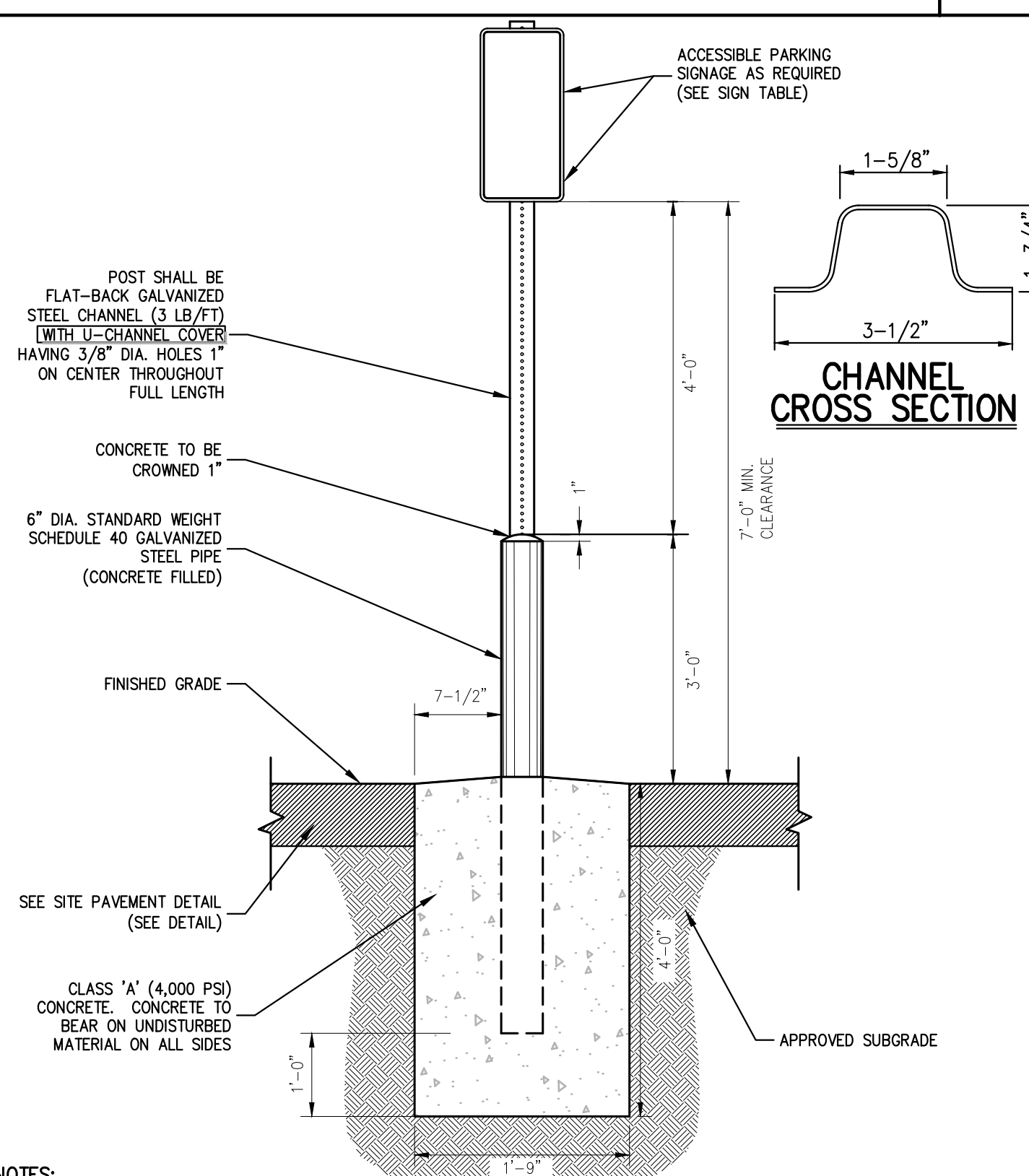
38

- NOTES:**
1. RAMPS AND SIDE RAMPS SHALL HAVE DETECTABLE WARNING STRIPS CONSISTING OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES.
 2. THEY SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT IN ACCORDANCE WITH SECTION 4.29.2, FEDERAL REGISTER, VOLUME 56, NO. 144, RULES AND REGULATIONS, APPENDIX A TO PART 36 - STANDARDS FOR ACCESSIBLE DESIGN (AMERICANS WITH DISABILITIES ACT), DATED JULY 26, 1991 AND SUBSEQUENT REVISIONS.
 3. SLOPES IN HANDICAP PARKING AREAS SHALL NOT EXCEED 1.5%.
 4. SEE SITE PLANS/SIGN TABLE FOR SIGN DESIGNATIONS, LOCATIONS AND SPECIFICATIONS.



TYPICAL ACCESSIBLE PARKING STALL AND AISLE (TYPE B)

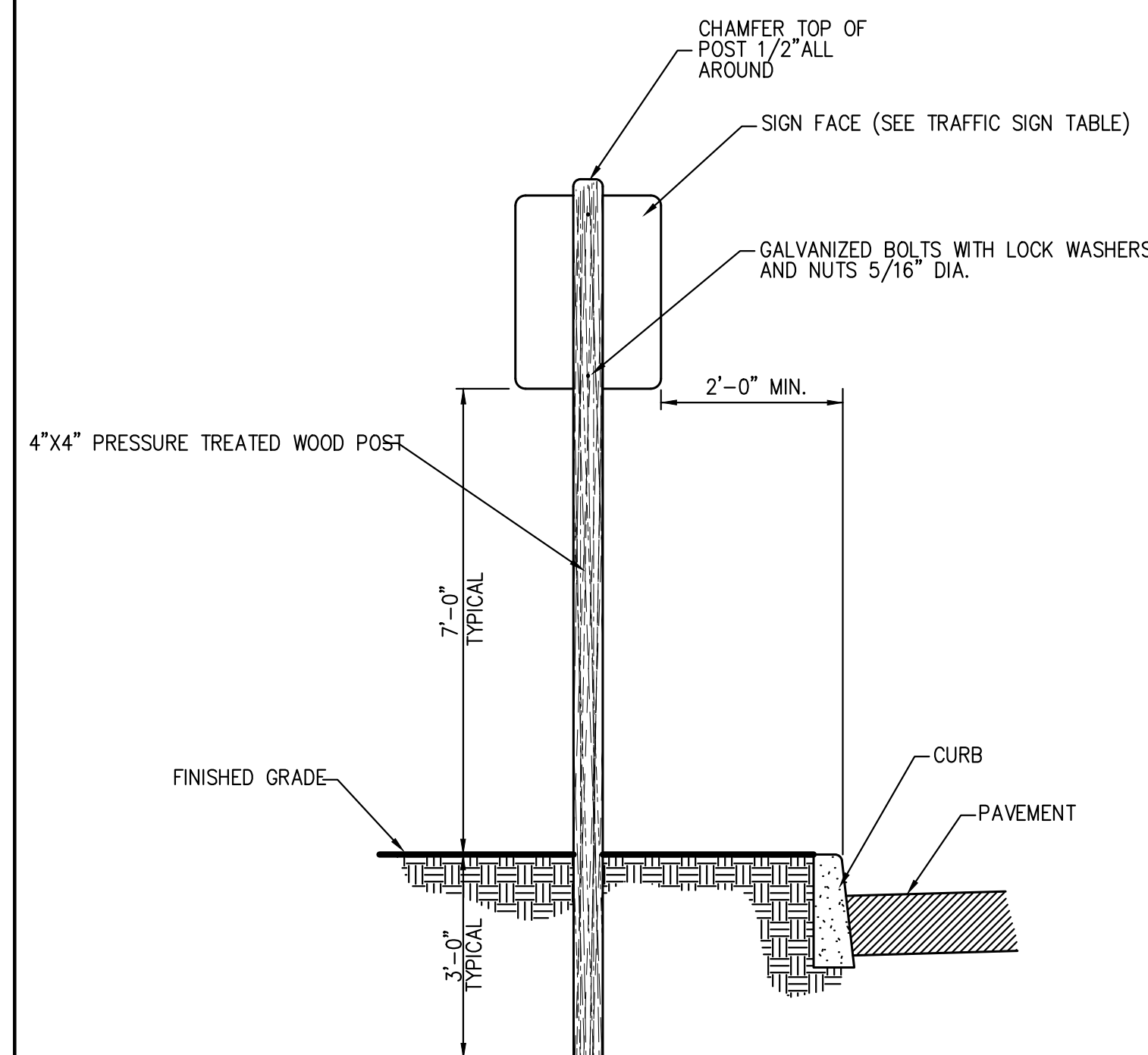
39



ACCESSIBLE PARKING SIGN DETAIL

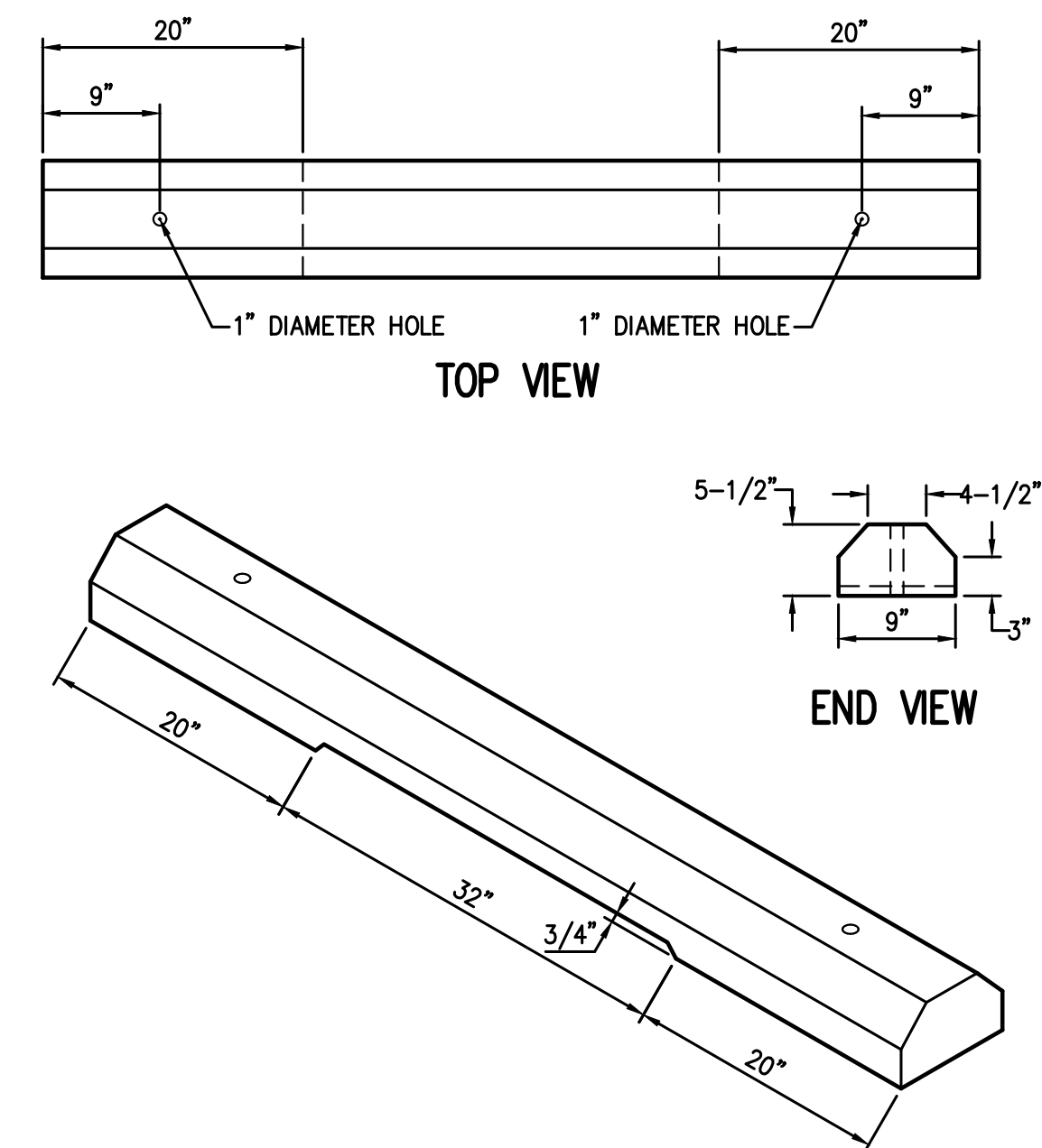
40

- NOTES:**
1. GALVANIZED STEEL CHANNEL SHALL BE EMBEDDED A MIN. OF 3 FT. INTO THE CONCRETE
 2. POSTS FOR HANDICAP PARKING STALLS AND ACCESS AISLES SHALL BE PAINTED BLUE AS FOLLOWS:
 - A. SOLVENT CLEAN TO REMOVE OIL, GREASE AND OTHER CONTAMINANTS.
 - B. APPLY METAL PRIMER FOR GALVANIZED SURFACES.
 - C. APPLY TWO (2) FINISH COATS OF APPROVED EXTERIOR PAINT FOR METAL SURFACES.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE PARKING SIGNS, BOLLARDS AND FOUNDATIONS WITH THE DESIGN AND INSTALLATION OF THE SITE SIDEWALKS, CURBING, PAVEMENT AND ANY OTHER SITE FEATURES SHOWN ON THE PLANS.
 4. FASTEN SING TO POSTS WITH GALVANIZED STEEL BOLTS, LOCK WASHERS, AND NUTS (5/16" DIA.)
 5. HANDICAP PARKING STALLS AND ACCESS AISLES SHALL BE BLUE WITH WHITE STRIPE FOR HANDICAP PARKING STALLS AND HANDICAP ACCESS AISLES.



TRAFFIC SIGN POST

41



CONCRETE BUMPER BLOCK

42

- NOTES**
1. CONCRETE MINIMUM STRENGTH-4,000 PSI AT 28 DAYS
 2. REINFORCEMENT-#4 REBAR

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No.	Revision	Date
1.	REVISED PER CITY COMMENTS	12/30/19
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Previous Editions Obsolete		

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JMC Site Development Consultants, LLC

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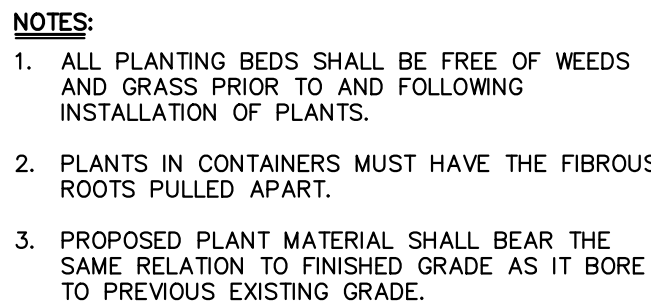
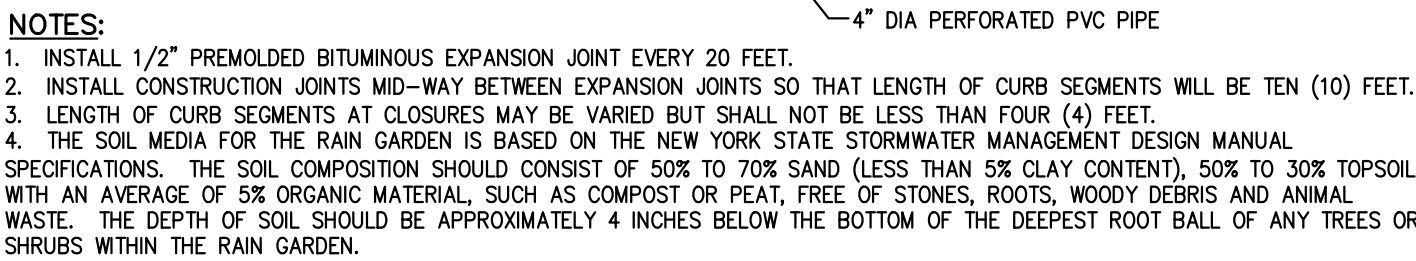
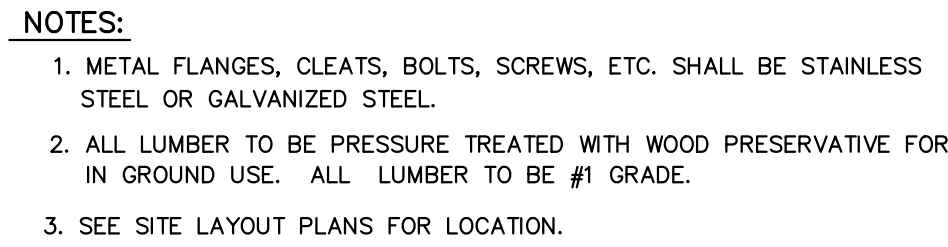


CONSTRUCTION DETAILS

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

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Project No:	18119		
18119-DETAILS	C-905	-	
Drawing No:			
C-905 (Sheet 22 of 26)			



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CONSTRUCTION DETAILS

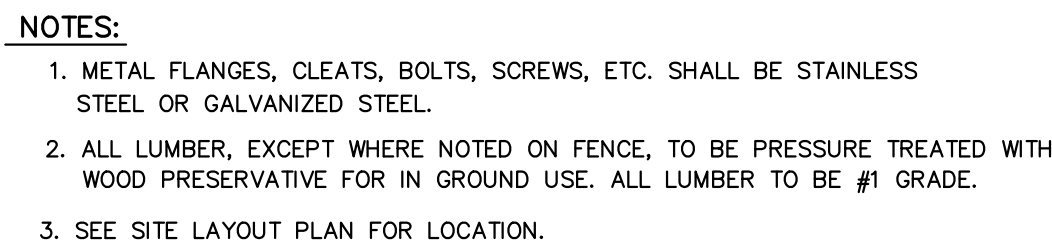
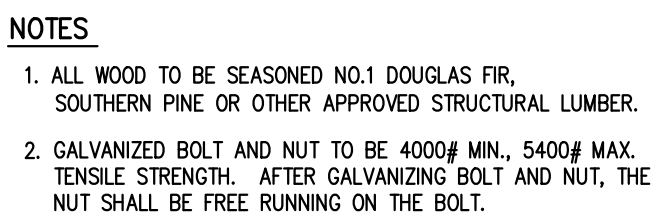
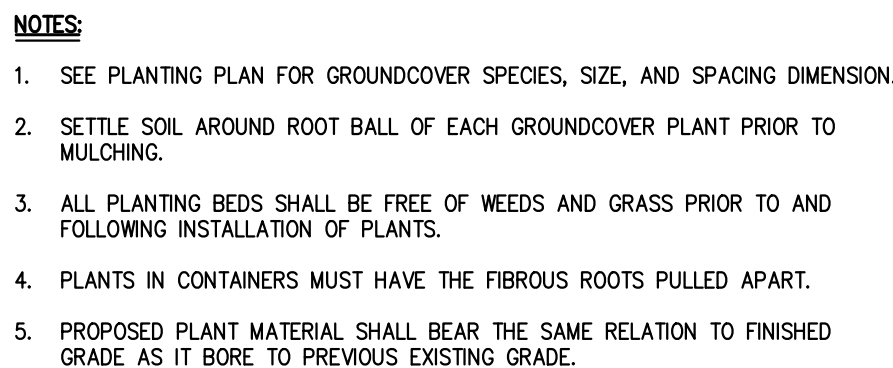
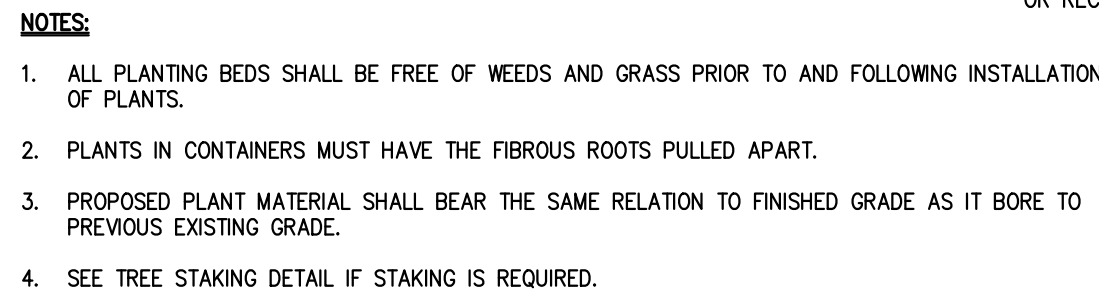
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Project No:	18119		
18119-DETAILS	C-906	-	
Drawing No:			
C-906 (Sheet 23 of 26)			



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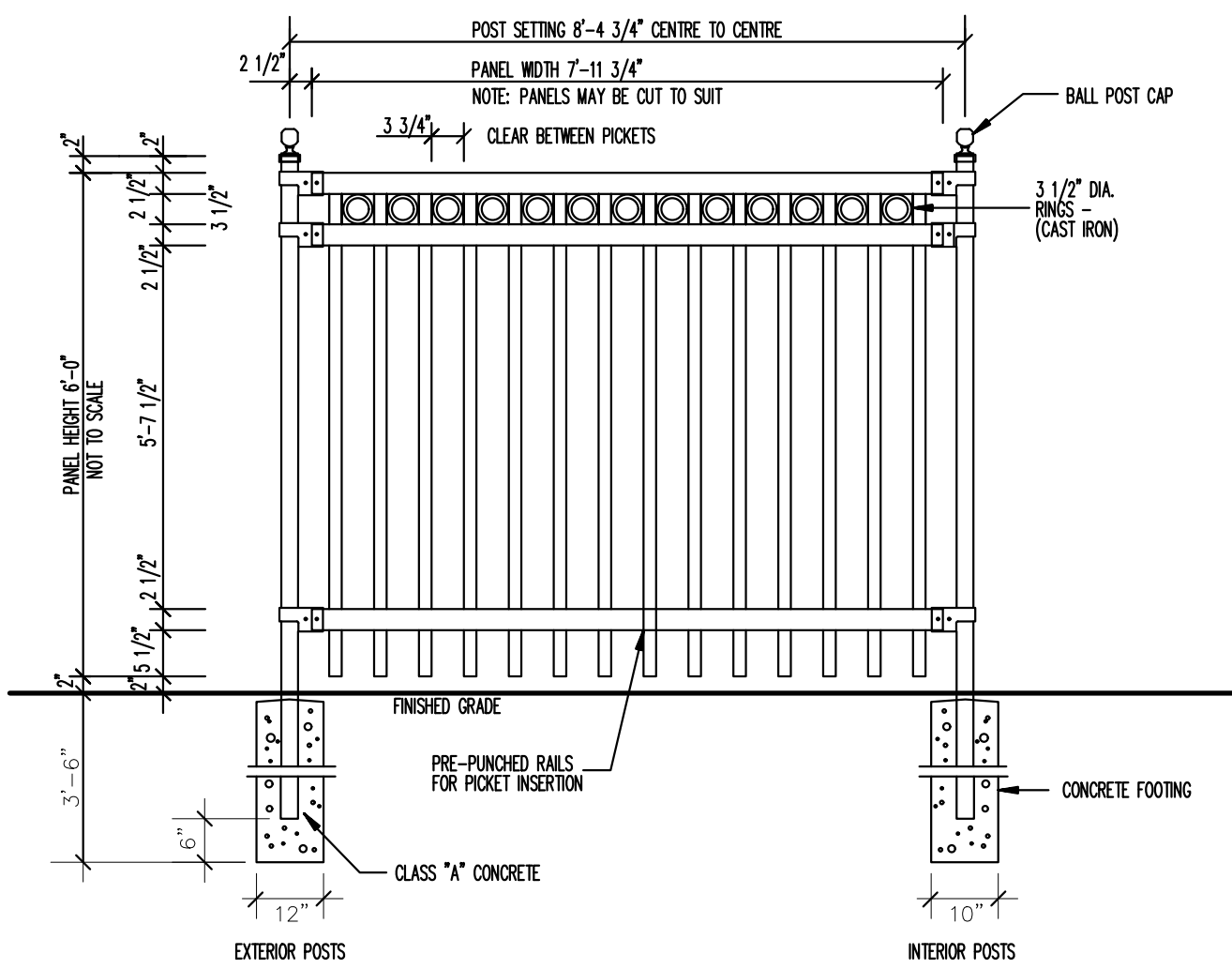


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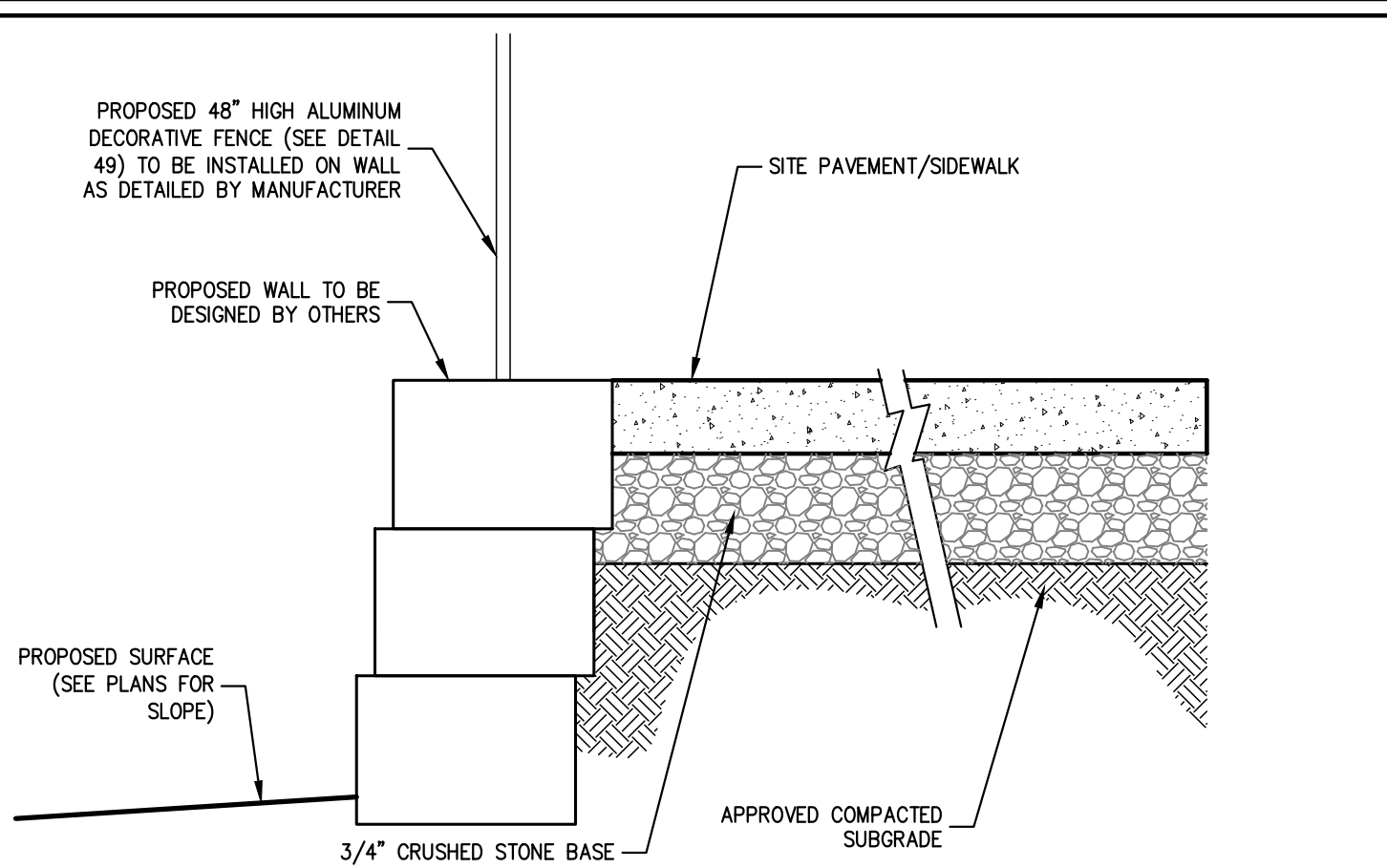
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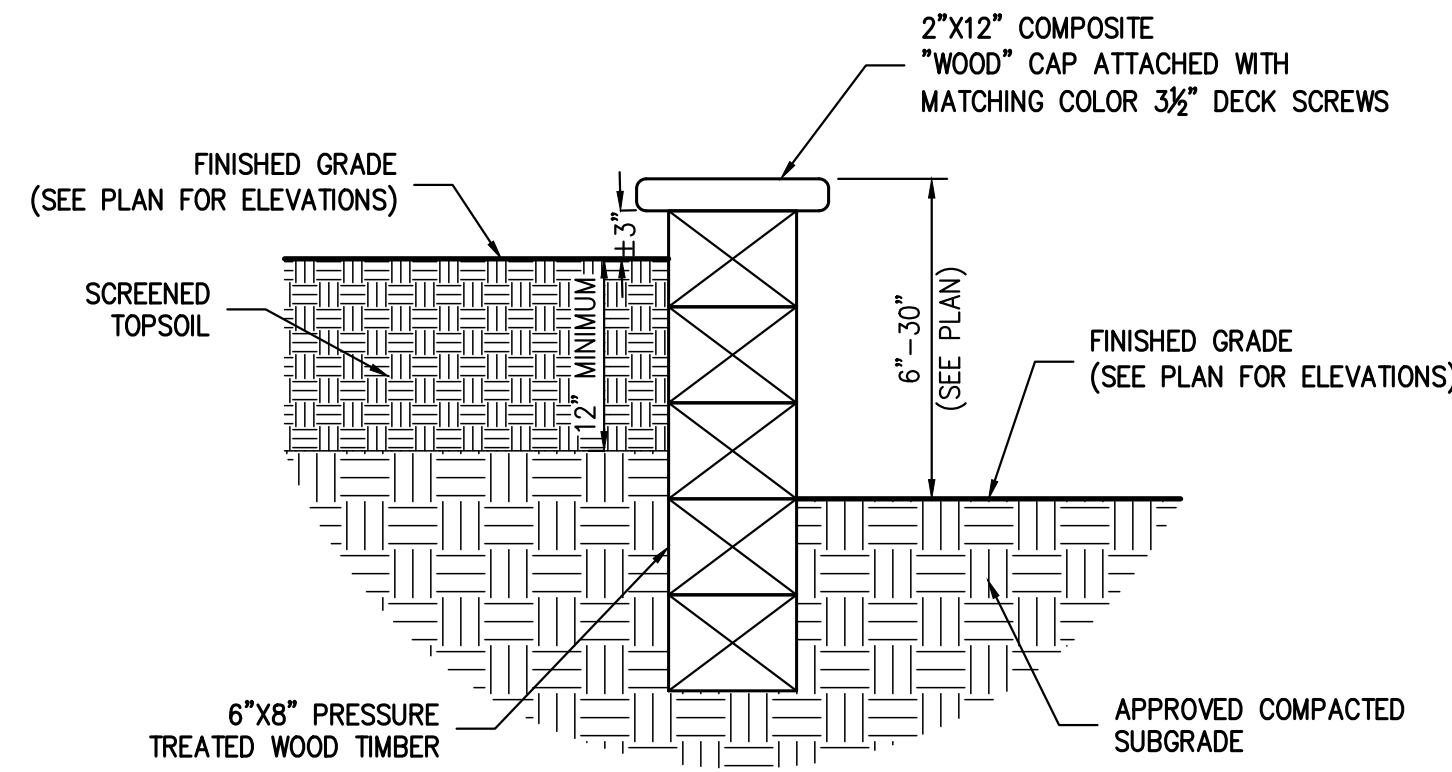
- SPECIFICATIONS:**
- POSTS, RAILS & PICKETS: COLD FORMED STEEL TUBING INTERIOR & EXTERIOR GALVALUME COATING CHROMATE CONVERSION COATING ELECTROSTATICALLY APPLIED THERMALLY BONDED POLYESTER POWDER COATING MINIMUM FILM THICKNESS 2.5 mils
- POSTS: 3"x3", 14 GAUGE OR SCH 40 POST SPACING (CENTRE TO CENTRE): 8'-4 3/4"
- POST FLANGES: 8"x8" x 1/2" 10"x10" x 1/2"
- POST CAP: BALL
- RAILS: 1 1/2" x 2 1/2", 16 GAUGE
- PICKETS: 3/4" x 1 1/2", 16 GAUGE
- FITTINGS: 12 GAUGE STAMP FORGED FACTORY FINISH AS ABOVE
- WELDS: STAINLESS STEEL
- PANEL: WIDTH OF 7'-11 3/4" HEIGHT OF 6'
- COLOUR: BLACK
- WARRANTY: 5 YEAR MAINTENANCE FREE

FENCE TO BE SILVER EAGLE C/W RINGS AS MANUFACTURED BY IRON EAGLE INDUSTRIES, INC. OF MISSISSAUGA, ONTARIO OR APPROVED EQUAL.



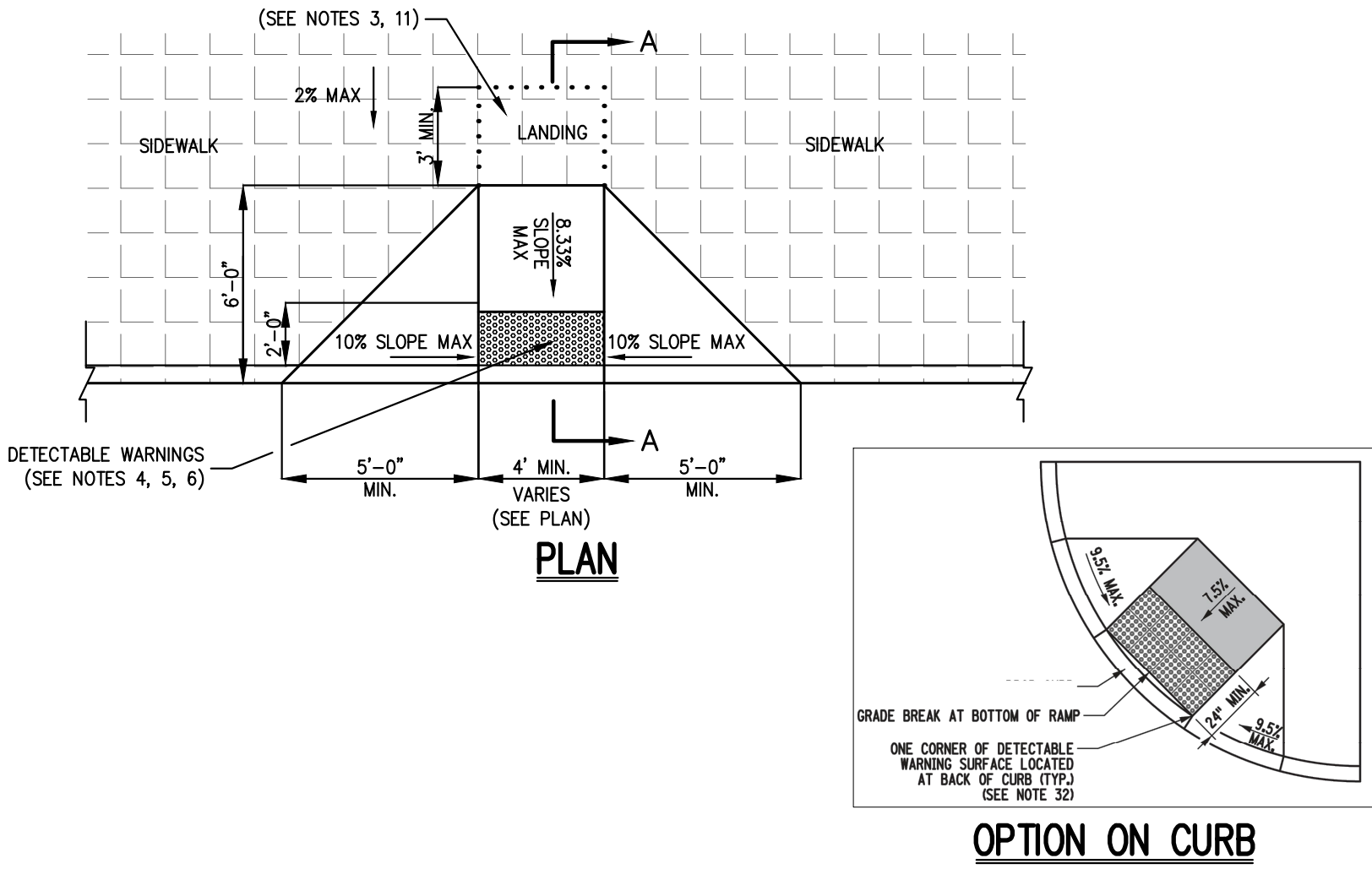
RETAINING WALL AND SAFETY FENCE

51



BLACK ALUMINUM SAFETY FENCE

50



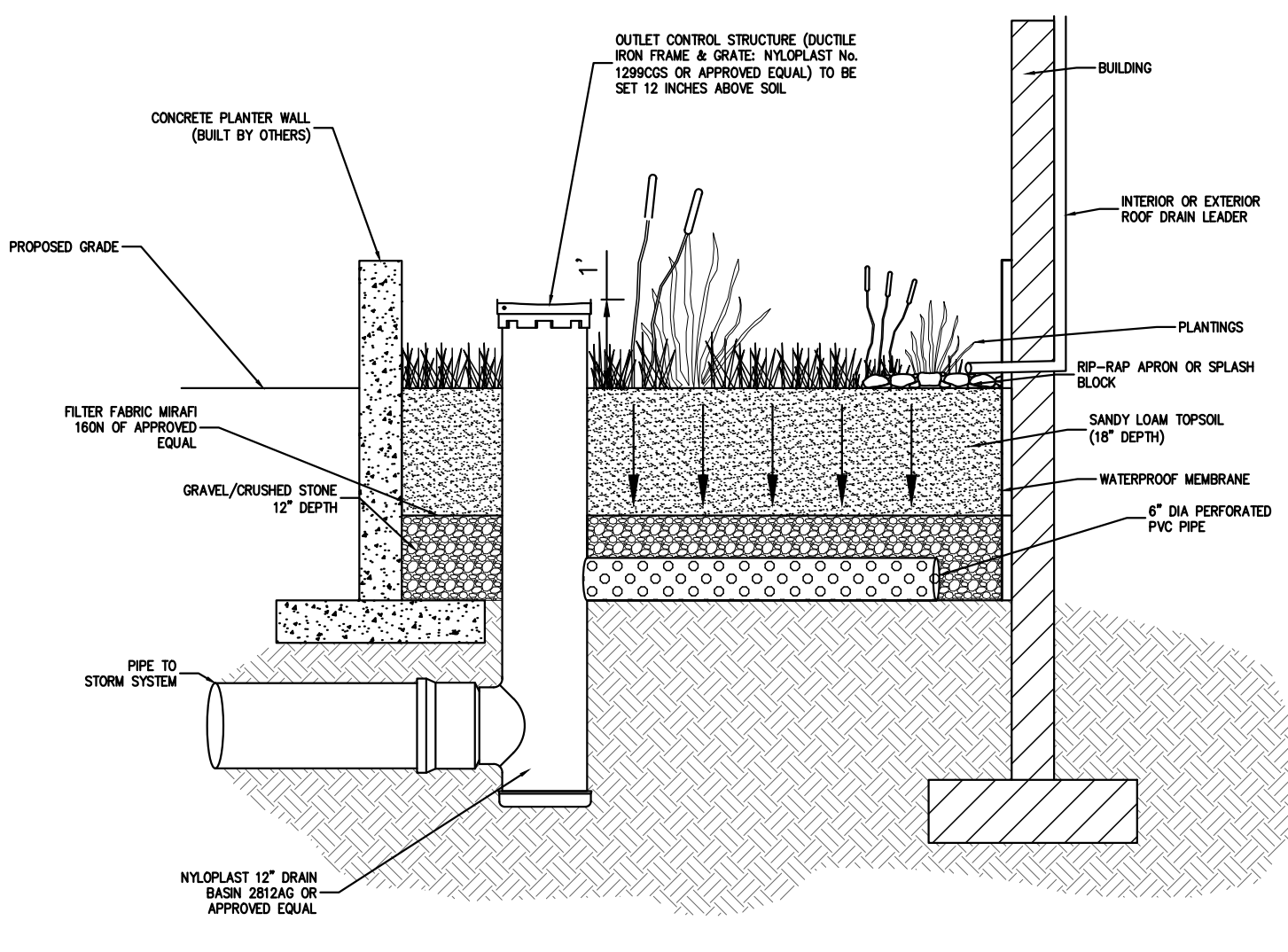
PERPENDICULAR CURB RAMP (WITH DETECTABLE WARNING)

56

- NOTES:**
- THE MAXIMUM RUNNING SLOPE OF A CURB RAMP SHALL BE 8.33%, THE MAXIMUM CROSS SLOPE SHALL BE 2.0%, AND WHERE PROVIDED, CURB RAMP FLARES SHALL NOT EXCEED 10% ALONG CURB MEASURED WITH A 2 FOOT SMART LEVEL AS SPECIFIED IN "DIMENSIONAL TOLERANCES IN CONSTRUCTION AND FOR SURFACE ACCESSIBILITY", BY UNITED STATES ACCESS BOARD, LATEST EDITION.
 - COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 5%. THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMP TO WALKS, GUTTERS AND STREETS SHALL BE AT THE SAME LEVEL.
 - LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB RAMP. THE CLEAR LENGTH OF THE LANDING SHALL BE THIRTY-SIX (36) INCHES MINIMUM. THE CLEAR WIDTH OF THE LANDING SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES. LEADING TO THE LANDING, LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2% IN ANY DIRECTION MEASURED WITH A 2 FOOT SMART LEVEL AS SPECIFIED IN "DIMENSIONAL TOLERANCES IN CONSTRUCTION AND FOR SURFACE ACCESSIBILITY", BY UNITED STATES ACCESS BOARD, LATEST EDITION.
 - RAMP SHALL HAVE CAST IN PLACE DETECTABLE WARNINGS AS MANUFACTURED BY ARMOR-TILE (OR APPROVED EQUAL) AND SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A BASE DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 1.6 INCHES.
 - DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN, THE BUILDING CODE, AND APPLICABLE LOCAL LAWS AND REGULATIONS, LATEST EDITIONS.
 - 24" WIDTH OF PANELS TO BE INSTALLED DIRECTLY BEHIND CURB AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - SEE PLANS AND DETAILS FOR CURB TYPE AND DIMENSIONS.
 - RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
 - CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
 - CONTRACTOR TO ENSURE TOP OF CURB MATCHES SLOPE OF RAMP.
 - CURB RAMPS SHALL NOT BE LOCATED IN AN AREA THAT INTERFERES WITH MINIMUM MANEUVERING CLEARANCES AT DOORS AND GATES.
 - CURB RAMP SHALL HAVE LIGHT BROOM FINISH.
 - THE MINIMUM WIDTH OF A CURB SHALL BE 4'-0".
 - THE GRADE (RUNNING SLOPE) OF A CURB RAMP SHALL BE A MINIMUM OF 5%. THE GRADE FOR DESIGN AND LAYOUT SHALL BE A MAXIMUM OF 7.5% OF THE GRADE FOR ADA ACCESSIBILITY AND WORK ACCEPTANCE. THE SLOPE OF 8.3%.
 - THE CROSS SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS POSSIBLE AND STILL PROVIDE POSITIVE DRAINAGE. THE CROSS SLOPE OF A CURB RAMP SHALL BE 1.5% MAXIMUM FOR DESIGN AND LAYOUT, AND 2% MAXIMUM FOR WORK ACCEPTANCE.
 - WHERE A PEDESTRIAN CIRCULAR PATH CROSSES THE CURB RAMP, FLARED SIDES SHALL BE INSTALLED WITH A MAXIMUM SLOPE OF 9.5% FOR DESIGN AND LAYOUT, AND 10% MAXIMUM FOR WORK ACCEPTANCE. THE SLOPE OF FLARED SIDES IS MEASURED PARALLEL TO THE CURB LINE.
 - WHERE A CHANGE IN DIRECTION IS REQUIRED TO UTILIZE A CURB RAMP, A TURNING SPACE SHALL BE PROVIDED AT THE BASE OR THE TOP OF A CURB RAMP AS APPLICABLE. TURNING SPACES SHALL BE PERMITTED TO OVERLAP CLEAR SPACES.
 - DETECTABLE WARNING SURFACES SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS ON PEDESTRIAN ACCESS ROUTES:
A. CURB RAMPS AND BLENDED TRANSITIONS AT PEDESTRIAN STREET CROSSINGS.
B. PEDESTRIAN REFUGE ISLANDS (WHERE THE LENGTH OF THE PEDESTRIAN ACCESS ROUTE ACROSS THE REFUGE ISLAND IS GREATER THAN OR EQUAL TO 6 FEET).
C. PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY.
 - DETECTABLE WARNING SURFACES SHALL BE PROVIDED WHERE THE PEDESTRIAN ACCESS ROUTE CROSSES DRIVEWAYS WITH SIGNAL, YIELD OR STOP CONTROL. DETECTABLE WARNING SURFACES SHALL NOT BE PROVIDED AT CROSSINGS OR UNCONTROLLED DRIVEWAY APRONS.
 - SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. IF REQUIRED, THE BORDER SHALL NOT EXCEED 2", WHERE THE BACK OF CURB EDGE IS TOOLED TO PROVIDE A RADIUS, THE BORDER DIMENSION SHALL BE MEASURED FROM THE INSIDE EDGE OF THE CURB RADIUS.

SITE LIGHTING STANDARD FOUNDATION (ROUND)

53



- NOTES:**
- FLOW-THROUGH AND INFILTRATION STORMWATER PLANTERS SHOULD NOT RECEIVE DRAINAGE FROM IMPERVIOUS AREAS GREATER THAN 15,000 SQUARE FEET.
 - INFILTRATION PLANTERS SHOULD BE LOCATED AT A MINIMUM DISTANCE OF TEN FEET FROM STRUCTURES.
 - RIP-RAP MUST BE PLACED BELOW DOWNSPOUTS OR WHERE STORMWATER ENTERS THE PLANTER TO PREVENT EROSION.
 - STORMWATER PLANTERS ARE DESIGNED TO POND WATER LESS THEN 12 HOURS, WITH A MAXIMUM OF PONDING DEPTH OF 12 INCHES.
 - FLOW-THROUGH AND INFILTRATION PLANTERS MUST HAVE A MINIMUM WIDTH OF 1.5 AND 2.5 FEET, RESPECTIVELY.
 - SOILS SPECIFICATIONS FOR THE STORMWATER PLANTERS GROWING MEDIUM SHOULD ALLOW AN INFILTRATION RATE OF 2 INCHES PER HOUR, AND 5 INCHES AN HOUR FOR THE DRAINAGE LAYER.
 - SOIL COMPACTION MUST BE NO GREATER THAN 85% IN THE PLANTER.
 - THE GROWING MEDIUM DEPTH FOR ALL THREE STORMWATER PLANTERS TYPES SHOULD BE AT LEAST 18 INCHES. GROWING MEDIA SHOULD BE A UNIFORM MIXTURE OF 70% SAND (100% PASSING THE 1-INCH SIEVE AND 5% PASSING THE NO. 200 SIEVE) AND 30% TOPSOIL WITH AN AVERAGE OF 5% ORGANIC MATERIAL, SUCH AS COMPOST OR PEAT, FREE OF STONES, ROOTS AND WOODY DEBRIS AND ANIMAL WASTE.
 - FOR INFILTRATION AND FLOW-THROUGH PLANTERS THE DRAINAGE LAYER SHOULD HAVE A MINIMUM DEPTH OF 12 INCHES. DRAINAGE LAYER SHOULD BE CLEAN SAND WITH 100% PASSING THE 1-INCH SIEVE AND 5% PASSING THE NO. 200 SIEVE.
 - A MINIMUM INFILTRATION DEPTH OF 3 FEET SHOULD BE PROVIDED BETWEEN THE BOTTOM OF THE INFILTRATION PRACTICE AND ANY IMPERMEABLE BOUNDARIES, SUCH AS THE SEASONAL HIGH GROUNDWATER LEVEL OR ROCK.
 - INFILTRATION PLANTERS MUST BE DESIGNED AND CONSTRUCTED WITH NO LONGITUDINAL OR LATERAL SLOPE.

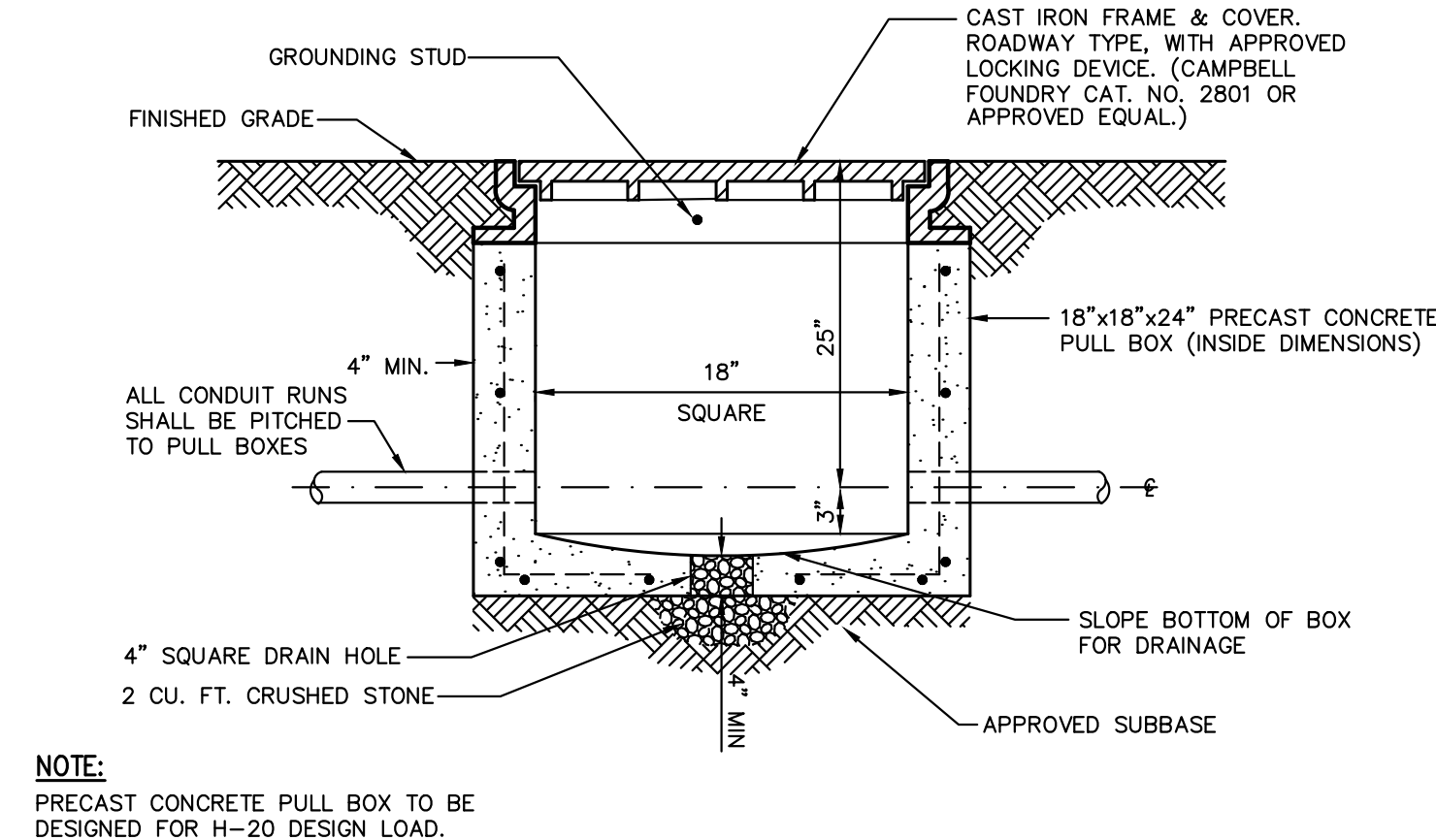
FLOW-THROUGH STORMWATER PLANTER (WITH UNDER DRAIN)

57

- NOTES**
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSIONS (SIZE, BOLT CIRCLE, ETC.) WITH THE POLE MANUFACTURER PRIOR TO INSTALLATION OF THE FOUNDATIONS.
 - CHAMFER EXPOSED EDGES OF ALL FOUNDATIONS.
 - PROVIDE INSULATED GROUNDING BUSHING ON EXPOSED ENDS (IN BASE OF POLE) OF ALL GALVANIZED STEEL BENDS.

BOLLARD LIGHT BASE (ROUND)

54



NOTE:
PRECAST CONCRETE PULL BOX TO BE DESIGNED FOR H-20 DESIGN LOAD.

ELECTRICAL PULL BOX

55

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CONSTRUCTION DETAILS

BEACON COMMONS
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Drawing No: C-907
C-907
(Sheet 24 of 26)

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THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE
FOLLOWING: U.S. PATENT NO. 8,287,726; 8,221,618; U.S. 8,123,908
OTHER INTERNATIONAL PATENTS PENDING



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800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0806
STANDARD DETAIL
PEAK DIVERSION CONFIGURATION

1. REQUIRE MAINTENANCE FOR THE JELLYFISH FILTER IS BASED UPON RESULTS OF THE MOST RECENT INSPECTION, HISTORICAL MAINTENANCE RECORDS, OR THE RESULTS OF THE WATER QUALITY MANAGEMENT PLAN, WHICHEVER IS MORE FREQUENT. IN GENERAL, MAINTENANCE REQUIRES SOME COMBINATION OF THE FOLLOWING:
 1. SEDIMENTATION, WHICH MAY REQUIRE REPAIRS OF LESS OR GREATER, OR WITHIN 3 YEARS OF THE MOST RECENT SEDIMENT CLEANING, WHICHEVER OCCURS SOONER.
2. FLOATABLE TRASH, DEBRIS AND OIL REMOVAL.
3. DECK CLEANED AND FREED FROM SEDIMENT.
4. FILTER CARTRIDGES RINSED AND RE-INSTALLED AS REQUIRED BY THE MOST RECENT INSPECTION RESULTS, OR WITHIN 12 MONTHS OF THE MOST RECENT FILTER RINSING, WHICHEVER OCCURS SOONER.
5. REPLACE TENTACLES IF RINSING DOES NOT RESTORE ADEQUATE HYDRAULIC CAPACITY, REMOVE ACCUMULATED SEDIMENT, OR IF DAMAGED OR MISSING. IT IS RECOMMENDED THAT TENTACLES SHOULD BE REPLACED IF SERVICE NOT LONGER THAN 5 YEARS BEFORE REPLACEMENT.
6. DAMAGED OR MISSING CARTRIDGE DECK COMPONENTS MUST BE REPAIRED OR REPLACED AS INDICATED BY RESULTS OF THE MOST RECENT INSPECTION.
7. THE UNIT MUST BE CLEANED OUT AND FILTER CARTRIDGES INSPECTED IMMEDIATELY AFTER AN UPSTREAM OIL, FUEL, OR CHEMICAL SPILL. IF THE SPILLING TENTACLE SHOULD BE REPLACES IF DAMAGED OR COMPROMISED BY THE SPILL.

JELLYFISH FILTER

58

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No.	Revision	Date
1.	REVISED PER CITY COMMENTS	12/30/19
2.	REVISED PER CITY COMMENTS	02/24/2020
3.	REVISED PER CITY COMMENTS	09/29/2020
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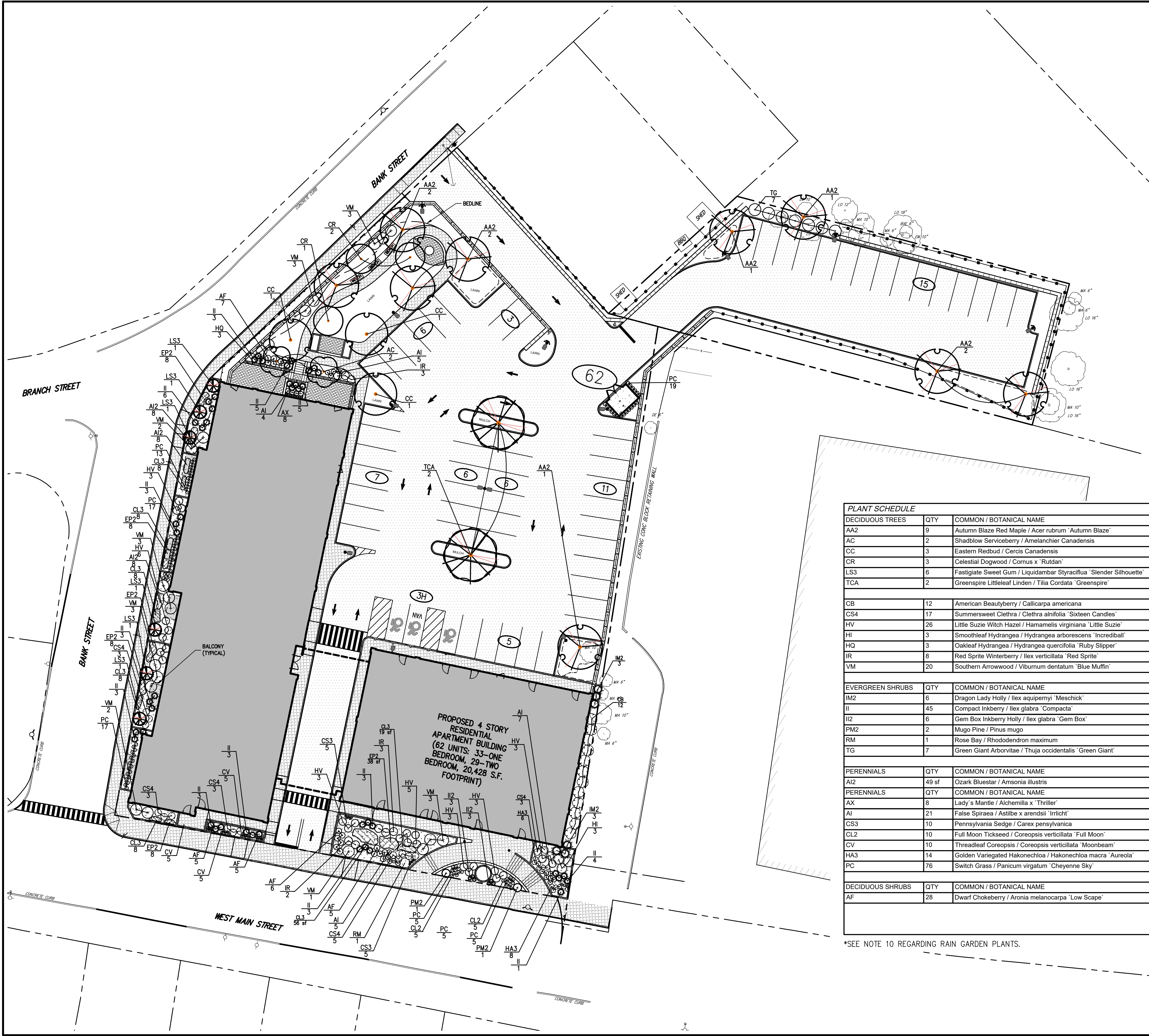


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C-908 (Sheet 25 of 26)			



LEGEND	
	EXISTING TREE AND DESIGNATION
	PROPOSED DECIDUOUS TREE
	PROPOSED FLOWERING TREE
	PROPOSED CONIFEROUS TREE
	PROPOSED SHRUBS

1. ALL PLANT MATERIAL SHALL BE FIRST QUALITY STOCK, PLANTED MATERIAL, AND METHODS OF INSTALLATION SHALL CONFORM TO THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION, AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION.
2. ALL AREAS OF THE SITE NOT OCCUPIED BY BUILDING OR PAVEMENT AND NOT SPECIFIED AS BEING PLANTED WITH TREES, SHRUBS OR GROUND COVER SHALL BE LAWN.
3. ALL PLANTING BEDS SHALL BE MULCHED WITH 3" OF BROWN MULCH. MULCH SHALL BE CLEAN, NON-DEY, TOXIC FREE, SHREDED HARDWOOD.
4. PLANT MATERIALS AS SPECIFIED ON THE DRAWINGS AND DELIVERED TO THE SITE SHALL BE NURSERY GROWN AND CERTIFIED TRUE TO THEIR GENUS, SPECIES AND CULTIVAR. PLANTS SHALL BE PERMITTED WITHIN THE PROJECT LANDSCAPE ARCHITECTS WRITTEN APPROVAL.
5. ALL LANDSCAPING SHALL CONTINUE TO BE MAINTAINED IN A HEALTHY GROWING CONDITION THROUGHOUT THE DURATION OF THE PROJECT, ANY PLANTING NOT SO MAINTAINED SHALL BE REPLACED WITH NEW PLANTS AT BEGINNING OF THE NEXT, IMMEDIATELY FOLLOWING, GROWING SEASON.
6. ALL TREES AND SHRUBS SHALL BE PRUNED AND SHAPED AND BE SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND GOVERNMENTAL AGENCIES HAVING JURISDICTION, ANY TREES AND SHRUBS THAT WILL POSSIBLY MAINTAIN A GROW TOWARDS THE BUILDING, LIGHT POLES, RETAIN WALLS, FENCES, PARKING SPACES, ETC. SHALL BE TRIMMED/PUNED BACK APPROPRIATELY.
7. PLANTING STOCK SHALL BE WELL-BRANCHED AND WELL-FORMED, SOUND, VIGOROUS, HEALTHY, FREE FROM DISEASE, SUN-SCALE, WINDBURN, ABRASION OR OTHER DEFECTS, INSECTS OR INSECTS EGGS, AND SHALL HAVE HEALTHY, NON UNBROKEN ROOT SYSTEMS, DECIDUOUS TREES AND SHRUBS SHALL BE SYMMETRICALLY DEVELOPED, OF UNIFORM HIGHT OF GROWTH, WITH STRAIGHT TRUNKS OR STEMS, AND FREE FROM OBSCURABLE DISFIGUREMENTS.
8. EVERGREEN TREES AND SHRUBS SHALL HAVE WELL-DEVELOPED SYMMETRICAL TOPS WITH TYPICAL SPREAD OF BRANCHES FOR EACH PARTICULAR SPECIES VARIETY. ONLY VINES AND GROUND COVER PLANTS WILL ESTABLISHED IN REMOVING EXISTING INTEGRAL CONTAINERS, OR FORMED HOLLOWED OUT SECTIONS SHALL BE USED. PLANTS SHALL BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT.
9. ALL STOCK SHALL BE BALLED OR BURLAPPED OR CONTAINER GROWN STOCK UNLESS OTHERWISE SPECIFIED. BAREROOT STOCK OF ANY KIND IS UNACCEPTABLE UNLESS SPECIFIED.
10. ALL PLANTING BEDS, LAWNS AND LANDSCAPED AREAS SHALL RECEIVE A MINIMUM 4" THICK LAYER OF TOPSOIL, UNLESS OTHERWISE SPECIFIED.
11. RAIN GARDEN PLANTINGS:
 - 30 - 1 GALLON PERENNIALS TO BE SELECTED BY PROJECT LANDSCAPE ARCHITECT.

PLANT SCHEDULE						
DECIDUOUS TREES		QTY	COMMON / BOTANICAL NAME	SIZE	ROOT COND.	MATURE HEIGHT
AA2	9		Autumn Blaze Red Maple / <i>Acer rubrum</i> 'Autumn Blaze'	2 1/2" - 3" Cal.	B & B	
AC	2		Shadblow Serviceberry / <i>Amelanchier Canadensis</i>	8" - 10" HT.	B & B	Single-Stem
CC	3		Eastern Redbud / <i>Cercis Canadensis</i>	8'-10" HT	B & B	
CR	3		Celestial Dogwood / <i>Cornus</i> x 'Rutdan'	10' - 12' HT	B & B	
LS3	6		Fastigate Sweet Gum / <i>Liquidambar Styraciflua</i> 'Slender Silhouette'	2" - 2 1/2" Cal.	B & B	
TCA	2		Greenspire Littleleaf Linden / <i>Tilia Cordata</i> 'Greenspire'	2 1/2" - 3" Cal.	B & B	
CB	12		American Beautyberry / <i>Callicarpa americana</i>	5 gal	Cont.	
CS4	17		Summersweet Clethra / <i>Clethra alnifolia</i> 'Sixteen Candles'	5 gal	Cont.	
HV	26		Little Suzie Witch Hazel / <i>Hamamelis virginiana</i> 'Little Suzie'	3 gal	Cont.	
HI	3		Smoothleaf Hydrangea / <i>Hydrangea arborescens</i> 'Incrediball'	30" - 36"	B & B	
HQ	3		Oakleaf Hydrangea / <i>Hydrangea quercifolia</i> 'Ruby Slipper'	30" - 36"	B & B	
IR	8		Red Sprite Winterberry / <i>Ilex verticillata</i> 'Red Sprite'	3 gal	Cont.	
VM	20		Southern Arrowwood / <i>Viburnum dentatum</i> 'Blue Muffin'	5 gal	Cont.	
EVERGREEN SHRUBS		QTY	COMMON / BOTANICAL NAME	SIZE	ROOT COND.	MATURE HEIGHT
IM2	6		Dragon Lady Holly / <i>Ilex aquipernyi</i> 'Meschick'	5' - 6' HT	B&B	
II	45		Compact Inkberry / <i>Ilex glabra</i> 'Compacta'	5 gal	Cont.	
II2	6		Gem Box Inkberry Holly / <i>Ilex glabra</i> 'Gem Box'	2 gal	Cont.	
PM2	2		Mugo Pine / <i>Pinus mugo</i>	5 gal	Cont.	
RM	1		Rose Bay / <i>Rhododendron maximum</i>	30" - 36" HT.	B & B	
TG	7		Green Giant Arborvitae / <i>Thuja occidentalis</i> 'Green Giant'	6' - 8' HT	B & B	
PERENNIALS		QTY	COMMON / BOTANICAL NAME	SIZE	ROOT COND.	MATURE HEIGHT
AI2	49 sf		Ozark Bluestar / <i>Amsonia illustris</i>	1 gal		
PERENNIALS		QTY	COMMON / BOTANICAL NAME	SIZE	ROOT COND.	MATURE HEIGHT
AX	8		Lady's Mantle / <i>Alchemilla</i> x 'Thriller'	1 gal	Cont.	
AI	21		False Spiraea / <i>Astilbe</i> x arendsil 'Irrlicht'	1 gal	Cont.	
CS3	10		Pennsylvania Sedge / <i>Carex pensylvanica</i>	1 gal	Cont.	
CL2	10		Full Moon Tickseed / <i>Coreopsis verticillata</i> 'Full Moon'	1 gal	Cont.	
CV	10		Threadleaf Coreopsis / <i>Coreopsis verticillata</i> 'Moonbeam'	1 gal	Cont.	
HA3	14		Golden Variegated Hakonechloa / <i>Hakonechloa macra</i> 'Aureola'	1 gal	Cont.	
PC	76		Switch Grass / <i>Panicum virgatum</i> 'Cheyenne Sky'	2 gal	Cont.	
DECIDUOUS SHRUBS		QTY	COMMON / BOTANICAL NAME	SIZE	ROOT COND.	MATURE HEIGHT
AF	28		Dwarf Chokeberry / <i>Aronia melanocarpa</i> 'Low Scape'	3 gal	Cont.	

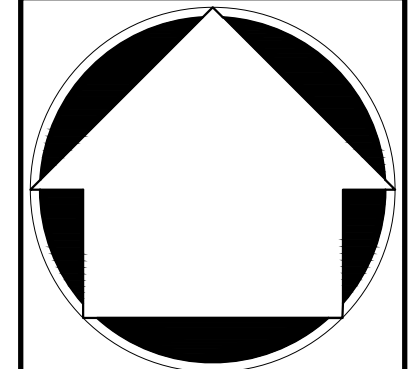
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LANDSCAPING PLAN

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APPLICANT/OWNER: **FARRELL BUILDING COMPANY**
2317 MONTAUK HIGHWAY
BRIDGEHAMPTON, NY 11932

ARCHITECT: **ARYEH SIEGEL ARCHITECT**
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2nd Floor Plan
12 - 1 Bedroom
7 - 2 Bedroom



WEST MAIN STREET

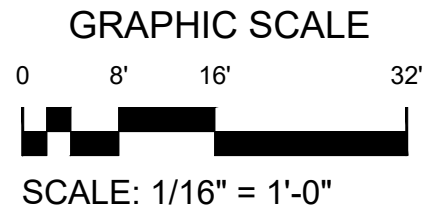
1st Floor Plan
9 - 1 Bedroom
6 - 2 Bedroom

62 Total Apartments

 = 1 Bedroom Apartment (Qty. = 33)

 = 2 Bedroom Apartment (Qty. = 29)

*BMR = **Below-market-rate Unit**
(3 - 1 Bedroom & 3 - 2 Bedroom Units)

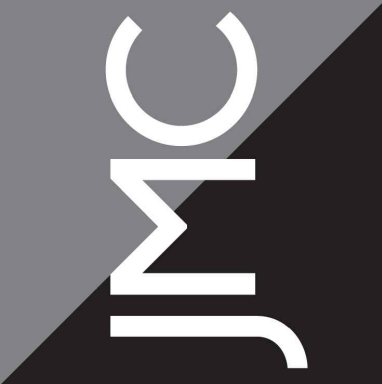
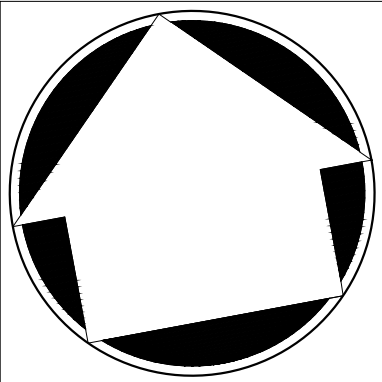


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1	REVISED PER PLANNING BOARD COMMENTS	11/26/19	AJS
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3	REVISED PER PLANNING BOARD COMMENTS	01/28/20	AJS
4	REVISED PER PLANNING BOARD COMMENTS	09/29/20	AJS
5	REVISED PER PLANNING BOARD COMMENTS	07/27/21	AJS
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BUILDING PLANS

BEACON COMMONS
16 WEST MAIN STREET
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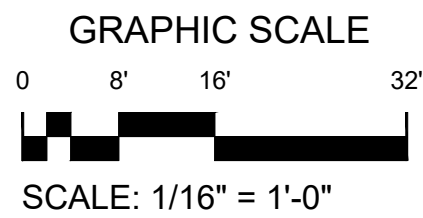


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ARCHITECT:
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*BMR = **Below-market-rate Unit**
(3 - 1 Bedroom & 3 - 2 Bedroom Units)

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ELEVATION - WEST MAIN STREET



ELEVATION - BANK STREET



PERSPECTIVE - LOOKING TOWARDS WEST MAIN STREET



PERSPECTIVE - PORTE COCHERE ENTRY



PERSPECTIVE - WEST MAIN STREET ENTRANCE

HARDIE BOARD VERTICAL
BOARD AND BATTEN SIDING:
COLOR: BRICK RED

PAINTED METAL RAILING:
COLOR: BLACK

CLAD ALUMINUM WINDOWS -
ANDERSEN 400 SERIES OR
APPROVED EQUAL. COLOR:
BLACK

BRICK SIDING - GLEN
GARY 5600 OR
APPROVED EQUAL

PAINTED METAL BALCONY
WITH 40" HIGH VERTICAL
RAILING

GLASS AND METAL
RAILING AT CONNECTION

HARDIE BOARD VERTICAL
BOARD AND BATTEN
SIDING. COLOR: BRICK
RED

PAINTED METAL RAILING:
COLOR: BLACK

CLAD ALUMINUM WINDOWS -
ANDERSEN 400 SERIES OR
APPROVED EQUAL. COLOR:
BLACK

BRICK SIDING - GLEN
GARY 5600 OR
APPROVED EQUAL

HARDIE BOARD VERTICAL
BOARD AND BATTEN
SIDING. COLOR: BRICK
RED

PAINTED METAL BALCONY
WITH 40" HIGH VERTICAL
RAILING

GLASS AND METAL
RAILING AT CONNECTION



PERSPECTIVE - CORNER OF WEST MAIN STREET & BANK STREET



PERSPECTIVE - LOOKING WEST ON WEST MAIN STREET



PERSPECTIVE - LOOKING ACROSS WEST MAIN STREET TO PORTE COCHERE ENTRY

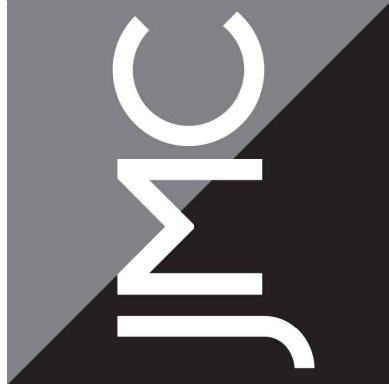
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ELEVATIONS

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BEACON, NY 12508

STORMWATER POLLUTION PREVENTION PLAN

Beacon Commons

**16 West Main Street
City of Beacon, NY**

*Applicant/Operator/
Owner:* Farrell Building Company
2317 Montauk Highway
Bridgehampton, NY 11932
Mr. Stephen Zagoren
(631) 766-0023

Prepared by:



120 Bedford Road
Armonk, NY 10504
JMC Project **18119**

Dated: 10/29/2019

Revised: 12/30/2019

09/29/2020

07/27/2021

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APPENDICES

<u>FIGURES</u>	<u>DESCRIPTION</u>
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- | | |
|----|-----------------------|
| 1. | Site Location Map |
| 2. | Rooftop Drainage Plan |

APPENDIX DESCRIPTION

- | | |
|----|--|
| A. | Existing/Proposed Hydrologic Calculations |
| B. | NYSDEC Stormwater Sizing Calculations |
| C. | Soil Testing Data |
| D. | Web Soil Survey Report |
| E. | Temporary Erosion and Sediment Control Inspection and Maintenance Checklist |
| | Permanent Stormwater Practice Operation, Maintenance and Management Inspection Checklist |
| F. | Contractor's Certification |
| G. | SPDES General Permit No. GP-0-20-001 & MS4 Acceptance Form |
| H. | Hydraulic Pipe Calculations |
| I. | Drawings and Figure: |
| | DA-1 "Existing Drainage Area Map" |
| | DA-2 "Proposed Drainage Area Map" |
| | Rooftop Drainage Figure |

REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS

JMC SITE PLANS

<u>Dwg. No.</u>	<u>Title</u>
C-000	Cover Sheet
C-010	Existing Conditions Plan
C-020	Demolition Plan
C-100	Site Plan
C-200	Grading Plan
C-300	Utilities Plan
C-310	Storm Profiles
C-400	Sediment and Erosion Control Plan
C-600	Lighting Plan
C-700	Garbage Truck Turning Plan (Front-Loading)
C-701	Garbage Truck Turning Plan (Rear-Loading)
C-702	Fire Truck Turning Plan (Scenario 1)
C-703	Fire Truck Turning Plan (Scenario 2)
C-704	Fire Truck Turning Plan (Scenario 3)
C-800	Aerial Site Plan
C-801	Sight Distance Plan
C-900	Construction Details
C-901	Construction Details
C-902	Construction Details
C-903	Construction Details
C-904	Construction Details
C-905	Construction Details
C-906	Construction Details
C-907	Construction Details
C-908	Construction Details
L-100	Landscaping Plan

I. INTRODUCTION

This Stormwater Pollution Prevention Plan has been prepared for the 1.51-acre Beacon Commons site, located in the City of Beacon, Dutchess County, New York (hereinafter referred to as the "Site"). The site is bordered by residential properties to the north, West Main Street to the south, 2-Way Brewing Company to the east, and Bank Street to the west. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 2020.
- Chapter 190 "Stormwater Management and Erosion and Sediment Control" of the City of Beacon Zoning Code
- New York State Stormwater Management Design Manual

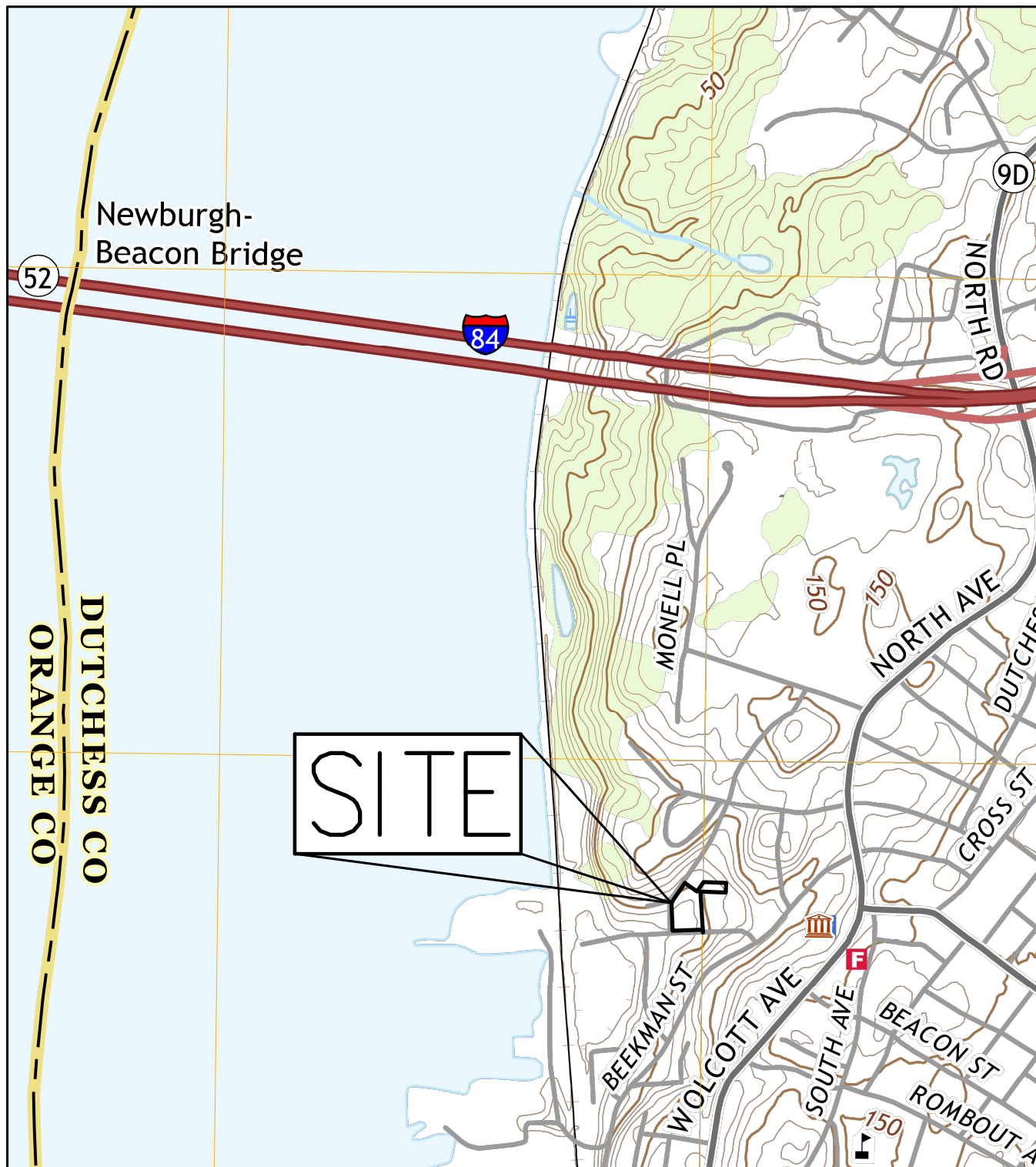
The existing site consists of a tall one-story brick building and a parking lot area. The site is proposed to be redeveloped with a 62-unit 4-story apartment building comprised of 33 one-bedroom and 29 two-bedroom units.

II. STORMWATER MANAGEMENT PLANNING

In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-20-001 for Stormwater Discharges from Construction Activities, the Stormwater Pollution Prevention Plan (SWPPP) includes stormwater management practices (SMP's) from the publication "New York State Stormwater Management Design Manual," last revised January 2015.

A Stormwater Pollution Prevention Plan has been prepared for this project because it is a construction activity that involves:

- Soil disturbances of one (1) or more acres of land.



BEACON COMMONS

16 WEST MAIN STREET

BEACON, NY 12508

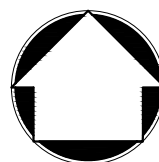
SITE LOCATION MAP

DATE: 10/29/2019

JMC PROJECT: 18119

FIGURE: 01

SCALE: 1" = 1,000'



120 BEDFORD RD
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The proposed stormwater facilities have been designed such that the quantity and quality of stormwater runoff during and after construction are not adversely altered or are enhanced when compared to pre-development conditions.

Based on the GIS information provided by the website of the New York State Office of Parks, Recreation and Historic Places, the site does not contain, nor is it immediately adjacent to any properties listed on the State or National Register of Historic Places.

According to the NYSDEC Environmental Mapper, the site may contain endangered or threatened species of wild life. According to the database, Atlantic Sturgeon, Shortnose Sturgeon and Indiana Bat are listed. The project site does not contain any streams or waterbodies that would be inhabited by Atlantic Sturgeon or Shortnose Sturgeon. However, the existing trees to be removed could be inhabited by Indiana Bats. According to the U.S. Fish and Wildlife Service (USFWS), tree removal should be conducted during the winter time frame of November 1st to March 31st to avoid adverse impacts to the bats. If tree removal is planned outside of this time frame, a site assessment by a bat biologist or a qualified bat surveyor should be performed. Such a survey will identify potential concerns and allow for implementation of site activity protections.

The Six Step Process for Stormwater Site Planning and Practice Selection

Stormwater management using green infrastructure is summarized in the six step process described below. The six step process was adhered to when developing this SWPPP. Information is provided in this SWPPP which documents compliance with the required process as follows:

Step 1: Site Planning

Implement planning practices that protect natural resources and utilize the hydrology of the site. Strong consideration must be given to reducing impervious cover to aid in the preservation of

natural resources including protecting natural areas, avoiding sensitive areas and minimizing grading and soil disturbance.

Step 2: Determine Water Quality Treatment Volume (WQv)

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **90% Rule** - According to the New York State Stormwater Design Manual, Section 4.1, the water quality volume is determined from the 90% rule. The method is based on 90% of the average annual stormwater runoff volume which must be provided due to impervious surfaces. The Water Quality Volume (denoted as the WQv) is designed to improve water quality sizing to capture and treat 90% of the average annual stormwater runoff volume. The WQv is directly related to the amount of impervious cover created at a site. The average rainfall storm depth for 90% of storms in New York State in one year is used to calculate a volume of runoff. The rainfall depth depends on the location of the site within the state. From this depth of rainfall, the required water quality volume is calculated.

The project is a redevelopment and therefore will comply with the strategies outlined within Chapter 9: Redevelopment Projects of the Design Manual. There are different options to control water quality depending on the redevelopment.

The NYSDEC Redevelopment Standards include specific criteria for the implementation of surface water quality improvements. A combination of standard and non-standard practices is proposed and all facilities will treat the required water quality volume from the entire contributing area. Therefore, Water Quality Treatment Options II & III will be utilized. According to Option III of the Redevelopment Standards, alternative or non-standard practices such as manufactured treatment devices are acceptable if they treat 75% of the water quality volume from the disturbed areas as well as any additional runoff directed to the practice. According to Option II, standard practices such as subsurface infiltration systems can be sized to

treat the water quality volume generated from 25% of the existing impervious area plus 100% of the new impervious area. Green practices such as green roofs and porous pavement can be used towards credit in meeting the water quality volume requirements.

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

RRv is required for this project since it is a combination of both new development and redevelopment.

Green infrastructure techniques or standard SMP's with RRv capacity can potentially reduce the required WQv by incorporating combinations of green infrastructure techniques and standard SMP's within each drainage area on the site.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.
- Practices resulting in a reduction of contributing volume such as green roofs, stormwater planters, and rain gardens.

Apply a combination of green infrastructure techniques and standard SMPs with RRv capacity to provide 100% of the WQv calculated in Step 2. If the RRv calculated in this step is greater than or equal to the WQv in Step 2, the RRv requirement has been met and Step 4 can be skipped. If the RRv provided cannot meet or exceed 100% of the WQv, the project 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 green infrastructure techniques and practices are provided in the Design Manual:

- **Conservation of Natural Areas**
 - The majority of the site is developed and has been for decades. The project involves an increase in the developed portion of the site. Therefore, there is no area to be subtracted from the contributing area for the WQv calculation.
- **Sheet flow to Riparian Buffers or Filter Strips**
 - There are no well vegetated areas on-site downstream of the developed area that lend an opportunity as a buffer and still meet the minimum contributing length of flow. This practice is not practical for this project since these items are typically used in a residential application.
- **Vegetated Swales**
 - The use of sheet flow into vegetated swales cannot be implemented as there is not any location with adequate width and length.
- **Tree Planting / Tree Pits**
 - The project includes tree planting around its perimeter as part of the proposed landscaping plan. There are two small depressed landscaped islands that contain tree plantings to treat stormwater. However, to be conservative, the new trees are not credited towards area reduction for the water quality volume.
- **Disconnection of Rooftop Runoff**
 - This practice is not practical for this project since these items are typically used in a residential application for small rooftop areas.
- **Stream Daylighting**
 - This practice is not possible for this project since there are no existing streams.
- **Rain Gardens**
 - A rain garden is used to treat runoff from sidewalk areas along the West Main Street frontage of the site.

- **Green Roofs**

- Green roofs were not considered for this project due to RRv requirements being met via subsurface infiltration and the rain garden.

- **Stormwater Planters**

- Flow-through Stormwater planters will be constructed along the rear of the building, along Bank Street and at the corner of West Main Street between the building and property line to provide RRv.

- **Rain Barrels and Cisterns**

- Underground storage tanks could be installed to collect stormwater runoff to be used for irrigation purposes. At this time the project will not have an irrigation system for the landscaped areas. There are other green practices proposed to meet the RRv requirements.

- **Porous Paving**

- Porous pavements were not considered for this project because they are better suited for paved areas with low traffic activity. As such the RRv requirements are being met via stormwater planters and a rain garden.

- **Standard Practices with RRv Capacity**

- **Biofilters and Bioretention Basins** – These surface practices cannot be proposed due to the limited landscaped area.
- **Infiltration Practices** – A subsurface infiltration system is not ideal due to testing revealing high ground water and poor infiltration rates.

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.

Step 4: Determine the minimum RRv Required

The minimum RRv is calculated similar to the WQV. However, it is determined using only the new impervious cover and accounts for the hydrologic soil group present. In no case shall the runoff reduction achieved from the newly constructed impervious area be less than the minimum runoff reduction volume (RRv_{min}).

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Apply the standard SMP's to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques. The standard SMP's with RRv capacity must be implemented to verify that the RRv requirement has been met.

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

The Channel Protection Volume (CPv), Overbank Flood Control (Q_p) and Extreme Flood Control (Q_f) must be met for the plan to be completed. This is accomplished by using practices such as infiltration basins, dry detention basins, etc. to meet water quantity requirements. The following standards must be met:

I. Stream Channel Protection (CPv)

Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event, remained from runoff reduction. Reduction of runoff for meeting stream channel protection objectives, where site conditions allow, is encouraged and the volume reduction achieved through green infrastructure can be deducted from CPv. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this

criterion. Detention time may be calculated using either a center of mass method or plug flow calculation method.

- CPv for a redevelopment project is not required if there is no increase in impervious area or changes to hydrology that increase the discharge rate. This criterion, as defined in Chapter 4 of New York State Stormwater Design Manual, is not based on a pre versus post-development comparison. However, for a redevelopment project this requirement is relaxed. If the hydrology and hydraulic study shows that the post-construction 1-year 24 hour discharge rate and velocity are less than or equal to the pre-construction discharge rate, providing 24 hour detention of the 1-year storm to meet the channel protection criteria is not required.

2. Overbank Flood (Q_p) which is the 10 year storm.

Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate (Q_p) to predevelopment rates.

3. Extreme Storm (Q_f) which is the 100 year storm.

100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate (Q_f) to predevelopment rates.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-20-001.

III. STUDY METHODOLOGY

Runoff rates were calculated based upon the standards set forth by the United States Department of Agriculture Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986. The methodology set forth in TR-55

considers a multitude of characteristics for watershed areas including soil types, soil permeability, vegetative cover, time of concentration, topography, rainfall intensity, ponding areas, etc.

The 1, 10, 25, 100-year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendix A Existing/Proposed Hydrologic Calculations).

Anticipated drainage conditions were analyzed taking into account the rate of runoff which will result from the construction of buildings, parking areas and other impervious surfaces associated with the site development.

Base Data and Design Criteria

For the stormwater management analysis, the following base information and methodology were used:

1. The site drainage patterns and outfall facilities were reviewed by JMC personnel for the purpose of gathering background data and confirming existing mapping of the watershed areas.
2. An Existing Drainage Area Map was developed from the topographical survey, available County GIS data, and site observations. The drainage area map reflects the existing conditions within and around the project area.
3. A Proposed Drainage Area Map was developed from the proposed grading design superimposed over the existing conditions. The drainage area map reflects the proposed conditions within the project area and the existing conditions to remain in the surrounding area.
4. The United States Department of Agriculture (USDA) Web Soil Survey of the site available on its website at <http://websoilsurvey.nrcd.usda.gov>.

5. Soil Survey of Putnam and Westchester Counties, 1994.
6. The United States Department of Agriculture Natural Resources Conservation Service National Engineering Handbook, Section 4 - Hydrology", dated March 1985.
7. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.
8. The time of concentration was calculated using the methods described in Chapter 3 of TR-55, Second Edition, June 1986. Manning's kinematics wave equation was used to determine the travel time of sheet flow. The 2-year 24-hour precipitation amount of 3.16 inches was used in the equation for all storm events. The travel time for shallow concentrated flow was computed using Figure 3-1 and Table 3-1 of TR-55. Manning's Equation was used to determine the travel time for channel reaches.
9. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.
10. The New York State Stormwater Management Design Manual, revised January 2015.
11. New York Standards and Specifications for Erosion and Sediment Control, November 2016.
12. The storm flows for the 1, 10, 25, & 100-year recurrence interval storms were analyzed for the total watershed areas. The Type III distribution design storm for a 24 hour duration was used and the mass rainfall for each design storm was taken from the Extreme Precipitation in New York & New England developed by the Natural Resource Conservation Service (NRCS) and the Northeast Regional Climate Center (NRCC) as follows:

24 Hour Rainfall Amounts

Design Storm Recurrence Interval	Inches of Rainfall
1 Year	2.61
10 Year	4.70
25 Year	5.89
100 Year	8.33

IV. EXISTING CONDITIONS

The existing conditions of the project site consists of a tall one story brick building and associated parking lot. Some of the stormwater is collected by a storm sewer conveyance system on site while the rest of the stormwater flows into an undersized rain garden before entering the municipal storm system along West Main Street. After stormwater runoff exits the project site, it all flows to the storm sewer manhole located at the intersection of Bank Street and West Main Street which is designated as Design Point 1.

The following natural features and drainage patterns of the project site and off-site have been identified and utilized to develop Drawing DA-1 “Existing Drainage Area Map” which is included in Appendix I:

- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)

Based on the USDA Web soil survey, all on-site soils are well drained and belong to hydrological group B.

One Design Point (DP-1) was identified for comparing peak rates of runoff in existing and proposed conditions. Three separate drainage areas were identified in existing conditions based on the existing drainage divides at the site and surrounding properties.

The following is a description of each of the drainage areas analyzed in the existing conditions analysis:

Existing Drainage Area 1A (EDA-1A) is 5.58 acres in size and is located on the northern portion of the site along Bank Street, the Parcel 2 area and offsite areas located to the north and east of the site. This area consists of the rear parking area and a portion of the existing building and nearby residential and business properties uphill from the project site. This drainage area is collected by an on-site storm sewer within an easement and drains to the municipal storm system in Bank Street, then towards the manhole at the intersection of Bank Street and West Main Street which is designated as Design Point 1.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 74.8 and 13.7 minutes, respectively. Refer to Drawing DA-1 in Appendix I.

Existing Drainage Area 1B (EDA-1B) is 0.92 acres in size and is located on the southern portion of the site along West Main Street and Bank Street. This area consists of the front and side parking areas and a portion of the existing building. This drainage area is collected by an existing undersized rain garden area and drains towards the manhole at the intersection of Bank Street and West Main Street, designated as Design Point 1.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 80.1 and 6.4 minutes, respectively. Refer to Drawing DA-1 in Appendix I.

The peak rates of runoff to the design point from the drainage areas for each storm are shown in the table below:

Table I
Summary of Peak Rates of Runoff in Existing Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-I
1 year	3.96
10 year	12.42
25 year	18.52
100 year	30.71

V. PROPOSED CONDITIONS

The proposed improvements consist of the replacing the existing building and parking areas with a four-story residential apartment building totaling 62 units. The associated parking lot will be redeveloped as well and additional parking will be added on Parcel 2.

The proposed drainage improvements include a variety of stormwater practices, such as tree plantings in depressed curb islands, rain garden, subsurface infiltration system, and a hydrodynamic separator water quality structure. After treatment for water quality, stormwater will be discharged from the rain garden and subsurface infiltration system using outlet control structures to control peak flows.

This section describes the design and analysis of the proposed conditions used to demonstrate that the SWPPP meets the requirements of the NYSDEC SPDES General Permit.

The Six Step Process For Stormwater Site Planning and Practice Selection

Step I: Site Planning

The following practices and site features were incorporated in the site design:

- Preserving hydrology - Maintaining drainage divides

- Floodplain considerations - The site does not lie within the 100 year flood zone according to the National Flood Insurance Program Flood Insurance Rate Map (FIRM) No. 36027C0463E, effective date 05/02/2012.
- Topography (contour lines, existing flow paths, steep slopes, etc.) has been maintained or disturbed to the minimum extent practicable.
- Soil (hydrologic soil groups, highly erodible soils, etc.)

Step 2: Determine Water Quality Treatment Volume (WQv)

90% Rule - According to the New York State Stormwater Design Manual, Section 4.1, the water quality volume is determined from the 90% rule.

Water quality volume required = 5,887 CF

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

- Stormwater Planters

Step 4: Determine the minimum RRv Required

RRv_{min} calculations can be found in Appendix 'B'. RRv_{min} was met through

- Stormwater Planters

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Non Standard/Alternative SMP's to Address Remaining Water Quality Volume (for Redevelopment Projects)

- **Hydrodynamic Separators**

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

- **Detention Systems**

- Subsurface Detention Basin

- Description

- A detention practice that stores the water quality volume in underground units, before it is infiltrated into the ground.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Stormwater practices are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM).
2. Conveyance – The design conveys runoff to the designed stormwater practice in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.
3. Pretreatment – All stormwater practices provide pretreatment as required in accordance with NYSSMDM design guidelines.
4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines.
5. Environmental/Landscaping – Extensive landscaping has been provided for each proposed stormwater practice to enhance pollutant removal and provide aesthetic enhancement to the property.
6. Maintenance – Maintenance for the environment practices has been provided and is detain the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing DA-2 "Proposed Drainage Area Map" located in Appendix I.

Similarly, one Design Point (DP-I) was identified for comparing peak rates of runoff in existing and proposed conditions. However, five separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site.

The following is a description of each of the drainage areas analyzed in the proposed conditions analysis:

Proposed Drainage Area IA (PDA-IA) is 0.73 acres in size and is the northern portion of the site which consists of the parking areas and adjacent landscaping. This drainage area is treated by a Jellyfish system, before being directed to a proposed subsurface detention system and slowly released to the storm sewer system leading to design point I. The proposed detention system will be 4 rows of Stormtech MC-3500 Chambers (32 units) with the bottom of the system at elevation 33.40. Outlet control structure A-6 will control its flow release with a orifi 3.5" at invert elevation 33.40, a 4" wide weir set at elevation 36.50 and a 15" culvert pipe with final discharge to design point I.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 92 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix I.

Proposed Drainage Area IB (PDA-IB) is 0.09 acres in size and consists of the entrance driveway leading from West Main Street and a small portion of the parking area. This drainage area is collected and treated by a Cascade Separator unit located at the intersection of the driveway with West Main Street. Sizing calculations are provided in Appendix "B". The stormwater is then released to the storm sewer system similar to existing conditions.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 98 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix "I".

Proposed Drainage Area IC (PDA-IC) is 0.56 acres in size and consists of much of the proposed building. This drainage area is directed into multiple stormwater planters along the sides of the buildings. After being treated by the planters, the stormwater is then released to the city storm sewer system similar to existing conditions. Raised drains are placed in the planters to allow stormwater from the larger storm events to bypass directly into the storm sewer system.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 94 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix “I”.

Proposed Drainage Area ID (PDA-ID) is 5.38 acres in size and is located to the north and east of the site. This offsite area consists of the nearby residential and business properties uphill from the project site. Under proposed conditions, this drainage area is the same as existing conditions. However, instead of flowing onto the site, the off-site runoff is collected by proposed drain inlets and conveyed to a proposed on-site storm sewer system which bypasses the on-site SMPs and is directed towards the manhole at the intersection of the site driveway and West Main Street. .

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 75 and 19.2 minutes, respectively. Refer to Drawing DA-1 in Appendix “I”.

Proposed Drainage Area IE (PDA-IE) is 0.03 acres in size and consists of the remaining landscaped areas along the West Main Street and Bank street frontage. This drainage area is allowed to run off the site onto the adjacent sidewalks and roadways where it is captured by the storm sewer system similar to existing conditions.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 73 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix “I”

The peak rates of runoff to the design point for each storm are shown on the table below:

Table 2
Summary of Proposed Peak Rates of Runoff in Proposed Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1
1 year	3.07
10 year	11.05
25 year	14.98
100 year	26.64

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

Table 3
Percent Reductions in Peak Rates of Runoff (Existing vs. Proposed Conditions)
(Cubic Feet per Second)

Design Point	Storm Recurrence Frequency (Years)	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)	Percent Reduction (%)
1	1 year	3.38	3.07	9
	10 year	11.13	11.05	1
	25 year	16.15	14.98	7
	100 year	26.79	26.64	1

As demonstrated in Table 3, the proposed stormwater improvements will result in reductions of peak rates of runoff for all storms.

VI. SOIL EROSION & SEDIMENT CONTROL

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction and continuing throughout its course, as outlined in the "New York State Standards and Specifications for Erosion and Sediment Control," November 2016. A continuing maintenance

program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.

The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days.

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 post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.

The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the certification statement provided in Appendix F before they commence any construction activity.

Soil Description

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

Soils are placed into four hydrologic groups: A, B, C, and D. In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by the

surface conditions. Transmission rate is the rate at which water moves in the soil and is controlled by soil properties. Definitions of the classes are as follows:

- A. (Low runoff potential). The soils have a high infiltration rate even when thoroughly wetted. They chiefly consist of deep, well drained to excessively drained sands or gravels. They have a high rate of water transmission.
- B. The soils have a moderate infiltration rate when thoroughly wetted. They chiefly are moderately deep to deep, moderately well drained to well drained soils that have moderately fine to moderately coarse textures. They have a moderate rate of water transmission.
- C. The soils have a slow infiltration rate when thoroughly wetted. They chiefly have a layer that impedes downward movement of water or have moderately fine to fine texture. They have a slow rate of water transmission.
- D. (High runoff potential). The soils have a very slow infiltration rate when thoroughly wetted. They chiefly consist of clay soils that have a high swelling potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. They have a very slow rate of water transmission.

A soil's tendency to erode is also described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight," "moderate," or "SEVERE." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "SEVERE" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed.

Per the Soil Survey, the following soils listed below are present at the site. Following this list is a detailed description of each soil type found on the property:

<u>SYM. HYDRO. SOIL GROUP</u>	<u>DESCRIPTION</u>
DwB B	Dutchess-Cardigan complex, undulating, rocky

DwB, Dutchess-Cardigan complex, undulating, rocky

This soil consists of very deep, well drained Dutchess soils and moderately deep, well drained Cardigan soils that formed in glacial till deposits. It is on hilltops and undulating till plains that are underlain by folded shale bedrock. Dutchess soils are commonly on lower concave slopes and Cardigan soils are commonly on upper slopes, hilltops, and near areas of rock outcrop. This unit consists of about 40 percent Dutchess soils, 30 percent Cardigan soils, and 30 percent other soils and rock outcrop. Depth to the top of a seasonal high water table is more than 6 feet. Available water capacity is low.

Hydrologic group: **B**

Erosion Hazard Rating: **SLIGHT**

Sequence of Construction

Construction shall be sequenced in such a manner that any area which is disturbed shall first be protected with sediment erosion controls as indicated on this plan. 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.

Specific requirements are given as follows:

1. Installation of sediment and erosion control measures as indicated on this plan.
2. Pre-construction meeting with site contractor, city of beacon personnel, and site engineer.

3. Demolition of existing building as required.
4. Clear undeveloped portion of property which is to be developed.
5. Strip and stockpile topsoil.
6. Begin building and parking lot construction, rough grading.
7. Install storm drain system complete (immediately install inlet protection on all inlets).
8. Install public utilities (gas, electric and telephone) as required.
9. Install concrete and asphalt concrete pavement complete.
10. Finish grading, redistribute topsoil and establish vegetation and/or landscaping.
11. Clean pavements and storm drain system of all accumulated sediment in conjunction with the removal of all temporary sediment and erosion control devices.
12. Complete site and building construction.

On-Site Pollution Prevention

There are temporary pollution prevention measures used to control litter and construction debris on site, such as:

- Silt Fence
- Baled Erosion Fence
- Silt Sack
- Excavated Drop Inlet Protection

There will be inlet protection provided for all storm drains and inlets with the use of curb gutter inlet protection structures and stone & block drop inlet protection, which keep silt, sediment and construction litter and debris out of the on-site stormwater drainage system.

Temporary Control Measures

Temporary control measures and facilities will include silt fences, construction ditches, stabilized construction access, temporary seeding, mulching and sediment traps with temporary riser and anti-vortex devices.

Throughout the construction of the proposed redevelopment, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Construction ditches, if required, will be used to direct stormwater runoff to excavated drop inlet protections for settlement.

Descriptions of the temporary sediment & erosion controls that will be used during the development of the site including silt fence, stabilized construction access, seeding, mulching, inlet protection, and haybales are as follows:

1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.
2. Stabilized Construction Access consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 24 feet in width by 8 inches in depth.
3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 80% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.
4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.
5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt,

sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using “Silt Sacks” inside the structures.

6. Haybales may be used along existing paved areas to intercept sediment from stormwater runoff generated by upstream soil disturbance. Haybales may also be placed around temporary soil stockpile areas on pavement.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:

1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).
2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.
3. Sediment deposits shall be removed when they reach approximately $\frac{1}{3}$ the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner’s Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.
4. Rake all exposed areas parallel to the slope during earthwork operations.
5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for fourteen or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

Concrete Material and Equipment Management

Concrete washouts shall be used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solid for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drain pipes and cause flooding. Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

Prefabricated concrete washout containers can be delivered to the site to provide maintenance and disposal of materials. Regular pick-ups of solid and liquid waste materials will be necessary. To prevent leaks on the job site, ensure that prefabricated washout containers are watertight. A self installed concrete washout facility can be utilized although they are much less reliable than prefabricated containers and are prone to leaks. There are many design options for the washout, but they are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Above-grade structures can also be used if they are sized and constructed correctly and are diligently maintained. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of constant use, therefore the contractor shall be sure to use quality materials and inspect the facilities on a daily basis.

Washouts must be sized to handle solids, wash water, and rainfall to prevent overflow. Concrete Washout Systems, Inc. estimates that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be at least 10 feet wide and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 12-inches of freeboard must be provided. The pit must be lined with plastic sheeting of at least 10-

mil thickness without holes or tears to prevent leaching of liquids into the ground. Concrete wash water should never be placed in a pit that is connected to the storm drain system or that drains to nearby waterways.

An above-grade washout can be constructed at least 10 feet wide by 10 feet long and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 4-inches of freeboard must be provided. The washout structures can be constructed with staked straw bales or sandbags double-or triple lined with plastic sheeting of at least 10-mil thickness without holes or tears.

Concrete washout facilities shall not be located within 50 feet of storm drains, open ditches, or water bodies and should be placed in locations that allow for convenient access for concrete trucks. The contractor shall check all concrete washout facilities daily to determine if they have been filled to 75 percent capacity, which is when materials need to be removed. Both above-and below-ground self-installed washouts should be inspected daily to ensure that plastic linings are intact, and sidewalls have not been damaged by construction activities. Prefabricated washout containers should be inspected daily as well as to ensure the container is not leaking or nearing 75 percent capacity. Inspectors should also note whether the facilities are being used regularly. Additional signage for washouts may be needed in more convenient locations if concrete truck operators are not utilizing them.

The washout structures must be drained or covered prior to predicted rainstorms to prevent overflows. Hardened solids either whole or broken must be removed and then they may be reused onsite or hauled away for recycling.

Once materials are removed from the concrete washout, a new structure must be built or excavated, or if the previous structure is still intact, inspect it for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic be used after every cleaning because pumps and concrete removal equipment can damage the existing liner.

Construction Site Chemical Control

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides; fertilizers used for vegetative stabilization; petrochemicals; construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste.

Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in applicable Federal, State and local regulations that govern their usage, handling, storage, and disposal.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.

Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage areas, and notifying neighboring property owners prior to spraying.

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity of 110 percent greater than that of the largest container;
- Clearly label all products;

- Keep tanks off the ground; and
- Keep lids securely fastened.

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.

Thinners or solvents should not be discharged into sanitary or storm systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used, and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned with degreasing solvents, which can then be reused or recycled.

Solid Waste Management and Portable Sanitary Management

The purpose of this management measure is to prevent the potential for solid waste such as construction debris, trash, etc. from construction sites due to improper handling and storage. Debris and litter should be removed periodically from the BMP's and surrounding areas to prevent clogging of pipes and structures. All construction material shall be stored in designated staging areas. Roll-off containers shall be placed on site and all empty containers, construction debris and litter shall be placed in the containers.

Portable sanitary units may be utilized on-site or bathrooms will be provided within construction trailers. A sanitation removal company will be hired to pump/remove any sanitary waste. In the event that portable sanitary units are used and then cleaned after being emptied, the rinse water may not be disposed of to the storm drain system. It shall be contained for later disposal if it can't be disposed of on-site. Remove paper and trash before cleaning the portable sanitary units. The portable sanitary units shall be located away from the storm drain system if possible. Provide over head cover for wash areas if possible. Maintain spill response material and equipment on site

to eliminate the potential for contaminants and wash water from entering the storm drain system.

Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project.

1. Stormwater Planters are proposed at various locations around the proposed building to collect and filter runoff from portions of the building rooftops. Small drainage areas, less than 15,000 square feet will be collected by gutters and roof drain leaders and discharged into stormwater planters that will infiltrate the smaller storms and then discharge the higher storms through risers/standpipes directly into the underground storm pipes to the proposed stormwater management basins. Stormwater Planters act as small basins that treat stormwater as it flows through plant material and a soil matrix and is discharged to the storm drain system. These practices are elevated above the existing grade, surrounded by a concrete wall and consist of a reservoir with a depth of 12 inches, grass/landscaping with a layer of mulch, 12 inches of sandy loam topsoil and a sand/gravel layer a minimum of 24 inches wide that extends down to the native soil. Filtration through these layers will enable removal of pollutants and sediment generated by the rooftop and other small impervious areas. Refer to Appendix 'B' for the Runoff Reduction and Water Quality Volume Sizing Calculations.
2. Cascade Separator Water Quality Structure is proposed to provide pretreatment of the water quality flow rate for separating sediment, debris, floatables, etc. from the runoff prior to discharge to the SMP's. The Cascade Separator Water Quality Structure has been designed to treat up to the required water quality volume and appropriately handle all storm frequencies without the resuspension of solids. The system will provide 80% TSS removal rate for particles having a mean particle size of 125 microns for stormwater runoff. Refer to Appendix "E" for the first defense unit water quality calculation.

3. Jellyfish Stormwater Treatment is proposed to provide treatment of the water quality using a membrane filtration compact stand-alone system. Jellyfish removes floatables, trash, oil, debris, TSS, fine silt-sized particles, and a high percentage of particulate-bound pollutants; including phosphorus, nitrogen, metals, and hydrocarbons.
4. Subsurface Detention System (I-2) which is a standard SMP that will be used to provide runoff volume reduction. The smaller storms will be retained, and the higher storms will be released gradually. Refer to the Proposed Hydrologic Calculations and Runoff Reduction and Water Quality Volume Sizing Calculations, in Appendices A and B.

The StormTech MC-4500 Recharge Chambers are domed shaped fully opened bottom corrugated chambers with perforated side walls. Chambers allow stormwater to be stored within the dome void until it can infiltrate into the ground. They are able to be used for residential, commercial or industrial applications and provide an easy way to treat and dispose of stormwater runoff underground. Water is infiltrated into the ground through the chambers and surrounding crushed stone and will replenish the groundwater as a natural condition.

The Isolator Row is a row of StormTech chambers that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as stormwater rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage access of the adjacent stone and chambers from sediment accumulation.

The Isolator Row is designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but includes a high flow weir such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other standard chambers. By treating stormwater prior to entry into the

chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured.

5. Seeding of at least 70% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 2 tons per acre such that the mulch forms a continuous blanket.

Specifications for Soil Restoration

Prior to the final stabilization of the disturbed areas, soil restoration will be required for all vegetated areas to recover the original properties and porosity of the soil. Soil Restoration Requirements are provided on Table 4 below:

Table 4

Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only – no change in grade	HSG A&B	HSG C&D	Protect area from any ongoing construction activities
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	Clearing and grubbing
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration**	
Heavy traffic areas on site (especially) in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (decompaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area.
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.		

* 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.

** Per "Deep Ripping and De-compaction, DEC 2008."

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following full soil restoration steps applied:

1. Apply 3 inches of compost over subsoil.
2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

Specifications for Final Stabilization of Graded Areas

Final stabilization of graded areas consists of the placement of topsoil and installation of landscaping (unless the area is to be paved, or a building is to be constructed in the location). Topsoil is to be spread as soon as grading operations are completed. Topsoil is to be placed to a minimum depth of six inches on all embankments, planting areas and seeding/sod areas. The subgrade is to be scarified to a depth of two inches to provide a bond of the topsoil with the subsoil. Topsoil is to be raked to an even surface and cleared of all debris, roots, stones and other unsatisfactory material.

Planting operations shall be conducted under favorable weather conditions as follows:

- Permanent Lawns - April 15 (provided soil is frost-free and not excessively moist) to May 15; August 15 to October 15.
- Temporary Lawn Seeding - if outside of the time periods noted above, the areas shall be seeded immediately on completion of topsoil operations with annual ryegrass (Italian rye) at a rate of six pounds per 1,000 square feet. Temporary lawn installation is permitted provided the soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

On slopes with a grade of 3 horizontal to 1 vertical or greater, and in swales, a geotextile netting or mat shall be installed for stabilization purposes as shown on the Plans. Seeded areas are to be

mulched with straw or hay at an application rate of 70-90 pounds per 1,000 s.f. Straw or hay mulch must be spread uniformly and anchored immediately after spreading to prevent wind blowing. Mulches must be inspected periodically and in particular after rainstorms to check for erosion. If erosion is observed, additional mulch must be applied. Netting shall be inspected after rainstorms for dislocation or failure; any damage shall be repaired immediately.

All denuded surfaces which will be exposed for a period of over two months or more shall be temporarily hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet); (b) Certified "Aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to be used in the months of October and November.

Permanent turfgrass cover is to consist of a seed mixture as follows:

(a) Sunny sites

Kentucky Bluegrass	2.0-2.6 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	0.4-0.6 pounds/1000 square feet

(b) Shady sites

Kentucky Bluegrass	0.8-1.0 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	2.6-3.3 pounds/1000 square feet

All plant materials shall comply with the standards of the American Association Of Nurserymen with respect to height and caliper as described in its publication American Standard for Nursery Stock, latest edition.

VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE

During the construction phase and following construction of the project, a number of maintenance measures will be taken with respect to the site maintenance. Measures to be taken included the following:

I. During Construction

A comprehensive sediment and erosion control plan will be in place during the construction period. Maintenance measures for sediment and erosion controls will include:

A qualified professional acceptable to the municipality will be hired by the owner or operator to monitor the installation and maintenance of the sediment and erosion control plans. The qualified professional shall report directly to the Engineering Consultant and shall be responsible for ensuring compliance with the design of the sediment and erosion control plans.

The qualified professional so hired will inspect all sediment and erosion control measures at least every seven calendar days. In the event that there has been a variance with the design of the sediment and erosion control measures so that the ability of the measures to adequately perform the intended function is lessened or compromised and/or the facilities are not adequately maintained, the qualified professional shall be required to report such variance to the Engineering Consultant within 48 hours and shall be empowered to order immediate repairs to the sediment and erosion control measures.

The qualified professional will also be responsible for observing the adequacy of the vegetation growth (trees, shrubs, groundcovers and turfgrasses) in newly graded areas and for ordering additional plantings in the event that the established plant materials do not adequately protect the ground surface from erosion.

2. Following Construction

Site maintenance activities on the property will include:

- Grounds maintenance, including mowing of lawns;
- Planting of trees, shrubs and groundcovers; pruning of trees and shrubs;
- Application of fertilizer and herbicides;
- Maintenance of stormwater management practices;

Grounds maintenance on the site will be performed by landscaping contractor.

Fertilizer is typically applied twice in the year - once in the spring and once in the fall. The application of fertilizer is usually necessary to maintain healthy lawn growth due to competition for nutrients with trees and shrubs and since the clippings are often removed. It is not recommended that fertilizer be applied during the summer. It is at this time that lawns are typically dormant.

Fertilizers come in three basic types: (1) Organic; (2) Soluble synthetic and (3) Slow release.

Organic fertilizers are derived from plant or animal waste. Since they are heavier and bulkier than other fertilizers, it is necessary to apply a much greater amount at one time. Soluble synthetic fertilizers are predictable with determining the exact impact on a lawn. However, more applications are necessary since their effect is often short term. Slow release fertilizers have a high percentage of nitrogen so quantities that need be handled at one time are smaller. Slow release fertilizers will be utilized by the project.

A complete fertilizer contains all three of the primary nutrients - nitrogen (N), phosphorus (P) and potassium in the form of potash (K). Typically, a 3-1-2 ratio of nutrients (N-P-K) is used for lawn applications.

Fertilizer shall be applied by the landscape contractor in accordance with the manufacturer's instructions. The application of fertilizer does require some skill on the part of the operator. Should there be a spill of fertilizer, the landscape contractor shall be required to scrape or vacuum it up. The area will then be watered in accordance with the manufacturer's instructions to ensure that the fertilizer becomes soluble and available to plants and does not run off.

Farrell Building Company will be responsible for the long-term operation and maintenance of the permanent stormwater management practices. The permanent stormwater management practices shall be maintained in accordance with the Maintenance Inspection Checklists provided in Appendix E.

VIII. CONCLUSION

This Stormwater Pollution Prevention Plan has been prepared to describe the project's pre and post-development stormwater management improvements and its sediment and erosion control improvements to be utilized during construction. The proposed permanent improvements and the interim improvements to be utilized during construction have been designed in accordance with the requirements of the:

- New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 29, 2015, last modified November 23, 2016.
- Chapter 190 "Stormwater Management and Erosion and Sediment Control" of the City of Beacon Zoning Code.
- New York State Stormwater Management Design Manual.

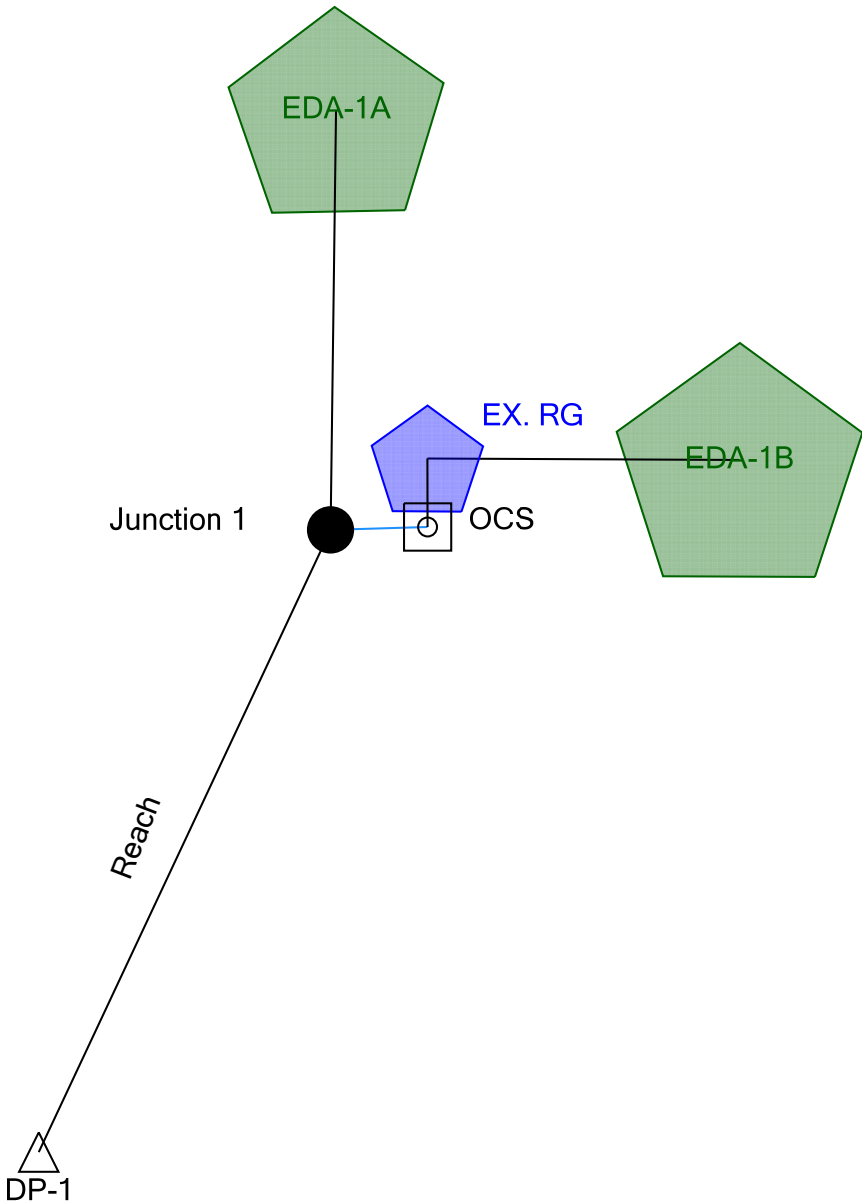
The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed improvements. These measures include a subsurface detention system, stormwater planters, a rain garden, and a First Defense water quality structure. These improvements will also mitigate runoff volumes from the proposed improvements as runoff volumes will be slightly reduced or maintained in all the analyzed storms.

Based on the foregoing, it is our professional opinion that the proposed improvements will provide water quantity and quality enhancements which exceed the above mentioned requirements and are not anticipated to have any adverse impacts to the site or any surrounding areas.

APPENDIX A

EXISTING/PROPOSED HYDROLOGIC CALCULATIONS

Scenario: Pre-Development 1 year



Scenario: Post-Development 1 year

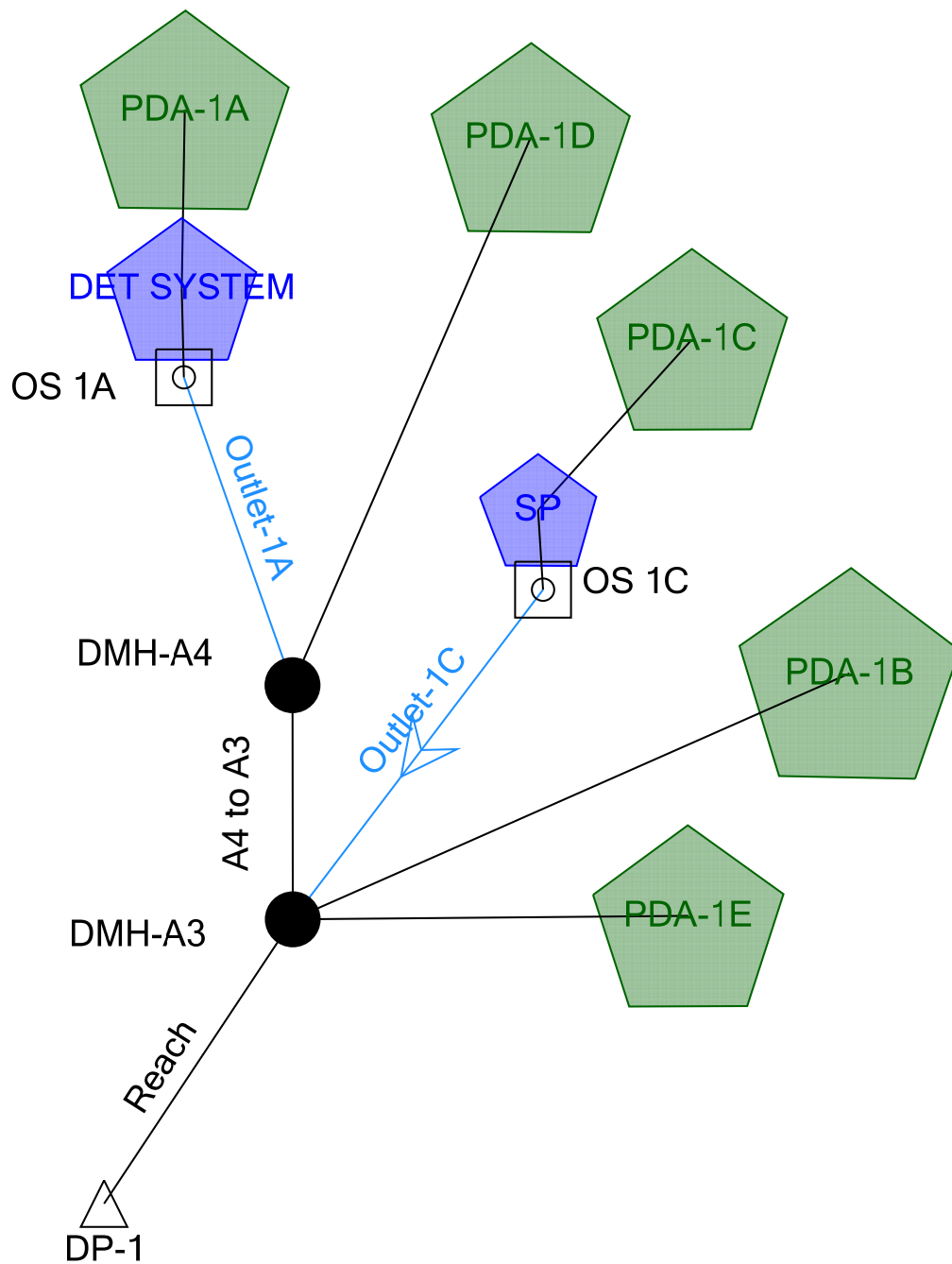


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Hydrologic Calculations

Project Summary

Title	Beacon Commons
Engineer	Stephen Spina, PE
Company	JMC, PLLC
Date	7/27/2021

Notes

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (hours)	Peak Flow (ft ³ /s)
EDA-1A	Pre-Development 1 year	1	14,498	12.300	2.78
EDA-1A	Pre-Development 10 year	10	44,732	12.250	9.41
EDA-1A	Pre-Development 25 year	25	64,761	12.250	13.70
EDA-1A	Pre-Development 100 year	100	108,363	12.250	22.78
EDA-1B	Pre-Development 1 year	1	3,234	12.100	0.88
EDA-1B	Pre-Development 10 year	10	8,818	12.100	2.46
EDA-1B	Pre-Development 25 year	25	12,363	12.100	3.42
EDA-1B	Pre-Development 100 year	100	19,910	12.100	5.40
PDA-1A	Post-Development 1 year	1	4,757	12.100	1.32
PDA-1A	Post-Development 10 year	10	10,061	12.100	2.68
PDA-1A	Post-Development 25 year	25	13,173	12.100	3.45
PDA-1A	Post-Development 100 year	100	19,557	12.100	4.99
PDA-1B	Post-Development 1 year	1	778	12.100	0.19
PDA-1B	Post-Development 10 year	10	1,458	12.100	0.35
PDA-1B	Post-Development 25 year	25	1,850	12.100	0.45
PDA-1B	Post-Development 100 year	100	2,646	12.100	0.63
PDA-1D	Post-Development 1 year	1	13,218	12.250	2.59

Hydrologic Calculations

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (hours)	Peak Flow (ft ³ /s)
PDA-1D	Post-Development 10 year	10	40,786	12.250	8.71
PDA-1D	Post-Development 25 year	25	59,047	12.250	12.65
PDA-1D	Post-Development 100 year	100	98,803	12.200	21.05
PDA-1C	Post-Development 1 year	1	4,014	12.100	1.09
PDA-1C	Post-Development 10 year	10	8,156	12.100	2.12
PDA-1C	Post-Development 25 year	25	10,566	12.100	2.70
PDA-1C	Post-Development 100 year	100	15,491	12.100	3.88
PDA-1E	Post-Development 1 year	1	68	12.100	0.02
PDA-1E	Post-Development 10 year	10	223	12.100	0.06
PDA-1E	Post-Development 25 year	25	327	12.100	0.09
PDA-1E	Post-Development 100 year	100	557	12.100	0.16

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (hours)	Peak Flow (ft ³ /s)
DP-1	Pre-Development 1 year	1	17,710	12.300	3.38
DP-1	Post-Development 1 year	1	22,845	12.350	3.07
DP-1	Pre-Development 10 year	10	53,528	12.250	11.13
DP-1	Post-Development 10 year	10	60,693	12.300	11.05
DP-1	Pre-Development 25 year	25	77,101	12.250	16.15
DP-1	Post-Development 25 year	25	84,973	12.350	14.98
DP-1	Pre-Development 100 year	100	128,250	12.250	26.79
DP-1	Post-Development 100 year	100	137,063	12.300	26.64
Junction 1	Pre-Development 1 year	1	17,710	12.250	3.38

Hydrologic Calculations

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Junction 1	Pre-Development 10 year	10	53,528	12.200	11.13
Junction 1	Pre-Development 25 year	25	77,101	12.200	16.15
Junction 1	Pre-Development 100 year	100	128,250	12.200	26.79
DMH-A4	Post-Development 1 year	1	17,975	12.250	2.87
DMH-A4	Post-Development 10 year	10	50,846	12.250	9.17
DMH-A4	Post-Development 25 year	25	72,220	12.250	13.42
DMH-A4	Post-Development 100 year	100	118,360	12.200	24.29
DMH-A3	Post-Development 1 year	1	22,840	12.300	3.07
DMH-A3	Post-Development 10 year	10	60,689	12.250	11.05
DMH-A3	Post-Development 25 year	25	84,968	12.300	14.98
DMH-A3	Post-Development 100 year	100	137,058	12.250	26.64

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft ³)
EX. RG (IN)	Pre-Development 1 year	1	3,234	12.100	0.88	(N/A)	(N/A)
EX. RG (OUT)	Pre-Development 1 year	1	3,212	12.150	0.85	30.63	117
EX. RG (IN)	Pre-Development 10 year	10	8,818	12.100	2.46	(N/A)	(N/A)
EX. RG (OUT)	Pre-Development 10 year	10	8,796	12.100	2.37	30.86	161
EX. RG (IN)	Pre-Development 25 year	25	12,363	12.100	3.42	(N/A)	(N/A)

Hydrologic Calculations

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft ³)
EX. RG (OUT)	Pre-Development 25 year	25	12,340	12.100	3.31	30.90	170
EX. RG (IN)	Pre-Development 100 year	100	19,910	12.100	5.40	(N/A)	(N/A)
EX. RG (OUT)	Pre-Development 100 year	100	19,887	12.100	5.26	30.99	189
DET SYSTEM (IN)	Post-Development 1 year	1	4,757	12.100	1.32	(N/A)	(N/A)
DET SYSTEM (OUT)	Post-Development 1 year	1	4,757	12.500	0.30	34.59	1,816
DET SYSTEM (IN)	Post-Development 10 year	10	10,061	12.100	2.68	(N/A)	(N/A)
DET SYSTEM (OUT)	Post-Development 10 year	10	10,061	12.550	0.50	36.21	4,078
DET SYSTEM (IN)	Post-Development 25 year	25	13,173	12.100	3.45	(N/A)	(N/A)
DET SYSTEM (OUT)	Post-Development 25 year	25	13,173	12.400	1.06	37.11	5,076
DET SYSTEM (IN)	Post-Development 100 year	100	19,557	12.100	4.99	(N/A)	(N/A)
DET SYSTEM (OUT)	Post-Development 100 year	100	19,557	12.200	3.24	38.40	6,034
SP (IN)	Post-Development 1 year	1	4,014	12.100	1.09	(N/A)	(N/A)
SP (OUT)	Post-Development 1 year	1	4,019	11.400	0.10	31.56	1,549
SP (IN)	Post-Development 10 year	10	8,156	12.100	2.12	(N/A)	(N/A)
SP (OUT)	Post-Development 10 year	10	8,161	12.250	1.81	32.01	2,776

Hydrologic Calculations

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft ³)
SP (IN)	Post-Development 25 year	25	10,566	12.100	2.70	(N/A)	(N/A)
SP (OUT)	Post-Development 25 year	25	10,571	12.100	3.35	32.02	2,801
SP (IN)	Post-Development 100 year	100	15,491	12.100	3.88	(N/A)	(N/A)
SP (OUT)	Post-Development 100 year	100	15,496	12.050	4.00	32.02	2,811

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time-Depth Curve: 1 year

Label	1 year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.00	0.01	0.01	0.01
0.500	0.01	0.02	0.02	0.02	0.02
1.000	0.03	0.03	0.03	0.03	0.04
1.500	0.04	0.04	0.04	0.05	0.05
2.000	0.05	0.05	0.06	0.06	0.06
2.500	0.07	0.07	0.07	0.07	0.08
3.000	0.08	0.08	0.09	0.09	0.09
3.500	0.10	0.10	0.10	0.11	0.11
4.000	0.11	0.12	0.12	0.12	0.13
4.500	0.13	0.13	0.14	0.14	0.14
5.000	0.15	0.15	0.16	0.16	0.16
5.500	0.17	0.17	0.18	0.18	0.18

Hydrologic Calculations

Subsection: Time-Depth Curve
 Label: Time-Depth - 1
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
6.000	0.19	0.19	0.20	0.20	0.21
6.500	0.21	0.22	0.22	0.23	0.23
7.000	0.24	0.24	0.25	0.25	0.26
7.500	0.27	0.27	0.28	0.28	0.29
8.000	0.30	0.30	0.31	0.32	0.33
8.500	0.34	0.34	0.35	0.36	0.37
9.000	0.38	0.39	0.40	0.41	0.42
9.500	0.43	0.44	0.46	0.47	0.48
10.000	0.49	0.51	0.52	0.53	0.55
10.500	0.57	0.58	0.60	0.62	0.63
11.000	0.65	0.67	0.70	0.72	0.75
11.500	0.78	0.82	0.89	0.97	1.09
12.000	1.30	1.52	1.64	1.72	1.79
12.500	1.83	1.86	1.89	1.91	1.94
13.000	1.96	1.98	1.99	2.01	2.03
13.500	2.04	2.06	2.08	2.09	2.10
14.000	2.12	2.13	2.14	2.15	2.17
14.500	2.18	2.19	2.20	2.21	2.22
15.000	2.23	2.24	2.25	2.26	2.27
15.500	2.27	2.28	2.29	2.30	2.31
16.000	2.31	2.32	2.33	2.33	2.34
16.500	2.34	2.35	2.36	2.36	2.37
17.000	2.37	2.38	2.38	2.39	2.39
17.500	2.40	2.40	2.41	2.41	2.42
18.000	2.42	2.43	2.43	2.43	2.44
18.500	2.44	2.45	2.45	2.45	2.46
19.000	2.46	2.47	2.47	2.47	2.48
19.500	2.48	2.48	2.49	2.49	2.49
20.000	2.50	2.50	2.50	2.51	2.51
20.500	2.51	2.52	2.52	2.52	2.53
21.000	2.53	2.53	2.54	2.54	2.54
21.500	2.55	2.55	2.55	2.55	2.56
22.000	2.56	2.56	2.57	2.57	2.57
22.500	2.57	2.58	2.58	2.58	2.58
23.000	2.59	2.59	2.59	2.59	2.60
23.500	2.60	2.60	2.60	2.61	2.61
24.000	2.61	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: Time-Depth - 1
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time-Depth Curve: 1 year

Label	1 year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.00	0.01	0.01	0.01
0.500	0.01	0.02	0.02	0.02	0.02
1.000	0.03	0.03	0.03	0.03	0.04
1.500	0.04	0.04	0.04	0.05	0.05
2.000	0.05	0.05	0.06	0.06	0.06
2.500	0.07	0.07	0.07	0.07	0.08
3.000	0.08	0.08	0.09	0.09	0.09
3.500	0.10	0.10	0.10	0.11	0.11
4.000	0.11	0.12	0.12	0.12	0.13
4.500	0.13	0.13	0.14	0.14	0.14
5.000	0.15	0.15	0.16	0.16	0.16
5.500	0.17	0.17	0.18	0.18	0.18
6.000	0.19	0.19	0.20	0.20	0.21
6.500	0.21	0.22	0.22	0.23	0.23
7.000	0.24	0.24	0.25	0.25	0.26
7.500	0.27	0.27	0.28	0.28	0.29
8.000	0.30	0.30	0.31	0.32	0.33
8.500	0.34	0.34	0.35	0.36	0.37
9.000	0.38	0.39	0.40	0.41	0.42
9.500	0.43	0.44	0.46	0.47	0.48
10.000	0.49	0.51	0.52	0.53	0.55
10.500	0.57	0.58	0.60	0.62	0.63
11.000	0.65	0.67	0.70	0.72	0.75
11.500	0.78	0.82	0.89	0.97	1.09
12.000	1.30	1.52	1.64	1.72	1.79
12.500	1.83	1.86	1.89	1.91	1.94
13.000	1.96	1.98	1.99	2.01	2.03
13.500	2.04	2.06	2.08	2.09	2.10
14.000	2.12	2.13	2.14	2.15	2.17
14.500	2.18	2.19	2.20	2.21	2.22
15.000	2.23	2.24	2.25	2.26	2.27
15.500	2.27	2.28	2.29	2.30	2.31
16.000	2.31	2.32	2.33	2.33	2.34
16.500	2.34	2.35	2.36	2.36	2.37

Hydrologic Calculations

Subsection: Time-Depth Curve
 Label: Time-Depth - 1
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.000	2.37	2.38	2.38	2.39	2.39
17.500	2.40	2.40	2.41	2.41	2.42
18.000	2.42	2.43	2.43	2.43	2.44
18.500	2.44	2.45	2.45	2.45	2.46
19.000	2.46	2.47	2.47	2.47	2.48
19.500	2.48	2.48	2.49	2.49	2.49
20.000	2.50	2.50	2.50	2.51	2.51
20.500	2.51	2.52	2.52	2.52	2.53
21.000	2.53	2.53	2.54	2.54	2.54
21.500	2.55	2.55	2.55	2.55	2.56
22.000	2.56	2.56	2.57	2.57	2.57
22.500	2.57	2.58	2.58	2.58	2.58
23.000	2.59	2.59	2.59	2.59	2.60
23.500	2.60	2.60	2.60	2.61	2.61
24.000	2.61	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: Time-Depth - 1
 Scenario: Post-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

Time-Depth Curve: 10 years

Label	10 years
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.00	0.01	0.01	0.02
0.500	0.02	0.03	0.03	0.04	0.04
1.000	0.05	0.05	0.06	0.06	0.07
1.500	0.07	0.08	0.08	0.08	0.09
2.000	0.09	0.10	0.10	0.11	0.11
2.500	0.12	0.12	0.13	0.13	0.14
3.000	0.14	0.15	0.16	0.16	0.17
3.500	0.17	0.18	0.18	0.19	0.20
4.000	0.20	0.21	0.21	0.22	0.23

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
4.500	0.23	0.24	0.25	0.25	0.26
5.000	0.27	0.27	0.28	0.29	0.29
5.500	0.30	0.31	0.32	0.32	0.33
6.000	0.34	0.35	0.35	0.36	0.37
6.500	0.38	0.39	0.40	0.41	0.42
7.000	0.43	0.44	0.45	0.46	0.47
7.500	0.48	0.49	0.50	0.51	0.52
8.000	0.54	0.55	0.56	0.57	0.59
8.500	0.60	0.62	0.63	0.65	0.67
9.000	0.69	0.70	0.72	0.74	0.76
9.500	0.78	0.80	0.82	0.84	0.87
10.000	0.89	0.91	0.94	0.96	0.99
10.500	1.02	1.05	1.08	1.11	1.14
11.000	1.17	1.21	1.25	1.30	1.35
11.500	1.40	1.48	1.60	1.75	1.96
12.000	2.35	2.74	2.95	3.10	3.22
12.500	3.30	3.35	3.40	3.45	3.49
13.000	3.52	3.56	3.59	3.62	3.65
13.500	3.68	3.71	3.74	3.76	3.79
14.000	3.81	3.83	3.86	3.88	3.90
14.500	3.92	3.94	3.96	3.98	4.00
15.000	4.01	4.03	4.05	4.07	4.08
15.500	4.10	4.11	4.13	4.14	4.15
16.000	4.16	4.18	4.19	4.20	4.21
16.500	4.22	4.23	4.24	4.25	4.26
17.000	4.27	4.28	4.29	4.30	4.31
17.500	4.32	4.33	4.34	4.35	4.35
18.000	4.36	4.37	4.38	4.38	4.39
18.500	4.40	4.41	4.41	4.42	4.43
19.000	4.43	4.44	4.45	4.45	4.46
19.500	4.47	4.47	4.48	4.49	4.49
20.000	4.50	4.50	4.51	4.52	4.52
20.500	4.53	4.53	4.54	4.55	4.55
21.000	4.56	4.56	4.57	4.57	4.58
21.500	4.58	4.59	4.59	4.60	4.60
22.000	4.61	4.61	4.62	4.62	4.63
22.500	4.63	4.64	4.64	4.65	4.65
23.000	4.66	4.66	4.67	4.67	4.68
23.500	4.68	4.68	4.69	4.69	4.70
24.000	4.70	(N/A)	(N/A)	(N/A)	(N/A)

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time-Depth Curve: 10 years

Label	10 years
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.00	0.01	0.01	0.02
0.500	0.02	0.03	0.03	0.04	0.04
1.000	0.05	0.05	0.06	0.06	0.07
1.500	0.07	0.08	0.08	0.08	0.09
2.000	0.09	0.10	0.10	0.11	0.11
2.500	0.12	0.12	0.13	0.13	0.14
3.000	0.14	0.15	0.16	0.16	0.17
3.500	0.17	0.18	0.18	0.19	0.20
4.000	0.20	0.21	0.21	0.22	0.23
4.500	0.23	0.24	0.25	0.25	0.26
5.000	0.27	0.27	0.28	0.29	0.29
5.500	0.30	0.31	0.32	0.32	0.33
6.000	0.34	0.35	0.35	0.36	0.37
6.500	0.38	0.39	0.40	0.41	0.42
7.000	0.43	0.44	0.45	0.46	0.47
7.500	0.48	0.49	0.50	0.51	0.52
8.000	0.54	0.55	0.56	0.57	0.59
8.500	0.60	0.62	0.63	0.65	0.67
9.000	0.69	0.70	0.72	0.74	0.76
9.500	0.78	0.80	0.82	0.84	0.87
10.000	0.89	0.91	0.94	0.96	0.99
10.500	1.02	1.05	1.08	1.11	1.14
11.000	1.17	1.21	1.25	1.30	1.35
11.500	1.40	1.48	1.60	1.75	1.96
12.000	2.35	2.74	2.95	3.10	3.22
12.500	3.30	3.35	3.40	3.45	3.49
13.000	3.52	3.56	3.59	3.62	3.65
13.500	3.68	3.71	3.74	3.76	3.79
14.000	3.81	3.83	3.86	3.88	3.90
14.500	3.92	3.94	3.96	3.98	4.00
15.000	4.01	4.03	4.05	4.07	4.08
15.500	4.10	4.11	4.13	4.14	4.15
16.000	4.16	4.18	4.19	4.20	4.21
16.500	4.22	4.23	4.24	4.25	4.26

Hydrologic Calculations

Subsection: Time-Depth Curve
 Label: Time-Depth - 1
 Scenario: Pre-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.000	4.27	4.28	4.29	4.30	4.31
17.500	4.32	4.33	4.34	4.35	4.35
18.000	4.36	4.37	4.38	4.38	4.39
18.500	4.40	4.41	4.41	4.42	4.43
19.000	4.43	4.44	4.45	4.45	4.46
19.500	4.47	4.47	4.48	4.49	4.49
20.000	4.50	4.50	4.51	4.52	4.52
20.500	4.53	4.53	4.54	4.55	4.55
21.000	4.56	4.56	4.57	4.57	4.58
21.500	4.58	4.59	4.59	4.60	4.60
22.000	4.61	4.61	4.62	4.62	4.63
22.500	4.63	4.64	4.64	4.65	4.65
23.000	4.66	4.66	4.67	4.67	4.68
23.500	4.68	4.68	4.69	4.69	4.70
24.000	4.70	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: Time-Depth - 1
 Scenario: Post-Development 100 year

Return Event: 100 years
 Storm Event: 100 years

Time-Depth Curve: 100 years

Label	100 years
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.01	0.02	0.03	0.03
0.500	0.04	0.05	0.06	0.07	0.08
1.000	0.08	0.09	0.10	0.11	0.12
1.500	0.13	0.13	0.14	0.15	0.16
2.000	0.17	0.18	0.18	0.19	0.20
2.500	0.21	0.22	0.23	0.24	0.25
3.000	0.26	0.27	0.28	0.29	0.30
3.500	0.31	0.32	0.33	0.34	0.35
4.000	0.36	0.37	0.38	0.39	0.40

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
4.500	0.41	0.43	0.44	0.45	0.46
5.000	0.47	0.49	0.50	0.51	0.52
5.500	0.54	0.55	0.56	0.57	0.59
6.000	0.60	0.61	0.63	0.64	0.66
6.500	0.67	0.69	0.70	0.72	0.74
7.000	0.75	0.77	0.79	0.81	0.83
7.500	0.85	0.87	0.89	0.91	0.93
8.000	0.95	0.97	1.00	1.02	1.05
8.500	1.07	1.10	1.13	1.15	1.18
9.000	1.22	1.25	1.28	1.31	1.35
9.500	1.38	1.42	1.46	1.50	1.54
10.000	1.58	1.62	1.66	1.71	1.76
10.500	1.81	1.86	1.91	1.97	2.03
11.000	2.08	2.15	2.22	2.30	2.39
11.500	2.49	2.62	2.83	3.11	3.47
12.000	4.17	4.87	5.23	5.51	5.72
12.500	5.85	5.95	6.04	6.12	6.19
13.000	6.25	6.31	6.37	6.43	6.48
13.500	6.53	6.58	6.63	6.68	6.72
14.000	6.76	6.80	6.84	6.88	6.92
14.500	6.96	6.99	7.03	7.06	7.09
15.000	7.12	7.16	7.19	7.21	7.24
15.500	7.27	7.29	7.32	7.34	7.37
16.000	7.39	7.41	7.43	7.45	7.47
16.500	7.49	7.51	7.53	7.55	7.57
17.000	7.59	7.60	7.62	7.64	7.65
17.500	7.67	7.68	7.70	7.71	7.73
18.000	7.74	7.75	7.77	7.78	7.79
18.500	7.80	7.82	7.83	7.84	7.85
19.000	7.87	7.88	7.89	7.90	7.91
19.500	7.93	7.94	7.95	7.96	7.97
20.000	7.98	7.99	8.00	8.01	8.02
20.500	8.03	8.04	8.05	8.07	8.08
21.000	8.09	8.09	8.10	8.11	8.12
21.500	8.13	8.14	8.15	8.16	8.17
22.000	8.18	8.19	8.20	8.21	8.21
22.500	8.22	8.23	8.24	8.25	8.26
23.000	8.26	8.27	8.28	8.29	8.30
23.500	8.30	8.31	8.32	8.33	8.33
24.000	8.34	(N/A)	(N/A)	(N/A)	(N/A)

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time-Depth Curve: 100 years

Label	100 years
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.01	0.02	0.03	0.03
0.500	0.04	0.05	0.06	0.07	0.08
1.000	0.08	0.09	0.10	0.11	0.12
1.500	0.13	0.13	0.14	0.15	0.16
2.000	0.17	0.18	0.18	0.19	0.20
2.500	0.21	0.22	0.23	0.24	0.25
3.000	0.26	0.27	0.28	0.29	0.30
3.500	0.31	0.32	0.33	0.34	0.35
4.000	0.36	0.37	0.38	0.39	0.40
4.500	0.41	0.43	0.44	0.45	0.46
5.000	0.47	0.49	0.50	0.51	0.52
5.500	0.54	0.55	0.56	0.57	0.59
6.000	0.60	0.61	0.63	0.64	0.66
6.500	0.67	0.69	0.70	0.72	0.74
7.000	0.75	0.77	0.79	0.81	0.83
7.500	0.85	0.87	0.89	0.91	0.93
8.000	0.95	0.97	1.00	1.02	1.05
8.500	1.07	1.10	1.13	1.15	1.18
9.000	1.22	1.25	1.28	1.31	1.35
9.500	1.38	1.42	1.46	1.50	1.54
10.000	1.58	1.62	1.66	1.71	1.76
10.500	1.81	1.86	1.91	1.97	2.03
11.000	2.08	2.15	2.22	2.30	2.39
11.500	2.49	2.62	2.83	3.11	3.47
12.000	4.17	4.87	5.23	5.51	5.72
12.500	5.85	5.95	6.04	6.12	6.19
13.000	6.25	6.31	6.37	6.43	6.48
13.500	6.53	6.58	6.63	6.68	6.72
14.000	6.76	6.80	6.84	6.88	6.92
14.500	6.96	6.99	7.03	7.06	7.09
15.000	7.12	7.16	7.19	7.21	7.24
15.500	7.27	7.29	7.32	7.34	7.37
16.000	7.39	7.41	7.43	7.45	7.47
16.500	7.49	7.51	7.53	7.55	7.57

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.000	7.59	7.60	7.62	7.64	7.65
17.500	7.67	7.68	7.70	7.71	7.73
18.000	7.74	7.75	7.77	7.78	7.79
18.500	7.80	7.82	7.83	7.84	7.85
19.000	7.87	7.88	7.89	7.90	7.91
19.500	7.93	7.94	7.95	7.96	7.97
20.000	7.98	7.99	8.00	8.01	8.02
20.500	8.03	8.04	8.05	8.07	8.08
21.000	8.09	8.09	8.10	8.11	8.12
21.500	8.13	8.14	8.15	8.16	8.17
22.000	8.18	8.19	8.20	8.21	8.21
22.500	8.22	8.23	8.24	8.25	8.26
23.000	8.26	8.27	8.28	8.29	8.30
23.500	8.30	8.31	8.32	8.33	8.33
24.000	8.34	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time-Depth Curve: 25 years

Label	25 years
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	25 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.01	0.01	0.02	0.02
0.500	0.03	0.04	0.04	0.05	0.05
1.000	0.06	0.06	0.07	0.08	0.08
1.500	0.09	0.09	0.10	0.11	0.11
2.000	0.12	0.12	0.13	0.14	0.14
2.500	0.15	0.15	0.16	0.17	0.17
3.000	0.18	0.19	0.20	0.20	0.21
3.500	0.22	0.22	0.23	0.24	0.25
4.000	0.25	0.26	0.27	0.28	0.29

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
4.500	0.29	0.30	0.31	0.32	0.33
5.000	0.33	0.34	0.35	0.36	0.37
5.500	0.38	0.39	0.40	0.41	0.42
6.000	0.42	0.43	0.44	0.45	0.46
6.500	0.48	0.49	0.50	0.51	0.52
7.000	0.53	0.55	0.56	0.57	0.59
7.500	0.60	0.61	0.63	0.64	0.66
8.000	0.67	0.69	0.70	0.72	0.74
8.500	0.76	0.78	0.80	0.82	0.84
9.000	0.86	0.88	0.91	0.93	0.95
9.500	0.98	1.00	1.03	1.06	1.09
10.000	1.12	1.14	1.18	1.21	1.24
10.500	1.28	1.31	1.35	1.39	1.43
11.000	1.47	1.52	1.57	1.63	1.69
11.500	1.76	1.85	2.00	2.20	2.45
12.000	2.95	3.45	3.70	3.90	4.05
12.500	4.14	4.21	4.27	4.33	4.38
13.000	4.42	4.47	4.51	4.55	4.59
13.500	4.62	4.66	4.69	4.72	4.76
14.000	4.78	4.81	4.84	4.87	4.90
14.500	4.92	4.95	4.97	4.99	5.02
15.000	5.04	5.06	5.08	5.10	5.12
15.500	5.14	5.16	5.18	5.20	5.21
16.000	5.23	5.24	5.26	5.27	5.29
16.500	5.30	5.31	5.33	5.34	5.35
17.000	5.37	5.38	5.39	5.40	5.41
17.500	5.42	5.44	5.45	5.46	5.47
18.000	5.48	5.48	5.49	5.50	5.51
18.500	5.52	5.53	5.54	5.55	5.56
19.000	5.57	5.57	5.58	5.59	5.60
19.500	5.61	5.61	5.62	5.63	5.64
20.000	5.65	5.65	5.66	5.67	5.68
20.500	5.68	5.69	5.70	5.71	5.71
21.000	5.72	5.73	5.73	5.74	5.75
21.500	5.75	5.76	5.77	5.77	5.78
22.000	5.79	5.79	5.80	5.81	5.81
22.500	5.82	5.82	5.83	5.84	5.84
23.000	5.85	5.85	5.86	5.86	5.87
23.500	5.87	5.88	5.88	5.89	5.89
24.000	5.90	(N/A)	(N/A)	(N/A)	(N/A)

Hydrologic Calculations

Subsection: Time-Depth Curve

Label: Time-Depth - 1

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time-Depth Curve: 25 years

Label	25 years
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	25 years

CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.00	0.01	0.01	0.02	0.02
0.500	0.03	0.04	0.04	0.05	0.05
1.000	0.06	0.06	0.07	0.08	0.08
1.500	0.09	0.09	0.10	0.11	0.11
2.000	0.12	0.12	0.13	0.14	0.14
2.500	0.15	0.15	0.16	0.17	0.17
3.000	0.18	0.19	0.20	0.20	0.21
3.500	0.22	0.22	0.23	0.24	0.25
4.000	0.25	0.26	0.27	0.28	0.29
4.500	0.29	0.30	0.31	0.32	0.33
5.000	0.33	0.34	0.35	0.36	0.37
5.500	0.38	0.39	0.40	0.41	0.42
6.000	0.42	0.43	0.44	0.45	0.46
6.500	0.48	0.49	0.50	0.51	0.52
7.000	0.53	0.55	0.56	0.57	0.59
7.500	0.60	0.61	0.63	0.64	0.66
8.000	0.67	0.69	0.70	0.72	0.74
8.500	0.76	0.78	0.80	0.82	0.84
9.000	0.86	0.88	0.91	0.93	0.95
9.500	0.98	1.00	1.03	1.06	1.09
10.000	1.12	1.14	1.18	1.21	1.24
10.500	1.28	1.31	1.35	1.39	1.43
11.000	1.47	1.52	1.57	1.63	1.69
11.500	1.76	1.85	2.00	2.20	2.45
12.000	2.95	3.45	3.70	3.90	4.05
12.500	4.14	4.21	4.27	4.33	4.38
13.000	4.42	4.47	4.51	4.55	4.59
13.500	4.62	4.66	4.69	4.72	4.76
14.000	4.78	4.81	4.84	4.87	4.90
14.500	4.92	4.95	4.97	4.99	5.02
15.000	5.04	5.06	5.08	5.10	5.12
15.500	5.14	5.16	5.18	5.20	5.21
16.000	5.23	5.24	5.26	5.27	5.29
16.500	5.30	5.31	5.33	5.34	5.35

Hydrologic Calculations

Subsection: Time-Depth Curve
 Label: Time-Depth - 1
 Scenario: Pre-Development 25 year

Return Event: 25 years
 Storm Event: 25 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.000	5.37	5.38	5.39	5.40	5.41
17.500	5.42	5.44	5.45	5.46	5.47
18.000	5.48	5.48	5.49	5.50	5.51
18.500	5.52	5.53	5.54	5.55	5.56
19.000	5.57	5.57	5.58	5.59	5.60
19.500	5.61	5.61	5.62	5.63	5.64
20.000	5.65	5.65	5.66	5.67	5.68
20.500	5.68	5.69	5.70	5.71	5.71
21.000	5.72	5.73	5.73	5.74	5.75
21.500	5.75	5.76	5.77	5.77	5.78
22.000	5.79	5.79	5.80	5.81	5.81
22.500	5.82	5.82	5.83	5.84	5.84
23.000	5.85	5.85	5.86	5.86	5.87
23.500	5.87	5.88	5.88	5.89	5.89
24.000	5.90	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time of Concentration Calculations
 Label: EDA-1A
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	150.00 ft
Manning's n	0.400
Slope	0.070 ft/ft
2 Year 24 Hour Depth	3.16 in
Average Velocity	0.14 ft/s
Segment Time of Concentration	0.302 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	519.00 ft
Is Paved?	False
Slope	0.180 ft/ft
Average Velocity	6.85 ft/s
Segment Time of Concentration	0.021 hours

Segment #3: TR-55 Channel Flow

Hydrologic Calculations

Subsection: Time of Concentration Calculations

Label: EDA-1A

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Segment #3: TR-55 Channel Flow

Flow Area	4.9 ft ²
Hydraulic Length	397.00 ft
Manning's n	0.022
Slope	0.045 ft/ft
Wetted Perimeter	7.90 ft
Average Velocity	10.45 ft/s
Segment Time of Concentration	0.011 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.333 hours
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==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n}$$

Where:

$(L_f / V) / 3600$

R= Hydraulic radius
 A_q= Flow area, square feet
 W_p= Wetted perimeter, feet
 V= Velocity, ft/sec
 S_f= Slope, ft/ft
 n= Manning's n
 T_c= Time of concentration, hours
 L_f= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$

$$V = 20.3282 * (S_f^{0.5})$$

Where:

$(L_f / V) / 3600$

V= Velocity, ft/sec
 S_f= Slope, ft/ft
 T_c= Time of concentration, hours
 L_f= Flow length, feet

==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Hydrologic Calculations

Subsection: Time of Concentration Calculations
 Label: EDA-1A
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

==== SCS TR-55 Sheet Flow

Where: Tc= Time of concentration, hours
 n= Manning's n
 Lf= Flow length, feet
 P= 2yr, 24hr Rain depth, inches
 Sf= Slope, %

Subsection: Time of Concentration Calculations
 Label: EDA-1B
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.070 ft/ft
2 Year 24 Hour Depth	3.16 in
Average Velocity	0.28 ft/s
Segment Time of Concentration	0.100 hours
Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	95.00 ft
Is Paved?	False
Slope	0.060 ft/ft
Average Velocity	3.95 ft/s
Segment Time of Concentration	0.007 hours
Time of Concentration (Composite)	
Time of Concentration (Composite)	0.106 hours

==== SCS Channel Flow

Tc = $R = Qa / Wp$
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$
 $(Lf / V) / 3600$

Hydrologic Calculations

Subsection: Time of Concentration Calculations
 Label: EDA-1B
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

==== SCS Channel Flow

Where:

- R= Hydraulic radius
- Aq= Flow area, square feet
- Wp= Wetted perimeter, feet
- V= Velocity, ft/sec
- Sf= Slope, ft/ft
- n= Manning's n
- Tc= Time of concentration, hours
- Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
 $V = 16.1345 * (Sf^{0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{0.5})$

(Lf / V) / 3600

Where:

- V= Velocity, ft/sec
- Sf= Slope, ft/ft
- Tc= Time of concentration, hours
- Lf= Flow length, feet

Subsection: Time of Concentration Calculations
 Label: PDA-1A
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	100.00 ft
Manning's n	0.025
Slope	0.060 ft/ft
2 Year 24 Hour Depth	3.20 in
Average Velocity	1.11 ft/s
Segment Time of Concentration	0.025 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	118.00 ft
Is Paved?	True
Slope	0.070 ft/ft
Average Velocity	5.38 ft/s
Segment Time of Concentration	0.006 hours

Hydrologic Calculations

Subsection: Time of Concentration Calculations

Label: PDA-1A

Scenario: Post-Development 1 year

Segment #3: TR-55 Channel Flow

Return Event: 1 years

Storm Event: 1 year

Flow Area	1.2 ft ²
Hydraulic Length	251.00 ft
Manning's n	0.012
Slope	0.020 ft/ft
Wetted Perimeter	3.90 ft
Average Velocity	8.00 ft/s
Segment Time of Concentration	0.009 hours
Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{0.5})) / n}$$

$$(L_f / V) / 3600$$

Where:

- R= Hydraulic radius
- A_q= Flow area, square feet
- W_p= Wetted perimeter, feet
- V= Velocity, ft/sec
- S_f= Slope, ft/ft
- n= Manning's n
- T_c= Time of concentration, hours
- L_f= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$

$$V = 20.3282 * (S_f^{0.5})$$

$$(L_f / V) / 3600$$

Where:

- V= Velocity, ft/sec
- S_f= Slope, ft/ft
- T_c= Time of concentration, hours
- L_f= Flow length, feet

==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Hydrologic Calculations

Subsection: Time of Concentration Calculations

Label: PDA-1A

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

==== SCS TR-55 Sheet Flow

Where: Tc= Time of concentration, hours
n= Manning's n
Lf= Flow length, feet
P= 2yr, 24hr Rain depth, inches
Sf= Slope, %

Subsection: Time of Concentration Calculations

Label: PDA-1B

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.083 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.083 hours
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==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations

Label: PDA-1C

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.083 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.083 hours
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==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Hydrologic Calculations

Subsection: Time of Concentration Calculations

Label: PDA-1D

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	150.00 ft
Manning's n	0.400
Slope	0.070 ft/ft
2 Year 24 Hour Depth	3.20 in
Average Velocity	0.14 ft/s
Segment Time of Concentration	0.300 hours
Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	405.00 ft
Is Paved?	False
Slope	0.200 ft/ft
Average Velocity	7.22 ft/s
Segment Time of Concentration	0.016 hours
Segment #3: TR-55 Channel Flow	
Flow Area	3.1 ft ²
Hydraulic Length	247.00 ft
Manning's n	0.012
Slope	0.047 ft/ft
Wetted Perimeter	6.30 ft
Average Velocity	16.78 ft/s
Segment Time of Concentration	0.004 hours
Time of Concentration (Composite)	
Time of Concentration (Composite)	0.320 hours

==== SCS Channel Flow

$$T_c = \frac{R}{V} = \frac{Q_a / W_p}{(1.49 * (R^{2/3}) * (S_f^{*-0.5})) / n}$$

$$(L_f / V) / 3600$$

Hydrologic Calculations

Subsection: Time of Concentration Calculations

Label: PDA-1D

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

==== SCS Channel Flow

Where:

- R= Hydraulic radius
- Aq= Flow area, square feet
- Wp= Wetted perimeter, feet
- V= Velocity, ft/sec
- Sf= Slope, ft/ft
- n= Manning's n
- Tc= Time of concentration, hours
- Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
 $V = 16.1345 * (Sf^{0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{0.5})$

Where:

- $(Lf / V) / 3600$
- V= Velocity, ft/sec
- Sf= Slope, ft/ft
- Tc= Time of concentration, hours
- Lf= Flow length, feet

==== SCS TR-55 Sheet Flow

Tc = $(0.007 * ((n * Lf)^{0.8})) / ((P^{0.5}) * (Sf^{0.4}))$

Where:

- Tc= Time of concentration, hours
- n= Manning's n
- Lf= Flow length, feet
- P= 2yr, 24hr Rain depth, inches
- Sf= Slope, %

Subsection: Time of Concentration Calculations

Label: PDA-1E

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.083 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.083 hours
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==== User Defined

Hydrologic Calculations

Subsection: Time of Concentration Calculations

Label: PDA-1E

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Runoff CN-Area

Label: EDA-1A

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	0.85	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	0.02	0.0	0.0	61.000
Woods - good - Soil B	55.000	0.37	0.0	0.0	55.000
Residential Districts - 1/3 acre - Soil B	72.000	4.34	0.0	0.0	72.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	5.58	(N/A)	(N/A)	74.764

Subsection: Runoff CN-Area

Label: EDA-1B

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	0.52	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	0.16	0.0	0.0	61.000
Woods - good - Soil B	55.000	0.25	0.0	0.0	55.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	0.92	(N/A)	(N/A)	80.055

Subsection: Runoff CN-Area

Label: PDA-1A

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	0.61	0.0	0.0	98.000

Hydrologic Calculations

Subsection: Runoff CN-Area
 Label: PDA-1A
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	0.12	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	0.73	(N/A)	(N/A)	91.918

Subsection: Runoff CN-Area
 Label: PDA-1B
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	0.09	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	0.09	(N/A)	(N/A)	98.000

Subsection: Runoff CN-Area
 Label: PDA-1C
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	0.50	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	0.06	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	0.56	(N/A)	(N/A)	93.843

Subsection: Runoff CN-Area
 Label: PDA-1D
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	0.59	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	0.15	0.0	0.0	61.000

Hydrologic Calculations

Subsection: Runoff CN-Area
 Label: PDA-1D
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Residential Districts - 1/3 acre - Soil B	72.000	4.34	0.0	0.0	72.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	5.09	(N/A)	(N/A)	74.704

Subsection: Runoff CN-Area
 Label: PDA-1E
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	0.01	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	0.02	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	0.03	(N/A)	(N/A)	73.333

Subsection: Unit Hydrograph Summary
 Label: EDA-1A
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	36.000 hours
Depth	2.61 in
Time of Concentration (Composite)	0.333 hours
Area (User Defined)	5.58 acres
Computational Time Increment	0.044 hours
Time to Peak (Computed)	12.270 hours
Flow (Peak, Computed)	2.81 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.300 hours
Flow (Peak Interpolated Output)	2.78 ft ³ /s
Drainage Area	
SCS CN (Composite)	75.000

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: EDA-1A

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Drainage Area	
Area (User Defined)	5.58 acres
Maximum Retention (Pervious)	3.33 in
Maximum Retention (Pervious, 20 percent)	0.67 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.72 in
Runoff Volume (Pervious)	14,503 ft ³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	14,498 ft ³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.333 hours
Computational Time Increment	0.044 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.97 ft ³ /s
Unit peak time, Tp	0.222 hours
Unit receding limb, Tr	0.889 hours
Total unit time, Tb	1.111 hours

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: EDA-1B

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	36.000 hours
Depth	2.61 in
Time of Concentration (Composite)	0.106 hours
Area (User Defined)	0.92 acres
Computational Time Increment	0.014 hours
Time to Peak (Computed)	12.125 hours
Flow (Peak, Computed)	0.90 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.88 ft ³ /s
Drainage Area	
SCS CN (Composite)	80.000
Area (User Defined)	0.92 acres
Maximum Retention (Pervious)	2.50 in
Maximum Retention (Pervious, 20 percent)	0.50 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.97 in
Runoff Volume (Pervious)	3,234 ft ³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	3,234 ft ³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.106 hours
Computational Time Increment	0.014 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: EDA-1B

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

SCS Unit Hydrograph Parameters

Unit peak, qp	9.84 ft ³ /s
Unit peak time, Tp	0.071 hours
Unit receding limb, Tr	0.283 hours
Total unit time, Tb	0.354 hours

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1A

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	36.000 hours
Depth	2.61 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	0.73 acres
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	1.32 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	1.32 ft ³ /s
Drainage Area	
SCS CN (Composite)	92.000
Area (User Defined)	0.73 acres
Maximum Retention (Pervious)	0.87 in
Maximum Retention (Pervious, 20 percent)	0.17 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.80 in
Runoff Volume (Pervious)	4,757 ft ³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4,757 ft ³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1A

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

SCS Unit Hydrograph Parameters

Unit peak, qp	9.93 ft ³ /s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1B

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	36.000 hours
Depth	2.61 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	0.09 acres

Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	0.19 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.19 ft ³ /s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.09 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.38 in
Runoff Volume (Pervious)	778 ft ³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	778 ft ³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1B

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

SCS Unit Hydrograph Parameters

Unit peak, qp	1.22 ft ³ /s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1C

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	36.000 hours
Depth	2.61 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	0.56 acres
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	1.09 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	1.09 ft ³ /s
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	0.56 acres
Maximum Retention (Pervious)	0.64 in
Maximum Retention (Pervious, 20 percent)	0.13 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.97 in
Runoff Volume (Pervious)	4,014 ft ³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4,014 ft ³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1C

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

SCS Unit Hydrograph Parameters

Unit peak, qp	7.61 ft ³ /s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1D

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	36.000 hours
Depth	2.61 in
Time of Concentration (Composite)	0.320 hours
Area (User Defined)	5.09 acres

Computational Time Increment	0.043 hours
Time to Peak (Computed)	12.273 hours
Flow (Peak, Computed)	2.60 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.250 hours
Flow (Peak Interpolated Output)	2.59 ft ³ /s

Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	5.09 acres
Maximum Retention (Pervious)	3.33 in
Maximum Retention (Pervious, 20 percent)	0.67 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.72 in
Runoff Volume (Pervious)	13,219 ft ³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	13,218 ft ³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.320 hours
Computational Time Increment	0.043 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1D

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

SCS Unit Hydrograph Parameters

Unit peak, qp	18.04 ft ³ /s
Unit peak time, Tp	0.213 hours
Unit receding limb, Tr	0.852 hours
Total unit time, Tb	1.065 hours

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1E

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	36.000 hours
Depth	2.61 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	0.03 acres

Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.122 hours
Flow (Peak, Computed)	0.02 ft ³ /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.02 ft ³ /s

Drainage Area	
SCS CN (Composite)	73.000
Area (User Defined)	0.03 acres
Maximum Retention (Pervious)	3.70 in
Maximum Retention (Pervious, 20 percent)	0.74 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.63 in
Runoff Volume (Pervious)	68 ft ³

Hydrograph Volume (Area under Hydrograph curve)	
Volume	68 ft ³

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Hydrologic Calculations

Subsection: Unit Hydrograph Summary

Label: PDA-1E

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

SCS Unit Hydrograph Parameters

Unit peak, qp	0.41 ft ³ /s
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: A4 to A3

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Infiltration	
Infiltration Method	No Infiltration
Translation Routing Summary	
Flow (Base)	0.00 ft ³ /s
Translate	0.011 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.250	12.300
Peak Flow (ft ³ /s)...	2.87	2.87
Inflow/Outflow Volumes		
Volume (Routing, Inflow)	17,975 ft ³	
Volume (Routing, Unrouted)	0 ft ³	
Volume (Routing, Base Flow)	0 ft ³	
Volume (Routing, Infiltration)	0 ft ³	
Volume (Routing, Outflow)	17,975 ft ³	

Subsection: Channel Routing Summary

Label: A4 to A3

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration	
Infiltration Method	No Infiltration
Translation Routing Summary	
Flow (Base)	0.00 ft ³ /s
Translate	0.011 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.250	12.300
Peak Flow (ft ³ /s)...	9.17	9.17
Inflow/Outflow Volumes		
Volume (Routing, Inflow)	50,846 ft ³	
Volume (Routing, Unrouted)	0 ft ³	

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: A4 to A3

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Inflow/Outflow Volumes

Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	50,846 ft ³

Subsection: Channel Routing Summary

Label: A4 to A3

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration

Infiltration Method	No Infiltration
---------------------	-----------------

Translation Routing Summary

Flow (Base)	0.00 ft ³ /s
Translate	0.011 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.250	12.300
Peak Flow (ft ³ /s)...	13.42	13.42

Inflow/Outflow Volumes

Volume (Routing, Inflow)	72,220 ft ³
Volume (Routing, Unrouted)	0 ft ³
Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	72,220 ft ³

Subsection: Channel Routing Summary

Label: A4 to A3

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Infiltration Method	No Infiltration
---------------------	-----------------

Translation Routing Summary

Flow (Base)	0.00 ft ³ /s
Translate	0.011 hours

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: A4 to A3

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.200	12.250
Peak Flow (ft ³ /s)...	24.29	24.29

Inflow/Outflow Volumes

Volume (Routing, Inflow)	118,360 ft ³
Volume (Routing, Unrouted)	0 ft ³
Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	118,360 ft ³

Subsection: Channel Routing Summary

Label: Reach

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Infiltration

Infiltration Method	No Infiltration
---------------------	-----------------

Translation Routing Summary

Flow (Base)	0.00 ft ³ /s
Translate	0.003 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.300	12.350
Peak Flow (ft ³ /s)...	3.07	3.07

Inflow/Outflow Volumes

Volume (Routing, Inflow)	22,840 ft ³
Volume (Routing, Unrouted)	0 ft ³
Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	22,840 ft ³

Subsection: Channel Routing Summary

Label: Reach

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Infiltration

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: Reach

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Infiltration	
Infiltration Method	No Infiltration
Translation Routing Summary	
Flow (Base)	0.00 ft ³ /s
Translate	0.004 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.250	12.300
Peak Flow (ft ³ /s)...	3.38	3.38
Inflow/Outflow Volumes		
Volume (Routing, Inflow)	17,710 ft ³	
Volume (Routing, Unrouted)	0 ft ³	
Volume (Routing, Base Flow)	0 ft ³	
Volume (Routing, Infiltration)	0 ft ³	
Volume (Routing, Outflow)	17,710 ft ³	

Subsection: Channel Routing Summary

Label: Reach

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration	
Infiltration Method	No Infiltration
Translation Routing Summary	
Flow (Base)	0.00 ft ³ /s
Translate	0.003 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.250	12.300
Peak Flow (ft ³ /s)...	11.05	11.05
Inflow/Outflow Volumes		
Volume (Routing, Inflow)	60,689 ft ³	
Volume (Routing, Unrouted)	0 ft ³	

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: Reach

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Inflow/Outflow Volumes

Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	60,689 ft ³

Subsection: Channel Routing Summary

Label: Reach

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration

Infiltration Method	No Infiltration
---------------------	-----------------

Translation Routing Summary

Flow (Base)	0.00 ft ³ /s
Translate	0.004 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.200	12.250
Peak Flow (ft ³ /s)...	11.13	11.13

Inflow/Outflow Volumes

Volume (Routing, Inflow)	53,528 ft ³
Volume (Routing, Unrouted)	0 ft ³
Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	53,528 ft ³

Subsection: Channel Routing Summary

Label: Reach

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration

Infiltration Method	No Infiltration
---------------------	-----------------

Translation Routing Summary

Flow (Base)	0.00 ft ³ /s
Translate	0.003 hours

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: Reach

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.300	12.350
Peak Flow (ft ³ /s)...	14.98	14.98

Inflow/Outflow Volumes

Volume (Routing, Inflow)	84,968 ft ³
Volume (Routing, Unrouted)	0 ft ³
Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	84,968 ft ³

Subsection: Channel Routing Summary

Label: Reach

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration

Infiltration Method	No Infiltration
---------------------	-----------------

Translation Routing Summary

Flow (Base)	0.00 ft ³ /s
Translate	0.004 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.200	12.250
Peak Flow (ft ³ /s)...	16.15	16.15

Inflow/Outflow Volumes

Volume (Routing, Inflow)	77,101 ft ³
Volume (Routing, Unrouted)	0 ft ³
Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	77,101 ft ³

Subsection: Channel Routing Summary

Label: Reach

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: Reach

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration	
Infiltration Method	No Infiltration
Translation Routing Summary	
Flow (Base)	0.00 ft ³ /s
Translate	0.003 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.250	12.300
Peak Flow (ft ³ /s)...	26.64	26.64
Inflow/Outflow Volumes		
Volume (Routing, Inflow)	137,058 ft ³	
Volume (Routing, Unrouted)	0 ft ³	
Volume (Routing, Base Flow)	0 ft ³	
Volume (Routing, Infiltration)	0 ft ³	
Volume (Routing, Outflow)	137,058 ft ³	

Subsection: Channel Routing Summary

Label: Reach

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration	
Infiltration Method	No Infiltration
Translation Routing Summary	
Flow (Base)	0.00 ft ³ /s
Translate	0.004 hours

	Inflow Hydrograph	Outflow Hydrograph
Time Start (hours)...	0.000	0.050
Time Step (hours)...	0.050	0.050
Time End (hours)...	36.000	36.050
Peak Time (hours)...	12.200	12.250
Peak Flow (ft ³ /s)...	26.79	26.79
Inflow/Outflow Volumes		
Volume (Routing, Inflow)	128,250 ft ³	
Volume (Routing, Unrouted)	0 ft ³	

Hydrologic Calculations

Subsection: Channel Routing Summary

Label: Reach

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Inflow/Outflow Volumes

Volume (Routing, Base Flow)	0 ft ³
Volume (Routing, Infiltration)	0 ft ³
Volume (Routing, Outflow)	128,250 ft ³

Subsection: Addition Summary

Label: DMH-A3

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'DMH-A3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1B
A4 to A3	DMH-A4
<Catchment to Outflow Node>	PDA-1E
Outlet-1C	SP

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1B	778	12.100	0.19
Flow (From)	A4 to A3	17,975	12.300	2.87
Flow (From)	PDA-1E	68	12.100	0.02
Flow (From)	Outlet-1C	4,019	11.400	0.10
Flow (In)	DMH-A3	22,840	12.300	3.07

Subsection: Addition Summary

Label: DMH-A3

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'DMH-A3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1B
A4 to A3	DMH-A4
<Catchment to Outflow Node>	PDA-1E
Outlet-1C	SP

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1B	1,458	12.100	0.35
Flow (From)	A4 to A3	50,846	12.300	9.17
Flow (From)	PDA-1E	223	12.100	0.06
Flow (From)	Outlet-1C	8,161	12.250	1.81

Hydrologic Calculations

Subsection: Addition Summary

Label: DMH-A3

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (In)	DMH-A3	60,689	12.250	11.05

Subsection: Addition Summary

Label: DMH-A3

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Summary for Hydrograph Addition at 'DMH-A3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1B
A4 to A3	DMH-A4
<Catchment to Outflow Node>	PDA-1E
Outlet-1C	SP

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1B	1,850	12.100	0.45
Flow (From)	A4 to A3	72,220	12.300	13.42
Flow (From)	PDA-1E	327	12.100	0.09
Flow (From)	Outlet-1C	10,571	12.100	3.35
Flow (In)	DMH-A3	84,968	12.300	14.98

Subsection: Addition Summary

Label: DMH-A3

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Summary for Hydrograph Addition at 'DMH-A3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1B
A4 to A3	DMH-A4
<Catchment to Outflow Node>	PDA-1E
Outlet-1C	SP

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1B	2,646	12.100	0.63
Flow (From)	A4 to A3	118,360	12.250	24.29
Flow (From)	PDA-1E	557	12.100	0.16
Flow (From)	Outlet-1C	15,496	12.050	4.00

Hydrologic Calculations

Subsection: Addition Summary

Label: DMH-A3

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (In)	DMH-A3	137,058	12.250	26.64

Subsection: Addition Summary

Label: DMH-A4

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'DMH-A4'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1D
Outlet-1A	DET SYSTEM

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1D	13,218	12.250	2.59
Flow (From)	Outlet-1A	4,757	12.500	0.30
Flow (In)	DMH-A4	17,975	12.250	2.87

Subsection: Addition Summary

Label: DMH-A4

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'DMH-A4'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1D
Outlet-1A	DET SYSTEM

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1D	40,786	12.250	8.71
Flow (From)	Outlet-1A	10,061	12.550	0.50
Flow (In)	DMH-A4	50,846	12.250	9.17

Subsection: Addition Summary

Label: DMH-A4

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Summary for Hydrograph Addition at 'DMH-A4'

Hydrologic Calculations

Subsection: Addition Summary

Label: DMH-A4

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Summary for Hydrograph Addition at 'DMH-A4'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1D
Outlet-1A	DET SYSTEM

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1D	59,047	12.250	12.65
Flow (From)	Outlet-1A	13,173	12.400	1.06
Flow (In)	DMH-A4	72,220	12.250	13.42

Subsection: Addition Summary

Label: DMH-A4

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Summary for Hydrograph Addition at 'DMH-A4'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1D
Outlet-1A	DET SYSTEM

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1D	98,803	12.200	21.05
Flow (From)	Outlet-1A	19,557	12.200	3.24
Flow (In)	DMH-A4	118,360	12.200	24.29

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	DMH-A3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	22,840	12.350	3.07
Flow (In)	DP-1	22,845	12.350	3.07

Hydrologic Calculations

Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	Junction 1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	17,710	12.300	3.38
Flow (In)	DP-1	17,710	12.300	3.38

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	DMH-A3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	60,689	12.300	11.05
Flow (In)	DP-1	60,693	12.300	11.05

Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	Junction 1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	53,528	12.250	11.13
Flow (In)	DP-1	53,528	12.250	11.13

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Hydrologic Calculations

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	DMH-A3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	84,968	12.350	14.98
Flow (In)	DP-1	84,973	12.350	14.98

Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	Junction 1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	77,101	12.250	16.15
Flow (In)	DP-1	77,101	12.250	16.15

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	DMH-A3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	137,058	12.300	26.64
Flow (In)	DP-1	137,063	12.300	26.64

Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Hydrologic Calculations

Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Reach	Junction 1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	Reach	128,250	12.250	26.79
Flow (In)	DP-1	128,250	12.250	26.79

Subsection: Addition Summary

Label: Junction 1

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'Junction 1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A EX. RG

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1A	14,498	12.300	2.78
Flow (From)		3,212	12.150	0.85
Flow (In)	Junction 1	17,710	12.250	3.38

Subsection: Addition Summary

Label: Junction 1

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'Junction 1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A EX. RG

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1A	44,732	12.250	9.41
Flow (From)		8,796	12.100	2.37
Flow (In)	Junction 1	53,528	12.200	11.13

Hydrologic Calculations

Subsection: Addition Summary

Label: Junction 1

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Summary for Hydrograph Addition at 'Junction 1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
	EX. RG

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1A	64,761	12.250	13.70
Flow (From)		12,340	12.100	3.31
Flow (In)	Junction 1	77,101	12.200	16.15

Subsection: Addition Summary

Label: Junction 1

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Summary for Hydrograph Addition at 'Junction 1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
	EX. RG

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1A	108,363	12.250	22.78
Flow (From)		19,887	12.100	5.26
Flow (In)	Junction 1	128,250	12.200	26.79

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	33.40	33.40	33.40	33.40	33.40
0.250	33.40	33.40	33.40	33.40	33.40
0.500	33.40	33.40	33.40	33.40	33.40
0.750	33.40	33.40	33.40	33.40	33.40
1.000	33.40	33.40	33.40	33.40	33.40

Hydrologic Calculations

Subsection: Time vs. Elevation
 Label: DET SYSTEM (OUT)
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1.250	33.40	33.40	33.40	33.40	33.40
1.500	33.40	33.40	33.40	33.40	33.40
1.750	33.40	33.40	33.40	33.40	33.40
2.000	33.40	33.40	33.40	33.40	33.40
2.250	33.40	33.40	33.40	33.40	33.40
2.500	33.40	33.40	33.40	33.40	33.40
2.750	33.40	33.40	33.40	33.40	33.40
3.000	33.40	33.40	33.40	33.40	33.40
3.250	33.40	33.40	33.40	33.40	33.40
3.500	33.40	33.40	33.40	33.40	33.40
3.750	33.40	33.40	33.40	33.40	33.40
4.000	33.40	33.40	33.40	33.40	33.40
4.250	33.40	33.40	33.40	33.40	33.40
4.500	33.40	33.40	33.40	33.40	33.40
4.750	33.40	33.40	33.40	33.40	33.40
5.000	33.40	33.40	33.40	33.40	33.40
5.250	33.40	33.40	33.40	33.40	33.40
5.500	33.40	33.40	33.40	33.40	33.40
5.750	33.40	33.40	33.40	33.40	33.40
6.000	33.40	33.40	33.40	33.40	33.40
6.250	33.40	33.40	33.40	33.40	33.40
6.500	33.40	33.40	33.40	33.40	33.40
6.750	33.40	33.40	33.40	33.40	33.40
7.000	33.40	33.41	33.41	33.41	33.41
7.250	33.41	33.41	33.41	33.41	33.41
7.500	33.41	33.41	33.41	33.41	33.41
7.750	33.41	33.41	33.41	33.41	33.41
8.000	33.42	33.42	33.42	33.42	33.42
8.250	33.42	33.42	33.42	33.42	33.42
8.500	33.42	33.43	33.43	33.43	33.43
8.750	33.43	33.43	33.43	33.43	33.43
9.000	33.44	33.44	33.44	33.44	33.44
9.250	33.44	33.44	33.45	33.45	33.45
9.500	33.45	33.45	33.46	33.46	33.46
9.750	33.46	33.46	33.47	33.47	33.47
10.000	33.47	33.47	33.48	33.48	33.48
10.250	33.48	33.49	33.49	33.49	33.49
10.500	33.50	33.50	33.50	33.51	33.51
10.750	33.51	33.52	33.52	33.52	33.53
11.000	33.53	33.54	33.54	33.55	33.55
11.250	33.56	33.56	33.57	33.58	33.59

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.500	33.59	33.60	33.62	33.63	33.66
11.750	33.69	33.72	33.77	33.81	33.88
12.000	33.98	34.10	34.23	34.34	34.42
12.250	34.48	34.52	34.55	34.57	34.58
12.500	34.59	34.59	34.58	34.56	34.55
12.750	34.54	34.52	34.51	34.49	34.48
13.000	34.46	34.44	34.42	34.40	34.39
13.250	34.37	34.35	34.34	34.32	34.30
13.500	34.29	34.27	34.25	34.24	34.22
13.750	34.21	34.19	34.17	34.16	34.14
14.000	34.13	34.11	34.10	34.08	34.07
14.250	34.06	34.04	34.03	34.01	34.00
14.500	33.99	33.98	33.96	33.95	33.94
14.750	33.93	33.91	33.90	33.89	33.88
15.000	33.87	33.86	33.85	33.84	33.83
15.250	33.82	33.81	33.80	33.79	33.78
15.500	33.77	33.77	33.76	33.75	33.74
15.750	33.74	33.73	33.72	33.72	33.71
16.000	33.70	33.70	33.69	33.68	33.68
16.250	33.67	33.67	33.66	33.66	33.65
16.500	33.65	33.64	33.64	33.63	33.63
16.750	33.62	33.62	33.62	33.61	33.61
17.000	33.60	33.60	33.60	33.59	33.59
17.250	33.59	33.58	33.58	33.58	33.57
17.500	33.57	33.57	33.57	33.56	33.56
17.750	33.56	33.56	33.55	33.55	33.55
18.000	33.55	33.54	33.54	33.54	33.54
18.250	33.53	33.53	33.53	33.53	33.53
18.500	33.52	33.52	33.52	33.52	33.52
18.750	33.52	33.52	33.51	33.51	33.51
19.000	33.51	33.51	33.51	33.51	33.50
19.250	33.50	33.50	33.50	33.50	33.50
19.500	33.50	33.50	33.50	33.50	33.49
19.750	33.49	33.49	33.49	33.49	33.49
20.000	33.49	33.49	33.49	33.49	33.49
20.250	33.49	33.48	33.48	33.48	33.48
20.500	33.48	33.48	33.48	33.48	33.48
20.750	33.48	33.48	33.48	33.48	33.48
21.000	33.48	33.48	33.48	33.47	33.47
21.250	33.47	33.47	33.47	33.47	33.47
21.500	33.47	33.47	33.47	33.47	33.47

Hydrologic Calculations

Subsection: Time vs. Elevation
 Label: DET SYSTEM (OUT)
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.750	33.47	33.47	33.47	33.47	33.47
22.000	33.47	33.47	33.47	33.47	33.47
22.250	33.47	33.46	33.46	33.46	33.46
22.500	33.46	33.46	33.46	33.46	33.46
22.750	33.46	33.46	33.46	33.46	33.46
23.000	33.46	33.46	33.46	33.46	33.46
23.250	33.46	33.46	33.46	33.46	33.46
23.500	33.46	33.46	33.46	33.46	33.46
23.750	33.45	33.45	33.45	33.45	33.45
24.000	33.45	33.45	33.45	33.45	33.45
24.250	33.45	33.44	33.44	33.44	33.44
24.500	33.44	33.44	33.43	33.43	33.43
24.750	33.43	33.43	33.43	33.43	33.43
25.000	33.43	33.42	33.42	33.42	33.42
25.250	33.42	33.42	33.42	33.42	33.42
25.500	33.42	33.42	33.42	33.42	33.41
25.750	33.41	33.41	33.41	33.41	33.41
26.000	33.41	33.41	33.41	33.41	33.41
26.250	33.41	33.41	33.41	33.41	33.41
26.500	33.41	33.41	33.41	33.41	33.41
26.750	33.41	33.41	33.41	33.41	33.41
27.000	33.41	33.40	33.40	33.40	33.40
27.250	33.40	33.40	33.40	33.40	33.40
27.500	33.40	33.40	33.40	33.40	33.40
27.750	33.40	33.40	33.40	33.40	33.40
28.000	33.40	33.40	33.40	33.40	33.40
28.250	33.40	33.40	33.40	33.40	33.40
28.500	33.40	33.40	33.40	33.40	33.40
28.750	33.40	33.40	33.40	33.40	33.40
29.000	33.40	33.40	33.40	33.40	33.40
29.250	33.40	33.40	33.40	33.40	33.40
29.500	33.40	33.40	33.40	33.40	33.40
29.750	33.40	33.40	33.40	33.40	33.40
30.000	33.40	33.40	33.40	33.40	33.40
30.250	33.40	33.40	33.40	33.40	33.40
30.500	33.40	33.40	33.40	33.40	33.40
30.750	33.40	33.40	33.40	33.40	33.40
31.000	33.40	33.40	33.40	33.40	33.40
31.250	33.40	33.40	33.40	33.40	33.40
31.500	33.40	33.40	33.40	33.40	33.40
31.750	33.40	33.40	33.40	33.40	33.40

Hydrologic Calculations

Subsection: Time vs. Elevation
 Label: DET SYSTEM (OUT)
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
32.000	33.40	33.40	33.40	33.40	33.40
32.250	33.40	33.40	33.40	33.40	33.40
32.500	33.40	33.40	33.40	33.40	33.40
32.750	33.40	33.40	33.40	33.40	33.40
33.000	33.40	33.40	33.40	33.40	33.40
33.250	33.40	33.40	33.40	33.40	33.40
33.500	33.40	33.40	33.40	33.40	33.40
33.750	33.40	33.40	33.40	33.40	33.40
34.000	33.40	33.40	33.40	33.40	33.40
34.250	33.40	33.40	33.40	33.40	33.40
34.500	33.40	33.40	33.40	33.40	33.40
34.750	33.40	33.40	33.40	33.40	33.40
35.000	33.40	33.40	33.40	33.40	33.40
35.250	33.40	33.40	33.40	33.40	33.40
35.500	33.40	33.40	33.40	33.40	33.40
35.750	33.40	33.40	33.40	33.40	33.40
36.000	33.40	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation
 Label: DET SYSTEM (OUT)
 Scenario: Post-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	33.40	33.40	33.40	33.40	33.40
0.250	33.40	33.40	33.40	33.40	33.40
0.500	33.40	33.40	33.40	33.40	33.40
0.750	33.40	33.40	33.40	33.40	33.40
1.000	33.40	33.40	33.40	33.40	33.40
1.250	33.40	33.40	33.40	33.40	33.40
1.500	33.40	33.40	33.40	33.40	33.40
1.750	33.40	33.40	33.40	33.40	33.40
2.000	33.40	33.40	33.40	33.40	33.40
2.250	33.40	33.40	33.40	33.40	33.40
2.500	33.40	33.40	33.40	33.40	33.40
2.750	33.40	33.40	33.40	33.40	33.40

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
3.000	33.40	33.40	33.40	33.40	33.40
3.250	33.40	33.40	33.40	33.40	33.40
3.500	33.40	33.40	33.40	33.40	33.40
3.750	33.40	33.40	33.40	33.40	33.40
4.000	33.40	33.40	33.40	33.40	33.40
4.250	33.40	33.40	33.40	33.40	33.40
4.500	33.40	33.41	33.41	33.41	33.41
4.750	33.41	33.41	33.41	33.41	33.41
5.000	33.41	33.41	33.41	33.41	33.41
5.250	33.41	33.41	33.41	33.42	33.42
5.500	33.42	33.42	33.42	33.42	33.42
5.750	33.42	33.42	33.42	33.42	33.42
6.000	33.43	33.43	33.43	33.43	33.43
6.250	33.43	33.43	33.43	33.43	33.43
6.500	33.43	33.44	33.44	33.44	33.44
6.750	33.44	33.44	33.44	33.44	33.45
7.000	33.45	33.45	33.45	33.45	33.45
7.250	33.45	33.46	33.46	33.46	33.46
7.500	33.46	33.46	33.47	33.47	33.47
7.750	33.47	33.47	33.48	33.48	33.48
8.000	33.48	33.48	33.48	33.49	33.49
8.250	33.49	33.49	33.50	33.50	33.50
8.500	33.50	33.51	33.51	33.51	33.52
8.750	33.52	33.52	33.53	33.53	33.53
9.000	33.54	33.54	33.54	33.55	33.55
9.250	33.55	33.56	33.56	33.57	33.57
9.500	33.57	33.58	33.58	33.59	33.59
9.750	33.60	33.60	33.61	33.61	33.62
10.000	33.62	33.62	33.63	33.64	33.64
10.250	33.65	33.65	33.66	33.66	33.67
10.500	33.68	33.68	33.69	33.70	33.71
10.750	33.71	33.72	33.73	33.74	33.75
11.000	33.75	33.76	33.77	33.78	33.79
11.250	33.81	33.82	33.83	33.85	33.87
11.500	33.89	33.91	33.94	33.97	34.03
11.750	34.09	34.17	34.27	34.38	34.53
12.000	34.74	35.01	35.29	35.55	35.75
12.250	35.88	35.99	36.07	36.14	36.18
12.500	36.20	36.21	36.20	36.18	36.16
12.750	36.14	36.12	36.10	36.07	36.04
13.000	36.01	35.98	35.95	35.91	35.88

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
13.250	35.85	35.82	35.79	35.76	35.73
13.500	35.70	35.66	35.63	35.60	35.57
13.750	35.54	35.51	35.47	35.44	35.41
14.000	35.38	35.35	35.32	35.29	35.26
14.250	35.23	35.20	35.17	35.14	35.12
14.500	35.09	35.06	35.03	35.00	34.98
14.750	34.95	34.92	34.90	34.87	34.84
15.000	34.82	34.79	34.77	34.74	34.72
15.250	34.70	34.67	34.65	34.63	34.60
15.500	34.58	34.56	34.53	34.51	34.49
15.750	34.47	34.44	34.42	34.40	34.38
16.000	34.36	34.34	34.32	34.30	34.28
16.250	34.26	34.24	34.23	34.21	34.19
16.500	34.17	34.16	34.14	34.12	34.11
16.750	34.09	34.08	34.06	34.05	34.03
17.000	34.02	34.00	33.99	33.98	33.96
17.250	33.95	33.94	33.92	33.91	33.90
17.500	33.89	33.87	33.86	33.85	33.84
17.750	33.83	33.82	33.81	33.80	33.79
18.000	33.78	33.77	33.77	33.76	33.75
18.250	33.74	33.74	33.73	33.72	33.72
18.500	33.71	33.70	33.70	33.69	33.69
18.750	33.68	33.68	33.67	33.67	33.66
19.000	33.66	33.65	33.65	33.64	33.64
19.250	33.64	33.63	33.63	33.63	33.62
19.500	33.62	33.62	33.61	33.61	33.61
19.750	33.60	33.60	33.60	33.60	33.59
20.000	33.59	33.59	33.59	33.58	33.58
20.250	33.58	33.58	33.58	33.57	33.57
20.500	33.57	33.57	33.57	33.56	33.56
20.750	33.56	33.56	33.56	33.56	33.56
21.000	33.55	33.55	33.55	33.55	33.55
21.250	33.55	33.55	33.55	33.54	33.54
21.500	33.54	33.54	33.54	33.54	33.54
21.750	33.54	33.54	33.53	33.53	33.53
22.000	33.53	33.53	33.53	33.53	33.53
22.250	33.53	33.53	33.53	33.52	33.52
22.500	33.52	33.52	33.52	33.52	33.52
22.750	33.52	33.52	33.52	33.52	33.52
23.000	33.52	33.51	33.51	33.51	33.51
23.250	33.51	33.51	33.51	33.51	33.51

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
23.500	33.51	33.51	33.51	33.51	33.51
23.750	33.50	33.50	33.50	33.50	33.50
24.000	33.50	33.50	33.50	33.49	33.49
24.250	33.49	33.48	33.48	33.48	33.47
24.500	33.47	33.47	33.47	33.46	33.46
24.750	33.46	33.46	33.45	33.45	33.45
25.000	33.45	33.45	33.44	33.44	33.44
25.250	33.44	33.44	33.44	33.43	33.43
25.500	33.43	33.43	33.43	33.43	33.43
25.750	33.43	33.43	33.42	33.42	33.42
26.000	33.42	33.42	33.42	33.42	33.42
26.250	33.42	33.42	33.42	33.42	33.42
26.500	33.41	33.41	33.41	33.41	33.41
26.750	33.41	33.41	33.41	33.41	33.41
27.000	33.41	33.41	33.41	33.41	33.41
27.250	33.41	33.41	33.41	33.41	33.41
27.500	33.41	33.41	33.41	33.41	33.41
27.750	33.41	33.41	33.40	33.40	33.40
28.000	33.40	33.40	33.40	33.40	33.40
28.250	33.40	33.40	33.40	33.40	33.40
28.500	33.40	33.40	33.40	33.40	33.40
28.750	33.40	33.40	33.40	33.40	33.40
29.000	33.40	33.40	33.40	33.40	33.40
29.250	33.40	33.40	33.40	33.40	33.40
29.500	33.40	33.40	33.40	33.40	33.40
29.750	33.40	33.40	33.40	33.40	33.40
30.000	33.40	33.40	33.40	33.40	33.40
30.250	33.40	33.40	33.40	33.40	33.40
30.500	33.40	33.40	33.40	33.40	33.40
30.750	33.40	33.40	33.40	33.40	33.40
31.000	33.40	33.40	33.40	33.40	33.40
31.250	33.40	33.40	33.40	33.40	33.40
31.500	33.40	33.40	33.40	33.40	33.40
31.750	33.40	33.40	33.40	33.40	33.40
32.000	33.40	33.40	33.40	33.40	33.40
32.250	33.40	33.40	33.40	33.40	33.40
32.500	33.40	33.40	33.40	33.40	33.40
32.750	33.40	33.40	33.40	33.40	33.40
33.000	33.40	33.40	33.40	33.40	33.40
33.250	33.40	33.40	33.40	33.40	33.40
33.500	33.40	33.40	33.40	33.40	33.40

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
33.750	33.40	33.40	33.40	33.40	33.40
34.000	33.40	33.40	33.40	33.40	33.40
34.250	33.40	33.40	33.40	33.40	33.40
34.500	33.40	33.40	33.40	33.40	33.40
34.750	33.40	33.40	33.40	33.40	33.40
35.000	33.40	33.40	33.40	33.40	33.40
35.250	33.40	33.40	33.40	33.40	33.40
35.500	33.40	33.40	33.40	33.40	33.40
35.750	33.40	33.40	33.40	33.40	33.40
36.000	33.40	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	33.40	33.40	33.40	33.40	33.40
0.250	33.40	33.40	33.40	33.40	33.40
0.500	33.40	33.40	33.40	33.40	33.40
0.750	33.40	33.40	33.40	33.40	33.40
1.000	33.40	33.40	33.40	33.40	33.40
1.250	33.40	33.40	33.40	33.40	33.40
1.500	33.40	33.40	33.40	33.40	33.40
1.750	33.40	33.40	33.40	33.40	33.40
2.000	33.40	33.40	33.40	33.40	33.40
2.250	33.40	33.40	33.40	33.40	33.40
2.500	33.40	33.40	33.40	33.40	33.40
2.750	33.40	33.40	33.40	33.40	33.40
3.000	33.40	33.40	33.40	33.40	33.40
3.250	33.40	33.40	33.40	33.40	33.40
3.500	33.40	33.40	33.40	33.40	33.40
3.750	33.40	33.41	33.41	33.41	33.41
4.000	33.41	33.41	33.41	33.41	33.41
4.250	33.41	33.41	33.41	33.41	33.41
4.500	33.42	33.42	33.42	33.42	33.42

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
4.750	33.42	33.42	33.42	33.42	33.42
5.000	33.43	33.43	33.43	33.43	33.43
5.250	33.43	33.43	33.43	33.43	33.44
5.500	33.44	33.44	33.44	33.44	33.44
5.750	33.44	33.44	33.44	33.45	33.45
6.000	33.45	33.45	33.45	33.45	33.45
6.250	33.46	33.46	33.46	33.46	33.46
6.500	33.46	33.46	33.47	33.47	33.47
6.750	33.47	33.47	33.47	33.48	33.48
7.000	33.48	33.48	33.48	33.49	33.49
7.250	33.49	33.49	33.50	33.50	33.50
7.500	33.50	33.50	33.51	33.51	33.51
7.750	33.51	33.52	33.52	33.52	33.52
8.000	33.53	33.53	33.53	33.54	33.54
8.250	33.54	33.55	33.55	33.55	33.56
8.500	33.56	33.56	33.57	33.57	33.57
8.750	33.58	33.58	33.59	33.59	33.60
9.000	33.60	33.61	33.61	33.62	33.62
9.250	33.63	33.63	33.64	33.64	33.65
9.500	33.65	33.66	33.67	33.67	33.68
9.750	33.68	33.69	33.70	33.70	33.71
10.000	33.71	33.72	33.73	33.73	33.74
10.250	33.75	33.76	33.76	33.77	33.78
10.500	33.79	33.80	33.81	33.82	33.83
10.750	33.84	33.85	33.86	33.87	33.88
11.000	33.89	33.90	33.91	33.93	33.94
11.250	33.96	33.98	34.00	34.02	34.04
11.500	34.07	34.10	34.14	34.19	34.26
11.750	34.35	34.46	34.59	34.74	34.94
12.000	35.23	35.60	35.99	36.37	36.66
12.250	36.85	36.99	37.07	37.11	37.10
12.500	37.06	37.00	36.93	36.87	36.82
12.750	36.77	36.73	36.68	36.64	36.60
13.000	36.56	36.52	36.49	36.46	36.42
13.250	36.39	36.36	36.32	36.29	36.26
13.500	36.22	36.19	36.16	36.12	36.09
13.750	36.05	36.02	35.98	35.95	35.91
14.000	35.88	35.85	35.81	35.78	35.75
14.250	35.71	35.68	35.65	35.62	35.58
14.500	35.55	35.52	35.49	35.46	35.43
14.750	35.39	35.36	35.34	35.31	35.28

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
15.000	35.25	35.22	35.19	35.16	35.13
15.250	35.11	35.08	35.05	35.02	34.99
15.500	34.97	34.94	34.91	34.89	34.86
15.750	34.83	34.81	34.78	34.76	34.73
16.000	34.71	34.68	34.66	34.63	34.61
16.250	34.59	34.56	34.54	34.52	34.50
16.500	34.47	34.45	34.43	34.41	34.39
16.750	34.37	34.35	34.33	34.31	34.29
17.000	34.27	34.26	34.24	34.22	34.20
17.250	34.19	34.17	34.15	34.14	34.12
17.500	34.11	34.09	34.08	34.06	34.05
17.750	34.03	34.02	34.00	33.99	33.98
18.000	33.96	33.95	33.94	33.93	33.91
18.250	33.90	33.89	33.88	33.87	33.86
18.500	33.85	33.84	33.83	33.82	33.81
18.750	33.80	33.79	33.78	33.78	33.77
19.000	33.76	33.75	33.75	33.74	33.74
19.250	33.73	33.72	33.72	33.71	33.71
19.500	33.70	33.70	33.69	33.69	33.68
19.750	33.68	33.67	33.67	33.67	33.66
20.000	33.66	33.65	33.65	33.65	33.64
20.250	33.64	33.64	33.64	33.63	33.63
20.500	33.63	33.62	33.62	33.62	33.62
20.750	33.61	33.61	33.61	33.61	33.60
21.000	33.60	33.60	33.60	33.60	33.59
21.250	33.59	33.59	33.59	33.59	33.59
21.500	33.58	33.58	33.58	33.58	33.58
21.750	33.58	33.58	33.57	33.57	33.57
22.000	33.57	33.57	33.57	33.57	33.56
22.250	33.56	33.56	33.56	33.56	33.56
22.500	33.56	33.56	33.56	33.55	33.55
22.750	33.55	33.55	33.55	33.55	33.55
23.000	33.55	33.55	33.55	33.54	33.54
23.250	33.54	33.54	33.54	33.54	33.54
23.500	33.54	33.54	33.54	33.54	33.53
23.750	33.53	33.53	33.53	33.53	33.53
24.000	33.53	33.53	33.52	33.52	33.52
24.250	33.51	33.51	33.50	33.50	33.49
24.500	33.49	33.49	33.48	33.48	33.48
24.750	33.47	33.47	33.47	33.47	33.46
25.000	33.46	33.46	33.46	33.45	33.45

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
25.250	33.45	33.45	33.45	33.44	33.44
25.500	33.44	33.44	33.44	33.44	33.44
25.750	33.43	33.43	33.43	33.43	33.43
26.000	33.43	33.43	33.43	33.42	33.42
26.250	33.42	33.42	33.42	33.42	33.42
26.500	33.42	33.42	33.42	33.42	33.42
26.750	33.42	33.41	33.41	33.41	33.41
27.000	33.41	33.41	33.41	33.41	33.41
27.250	33.41	33.41	33.41	33.41	33.41
27.500	33.41	33.41	33.41	33.41	33.41
27.750	33.41	33.41	33.41	33.41	33.41
28.000	33.41	33.41	33.41	33.41	33.40
28.250	33.40	33.40	33.40	33.40	33.40
28.500	33.40	33.40	33.40	33.40	33.40
28.750	33.40	33.40	33.40	33.40	33.40
29.000	33.40	33.40	33.40	33.40	33.40
29.250	33.40	33.40	33.40	33.40	33.40
29.500	33.40	33.40	33.40	33.40	33.40
29.750	33.40	33.40	33.40	33.40	33.40
30.000	33.40	33.40	33.40	33.40	33.40
30.250	33.40	33.40	33.40	33.40	33.40
30.500	33.40	33.40	33.40	33.40	33.40
30.750	33.40	33.40	33.40	33.40	33.40
31.000	33.40	33.40	33.40	33.40	33.40
31.250	33.40	33.40	33.40	33.40	33.40
31.500	33.40	33.40	33.40	33.40	33.40
31.750	33.40	33.40	33.40	33.40	33.40
32.000	33.40	33.40	33.40	33.40	33.40
32.250	33.40	33.40	33.40	33.40	33.40
32.500	33.40	33.40	33.40	33.40	33.40
32.750	33.40	33.40	33.40	33.40	33.40
33.000	33.40	33.40	33.40	33.40	33.40
33.250	33.40	33.40	33.40	33.40	33.40
33.500	33.40	33.40	33.40	33.40	33.40
33.750	33.40	33.40	33.40	33.40	33.40
34.000	33.40	33.40	33.40	33.40	33.40
34.250	33.40	33.40	33.40	33.40	33.40
34.500	33.40	33.40	33.40	33.40	33.40
34.750	33.40	33.40	33.40	33.40	33.40
35.000	33.40	33.40	33.40	33.40	33.40
35.250	33.40	33.40	33.40	33.40	33.40

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
35.500	33.40	33.40	33.40	33.40	33.40
35.750	33.40	33.40	33.40	33.40	33.40
36.000	33.40	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	33.40	33.40	33.40	33.40	33.40
0.250	33.40	33.40	33.40	33.40	33.40
0.500	33.40	33.40	33.40	33.40	33.40
0.750	33.40	33.40	33.40	33.40	33.40
1.000	33.40	33.40	33.40	33.40	33.40
1.250	33.40	33.40	33.40	33.40	33.40
1.500	33.40	33.40	33.40	33.40	33.40
1.750	33.40	33.40	33.40	33.40	33.40
2.000	33.40	33.40	33.40	33.40	33.40
2.250	33.40	33.40	33.40	33.40	33.40
2.500	33.40	33.40	33.40	33.40	33.40
2.750	33.40	33.41	33.41	33.41	33.41
3.000	33.41	33.41	33.41	33.41	33.41
3.250	33.41	33.41	33.42	33.42	33.42
3.500	33.42	33.42	33.42	33.42	33.43
3.750	33.43	33.43	33.43	33.43	33.43
4.000	33.43	33.44	33.44	33.44	33.44
4.250	33.44	33.44	33.45	33.45	33.45
4.500	33.45	33.45	33.45	33.46	33.46
4.750	33.46	33.46	33.46	33.46	33.47
5.000	33.47	33.47	33.47	33.47	33.48
5.250	33.48	33.48	33.48	33.48	33.49
5.500	33.49	33.49	33.49	33.49	33.49
5.750	33.50	33.50	33.50	33.50	33.50
6.000	33.51	33.51	33.51	33.51	33.52
6.250	33.52	33.52	33.52	33.52	33.53

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
6.500	33.53	33.53	33.53	33.54	33.54
6.750	33.54	33.55	33.55	33.55	33.56
7.000	33.56	33.56	33.56	33.57	33.57
7.250	33.57	33.58	33.58	33.59	33.59
7.500	33.59	33.60	33.60	33.60	33.61
7.750	33.61	33.62	33.62	33.62	33.63
8.000	33.63	33.64	33.64	33.64	33.65
8.250	33.65	33.66	33.66	33.67	33.67
8.500	33.68	33.69	33.69	33.70	33.70
8.750	33.71	33.72	33.72	33.73	33.74
9.000	33.74	33.75	33.76	33.77	33.77
9.250	33.78	33.79	33.80	33.81	33.81
9.500	33.82	33.83	33.84	33.85	33.86
9.750	33.87	33.87	33.88	33.89	33.90
10.000	33.91	33.92	33.93	33.94	33.95
10.250	33.96	33.98	33.99	34.00	34.02
10.500	34.03	34.04	34.06	34.08	34.09
10.750	34.11	34.13	34.14	34.16	34.18
11.000	34.20	34.22	34.24	34.26	34.29
11.250	34.32	34.35	34.38	34.42	34.46
11.500	34.50	34.55	34.61	34.69	34.80
11.750	34.94	35.11	35.32	35.56	35.88
12.000	36.38	37.04	37.82	38.31	38.40
12.250	38.29	38.15	38.00	37.85	37.70
12.500	37.55	37.41	37.29	37.18	37.09
12.750	37.02	36.95	36.90	36.86	36.82
13.000	36.78	36.74	36.70	36.67	36.63
13.250	36.60	36.57	36.54	36.52	36.50
13.500	36.47	36.45	36.43	36.41	36.38
13.750	36.36	36.33	36.31	36.28	36.26
14.000	36.23	36.20	36.17	36.14	36.11
14.250	36.09	36.06	36.03	36.00	35.97
14.500	35.94	35.91	35.88	35.86	35.83
14.750	35.80	35.77	35.75	35.72	35.69
15.000	35.66	35.64	35.61	35.58	35.55
15.250	35.53	35.50	35.47	35.44	35.41
15.500	35.39	35.36	35.33	35.31	35.28
15.750	35.25	35.23	35.20	35.17	35.15
16.000	35.12	35.09	35.07	35.04	35.01
16.250	34.99	34.96	34.94	34.91	34.88
16.500	34.86	34.84	34.81	34.79	34.77

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
16.750	34.74	34.72	34.70	34.68	34.66
17.000	34.63	34.61	34.59	34.57	34.55
17.250	34.53	34.51	34.49	34.47	34.45
17.500	34.43	34.41	34.39	34.37	34.36
17.750	34.34	34.32	34.30	34.28	34.27
18.000	34.25	34.23	34.22	34.20	34.19
18.250	34.17	34.16	34.14	34.13	34.11
18.500	34.10	34.09	34.07	34.06	34.05
18.750	34.03	34.02	34.01	34.00	33.99
19.000	33.98	33.96	33.95	33.94	33.93
19.250	33.92	33.91	33.90	33.89	33.88
19.500	33.87	33.86	33.86	33.85	33.84
19.750	33.83	33.82	33.82	33.81	33.80
20.000	33.80	33.79	33.78	33.78	33.77
20.250	33.77	33.76	33.76	33.75	33.75
20.500	33.74	33.74	33.73	33.73	33.72
20.750	33.72	33.72	33.71	33.71	33.71
21.000	33.70	33.70	33.70	33.69	33.69
21.250	33.69	33.68	33.68	33.68	33.67
21.500	33.67	33.67	33.67	33.66	33.66
21.750	33.66	33.66	33.65	33.65	33.65
22.000	33.65	33.65	33.64	33.64	33.64
22.250	33.64	33.64	33.63	33.63	33.63
22.500	33.63	33.63	33.63	33.62	33.62
22.750	33.62	33.62	33.62	33.62	33.61
23.000	33.61	33.61	33.61	33.61	33.61
23.250	33.61	33.60	33.60	33.60	33.60
23.500	33.60	33.60	33.60	33.59	33.59
23.750	33.59	33.59	33.59	33.59	33.59
24.000	33.59	33.58	33.58	33.57	33.57
24.250	33.56	33.55	33.55	33.54	33.54
24.500	33.53	33.53	33.52	33.52	33.51
24.750	33.51	33.50	33.50	33.49	33.49
25.000	33.49	33.48	33.48	33.48	33.47
25.250	33.47	33.47	33.47	33.46	33.46
25.500	33.46	33.46	33.45	33.45	33.45
25.750	33.45	33.45	33.44	33.44	33.44
26.000	33.44	33.44	33.44	33.44	33.43
26.250	33.43	33.43	33.43	33.43	33.43
26.500	33.43	33.43	33.42	33.42	33.42
26.750	33.42	33.42	33.42	33.42	33.42

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
27.000	33.42	33.42	33.42	33.42	33.42
27.250	33.41	33.41	33.41	33.41	33.41
27.500	33.41	33.41	33.41	33.41	33.41
27.750	33.41	33.41	33.41	33.41	33.41
28.000	33.41	33.41	33.41	33.41	33.41
28.250	33.41	33.41	33.41	33.41	33.41
28.500	33.41	33.41	33.41	33.40	33.40
28.750	33.40	33.40	33.40	33.40	33.40
29.000	33.40	33.40	33.40	33.40	33.40
29.250	33.40	33.40	33.40	33.40	33.40
29.500	33.40	33.40	33.40	33.40	33.40
29.750	33.40	33.40	33.40	33.40	33.40
30.000	33.40	33.40	33.40	33.40	33.40
30.250	33.40	33.40	33.40	33.40	33.40
30.500	33.40	33.40	33.40	33.40	33.40
30.750	33.40	33.40	33.40	33.40	33.40
31.000	33.40	33.40	33.40	33.40	33.40
31.250	33.40	33.40	33.40	33.40	33.40
31.500	33.40	33.40	33.40	33.40	33.40
31.750	33.40	33.40	33.40	33.40	33.40
32.000	33.40	33.40	33.40	33.40	33.40
32.250	33.40	33.40	33.40	33.40	33.40
32.500	33.40	33.40	33.40	33.40	33.40
32.750	33.40	33.40	33.40	33.40	33.40
33.000	33.40	33.40	33.40	33.40	33.40
33.250	33.40	33.40	33.40	33.40	33.40
33.500	33.40	33.40	33.40	33.40	33.40
33.750	33.40	33.40	33.40	33.40	33.40
34.000	33.40	33.40	33.40	33.40	33.40
34.250	33.40	33.40	33.40	33.40	33.40
34.500	33.40	33.40	33.40	33.40	33.40
34.750	33.40	33.40	33.40	33.40	33.40
35.000	33.40	33.40	33.40	33.40	33.40
35.250	33.40	33.40	33.40	33.40	33.40
35.500	33.40	33.40	33.40	33.40	33.40
35.750	33.40	33.40	33.40	33.40	33.40
36.000	33.40	(N/A)	(N/A)	(N/A)	(N/A)

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.10	29.10	29.10
5.500	29.10	29.10	29.10	29.10	29.10
5.750	29.10	29.10	29.10	29.10	29.10
6.000	29.10	29.10	29.10	29.10	29.10
6.250	29.10	29.10	29.10	29.10	29.10
6.500	29.10	29.10	29.10	29.10	29.10
6.750	29.10	29.10	29.10	29.10	29.10
7.000	29.10	29.10	29.10	29.10	29.10
7.250	29.10	29.10	29.10	29.10	29.10
7.500	29.10	29.10	29.10	29.10	29.10
7.750	29.10	29.10	29.10	29.10	29.10
8.000	29.10	29.10	29.10	29.10	29.10
8.250	29.10	29.10	29.10	29.10	29.10
8.500	29.10	29.10	29.10	29.10	29.10
8.750	29.10	29.10	29.10	29.10	29.10
9.000	29.10	29.10	29.10	29.10	29.10
9.250	29.10	29.10	29.10	29.10	29.10
9.500	29.10	29.10	29.10	29.10	29.10
9.750	29.10	29.10	29.10	29.10	29.10

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.000	29.10	29.10	29.10	29.10	29.11
10.250	29.14	29.17	29.22	29.28	29.35
10.500	29.44	29.55	29.62	29.65	29.68
10.750	29.72	29.75	29.79	29.83	29.88
11.000	29.92	29.93	29.94	29.95	29.95
11.250	29.96	29.96	29.97	29.97	29.98
11.500	29.99	30.00	30.01	30.04	30.08
11.750	30.12	30.15	30.18	30.21	30.27
12.000	30.39	30.52	30.61	30.63	30.56
12.250	30.45	30.39	30.35	30.31	30.27
12.500	30.23	30.20	30.17	30.15	30.14
12.750	30.13	30.13	30.12	30.12	30.11
13.000	30.11	30.11	30.10	30.10	30.10
13.250	30.10	30.09	30.09	30.09	30.08
13.500	30.08	30.08	30.08	30.07	30.07
13.750	30.07	30.06	30.06	30.06	30.06
14.000	30.05	30.05	30.05	30.04	30.04
14.250	30.04	30.04	30.04	30.04	30.04
14.500	30.03	30.03	30.03	30.03	30.03
14.750	30.03	30.03	30.02	30.02	30.02
15.000	30.02	30.02	30.02	30.02	30.01
15.250	30.01	30.01	30.01	30.01	30.01
15.500	30.00	30.00	30.00	30.00	30.00
15.750	30.00	30.00	29.99	29.99	29.99
16.000	29.99	29.99	29.99	29.99	29.98
16.250	29.98	29.98	29.98	29.98	29.98
16.500	29.98	29.98	29.98	29.98	29.98
16.750	29.98	29.98	29.98	29.97	29.97
17.000	29.97	29.97	29.97	29.97	29.97
17.250	29.97	29.97	29.97	29.97	29.97
17.500	29.97	29.97	29.96	29.96	29.96
17.750	29.96	29.96	29.96	29.96	29.96
18.000	29.96	29.96	29.96	29.96	29.96
18.250	29.96	29.96	29.96	29.96	29.96
18.500	29.96	29.96	29.96	29.96	29.96
18.750	29.95	29.95	29.95	29.95	29.95
19.000	29.95	29.95	29.95	29.95	29.95
19.250	29.95	29.95	29.95	29.95	29.95
19.500	29.95	29.95	29.95	29.95	29.95
19.750	29.95	29.95	29.95	29.95	29.95
20.000	29.95	29.95	29.95	29.95	29.95

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
20.250	29.95	29.95	29.95	29.95	29.95
20.500	29.95	29.95	29.95	29.95	29.95
20.750	29.95	29.95	29.95	29.95	29.95
21.000	29.95	29.95	29.95	29.95	29.95
21.250	29.95	29.95	29.95	29.95	29.94
21.500	29.94	29.94	29.94	29.94	29.94
21.750	29.94	29.94	29.94	29.94	29.94
22.000	29.94	29.94	29.94	29.94	29.94
22.250	29.94	29.94	29.94	29.94	29.94
22.500	29.94	29.94	29.94	29.94	29.94
22.750	29.94	29.94	29.94	29.94	29.94
23.000	29.94	29.94	29.94	29.94	29.94
23.250	29.94	29.94	29.94	29.94	29.94
23.500	29.94	29.94	29.94	29.94	29.94
23.750	29.94	29.94	29.94	29.94	29.94
24.000	29.94	29.93	29.93	29.92	29.91
24.250	29.91	29.91	29.91	29.91	29.91
24.500	29.91	29.91	29.91	29.91	29.91
24.750	29.91	29.91	29.91	29.91	29.91
25.000	29.91	29.91	29.91	29.91	29.91
25.250	29.91	29.91	29.91	29.91	29.91
25.500	29.91	29.91	29.91	29.91	29.91
25.750	29.91	29.91	29.91	29.91	29.91
26.000	29.91	29.91	29.91	29.91	29.91
26.250	29.91	29.91	29.91	29.91	29.91
26.500	29.91	29.91	29.91	29.91	29.91
26.750	29.91	29.91	29.91	29.91	29.91
27.000	29.91	29.91	29.91	29.91	29.91
27.250	29.91	29.91	29.91	29.91	29.91
27.500	29.91	29.91	29.91	29.91	29.91
27.750	29.91	29.91	29.91	29.91	29.91
28.000	29.91	29.91	29.91	29.91	29.91
28.250	29.91	29.91	29.91	29.91	29.91
28.500	29.91	29.91	29.91	29.91	29.91
28.750	29.91	29.91	29.91	29.91	29.91
29.000	29.91	29.91	29.91	29.91	29.91
29.250	29.91	29.91	29.91	29.91	29.91
29.500	29.91	29.91	29.91	29.91	29.91
29.750	29.91	29.91	29.91	29.91	29.91
30.000	29.91	29.91	29.91	29.91	29.91
30.250	29.91	29.91	29.91	29.91	29.91

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
30.500	29.91	29.91	29.91	29.91	29.91
30.750	29.91	29.91	29.91	29.91	29.91
31.000	29.91	29.91	29.91	29.91	29.91
31.250	29.91	29.91	29.91	29.91	29.91
31.500	29.91	29.91	29.91	29.91	29.91
31.750	29.91	29.91	29.91	29.91	29.91
32.000	29.91	29.91	29.91	29.91	29.91
32.250	29.91	29.91	29.91	29.91	29.91
32.500	29.91	29.91	29.91	29.91	29.91
32.750	29.91	29.91	29.91	29.91	29.91
33.000	29.91	29.91	29.91	29.91	29.91
33.250	29.91	29.91	29.91	29.91	29.91
33.500	29.91	29.91	29.91	29.91	29.91
33.750	29.91	29.91	29.91	29.91	29.91
34.000	29.91	29.91	29.91	29.91	29.91
34.250	29.91	29.91	29.91	29.91	29.91
34.500	29.91	29.91	29.91	29.91	29.91
34.750	29.91	29.91	29.91	29.91	29.91
35.000	29.91	29.91	29.91	29.91	29.91
35.250	29.91	29.91	29.91	29.91	29.91
35.500	29.91	29.91	29.91	29.91	29.91
35.750	29.91	29.91	29.91	29.91	29.91
36.000	29.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.10	29.10	29.10
5.500	29.10	29.10	29.10	29.10	29.10
5.750	29.10	29.10	29.10	29.10	29.10
6.000	29.10	29.10	29.10	29.10	29.10
6.250	29.10	29.10	29.10	29.10	29.10
6.500	29.10	29.10	29.10	29.10	29.10
6.750	29.10	29.10	29.10	29.10	29.10
7.000	29.10	29.10	29.10	29.10	29.10
7.250	29.10	29.10	29.10	29.10	29.10
7.500	29.10	29.10	29.10	29.10	29.10
7.750	29.10	29.10	29.11	29.13	29.15
8.000	29.19	29.23	29.28	29.35	29.42
8.250	29.51	29.60	29.63	29.66	29.68
8.500	29.71	29.74	29.77	29.81	29.85
8.750	29.89	29.92	29.93	29.94	29.94
9.000	29.94	29.95	29.95	29.95	29.95
9.250	29.95	29.96	29.96	29.96	29.96
9.500	29.97	29.97	29.97	29.98	29.98
9.750	29.98	29.98	29.99	29.99	29.99
10.000	30.00	30.00	30.00	30.01	30.01
10.250	30.02	30.02	30.03	30.03	30.04
10.500	30.04	30.05	30.06	30.06	30.07
10.750	30.07	30.08	30.09	30.09	30.10
11.000	30.10	30.11	30.11	30.12	30.12
11.250	30.13	30.14	30.15	30.15	30.16
11.500	30.17	30.19	30.22	30.26	30.32

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.750	30.40	30.48	30.56	30.65	30.80
12.000	30.84	30.85	30.86	30.86	30.84
12.250	30.82	30.81	30.80	30.76	30.67
12.500	30.55	30.45	30.38	30.32	30.30
12.750	30.28	30.27	30.26	30.25	30.24
13.000	30.23	30.22	30.21	30.20	30.20
13.250	30.20	30.19	30.19	30.19	30.19
13.500	30.18	30.18	30.18	30.17	30.17
13.750	30.17	30.17	30.16	30.16	30.16
14.000	30.15	30.15	30.15	30.15	30.15
14.250	30.14	30.14	30.14	30.14	30.14
14.500	30.14	30.14	30.13	30.13	30.13
14.750	30.13	30.13	30.13	30.13	30.13
15.000	30.12	30.12	30.12	30.12	30.12
15.250	30.12	30.12	30.11	30.11	30.11
15.500	30.11	30.11	30.11	30.11	30.10
15.750	30.10	30.10	30.10	30.10	30.09
16.000	30.09	30.09	30.08	30.08	30.08
16.250	30.08	30.07	30.07	30.07	30.07
16.500	30.07	30.07	30.07	30.06	30.06
16.750	30.06	30.06	30.06	30.06	30.05
17.000	30.05	30.05	30.05	30.05	30.05
17.250	30.04	30.04	30.04	30.04	30.04
17.500	30.04	30.04	30.03	30.03	30.03
17.750	30.03	30.03	30.03	30.02	30.02
18.000	30.02	30.02	30.02	30.02	30.02
18.250	30.01	30.01	30.01	30.01	30.01
18.500	30.01	30.01	30.01	30.01	30.01
18.750	30.01	30.01	30.01	30.01	30.01
19.000	30.01	30.01	30.01	30.01	30.01
19.250	30.01	30.00	30.00	30.00	30.00
19.500	30.00	30.00	30.00	30.00	30.00
19.750	30.00	30.00	30.00	30.00	30.00
20.000	30.00	30.00	30.00	30.00	30.00
20.250	30.00	30.00	30.00	29.99	29.99
20.500	29.99	29.99	29.99	29.99	29.99
20.750	29.99	29.99	29.99	29.99	29.99
21.000	29.99	29.99	29.99	29.99	29.99
21.250	29.99	29.99	29.99	29.99	29.99
21.500	29.99	29.99	29.99	29.99	29.99
21.750	29.98	29.98	29.98	29.98	29.98

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.000	29.98	29.98	29.98	29.98	29.98
22.250	29.98	29.98	29.98	29.98	29.98
22.500	29.98	29.98	29.98	29.98	29.98
22.750	29.98	29.98	29.98	29.98	29.98
23.000	29.98	29.98	29.97	29.97	29.97
23.250	29.97	29.97	29.97	29.97	29.97
23.500	29.97	29.97	29.97	29.97	29.97
23.750	29.97	29.97	29.97	29.97	29.97
24.000	29.97	29.96	29.95	29.93	29.92
24.250	29.91	29.91	29.91	29.91	29.91
24.500	29.91	29.91	29.91	29.91	29.91
24.750	29.91	29.91	29.91	29.91	29.91
25.000	29.91	29.91	29.91	29.91	29.91
25.250	29.91	29.91	29.91	29.91	29.91
25.500	29.91	29.91	29.91	29.91	29.91
25.750	29.91	29.91	29.91	29.91	29.91
26.000	29.91	29.91	29.91	29.91	29.91
26.250	29.91	29.91	29.91	29.91	29.91
26.500	29.91	29.91	29.91	29.91	29.91
26.750	29.91	29.91	29.91	29.91	29.91
27.000	29.91	29.91	29.91	29.91	29.91
27.250	29.91	29.91	29.91	29.91	29.91
27.500	29.91	29.91	29.91	29.91	29.91
27.750	29.91	29.91	29.91	29.91	29.91
28.000	29.91	29.91	29.91	29.91	29.91
28.250	29.91	29.91	29.91	29.91	29.91
28.500	29.91	29.91	29.91	29.91	29.91
28.750	29.91	29.91	29.91	29.91	29.91
29.000	29.91	29.91	29.91	29.91	29.91
29.250	29.91	29.91	29.91	29.91	29.91
29.500	29.91	29.91	29.91	29.91	29.91
29.750	29.91	29.91	29.91	29.91	29.91
30.000	29.91	29.91	29.91	29.91	29.91
30.250	29.91	29.91	29.91	29.91	29.91
30.500	29.91	29.91	29.91	29.91	29.91
30.750	29.91	29.91	29.91	29.91	29.91
31.000	29.91	29.91	29.91	29.91	29.91
31.250	29.91	29.91	29.91	29.91	29.91
31.500	29.91	29.91	29.91	29.91	29.91
31.750	29.91	29.91	29.91	29.91	29.91
32.000	29.91	29.91	29.91	29.91	29.91

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
32.250	29.91	29.91	29.91	29.91	29.91
32.500	29.91	29.91	29.91	29.91	29.91
32.750	29.91	29.91	29.91	29.91	29.91
33.000	29.91	29.91	29.91	29.91	29.91
33.250	29.91	29.91	29.91	29.91	29.91
33.500	29.91	29.91	29.91	29.91	29.91
33.750	29.91	29.91	29.91	29.91	29.91
34.000	29.91	29.91	29.91	29.91	29.91
34.250	29.91	29.91	29.91	29.91	29.91
34.500	29.91	29.91	29.91	29.91	29.91
34.750	29.91	29.91	29.91	29.91	29.91
35.000	29.91	29.91	29.91	29.91	29.91
35.250	29.91	29.91	29.91	29.91	29.91
35.500	29.91	29.91	29.91	29.91	29.91
35.750	29.91	29.91	29.91	29.91	29.91
36.000	29.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.10	29.10	29.10
5.500	29.10	29.10	29.10	29.10	29.10
5.750	29.10	29.10	29.10	29.10	29.10
6.000	29.10	29.10	29.10	29.10	29.10
6.250	29.10	29.10	29.10	29.10	29.10
6.500	29.10	29.10	29.10	29.10	29.10
6.750	29.10	29.10	29.11	29.12	29.14
7.000	29.18	29.22	29.27	29.33	29.40
7.250	29.48	29.57	29.62	29.65	29.67
7.500	29.70	29.73	29.75	29.79	29.82
7.750	29.86	29.90	29.92	29.93	29.93
8.000	29.94	29.94	29.94	29.94	29.94
8.250	29.95	29.95	29.95	29.95	29.96
8.500	29.96	29.96	29.96	29.97	29.97
8.750	29.97	29.98	29.98	29.98	29.98
9.000	29.99	29.99	29.99	30.00	30.00
9.250	30.01	30.01	30.01	30.02	30.02
9.500	30.02	30.03	30.03	30.04	30.04
9.750	30.05	30.05	30.05	30.06	30.06
10.000	30.07	30.07	30.08	30.08	30.09
10.250	30.10	30.10	30.11	30.11	30.11
10.500	30.12	30.12	30.12	30.13	30.13
10.750	30.13	30.14	30.14	30.14	30.15
11.000	30.15	30.16	30.16	30.17	30.18
11.250	30.19	30.20	30.21	30.23	30.24
11.500	30.25	30.27	30.32	30.38	30.47
11.750	30.58	30.69	30.80	30.82	30.83
12.000	30.86	30.89	30.90	30.90	30.87
12.250	30.85	30.83	30.82	30.81	30.80
12.500	30.75	30.62	30.50	30.43	30.39
12.750	30.37	30.35	30.34	30.33	30.31
13.000	30.30	30.28	30.27	30.26	30.26
13.250	30.25	30.25	30.25	30.24	30.24

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
13.500	30.23	30.23	30.23	30.22	30.22
13.750	30.22	30.21	30.21	30.20	30.20
14.000	30.20	30.19	30.19	30.19	30.19
14.250	30.18	30.18	30.18	30.18	30.18
14.500	30.17	30.17	30.17	30.17	30.17
14.750	30.16	30.16	30.16	30.16	30.16
15.000	30.16	30.15	30.15	30.15	30.15
15.250	30.15	30.14	30.14	30.14	30.14
15.500	30.14	30.14	30.13	30.13	30.13
15.750	30.13	30.13	30.12	30.12	30.12
16.000	30.12	30.12	30.11	30.11	30.11
16.250	30.11	30.11	30.11	30.11	30.11
16.500	30.11	30.11	30.11	30.10	30.10
16.750	30.10	30.10	30.10	30.10	30.10
17.000	30.10	30.10	30.09	30.09	30.09
17.250	30.09	30.09	30.08	30.08	30.08
17.500	30.08	30.07	30.07	30.07	30.07
17.750	30.07	30.06	30.06	30.06	30.06
18.000	30.06	30.05	30.05	30.05	30.05
18.250	30.05	30.05	30.05	30.05	30.05
18.500	30.05	30.04	30.04	30.04	30.04
18.750	30.04	30.04	30.04	30.04	30.04
19.000	30.04	30.04	30.04	30.04	30.04
19.250	30.04	30.03	30.03	30.03	30.03
19.500	30.03	30.03	30.03	30.03	30.03
19.750	30.03	30.03	30.03	30.03	30.03
20.000	30.03	30.03	30.02	30.02	30.02
20.250	30.02	30.02	30.02	30.02	30.02
20.500	30.02	30.02	30.02	30.02	30.02
20.750	30.02	30.02	30.02	30.02	30.02
21.000	30.02	30.02	30.02	30.01	30.01
21.250	30.01	30.01	30.01	30.01	30.01
21.500	30.01	30.01	30.01	30.01	30.01
21.750	30.01	30.01	30.01	30.01	30.01
22.000	30.01	30.01	30.01	30.00	30.00
22.250	30.00	30.00	30.00	30.00	30.00
22.500	30.00	30.00	30.00	30.00	30.00
22.750	30.00	30.00	30.00	30.00	30.00
23.000	30.00	30.00	30.00	29.99	29.99
23.250	29.99	29.99	29.99	29.99	29.99
23.500	29.99	29.99	29.99	29.99	29.99

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
23.750	29.99	29.99	29.99	29.99	29.99
24.000	29.99	29.98	29.96	29.94	29.92
24.250	29.91	29.91	29.91	29.91	29.91
24.500	29.91	29.91	29.91	29.91	29.91
24.750	29.91	29.91	29.91	29.91	29.91
25.000	29.91	29.91	29.91	29.91	29.91
25.250	29.91	29.91	29.91	29.91	29.91
25.500	29.91	29.91	29.91	29.91	29.91
25.750	29.91	29.91	29.91	29.91	29.91
26.000	29.91	29.91	29.91	29.91	29.91
26.250	29.91	29.91	29.91	29.91	29.91
26.500	29.91	29.91	29.91	29.91	29.91
26.750	29.91	29.91	29.91	29.91	29.91
27.000	29.91	29.91	29.91	29.91	29.91
27.250	29.91	29.91	29.91	29.91	29.91
27.500	29.91	29.91	29.91	29.91	29.91
27.750	29.91	29.91	29.91	29.91	29.91
28.000	29.91	29.91	29.91	29.91	29.91
28.250	29.91	29.91	29.91	29.91	29.91
28.500	29.91	29.91	29.91	29.91	29.91
28.750	29.91	29.91	29.91	29.91	29.91
29.000	29.91	29.91	29.91	29.91	29.91
29.250	29.91	29.91	29.91	29.91	29.91
29.500	29.91	29.91	29.91	29.91	29.91
29.750	29.91	29.91	29.91	29.91	29.91
30.000	29.91	29.91	29.91	29.91	29.91
30.250	29.91	29.91	29.91	29.91	29.91
30.500	29.91	29.91	29.91	29.91	29.91
30.750	29.91	29.91	29.91	29.91	29.91
31.000	29.91	29.91	29.91	29.91	29.91
31.250	29.91	29.91	29.91	29.91	29.91
31.500	29.91	29.91	29.91	29.91	29.91
31.750	29.91	29.91	29.91	29.91	29.91
32.000	29.91	29.91	29.91	29.91	29.91
32.250	29.91	29.91	29.91	29.91	29.91
32.500	29.91	29.91	29.91	29.91	29.91
32.750	29.91	29.91	29.91	29.91	29.91
33.000	29.91	29.91	29.91	29.91	29.91
33.250	29.91	29.91	29.91	29.91	29.91
33.500	29.91	29.91	29.91	29.91	29.91
33.750	29.91	29.91	29.91	29.91	29.91

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
34.000	29.91	29.91	29.91	29.91	29.91
34.250	29.91	29.91	29.91	29.91	29.91
34.500	29.91	29.91	29.91	29.91	29.91
34.750	29.91	29.91	29.91	29.91	29.91
35.000	29.91	29.91	29.91	29.91	29.91
35.250	29.91	29.91	29.91	29.91	29.91
35.500	29.91	29.91	29.91	29.91	29.91
35.750	29.91	29.91	29.91	29.91	29.91
36.000	29.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.11	29.12	29.15
5.500	29.18	29.23	29.28	29.34	29.42
5.750	29.50	29.60	29.63	29.66	29.68
6.000	29.70	29.73	29.76	29.79	29.82
6.250	29.86	29.90	29.92	29.93	29.93
6.500	29.94	29.94	29.94	29.94	29.94
6.750	29.95	29.95	29.95	29.95	29.95
7.000	29.96	29.96	29.96	29.96	29.96
7.250	29.97	29.97	29.97	29.97	29.98
7.500	29.98	29.98	29.98	29.99	29.99
7.750	29.99	29.99	30.00	30.00	30.00
8.000	30.00	30.01	30.01	30.01	30.02
8.250	30.02	30.03	30.03	30.04	30.04
8.500	30.05	30.05	30.06	30.06	30.07
8.750	30.07	30.08	30.08	30.09	30.09
9.000	30.10	30.10	30.11	30.11	30.11
9.250	30.11	30.12	30.12	30.12	30.12
9.500	30.13	30.13	30.13	30.13	30.14
9.750	30.14	30.14	30.15	30.15	30.15
10.000	30.15	30.16	30.16	30.17	30.17
10.250	30.18	30.18	30.19	30.19	30.20
10.500	30.20	30.21	30.21	30.22	30.22
10.750	30.23	30.24	30.24	30.25	30.25
11.000	30.26	30.27	30.28	30.29	30.31
11.250	30.32	30.34	30.36	30.38	30.40
11.500	30.42	30.46	30.53	30.64	30.79
11.750	30.82	30.83	30.84	30.85	30.88
12.000	30.92	30.97	30.99	30.98	30.94
12.250	30.90	30.88	30.86	30.85	30.83
12.500	30.81	30.80	30.74	30.66	30.60
12.750	30.55	30.52	30.50	30.48	30.46
13.000	30.44	30.41	30.40	30.39	30.38
13.250	30.37	30.36	30.36	30.35	30.35
13.500	30.34	30.34	30.33	30.32	30.32
13.750	30.31	30.31	30.30	30.29	30.29
14.000	30.28	30.28	30.27	30.27	30.27
14.250	30.26	30.26	30.26	30.25	30.25
14.500	30.25	30.25	30.24	30.24	30.24
14.750	30.23	30.23	30.23	30.23	30.22
15.000	30.22	30.22	30.21	30.21	30.21

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
15.250	30.21	30.20	30.20	30.20	30.19
15.500	30.19	30.19	30.19	30.18	30.18
15.750	30.18	30.17	30.17	30.17	30.17
16.000	30.16	30.16	30.16	30.16	30.15
16.250	30.15	30.15	30.15	30.15	30.15
16.500	30.15	30.15	30.14	30.14	30.14
16.750	30.14	30.14	30.14	30.14	30.14
17.000	30.13	30.13	30.13	30.13	30.13
17.250	30.13	30.13	30.13	30.12	30.12
17.500	30.12	30.12	30.12	30.12	30.12
17.750	30.12	30.11	30.11	30.11	30.11
18.000	30.11	30.11	30.11	30.11	30.11
18.250	30.11	30.11	30.11	30.10	30.10
18.500	30.10	30.10	30.10	30.10	30.10
18.750	30.10	30.10	30.10	30.10	30.10
19.000	30.10	30.10	30.10	30.10	30.10
19.250	30.10	30.10	30.09	30.09	30.09
19.500	30.09	30.09	30.09	30.09	30.09
19.750	30.09	30.09	30.08	30.08	30.08
20.000	30.08	30.08	30.08	30.08	30.08
20.250	30.08	30.08	30.08	30.08	30.07
20.500	30.07	30.07	30.07	30.07	30.07
20.750	30.07	30.07	30.07	30.07	30.07
21.000	30.07	30.07	30.07	30.06	30.06
21.250	30.06	30.06	30.06	30.06	30.06
21.500	30.06	30.06	30.06	30.06	30.06
21.750	30.06	30.06	30.05	30.05	30.05
22.000	30.05	30.05	30.05	30.05	30.05
22.250	30.05	30.05	30.05	30.05	30.05
22.500	30.05	30.04	30.04	30.04	30.04
22.750	30.04	30.04	30.04	30.04	30.04
23.000	30.04	30.04	30.04	30.04	30.03
23.250	30.03	30.03	30.03	30.03	30.03
23.500	30.03	30.03	30.03	30.03	30.03
23.750	30.03	30.03	30.03	30.02	30.02
24.000	30.02	30.01	29.98	29.95	29.93
24.250	29.92	29.91	29.91	29.91	29.91
24.500	29.91	29.91	29.91	29.91	29.91
24.750	29.91	29.91	29.91	29.91	29.91
25.000	29.91	29.91	29.91	29.91	29.91
25.250	29.91	29.91	29.91	29.91	29.91

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
25.500	29.91	29.91	29.91	29.91	29.91
25.750	29.91	29.91	29.91	29.91	29.91
26.000	29.91	29.91	29.91	29.91	29.91
26.250	29.91	29.91	29.91	29.91	29.91
26.500	29.91	29.91	29.91	29.91	29.91
26.750	29.91	29.91	29.91	29.91	29.91
27.000	29.91	29.91	29.91	29.91	29.91
27.250	29.91	29.91	29.91	29.91	29.91
27.500	29.91	29.91	29.91	29.91	29.91
27.750	29.91	29.91	29.91	29.91	29.91
28.000	29.91	29.91	29.91	29.91	29.91
28.250	29.91	29.91	29.91	29.91	29.91
28.500	29.91	29.91	29.91	29.91	29.91
28.750	29.91	29.91	29.91	29.91	29.91
29.000	29.91	29.91	29.91	29.91	29.91
29.250	29.91	29.91	29.91	29.91	29.91
29.500	29.91	29.91	29.91	29.91	29.91
29.750	29.91	29.91	29.91	29.91	29.91
30.000	29.91	29.91	29.91	29.91	29.91
30.250	29.91	29.91	29.91	29.91	29.91
30.500	29.91	29.91	29.91	29.91	29.91
30.750	29.91	29.91	29.91	29.91	29.91
31.000	29.91	29.91	29.91	29.91	29.91
31.250	29.91	29.91	29.91	29.91	29.91
31.500	29.91	29.91	29.91	29.91	29.91
31.750	29.91	29.91	29.91	29.91	29.91
32.000	29.91	29.91	29.91	29.91	29.91
32.250	29.91	29.91	29.91	29.91	29.91
32.500	29.91	29.91	29.91	29.91	29.91
32.750	29.91	29.91	29.91	29.91	29.91
33.000	29.91	29.91	29.91	29.91	29.91
33.250	29.91	29.91	29.91	29.91	29.91
33.500	29.91	29.91	29.91	29.91	29.91
33.750	29.91	29.91	29.91	29.91	29.91
34.000	29.91	29.91	29.91	29.91	29.91
34.250	29.91	29.91	29.91	29.91	29.91
34.500	29.91	29.91	29.91	29.91	29.91
34.750	29.91	29.91	29.91	29.91	29.91
35.000	29.91	29.91	29.91	29.91	29.91
35.250	29.91	29.91	29.91	29.91	29.91
35.500	29.91	29.91	29.91	29.91	29.91

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
35.750	29.91	29.91	29.91	29.91	29.91
36.000	29.91	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	31.00	31.00	31.00	31.00	31.00
0.250	31.00	31.00	31.00	31.00	31.00
0.500	31.00	31.00	31.00	31.00	31.00
0.750	31.00	31.00	31.00	31.00	31.00
1.000	31.00	31.00	31.00	31.00	31.00
1.250	31.00	31.00	31.00	31.00	31.00
1.500	31.00	31.00	31.00	31.00	31.00
1.750	31.00	31.00	31.00	31.00	31.00
2.000	31.00	31.00	31.00	31.00	31.00
2.250	31.00	31.00	31.00	31.00	31.00
2.500	31.00	31.00	31.00	31.00	31.00
2.750	31.00	31.00	31.00	31.00	31.00
3.000	31.00	31.00	31.00	31.00	31.00
3.250	31.00	31.00	31.00	31.00	31.00
3.500	31.00	31.00	31.00	31.00	31.00
3.750	31.00	31.00	31.00	31.00	31.00
4.000	31.00	31.00	31.00	31.00	31.00
4.250	31.00	31.00	31.00	31.00	31.00
4.500	31.00	31.00	31.00	31.00	31.00
4.750	31.00	31.00	31.00	31.00	31.00
5.000	31.00	31.00	31.00	31.00	31.00
5.250	31.00	31.00	31.00	31.00	31.00
5.500	31.00	31.00	31.00	31.00	31.00
5.750	31.00	31.00	31.00	31.00	31.00
6.000	31.00	31.00	31.00	31.00	31.00
6.250	31.00	31.00	31.00	31.00	31.00
6.500	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
6.750	31.00	31.00	31.00	31.00	31.00
7.000	31.00	31.00	31.00	31.00	31.00
7.250	31.00	31.00	31.00	31.00	31.00
7.500	31.00	31.00	31.00	31.00	31.00
7.750	31.00	31.00	31.00	31.00	31.00
8.000	31.00	31.00	31.00	31.00	31.00
8.250	31.00	31.00	31.00	31.00	31.00
8.500	31.00	31.00	31.00	31.00	31.00
8.750	31.00	31.00	31.00	31.00	31.00
9.000	31.00	31.00	31.00	31.00	31.00
9.250	31.00	31.00	31.00	31.00	31.00
9.500	31.00	31.00	31.00	31.00	31.00
9.750	31.00	31.00	31.00	31.00	31.00
10.000	31.00	31.00	31.00	31.00	31.00
10.250	31.00	31.00	31.00	31.00	31.00
10.500	31.00	31.00	31.00	31.00	31.00
10.750	31.00	31.00	31.00	31.00	31.00
11.000	31.00	31.00	31.00	31.00	31.00
11.250	31.00	31.00	31.00	31.00	31.00
11.500	31.01	31.01	31.01	31.02	31.03
11.750	31.04	31.06	31.08	31.10	31.13
12.000	31.18	31.24	31.31	31.36	31.41
12.250	31.44	31.47	31.49	31.51	31.52
12.500	31.53	31.54	31.55	31.55	31.55
12.750	31.56	31.56	31.56	31.56	31.56
13.000	31.56	31.56	31.56	31.56	31.56
13.250	31.56	31.56	31.56	31.56	31.56
13.500	31.56	31.56	31.56	31.55	31.55
13.750	31.55	31.55	31.55	31.55	31.54
14.000	31.54	31.54	31.54	31.53	31.53
14.250	31.53	31.53	31.52	31.52	31.52
14.500	31.52	31.51	31.51	31.51	31.50
14.750	31.50	31.50	31.49	31.49	31.49
15.000	31.49	31.48	31.48	31.47	31.47
15.250	31.47	31.46	31.46	31.46	31.45
15.500	31.45	31.45	31.44	31.44	31.43
15.750	31.43	31.43	31.42	31.42	31.41
16.000	31.41	31.40	31.40	31.40	31.39
16.250	31.39	31.38	31.38	31.37	31.37
16.500	31.36	31.36	31.35	31.35	31.34
16.750	31.34	31.34	31.33	31.33	31.32

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
17.000	31.32	31.31	31.31	31.30	31.30
17.250	31.29	31.29	31.28	31.28	31.27
17.500	31.27	31.26	31.26	31.25	31.25
17.750	31.24	31.24	31.23	31.22	31.22
18.000	31.21	31.21	31.20	31.20	31.19
18.250	31.19	31.18	31.18	31.17	31.17
18.500	31.16	31.16	31.15	31.14	31.14
18.750	31.13	31.13	31.12	31.12	31.11
19.000	31.11	31.10	31.10	31.09	31.08
19.250	31.08	31.07	31.07	31.06	31.06
19.500	31.05	31.05	31.04	31.03	31.03
19.750	31.02	31.02	31.01	31.01	31.00
20.000	31.00	31.00	31.00	31.00	31.00
20.250	31.00	31.00	31.00	31.00	31.00
20.500	31.00	31.00	31.00	31.00	31.00
20.750	31.00	31.00	31.00	31.00	31.00
21.000	31.00	31.00	31.00	31.00	31.00
21.250	31.00	31.00	31.00	31.00	31.00
21.500	31.00	31.00	31.00	31.00	31.00
21.750	31.00	31.00	31.00	31.00	31.00
22.000	31.00	31.00	31.00	31.00	31.00
22.250	31.00	31.00	31.00	31.00	31.00
22.500	31.00	31.00	31.00	31.00	31.00
22.750	31.00	31.00	31.00	31.00	31.00
23.000	31.00	31.00	31.00	31.00	31.00
23.250	31.00	31.00	31.00	31.00	31.00
23.500	31.00	31.00	31.00	31.00	31.00
23.750	31.00	31.00	31.00	31.00	31.00
24.000	31.00	31.00	31.00	31.00	31.00
24.250	31.00	31.00	31.00	31.00	31.00
24.500	31.00	31.00	31.00	31.00	31.00
24.750	31.00	31.00	31.00	31.00	31.00
25.000	31.00	31.00	31.00	31.00	31.00
25.250	31.00	31.00	31.00	31.00	31.00
25.500	31.00	31.00	31.00	31.00	31.00
25.750	31.00	31.00	31.00	31.00	31.00
26.000	31.00	31.00	31.00	31.00	31.00
26.250	31.00	31.00	31.00	31.00	31.00
26.500	31.00	31.00	31.00	31.00	31.00
26.750	31.00	31.00	31.00	31.00	31.00
27.000	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation
 Label: SP (OUT)
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
27.250	31.00	31.00	31.00	31.00	31.00
27.500	31.00	31.00	31.00	31.00	31.00
27.750	31.00	31.00	31.00	31.00	31.00
28.000	31.00	31.00	31.00	31.00	31.00
28.250	31.00	31.00	31.00	31.00	31.00
28.500	31.00	31.00	31.00	31.00	31.00
28.750	31.00	31.00	31.00	31.00	31.00
29.000	31.00	31.00	31.00	31.00	31.00
29.250	31.00	31.00	31.00	31.00	31.00
29.500	31.00	31.00	31.00	31.00	31.00
29.750	31.00	31.00	31.00	31.00	31.00
30.000	31.00	31.00	31.00	31.00	31.00
30.250	31.00	31.00	31.00	31.00	31.00
30.500	31.00	31.00	31.00	31.00	31.00
30.750	31.00	31.00	31.00	31.00	31.00
31.000	31.00	31.00	31.00	31.00	31.00
31.250	31.00	31.00	31.00	31.00	31.00
31.500	31.00	31.00	31.00	31.00	31.00
31.750	31.00	31.00	31.00	31.00	31.00
32.000	31.00	31.00	31.00	31.00	31.00
32.250	31.00	31.00	31.00	31.00	31.00
32.500	31.00	31.00	31.00	31.00	31.00
32.750	31.00	31.00	31.00	31.00	31.00
33.000	31.00	31.00	31.00	31.00	31.00
33.250	31.00	31.00	31.00	31.00	31.00
33.500	31.00	31.00	31.00	31.00	31.00
33.750	31.00	31.00	31.00	31.00	31.00
34.000	31.00	31.00	31.00	31.00	31.00
34.250	31.00	31.00	31.00	31.00	31.00
34.500	31.00	31.00	31.00	31.00	31.00
34.750	31.00	31.00	31.00	31.00	31.00
35.000	31.00	31.00	31.00	31.00	31.00
35.250	31.00	31.00	31.00	31.00	31.00
35.500	31.00	31.00	31.00	31.00	31.00
35.750	31.00	31.00	31.00	31.00	31.00
36.000	31.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation
 Label: SP (OUT)
 Scenario: Post-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	31.00	31.00	31.00	31.00	31.00
0.250	31.00	31.00	31.00	31.00	31.00
0.500	31.00	31.00	31.00	31.00	31.00
0.750	31.00	31.00	31.00	31.00	31.00
1.000	31.00	31.00	31.00	31.00	31.00
1.250	31.00	31.00	31.00	31.00	31.00
1.500	31.00	31.00	31.00	31.00	31.00
1.750	31.00	31.00	31.00	31.00	31.00
2.000	31.00	31.00	31.00	31.00	31.00
2.250	31.00	31.00	31.00	31.00	31.00
2.500	31.00	31.00	31.00	31.00	31.00
2.750	31.00	31.00	31.00	31.00	31.00
3.000	31.00	31.00	31.00	31.00	31.00
3.250	31.00	31.00	31.00	31.00	31.00
3.500	31.00	31.00	31.00	31.00	31.00
3.750	31.00	31.00	31.00	31.00	31.00
4.000	31.00	31.00	31.00	31.00	31.00
4.250	31.00	31.00	31.00	31.00	31.00
4.500	31.00	31.00	31.00	31.00	31.00
4.750	31.00	31.00	31.00	31.00	31.00
5.000	31.00	31.00	31.00	31.00	31.00
5.250	31.00	31.00	31.00	31.00	31.00
5.500	31.00	31.00	31.00	31.00	31.00
5.750	31.00	31.00	31.00	31.00	31.00
6.000	31.00	31.00	31.00	31.00	31.00
6.250	31.00	31.00	31.00	31.00	31.00
6.500	31.00	31.00	31.00	31.00	31.00
6.750	31.00	31.00	31.00	31.00	31.00
7.000	31.00	31.00	31.00	31.00	31.00
7.250	31.00	31.00	31.00	31.00	31.00
7.500	31.00	31.00	31.00	31.00	31.00
7.750	31.00	31.00	31.00	31.00	31.00
8.000	31.00	31.00	31.00	31.00	31.00
8.250	31.00	31.00	31.00	31.00	31.00
8.500	31.00	31.00	31.00	31.00	31.00
8.750	31.00	31.00	31.00	31.00	31.00
9.000	31.00	31.00	31.00	31.00	31.00
9.250	31.00	31.00	31.00	31.00	31.00
9.500	31.00	31.00	31.00	31.00	31.00
9.750	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.000	31.00	31.00	31.00	31.00	31.00
10.250	31.00	31.01	31.01	31.01	31.01
10.500	31.01	31.01	31.01	31.02	31.02
10.750	31.02	31.02	31.03	31.03	31.03
11.000	31.04	31.04	31.05	31.05	31.06
11.250	31.06	31.07	31.08	31.09	31.10
11.500	31.11	31.12	31.13	31.15	31.18
11.750	31.21	31.26	31.30	31.36	31.43
12.000	31.54	31.66	31.79	31.91	32.00
12.250	32.01	32.00	32.01	32.00	32.00
12.500	32.00	32.00	32.00	32.00	32.00
12.750	32.00	32.00	32.00	32.00	32.00
13.000	32.00	32.00	32.00	32.00	32.00
13.250	32.00	32.00	32.00	32.00	32.00
13.500	32.00	32.00	32.00	32.00	32.00
13.750	32.00	32.00	32.00	32.00	32.00
14.000	32.00	32.00	32.00	32.00	32.00
14.250	32.00	32.00	32.00	32.00	32.00
14.500	32.00	32.00	32.00	32.00	32.00
14.750	32.00	32.00	32.00	32.00	32.00
15.000	32.00	32.00	32.00	32.00	32.00
15.250	32.00	32.00	32.00	31.99	31.99
15.500	31.99	31.99	31.99	31.99	31.99
15.750	31.98	31.98	31.98	31.98	31.98
16.000	31.97	31.97	31.97	31.97	31.96
16.250	31.96	31.96	31.96	31.95	31.95
16.500	31.95	31.95	31.94	31.94	31.94
16.750	31.93	31.93	31.93	31.93	31.92
17.000	31.92	31.92	31.91	31.91	31.91
17.250	31.90	31.90	31.90	31.89	31.89
17.500	31.89	31.88	31.88	31.87	31.87
17.750	31.87	31.86	31.86	31.86	31.85
18.000	31.85	31.84	31.84	31.84	31.83
18.250	31.83	31.82	31.82	31.81	31.81
18.500	31.81	31.80	31.80	31.79	31.79
18.750	31.79	31.78	31.78	31.77	31.77
19.000	31.76	31.76	31.76	31.75	31.75
19.250	31.74	31.74	31.73	31.73	31.72
19.500	31.72	31.72	31.71	31.71	31.70
19.750	31.70	31.69	31.69	31.68	31.68
20.000	31.67	31.67	31.67	31.66	31.66

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
20.250	31.65	31.65	31.64	31.64	31.63
20.500	31.63	31.62	31.62	31.61	31.61
20.750	31.61	31.60	31.60	31.59	31.59
21.000	31.58	31.58	31.57	31.57	31.56
21.250	31.56	31.55	31.55	31.54	31.54
21.500	31.53	31.53	31.52	31.52	31.51
21.750	31.51	31.50	31.50	31.49	31.49
22.000	31.48	31.48	31.47	31.47	31.46
22.250	31.46	31.45	31.45	31.44	31.44
22.500	31.43	31.43	31.42	31.42	31.41
22.750	31.41	31.40	31.40	31.39	31.39
23.000	31.38	31.38	31.37	31.37	31.36
23.250	31.36	31.35	31.35	31.34	31.34
23.500	31.33	31.33	31.32	31.32	31.31
23.750	31.30	31.30	31.29	31.29	31.28
24.000	31.28	31.27	31.27	31.26	31.25
24.250	31.25	31.24	31.23	31.23	31.22
24.500	31.21	31.21	31.20	31.19	31.18
24.750	31.18	31.17	31.16	31.16	31.15
25.000	31.14	31.14	31.13	31.12	31.12
25.250	31.11	31.10	31.10	31.09	31.08
25.500	31.08	31.07	31.06	31.06	31.05
25.750	31.04	31.03	31.03	31.02	31.01
26.000	31.01	31.00	31.00	31.00	31.00
26.250	31.00	31.00	31.00	31.00	31.00
26.500	31.00	31.00	31.00	31.00	31.00
26.750	31.00	31.00	31.00	31.00	31.00
27.000	31.00	31.00	31.00	31.00	31.00
27.250	31.00	31.00	31.00	31.00	31.00
27.500	31.00	31.00	31.00	31.00	31.00
27.750	31.00	31.00	31.00	31.00	31.00
28.000	31.00	31.00	31.00	31.00	31.00
28.250	31.00	31.00	31.00	31.00	31.00
28.500	31.00	31.00	31.00	31.00	31.00
28.750	31.00	31.00	31.00	31.00	31.00
29.000	31.00	31.00	31.00	31.00	31.00
29.250	31.00	31.00	31.00	31.00	31.00
29.500	31.00	31.00	31.00	31.00	31.00
29.750	31.00	31.00	31.00	31.00	31.00
30.000	31.00	31.00	31.00	31.00	31.00
30.250	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
30.500	31.00	31.00	31.00	31.00	31.00
30.750	31.00	31.00	31.00	31.00	31.00
31.000	31.00	31.00	31.00	31.00	31.00
31.250	31.00	31.00	31.00	31.00	31.00
31.500	31.00	31.00	31.00	31.00	31.00
31.750	31.00	31.00	31.00	31.00	31.00
32.000	31.00	31.00	31.00	31.00	31.00
32.250	31.00	31.00	31.00	31.00	31.00
32.500	31.00	31.00	31.00	31.00	31.00
32.750	31.00	31.00	31.00	31.00	31.00
33.000	31.00	31.00	31.00	31.00	31.00
33.250	31.00	31.00	31.00	31.00	31.00
33.500	31.00	31.00	31.00	31.00	31.00
33.750	31.00	31.00	31.00	31.00	31.00
34.000	31.00	31.00	31.00	31.00	31.00
34.250	31.00	31.00	31.00	31.00	31.00
34.500	31.00	31.00	31.00	31.00	31.00
34.750	31.00	31.00	31.00	31.00	31.00
35.000	31.00	31.00	31.00	31.00	31.00
35.250	31.00	31.00	31.00	31.00	31.00
35.500	31.00	31.00	31.00	31.00	31.00
35.750	31.00	31.00	31.00	31.00	31.00
36.000	31.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	31.00	31.00	31.00	31.00	31.00
0.250	31.00	31.00	31.00	31.00	31.00
0.500	31.00	31.00	31.00	31.00	31.00
0.750	31.00	31.00	31.00	31.00	31.00
1.000	31.00	31.00	31.00	31.00	31.00
1.250	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1.500	31.00	31.00	31.00	31.00	31.00
1.750	31.00	31.00	31.00	31.00	31.00
2.000	31.00	31.00	31.00	31.00	31.00
2.250	31.00	31.00	31.00	31.00	31.00
2.500	31.00	31.00	31.00	31.00	31.00
2.750	31.00	31.00	31.00	31.00	31.00
3.000	31.00	31.00	31.00	31.00	31.00
3.250	31.00	31.00	31.00	31.00	31.00
3.500	31.00	31.00	31.00	31.00	31.00
3.750	31.00	31.00	31.00	31.00	31.00
4.000	31.00	31.00	31.00	31.00	31.00
4.250	31.00	31.00	31.00	31.00	31.00
4.500	31.00	31.00	31.00	31.00	31.00
4.750	31.00	31.00	31.00	31.00	31.00
5.000	31.00	31.00	31.00	31.00	31.00
5.250	31.00	31.00	31.00	31.00	31.00
5.500	31.00	31.00	31.00	31.00	31.00
5.750	31.00	31.00	31.00	31.00	31.00
6.000	31.00	31.00	31.00	31.00	31.00
6.250	31.00	31.00	31.00	31.00	31.00
6.500	31.00	31.00	31.00	31.00	31.00
6.750	31.00	31.00	31.00	31.00	31.00
7.000	31.00	31.00	31.00	31.00	31.00
7.250	31.00	31.00	31.00	31.00	31.00
7.500	31.00	31.00	31.00	31.00	31.00
7.750	31.00	31.00	31.00	31.00	31.00
8.000	31.00	31.00	31.00	31.00	31.00
8.250	31.00	31.00	31.00	31.00	31.00
8.500	31.00	31.00	31.00	31.00	31.00
8.750	31.00	31.00	31.00	31.00	31.00
9.000	31.00	31.00	31.00	31.00	31.00
9.250	31.00	31.00	31.00	31.00	31.00
9.500	31.01	31.01	31.01	31.01	31.01
9.750	31.01	31.01	31.01	31.02	31.02
10.000	31.02	31.02	31.02	31.03	31.03
10.250	31.03	31.04	31.04	31.04	31.05
10.500	31.05	31.06	31.06	31.07	31.07
10.750	31.08	31.08	31.09	31.10	31.10
11.000	31.11	31.12	31.12	31.13	31.14
11.250	31.15	31.16	31.18	31.19	31.20
11.500	31.22	31.24	31.26	31.29	31.33

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
11.750	31.37	31.43	31.49	31.56	31.66
12.000	31.80	31.96	32.02	32.01	32.01
12.250	32.01	32.01	32.00	32.01	32.00
12.500	32.00	32.00	32.00	32.00	32.00
12.750	32.00	32.00	32.00	32.00	32.00
13.000	32.00	32.00	32.00	32.00	32.00
13.250	32.00	32.00	32.00	32.00	32.00
13.500	32.00	32.00	32.00	32.00	32.00
13.750	32.00	32.00	32.00	32.00	32.00
14.000	32.00	32.00	32.00	32.00	32.00
14.250	32.00	32.00	32.00	32.00	32.00
14.500	32.00	32.00	32.00	32.00	32.00
14.750	32.00	32.00	32.00	32.00	32.00
15.000	32.00	32.00	32.00	32.00	32.00
15.250	32.00	32.00	32.00	32.00	32.00
15.500	32.00	32.00	32.00	32.00	32.00
15.750	32.00	32.00	32.00	32.00	32.00
16.000	32.00	31.99	31.99	31.99	31.99
16.250	31.99	31.99	31.99	31.98	31.98
16.500	31.98	31.98	31.98	31.98	31.97
16.750	31.97	31.97	31.97	31.97	31.96
17.000	31.96	31.96	31.96	31.96	31.95
17.250	31.95	31.95	31.95	31.94	31.94
17.500	31.94	31.93	31.93	31.93	31.93
17.750	31.92	31.92	31.92	31.91	31.91
18.000	31.91	31.90	31.90	31.90	31.89
18.250	31.89	31.89	31.88	31.88	31.88
18.500	31.87	31.87	31.87	31.86	31.86
18.750	31.86	31.85	31.85	31.84	31.84
19.000	31.84	31.83	31.83	31.83	31.82
19.250	31.82	31.81	31.81	31.81	31.80
19.500	31.80	31.80	31.79	31.79	31.78
19.750	31.78	31.78	31.77	31.77	31.76
20.000	31.76	31.76	31.75	31.75	31.74
20.250	31.74	31.74	31.73	31.73	31.72
20.500	31.72	31.72	31.71	31.71	31.70
20.750	31.70	31.70	31.69	31.69	31.68
21.000	31.68	31.67	31.67	31.67	31.66
21.250	31.66	31.65	31.65	31.64	31.64
21.500	31.64	31.63	31.63	31.62	31.62
21.750	31.61	31.61	31.60	31.60	31.60

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
22.000	31.59	31.59	31.58	31.58	31.57
22.250	31.57	31.56	31.56	31.56	31.55
22.500	31.55	31.54	31.54	31.53	31.53
22.750	31.52	31.52	31.51	31.51	31.50
23.000	31.50	31.49	31.49	31.49	31.48
23.250	31.48	31.47	31.47	31.46	31.46
23.500	31.45	31.45	31.44	31.44	31.43
23.750	31.43	31.42	31.42	31.41	31.41
24.000	31.40	31.40	31.39	31.38	31.38
24.250	31.37	31.36	31.36	31.35	31.34
24.500	31.34	31.33	31.32	31.32	31.31
24.750	31.30	31.30	31.29	31.28	31.28
25.000	31.27	31.26	31.26	31.25	31.24
25.250	31.23	31.23	31.22	31.21	31.21
25.500	31.20	31.19	31.19	31.18	31.17
25.750	31.17	31.16	31.15	31.15	31.14
26.000	31.13	31.13	31.12	31.11	31.11
26.250	31.10	31.09	31.09	31.08	31.07
26.500	31.06	31.06	31.05	31.04	31.04
26.750	31.03	31.02	31.02	31.01	31.00
27.000	31.00	31.00	31.00	31.00	31.00
27.250	31.00	31.00	31.00	31.00	31.00
27.500	31.00	31.00	31.00	31.00	31.00
27.750	31.00	31.00	31.00	31.00	31.00
28.000	31.00	31.00	31.00	31.00	31.00
28.250	31.00	31.00	31.00	31.00	31.00
28.500	31.00	31.00	31.00	31.00	31.00
28.750	31.00	31.00	31.00	31.00	31.00
29.000	31.00	31.00	31.00	31.00	31.00
29.250	31.00	31.00	31.00	31.00	31.00
29.500	31.00	31.00	31.00	31.00	31.00
29.750	31.00	31.00	31.00	31.00	31.00
30.000	31.00	31.00	31.00	31.00	31.00
30.250	31.00	31.00	31.00	31.00	31.00
30.500	31.00	31.00	31.00	31.00	31.00
30.750	31.00	31.00	31.00	31.00	31.00
31.000	31.00	31.00	31.00	31.00	31.00
31.250	31.00	31.00	31.00	31.00	31.00
31.500	31.00	31.00	31.00	31.00	31.00
31.750	31.00	31.00	31.00	31.00	31.00
32.000	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
32.250	31.00	31.00	31.00	31.00	31.00
32.500	31.00	31.00	31.00	31.00	31.00
32.750	31.00	31.00	31.00	31.00	31.00
33.000	31.00	31.00	31.00	31.00	31.00
33.250	31.00	31.00	31.00	31.00	31.00
33.500	31.00	31.00	31.00	31.00	31.00
33.750	31.00	31.00	31.00	31.00	31.00
34.000	31.00	31.00	31.00	31.00	31.00
34.250	31.00	31.00	31.00	31.00	31.00
34.500	31.00	31.00	31.00	31.00	31.00
34.750	31.00	31.00	31.00	31.00	31.00
35.000	31.00	31.00	31.00	31.00	31.00
35.250	31.00	31.00	31.00	31.00	31.00
35.500	31.00	31.00	31.00	31.00	31.00
35.750	31.00	31.00	31.00	31.00	31.00
36.000	31.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	31.00	31.00	31.00	31.00	31.00
0.250	31.00	31.00	31.00	31.00	31.00
0.500	31.00	31.00	31.00	31.00	31.00
0.750	31.00	31.00	31.00	31.00	31.00
1.000	31.00	31.00	31.00	31.00	31.00
1.250	31.00	31.00	31.00	31.00	31.00
1.500	31.00	31.00	31.00	31.00	31.00
1.750	31.00	31.00	31.00	31.00	31.00
2.000	31.00	31.00	31.00	31.00	31.00
2.250	31.00	31.00	31.00	31.00	31.00
2.500	31.00	31.00	31.00	31.00	31.00
2.750	31.00	31.00	31.00	31.00	31.00
3.000	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
3.250	31.00	31.00	31.00	31.00	31.00
3.500	31.00	31.00	31.00	31.00	31.00
3.750	31.00	31.00	31.00	31.00	31.00
4.000	31.00	31.00	31.00	31.00	31.00
4.250	31.00	31.00	31.00	31.00	31.00
4.500	31.00	31.00	31.00	31.00	31.00
4.750	31.00	31.00	31.00	31.00	31.00
5.000	31.00	31.00	31.00	31.00	31.00
5.250	31.00	31.00	31.00	31.00	31.00
5.500	31.00	31.00	31.00	31.00	31.00
5.750	31.00	31.00	31.00	31.00	31.00
6.000	31.00	31.00	31.00	31.00	31.00
6.250	31.00	31.00	31.00	31.00	31.00
6.500	31.00	31.00	31.00	31.00	31.00
6.750	31.00	31.00	31.00	31.00	31.00
7.000	31.00	31.00	31.00	31.00	31.00
7.250	31.00	31.00	31.00	31.00	31.00
7.500	31.00	31.00	31.00	31.00	31.00
7.750	31.00	31.00	31.00	31.00	31.00
8.000	31.00	31.00	31.00	31.00	31.00
8.250	31.00	31.00	31.00	31.01	31.01
8.500	31.01	31.01	31.01	31.01	31.01
8.750	31.02	31.02	31.02	31.02	31.02
9.000	31.03	31.03	31.03	31.04	31.04
9.250	31.04	31.05	31.05	31.06	31.06
9.500	31.07	31.07	31.08	31.08	31.09
9.750	31.09	31.10	31.10	31.11	31.12
10.000	31.12	31.13	31.14	31.14	31.15
10.250	31.16	31.17	31.18	31.19	31.20
10.500	31.21	31.22	31.23	31.24	31.25
10.750	31.26	31.27	31.29	31.30	31.31
11.000	31.33	31.34	31.35	31.37	31.39
11.250	31.41	31.43	31.45	31.47	31.50
11.500	31.52	31.55	31.59	31.63	31.69
11.750	31.76	31.84	31.94	32.01	32.02
12.000	32.02	32.02	32.02	32.02	32.01
12.250	32.01	32.01	32.01	32.01	32.01
12.500	32.00	32.00	32.00	32.00	32.00
12.750	32.00	32.00	32.00	32.00	32.00
13.000	32.00	32.00	32.00	32.00	32.00
13.250	32.00	32.00	32.00	32.00	32.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
13.500	32.00	32.00	32.00	32.00	32.00
13.750	32.00	32.00	32.00	32.00	32.00
14.000	32.00	32.00	32.00	32.00	32.00
14.250	32.00	32.00	32.00	32.00	32.00
14.500	32.00	32.00	32.00	32.00	32.00
14.750	32.00	32.00	32.00	32.00	32.00
15.000	32.00	32.00	32.00	32.00	32.00
15.250	32.00	32.00	32.00	32.00	32.00
15.500	32.00	32.00	32.00	32.00	32.00
15.750	32.00	32.00	32.00	32.00	32.00
16.000	32.00	32.00	32.00	32.00	32.00
16.250	32.00	32.00	32.00	32.00	32.00
16.500	32.00	32.00	32.00	32.00	32.00
16.750	32.00	32.00	32.00	32.00	32.00
17.000	32.00	32.00	32.00	32.00	32.00
17.250	32.00	32.00	32.00	31.99	31.99
17.500	31.99	31.99	31.99	31.99	31.99
17.750	31.99	31.99	31.98	31.98	31.98
18.000	31.98	31.98	31.97	31.97	31.97
18.250	31.97	31.97	31.97	31.96	31.96
18.500	31.96	31.96	31.95	31.95	31.95
18.750	31.95	31.95	31.94	31.94	31.94
19.000	31.94	31.93	31.93	31.93	31.93
19.250	31.92	31.92	31.92	31.92	31.91
19.500	31.91	31.91	31.91	31.90	31.90
19.750	31.90	31.90	31.89	31.89	31.89
20.000	31.89	31.88	31.88	31.88	31.87
20.250	31.87	31.87	31.87	31.86	31.86
20.500	31.86	31.85	31.85	31.85	31.84
20.750	31.84	31.84	31.84	31.83	31.83
21.000	31.83	31.82	31.82	31.82	31.81
21.250	31.81	31.81	31.80	31.80	31.80
21.500	31.79	31.79	31.79	31.78	31.78
21.750	31.78	31.77	31.77	31.77	31.76
22.000	31.76	31.76	31.75	31.75	31.75
22.250	31.74	31.74	31.73	31.73	31.73
22.500	31.72	31.72	31.72	31.71	31.71
22.750	31.71	31.70	31.70	31.69	31.69
23.000	31.69	31.68	31.68	31.67	31.67
23.250	31.67	31.66	31.66	31.66	31.65
23.500	31.65	31.64	31.64	31.63	31.63

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
23.750	31.63	31.62	31.62	31.61	31.61
24.000	31.61	31.60	31.60	31.59	31.58
24.250	31.58	31.57	31.56	31.56	31.55
24.500	31.54	31.53	31.53	31.52	31.51
24.750	31.51	31.50	31.49	31.49	31.48
25.000	31.47	31.47	31.46	31.45	31.45
25.250	31.44	31.43	31.43	31.42	31.41
25.500	31.41	31.40	31.39	31.38	31.38
25.750	31.37	31.36	31.36	31.35	31.34
26.000	31.34	31.33	31.32	31.32	31.31
26.250	31.30	31.30	31.29	31.28	31.28
26.500	31.27	31.26	31.26	31.25	31.24
26.750	31.23	31.23	31.22	31.21	31.21
27.000	31.20	31.19	31.19	31.18	31.17
27.250	31.17	31.16	31.15	31.15	31.14
27.500	31.13	31.13	31.12	31.11	31.11
27.750	31.10	31.09	31.09	31.08	31.07
28.000	31.06	31.06	31.05	31.04	31.04
28.250	31.03	31.02	31.02	31.01	31.00
28.500	31.00	31.00	31.00	31.00	31.00
28.750	31.00	31.00	31.00	31.00	31.00
29.000	31.00	31.00	31.00	31.00	31.00
29.250	31.00	31.00	31.00	31.00	31.00
29.500	31.00	31.00	31.00	31.00	31.00
29.750	31.00	31.00	31.00	31.00	31.00
30.000	31.00	31.00	31.00	31.00	31.00
30.250	31.00	31.00	31.00	31.00	31.00
30.500	31.00	31.00	31.00	31.00	31.00
30.750	31.00	31.00	31.00	31.00	31.00
31.000	31.00	31.00	31.00	31.00	31.00
31.250	31.00	31.00	31.00	31.00	31.00
31.500	31.00	31.00	31.00	31.00	31.00
31.750	31.00	31.00	31.00	31.00	31.00
32.000	31.00	31.00	31.00	31.00	31.00
32.250	31.00	31.00	31.00	31.00	31.00
32.500	31.00	31.00	31.00	31.00	31.00
32.750	31.00	31.00	31.00	31.00	31.00
33.000	31.00	31.00	31.00	31.00	31.00
33.250	31.00	31.00	31.00	31.00	31.00
33.500	31.00	31.00	31.00	31.00	31.00
33.750	31.00	31.00	31.00	31.00	31.00

Hydrologic Calculations

Subsection: Time vs. Elevation

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Elevation (ft)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
34.000	31.00	31.00	31.00	31.00	31.00
34.250	31.00	31.00	31.00	31.00	31.00
34.500	31.00	31.00	31.00	31.00	31.00
34.750	31.00	31.00	31.00	31.00	31.00
35.000	31.00	31.00	31.00	31.00	31.00
35.250	31.00	31.00	31.00	31.00	31.00
35.500	31.00	31.00	31.00	31.00	31.00
35.750	31.00	31.00	31.00	31.00	31.00
36.000	31.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	1	1	1
6.250	1	1	2	2	2
6.500	3	3	3	4	4
6.750	5	5	6	6	7
7.000	7	8	9	9	10
7.250	11	11	12	13	14
7.500	14	15	16	17	18
7.750	19	20	21	22	23
8.000	24	25	26	27	28
8.250	30	31	32	34	35
8.500	37	38	40	41	43
8.750	45	47	49	51	53
9.000	55	57	59	61	64
9.250	66	69	71	74	76
9.500	79	82	84	87	90
9.750	93	96	99	102	106
10.000	109	112	116	119	123
10.250	127	131	135	139	144
10.500	148	153	158	163	168
10.750	173	179	185	190	196
11.000	202	209	215	223	231
11.250	240	249	260	271	283
11.500	296	311	331	357	393
11.750	438	493	558	634	737
12.000	889	1,074	1,269	1,441	1,564
12.250	1,647	1,710	1,757	1,790	1,810
12.500	1,816	1,812	1,799	1,781	1,761
12.750	1,741	1,719	1,696	1,672	1,647
13.000	1,621	1,594	1,567	1,539	1,513
13.250	1,486	1,460	1,434	1,409	1,384
13.500	1,359	1,334	1,309	1,285	1,260
13.750	1,236	1,212	1,189	1,165	1,142
14.000	1,119	1,096	1,073	1,051	1,029
14.250	1,007	986	965	944	924
14.500	903	883	864	844	825
14.750	807	788	770	752	735
15.000	718	701	685	670	655

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
15.250	640	626	612	598	585
15.500	572	560	548	536	524
15.750	513	502	492	481	471
16.000	461	451	442	433	424
16.250	415	407	398	390	383
16.500	375	368	361	354	347
16.750	341	335	329	323	317
17.000	311	306	300	295	290
17.250	285	280	275	270	266
17.500	261	257	253	249	245
17.750	241	237	233	229	225
18.000	222	218	215	211	208
18.250	205	202	199	196	193
18.500	190	188	185	183	180
18.750	178	176	173	171	169
19.000	167	165	163	161	160
19.250	158	156	154	153	151
19.500	150	148	147	145	144
19.750	142	141	140	138	137
20.000	136	135	134	132	131
20.250	130	129	128	127	126
20.500	125	124	123	122	121
20.750	120	120	119	118	117
21.000	116	115	115	114	113
21.250	112	112	111	110	110
21.500	109	108	107	107	106
21.750	106	105	104	104	103
22.000	102	102	101	101	100
22.250	99	99	98	98	97
22.500	97	96	96	95	94
22.750	94	93	93	92	92
23.000	91	91	90	90	89
23.250	89	88	88	87	87
23.500	86	86	85	85	84
23.750	84	83	83	82	82
24.000	81	80	78	75	73
24.250	70	67	64	62	60
24.500	57	55	53	51	49
24.750	47	45	43	42	40
25.000	38	37	36	34	33
25.250	32	30	29	28	27

Hydrologic Calculations

Subsection: Time vs. Volume
 Label: DET SYSTEM
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
25.500	26	25	24	23	22
25.750	21	20	20	19	18
26.000	17	17	16	15	15
26.250	14	14	13	13	12
26.500	12	11	11	10	10
26.750	10	9	9	9	8
27.000	8	8	7	7	7
27.250	6	6	6	6	6
27.500	5	5	5	5	5
27.750	4	4	4	4	4
28.000	4	3	3	3	3
28.250	3	3	3	3	2
28.500	2	2	2	2	2
28.750	2	2	2	2	2
29.000	2	2	1	1	1
29.250	1	1	1	1	1
29.500	1	1	1	1	1
29.750	1	1	1	1	1
30.000	1	1	1	1	1
30.250	1	1	1	1	1
30.500	0	0	0	0	0
30.750	0	0	0	0	0
31.000	0	0	0	0	0
31.250	0	0	0	0	0
31.500	0	0	0	0	0
31.750	0	0	0	0	0
32.000	0	0	0	0	0
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume
 Label: DET SYSTEM
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume
 Label: DET SYSTEM
 Scenario: Post-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	1	1	1
4.000	2	2	2	3	3
4.250	4	4	5	6	6
4.500	7	8	8	9	10
4.750	11	12	13	14	14
5.000	15	16	17	18	19
5.250	20	22	23	24	25
5.500	26	27	28	30	31
5.750	32	33	34	36	37
6.000	38	40	41	42	44
6.250	45	47	48	50	51
6.500	53	55	57	58	60

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
6.750	62	64	66	68	70
7.000	72	75	77	79	81
7.250	84	86	88	91	93
7.500	96	99	101	104	107
7.750	109	112	115	118	121
8.000	124	127	130	133	136
8.250	140	143	147	151	155
8.500	159	163	167	172	177
8.750	181	186	191	196	201
9.000	207	212	218	223	229
9.250	235	241	247	253	260
9.500	266	273	279	286	293
9.750	300	307	314	321	328
10.000	336	343	351	359	367
10.250	375	384	394	403	413
10.500	423	434	445	456	467
10.750	479	490	503	515	528
11.000	541	554	569	585	602
11.250	622	643	666	690	716
11.500	744	777	821	881	960
11.750	1,061	1,185	1,330	1,496	1,722
12.000	2,047	2,439	2,847	3,213	3,477
12.250	3,652	3,795	3,906	3,988	4,043
12.500	4,071	4,078	4,068	4,048	4,024
12.750	3,997	3,967	3,936	3,902	3,866
13.000	3,828	3,786	3,743	3,699	3,657
13.250	3,616	3,575	3,533	3,492	3,450
13.500	3,407	3,364	3,321	3,278	3,234
13.750	3,191	3,148	3,103	3,059	3,014
14.000	2,971	2,928	2,886	2,844	2,802
14.250	2,760	2,718	2,676	2,635	2,593
14.500	2,552	2,512	2,471	2,431	2,391
14.750	2,351	2,311	2,272	2,234	2,196
15.000	2,159	2,122	2,086	2,050	2,013
15.250	1,977	1,941	1,906	1,871	1,836
15.500	1,802	1,768	1,734	1,700	1,667
15.750	1,633	1,600	1,567	1,534	1,503
16.000	1,472	1,441	1,411	1,381	1,352
16.250	1,324	1,295	1,268	1,240	1,213
16.500	1,187	1,161	1,136	1,111	1,086
16.750	1,062	1,038	1,015	992	970

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
17.000	948	926	904	883	862
17.250	842	822	802	782	763
17.500	745	726	709	692	675
17.750	659	644	629	614	600
18.000	586	573	560	547	535
18.250	523	512	502	491	481
18.500	472	462	453	445	436
18.750	428	420	413	405	398
19.000	391	385	378	372	366
19.250	360	355	349	344	339
19.500	334	329	324	320	315
19.750	311	307	303	299	295
20.000	291	288	284	281	277
20.250	274	271	268	265	262
20.500	259	257	254	251	249
20.750	246	244	242	239	237
21.000	235	233	231	229	227
21.250	225	223	221	220	218
21.500	216	214	213	211	209
21.750	208	206	205	203	202
22.000	200	199	198	196	195
22.250	194	192	191	190	188
22.500	187	186	185	184	182
22.750	181	180	179	178	177
23.000	175	174	173	172	171
23.250	170	169	168	167	166
23.500	165	164	163	162	161
23.750	160	159	158	157	156
24.000	155	153	149	144	138
24.250	133	128	123	118	113
24.500	109	105	101	97	93
24.750	89	86	82	79	76
25.000	73	70	68	65	62
25.250	60	58	55	53	51
25.500	49	47	45	44	42
25.750	40	39	37	36	34
26.000	33	32	31	29	28
26.250	27	26	25	24	23
26.500	22	21	21	20	19
26.750	18	18	17	16	16
27.000	15	14	14	13	13

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
27.250	12	12	11	11	10
27.500	10	10	9	9	9
27.750	8	8	8	7	7
28.000	7	7	6	6	6
28.250	6	5	5	5	5
28.500	5	4	4	4	4
28.750	4	4	3	3	3
29.000	3	3	3	3	3
29.250	3	2	2	2	2
29.500	2	2	2	2	2
29.750	2	2	2	1	1
30.000	1	1	1	1	1
30.250	1	1	1	1	1
30.500	1	1	1	1	1
30.750	1	1	1	1	1
31.000	1	1	1	1	1
31.250	1	0	0	0	0
31.500	0	0	0	0	0
31.750	0	0	0	0	0
32.000	0	0	0	0	0
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	1	1
3.250	1	2	2	2	3
3.500	4	4	5	6	7
3.750	7	8	9	10	11
4.000	12	13	14	15	17
4.250	18	19	20	22	23
4.500	24	26	27	28	30
4.750	31	33	34	36	37
5.000	39	41	42	44	46
5.250	47	49	51	52	54
5.500	56	58	59	61	63
5.750	65	67	69	70	72
6.000	74	76	78	80	82
6.250	84	86	89	91	93
6.500	96	98	101	103	106
6.750	109	111	114	117	120
7.000	123	126	129	133	136
7.250	139	142	146	149	153
7.500	156	160	164	167	171
7.750	175	179	183	187	191
8.000	195	199	203	207	212
8.250	217	221	227	232	237
8.500	243	249	255	261	267
8.750	273	280	287	294	301
9.000	308	315	323	330	338
9.250	346	354	362	370	379
9.500	387	396	405	414	423
9.750	432	441	450	460	469

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
10.000	479	489	499	509	520
10.250	531	543	555	568	581
10.500	595	608	623	637	652
10.750	668	683	699	716	732
11.000	749	767	786	807	831
11.250	857	886	917	951	988
11.500	1,027	1,073	1,133	1,214	1,321
11.750	1,455	1,620	1,814	2,037	2,331
12.000	2,760	3,273	3,805	4,277	4,615
12.250	4,822	4,969	5,047	5,076	5,069
12.500	5,034	4,982	4,913	4,850	4,798
12.750	4,747	4,697	4,647	4,598	4,552
13.000	4,507	4,464	4,423	4,383	4,343
13.250	4,302	4,263	4,223	4,183	4,142
13.500	4,100	4,057	4,014	3,970	3,927
13.750	3,882	3,838	3,793	3,746	3,699
14.000	3,653	3,609	3,565	3,521	3,477
14.250	3,432	3,387	3,343	3,298	3,254
14.500	3,210	3,166	3,122	3,078	3,033
14.750	2,990	2,948	2,907	2,866	2,825
15.000	2,784	2,742	2,701	2,660	2,619
15.250	2,578	2,538	2,498	2,458	2,418
15.500	2,377	2,337	2,297	2,258	2,220
15.750	2,182	2,144	2,107	2,070	2,032
16.000	1,995	1,958	1,922	1,886	1,850
16.250	1,815	1,780	1,746	1,712	1,679
16.500	1,646	1,613	1,580	1,548	1,517
16.750	1,486	1,456	1,427	1,398	1,370
17.000	1,342	1,315	1,288	1,261	1,235
17.250	1,209	1,183	1,158	1,134	1,109
17.500	1,086	1,062	1,039	1,016	994
17.750	972	950	929	908	887
18.000	866	846	826	806	787
18.250	768	750	732	715	699
18.500	683	667	653	639	625
18.750	612	599	586	575	563
19.000	552	541	531	521	511
19.250	502	493	485	476	468
19.500	460	453	445	438	431
19.750	425	418	412	406	400
20.000	394	389	383	378	373

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
20.250	368	363	359	354	350
20.500	346	342	338	334	330
20.750	326	323	319	316	313
21.000	309	306	303	300	297
21.250	295	292	289	287	284
21.500	281	279	277	274	272
21.750	270	268	265	263	261
22.000	259	257	255	253	251
22.250	250	248	246	244	242
22.500	241	239	237	236	234
22.750	232	231	229	228	226
23.000	225	223	222	220	219
23.250	217	216	214	213	212
23.500	210	209	208	206	205
23.750	204	202	201	200	198
24.000	197	195	190	183	176
24.250	169	162	156	150	144
24.500	139	133	128	123	118
24.750	114	109	105	101	97
25.000	93	90	86	83	80
25.250	76	73	71	68	65
25.500	63	60	58	56	53
25.750	51	49	47	46	44
26.000	42	40	39	37	36
26.250	35	33	32	31	29
26.500	28	27	26	25	24
26.750	23	22	21	21	20
27.000	19	18	18	17	16
27.250	16	15	14	14	13
27.500	13	12	12	11	11
27.750	11	10	10	9	9
28.000	9	8	8	8	7
28.250	7	7	7	6	6
28.500	6	6	5	5	5
28.750	5	5	4	4	4
29.000	4	4	4	3	3
29.250	3	3	3	3	3
29.500	3	3	2	2	2
29.750	2	2	2	2	2
30.000	2	2	2	2	2
30.250	1	1	1	1	1

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
30.500	1	1	1	1	1
30.750	1	1	1	1	1
31.000	1	1	1	1	1
31.250	1	1	1	1	1
31.500	1	1	0	0	0
31.750	0	0	0	0	0
32.000	0	0	0	0	0
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	1	1	1	2
2.500	2	3	4	5	6
2.750	7	8	9	10	12
3.000	13	15	16	18	19
3.250	21	23	25	26	28
3.500	30	32	34	36	38
3.750	41	43	45	47	49
4.000	52	54	57	59	61
4.250	64	66	69	72	74
4.500	77	79	82	85	87
4.750	90	93	96	98	101
5.000	104	107	110	113	115
5.250	118	121	124	127	130
5.500	133	136	139	142	145
5.750	148	151	154	157	160
6.000	163	166	169	172	176
6.250	179	183	186	190	194
6.500	198	202	206	210	214
6.750	218	223	227	232	237
7.000	242	247	251	257	262
7.250	267	272	277	283	288
7.500	294	300	305	311	317
7.750	323	329	335	341	347
8.000	353	359	366	372	379
8.250	387	394	402	410	418
8.500	427	436	445	454	464
8.750	474	484	494	504	515
9.000	526	537	548	560	572
9.250	584	596	609	621	634
9.500	647	660	673	686	700
9.750	714	727	741	755	770
10.000	784	799	814	831	848
10.250	866	885	904	925	946
10.500	968	990	1,014	1,038	1,063
10.750	1,089	1,115	1,143	1,170	1,199
11.000	1,228	1,259	1,291	1,327	1,365
11.250	1,407	1,454	1,503	1,557	1,616
11.500	1,679	1,752	1,846	1,970	2,133

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
11.750	2,339	2,591	2,882	3,219	3,657
12.000	4,288	5,022	5,616	5,968	6,034
12.250	5,955	5,850	5,744	5,640	5,536
12.500	5,428	5,320	5,233	5,144	5,065
12.750	4,998	4,934	4,877	4,835	4,794
13.000	4,752	4,710	4,667	4,626	4,587
13.250	4,552	4,519	4,488	4,460	4,433
13.500	4,407	4,380	4,352	4,323	4,294
13.750	4,265	4,235	4,204	4,172	4,140
14.000	4,105	4,070	4,033	3,997	3,960
14.250	3,924	3,887	3,850	3,813	3,774
14.500	3,736	3,697	3,659	3,623	3,587
14.750	3,551	3,514	3,478	3,440	3,402
15.000	3,364	3,326	3,288	3,250	3,212
15.250	3,174	3,135	3,096	3,056	3,017
15.500	2,978	2,941	2,903	2,866	2,828
15.750	2,790	2,752	2,713	2,675	2,636
16.000	2,597	2,559	2,520	2,482	2,444
16.250	2,406	2,368	2,330	2,293	2,257
16.500	2,221	2,186	2,152	2,118	2,084
16.750	2,050	2,017	1,983	1,950	1,918
17.000	1,885	1,853	1,822	1,790	1,759
17.250	1,729	1,698	1,668	1,638	1,608
17.500	1,578	1,549	1,520	1,492	1,464
17.750	1,437	1,410	1,384	1,358	1,332
18.000	1,307	1,281	1,256	1,232	1,208
18.250	1,185	1,161	1,139	1,117	1,095
18.500	1,074	1,053	1,033	1,013	993
18.750	974	955	937	919	901
19.000	883	866	849	832	816
19.250	800	784	769	754	739
19.500	725	712	699	686	674
19.750	662	650	639	628	618
20.000	608	598	588	579	570
20.250	562	553	545	537	530
20.500	523	516	509	502	496
20.750	490	484	478	472	466
21.000	461	456	451	446	441
21.250	436	432	427	423	419
21.500	415	411	407	403	399
21.750	396	392	389	385	382

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
22.000	379	375	372	369	366
22.250	363	360	357	355	352
22.500	349	346	344	341	339
22.750	336	334	331	329	327
23.000	324	322	320	318	315
23.250	313	311	309	307	305
23.500	303	301	299	297	295
23.750	293	291	289	287	285
24.000	283	279	272	262	252
24.250	243	233	224	215	207
24.500	199	191	184	177	170
24.750	163	157	151	145	139
25.000	134	129	124	119	114
25.250	110	105	101	97	94
25.500	90	86	83	80	77
25.750	74	71	68	65	63
26.000	60	58	56	54	52
26.250	50	48	46	44	42
26.500	41	39	38	36	35
26.750	33	32	31	30	28
27.000	27	26	25	24	23
27.250	22	22	21	20	19
27.500	18	18	17	16	16
27.750	15	14	14	13	13
28.000	12	12	11	11	11
28.250	10	10	9	9	9
28.500	8	8	8	7	7
28.750	7	7	6	6	6
29.000	6	5	5	5	5
29.250	5	4	4	4	4
29.500	4	4	3	3	3
29.750	3	3	3	3	3
30.000	3	2	2	2	2
30.250	2	2	2	2	2
30.500	2	2	2	2	1
30.750	1	1	1	1	1
31.000	1	1	1	1	1
31.250	1	1	1	1	1
31.500	1	1	1	1	1
31.750	1	1	1	1	1
32.000	1	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: DET SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	1
10.500	2	4	6	7	8
10.750	10	12	14	17	20
11.000	23	25	25	26	26
11.250	27	27	28	28	29
11.500	30	31	32	35	40
11.750	44	47	51	55	63
12.000	79	99	113	117	105
12.250	88	79	73	68	63
12.500	58	53	50	47	46
12.750	45	45	44	44	43
13.000	43	42	42	42	41
13.250	41	41	41	40	40

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
13.500	40	39	39	39	38
13.750	38	38	37	37	37
14.000	36	36	36	36	35
14.250	35	35	35	35	35
14.500	35	34	34	34	34
14.750	34	34	33	33	33
15.000	33	33	33	33	32
15.250	32	32	32	32	32
15.500	31	31	31	31	31
15.750	31	30	30	30	30
16.000	30	30	30	29	29
16.250	29	29	29	29	29
16.500	29	29	29	29	29
16.750	29	29	28	28	28
17.000	28	28	28	28	28
17.250	28	28	28	28	28
17.500	28	27	27	27	27
17.750	27	27	27	27	27
18.000	27	27	27	27	27
18.250	27	27	27	27	27
18.500	27	27	27	27	26
18.750	26	26	26	26	26
19.000	26	26	26	26	26
19.250	26	26	26	26	26
19.500	26	26	26	26	26
19.750	26	26	26	26	26
20.000	26	26	26	26	26
20.250	26	26	26	26	26
20.500	26	26	26	26	26
20.750	26	26	26	26	26
21.000	26	26	26	26	26
21.250	26	26	26	26	26
21.500	26	26	26	26	25
21.750	25	25	25	25	25
22.000	25	25	25	25	25
22.250	25	25	25	25	25
22.500	25	25	25	25	25
22.750	25	25	25	25	25
23.000	25	25	25	25	25
23.250	25	25	25	25	25
23.500	25	25	25	25	25

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
23.750	25	25	25	25	25
24.000	25	25	24	23	23
24.250	23	23	23	23	23
24.500	23	23	23	23	23
24.750	23	23	23	23	23
25.000	23	23	23	23	23
25.250	23	23	23	23	23
25.500	23	23	23	23	23
25.750	23	23	23	23	23
26.000	23	23	23	23	23
26.250	23	23	23	23	23
26.500	23	23	23	23	23
26.750	23	23	23	23	23
27.000	23	23	23	23	23
27.250	23	23	23	23	23
27.500	23	23	23	23	23
27.750	23	23	23	23	23
28.000	23	23	23	23	23
28.250	23	23	23	23	23
28.500	23	23	23	23	23
28.750	23	23	23	23	23
29.000	23	23	23	23	23
29.250	23	23	23	23	23
29.500	23	23	23	23	23
29.750	23	23	23	23	23
30.000	23	23	23	23	23
30.250	23	23	23	23	23
30.500	23	23	23	23	23
30.750	23	23	23	23	23
31.000	23	23	23	23	23
31.250	23	23	23	23	23
31.500	23	23	23	23	23
31.750	23	23	23	23	23
32.000	23	23	23	23	23
32.250	23	23	23	23	23
32.500	23	23	23	23	23
32.750	23	23	23	23	23
33.000	23	23	23	23	23
33.250	23	23	23	23	23
33.500	23	23	23	23	23
33.750	23	23	23	23	23

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
34.000	23	23	23	23	23
34.250	23	23	23	23	23
34.500	23	23	23	23	23
34.750	23	23	23	23	23
35.000	23	23	23	23	23
35.250	23	23	23	23	23
35.500	23	23	23	23	23
35.750	23	23	23	23	23
36.000	23	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	1	1
8.250	3	5	6	7	8
8.500	10	11	13	15	18
8.750	21	23	24	25	25
9.000	25	26	26	26	26
9.250	26	27	27	27	27
9.500	28	28	28	28	29
9.750	29	29	30	30	30
10.000	31	31	31	32	32
10.250	33	33	34	34	35
10.500	36	36	37	37	38
10.750	39	40	40	41	42
11.000	42	43	43	44	44
11.250	45	46	47	48	49
11.500	50	52	56	61	70
11.750	80	92	106	122	150
12.000	157	159	161	161	158
12.250	153	151	150	141	124
12.500	104	88	77	70	66
12.750	64	63	61	60	58
13.000	57	56	55	54	53
13.250	53	53	52	52	52
13.500	51	51	51	50	50
13.750	50	49	49	49	48
14.000	48	48	47	47	47
14.250	47	47	46	46	46
14.500	46	46	46	46	45
14.750	45	45	45	45	45
15.000	44	44	44	44	44

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
15.250	44	43	43	43	43
15.500	43	43	42	42	42
15.750	42	42	42	41	41
16.000	41	40	40	40	39
16.250	39	39	39	39	38
16.500	38	38	38	38	38
16.750	37	37	37	37	37
17.000	36	36	36	36	36
17.250	36	35	35	35	35
17.500	35	35	34	34	34
17.750	34	34	34	33	33
18.000	33	33	33	33	33
18.250	32	32	32	32	32
18.500	32	32	32	32	32
18.750	32	32	32	32	32
19.000	32	32	32	32	31
19.250	31	31	31	31	31
19.500	31	31	31	31	31
19.750	31	31	31	31	31
20.000	31	31	31	31	31
20.250	30	30	30	30	30
20.500	30	30	30	30	30
20.750	30	30	30	30	30
21.000	30	30	30	30	30
21.250	30	30	30	30	30
21.500	30	30	29	29	29
21.750	29	29	29	29	29
22.000	29	29	29	29	29
22.250	29	29	29	29	29
22.500	29	29	29	29	29
22.750	29	29	29	29	29
23.000	28	28	28	28	28
23.250	28	28	28	28	28
23.500	28	28	28	28	28
23.750	28	28	28	28	28
24.000	28	27	26	24	23
24.250	23	23	23	23	23
24.500	23	23	23	23	23
24.750	23	23	23	23	23
25.000	23	23	23	23	23
25.250	23	23	23	23	23

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
25.500	23	23	23	23	23
25.750	23	23	23	23	23
26.000	23	23	23	23	23
26.250	23	23	23	23	23
26.500	23	23	23	23	23
26.750	23	23	23	23	23
27.000	23	23	23	23	23
27.250	23	23	23	23	23
27.500	23	23	23	23	23
27.750	23	23	23	23	23
28.000	23	23	23	23	23
28.250	23	23	23	23	23
28.500	23	23	23	23	23
28.750	23	23	23	23	23
29.000	23	23	23	23	23
29.250	23	23	23	23	23
29.500	23	23	23	23	23
29.750	23	23	23	23	23
30.000	23	23	23	23	23
30.250	23	23	23	23	23
30.500	23	23	23	23	23
30.750	23	23	23	23	23
31.000	23	23	23	23	23
31.250	23	23	23	23	23
31.500	23	23	23	23	23
31.750	23	23	23	23	23
32.000	23	23	23	23	23
32.250	23	23	23	23	23
32.500	23	23	23	23	23
32.750	23	23	23	23	23
33.000	23	23	23	23	23
33.250	23	23	23	23	23
33.500	23	23	23	23	23
33.750	23	23	23	23	23
34.000	23	23	23	23	23
34.250	23	23	23	23	23
34.500	23	23	23	23	23
34.750	23	23	23	23	23
35.000	23	23	23	23	23
35.250	23	23	23	23	23
35.500	23	23	23	23	23

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
35.750	23	23	23	23	23
36.000	23	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
6.750	0	0	0	0	0
7.000	0	0	0	0	1
7.250	2	4	6	7	8
7.500	9	10	12	14	16
7.750	18	21	23	24	25
8.000	25	25	25	25	26
8.250	26	26	26	26	27
8.500	27	27	27	28	28
8.750	28	28	29	29	29
9.000	30	30	30	31	31
9.250	31	32	32	33	33
9.500	33	34	34	35	35
9.750	36	36	37	37	38
10.000	38	39	39	40	41
10.250	42	42	42	43	43
10.500	44	44	44	45	45
10.750	46	46	46	47	47
11.000	48	48	49	50	51
11.250	52	54	55	57	58
11.500	60	63	69	78	91
11.750	109	128	150	153	156
12.000	161	167	170	170	165
12.250	159	156	153	151	149
12.500	139	117	96	85	79
12.750	76	74	72	70	68
13.000	66	64	63	62	61
13.250	60	60	59	59	58
13.500	58	57	57	57	56
13.750	56	55	55	54	54
14.000	53	53	52	52	52
14.250	52	51	51	51	51
14.500	50	50	50	50	50
14.750	49	49	49	49	48
15.000	48	48	48	48	47
15.250	47	47	47	46	46
15.500	46	46	46	45	45
15.750	45	45	44	44	44
16.000	44	44	43	43	43
16.250	43	43	43	43	43
16.500	43	42	42	42	42
16.750	42	42	42	42	42

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
17.000	41	41	41	41	41
17.250	40	40	40	40	39
17.500	39	39	39	38	38
17.750	38	38	37	37	37
18.000	37	37	36	36	36
18.250	36	36	36	36	36
18.500	36	36	36	35	35
18.750	35	35	35	35	35
19.000	35	35	35	35	35
19.250	35	35	34	34	34
19.500	34	34	34	34	34
19.750	34	34	34	34	34
20.000	34	34	33	33	33
20.250	33	33	33	33	33
20.500	33	33	33	33	33
20.750	33	33	33	33	33
21.000	33	33	32	32	32
21.250	32	32	32	32	32
21.500	32	32	32	32	32
21.750	32	32	32	32	32
22.000	32	31	31	31	31
22.250	31	31	31	31	31
22.500	31	31	31	31	31
22.750	31	31	31	31	31
23.000	31	30	30	30	30
23.250	30	30	30	30	30
23.500	30	30	30	30	30
23.750	30	30	30	30	30
24.000	30	29	27	25	24
24.250	23	23	23	23	23
24.500	23	23	23	23	23
24.750	23	23	23	23	23
25.000	23	23	23	23	23
25.250	23	23	23	23	23
25.500	23	23	23	23	23
25.750	23	23	23	23	23
26.000	23	23	23	23	23
26.250	23	23	23	23	23
26.500	23	23	23	23	23
26.750	23	23	23	23	23
27.000	23	23	23	23	23

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
27.250	23	23	23	23	23
27.500	23	23	23	23	23
27.750	23	23	23	23	23
28.000	23	23	23	23	23
28.250	23	23	23	23	23
28.500	23	23	23	23	23
28.750	23	23	23	23	23
29.000	23	23	23	23	23
29.250	23	23	23	23	23
29.500	23	23	23	23	23
29.750	23	23	23	23	23
30.000	23	23	23	23	23
30.250	23	23	23	23	23
30.500	23	23	23	23	23
30.750	23	23	23	23	23
31.000	23	23	23	23	23
31.250	23	23	23	23	23
31.500	23	23	23	23	23
31.750	23	23	23	23	23
32.000	23	23	23	23	23
32.250	23	23	23	23	23
32.500	23	23	23	23	23
32.750	23	23	23	23	23
33.000	23	23	23	23	23
33.250	23	23	23	23	23
33.500	23	23	23	23	23
33.750	23	23	23	23	23
34.000	23	23	23	23	23
34.250	23	23	23	23	23
34.500	23	23	23	23	23
34.750	23	23	23	23	23
35.000	23	23	23	23	23
35.250	23	23	23	23	23
35.500	23	23	23	23	23
35.750	23	23	23	23	23
36.000	23	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	1	1
5.750	3	5	6	7	8
6.000	9	11	12	14	16
6.250	18	21	23	24	25
6.500	25	25	25	25	26
6.750	26	26	26	26	26
7.000	27	27	27	27	27
7.250	28	28	28	28	28
7.500	29	29	29	29	30
7.750	30	30	30	31	31
8.000	31	32	32	32	33
8.250	33	34	34	35	35
8.500	36	36	37	37	38
8.750	39	39	40	40	41
9.000	42	42	42	43	43
9.250	43	43	44	44	44
9.500	45	45	45	46	46
9.750	46	47	47	47	48

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
10.000	48	48	49	49	50
10.250	51	51	52	52	53
10.500	54	54	55	56	57
10.750	57	58	59	60	60
11.000	61	62	63	65	67
11.250	70	72	75	78	81
11.500	84	90	101	119	147
11.750	154	155	157	160	165
12.000	175	184	189	188	179
12.250	170	165	162	159	156
12.500	151	150	138	124	112
12.750	104	100	96	93	89
13.000	86	83	80	78	77
13.250	76	75	75	74	73
13.500	72	71	71	70	69
13.750	68	67	67	66	65
14.000	64	64	63	62	62
14.250	62	61	61	60	60
14.500	60	59	59	59	58
14.750	58	58	57	57	56
15.000	56	56	55	55	55
15.250	54	54	54	53	53
15.500	53	52	52	52	51
15.750	51	50	50	50	49
16.000	49	49	49	48	48
16.250	48	48	48	47	47
16.500	47	47	47	47	47
16.750	46	46	46	46	46
17.000	46	46	45	45	45
17.250	45	45	45	45	44
17.500	44	44	44	44	44
17.750	44	43	43	43	43
18.000	43	43	43	42	42
18.250	42	42	42	42	42
18.500	42	42	42	42	42
18.750	42	42	42	42	42
19.000	42	42	42	41	41
19.250	41	41	41	41	41
19.500	41	41	41	40	40
19.750	40	40	40	40	40
20.000	40	40	39	39	39

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
20.250	39	39	39	39	39
20.500	39	39	39	39	38
20.750	38	38	38	38	38
21.000	38	38	38	38	38
21.250	38	38	37	37	37
21.500	37	37	37	37	37
21.750	37	37	37	37	37
22.000	36	36	36	36	36
22.250	36	36	36	36	36
22.500	36	36	35	35	35
22.750	35	35	35	35	35
23.000	35	35	35	35	35
23.250	34	34	34	34	34
23.500	34	34	34	34	34
23.750	34	34	34	33	33
24.000	33	32	29	26	24
24.250	23	23	23	23	23
24.500	23	23	23	23	23
24.750	23	23	23	23	23
25.000	23	23	23	23	23
25.250	23	23	23	23	23
25.500	23	23	23	23	23
25.750	23	23	23	23	23
26.000	23	23	23	23	23
26.250	23	23	23	23	23
26.500	23	23	23	23	23
26.750	23	23	23	23	23
27.000	23	23	23	23	23
27.250	23	23	23	23	23
27.500	23	23	23	23	23
27.750	23	23	23	23	23
28.000	23	23	23	23	23
28.250	23	23	23	23	23
28.500	23	23	23	23	23
28.750	23	23	23	23	23
29.000	23	23	23	23	23
29.250	23	23	23	23	23
29.500	23	23	23	23	23
29.750	23	23	23	23	23
30.000	23	23	23	23	23
30.250	23	23	23	23	23

Hydrologic Calculations

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
30.500	23	23	23	23	23
30.750	23	23	23	23	23
31.000	23	23	23	23	23
31.250	23	23	23	23	23
31.500	23	23	23	23	23
31.750	23	23	23	23	23
32.000	23	23	23	23	23
32.250	23	23	23	23	23
32.500	23	23	23	23	23
32.750	23	23	23	23	23
33.000	23	23	23	23	23
33.250	23	23	23	23	23
33.500	23	23	23	23	23
33.750	23	23	23	23	23
34.000	23	23	23	23	23
34.250	23	23	23	23	23
34.500	23	23	23	23	23
34.750	23	23	23	23	23
35.000	23	23	23	23	23
35.250	23	23	23	23	23
35.500	23	23	23	23	23
35.750	23	23	23	23	23
36.000	23	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0
10.500	0	0	0	0	0
10.750	0	0	0	0	0
11.000	0	0	0	0	0
11.250	0	0	0	10	12
11.500	16	21	31	48	74

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
11.750	109	154	210	276	367
12.000	501	666	841	1,002	1,123
12.250	1,212	1,286	1,348	1,399	1,440
12.500	1,470	1,491	1,505	1,515	1,524
12.750	1,531	1,537	1,541	1,545	1,548
13.000	1,549	1,549	1,549	1,548	1,547
13.250	1,545	1,543	1,541	1,539	1,536
13.500	1,533	1,530	1,526	1,522	1,518
13.750	1,514	1,509	1,504	1,499	1,493
14.000	1,487	1,481	1,474	1,468	1,461
14.250	1,454	1,447	1,440	1,432	1,425
14.500	1,417	1,409	1,401	1,393	1,385
14.750	1,377	1,368	1,360	1,351	1,342
15.000	1,333	1,324	1,314	1,305	1,295
15.250	1,286	1,276	1,266	1,255	1,245
15.500	1,235	1,224	1,213	1,202	1,191
15.750	1,180	1,169	1,157	1,146	1,134
16.000	1,122	1,110	1,098	1,086	1,073
16.250	1,061	1,048	1,036	1,023	1,011
16.500	998	985	972	960	947
16.750	934	921	907	894	881
17.000	868	854	841	827	814
17.250	800	787	773	759	745
17.500	731	717	703	689	675
17.750	661	646	632	618	603
18.000	588	574	559	544	530
18.250	515	500	485	471	456
18.500	441	426	411	396	382
18.750	367	352	337	322	307
19.000	292	277	262	247	231
19.250	216	201	186	171	156
19.500	141	125	110	95	80
19.750	64	49	34	18	0
20.000	0	0	0	0	0
20.250	0	0	0	0	0
20.500	0	0	0	0	0
20.750	0	0	0	0	0
21.000	0	0	0	0	0
21.250	0	0	0	0	0
21.500	0	0	0	0	0
21.750	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
22.000	0	0	0	0	0
22.250	0	0	0	0	0
22.500	0	0	0	0	0
22.750	0	0	0	0	0
23.000	0	0	0	0	0
23.250	0	0	0	0	0
23.500	0	0	0	0	0
23.750	0	0	0	0	0
24.000	0	0	0	0	0
24.250	0	0	0	0	0
24.500	0	0	0	0	0
24.750	0	0	0	0	0
25.000	0	0	0	0	0
25.250	0	0	0	0	0
25.500	0	0	0	0	0
25.750	0	0	0	0	0
26.000	0	0	0	0	0
26.250	0	0	0	0	0
26.500	0	0	0	0	0
26.750	0	0	0	0	0
27.000	0	0	0	0	0
27.250	0	0	0	0	0
27.500	0	0	0	0	0
27.750	0	0	0	0	0
28.000	0	0	0	0	0
28.250	0	0	0	0	0
28.500	0	0	0	0	0
28.750	0	0	0	0	0
29.000	0	0	0	0	0
29.250	0	0	0	0	0
29.500	0	0	0	0	0
29.750	0	0	0	0	0
30.000	0	0	0	0	0
30.250	0	0	0	0	0
30.500	0	0	0	0	0
30.750	0	0	0	0	0
31.000	0	0	0	0	0
31.250	0	0	0	0	0
31.500	0	0	0	0	0
31.750	0	0	0	0	0
32.000	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	9	10	11
10.250	12	14	17	20	24
10.500	28	33	39	45	51
10.750	58	66	74	83	93
11.000	103	114	126	140	155
11.250	173	192	214	238	264
11.500	292	325	367	423	497
11.750	591	704	837	990	1,192
12.000	1,477	1,820	2,179	2,508	2,750
12.250	2,776	2,753	2,765	2,753	2,759
12.500	2,752	2,754	2,751	2,752	2,750
12.750	2,751	2,750	2,750	2,750	2,750
13.000	2,750	2,750	2,749	2,749	2,749
13.250	2,749	2,749	2,749	2,749	2,749

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
13.500	2,749	2,749	2,749	2,749	2,749
13.750	2,749	2,749	2,749	2,749	2,748
14.000	2,748	2,748	2,748	2,748	2,748
14.250	2,748	2,748	2,748	2,748	2,748
14.500	2,748	2,748	2,748	2,748	2,748
14.750	2,748	2,748	2,748	2,748	2,747
15.000	2,747	2,746	2,745	2,743	2,741
15.250	2,739	2,737	2,735	2,732	2,729
15.500	2,725	2,722	2,718	2,714	2,709
15.750	2,704	2,700	2,694	2,689	2,683
16.000	2,677	2,671	2,664	2,658	2,651
16.250	2,644	2,637	2,630	2,622	2,615
16.500	2,608	2,600	2,592	2,584	2,577
16.750	2,568	2,560	2,552	2,544	2,535
17.000	2,526	2,518	2,509	2,500	2,491
17.250	2,481	2,472	2,463	2,453	2,443
17.500	2,433	2,423	2,413	2,403	2,393
17.750	2,383	2,372	2,361	2,351	2,340
18.000	2,329	2,318	2,306	2,295	2,284
18.250	2,273	2,261	2,250	2,238	2,227
18.500	2,215	2,204	2,192	2,181	2,169
18.750	2,157	2,146	2,134	2,122	2,110
19.000	2,099	2,087	2,075	2,063	2,051
19.250	2,039	2,027	2,015	2,003	1,990
19.500	1,978	1,966	1,954	1,941	1,929
19.750	1,917	1,904	1,892	1,879	1,867
20.000	1,854	1,842	1,829	1,816	1,804
20.250	1,791	1,778	1,766	1,753	1,740
20.500	1,727	1,714	1,702	1,689	1,676
20.750	1,663	1,650	1,637	1,624	1,611
21.000	1,598	1,584	1,571	1,558	1,545
21.250	1,532	1,518	1,505	1,492	1,479
21.500	1,465	1,452	1,438	1,425	1,412
21.750	1,398	1,385	1,371	1,357	1,344
22.000	1,330	1,317	1,303	1,289	1,276
22.250	1,262	1,248	1,234	1,220	1,207
22.500	1,193	1,179	1,165	1,151	1,137
22.750	1,123	1,109	1,095	1,081	1,067
23.000	1,052	1,038	1,024	1,010	996
23.250	981	967	953	938	924
23.500	910	895	881	866	852

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
23.750	837	823	808	793	779
24.000	764	749	731	713	694
24.250	676	657	638	620	601
24.500	582	563	545	526	507
24.750	488	470	451	432	414
25.000	395	376	357	339	320
25.250	301	283	264	245	226
25.500	208	189	170	152	133
25.750	114	95	77	58	39
26.000	20	0	0	0	0
26.250	0	0	0	0	0
26.500	0	0	0	0	0
26.750	0	0	0	0	0
27.000	0	0	0	0	0
27.250	0	0	0	0	0
27.500	0	0	0	0	0
27.750	0	0	0	0	0
28.000	0	0	0	0	0
28.250	0	0	0	0	0
28.500	0	0	0	0	0
28.750	0	0	0	0	0
29.000	0	0	0	0	0
29.250	0	0	0	0	0
29.500	0	0	0	0	0
29.750	0	0	0	0	0
30.000	0	0	0	0	0
30.250	0	0	0	0	0
30.500	0	0	0	0	0
30.750	0	0	0	0	0
31.000	0	0	0	0	0
31.250	0	0	0	0	0
31.500	0	0	0	0	0
31.750	0	0	0	0	0
32.000	0	0	0	0	0
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	9	10	10	12	13
9.500	15	17	19	22	26
9.750	29	33	38	42	47
10.000	53	59	65	72	80
10.250	88	97	107	117	129
10.500	140	153	166	180	195
10.750	211	227	244	262	280
11.000	299	320	341	365	391
11.250	420	452	486	522	562
11.500	604	653	714	792	893
11.750	1,020	1,171	1,349	1,552	1,816
12.000	2,186	2,630	2,801	2,776	2,778
12.250	2,764	2,768	2,761	2,762	2,757
12.500	2,756	2,754	2,753	2,752	2,752
12.750	2,752	2,752	2,751	2,751	2,751
13.000	2,751	2,750	2,750	2,750	2,750
13.250	2,750	2,750	2,750	2,750	2,750
13.500	2,750	2,750	2,750	2,749	2,749
13.750	2,749	2,749	2,749	2,749	2,749
14.000	2,749	2,749	2,749	2,749	2,749
14.250	2,749	2,749	2,749	2,749	2,749
14.500	2,749	2,749	2,749	2,749	2,749
14.750	2,749	2,748	2,748	2,748	2,748
15.000	2,748	2,748	2,748	2,748	2,748

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
15.250	2,748	2,748	2,748	2,748	2,748
15.500	2,748	2,748	2,748	2,748	2,747
15.750	2,746	2,745	2,743	2,741	2,739
16.000	2,736	2,733	2,730	2,726	2,722
16.250	2,719	2,715	2,711	2,706	2,702
16.500	2,698	2,693	2,688	2,683	2,678
16.750	2,673	2,667	2,662	2,656	2,650
17.000	2,644	2,638	2,632	2,625	2,619
17.250	2,612	2,605	2,598	2,591	2,583
17.500	2,576	2,568	2,561	2,553	2,545
17.750	2,536	2,528	2,519	2,511	2,502
18.000	2,493	2,484	2,475	2,465	2,456
18.250	2,447	2,437	2,428	2,418	2,409
18.500	2,399	2,389	2,380	2,370	2,360
18.750	2,350	2,341	2,331	2,321	2,311
19.000	2,301	2,291	2,280	2,270	2,260
19.250	2,250	2,240	2,229	2,219	2,208
19.500	2,198	2,187	2,177	2,166	2,155
19.750	2,145	2,134	2,123	2,112	2,102
20.000	2,091	2,080	2,069	2,058	2,046
20.250	2,035	2,024	2,013	2,002	1,991
20.500	1,979	1,968	1,957	1,945	1,934
20.750	1,922	1,911	1,899	1,888	1,876
21.000	1,865	1,853	1,841	1,830	1,818
21.250	1,806	1,794	1,782	1,771	1,759
21.500	1,747	1,735	1,723	1,711	1,699
21.750	1,686	1,674	1,662	1,650	1,638
22.000	1,625	1,613	1,601	1,588	1,576
22.250	1,564	1,551	1,539	1,526	1,513
22.500	1,501	1,488	1,475	1,463	1,450
22.750	1,437	1,424	1,412	1,399	1,386
23.000	1,373	1,360	1,347	1,334	1,321
23.250	1,308	1,294	1,281	1,268	1,255
23.500	1,242	1,228	1,215	1,202	1,188
23.750	1,175	1,161	1,148	1,134	1,121
24.000	1,107	1,092	1,076	1,057	1,039
24.250	1,020	1,001	983	964	945
24.500	926	908	889	870	852
24.750	833	814	795	777	758
25.000	739	721	702	683	664
25.250	646	627	608	590	571

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
25.500	552	533	515	496	477
25.750	458	440	421	402	384
26.000	365	346	327	309	290
26.250	271	253	234	215	196
26.500	178	159	140	122	103
26.750	84	65	47	28	0
27.000	0	0	0	0	0
27.250	0	0	0	0	0
27.500	0	0	0	0	0
27.750	0	0	0	0	0
28.000	0	0	0	0	0
28.250	0	0	0	0	0
28.500	0	0	0	0	0
28.750	0	0	0	0	0
29.000	0	0	0	0	0
29.250	0	0	0	0	0
29.500	0	0	0	0	0
29.750	0	0	0	0	0
30.000	0	0	0	0	0
30.250	0	0	0	0	0
30.500	0	0	0	0	0
30.750	0	0	0	0	0
31.000	0	0	0	0	0
31.250	0	0	0	0	0
31.500	0	0	0	0	0
31.750	0	0	0	0	0
32.000	0	0	0	0	0
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	9
8.250	10	11	13	15	17
8.500	20	23	27	32	37
8.750	42	48	54	61	68
9.000	76	84	93	103	112
9.250	123	134	145	157	169
9.500	182	195	209	224	238
9.750	254	270	286	303	321
10.000	339	357	377	397	418
10.250	440	463	487	512	539
10.500	566	594	623	654	685
10.750	717	751	785	820	857
11.000	894	934	975	1,019	1,067
11.250	1,118	1,173	1,232	1,295	1,362
11.500	1,432	1,513	1,611	1,734	1,891
11.750	2,083	2,312	2,578	2,768	2,793
12.000	2,799	2,811	2,807	2,801	2,783
12.250	2,778	2,773	2,770	2,766	2,763
12.500	2,760	2,758	2,756	2,755	2,754
12.750	2,754	2,754	2,753	2,753	2,753
13.000	2,752	2,752	2,752	2,752	2,752
13.250	2,752	2,751	2,751	2,751	2,751
13.500	2,751	2,751	2,751	2,751	2,751
13.750	2,751	2,751	2,750	2,750	2,750
14.000	2,750	2,750	2,750	2,750	2,750
14.250	2,750	2,750	2,750	2,750	2,750
14.500	2,750	2,750	2,750	2,750	2,749
14.750	2,749	2,749	2,749	2,749	2,749
15.000	2,749	2,749	2,749	2,749	2,749
15.250	2,749	2,749	2,749	2,749	2,749
15.500	2,749	2,749	2,749	2,749	2,749
15.750	2,749	2,749	2,748	2,748	2,748
16.000	2,748	2,748	2,748	2,748	2,748
16.250	2,748	2,748	2,748	2,748	2,748
16.500	2,748	2,748	2,748	2,748	2,748
16.750	2,748	2,748	2,748	2,748	2,747

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
17.000	2,747	2,746	2,745	2,743	2,742
17.250	2,740	2,738	2,736	2,734	2,731
17.500	2,729	2,726	2,722	2,719	2,716
17.750	2,712	2,708	2,703	2,699	2,694
18.000	2,690	2,684	2,679	2,674	2,669
18.250	2,663	2,658	2,652	2,646	2,641
18.500	2,635	2,629	2,623	2,617	2,611
18.750	2,605	2,599	2,593	2,587	2,580
19.000	2,574	2,568	2,561	2,554	2,548
19.250	2,541	2,534	2,528	2,521	2,514
19.500	2,507	2,500	2,492	2,485	2,478
19.750	2,471	2,463	2,456	2,448	2,441
20.000	2,433	2,425	2,418	2,410	2,402
20.250	2,394	2,386	2,378	2,370	2,362
20.500	2,354	2,346	2,337	2,329	2,321
20.750	2,312	2,304	2,295	2,287	2,278
21.000	2,270	2,261	2,252	2,244	2,235
21.250	2,226	2,217	2,208	2,199	2,190
21.500	2,181	2,172	2,162	2,153	2,144
21.750	2,135	2,125	2,116	2,106	2,097
22.000	2,087	2,078	2,068	2,058	2,049
22.250	2,039	2,029	2,019	2,009	1,999
22.500	1,989	1,979	1,969	1,959	1,948
22.750	1,938	1,928	1,917	1,907	1,896
23.000	1,886	1,875	1,865	1,854	1,843
23.250	1,833	1,822	1,811	1,800	1,789
23.500	1,778	1,767	1,756	1,745	1,734
23.750	1,722	1,711	1,700	1,688	1,677
24.000	1,666	1,653	1,637	1,619	1,600
24.250	1,582	1,563	1,544	1,525	1,507
24.500	1,488	1,469	1,450	1,432	1,413
24.750	1,394	1,376	1,357	1,338	1,319
25.000	1,301	1,282	1,263	1,245	1,226
25.250	1,207	1,188	1,170	1,151	1,132
25.500	1,114	1,095	1,076	1,057	1,039
25.750	1,020	1,001	982	964	945
26.000	926	908	889	870	851
26.250	833	814	795	777	758
26.500	739	720	702	683	664
26.750	646	627	608	589	571
27.000	552	533	514	496	477

Hydrologic Calculations

Subsection: Time vs. Volume

Label: SP

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Time vs. Volume (ft³)

Output Time increment = 0.050 hours

Time on left represents time for first value in each row.

Time (hours)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
27.250	458	440	421	402	383
27.500	365	346	327	309	290
27.750	271	252	234	215	196
28.000	178	159	140	121	103
28.250	84	65	46	28	0
28.500	0	0	0	0	0
28.750	0	0	0	0	0
29.000	0	0	0	0	0
29.250	0	0	0	0	0
29.500	0	0	0	0	0
29.750	0	0	0	0	0
30.000	0	0	0	0	0
30.250	0	0	0	0	0
30.500	0	0	0	0	0
30.750	0	0	0	0	0
31.000	0	0	0	0	0
31.250	0	0	0	0	0
31.500	0	0	0	0	0
31.750	0	0	0	0	0
32.000	0	0	0	0	0
32.250	0	0	0	0	0
32.500	0	0	0	0	0
32.750	0	0	0	0	0
33.000	0	0	0	0	0
33.250	0	0	0	0	0
33.500	0	0	0	0	0
33.750	0	0	0	0	0
34.000	0	0	0	0	0
34.250	0	0	0	0	0
34.500	0	0	0	0	0
34.750	0	0	0	0	0
35.000	0	0	0	0	0
35.250	0	0	0	0	0
35.500	0	0	0	0	0
35.750	0	0	0	0	0
36.000	0	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation vs. Volume Curve

Label: DET SYSTEM

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Hydrologic Calculations

Subsection: Elevation vs. Volume Curve

Label: DET SYSTEM

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft ³)
33.40	0
33.75	534
34.00	922
34.25	1,305
34.50	1,684
34.75	2,058
35.00	2,426
35.25	2,787
35.50	3,139
35.75	3,482
36.00	3,814
36.25	4,133
36.50	4,437
36.75	4,722
37.00	4,983
37.25	5,202
37.50	5,390
38.50	6,102

Subsection: Elevation vs. Volume Curve

Label: DET SYSTEM

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft ³)
33.40	0
33.75	534
34.00	922
34.25	1,305
34.50	1,684
34.75	2,058
35.00	2,426
35.25	2,787
35.50	3,139
35.75	3,482
36.00	3,814
36.25	4,133
36.50	4,437
36.75	4,722
37.00	4,983
37.25	5,202

Hydrologic Calculations

Subsection: Elevation vs. Volume Curve

Label: DET SYSTEM

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft ³)
37.50	5,390
38.50	6,102

Subsection: Elevation vs. Volume Curve

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft ³)
33.40	0
33.75	534
34.00	922
34.25	1,305
34.50	1,684
34.75	2,058
35.00	2,426
35.25	2,787
35.50	3,139
35.75	3,482
36.00	3,814
36.25	4,133
36.50	4,437
36.75	4,722
37.00	4,983
37.25	5,202
37.50	5,390
38.50	6,102

Subsection: Elevation vs. Volume Curve

Label: DET SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft ³)
33.40	0
33.75	534
34.00	922
34.25	1,305
34.50	1,684
34.75	2,058

Hydrologic Calculations

Subsection: Elevation vs. Volume Curve
 Label: DET SYSTEM
 Scenario: Post-Development 100 year

Return Event: 100 years
 Storm Event: 100 years

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft ³)
35.00	2,426
35.25	2,787
35.50	3,139
35.75	3,482
36.00	3,814
36.25	4,133
36.50	4,437
36.75	4,722
37.00	4,983
37.25	5,202
37.50	5,390
38.50	6,102

Subsection: Elevation-Area Volume Curve
 Label: EX. RG
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
29.10	0.0	0.00	0.00	0	0
30.00	0.0	0.00	0.00	31	31
31.50	0.0	0.01	0.01	294	325
32.00	0.0	0.02	0.04	257	581

Subsection: Elevation-Area Volume Curve
 Label: EX. RG
 Scenario: Pre-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
29.10	0.0	0.00	0.00	0	0
30.00	0.0	0.00	0.00	31	31
31.50	0.0	0.01	0.01	294	325
32.00	0.0	0.02	0.04	257	581

Subsection: Elevation-Area Volume Curve
 Label: EX. RG
 Scenario: Pre-Development 25 year

Return Event: 25 years
 Storm Event: 25 years

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
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Hydrologic Calculations

Subsection: Elevation-Area Volume Curve

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
29.10	0.0	0.00	0.00	0	0
30.00	0.0	0.00	0.00	31	31
31.50	0.0	0.01	0.01	294	325
32.00	0.0	0.02	0.04	257	581

Subsection: Elevation-Area Volume Curve

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
29.10	0.0	0.00	0.00	0	0
30.00	0.0	0.00	0.00	31	31
31.50	0.0	0.01	0.01	294	325
32.00	0.0	0.02	0.04	257	581

Subsection: Elevation-Area Volume Curve

Label: SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
31.00	0.0	0.06	0.00	0	0
32.00	0.0	0.06	0.19	2,748	2,748
33.00	0.0	0.06	0.19	2,748	5,496

Subsection: Elevation-Area Volume Curve

Label: SP

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
31.00	0.0	0.06	0.00	0	0
32.00	0.0	0.06	0.19	2,748	2,748
33.00	0.0	0.06	0.19	2,748	5,496

Subsection: Elevation-Area Volume Curve

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Hydrologic Calculations

Subsection: Elevation-Area Volume Curve

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
31.00	0.0	0.06	0.00	0	0
32.00	0.0	0.06	0.19	2,748	2,748
33.00	0.0	0.06	0.19	2,748	5,496

Subsection: Elevation-Area Volume Curve

Label: SP

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Elevation (ft)	Planimeter (ft ²)	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ft ³)	Volume (Total) (ft ³)
31.00	0.0	0.06	0.00	0	0
32.00	0.0	0.06	0.19	2,748	2,748
33.00	0.0	0.06	0.19	2,748	5,496

Subsection: Outlet Input Data

Label: OCS-DET-SYS

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Requested Pond Water Surface Elevations

Minimum (Headwater)	33.40 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	38.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	Culvert - 1	33.40	38.50
Rectangular Weir	Weir - 1	Forward	Culvert - 1	36.50	38.50
Culvert-Circular	Culvert - 1	Forward	TW	33.40	38.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Culvert - 1

Structure Type: Culvert-Circular

Number of Barrels	1
Diameter	15.0 in
Length	94.00 ft
Length (Computed Barrel)	94.00 ft
Slope (Computed)	0.008 ft/ft

Outlet Control Data

Hydrologic Calculations

Subsection: Outlet Input Data
 Label: OCS-DET-SYS
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Outlet Control Data

Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data

Equation Form	Form 1
K	0.0018
M	2.5000
C	0.0243
Y	0.8300
T1 ratio (HW/D)	1.077
T2 ratio (HW/D)	1.215
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.

Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	34.75 ft	T1 Flow	4.80 ft ³ /s
T2 Elevation	34.92 ft	T2 Flow	5.49 ft ³ /s

Hydrologic Calculations

Subsection: Outlet Input Data
 Label: OCS-DET-SYS
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	33.40 ft
Orifice Diameter	3.5 in
Orifice Coefficient	0.600
Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	36.50 ft
Weir Length	0.33 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Composite Rating Curve
 Label: OCS-DET-SYS
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
33.40	0.00	(N/A)	0.00
33.90	0.17	(N/A)	0.00
34.40	0.27	(N/A)	0.00
34.90	0.35	(N/A)	0.00
35.40	0.41	(N/A)	0.00

Hydrologic Calculations

Subsection: Composite Rating Curve
 Label: OCS-DET-SYS
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
35.90	0.47	(N/A)	0.00
36.40	0.52	(N/A)	0.00
36.50	0.53	(N/A)	0.00
36.90	0.81	(N/A)	0.00
37.40	1.43	(N/A)	0.00
37.90	2.25	(N/A)	0.00
38.40	3.23	(N/A)	0.00
38.50	3.44	(N/A)	0.00

Contributing Structures

(no Q: Orifice - 1, Weir - 1, Culvert - 1)
 Orifice - 1, Culvert - 1
 (no Q: Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Weir - 1)
 Orifice - 1, Weir - 1, Culvert - 1
 Orifice - 1, Weir - 1, Culvert - 1
 Orifice - 1, Weir - 1, Culvert - 1
 Orifice - 1, Weir - 1, Culvert - 1
 Orifice - 1, Weir - 1, Culvert - 1

Subsection: Outlet Input Data
 Label: OCS-EX-RG
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Requested Pond Water Surface Elevations

Minimum (Headwater)	29.10 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	32.00 ft

Hydrologic Calculations

Subsection: Outlet Input Data

Label: OCS-EX-RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Requested Pond Water Surface Elevations

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	Riser - 1	Forward	Culvert - 1	31.76	32.00
Orifice-Area	Orifice - 1	Forward	Culvert - 1	29.64	32.00
Culvert-Circular	Culvert - 1	Forward	TW	29.91	32.00
Irregular Weir	Weir - 1	Forward	TW	30.80	32.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Culvert - 1

Structure Type: Culvert-Circular

Number of Barrels	1
Diameter	15.0 in
Length	18.50 ft
Length (Computed Barrel)	18.72 ft
Slope (Computed)	0.156 ft/ft

Outlet Control Data

Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data

Equation Form	Form 1
K	0.0018
M	2.5000
C	0.0243
Y	0.8300
T1 ratio (HW/D)	0.000
T2 ratio (HW/D)	1.141
Slope Correction Factor	-0.500

Hydrologic Calculations

Subsection: Outlet Input Data

Label: OCS-EX-RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Use unsubmerged inlet control 0 equation below T1 elevation.

Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	29.91 ft	T1 Flow	4.80 ft ³ /s
T2 Elevation	31.34 ft	T2 Flow	5.49 ft ³ /s

Hydrologic Calculations

Subsection: Outlet Input Data

Label: OCS-EX-RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Structure ID: Riser - 1
Structure Type: Inlet Box

Number of Openings	1
Elevation	31.76 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

Structure ID: Orifice - 1
Structure Type: Orifice-Area

Number of Openings	1
Elevation	29.64 ft
Orifice Area	0.4 ft ²
Top Elevation	30.14 ft
Datum Elevation	29.64 ft
Orifice Coefficient	0.600

Structure ID: Weir - 1 Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	32.00
18.40	31.40
31.50	30.85
44.30	31.00
51.15	30.80
60.50	31.30
67.70	31.45
77.80	32.00

Lowest Elevation	30.80 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Structure ID: TW
Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
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Hydrologic Calculations

Subsection: Outlet Input Data

Label: OCS-EX-RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Composite Rating Curve

Label: OCS-EX-RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
29.10	0.00	(N/A)	0.00
29.60	0.00	(N/A)	0.00
29.64	0.00	(N/A)	0.00
29.91	0.00	(N/A)	0.00
30.10	0.11	(N/A)	0.00
30.60	0.82	(N/A)	0.00
30.80	1.07	(N/A)	0.00
31.10	7.80	(N/A)	0.00
31.60	62.53	(N/A)	0.00
31.76	93.05	(N/A)	0.00
32.00	153.27	(N/A)	0.00

Contributing Structures

(no Q: Riser - 1, Orifice - 1, Culvert - 1, Weir - 1)
 (no Q: Riser - 1, Orifice - 1, Culvert - 1, Weir - 1)
 (no Q: Riser - 1, Orifice - 1, Culvert - 1, Weir - 1)
 (no Q: Riser - 1, Orifice - 1, Culvert - 1, Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Riser - 1, Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Riser - 1, Weir - 1)
 Orifice - 1, Culvert - 1
 (no Q: Riser - 1, Weir - 1)

Hydrologic Calculations

Subsection: Composite Rating Curve
 Label: OCS-EX-RG
 Scenario: Pre-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Composite Outflow Summary

Contributing Structures
Orifice - 1,Culvert - 1,Weir - 1 (no Q: Riser - 1)
Orifice - 1,Culvert - 1,Weir - 1 (no Q: Riser - 1)
Orifice - 1,Culvert - 1,Weir - 1 (no Q: Riser - 1)
Riser - 1,Orifice - 1,Culvert - 1,Weir - 1

Subsection: Outlet Input Data
 Label: OCS-SP
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Requested Pond Water Surface Elevations

Minimum (Headwater)	31.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	33.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	Riser - 10	Forward	TW	32.00	33.00
Inlet Box	Riser - 5	Forward	TW	32.00	33.00
Inlet Box	Riser - 8	Forward	TW	32.00	33.00
Inlet Box	Riser - 4	Forward	TW	32.00	33.00
User Defined Table	User Defined Rating Table - 1	Forward	TW	0.00	33.00
Inlet Box	Riser - 3	Forward	TW	32.00	33.00
Inlet Box	Riser - 7	Forward	TW	32.00	33.00
Inlet Box	Riser - 2	Forward	TW	32.00	33.00
Inlet Box	Riser - 9	Forward	TW	32.00	33.00
Inlet Box	Riser - 1	Forward	TW	32.00	33.00
Inlet Box	Riser - 6	Forward	TW	32.00	33.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: User Defined Rating Table - 1
 Structure Type: User Defined Table

Elevation (ft)	Flow (ft ³ /s)
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Hydrologic Calculations

Subsection: Outlet Input Data
 Label: OCS-SP
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Elevation (ft)	Flow (ft ³ /s)
31.00	0.10
32.00	0.10
33.00	0.10

Structure ID: Riser - 1
 Structure Type: Inlet Box

Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 2
 Structure Type: Inlet Box

Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 3
 Structure Type: Inlet Box

Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Hydrologic Calculations

Subsection: Outlet Input Data
 Label: OCS-SP
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Structure ID: Riser - 3	
Structure Type: Inlet Box	
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 4	
Structure Type: Inlet Box	
Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 5	
Structure Type: Inlet Box	
Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 6	
Structure Type: Inlet Box	
Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600

Hydrologic Calculations

Subsection: Outlet Input Data

Label: OCS-SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Structure ID: Riser - 6
Structure Type: Inlet Box

Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 7
Structure Type: Inlet Box

Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 8
Structure Type: Inlet Box

Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 9
Structure Type: Inlet Box

Number of Openings	1
Elevation	32.00 ft

Hydrologic Calculations

Subsection: Outlet Input Data

Label: OCS-SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Structure ID: Riser - 9
Structure Type: Inlet Box

Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Riser - 10
Structure Type: Inlet Box

Number of Openings	1
Elevation	32.00 ft
Orifice Area	4.0 ft ²
Orifice Coefficient	0.600
Weir Length	8.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: TW
Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
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Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Hydrologic Calculations

Subsection: Composite Rating Curve
 Label: OCS-SP
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
31.00	0.10	(N/A)	0.00
31.50	0.10	(N/A)	0.00
32.00	0.10	(N/A)	0.00
32.50	84.96	(N/A)	0.00
33.00	192.63	(N/A)	0.00

Contributing Structures

User Defined Rating Table
 - 1
 User Defined Rating Table
 - 1
 Riser - 10 + Riser - 5 +
 Riser - 8 + Riser - 4 +
 User Defined Rating Table
 - 1 + Riser - 3 + Riser - 7
 + Riser - 2 + Riser - 9 +
 Riser - 1 + Riser - 6
 Riser - 10 + Riser - 5 +
 Riser - 8 + Riser - 4 +
 User Defined Rating Table
 - 1 + Riser - 3 + Riser - 7
 + Riser - 2 + Riser - 9 +
 Riser - 1 + Riser - 6
 Riser - 10 + Riser - 5 +
 Riser - 8 + Riser - 4 +
 User Defined Rating Table
 - 1 + Riser - 3 + Riser - 7
 + Riser - 2 + Riser - 9 +
 Riser - 1 + Riser - 6

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: DET SYSTEM
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: DET SYSTEM

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Initial Conditions

Time Increment	0.050 hours
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Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
33.40	0.00	0	0.00	0.00	0.00	0.00
33.90	0.17	767	0.00	0.00	0.17	8.69
34.40	0.27	1,532	0.00	0.00	0.27	17.30
34.90	0.35	2,279	0.00	0.00	0.35	25.67
35.40	0.41	2,998	0.00	0.00	0.41	33.73
35.90	0.47	3,681	0.00	0.00	0.47	41.37
36.40	0.52	4,315	0.00	0.00	0.52	48.47
36.50	0.53	4,437	0.00	0.00	0.53	49.83
36.90	0.81	4,879	0.00	0.00	0.81	55.01
37.40	1.43	5,315	0.00	0.00	1.43	60.48
37.90	2.25	5,675	0.00	0.00	2.25	65.31
38.40	3.23	6,031	0.00	0.00	3.23	70.24
38.50	3.44	6,102	0.00	0.00	3.44	71.24

Subsection: Elevation-Volume-Flow Table (Pond)

Label: DET SYSTEM

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
33.40	0.00	0	0.00	0.00	0.00	0.00
33.90	0.17	767	0.00	0.00	0.17	8.69
34.40	0.27	1,532	0.00	0.00	0.27	17.30
34.90	0.35	2,279	0.00	0.00	0.35	25.67

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: DET SYSTEM

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
35.40	0.41	2,998	0.00	0.00	0.41	33.73
35.90	0.47	3,681	0.00	0.00	0.47	41.37
36.40	0.52	4,315	0.00	0.00	0.52	48.47
36.50	0.53	4,437	0.00	0.00	0.53	49.83
36.90	0.81	4,879	0.00	0.00	0.81	55.01
37.40	1.43	5,315	0.00	0.00	1.43	60.48
37.90	2.25	5,675	0.00	0.00	2.25	65.31
38.40	3.23	6,031	0.00	0.00	3.23	70.24
38.50	3.44	6,102	0.00	0.00	3.44	71.24

Subsection: Elevation-Volume-Flow Table (Pond)

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
33.40	0.00	0	0.00	0.00	0.00	0.00
33.90	0.17	767	0.00	0.00	0.17	8.69
34.40	0.27	1,532	0.00	0.00	0.27	17.30
34.90	0.35	2,279	0.00	0.00	0.35	25.67
35.40	0.41	2,998	0.00	0.00	0.41	33.73
35.90	0.47	3,681	0.00	0.00	0.47	41.37
36.40	0.52	4,315	0.00	0.00	0.52	48.47
36.50	0.53	4,437	0.00	0.00	0.53	49.83
36.90	0.81	4,879	0.00	0.00	0.81	55.01
37.40	1.43	5,315	0.00	0.00	1.43	60.48
37.90	2.25	5,675	0.00	0.00	2.25	65.31

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: DET SYSTEM

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
38.40	3.23	6,031	0.00	0.00	3.23	70.24
38.50	3.44	6,102	0.00	0.00	3.44	71.24

Subsection: Elevation-Volume-Flow Table (Pond)

Label: DET SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
33.40	0.00	0	0.00	0.00	0.00	0.00
33.90	0.17	767	0.00	0.00	0.17	8.69
34.40	0.27	1,532	0.00	0.00	0.27	17.30
34.90	0.35	2,279	0.00	0.00	0.35	25.67
35.40	0.41	2,998	0.00	0.00	0.41	33.73
35.90	0.47	3,681	0.00	0.00	0.47	41.37
36.40	0.52	4,315	0.00	0.00	0.52	48.47
36.50	0.53	4,437	0.00	0.00	0.53	49.83
36.90	0.81	4,879	0.00	0.00	0.81	55.01
37.40	1.43	5,315	0.00	0.00	1.43	60.48
37.90	2.25	5,675	0.00	0.00	2.25	65.31
38.40	3.23	6,031	0.00	0.00	3.23	70.24
38.50	3.44	6,102	0.00	0.00	3.44	71.24

Subsection: Detention Time

Label: DET SYSTEM (IN)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Hydrologic Calculations

Subsection: Detention Time
 Label: DET SYSTEM (IN)
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Infiltration

Infiltration Method (Computed)	No Infiltration
Approximate Detention Times	
Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	12.500 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	12.100 hours
Detention Time (Peak to Peak)	0.400 hours
Time to Centroid (Outflow)	14.793 hours
Time to Centroid (Inflow)	13.395 hours
Detention Time (Centroid to Centroid)	1.398 hours
Weighted Average Plug Time	1.424 hours
Maximum Plug Volume Plug Time	1.243 hours
Maximum Inflow Plug Volume	234 ft ³
Time (Maximum Plug Volume, Start)	12.050 hours
Time (Maximum Plug Volume, End)	12.100 hours

Subsection: Level Pool Pond Routing Summary
 Label: DET SYSTEM (IN)
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Infiltration

Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: DET SYSTEM (IN)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	1.32 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	0.30 ft ³ /s	Time to Peak (Flow, Outlet)	12.500 hours

Elevation (Water Surface, Peak)	34.59 ft
Volume (Peak)	1,816 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	4,757 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	4,757 ft ³
Volume (Retained)	0 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Subsection: Detention Time

Label: DET SYSTEM (IN)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Approximate Detention Times

Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	12.550 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	12.100 hours
Detention Time (Peak to Peak)	0.450 hours
Time to Centroid (Outflow)	14.762 hours
Time to Centroid (Inflow)	13.051 hours
Detention Time (Centroid to Centroid)	1.710 hours
Weighted Average Plug Time	1.743 hours
Maximum Plug Volume Plug Time	1.688 hours
Maximum Inflow Plug Volume	476 ft ³

Hydrologic Calculations

Subsection: Detention Time
 Label: DET SYSTEM (IN)
 Scenario: Post-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

Approximate Detention Times

Time (Maximum Plug Volume, Start)	12.050 hours
Time (Maximum Plug Volume, End)	12.100 hours

Subsection: Level Pool Pond Routing Summary
 Label: DET SYSTEM (IN)
 Scenario: Post-Development 10 year

Return Event: 10 years
 Storm Event: 10 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	2.68 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	0.50 ft ³ /s	Time to Peak (Flow, Outlet)	12.550 hours

Elevation (Water Surface, Peak)	36.21 ft
Volume (Peak)	4,078 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	10,061 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	10,061 ft ³
Volume (Retained)	0 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Hydrologic Calculations

Subsection: Detention Time
 Label: DET SYSTEM (IN)
 Scenario: Post-Development 25 year

Return Event: 25 years
 Storm Event: 25 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Approximate Detention Times	
Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	12.400 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	12.100 hours
Detention Time (Peak to Peak)	0.300 hours
Time to Centroid (Outflow)	14.630 hours
Time to Centroid (Inflow)	12.934 hours
Detention Time (Centroid to Centroid)	1.696 hours
Weighted Average Plug Time	1.730 hours
Maximum Plug Volume Plug Time	1.581 hours
Maximum Inflow Plug Volume	614 ft ³
Time (Maximum Plug Volume, Start)	12.050 hours
Time (Maximum Plug Volume, End)	12.100 hours

Subsection: Level Pool Pond Routing Summary
 Label: DET SYSTEM (IN)
 Scenario: Post-Development 25 year

Return Event: 25 years
 Storm Event: 25 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: DET SYSTEM (IN)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	3.45 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	1.06 ft ³ /s	Time to Peak (Flow, Outlet)	12.400 hours

Elevation (Water Surface, Peak)	37.11 ft
Volume (Peak)	5,076 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	13,173 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	13,173 ft ³
Volume (Retained)	0 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Subsection: Detention Time

Label: DET SYSTEM (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Approximate Detention Times

Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	12.200 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	12.100 hours
Detention Time (Peak to Peak)	0.100 hours
Time to Centroid (Outflow)	14.247 hours
Time to Centroid (Inflow)	12.773 hours
Detention Time (Centroid to Centroid)	1.474 hours
Weighted Average Plug Time	1.504 hours
Maximum Plug Volume Plug Time	0.928 hours
Maximum Inflow Plug Volume	890 ft ³

Hydrologic Calculations

Subsection: Detention Time

Label: DET SYSTEM (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Approximate Detention Times

Time (Maximum Plug Volume, Start)	12.050 hours
Time (Maximum Plug Volume, End)	12.100 hours

Subsection: Level Pool Pond Routing Summary

Label: DET SYSTEM (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	33.40 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	4.99 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	3.24 ft ³ /s	Time to Peak (Flow, Outlet)	12.200 hours

Elevation (Water Surface, Peak)	38.40 ft
Volume (Peak)	6,034 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	19,557 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	19,557 ft ³
Volume (Retained)	0 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	33.40
0.050	0.00	0.00	0.00	0.00	0.00	0	33.40
0.100	0.00	0.00	0.00	0.00	0.00	0	33.40
0.150	0.00	0.00	0.00	0.00	0.00	0	33.40
0.200	0.00	0.00	0.00	0.00	0.00	0	33.40
0.250	0.00	0.00	0.00	0.00	0.00	0	33.40
0.300	0.00	0.00	0.00	0.00	0.00	0	33.40
0.350	0.00	0.00	0.00	0.00	0.00	0	33.40
0.400	0.00	0.00	0.00	0.00	0.00	0	33.40
0.450	0.00	0.00	0.00	0.00	0.00	0	33.40
0.500	0.00	0.00	0.00	0.00	0.00	0	33.40
0.550	0.00	0.00	0.00	0.00	0.00	0	33.40
0.600	0.00	0.00	0.00	0.00	0.00	0	33.40
0.650	0.00	0.00	0.00	0.00	0.00	0	33.40
0.700	0.00	0.00	0.00	0.00	0.00	0	33.40
0.750	0.00	0.00	0.00	0.00	0.00	0	33.40
0.800	0.00	0.00	0.00	0.00	0.00	0	33.40
0.850	0.00	0.00	0.00	0.00	0.00	0	33.40
0.900	0.00	0.00	0.00	0.00	0.00	0	33.40
0.950	0.00	0.00	0.00	0.00	0.00	0	33.40
1.000	0.00	0.00	0.00	0.00	0.00	0	33.40
1.050	0.00	0.00	0.00	0.00	0.00	0	33.40
1.100	0.00	0.00	0.00	0.00	0.00	0	33.40
1.150	0.00	0.00	0.00	0.00	0.00	0	33.40
1.200	0.00	0.00	0.00	0.00	0.00	0	33.40
1.250	0.00	0.00	0.00	0.00	0.00	0	33.40
1.300	0.00	0.00	0.00	0.00	0.00	0	33.40
1.350	0.00	0.00	0.00	0.00	0.00	0	33.40
1.400	0.00	0.00	0.00	0.00	0.00	0	33.40
1.450	0.00	0.00	0.00	0.00	0.00	0	33.40
1.500	0.00	0.00	0.00	0.00	0.00	0	33.40
1.550	0.00	0.00	0.00	0.00	0.00	0	33.40
1.600	0.00	0.00	0.00	0.00	0.00	0	33.40
1.650	0.00	0.00	0.00	0.00	0.00	0	33.40
1.700	0.00	0.00	0.00	0.00	0.00	0	33.40
1.750	0.00	0.00	0.00	0.00	0.00	0	33.40
1.800	0.00	0.00	0.00	0.00	0.00	0	33.40
1.850	0.00	0.00	0.00	0.00	0.00	0	33.40
1.900	0.00	0.00	0.00	0.00	0.00	0	33.40
1.950	0.00	0.00	0.00	0.00	0.00	0	33.40
2.000	0.00	0.00	0.00	0.00	0.00	0	33.40
2.050	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.100	0.00	0.00	0.00	0.00	0.00	0	33.40
2.150	0.00	0.00	0.00	0.00	0.00	0	33.40
2.200	0.00	0.00	0.00	0.00	0.00	0	33.40
2.250	0.00	0.00	0.00	0.00	0.00	0	33.40
2.300	0.00	0.00	0.00	0.00	0.00	0	33.40
2.350	0.00	0.00	0.00	0.00	0.00	0	33.40
2.400	0.00	0.00	0.00	0.00	0.00	0	33.40
2.450	0.00	0.00	0.00	0.00	0.00	0	33.40
2.500	0.00	0.00	0.00	0.00	0.00	0	33.40
2.550	0.00	0.00	0.00	0.00	0.00	0	33.40
2.600	0.00	0.00	0.00	0.00	0.00	0	33.40
2.650	0.00	0.00	0.00	0.00	0.00	0	33.40
2.700	0.00	0.00	0.00	0.00	0.00	0	33.40
2.750	0.00	0.00	0.00	0.00	0.00	0	33.40
2.800	0.00	0.00	0.00	0.00	0.00	0	33.40
2.850	0.00	0.00	0.00	0.00	0.00	0	33.40
2.900	0.00	0.00	0.00	0.00	0.00	0	33.40
2.950	0.00	0.00	0.00	0.00	0.00	0	33.40
3.000	0.00	0.00	0.00	0.00	0.00	0	33.40
3.050	0.00	0.00	0.00	0.00	0.00	0	33.40
3.100	0.00	0.00	0.00	0.00	0.00	0	33.40
3.150	0.00	0.00	0.00	0.00	0.00	0	33.40
3.200	0.00	0.00	0.00	0.00	0.00	0	33.40
3.250	0.00	0.00	0.00	0.00	0.00	0	33.40
3.300	0.00	0.00	0.00	0.00	0.00	0	33.40
3.350	0.00	0.00	0.00	0.00	0.00	0	33.40
3.400	0.00	0.00	0.00	0.00	0.00	0	33.40
3.450	0.00	0.00	0.00	0.00	0.00	0	33.40
3.500	0.00	0.00	0.00	0.00	0.00	0	33.40
3.550	0.00	0.00	0.00	0.00	0.00	0	33.40
3.600	0.00	0.00	0.00	0.00	0.00	0	33.40
3.650	0.00	0.00	0.00	0.00	0.00	0	33.40
3.700	0.00	0.00	0.00	0.00	0.00	0	33.40
3.750	0.00	0.00	0.00	0.00	0.00	0	33.40
3.800	0.00	0.00	0.00	0.00	0.00	0	33.40
3.850	0.00	0.00	0.00	0.00	0.00	0	33.40
3.900	0.00	0.00	0.00	0.00	0.00	0	33.40
3.950	0.00	0.00	0.00	0.00	0.00	0	33.40
4.000	0.00	0.00	0.00	0.00	0.00	0	33.40
4.050	0.00	0.00	0.00	0.00	0.00	0	33.40
4.100	0.00	0.00	0.00	0.00	0.00	0	33.40
4.150	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.200	0.00	0.00	0.00	0.00	0.00	0	33.40
4.250	0.00	0.00	0.00	0.00	0.00	0	33.40
4.300	0.00	0.00	0.00	0.00	0.00	0	33.40
4.350	0.00	0.00	0.00	0.00	0.00	0	33.40
4.400	0.00	0.00	0.00	0.00	0.00	0	33.40
4.450	0.00	0.00	0.00	0.00	0.00	0	33.40
4.500	0.00	0.00	0.00	0.00	0.00	0	33.40
4.550	0.00	0.00	0.00	0.00	0.00	0	33.40
4.600	0.00	0.00	0.00	0.00	0.00	0	33.40
4.650	0.00	0.00	0.00	0.00	0.00	0	33.40
4.700	0.00	0.00	0.00	0.00	0.00	0	33.40
4.750	0.00	0.00	0.00	0.00	0.00	0	33.40
4.800	0.00	0.00	0.00	0.00	0.00	0	33.40
4.850	0.00	0.00	0.00	0.00	0.00	0	33.40
4.900	0.00	0.00	0.00	0.00	0.00	0	33.40
4.950	0.00	0.00	0.00	0.00	0.00	0	33.40
5.000	0.00	0.00	0.00	0.00	0.00	0	33.40
5.050	0.00	0.00	0.00	0.00	0.00	0	33.40
5.100	0.00	0.00	0.00	0.00	0.00	0	33.40
5.150	0.00	0.00	0.00	0.00	0.00	0	33.40
5.200	0.00	0.00	0.00	0.00	0.00	0	33.40
5.250	0.00	0.00	0.00	0.00	0.00	0	33.40
5.300	0.00	0.00	0.00	0.00	0.00	0	33.40
5.350	0.00	0.00	0.00	0.00	0.00	0	33.40
5.400	0.00	0.00	0.00	0.00	0.00	0	33.40
5.450	0.00	0.00	0.00	0.00	0.00	0	33.40
5.500	0.00	0.00	0.00	0.00	0.00	0	33.40
5.550	0.00	0.00	0.00	0.00	0.00	0	33.40
5.600	0.00	0.00	0.00	0.00	0.00	0	33.40
5.650	0.00	0.00	0.00	0.00	0.00	0	33.40
5.700	0.00	0.00	0.00	0.00	0.00	0	33.40
5.750	0.00	0.00	0.00	0.00	0.00	0	33.40
5.800	0.00	0.00	0.00	0.00	0.00	0	33.40
5.850	0.00	0.00	0.00	0.00	0.00	0	33.40
5.900	0.00	0.00	0.00	0.00	0.00	0	33.40
5.950	0.00	0.00	0.00	0.00	0.00	0	33.40
6.000	0.00	0.00	0.00	0.00	0.00	0	33.40
6.050	0.00	0.01	0.01	0.00	0.00	0	33.40
6.100	0.00	0.01	0.01	0.00	0.00	1	33.40
6.150	0.00	0.01	0.01	0.00	0.00	1	33.40
6.200	0.00	0.01	0.01	0.00	0.00	1	33.40
6.250	0.00	0.01	0.01	0.00	0.00	1	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.300	0.00	0.02	0.02	0.00	0.00	1	33.40
6.350	0.00	0.02	0.02	0.00	0.00	2	33.40
6.400	0.00	0.02	0.02	0.00	0.00	2	33.40
6.450	0.00	0.03	0.03	0.00	0.00	2	33.40
6.500	0.00	0.03	0.03	0.00	0.00	3	33.40
6.550	0.00	0.03	0.03	0.00	0.00	3	33.40
6.600	0.00	0.04	0.04	0.00	0.00	3	33.40
6.650	0.00	0.04	0.04	0.00	0.00	4	33.40
6.700	0.00	0.05	0.05	0.00	0.00	4	33.40
6.750	0.00	0.05	0.05	0.00	0.00	5	33.40
6.800	0.00	0.06	0.06	0.00	0.00	5	33.40
6.850	0.00	0.06	0.06	0.00	0.00	6	33.40
6.900	0.00	0.07	0.07	0.00	0.00	6	33.40
6.950	0.00	0.07	0.08	0.00	0.00	7	33.40
7.000	0.00	0.08	0.08	0.00	0.00	7	33.40
7.050	0.01	0.09	0.09	0.00	0.00	8	33.41
7.100	0.01	0.09	0.10	0.00	0.00	9	33.41
7.150	0.01	0.10	0.10	0.00	0.00	9	33.41
7.200	0.01	0.11	0.11	0.00	0.00	10	33.41
7.250	0.01	0.12	0.12	0.00	0.00	11	33.41
7.300	0.01	0.12	0.13	0.00	0.00	11	33.41
7.350	0.01	0.13	0.14	0.00	0.00	12	33.41
7.400	0.01	0.14	0.15	0.00	0.00	13	33.41
7.450	0.01	0.15	0.15	0.00	0.00	14	33.41
7.500	0.01	0.16	0.16	0.00	0.00	14	33.41
7.550	0.01	0.17	0.17	0.00	0.00	15	33.41
7.600	0.01	0.18	0.18	0.00	0.00	16	33.41
7.650	0.01	0.18	0.19	0.00	0.00	17	33.41
7.700	0.01	0.19	0.20	0.00	0.00	18	33.41
7.750	0.01	0.21	0.21	0.00	0.00	19	33.41
7.800	0.01	0.22	0.22	0.00	0.00	20	33.41
7.850	0.01	0.23	0.24	0.00	0.00	21	33.41
7.900	0.01	0.24	0.25	0.00	0.00	22	33.41
7.950	0.01	0.25	0.26	0.00	0.01	23	33.41
8.000	0.01	0.26	0.27	0.00	0.01	24	33.42
8.050	0.01	0.27	0.28	0.00	0.01	25	33.42
8.100	0.01	0.28	0.30	0.00	0.01	26	33.42
8.150	0.01	0.30	0.31	0.00	0.01	27	33.42
8.200	0.01	0.31	0.32	0.00	0.01	28	33.42
8.250	0.01	0.32	0.34	0.00	0.01	30	33.42
8.300	0.01	0.34	0.35	0.00	0.01	31	33.42
8.350	0.01	0.35	0.37	0.00	0.01	32	33.42

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.400	0.02	0.37	0.38	0.00	0.01	34	33.42
8.450	0.02	0.38	0.40	0.00	0.01	35	33.42
8.500	0.02	0.40	0.42	0.00	0.01	37	33.42
8.550	0.02	0.42	0.43	0.00	0.01	38	33.43
8.600	0.02	0.44	0.45	0.00	0.01	40	33.43
8.650	0.02	0.45	0.47	0.00	0.01	41	33.43
8.700	0.02	0.47	0.49	0.00	0.01	43	33.43
8.750	0.02	0.49	0.51	0.00	0.01	45	33.43
8.800	0.02	0.51	0.53	0.00	0.01	47	33.43
8.850	0.02	0.53	0.56	0.00	0.01	49	33.43
8.900	0.02	0.56	0.58	0.00	0.01	51	33.43
8.950	0.02	0.58	0.60	0.00	0.01	53	33.43
9.000	0.02	0.60	0.62	0.00	0.01	55	33.44
9.050	0.02	0.62	0.65	0.00	0.01	57	33.44
9.100	0.03	0.65	0.67	0.00	0.01	59	33.44
9.150	0.03	0.67	0.70	0.00	0.01	61	33.44
9.200	0.03	0.70	0.73	0.00	0.01	64	33.44
9.250	0.03	0.72	0.75	0.00	0.01	66	33.44
9.300	0.03	0.75	0.78	0.00	0.02	69	33.44
9.350	0.03	0.78	0.81	0.00	0.02	71	33.45
9.400	0.03	0.81	0.84	0.00	0.02	74	33.45
9.450	0.03	0.83	0.87	0.00	0.02	76	33.45
9.500	0.03	0.86	0.90	0.00	0.02	79	33.45
9.550	0.03	0.89	0.93	0.00	0.02	82	33.45
9.600	0.03	0.92	0.96	0.00	0.02	84	33.46
9.650	0.04	0.95	0.99	0.00	0.02	87	33.46
9.700	0.04	0.99	1.03	0.00	0.02	90	33.46
9.750	0.04	1.02	1.06	0.00	0.02	93	33.46
9.800	0.04	1.05	1.09	0.00	0.02	96	33.46
9.850	0.04	1.09	1.13	0.00	0.02	99	33.47
9.900	0.04	1.12	1.17	0.00	0.02	102	33.47
9.950	0.04	1.16	1.20	0.00	0.02	106	33.47
10.000	0.04	1.19	1.24	0.00	0.02	109	33.47
10.050	0.04	1.23	1.28	0.00	0.02	112	33.47
10.100	0.04	1.26	1.32	0.00	0.03	116	33.48
10.150	0.05	1.30	1.36	0.00	0.03	119	33.48
10.200	0.05	1.34	1.40	0.00	0.03	123	33.48
10.250	0.05	1.39	1.44	0.00	0.03	127	33.48
10.300	0.05	1.43	1.49	0.00	0.03	131	33.49
10.350	0.05	1.47	1.53	0.00	0.03	135	33.49
10.400	0.06	1.52	1.58	0.00	0.03	139	33.49
10.450	0.06	1.57	1.63	0.00	0.03	144	33.49

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
10.500	0.06	1.62	1.69	0.00	0.03	148	33.50
10.550	0.06	1.67	1.74	0.00	0.03	153	33.50
10.600	0.06	1.73	1.80	0.00	0.03	158	33.50
10.650	0.06	1.78	1.85	0.00	0.04	163	33.51
10.700	0.07	1.84	1.91	0.00	0.04	168	33.51
10.750	0.07	1.90	1.97	0.00	0.04	173	33.51
10.800	0.07	1.96	2.04	0.00	0.04	179	33.52
10.850	0.07	2.02	2.10	0.00	0.04	185	33.52
10.900	0.07	2.08	2.17	0.00	0.04	190	33.52
10.950	0.08	2.15	2.23	0.00	0.04	196	33.53
11.000	0.08	2.21	2.30	0.00	0.04	202	33.53
11.050	0.08	2.28	2.38	0.00	0.05	209	33.54
11.100	0.09	2.36	2.45	0.00	0.05	215	33.54
11.150	0.09	2.44	2.54	0.00	0.05	223	33.55
11.200	0.10	2.53	2.63	0.00	0.05	231	33.55
11.250	0.10	2.62	2.73	0.00	0.05	240	33.56
11.300	0.11	2.73	2.84	0.00	0.06	249	33.56
11.350	0.12	2.84	2.96	0.00	0.06	260	33.57
11.400	0.13	2.97	3.09	0.00	0.06	271	33.58
11.450	0.13	3.10	3.22	0.00	0.06	283	33.59
11.500	0.14	3.24	3.37	0.00	0.07	296	33.59
11.550	0.17	3.41	3.54	0.00	0.07	311	33.60
11.600	0.20	3.62	3.77	0.00	0.07	331	33.62
11.650	0.25	3.91	4.07	0.00	0.08	357	33.63
11.700	0.31	4.30	4.47	0.00	0.09	393	33.66
11.750	0.38	4.79	4.98	0.00	0.10	438	33.69
11.800	0.44	5.39	5.61	0.00	0.11	493	33.72
11.850	0.51	6.10	6.35	0.00	0.12	558	33.77
11.900	0.59	6.92	7.20	0.00	0.14	634	33.81
11.950	0.85	8.03	8.36	0.00	0.16	737	33.88
12.000	1.17	9.68	10.05	0.00	0.19	889	33.98
12.050	1.28	11.70	12.12	0.00	0.21	1,074	34.10
12.100	1.32	13.83	14.31	0.00	0.24	1,269	34.23
12.150	1.10	15.74	16.26	0.00	0.26	1,441	34.34
12.200	0.80	17.10	17.64	0.00	0.27	1,564	34.42
12.250	0.67	18.00	18.57	0.00	0.28	1,647	34.48
12.300	0.59	18.68	19.26	0.00	0.29	1,710	34.52
12.350	0.52	19.20	19.79	0.00	0.29	1,757	34.55
12.400	0.44	19.56	20.16	0.00	0.30	1,790	34.57
12.450	0.37	19.78	20.38	0.00	0.30	1,810	34.58
12.500	0.30	19.85	20.45	0.00	0.30	1,816	34.59
12.550	0.25	19.80	20.40	0.00	0.30	1,812	34.59

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
12.600	0.21	19.66	20.26	0.00	0.30	1,799	34.58
12.650	0.19	19.47	20.06	0.00	0.30	1,781	34.56
12.700	0.18	19.25	19.84	0.00	0.29	1,761	34.55
12.750	0.17	19.02	19.60	0.00	0.29	1,741	34.54
12.800	0.17	18.78	19.36	0.00	0.29	1,719	34.52
12.850	0.16	18.53	19.10	0.00	0.29	1,696	34.51
12.900	0.15	18.27	18.84	0.00	0.29	1,672	34.49
12.950	0.14	17.99	18.56	0.00	0.28	1,647	34.48
13.000	0.14	17.71	18.27	0.00	0.28	1,621	34.46
13.050	0.13	17.42	17.98	0.00	0.28	1,594	34.44
13.100	0.12	17.13	17.68	0.00	0.27	1,567	34.42
13.150	0.12	16.83	17.38	0.00	0.27	1,539	34.40
13.200	0.12	16.54	17.07	0.00	0.27	1,513	34.39
13.250	0.12	16.24	16.77	0.00	0.26	1,486	34.37
13.300	0.12	15.96	16.48	0.00	0.26	1,460	34.35
13.350	0.11	15.67	16.19	0.00	0.26	1,434	34.34
13.400	0.11	15.39	15.90	0.00	0.25	1,409	34.32
13.450	0.11	15.11	15.61	0.00	0.25	1,384	34.30
13.500	0.11	14.83	15.32	0.00	0.25	1,359	34.29
13.550	0.11	14.55	15.04	0.00	0.24	1,334	34.27
13.600	0.10	14.28	14.76	0.00	0.24	1,309	34.25
13.650	0.10	14.01	14.49	0.00	0.24	1,285	34.24
13.700	0.10	13.74	14.21	0.00	0.23	1,260	34.22
13.750	0.10	13.48	13.94	0.00	0.23	1,236	34.21
13.800	0.10	13.22	13.67	0.00	0.23	1,212	34.19
13.850	0.09	12.96	13.41	0.00	0.23	1,189	34.17
13.900	0.09	12.70	13.14	0.00	0.22	1,165	34.16
13.950	0.09	12.44	12.88	0.00	0.22	1,142	34.14
14.000	0.09	12.19	12.62	0.00	0.22	1,119	34.13
14.050	0.09	11.94	12.36	0.00	0.21	1,096	34.11
14.100	0.08	11.69	12.11	0.00	0.21	1,073	34.10
14.150	0.08	11.44	11.86	0.00	0.21	1,051	34.08
14.200	0.08	11.20	11.61	0.00	0.20	1,029	34.07
14.250	0.08	10.97	11.37	0.00	0.20	1,007	34.06
14.300	0.08	10.73	11.13	0.00	0.20	986	34.04
14.350	0.08	10.50	10.89	0.00	0.20	965	34.03
14.400	0.08	10.28	10.66	0.00	0.19	944	34.01
14.450	0.08	10.05	10.43	0.00	0.19	924	34.00
14.500	0.08	9.83	10.21	0.00	0.19	903	33.99
14.550	0.08	9.62	9.99	0.00	0.18	883	33.98
14.600	0.07	9.40	9.77	0.00	0.18	864	33.96
14.650	0.07	9.19	9.55	0.00	0.18	844	33.95

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
14.700	0.07	8.99	9.34	0.00	0.18	825	33.94
14.750	0.07	8.78	9.13	0.00	0.17	807	33.93
14.800	0.07	8.58	8.93	0.00	0.17	788	33.91
14.850	0.07	8.38	8.72	0.00	0.17	770	33.90
14.900	0.07	8.19	8.52	0.00	0.17	752	33.89
14.950	0.07	8.00	8.33	0.00	0.16	735	33.88
15.000	0.07	7.82	8.14	0.00	0.16	718	33.87
15.050	0.07	7.65	7.95	0.00	0.15	701	33.86
15.100	0.06	7.47	7.78	0.00	0.15	685	33.85
15.150	0.06	7.31	7.60	0.00	0.15	670	33.84
15.200	0.06	7.14	7.43	0.00	0.14	655	33.83
15.250	0.06	6.99	7.27	0.00	0.14	640	33.82
15.300	0.06	6.83	7.11	0.00	0.14	626	33.81
15.350	0.06	6.68	6.95	0.00	0.14	612	33.80
15.400	0.06	6.54	6.80	0.00	0.13	598	33.79
15.450	0.06	6.40	6.65	0.00	0.13	585	33.78
15.500	0.06	6.26	6.51	0.00	0.13	572	33.77
15.550	0.06	6.12	6.37	0.00	0.12	560	33.77
15.600	0.06	5.99	6.23	0.00	0.12	548	33.76
15.650	0.05	5.86	6.10	0.00	0.12	536	33.75
15.700	0.05	5.74	5.97	0.00	0.12	524	33.74
15.750	0.05	5.62	5.84	0.00	0.11	513	33.74
15.800	0.05	5.50	5.72	0.00	0.11	502	33.73
15.850	0.05	5.38	5.60	0.00	0.11	492	33.72
15.900	0.05	5.27	5.48	0.00	0.11	481	33.72
15.950	0.05	5.15	5.36	0.00	0.10	471	33.71
16.000	0.05	5.05	5.25	0.00	0.10	461	33.70
16.050	0.05	4.94	5.14	0.00	0.10	451	33.70
16.100	0.05	4.83	5.03	0.00	0.10	442	33.69
16.150	0.05	4.73	4.93	0.00	0.10	433	33.68
16.200	0.04	4.64	4.82	0.00	0.09	424	33.68
16.250	0.04	4.54	4.72	0.00	0.09	415	33.67
16.300	0.04	4.45	4.63	0.00	0.09	407	33.67
16.350	0.04	4.36	4.54	0.00	0.09	398	33.66
16.400	0.04	4.27	4.45	0.00	0.09	390	33.66
16.450	0.04	4.19	4.36	0.00	0.08	383	33.65
16.500	0.04	4.11	4.27	0.00	0.08	375	33.65
16.550	0.04	4.03	4.19	0.00	0.08	368	33.64
16.600	0.04	3.95	4.11	0.00	0.08	361	33.64
16.650	0.04	3.87	4.03	0.00	0.08	354	33.63
16.700	0.04	3.80	3.96	0.00	0.08	347	33.63
16.750	0.04	3.73	3.88	0.00	0.08	341	33.62

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.800	0.04	3.66	3.81	0.00	0.07	335	33.62
16.850	0.04	3.59	3.74	0.00	0.07	329	33.62
16.900	0.04	3.53	3.67	0.00	0.07	323	33.61
16.950	0.04	3.47	3.61	0.00	0.07	317	33.61
17.000	0.04	3.40	3.54	0.00	0.07	311	33.60
17.050	0.04	3.34	3.48	0.00	0.07	306	33.60
17.100	0.04	3.28	3.42	0.00	0.07	300	33.60
17.150	0.04	3.23	3.36	0.00	0.07	295	33.59
17.200	0.04	3.17	3.30	0.00	0.06	290	33.59
17.250	0.04	3.12	3.24	0.00	0.06	285	33.59
17.300	0.04	3.06	3.19	0.00	0.06	280	33.58
17.350	0.03	3.01	3.13	0.00	0.06	275	33.58
17.400	0.03	2.96	3.08	0.00	0.06	270	33.58
17.450	0.03	2.91	3.03	0.00	0.06	266	33.57
17.500	0.03	2.86	2.98	0.00	0.06	261	33.57
17.550	0.03	2.81	2.93	0.00	0.06	257	33.57
17.600	0.03	2.77	2.88	0.00	0.06	253	33.57
17.650	0.03	2.72	2.83	0.00	0.06	249	33.56
17.700	0.03	2.68	2.78	0.00	0.05	245	33.56
17.750	0.03	2.63	2.74	0.00	0.05	241	33.56
17.800	0.03	2.59	2.69	0.00	0.05	237	33.56
17.850	0.03	2.55	2.65	0.00	0.05	233	33.55
17.900	0.03	2.51	2.61	0.00	0.05	229	33.55
17.950	0.03	2.46	2.56	0.00	0.05	225	33.55
18.000	0.03	2.42	2.52	0.00	0.05	222	33.55
18.050	0.03	2.39	2.48	0.00	0.05	218	33.54
18.100	0.03	2.35	2.44	0.00	0.05	215	33.54
18.150	0.03	2.31	2.40	0.00	0.05	211	33.54
18.200	0.03	2.27	2.37	0.00	0.05	208	33.54
18.250	0.03	2.24	2.33	0.00	0.05	205	33.53
18.300	0.03	2.21	2.29	0.00	0.04	202	33.53
18.350	0.03	2.17	2.26	0.00	0.04	199	33.53
18.400	0.03	2.14	2.23	0.00	0.04	196	33.53
18.450	0.03	2.11	2.20	0.00	0.04	193	33.53
18.500	0.03	2.08	2.17	0.00	0.04	190	33.52
18.550	0.03	2.05	2.14	0.00	0.04	188	33.52
18.600	0.03	2.02	2.11	0.00	0.04	185	33.52
18.650	0.03	2.00	2.08	0.00	0.04	183	33.52
18.700	0.03	1.97	2.05	0.00	0.04	180	33.52
18.750	0.03	1.95	2.02	0.00	0.04	178	33.52
18.800	0.03	1.92	2.00	0.00	0.04	176	33.52
18.850	0.03	1.90	1.97	0.00	0.04	173	33.51

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.900	0.03	1.87	1.95	0.00	0.04	171	33.51
18.950	0.03	1.85	1.93	0.00	0.04	169	33.51
19.000	0.03	1.83	1.90	0.00	0.04	167	33.51
19.050	0.03	1.81	1.88	0.00	0.04	165	33.51
19.100	0.03	1.79	1.86	0.00	0.04	163	33.51
19.150	0.03	1.77	1.84	0.00	0.04	161	33.51
19.200	0.03	1.75	1.82	0.00	0.04	160	33.50
19.250	0.03	1.73	1.80	0.00	0.03	158	33.50
19.300	0.03	1.71	1.78	0.00	0.03	156	33.50
19.350	0.02	1.69	1.76	0.00	0.03	154	33.50
19.400	0.02	1.67	1.74	0.00	0.03	153	33.50
19.450	0.02	1.65	1.72	0.00	0.03	151	33.50
19.500	0.02	1.64	1.70	0.00	0.03	150	33.50
19.550	0.02	1.62	1.69	0.00	0.03	148	33.50
19.600	0.02	1.60	1.67	0.00	0.03	147	33.50
19.650	0.02	1.59	1.65	0.00	0.03	145	33.50
19.700	0.02	1.57	1.64	0.00	0.03	144	33.49
19.750	0.02	1.56	1.62	0.00	0.03	142	33.49
19.800	0.02	1.54	1.61	0.00	0.03	141	33.49
19.850	0.02	1.53	1.59	0.00	0.03	140	33.49
19.900	0.02	1.52	1.58	0.00	0.03	138	33.49
19.950	0.02	1.50	1.56	0.00	0.03	137	33.49
20.000	0.02	1.49	1.55	0.00	0.03	136	33.49
20.050	0.02	1.47	1.53	0.00	0.03	135	33.49
20.100	0.02	1.46	1.52	0.00	0.03	134	33.49
20.150	0.02	1.45	1.51	0.00	0.03	132	33.49
20.200	0.02	1.44	1.49	0.00	0.03	131	33.49
20.250	0.02	1.42	1.48	0.00	0.03	130	33.49
20.300	0.02	1.41	1.47	0.00	0.03	129	33.48
20.350	0.02	1.40	1.46	0.00	0.03	128	33.48
20.400	0.02	1.39	1.45	0.00	0.03	127	33.48
20.450	0.02	1.38	1.44	0.00	0.03	126	33.48
20.500	0.02	1.37	1.42	0.00	0.03	125	33.48
20.550	0.02	1.36	1.41	0.00	0.03	124	33.48
20.600	0.02	1.35	1.40	0.00	0.03	123	33.48
20.650	0.02	1.34	1.39	0.00	0.03	122	33.48
20.700	0.02	1.33	1.38	0.00	0.03	121	33.48
20.750	0.02	1.32	1.37	0.00	0.03	120	33.48
20.800	0.02	1.31	1.36	0.00	0.03	120	33.48
20.850	0.02	1.30	1.35	0.00	0.03	119	33.48
20.900	0.02	1.29	1.34	0.00	0.03	118	33.48
20.950	0.02	1.28	1.33	0.00	0.03	117	33.48

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.000	0.02	1.27	1.32	0.00	0.03	116	33.48
21.050	0.02	1.26	1.31	0.00	0.03	115	33.48
21.100	0.02	1.25	1.31	0.00	0.03	115	33.48
21.150	0.02	1.25	1.30	0.00	0.03	114	33.47
21.200	0.02	1.24	1.29	0.00	0.03	113	33.47
21.250	0.02	1.23	1.28	0.00	0.02	112	33.47
21.300	0.02	1.22	1.27	0.00	0.02	112	33.47
21.350	0.02	1.21	1.26	0.00	0.02	111	33.47
21.400	0.02	1.21	1.26	0.00	0.02	110	33.47
21.450	0.02	1.20	1.25	0.00	0.02	110	33.47
21.500	0.02	1.19	1.24	0.00	0.02	109	33.47
21.550	0.02	1.18	1.23	0.00	0.02	108	33.47
21.600	0.02	1.18	1.22	0.00	0.02	107	33.47
21.650	0.02	1.17	1.22	0.00	0.02	107	33.47
21.700	0.02	1.16	1.21	0.00	0.02	106	33.47
21.750	0.02	1.15	1.20	0.00	0.02	106	33.47
21.800	0.02	1.15	1.19	0.00	0.02	105	33.47
21.850	0.02	1.14	1.19	0.00	0.02	104	33.47
21.900	0.02	1.13	1.18	0.00	0.02	104	33.47
21.950	0.02	1.13	1.17	0.00	0.02	103	33.47
22.000	0.02	1.12	1.17	0.00	0.02	102	33.47
22.050	0.02	1.11	1.16	0.00	0.02	102	33.47
22.100	0.02	1.11	1.15	0.00	0.02	101	33.47
22.150	0.02	1.10	1.15	0.00	0.02	101	33.47
22.200	0.02	1.09	1.14	0.00	0.02	100	33.47
22.250	0.02	1.09	1.13	0.00	0.02	99	33.47
22.300	0.02	1.08	1.13	0.00	0.02	99	33.46
22.350	0.02	1.08	1.12	0.00	0.02	98	33.46
22.400	0.02	1.07	1.11	0.00	0.02	98	33.46
22.450	0.02	1.06	1.11	0.00	0.02	97	33.46
22.500	0.02	1.06	1.10	0.00	0.02	97	33.46
22.550	0.02	1.05	1.09	0.00	0.02	96	33.46
22.600	0.02	1.05	1.09	0.00	0.02	96	33.46
22.650	0.02	1.04	1.08	0.00	0.02	95	33.46
22.700	0.02	1.03	1.08	0.00	0.02	94	33.46
22.750	0.02	1.03	1.07	0.00	0.02	94	33.46
22.800	0.02	1.02	1.06	0.00	0.02	93	33.46
22.850	0.02	1.02	1.06	0.00	0.02	93	33.46
22.900	0.02	1.01	1.05	0.00	0.02	92	33.46
22.950	0.02	1.00	1.05	0.00	0.02	92	33.46
23.000	0.02	1.00	1.04	0.00	0.02	91	33.46
23.050	0.02	0.99	1.03	0.00	0.02	91	33.46

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.100	0.02	0.99	1.03	0.00	0.02	90	33.46
23.150	0.02	0.98	1.02	0.00	0.02	90	33.46
23.200	0.02	0.98	1.02	0.00	0.02	89	33.46
23.250	0.02	0.97	1.01	0.00	0.02	89	33.46
23.300	0.02	0.97	1.00	0.00	0.02	88	33.46
23.350	0.02	0.96	1.00	0.00	0.02	88	33.46
23.400	0.02	0.95	0.99	0.00	0.02	87	33.46
23.450	0.02	0.95	0.99	0.00	0.02	87	33.46
23.500	0.02	0.94	0.98	0.00	0.02	86	33.46
23.550	0.02	0.94	0.98	0.00	0.02	86	33.46
23.600	0.02	0.93	0.97	0.00	0.02	85	33.46
23.650	0.02	0.93	0.96	0.00	0.02	85	33.46
23.700	0.02	0.92	0.96	0.00	0.02	84	33.46
23.750	0.02	0.92	0.95	0.00	0.02	84	33.45
23.800	0.02	0.91	0.95	0.00	0.02	83	33.45
23.850	0.02	0.91	0.94	0.00	0.02	83	33.45
23.900	0.02	0.90	0.94	0.00	0.02	82	33.45
23.950	0.02	0.90	0.93	0.00	0.02	82	33.45
24.000	0.02	0.89	0.93	0.00	0.02	81	33.45
24.050	0.01	0.88	0.91	0.00	0.02	80	33.45
24.100	0.00	0.86	0.89	0.00	0.02	78	33.45
24.150	0.00	0.83	0.86	0.00	0.02	75	33.45
24.200	0.00	0.79	0.83	0.00	0.02	73	33.45
24.250	0.00	0.76	0.79	0.00	0.02	70	33.45
24.300	0.00	0.73	0.76	0.00	0.01	67	33.44
24.350	0.00	0.71	0.73	0.00	0.01	64	33.44
24.400	0.00	0.68	0.71	0.00	0.01	62	33.44
24.450	0.00	0.65	0.68	0.00	0.01	60	33.44
24.500	0.00	0.63	0.65	0.00	0.01	57	33.44
24.550	0.00	0.60	0.63	0.00	0.01	55	33.44
24.600	0.00	0.58	0.60	0.00	0.01	53	33.43
24.650	0.00	0.56	0.58	0.00	0.01	51	33.43
24.700	0.00	0.53	0.56	0.00	0.01	49	33.43
24.750	0.00	0.51	0.53	0.00	0.01	47	33.43
24.800	0.00	0.49	0.51	0.00	0.01	45	33.43
24.850	0.00	0.47	0.49	0.00	0.01	43	33.43
24.900	0.00	0.46	0.47	0.00	0.01	42	33.43
24.950	0.00	0.44	0.46	0.00	0.01	40	33.43
25.000	0.00	0.42	0.44	0.00	0.01	38	33.43
25.050	0.00	0.40	0.42	0.00	0.01	37	33.42
25.100	0.00	0.39	0.40	0.00	0.01	36	33.42
25.150	0.00	0.37	0.39	0.00	0.01	34	33.42

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.200	0.00	0.36	0.37	0.00	0.01	33	33.42
25.250	0.00	0.35	0.36	0.00	0.01	32	33.42
25.300	0.00	0.33	0.35	0.00	0.01	30	33.42
25.350	0.00	0.32	0.33	0.00	0.01	29	33.42
25.400	0.00	0.31	0.32	0.00	0.01	28	33.42
25.450	0.00	0.29	0.31	0.00	0.01	27	33.42
25.500	0.00	0.28	0.29	0.00	0.01	26	33.42
25.550	0.00	0.27	0.28	0.00	0.01	25	33.42
25.600	0.00	0.26	0.27	0.00	0.01	24	33.42
25.650	0.00	0.25	0.26	0.00	0.01	23	33.42
25.700	0.00	0.24	0.25	0.00	0.00	22	33.41
25.750	0.00	0.23	0.24	0.00	0.00	21	33.41
25.800	0.00	0.22	0.23	0.00	0.00	20	33.41
25.850	0.00	0.21	0.22	0.00	0.00	20	33.41
25.900	0.00	0.21	0.21	0.00	0.00	19	33.41
25.950	0.00	0.20	0.21	0.00	0.00	18	33.41
26.000	0.00	0.19	0.20	0.00	0.00	17	33.41
26.050	0.00	0.18	0.19	0.00	0.00	17	33.41
26.100	0.00	0.18	0.18	0.00	0.00	16	33.41
26.150	0.00	0.17	0.18	0.00	0.00	15	33.41
26.200	0.00	0.16	0.17	0.00	0.00	15	33.41
26.250	0.00	0.16	0.16	0.00	0.00	14	33.41
26.300	0.00	0.15	0.16	0.00	0.00	14	33.41
26.350	0.00	0.14	0.15	0.00	0.00	13	33.41
26.400	0.00	0.14	0.14	0.00	0.00	13	33.41
26.450	0.00	0.13	0.14	0.00	0.00	12	33.41
26.500	0.00	0.13	0.13	0.00	0.00	12	33.41
26.550	0.00	0.12	0.13	0.00	0.00	11	33.41
26.600	0.00	0.12	0.12	0.00	0.00	11	33.41
26.650	0.00	0.11	0.12	0.00	0.00	10	33.41
26.700	0.00	0.11	0.11	0.00	0.00	10	33.41
26.750	0.00	0.10	0.11	0.00	0.00	10	33.41
26.800	0.00	0.10	0.10	0.00	0.00	9	33.41
26.850	0.00	0.10	0.10	0.00	0.00	9	33.41
26.900	0.00	0.09	0.10	0.00	0.00	9	33.41
26.950	0.00	0.09	0.09	0.00	0.00	8	33.41
27.000	0.00	0.09	0.09	0.00	0.00	8	33.41
27.050	0.00	0.08	0.09	0.00	0.00	8	33.40
27.100	0.00	0.08	0.08	0.00	0.00	7	33.40
27.150	0.00	0.08	0.08	0.00	0.00	7	33.40
27.200	0.00	0.07	0.08	0.00	0.00	7	33.40
27.250	0.00	0.07	0.07	0.00	0.00	6	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.300	0.00	0.07	0.07	0.00	0.00	6	33.40
27.350	0.00	0.07	0.07	0.00	0.00	6	33.40
27.400	0.00	0.06	0.07	0.00	0.00	6	33.40
27.450	0.00	0.06	0.06	0.00	0.00	6	33.40
27.500	0.00	0.06	0.06	0.00	0.00	5	33.40
27.550	0.00	0.06	0.06	0.00	0.00	5	33.40
27.600	0.00	0.05	0.06	0.00	0.00	5	33.40
27.650	0.00	0.05	0.05	0.00	0.00	5	33.40
27.700	0.00	0.05	0.05	0.00	0.00	5	33.40
27.750	0.00	0.05	0.05	0.00	0.00	4	33.40
27.800	0.00	0.05	0.05	0.00	0.00	4	33.40
27.850	0.00	0.04	0.05	0.00	0.00	4	33.40
27.900	0.00	0.04	0.04	0.00	0.00	4	33.40
27.950	0.00	0.04	0.04	0.00	0.00	4	33.40
28.000	0.00	0.04	0.04	0.00	0.00	4	33.40
28.050	0.00	0.04	0.04	0.00	0.00	3	33.40
28.100	0.00	0.04	0.04	0.00	0.00	3	33.40
28.150	0.00	0.03	0.04	0.00	0.00	3	33.40
28.200	0.00	0.03	0.03	0.00	0.00	3	33.40
28.250	0.00	0.03	0.03	0.00	0.00	3	33.40
28.300	0.00	0.03	0.03	0.00	0.00	3	33.40
28.350	0.00	0.03	0.03	0.00	0.00	3	33.40
28.400	0.00	0.03	0.03	0.00	0.00	3	33.40
28.450	0.00	0.03	0.03	0.00	0.00	2	33.40
28.500	0.00	0.03	0.03	0.00	0.00	2	33.40
28.550	0.00	0.03	0.03	0.00	0.00	2	33.40
28.600	0.00	0.02	0.03	0.00	0.00	2	33.40
28.650	0.00	0.02	0.02	0.00	0.00	2	33.40
28.700	0.00	0.02	0.02	0.00	0.00	2	33.40
28.750	0.00	0.02	0.02	0.00	0.00	2	33.40
28.800	0.00	0.02	0.02	0.00	0.00	2	33.40
28.850	0.00	0.02	0.02	0.00	0.00	2	33.40
28.900	0.00	0.02	0.02	0.00	0.00	2	33.40
28.950	0.00	0.02	0.02	0.00	0.00	2	33.40
29.000	0.00	0.02	0.02	0.00	0.00	2	33.40
29.050	0.00	0.02	0.02	0.00	0.00	2	33.40
29.100	0.00	0.02	0.02	0.00	0.00	1	33.40
29.150	0.00	0.02	0.02	0.00	0.00	1	33.40
29.200	0.00	0.02	0.02	0.00	0.00	1	33.40
29.250	0.00	0.01	0.02	0.00	0.00	1	33.40
29.300	0.00	0.01	0.01	0.00	0.00	1	33.40
29.350	0.00	0.01	0.01	0.00	0.00	1	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.400	0.00	0.01	0.01	0.00	0.00	1	33.40
29.450	0.00	0.01	0.01	0.00	0.00	1	33.40
29.500	0.00	0.01	0.01	0.00	0.00	1	33.40
29.550	0.00	0.01	0.01	0.00	0.00	1	33.40
29.600	0.00	0.01	0.01	0.00	0.00	1	33.40
29.650	0.00	0.01	0.01	0.00	0.00	1	33.40
29.700	0.00	0.01	0.01	0.00	0.00	1	33.40
29.750	0.00	0.01	0.01	0.00	0.00	1	33.40
29.800	0.00	0.01	0.01	0.00	0.00	1	33.40
29.850	0.00	0.01	0.01	0.00	0.00	1	33.40
29.900	0.00	0.01	0.01	0.00	0.00	1	33.40
29.950	0.00	0.01	0.01	0.00	0.00	1	33.40
30.000	0.00	0.01	0.01	0.00	0.00	1	33.40
30.050	0.00	0.01	0.01	0.00	0.00	1	33.40
30.100	0.00	0.01	0.01	0.00	0.00	1	33.40
30.150	0.00	0.01	0.01	0.00	0.00	1	33.40
30.200	0.00	0.01	0.01	0.00	0.00	1	33.40
30.250	0.00	0.01	0.01	0.00	0.00	1	33.40
30.300	0.00	0.01	0.01	0.00	0.00	1	33.40
30.350	0.00	0.01	0.01	0.00	0.00	1	33.40
30.400	0.00	0.01	0.01	0.00	0.00	1	33.40
30.450	0.00	0.01	0.01	0.00	0.00	1	33.40
30.500	0.00	0.01	0.01	0.00	0.00	0	33.40
30.550	0.00	0.01	0.01	0.00	0.00	0	33.40
30.600	0.00	0.00	0.01	0.00	0.00	0	33.40
30.650	0.00	0.00	0.00	0.00	0.00	0	33.40
30.700	0.00	0.00	0.00	0.00	0.00	0	33.40
30.750	0.00	0.00	0.00	0.00	0.00	0	33.40
30.800	0.00	0.00	0.00	0.00	0.00	0	33.40
30.850	0.00	0.00	0.00	0.00	0.00	0	33.40
30.900	0.00	0.00	0.00	0.00	0.00	0	33.40
30.950	0.00	0.00	0.00	0.00	0.00	0	33.40
31.000	0.00	0.00	0.00	0.00	0.00	0	33.40
31.050	0.00	0.00	0.00	0.00	0.00	0	33.40
31.100	0.00	0.00	0.00	0.00	0.00	0	33.40
31.150	0.00	0.00	0.00	0.00	0.00	0	33.40
31.200	0.00	0.00	0.00	0.00	0.00	0	33.40
31.250	0.00	0.00	0.00	0.00	0.00	0	33.40
31.300	0.00	0.00	0.00	0.00	0.00	0	33.40
31.350	0.00	0.00	0.00	0.00	0.00	0	33.40
31.400	0.00	0.00	0.00	0.00	0.00	0	33.40
31.450	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
31.500	0.00	0.00	0.00	0.00	0.00	0	33.40
31.550	0.00	0.00	0.00	0.00	0.00	0	33.40
31.600	0.00	0.00	0.00	0.00	0.00	0	33.40
31.650	0.00	0.00	0.00	0.00	0.00	0	33.40
31.700	0.00	0.00	0.00	0.00	0.00	0	33.40
31.750	0.00	0.00	0.00	0.00	0.00	0	33.40
31.800	0.00	0.00	0.00	0.00	0.00	0	33.40
31.850	0.00	0.00	0.00	0.00	0.00	0	33.40
31.900	0.00	0.00	0.00	0.00	0.00	0	33.40
31.950	0.00	0.00	0.00	0.00	0.00	0	33.40
32.000	0.00	0.00	0.00	0.00	0.00	0	33.40
32.050	0.00	0.00	0.00	0.00	0.00	0	33.40
32.100	0.00	0.00	0.00	0.00	0.00	0	33.40
32.150	0.00	0.00	0.00	0.00	0.00	0	33.40
32.200	0.00	0.00	0.00	0.00	0.00	0	33.40
32.250	0.00	0.00	0.00	0.00	0.00	0	33.40
32.300	0.00	0.00	0.00	0.00	0.00	0	33.40
32.350	0.00	0.00	0.00	0.00	0.00	0	33.40
32.400	0.00	0.00	0.00	0.00	0.00	0	33.40
32.450	0.00	0.00	0.00	0.00	0.00	0	33.40
32.500	0.00	0.00	0.00	0.00	0.00	0	33.40
32.550	0.00	0.00	0.00	0.00	0.00	0	33.40
32.600	0.00	0.00	0.00	0.00	0.00	0	33.40
32.650	0.00	0.00	0.00	0.00	0.00	0	33.40
32.700	0.00	0.00	0.00	0.00	0.00	0	33.40
32.750	0.00	0.00	0.00	0.00	0.00	0	33.40
32.800	0.00	0.00	0.00	0.00	0.00	0	33.40
32.850	0.00	0.00	0.00	0.00	0.00	0	33.40
32.900	0.00	0.00	0.00	0.00	0.00	0	33.40
32.950	0.00	0.00	0.00	0.00	0.00	0	33.40
33.000	0.00	0.00	0.00	0.00	0.00	0	33.40
33.050	0.00	0.00	0.00	0.00	0.00	0	33.40
33.100	0.00	0.00	0.00	0.00	0.00	0	33.40
33.150	0.00	0.00	0.00	0.00	0.00	0	33.40
33.200	0.00	0.00	0.00	0.00	0.00	0	33.40
33.250	0.00	0.00	0.00	0.00	0.00	0	33.40
33.300	0.00	0.00	0.00	0.00	0.00	0	33.40
33.350	0.00	0.00	0.00	0.00	0.00	0	33.40
33.400	0.00	0.00	0.00	0.00	0.00	0	33.40
33.450	0.00	0.00	0.00	0.00	0.00	0	33.40
33.500	0.00	0.00	0.00	0.00	0.00	0	33.40
33.550	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
33.600	0.00	0.00	0.00	0.00	0.00	0	33.40
33.650	0.00	0.00	0.00	0.00	0.00	0	33.40
33.700	0.00	0.00	0.00	0.00	0.00	0	33.40
33.750	0.00	0.00	0.00	0.00	0.00	0	33.40
33.800	0.00	0.00	0.00	0.00	0.00	0	33.40
33.850	0.00	0.00	0.00	0.00	0.00	0	33.40
33.900	0.00	0.00	0.00	0.00	0.00	0	33.40
33.950	0.00	0.00	0.00	0.00	0.00	0	33.40
34.000	0.00	0.00	0.00	0.00	0.00	0	33.40
34.050	0.00	0.00	0.00	0.00	0.00	0	33.40
34.100	0.00	0.00	0.00	0.00	0.00	0	33.40
34.150	0.00	0.00	0.00	0.00	0.00	0	33.40
34.200	0.00	0.00	0.00	0.00	0.00	0	33.40
34.250	0.00	0.00	0.00	0.00	0.00	0	33.40
34.300	0.00	0.00	0.00	0.00	0.00	0	33.40
34.350	0.00	0.00	0.00	0.00	0.00	0	33.40
34.400	0.00	0.00	0.00	0.00	0.00	0	33.40
34.450	0.00	0.00	0.00	0.00	0.00	0	33.40
34.500	0.00	0.00	0.00	0.00	0.00	0	33.40
34.550	0.00	0.00	0.00	0.00	0.00	0	33.40
34.600	0.00	0.00	0.00	0.00	0.00	0	33.40
34.650	0.00	0.00	0.00	0.00	0.00	0	33.40
34.700	0.00	0.00	0.00	0.00	0.00	0	33.40
34.750	0.00	0.00	0.00	0.00	0.00	0	33.40
34.800	0.00	0.00	0.00	0.00	0.00	0	33.40
34.850	0.00	0.00	0.00	0.00	0.00	0	33.40
34.900	0.00	0.00	0.00	0.00	0.00	0	33.40
34.950	0.00	0.00	0.00	0.00	0.00	0	33.40
35.000	0.00	0.00	0.00	0.00	0.00	0	33.40
35.050	0.00	0.00	0.00	0.00	0.00	0	33.40
35.100	0.00	0.00	0.00	0.00	0.00	0	33.40
35.150	0.00	0.00	0.00	0.00	0.00	0	33.40
35.200	0.00	0.00	0.00	0.00	0.00	0	33.40
35.250	0.00	0.00	0.00	0.00	0.00	0	33.40
35.300	0.00	0.00	0.00	0.00	0.00	0	33.40
35.350	0.00	0.00	0.00	0.00	0.00	0	33.40
35.400	0.00	0.00	0.00	0.00	0.00	0	33.40
35.450	0.00	0.00	0.00	0.00	0.00	0	33.40
35.500	0.00	0.00	0.00	0.00	0.00	0	33.40
35.550	0.00	0.00	0.00	0.00	0.00	0	33.40
35.600	0.00	0.00	0.00	0.00	0.00	0	33.40
35.650	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
35.700	0.00	0.00	0.00	0.00	0.00	0	33.40
35.750	0.00	0.00	0.00	0.00	0.00	0	33.40
35.800	0.00	0.00	0.00	0.00	0.00	0	33.40
35.850	0.00	0.00	0.00	0.00	0.00	0	33.40
35.900	0.00	0.00	0.00	0.00	0.00	0	33.40
35.950	0.00	0.00	0.00	0.00	0.00	0	33.40
36.000	0.00	0.00	0.00	0.00	0.00	0	33.40

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	33.40
0.050	0.00	0.00	0.00	0.00	0.00	0	33.40
0.100	0.00	0.00	0.00	0.00	0.00	0	33.40
0.150	0.00	0.00	0.00	0.00	0.00	0	33.40
0.200	0.00	0.00	0.00	0.00	0.00	0	33.40
0.250	0.00	0.00	0.00	0.00	0.00	0	33.40
0.300	0.00	0.00	0.00	0.00	0.00	0	33.40
0.350	0.00	0.00	0.00	0.00	0.00	0	33.40
0.400	0.00	0.00	0.00	0.00	0.00	0	33.40
0.450	0.00	0.00	0.00	0.00	0.00	0	33.40
0.500	0.00	0.00	0.00	0.00	0.00	0	33.40
0.550	0.00	0.00	0.00	0.00	0.00	0	33.40
0.600	0.00	0.00	0.00	0.00	0.00	0	33.40
0.650	0.00	0.00	0.00	0.00	0.00	0	33.40
0.700	0.00	0.00	0.00	0.00	0.00	0	33.40
0.750	0.00	0.00	0.00	0.00	0.00	0	33.40
0.800	0.00	0.00	0.00	0.00	0.00	0	33.40
0.850	0.00	0.00	0.00	0.00	0.00	0	33.40
0.900	0.00	0.00	0.00	0.00	0.00	0	33.40
0.950	0.00	0.00	0.00	0.00	0.00	0	33.40
1.000	0.00	0.00	0.00	0.00	0.00	0	33.40
1.050	0.00	0.00	0.00	0.00	0.00	0	33.40
1.100	0.00	0.00	0.00	0.00	0.00	0	33.40
1.150	0.00	0.00	0.00	0.00	0.00	0	33.40
1.200	0.00	0.00	0.00	0.00	0.00	0	33.40
1.250	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
1.300	0.00	0.00	0.00	0.00	0.00	0	33.40
1.350	0.00	0.00	0.00	0.00	0.00	0	33.40
1.400	0.00	0.00	0.00	0.00	0.00	0	33.40
1.450	0.00	0.00	0.00	0.00	0.00	0	33.40
1.500	0.00	0.00	0.00	0.00	0.00	0	33.40
1.550	0.00	0.00	0.00	0.00	0.00	0	33.40
1.600	0.00	0.00	0.00	0.00	0.00	0	33.40
1.650	0.00	0.00	0.00	0.00	0.00	0	33.40
1.700	0.00	0.00	0.00	0.00	0.00	0	33.40
1.750	0.00	0.00	0.00	0.00	0.00	0	33.40
1.800	0.00	0.00	0.00	0.00	0.00	0	33.40
1.850	0.00	0.00	0.00	0.00	0.00	0	33.40
1.900	0.00	0.00	0.00	0.00	0.00	0	33.40
1.950	0.00	0.00	0.00	0.00	0.00	0	33.40
2.000	0.00	0.00	0.00	0.00	0.00	0	33.40
2.050	0.00	0.00	0.00	0.00	0.00	0	33.40
2.100	0.00	0.00	0.00	0.00	0.00	0	33.40
2.150	0.00	0.00	0.00	0.00	0.00	0	33.40
2.200	0.00	0.00	0.00	0.00	0.00	0	33.40
2.250	0.00	0.00	0.00	0.00	0.00	0	33.40
2.300	0.00	0.00	0.00	0.00	0.00	0	33.40
2.350	0.00	0.00	0.00	0.00	0.00	0	33.40
2.400	0.00	0.00	0.00	0.00	0.00	0	33.40
2.450	0.00	0.00	0.00	0.00	0.00	0	33.40
2.500	0.00	0.00	0.00	0.00	0.00	0	33.40
2.550	0.00	0.00	0.00	0.00	0.00	0	33.40
2.600	0.00	0.00	0.00	0.00	0.00	0	33.40
2.650	0.00	0.00	0.00	0.00	0.00	0	33.40
2.700	0.00	0.00	0.00	0.00	0.00	0	33.40
2.750	0.00	0.00	0.00	0.00	0.00	0	33.40
2.800	0.00	0.00	0.00	0.00	0.00	0	33.40
2.850	0.00	0.00	0.00	0.00	0.00	0	33.40
2.900	0.00	0.00	0.00	0.00	0.00	0	33.40
2.950	0.00	0.00	0.00	0.00	0.00	0	33.40
3.000	0.00	0.00	0.00	0.00	0.00	0	33.40
3.050	0.00	0.00	0.00	0.00	0.00	0	33.40
3.100	0.00	0.00	0.00	0.00	0.00	0	33.40
3.150	0.00	0.00	0.00	0.00	0.00	0	33.40
3.200	0.00	0.00	0.00	0.00	0.00	0	33.40
3.250	0.00	0.00	0.00	0.00	0.00	0	33.40
3.300	0.00	0.00	0.00	0.00	0.00	0	33.40
3.350	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
3.400	0.00	0.00	0.00	0.00	0.00	0	33.40
3.450	0.00	0.00	0.00	0.00	0.00	0	33.40
3.500	0.00	0.00	0.00	0.00	0.00	0	33.40
3.550	0.00	0.00	0.00	0.00	0.00	0	33.40
3.600	0.00	0.00	0.00	0.00	0.00	0	33.40
3.650	0.00	0.00	0.00	0.00	0.00	0	33.40
3.700	0.00	0.00	0.00	0.00	0.00	0	33.40
3.750	0.00	0.00	0.00	0.00	0.00	0	33.40
3.800	0.00	0.00	0.00	0.00	0.00	0	33.40
3.850	0.00	0.01	0.01	0.00	0.00	1	33.40
3.900	0.00	0.01	0.01	0.00	0.00	1	33.40
3.950	0.00	0.01	0.01	0.00	0.00	1	33.40
4.000	0.00	0.02	0.02	0.00	0.00	2	33.40
4.050	0.00	0.02	0.02	0.00	0.00	2	33.40
4.100	0.00	0.03	0.03	0.00	0.00	2	33.40
4.150	0.00	0.03	0.03	0.00	0.00	3	33.40
4.200	0.00	0.04	0.04	0.00	0.00	3	33.40
4.250	0.00	0.04	0.04	0.00	0.00	4	33.40
4.300	0.00	0.05	0.05	0.00	0.00	4	33.40
4.350	0.00	0.05	0.06	0.00	0.00	5	33.40
4.400	0.00	0.06	0.06	0.00	0.00	6	33.40
4.450	0.01	0.07	0.07	0.00	0.00	6	33.40
4.500	0.01	0.08	0.08	0.00	0.00	7	33.40
4.550	0.01	0.08	0.09	0.00	0.00	8	33.41
4.600	0.01	0.09	0.10	0.00	0.00	8	33.41
4.650	0.01	0.10	0.11	0.00	0.00	9	33.41
4.700	0.01	0.11	0.11	0.00	0.00	10	33.41
4.750	0.01	0.12	0.12	0.00	0.00	11	33.41
4.800	0.01	0.13	0.13	0.00	0.00	12	33.41
4.850	0.01	0.14	0.14	0.00	0.00	13	33.41
4.900	0.01	0.15	0.15	0.00	0.00	14	33.41
4.950	0.01	0.16	0.16	0.00	0.00	14	33.41
5.000	0.01	0.17	0.18	0.00	0.00	15	33.41
5.050	0.01	0.18	0.19	0.00	0.00	16	33.41
5.100	0.01	0.19	0.20	0.00	0.00	17	33.41
5.150	0.01	0.20	0.21	0.00	0.00	18	33.41
5.200	0.01	0.21	0.22	0.00	0.00	19	33.41
5.250	0.01	0.22	0.23	0.00	0.00	20	33.41
5.300	0.01	0.24	0.24	0.00	0.00	22	33.41
5.350	0.01	0.25	0.26	0.00	0.01	23	33.41
5.400	0.01	0.26	0.27	0.00	0.01	24	33.42
5.450	0.01	0.27	0.28	0.00	0.01	25	33.42

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
5.500	0.01	0.28	0.30	0.00	0.01	26	33.42
5.550	0.01	0.30	0.31	0.00	0.01	27	33.42
5.600	0.01	0.31	0.32	0.00	0.01	28	33.42
5.650	0.01	0.32	0.34	0.00	0.01	30	33.42
5.700	0.01	0.34	0.35	0.00	0.01	31	33.42
5.750	0.01	0.35	0.36	0.00	0.01	32	33.42
5.800	0.01	0.36	0.38	0.00	0.01	33	33.42
5.850	0.01	0.38	0.39	0.00	0.01	34	33.42
5.900	0.02	0.39	0.41	0.00	0.01	36	33.42
5.950	0.02	0.40	0.42	0.00	0.01	37	33.42
6.000	0.02	0.42	0.44	0.00	0.01	38	33.43
6.050	0.02	0.43	0.45	0.00	0.01	40	33.43
6.100	0.02	0.45	0.47	0.00	0.01	41	33.43
6.150	0.02	0.46	0.48	0.00	0.01	42	33.43
6.200	0.02	0.48	0.50	0.00	0.01	44	33.43
6.250	0.02	0.49	0.51	0.00	0.01	45	33.43
6.300	0.02	0.51	0.53	0.00	0.01	47	33.43
6.350	0.02	0.53	0.55	0.00	0.01	48	33.43
6.400	0.02	0.55	0.57	0.00	0.01	50	33.43
6.450	0.02	0.56	0.59	0.00	0.01	51	33.43
6.500	0.02	0.58	0.60	0.00	0.01	53	33.43
6.550	0.02	0.60	0.62	0.00	0.01	55	33.44
6.600	0.02	0.62	0.64	0.00	0.01	57	33.44
6.650	0.02	0.64	0.67	0.00	0.01	58	33.44
6.700	0.02	0.66	0.69	0.00	0.01	60	33.44
6.750	0.02	0.68	0.71	0.00	0.01	62	33.44
6.800	0.03	0.70	0.73	0.00	0.01	64	33.44
6.850	0.03	0.72	0.75	0.00	0.01	66	33.44
6.900	0.03	0.75	0.78	0.00	0.02	68	33.44
6.950	0.03	0.77	0.80	0.00	0.02	70	33.45
7.000	0.03	0.79	0.82	0.00	0.02	72	33.45
7.050	0.03	0.82	0.85	0.00	0.02	75	33.45
7.100	0.03	0.84	0.87	0.00	0.02	77	33.45
7.150	0.03	0.86	0.90	0.00	0.02	79	33.45
7.200	0.03	0.89	0.93	0.00	0.02	81	33.45
7.250	0.03	0.91	0.95	0.00	0.02	84	33.45
7.300	0.03	0.94	0.98	0.00	0.02	86	33.46
7.350	0.03	0.97	1.01	0.00	0.02	88	33.46
7.400	0.03	0.99	1.03	0.00	0.02	91	33.46
7.450	0.03	1.02	1.06	0.00	0.02	93	33.46
7.500	0.04	1.05	1.09	0.00	0.02	96	33.46
7.550	0.04	1.08	1.12	0.00	0.02	99	33.46

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
7.600	0.04	1.11	1.15	0.00	0.02	101	33.47
7.650	0.04	1.14	1.18	0.00	0.02	104	33.47
7.700	0.04	1.17	1.21	0.00	0.02	107	33.47
7.750	0.04	1.20	1.24	0.00	0.02	109	33.47
7.800	0.04	1.23	1.28	0.00	0.02	112	33.47
7.850	0.04	1.26	1.31	0.00	0.03	115	33.48
7.900	0.04	1.29	1.34	0.00	0.03	118	33.48
7.950	0.04	1.32	1.37	0.00	0.03	121	33.48
8.000	0.04	1.35	1.41	0.00	0.03	124	33.48
8.050	0.05	1.39	1.44	0.00	0.03	127	33.48
8.100	0.05	1.42	1.48	0.00	0.03	130	33.48
8.150	0.05	1.45	1.51	0.00	0.03	133	33.49
8.200	0.05	1.49	1.55	0.00	0.03	136	33.49
8.250	0.05	1.53	1.59	0.00	0.03	140	33.49
8.300	0.05	1.57	1.63	0.00	0.03	143	33.49
8.350	0.05	1.61	1.67	0.00	0.03	147	33.50
8.400	0.06	1.65	1.72	0.00	0.03	151	33.50
8.450	0.06	1.69	1.76	0.00	0.03	155	33.50
8.500	0.06	1.74	1.81	0.00	0.04	159	33.50
8.550	0.06	1.78	1.86	0.00	0.04	163	33.51
8.600	0.06	1.83	1.91	0.00	0.04	167	33.51
8.650	0.06	1.88	1.96	0.00	0.04	172	33.51
8.700	0.07	1.93	2.01	0.00	0.04	177	33.52
8.750	0.07	1.98	2.06	0.00	0.04	181	33.52
8.800	0.07	2.04	2.12	0.00	0.04	186	33.52
8.850	0.07	2.09	2.18	0.00	0.04	191	33.53
8.900	0.07	2.15	2.23	0.00	0.04	196	33.53
8.950	0.07	2.20	2.29	0.00	0.04	201	33.53
9.000	0.08	2.26	2.35	0.00	0.05	207	33.54
9.050	0.08	2.32	2.42	0.00	0.05	212	33.54
9.100	0.08	2.38	2.48	0.00	0.05	218	33.54
9.150	0.08	2.44	2.54	0.00	0.05	223	33.55
9.200	0.08	2.51	2.61	0.00	0.05	229	33.55
9.250	0.09	2.57	2.68	0.00	0.05	235	33.55
9.300	0.09	2.64	2.74	0.00	0.05	241	33.56
9.350	0.09	2.70	2.81	0.00	0.05	247	33.56
9.400	0.09	2.77	2.88	0.00	0.06	253	33.57
9.450	0.09	2.84	2.96	0.00	0.06	260	33.57
9.500	0.10	2.91	3.03	0.00	0.06	266	33.57
9.550	0.10	2.98	3.10	0.00	0.06	273	33.58
9.600	0.10	3.06	3.18	0.00	0.06	279	33.58
9.650	0.10	3.13	3.26	0.00	0.06	286	33.59

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
9.700	0.10	3.20	3.33	0.00	0.06	293	33.59
9.750	0.11	3.28	3.41	0.00	0.07	300	33.60
9.800	0.11	3.36	3.49	0.00	0.07	307	33.60
9.850	0.11	3.43	3.57	0.00	0.07	314	33.61
9.900	0.11	3.51	3.65	0.00	0.07	321	33.61
9.950	0.11	3.59	3.74	0.00	0.07	328	33.62
10.000	0.12	3.67	3.82	0.00	0.07	336	33.62
10.050	0.12	3.75	3.91	0.00	0.08	343	33.62
10.100	0.12	3.84	3.99	0.00	0.08	351	33.63
10.150	0.12	3.92	4.08	0.00	0.08	359	33.64
10.200	0.13	4.01	4.18	0.00	0.08	367	33.64
10.250	0.13	4.11	4.28	0.00	0.08	375	33.65
10.300	0.14	4.21	4.38	0.00	0.09	384	33.65
10.350	0.14	4.31	4.48	0.00	0.09	394	33.66
10.400	0.14	4.41	4.59	0.00	0.09	403	33.66
10.450	0.15	4.52	4.70	0.00	0.09	413	33.67
10.500	0.15	4.63	4.82	0.00	0.09	423	33.68
10.550	0.16	4.75	4.94	0.00	0.10	434	33.68
10.600	0.16	4.86	5.06	0.00	0.10	445	33.69
10.650	0.16	4.99	5.19	0.00	0.10	456	33.70
10.700	0.17	5.11	5.32	0.00	0.10	467	33.71
10.750	0.17	5.24	5.45	0.00	0.11	479	33.71
10.800	0.18	5.37	5.58	0.00	0.11	490	33.72
10.850	0.18	5.50	5.72	0.00	0.11	503	33.73
10.900	0.18	5.63	5.86	0.00	0.11	515	33.74
10.950	0.19	5.77	6.01	0.00	0.12	528	33.75
11.000	0.19	5.91	6.15	0.00	0.12	541	33.75
11.050	0.20	6.06	6.31	0.00	0.12	554	33.76
11.100	0.21	6.22	6.47	0.00	0.13	569	33.77
11.150	0.22	6.39	6.65	0.00	0.13	585	33.78
11.200	0.23	6.58	6.85	0.00	0.13	602	33.79
11.250	0.25	6.79	7.06	0.00	0.14	622	33.81
11.300	0.26	7.02	7.30	0.00	0.14	643	33.82
11.350	0.28	7.26	7.56	0.00	0.15	666	33.83
11.400	0.29	7.53	7.83	0.00	0.15	690	33.85
11.450	0.31	7.81	8.12	0.00	0.16	716	33.87
11.500	0.32	8.11	8.44	0.00	0.16	744	33.89
11.550	0.38	8.47	8.81	0.00	0.17	777	33.91
11.600	0.45	8.94	9.29	0.00	0.18	821	33.94
11.650	0.56	9.58	9.95	0.00	0.18	881	33.97
11.700	0.69	10.45	10.84	0.00	0.19	960	34.03
11.750	0.83	11.56	11.98	0.00	0.21	1,061	34.09

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
11.800	0.97	12.92	13.36	0.00	0.22	1,185	34.17
11.850	1.11	14.51	15.00	0.00	0.24	1,330	34.27
11.900	1.26	16.35	16.88	0.00	0.27	1,496	34.38
11.950	1.79	18.82	19.40	0.00	0.29	1,722	34.53
12.000	2.43	22.38	23.03	0.00	0.32	2,047	34.74
12.050	2.61	26.70	27.43	0.00	0.36	2,439	35.01
12.100	2.68	31.20	31.99	0.00	0.40	2,847	35.29
12.150	2.21	35.22	36.08	0.00	0.43	3,213	35.55
12.200	1.59	38.12	39.02	0.00	0.45	3,477	35.75
12.250	1.33	40.10	41.03	0.00	0.47	3,652	35.88
12.300	1.16	41.64	42.59	0.00	0.48	3,795	35.99
12.350	1.01	42.84	43.81	0.00	0.49	3,906	36.07
12.400	0.87	43.74	44.72	0.00	0.49	3,988	36.14
12.450	0.73	44.34	45.33	0.00	0.50	4,043	36.18
12.500	0.58	44.65	45.65	0.00	0.50	4,071	36.20
12.550	0.49	44.72	45.72	0.00	0.50	4,078	36.21
12.600	0.40	44.62	45.61	0.00	0.50	4,068	36.20
12.650	0.37	44.40	45.39	0.00	0.50	4,048	36.18
12.700	0.35	44.13	45.12	0.00	0.49	4,024	36.16
12.750	0.34	43.84	44.82	0.00	0.49	3,997	36.14
12.800	0.32	43.52	44.50	0.00	0.49	3,967	36.12
12.850	0.31	43.17	44.15	0.00	0.49	3,936	36.10
12.900	0.29	42.80	43.77	0.00	0.49	3,902	36.07
12.950	0.28	42.40	43.37	0.00	0.48	3,866	36.04
13.000	0.26	41.98	42.94	0.00	0.48	3,828	36.01
13.050	0.25	41.54	42.49	0.00	0.48	3,786	35.98
13.100	0.24	41.09	42.03	0.00	0.47	3,743	35.95
13.150	0.24	40.62	41.56	0.00	0.47	3,699	35.91
13.200	0.23	40.16	41.09	0.00	0.47	3,657	35.88
13.250	0.23	39.69	40.62	0.00	0.46	3,616	35.85
13.300	0.22	39.23	40.14	0.00	0.46	3,575	35.82
13.350	0.22	38.76	39.67	0.00	0.46	3,533	35.79
13.400	0.22	38.29	39.19	0.00	0.45	3,492	35.76
13.450	0.21	37.82	38.72	0.00	0.45	3,450	35.73
13.500	0.21	37.35	38.24	0.00	0.45	3,407	35.70
13.550	0.20	36.87	37.76	0.00	0.44	3,364	35.66
13.600	0.20	36.40	37.28	0.00	0.44	3,321	35.63
13.650	0.20	35.93	36.80	0.00	0.43	3,278	35.60
13.700	0.19	35.45	36.32	0.00	0.43	3,234	35.57
13.750	0.19	34.98	35.84	0.00	0.43	3,191	35.54
13.800	0.18	34.50	35.35	0.00	0.42	3,148	35.51
13.850	0.18	34.03	34.87	0.00	0.42	3,103	35.47

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
13.900	0.18	33.55	34.38	0.00	0.42	3,059	35.44
13.950	0.17	33.07	33.90	0.00	0.41	3,014	35.41
14.000	0.17	32.59	33.41	0.00	0.41	2,971	35.38
14.050	0.17	32.12	32.93	0.00	0.41	2,928	35.35
14.100	0.16	31.64	32.44	0.00	0.40	2,886	35.32
14.150	0.16	31.16	31.96	0.00	0.40	2,844	35.29
14.200	0.16	30.69	31.48	0.00	0.39	2,802	35.26
14.250	0.16	30.23	31.01	0.00	0.39	2,760	35.23
14.300	0.15	29.76	30.54	0.00	0.39	2,718	35.20
14.350	0.15	29.30	30.07	0.00	0.38	2,676	35.17
14.400	0.15	28.85	29.61	0.00	0.38	2,635	35.14
14.450	0.15	28.39	29.15	0.00	0.38	2,593	35.12
14.500	0.15	27.95	28.69	0.00	0.37	2,552	35.09
14.550	0.14	27.50	28.24	0.00	0.37	2,512	35.06
14.600	0.14	27.06	27.79	0.00	0.37	2,471	35.03
14.650	0.14	26.62	27.34	0.00	0.36	2,431	35.00
14.700	0.14	26.18	26.90	0.00	0.36	2,391	34.98
14.750	0.14	25.75	26.46	0.00	0.35	2,351	34.95
14.800	0.14	25.32	26.02	0.00	0.35	2,311	34.92
14.850	0.13	24.89	25.59	0.00	0.35	2,272	34.90
14.900	0.13	24.47	25.16	0.00	0.34	2,234	34.87
14.950	0.13	24.05	24.73	0.00	0.34	2,196	34.84
15.000	0.13	23.63	24.31	0.00	0.34	2,159	34.82
15.050	0.13	23.22	23.89	0.00	0.33	2,122	34.79
15.100	0.12	22.82	23.47	0.00	0.33	2,086	34.77
15.150	0.12	22.41	23.06	0.00	0.32	2,050	34.74
15.200	0.12	22.01	22.66	0.00	0.32	2,013	34.72
15.250	0.12	21.62	22.25	0.00	0.32	1,977	34.70
15.300	0.12	21.23	21.85	0.00	0.31	1,941	34.67
15.350	0.11	20.84	21.46	0.00	0.31	1,906	34.65
15.400	0.11	20.45	21.07	0.00	0.31	1,871	34.63
15.450	0.11	20.07	20.68	0.00	0.30	1,836	34.60
15.500	0.11	19.69	20.29	0.00	0.30	1,802	34.58
15.550	0.11	19.32	19.91	0.00	0.30	1,768	34.56
15.600	0.10	18.95	19.53	0.00	0.29	1,734	34.53
15.650	0.10	18.58	19.15	0.00	0.29	1,700	34.51
15.700	0.10	18.21	18.78	0.00	0.28	1,667	34.49
15.750	0.10	17.85	18.41	0.00	0.28	1,633	34.47
15.800	0.10	17.49	18.05	0.00	0.28	1,600	34.44
15.850	0.10	17.13	17.68	0.00	0.27	1,567	34.42
15.900	0.09	16.78	17.32	0.00	0.27	1,534	34.40
15.950	0.09	16.43	16.96	0.00	0.27	1,503	34.38

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.000	0.09	16.08	16.61	0.00	0.26	1,472	34.36
16.050	0.09	15.74	16.26	0.00	0.26	1,441	34.34
16.100	0.09	15.41	15.92	0.00	0.25	1,411	34.32
16.150	0.09	15.08	15.58	0.00	0.25	1,381	34.30
16.200	0.08	14.76	15.25	0.00	0.25	1,352	34.28
16.250	0.08	14.44	14.93	0.00	0.24	1,324	34.26
16.300	0.08	14.13	14.61	0.00	0.24	1,295	34.24
16.350	0.08	13.82	14.29	0.00	0.24	1,268	34.23
16.400	0.08	13.52	13.99	0.00	0.23	1,240	34.21
16.450	0.08	13.23	13.68	0.00	0.23	1,213	34.19
16.500	0.08	12.94	13.39	0.00	0.22	1,187	34.17
16.550	0.08	12.65	13.10	0.00	0.22	1,161	34.16
16.600	0.08	12.38	12.81	0.00	0.22	1,136	34.14
16.650	0.08	12.10	12.53	0.00	0.21	1,111	34.12
16.700	0.08	11.83	12.26	0.00	0.21	1,086	34.11
16.750	0.08	11.57	11.99	0.00	0.21	1,062	34.09
16.800	0.07	11.31	11.72	0.00	0.21	1,038	34.08
16.850	0.07	11.05	11.46	0.00	0.20	1,015	34.06
16.900	0.07	10.80	11.20	0.00	0.20	992	34.05
16.950	0.07	10.56	10.95	0.00	0.20	970	34.03
17.000	0.07	10.32	10.70	0.00	0.19	948	34.02
17.050	0.07	10.08	10.46	0.00	0.19	926	34.00
17.100	0.07	9.84	10.22	0.00	0.19	904	33.99
17.150	0.07	9.61	9.98	0.00	0.18	883	33.98
17.200	0.07	9.39	9.75	0.00	0.18	862	33.96
17.250	0.07	9.17	9.52	0.00	0.18	842	33.95
17.300	0.07	8.95	9.30	0.00	0.18	822	33.94
17.350	0.07	8.73	9.08	0.00	0.17	802	33.92
17.400	0.06	8.52	8.86	0.00	0.17	782	33.91
17.450	0.06	8.31	8.65	0.00	0.17	763	33.90
17.500	0.06	8.11	8.44	0.00	0.16	745	33.89
17.550	0.06	7.92	8.24	0.00	0.16	726	33.87
17.600	0.06	7.73	8.04	0.00	0.16	709	33.86
17.650	0.06	7.54	7.85	0.00	0.15	692	33.85
17.700	0.06	7.37	7.66	0.00	0.15	675	33.84
17.750	0.06	7.19	7.49	0.00	0.15	659	33.83
17.800	0.06	7.03	7.31	0.00	0.14	644	33.82
17.850	0.06	6.86	7.14	0.00	0.14	629	33.81
17.900	0.06	6.71	6.98	0.00	0.14	614	33.80
17.950	0.06	6.55	6.82	0.00	0.13	600	33.79
18.000	0.05	6.40	6.66	0.00	0.13	586	33.78
18.050	0.05	6.26	6.51	0.00	0.13	573	33.77

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.100	0.05	6.12	6.37	0.00	0.12	560	33.77
18.150	0.05	5.98	6.23	0.00	0.12	547	33.76
18.200	0.05	5.85	6.09	0.00	0.12	535	33.75
18.250	0.05	5.73	5.96	0.00	0.12	523	33.74
18.300	0.05	5.61	5.83	0.00	0.11	512	33.74
18.350	0.05	5.49	5.71	0.00	0.11	502	33.73
18.400	0.05	5.37	5.59	0.00	0.11	491	33.72
18.450	0.05	5.27	5.48	0.00	0.11	481	33.72
18.500	0.05	5.16	5.37	0.00	0.10	472	33.71
18.550	0.05	5.06	5.26	0.00	0.10	462	33.70
18.600	0.05	4.96	5.16	0.00	0.10	453	33.70
18.650	0.05	4.86	5.06	0.00	0.10	445	33.69
18.700	0.05	4.77	4.97	0.00	0.10	436	33.69
18.750	0.05	4.68	4.87	0.00	0.09	428	33.68
18.800	0.05	4.60	4.78	0.00	0.09	420	33.68
18.850	0.05	4.51	4.70	0.00	0.09	413	33.67
18.900	0.05	4.43	4.61	0.00	0.09	405	33.67
18.950	0.05	4.36	4.53	0.00	0.09	398	33.66
19.000	0.05	4.28	4.46	0.00	0.09	391	33.66
19.050	0.05	4.21	4.38	0.00	0.09	385	33.65
19.100	0.05	4.14	4.31	0.00	0.08	378	33.65
19.150	0.05	4.07	4.24	0.00	0.08	372	33.64
19.200	0.05	4.01	4.17	0.00	0.08	366	33.64
19.250	0.05	3.94	4.10	0.00	0.08	360	33.64
19.300	0.05	3.88	4.04	0.00	0.08	355	33.63
19.350	0.05	3.82	3.97	0.00	0.08	349	33.63
19.400	0.05	3.76	3.91	0.00	0.08	344	33.63
19.450	0.05	3.71	3.86	0.00	0.08	339	33.62
19.500	0.05	3.65	3.80	0.00	0.07	334	33.62
19.550	0.05	3.60	3.74	0.00	0.07	329	33.62
19.600	0.05	3.55	3.69	0.00	0.07	324	33.61
19.650	0.05	3.50	3.64	0.00	0.07	320	33.61
19.700	0.05	3.45	3.59	0.00	0.07	315	33.61
19.750	0.05	3.40	3.54	0.00	0.07	311	33.60
19.800	0.05	3.36	3.49	0.00	0.07	307	33.60
19.850	0.04	3.31	3.45	0.00	0.07	303	33.60
19.900	0.04	3.27	3.40	0.00	0.07	299	33.60
19.950	0.04	3.23	3.36	0.00	0.07	295	33.59
20.000	0.04	3.19	3.32	0.00	0.06	291	33.59
20.050	0.04	3.15	3.27	0.00	0.06	288	33.59
20.100	0.04	3.11	3.23	0.00	0.06	284	33.59
20.150	0.04	3.07	3.20	0.00	0.06	281	33.58

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
20.200	0.04	3.03	3.16	0.00	0.06	277	33.58
20.250	0.04	3.00	3.12	0.00	0.06	274	33.58
20.300	0.04	2.97	3.09	0.00	0.06	271	33.58
20.350	0.04	2.93	3.05	0.00	0.06	268	33.58
20.400	0.04	2.90	3.02	0.00	0.06	265	33.57
20.450	0.04	2.87	2.98	0.00	0.06	262	33.57
20.500	0.04	2.84	2.95	0.00	0.06	259	33.57
20.550	0.04	2.81	2.92	0.00	0.06	257	33.57
20.600	0.04	2.78	2.89	0.00	0.06	254	33.57
20.650	0.04	2.75	2.86	0.00	0.06	251	33.56
20.700	0.04	2.72	2.83	0.00	0.06	249	33.56
20.750	0.04	2.70	2.81	0.00	0.05	246	33.56
20.800	0.04	2.67	2.78	0.00	0.05	244	33.56
20.850	0.04	2.65	2.75	0.00	0.05	242	33.56
20.900	0.04	2.62	2.73	0.00	0.05	239	33.56
20.950	0.04	2.60	2.70	0.00	0.05	237	33.56
21.000	0.04	2.57	2.68	0.00	0.05	235	33.55
21.050	0.04	2.55	2.65	0.00	0.05	233	33.55
21.100	0.04	2.53	2.63	0.00	0.05	231	33.55
21.150	0.04	2.51	2.61	0.00	0.05	229	33.55
21.200	0.04	2.48	2.58	0.00	0.05	227	33.55
21.250	0.04	2.46	2.56	0.00	0.05	225	33.55
21.300	0.04	2.44	2.54	0.00	0.05	223	33.55
21.350	0.04	2.42	2.52	0.00	0.05	221	33.55
21.400	0.04	2.40	2.50	0.00	0.05	220	33.54
21.450	0.04	2.38	2.48	0.00	0.05	218	33.54
21.500	0.04	2.36	2.46	0.00	0.05	216	33.54
21.550	0.04	2.35	2.44	0.00	0.05	214	33.54
21.600	0.04	2.33	2.42	0.00	0.05	213	33.54
21.650	0.04	2.31	2.40	0.00	0.05	211	33.54
21.700	0.04	2.29	2.38	0.00	0.05	209	33.54
21.750	0.04	2.27	2.37	0.00	0.05	208	33.54
21.800	0.04	2.26	2.35	0.00	0.05	206	33.54
21.850	0.04	2.24	2.33	0.00	0.05	205	33.53
21.900	0.04	2.23	2.32	0.00	0.05	203	33.53
21.950	0.04	2.21	2.30	0.00	0.04	202	33.53
22.000	0.04	2.19	2.28	0.00	0.04	200	33.53
22.050	0.04	2.18	2.27	0.00	0.04	199	33.53
22.100	0.04	2.16	2.25	0.00	0.04	198	33.53
22.150	0.04	2.15	2.23	0.00	0.04	196	33.53
22.200	0.04	2.13	2.22	0.00	0.04	195	33.53
22.250	0.04	2.12	2.20	0.00	0.04	194	33.53

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
22.300	0.04	2.10	2.19	0.00	0.04	192	33.53
22.350	0.04	2.09	2.17	0.00	0.04	191	33.53
22.400	0.04	2.08	2.16	0.00	0.04	190	33.52
22.450	0.03	2.06	2.15	0.00	0.04	188	33.52
22.500	0.03	2.05	2.13	0.00	0.04	187	33.52
22.550	0.03	2.03	2.12	0.00	0.04	186	33.52
22.600	0.03	2.02	2.10	0.00	0.04	185	33.52
22.650	0.03	2.01	2.09	0.00	0.04	184	33.52
22.700	0.03	2.00	2.08	0.00	0.04	182	33.52
22.750	0.03	1.98	2.06	0.00	0.04	181	33.52
22.800	0.03	1.97	2.05	0.00	0.04	180	33.52
22.850	0.03	1.96	2.04	0.00	0.04	179	33.52
22.900	0.03	1.94	2.02	0.00	0.04	178	33.52
22.950	0.03	1.93	2.01	0.00	0.04	177	33.52
23.000	0.03	1.92	2.00	0.00	0.04	175	33.52
23.050	0.03	1.91	1.99	0.00	0.04	174	33.51
23.100	0.03	1.90	1.97	0.00	0.04	173	33.51
23.150	0.03	1.88	1.96	0.00	0.04	172	33.51
23.200	0.03	1.87	1.95	0.00	0.04	171	33.51
23.250	0.03	1.86	1.94	0.00	0.04	170	33.51
23.300	0.03	1.85	1.92	0.00	0.04	169	33.51
23.350	0.03	1.84	1.91	0.00	0.04	168	33.51
23.400	0.03	1.83	1.90	0.00	0.04	167	33.51
23.450	0.03	1.81	1.89	0.00	0.04	166	33.51
23.500	0.03	1.80	1.88	0.00	0.04	165	33.51
23.550	0.03	1.79	1.86	0.00	0.04	164	33.51
23.600	0.03	1.78	1.85	0.00	0.04	163	33.51
23.650	0.03	1.77	1.84	0.00	0.04	162	33.51
23.700	0.03	1.76	1.83	0.00	0.04	161	33.51
23.750	0.03	1.75	1.82	0.00	0.04	160	33.50
23.800	0.03	1.74	1.81	0.00	0.04	159	33.50
23.850	0.03	1.73	1.80	0.00	0.03	158	33.50
23.900	0.03	1.72	1.79	0.00	0.03	157	33.50
23.950	0.03	1.70	1.77	0.00	0.03	156	33.50
24.000	0.03	1.69	1.76	0.00	0.03	155	33.50
24.050	0.02	1.67	1.74	0.00	0.03	153	33.50
24.100	0.00	1.63	1.70	0.00	0.03	149	33.50
24.150	0.00	1.57	1.64	0.00	0.03	144	33.49
24.200	0.00	1.51	1.57	0.00	0.03	138	33.49
24.250	0.00	1.45	1.51	0.00	0.03	133	33.49
24.300	0.00	1.40	1.45	0.00	0.03	128	33.48
24.350	0.00	1.34	1.40	0.00	0.03	123	33.48

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
24.400	0.00	1.29	1.34	0.00	0.03	118	33.48
24.450	0.00	1.24	1.29	0.00	0.03	113	33.47
24.500	0.00	1.19	1.24	0.00	0.02	109	33.47
24.550	0.00	1.15	1.19	0.00	0.02	105	33.47
24.600	0.00	1.10	1.15	0.00	0.02	101	33.47
24.650	0.00	1.06	1.10	0.00	0.02	97	33.46
24.700	0.00	1.02	1.06	0.00	0.02	93	33.46
24.750	0.00	0.98	1.02	0.00	0.02	89	33.46
24.800	0.00	0.94	0.98	0.00	0.02	86	33.46
24.850	0.00	0.90	0.94	0.00	0.02	82	33.45
24.900	0.00	0.87	0.90	0.00	0.02	79	33.45
24.950	0.00	0.83	0.87	0.00	0.02	76	33.45
25.000	0.00	0.80	0.83	0.00	0.02	73	33.45
25.050	0.00	0.77	0.80	0.00	0.02	70	33.45
25.100	0.00	0.74	0.77	0.00	0.01	68	33.44
25.150	0.00	0.71	0.74	0.00	0.01	65	33.44
25.200	0.00	0.68	0.71	0.00	0.01	62	33.44
25.250	0.00	0.66	0.68	0.00	0.01	60	33.44
25.300	0.00	0.63	0.66	0.00	0.01	58	33.44
25.350	0.00	0.61	0.63	0.00	0.01	55	33.44
25.400	0.00	0.58	0.61	0.00	0.01	53	33.43
25.450	0.00	0.56	0.58	0.00	0.01	51	33.43
25.500	0.00	0.54	0.56	0.00	0.01	49	33.43
25.550	0.00	0.52	0.54	0.00	0.01	47	33.43
25.600	0.00	0.50	0.52	0.00	0.01	45	33.43
25.650	0.00	0.48	0.50	0.00	0.01	44	33.43
25.700	0.00	0.46	0.48	0.00	0.01	42	33.43
25.750	0.00	0.44	0.46	0.00	0.01	40	33.43
25.800	0.00	0.42	0.44	0.00	0.01	39	33.43
25.850	0.00	0.41	0.42	0.00	0.01	37	33.42
25.900	0.00	0.39	0.41	0.00	0.01	36	33.42
25.950	0.00	0.38	0.39	0.00	0.01	34	33.42
26.000	0.00	0.36	0.38	0.00	0.01	33	33.42
26.050	0.00	0.35	0.36	0.00	0.01	32	33.42
26.100	0.00	0.33	0.35	0.00	0.01	31	33.42
26.150	0.00	0.32	0.33	0.00	0.01	29	33.42
26.200	0.00	0.31	0.32	0.00	0.01	28	33.42
26.250	0.00	0.30	0.31	0.00	0.01	27	33.42
26.300	0.00	0.29	0.30	0.00	0.01	26	33.42
26.350	0.00	0.27	0.29	0.00	0.01	25	33.42
26.400	0.00	0.26	0.27	0.00	0.01	24	33.42
26.450	0.00	0.25	0.26	0.00	0.01	23	33.42

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
26.500	0.00	0.24	0.25	0.00	0.00	22	33.41
26.550	0.00	0.23	0.24	0.00	0.00	21	33.41
26.600	0.00	0.22	0.23	0.00	0.00	21	33.41
26.650	0.00	0.22	0.22	0.00	0.00	20	33.41
26.700	0.00	0.21	0.22	0.00	0.00	19	33.41
26.750	0.00	0.20	0.21	0.00	0.00	18	33.41
26.800	0.00	0.19	0.20	0.00	0.00	18	33.41
26.850	0.00	0.18	0.19	0.00	0.00	17	33.41
26.900	0.00	0.18	0.18	0.00	0.00	16	33.41
26.950	0.00	0.17	0.18	0.00	0.00	16	33.41
27.000	0.00	0.16	0.17	0.00	0.00	15	33.41
27.050	0.00	0.16	0.16	0.00	0.00	14	33.41
27.100	0.00	0.15	0.16	0.00	0.00	14	33.41
27.150	0.00	0.15	0.15	0.00	0.00	13	33.41
27.200	0.00	0.14	0.15	0.00	0.00	13	33.41
27.250	0.00	0.13	0.14	0.00	0.00	12	33.41
27.300	0.00	0.13	0.13	0.00	0.00	12	33.41
27.350	0.00	0.12	0.13	0.00	0.00	11	33.41
27.400	0.00	0.12	0.12	0.00	0.00	11	33.41
27.450	0.00	0.11	0.12	0.00	0.00	10	33.41
27.500	0.00	0.11	0.11	0.00	0.00	10	33.41
27.550	0.00	0.11	0.11	0.00	0.00	10	33.41
27.600	0.00	0.10	0.11	0.00	0.00	9	33.41
27.650	0.00	0.10	0.10	0.00	0.00	9	33.41
27.700	0.00	0.09	0.10	0.00	0.00	9	33.41
27.750	0.00	0.09	0.09	0.00	0.00	8	33.41
27.800	0.00	0.09	0.09	0.00	0.00	8	33.41
27.850	0.00	0.08	0.09	0.00	0.00	8	33.40
27.900	0.00	0.08	0.08	0.00	0.00	7	33.40
27.950	0.00	0.08	0.08	0.00	0.00	7	33.40
28.000	0.00	0.07	0.08	0.00	0.00	7	33.40
28.050	0.00	0.07	0.07	0.00	0.00	7	33.40
28.100	0.00	0.07	0.07	0.00	0.00	6	33.40
28.150	0.00	0.07	0.07	0.00	0.00	6	33.40
28.200	0.00	0.06	0.07	0.00	0.00	6	33.40
28.250	0.00	0.06	0.06	0.00	0.00	6	33.40
28.300	0.00	0.06	0.06	0.00	0.00	5	33.40
28.350	0.00	0.06	0.06	0.00	0.00	5	33.40
28.400	0.00	0.05	0.06	0.00	0.00	5	33.40
28.450	0.00	0.05	0.05	0.00	0.00	5	33.40
28.500	0.00	0.05	0.05	0.00	0.00	5	33.40
28.550	0.00	0.05	0.05	0.00	0.00	4	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
28.600	0.00	0.05	0.05	0.00	0.00	4	33.40
28.650	0.00	0.04	0.05	0.00	0.00	4	33.40
28.700	0.00	0.04	0.04	0.00	0.00	4	33.40
28.750	0.00	0.04	0.04	0.00	0.00	4	33.40
28.800	0.00	0.04	0.04	0.00	0.00	4	33.40
28.850	0.00	0.04	0.04	0.00	0.00	3	33.40
28.900	0.00	0.04	0.04	0.00	0.00	3	33.40
28.950	0.00	0.03	0.04	0.00	0.00	3	33.40
29.000	0.00	0.03	0.03	0.00	0.00	3	33.40
29.050	0.00	0.03	0.03	0.00	0.00	3	33.40
29.100	0.00	0.03	0.03	0.00	0.00	3	33.40
29.150	0.00	0.03	0.03	0.00	0.00	3	33.40
29.200	0.00	0.03	0.03	0.00	0.00	3	33.40
29.250	0.00	0.03	0.03	0.00	0.00	3	33.40
29.300	0.00	0.03	0.03	0.00	0.00	2	33.40
29.350	0.00	0.03	0.03	0.00	0.00	2	33.40
29.400	0.00	0.02	0.03	0.00	0.00	2	33.40
29.450	0.00	0.02	0.02	0.00	0.00	2	33.40
29.500	0.00	0.02	0.02	0.00	0.00	2	33.40
29.550	0.00	0.02	0.02	0.00	0.00	2	33.40
29.600	0.00	0.02	0.02	0.00	0.00	2	33.40
29.650	0.00	0.02	0.02	0.00	0.00	2	33.40
29.700	0.00	0.02	0.02	0.00	0.00	2	33.40
29.750	0.00	0.02	0.02	0.00	0.00	2	33.40
29.800	0.00	0.02	0.02	0.00	0.00	2	33.40
29.850	0.00	0.02	0.02	0.00	0.00	2	33.40
29.900	0.00	0.02	0.02	0.00	0.00	1	33.40
29.950	0.00	0.02	0.02	0.00	0.00	1	33.40
30.000	0.00	0.02	0.02	0.00	0.00	1	33.40
30.050	0.00	0.01	0.02	0.00	0.00	1	33.40
30.100	0.00	0.01	0.01	0.00	0.00	1	33.40
30.150	0.00	0.01	0.01	0.00	0.00	1	33.40
30.200	0.00	0.01	0.01	0.00	0.00	1	33.40
30.250	0.00	0.01	0.01	0.00	0.00	1	33.40
30.300	0.00	0.01	0.01	0.00	0.00	1	33.40
30.350	0.00	0.01	0.01	0.00	0.00	1	33.40
30.400	0.00	0.01	0.01	0.00	0.00	1	33.40
30.450	0.00	0.01	0.01	0.00	0.00	1	33.40
30.500	0.00	0.01	0.01	0.00	0.00	1	33.40
30.550	0.00	0.01	0.01	0.00	0.00	1	33.40
30.600	0.00	0.01	0.01	0.00	0.00	1	33.40
30.650	0.00	0.01	0.01	0.00	0.00	1	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
30.700	0.00	0.01	0.01	0.00	0.00	1	33.40
30.750	0.00	0.01	0.01	0.00	0.00	1	33.40
30.800	0.00	0.01	0.01	0.00	0.00	1	33.40
30.850	0.00	0.01	0.01	0.00	0.00	1	33.40
30.900	0.00	0.01	0.01	0.00	0.00	1	33.40
30.950	0.00	0.01	0.01	0.00	0.00	1	33.40
31.000	0.00	0.01	0.01	0.00	0.00	1	33.40
31.050	0.00	0.01	0.01	0.00	0.00	1	33.40
31.100	0.00	0.01	0.01	0.00	0.00	1	33.40
31.150	0.00	0.01	0.01	0.00	0.00	1	33.40
31.200	0.00	0.01	0.01	0.00	0.00	1	33.40
31.250	0.00	0.01	0.01	0.00	0.00	1	33.40
31.300	0.00	0.01	0.01	0.00	0.00	0	33.40
31.350	0.00	0.01	0.01	0.00	0.00	0	33.40
31.400	0.00	0.00	0.01	0.00	0.00	0	33.40
31.450	0.00	0.00	0.00	0.00	0.00	0	33.40
31.500	0.00	0.00	0.00	0.00	0.00	0	33.40
31.550	0.00	0.00	0.00	0.00	0.00	0	33.40
31.600	0.00	0.00	0.00	0.00	0.00	0	33.40
31.650	0.00	0.00	0.00	0.00	0.00	0	33.40
31.700	0.00	0.00	0.00	0.00	0.00	0	33.40
31.750	0.00	0.00	0.00	0.00	0.00	0	33.40
31.800	0.00	0.00	0.00	0.00	0.00	0	33.40
31.850	0.00	0.00	0.00	0.00	0.00	0	33.40
31.900	0.00	0.00	0.00	0.00	0.00	0	33.40
31.950	0.00	0.00	0.00	0.00	0.00	0	33.40
32.000	0.00	0.00	0.00	0.00	0.00	0	33.40
32.050	0.00	0.00	0.00	0.00	0.00	0	33.40
32.100	0.00	0.00	0.00	0.00	0.00	0	33.40
32.150	0.00	0.00	0.00	0.00	0.00	0	33.40
32.200	0.00	0.00	0.00	0.00	0.00	0	33.40
32.250	0.00	0.00	0.00	0.00	0.00	0	33.40
32.300	0.00	0.00	0.00	0.00	0.00	0	33.40
32.350	0.00	0.00	0.00	0.00	0.00	0	33.40
32.400	0.00	0.00	0.00	0.00	0.00	0	33.40
32.450	0.00	0.00	0.00	0.00	0.00	0	33.40
32.500	0.00	0.00	0.00	0.00	0.00	0	33.40
32.550	0.00	0.00	0.00	0.00	0.00	0	33.40
32.600	0.00	0.00	0.00	0.00	0.00	0	33.40
32.650	0.00	0.00	0.00	0.00	0.00	0	33.40
32.700	0.00	0.00	0.00	0.00	0.00	0	33.40
32.750	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
32.800	0.00	0.00	0.00	0.00	0.00	0	33.40
32.850	0.00	0.00	0.00	0.00	0.00	0	33.40
32.900	0.00	0.00	0.00	0.00	0.00	0	33.40
32.950	0.00	0.00	0.00	0.00	0.00	0	33.40
33.000	0.00	0.00	0.00	0.00	0.00	0	33.40
33.050	0.00	0.00	0.00	0.00	0.00	0	33.40
33.100	0.00	0.00	0.00	0.00	0.00	0	33.40
33.150	0.00	0.00	0.00	0.00	0.00	0	33.40
33.200	0.00	0.00	0.00	0.00	0.00	0	33.40
33.250	0.00	0.00	0.00	0.00	0.00	0	33.40
33.300	0.00	0.00	0.00	0.00	0.00	0	33.40
33.350	0.00	0.00	0.00	0.00	0.00	0	33.40
33.400	0.00	0.00	0.00	0.00	0.00	0	33.40
33.450	0.00	0.00	0.00	0.00	0.00	0	33.40
33.500	0.00	0.00	0.00	0.00	0.00	0	33.40
33.550	0.00	0.00	0.00	0.00	0.00	0	33.40
33.600	0.00	0.00	0.00	0.00	0.00	0	33.40
33.650	0.00	0.00	0.00	0.00	0.00	0	33.40
33.700	0.00	0.00	0.00	0.00	0.00	0	33.40
33.750	0.00	0.00	0.00	0.00	0.00	0	33.40
33.800	0.00	0.00	0.00	0.00	0.00	0	33.40
33.850	0.00	0.00	0.00	0.00	0.00	0	33.40
33.900	0.00	0.00	0.00	0.00	0.00	0	33.40
33.950	0.00	0.00	0.00	0.00	0.00	0	33.40
34.000	0.00	0.00	0.00	0.00	0.00	0	33.40
34.050	0.00	0.00	0.00	0.00	0.00	0	33.40
34.100	0.00	0.00	0.00	0.00	0.00	0	33.40
34.150	0.00	0.00	0.00	0.00	0.00	0	33.40
34.200	0.00	0.00	0.00	0.00	0.00	0	33.40
34.250	0.00	0.00	0.00	0.00	0.00	0	33.40
34.300	0.00	0.00	0.00	0.00	0.00	0	33.40
34.350	0.00	0.00	0.00	0.00	0.00	0	33.40
34.400	0.00	0.00	0.00	0.00	0.00	0	33.40
34.450	0.00	0.00	0.00	0.00	0.00	0	33.40
34.500	0.00	0.00	0.00	0.00	0.00	0	33.40
34.550	0.00	0.00	0.00	0.00	0.00	0	33.40
34.600	0.00	0.00	0.00	0.00	0.00	0	33.40
34.650	0.00	0.00	0.00	0.00	0.00	0	33.40
34.700	0.00	0.00	0.00	0.00	0.00	0	33.40
34.750	0.00	0.00	0.00	0.00	0.00	0	33.40
34.800	0.00	0.00	0.00	0.00	0.00	0	33.40
34.850	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
34.900	0.00	0.00	0.00	0.00	0.00	0	33.40
34.950	0.00	0.00	0.00	0.00	0.00	0	33.40
35.000	0.00	0.00	0.00	0.00	0.00	0	33.40
35.050	0.00	0.00	0.00	0.00	0.00	0	33.40
35.100	0.00	0.00	0.00	0.00	0.00	0	33.40
35.150	0.00	0.00	0.00	0.00	0.00	0	33.40
35.200	0.00	0.00	0.00	0.00	0.00	0	33.40
35.250	0.00	0.00	0.00	0.00	0.00	0	33.40
35.300	0.00	0.00	0.00	0.00	0.00	0	33.40
35.350	0.00	0.00	0.00	0.00	0.00	0	33.40
35.400	0.00	0.00	0.00	0.00	0.00	0	33.40
35.450	0.00	0.00	0.00	0.00	0.00	0	33.40
35.500	0.00	0.00	0.00	0.00	0.00	0	33.40
35.550	0.00	0.00	0.00	0.00	0.00	0	33.40
35.600	0.00	0.00	0.00	0.00	0.00	0	33.40
35.650	0.00	0.00	0.00	0.00	0.00	0	33.40
35.700	0.00	0.00	0.00	0.00	0.00	0	33.40
35.750	0.00	0.00	0.00	0.00	0.00	0	33.40
35.800	0.00	0.00	0.00	0.00	0.00	0	33.40
35.850	0.00	0.00	0.00	0.00	0.00	0	33.40
35.900	0.00	0.00	0.00	0.00	0.00	0	33.40
35.950	0.00	0.00	0.00	0.00	0.00	0	33.40
36.000	0.00	0.00	0.00	0.00	0.00	0	33.40

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	33.40
0.050	0.00	0.00	0.00	0.00	0.00	0	33.40
0.100	0.00	0.00	0.00	0.00	0.00	0	33.40
0.150	0.00	0.00	0.00	0.00	0.00	0	33.40
0.200	0.00	0.00	0.00	0.00	0.00	0	33.40
0.250	0.00	0.00	0.00	0.00	0.00	0	33.40
0.300	0.00	0.00	0.00	0.00	0.00	0	33.40
0.350	0.00	0.00	0.00	0.00	0.00	0	33.40
0.400	0.00	0.00	0.00	0.00	0.00	0	33.40
0.450	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.500	0.00	0.00	0.00	0.00	0.00	0	33.40
0.550	0.00	0.00	0.00	0.00	0.00	0	33.40
0.600	0.00	0.00	0.00	0.00	0.00	0	33.40
0.650	0.00	0.00	0.00	0.00	0.00	0	33.40
0.700	0.00	0.00	0.00	0.00	0.00	0	33.40
0.750	0.00	0.00	0.00	0.00	0.00	0	33.40
0.800	0.00	0.00	0.00	0.00	0.00	0	33.40
0.850	0.00	0.00	0.00	0.00	0.00	0	33.40
0.900	0.00	0.00	0.00	0.00	0.00	0	33.40
0.950	0.00	0.00	0.00	0.00	0.00	0	33.40
1.000	0.00	0.00	0.00	0.00	0.00	0	33.40
1.050	0.00	0.00	0.00	0.00	0.00	0	33.40
1.100	0.00	0.00	0.00	0.00	0.00	0	33.40
1.150	0.00	0.00	0.00	0.00	0.00	0	33.40
1.200	0.00	0.00	0.00	0.00	0.00	0	33.40
1.250	0.00	0.00	0.00	0.00	0.00	0	33.40
1.300	0.00	0.00	0.00	0.00	0.00	0	33.40
1.350	0.00	0.00	0.00	0.00	0.00	0	33.40
1.400	0.00	0.00	0.00	0.00	0.00	0	33.40
1.450	0.00	0.00	0.00	0.00	0.00	0	33.40
1.500	0.00	0.00	0.00	0.00	0.00	0	33.40
1.550	0.00	0.00	0.00	0.00	0.00	0	33.40
1.600	0.00	0.00	0.00	0.00	0.00	0	33.40
1.650	0.00	0.00	0.00	0.00	0.00	0	33.40
1.700	0.00	0.00	0.00	0.00	0.00	0	33.40
1.750	0.00	0.00	0.00	0.00	0.00	0	33.40
1.800	0.00	0.00	0.00	0.00	0.00	0	33.40
1.850	0.00	0.00	0.00	0.00	0.00	0	33.40
1.900	0.00	0.00	0.00	0.00	0.00	0	33.40
1.950	0.00	0.00	0.00	0.00	0.00	0	33.40
2.000	0.00	0.00	0.00	0.00	0.00	0	33.40
2.050	0.00	0.00	0.00	0.00	0.00	0	33.40
2.100	0.00	0.00	0.00	0.00	0.00	0	33.40
2.150	0.00	0.00	0.00	0.00	0.00	0	33.40
2.200	0.00	0.00	0.00	0.00	0.00	0	33.40
2.250	0.00	0.00	0.00	0.00	0.00	0	33.40
2.300	0.00	0.00	0.00	0.00	0.00	0	33.40
2.350	0.00	0.00	0.00	0.00	0.00	0	33.40
2.400	0.00	0.00	0.00	0.00	0.00	0	33.40
2.450	0.00	0.00	0.00	0.00	0.00	0	33.40
2.500	0.00	0.00	0.00	0.00	0.00	0	33.40
2.550	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.600	0.00	0.00	0.00	0.00	0.00	0	33.40
2.650	0.00	0.00	0.00	0.00	0.00	0	33.40
2.700	0.00	0.00	0.00	0.00	0.00	0	33.40
2.750	0.00	0.00	0.00	0.00	0.00	0	33.40
2.800	0.00	0.00	0.00	0.00	0.00	0	33.40
2.850	0.00	0.00	0.00	0.00	0.00	0	33.40
2.900	0.00	0.00	0.00	0.00	0.00	0	33.40
2.950	0.00	0.00	0.00	0.00	0.00	0	33.40
3.000	0.00	0.00	0.00	0.00	0.00	0	33.40
3.050	0.00	0.00	0.00	0.00	0.00	0	33.40
3.100	0.00	0.00	0.00	0.00	0.00	0	33.40
3.150	0.00	0.01	0.01	0.00	0.00	1	33.40
3.200	0.00	0.01	0.01	0.00	0.00	1	33.40
3.250	0.00	0.01	0.01	0.00	0.00	1	33.40
3.300	0.00	0.02	0.02	0.00	0.00	2	33.40
3.350	0.00	0.02	0.02	0.00	0.00	2	33.40
3.400	0.00	0.03	0.03	0.00	0.00	2	33.40
3.450	0.00	0.03	0.03	0.00	0.00	3	33.40
3.500	0.00	0.04	0.04	0.00	0.00	4	33.40
3.550	0.00	0.05	0.05	0.00	0.00	4	33.40
3.600	0.01	0.05	0.06	0.00	0.00	5	33.40
3.650	0.01	0.06	0.07	0.00	0.00	6	33.40
3.700	0.01	0.07	0.07	0.00	0.00	7	33.40
3.750	0.01	0.08	0.08	0.00	0.00	7	33.40
3.800	0.01	0.09	0.09	0.00	0.00	8	33.41
3.850	0.01	0.10	0.10	0.00	0.00	9	33.41
3.900	0.01	0.11	0.11	0.00	0.00	10	33.41
3.950	0.01	0.12	0.13	0.00	0.00	11	33.41
4.000	0.01	0.13	0.14	0.00	0.00	12	33.41
4.050	0.01	0.14	0.15	0.00	0.00	13	33.41
4.100	0.01	0.16	0.16	0.00	0.00	14	33.41
4.150	0.01	0.17	0.18	0.00	0.00	15	33.41
4.200	0.01	0.18	0.19	0.00	0.00	17	33.41
4.250	0.01	0.19	0.20	0.00	0.00	18	33.41
4.300	0.01	0.21	0.22	0.00	0.00	19	33.41
4.350	0.01	0.22	0.23	0.00	0.00	20	33.41
4.400	0.01	0.24	0.25	0.00	0.00	22	33.41
4.450	0.01	0.25	0.26	0.00	0.01	23	33.41
4.500	0.01	0.26	0.28	0.00	0.01	24	33.42
4.550	0.01	0.28	0.29	0.00	0.01	26	33.42
4.600	0.01	0.30	0.31	0.00	0.01	27	33.42
4.650	0.01	0.31	0.32	0.00	0.01	28	33.42

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.700	0.01	0.33	0.34	0.00	0.01	30	33.42
4.750	0.02	0.34	0.36	0.00	0.01	31	33.42
4.800	0.02	0.36	0.37	0.00	0.01	33	33.42
4.850	0.02	0.38	0.39	0.00	0.01	34	33.42
4.900	0.02	0.39	0.41	0.00	0.01	36	33.42
4.950	0.02	0.41	0.43	0.00	0.01	37	33.42
5.000	0.02	0.43	0.44	0.00	0.01	39	33.43
5.050	0.02	0.44	0.46	0.00	0.01	41	33.43
5.100	0.02	0.46	0.48	0.00	0.01	42	33.43
5.150	0.02	0.48	0.50	0.00	0.01	44	33.43
5.200	0.02	0.50	0.52	0.00	0.01	46	33.43
5.250	0.02	0.52	0.54	0.00	0.01	47	33.43
5.300	0.02	0.53	0.56	0.00	0.01	49	33.43
5.350	0.02	0.55	0.58	0.00	0.01	51	33.43
5.400	0.02	0.57	0.60	0.00	0.01	52	33.43
5.450	0.02	0.59	0.62	0.00	0.01	54	33.44
5.500	0.02	0.61	0.64	0.00	0.01	56	33.44
5.550	0.02	0.63	0.66	0.00	0.01	58	33.44
5.600	0.02	0.65	0.68	0.00	0.01	59	33.44
5.650	0.02	0.67	0.70	0.00	0.01	61	33.44
5.700	0.02	0.69	0.72	0.00	0.01	63	33.44
5.750	0.02	0.71	0.74	0.00	0.01	65	33.44
5.800	0.03	0.73	0.76	0.00	0.01	67	33.44
5.850	0.03	0.75	0.78	0.00	0.02	69	33.44
5.900	0.03	0.77	0.80	0.00	0.02	70	33.45
5.950	0.03	0.79	0.82	0.00	0.02	72	33.45
6.000	0.03	0.81	0.84	0.00	0.02	74	33.45
6.050	0.03	0.83	0.87	0.00	0.02	76	33.45
6.100	0.03	0.85	0.89	0.00	0.02	78	33.45
6.150	0.03	0.88	0.91	0.00	0.02	80	33.45
6.200	0.03	0.90	0.93	0.00	0.02	82	33.45
6.250	0.03	0.92	0.96	0.00	0.02	84	33.46
6.300	0.03	0.94	0.98	0.00	0.02	86	33.46
6.350	0.03	0.97	1.01	0.00	0.02	89	33.46
6.400	0.03	0.99	1.03	0.00	0.02	91	33.46
6.450	0.03	1.02	1.06	0.00	0.02	93	33.46
6.500	0.03	1.05	1.09	0.00	0.02	96	33.46
6.550	0.04	1.07	1.12	0.00	0.02	98	33.46
6.600	0.04	1.10	1.15	0.00	0.02	101	33.47
6.650	0.04	1.13	1.18	0.00	0.02	103	33.47
6.700	0.04	1.16	1.21	0.00	0.02	106	33.47
6.750	0.04	1.19	1.24	0.00	0.02	109	33.47

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.800	0.04	1.22	1.27	0.00	0.02	111	33.47
6.850	0.04	1.25	1.30	0.00	0.03	114	33.47
6.900	0.04	1.28	1.33	0.00	0.03	117	33.48
6.950	0.04	1.31	1.37	0.00	0.03	120	33.48
7.000	0.04	1.35	1.40	0.00	0.03	123	33.48
7.050	0.05	1.38	1.44	0.00	0.03	126	33.48
7.100	0.05	1.42	1.47	0.00	0.03	129	33.48
7.150	0.05	1.45	1.51	0.00	0.03	133	33.49
7.200	0.05	1.49	1.55	0.00	0.03	136	33.49
7.250	0.05	1.52	1.58	0.00	0.03	139	33.49
7.300	0.05	1.56	1.62	0.00	0.03	142	33.49
7.350	0.05	1.60	1.66	0.00	0.03	146	33.50
7.400	0.05	1.63	1.70	0.00	0.03	149	33.50
7.450	0.05	1.67	1.74	0.00	0.03	153	33.50
7.500	0.05	1.71	1.78	0.00	0.03	156	33.50
7.550	0.06	1.75	1.82	0.00	0.04	160	33.50
7.600	0.06	1.79	1.86	0.00	0.04	164	33.51
7.650	0.06	1.83	1.90	0.00	0.04	167	33.51
7.700	0.06	1.87	1.95	0.00	0.04	171	33.51
7.750	0.06	1.91	1.99	0.00	0.04	175	33.51
7.800	0.06	1.96	2.04	0.00	0.04	179	33.52
7.850	0.06	2.00	2.08	0.00	0.04	183	33.52
7.900	0.06	2.04	2.12	0.00	0.04	187	33.52
7.950	0.06	2.09	2.17	0.00	0.04	191	33.52
8.000	0.07	2.13	2.22	0.00	0.04	195	33.53
8.050	0.07	2.17	2.26	0.00	0.04	199	33.53
8.100	0.07	2.22	2.31	0.00	0.04	203	33.53
8.150	0.07	2.27	2.36	0.00	0.05	207	33.54
8.200	0.07	2.32	2.41	0.00	0.05	212	33.54
8.250	0.07	2.37	2.47	0.00	0.05	217	33.54
8.300	0.08	2.42	2.52	0.00	0.05	221	33.55
8.350	0.08	2.48	2.58	0.00	0.05	227	33.55
8.400	0.08	2.54	2.64	0.00	0.05	232	33.55
8.450	0.08	2.60	2.70	0.00	0.05	237	33.56
8.500	0.09	2.66	2.77	0.00	0.05	243	33.56
8.550	0.09	2.72	2.83	0.00	0.06	249	33.56
8.600	0.09	2.79	2.90	0.00	0.06	255	33.57
8.650	0.09	2.85	2.97	0.00	0.06	261	33.57
8.700	0.09	2.92	3.04	0.00	0.06	267	33.57
8.750	0.10	2.99	3.11	0.00	0.06	273	33.58
8.800	0.10	3.06	3.19	0.00	0.06	280	33.58
8.850	0.10	3.14	3.26	0.00	0.06	287	33.59

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.900	0.10	3.21	3.34	0.00	0.07	294	33.59
8.950	0.11	3.29	3.42	0.00	0.07	301	33.60
9.000	0.11	3.37	3.51	0.00	0.07	308	33.60
9.050	0.11	3.45	3.59	0.00	0.07	315	33.61
9.100	0.11	3.53	3.67	0.00	0.07	323	33.61
9.150	0.12	3.61	3.76	0.00	0.07	330	33.62
9.200	0.12	3.70	3.85	0.00	0.07	338	33.62
9.250	0.12	3.79	3.94	0.00	0.08	346	33.63
9.300	0.12	3.87	4.03	0.00	0.08	354	33.63
9.350	0.13	3.96	4.12	0.00	0.08	362	33.64
9.400	0.13	4.05	4.22	0.00	0.08	370	33.64
9.450	0.13	4.15	4.31	0.00	0.08	379	33.65
9.500	0.13	4.24	4.41	0.00	0.09	387	33.65
9.550	0.14	4.33	4.51	0.00	0.09	396	33.66
9.600	0.14	4.43	4.61	0.00	0.09	405	33.67
9.650	0.14	4.53	4.71	0.00	0.09	414	33.67
9.700	0.14	4.63	4.81	0.00	0.09	423	33.68
9.750	0.15	4.72	4.92	0.00	0.10	432	33.68
9.800	0.15	4.83	5.02	0.00	0.10	441	33.69
9.850	0.15	4.93	5.13	0.00	0.10	450	33.70
9.900	0.15	5.03	5.23	0.00	0.10	460	33.70
9.950	0.16	5.14	5.34	0.00	0.10	469	33.71
10.000	0.16	5.24	5.45	0.00	0.11	479	33.71
10.050	0.16	5.35	5.56	0.00	0.11	489	33.72
10.100	0.17	5.46	5.68	0.00	0.11	499	33.73
10.150	0.17	5.57	5.80	0.00	0.11	509	33.73
10.200	0.18	5.69	5.92	0.00	0.12	520	33.74
10.250	0.18	5.81	6.05	0.00	0.12	531	33.75
10.300	0.19	5.94	6.18	0.00	0.12	543	33.76
10.350	0.19	6.07	6.32	0.00	0.12	555	33.76
10.400	0.20	6.21	6.46	0.00	0.13	568	33.77
10.450	0.20	6.35	6.61	0.00	0.13	581	33.78
10.500	0.21	6.50	6.76	0.00	0.13	595	33.79
10.550	0.21	6.65	6.91	0.00	0.13	608	33.80
10.600	0.22	6.80	7.07	0.00	0.14	623	33.81
10.650	0.22	6.96	7.24	0.00	0.14	637	33.82
10.700	0.23	7.12	7.41	0.00	0.14	652	33.83
10.750	0.23	7.28	7.58	0.00	0.15	668	33.84
10.800	0.24	7.45	7.75	0.00	0.15	683	33.85
10.850	0.24	7.62	7.93	0.00	0.15	699	33.86
10.900	0.25	7.80	8.11	0.00	0.16	716	33.87
10.950	0.25	7.98	8.30	0.00	0.16	732	33.88

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
11.000	0.26	8.16	8.49	0.00	0.17	749	33.89
11.050	0.27	8.35	8.69	0.00	0.17	767	33.90
11.100	0.28	8.56	8.90	0.00	0.17	786	33.91
11.150	0.30	8.79	9.13	0.00	0.17	807	33.93
11.200	0.31	9.04	9.40	0.00	0.18	831	33.94
11.250	0.33	9.33	9.69	0.00	0.18	857	33.96
11.300	0.35	9.64	10.01	0.00	0.18	886	33.98
11.350	0.37	9.99	10.36	0.00	0.19	917	34.00
11.400	0.39	10.36	10.74	0.00	0.19	951	34.02
11.450	0.41	10.76	11.15	0.00	0.20	988	34.04
11.500	0.43	11.18	11.59	0.00	0.20	1,027	34.07
11.550	0.50	11.69	12.11	0.00	0.21	1,073	34.10
11.600	0.59	12.35	12.79	0.00	0.22	1,133	34.14
11.650	0.75	13.23	13.69	0.00	0.23	1,214	34.19
11.700	0.92	14.41	14.90	0.00	0.24	1,321	34.26
11.750	1.09	15.90	16.42	0.00	0.26	1,455	34.35
11.800	1.27	17.70	18.26	0.00	0.28	1,620	34.46
11.850	1.46	19.83	20.43	0.00	0.30	1,814	34.59
11.900	1.64	22.28	22.93	0.00	0.32	2,037	34.74
11.950	2.32	25.54	26.24	0.00	0.35	2,331	34.94
12.000	3.15	30.22	31.01	0.00	0.39	2,760	35.23
12.050	3.37	35.87	36.74	0.00	0.43	3,273	35.60
12.100	3.45	41.74	42.69	0.00	0.48	3,805	35.99
12.150	2.83	46.99	48.02	0.00	0.52	4,277	36.37
12.200	2.03	50.58	51.85	0.00	0.64	4,615	36.66
12.250	1.70	52.78	54.31	0.00	0.77	4,822	36.85
12.300	1.48	54.13	55.96	0.00	0.91	4,969	36.99
12.350	1.29	54.86	56.91	0.00	1.02	5,047	37.07
12.400	1.11	55.14	57.27	0.00	1.06	5,076	37.11
12.450	0.93	55.07	57.18	0.00	1.05	5,069	37.10
12.500	0.74	54.73	56.74	0.00	1.00	5,034	37.06
12.550	0.62	54.24	56.10	0.00	0.93	4,982	37.00
12.600	0.51	53.68	55.37	0.00	0.85	4,913	36.93
12.650	0.47	53.09	54.66	0.00	0.79	4,850	36.87
12.700	0.45	52.51	54.01	0.00	0.75	4,798	36.82
12.750	0.43	51.95	53.38	0.00	0.72	4,747	36.77
12.800	0.41	51.41	52.79	0.00	0.69	4,697	36.73
12.850	0.39	50.90	52.21	0.00	0.66	4,647	36.68
12.900	0.37	50.41	51.66	0.00	0.63	4,598	36.64
12.950	0.35	49.94	51.13	0.00	0.60	4,552	36.60
13.000	0.33	49.48	50.62	0.00	0.57	4,507	36.56
13.050	0.32	49.05	50.13	0.00	0.54	4,464	36.52

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
13.100	0.31	48.62	49.67	0.00	0.53	4,423	36.49
13.150	0.30	48.18	49.22	0.00	0.52	4,383	36.46
13.200	0.29	47.73	48.77	0.00	0.52	4,343	36.42
13.250	0.29	47.28	48.31	0.00	0.52	4,302	36.39
13.300	0.28	46.82	47.85	0.00	0.51	4,263	36.36
13.350	0.28	46.37	47.39	0.00	0.51	4,223	36.32
13.400	0.27	45.90	46.92	0.00	0.51	4,183	36.29
13.450	0.27	45.44	46.45	0.00	0.50	4,142	36.26
13.500	0.26	44.97	45.97	0.00	0.50	4,100	36.22
13.550	0.26	44.50	45.50	0.00	0.50	4,057	36.19
13.600	0.25	44.03	45.01	0.00	0.49	4,014	36.16
13.650	0.25	43.55	44.53	0.00	0.49	3,970	36.12
13.700	0.24	43.07	44.04	0.00	0.49	3,927	36.09
13.750	0.24	42.58	43.55	0.00	0.48	3,882	36.05
13.800	0.23	42.10	43.06	0.00	0.48	3,838	36.02
13.850	0.23	41.61	42.56	0.00	0.48	3,793	35.98
13.900	0.22	41.11	42.06	0.00	0.47	3,746	35.95
13.950	0.22	40.62	41.56	0.00	0.47	3,699	35.91
14.000	0.21	40.12	41.05	0.00	0.47	3,653	35.88
14.050	0.21	39.62	40.54	0.00	0.46	3,609	35.85
14.100	0.21	39.12	40.04	0.00	0.46	3,565	35.81
14.150	0.20	38.62	39.53	0.00	0.45	3,521	35.78
14.200	0.20	38.12	39.02	0.00	0.45	3,477	35.75
14.250	0.20	37.63	38.52	0.00	0.45	3,432	35.71
14.300	0.20	37.13	38.02	0.00	0.44	3,387	35.68
14.350	0.19	36.64	37.52	0.00	0.44	3,343	35.65
14.400	0.19	36.16	37.03	0.00	0.44	3,298	35.62
14.450	0.19	35.67	36.54	0.00	0.43	3,254	35.58
14.500	0.19	35.19	36.05	0.00	0.43	3,210	35.55
14.550	0.18	34.71	35.56	0.00	0.43	3,166	35.52
14.600	0.18	34.23	35.07	0.00	0.42	3,122	35.49
14.650	0.18	33.75	34.59	0.00	0.42	3,078	35.46
14.700	0.18	33.28	34.11	0.00	0.41	3,033	35.43
14.750	0.17	32.81	33.63	0.00	0.41	2,990	35.39
14.800	0.17	32.34	33.15	0.00	0.41	2,948	35.36
14.850	0.17	31.87	32.68	0.00	0.40	2,907	35.34
14.900	0.17	31.41	32.21	0.00	0.40	2,866	35.31
14.950	0.16	30.95	31.74	0.00	0.40	2,825	35.28
15.000	0.16	30.49	31.27	0.00	0.39	2,784	35.25
15.050	0.16	30.03	30.81	0.00	0.39	2,742	35.22
15.100	0.16	29.58	30.35	0.00	0.39	2,701	35.19
15.150	0.16	29.13	29.89	0.00	0.38	2,660	35.16

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
15.200	0.15	28.68	29.43	0.00	0.38	2,619	35.13
15.250	0.15	28.23	28.98	0.00	0.37	2,578	35.11
15.300	0.15	27.79	28.53	0.00	0.37	2,538	35.08
15.350	0.15	27.34	28.08	0.00	0.37	2,498	35.05
15.400	0.14	26.90	27.63	0.00	0.36	2,458	35.02
15.450	0.14	26.47	27.19	0.00	0.36	2,418	34.99
15.500	0.14	26.03	26.74	0.00	0.36	2,377	34.97
15.550	0.14	25.60	26.30	0.00	0.35	2,337	34.94
15.600	0.13	25.17	25.87	0.00	0.35	2,297	34.91
15.650	0.13	24.74	25.43	0.00	0.35	2,258	34.89
15.700	0.13	24.31	25.00	0.00	0.34	2,220	34.86
15.750	0.13	23.89	24.56	0.00	0.34	2,182	34.83
15.800	0.12	23.47	24.14	0.00	0.33	2,144	34.81
15.850	0.12	23.05	23.71	0.00	0.33	2,107	34.78
15.900	0.12	22.64	23.29	0.00	0.33	2,070	34.76
15.950	0.12	22.23	22.87	0.00	0.32	2,032	34.73
16.000	0.11	21.82	22.46	0.00	0.32	1,995	34.71
16.050	0.11	21.41	22.04	0.00	0.32	1,958	34.68
16.100	0.11	21.01	21.64	0.00	0.31	1,922	34.66
16.150	0.11	20.62	21.23	0.00	0.31	1,886	34.63
16.200	0.11	20.23	20.83	0.00	0.30	1,850	34.61
16.250	0.11	19.84	20.44	0.00	0.30	1,815	34.59
16.300	0.11	19.46	20.05	0.00	0.30	1,780	34.56
16.350	0.10	19.08	19.67	0.00	0.29	1,746	34.54
16.400	0.10	18.71	19.29	0.00	0.29	1,712	34.52
16.450	0.10	18.34	18.92	0.00	0.29	1,679	34.50
16.500	0.10	17.98	18.55	0.00	0.28	1,646	34.47
16.550	0.10	17.62	18.18	0.00	0.28	1,613	34.45
16.600	0.10	17.27	17.82	0.00	0.28	1,580	34.43
16.650	0.10	16.92	17.47	0.00	0.27	1,548	34.41
16.700	0.10	16.58	17.12	0.00	0.27	1,517	34.39
16.750	0.10	16.24	16.77	0.00	0.26	1,486	34.37
16.800	0.09	15.91	16.43	0.00	0.26	1,456	34.35
16.850	0.09	15.59	16.10	0.00	0.26	1,427	34.33
16.900	0.09	15.27	15.77	0.00	0.25	1,398	34.31
16.950	0.09	14.95	15.45	0.00	0.25	1,370	34.29
17.000	0.09	14.65	15.14	0.00	0.25	1,342	34.27
17.050	0.09	14.34	14.83	0.00	0.24	1,315	34.26
17.100	0.09	14.04	14.52	0.00	0.24	1,288	34.24
17.150	0.09	13.75	14.22	0.00	0.23	1,261	34.22
17.200	0.09	13.46	13.92	0.00	0.23	1,235	34.20
17.250	0.09	13.18	13.63	0.00	0.23	1,209	34.19

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
17.300	0.08	12.90	13.35	0.00	0.22	1,183	34.17
17.350	0.08	12.63	13.07	0.00	0.22	1,158	34.15
17.400	0.08	12.36	12.79	0.00	0.22	1,134	34.14
17.450	0.08	12.09	12.52	0.00	0.21	1,109	34.12
17.500	0.08	11.83	12.25	0.00	0.21	1,086	34.11
17.550	0.08	11.57	11.99	0.00	0.21	1,062	34.09
17.600	0.08	11.32	11.73	0.00	0.21	1,039	34.08
17.650	0.08	11.07	11.47	0.00	0.20	1,016	34.06
17.700	0.08	10.82	11.22	0.00	0.20	994	34.05
17.750	0.07	10.58	10.97	0.00	0.20	972	34.03
17.800	0.07	10.34	10.73	0.00	0.19	950	34.02
17.850	0.07	10.11	10.49	0.00	0.19	929	34.00
17.900	0.07	9.88	10.25	0.00	0.19	908	33.99
17.950	0.07	9.65	10.02	0.00	0.18	887	33.98
18.000	0.07	9.43	9.79	0.00	0.18	866	33.96
18.050	0.07	9.21	9.56	0.00	0.18	846	33.95
18.100	0.07	8.99	9.34	0.00	0.18	826	33.94
18.150	0.07	8.78	9.12	0.00	0.17	806	33.93
18.200	0.07	8.57	8.91	0.00	0.17	787	33.91
18.250	0.07	8.36	8.70	0.00	0.17	768	33.90
18.300	0.07	8.17	8.50	0.00	0.17	750	33.89
18.350	0.07	7.98	8.30	0.00	0.16	732	33.88
18.400	0.07	7.79	8.11	0.00	0.16	715	33.87
18.450	0.07	7.62	7.92	0.00	0.15	699	33.86
18.500	0.07	7.45	7.75	0.00	0.15	683	33.85
18.550	0.07	7.28	7.58	0.00	0.15	667	33.84
18.600	0.06	7.12	7.41	0.00	0.14	653	33.83
18.650	0.06	6.97	7.25	0.00	0.14	639	33.82
18.700	0.06	6.82	7.10	0.00	0.14	625	33.81
18.750	0.06	6.68	6.95	0.00	0.14	612	33.80
18.800	0.06	6.54	6.81	0.00	0.13	599	33.79
18.850	0.06	6.41	6.67	0.00	0.13	586	33.78
18.900	0.06	6.28	6.53	0.00	0.13	575	33.78
18.950	0.06	6.16	6.41	0.00	0.12	563	33.77
19.000	0.06	6.04	6.28	0.00	0.12	552	33.76
19.050	0.06	5.92	6.16	0.00	0.12	541	33.75
19.100	0.06	5.81	6.04	0.00	0.12	531	33.75
19.150	0.06	5.70	5.93	0.00	0.12	521	33.74
19.200	0.06	5.60	5.82	0.00	0.11	511	33.74
19.250	0.06	5.50	5.72	0.00	0.11	502	33.73
19.300	0.06	5.40	5.62	0.00	0.11	493	33.72
19.350	0.06	5.30	5.52	0.00	0.11	485	33.72

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
19.400	0.06	5.21	5.42	0.00	0.11	476	33.71
19.450	0.06	5.12	5.33	0.00	0.10	468	33.71
19.500	0.06	5.04	5.24	0.00	0.10	460	33.70
19.550	0.06	4.95	5.15	0.00	0.10	453	33.70
19.600	0.06	4.87	5.07	0.00	0.10	445	33.69
19.650	0.06	4.80	4.99	0.00	0.10	438	33.69
19.700	0.06	4.72	4.91	0.00	0.10	431	33.68
19.750	0.06	4.65	4.84	0.00	0.09	425	33.68
19.800	0.06	4.58	4.76	0.00	0.09	418	33.67
19.850	0.06	4.51	4.69	0.00	0.09	412	33.67
19.900	0.06	4.44	4.62	0.00	0.09	406	33.67
19.950	0.06	4.38	4.55	0.00	0.09	400	33.66
20.000	0.06	4.31	4.49	0.00	0.09	394	33.66
20.050	0.06	4.25	4.43	0.00	0.09	389	33.65
20.100	0.06	4.19	4.36	0.00	0.08	383	33.65
20.150	0.06	4.14	4.30	0.00	0.08	378	33.65
20.200	0.05	4.08	4.25	0.00	0.08	373	33.64
20.250	0.05	4.03	4.19	0.00	0.08	368	33.64
20.300	0.05	3.98	4.14	0.00	0.08	363	33.64
20.350	0.05	3.93	4.08	0.00	0.08	359	33.64
20.400	0.05	3.88	4.03	0.00	0.08	354	33.63
20.450	0.05	3.83	3.98	0.00	0.08	350	33.63
20.500	0.05	3.78	3.94	0.00	0.08	346	33.63
20.550	0.05	3.74	3.89	0.00	0.08	342	33.62
20.600	0.05	3.69	3.84	0.00	0.07	338	33.62
20.650	0.05	3.65	3.80	0.00	0.07	334	33.62
20.700	0.05	3.61	3.76	0.00	0.07	330	33.62
20.750	0.05	3.57	3.71	0.00	0.07	326	33.61
20.800	0.05	3.53	3.67	0.00	0.07	323	33.61
20.850	0.05	3.49	3.63	0.00	0.07	319	33.61
20.900	0.05	3.46	3.60	0.00	0.07	316	33.61
20.950	0.05	3.42	3.56	0.00	0.07	313	33.60
21.000	0.05	3.38	3.52	0.00	0.07	309	33.60
21.050	0.05	3.35	3.49	0.00	0.07	306	33.60
21.100	0.05	3.32	3.45	0.00	0.07	303	33.60
21.150	0.05	3.29	3.42	0.00	0.07	300	33.60
21.200	0.05	3.25	3.39	0.00	0.07	297	33.59
21.250	0.05	3.22	3.35	0.00	0.07	295	33.59
21.300	0.05	3.19	3.32	0.00	0.06	292	33.59
21.350	0.05	3.16	3.29	0.00	0.06	289	33.59
21.400	0.05	3.14	3.26	0.00	0.06	287	33.59
21.450	0.05	3.11	3.23	0.00	0.06	284	33.59

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.500	0.05	3.08	3.20	0.00	0.06	281	33.58
21.550	0.05	3.05	3.18	0.00	0.06	279	33.58
21.600	0.05	3.03	3.15	0.00	0.06	277	33.58
21.650	0.05	3.00	3.12	0.00	0.06	274	33.58
21.700	0.05	2.98	3.10	0.00	0.06	272	33.58
21.750	0.05	2.95	3.07	0.00	0.06	270	33.58
21.800	0.05	2.93	3.05	0.00	0.06	268	33.58
21.850	0.05	2.90	3.02	0.00	0.06	265	33.57
21.900	0.05	2.88	3.00	0.00	0.06	263	33.57
21.950	0.05	2.86	2.97	0.00	0.06	261	33.57
22.000	0.05	2.84	2.95	0.00	0.06	259	33.57
22.050	0.05	2.81	2.93	0.00	0.06	257	33.57
22.100	0.05	2.79	2.91	0.00	0.06	255	33.57
22.150	0.05	2.77	2.88	0.00	0.06	253	33.57
22.200	0.05	2.75	2.86	0.00	0.06	251	33.56
22.250	0.04	2.73	2.84	0.00	0.06	250	33.56
22.300	0.04	2.71	2.82	0.00	0.05	248	33.56
22.350	0.04	2.69	2.80	0.00	0.05	246	33.56
22.400	0.04	2.67	2.78	0.00	0.05	244	33.56
22.450	0.04	2.65	2.76	0.00	0.05	242	33.56
22.500	0.04	2.63	2.74	0.00	0.05	241	33.56
22.550	0.04	2.61	2.72	0.00	0.05	239	33.56
22.600	0.04	2.60	2.70	0.00	0.05	237	33.56
22.650	0.04	2.58	2.68	0.00	0.05	236	33.55
22.700	0.04	2.56	2.66	0.00	0.05	234	33.55
22.750	0.04	2.54	2.65	0.00	0.05	232	33.55
22.800	0.04	2.53	2.63	0.00	0.05	231	33.55
22.850	0.04	2.51	2.61	0.00	0.05	229	33.55
22.900	0.04	2.49	2.59	0.00	0.05	228	33.55
22.950	0.04	2.47	2.57	0.00	0.05	226	33.55
23.000	0.04	2.46	2.56	0.00	0.05	225	33.55
23.050	0.04	2.44	2.54	0.00	0.05	223	33.55
23.100	0.04	2.43	2.52	0.00	0.05	222	33.55
23.150	0.04	2.41	2.51	0.00	0.05	220	33.54
23.200	0.04	2.39	2.49	0.00	0.05	219	33.54
23.250	0.04	2.38	2.47	0.00	0.05	217	33.54
23.300	0.04	2.36	2.46	0.00	0.05	216	33.54
23.350	0.04	2.35	2.44	0.00	0.05	214	33.54
23.400	0.04	2.33	2.43	0.00	0.05	213	33.54
23.450	0.04	2.32	2.41	0.00	0.05	212	33.54
23.500	0.04	2.30	2.40	0.00	0.05	210	33.54
23.550	0.04	2.29	2.38	0.00	0.05	209	33.54

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.600	0.04	2.27	2.36	0.00	0.05	208	33.54
23.650	0.04	2.26	2.35	0.00	0.05	206	33.54
23.700	0.04	2.24	2.33	0.00	0.05	205	33.53
23.750	0.04	2.23	2.32	0.00	0.05	204	33.53
23.800	0.04	2.21	2.30	0.00	0.04	202	33.53
23.850	0.04	2.20	2.29	0.00	0.04	201	33.53
23.900	0.04	2.19	2.27	0.00	0.04	200	33.53
23.950	0.04	2.17	2.26	0.00	0.04	198	33.53
24.000	0.04	2.16	2.24	0.00	0.04	197	33.53
24.050	0.02	2.13	2.22	0.00	0.04	195	33.53
24.100	0.01	2.08	2.16	0.00	0.04	190	33.52
24.150	0.00	2.00	2.08	0.00	0.04	183	33.52
24.200	0.00	1.92	2.00	0.00	0.04	176	33.52
24.250	0.00	1.85	1.92	0.00	0.04	169	33.51
24.300	0.00	1.78	1.85	0.00	0.04	162	33.51
24.350	0.00	1.71	1.78	0.00	0.03	156	33.50
24.400	0.00	1.64	1.71	0.00	0.03	150	33.50
24.450	0.00	1.58	1.64	0.00	0.03	144	33.49
24.500	0.00	1.52	1.58	0.00	0.03	139	33.49
24.550	0.00	1.46	1.52	0.00	0.03	133	33.49
24.600	0.00	1.40	1.46	0.00	0.03	128	33.48
24.650	0.00	1.35	1.40	0.00	0.03	123	33.48
24.700	0.00	1.29	1.35	0.00	0.03	118	33.48
24.750	0.00	1.24	1.29	0.00	0.03	114	33.47
24.800	0.00	1.20	1.24	0.00	0.02	109	33.47
24.850	0.00	1.15	1.20	0.00	0.02	105	33.47
24.900	0.00	1.10	1.15	0.00	0.02	101	33.47
24.950	0.00	1.06	1.10	0.00	0.02	97	33.46
25.000	0.00	1.02	1.06	0.00	0.02	93	33.46
25.050	0.00	0.98	1.02	0.00	0.02	90	33.46
25.100	0.00	0.94	0.98	0.00	0.02	86	33.46
25.150	0.00	0.91	0.94	0.00	0.02	83	33.45
25.200	0.00	0.87	0.91	0.00	0.02	80	33.45
25.250	0.00	0.84	0.87	0.00	0.02	76	33.45
25.300	0.00	0.80	0.84	0.00	0.02	73	33.45
25.350	0.00	0.77	0.80	0.00	0.02	71	33.45
25.400	0.00	0.74	0.77	0.00	0.02	68	33.44
25.450	0.00	0.71	0.74	0.00	0.01	65	33.44
25.500	0.00	0.69	0.71	0.00	0.01	63	33.44
25.550	0.00	0.66	0.69	0.00	0.01	60	33.44
25.600	0.00	0.63	0.66	0.00	0.01	58	33.44
25.650	0.00	0.61	0.63	0.00	0.01	56	33.44

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.700	0.00	0.59	0.61	0.00	0.01	53	33.44
25.750	0.00	0.56	0.59	0.00	0.01	51	33.43
25.800	0.00	0.54	0.56	0.00	0.01	49	33.43
25.850	0.00	0.52	0.54	0.00	0.01	47	33.43
25.900	0.00	0.50	0.52	0.00	0.01	46	33.43
25.950	0.00	0.48	0.50	0.00	0.01	44	33.43
26.000	0.00	0.46	0.48	0.00	0.01	42	33.43
26.050	0.00	0.44	0.46	0.00	0.01	40	33.43
26.100	0.00	0.43	0.44	0.00	0.01	39	33.43
26.150	0.00	0.41	0.43	0.00	0.01	37	33.42
26.200	0.00	0.39	0.41	0.00	0.01	36	33.42
26.250	0.00	0.38	0.39	0.00	0.01	35	33.42
26.300	0.00	0.36	0.38	0.00	0.01	33	33.42
26.350	0.00	0.35	0.36	0.00	0.01	32	33.42
26.400	0.00	0.34	0.35	0.00	0.01	31	33.42
26.450	0.00	0.32	0.34	0.00	0.01	29	33.42
26.500	0.00	0.31	0.32	0.00	0.01	28	33.42
26.550	0.00	0.30	0.31	0.00	0.01	27	33.42
26.600	0.00	0.29	0.30	0.00	0.01	26	33.42
26.650	0.00	0.28	0.29	0.00	0.01	25	33.42
26.700	0.00	0.26	0.28	0.00	0.01	24	33.42
26.750	0.00	0.25	0.26	0.00	0.01	23	33.42
26.800	0.00	0.24	0.25	0.00	0.00	22	33.41
26.850	0.00	0.23	0.24	0.00	0.00	21	33.41
26.900	0.00	0.23	0.23	0.00	0.00	21	33.41
26.950	0.00	0.22	0.23	0.00	0.00	20	33.41
27.000	0.00	0.21	0.22	0.00	0.00	19	33.41
27.050	0.00	0.20	0.21	0.00	0.00	18	33.41
27.100	0.00	0.19	0.20	0.00	0.00	18	33.41
27.150	0.00	0.19	0.19	0.00	0.00	17	33.41
27.200	0.00	0.18	0.19	0.00	0.00	16	33.41
27.250	0.00	0.17	0.18	0.00	0.00	16	33.41
27.300	0.00	0.16	0.17	0.00	0.00	15	33.41
27.350	0.00	0.16	0.16	0.00	0.00	14	33.41
27.400	0.00	0.15	0.16	0.00	0.00	14	33.41
27.450	0.00	0.15	0.15	0.00	0.00	13	33.41
27.500	0.00	0.14	0.15	0.00	0.00	13	33.41
27.550	0.00	0.13	0.14	0.00	0.00	12	33.41
27.600	0.00	0.13	0.13	0.00	0.00	12	33.41
27.650	0.00	0.12	0.13	0.00	0.00	11	33.41
27.700	0.00	0.12	0.12	0.00	0.00	11	33.41
27.750	0.00	0.11	0.12	0.00	0.00	11	33.41

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.800	0.00	0.11	0.11	0.00	0.00	10	33.41
27.850	0.00	0.11	0.11	0.00	0.00	10	33.41
27.900	0.00	0.10	0.11	0.00	0.00	9	33.41
27.950	0.00	0.10	0.10	0.00	0.00	9	33.41
28.000	0.00	0.09	0.10	0.00	0.00	9	33.41
28.050	0.00	0.09	0.09	0.00	0.00	8	33.41
28.100	0.00	0.09	0.09	0.00	0.00	8	33.41
28.150	0.00	0.08	0.09	0.00	0.00	8	33.41
28.200	0.00	0.08	0.08	0.00	0.00	7	33.40
28.250	0.00	0.08	0.08	0.00	0.00	7	33.40
28.300	0.00	0.07	0.08	0.00	0.00	7	33.40
28.350	0.00	0.07	0.07	0.00	0.00	7	33.40
28.400	0.00	0.07	0.07	0.00	0.00	6	33.40
28.450	0.00	0.07	0.07	0.00	0.00	6	33.40
28.500	0.00	0.06	0.07	0.00	0.00	6	33.40
28.550	0.00	0.06	0.06	0.00	0.00	6	33.40
28.600	0.00	0.06	0.06	0.00	0.00	5	33.40
28.650	0.00	0.06	0.06	0.00	0.00	5	33.40
28.700	0.00	0.05	0.06	0.00	0.00	5	33.40
28.750	0.00	0.05	0.05	0.00	0.00	5	33.40
28.800	0.00	0.05	0.05	0.00	0.00	5	33.40
28.850	0.00	0.05	0.05	0.00	0.00	4	33.40
28.900	0.00	0.05	0.05	0.00	0.00	4	33.40
28.950	0.00	0.04	0.05	0.00	0.00	4	33.40
29.000	0.00	0.04	0.04	0.00	0.00	4	33.40
29.050	0.00	0.04	0.04	0.00	0.00	4	33.40
29.100	0.00	0.04	0.04	0.00	0.00	4	33.40
29.150	0.00	0.04	0.04	0.00	0.00	3	33.40
29.200	0.00	0.04	0.04	0.00	0.00	3	33.40
29.250	0.00	0.03	0.04	0.00	0.00	3	33.40
29.300	0.00	0.03	0.03	0.00	0.00	3	33.40
29.350	0.00	0.03	0.03	0.00	0.00	3	33.40
29.400	0.00	0.03	0.03	0.00	0.00	3	33.40
29.450	0.00	0.03	0.03	0.00	0.00	3	33.40
29.500	0.00	0.03	0.03	0.00	0.00	3	33.40
29.550	0.00	0.03	0.03	0.00	0.00	3	33.40
29.600	0.00	0.03	0.03	0.00	0.00	2	33.40
29.650	0.00	0.03	0.03	0.00	0.00	2	33.40
29.700	0.00	0.02	0.03	0.00	0.00	2	33.40
29.750	0.00	0.02	0.02	0.00	0.00	2	33.40
29.800	0.00	0.02	0.02	0.00	0.00	2	33.40
29.850	0.00	0.02	0.02	0.00	0.00	2	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.900	0.00	0.02	0.02	0.00	0.00	2	33.40
29.950	0.00	0.02	0.02	0.00	0.00	2	33.40
30.000	0.00	0.02	0.02	0.00	0.00	2	33.40
30.050	0.00	0.02	0.02	0.00	0.00	2	33.40
30.100	0.00	0.02	0.02	0.00	0.00	2	33.40
30.150	0.00	0.02	0.02	0.00	0.00	2	33.40
30.200	0.00	0.02	0.02	0.00	0.00	2	33.40
30.250	0.00	0.02	0.02	0.00	0.00	1	33.40
30.300	0.00	0.02	0.02	0.00	0.00	1	33.40
30.350	0.00	0.01	0.02	0.00	0.00	1	33.40
30.400	0.00	0.01	0.01	0.00	0.00	1	33.40
30.450	0.00	0.01	0.01	0.00	0.00	1	33.40
30.500	0.00	0.01	0.01	0.00	0.00	1	33.40
30.550	0.00	0.01	0.01	0.00	0.00	1	33.40
30.600	0.00	0.01	0.01	0.00	0.00	1	33.40
30.650	0.00	0.01	0.01	0.00	0.00	1	33.40
30.700	0.00	0.01	0.01	0.00	0.00	1	33.40
30.750	0.00	0.01	0.01	0.00	0.00	1	33.40
30.800	0.00	0.01	0.01	0.00	0.00	1	33.40
30.850	0.00	0.01	0.01	0.00	0.00	1	33.40
30.900	0.00	0.01	0.01	0.00	0.00	1	33.40
30.950	0.00	0.01	0.01	0.00	0.00	1	33.40
31.000	0.00	0.01	0.01	0.00	0.00	1	33.40
31.050	0.00	0.01	0.01	0.00	0.00	1	33.40
31.100	0.00	0.01	0.01	0.00	0.00	1	33.40
31.150	0.00	0.01	0.01	0.00	0.00	1	33.40
31.200	0.00	0.01	0.01	0.00	0.00	1	33.40
31.250	0.00	0.01	0.01	0.00	0.00	1	33.40
31.300	0.00	0.01	0.01	0.00	0.00	1	33.40
31.350	0.00	0.01	0.01	0.00	0.00	1	33.40
31.400	0.00	0.01	0.01	0.00	0.00	1	33.40
31.450	0.00	0.01	0.01	0.00	0.00	1	33.40
31.500	0.00	0.01	0.01	0.00	0.00	1	33.40
31.550	0.00	0.01	0.01	0.00	0.00	1	33.40
31.600	0.00	0.01	0.01	0.00	0.00	0	33.40
31.650	0.00	0.01	0.01	0.00	0.00	0	33.40
31.700	0.00	0.00	0.01	0.00	0.00	0	33.40
31.750	0.00	0.00	0.00	0.00	0.00	0	33.40
31.800	0.00	0.00	0.00	0.00	0.00	0	33.40
31.850	0.00	0.00	0.00	0.00	0.00	0	33.40
31.900	0.00	0.00	0.00	0.00	0.00	0	33.40
31.950	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
32.000	0.00	0.00	0.00	0.00	0.00	0	33.40
32.050	0.00	0.00	0.00	0.00	0.00	0	33.40
32.100	0.00	0.00	0.00	0.00	0.00	0	33.40
32.150	0.00	0.00	0.00	0.00	0.00	0	33.40
32.200	0.00	0.00	0.00	0.00	0.00	0	33.40
32.250	0.00	0.00	0.00	0.00	0.00	0	33.40
32.300	0.00	0.00	0.00	0.00	0.00	0	33.40
32.350	0.00	0.00	0.00	0.00	0.00	0	33.40
32.400	0.00	0.00	0.00	0.00	0.00	0	33.40
32.450	0.00	0.00	0.00	0.00	0.00	0	33.40
32.500	0.00	0.00	0.00	0.00	0.00	0	33.40
32.550	0.00	0.00	0.00	0.00	0.00	0	33.40
32.600	0.00	0.00	0.00	0.00	0.00	0	33.40
32.650	0.00	0.00	0.00	0.00	0.00	0	33.40
32.700	0.00	0.00	0.00	0.00	0.00	0	33.40
32.750	0.00	0.00	0.00	0.00	0.00	0	33.40
32.800	0.00	0.00	0.00	0.00	0.00	0	33.40
32.850	0.00	0.00	0.00	0.00	0.00	0	33.40
32.900	0.00	0.00	0.00	0.00	0.00	0	33.40
32.950	0.00	0.00	0.00	0.00	0.00	0	33.40
33.000	0.00	0.00	0.00	0.00	0.00	0	33.40
33.050	0.00	0.00	0.00	0.00	0.00	0	33.40
33.100	0.00	0.00	0.00	0.00	0.00	0	33.40
33.150	0.00	0.00	0.00	0.00	0.00	0	33.40
33.200	0.00	0.00	0.00	0.00	0.00	0	33.40
33.250	0.00	0.00	0.00	0.00	0.00	0	33.40
33.300	0.00	0.00	0.00	0.00	0.00	0	33.40
33.350	0.00	0.00	0.00	0.00	0.00	0	33.40
33.400	0.00	0.00	0.00	0.00	0.00	0	33.40
33.450	0.00	0.00	0.00	0.00	0.00	0	33.40
33.500	0.00	0.00	0.00	0.00	0.00	0	33.40
33.550	0.00	0.00	0.00	0.00	0.00	0	33.40
33.600	0.00	0.00	0.00	0.00	0.00	0	33.40
33.650	0.00	0.00	0.00	0.00	0.00	0	33.40
33.700	0.00	0.00	0.00	0.00	0.00	0	33.40
33.750	0.00	0.00	0.00	0.00	0.00	0	33.40
33.800	0.00	0.00	0.00	0.00	0.00	0	33.40
33.850	0.00	0.00	0.00	0.00	0.00	0	33.40
33.900	0.00	0.00	0.00	0.00	0.00	0	33.40
33.950	0.00	0.00	0.00	0.00	0.00	0	33.40
34.000	0.00	0.00	0.00	0.00	0.00	0	33.40
34.050	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
34.100	0.00	0.00	0.00	0.00	0.00	0	33.40
34.150	0.00	0.00	0.00	0.00	0.00	0	33.40
34.200	0.00	0.00	0.00	0.00	0.00	0	33.40
34.250	0.00	0.00	0.00	0.00	0.00	0	33.40
34.300	0.00	0.00	0.00	0.00	0.00	0	33.40
34.350	0.00	0.00	0.00	0.00	0.00	0	33.40
34.400	0.00	0.00	0.00	0.00	0.00	0	33.40
34.450	0.00	0.00	0.00	0.00	0.00	0	33.40
34.500	0.00	0.00	0.00	0.00	0.00	0	33.40
34.550	0.00	0.00	0.00	0.00	0.00	0	33.40
34.600	0.00	0.00	0.00	0.00	0.00	0	33.40
34.650	0.00	0.00	0.00	0.00	0.00	0	33.40
34.700	0.00	0.00	0.00	0.00	0.00	0	33.40
34.750	0.00	0.00	0.00	0.00	0.00	0	33.40
34.800	0.00	0.00	0.00	0.00	0.00	0	33.40
34.850	0.00	0.00	0.00	0.00	0.00	0	33.40
34.900	0.00	0.00	0.00	0.00	0.00	0	33.40
34.950	0.00	0.00	0.00	0.00	0.00	0	33.40
35.000	0.00	0.00	0.00	0.00	0.00	0	33.40
35.050	0.00	0.00	0.00	0.00	0.00	0	33.40
35.100	0.00	0.00	0.00	0.00	0.00	0	33.40
35.150	0.00	0.00	0.00	0.00	0.00	0	33.40
35.200	0.00	0.00	0.00	0.00	0.00	0	33.40
35.250	0.00	0.00	0.00	0.00	0.00	0	33.40
35.300	0.00	0.00	0.00	0.00	0.00	0	33.40
35.350	0.00	0.00	0.00	0.00	0.00	0	33.40
35.400	0.00	0.00	0.00	0.00	0.00	0	33.40
35.450	0.00	0.00	0.00	0.00	0.00	0	33.40
35.500	0.00	0.00	0.00	0.00	0.00	0	33.40
35.550	0.00	0.00	0.00	0.00	0.00	0	33.40
35.600	0.00	0.00	0.00	0.00	0.00	0	33.40
35.650	0.00	0.00	0.00	0.00	0.00	0	33.40
35.700	0.00	0.00	0.00	0.00	0.00	0	33.40
35.750	0.00	0.00	0.00	0.00	0.00	0	33.40
35.800	0.00	0.00	0.00	0.00	0.00	0	33.40
35.850	0.00	0.00	0.00	0.00	0.00	0	33.40
35.900	0.00	0.00	0.00	0.00	0.00	0	33.40
35.950	0.00	0.00	0.00	0.00	0.00	0	33.40
36.000	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	33.40
0.050	0.00	0.00	0.00	0.00	0.00	0	33.40
0.100	0.00	0.00	0.00	0.00	0.00	0	33.40
0.150	0.00	0.00	0.00	0.00	0.00	0	33.40
0.200	0.00	0.00	0.00	0.00	0.00	0	33.40
0.250	0.00	0.00	0.00	0.00	0.00	0	33.40
0.300	0.00	0.00	0.00	0.00	0.00	0	33.40
0.350	0.00	0.00	0.00	0.00	0.00	0	33.40
0.400	0.00	0.00	0.00	0.00	0.00	0	33.40
0.450	0.00	0.00	0.00	0.00	0.00	0	33.40
0.500	0.00	0.00	0.00	0.00	0.00	0	33.40
0.550	0.00	0.00	0.00	0.00	0.00	0	33.40
0.600	0.00	0.00	0.00	0.00	0.00	0	33.40
0.650	0.00	0.00	0.00	0.00	0.00	0	33.40
0.700	0.00	0.00	0.00	0.00	0.00	0	33.40
0.750	0.00	0.00	0.00	0.00	0.00	0	33.40
0.800	0.00	0.00	0.00	0.00	0.00	0	33.40
0.850	0.00	0.00	0.00	0.00	0.00	0	33.40
0.900	0.00	0.00	0.00	0.00	0.00	0	33.40
0.950	0.00	0.00	0.00	0.00	0.00	0	33.40
1.000	0.00	0.00	0.00	0.00	0.00	0	33.40
1.050	0.00	0.00	0.00	0.00	0.00	0	33.40
1.100	0.00	0.00	0.00	0.00	0.00	0	33.40
1.150	0.00	0.00	0.00	0.00	0.00	0	33.40
1.200	0.00	0.00	0.00	0.00	0.00	0	33.40
1.250	0.00	0.00	0.00	0.00	0.00	0	33.40
1.300	0.00	0.00	0.00	0.00	0.00	0	33.40
1.350	0.00	0.00	0.00	0.00	0.00	0	33.40
1.400	0.00	0.00	0.00	0.00	0.00	0	33.40
1.450	0.00	0.00	0.00	0.00	0.00	0	33.40
1.500	0.00	0.00	0.00	0.00	0.00	0	33.40
1.550	0.00	0.00	0.00	0.00	0.00	0	33.40
1.600	0.00	0.00	0.00	0.00	0.00	0	33.40
1.650	0.00	0.00	0.00	0.00	0.00	0	33.40
1.700	0.00	0.00	0.00	0.00	0.00	0	33.40
1.750	0.00	0.00	0.00	0.00	0.00	0	33.40
1.800	0.00	0.00	0.00	0.00	0.00	0	33.40
1.850	0.00	0.00	0.00	0.00	0.00	0	33.40
1.900	0.00	0.00	0.00	0.00	0.00	0	33.40
1.950	0.00	0.00	0.00	0.00	0.00	0	33.40
2.000	0.00	0.00	0.00	0.00	0.00	0	33.40
2.050	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.100	0.00	0.00	0.00	0.00	0.00	0	33.40
2.150	0.00	0.00	0.00	0.00	0.00	0	33.40
2.200	0.00	0.00	0.00	0.00	0.00	0	33.40
2.250	0.00	0.00	0.00	0.00	0.00	0	33.40
2.300	0.00	0.01	0.01	0.00	0.00	1	33.40
2.350	0.00	0.01	0.01	0.00	0.00	1	33.40
2.400	0.00	0.01	0.01	0.00	0.00	1	33.40
2.450	0.00	0.02	0.02	0.00	0.00	2	33.40
2.500	0.00	0.03	0.03	0.00	0.00	2	33.40
2.550	0.00	0.04	0.04	0.00	0.00	3	33.40
2.600	0.01	0.04	0.05	0.00	0.00	4	33.40
2.650	0.01	0.05	0.06	0.00	0.00	5	33.40
2.700	0.01	0.06	0.07	0.00	0.00	6	33.40
2.750	0.01	0.08	0.08	0.00	0.00	7	33.40
2.800	0.01	0.09	0.09	0.00	0.00	8	33.41
2.850	0.01	0.10	0.10	0.00	0.00	9	33.41
2.900	0.01	0.11	0.12	0.00	0.00	10	33.41
2.950	0.01	0.13	0.13	0.00	0.00	12	33.41
3.000	0.01	0.14	0.15	0.00	0.00	13	33.41
3.050	0.01	0.16	0.17	0.00	0.00	15	33.41
3.100	0.01	0.18	0.18	0.00	0.00	16	33.41
3.150	0.01	0.19	0.20	0.00	0.00	18	33.41
3.200	0.01	0.21	0.22	0.00	0.00	19	33.41
3.250	0.01	0.23	0.24	0.00	0.00	21	33.41
3.300	0.01	0.25	0.26	0.00	0.01	23	33.41
3.350	0.02	0.27	0.28	0.00	0.01	25	33.42
3.400	0.02	0.29	0.30	0.00	0.01	26	33.42
3.450	0.02	0.31	0.32	0.00	0.01	28	33.42
3.500	0.02	0.33	0.34	0.00	0.01	30	33.42
3.550	0.02	0.35	0.37	0.00	0.01	32	33.42
3.600	0.02	0.37	0.39	0.00	0.01	34	33.42
3.650	0.02	0.40	0.41	0.00	0.01	36	33.42
3.700	0.02	0.42	0.44	0.00	0.01	38	33.43
3.750	0.02	0.44	0.46	0.00	0.01	41	33.43
3.800	0.02	0.47	0.49	0.00	0.01	43	33.43
3.850	0.02	0.49	0.51	0.00	0.01	45	33.43
3.900	0.02	0.52	0.54	0.00	0.01	47	33.43
3.950	0.02	0.54	0.56	0.00	0.01	49	33.43
4.000	0.02	0.57	0.59	0.00	0.01	52	33.43
4.050	0.03	0.59	0.62	0.00	0.01	54	33.44
4.100	0.03	0.62	0.64	0.00	0.01	57	33.44
4.150	0.03	0.65	0.67	0.00	0.01	59	33.44

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.200	0.03	0.67	0.70	0.00	0.01	61	33.44
4.250	0.03	0.70	0.73	0.00	0.01	64	33.44
4.300	0.03	0.73	0.76	0.00	0.01	66	33.44
4.350	0.03	0.75	0.79	0.00	0.02	69	33.45
4.400	0.03	0.78	0.81	0.00	0.02	72	33.45
4.450	0.03	0.81	0.84	0.00	0.02	74	33.45
4.500	0.03	0.84	0.87	0.00	0.02	77	33.45
4.550	0.03	0.87	0.90	0.00	0.02	79	33.45
4.600	0.03	0.90	0.93	0.00	0.02	82	33.45
4.650	0.03	0.93	0.96	0.00	0.02	85	33.46
4.700	0.03	0.96	1.00	0.00	0.02	87	33.46
4.750	0.04	0.99	1.03	0.00	0.02	90	33.46
4.800	0.04	1.02	1.06	0.00	0.02	93	33.46
4.850	0.04	1.05	1.09	0.00	0.02	96	33.46
4.900	0.04	1.08	1.12	0.00	0.02	98	33.46
4.950	0.04	1.11	1.15	0.00	0.02	101	33.47
5.000	0.04	1.14	1.18	0.00	0.02	104	33.47
5.050	0.04	1.17	1.22	0.00	0.02	107	33.47
5.100	0.04	1.20	1.25	0.00	0.02	110	33.47
5.150	0.04	1.23	1.28	0.00	0.02	113	33.47
5.200	0.04	1.26	1.31	0.00	0.03	115	33.48
5.250	0.04	1.30	1.35	0.00	0.03	118	33.48
5.300	0.04	1.33	1.38	0.00	0.03	121	33.48
5.350	0.04	1.36	1.41	0.00	0.03	124	33.48
5.400	0.04	1.39	1.45	0.00	0.03	127	33.48
5.450	0.05	1.42	1.48	0.00	0.03	130	33.49
5.500	0.05	1.46	1.51	0.00	0.03	133	33.49
5.550	0.05	1.49	1.55	0.00	0.03	136	33.49
5.600	0.05	1.52	1.58	0.00	0.03	139	33.49
5.650	0.05	1.55	1.62	0.00	0.03	142	33.49
5.700	0.05	1.59	1.65	0.00	0.03	145	33.49
5.750	0.05	1.62	1.68	0.00	0.03	148	33.50
5.800	0.05	1.65	1.72	0.00	0.03	151	33.50
5.850	0.05	1.68	1.75	0.00	0.03	154	33.50
5.900	0.05	1.72	1.79	0.00	0.03	157	33.50
5.950	0.05	1.75	1.82	0.00	0.04	160	33.50
6.000	0.05	1.78	1.86	0.00	0.04	163	33.51
6.050	0.05	1.82	1.89	0.00	0.04	166	33.51
6.100	0.06	1.85	1.93	0.00	0.04	169	33.51
6.150	0.06	1.89	1.96	0.00	0.04	172	33.51
6.200	0.06	1.92	2.00	0.00	0.04	176	33.52
6.250	0.06	1.96	2.04	0.00	0.04	179	33.52

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.300	0.06	2.00	2.08	0.00	0.04	183	33.52
6.350	0.06	2.04	2.12	0.00	0.04	186	33.52
6.400	0.06	2.08	2.16	0.00	0.04	190	33.52
6.450	0.06	2.12	2.20	0.00	0.04	194	33.53
6.500	0.07	2.16	2.25	0.00	0.04	198	33.53
6.550	0.07	2.21	2.29	0.00	0.04	202	33.53
6.600	0.07	2.25	2.34	0.00	0.05	206	33.53
6.650	0.07	2.30	2.39	0.00	0.05	210	33.54
6.700	0.07	2.34	2.44	0.00	0.05	214	33.54
6.750	0.07	2.39	2.49	0.00	0.05	218	33.54
6.800	0.07	2.44	2.54	0.00	0.05	223	33.55
6.850	0.08	2.49	2.59	0.00	0.05	227	33.55
6.900	0.08	2.54	2.64	0.00	0.05	232	33.55
6.950	0.08	2.59	2.70	0.00	0.05	237	33.56
7.000	0.08	2.64	2.75	0.00	0.05	242	33.56
7.050	0.08	2.70	2.81	0.00	0.05	247	33.56
7.100	0.08	2.75	2.86	0.00	0.06	251	33.56
7.150	0.09	2.81	2.92	0.00	0.06	257	33.57
7.200	0.09	2.86	2.98	0.00	0.06	262	33.57
7.250	0.09	2.92	3.04	0.00	0.06	267	33.57
7.300	0.09	2.98	3.10	0.00	0.06	272	33.58
7.350	0.09	3.04	3.16	0.00	0.06	277	33.58
7.400	0.09	3.10	3.22	0.00	0.06	283	33.59
7.450	0.09	3.16	3.28	0.00	0.06	288	33.59
7.500	0.10	3.22	3.35	0.00	0.07	294	33.59
7.550	0.10	3.28	3.41	0.00	0.07	300	33.60
7.600	0.10	3.34	3.48	0.00	0.07	305	33.60
7.650	0.10	3.40	3.54	0.00	0.07	311	33.60
7.700	0.10	3.47	3.61	0.00	0.07	317	33.61
7.750	0.10	3.53	3.67	0.00	0.07	323	33.61
7.800	0.11	3.60	3.74	0.00	0.07	329	33.62
7.850	0.11	3.66	3.81	0.00	0.07	335	33.62
7.900	0.11	3.73	3.88	0.00	0.08	341	33.62
7.950	0.11	3.80	3.95	0.00	0.08	347	33.63
8.000	0.11	3.86	4.02	0.00	0.08	353	33.63
8.050	0.12	3.93	4.09	0.00	0.08	359	33.64
8.100	0.12	4.00	4.16	0.00	0.08	366	33.64
8.150	0.12	4.07	4.24	0.00	0.08	372	33.64
8.200	0.12	4.15	4.32	0.00	0.08	379	33.65
8.250	0.13	4.23	4.40	0.00	0.09	387	33.65
8.300	0.13	4.31	4.49	0.00	0.09	394	33.66
8.350	0.13	4.40	4.58	0.00	0.09	402	33.66

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.400	0.14	4.49	4.67	0.00	0.09	410	33.67
8.450	0.14	4.58	4.76	0.00	0.09	418	33.67
8.500	0.14	4.67	4.86	0.00	0.09	427	33.68
8.550	0.15	4.77	4.96	0.00	0.10	436	33.69
8.600	0.15	4.87	5.06	0.00	0.10	445	33.69
8.650	0.15	4.97	5.17	0.00	0.10	454	33.70
8.700	0.16	5.07	5.28	0.00	0.10	464	33.70
8.750	0.16	5.18	5.39	0.00	0.10	474	33.71
8.800	0.16	5.29	5.51	0.00	0.11	484	33.72
8.850	0.17	5.40	5.62	0.00	0.11	494	33.72
8.900	0.17	5.52	5.74	0.00	0.11	504	33.73
8.950	0.17	5.64	5.86	0.00	0.11	515	33.74
9.000	0.18	5.75	5.99	0.00	0.12	526	33.74
9.050	0.18	5.88	6.11	0.00	0.12	537	33.75
9.100	0.19	6.00	6.24	0.00	0.12	548	33.76
9.150	0.19	6.12	6.37	0.00	0.12	560	33.77
9.200	0.19	6.25	6.51	0.00	0.13	572	33.77
9.250	0.20	6.38	6.64	0.00	0.13	584	33.78
9.300	0.20	6.51	6.78	0.00	0.13	596	33.79
9.350	0.20	6.65	6.92	0.00	0.13	609	33.80
9.400	0.21	6.78	7.06	0.00	0.14	621	33.81
9.450	0.21	6.92	7.20	0.00	0.14	634	33.81
9.500	0.21	7.06	7.34	0.00	0.14	647	33.82
9.550	0.22	7.20	7.49	0.00	0.15	660	33.83
9.600	0.22	7.34	7.64	0.00	0.15	673	33.84
9.650	0.23	7.49	7.79	0.00	0.15	686	33.85
9.700	0.23	7.63	7.94	0.00	0.15	700	33.86
9.750	0.23	7.78	8.09	0.00	0.16	714	33.87
9.800	0.24	7.93	8.25	0.00	0.16	727	33.87
9.850	0.24	8.08	8.40	0.00	0.16	741	33.88
9.900	0.24	8.23	8.56	0.00	0.17	755	33.89
9.950	0.25	8.38	8.72	0.00	0.17	770	33.90
10.000	0.25	8.54	8.88	0.00	0.17	784	33.91
10.050	0.26	8.70	9.05	0.00	0.17	799	33.92
10.100	0.26	8.87	9.22	0.00	0.18	814	33.93
10.150	0.27	9.04	9.40	0.00	0.18	831	33.94
10.200	0.28	9.23	9.59	0.00	0.18	848	33.95
10.250	0.28	9.42	9.79	0.00	0.18	866	33.96
10.300	0.29	9.63	10.00	0.00	0.18	885	33.98
10.350	0.30	9.84	10.22	0.00	0.19	904	33.99
10.400	0.30	10.06	10.44	0.00	0.19	925	34.00
10.450	0.31	10.30	10.68	0.00	0.19	946	34.02

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
10.500	0.32	10.54	10.93	0.00	0.20	968	34.03
10.550	0.33	10.78	11.18	0.00	0.20	990	34.04
10.600	0.33	11.04	11.45	0.00	0.20	1,014	34.06
10.650	0.34	11.31	11.72	0.00	0.21	1,038	34.08
10.700	0.35	11.58	12.00	0.00	0.21	1,063	34.09
10.750	0.36	11.86	12.29	0.00	0.21	1,089	34.11
10.800	0.36	12.16	12.59	0.00	0.22	1,115	34.13
10.850	0.37	12.45	12.89	0.00	0.22	1,143	34.14
10.900	0.38	12.76	13.20	0.00	0.22	1,170	34.16
10.950	0.39	13.07	13.52	0.00	0.23	1,199	34.18
11.000	0.39	13.39	13.85	0.00	0.23	1,228	34.20
11.050	0.41	13.73	14.20	0.00	0.23	1,259	34.22
11.100	0.43	14.08	14.56	0.00	0.24	1,291	34.24
11.150	0.45	14.47	14.96	0.00	0.24	1,327	34.26
11.200	0.48	14.90	15.40	0.00	0.25	1,365	34.29
11.250	0.50	15.37	15.88	0.00	0.25	1,407	34.32
11.300	0.53	15.88	16.40	0.00	0.26	1,454	34.35
11.350	0.56	16.43	16.97	0.00	0.27	1,503	34.38
11.400	0.58	17.03	17.57	0.00	0.27	1,557	34.42
11.450	0.61	17.66	18.22	0.00	0.28	1,616	34.46
11.500	0.64	18.34	18.92	0.00	0.29	1,679	34.50
11.550	0.75	19.15	19.73	0.00	0.29	1,752	34.55
11.600	0.89	20.18	20.78	0.00	0.30	1,846	34.61
11.650	1.11	21.54	22.17	0.00	0.32	1,970	34.69
11.700	1.36	23.35	24.01	0.00	0.33	2,133	34.80
11.750	1.62	25.62	26.33	0.00	0.35	2,339	34.94
11.800	1.88	28.37	29.12	0.00	0.38	2,591	35.11
11.850	2.14	31.59	32.39	0.00	0.40	2,882	35.32
11.900	2.41	35.29	36.14	0.00	0.43	3,219	35.56
11.950	3.40	40.16	41.10	0.00	0.47	3,657	35.88
12.000	4.59	47.11	48.15	0.00	0.52	4,288	36.38
12.050	4.90	54.62	56.60	0.00	0.99	5,022	37.04
12.100	4.99	60.28	64.51	0.00	2.12	5,616	37.82
12.150	4.09	63.25	69.36	0.00	3.05	5,968	38.31
12.200	2.93	63.81	70.28	0.00	3.24	6,034	38.40
12.250	2.45	63.15	69.19	0.00	3.02	5,955	38.29
12.300	2.13	62.27	67.73	0.00	2.73	5,850	38.15
12.350	1.86	61.38	66.26	0.00	2.44	5,744	38.00
12.400	1.59	60.49	64.84	0.00	2.17	5,640	37.85
12.450	1.33	59.56	63.42	0.00	1.93	5,536	37.70
12.500	1.07	58.59	61.96	0.00	1.68	5,428	37.55
12.550	0.89	57.67	60.55	0.00	1.44	5,320	37.41

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
12.600	0.74	56.71	59.30	0.00	1.30	5,233	37.29
12.650	0.68	55.80	58.12	0.00	1.16	5,144	37.18
12.700	0.65	55.03	57.13	0.00	1.05	5,065	37.09
12.750	0.62	54.39	56.29	0.00	0.95	4,998	37.02
12.800	0.59	53.85	55.59	0.00	0.87	4,934	36.95
12.850	0.56	53.38	54.99	0.00	0.81	4,877	36.90
12.900	0.53	52.92	54.48	0.00	0.78	4,835	36.86
12.950	0.51	52.46	53.96	0.00	0.75	4,794	36.82
13.000	0.48	52.00	53.44	0.00	0.72	4,752	36.78
13.050	0.46	51.54	52.93	0.00	0.70	4,710	36.74
13.100	0.44	51.10	52.44	0.00	0.67	4,667	36.70
13.150	0.43	50.69	51.97	0.00	0.64	4,626	36.67
13.200	0.42	50.30	51.54	0.00	0.62	4,587	36.63
13.250	0.41	49.94	51.13	0.00	0.60	4,552	36.60
13.300	0.41	49.60	50.76	0.00	0.58	4,519	36.57
13.350	0.40	49.29	50.41	0.00	0.56	4,488	36.54
13.400	0.39	49.00	50.08	0.00	0.54	4,460	36.52
13.450	0.39	48.72	49.78	0.00	0.53	4,433	36.50
13.500	0.38	48.44	49.49	0.00	0.53	4,407	36.47
13.550	0.37	48.14	49.19	0.00	0.52	4,380	36.45
13.600	0.36	47.83	48.87	0.00	0.52	4,352	36.43
13.650	0.36	47.51	48.55	0.00	0.52	4,323	36.41
13.700	0.35	47.19	48.22	0.00	0.52	4,294	36.38
13.750	0.34	46.85	47.88	0.00	0.51	4,265	36.36
13.800	0.34	46.50	47.53	0.00	0.51	4,235	36.33
13.850	0.33	46.15	47.17	0.00	0.51	4,204	36.31
13.900	0.32	45.78	46.80	0.00	0.51	4,172	36.28
13.950	0.31	45.41	46.42	0.00	0.50	4,140	36.26
14.000	0.31	45.03	46.03	0.00	0.50	4,105	36.23
14.050	0.30	44.64	45.63	0.00	0.50	4,070	36.20
14.100	0.29	44.24	45.23	0.00	0.50	4,033	36.17
14.150	0.29	43.84	44.83	0.00	0.49	3,997	36.14
14.200	0.29	43.44	44.42	0.00	0.49	3,960	36.11
14.250	0.28	43.04	44.01	0.00	0.49	3,924	36.09
14.300	0.28	42.63	43.60	0.00	0.48	3,887	36.06
14.350	0.28	42.23	43.19	0.00	0.48	3,850	36.03
14.400	0.27	41.82	42.78	0.00	0.48	3,813	36.00
14.450	0.27	41.41	42.37	0.00	0.48	3,774	35.97
14.500	0.27	41.01	41.95	0.00	0.47	3,736	35.94
14.550	0.26	40.60	41.54	0.00	0.47	3,697	35.91
14.600	0.26	40.19	41.12	0.00	0.47	3,659	35.88
14.650	0.26	39.78	40.70	0.00	0.46	3,623	35.86

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
14.700	0.25	39.37	40.29	0.00	0.46	3,587	35.83
14.750	0.25	38.95	39.87	0.00	0.46	3,551	35.80
14.800	0.25	38.54	39.45	0.00	0.45	3,514	35.77
14.850	0.24	38.13	39.03	0.00	0.45	3,478	35.75
14.900	0.24	37.71	38.61	0.00	0.45	3,440	35.72
14.950	0.24	37.29	38.18	0.00	0.44	3,402	35.69
15.000	0.23	36.88	37.76	0.00	0.44	3,364	35.66
15.050	0.23	36.46	37.34	0.00	0.44	3,326	35.64
15.100	0.22	36.04	36.92	0.00	0.44	3,288	35.61
15.150	0.22	35.63	36.49	0.00	0.43	3,250	35.58
15.200	0.22	35.21	36.07	0.00	0.43	3,212	35.55
15.250	0.21	34.79	35.64	0.00	0.43	3,174	35.53
15.300	0.21	34.37	35.21	0.00	0.42	3,135	35.50
15.350	0.21	33.95	34.78	0.00	0.42	3,096	35.47
15.400	0.20	33.52	34.36	0.00	0.42	3,056	35.44
15.450	0.20	33.10	33.93	0.00	0.41	3,017	35.41
15.500	0.20	32.68	33.50	0.00	0.41	2,978	35.39
15.550	0.19	32.25	33.07	0.00	0.41	2,941	35.36
15.600	0.19	31.83	32.64	0.00	0.40	2,903	35.33
15.650	0.19	31.41	32.21	0.00	0.40	2,866	35.31
15.700	0.18	30.98	31.78	0.00	0.40	2,828	35.28
15.750	0.18	30.56	31.35	0.00	0.39	2,790	35.25
15.800	0.18	30.14	30.92	0.00	0.39	2,752	35.23
15.850	0.17	29.71	30.49	0.00	0.39	2,713	35.20
15.900	0.17	29.29	30.05	0.00	0.38	2,675	35.17
15.950	0.17	28.86	29.62	0.00	0.38	2,636	35.15
16.000	0.16	28.44	29.19	0.00	0.38	2,597	35.12
16.050	0.16	28.02	28.76	0.00	0.37	2,559	35.09
16.100	0.16	27.59	28.33	0.00	0.37	2,520	35.07
16.150	0.16	27.17	27.91	0.00	0.37	2,482	35.04
16.200	0.15	26.76	27.48	0.00	0.36	2,444	35.01
16.250	0.15	26.34	27.06	0.00	0.36	2,406	34.99
16.300	0.15	25.93	26.65	0.00	0.36	2,368	34.96
16.350	0.15	25.53	26.23	0.00	0.35	2,330	34.94
16.400	0.15	25.12	25.82	0.00	0.35	2,293	34.91
16.450	0.15	24.72	25.42	0.00	0.35	2,257	34.88
16.500	0.14	24.33	25.02	0.00	0.34	2,221	34.86
16.550	0.14	23.94	24.62	0.00	0.34	2,186	34.84
16.600	0.14	23.55	24.22	0.00	0.34	2,152	34.81
16.650	0.14	23.17	23.84	0.00	0.33	2,118	34.79
16.700	0.14	22.79	23.45	0.00	0.33	2,084	34.77
16.750	0.14	22.42	23.07	0.00	0.32	2,050	34.74

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.800	0.14	22.05	22.69	0.00	0.32	2,017	34.72
16.850	0.13	21.69	22.32	0.00	0.32	1,983	34.70
16.900	0.13	21.32	21.95	0.00	0.31	1,950	34.68
16.950	0.13	20.97	21.59	0.00	0.31	1,918	34.66
17.000	0.13	20.61	21.23	0.00	0.31	1,885	34.63
17.050	0.13	20.26	20.87	0.00	0.30	1,853	34.61
17.100	0.13	19.91	20.51	0.00	0.30	1,822	34.59
17.150	0.13	19.57	20.16	0.00	0.30	1,790	34.57
17.200	0.12	19.23	19.82	0.00	0.29	1,759	34.55
17.250	0.12	18.89	19.47	0.00	0.29	1,729	34.53
17.300	0.12	18.56	19.13	0.00	0.29	1,698	34.51
17.350	0.12	18.23	18.80	0.00	0.29	1,668	34.49
17.400	0.12	17.90	18.46	0.00	0.28	1,638	34.47
17.450	0.12	17.57	18.13	0.00	0.28	1,608	34.45
17.500	0.11	17.25	17.80	0.00	0.28	1,578	34.43
17.550	0.11	16.93	17.48	0.00	0.27	1,549	34.41
17.600	0.11	16.62	17.16	0.00	0.27	1,520	34.39
17.650	0.11	16.31	16.84	0.00	0.27	1,492	34.37
17.700	0.11	16.00	16.53	0.00	0.26	1,464	34.36
17.750	0.11	15.70	16.22	0.00	0.26	1,437	34.34
17.800	0.11	15.40	15.91	0.00	0.25	1,410	34.32
17.850	0.10	15.11	15.61	0.00	0.25	1,384	34.30
17.900	0.10	14.82	15.31	0.00	0.25	1,358	34.28
17.950	0.10	14.53	15.02	0.00	0.24	1,332	34.27
18.000	0.10	14.25	14.73	0.00	0.24	1,307	34.25
18.050	0.10	13.97	14.45	0.00	0.24	1,281	34.23
18.100	0.10	13.70	14.17	0.00	0.23	1,256	34.22
18.150	0.10	13.43	13.89	0.00	0.23	1,232	34.20
18.200	0.10	13.17	13.62	0.00	0.23	1,208	34.19
18.250	0.10	12.91	13.36	0.00	0.22	1,185	34.17
18.300	0.09	12.66	13.10	0.00	0.22	1,161	34.16
18.350	0.09	12.41	12.85	0.00	0.22	1,139	34.14
18.400	0.09	12.17	12.60	0.00	0.22	1,117	34.13
18.450	0.09	11.93	12.36	0.00	0.21	1,095	34.11
18.500	0.09	11.70	12.12	0.00	0.21	1,074	34.10
18.550	0.09	11.47	11.89	0.00	0.21	1,053	34.09
18.600	0.09	11.25	11.66	0.00	0.20	1,033	34.07
18.650	0.09	11.03	11.43	0.00	0.20	1,013	34.06
18.700	0.09	10.82	11.21	0.00	0.20	993	34.05
18.750	0.09	10.60	11.00	0.00	0.20	974	34.03
18.800	0.09	10.40	10.79	0.00	0.19	955	34.02
18.850	0.09	10.20	10.58	0.00	0.19	937	34.01

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.900	0.09	10.00	10.38	0.00	0.19	919	34.00
18.950	0.09	9.80	10.18	0.00	0.19	901	33.99
19.000	0.09	9.61	9.98	0.00	0.18	883	33.98
19.050	0.09	9.42	9.79	0.00	0.18	866	33.96
19.100	0.09	9.24	9.60	0.00	0.18	849	33.95
19.150	0.09	9.06	9.42	0.00	0.18	832	33.94
19.200	0.09	8.88	9.23	0.00	0.18	816	33.93
19.250	0.09	8.71	9.06	0.00	0.17	800	33.92
19.300	0.09	8.54	8.88	0.00	0.17	784	33.91
19.350	0.09	8.37	8.71	0.00	0.17	769	33.90
19.400	0.09	8.21	8.54	0.00	0.17	754	33.89
19.450	0.08	8.05	8.38	0.00	0.16	739	33.88
19.500	0.08	7.90	8.22	0.00	0.16	725	33.87
19.550	0.08	7.76	8.07	0.00	0.16	712	33.86
19.600	0.08	7.62	7.92	0.00	0.15	699	33.86
19.650	0.08	7.48	7.78	0.00	0.15	686	33.85
19.700	0.08	7.35	7.64	0.00	0.15	674	33.84
19.750	0.08	7.22	7.51	0.00	0.15	662	33.83
19.800	0.08	7.09	7.38	0.00	0.14	650	33.82
19.850	0.08	6.97	7.26	0.00	0.14	639	33.82
19.900	0.08	6.86	7.14	0.00	0.14	628	33.81
19.950	0.08	6.75	7.02	0.00	0.14	618	33.80
20.000	0.08	6.64	6.90	0.00	0.13	608	33.80
20.050	0.08	6.53	6.80	0.00	0.13	598	33.79
20.100	0.08	6.43	6.69	0.00	0.13	588	33.78
20.150	0.08	6.33	6.59	0.00	0.13	579	33.78
20.200	0.08	6.23	6.49	0.00	0.13	570	33.77
20.250	0.08	6.14	6.39	0.00	0.12	562	33.77
20.300	0.08	6.05	6.30	0.00	0.12	553	33.76
20.350	0.08	5.96	6.21	0.00	0.12	545	33.76
20.400	0.08	5.88	6.12	0.00	0.12	537	33.75
20.450	0.08	5.80	6.03	0.00	0.12	530	33.75
20.500	0.08	5.72	5.95	0.00	0.12	523	33.74
20.550	0.08	5.64	5.87	0.00	0.11	516	33.74
20.600	0.08	5.57	5.79	0.00	0.11	509	33.73
20.650	0.07	5.50	5.72	0.00	0.11	502	33.73
20.700	0.07	5.43	5.65	0.00	0.11	496	33.72
20.750	0.07	5.36	5.57	0.00	0.11	490	33.72
20.800	0.07	5.29	5.51	0.00	0.11	484	33.72
20.850	0.07	5.23	5.44	0.00	0.11	478	33.71
20.900	0.07	5.17	5.37	0.00	0.10	472	33.71
20.950	0.07	5.10	5.31	0.00	0.10	466	33.71

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.000	0.07	5.05	5.25	0.00	0.10	461	33.70
21.050	0.07	4.99	5.19	0.00	0.10	456	33.70
21.100	0.07	4.93	5.13	0.00	0.10	451	33.70
21.150	0.07	4.88	5.08	0.00	0.10	446	33.69
21.200	0.07	4.83	5.02	0.00	0.10	441	33.69
21.250	0.07	4.78	4.97	0.00	0.10	436	33.69
21.300	0.07	4.73	4.92	0.00	0.10	432	33.68
21.350	0.07	4.68	4.87	0.00	0.09	427	33.68
21.400	0.07	4.63	4.82	0.00	0.09	423	33.68
21.450	0.07	4.58	4.77	0.00	0.09	419	33.67
21.500	0.07	4.54	4.72	0.00	0.09	415	33.67
21.550	0.07	4.49	4.68	0.00	0.09	411	33.67
21.600	0.07	4.45	4.63	0.00	0.09	407	33.67
21.650	0.07	4.41	4.59	0.00	0.09	403	33.66
21.700	0.07	4.37	4.55	0.00	0.09	399	33.66
21.750	0.07	4.33	4.50	0.00	0.09	396	33.66
21.800	0.07	4.29	4.46	0.00	0.09	392	33.66
21.850	0.07	4.25	4.42	0.00	0.09	389	33.65
21.900	0.07	4.22	4.39	0.00	0.09	385	33.65
21.950	0.07	4.18	4.35	0.00	0.08	382	33.65
22.000	0.07	4.14	4.31	0.00	0.08	379	33.65
22.050	0.07	4.11	4.27	0.00	0.08	375	33.65
22.100	0.07	4.07	4.24	0.00	0.08	372	33.64
22.150	0.06	4.04	4.20	0.00	0.08	369	33.64
22.200	0.06	4.01	4.17	0.00	0.08	366	33.64
22.250	0.06	3.97	4.14	0.00	0.08	363	33.64
22.300	0.06	3.94	4.10	0.00	0.08	360	33.64
22.350	0.06	3.91	4.07	0.00	0.08	357	33.63
22.400	0.06	3.88	4.04	0.00	0.08	355	33.63
22.450	0.06	3.85	4.01	0.00	0.08	352	33.63
22.500	0.06	3.82	3.98	0.00	0.08	349	33.63
22.550	0.06	3.79	3.94	0.00	0.08	346	33.63
22.600	0.06	3.76	3.92	0.00	0.08	344	33.63
22.650	0.06	3.74	3.89	0.00	0.08	341	33.62
22.700	0.06	3.71	3.86	0.00	0.08	339	33.62
22.750	0.06	3.68	3.83	0.00	0.07	336	33.62
22.800	0.06	3.65	3.80	0.00	0.07	334	33.62
22.850	0.06	3.63	3.77	0.00	0.07	331	33.62
22.900	0.06	3.60	3.75	0.00	0.07	329	33.62
22.950	0.06	3.57	3.72	0.00	0.07	327	33.61
23.000	0.06	3.55	3.69	0.00	0.07	324	33.61
23.050	0.06	3.52	3.67	0.00	0.07	322	33.61

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.100	0.06	3.50	3.64	0.00	0.07	320	33.61
23.150	0.06	3.47	3.62	0.00	0.07	318	33.61
23.200	0.06	3.45	3.59	0.00	0.07	315	33.61
23.250	0.06	3.43	3.57	0.00	0.07	313	33.61
23.300	0.06	3.40	3.54	0.00	0.07	311	33.60
23.350	0.06	3.38	3.52	0.00	0.07	309	33.60
23.400	0.06	3.36	3.49	0.00	0.07	307	33.60
23.450	0.06	3.33	3.47	0.00	0.07	305	33.60
23.500	0.06	3.31	3.45	0.00	0.07	303	33.60
23.550	0.06	3.29	3.42	0.00	0.07	301	33.60
23.600	0.05	3.27	3.40	0.00	0.07	299	33.60
23.650	0.05	3.24	3.38	0.00	0.07	297	33.59
23.700	0.05	3.22	3.35	0.00	0.07	295	33.59
23.750	0.05	3.20	3.33	0.00	0.06	293	33.59
23.800	0.05	3.18	3.31	0.00	0.06	291	33.59
23.850	0.05	3.16	3.29	0.00	0.06	289	33.59
23.900	0.05	3.14	3.26	0.00	0.06	287	33.59
23.950	0.05	3.12	3.24	0.00	0.06	285	33.59
24.000	0.05	3.10	3.22	0.00	0.06	283	33.59
24.050	0.03	3.06	3.18	0.00	0.06	279	33.58
24.100	0.01	2.98	3.10	0.00	0.06	272	33.58
24.150	0.00	2.87	2.99	0.00	0.06	262	33.57
24.200	0.00	2.76	2.87	0.00	0.06	252	33.57
24.250	0.00	2.65	2.76	0.00	0.05	243	33.56
24.300	0.00	2.55	2.65	0.00	0.05	233	33.55
24.350	0.00	2.45	2.55	0.00	0.05	224	33.55
24.400	0.00	2.36	2.45	0.00	0.05	215	33.54
24.450	0.00	2.26	2.36	0.00	0.05	207	33.54
24.500	0.00	2.18	2.26	0.00	0.04	199	33.53
24.550	0.00	2.09	2.18	0.00	0.04	191	33.53
24.600	0.00	2.01	2.09	0.00	0.04	184	33.52
24.650	0.00	1.93	2.01	0.00	0.04	177	33.52
24.700	0.00	1.86	1.93	0.00	0.04	170	33.51
24.750	0.00	1.78	1.86	0.00	0.04	163	33.51
24.800	0.00	1.71	1.78	0.00	0.03	157	33.50
24.850	0.00	1.65	1.71	0.00	0.03	151	33.50
24.900	0.00	1.58	1.65	0.00	0.03	145	33.49
24.950	0.00	1.52	1.58	0.00	0.03	139	33.49
25.000	0.00	1.46	1.52	0.00	0.03	134	33.49
25.050	0.00	1.41	1.46	0.00	0.03	129	33.48
25.100	0.00	1.35	1.41	0.00	0.03	124	33.48
25.150	0.00	1.30	1.35	0.00	0.03	119	33.48

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.200	0.00	1.25	1.30	0.00	0.03	114	33.47
25.250	0.00	1.20	1.25	0.00	0.02	110	33.47
25.300	0.00	1.15	1.20	0.00	0.02	105	33.47
25.350	0.00	1.11	1.15	0.00	0.02	101	33.47
25.400	0.00	1.07	1.11	0.00	0.02	97	33.46
25.450	0.00	1.02	1.07	0.00	0.02	94	33.46
25.500	0.00	0.98	1.02	0.00	0.02	90	33.46
25.550	0.00	0.95	0.98	0.00	0.02	86	33.46
25.600	0.00	0.91	0.95	0.00	0.02	83	33.45
25.650	0.00	0.87	0.91	0.00	0.02	80	33.45
25.700	0.00	0.84	0.87	0.00	0.02	77	33.45
25.750	0.00	0.81	0.84	0.00	0.02	74	33.45
25.800	0.00	0.78	0.81	0.00	0.02	71	33.45
25.850	0.00	0.75	0.78	0.00	0.02	68	33.44
25.900	0.00	0.72	0.75	0.00	0.01	65	33.44
25.950	0.00	0.69	0.72	0.00	0.01	63	33.44
26.000	0.00	0.66	0.69	0.00	0.01	60	33.44
26.050	0.00	0.64	0.66	0.00	0.01	58	33.44
26.100	0.00	0.61	0.64	0.00	0.01	56	33.44
26.150	0.00	0.59	0.61	0.00	0.01	54	33.44
26.200	0.00	0.56	0.59	0.00	0.01	52	33.43
26.250	0.00	0.54	0.56	0.00	0.01	50	33.43
26.300	0.00	0.52	0.54	0.00	0.01	48	33.43
26.350	0.00	0.50	0.52	0.00	0.01	46	33.43
26.400	0.00	0.48	0.50	0.00	0.01	44	33.43
26.450	0.00	0.46	0.48	0.00	0.01	42	33.43
26.500	0.00	0.44	0.46	0.00	0.01	41	33.43
26.550	0.00	0.43	0.44	0.00	0.01	39	33.43
26.600	0.00	0.41	0.43	0.00	0.01	38	33.42
26.650	0.00	0.39	0.41	0.00	0.01	36	33.42
26.700	0.00	0.38	0.39	0.00	0.01	35	33.42
26.750	0.00	0.36	0.38	0.00	0.01	33	33.42
26.800	0.00	0.35	0.36	0.00	0.01	32	33.42
26.850	0.00	0.34	0.35	0.00	0.01	31	33.42
26.900	0.00	0.32	0.34	0.00	0.01	30	33.42
26.950	0.00	0.31	0.32	0.00	0.01	28	33.42
27.000	0.00	0.30	0.31	0.00	0.01	27	33.42
27.050	0.00	0.29	0.30	0.00	0.01	26	33.42
27.100	0.00	0.28	0.29	0.00	0.01	25	33.42
27.150	0.00	0.27	0.28	0.00	0.01	24	33.42
27.200	0.00	0.26	0.27	0.00	0.01	23	33.42
27.250	0.00	0.25	0.26	0.00	0.00	22	33.41

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.300	0.00	0.24	0.25	0.00	0.00	22	33.41
27.350	0.00	0.23	0.24	0.00	0.00	21	33.41
27.400	0.00	0.22	0.23	0.00	0.00	20	33.41
27.450	0.00	0.21	0.22	0.00	0.00	19	33.41
27.500	0.00	0.20	0.21	0.00	0.00	18	33.41
27.550	0.00	0.19	0.20	0.00	0.00	18	33.41
27.600	0.00	0.19	0.19	0.00	0.00	17	33.41
27.650	0.00	0.18	0.19	0.00	0.00	16	33.41
27.700	0.00	0.17	0.18	0.00	0.00	16	33.41
27.750	0.00	0.16	0.17	0.00	0.00	15	33.41
27.800	0.00	0.16	0.16	0.00	0.00	14	33.41
27.850	0.00	0.15	0.16	0.00	0.00	14	33.41
27.900	0.00	0.15	0.15	0.00	0.00	13	33.41
27.950	0.00	0.14	0.15	0.00	0.00	13	33.41
28.000	0.00	0.14	0.14	0.00	0.00	12	33.41
28.050	0.00	0.13	0.14	0.00	0.00	12	33.41
28.100	0.00	0.12	0.13	0.00	0.00	11	33.41
28.150	0.00	0.12	0.12	0.00	0.00	11	33.41
28.200	0.00	0.12	0.12	0.00	0.00	11	33.41
28.250	0.00	0.11	0.12	0.00	0.00	10	33.41
28.300	0.00	0.11	0.11	0.00	0.00	10	33.41
28.350	0.00	0.10	0.11	0.00	0.00	9	33.41
28.400	0.00	0.10	0.10	0.00	0.00	9	33.41
28.450	0.00	0.09	0.10	0.00	0.00	9	33.41
28.500	0.00	0.09	0.09	0.00	0.00	8	33.41
28.550	0.00	0.09	0.09	0.00	0.00	8	33.41
28.600	0.00	0.08	0.09	0.00	0.00	8	33.41
28.650	0.00	0.08	0.08	0.00	0.00	7	33.40
28.700	0.00	0.08	0.08	0.00	0.00	7	33.40
28.750	0.00	0.07	0.08	0.00	0.00	7	33.40
28.800	0.00	0.07	0.07	0.00	0.00	7	33.40
28.850	0.00	0.07	0.07	0.00	0.00	6	33.40
28.900	0.00	0.07	0.07	0.00	0.00	6	33.40
28.950	0.00	0.06	0.07	0.00	0.00	6	33.40
29.000	0.00	0.06	0.06	0.00	0.00	6	33.40
29.050	0.00	0.06	0.06	0.00	0.00	5	33.40
29.100	0.00	0.06	0.06	0.00	0.00	5	33.40
29.150	0.00	0.05	0.06	0.00	0.00	5	33.40
29.200	0.00	0.05	0.05	0.00	0.00	5	33.40
29.250	0.00	0.05	0.05	0.00	0.00	5	33.40
29.300	0.00	0.05	0.05	0.00	0.00	4	33.40
29.350	0.00	0.05	0.05	0.00	0.00	4	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.400	0.00	0.04	0.05	0.00	0.00	4	33.40
29.450	0.00	0.04	0.04	0.00	0.00	4	33.40
29.500	0.00	0.04	0.04	0.00	0.00	4	33.40
29.550	0.00	0.04	0.04	0.00	0.00	4	33.40
29.600	0.00	0.04	0.04	0.00	0.00	3	33.40
29.650	0.00	0.04	0.04	0.00	0.00	3	33.40
29.700	0.00	0.04	0.04	0.00	0.00	3	33.40
29.750	0.00	0.03	0.04	0.00	0.00	3	33.40
29.800	0.00	0.03	0.03	0.00	0.00	3	33.40
29.850	0.00	0.03	0.03	0.00	0.00	3	33.40
29.900	0.00	0.03	0.03	0.00	0.00	3	33.40
29.950	0.00	0.03	0.03	0.00	0.00	3	33.40
30.000	0.00	0.03	0.03	0.00	0.00	3	33.40
30.050	0.00	0.03	0.03	0.00	0.00	2	33.40
30.100	0.00	0.03	0.03	0.00	0.00	2	33.40
30.150	0.00	0.02	0.03	0.00	0.00	2	33.40
30.200	0.00	0.02	0.02	0.00	0.00	2	33.40
30.250	0.00	0.02	0.02	0.00	0.00	2	33.40
30.300	0.00	0.02	0.02	0.00	0.00	2	33.40
30.350	0.00	0.02	0.02	0.00	0.00	2	33.40
30.400	0.00	0.02	0.02	0.00	0.00	2	33.40
30.450	0.00	0.02	0.02	0.00	0.00	2	33.40
30.500	0.00	0.02	0.02	0.00	0.00	2	33.40
30.550	0.00	0.02	0.02	0.00	0.00	2	33.40
30.600	0.00	0.02	0.02	0.00	0.00	2	33.40
30.650	0.00	0.02	0.02	0.00	0.00	2	33.40
30.700	0.00	0.02	0.02	0.00	0.00	1	33.40
30.750	0.00	0.02	0.02	0.00	0.00	1	33.40
30.800	0.00	0.01	0.02	0.00	0.00	1	33.40
30.850	0.00	0.01	0.01	0.00	0.00	1	33.40
30.900	0.00	0.01	0.01	0.00	0.00	1	33.40
30.950	0.00	0.01	0.01	0.00	0.00	1	33.40
31.000	0.00	0.01	0.01	0.00	0.00	1	33.40
31.050	0.00	0.01	0.01	0.00	0.00	1	33.40
31.100	0.00	0.01	0.01	0.00	0.00	1	33.40
31.150	0.00	0.01	0.01	0.00	0.00	1	33.40
31.200	0.00	0.01	0.01	0.00	0.00	1	33.40
31.250	0.00	0.01	0.01	0.00	0.00	1	33.40
31.300	0.00	0.01	0.01	0.00	0.00	1	33.40
31.350	0.00	0.01	0.01	0.00	0.00	1	33.40
31.400	0.00	0.01	0.01	0.00	0.00	1	33.40
31.450	0.00	0.01	0.01	0.00	0.00	1	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
31.500	0.00	0.01	0.01	0.00	0.00	1	33.40
31.550	0.00	0.01	0.01	0.00	0.00	1	33.40
31.600	0.00	0.01	0.01	0.00	0.00	1	33.40
31.650	0.00	0.01	0.01	0.00	0.00	1	33.40
31.700	0.00	0.01	0.01	0.00	0.00	1	33.40
31.750	0.00	0.01	0.01	0.00	0.00	1	33.40
31.800	0.00	0.01	0.01	0.00	0.00	1	33.40
31.850	0.00	0.01	0.01	0.00	0.00	1	33.40
31.900	0.00	0.01	0.01	0.00	0.00	1	33.40
31.950	0.00	0.01	0.01	0.00	0.00	1	33.40
32.000	0.00	0.01	0.01	0.00	0.00	1	33.40
32.050	0.00	0.01	0.01	0.00	0.00	0	33.40
32.100	0.00	0.01	0.01	0.00	0.00	0	33.40
32.150	0.00	0.01	0.01	0.00	0.00	0	33.40
32.200	0.00	0.00	0.01	0.00	0.00	0	33.40
32.250	0.00	0.00	0.00	0.00	0.00	0	33.40
32.300	0.00	0.00	0.00	0.00	0.00	0	33.40
32.350	0.00	0.00	0.00	0.00	0.00	0	33.40
32.400	0.00	0.00	0.00	0.00	0.00	0	33.40
32.450	0.00	0.00	0.00	0.00	0.00	0	33.40
32.500	0.00	0.00	0.00	0.00	0.00	0	33.40
32.550	0.00	0.00	0.00	0.00	0.00	0	33.40
32.600	0.00	0.00	0.00	0.00	0.00	0	33.40
32.650	0.00	0.00	0.00	0.00	0.00	0	33.40
32.700	0.00	0.00	0.00	0.00	0.00	0	33.40
32.750	0.00	0.00	0.00	0.00	0.00	0	33.40
32.800	0.00	0.00	0.00	0.00	0.00	0	33.40
32.850	0.00	0.00	0.00	0.00	0.00	0	33.40
32.900	0.00	0.00	0.00	0.00	0.00	0	33.40
32.950	0.00	0.00	0.00	0.00	0.00	0	33.40
33.000	0.00	0.00	0.00	0.00	0.00	0	33.40
33.050	0.00	0.00	0.00	0.00	0.00	0	33.40
33.100	0.00	0.00	0.00	0.00	0.00	0	33.40
33.150	0.00	0.00	0.00	0.00	0.00	0	33.40
33.200	0.00	0.00	0.00	0.00	0.00	0	33.40
33.250	0.00	0.00	0.00	0.00	0.00	0	33.40
33.300	0.00	0.00	0.00	0.00	0.00	0	33.40
33.350	0.00	0.00	0.00	0.00	0.00	0	33.40
33.400	0.00	0.00	0.00	0.00	0.00	0	33.40
33.450	0.00	0.00	0.00	0.00	0.00	0	33.40
33.500	0.00	0.00	0.00	0.00	0.00	0	33.40
33.550	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
33.600	0.00	0.00	0.00	0.00	0.00	0	33.40
33.650	0.00	0.00	0.00	0.00	0.00	0	33.40
33.700	0.00	0.00	0.00	0.00	0.00	0	33.40
33.750	0.00	0.00	0.00	0.00	0.00	0	33.40
33.800	0.00	0.00	0.00	0.00	0.00	0	33.40
33.850	0.00	0.00	0.00	0.00	0.00	0	33.40
33.900	0.00	0.00	0.00	0.00	0.00	0	33.40
33.950	0.00	0.00	0.00	0.00	0.00	0	33.40
34.000	0.00	0.00	0.00	0.00	0.00	0	33.40
34.050	0.00	0.00	0.00	0.00	0.00	0	33.40
34.100	0.00	0.00	0.00	0.00	0.00	0	33.40
34.150	0.00	0.00	0.00	0.00	0.00	0	33.40
34.200	0.00	0.00	0.00	0.00	0.00	0	33.40
34.250	0.00	0.00	0.00	0.00	0.00	0	33.40
34.300	0.00	0.00	0.00	0.00	0.00	0	33.40
34.350	0.00	0.00	0.00	0.00	0.00	0	33.40
34.400	0.00	0.00	0.00	0.00	0.00	0	33.40
34.450	0.00	0.00	0.00	0.00	0.00	0	33.40
34.500	0.00	0.00	0.00	0.00	0.00	0	33.40
34.550	0.00	0.00	0.00	0.00	0.00	0	33.40
34.600	0.00	0.00	0.00	0.00	0.00	0	33.40
34.650	0.00	0.00	0.00	0.00	0.00	0	33.40
34.700	0.00	0.00	0.00	0.00	0.00	0	33.40
34.750	0.00	0.00	0.00	0.00	0.00	0	33.40
34.800	0.00	0.00	0.00	0.00	0.00	0	33.40
34.850	0.00	0.00	0.00	0.00	0.00	0	33.40
34.900	0.00	0.00	0.00	0.00	0.00	0	33.40
34.950	0.00	0.00	0.00	0.00	0.00	0	33.40
35.000	0.00	0.00	0.00	0.00	0.00	0	33.40
35.050	0.00	0.00	0.00	0.00	0.00	0	33.40
35.100	0.00	0.00	0.00	0.00	0.00	0	33.40
35.150	0.00	0.00	0.00	0.00	0.00	0	33.40
35.200	0.00	0.00	0.00	0.00	0.00	0	33.40
35.250	0.00	0.00	0.00	0.00	0.00	0	33.40
35.300	0.00	0.00	0.00	0.00	0.00	0	33.40
35.350	0.00	0.00	0.00	0.00	0.00	0	33.40
35.400	0.00	0.00	0.00	0.00	0.00	0	33.40
35.450	0.00	0.00	0.00	0.00	0.00	0	33.40
35.500	0.00	0.00	0.00	0.00	0.00	0	33.40
35.550	0.00	0.00	0.00	0.00	0.00	0	33.40
35.600	0.00	0.00	0.00	0.00	0.00	0	33.40
35.650	0.00	0.00	0.00	0.00	0.00	0	33.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: DET SYSTEM (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
35.700	0.00	0.00	0.00	0.00	0.00	0	33.40
35.750	0.00	0.00	0.00	0.00	0.00	0	33.40
35.800	0.00	0.00	0.00	0.00	0.00	0	33.40
35.850	0.00	0.00	0.00	0.00	0.00	0	33.40
35.900	0.00	0.00	0.00	0.00	0.00	0	33.40
35.950	0.00	0.00	0.00	0.00	0.00	0	33.40
36.000	0.00	0.00	0.00	0.00	0.00	0	33.40

Subsection: Pond Inflow Summary

Label: DET SYSTEM (IN)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'DET SYSTEM'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1A	4,757	12.100	1.32
Flow (In)	DET SYSTEM	4,757	12.100	1.32

Subsection: Pond Inflow Summary

Label: DET SYSTEM (IN)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'DET SYSTEM'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1A	10,061	12.100	2.68
Flow (In)	DET SYSTEM	10,061	12.100	2.68

Hydrologic Calculations

Subsection: Pond Inflow Summary
Label: DET SYSTEM (IN)
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event: 25 years

Summary for Hydrograph Addition at 'DET SYSTEM'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1A	13,173	12.100	3.45
Flow (In)	DET SYSTEM	13,173	12.100	3.45

Subsection: Pond Inflow Summary
Label: DET SYSTEM (IN)
Scenario: Post-Development 100 year

Return Event: 100 years
Storm Event: 100 years

Summary for Hydrograph Addition at 'DET SYSTEM'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1A	19,557	12.100	4.99
Flow (In)	DET SYSTEM	19,557	12.100	4.99

Subsection: Elevation-Volume-Flow Table (Pond)
Label: EX. RG
Scenario: Pre-Development 1 year

Return Event: 1 years
Storm Event: 1 year

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
29.10	0.00	0	0.00	0.00	0.00	0.00
29.60	0.00	5	0.00	0.00	0.00	0.06
29.64	0.00	7	0.00	0.00	0.00	0.07
29.91	0.00	23	0.00	0.00	0.00	0.25
30.10	0.11	42	0.00	0.00	0.11	0.57
30.60	0.82	112	0.00	0.00	0.82	2.07
30.80	1.07	149	0.00	0.00	1.07	2.72
31.10	7.80	215	0.01	0.00	7.80	10.19
31.60	62.53	359	0.01	0.00	62.53	66.52
31.76	93.05	430	0.01	0.00	93.05	97.83
32.00	153.27	581	0.02	0.00	153.27	159.73

Subsection: Elevation-Volume-Flow Table (Pond)

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
29.10	0.00	0	0.00	0.00	0.00	0.00
29.60	0.00	5	0.00	0.00	0.00	0.06
29.64	0.00	7	0.00	0.00	0.00	0.07
29.91	0.00	23	0.00	0.00	0.00	0.25
30.10	0.11	42	0.00	0.00	0.11	0.57
30.60	0.82	112	0.00	0.00	0.82	2.07
30.80	1.07	149	0.00	0.00	1.07	2.72
31.10	7.80	215	0.01	0.00	7.80	10.19
31.60	62.53	359	0.01	0.00	62.53	66.52

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
31.76	93.05	430	0.01	0.00	93.05	97.83
32.00	153.27	581	0.02	0.00	153.27	159.73

Subsection: Elevation-Volume-Flow Table (Pond)

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
29.10	0.00	0	0.00	0.00	0.00	0.00
29.60	0.00	5	0.00	0.00	0.00	0.06
29.64	0.00	7	0.00	0.00	0.00	0.07
29.91	0.00	23	0.00	0.00	0.00	0.25
30.10	0.11	42	0.00	0.00	0.11	0.57
30.60	0.82	112	0.00	0.00	0.82	2.07
30.80	1.07	149	0.00	0.00	1.07	2.72
31.10	7.80	215	0.01	0.00	7.80	10.19
31.60	62.53	359	0.01	0.00	62.53	66.52
31.76	93.05	430	0.01	0.00	93.05	97.83
32.00	153.27	581	0.02	0.00	153.27	159.73

Subsection: Elevation-Volume-Flow Table (Pond)

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
29.10	0.00	0	0.00	0.00	0.00	0.00
29.60	0.00	5	0.00	0.00	0.00	0.06
29.64	0.00	7	0.00	0.00	0.00	0.07
29.91	0.00	23	0.00	0.00	0.00	0.25
30.10	0.11	42	0.00	0.00	0.11	0.57
30.60	0.82	112	0.00	0.00	0.82	2.07
30.80	1.07	149	0.00	0.00	1.07	2.72
31.10	7.80	215	0.01	0.00	7.80	10.19
31.60	62.53	359	0.01	0.00	62.53	66.52
31.76	93.05	430	0.01	0.00	93.05	97.83
32.00	153.27	581	0.02	0.00	153.27	159.73

Subsection: Level Pool Pond Routing Summary

Label: EX. RG (IN)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: EX. RG (IN)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Initial Conditions

Time Increment	0.050 hours
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Inflow/Outflow Hydrograph Summary

Flow (Peak In)	0.88 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	0.85 ft ³ /s	Time to Peak (Flow, Outlet)	12.150 hours

Elevation (Water Surface, Peak)	30.63 ft
Volume (Peak)	117 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	3,234 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	3,212 ft ³
Volume (Retained)	23 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary

Label: EX. RG (IN)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	2.46 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	2.37 ft ³ /s	Time to Peak (Flow, Outlet)	12.100 hours

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: EX. RG (IN)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Elevation (Water Surface, Peak)	30.86 ft
Volume (Peak)	161 ft ³
Mass Balance (ft³)	
Volume (Initial)	0 ft ³
Volume (Total Inflow)	8,818 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	8,796 ft ³
Volume (Retained)	23 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary

Label: EX. RG (IN)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	3.42 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	3.31 ft ³ /s	Time to Peak (Flow, Outlet)	12.100 hours

Elevation (Water Surface, Peak)	30.90 ft
Volume (Peak)	170 ft ³

Mass Balance (ft³)	
Volume (Initial)	0 ft ³
Volume (Total Inflow)	12,363 ft ³
Volume (Total Infiltration)	0 ft ³

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: EX. RG (IN)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Mass Balance (ft³)

Volume (Total Outlet Outflow)	12,340 ft ³
Volume (Retained)	23 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary

Label: EX. RG (IN)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	5.40 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	5.26 ft ³ /s	Time to Peak (Flow, Outlet)	12.100 hours

Elevation (Water Surface, Peak)	30.99 ft
Volume (Peak)	189 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	19,910 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	19,887 ft ³
Volume (Retained)	23 ft ³
Volume (Unrouted)	0 ft ³
Error (Mass Balance)	0.0 %

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	29.10
0.050	0.00	0.00	0.00	0.00	0.00	0	29.10
0.100	0.00	0.00	0.00	0.00	0.00	0	29.10
0.150	0.00	0.00	0.00	0.00	0.00	0	29.10
0.200	0.00	0.00	0.00	0.00	0.00	0	29.10
0.250	0.00	0.00	0.00	0.00	0.00	0	29.10
0.300	0.00	0.00	0.00	0.00	0.00	0	29.10
0.350	0.00	0.00	0.00	0.00	0.00	0	29.10
0.400	0.00	0.00	0.00	0.00	0.00	0	29.10
0.450	0.00	0.00	0.00	0.00	0.00	0	29.10
0.500	0.00	0.00	0.00	0.00	0.00	0	29.10
0.550	0.00	0.00	0.00	0.00	0.00	0	29.10
0.600	0.00	0.00	0.00	0.00	0.00	0	29.10
0.650	0.00	0.00	0.00	0.00	0.00	0	29.10
0.700	0.00	0.00	0.00	0.00	0.00	0	29.10
0.750	0.00	0.00	0.00	0.00	0.00	0	29.10
0.800	0.00	0.00	0.00	0.00	0.00	0	29.10
0.850	0.00	0.00	0.00	0.00	0.00	0	29.10
0.900	0.00	0.00	0.00	0.00	0.00	0	29.10
0.950	0.00	0.00	0.00	0.00	0.00	0	29.10
1.000	0.00	0.00	0.00	0.00	0.00	0	29.10
1.050	0.00	0.00	0.00	0.00	0.00	0	29.10
1.100	0.00	0.00	0.00	0.00	0.00	0	29.10
1.150	0.00	0.00	0.00	0.00	0.00	0	29.10
1.200	0.00	0.00	0.00	0.00	0.00	0	29.10
1.250	0.00	0.00	0.00	0.00	0.00	0	29.10
1.300	0.00	0.00	0.00	0.00	0.00	0	29.10
1.350	0.00	0.00	0.00	0.00	0.00	0	29.10
1.400	0.00	0.00	0.00	0.00	0.00	0	29.10
1.450	0.00	0.00	0.00	0.00	0.00	0	29.10
1.500	0.00	0.00	0.00	0.00	0.00	0	29.10
1.550	0.00	0.00	0.00	0.00	0.00	0	29.10
1.600	0.00	0.00	0.00	0.00	0.00	0	29.10
1.650	0.00	0.00	0.00	0.00	0.00	0	29.10
1.700	0.00	0.00	0.00	0.00	0.00	0	29.10
1.750	0.00	0.00	0.00	0.00	0.00	0	29.10
1.800	0.00	0.00	0.00	0.00	0.00	0	29.10
1.850	0.00	0.00	0.00	0.00	0.00	0	29.10
1.900	0.00	0.00	0.00	0.00	0.00	0	29.10
1.950	0.00	0.00	0.00	0.00	0.00	0	29.10
2.000	0.00	0.00	0.00	0.00	0.00	0	29.10
2.050	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.100	0.00	0.00	0.00	0.00	0.00	0	29.10
2.150	0.00	0.00	0.00	0.00	0.00	0	29.10
2.200	0.00	0.00	0.00	0.00	0.00	0	29.10
2.250	0.00	0.00	0.00	0.00	0.00	0	29.10
2.300	0.00	0.00	0.00	0.00	0.00	0	29.10
2.350	0.00	0.00	0.00	0.00	0.00	0	29.10
2.400	0.00	0.00	0.00	0.00	0.00	0	29.10
2.450	0.00	0.00	0.00	0.00	0.00	0	29.10
2.500	0.00	0.00	0.00	0.00	0.00	0	29.10
2.550	0.00	0.00	0.00	0.00	0.00	0	29.10
2.600	0.00	0.00	0.00	0.00	0.00	0	29.10
2.650	0.00	0.00	0.00	0.00	0.00	0	29.10
2.700	0.00	0.00	0.00	0.00	0.00	0	29.10
2.750	0.00	0.00	0.00	0.00	0.00	0	29.10
2.800	0.00	0.00	0.00	0.00	0.00	0	29.10
2.850	0.00	0.00	0.00	0.00	0.00	0	29.10
2.900	0.00	0.00	0.00	0.00	0.00	0	29.10
2.950	0.00	0.00	0.00	0.00	0.00	0	29.10
3.000	0.00	0.00	0.00	0.00	0.00	0	29.10
3.050	0.00	0.00	0.00	0.00	0.00	0	29.10
3.100	0.00	0.00	0.00	0.00	0.00	0	29.10
3.150	0.00	0.00	0.00	0.00	0.00	0	29.10
3.200	0.00	0.00	0.00	0.00	0.00	0	29.10
3.250	0.00	0.00	0.00	0.00	0.00	0	29.10
3.300	0.00	0.00	0.00	0.00	0.00	0	29.10
3.350	0.00	0.00	0.00	0.00	0.00	0	29.10
3.400	0.00	0.00	0.00	0.00	0.00	0	29.10
3.450	0.00	0.00	0.00	0.00	0.00	0	29.10
3.500	0.00	0.00	0.00	0.00	0.00	0	29.10
3.550	0.00	0.00	0.00	0.00	0.00	0	29.10
3.600	0.00	0.00	0.00	0.00	0.00	0	29.10
3.650	0.00	0.00	0.00	0.00	0.00	0	29.10
3.700	0.00	0.00	0.00	0.00	0.00	0	29.10
3.750	0.00	0.00	0.00	0.00	0.00	0	29.10
3.800	0.00	0.00	0.00	0.00	0.00	0	29.10
3.850	0.00	0.00	0.00	0.00	0.00	0	29.10
3.900	0.00	0.00	0.00	0.00	0.00	0	29.10
3.950	0.00	0.00	0.00	0.00	0.00	0	29.10
4.000	0.00	0.00	0.00	0.00	0.00	0	29.10
4.050	0.00	0.00	0.00	0.00	0.00	0	29.10
4.100	0.00	0.00	0.00	0.00	0.00	0	29.10
4.150	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.200	0.00	0.00	0.00	0.00	0.00	0	29.10
4.250	0.00	0.00	0.00	0.00	0.00	0	29.10
4.300	0.00	0.00	0.00	0.00	0.00	0	29.10
4.350	0.00	0.00	0.00	0.00	0.00	0	29.10
4.400	0.00	0.00	0.00	0.00	0.00	0	29.10
4.450	0.00	0.00	0.00	0.00	0.00	0	29.10
4.500	0.00	0.00	0.00	0.00	0.00	0	29.10
4.550	0.00	0.00	0.00	0.00	0.00	0	29.10
4.600	0.00	0.00	0.00	0.00	0.00	0	29.10
4.650	0.00	0.00	0.00	0.00	0.00	0	29.10
4.700	0.00	0.00	0.00	0.00	0.00	0	29.10
4.750	0.00	0.00	0.00	0.00	0.00	0	29.10
4.800	0.00	0.00	0.00	0.00	0.00	0	29.10
4.850	0.00	0.00	0.00	0.00	0.00	0	29.10
4.900	0.00	0.00	0.00	0.00	0.00	0	29.10
4.950	0.00	0.00	0.00	0.00	0.00	0	29.10
5.000	0.00	0.00	0.00	0.00	0.00	0	29.10
5.050	0.00	0.00	0.00	0.00	0.00	0	29.10
5.100	0.00	0.00	0.00	0.00	0.00	0	29.10
5.150	0.00	0.00	0.00	0.00	0.00	0	29.10
5.200	0.00	0.00	0.00	0.00	0.00	0	29.10
5.250	0.00	0.00	0.00	0.00	0.00	0	29.10
5.300	0.00	0.00	0.00	0.00	0.00	0	29.10
5.350	0.00	0.00	0.00	0.00	0.00	0	29.10
5.400	0.00	0.00	0.00	0.00	0.00	0	29.10
5.450	0.00	0.00	0.00	0.00	0.00	0	29.10
5.500	0.00	0.00	0.00	0.00	0.00	0	29.10
5.550	0.00	0.00	0.00	0.00	0.00	0	29.10
5.600	0.00	0.00	0.00	0.00	0.00	0	29.10
5.650	0.00	0.00	0.00	0.00	0.00	0	29.10
5.700	0.00	0.00	0.00	0.00	0.00	0	29.10
5.750	0.00	0.00	0.00	0.00	0.00	0	29.10
5.800	0.00	0.00	0.00	0.00	0.00	0	29.10
5.850	0.00	0.00	0.00	0.00	0.00	0	29.10
5.900	0.00	0.00	0.00	0.00	0.00	0	29.10
5.950	0.00	0.00	0.00	0.00	0.00	0	29.10
6.000	0.00	0.00	0.00	0.00	0.00	0	29.10
6.050	0.00	0.00	0.00	0.00	0.00	0	29.10
6.100	0.00	0.00	0.00	0.00	0.00	0	29.10
6.150	0.00	0.00	0.00	0.00	0.00	0	29.10
6.200	0.00	0.00	0.00	0.00	0.00	0	29.10
6.250	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.300	0.00	0.00	0.00	0.00	0.00	0	29.10
6.350	0.00	0.00	0.00	0.00	0.00	0	29.10
6.400	0.00	0.00	0.00	0.00	0.00	0	29.10
6.450	0.00	0.00	0.00	0.00	0.00	0	29.10
6.500	0.00	0.00	0.00	0.00	0.00	0	29.10
6.550	0.00	0.00	0.00	0.00	0.00	0	29.10
6.600	0.00	0.00	0.00	0.00	0.00	0	29.10
6.650	0.00	0.00	0.00	0.00	0.00	0	29.10
6.700	0.00	0.00	0.00	0.00	0.00	0	29.10
6.750	0.00	0.00	0.00	0.00	0.00	0	29.10
6.800	0.00	0.00	0.00	0.00	0.00	0	29.10
6.850	0.00	0.00	0.00	0.00	0.00	0	29.10
6.900	0.00	0.00	0.00	0.00	0.00	0	29.10
6.950	0.00	0.00	0.00	0.00	0.00	0	29.10
7.000	0.00	0.00	0.00	0.00	0.00	0	29.10
7.050	0.00	0.00	0.00	0.00	0.00	0	29.10
7.100	0.00	0.00	0.00	0.00	0.00	0	29.10
7.150	0.00	0.00	0.00	0.00	0.00	0	29.10
7.200	0.00	0.00	0.00	0.00	0.00	0	29.10
7.250	0.00	0.00	0.00	0.00	0.00	0	29.10
7.300	0.00	0.00	0.00	0.00	0.00	0	29.10
7.350	0.00	0.00	0.00	0.00	0.00	0	29.10
7.400	0.00	0.00	0.00	0.00	0.00	0	29.10
7.450	0.00	0.00	0.00	0.00	0.00	0	29.10
7.500	0.00	0.00	0.00	0.00	0.00	0	29.10
7.550	0.00	0.00	0.00	0.00	0.00	0	29.10
7.600	0.00	0.00	0.00	0.00	0.00	0	29.10
7.650	0.00	0.00	0.00	0.00	0.00	0	29.10
7.700	0.00	0.00	0.00	0.00	0.00	0	29.10
7.750	0.00	0.00	0.00	0.00	0.00	0	29.10
7.800	0.00	0.00	0.00	0.00	0.00	0	29.10
7.850	0.00	0.00	0.00	0.00	0.00	0	29.10
7.900	0.00	0.00	0.00	0.00	0.00	0	29.10
7.950	0.00	0.00	0.00	0.00	0.00	0	29.10
8.000	0.00	0.00	0.00	0.00	0.00	0	29.10
8.050	0.00	0.00	0.00	0.00	0.00	0	29.10
8.100	0.00	0.00	0.00	0.00	0.00	0	29.10
8.150	0.00	0.00	0.00	0.00	0.00	0	29.10
8.200	0.00	0.00	0.00	0.00	0.00	0	29.10
8.250	0.00	0.00	0.00	0.00	0.00	0	29.10
8.300	0.00	0.00	0.00	0.00	0.00	0	29.10
8.350	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.400	0.00	0.00	0.00	0.00	0.00	0	29.10
8.450	0.00	0.00	0.00	0.00	0.00	0	29.10
8.500	0.00	0.00	0.00	0.00	0.00	0	29.10
8.550	0.00	0.00	0.00	0.00	0.00	0	29.10
8.600	0.00	0.00	0.00	0.00	0.00	0	29.10
8.650	0.00	0.00	0.00	0.00	0.00	0	29.10
8.700	0.00	0.00	0.00	0.00	0.00	0	29.10
8.750	0.00	0.00	0.00	0.00	0.00	0	29.10
8.800	0.00	0.00	0.00	0.00	0.00	0	29.10
8.850	0.00	0.00	0.00	0.00	0.00	0	29.10
8.900	0.00	0.00	0.00	0.00	0.00	0	29.10
8.950	0.00	0.00	0.00	0.00	0.00	0	29.10
9.000	0.00	0.00	0.00	0.00	0.00	0	29.10
9.050	0.00	0.00	0.00	0.00	0.00	0	29.10
9.100	0.00	0.00	0.00	0.00	0.00	0	29.10
9.150	0.00	0.00	0.00	0.00	0.00	0	29.10
9.200	0.00	0.00	0.00	0.00	0.00	0	29.10
9.250	0.00	0.00	0.00	0.00	0.00	0	29.10
9.300	0.00	0.00	0.00	0.00	0.00	0	29.10
9.350	0.00	0.00	0.00	0.00	0.00	0	29.10
9.400	0.00	0.00	0.00	0.00	0.00	0	29.10
9.450	0.00	0.00	0.00	0.00	0.00	0	29.10
9.500	0.00	0.00	0.00	0.00	0.00	0	29.10
9.550	0.00	0.00	0.00	0.00	0.00	0	29.10
9.600	0.00	0.00	0.00	0.00	0.00	0	29.10
9.650	0.00	0.00	0.00	0.00	0.00	0	29.10
9.700	0.00	0.00	0.00	0.00	0.00	0	29.10
9.750	0.00	0.00	0.00	0.00	0.00	0	29.10
9.800	0.00	0.00	0.00	0.00	0.00	0	29.10
9.850	0.00	0.00	0.00	0.00	0.00	0	29.10
9.900	0.00	0.00	0.00	0.00	0.00	0	29.10
9.950	0.00	0.00	0.00	0.00	0.00	0	29.10
10.000	0.00	0.00	0.00	0.00	0.00	0	29.10
10.050	0.00	0.00	0.00	0.00	0.00	0	29.10
10.100	0.00	0.00	0.00	0.00	0.00	0	29.10
10.150	0.00	0.00	0.00	0.00	0.00	0	29.10
10.200	0.00	0.00	0.00	0.00	0.00	0	29.11
10.250	0.00	0.00	0.00	0.00	0.00	0	29.14
10.300	0.00	0.01	0.01	0.00	0.00	0	29.17
10.350	0.00	0.01	0.01	0.00	0.00	0	29.22
10.400	0.00	0.02	0.02	0.00	0.00	0	29.28
10.450	0.00	0.03	0.03	0.00	0.00	1	29.35

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
10.500	0.01	0.04	0.04	0.00	0.00	2	29.44
10.550	0.01	0.05	0.05	0.00	0.00	4	29.55
10.600	0.01	0.07	0.07	0.00	0.00	6	29.62
10.650	0.01	0.08	0.08	0.00	0.00	7	29.65
10.700	0.01	0.10	0.10	0.00	0.00	8	29.68
10.750	0.01	0.12	0.12	0.00	0.00	10	29.72
10.800	0.01	0.15	0.15	0.00	0.00	12	29.75
10.850	0.01	0.17	0.17	0.00	0.00	14	29.79
10.900	0.01	0.20	0.20	0.00	0.00	17	29.83
10.950	0.02	0.23	0.23	0.00	0.00	20	29.88
11.000	0.02	0.26	0.27	0.00	0.00	23	29.92
11.050	0.02	0.26	0.29	0.00	0.01	25	29.93
11.100	0.02	0.27	0.30	0.00	0.02	25	29.94
11.150	0.02	0.27	0.31	0.00	0.02	26	29.95
11.200	0.03	0.27	0.32	0.00	0.02	26	29.95
11.250	0.03	0.28	0.33	0.00	0.03	27	29.96
11.300	0.03	0.28	0.34	0.00	0.03	27	29.96
11.350	0.04	0.28	0.35	0.00	0.03	28	29.97
11.400	0.04	0.29	0.36	0.00	0.04	28	29.97
11.450	0.04	0.29	0.37	0.00	0.04	29	29.98
11.500	0.05	0.29	0.38	0.00	0.04	30	29.99
11.550	0.06	0.30	0.40	0.00	0.05	31	30.00
11.600	0.07	0.31	0.43	0.00	0.06	32	30.01
11.650	0.09	0.32	0.47	0.00	0.07	35	30.04
11.700	0.12	0.35	0.54	0.00	0.10	40	30.08
11.750	0.15	0.36	0.62	0.00	0.13	44	30.12
11.800	0.20	0.36	0.71	0.00	0.17	47	30.15
11.850	0.24	0.37	0.80	0.00	0.22	51	30.18
11.900	0.30	0.37	0.90	0.00	0.27	55	30.21
11.950	0.42	0.38	1.09	0.00	0.35	63	30.27
12.000	0.64	0.40	1.44	0.00	0.52	79	30.39
12.050	0.79	0.42	1.83	0.00	0.71	99	30.52
12.100	0.88	0.43	2.09	0.00	0.83	113	30.61
12.150	0.84	0.45	2.16	0.00	0.85	117	30.63
12.200	0.65	0.42	1.94	0.00	0.76	105	30.56
12.250	0.55	0.41	1.62	0.00	0.61	88	30.45
12.300	0.48	0.40	1.44	0.00	0.52	79	30.39
12.350	0.43	0.39	1.31	0.00	0.46	73	30.35
12.400	0.37	0.39	1.20	0.00	0.41	68	30.31
12.450	0.32	0.38	1.08	0.00	0.35	63	30.27
12.500	0.26	0.38	0.97	0.00	0.30	58	30.23
12.550	0.22	0.37	0.86	0.00	0.24	53	30.20

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
12.600	0.18	0.37	0.78	0.00	0.20	50	30.17
12.650	0.16	0.36	0.71	0.00	0.18	47	30.15
12.700	0.15	0.36	0.68	0.00	0.16	46	30.14
12.750	0.15	0.36	0.67	0.00	0.15	45	30.13
12.800	0.14	0.36	0.65	0.00	0.14	45	30.13
12.850	0.14	0.36	0.64	0.00	0.14	44	30.12
12.900	0.13	0.36	0.63	0.00	0.13	44	30.12
12.950	0.12	0.36	0.61	0.00	0.13	43	30.11
13.000	0.12	0.36	0.60	0.00	0.12	43	30.11
13.050	0.11	0.36	0.59	0.00	0.11	42	30.11
13.100	0.11	0.36	0.58	0.00	0.11	42	30.10
13.150	0.11	0.36	0.57	0.00	0.11	42	30.10
13.200	0.10	0.36	0.57	0.00	0.10	41	30.10
13.250	0.10	0.35	0.56	0.00	0.10	41	30.10
13.300	0.10	0.35	0.56	0.00	0.10	41	30.09
13.350	0.10	0.35	0.55	0.00	0.10	41	30.09
13.400	0.10	0.35	0.55	0.00	0.10	40	30.09
13.450	0.10	0.35	0.54	0.00	0.10	40	30.08
13.500	0.09	0.35	0.54	0.00	0.10	40	30.08
13.550	0.09	0.35	0.53	0.00	0.09	39	30.08
13.600	0.09	0.34	0.53	0.00	0.09	39	30.08
13.650	0.09	0.34	0.52	0.00	0.09	39	30.07
13.700	0.09	0.34	0.52	0.00	0.09	38	30.07
13.750	0.09	0.34	0.51	0.00	0.09	38	30.07
13.800	0.08	0.34	0.51	0.00	0.09	38	30.06
13.850	0.08	0.34	0.50	0.00	0.08	37	30.06
13.900	0.08	0.33	0.50	0.00	0.08	37	30.06
13.950	0.08	0.33	0.49	0.00	0.08	37	30.06
14.000	0.08	0.33	0.49	0.00	0.08	36	30.05
14.050	0.08	0.33	0.49	0.00	0.08	36	30.05
14.100	0.08	0.33	0.48	0.00	0.08	36	30.05
14.150	0.07	0.33	0.48	0.00	0.08	36	30.04
14.200	0.07	0.33	0.47	0.00	0.07	35	30.04
14.250	0.07	0.32	0.47	0.00	0.07	35	30.04
14.300	0.07	0.32	0.47	0.00	0.07	35	30.04
14.350	0.07	0.32	0.47	0.00	0.07	35	30.04
14.400	0.07	0.32	0.46	0.00	0.07	35	30.04
14.450	0.07	0.32	0.46	0.00	0.07	35	30.04
14.500	0.07	0.32	0.46	0.00	0.07	35	30.03
14.550	0.07	0.32	0.46	0.00	0.07	34	30.03
14.600	0.07	0.32	0.45	0.00	0.07	34	30.03
14.650	0.07	0.32	0.45	0.00	0.07	34	30.03

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
14.700	0.07	0.32	0.45	0.00	0.07	34	30.03
14.750	0.06	0.32	0.45	0.00	0.07	34	30.03
14.800	0.06	0.32	0.45	0.00	0.06	34	30.03
14.850	0.06	0.31	0.44	0.00	0.06	33	30.02
14.900	0.06	0.31	0.44	0.00	0.06	33	30.02
14.950	0.06	0.31	0.44	0.00	0.06	33	30.02
15.000	0.06	0.31	0.44	0.00	0.06	33	30.02
15.050	0.06	0.31	0.43	0.00	0.06	33	30.02
15.100	0.06	0.31	0.43	0.00	0.06	33	30.02
15.150	0.06	0.31	0.43	0.00	0.06	33	30.02
15.200	0.06	0.31	0.43	0.00	0.06	32	30.01
15.250	0.06	0.31	0.42	0.00	0.06	32	30.01
15.300	0.06	0.31	0.42	0.00	0.06	32	30.01
15.350	0.05	0.31	0.42	0.00	0.06	32	30.01
15.400	0.05	0.31	0.42	0.00	0.05	32	30.01
15.450	0.05	0.30	0.41	0.00	0.05	32	30.01
15.500	0.05	0.30	0.41	0.00	0.05	31	30.00
15.550	0.05	0.30	0.41	0.00	0.05	31	30.00
15.600	0.05	0.30	0.40	0.00	0.05	31	30.00
15.650	0.05	0.30	0.40	0.00	0.05	31	30.00
15.700	0.05	0.30	0.40	0.00	0.05	31	30.00
15.750	0.05	0.30	0.40	0.00	0.05	31	30.00
15.800	0.05	0.30	0.39	0.00	0.05	30	30.00
15.850	0.05	0.30	0.39	0.00	0.05	30	29.99
15.900	0.05	0.30	0.39	0.00	0.05	30	29.99
15.950	0.04	0.30	0.39	0.00	0.05	30	29.99
16.000	0.04	0.29	0.38	0.00	0.04	30	29.99
16.050	0.04	0.29	0.38	0.00	0.04	30	29.99
16.100	0.04	0.29	0.38	0.00	0.04	30	29.99
16.150	0.04	0.29	0.38	0.00	0.04	29	29.99
16.200	0.04	0.29	0.38	0.00	0.04	29	29.98
16.250	0.04	0.29	0.37	0.00	0.04	29	29.98
16.300	0.04	0.29	0.37	0.00	0.04	29	29.98
16.350	0.04	0.29	0.37	0.00	0.04	29	29.98
16.400	0.04	0.29	0.37	0.00	0.04	29	29.98
16.450	0.04	0.29	0.37	0.00	0.04	29	29.98
16.500	0.04	0.29	0.37	0.00	0.04	29	29.98
16.550	0.04	0.29	0.37	0.00	0.04	29	29.98
16.600	0.04	0.29	0.37	0.00	0.04	29	29.98
16.650	0.04	0.29	0.36	0.00	0.04	29	29.98
16.700	0.04	0.29	0.36	0.00	0.04	29	29.98
16.750	0.04	0.29	0.36	0.00	0.04	29	29.98

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.800	0.04	0.29	0.36	0.00	0.04	29	29.98
16.850	0.04	0.29	0.36	0.00	0.04	28	29.98
16.900	0.04	0.29	0.36	0.00	0.04	28	29.97
16.950	0.04	0.29	0.36	0.00	0.04	28	29.97
17.000	0.03	0.29	0.36	0.00	0.04	28	29.97
17.050	0.03	0.29	0.36	0.00	0.03	28	29.97
17.100	0.03	0.29	0.35	0.00	0.03	28	29.97
17.150	0.03	0.28	0.35	0.00	0.03	28	29.97
17.200	0.03	0.28	0.35	0.00	0.03	28	29.97
17.250	0.03	0.28	0.35	0.00	0.03	28	29.97
17.300	0.03	0.28	0.35	0.00	0.03	28	29.97
17.350	0.03	0.28	0.35	0.00	0.03	28	29.97
17.400	0.03	0.28	0.35	0.00	0.03	28	29.97
17.450	0.03	0.28	0.35	0.00	0.03	28	29.97
17.500	0.03	0.28	0.34	0.00	0.03	28	29.97
17.550	0.03	0.28	0.34	0.00	0.03	27	29.97
17.600	0.03	0.28	0.34	0.00	0.03	27	29.96
17.650	0.03	0.28	0.34	0.00	0.03	27	29.96
17.700	0.03	0.28	0.34	0.00	0.03	27	29.96
17.750	0.03	0.28	0.34	0.00	0.03	27	29.96
17.800	0.03	0.28	0.34	0.00	0.03	27	29.96
17.850	0.03	0.28	0.34	0.00	0.03	27	29.96
17.900	0.03	0.28	0.34	0.00	0.03	27	29.96
17.950	0.03	0.28	0.33	0.00	0.03	27	29.96
18.000	0.03	0.28	0.33	0.00	0.03	27	29.96
18.050	0.03	0.28	0.33	0.00	0.03	27	29.96
18.100	0.03	0.28	0.33	0.00	0.03	27	29.96
18.150	0.03	0.28	0.33	0.00	0.03	27	29.96
18.200	0.03	0.28	0.33	0.00	0.03	27	29.96
18.250	0.03	0.28	0.33	0.00	0.03	27	29.96
18.300	0.03	0.28	0.33	0.00	0.03	27	29.96
18.350	0.03	0.28	0.33	0.00	0.03	27	29.96
18.400	0.03	0.28	0.33	0.00	0.03	27	29.96
18.450	0.03	0.28	0.33	0.00	0.03	27	29.96
18.500	0.03	0.28	0.33	0.00	0.03	27	29.96
18.550	0.03	0.28	0.33	0.00	0.03	27	29.96
18.600	0.03	0.28	0.33	0.00	0.03	27	29.96
18.650	0.03	0.28	0.33	0.00	0.03	27	29.96
18.700	0.03	0.28	0.33	0.00	0.03	26	29.96
18.750	0.02	0.28	0.33	0.00	0.03	26	29.95
18.800	0.02	0.28	0.33	0.00	0.02	26	29.95
18.850	0.02	0.28	0.32	0.00	0.02	26	29.95

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.900	0.02	0.28	0.32	0.00	0.02	26	29.95
18.950	0.02	0.28	0.32	0.00	0.02	26	29.95
19.000	0.02	0.27	0.32	0.00	0.02	26	29.95
19.050	0.02	0.27	0.32	0.00	0.02	26	29.95
19.100	0.02	0.27	0.32	0.00	0.02	26	29.95
19.150	0.02	0.27	0.32	0.00	0.02	26	29.95
19.200	0.02	0.27	0.32	0.00	0.02	26	29.95
19.250	0.02	0.27	0.32	0.00	0.02	26	29.95
19.300	0.02	0.27	0.32	0.00	0.02	26	29.95
19.350	0.02	0.27	0.32	0.00	0.02	26	29.95
19.400	0.02	0.27	0.32	0.00	0.02	26	29.95
19.450	0.02	0.27	0.32	0.00	0.02	26	29.95
19.500	0.02	0.27	0.32	0.00	0.02	26	29.95
19.550	0.02	0.27	0.32	0.00	0.02	26	29.95
19.600	0.02	0.27	0.32	0.00	0.02	26	29.95
19.650	0.02	0.27	0.32	0.00	0.02	26	29.95
19.700	0.02	0.27	0.32	0.00	0.02	26	29.95
19.750	0.02	0.27	0.32	0.00	0.02	26	29.95
19.800	0.02	0.27	0.32	0.00	0.02	26	29.95
19.850	0.02	0.27	0.32	0.00	0.02	26	29.95
19.900	0.02	0.27	0.32	0.00	0.02	26	29.95
19.950	0.02	0.27	0.32	0.00	0.02	26	29.95
20.000	0.02	0.27	0.32	0.00	0.02	26	29.95
20.050	0.02	0.27	0.32	0.00	0.02	26	29.95
20.100	0.02	0.27	0.32	0.00	0.02	26	29.95
20.150	0.02	0.27	0.32	0.00	0.02	26	29.95
20.200	0.02	0.27	0.32	0.00	0.02	26	29.95
20.250	0.02	0.27	0.32	0.00	0.02	26	29.95
20.300	0.02	0.27	0.32	0.00	0.02	26	29.95
20.350	0.02	0.27	0.31	0.00	0.02	26	29.95
20.400	0.02	0.27	0.31	0.00	0.02	26	29.95
20.450	0.02	0.27	0.31	0.00	0.02	26	29.95
20.500	0.02	0.27	0.31	0.00	0.02	26	29.95
20.550	0.02	0.27	0.31	0.00	0.02	26	29.95
20.600	0.02	0.27	0.31	0.00	0.02	26	29.95
20.650	0.02	0.27	0.31	0.00	0.02	26	29.95
20.700	0.02	0.27	0.31	0.00	0.02	26	29.95
20.750	0.02	0.27	0.31	0.00	0.02	26	29.95
20.800	0.02	0.27	0.31	0.00	0.02	26	29.95
20.850	0.02	0.27	0.31	0.00	0.02	26	29.95
20.900	0.02	0.27	0.31	0.00	0.02	26	29.95
20.950	0.02	0.27	0.31	0.00	0.02	26	29.95

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.000	0.02	0.27	0.31	0.00	0.02	26	29.95
21.050	0.02	0.27	0.31	0.00	0.02	26	29.95
21.100	0.02	0.27	0.31	0.00	0.02	26	29.95
21.150	0.02	0.27	0.31	0.00	0.02	26	29.95
21.200	0.02	0.27	0.31	0.00	0.02	26	29.95
21.250	0.02	0.27	0.31	0.00	0.02	26	29.95
21.300	0.02	0.27	0.31	0.00	0.02	26	29.95
21.350	0.02	0.27	0.31	0.00	0.02	26	29.95
21.400	0.02	0.27	0.31	0.00	0.02	26	29.95
21.450	0.02	0.27	0.31	0.00	0.02	26	29.94
21.500	0.02	0.27	0.31	0.00	0.02	26	29.94
21.550	0.02	0.27	0.31	0.00	0.02	26	29.94
21.600	0.02	0.27	0.31	0.00	0.02	26	29.94
21.650	0.02	0.27	0.31	0.00	0.02	26	29.94
21.700	0.02	0.27	0.31	0.00	0.02	25	29.94
21.750	0.02	0.27	0.31	0.00	0.02	25	29.94
21.800	0.02	0.27	0.31	0.00	0.02	25	29.94
21.850	0.02	0.27	0.31	0.00	0.02	25	29.94
21.900	0.02	0.27	0.31	0.00	0.02	25	29.94
21.950	0.02	0.27	0.31	0.00	0.02	25	29.94
22.000	0.02	0.27	0.31	0.00	0.02	25	29.94
22.050	0.02	0.27	0.31	0.00	0.02	25	29.94
22.100	0.02	0.27	0.31	0.00	0.02	25	29.94
22.150	0.02	0.27	0.31	0.00	0.02	25	29.94
22.200	0.02	0.27	0.30	0.00	0.02	25	29.94
22.250	0.02	0.27	0.30	0.00	0.02	25	29.94
22.300	0.02	0.27	0.30	0.00	0.02	25	29.94
22.350	0.02	0.27	0.30	0.00	0.02	25	29.94
22.400	0.02	0.27	0.30	0.00	0.02	25	29.94
22.450	0.02	0.27	0.30	0.00	0.02	25	29.94
22.500	0.02	0.27	0.30	0.00	0.02	25	29.94
22.550	0.02	0.27	0.30	0.00	0.02	25	29.94
22.600	0.02	0.27	0.30	0.00	0.02	25	29.94
22.650	0.02	0.27	0.30	0.00	0.02	25	29.94
22.700	0.02	0.27	0.30	0.00	0.02	25	29.94
22.750	0.02	0.27	0.30	0.00	0.02	25	29.94
22.800	0.02	0.27	0.30	0.00	0.02	25	29.94
22.850	0.02	0.27	0.30	0.00	0.02	25	29.94
22.900	0.02	0.27	0.30	0.00	0.02	25	29.94
22.950	0.02	0.27	0.30	0.00	0.02	25	29.94
23.000	0.02	0.27	0.30	0.00	0.02	25	29.94
23.050	0.02	0.27	0.30	0.00	0.02	25	29.94

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.100	0.02	0.27	0.30	0.00	0.02	25	29.94
23.150	0.02	0.27	0.30	0.00	0.02	25	29.94
23.200	0.02	0.27	0.30	0.00	0.02	25	29.94
23.250	0.02	0.27	0.30	0.00	0.02	25	29.94
23.300	0.02	0.27	0.30	0.00	0.02	25	29.94
23.350	0.02	0.27	0.30	0.00	0.02	25	29.94
23.400	0.02	0.27	0.30	0.00	0.02	25	29.94
23.450	0.02	0.27	0.30	0.00	0.02	25	29.94
23.500	0.02	0.27	0.30	0.00	0.02	25	29.94
23.550	0.02	0.27	0.30	0.00	0.02	25	29.94
23.600	0.02	0.27	0.30	0.00	0.02	25	29.94
23.650	0.02	0.27	0.30	0.00	0.02	25	29.94
23.700	0.02	0.27	0.30	0.00	0.02	25	29.94
23.750	0.02	0.27	0.30	0.00	0.02	25	29.94
23.800	0.02	0.27	0.30	0.00	0.02	25	29.94
23.850	0.02	0.27	0.30	0.00	0.02	25	29.94
23.900	0.01	0.27	0.30	0.00	0.01	25	29.94
23.950	0.01	0.27	0.30	0.00	0.01	25	29.94
24.000	0.01	0.27	0.29	0.00	0.01	25	29.94
24.050	0.01	0.26	0.29	0.00	0.01	25	29.93
24.100	0.00	0.26	0.28	0.00	0.01	24	29.93
24.150	0.00	0.26	0.27	0.00	0.01	23	29.92
24.200	0.00	0.25	0.26	0.00	0.00	23	29.91
24.250	0.00	0.25	0.25	0.00	0.00	23	29.91
24.300	0.00	0.25	0.25	0.00	0.00	23	29.91
24.350	0.00	0.25	0.25	0.00	0.00	23	29.91
24.400	0.00	0.25	0.25	0.00	0.00	23	29.91
24.450	0.00	0.25	0.25	0.00	0.00	23	29.91
24.500	0.00	0.25	0.25	0.00	0.00	23	29.91
24.550	0.00	0.25	0.25	0.00	0.00	23	29.91
24.600	0.00	0.25	0.25	0.00	0.00	23	29.91
24.650	0.00	0.25	0.25	0.00	0.00	23	29.91
24.700	0.00	0.25	0.25	0.00	0.00	23	29.91
24.750	0.00	0.25	0.25	0.00	0.00	23	29.91
24.800	0.00	0.25	0.25	0.00	0.00	23	29.91
24.850	0.00	0.25	0.25	0.00	0.00	23	29.91
24.900	0.00	0.25	0.25	0.00	0.00	23	29.91
24.950	0.00	0.25	0.25	0.00	0.00	23	29.91
25.000	0.00	0.25	0.25	0.00	0.00	23	29.91
25.050	0.00	0.25	0.25	0.00	0.00	23	29.91
25.100	0.00	0.25	0.25	0.00	0.00	23	29.91
25.150	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.200	0.00	0.25	0.25	0.00	0.00	23	29.91
25.250	0.00	0.25	0.25	0.00	0.00	23	29.91
25.300	0.00	0.25	0.25	0.00	0.00	23	29.91
25.350	0.00	0.25	0.25	0.00	0.00	23	29.91
25.400	0.00	0.25	0.25	0.00	0.00	23	29.91
25.450	0.00	0.25	0.25	0.00	0.00	23	29.91
25.500	0.00	0.25	0.25	0.00	0.00	23	29.91
25.550	0.00	0.25	0.25	0.00	0.00	23	29.91
25.600	0.00	0.25	0.25	0.00	0.00	23	29.91
25.650	0.00	0.25	0.25	0.00	0.00	23	29.91
25.700	0.00	0.25	0.25	0.00	0.00	23	29.91
25.750	0.00	0.25	0.25	0.00	0.00	23	29.91
25.800	0.00	0.25	0.25	0.00	0.00	23	29.91
25.850	0.00	0.25	0.25	0.00	0.00	23	29.91
25.900	0.00	0.25	0.25	0.00	0.00	23	29.91
25.950	0.00	0.25	0.25	0.00	0.00	23	29.91
26.000	0.00	0.25	0.25	0.00	0.00	23	29.91
26.050	0.00	0.25	0.25	0.00	0.00	23	29.91
26.100	0.00	0.25	0.25	0.00	0.00	23	29.91
26.150	0.00	0.25	0.25	0.00	0.00	23	29.91
26.200	0.00	0.25	0.25	0.00	0.00	23	29.91
26.250	0.00	0.25	0.25	0.00	0.00	23	29.91
26.300	0.00	0.25	0.25	0.00	0.00	23	29.91
26.350	0.00	0.25	0.25	0.00	0.00	23	29.91
26.400	0.00	0.25	0.25	0.00	0.00	23	29.91
26.450	0.00	0.25	0.25	0.00	0.00	23	29.91
26.500	0.00	0.25	0.25	0.00	0.00	23	29.91
26.550	0.00	0.25	0.25	0.00	0.00	23	29.91
26.600	0.00	0.25	0.25	0.00	0.00	23	29.91
26.650	0.00	0.25	0.25	0.00	0.00	23	29.91
26.700	0.00	0.25	0.25	0.00	0.00	23	29.91
26.750	0.00	0.25	0.25	0.00	0.00	23	29.91
26.800	0.00	0.25	0.25	0.00	0.00	23	29.91
26.850	0.00	0.25	0.25	0.00	0.00	23	29.91
26.900	0.00	0.25	0.25	0.00	0.00	23	29.91
26.950	0.00	0.25	0.25	0.00	0.00	23	29.91
27.000	0.00	0.25	0.25	0.00	0.00	23	29.91
27.050	0.00	0.25	0.25	0.00	0.00	23	29.91
27.100	0.00	0.25	0.25	0.00	0.00	23	29.91
27.150	0.00	0.25	0.25	0.00	0.00	23	29.91
27.200	0.00	0.25	0.25	0.00	0.00	23	29.91
27.250	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.300	0.00	0.25	0.25	0.00	0.00	23	29.91
27.350	0.00	0.25	0.25	0.00	0.00	23	29.91
27.400	0.00	0.25	0.25	0.00	0.00	23	29.91
27.450	0.00	0.25	0.25	0.00	0.00	23	29.91
27.500	0.00	0.25	0.25	0.00	0.00	23	29.91
27.550	0.00	0.25	0.25	0.00	0.00	23	29.91
27.600	0.00	0.25	0.25	0.00	0.00	23	29.91
27.650	0.00	0.25	0.25	0.00	0.00	23	29.91
27.700	0.00	0.25	0.25	0.00	0.00	23	29.91
27.750	0.00	0.25	0.25	0.00	0.00	23	29.91
27.800	0.00	0.25	0.25	0.00	0.00	23	29.91
27.850	0.00	0.25	0.25	0.00	0.00	23	29.91
27.900	0.00	0.25	0.25	0.00	0.00	23	29.91
27.950	0.00	0.25	0.25	0.00	0.00	23	29.91
28.000	0.00	0.25	0.25	0.00	0.00	23	29.91
28.050	0.00	0.25	0.25	0.00	0.00	23	29.91
28.100	0.00	0.25	0.25	0.00	0.00	23	29.91
28.150	0.00	0.25	0.25	0.00	0.00	23	29.91
28.200	0.00	0.25	0.25	0.00	0.00	23	29.91
28.250	0.00	0.25	0.25	0.00	0.00	23	29.91
28.300	0.00	0.25	0.25	0.00	0.00	23	29.91
28.350	0.00	0.25	0.25	0.00	0.00	23	29.91
28.400	0.00	0.25	0.25	0.00	0.00	23	29.91
28.450	0.00	0.25	0.25	0.00	0.00	23	29.91
28.500	0.00	0.25	0.25	0.00	0.00	23	29.91
28.550	0.00	0.25	0.25	0.00	0.00	23	29.91
28.600	0.00	0.25	0.25	0.00	0.00	23	29.91
28.650	0.00	0.25	0.25	0.00	0.00	23	29.91
28.700	0.00	0.25	0.25	0.00	0.00	23	29.91
28.750	0.00	0.25	0.25	0.00	0.00	23	29.91
28.800	0.00	0.25	0.25	0.00	0.00	23	29.91
28.850	0.00	0.25	0.25	0.00	0.00	23	29.91
28.900	0.00	0.25	0.25	0.00	0.00	23	29.91
28.950	0.00	0.25	0.25	0.00	0.00	23	29.91
29.000	0.00	0.25	0.25	0.00	0.00	23	29.91
29.050	0.00	0.25	0.25	0.00	0.00	23	29.91
29.100	0.00	0.25	0.25	0.00	0.00	23	29.91
29.150	0.00	0.25	0.25	0.00	0.00	23	29.91
29.200	0.00	0.25	0.25	0.00	0.00	23	29.91
29.250	0.00	0.25	0.25	0.00	0.00	23	29.91
29.300	0.00	0.25	0.25	0.00	0.00	23	29.91
29.350	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.400	0.00	0.25	0.25	0.00	0.00	23	29.91
29.450	0.00	0.25	0.25	0.00	0.00	23	29.91
29.500	0.00	0.25	0.25	0.00	0.00	23	29.91
29.550	0.00	0.25	0.25	0.00	0.00	23	29.91
29.600	0.00	0.25	0.25	0.00	0.00	23	29.91
29.650	0.00	0.25	0.25	0.00	0.00	23	29.91
29.700	0.00	0.25	0.25	0.00	0.00	23	29.91
29.750	0.00	0.25	0.25	0.00	0.00	23	29.91
29.800	0.00	0.25	0.25	0.00	0.00	23	29.91
29.850	0.00	0.25	0.25	0.00	0.00	23	29.91
29.900	0.00	0.25	0.25	0.00	0.00	23	29.91
29.950	0.00	0.25	0.25	0.00	0.00	23	29.91
30.000	0.00	0.25	0.25	0.00	0.00	23	29.91
30.050	0.00	0.25	0.25	0.00	0.00	23	29.91
30.100	0.00	0.25	0.25	0.00	0.00	23	29.91
30.150	0.00	0.25	0.25	0.00	0.00	23	29.91
30.200	0.00	0.25	0.25	0.00	0.00	23	29.91
30.250	0.00	0.25	0.25	0.00	0.00	23	29.91
30.300	0.00	0.25	0.25	0.00	0.00	23	29.91
30.350	0.00	0.25	0.25	0.00	0.00	23	29.91
30.400	0.00	0.25	0.25	0.00	0.00	23	29.91
30.450	0.00	0.25	0.25	0.00	0.00	23	29.91
30.500	0.00	0.25	0.25	0.00	0.00	23	29.91
30.550	0.00	0.25	0.25	0.00	0.00	23	29.91
30.600	0.00	0.25	0.25	0.00	0.00	23	29.91
30.650	0.00	0.25	0.25	0.00	0.00	23	29.91
30.700	0.00	0.25	0.25	0.00	0.00	23	29.91
30.750	0.00	0.25	0.25	0.00	0.00	23	29.91
30.800	0.00	0.25	0.25	0.00	0.00	23	29.91
30.850	0.00	0.25	0.25	0.00	0.00	23	29.91
30.900	0.00	0.25	0.25	0.00	0.00	23	29.91
30.950	0.00	0.25	0.25	0.00	0.00	23	29.91
31.000	0.00	0.25	0.25	0.00	0.00	23	29.91
31.050	0.00	0.25	0.25	0.00	0.00	23	29.91
31.100	0.00	0.25	0.25	0.00	0.00	23	29.91
31.150	0.00	0.25	0.25	0.00	0.00	23	29.91
31.200	0.00	0.25	0.25	0.00	0.00	23	29.91
31.250	0.00	0.25	0.25	0.00	0.00	23	29.91
31.300	0.00	0.25	0.25	0.00	0.00	23	29.91
31.350	0.00	0.25	0.25	0.00	0.00	23	29.91
31.400	0.00	0.25	0.25	0.00	0.00	23	29.91
31.450	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
31.500	0.00	0.25	0.25	0.00	0.00	23	29.91
31.550	0.00	0.25	0.25	0.00	0.00	23	29.91
31.600	0.00	0.25	0.25	0.00	0.00	23	29.91
31.650	0.00	0.25	0.25	0.00	0.00	23	29.91
31.700	0.00	0.25	0.25	0.00	0.00	23	29.91
31.750	0.00	0.25	0.25	0.00	0.00	23	29.91
31.800	0.00	0.25	0.25	0.00	0.00	23	29.91
31.850	0.00	0.25	0.25	0.00	0.00	23	29.91
31.900	0.00	0.25	0.25	0.00	0.00	23	29.91
31.950	0.00	0.25	0.25	0.00	0.00	23	29.91
32.000	0.00	0.25	0.25	0.00	0.00	23	29.91
32.050	0.00	0.25	0.25	0.00	0.00	23	29.91
32.100	0.00	0.25	0.25	0.00	0.00	23	29.91
32.150	0.00	0.25	0.25	0.00	0.00	23	29.91
32.200	0.00	0.25	0.25	0.00	0.00	23	29.91
32.250	0.00	0.25	0.25	0.00	0.00	23	29.91
32.300	0.00	0.25	0.25	0.00	0.00	23	29.91
32.350	0.00	0.25	0.25	0.00	0.00	23	29.91
32.400	0.00	0.25	0.25	0.00	0.00	23	29.91
32.450	0.00	0.25	0.25	0.00	0.00	23	29.91
32.500	0.00	0.25	0.25	0.00	0.00	23	29.91
32.550	0.00	0.25	0.25	0.00	0.00	23	29.91
32.600	0.00	0.25	0.25	0.00	0.00	23	29.91
32.650	0.00	0.25	0.25	0.00	0.00	23	29.91
32.700	0.00	0.25	0.25	0.00	0.00	23	29.91
32.750	0.00	0.25	0.25	0.00	0.00	23	29.91
32.800	0.00	0.25	0.25	0.00	0.00	23	29.91
32.850	0.00	0.25	0.25	0.00	0.00	23	29.91
32.900	0.00	0.25	0.25	0.00	0.00	23	29.91
32.950	0.00	0.25	0.25	0.00	0.00	23	29.91
33.000	0.00	0.25	0.25	0.00	0.00	23	29.91
33.050	0.00	0.25	0.25	0.00	0.00	23	29.91
33.100	0.00	0.25	0.25	0.00	0.00	23	29.91
33.150	0.00	0.25	0.25	0.00	0.00	23	29.91
33.200	0.00	0.25	0.25	0.00	0.00	23	29.91
33.250	0.00	0.25	0.25	0.00	0.00	23	29.91
33.300	0.00	0.25	0.25	0.00	0.00	23	29.91
33.350	0.00	0.25	0.25	0.00	0.00	23	29.91
33.400	0.00	0.25	0.25	0.00	0.00	23	29.91
33.450	0.00	0.25	0.25	0.00	0.00	23	29.91
33.500	0.00	0.25	0.25	0.00	0.00	23	29.91
33.550	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
33.600	0.00	0.25	0.25	0.00	0.00	23	29.91
33.650	0.00	0.25	0.25	0.00	0.00	23	29.91
33.700	0.00	0.25	0.25	0.00	0.00	23	29.91
33.750	0.00	0.25	0.25	0.00	0.00	23	29.91
33.800	0.00	0.25	0.25	0.00	0.00	23	29.91
33.850	0.00	0.25	0.25	0.00	0.00	23	29.91
33.900	0.00	0.25	0.25	0.00	0.00	23	29.91
33.950	0.00	0.25	0.25	0.00	0.00	23	29.91
34.000	0.00	0.25	0.25	0.00	0.00	23	29.91
34.050	0.00	0.25	0.25	0.00	0.00	23	29.91
34.100	0.00	0.25	0.25	0.00	0.00	23	29.91
34.150	0.00	0.25	0.25	0.00	0.00	23	29.91
34.200	0.00	0.25	0.25	0.00	0.00	23	29.91
34.250	0.00	0.25	0.25	0.00	0.00	23	29.91
34.300	0.00	0.25	0.25	0.00	0.00	23	29.91
34.350	0.00	0.25	0.25	0.00	0.00	23	29.91
34.400	0.00	0.25	0.25	0.00	0.00	23	29.91
34.450	0.00	0.25	0.25	0.00	0.00	23	29.91
34.500	0.00	0.25	0.25	0.00	0.00	23	29.91
34.550	0.00	0.25	0.25	0.00	0.00	23	29.91
34.600	0.00	0.25	0.25	0.00	0.00	23	29.91
34.650	0.00	0.25	0.25	0.00	0.00	23	29.91
34.700	0.00	0.25	0.25	0.00	0.00	23	29.91
34.750	0.00	0.25	0.25	0.00	0.00	23	29.91
34.800	0.00	0.25	0.25	0.00	0.00	23	29.91
34.850	0.00	0.25	0.25	0.00	0.00	23	29.91
34.900	0.00	0.25	0.25	0.00	0.00	23	29.91
34.950	0.00	0.25	0.25	0.00	0.00	23	29.91
35.000	0.00	0.25	0.25	0.00	0.00	23	29.91
35.050	0.00	0.25	0.25	0.00	0.00	23	29.91
35.100	0.00	0.25	0.25	0.00	0.00	23	29.91
35.150	0.00	0.25	0.25	0.00	0.00	23	29.91
35.200	0.00	0.25	0.25	0.00	0.00	23	29.91
35.250	0.00	0.25	0.25	0.00	0.00	23	29.91
35.300	0.00	0.25	0.25	0.00	0.00	23	29.91
35.350	0.00	0.25	0.25	0.00	0.00	23	29.91
35.400	0.00	0.25	0.25	0.00	0.00	23	29.91
35.450	0.00	0.25	0.25	0.00	0.00	23	29.91
35.500	0.00	0.25	0.25	0.00	0.00	23	29.91
35.550	0.00	0.25	0.25	0.00	0.00	23	29.91
35.600	0.00	0.25	0.25	0.00	0.00	23	29.91
35.650	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
35.700	0.00	0.25	0.25	0.00	0.00	23	29.91
35.750	0.00	0.25	0.25	0.00	0.00	23	29.91
35.800	0.00	0.25	0.25	0.00	0.00	23	29.91
35.850	0.00	0.25	0.25	0.00	0.00	23	29.91
35.900	0.00	0.25	0.25	0.00	0.00	23	29.91
35.950	0.00	0.25	0.25	0.00	0.00	23	29.91
36.000	0.00	0.25	0.25	0.00	0.00	23	29.91

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	29.10
0.050	0.00	0.00	0.00	0.00	0.00	0	29.10
0.100	0.00	0.00	0.00	0.00	0.00	0	29.10
0.150	0.00	0.00	0.00	0.00	0.00	0	29.10
0.200	0.00	0.00	0.00	0.00	0.00	0	29.10
0.250	0.00	0.00	0.00	0.00	0.00	0	29.10
0.300	0.00	0.00	0.00	0.00	0.00	0	29.10
0.350	0.00	0.00	0.00	0.00	0.00	0	29.10
0.400	0.00	0.00	0.00	0.00	0.00	0	29.10
0.450	0.00	0.00	0.00	0.00	0.00	0	29.10
0.500	0.00	0.00	0.00	0.00	0.00	0	29.10
0.550	0.00	0.00	0.00	0.00	0.00	0	29.10
0.600	0.00	0.00	0.00	0.00	0.00	0	29.10
0.650	0.00	0.00	0.00	0.00	0.00	0	29.10
0.700	0.00	0.00	0.00	0.00	0.00	0	29.10
0.750	0.00	0.00	0.00	0.00	0.00	0	29.10
0.800	0.00	0.00	0.00	0.00	0.00	0	29.10
0.850	0.00	0.00	0.00	0.00	0.00	0	29.10
0.900	0.00	0.00	0.00	0.00	0.00	0	29.10
0.950	0.00	0.00	0.00	0.00	0.00	0	29.10
1.000	0.00	0.00	0.00	0.00	0.00	0	29.10
1.050	0.00	0.00	0.00	0.00	0.00	0	29.10
1.100	0.00	0.00	0.00	0.00	0.00	0	29.10
1.150	0.00	0.00	0.00	0.00	0.00	0	29.10
1.200	0.00	0.00	0.00	0.00	0.00	0	29.10
1.250	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
1.300	0.00	0.00	0.00	0.00	0.00	0	29.10
1.350	0.00	0.00	0.00	0.00	0.00	0	29.10
1.400	0.00	0.00	0.00	0.00	0.00	0	29.10
1.450	0.00	0.00	0.00	0.00	0.00	0	29.10
1.500	0.00	0.00	0.00	0.00	0.00	0	29.10
1.550	0.00	0.00	0.00	0.00	0.00	0	29.10
1.600	0.00	0.00	0.00	0.00	0.00	0	29.10
1.650	0.00	0.00	0.00	0.00	0.00	0	29.10
1.700	0.00	0.00	0.00	0.00	0.00	0	29.10
1.750	0.00	0.00	0.00	0.00	0.00	0	29.10
1.800	0.00	0.00	0.00	0.00	0.00	0	29.10
1.850	0.00	0.00	0.00	0.00	0.00	0	29.10
1.900	0.00	0.00	0.00	0.00	0.00	0	29.10
1.950	0.00	0.00	0.00	0.00	0.00	0	29.10
2.000	0.00	0.00	0.00	0.00	0.00	0	29.10
2.050	0.00	0.00	0.00	0.00	0.00	0	29.10
2.100	0.00	0.00	0.00	0.00	0.00	0	29.10
2.150	0.00	0.00	0.00	0.00	0.00	0	29.10
2.200	0.00	0.00	0.00	0.00	0.00	0	29.10
2.250	0.00	0.00	0.00	0.00	0.00	0	29.10
2.300	0.00	0.00	0.00	0.00	0.00	0	29.10
2.350	0.00	0.00	0.00	0.00	0.00	0	29.10
2.400	0.00	0.00	0.00	0.00	0.00	0	29.10
2.450	0.00	0.00	0.00	0.00	0.00	0	29.10
2.500	0.00	0.00	0.00	0.00	0.00	0	29.10
2.550	0.00	0.00	0.00	0.00	0.00	0	29.10
2.600	0.00	0.00	0.00	0.00	0.00	0	29.10
2.650	0.00	0.00	0.00	0.00	0.00	0	29.10
2.700	0.00	0.00	0.00	0.00	0.00	0	29.10
2.750	0.00	0.00	0.00	0.00	0.00	0	29.10
2.800	0.00	0.00	0.00	0.00	0.00	0	29.10
2.850	0.00	0.00	0.00	0.00	0.00	0	29.10
2.900	0.00	0.00	0.00	0.00	0.00	0	29.10
2.950	0.00	0.00	0.00	0.00	0.00	0	29.10
3.000	0.00	0.00	0.00	0.00	0.00	0	29.10
3.050	0.00	0.00	0.00	0.00	0.00	0	29.10
3.100	0.00	0.00	0.00	0.00	0.00	0	29.10
3.150	0.00	0.00	0.00	0.00	0.00	0	29.10
3.200	0.00	0.00	0.00	0.00	0.00	0	29.10
3.250	0.00	0.00	0.00	0.00	0.00	0	29.10
3.300	0.00	0.00	0.00	0.00	0.00	0	29.10
3.350	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
3.400	0.00	0.00	0.00	0.00	0.00	0	29.10
3.450	0.00	0.00	0.00	0.00	0.00	0	29.10
3.500	0.00	0.00	0.00	0.00	0.00	0	29.10
3.550	0.00	0.00	0.00	0.00	0.00	0	29.10
3.600	0.00	0.00	0.00	0.00	0.00	0	29.10
3.650	0.00	0.00	0.00	0.00	0.00	0	29.10
3.700	0.00	0.00	0.00	0.00	0.00	0	29.10
3.750	0.00	0.00	0.00	0.00	0.00	0	29.10
3.800	0.00	0.00	0.00	0.00	0.00	0	29.10
3.850	0.00	0.00	0.00	0.00	0.00	0	29.10
3.900	0.00	0.00	0.00	0.00	0.00	0	29.10
3.950	0.00	0.00	0.00	0.00	0.00	0	29.10
4.000	0.00	0.00	0.00	0.00	0.00	0	29.10
4.050	0.00	0.00	0.00	0.00	0.00	0	29.10
4.100	0.00	0.00	0.00	0.00	0.00	0	29.10
4.150	0.00	0.00	0.00	0.00	0.00	0	29.10
4.200	0.00	0.00	0.00	0.00	0.00	0	29.10
4.250	0.00	0.00	0.00	0.00	0.00	0	29.10
4.300	0.00	0.00	0.00	0.00	0.00	0	29.10
4.350	0.00	0.00	0.00	0.00	0.00	0	29.10
4.400	0.00	0.00	0.00	0.00	0.00	0	29.10
4.450	0.00	0.00	0.00	0.00	0.00	0	29.10
4.500	0.00	0.00	0.00	0.00	0.00	0	29.10
4.550	0.00	0.00	0.00	0.00	0.00	0	29.10
4.600	0.00	0.00	0.00	0.00	0.00	0	29.10
4.650	0.00	0.00	0.00	0.00	0.00	0	29.10
4.700	0.00	0.00	0.00	0.00	0.00	0	29.10
4.750	0.00	0.00	0.00	0.00	0.00	0	29.10
4.800	0.00	0.00	0.00	0.00	0.00	0	29.10
4.850	0.00	0.00	0.00	0.00	0.00	0	29.10
4.900	0.00	0.00	0.00	0.00	0.00	0	29.10
4.950	0.00	0.00	0.00	0.00	0.00	0	29.10
5.000	0.00	0.00	0.00	0.00	0.00	0	29.10
5.050	0.00	0.00	0.00	0.00	0.00	0	29.10
5.100	0.00	0.00	0.00	0.00	0.00	0	29.10
5.150	0.00	0.00	0.00	0.00	0.00	0	29.10
5.200	0.00	0.00	0.00	0.00	0.00	0	29.10
5.250	0.00	0.00	0.00	0.00	0.00	0	29.10
5.300	0.00	0.00	0.00	0.00	0.00	0	29.10
5.350	0.00	0.00	0.00	0.00	0.00	0	29.10
5.400	0.00	0.00	0.00	0.00	0.00	0	29.10
5.450	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
5.500	0.00	0.00	0.00	0.00	0.00	0	29.10
5.550	0.00	0.00	0.00	0.00	0.00	0	29.10
5.600	0.00	0.00	0.00	0.00	0.00	0	29.10
5.650	0.00	0.00	0.00	0.00	0.00	0	29.10
5.700	0.00	0.00	0.00	0.00	0.00	0	29.10
5.750	0.00	0.00	0.00	0.00	0.00	0	29.10
5.800	0.00	0.00	0.00	0.00	0.00	0	29.10
5.850	0.00	0.00	0.00	0.00	0.00	0	29.10
5.900	0.00	0.00	0.00	0.00	0.00	0	29.10
5.950	0.00	0.00	0.00	0.00	0.00	0	29.10
6.000	0.00	0.00	0.00	0.00	0.00	0	29.10
6.050	0.00	0.00	0.00	0.00	0.00	0	29.10
6.100	0.00	0.00	0.00	0.00	0.00	0	29.10
6.150	0.00	0.00	0.00	0.00	0.00	0	29.10
6.200	0.00	0.00	0.00	0.00	0.00	0	29.10
6.250	0.00	0.00	0.00	0.00	0.00	0	29.10
6.300	0.00	0.00	0.00	0.00	0.00	0	29.10
6.350	0.00	0.00	0.00	0.00	0.00	0	29.10
6.400	0.00	0.00	0.00	0.00	0.00	0	29.10
6.450	0.00	0.00	0.00	0.00	0.00	0	29.10
6.500	0.00	0.00	0.00	0.00	0.00	0	29.10
6.550	0.00	0.00	0.00	0.00	0.00	0	29.10
6.600	0.00	0.00	0.00	0.00	0.00	0	29.10
6.650	0.00	0.00	0.00	0.00	0.00	0	29.10
6.700	0.00	0.00	0.00	0.00	0.00	0	29.10
6.750	0.00	0.00	0.00	0.00	0.00	0	29.10
6.800	0.00	0.00	0.00	0.00	0.00	0	29.10
6.850	0.00	0.00	0.00	0.00	0.00	0	29.10
6.900	0.00	0.00	0.00	0.00	0.00	0	29.10
6.950	0.00	0.00	0.00	0.00	0.00	0	29.10
7.000	0.00	0.00	0.00	0.00	0.00	0	29.10
7.050	0.00	0.00	0.00	0.00	0.00	0	29.10
7.100	0.00	0.00	0.00	0.00	0.00	0	29.10
7.150	0.00	0.00	0.00	0.00	0.00	0	29.10
7.200	0.00	0.00	0.00	0.00	0.00	0	29.10
7.250	0.00	0.00	0.00	0.00	0.00	0	29.10
7.300	0.00	0.00	0.00	0.00	0.00	0	29.10
7.350	0.00	0.00	0.00	0.00	0.00	0	29.10
7.400	0.00	0.00	0.00	0.00	0.00	0	29.10
7.450	0.00	0.00	0.00	0.00	0.00	0	29.10
7.500	0.00	0.00	0.00	0.00	0.00	0	29.10
7.550	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
7.600	0.00	0.00	0.00	0.00	0.00	0	29.10
7.650	0.00	0.00	0.00	0.00	0.00	0	29.10
7.700	0.00	0.00	0.00	0.00	0.00	0	29.10
7.750	0.00	0.00	0.00	0.00	0.00	0	29.10
7.800	0.00	0.00	0.00	0.00	0.00	0	29.10
7.850	0.00	0.00	0.00	0.00	0.00	0	29.11
7.900	0.00	0.00	0.00	0.00	0.00	0	29.13
7.950	0.00	0.01	0.01	0.00	0.00	0	29.15
8.000	0.00	0.01	0.01	0.00	0.00	0	29.19
8.050	0.00	0.02	0.02	0.00	0.00	0	29.23
8.100	0.00	0.02	0.02	0.00	0.00	0	29.28
8.150	0.00	0.03	0.03	0.00	0.00	1	29.35
8.200	0.00	0.04	0.04	0.00	0.00	1	29.42
8.250	0.01	0.05	0.05	0.00	0.00	3	29.51
8.300	0.01	0.06	0.06	0.00	0.00	5	29.60
8.350	0.01	0.07	0.07	0.00	0.00	6	29.63
8.400	0.01	0.09	0.09	0.00	0.00	7	29.66
8.450	0.01	0.10	0.10	0.00	0.00	8	29.68
8.500	0.01	0.12	0.12	0.00	0.00	10	29.71
8.550	0.01	0.14	0.14	0.00	0.00	11	29.74
8.600	0.01	0.16	0.16	0.00	0.00	13	29.77
8.650	0.01	0.18	0.18	0.00	0.00	15	29.81
8.700	0.01	0.21	0.21	0.00	0.00	18	29.85
8.750	0.01	0.24	0.24	0.00	0.00	21	29.89
8.800	0.02	0.26	0.27	0.00	0.01	23	29.92
8.850	0.02	0.26	0.29	0.00	0.01	24	29.93
8.900	0.02	0.27	0.30	0.00	0.02	25	29.94
8.950	0.02	0.27	0.30	0.00	0.02	25	29.94
9.000	0.02	0.27	0.31	0.00	0.02	25	29.94
9.050	0.02	0.27	0.31	0.00	0.02	26	29.95
9.100	0.02	0.27	0.31	0.00	0.02	26	29.95
9.150	0.02	0.27	0.32	0.00	0.02	26	29.95
9.200	0.02	0.27	0.32	0.00	0.02	26	29.95
9.250	0.03	0.28	0.33	0.00	0.02	26	29.95
9.300	0.03	0.28	0.33	0.00	0.03	27	29.96
9.350	0.03	0.28	0.33	0.00	0.03	27	29.96
9.400	0.03	0.28	0.34	0.00	0.03	27	29.96
9.450	0.03	0.28	0.34	0.00	0.03	27	29.96
9.500	0.03	0.28	0.35	0.00	0.03	28	29.97
9.550	0.04	0.28	0.35	0.00	0.03	28	29.97
9.600	0.04	0.29	0.36	0.00	0.04	28	29.97
9.650	0.04	0.29	0.36	0.00	0.04	28	29.98

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
9.700	0.04	0.29	0.37	0.00	0.04	29	29.98
9.750	0.04	0.29	0.37	0.00	0.04	29	29.98
9.800	0.04	0.29	0.38	0.00	0.04	29	29.98
9.850	0.05	0.29	0.38	0.00	0.04	30	29.99
9.900	0.05	0.30	0.39	0.00	0.05	30	29.99
9.950	0.05	0.30	0.39	0.00	0.05	30	29.99
10.000	0.05	0.30	0.40	0.00	0.05	31	30.00
10.050	0.05	0.30	0.40	0.00	0.05	31	30.00
10.100	0.05	0.30	0.41	0.00	0.05	31	30.00
10.150	0.06	0.31	0.42	0.00	0.05	32	30.01
10.200	0.06	0.31	0.42	0.00	0.06	32	30.01
10.250	0.06	0.31	0.43	0.00	0.06	33	30.02
10.300	0.07	0.31	0.44	0.00	0.06	33	30.02
10.350	0.07	0.32	0.45	0.00	0.07	34	30.03
10.400	0.07	0.32	0.46	0.00	0.07	34	30.03
10.450	0.07	0.32	0.47	0.00	0.07	35	30.04
10.500	0.08	0.33	0.48	0.00	0.07	36	30.04
10.550	0.08	0.33	0.49	0.00	0.08	36	30.05
10.600	0.08	0.33	0.50	0.00	0.08	37	30.06
10.650	0.09	0.34	0.51	0.00	0.08	37	30.06
10.700	0.09	0.34	0.52	0.00	0.09	38	30.07
10.750	0.10	0.34	0.53	0.00	0.09	39	30.07
10.800	0.10	0.35	0.54	0.00	0.10	40	30.08
10.850	0.10	0.35	0.55	0.00	0.10	40	30.09
10.900	0.11	0.35	0.56	0.00	0.10	41	30.09
10.950	0.11	0.36	0.57	0.00	0.11	42	30.10
11.000	0.11	0.36	0.58	0.00	0.11	42	30.10
11.050	0.12	0.36	0.59	0.00	0.12	43	30.11
11.100	0.13	0.36	0.60	0.00	0.12	43	30.11
11.150	0.13	0.36	0.62	0.00	0.13	44	30.12
11.200	0.15	0.36	0.64	0.00	0.14	44	30.12
11.250	0.16	0.36	0.66	0.00	0.15	45	30.13
11.300	0.17	0.36	0.69	0.00	0.16	46	30.14
11.350	0.18	0.36	0.71	0.00	0.17	47	30.15
11.400	0.19	0.36	0.73	0.00	0.18	48	30.15
11.450	0.20	0.37	0.76	0.00	0.20	49	30.16
11.500	0.22	0.37	0.79	0.00	0.21	50	30.17
11.550	0.25	0.37	0.83	0.00	0.23	52	30.19
11.600	0.30	0.37	0.92	0.00	0.27	56	30.22
11.650	0.37	0.38	1.05	0.00	0.34	61	30.26
11.700	0.48	0.39	1.24	0.00	0.42	70	30.32
11.750	0.59	0.40	1.46	0.00	0.53	80	30.40

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
11.800	0.72	0.41	1.70	0.00	0.64	92	30.48
11.850	0.84	0.42	1.96	0.00	0.77	106	30.56
11.900	0.99	0.47	2.25	0.00	0.89	122	30.65
11.950	1.34	0.53	2.80	0.00	1.13	150	30.80
12.000	1.95	0.00	3.82	0.00	1.91	157	30.84
12.050	2.28	0.00	4.23	0.00	2.12	159	30.85
12.100	2.46	0.00	4.74	0.00	2.37	161	30.86
12.150	2.27	0.00	4.72	0.00	2.36	161	30.86
12.200	1.72	0.00	3.98	0.00	1.99	158	30.84
12.250	1.42	0.26	3.14	0.00	1.44	153	30.82
12.300	1.22	0.45	2.91	0.00	1.23	151	30.81
12.350	1.09	0.57	2.76	0.00	1.09	150	30.80
12.400	0.93	0.56	2.58	0.00	1.01	141	30.76
12.450	0.80	0.48	2.29	0.00	0.90	124	30.67
12.500	0.65	0.42	1.93	0.00	0.75	104	30.55
12.550	0.54	0.41	1.61	0.00	0.60	88	30.45
12.600	0.45	0.40	1.40	0.00	0.50	77	30.38
12.650	0.40	0.39	1.24	0.00	0.43	70	30.32
12.700	0.37	0.39	1.16	0.00	0.39	66	30.30
12.750	0.36	0.38	1.12	0.00	0.37	64	30.28
12.800	0.34	0.38	1.08	0.00	0.35	63	30.27
12.850	0.33	0.38	1.05	0.00	0.33	61	30.26
12.900	0.31	0.38	1.02	0.00	0.32	60	30.25
12.950	0.30	0.38	0.98	0.00	0.30	58	30.24
13.000	0.28	0.38	0.95	0.00	0.29	57	30.23
13.050	0.27	0.37	0.92	0.00	0.27	56	30.22
13.100	0.26	0.37	0.90	0.00	0.26	55	30.21
13.150	0.25	0.37	0.88	0.00	0.25	54	30.20
13.200	0.25	0.37	0.87	0.00	0.25	53	30.20
13.250	0.24	0.37	0.86	0.00	0.24	53	30.20
13.300	0.24	0.37	0.85	0.00	0.24	53	30.19
13.350	0.23	0.37	0.84	0.00	0.24	52	30.19
13.400	0.23	0.37	0.83	0.00	0.23	52	30.19
13.450	0.23	0.37	0.82	0.00	0.23	52	30.19
13.500	0.22	0.37	0.82	0.00	0.22	51	30.18
13.550	0.22	0.37	0.81	0.00	0.22	51	30.18
13.600	0.21	0.37	0.80	0.00	0.22	51	30.18
13.650	0.21	0.37	0.79	0.00	0.21	50	30.17
13.700	0.21	0.37	0.78	0.00	0.21	50	30.17
13.750	0.20	0.37	0.77	0.00	0.20	50	30.17
13.800	0.20	0.37	0.77	0.00	0.20	49	30.17
13.850	0.19	0.37	0.76	0.00	0.20	49	30.16

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
13.900	0.19	0.37	0.75	0.00	0.19	49	30.16
13.950	0.19	0.37	0.74	0.00	0.19	48	30.16
14.000	0.18	0.36	0.73	0.00	0.18	48	30.15
14.050	0.18	0.36	0.72	0.00	0.18	48	30.15
14.100	0.17	0.36	0.72	0.00	0.18	47	30.15
14.150	0.17	0.36	0.71	0.00	0.17	47	30.15
14.200	0.17	0.36	0.71	0.00	0.17	47	30.15
14.250	0.17	0.36	0.70	0.00	0.17	47	30.14
14.300	0.17	0.36	0.70	0.00	0.17	47	30.14
14.350	0.16	0.36	0.69	0.00	0.17	46	30.14
14.400	0.16	0.36	0.69	0.00	0.16	46	30.14
14.450	0.16	0.36	0.69	0.00	0.16	46	30.14
14.500	0.16	0.36	0.68	0.00	0.16	46	30.14
14.550	0.16	0.36	0.68	0.00	0.16	46	30.14
14.600	0.15	0.36	0.67	0.00	0.16	46	30.13
14.650	0.15	0.36	0.67	0.00	0.15	46	30.13
14.700	0.15	0.36	0.67	0.00	0.15	45	30.13
14.750	0.15	0.36	0.66	0.00	0.15	45	30.13
14.800	0.15	0.36	0.66	0.00	0.15	45	30.13
14.850	0.15	0.36	0.65	0.00	0.15	45	30.13
14.900	0.14	0.36	0.65	0.00	0.14	45	30.13
14.950	0.14	0.36	0.64	0.00	0.14	45	30.13
15.000	0.14	0.36	0.64	0.00	0.14	44	30.12
15.050	0.14	0.36	0.64	0.00	0.14	44	30.12
15.100	0.13	0.36	0.63	0.00	0.14	44	30.12
15.150	0.13	0.36	0.63	0.00	0.13	44	30.12
15.200	0.13	0.36	0.62	0.00	0.13	44	30.12
15.250	0.13	0.36	0.62	0.00	0.13	44	30.12
15.300	0.13	0.36	0.62	0.00	0.13	43	30.12
15.350	0.13	0.36	0.61	0.00	0.13	43	30.11
15.400	0.12	0.36	0.61	0.00	0.12	43	30.11
15.450	0.12	0.36	0.60	0.00	0.12	43	30.11
15.500	0.12	0.36	0.60	0.00	0.12	43	30.11
15.550	0.12	0.36	0.59	0.00	0.12	43	30.11
15.600	0.11	0.36	0.59	0.00	0.12	42	30.11
15.650	0.11	0.36	0.59	0.00	0.11	42	30.11
15.700	0.11	0.36	0.58	0.00	0.11	42	30.10
15.750	0.11	0.36	0.58	0.00	0.11	42	30.10
15.800	0.11	0.36	0.57	0.00	0.11	42	30.10
15.850	0.10	0.36	0.57	0.00	0.11	42	30.10
15.900	0.10	0.36	0.56	0.00	0.10	41	30.10
15.950	0.10	0.35	0.56	0.00	0.10	41	30.09

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.000	0.10	0.35	0.55	0.00	0.10	41	30.09
16.050	0.10	0.35	0.55	0.00	0.10	40	30.09
16.100	0.10	0.35	0.54	0.00	0.10	40	30.08
16.150	0.09	0.35	0.54	0.00	0.10	40	30.08
16.200	0.09	0.35	0.53	0.00	0.09	39	30.08
16.250	0.09	0.34	0.53	0.00	0.09	39	30.08
16.300	0.09	0.34	0.53	0.00	0.09	39	30.07
16.350	0.09	0.34	0.52	0.00	0.09	39	30.07
16.400	0.09	0.34	0.52	0.00	0.09	39	30.07
16.450	0.09	0.34	0.52	0.00	0.09	38	30.07
16.500	0.09	0.34	0.52	0.00	0.09	38	30.07
16.550	0.09	0.34	0.51	0.00	0.09	38	30.07
16.600	0.09	0.34	0.51	0.00	0.09	38	30.07
16.650	0.08	0.34	0.51	0.00	0.09	38	30.06
16.700	0.08	0.34	0.51	0.00	0.08	38	30.06
16.750	0.08	0.34	0.50	0.00	0.08	37	30.06
16.800	0.08	0.33	0.50	0.00	0.08	37	30.06
16.850	0.08	0.33	0.50	0.00	0.08	37	30.06
16.900	0.08	0.33	0.50	0.00	0.08	37	30.06
16.950	0.08	0.33	0.49	0.00	0.08	37	30.05
17.000	0.08	0.33	0.49	0.00	0.08	36	30.05
17.050	0.08	0.33	0.49	0.00	0.08	36	30.05
17.100	0.08	0.33	0.48	0.00	0.08	36	30.05
17.150	0.08	0.33	0.48	0.00	0.08	36	30.05
17.200	0.08	0.33	0.48	0.00	0.08	36	30.05
17.250	0.07	0.33	0.48	0.00	0.08	36	30.04
17.300	0.07	0.33	0.47	0.00	0.07	35	30.04
17.350	0.07	0.32	0.47	0.00	0.07	35	30.04
17.400	0.07	0.32	0.47	0.00	0.07	35	30.04
17.450	0.07	0.32	0.47	0.00	0.07	35	30.04
17.500	0.07	0.32	0.46	0.00	0.07	35	30.04
17.550	0.07	0.32	0.46	0.00	0.07	35	30.04
17.600	0.07	0.32	0.46	0.00	0.07	34	30.03
17.650	0.07	0.32	0.45	0.00	0.07	34	30.03
17.700	0.07	0.32	0.45	0.00	0.07	34	30.03
17.750	0.07	0.32	0.45	0.00	0.07	34	30.03
17.800	0.06	0.32	0.45	0.00	0.07	34	30.03
17.850	0.06	0.32	0.44	0.00	0.06	34	30.03
17.900	0.06	0.31	0.44	0.00	0.06	33	30.02
17.950	0.06	0.31	0.44	0.00	0.06	33	30.02
18.000	0.06	0.31	0.44	0.00	0.06	33	30.02
18.050	0.06	0.31	0.43	0.00	0.06	33	30.02

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.100	0.06	0.31	0.43	0.00	0.06	33	30.02
18.150	0.06	0.31	0.43	0.00	0.06	33	30.02
18.200	0.06	0.31	0.43	0.00	0.06	33	30.02
18.250	0.06	0.31	0.43	0.00	0.06	32	30.01
18.300	0.06	0.31	0.43	0.00	0.06	32	30.01
18.350	0.06	0.31	0.42	0.00	0.06	32	30.01
18.400	0.06	0.31	0.42	0.00	0.06	32	30.01
18.450	0.06	0.31	0.42	0.00	0.06	32	30.01
18.500	0.06	0.31	0.42	0.00	0.06	32	30.01
18.550	0.06	0.31	0.42	0.00	0.06	32	30.01
18.600	0.06	0.31	0.42	0.00	0.06	32	30.01
18.650	0.06	0.31	0.42	0.00	0.06	32	30.01
18.700	0.06	0.31	0.42	0.00	0.06	32	30.01
18.750	0.06	0.31	0.42	0.00	0.06	32	30.01
18.800	0.06	0.31	0.42	0.00	0.06	32	30.01
18.850	0.06	0.31	0.42	0.00	0.06	32	30.01
18.900	0.05	0.31	0.42	0.00	0.06	32	30.01
18.950	0.05	0.31	0.42	0.00	0.05	32	30.01
19.000	0.05	0.31	0.41	0.00	0.05	32	30.01
19.050	0.05	0.31	0.41	0.00	0.05	32	30.01
19.100	0.05	0.30	0.41	0.00	0.05	32	30.01
19.150	0.05	0.30	0.41	0.00	0.05	32	30.01
19.200	0.05	0.30	0.41	0.00	0.05	31	30.01
19.250	0.05	0.30	0.41	0.00	0.05	31	30.01
19.300	0.05	0.30	0.41	0.00	0.05	31	30.00
19.350	0.05	0.30	0.41	0.00	0.05	31	30.00
19.400	0.05	0.30	0.41	0.00	0.05	31	30.00
19.450	0.05	0.30	0.41	0.00	0.05	31	30.00
19.500	0.05	0.30	0.41	0.00	0.05	31	30.00
19.550	0.05	0.30	0.41	0.00	0.05	31	30.00
19.600	0.05	0.30	0.40	0.00	0.05	31	30.00
19.650	0.05	0.30	0.40	0.00	0.05	31	30.00
19.700	0.05	0.30	0.40	0.00	0.05	31	30.00
19.750	0.05	0.30	0.40	0.00	0.05	31	30.00
19.800	0.05	0.30	0.40	0.00	0.05	31	30.00
19.850	0.05	0.30	0.40	0.00	0.05	31	30.00
19.900	0.05	0.30	0.40	0.00	0.05	31	30.00
19.950	0.05	0.30	0.40	0.00	0.05	31	30.00
20.000	0.05	0.30	0.40	0.00	0.05	31	30.00
20.050	0.05	0.30	0.40	0.00	0.05	31	30.00
20.100	0.05	0.30	0.40	0.00	0.05	31	30.00
20.150	0.05	0.30	0.40	0.00	0.05	31	30.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
20.200	0.05	0.30	0.40	0.00	0.05	31	30.00
20.250	0.05	0.30	0.39	0.00	0.05	30	30.00
20.300	0.05	0.30	0.39	0.00	0.05	30	30.00
20.350	0.05	0.30	0.39	0.00	0.05	30	30.00
20.400	0.05	0.30	0.39	0.00	0.05	30	29.99
20.450	0.05	0.30	0.39	0.00	0.05	30	29.99
20.500	0.05	0.30	0.39	0.00	0.05	30	29.99
20.550	0.05	0.30	0.39	0.00	0.05	30	29.99
20.600	0.05	0.30	0.39	0.00	0.05	30	29.99
20.650	0.05	0.30	0.39	0.00	0.05	30	29.99
20.700	0.05	0.30	0.39	0.00	0.05	30	29.99
20.750	0.05	0.30	0.39	0.00	0.05	30	29.99
20.800	0.05	0.30	0.39	0.00	0.05	30	29.99
20.850	0.05	0.30	0.39	0.00	0.05	30	29.99
20.900	0.05	0.30	0.39	0.00	0.05	30	29.99
20.950	0.04	0.30	0.39	0.00	0.05	30	29.99
21.000	0.04	0.30	0.39	0.00	0.04	30	29.99
21.050	0.04	0.30	0.39	0.00	0.04	30	29.99
21.100	0.04	0.30	0.38	0.00	0.04	30	29.99
21.150	0.04	0.30	0.38	0.00	0.04	30	29.99
21.200	0.04	0.29	0.38	0.00	0.04	30	29.99
21.250	0.04	0.29	0.38	0.00	0.04	30	29.99
21.300	0.04	0.29	0.38	0.00	0.04	30	29.99
21.350	0.04	0.29	0.38	0.00	0.04	30	29.99
21.400	0.04	0.29	0.38	0.00	0.04	30	29.99
21.450	0.04	0.29	0.38	0.00	0.04	30	29.99
21.500	0.04	0.29	0.38	0.00	0.04	30	29.99
21.550	0.04	0.29	0.38	0.00	0.04	30	29.99
21.600	0.04	0.29	0.38	0.00	0.04	29	29.99
21.650	0.04	0.29	0.38	0.00	0.04	29	29.99
21.700	0.04	0.29	0.38	0.00	0.04	29	29.99
21.750	0.04	0.29	0.38	0.00	0.04	29	29.98
21.800	0.04	0.29	0.38	0.00	0.04	29	29.98
21.850	0.04	0.29	0.38	0.00	0.04	29	29.98
21.900	0.04	0.29	0.37	0.00	0.04	29	29.98
21.950	0.04	0.29	0.37	0.00	0.04	29	29.98
22.000	0.04	0.29	0.37	0.00	0.04	29	29.98
22.050	0.04	0.29	0.37	0.00	0.04	29	29.98
22.100	0.04	0.29	0.37	0.00	0.04	29	29.98
22.150	0.04	0.29	0.37	0.00	0.04	29	29.98
22.200	0.04	0.29	0.37	0.00	0.04	29	29.98
22.250	0.04	0.29	0.37	0.00	0.04	29	29.98

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
22.300	0.04	0.29	0.37	0.00	0.04	29	29.98
22.350	0.04	0.29	0.37	0.00	0.04	29	29.98
22.400	0.04	0.29	0.37	0.00	0.04	29	29.98
22.450	0.04	0.29	0.37	0.00	0.04	29	29.98
22.500	0.04	0.29	0.37	0.00	0.04	29	29.98
22.550	0.04	0.29	0.37	0.00	0.04	29	29.98
22.600	0.04	0.29	0.37	0.00	0.04	29	29.98
22.650	0.04	0.29	0.37	0.00	0.04	29	29.98
22.700	0.04	0.29	0.36	0.00	0.04	29	29.98
22.750	0.04	0.29	0.36	0.00	0.04	29	29.98
22.800	0.04	0.29	0.36	0.00	0.04	29	29.98
22.850	0.04	0.29	0.36	0.00	0.04	29	29.98
22.900	0.04	0.29	0.36	0.00	0.04	29	29.98
22.950	0.04	0.29	0.36	0.00	0.04	29	29.98
23.000	0.04	0.29	0.36	0.00	0.04	28	29.98
23.050	0.04	0.29	0.36	0.00	0.04	28	29.98
23.100	0.04	0.29	0.36	0.00	0.04	28	29.97
23.150	0.04	0.29	0.36	0.00	0.04	28	29.97
23.200	0.04	0.29	0.36	0.00	0.04	28	29.97
23.250	0.04	0.29	0.36	0.00	0.04	28	29.97
23.300	0.04	0.29	0.36	0.00	0.04	28	29.97
23.350	0.04	0.29	0.36	0.00	0.04	28	29.97
23.400	0.03	0.29	0.36	0.00	0.04	28	29.97
23.450	0.03	0.29	0.36	0.00	0.03	28	29.97
23.500	0.03	0.29	0.35	0.00	0.03	28	29.97
23.550	0.03	0.29	0.35	0.00	0.03	28	29.97
23.600	0.03	0.28	0.35	0.00	0.03	28	29.97
23.650	0.03	0.28	0.35	0.00	0.03	28	29.97
23.700	0.03	0.28	0.35	0.00	0.03	28	29.97
23.750	0.03	0.28	0.35	0.00	0.03	28	29.97
23.800	0.03	0.28	0.35	0.00	0.03	28	29.97
23.850	0.03	0.28	0.35	0.00	0.03	28	29.97
23.900	0.03	0.28	0.35	0.00	0.03	28	29.97
23.950	0.03	0.28	0.35	0.00	0.03	28	29.97
24.000	0.03	0.28	0.35	0.00	0.03	28	29.97
24.050	0.02	0.28	0.34	0.00	0.03	27	29.96
24.100	0.01	0.27	0.31	0.00	0.02	26	29.95
24.150	0.00	0.26	0.28	0.00	0.01	24	29.93
24.200	0.00	0.26	0.27	0.00	0.01	23	29.92
24.250	0.00	0.25	0.26	0.00	0.00	23	29.91
24.300	0.00	0.25	0.25	0.00	0.00	23	29.91
24.350	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
24.400	0.00	0.25	0.25	0.00	0.00	23	29.91
24.450	0.00	0.25	0.25	0.00	0.00	23	29.91
24.500	0.00	0.25	0.25	0.00	0.00	23	29.91
24.550	0.00	0.25	0.25	0.00	0.00	23	29.91
24.600	0.00	0.25	0.25	0.00	0.00	23	29.91
24.650	0.00	0.25	0.25	0.00	0.00	23	29.91
24.700	0.00	0.25	0.25	0.00	0.00	23	29.91
24.750	0.00	0.25	0.25	0.00	0.00	23	29.91
24.800	0.00	0.25	0.25	0.00	0.00	23	29.91
24.850	0.00	0.25	0.25	0.00	0.00	23	29.91
24.900	0.00	0.25	0.25	0.00	0.00	23	29.91
24.950	0.00	0.25	0.25	0.00	0.00	23	29.91
25.000	0.00	0.25	0.25	0.00	0.00	23	29.91
25.050	0.00	0.25	0.25	0.00	0.00	23	29.91
25.100	0.00	0.25	0.25	0.00	0.00	23	29.91
25.150	0.00	0.25	0.25	0.00	0.00	23	29.91
25.200	0.00	0.25	0.25	0.00	0.00	23	29.91
25.250	0.00	0.25	0.25	0.00	0.00	23	29.91
25.300	0.00	0.25	0.25	0.00	0.00	23	29.91
25.350	0.00	0.25	0.25	0.00	0.00	23	29.91
25.400	0.00	0.25	0.25	0.00	0.00	23	29.91
25.450	0.00	0.25	0.25	0.00	0.00	23	29.91
25.500	0.00	0.25	0.25	0.00	0.00	23	29.91
25.550	0.00	0.25	0.25	0.00	0.00	23	29.91
25.600	0.00	0.25	0.25	0.00	0.00	23	29.91
25.650	0.00	0.25	0.25	0.00	0.00	23	29.91
25.700	0.00	0.25	0.25	0.00	0.00	23	29.91
25.750	0.00	0.25	0.25	0.00	0.00	23	29.91
25.800	0.00	0.25	0.25	0.00	0.00	23	29.91
25.850	0.00	0.25	0.25	0.00	0.00	23	29.91
25.900	0.00	0.25	0.25	0.00	0.00	23	29.91
25.950	0.00	0.25	0.25	0.00	0.00	23	29.91
26.000	0.00	0.25	0.25	0.00	0.00	23	29.91
26.050	0.00	0.25	0.25	0.00	0.00	23	29.91
26.100	0.00	0.25	0.25	0.00	0.00	23	29.91
26.150	0.00	0.25	0.25	0.00	0.00	23	29.91
26.200	0.00	0.25	0.25	0.00	0.00	23	29.91
26.250	0.00	0.25	0.25	0.00	0.00	23	29.91
26.300	0.00	0.25	0.25	0.00	0.00	23	29.91
26.350	0.00	0.25	0.25	0.00	0.00	23	29.91
26.400	0.00	0.25	0.25	0.00	0.00	23	29.91
26.450	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
26.500	0.00	0.25	0.25	0.00	0.00	23	29.91
26.550	0.00	0.25	0.25	0.00	0.00	23	29.91
26.600	0.00	0.25	0.25	0.00	0.00	23	29.91
26.650	0.00	0.25	0.25	0.00	0.00	23	29.91
26.700	0.00	0.25	0.25	0.00	0.00	23	29.91
26.750	0.00	0.25	0.25	0.00	0.00	23	29.91
26.800	0.00	0.25	0.25	0.00	0.00	23	29.91
26.850	0.00	0.25	0.25	0.00	0.00	23	29.91
26.900	0.00	0.25	0.25	0.00	0.00	23	29.91
26.950	0.00	0.25	0.25	0.00	0.00	23	29.91
27.000	0.00	0.25	0.25	0.00	0.00	23	29.91
27.050	0.00	0.25	0.25	0.00	0.00	23	29.91
27.100	0.00	0.25	0.25	0.00	0.00	23	29.91
27.150	0.00	0.25	0.25	0.00	0.00	23	29.91
27.200	0.00	0.25	0.25	0.00	0.00	23	29.91
27.250	0.00	0.25	0.25	0.00	0.00	23	29.91
27.300	0.00	0.25	0.25	0.00	0.00	23	29.91
27.350	0.00	0.25	0.25	0.00	0.00	23	29.91
27.400	0.00	0.25	0.25	0.00	0.00	23	29.91
27.450	0.00	0.25	0.25	0.00	0.00	23	29.91
27.500	0.00	0.25	0.25	0.00	0.00	23	29.91
27.550	0.00	0.25	0.25	0.00	0.00	23	29.91
27.600	0.00	0.25	0.25	0.00	0.00	23	29.91
27.650	0.00	0.25	0.25	0.00	0.00	23	29.91
27.700	0.00	0.25	0.25	0.00	0.00	23	29.91
27.750	0.00	0.25	0.25	0.00	0.00	23	29.91
27.800	0.00	0.25	0.25	0.00	0.00	23	29.91
27.850	0.00	0.25	0.25	0.00	0.00	23	29.91
27.900	0.00	0.25	0.25	0.00	0.00	23	29.91
27.950	0.00	0.25	0.25	0.00	0.00	23	29.91
28.000	0.00	0.25	0.25	0.00	0.00	23	29.91
28.050	0.00	0.25	0.25	0.00	0.00	23	29.91
28.100	0.00	0.25	0.25	0.00	0.00	23	29.91
28.150	0.00	0.25	0.25	0.00	0.00	23	29.91
28.200	0.00	0.25	0.25	0.00	0.00	23	29.91
28.250	0.00	0.25	0.25	0.00	0.00	23	29.91
28.300	0.00	0.25	0.25	0.00	0.00	23	29.91
28.350	0.00	0.25	0.25	0.00	0.00	23	29.91
28.400	0.00	0.25	0.25	0.00	0.00	23	29.91
28.450	0.00	0.25	0.25	0.00	0.00	23	29.91
28.500	0.00	0.25	0.25	0.00	0.00	23	29.91
28.550	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
28.600	0.00	0.25	0.25	0.00	0.00	23	29.91
28.650	0.00	0.25	0.25	0.00	0.00	23	29.91
28.700	0.00	0.25	0.25	0.00	0.00	23	29.91
28.750	0.00	0.25	0.25	0.00	0.00	23	29.91
28.800	0.00	0.25	0.25	0.00	0.00	23	29.91
28.850	0.00	0.25	0.25	0.00	0.00	23	29.91
28.900	0.00	0.25	0.25	0.00	0.00	23	29.91
28.950	0.00	0.25	0.25	0.00	0.00	23	29.91
29.000	0.00	0.25	0.25	0.00	0.00	23	29.91
29.050	0.00	0.25	0.25	0.00	0.00	23	29.91
29.100	0.00	0.25	0.25	0.00	0.00	23	29.91
29.150	0.00	0.25	0.25	0.00	0.00	23	29.91
29.200	0.00	0.25	0.25	0.00	0.00	23	29.91
29.250	0.00	0.25	0.25	0.00	0.00	23	29.91
29.300	0.00	0.25	0.25	0.00	0.00	23	29.91
29.350	0.00	0.25	0.25	0.00	0.00	23	29.91
29.400	0.00	0.25	0.25	0.00	0.00	23	29.91
29.450	0.00	0.25	0.25	0.00	0.00	23	29.91
29.500	0.00	0.25	0.25	0.00	0.00	23	29.91
29.550	0.00	0.25	0.25	0.00	0.00	23	29.91
29.600	0.00	0.25	0.25	0.00	0.00	23	29.91
29.650	0.00	0.25	0.25	0.00	0.00	23	29.91
29.700	0.00	0.25	0.25	0.00	0.00	23	29.91
29.750	0.00	0.25	0.25	0.00	0.00	23	29.91
29.800	0.00	0.25	0.25	0.00	0.00	23	29.91
29.850	0.00	0.25	0.25	0.00	0.00	23	29.91
29.900	0.00	0.25	0.25	0.00	0.00	23	29.91
29.950	0.00	0.25	0.25	0.00	0.00	23	29.91
30.000	0.00	0.25	0.25	0.00	0.00	23	29.91
30.050	0.00	0.25	0.25	0.00	0.00	23	29.91
30.100	0.00	0.25	0.25	0.00	0.00	23	29.91
30.150	0.00	0.25	0.25	0.00	0.00	23	29.91
30.200	0.00	0.25	0.25	0.00	0.00	23	29.91
30.250	0.00	0.25	0.25	0.00	0.00	23	29.91
30.300	0.00	0.25	0.25	0.00	0.00	23	29.91
30.350	0.00	0.25	0.25	0.00	0.00	23	29.91
30.400	0.00	0.25	0.25	0.00	0.00	23	29.91
30.450	0.00	0.25	0.25	0.00	0.00	23	29.91
30.500	0.00	0.25	0.25	0.00	0.00	23	29.91
30.550	0.00	0.25	0.25	0.00	0.00	23	29.91
30.600	0.00	0.25	0.25	0.00	0.00	23	29.91
30.650	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
30.700	0.00	0.25	0.25	0.00	0.00	23	29.91
30.750	0.00	0.25	0.25	0.00	0.00	23	29.91
30.800	0.00	0.25	0.25	0.00	0.00	23	29.91
30.850	0.00	0.25	0.25	0.00	0.00	23	29.91
30.900	0.00	0.25	0.25	0.00	0.00	23	29.91
30.950	0.00	0.25	0.25	0.00	0.00	23	29.91
31.000	0.00	0.25	0.25	0.00	0.00	23	29.91
31.050	0.00	0.25	0.25	0.00	0.00	23	29.91
31.100	0.00	0.25	0.25	0.00	0.00	23	29.91
31.150	0.00	0.25	0.25	0.00	0.00	23	29.91
31.200	0.00	0.25	0.25	0.00	0.00	23	29.91
31.250	0.00	0.25	0.25	0.00	0.00	23	29.91
31.300	0.00	0.25	0.25	0.00	0.00	23	29.91
31.350	0.00	0.25	0.25	0.00	0.00	23	29.91
31.400	0.00	0.25	0.25	0.00	0.00	23	29.91
31.450	0.00	0.25	0.25	0.00	0.00	23	29.91
31.500	0.00	0.25	0.25	0.00	0.00	23	29.91
31.550	0.00	0.25	0.25	0.00	0.00	23	29.91
31.600	0.00	0.25	0.25	0.00	0.00	23	29.91
31.650	0.00	0.25	0.25	0.00	0.00	23	29.91
31.700	0.00	0.25	0.25	0.00	0.00	23	29.91
31.750	0.00	0.25	0.25	0.00	0.00	23	29.91
31.800	0.00	0.25	0.25	0.00	0.00	23	29.91
31.850	0.00	0.25	0.25	0.00	0.00	23	29.91
31.900	0.00	0.25	0.25	0.00	0.00	23	29.91
31.950	0.00	0.25	0.25	0.00	0.00	23	29.91
32.000	0.00	0.25	0.25	0.00	0.00	23	29.91
32.050	0.00	0.25	0.25	0.00	0.00	23	29.91
32.100	0.00	0.25	0.25	0.00	0.00	23	29.91
32.150	0.00	0.25	0.25	0.00	0.00	23	29.91
32.200	0.00	0.25	0.25	0.00	0.00	23	29.91
32.250	0.00	0.25	0.25	0.00	0.00	23	29.91
32.300	0.00	0.25	0.25	0.00	0.00	23	29.91
32.350	0.00	0.25	0.25	0.00	0.00	23	29.91
32.400	0.00	0.25	0.25	0.00	0.00	23	29.91
32.450	0.00	0.25	0.25	0.00	0.00	23	29.91
32.500	0.00	0.25	0.25	0.00	0.00	23	29.91
32.550	0.00	0.25	0.25	0.00	0.00	23	29.91
32.600	0.00	0.25	0.25	0.00	0.00	23	29.91
32.650	0.00	0.25	0.25	0.00	0.00	23	29.91
32.700	0.00	0.25	0.25	0.00	0.00	23	29.91
32.750	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
32.800	0.00	0.25	0.25	0.00	0.00	23	29.91
32.850	0.00	0.25	0.25	0.00	0.00	23	29.91
32.900	0.00	0.25	0.25	0.00	0.00	23	29.91
32.950	0.00	0.25	0.25	0.00	0.00	23	29.91
33.000	0.00	0.25	0.25	0.00	0.00	23	29.91
33.050	0.00	0.25	0.25	0.00	0.00	23	29.91
33.100	0.00	0.25	0.25	0.00	0.00	23	29.91
33.150	0.00	0.25	0.25	0.00	0.00	23	29.91
33.200	0.00	0.25	0.25	0.00	0.00	23	29.91
33.250	0.00	0.25	0.25	0.00	0.00	23	29.91
33.300	0.00	0.25	0.25	0.00	0.00	23	29.91
33.350	0.00	0.25	0.25	0.00	0.00	23	29.91
33.400	0.00	0.25	0.25	0.00	0.00	23	29.91
33.450	0.00	0.25	0.25	0.00	0.00	23	29.91
33.500	0.00	0.25	0.25	0.00	0.00	23	29.91
33.550	0.00	0.25	0.25	0.00	0.00	23	29.91
33.600	0.00	0.25	0.25	0.00	0.00	23	29.91
33.650	0.00	0.25	0.25	0.00	0.00	23	29.91
33.700	0.00	0.25	0.25	0.00	0.00	23	29.91
33.750	0.00	0.25	0.25	0.00	0.00	23	29.91
33.800	0.00	0.25	0.25	0.00	0.00	23	29.91
33.850	0.00	0.25	0.25	0.00	0.00	23	29.91
33.900	0.00	0.25	0.25	0.00	0.00	23	29.91
33.950	0.00	0.25	0.25	0.00	0.00	23	29.91
34.000	0.00	0.25	0.25	0.00	0.00	23	29.91
34.050	0.00	0.25	0.25	0.00	0.00	23	29.91
34.100	0.00	0.25	0.25	0.00	0.00	23	29.91
34.150	0.00	0.25	0.25	0.00	0.00	23	29.91
34.200	0.00	0.25	0.25	0.00	0.00	23	29.91
34.250	0.00	0.25	0.25	0.00	0.00	23	29.91
34.300	0.00	0.25	0.25	0.00	0.00	23	29.91
34.350	0.00	0.25	0.25	0.00	0.00	23	29.91
34.400	0.00	0.25	0.25	0.00	0.00	23	29.91
34.450	0.00	0.25	0.25	0.00	0.00	23	29.91
34.500	0.00	0.25	0.25	0.00	0.00	23	29.91
34.550	0.00	0.25	0.25	0.00	0.00	23	29.91
34.600	0.00	0.25	0.25	0.00	0.00	23	29.91
34.650	0.00	0.25	0.25	0.00	0.00	23	29.91
34.700	0.00	0.25	0.25	0.00	0.00	23	29.91
34.750	0.00	0.25	0.25	0.00	0.00	23	29.91
34.800	0.00	0.25	0.25	0.00	0.00	23	29.91
34.850	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
34.900	0.00	0.25	0.25	0.00	0.00	23	29.91
34.950	0.00	0.25	0.25	0.00	0.00	23	29.91
35.000	0.00	0.25	0.25	0.00	0.00	23	29.91
35.050	0.00	0.25	0.25	0.00	0.00	23	29.91
35.100	0.00	0.25	0.25	0.00	0.00	23	29.91
35.150	0.00	0.25	0.25	0.00	0.00	23	29.91
35.200	0.00	0.25	0.25	0.00	0.00	23	29.91
35.250	0.00	0.25	0.25	0.00	0.00	23	29.91
35.300	0.00	0.25	0.25	0.00	0.00	23	29.91
35.350	0.00	0.25	0.25	0.00	0.00	23	29.91
35.400	0.00	0.25	0.25	0.00	0.00	23	29.91
35.450	0.00	0.25	0.25	0.00	0.00	23	29.91
35.500	0.00	0.25	0.25	0.00	0.00	23	29.91
35.550	0.00	0.25	0.25	0.00	0.00	23	29.91
35.600	0.00	0.25	0.25	0.00	0.00	23	29.91
35.650	0.00	0.25	0.25	0.00	0.00	23	29.91
35.700	0.00	0.25	0.25	0.00	0.00	23	29.91
35.750	0.00	0.25	0.25	0.00	0.00	23	29.91
35.800	0.00	0.25	0.25	0.00	0.00	23	29.91
35.850	0.00	0.25	0.25	0.00	0.00	23	29.91
35.900	0.00	0.25	0.25	0.00	0.00	23	29.91
35.950	0.00	0.25	0.25	0.00	0.00	23	29.91
36.000	0.00	0.25	0.25	0.00	0.00	23	29.91

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	29.10
0.050	0.00	0.00	0.00	0.00	0.00	0	29.10
0.100	0.00	0.00	0.00	0.00	0.00	0	29.10
0.150	0.00	0.00	0.00	0.00	0.00	0	29.10
0.200	0.00	0.00	0.00	0.00	0.00	0	29.10
0.250	0.00	0.00	0.00	0.00	0.00	0	29.10
0.300	0.00	0.00	0.00	0.00	0.00	0	29.10
0.350	0.00	0.00	0.00	0.00	0.00	0	29.10
0.400	0.00	0.00	0.00	0.00	0.00	0	29.10
0.450	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.500	0.00	0.00	0.00	0.00	0.00	0	29.10
0.550	0.00	0.00	0.00	0.00	0.00	0	29.10
0.600	0.00	0.00	0.00	0.00	0.00	0	29.10
0.650	0.00	0.00	0.00	0.00	0.00	0	29.10
0.700	0.00	0.00	0.00	0.00	0.00	0	29.10
0.750	0.00	0.00	0.00	0.00	0.00	0	29.10
0.800	0.00	0.00	0.00	0.00	0.00	0	29.10
0.850	0.00	0.00	0.00	0.00	0.00	0	29.10
0.900	0.00	0.00	0.00	0.00	0.00	0	29.10
0.950	0.00	0.00	0.00	0.00	0.00	0	29.10
1.000	0.00	0.00	0.00	0.00	0.00	0	29.10
1.050	0.00	0.00	0.00	0.00	0.00	0	29.10
1.100	0.00	0.00	0.00	0.00	0.00	0	29.10
1.150	0.00	0.00	0.00	0.00	0.00	0	29.10
1.200	0.00	0.00	0.00	0.00	0.00	0	29.10
1.250	0.00	0.00	0.00	0.00	0.00	0	29.10
1.300	0.00	0.00	0.00	0.00	0.00	0	29.10
1.350	0.00	0.00	0.00	0.00	0.00	0	29.10
1.400	0.00	0.00	0.00	0.00	0.00	0	29.10
1.450	0.00	0.00	0.00	0.00	0.00	0	29.10
1.500	0.00	0.00	0.00	0.00	0.00	0	29.10
1.550	0.00	0.00	0.00	0.00	0.00	0	29.10
1.600	0.00	0.00	0.00	0.00	0.00	0	29.10
1.650	0.00	0.00	0.00	0.00	0.00	0	29.10
1.700	0.00	0.00	0.00	0.00	0.00	0	29.10
1.750	0.00	0.00	0.00	0.00	0.00	0	29.10
1.800	0.00	0.00	0.00	0.00	0.00	0	29.10
1.850	0.00	0.00	0.00	0.00	0.00	0	29.10
1.900	0.00	0.00	0.00	0.00	0.00	0	29.10
1.950	0.00	0.00	0.00	0.00	0.00	0	29.10
2.000	0.00	0.00	0.00	0.00	0.00	0	29.10
2.050	0.00	0.00	0.00	0.00	0.00	0	29.10
2.100	0.00	0.00	0.00	0.00	0.00	0	29.10
2.150	0.00	0.00	0.00	0.00	0.00	0	29.10
2.200	0.00	0.00	0.00	0.00	0.00	0	29.10
2.250	0.00	0.00	0.00	0.00	0.00	0	29.10
2.300	0.00	0.00	0.00	0.00	0.00	0	29.10
2.350	0.00	0.00	0.00	0.00	0.00	0	29.10
2.400	0.00	0.00	0.00	0.00	0.00	0	29.10
2.450	0.00	0.00	0.00	0.00	0.00	0	29.10
2.500	0.00	0.00	0.00	0.00	0.00	0	29.10
2.550	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.600	0.00	0.00	0.00	0.00	0.00	0	29.10
2.650	0.00	0.00	0.00	0.00	0.00	0	29.10
2.700	0.00	0.00	0.00	0.00	0.00	0	29.10
2.750	0.00	0.00	0.00	0.00	0.00	0	29.10
2.800	0.00	0.00	0.00	0.00	0.00	0	29.10
2.850	0.00	0.00	0.00	0.00	0.00	0	29.10
2.900	0.00	0.00	0.00	0.00	0.00	0	29.10
2.950	0.00	0.00	0.00	0.00	0.00	0	29.10
3.000	0.00	0.00	0.00	0.00	0.00	0	29.10
3.050	0.00	0.00	0.00	0.00	0.00	0	29.10
3.100	0.00	0.00	0.00	0.00	0.00	0	29.10
3.150	0.00	0.00	0.00	0.00	0.00	0	29.10
3.200	0.00	0.00	0.00	0.00	0.00	0	29.10
3.250	0.00	0.00	0.00	0.00	0.00	0	29.10
3.300	0.00	0.00	0.00	0.00	0.00	0	29.10
3.350	0.00	0.00	0.00	0.00	0.00	0	29.10
3.400	0.00	0.00	0.00	0.00	0.00	0	29.10
3.450	0.00	0.00	0.00	0.00	0.00	0	29.10
3.500	0.00	0.00	0.00	0.00	0.00	0	29.10
3.550	0.00	0.00	0.00	0.00	0.00	0	29.10
3.600	0.00	0.00	0.00	0.00	0.00	0	29.10
3.650	0.00	0.00	0.00	0.00	0.00	0	29.10
3.700	0.00	0.00	0.00	0.00	0.00	0	29.10
3.750	0.00	0.00	0.00	0.00	0.00	0	29.10
3.800	0.00	0.00	0.00	0.00	0.00	0	29.10
3.850	0.00	0.00	0.00	0.00	0.00	0	29.10
3.900	0.00	0.00	0.00	0.00	0.00	0	29.10
3.950	0.00	0.00	0.00	0.00	0.00	0	29.10
4.000	0.00	0.00	0.00	0.00	0.00	0	29.10
4.050	0.00	0.00	0.00	0.00	0.00	0	29.10
4.100	0.00	0.00	0.00	0.00	0.00	0	29.10
4.150	0.00	0.00	0.00	0.00	0.00	0	29.10
4.200	0.00	0.00	0.00	0.00	0.00	0	29.10
4.250	0.00	0.00	0.00	0.00	0.00	0	29.10
4.300	0.00	0.00	0.00	0.00	0.00	0	29.10
4.350	0.00	0.00	0.00	0.00	0.00	0	29.10
4.400	0.00	0.00	0.00	0.00	0.00	0	29.10
4.450	0.00	0.00	0.00	0.00	0.00	0	29.10
4.500	0.00	0.00	0.00	0.00	0.00	0	29.10
4.550	0.00	0.00	0.00	0.00	0.00	0	29.10
4.600	0.00	0.00	0.00	0.00	0.00	0	29.10
4.650	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.700	0.00	0.00	0.00	0.00	0.00	0	29.10
4.750	0.00	0.00	0.00	0.00	0.00	0	29.10
4.800	0.00	0.00	0.00	0.00	0.00	0	29.10
4.850	0.00	0.00	0.00	0.00	0.00	0	29.10
4.900	0.00	0.00	0.00	0.00	0.00	0	29.10
4.950	0.00	0.00	0.00	0.00	0.00	0	29.10
5.000	0.00	0.00	0.00	0.00	0.00	0	29.10
5.050	0.00	0.00	0.00	0.00	0.00	0	29.10
5.100	0.00	0.00	0.00	0.00	0.00	0	29.10
5.150	0.00	0.00	0.00	0.00	0.00	0	29.10
5.200	0.00	0.00	0.00	0.00	0.00	0	29.10
5.250	0.00	0.00	0.00	0.00	0.00	0	29.10
5.300	0.00	0.00	0.00	0.00	0.00	0	29.10
5.350	0.00	0.00	0.00	0.00	0.00	0	29.10
5.400	0.00	0.00	0.00	0.00	0.00	0	29.10
5.450	0.00	0.00	0.00	0.00	0.00	0	29.10
5.500	0.00	0.00	0.00	0.00	0.00	0	29.10
5.550	0.00	0.00	0.00	0.00	0.00	0	29.10
5.600	0.00	0.00	0.00	0.00	0.00	0	29.10
5.650	0.00	0.00	0.00	0.00	0.00	0	29.10
5.700	0.00	0.00	0.00	0.00	0.00	0	29.10
5.750	0.00	0.00	0.00	0.00	0.00	0	29.10
5.800	0.00	0.00	0.00	0.00	0.00	0	29.10
5.850	0.00	0.00	0.00	0.00	0.00	0	29.10
5.900	0.00	0.00	0.00	0.00	0.00	0	29.10
5.950	0.00	0.00	0.00	0.00	0.00	0	29.10
6.000	0.00	0.00	0.00	0.00	0.00	0	29.10
6.050	0.00	0.00	0.00	0.00	0.00	0	29.10
6.100	0.00	0.00	0.00	0.00	0.00	0	29.10
6.150	0.00	0.00	0.00	0.00	0.00	0	29.10
6.200	0.00	0.00	0.00	0.00	0.00	0	29.10
6.250	0.00	0.00	0.00	0.00	0.00	0	29.10
6.300	0.00	0.00	0.00	0.00	0.00	0	29.10
6.350	0.00	0.00	0.00	0.00	0.00	0	29.10
6.400	0.00	0.00	0.00	0.00	0.00	0	29.10
6.450	0.00	0.00	0.00	0.00	0.00	0	29.10
6.500	0.00	0.00	0.00	0.00	0.00	0	29.10
6.550	0.00	0.00	0.00	0.00	0.00	0	29.10
6.600	0.00	0.00	0.00	0.00	0.00	0	29.10
6.650	0.00	0.00	0.00	0.00	0.00	0	29.10
6.700	0.00	0.00	0.00	0.00	0.00	0	29.10
6.750	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.800	0.00	0.00	0.00	0.00	0.00	0	29.10
6.850	0.00	0.00	0.00	0.00	0.00	0	29.11
6.900	0.00	0.00	0.00	0.00	0.00	0	29.12
6.950	0.00	0.01	0.01	0.00	0.00	0	29.14
7.000	0.00	0.01	0.01	0.00	0.00	0	29.18
7.050	0.00	0.01	0.01	0.00	0.00	0	29.22
7.100	0.00	0.02	0.02	0.00	0.00	0	29.27
7.150	0.00	0.03	0.03	0.00	0.00	0	29.33
7.200	0.00	0.04	0.04	0.00	0.00	1	29.40
7.250	0.01	0.04	0.04	0.00	0.00	2	29.48
7.300	0.01	0.06	0.06	0.00	0.00	4	29.57
7.350	0.01	0.07	0.07	0.00	0.00	6	29.62
7.400	0.01	0.08	0.08	0.00	0.00	7	29.65
7.450	0.01	0.10	0.10	0.00	0.00	8	29.67
7.500	0.01	0.11	0.11	0.00	0.00	9	29.70
7.550	0.01	0.13	0.13	0.00	0.00	10	29.73
7.600	0.01	0.15	0.15	0.00	0.00	12	29.75
7.650	0.01	0.17	0.17	0.00	0.00	14	29.79
7.700	0.01	0.19	0.19	0.00	0.00	16	29.82
7.750	0.01	0.22	0.22	0.00	0.00	18	29.86
7.800	0.01	0.24	0.24	0.00	0.00	21	29.90
7.850	0.01	0.26	0.27	0.00	0.01	23	29.92
7.900	0.01	0.26	0.28	0.00	0.01	24	29.93
7.950	0.02	0.26	0.29	0.00	0.01	25	29.93
8.000	0.02	0.27	0.30	0.00	0.02	25	29.94
8.050	0.02	0.27	0.30	0.00	0.02	25	29.94
8.100	0.02	0.27	0.30	0.00	0.02	25	29.94
8.150	0.02	0.27	0.31	0.00	0.02	25	29.94
8.200	0.02	0.27	0.31	0.00	0.02	26	29.94
8.250	0.02	0.27	0.31	0.00	0.02	26	29.95
8.300	0.02	0.27	0.32	0.00	0.02	26	29.95
8.350	0.02	0.27	0.32	0.00	0.02	26	29.95
8.400	0.03	0.27	0.32	0.00	0.02	26	29.95
8.450	0.03	0.28	0.33	0.00	0.03	27	29.96
8.500	0.03	0.28	0.33	0.00	0.03	27	29.96
8.550	0.03	0.28	0.34	0.00	0.03	27	29.96
8.600	0.03	0.28	0.34	0.00	0.03	27	29.96
8.650	0.03	0.28	0.35	0.00	0.03	28	29.97
8.700	0.03	0.28	0.35	0.00	0.03	28	29.97
8.750	0.04	0.29	0.35	0.00	0.03	28	29.97
8.800	0.04	0.29	0.36	0.00	0.04	28	29.98
8.850	0.04	0.29	0.36	0.00	0.04	29	29.98

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.900	0.04	0.29	0.37	0.00	0.04	29	29.98
8.950	0.04	0.29	0.38	0.00	0.04	29	29.98
9.000	0.05	0.29	0.38	0.00	0.04	30	29.99
9.050	0.05	0.30	0.39	0.00	0.05	30	29.99
9.100	0.05	0.30	0.39	0.00	0.05	30	29.99
9.150	0.05	0.30	0.40	0.00	0.05	31	30.00
9.200	0.05	0.30	0.40	0.00	0.05	31	30.00
9.250	0.06	0.30	0.41	0.00	0.05	31	30.01
9.300	0.06	0.31	0.42	0.00	0.06	32	30.01
9.350	0.06	0.31	0.42	0.00	0.06	32	30.01
9.400	0.06	0.31	0.43	0.00	0.06	33	30.02
9.450	0.06	0.31	0.44	0.00	0.06	33	30.02
9.500	0.07	0.31	0.44	0.00	0.06	33	30.02
9.550	0.07	0.32	0.45	0.00	0.07	34	30.03
9.600	0.07	0.32	0.46	0.00	0.07	34	30.03
9.650	0.07	0.32	0.46	0.00	0.07	35	30.04
9.700	0.08	0.32	0.47	0.00	0.07	35	30.04
9.750	0.08	0.33	0.48	0.00	0.08	36	30.05
9.800	0.08	0.33	0.49	0.00	0.08	36	30.05
9.850	0.08	0.33	0.49	0.00	0.08	37	30.05
9.900	0.09	0.33	0.50	0.00	0.08	37	30.06
9.950	0.09	0.34	0.51	0.00	0.09	38	30.06
10.000	0.09	0.34	0.52	0.00	0.09	38	30.07
10.050	0.09	0.34	0.52	0.00	0.09	39	30.07
10.100	0.10	0.35	0.53	0.00	0.09	39	30.08
10.150	0.10	0.35	0.54	0.00	0.10	40	30.08
10.200	0.11	0.35	0.56	0.00	0.10	41	30.09
10.250	0.11	0.36	0.57	0.00	0.11	42	30.10
10.300	0.11	0.36	0.58	0.00	0.11	42	30.10
10.350	0.12	0.36	0.59	0.00	0.12	42	30.11
10.400	0.12	0.36	0.60	0.00	0.12	43	30.11
10.450	0.13	0.36	0.61	0.00	0.12	43	30.11
10.500	0.13	0.36	0.62	0.00	0.13	44	30.12
10.550	0.14	0.36	0.63	0.00	0.13	44	30.12
10.600	0.14	0.36	0.64	0.00	0.14	44	30.12
10.650	0.15	0.36	0.65	0.00	0.14	45	30.13
10.700	0.15	0.36	0.66	0.00	0.15	45	30.13
10.750	0.16	0.36	0.67	0.00	0.15	46	30.13
10.800	0.16	0.36	0.68	0.00	0.16	46	30.14
10.850	0.17	0.36	0.69	0.00	0.16	46	30.14
10.900	0.17	0.36	0.70	0.00	0.17	47	30.14
10.950	0.18	0.36	0.71	0.00	0.18	47	30.15

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
11.000	0.18	0.36	0.73	0.00	0.18	48	30.15
11.050	0.19	0.37	0.74	0.00	0.19	48	30.16
11.100	0.20	0.37	0.76	0.00	0.20	49	30.16
11.150	0.21	0.37	0.78	0.00	0.21	50	30.17
11.200	0.23	0.37	0.81	0.00	0.22	51	30.18
11.250	0.24	0.37	0.84	0.00	0.24	52	30.19
11.300	0.26	0.37	0.88	0.00	0.25	54	30.20
11.350	0.28	0.37	0.91	0.00	0.27	55	30.21
11.400	0.30	0.37	0.95	0.00	0.29	57	30.23
11.450	0.31	0.38	0.98	0.00	0.30	58	30.24
11.500	0.33	0.38	1.02	0.00	0.32	60	30.25
11.550	0.38	0.38	1.09	0.00	0.35	63	30.27
11.600	0.46	0.39	1.22	0.00	0.42	69	30.32
11.650	0.56	0.40	1.41	0.00	0.51	78	30.38
11.700	0.72	0.41	1.68	0.00	0.64	91	30.47
11.750	0.87	0.42	2.00	0.00	0.79	109	30.58
11.800	1.06	0.50	2.35	0.00	0.93	128	30.69
11.850	1.23	0.55	2.78	0.00	1.12	150	30.80
11.900	1.44	0.20	3.21	0.00	1.50	153	30.82
11.950	1.92	0.00	3.56	0.00	1.78	156	30.83
12.000	2.77	0.00	4.69	0.00	2.34	161	30.86
12.050	3.21	0.00	5.97	0.00	2.99	167	30.89
12.100	3.42	0.00	6.62	0.00	3.31	170	30.90
12.150	3.13	0.00	6.55	0.00	3.27	170	30.90
12.200	2.36	0.00	5.49	0.00	2.74	165	30.87
12.250	1.94	0.00	4.30	0.00	2.15	159	30.85
12.300	1.67	0.00	3.61	0.00	1.80	156	30.83
12.350	1.47	0.26	3.14	0.00	1.44	153	30.82
12.400	1.26	0.38	2.99	0.00	1.31	151	30.81
12.450	1.08	0.59	2.72	0.00	1.06	149	30.80
12.500	0.87	0.55	2.55	0.00	1.00	139	30.75
12.550	0.73	0.45	2.15	0.00	0.85	117	30.62
12.600	0.60	0.41	1.78	0.00	0.68	96	30.50
12.650	0.54	0.40	1.55	0.00	0.58	85	30.43
12.700	0.50	0.40	1.45	0.00	0.52	79	30.39
12.750	0.48	0.40	1.38	0.00	0.49	76	30.37
12.800	0.46	0.39	1.33	0.00	0.47	74	30.35
12.850	0.44	0.39	1.29	0.00	0.45	72	30.34
12.900	0.42	0.39	1.25	0.00	0.43	70	30.33
12.950	0.40	0.39	1.20	0.00	0.41	68	30.31
13.000	0.37	0.38	1.16	0.00	0.39	66	30.30
13.050	0.36	0.38	1.12	0.00	0.37	64	30.28

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
13.100	0.34	0.38	1.09	0.00	0.35	63	30.27
13.150	0.34	0.38	1.06	0.00	0.34	62	30.26
13.200	0.33	0.38	1.04	0.00	0.33	61	30.26
13.250	0.32	0.38	1.03	0.00	0.33	60	30.25
13.300	0.32	0.38	1.02	0.00	0.32	60	30.25
13.350	0.31	0.38	1.01	0.00	0.32	59	30.25
13.400	0.31	0.38	1.00	0.00	0.31	59	30.24
13.450	0.30	0.38	0.99	0.00	0.30	58	30.24
13.500	0.30	0.38	0.97	0.00	0.30	58	30.23
13.550	0.29	0.38	0.96	0.00	0.29	57	30.23
13.600	0.29	0.38	0.95	0.00	0.29	57	30.23
13.650	0.28	0.37	0.94	0.00	0.28	57	30.22
13.700	0.27	0.37	0.93	0.00	0.28	56	30.22
13.750	0.27	0.37	0.92	0.00	0.27	56	30.22
13.800	0.26	0.37	0.91	0.00	0.27	55	30.21
13.850	0.26	0.37	0.89	0.00	0.26	55	30.21
13.900	0.25	0.37	0.88	0.00	0.26	54	30.20
13.950	0.25	0.37	0.87	0.00	0.25	54	30.20
14.000	0.24	0.37	0.86	0.00	0.24	53	30.20
14.050	0.24	0.37	0.85	0.00	0.24	53	30.19
14.100	0.23	0.37	0.84	0.00	0.24	52	30.19
14.150	0.23	0.37	0.83	0.00	0.23	52	30.19
14.200	0.23	0.37	0.83	0.00	0.23	52	30.19
14.250	0.22	0.37	0.82	0.00	0.23	52	30.18
14.300	0.22	0.37	0.81	0.00	0.22	51	30.18
14.350	0.22	0.37	0.81	0.00	0.22	51	30.18
14.400	0.22	0.37	0.80	0.00	0.22	51	30.18
14.450	0.21	0.37	0.80	0.00	0.21	51	30.18
14.500	0.21	0.37	0.79	0.00	0.21	50	30.17
14.550	0.21	0.37	0.79	0.00	0.21	50	30.17
14.600	0.21	0.37	0.78	0.00	0.21	50	30.17
14.650	0.20	0.37	0.78	0.00	0.20	50	30.17
14.700	0.20	0.37	0.77	0.00	0.20	50	30.17
14.750	0.20	0.37	0.76	0.00	0.20	49	30.16
14.800	0.19	0.37	0.76	0.00	0.20	49	30.16
14.850	0.19	0.37	0.75	0.00	0.19	49	30.16
14.900	0.19	0.37	0.75	0.00	0.19	49	30.16
14.950	0.19	0.37	0.74	0.00	0.19	48	30.16
15.000	0.18	0.37	0.74	0.00	0.19	48	30.16
15.050	0.18	0.36	0.73	0.00	0.18	48	30.15
15.100	0.18	0.36	0.73	0.00	0.18	48	30.15
15.150	0.18	0.36	0.72	0.00	0.18	48	30.15

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
15.200	0.17	0.36	0.71	0.00	0.18	47	30.15
15.250	0.17	0.36	0.71	0.00	0.17	47	30.15
15.300	0.17	0.36	0.70	0.00	0.17	47	30.14
15.350	0.17	0.36	0.70	0.00	0.17	47	30.14
15.400	0.16	0.36	0.69	0.00	0.16	46	30.14
15.450	0.16	0.36	0.69	0.00	0.16	46	30.14
15.500	0.16	0.36	0.68	0.00	0.16	46	30.14
15.550	0.15	0.36	0.67	0.00	0.16	46	30.14
15.600	0.15	0.36	0.67	0.00	0.15	46	30.13
15.650	0.15	0.36	0.66	0.00	0.15	45	30.13
15.700	0.15	0.36	0.66	0.00	0.15	45	30.13
15.750	0.14	0.36	0.65	0.00	0.15	45	30.13
15.800	0.14	0.36	0.65	0.00	0.14	45	30.13
15.850	0.14	0.36	0.64	0.00	0.14	44	30.12
15.900	0.14	0.36	0.63	0.00	0.14	44	30.12
15.950	0.13	0.36	0.63	0.00	0.13	44	30.12
16.000	0.13	0.36	0.62	0.00	0.13	44	30.12
16.050	0.13	0.36	0.62	0.00	0.13	44	30.12
16.100	0.13	0.36	0.61	0.00	0.13	43	30.11
16.150	0.12	0.36	0.61	0.00	0.13	43	30.11
16.200	0.12	0.36	0.61	0.00	0.12	43	30.11
16.250	0.12	0.36	0.60	0.00	0.12	43	30.11
16.300	0.12	0.36	0.60	0.00	0.12	43	30.11
16.350	0.12	0.36	0.60	0.00	0.12	43	30.11
16.400	0.12	0.36	0.60	0.00	0.12	43	30.11
16.450	0.12	0.36	0.59	0.00	0.12	43	30.11
16.500	0.12	0.36	0.59	0.00	0.12	43	30.11
16.550	0.11	0.36	0.59	0.00	0.12	42	30.11
16.600	0.11	0.36	0.59	0.00	0.11	42	30.11
16.650	0.11	0.36	0.58	0.00	0.11	42	30.10
16.700	0.11	0.36	0.58	0.00	0.11	42	30.10
16.750	0.11	0.36	0.58	0.00	0.11	42	30.10
16.800	0.11	0.36	0.58	0.00	0.11	42	30.10
16.850	0.11	0.36	0.57	0.00	0.11	42	30.10
16.900	0.11	0.36	0.57	0.00	0.11	42	30.10
16.950	0.11	0.36	0.57	0.00	0.11	42	30.10
17.000	0.10	0.36	0.57	0.00	0.11	41	30.10
17.050	0.10	0.36	0.56	0.00	0.10	41	30.10
17.100	0.10	0.35	0.56	0.00	0.10	41	30.09
17.150	0.10	0.35	0.56	0.00	0.10	41	30.09
17.200	0.10	0.35	0.55	0.00	0.10	41	30.09
17.250	0.10	0.35	0.55	0.00	0.10	40	30.09

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
17.300	0.10	0.35	0.55	0.00	0.10	40	30.09
17.350	0.10	0.35	0.54	0.00	0.10	40	30.08
17.400	0.09	0.35	0.54	0.00	0.10	40	30.08
17.450	0.09	0.35	0.53	0.00	0.09	39	30.08
17.500	0.09	0.34	0.53	0.00	0.09	39	30.08
17.550	0.09	0.34	0.53	0.00	0.09	39	30.07
17.600	0.09	0.34	0.52	0.00	0.09	39	30.07
17.650	0.09	0.34	0.52	0.00	0.09	38	30.07
17.700	0.09	0.34	0.52	0.00	0.09	38	30.07
17.750	0.09	0.34	0.51	0.00	0.09	38	30.07
17.800	0.08	0.34	0.51	0.00	0.09	38	30.06
17.850	0.08	0.34	0.51	0.00	0.08	37	30.06
17.900	0.08	0.33	0.50	0.00	0.08	37	30.06
17.950	0.08	0.33	0.50	0.00	0.08	37	30.06
18.000	0.08	0.33	0.49	0.00	0.08	37	30.06
18.050	0.08	0.33	0.49	0.00	0.08	37	30.05
18.100	0.08	0.33	0.49	0.00	0.08	36	30.05
18.150	0.08	0.33	0.49	0.00	0.08	36	30.05
18.200	0.08	0.33	0.48	0.00	0.08	36	30.05
18.250	0.08	0.33	0.48	0.00	0.08	36	30.05
18.300	0.08	0.33	0.48	0.00	0.08	36	30.05
18.350	0.08	0.33	0.48	0.00	0.08	36	30.05
18.400	0.08	0.33	0.48	0.00	0.08	36	30.05
18.450	0.08	0.33	0.48	0.00	0.08	36	30.05
18.500	0.07	0.33	0.48	0.00	0.08	36	30.05
18.550	0.07	0.33	0.48	0.00	0.08	36	30.04
18.600	0.07	0.33	0.48	0.00	0.07	36	30.04
18.650	0.07	0.33	0.47	0.00	0.07	35	30.04
18.700	0.07	0.32	0.47	0.00	0.07	35	30.04
18.750	0.07	0.32	0.47	0.00	0.07	35	30.04
18.800	0.07	0.32	0.47	0.00	0.07	35	30.04
18.850	0.07	0.32	0.47	0.00	0.07	35	30.04
18.900	0.07	0.32	0.47	0.00	0.07	35	30.04
18.950	0.07	0.32	0.47	0.00	0.07	35	30.04
19.000	0.07	0.32	0.47	0.00	0.07	35	30.04
19.050	0.07	0.32	0.47	0.00	0.07	35	30.04
19.100	0.07	0.32	0.46	0.00	0.07	35	30.04
19.150	0.07	0.32	0.46	0.00	0.07	35	30.04
19.200	0.07	0.32	0.46	0.00	0.07	35	30.04
19.250	0.07	0.32	0.46	0.00	0.07	35	30.04
19.300	0.07	0.32	0.46	0.00	0.07	35	30.03
19.350	0.07	0.32	0.46	0.00	0.07	34	30.03

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
19.400	0.07	0.32	0.46	0.00	0.07	34	30.03
19.450	0.07	0.32	0.46	0.00	0.07	34	30.03
19.500	0.07	0.32	0.46	0.00	0.07	34	30.03
19.550	0.07	0.32	0.45	0.00	0.07	34	30.03
19.600	0.07	0.32	0.45	0.00	0.07	34	30.03
19.650	0.07	0.32	0.45	0.00	0.07	34	30.03
19.700	0.07	0.32	0.45	0.00	0.07	34	30.03
19.750	0.07	0.32	0.45	0.00	0.07	34	30.03
19.800	0.07	0.32	0.45	0.00	0.07	34	30.03
19.850	0.07	0.32	0.45	0.00	0.07	34	30.03
19.900	0.06	0.32	0.45	0.00	0.07	34	30.03
19.950	0.06	0.32	0.45	0.00	0.07	34	30.03
20.000	0.06	0.32	0.44	0.00	0.06	34	30.03
20.050	0.06	0.32	0.44	0.00	0.06	34	30.03
20.100	0.06	0.31	0.44	0.00	0.06	33	30.02
20.150	0.06	0.31	0.44	0.00	0.06	33	30.02
20.200	0.06	0.31	0.44	0.00	0.06	33	30.02
20.250	0.06	0.31	0.44	0.00	0.06	33	30.02
20.300	0.06	0.31	0.44	0.00	0.06	33	30.02
20.350	0.06	0.31	0.44	0.00	0.06	33	30.02
20.400	0.06	0.31	0.44	0.00	0.06	33	30.02
20.450	0.06	0.31	0.44	0.00	0.06	33	30.02
20.500	0.06	0.31	0.44	0.00	0.06	33	30.02
20.550	0.06	0.31	0.44	0.00	0.06	33	30.02
20.600	0.06	0.31	0.43	0.00	0.06	33	30.02
20.650	0.06	0.31	0.43	0.00	0.06	33	30.02
20.700	0.06	0.31	0.43	0.00	0.06	33	30.02
20.750	0.06	0.31	0.43	0.00	0.06	33	30.02
20.800	0.06	0.31	0.43	0.00	0.06	33	30.02
20.850	0.06	0.31	0.43	0.00	0.06	33	30.02
20.900	0.06	0.31	0.43	0.00	0.06	33	30.02
20.950	0.06	0.31	0.43	0.00	0.06	33	30.02
21.000	0.06	0.31	0.43	0.00	0.06	33	30.02
21.050	0.06	0.31	0.43	0.00	0.06	33	30.02
21.100	0.06	0.31	0.43	0.00	0.06	32	30.02
21.150	0.06	0.31	0.43	0.00	0.06	32	30.01
21.200	0.06	0.31	0.42	0.00	0.06	32	30.01
21.250	0.06	0.31	0.42	0.00	0.06	32	30.01
21.300	0.06	0.31	0.42	0.00	0.06	32	30.01
21.350	0.06	0.31	0.42	0.00	0.06	32	30.01
21.400	0.06	0.31	0.42	0.00	0.06	32	30.01
21.450	0.06	0.31	0.42	0.00	0.06	32	30.01

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.500	0.06	0.31	0.42	0.00	0.06	32	30.01
21.550	0.06	0.31	0.42	0.00	0.06	32	30.01
21.600	0.06	0.31	0.42	0.00	0.06	32	30.01
21.650	0.06	0.31	0.42	0.00	0.06	32	30.01
21.700	0.05	0.31	0.42	0.00	0.06	32	30.01
21.750	0.05	0.31	0.42	0.00	0.05	32	30.01
21.800	0.05	0.31	0.42	0.00	0.05	32	30.01
21.850	0.05	0.31	0.41	0.00	0.05	32	30.01
21.900	0.05	0.31	0.41	0.00	0.05	32	30.01
21.950	0.05	0.30	0.41	0.00	0.05	32	30.01
22.000	0.05	0.30	0.41	0.00	0.05	32	30.01
22.050	0.05	0.30	0.41	0.00	0.05	31	30.01
22.100	0.05	0.30	0.41	0.00	0.05	31	30.01
22.150	0.05	0.30	0.41	0.00	0.05	31	30.00
22.200	0.05	0.30	0.41	0.00	0.05	31	30.00
22.250	0.05	0.30	0.41	0.00	0.05	31	30.00
22.300	0.05	0.30	0.41	0.00	0.05	31	30.00
22.350	0.05	0.30	0.41	0.00	0.05	31	30.00
22.400	0.05	0.30	0.40	0.00	0.05	31	30.00
22.450	0.05	0.30	0.40	0.00	0.05	31	30.00
22.500	0.05	0.30	0.40	0.00	0.05	31	30.00
22.550	0.05	0.30	0.40	0.00	0.05	31	30.00
22.600	0.05	0.30	0.40	0.00	0.05	31	30.00
22.650	0.05	0.30	0.40	0.00	0.05	31	30.00
22.700	0.05	0.30	0.40	0.00	0.05	31	30.00
22.750	0.05	0.30	0.40	0.00	0.05	31	30.00
22.800	0.05	0.30	0.40	0.00	0.05	31	30.00
22.850	0.05	0.30	0.40	0.00	0.05	31	30.00
22.900	0.05	0.30	0.40	0.00	0.05	31	30.00
22.950	0.05	0.30	0.40	0.00	0.05	31	30.00
23.000	0.05	0.30	0.40	0.00	0.05	31	30.00
23.050	0.05	0.30	0.39	0.00	0.05	30	30.00
23.100	0.05	0.30	0.39	0.00	0.05	30	30.00
23.150	0.05	0.30	0.39	0.00	0.05	30	29.99
23.200	0.05	0.30	0.39	0.00	0.05	30	29.99
23.250	0.05	0.30	0.39	0.00	0.05	30	29.99
23.300	0.05	0.30	0.39	0.00	0.05	30	29.99
23.350	0.05	0.30	0.39	0.00	0.05	30	29.99
23.400	0.05	0.30	0.39	0.00	0.05	30	29.99
23.450	0.05	0.30	0.39	0.00	0.05	30	29.99
23.500	0.05	0.30	0.39	0.00	0.05	30	29.99
23.550	0.04	0.30	0.39	0.00	0.05	30	29.99

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.600	0.04	0.30	0.39	0.00	0.04	30	29.99
23.650	0.04	0.30	0.38	0.00	0.04	30	29.99
23.700	0.04	0.30	0.38	0.00	0.04	30	29.99
23.750	0.04	0.29	0.38	0.00	0.04	30	29.99
23.800	0.04	0.29	0.38	0.00	0.04	30	29.99
23.850	0.04	0.29	0.38	0.00	0.04	30	29.99
23.900	0.04	0.29	0.38	0.00	0.04	30	29.99
23.950	0.04	0.29	0.38	0.00	0.04	30	29.99
24.000	0.04	0.29	0.38	0.00	0.04	30	29.99
24.050	0.03	0.29	0.37	0.00	0.04	29	29.98
24.100	0.01	0.28	0.33	0.00	0.03	27	29.96
24.150	0.00	0.27	0.30	0.00	0.01	25	29.94
24.200	0.00	0.26	0.27	0.00	0.01	24	29.92
24.250	0.00	0.25	0.26	0.00	0.00	23	29.91
24.300	0.00	0.25	0.25	0.00	0.00	23	29.91
24.350	0.00	0.25	0.25	0.00	0.00	23	29.91
24.400	0.00	0.25	0.25	0.00	0.00	23	29.91
24.450	0.00	0.25	0.25	0.00	0.00	23	29.91
24.500	0.00	0.25	0.25	0.00	0.00	23	29.91
24.550	0.00	0.25	0.25	0.00	0.00	23	29.91
24.600	0.00	0.25	0.25	0.00	0.00	23	29.91
24.650	0.00	0.25	0.25	0.00	0.00	23	29.91
24.700	0.00	0.25	0.25	0.00	0.00	23	29.91
24.750	0.00	0.25	0.25	0.00	0.00	23	29.91
24.800	0.00	0.25	0.25	0.00	0.00	23	29.91
24.850	0.00	0.25	0.25	0.00	0.00	23	29.91
24.900	0.00	0.25	0.25	0.00	0.00	23	29.91
24.950	0.00	0.25	0.25	0.00	0.00	23	29.91
25.000	0.00	0.25	0.25	0.00	0.00	23	29.91
25.050	0.00	0.25	0.25	0.00	0.00	23	29.91
25.100	0.00	0.25	0.25	0.00	0.00	23	29.91
25.150	0.00	0.25	0.25	0.00	0.00	23	29.91
25.200	0.00	0.25	0.25	0.00	0.00	23	29.91
25.250	0.00	0.25	0.25	0.00	0.00	23	29.91
25.300	0.00	0.25	0.25	0.00	0.00	23	29.91
25.350	0.00	0.25	0.25	0.00	0.00	23	29.91
25.400	0.00	0.25	0.25	0.00	0.00	23	29.91
25.450	0.00	0.25	0.25	0.00	0.00	23	29.91
25.500	0.00	0.25	0.25	0.00	0.00	23	29.91
25.550	0.00	0.25	0.25	0.00	0.00	23	29.91
25.600	0.00	0.25	0.25	0.00	0.00	23	29.91
25.650	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.700	0.00	0.25	0.25	0.00	0.00	23	29.91
25.750	0.00	0.25	0.25	0.00	0.00	23	29.91
25.800	0.00	0.25	0.25	0.00	0.00	23	29.91
25.850	0.00	0.25	0.25	0.00	0.00	23	29.91
25.900	0.00	0.25	0.25	0.00	0.00	23	29.91
25.950	0.00	0.25	0.25	0.00	0.00	23	29.91
26.000	0.00	0.25	0.25	0.00	0.00	23	29.91
26.050	0.00	0.25	0.25	0.00	0.00	23	29.91
26.100	0.00	0.25	0.25	0.00	0.00	23	29.91
26.150	0.00	0.25	0.25	0.00	0.00	23	29.91
26.200	0.00	0.25	0.25	0.00	0.00	23	29.91
26.250	0.00	0.25	0.25	0.00	0.00	23	29.91
26.300	0.00	0.25	0.25	0.00	0.00	23	29.91
26.350	0.00	0.25	0.25	0.00	0.00	23	29.91
26.400	0.00	0.25	0.25	0.00	0.00	23	29.91
26.450	0.00	0.25	0.25	0.00	0.00	23	29.91
26.500	0.00	0.25	0.25	0.00	0.00	23	29.91
26.550	0.00	0.25	0.25	0.00	0.00	23	29.91
26.600	0.00	0.25	0.25	0.00	0.00	23	29.91
26.650	0.00	0.25	0.25	0.00	0.00	23	29.91
26.700	0.00	0.25	0.25	0.00	0.00	23	29.91
26.750	0.00	0.25	0.25	0.00	0.00	23	29.91
26.800	0.00	0.25	0.25	0.00	0.00	23	29.91
26.850	0.00	0.25	0.25	0.00	0.00	23	29.91
26.900	0.00	0.25	0.25	0.00	0.00	23	29.91
26.950	0.00	0.25	0.25	0.00	0.00	23	29.91
27.000	0.00	0.25	0.25	0.00	0.00	23	29.91
27.050	0.00	0.25	0.25	0.00	0.00	23	29.91
27.100	0.00	0.25	0.25	0.00	0.00	23	29.91
27.150	0.00	0.25	0.25	0.00	0.00	23	29.91
27.200	0.00	0.25	0.25	0.00	0.00	23	29.91
27.250	0.00	0.25	0.25	0.00	0.00	23	29.91
27.300	0.00	0.25	0.25	0.00	0.00	23	29.91
27.350	0.00	0.25	0.25	0.00	0.00	23	29.91
27.400	0.00	0.25	0.25	0.00	0.00	23	29.91
27.450	0.00	0.25	0.25	0.00	0.00	23	29.91
27.500	0.00	0.25	0.25	0.00	0.00	23	29.91
27.550	0.00	0.25	0.25	0.00	0.00	23	29.91
27.600	0.00	0.25	0.25	0.00	0.00	23	29.91
27.650	0.00	0.25	0.25	0.00	0.00	23	29.91
27.700	0.00	0.25	0.25	0.00	0.00	23	29.91
27.750	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.800	0.00	0.25	0.25	0.00	0.00	23	29.91
27.850	0.00	0.25	0.25	0.00	0.00	23	29.91
27.900	0.00	0.25	0.25	0.00	0.00	23	29.91
27.950	0.00	0.25	0.25	0.00	0.00	23	29.91
28.000	0.00	0.25	0.25	0.00	0.00	23	29.91
28.050	0.00	0.25	0.25	0.00	0.00	23	29.91
28.100	0.00	0.25	0.25	0.00	0.00	23	29.91
28.150	0.00	0.25	0.25	0.00	0.00	23	29.91
28.200	0.00	0.25	0.25	0.00	0.00	23	29.91
28.250	0.00	0.25	0.25	0.00	0.00	23	29.91
28.300	0.00	0.25	0.25	0.00	0.00	23	29.91
28.350	0.00	0.25	0.25	0.00	0.00	23	29.91
28.400	0.00	0.25	0.25	0.00	0.00	23	29.91
28.450	0.00	0.25	0.25	0.00	0.00	23	29.91
28.500	0.00	0.25	0.25	0.00	0.00	23	29.91
28.550	0.00	0.25	0.25	0.00	0.00	23	29.91
28.600	0.00	0.25	0.25	0.00	0.00	23	29.91
28.650	0.00	0.25	0.25	0.00	0.00	23	29.91
28.700	0.00	0.25	0.25	0.00	0.00	23	29.91
28.750	0.00	0.25	0.25	0.00	0.00	23	29.91
28.800	0.00	0.25	0.25	0.00	0.00	23	29.91
28.850	0.00	0.25	0.25	0.00	0.00	23	29.91
28.900	0.00	0.25	0.25	0.00	0.00	23	29.91
28.950	0.00	0.25	0.25	0.00	0.00	23	29.91
29.000	0.00	0.25	0.25	0.00	0.00	23	29.91
29.050	0.00	0.25	0.25	0.00	0.00	23	29.91
29.100	0.00	0.25	0.25	0.00	0.00	23	29.91
29.150	0.00	0.25	0.25	0.00	0.00	23	29.91
29.200	0.00	0.25	0.25	0.00	0.00	23	29.91
29.250	0.00	0.25	0.25	0.00	0.00	23	29.91
29.300	0.00	0.25	0.25	0.00	0.00	23	29.91
29.350	0.00	0.25	0.25	0.00	0.00	23	29.91
29.400	0.00	0.25	0.25	0.00	0.00	23	29.91
29.450	0.00	0.25	0.25	0.00	0.00	23	29.91
29.500	0.00	0.25	0.25	0.00	0.00	23	29.91
29.550	0.00	0.25	0.25	0.00	0.00	23	29.91
29.600	0.00	0.25	0.25	0.00	0.00	23	29.91
29.650	0.00	0.25	0.25	0.00	0.00	23	29.91
29.700	0.00	0.25	0.25	0.00	0.00	23	29.91
29.750	0.00	0.25	0.25	0.00	0.00	23	29.91
29.800	0.00	0.25	0.25	0.00	0.00	23	29.91
29.850	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.900	0.00	0.25	0.25	0.00	0.00	23	29.91
29.950	0.00	0.25	0.25	0.00	0.00	23	29.91
30.000	0.00	0.25	0.25	0.00	0.00	23	29.91
30.050	0.00	0.25	0.25	0.00	0.00	23	29.91
30.100	0.00	0.25	0.25	0.00	0.00	23	29.91
30.150	0.00	0.25	0.25	0.00	0.00	23	29.91
30.200	0.00	0.25	0.25	0.00	0.00	23	29.91
30.250	0.00	0.25	0.25	0.00	0.00	23	29.91
30.300	0.00	0.25	0.25	0.00	0.00	23	29.91
30.350	0.00	0.25	0.25	0.00	0.00	23	29.91
30.400	0.00	0.25	0.25	0.00	0.00	23	29.91
30.450	0.00	0.25	0.25	0.00	0.00	23	29.91
30.500	0.00	0.25	0.25	0.00	0.00	23	29.91
30.550	0.00	0.25	0.25	0.00	0.00	23	29.91
30.600	0.00	0.25	0.25	0.00	0.00	23	29.91
30.650	0.00	0.25	0.25	0.00	0.00	23	29.91
30.700	0.00	0.25	0.25	0.00	0.00	23	29.91
30.750	0.00	0.25	0.25	0.00	0.00	23	29.91
30.800	0.00	0.25	0.25	0.00	0.00	23	29.91
30.850	0.00	0.25	0.25	0.00	0.00	23	29.91
30.900	0.00	0.25	0.25	0.00	0.00	23	29.91
30.950	0.00	0.25	0.25	0.00	0.00	23	29.91
31.000	0.00	0.25	0.25	0.00	0.00	23	29.91
31.050	0.00	0.25	0.25	0.00	0.00	23	29.91
31.100	0.00	0.25	0.25	0.00	0.00	23	29.91
31.150	0.00	0.25	0.25	0.00	0.00	23	29.91
31.200	0.00	0.25	0.25	0.00	0.00	23	29.91
31.250	0.00	0.25	0.25	0.00	0.00	23	29.91
31.300	0.00	0.25	0.25	0.00	0.00	23	29.91
31.350	0.00	0.25	0.25	0.00	0.00	23	29.91
31.400	0.00	0.25	0.25	0.00	0.00	23	29.91
31.450	0.00	0.25	0.25	0.00	0.00	23	29.91
31.500	0.00	0.25	0.25	0.00	0.00	23	29.91
31.550	0.00	0.25	0.25	0.00	0.00	23	29.91
31.600	0.00	0.25	0.25	0.00	0.00	23	29.91
31.650	0.00	0.25	0.25	0.00	0.00	23	29.91
31.700	0.00	0.25	0.25	0.00	0.00	23	29.91
31.750	0.00	0.25	0.25	0.00	0.00	23	29.91
31.800	0.00	0.25	0.25	0.00	0.00	23	29.91
31.850	0.00	0.25	0.25	0.00	0.00	23	29.91
31.900	0.00	0.25	0.25	0.00	0.00	23	29.91
31.950	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
32.000	0.00	0.25	0.25	0.00	0.00	23	29.91
32.050	0.00	0.25	0.25	0.00	0.00	23	29.91
32.100	0.00	0.25	0.25	0.00	0.00	23	29.91
32.150	0.00	0.25	0.25	0.00	0.00	23	29.91
32.200	0.00	0.25	0.25	0.00	0.00	23	29.91
32.250	0.00	0.25	0.25	0.00	0.00	23	29.91
32.300	0.00	0.25	0.25	0.00	0.00	23	29.91
32.350	0.00	0.25	0.25	0.00	0.00	23	29.91
32.400	0.00	0.25	0.25	0.00	0.00	23	29.91
32.450	0.00	0.25	0.25	0.00	0.00	23	29.91
32.500	0.00	0.25	0.25	0.00	0.00	23	29.91
32.550	0.00	0.25	0.25	0.00	0.00	23	29.91
32.600	0.00	0.25	0.25	0.00	0.00	23	29.91
32.650	0.00	0.25	0.25	0.00	0.00	23	29.91
32.700	0.00	0.25	0.25	0.00	0.00	23	29.91
32.750	0.00	0.25	0.25	0.00	0.00	23	29.91
32.800	0.00	0.25	0.25	0.00	0.00	23	29.91
32.850	0.00	0.25	0.25	0.00	0.00	23	29.91
32.900	0.00	0.25	0.25	0.00	0.00	23	29.91
32.950	0.00	0.25	0.25	0.00	0.00	23	29.91
33.000	0.00	0.25	0.25	0.00	0.00	23	29.91
33.050	0.00	0.25	0.25	0.00	0.00	23	29.91
33.100	0.00	0.25	0.25	0.00	0.00	23	29.91
33.150	0.00	0.25	0.25	0.00	0.00	23	29.91
33.200	0.00	0.25	0.25	0.00	0.00	23	29.91
33.250	0.00	0.25	0.25	0.00	0.00	23	29.91
33.300	0.00	0.25	0.25	0.00	0.00	23	29.91
33.350	0.00	0.25	0.25	0.00	0.00	23	29.91
33.400	0.00	0.25	0.25	0.00	0.00	23	29.91
33.450	0.00	0.25	0.25	0.00	0.00	23	29.91
33.500	0.00	0.25	0.25	0.00	0.00	23	29.91
33.550	0.00	0.25	0.25	0.00	0.00	23	29.91
33.600	0.00	0.25	0.25	0.00	0.00	23	29.91
33.650	0.00	0.25	0.25	0.00	0.00	23	29.91
33.700	0.00	0.25	0.25	0.00	0.00	23	29.91
33.750	0.00	0.25	0.25	0.00	0.00	23	29.91
33.800	0.00	0.25	0.25	0.00	0.00	23	29.91
33.850	0.00	0.25	0.25	0.00	0.00	23	29.91
33.900	0.00	0.25	0.25	0.00	0.00	23	29.91
33.950	0.00	0.25	0.25	0.00	0.00	23	29.91
34.000	0.00	0.25	0.25	0.00	0.00	23	29.91
34.050	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
34.100	0.00	0.25	0.25	0.00	0.00	23	29.91
34.150	0.00	0.25	0.25	0.00	0.00	23	29.91
34.200	0.00	0.25	0.25	0.00	0.00	23	29.91
34.250	0.00	0.25	0.25	0.00	0.00	23	29.91
34.300	0.00	0.25	0.25	0.00	0.00	23	29.91
34.350	0.00	0.25	0.25	0.00	0.00	23	29.91
34.400	0.00	0.25	0.25	0.00	0.00	23	29.91
34.450	0.00	0.25	0.25	0.00	0.00	23	29.91
34.500	0.00	0.25	0.25	0.00	0.00	23	29.91
34.550	0.00	0.25	0.25	0.00	0.00	23	29.91
34.600	0.00	0.25	0.25	0.00	0.00	23	29.91
34.650	0.00	0.25	0.25	0.00	0.00	23	29.91
34.700	0.00	0.25	0.25	0.00	0.00	23	29.91
34.750	0.00	0.25	0.25	0.00	0.00	23	29.91
34.800	0.00	0.25	0.25	0.00	0.00	23	29.91
34.850	0.00	0.25	0.25	0.00	0.00	23	29.91
34.900	0.00	0.25	0.25	0.00	0.00	23	29.91
34.950	0.00	0.25	0.25	0.00	0.00	23	29.91
35.000	0.00	0.25	0.25	0.00	0.00	23	29.91
35.050	0.00	0.25	0.25	0.00	0.00	23	29.91
35.100	0.00	0.25	0.25	0.00	0.00	23	29.91
35.150	0.00	0.25	0.25	0.00	0.00	23	29.91
35.200	0.00	0.25	0.25	0.00	0.00	23	29.91
35.250	0.00	0.25	0.25	0.00	0.00	23	29.91
35.300	0.00	0.25	0.25	0.00	0.00	23	29.91
35.350	0.00	0.25	0.25	0.00	0.00	23	29.91
35.400	0.00	0.25	0.25	0.00	0.00	23	29.91
35.450	0.00	0.25	0.25	0.00	0.00	23	29.91
35.500	0.00	0.25	0.25	0.00	0.00	23	29.91
35.550	0.00	0.25	0.25	0.00	0.00	23	29.91
35.600	0.00	0.25	0.25	0.00	0.00	23	29.91
35.650	0.00	0.25	0.25	0.00	0.00	23	29.91
35.700	0.00	0.25	0.25	0.00	0.00	23	29.91
35.750	0.00	0.25	0.25	0.00	0.00	23	29.91
35.800	0.00	0.25	0.25	0.00	0.00	23	29.91
35.850	0.00	0.25	0.25	0.00	0.00	23	29.91
35.900	0.00	0.25	0.25	0.00	0.00	23	29.91
35.950	0.00	0.25	0.25	0.00	0.00	23	29.91
36.000	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.00	0.00	0.00	0	29.10
0.050	0.00	0.00	0.00	0.00	0.00	0	29.10
0.100	0.00	0.00	0.00	0.00	0.00	0	29.10
0.150	0.00	0.00	0.00	0.00	0.00	0	29.10
0.200	0.00	0.00	0.00	0.00	0.00	0	29.10
0.250	0.00	0.00	0.00	0.00	0.00	0	29.10
0.300	0.00	0.00	0.00	0.00	0.00	0	29.10
0.350	0.00	0.00	0.00	0.00	0.00	0	29.10
0.400	0.00	0.00	0.00	0.00	0.00	0	29.10
0.450	0.00	0.00	0.00	0.00	0.00	0	29.10
0.500	0.00	0.00	0.00	0.00	0.00	0	29.10
0.550	0.00	0.00	0.00	0.00	0.00	0	29.10
0.600	0.00	0.00	0.00	0.00	0.00	0	29.10
0.650	0.00	0.00	0.00	0.00	0.00	0	29.10
0.700	0.00	0.00	0.00	0.00	0.00	0	29.10
0.750	0.00	0.00	0.00	0.00	0.00	0	29.10
0.800	0.00	0.00	0.00	0.00	0.00	0	29.10
0.850	0.00	0.00	0.00	0.00	0.00	0	29.10
0.900	0.00	0.00	0.00	0.00	0.00	0	29.10
0.950	0.00	0.00	0.00	0.00	0.00	0	29.10
1.000	0.00	0.00	0.00	0.00	0.00	0	29.10
1.050	0.00	0.00	0.00	0.00	0.00	0	29.10
1.100	0.00	0.00	0.00	0.00	0.00	0	29.10
1.150	0.00	0.00	0.00	0.00	0.00	0	29.10
1.200	0.00	0.00	0.00	0.00	0.00	0	29.10
1.250	0.00	0.00	0.00	0.00	0.00	0	29.10
1.300	0.00	0.00	0.00	0.00	0.00	0	29.10
1.350	0.00	0.00	0.00	0.00	0.00	0	29.10
1.400	0.00	0.00	0.00	0.00	0.00	0	29.10
1.450	0.00	0.00	0.00	0.00	0.00	0	29.10
1.500	0.00	0.00	0.00	0.00	0.00	0	29.10
1.550	0.00	0.00	0.00	0.00	0.00	0	29.10
1.600	0.00	0.00	0.00	0.00	0.00	0	29.10
1.650	0.00	0.00	0.00	0.00	0.00	0	29.10
1.700	0.00	0.00	0.00	0.00	0.00	0	29.10
1.750	0.00	0.00	0.00	0.00	0.00	0	29.10
1.800	0.00	0.00	0.00	0.00	0.00	0	29.10
1.850	0.00	0.00	0.00	0.00	0.00	0	29.10
1.900	0.00	0.00	0.00	0.00	0.00	0	29.10
1.950	0.00	0.00	0.00	0.00	0.00	0	29.10
2.000	0.00	0.00	0.00	0.00	0.00	0	29.10
2.050	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.100	0.00	0.00	0.00	0.00	0.00	0	29.10
2.150	0.00	0.00	0.00	0.00	0.00	0	29.10
2.200	0.00	0.00	0.00	0.00	0.00	0	29.10
2.250	0.00	0.00	0.00	0.00	0.00	0	29.10
2.300	0.00	0.00	0.00	0.00	0.00	0	29.10
2.350	0.00	0.00	0.00	0.00	0.00	0	29.10
2.400	0.00	0.00	0.00	0.00	0.00	0	29.10
2.450	0.00	0.00	0.00	0.00	0.00	0	29.10
2.500	0.00	0.00	0.00	0.00	0.00	0	29.10
2.550	0.00	0.00	0.00	0.00	0.00	0	29.10
2.600	0.00	0.00	0.00	0.00	0.00	0	29.10
2.650	0.00	0.00	0.00	0.00	0.00	0	29.10
2.700	0.00	0.00	0.00	0.00	0.00	0	29.10
2.750	0.00	0.00	0.00	0.00	0.00	0	29.10
2.800	0.00	0.00	0.00	0.00	0.00	0	29.10
2.850	0.00	0.00	0.00	0.00	0.00	0	29.10
2.900	0.00	0.00	0.00	0.00	0.00	0	29.10
2.950	0.00	0.00	0.00	0.00	0.00	0	29.10
3.000	0.00	0.00	0.00	0.00	0.00	0	29.10
3.050	0.00	0.00	0.00	0.00	0.00	0	29.10
3.100	0.00	0.00	0.00	0.00	0.00	0	29.10
3.150	0.00	0.00	0.00	0.00	0.00	0	29.10
3.200	0.00	0.00	0.00	0.00	0.00	0	29.10
3.250	0.00	0.00	0.00	0.00	0.00	0	29.10
3.300	0.00	0.00	0.00	0.00	0.00	0	29.10
3.350	0.00	0.00	0.00	0.00	0.00	0	29.10
3.400	0.00	0.00	0.00	0.00	0.00	0	29.10
3.450	0.00	0.00	0.00	0.00	0.00	0	29.10
3.500	0.00	0.00	0.00	0.00	0.00	0	29.10
3.550	0.00	0.00	0.00	0.00	0.00	0	29.10
3.600	0.00	0.00	0.00	0.00	0.00	0	29.10
3.650	0.00	0.00	0.00	0.00	0.00	0	29.10
3.700	0.00	0.00	0.00	0.00	0.00	0	29.10
3.750	0.00	0.00	0.00	0.00	0.00	0	29.10
3.800	0.00	0.00	0.00	0.00	0.00	0	29.10
3.850	0.00	0.00	0.00	0.00	0.00	0	29.10
3.900	0.00	0.00	0.00	0.00	0.00	0	29.10
3.950	0.00	0.00	0.00	0.00	0.00	0	29.10
4.000	0.00	0.00	0.00	0.00	0.00	0	29.10
4.050	0.00	0.00	0.00	0.00	0.00	0	29.10
4.100	0.00	0.00	0.00	0.00	0.00	0	29.10
4.150	0.00	0.00	0.00	0.00	0.00	0	29.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.200	0.00	0.00	0.00	0.00	0.00	0	29.10
4.250	0.00	0.00	0.00	0.00	0.00	0	29.10
4.300	0.00	0.00	0.00	0.00	0.00	0	29.10
4.350	0.00	0.00	0.00	0.00	0.00	0	29.10
4.400	0.00	0.00	0.00	0.00	0.00	0	29.10
4.450	0.00	0.00	0.00	0.00	0.00	0	29.10
4.500	0.00	0.00	0.00	0.00	0.00	0	29.10
4.550	0.00	0.00	0.00	0.00	0.00	0	29.10
4.600	0.00	0.00	0.00	0.00	0.00	0	29.10
4.650	0.00	0.00	0.00	0.00	0.00	0	29.10
4.700	0.00	0.00	0.00	0.00	0.00	0	29.10
4.750	0.00	0.00	0.00	0.00	0.00	0	29.10
4.800	0.00	0.00	0.00	0.00	0.00	0	29.10
4.850	0.00	0.00	0.00	0.00	0.00	0	29.10
4.900	0.00	0.00	0.00	0.00	0.00	0	29.10
4.950	0.00	0.00	0.00	0.00	0.00	0	29.10
5.000	0.00	0.00	0.00	0.00	0.00	0	29.10
5.050	0.00	0.00	0.00	0.00	0.00	0	29.10
5.100	0.00	0.00	0.00	0.00	0.00	0	29.10
5.150	0.00	0.00	0.00	0.00	0.00	0	29.10
5.200	0.00	0.00	0.00	0.00	0.00	0	29.10
5.250	0.00	0.00	0.00	0.00	0.00	0	29.10
5.300	0.00	0.00	0.00	0.00	0.00	0	29.10
5.350	0.00	0.00	0.00	0.00	0.00	0	29.11
5.400	0.00	0.00	0.00	0.00	0.00	0	29.12
5.450	0.00	0.01	0.01	0.00	0.00	0	29.15
5.500	0.00	0.01	0.01	0.00	0.00	0	29.18
5.550	0.00	0.01	0.01	0.00	0.00	0	29.23
5.600	0.00	0.02	0.02	0.00	0.00	0	29.28
5.650	0.00	0.03	0.03	0.00	0.00	1	29.34
5.700	0.00	0.04	0.04	0.00	0.00	1	29.42
5.750	0.01	0.05	0.05	0.00	0.00	3	29.50
5.800	0.01	0.06	0.06	0.00	0.00	5	29.60
5.850	0.01	0.07	0.07	0.00	0.00	6	29.63
5.900	0.01	0.08	0.08	0.00	0.00	7	29.66
5.950	0.01	0.10	0.10	0.00	0.00	8	29.68
6.000	0.01	0.12	0.12	0.00	0.00	9	29.70
6.050	0.01	0.13	0.13	0.00	0.00	11	29.73
6.100	0.01	0.15	0.15	0.00	0.00	12	29.76
6.150	0.01	0.17	0.17	0.00	0.00	14	29.79
6.200	0.01	0.19	0.19	0.00	0.00	16	29.82
6.250	0.01	0.22	0.22	0.00	0.00	18	29.86

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.300	0.01	0.24	0.24	0.00	0.00	21	29.90
6.350	0.01	0.26	0.27	0.00	0.01	23	29.92
6.400	0.01	0.26	0.28	0.00	0.01	24	29.93
6.450	0.02	0.26	0.29	0.00	0.01	25	29.93
6.500	0.02	0.27	0.30	0.00	0.02	25	29.94
6.550	0.02	0.27	0.30	0.00	0.02	25	29.94
6.600	0.02	0.27	0.30	0.00	0.02	25	29.94
6.650	0.02	0.27	0.31	0.00	0.02	25	29.94
6.700	0.02	0.27	0.31	0.00	0.02	26	29.94
6.750	0.02	0.27	0.31	0.00	0.02	26	29.95
6.800	0.02	0.27	0.31	0.00	0.02	26	29.95
6.850	0.02	0.27	0.32	0.00	0.02	26	29.95
6.900	0.02	0.27	0.32	0.00	0.02	26	29.95
6.950	0.03	0.28	0.32	0.00	0.02	26	29.95
7.000	0.03	0.28	0.33	0.00	0.03	27	29.96
7.050	0.03	0.28	0.33	0.00	0.03	27	29.96
7.100	0.03	0.28	0.33	0.00	0.03	27	29.96
7.150	0.03	0.28	0.34	0.00	0.03	27	29.96
7.200	0.03	0.28	0.34	0.00	0.03	27	29.96
7.250	0.03	0.28	0.35	0.00	0.03	28	29.97
7.300	0.03	0.28	0.35	0.00	0.03	28	29.97
7.350	0.04	0.28	0.35	0.00	0.03	28	29.97
7.400	0.04	0.29	0.36	0.00	0.04	28	29.97
7.450	0.04	0.29	0.36	0.00	0.04	28	29.98
7.500	0.04	0.29	0.36	0.00	0.04	29	29.98
7.550	0.04	0.29	0.37	0.00	0.04	29	29.98
7.600	0.04	0.29	0.37	0.00	0.04	29	29.98
7.650	0.04	0.29	0.38	0.00	0.04	29	29.99
7.700	0.05	0.29	0.38	0.00	0.04	30	29.99
7.750	0.05	0.30	0.39	0.00	0.05	30	29.99
7.800	0.05	0.30	0.39	0.00	0.05	30	29.99
7.850	0.05	0.30	0.39	0.00	0.05	30	30.00
7.900	0.05	0.30	0.40	0.00	0.05	31	30.00
7.950	0.05	0.30	0.40	0.00	0.05	31	30.00
8.000	0.05	0.30	0.41	0.00	0.05	31	30.00
8.050	0.06	0.31	0.41	0.00	0.05	32	30.01
8.100	0.06	0.31	0.42	0.00	0.06	32	30.01
8.150	0.06	0.31	0.42	0.00	0.06	32	30.01
8.200	0.06	0.31	0.43	0.00	0.06	33	30.02
8.250	0.06	0.31	0.44	0.00	0.06	33	30.02
8.300	0.07	0.32	0.45	0.00	0.07	34	30.03
8.350	0.07	0.32	0.45	0.00	0.07	34	30.03

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.400	0.07	0.32	0.46	0.00	0.07	35	30.04
8.450	0.08	0.32	0.47	0.00	0.07	35	30.04
8.500	0.08	0.33	0.48	0.00	0.08	36	30.05
8.550	0.08	0.33	0.49	0.00	0.08	36	30.05
8.600	0.08	0.33	0.49	0.00	0.08	37	30.06
8.650	0.09	0.34	0.50	0.00	0.08	37	30.06
8.700	0.09	0.34	0.51	0.00	0.09	38	30.07
8.750	0.09	0.34	0.52	0.00	0.09	39	30.07
8.800	0.10	0.34	0.53	0.00	0.09	39	30.08
8.850	0.10	0.35	0.54	0.00	0.10	40	30.08
8.900	0.10	0.35	0.55	0.00	0.10	40	30.09
8.950	0.11	0.35	0.56	0.00	0.10	41	30.09
9.000	0.11	0.36	0.57	0.00	0.11	42	30.10
9.050	0.11	0.36	0.58	0.00	0.11	42	30.10
9.100	0.12	0.36	0.59	0.00	0.11	42	30.11
9.150	0.12	0.36	0.59	0.00	0.12	43	30.11
9.200	0.12	0.36	0.60	0.00	0.12	43	30.11
9.250	0.13	0.36	0.61	0.00	0.12	43	30.11
9.300	0.13	0.36	0.62	0.00	0.13	43	30.12
9.350	0.13	0.36	0.62	0.00	0.13	44	30.12
9.400	0.14	0.36	0.63	0.00	0.14	44	30.12
9.450	0.14	0.36	0.64	0.00	0.14	44	30.12
9.500	0.15	0.36	0.65	0.00	0.14	45	30.13
9.550	0.15	0.36	0.66	0.00	0.15	45	30.13
9.600	0.15	0.36	0.66	0.00	0.15	45	30.13
9.650	0.16	0.36	0.67	0.00	0.16	46	30.13
9.700	0.16	0.36	0.68	0.00	0.16	46	30.14
9.750	0.17	0.36	0.69	0.00	0.16	46	30.14
9.800	0.17	0.36	0.70	0.00	0.17	47	30.14
9.850	0.17	0.36	0.71	0.00	0.17	47	30.15
9.900	0.18	0.36	0.72	0.00	0.18	47	30.15
9.950	0.18	0.36	0.73	0.00	0.18	48	30.15
10.000	0.19	0.37	0.73	0.00	0.18	48	30.15
10.050	0.19	0.37	0.74	0.00	0.19	48	30.16
10.100	0.20	0.37	0.75	0.00	0.19	49	30.16
10.150	0.20	0.37	0.77	0.00	0.20	49	30.17
10.200	0.21	0.37	0.78	0.00	0.21	50	30.17
10.250	0.22	0.37	0.80	0.00	0.21	51	30.18
10.300	0.23	0.37	0.81	0.00	0.22	51	30.18
10.350	0.23	0.37	0.83	0.00	0.23	52	30.19
10.400	0.24	0.37	0.84	0.00	0.24	52	30.19
10.450	0.25	0.37	0.86	0.00	0.24	53	30.20

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
10.500	0.26	0.37	0.87	0.00	0.25	54	30.20
10.550	0.26	0.37	0.89	0.00	0.26	54	30.21
10.600	0.27	0.37	0.91	0.00	0.27	55	30.21
10.650	0.28	0.37	0.92	0.00	0.28	56	30.22
10.700	0.29	0.37	0.94	0.00	0.28	57	30.22
10.750	0.30	0.38	0.96	0.00	0.29	57	30.23
10.800	0.30	0.38	0.98	0.00	0.30	58	30.24
10.850	0.31	0.38	0.99	0.00	0.31	59	30.24
10.900	0.32	0.38	1.01	0.00	0.32	60	30.25
10.950	0.33	0.38	1.03	0.00	0.33	60	30.25
11.000	0.34	0.38	1.05	0.00	0.33	61	30.26
11.050	0.35	0.38	1.07	0.00	0.35	62	30.27
11.100	0.37	0.38	1.10	0.00	0.36	63	30.28
11.150	0.39	0.38	1.14	0.00	0.38	65	30.29
11.200	0.42	0.39	1.19	0.00	0.40	67	30.31
11.250	0.44	0.39	1.24	0.00	0.43	70	30.32
11.300	0.47	0.39	1.30	0.00	0.45	72	30.34
11.350	0.50	0.39	1.36	0.00	0.48	75	30.36
11.400	0.53	0.40	1.42	0.00	0.51	78	30.38
11.450	0.55	0.40	1.48	0.00	0.54	81	30.40
11.500	0.59	0.40	1.54	0.00	0.57	84	30.42
11.550	0.66	0.41	1.65	0.00	0.62	90	30.46
11.600	0.80	0.42	1.87	0.00	0.73	101	30.53
11.650	0.98	0.46	2.20	0.00	0.87	119	30.64
11.700	1.24	0.58	2.68	0.00	1.05	147	30.79
11.750	1.48	0.13	3.31	0.00	1.59	154	30.82
11.800	1.78	0.06	3.39	0.00	1.67	155	30.83
11.850	2.05	0.00	3.89	0.00	1.95	157	30.84
11.900	2.38	0.00	4.43	0.00	2.22	160	30.85
11.950	3.14	0.00	5.52	0.00	2.76	165	30.88
12.000	4.48	0.00	7.62	0.00	3.81	175	30.92
12.050	5.12	0.00	9.60	0.00	4.80	184	30.97
12.100	5.40	0.00	10.52	0.00	5.26	189	30.99
12.150	4.90	0.00	10.30	0.00	5.15	188	30.98
12.200	3.67	0.00	8.57	0.00	4.29	179	30.94
12.250	3.01	0.00	6.68	0.00	3.34	170	30.90
12.300	2.57	0.00	5.58	0.00	2.79	165	30.88
12.350	2.26	0.00	4.83	0.00	2.42	162	30.86
12.400	1.93	0.00	4.19	0.00	2.10	159	30.85
12.450	1.65	0.00	3.59	0.00	1.79	156	30.83
12.500	1.33	0.39	2.98	0.00	1.30	151	30.81
12.550	1.12	0.51	2.83	0.00	1.16	150	30.80

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
12.600	0.92	0.55	2.54	0.00	1.00	138	30.74
12.650	0.82	0.48	2.28	0.00	0.90	124	30.66
12.700	0.77	0.43	2.07	0.00	0.82	112	30.60
12.750	0.73	0.42	1.92	0.00	0.75	104	30.55
12.800	0.69	0.42	1.84	0.00	0.71	100	30.52
12.850	0.66	0.41	1.78	0.00	0.68	96	30.50
12.900	0.63	0.41	1.71	0.00	0.65	93	30.48
12.950	0.60	0.41	1.64	0.00	0.62	89	30.46
13.000	0.57	0.40	1.58	0.00	0.59	86	30.44
13.050	0.54	0.40	1.51	0.00	0.56	83	30.41
13.100	0.52	0.40	1.46	0.00	0.53	80	30.40
13.150	0.51	0.40	1.43	0.00	0.51	78	30.39
13.200	0.50	0.40	1.40	0.00	0.50	77	30.38
13.250	0.49	0.40	1.38	0.00	0.49	76	30.37
13.300	0.48	0.39	1.36	0.00	0.48	75	30.36
13.350	0.47	0.39	1.35	0.00	0.48	75	30.36
13.400	0.46	0.39	1.33	0.00	0.47	74	30.35
13.450	0.46	0.39	1.31	0.00	0.46	73	30.35
13.500	0.45	0.39	1.29	0.00	0.45	72	30.34
13.550	0.44	0.39	1.28	0.00	0.44	71	30.34
13.600	0.43	0.39	1.26	0.00	0.43	71	30.33
13.650	0.42	0.39	1.24	0.00	0.43	70	30.32
13.700	0.41	0.39	1.22	0.00	0.42	69	30.32
13.750	0.41	0.39	1.21	0.00	0.41	68	30.31
13.800	0.40	0.39	1.19	0.00	0.40	67	30.31
13.850	0.39	0.39	1.17	0.00	0.39	67	30.30
13.900	0.38	0.38	1.15	0.00	0.38	66	30.29
13.950	0.37	0.38	1.14	0.00	0.38	65	30.29
14.000	0.36	0.38	1.12	0.00	0.37	64	30.28
14.050	0.36	0.38	1.10	0.00	0.36	64	30.28
14.100	0.35	0.38	1.09	0.00	0.35	63	30.27
14.150	0.34	0.38	1.08	0.00	0.35	62	30.27
14.200	0.34	0.38	1.07	0.00	0.34	62	30.27
14.250	0.34	0.38	1.06	0.00	0.34	62	30.26
14.300	0.33	0.38	1.05	0.00	0.33	61	30.26
14.350	0.33	0.38	1.04	0.00	0.33	61	30.26
14.400	0.32	0.38	1.03	0.00	0.33	60	30.25
14.450	0.32	0.38	1.02	0.00	0.32	60	30.25
14.500	0.32	0.38	1.01	0.00	0.32	60	30.25
14.550	0.31	0.38	1.01	0.00	0.31	59	30.25
14.600	0.31	0.38	1.00	0.00	0.31	59	30.24
14.650	0.30	0.38	0.99	0.00	0.31	59	30.24

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
14.700	0.30	0.38	0.98	0.00	0.30	58	30.24
14.750	0.30	0.38	0.97	0.00	0.30	58	30.23
14.800	0.29	0.38	0.96	0.00	0.29	58	30.23
14.850	0.29	0.38	0.96	0.00	0.29	57	30.23
14.900	0.28	0.37	0.95	0.00	0.29	57	30.23
14.950	0.28	0.37	0.94	0.00	0.28	56	30.22
15.000	0.28	0.37	0.93	0.00	0.28	56	30.22
15.050	0.27	0.37	0.92	0.00	0.27	56	30.22
15.100	0.27	0.37	0.91	0.00	0.27	55	30.21
15.150	0.26	0.37	0.90	0.00	0.27	55	30.21
15.200	0.26	0.37	0.90	0.00	0.26	55	30.21
15.250	0.26	0.37	0.89	0.00	0.26	54	30.21
15.300	0.25	0.37	0.88	0.00	0.25	54	30.20
15.350	0.25	0.37	0.87	0.00	0.25	54	30.20
15.400	0.24	0.37	0.86	0.00	0.25	53	30.20
15.450	0.24	0.37	0.85	0.00	0.24	53	30.19
15.500	0.24	0.37	0.85	0.00	0.24	53	30.19
15.550	0.23	0.37	0.84	0.00	0.23	52	30.19
15.600	0.23	0.37	0.83	0.00	0.23	52	30.19
15.650	0.22	0.37	0.82	0.00	0.23	52	30.18
15.700	0.22	0.37	0.81	0.00	0.22	51	30.18
15.750	0.21	0.37	0.80	0.00	0.22	51	30.18
15.800	0.21	0.37	0.79	0.00	0.21	50	30.17
15.850	0.21	0.37	0.79	0.00	0.21	50	30.17
15.900	0.20	0.37	0.78	0.00	0.20	50	30.17
15.950	0.20	0.37	0.77	0.00	0.20	49	30.17
16.000	0.19	0.37	0.76	0.00	0.20	49	30.16
16.050	0.19	0.37	0.75	0.00	0.19	49	30.16
16.100	0.19	0.37	0.74	0.00	0.19	49	30.16
16.150	0.19	0.37	0.74	0.00	0.19	48	30.16
16.200	0.18	0.36	0.73	0.00	0.18	48	30.15
16.250	0.18	0.36	0.73	0.00	0.18	48	30.15
16.300	0.18	0.36	0.73	0.00	0.18	48	30.15
16.350	0.18	0.36	0.72	0.00	0.18	48	30.15
16.400	0.18	0.36	0.72	0.00	0.18	47	30.15
16.450	0.17	0.36	0.71	0.00	0.18	47	30.15
16.500	0.17	0.36	0.71	0.00	0.17	47	30.15
16.550	0.17	0.36	0.71	0.00	0.17	47	30.15
16.600	0.17	0.36	0.70	0.00	0.17	47	30.14
16.650	0.17	0.36	0.70	0.00	0.17	47	30.14
16.700	0.17	0.36	0.70	0.00	0.17	47	30.14
16.750	0.16	0.36	0.69	0.00	0.16	46	30.14

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.800	0.16	0.36	0.69	0.00	0.16	46	30.14
16.850	0.16	0.36	0.68	0.00	0.16	46	30.14
16.900	0.16	0.36	0.68	0.00	0.16	46	30.14
16.950	0.16	0.36	0.68	0.00	0.16	46	30.14
17.000	0.15	0.36	0.67	0.00	0.16	46	30.13
17.050	0.15	0.36	0.67	0.00	0.15	46	30.13
17.100	0.15	0.36	0.67	0.00	0.15	45	30.13
17.150	0.15	0.36	0.66	0.00	0.15	45	30.13
17.200	0.15	0.36	0.66	0.00	0.15	45	30.13
17.250	0.15	0.36	0.65	0.00	0.15	45	30.13
17.300	0.14	0.36	0.65	0.00	0.15	45	30.13
17.350	0.14	0.36	0.65	0.00	0.14	45	30.13
17.400	0.14	0.36	0.64	0.00	0.14	45	30.12
17.450	0.14	0.36	0.64	0.00	0.14	44	30.12
17.500	0.14	0.36	0.64	0.00	0.14	44	30.12
17.550	0.14	0.36	0.63	0.00	0.14	44	30.12
17.600	0.13	0.36	0.63	0.00	0.13	44	30.12
17.650	0.13	0.36	0.62	0.00	0.13	44	30.12
17.700	0.13	0.36	0.62	0.00	0.13	44	30.12
17.750	0.13	0.36	0.62	0.00	0.13	44	30.12
17.800	0.13	0.36	0.61	0.00	0.13	43	30.11
17.850	0.12	0.36	0.61	0.00	0.13	43	30.11
17.900	0.12	0.36	0.61	0.00	0.12	43	30.11
17.950	0.12	0.36	0.60	0.00	0.12	43	30.11
18.000	0.12	0.36	0.60	0.00	0.12	43	30.11
18.050	0.12	0.36	0.59	0.00	0.12	43	30.11
18.100	0.12	0.36	0.59	0.00	0.12	43	30.11
18.150	0.12	0.36	0.59	0.00	0.12	42	30.11
18.200	0.11	0.36	0.59	0.00	0.12	42	30.11
18.250	0.11	0.36	0.59	0.00	0.11	42	30.11
18.300	0.11	0.36	0.59	0.00	0.11	42	30.11
18.350	0.11	0.36	0.58	0.00	0.11	42	30.11
18.400	0.11	0.36	0.58	0.00	0.11	42	30.10
18.450	0.11	0.36	0.58	0.00	0.11	42	30.10
18.500	0.11	0.36	0.58	0.00	0.11	42	30.10
18.550	0.11	0.36	0.58	0.00	0.11	42	30.10
18.600	0.11	0.36	0.58	0.00	0.11	42	30.10
18.650	0.11	0.36	0.58	0.00	0.11	42	30.10
18.700	0.11	0.36	0.58	0.00	0.11	42	30.10
18.750	0.11	0.36	0.58	0.00	0.11	42	30.10
18.800	0.11	0.36	0.57	0.00	0.11	42	30.10
18.850	0.11	0.36	0.57	0.00	0.11	42	30.10

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.900	0.11	0.36	0.57	0.00	0.11	42	30.10
18.950	0.11	0.36	0.57	0.00	0.11	42	30.10
19.000	0.11	0.36	0.57	0.00	0.11	42	30.10
19.050	0.11	0.36	0.57	0.00	0.11	42	30.10
19.100	0.11	0.36	0.57	0.00	0.11	42	30.10
19.150	0.10	0.36	0.57	0.00	0.11	41	30.10
19.200	0.10	0.36	0.56	0.00	0.10	41	30.10
19.250	0.10	0.36	0.56	0.00	0.10	41	30.10
19.300	0.10	0.35	0.56	0.00	0.10	41	30.10
19.350	0.10	0.35	0.56	0.00	0.10	41	30.09
19.400	0.10	0.35	0.56	0.00	0.10	41	30.09
19.450	0.10	0.35	0.56	0.00	0.10	41	30.09
19.500	0.10	0.35	0.56	0.00	0.10	41	30.09
19.550	0.10	0.35	0.55	0.00	0.10	41	30.09
19.600	0.10	0.35	0.55	0.00	0.10	41	30.09
19.650	0.10	0.35	0.55	0.00	0.10	40	30.09
19.700	0.10	0.35	0.55	0.00	0.10	40	30.09
19.750	0.10	0.35	0.55	0.00	0.10	40	30.09
19.800	0.10	0.35	0.55	0.00	0.10	40	30.09
19.850	0.10	0.35	0.54	0.00	0.10	40	30.08
19.900	0.10	0.35	0.54	0.00	0.10	40	30.08
19.950	0.10	0.35	0.54	0.00	0.10	40	30.08
20.000	0.10	0.35	0.54	0.00	0.10	40	30.08
20.050	0.09	0.35	0.54	0.00	0.10	40	30.08
20.100	0.09	0.35	0.54	0.00	0.09	39	30.08
20.150	0.09	0.35	0.53	0.00	0.09	39	30.08
20.200	0.09	0.35	0.53	0.00	0.09	39	30.08
20.250	0.09	0.34	0.53	0.00	0.09	39	30.08
20.300	0.09	0.34	0.53	0.00	0.09	39	30.08
20.350	0.09	0.34	0.53	0.00	0.09	39	30.08
20.400	0.09	0.34	0.53	0.00	0.09	39	30.08
20.450	0.09	0.34	0.53	0.00	0.09	39	30.07
20.500	0.09	0.34	0.53	0.00	0.09	39	30.07
20.550	0.09	0.34	0.52	0.00	0.09	39	30.07
20.600	0.09	0.34	0.52	0.00	0.09	39	30.07
20.650	0.09	0.34	0.52	0.00	0.09	39	30.07
20.700	0.09	0.34	0.52	0.00	0.09	38	30.07
20.750	0.09	0.34	0.52	0.00	0.09	38	30.07
20.800	0.09	0.34	0.52	0.00	0.09	38	30.07
20.850	0.09	0.34	0.52	0.00	0.09	38	30.07
20.900	0.09	0.34	0.52	0.00	0.09	38	30.07
20.950	0.09	0.34	0.51	0.00	0.09	38	30.07

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.000	0.09	0.34	0.51	0.00	0.09	38	30.07
21.050	0.09	0.34	0.51	0.00	0.09	38	30.07
21.100	0.09	0.34	0.51	0.00	0.09	38	30.07
21.150	0.09	0.34	0.51	0.00	0.09	38	30.06
21.200	0.09	0.34	0.51	0.00	0.09	38	30.06
21.250	0.09	0.34	0.51	0.00	0.09	38	30.06
21.300	0.08	0.34	0.51	0.00	0.09	38	30.06
21.350	0.08	0.34	0.51	0.00	0.08	37	30.06
21.400	0.08	0.34	0.50	0.00	0.08	37	30.06
21.450	0.08	0.33	0.50	0.00	0.08	37	30.06
21.500	0.08	0.33	0.50	0.00	0.08	37	30.06
21.550	0.08	0.33	0.50	0.00	0.08	37	30.06
21.600	0.08	0.33	0.50	0.00	0.08	37	30.06
21.650	0.08	0.33	0.50	0.00	0.08	37	30.06
21.700	0.08	0.33	0.50	0.00	0.08	37	30.06
21.750	0.08	0.33	0.50	0.00	0.08	37	30.06
21.800	0.08	0.33	0.49	0.00	0.08	37	30.06
21.850	0.08	0.33	0.49	0.00	0.08	37	30.05
21.900	0.08	0.33	0.49	0.00	0.08	37	30.05
21.950	0.08	0.33	0.49	0.00	0.08	37	30.05
22.000	0.08	0.33	0.49	0.00	0.08	36	30.05
22.050	0.08	0.33	0.49	0.00	0.08	36	30.05
22.100	0.08	0.33	0.49	0.00	0.08	36	30.05
22.150	0.08	0.33	0.49	0.00	0.08	36	30.05
22.200	0.08	0.33	0.48	0.00	0.08	36	30.05
22.250	0.08	0.33	0.48	0.00	0.08	36	30.05
22.300	0.08	0.33	0.48	0.00	0.08	36	30.05
22.350	0.08	0.33	0.48	0.00	0.08	36	30.05
22.400	0.08	0.33	0.48	0.00	0.08	36	30.05
22.450	0.08	0.33	0.48	0.00	0.08	36	30.05
22.500	0.07	0.33	0.48	0.00	0.08	36	30.05
22.550	0.07	0.33	0.48	0.00	0.07	36	30.04
22.600	0.07	0.33	0.47	0.00	0.07	35	30.04
22.650	0.07	0.33	0.47	0.00	0.07	35	30.04
22.700	0.07	0.32	0.47	0.00	0.07	35	30.04
22.750	0.07	0.32	0.47	0.00	0.07	35	30.04
22.800	0.07	0.32	0.47	0.00	0.07	35	30.04
22.850	0.07	0.32	0.47	0.00	0.07	35	30.04
22.900	0.07	0.32	0.47	0.00	0.07	35	30.04
22.950	0.07	0.32	0.47	0.00	0.07	35	30.04
23.000	0.07	0.32	0.47	0.00	0.07	35	30.04
23.050	0.07	0.32	0.46	0.00	0.07	35	30.04

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.100	0.07	0.32	0.46	0.00	0.07	35	30.04
23.150	0.07	0.32	0.46	0.00	0.07	35	30.04
23.200	0.07	0.32	0.46	0.00	0.07	35	30.03
23.250	0.07	0.32	0.46	0.00	0.07	34	30.03
23.300	0.07	0.32	0.46	0.00	0.07	34	30.03
23.350	0.07	0.32	0.46	0.00	0.07	34	30.03
23.400	0.07	0.32	0.46	0.00	0.07	34	30.03
23.450	0.07	0.32	0.45	0.00	0.07	34	30.03
23.500	0.07	0.32	0.45	0.00	0.07	34	30.03
23.550	0.07	0.32	0.45	0.00	0.07	34	30.03
23.600	0.07	0.32	0.45	0.00	0.07	34	30.03
23.650	0.07	0.32	0.45	0.00	0.07	34	30.03
23.700	0.07	0.32	0.45	0.00	0.07	34	30.03
23.750	0.06	0.32	0.45	0.00	0.07	34	30.03
23.800	0.06	0.32	0.45	0.00	0.06	34	30.03
23.850	0.06	0.32	0.44	0.00	0.06	34	30.03
23.900	0.06	0.31	0.44	0.00	0.06	33	30.02
23.950	0.06	0.31	0.44	0.00	0.06	33	30.02
24.000	0.06	0.31	0.44	0.00	0.06	33	30.02
24.050	0.05	0.31	0.42	0.00	0.06	32	30.01
24.100	0.02	0.29	0.38	0.00	0.04	29	29.98
24.150	0.01	0.27	0.32	0.00	0.02	26	29.95
24.200	0.00	0.26	0.28	0.00	0.01	24	29.93
24.250	0.00	0.25	0.26	0.00	0.00	23	29.92
24.300	0.00	0.25	0.26	0.00	0.00	23	29.91
24.350	0.00	0.25	0.25	0.00	0.00	23	29.91
24.400	0.00	0.25	0.25	0.00	0.00	23	29.91
24.450	0.00	0.25	0.25	0.00	0.00	23	29.91
24.500	0.00	0.25	0.25	0.00	0.00	23	29.91
24.550	0.00	0.25	0.25	0.00	0.00	23	29.91
24.600	0.00	0.25	0.25	0.00	0.00	23	29.91
24.650	0.00	0.25	0.25	0.00	0.00	23	29.91
24.700	0.00	0.25	0.25	0.00	0.00	23	29.91
24.750	0.00	0.25	0.25	0.00	0.00	23	29.91
24.800	0.00	0.25	0.25	0.00	0.00	23	29.91
24.850	0.00	0.25	0.25	0.00	0.00	23	29.91
24.900	0.00	0.25	0.25	0.00	0.00	23	29.91
24.950	0.00	0.25	0.25	0.00	0.00	23	29.91
25.000	0.00	0.25	0.25	0.00	0.00	23	29.91
25.050	0.00	0.25	0.25	0.00	0.00	23	29.91
25.100	0.00	0.25	0.25	0.00	0.00	23	29.91
25.150	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.200	0.00	0.25	0.25	0.00	0.00	23	29.91
25.250	0.00	0.25	0.25	0.00	0.00	23	29.91
25.300	0.00	0.25	0.25	0.00	0.00	23	29.91
25.350	0.00	0.25	0.25	0.00	0.00	23	29.91
25.400	0.00	0.25	0.25	0.00	0.00	23	29.91
25.450	0.00	0.25	0.25	0.00	0.00	23	29.91
25.500	0.00	0.25	0.25	0.00	0.00	23	29.91
25.550	0.00	0.25	0.25	0.00	0.00	23	29.91
25.600	0.00	0.25	0.25	0.00	0.00	23	29.91
25.650	0.00	0.25	0.25	0.00	0.00	23	29.91
25.700	0.00	0.25	0.25	0.00	0.00	23	29.91
25.750	0.00	0.25	0.25	0.00	0.00	23	29.91
25.800	0.00	0.25	0.25	0.00	0.00	23	29.91
25.850	0.00	0.25	0.25	0.00	0.00	23	29.91
25.900	0.00	0.25	0.25	0.00	0.00	23	29.91
25.950	0.00	0.25	0.25	0.00	0.00	23	29.91
26.000	0.00	0.25	0.25	0.00	0.00	23	29.91
26.050	0.00	0.25	0.25	0.00	0.00	23	29.91
26.100	0.00	0.25	0.25	0.00	0.00	23	29.91
26.150	0.00	0.25	0.25	0.00	0.00	23	29.91
26.200	0.00	0.25	0.25	0.00	0.00	23	29.91
26.250	0.00	0.25	0.25	0.00	0.00	23	29.91
26.300	0.00	0.25	0.25	0.00	0.00	23	29.91
26.350	0.00	0.25	0.25	0.00	0.00	23	29.91
26.400	0.00	0.25	0.25	0.00	0.00	23	29.91
26.450	0.00	0.25	0.25	0.00	0.00	23	29.91
26.500	0.00	0.25	0.25	0.00	0.00	23	29.91
26.550	0.00	0.25	0.25	0.00	0.00	23	29.91
26.600	0.00	0.25	0.25	0.00	0.00	23	29.91
26.650	0.00	0.25	0.25	0.00	0.00	23	29.91
26.700	0.00	0.25	0.25	0.00	0.00	23	29.91
26.750	0.00	0.25	0.25	0.00	0.00	23	29.91
26.800	0.00	0.25	0.25	0.00	0.00	23	29.91
26.850	0.00	0.25	0.25	0.00	0.00	23	29.91
26.900	0.00	0.25	0.25	0.00	0.00	23	29.91
26.950	0.00	0.25	0.25	0.00	0.00	23	29.91
27.000	0.00	0.25	0.25	0.00	0.00	23	29.91
27.050	0.00	0.25	0.25	0.00	0.00	23	29.91
27.100	0.00	0.25	0.25	0.00	0.00	23	29.91
27.150	0.00	0.25	0.25	0.00	0.00	23	29.91
27.200	0.00	0.25	0.25	0.00	0.00	23	29.91
27.250	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.300	0.00	0.25	0.25	0.00	0.00	23	29.91
27.350	0.00	0.25	0.25	0.00	0.00	23	29.91
27.400	0.00	0.25	0.25	0.00	0.00	23	29.91
27.450	0.00	0.25	0.25	0.00	0.00	23	29.91
27.500	0.00	0.25	0.25	0.00	0.00	23	29.91
27.550	0.00	0.25	0.25	0.00	0.00	23	29.91
27.600	0.00	0.25	0.25	0.00	0.00	23	29.91
27.650	0.00	0.25	0.25	0.00	0.00	23	29.91
27.700	0.00	0.25	0.25	0.00	0.00	23	29.91
27.750	0.00	0.25	0.25	0.00	0.00	23	29.91
27.800	0.00	0.25	0.25	0.00	0.00	23	29.91
27.850	0.00	0.25	0.25	0.00	0.00	23	29.91
27.900	0.00	0.25	0.25	0.00	0.00	23	29.91
27.950	0.00	0.25	0.25	0.00	0.00	23	29.91
28.000	0.00	0.25	0.25	0.00	0.00	23	29.91
28.050	0.00	0.25	0.25	0.00	0.00	23	29.91
28.100	0.00	0.25	0.25	0.00	0.00	23	29.91
28.150	0.00	0.25	0.25	0.00	0.00	23	29.91
28.200	0.00	0.25	0.25	0.00	0.00	23	29.91
28.250	0.00	0.25	0.25	0.00	0.00	23	29.91
28.300	0.00	0.25	0.25	0.00	0.00	23	29.91
28.350	0.00	0.25	0.25	0.00	0.00	23	29.91
28.400	0.00	0.25	0.25	0.00	0.00	23	29.91
28.450	0.00	0.25	0.25	0.00	0.00	23	29.91
28.500	0.00	0.25	0.25	0.00	0.00	23	29.91
28.550	0.00	0.25	0.25	0.00	0.00	23	29.91
28.600	0.00	0.25	0.25	0.00	0.00	23	29.91
28.650	0.00	0.25	0.25	0.00	0.00	23	29.91
28.700	0.00	0.25	0.25	0.00	0.00	23	29.91
28.750	0.00	0.25	0.25	0.00	0.00	23	29.91
28.800	0.00	0.25	0.25	0.00	0.00	23	29.91
28.850	0.00	0.25	0.25	0.00	0.00	23	29.91
28.900	0.00	0.25	0.25	0.00	0.00	23	29.91
28.950	0.00	0.25	0.25	0.00	0.00	23	29.91
29.000	0.00	0.25	0.25	0.00	0.00	23	29.91
29.050	0.00	0.25	0.25	0.00	0.00	23	29.91
29.100	0.00	0.25	0.25	0.00	0.00	23	29.91
29.150	0.00	0.25	0.25	0.00	0.00	23	29.91
29.200	0.00	0.25	0.25	0.00	0.00	23	29.91
29.250	0.00	0.25	0.25	0.00	0.00	23	29.91
29.300	0.00	0.25	0.25	0.00	0.00	23	29.91
29.350	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.400	0.00	0.25	0.25	0.00	0.00	23	29.91
29.450	0.00	0.25	0.25	0.00	0.00	23	29.91
29.500	0.00	0.25	0.25	0.00	0.00	23	29.91
29.550	0.00	0.25	0.25	0.00	0.00	23	29.91
29.600	0.00	0.25	0.25	0.00	0.00	23	29.91
29.650	0.00	0.25	0.25	0.00	0.00	23	29.91
29.700	0.00	0.25	0.25	0.00	0.00	23	29.91
29.750	0.00	0.25	0.25	0.00	0.00	23	29.91
29.800	0.00	0.25	0.25	0.00	0.00	23	29.91
29.850	0.00	0.25	0.25	0.00	0.00	23	29.91
29.900	0.00	0.25	0.25	0.00	0.00	23	29.91
29.950	0.00	0.25	0.25	0.00	0.00	23	29.91
30.000	0.00	0.25	0.25	0.00	0.00	23	29.91
30.050	0.00	0.25	0.25	0.00	0.00	23	29.91
30.100	0.00	0.25	0.25	0.00	0.00	23	29.91
30.150	0.00	0.25	0.25	0.00	0.00	23	29.91
30.200	0.00	0.25	0.25	0.00	0.00	23	29.91
30.250	0.00	0.25	0.25	0.00	0.00	23	29.91
30.300	0.00	0.25	0.25	0.00	0.00	23	29.91
30.350	0.00	0.25	0.25	0.00	0.00	23	29.91
30.400	0.00	0.25	0.25	0.00	0.00	23	29.91
30.450	0.00	0.25	0.25	0.00	0.00	23	29.91
30.500	0.00	0.25	0.25	0.00	0.00	23	29.91
30.550	0.00	0.25	0.25	0.00	0.00	23	29.91
30.600	0.00	0.25	0.25	0.00	0.00	23	29.91
30.650	0.00	0.25	0.25	0.00	0.00	23	29.91
30.700	0.00	0.25	0.25	0.00	0.00	23	29.91
30.750	0.00	0.25	0.25	0.00	0.00	23	29.91
30.800	0.00	0.25	0.25	0.00	0.00	23	29.91
30.850	0.00	0.25	0.25	0.00	0.00	23	29.91
30.900	0.00	0.25	0.25	0.00	0.00	23	29.91
30.950	0.00	0.25	0.25	0.00	0.00	23	29.91
31.000	0.00	0.25	0.25	0.00	0.00	23	29.91
31.050	0.00	0.25	0.25	0.00	0.00	23	29.91
31.100	0.00	0.25	0.25	0.00	0.00	23	29.91
31.150	0.00	0.25	0.25	0.00	0.00	23	29.91
31.200	0.00	0.25	0.25	0.00	0.00	23	29.91
31.250	0.00	0.25	0.25	0.00	0.00	23	29.91
31.300	0.00	0.25	0.25	0.00	0.00	23	29.91
31.350	0.00	0.25	0.25	0.00	0.00	23	29.91
31.400	0.00	0.25	0.25	0.00	0.00	23	29.91
31.450	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
31.500	0.00	0.25	0.25	0.00	0.00	23	29.91
31.550	0.00	0.25	0.25	0.00	0.00	23	29.91
31.600	0.00	0.25	0.25	0.00	0.00	23	29.91
31.650	0.00	0.25	0.25	0.00	0.00	23	29.91
31.700	0.00	0.25	0.25	0.00	0.00	23	29.91
31.750	0.00	0.25	0.25	0.00	0.00	23	29.91
31.800	0.00	0.25	0.25	0.00	0.00	23	29.91
31.850	0.00	0.25	0.25	0.00	0.00	23	29.91
31.900	0.00	0.25	0.25	0.00	0.00	23	29.91
31.950	0.00	0.25	0.25	0.00	0.00	23	29.91
32.000	0.00	0.25	0.25	0.00	0.00	23	29.91
32.050	0.00	0.25	0.25	0.00	0.00	23	29.91
32.100	0.00	0.25	0.25	0.00	0.00	23	29.91
32.150	0.00	0.25	0.25	0.00	0.00	23	29.91
32.200	0.00	0.25	0.25	0.00	0.00	23	29.91
32.250	0.00	0.25	0.25	0.00	0.00	23	29.91
32.300	0.00	0.25	0.25	0.00	0.00	23	29.91
32.350	0.00	0.25	0.25	0.00	0.00	23	29.91
32.400	0.00	0.25	0.25	0.00	0.00	23	29.91
32.450	0.00	0.25	0.25	0.00	0.00	23	29.91
32.500	0.00	0.25	0.25	0.00	0.00	23	29.91
32.550	0.00	0.25	0.25	0.00	0.00	23	29.91
32.600	0.00	0.25	0.25	0.00	0.00	23	29.91
32.650	0.00	0.25	0.25	0.00	0.00	23	29.91
32.700	0.00	0.25	0.25	0.00	0.00	23	29.91
32.750	0.00	0.25	0.25	0.00	0.00	23	29.91
32.800	0.00	0.25	0.25	0.00	0.00	23	29.91
32.850	0.00	0.25	0.25	0.00	0.00	23	29.91
32.900	0.00	0.25	0.25	0.00	0.00	23	29.91
32.950	0.00	0.25	0.25	0.00	0.00	23	29.91
33.000	0.00	0.25	0.25	0.00	0.00	23	29.91
33.050	0.00	0.25	0.25	0.00	0.00	23	29.91
33.100	0.00	0.25	0.25	0.00	0.00	23	29.91
33.150	0.00	0.25	0.25	0.00	0.00	23	29.91
33.200	0.00	0.25	0.25	0.00	0.00	23	29.91
33.250	0.00	0.25	0.25	0.00	0.00	23	29.91
33.300	0.00	0.25	0.25	0.00	0.00	23	29.91
33.350	0.00	0.25	0.25	0.00	0.00	23	29.91
33.400	0.00	0.25	0.25	0.00	0.00	23	29.91
33.450	0.00	0.25	0.25	0.00	0.00	23	29.91
33.500	0.00	0.25	0.25	0.00	0.00	23	29.91
33.550	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
33.600	0.00	0.25	0.25	0.00	0.00	23	29.91
33.650	0.00	0.25	0.25	0.00	0.00	23	29.91
33.700	0.00	0.25	0.25	0.00	0.00	23	29.91
33.750	0.00	0.25	0.25	0.00	0.00	23	29.91
33.800	0.00	0.25	0.25	0.00	0.00	23	29.91
33.850	0.00	0.25	0.25	0.00	0.00	23	29.91
33.900	0.00	0.25	0.25	0.00	0.00	23	29.91
33.950	0.00	0.25	0.25	0.00	0.00	23	29.91
34.000	0.00	0.25	0.25	0.00	0.00	23	29.91
34.050	0.00	0.25	0.25	0.00	0.00	23	29.91
34.100	0.00	0.25	0.25	0.00	0.00	23	29.91
34.150	0.00	0.25	0.25	0.00	0.00	23	29.91
34.200	0.00	0.25	0.25	0.00	0.00	23	29.91
34.250	0.00	0.25	0.25	0.00	0.00	23	29.91
34.300	0.00	0.25	0.25	0.00	0.00	23	29.91
34.350	0.00	0.25	0.25	0.00	0.00	23	29.91
34.400	0.00	0.25	0.25	0.00	0.00	23	29.91
34.450	0.00	0.25	0.25	0.00	0.00	23	29.91
34.500	0.00	0.25	0.25	0.00	0.00	23	29.91
34.550	0.00	0.25	0.25	0.00	0.00	23	29.91
34.600	0.00	0.25	0.25	0.00	0.00	23	29.91
34.650	0.00	0.25	0.25	0.00	0.00	23	29.91
34.700	0.00	0.25	0.25	0.00	0.00	23	29.91
34.750	0.00	0.25	0.25	0.00	0.00	23	29.91
34.800	0.00	0.25	0.25	0.00	0.00	23	29.91
34.850	0.00	0.25	0.25	0.00	0.00	23	29.91
34.900	0.00	0.25	0.25	0.00	0.00	23	29.91
34.950	0.00	0.25	0.25	0.00	0.00	23	29.91
35.000	0.00	0.25	0.25	0.00	0.00	23	29.91
35.050	0.00	0.25	0.25	0.00	0.00	23	29.91
35.100	0.00	0.25	0.25	0.00	0.00	23	29.91
35.150	0.00	0.25	0.25	0.00	0.00	23	29.91
35.200	0.00	0.25	0.25	0.00	0.00	23	29.91
35.250	0.00	0.25	0.25	0.00	0.00	23	29.91
35.300	0.00	0.25	0.25	0.00	0.00	23	29.91
35.350	0.00	0.25	0.25	0.00	0.00	23	29.91
35.400	0.00	0.25	0.25	0.00	0.00	23	29.91
35.450	0.00	0.25	0.25	0.00	0.00	23	29.91
35.500	0.00	0.25	0.25	0.00	0.00	23	29.91
35.550	0.00	0.25	0.25	0.00	0.00	23	29.91
35.600	0.00	0.25	0.25	0.00	0.00	23	29.91
35.650	0.00	0.25	0.25	0.00	0.00	23	29.91

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: EX. RG (OUT)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
35.700	0.00	0.25	0.25	0.00	0.00	23	29.91
35.750	0.00	0.25	0.25	0.00	0.00	23	29.91
35.800	0.00	0.25	0.25	0.00	0.00	23	29.91
35.850	0.00	0.25	0.25	0.00	0.00	23	29.91
35.900	0.00	0.25	0.25	0.00	0.00	23	29.91
35.950	0.00	0.25	0.25	0.00	0.00	23	29.91
36.000	0.00	0.25	0.25	0.00	0.00	23	29.91

Subsection: Pond Inflow Summary

Label: EX. RG (IN)

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'EX. RG'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1B	3,234	12.100	0.88
Flow (In)	EX. RG	3,234	12.100	0.88

Subsection: Pond Inflow Summary

Label: EX. RG (IN)

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'EX. RG'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1B	8,818	12.100	2.46
Flow (In)	EX. RG	8,818	12.100	2.46

Hydrologic Calculations

Subsection: Pond Inflow Summary
 Label: EX. RG (IN)
 Scenario: Pre-Development 25 year

Return Event: 25 years
 Storm Event: 25 years

Summary for Hydrograph Addition at 'EX. RG'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1B	12,363	12.100	3.42
Flow (In)	EX. RG	12,363	12.100	3.42

Subsection: Pond Inflow Summary
 Label: EX. RG (IN)
 Scenario: Pre-Development 100 year

Return Event: 100 years
 Storm Event: 100 years

Summary for Hydrograph Addition at 'EX. RG'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	EDA-1B	19,910	12.100	5.40
Flow (In)	EX. RG	19,910	12.100	5.40

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: SP
 Scenario: Post-Development 1 year

Return Event: 1 years
 Storm Event: 1 year

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	31.00 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.10 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.10 ft ³ /s
Time Increment	0.050 hours

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: SP

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
31.00	0.10	0	0.06	0.00	0.10	0.10
31.50	0.10	1,374	0.06	0.00	0.10	15.37
32.00	0.10	2,748	0.06	0.00	0.10	30.64
32.50	84.96	4,122	0.06	0.00	84.96	130.76
33.00	192.63	5,496	0.06	0.00	192.63	253.69

Subsection: Elevation-Volume-Flow Table (Pond)

Label: SP

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	31.00 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.10 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.10 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
31.00	0.10	0	0.06	0.00	0.10	0.10
31.50	0.10	1,374	0.06	0.00	0.10	15.37
32.00	0.10	2,748	0.06	0.00	0.10	30.64
32.50	84.96	4,122	0.06	0.00	84.96	130.76
33.00	192.63	5,496	0.06	0.00	192.63	253.69

Subsection: Elevation-Volume-Flow Table (Pond)

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Hydrologic Calculations

Subsection: Elevation-Volume-Flow Table (Pond)

Label: SP

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Elevation (Water Surface, Initial)	31.00 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.10 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.10 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
31.00	0.10	0	0.06	0.00	0.10	0.10
31.50	0.10	1,374	0.06	0.00	0.10	15.37
32.00	0.10	2,748	0.06	0.00	0.10	30.64
32.50	84.96	4,122	0.06	0.00	84.96	130.76
33.00	192.63	5,496	0.06	0.00	192.63	253.69

Subsection: Elevation-Volume-Flow Table (Pond)

Label: SP

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	31.00 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.10 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.10 ft ³ /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (acres)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
31.00	0.10	0	0.06	0.00	0.10	0.10
31.50	0.10	1,374	0.06	0.00	0.10	15.37
32.00	0.10	2,748	0.06	0.00	0.10	30.64
32.50	84.96	4,122	0.06	0.00	84.96	130.76
33.00	192.63	5,496	0.06	0.00	192.63	253.69

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: SP (IN)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Infiltration			
Infiltration Method (Computed)		No Infiltration	
Initial Conditions			
Elevation (Water Surface, Initial)	31.00 ft		
Volume (Initial)	0 ft³		
Flow (Initial Outlet)	0.10 ft³/s		
Flow (Initial Infiltration)	0.00 ft³/s		
Flow (Initial, Total)	0.10 ft³/s		
Time Increment	0.050 hours		
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	1.09 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	0.10 ft³/s	Time to Peak (Flow, Outlet)	11.400 hours
Elevation (Water Surface, Peak)	31.56 ft		
Volume (Peak)	1,549 ft³		
Mass Balance (ft³)			
Volume (Initial)	0 ft³		
Volume (Total Inflow)	4,014 ft³		
Volume (Total Infiltration)	0 ft³		
Volume (Total Outlet Outflow)	4,019 ft³		
Volume (Retained)	0 ft³		
Volume (Unrouted)	5 ft³		
Error (Mass Balance)	0.1 %		

Subsection: Level Pool Pond Routing Summary

Label: SP (IN)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	31.00 ft
Volume (Initial)	0 ft ³

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: SP (IN)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Initial Conditions

Flow (Initial Outlet)	0.10 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.10 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	2.12 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	1.81 ft ³ /s	Time to Peak (Flow, Outlet)	12.250 hours

Elevation (Water Surface, Peak)	32.01 ft
Volume (Peak)	2,776 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	8,156 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	8,161 ft ³
Volume (Retained)	0 ft ³
Volume (Unrouted)	5 ft ³
Error (Mass Balance)	0.1 %

Subsection: Level Pool Pond Routing Summary

Label: SP (IN)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	31.00 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.10 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.10 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	2.70 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
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Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: SP (IN)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Inflow/Outflow Hydrograph Summary

Flow (Peak Outlet)	3.35 ft ³ /s	Time to Peak (Flow, Outlet)	12.100 hours
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Elevation (Water Surface, Peak)	32.02 ft
Volume (Peak)	2,801 ft ³

Mass Balance (ft³)

Volume (Initial)	0 ft ³
Volume (Total Inflow)	10,566 ft ³
Volume (Total Infiltration)	0 ft ³
Volume (Total Outlet Outflow)	10,571 ft ³
Volume (Retained)	0 ft ³
Volume (Unrouted)	5 ft ³
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary

Label: SP (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Infiltration

Infiltration Method (Computed)	No Infiltration
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Initial Conditions

Elevation (Water Surface, Initial)	31.00 ft
Volume (Initial)	0 ft ³
Flow (Initial Outlet)	0.10 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.10 ft ³ /s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	3.88 ft ³ /s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	4.00 ft ³ /s	Time to Peak (Flow, Outlet)	12.050 hours

Elevation (Water Surface, Peak)	32.02 ft
Volume (Peak)	2,811 ft ³

Mass Balance (ft³)

Hydrologic Calculations

Subsection: Level Pool Pond Routing Summary

Label: SP (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Mass Balance (ft³)

Volume (Initial)	0 ft³
Volume (Total Inflow)	15,491 ft³
Volume (Total Infiltration)	0 ft³
Volume (Total Outlet Outflow)	15,496 ft³
Volume (Retained)	0 ft³
Volume (Unrouted)	5 ft³
Error (Mass Balance)	0.0 %

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft³/s)	2S/t - O (ft³/s)	2S/t + O (ft³/s)	Infiltration (ft³/s)	Flow (Outlet) (ft³/s)	Volume (ft³)	Elevation (ft)
0.000	0.00	0.00	0.10	0.00	0.05	0	31.00
0.050	0.00	0.00	0.00	0.00	0.00	0	31.00
0.100	0.00	0.00	0.00	0.00	0.00	0	31.00
0.150	0.00	0.00	0.00	0.00	0.00	0	31.00
0.200	0.00	0.00	0.00	0.00	0.00	0	31.00
0.250	0.00	0.00	0.00	0.00	0.00	0	31.00
0.300	0.00	0.00	0.00	0.00	0.00	0	31.00
0.350	0.00	0.00	0.00	0.00	0.00	0	31.00
0.400	0.00	0.00	0.00	0.00	0.00	0	31.00
0.450	0.00	0.00	0.00	0.00	0.00	0	31.00
0.500	0.00	0.00	0.00	0.00	0.00	0	31.00
0.550	0.00	0.00	0.00	0.00	0.00	0	31.00
0.600	0.00	0.00	0.00	0.00	0.00	0	31.00
0.650	0.00	0.00	0.00	0.00	0.00	0	31.00
0.700	0.00	0.00	0.00	0.00	0.00	0	31.00
0.750	0.00	0.00	0.00	0.00	0.00	0	31.00
0.800	0.00	0.00	0.00	0.00	0.00	0	31.00
0.850	0.00	0.00	0.00	0.00	0.00	0	31.00
0.900	0.00	0.00	0.00	0.00	0.00	0	31.00
0.950	0.00	0.00	0.00	0.00	0.00	0	31.00
1.000	0.00	0.00	0.00	0.00	0.00	0	31.00
1.050	0.00	0.00	0.00	0.00	0.00	0	31.00
1.100	0.00	0.00	0.00	0.00	0.00	0	31.00
1.150	0.00	0.00	0.00	0.00	0.00	0	31.00
1.200	0.00	0.00	0.00	0.00	0.00	0	31.00
1.250	0.00	0.00	0.00	0.00	0.00	0	31.00
1.300	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
1.350	0.00	0.00	0.00	0.00	0.00	0	31.00
1.400	0.00	0.00	0.00	0.00	0.00	0	31.00
1.450	0.00	0.00	0.00	0.00	0.00	0	31.00
1.500	0.00	0.00	0.00	0.00	0.00	0	31.00
1.550	0.00	0.00	0.00	0.00	0.00	0	31.00
1.600	0.00	0.00	0.00	0.00	0.00	0	31.00
1.650	0.00	0.00	0.00	0.00	0.00	0	31.00
1.700	0.00	0.00	0.00	0.00	0.00	0	31.00
1.750	0.00	0.00	0.00	0.00	0.00	0	31.00
1.800	0.00	0.00	0.00	0.00	0.00	0	31.00
1.850	0.00	0.00	0.00	0.00	0.00	0	31.00
1.900	0.00	0.00	0.00	0.00	0.00	0	31.00
1.950	0.00	0.00	0.00	0.00	0.00	0	31.00
2.000	0.00	0.00	0.00	0.00	0.00	0	31.00
2.050	0.00	0.00	0.00	0.00	0.00	0	31.00
2.100	0.00	0.00	0.00	0.00	0.00	0	31.00
2.150	0.00	0.00	0.00	0.00	0.00	0	31.00
2.200	0.00	0.00	0.00	0.00	0.00	0	31.00
2.250	0.00	0.00	0.00	0.00	0.00	0	31.00
2.300	0.00	0.00	0.00	0.00	0.00	0	31.00
2.350	0.00	0.00	0.00	0.00	0.00	0	31.00
2.400	0.00	0.00	0.00	0.00	0.00	0	31.00
2.450	0.00	0.00	0.00	0.00	0.00	0	31.00
2.500	0.00	0.00	0.00	0.00	0.00	0	31.00
2.550	0.00	0.00	0.00	0.00	0.00	0	31.00
2.600	0.00	0.00	0.00	0.00	0.00	0	31.00
2.650	0.00	0.00	0.00	0.00	0.00	0	31.00
2.700	0.00	0.00	0.00	0.00	0.00	0	31.00
2.750	0.00	0.00	0.00	0.00	0.00	0	31.00
2.800	0.00	0.00	0.00	0.00	0.00	0	31.00
2.850	0.00	0.00	0.00	0.00	0.00	0	31.00
2.900	0.00	0.00	0.00	0.00	0.00	0	31.00
2.950	0.00	0.00	0.00	0.00	0.00	0	31.00
3.000	0.00	0.00	0.00	0.00	0.00	0	31.00
3.050	0.00	0.00	0.00	0.00	0.00	0	31.00
3.100	0.00	0.00	0.00	0.00	0.00	0	31.00
3.150	0.00	0.00	0.00	0.00	0.00	0	31.00
3.200	0.00	0.00	0.00	0.00	0.00	0	31.00
3.250	0.00	0.00	0.00	0.00	0.00	0	31.00
3.300	0.00	0.00	0.00	0.00	0.00	0	31.00
3.350	0.00	0.00	0.00	0.00	0.00	0	31.00
3.400	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
3.450	0.00	0.00	0.00	0.00	0.00	0	31.00
3.500	0.00	0.00	0.00	0.00	0.00	0	31.00
3.550	0.00	0.00	0.00	0.00	0.00	0	31.00
3.600	0.00	0.00	0.00	0.00	0.00	0	31.00
3.650	0.00	0.00	0.00	0.00	0.00	0	31.00
3.700	0.00	0.00	0.00	0.00	0.00	0	31.00
3.750	0.00	0.00	0.00	0.00	0.00	0	31.00
3.800	0.00	0.00	0.00	0.00	0.00	0	31.00
3.850	0.00	0.00	0.00	0.00	0.00	0	31.00
3.900	0.00	0.00	0.00	0.00	0.00	0	31.00
3.950	0.00	0.00	0.00	0.00	0.00	0	31.00
4.000	0.00	0.00	0.00	0.00	0.00	0	31.00
4.050	0.00	0.00	0.00	0.00	0.00	0	31.00
4.100	0.00	0.00	0.00	0.00	0.00	0	31.00
4.150	0.00	0.00	0.00	0.00	0.00	0	31.00
4.200	0.00	0.00	0.00	0.00	0.00	0	31.00
4.250	0.00	0.00	0.00	0.00	0.00	0	31.00
4.300	0.00	0.00	0.00	0.00	0.00	0	31.00
4.350	0.00	0.00	0.00	0.00	0.00	0	31.00
4.400	0.00	0.00	0.00	0.00	0.00	0	31.00
4.450	0.00	0.00	0.00	0.00	0.00	0	31.00
4.500	0.00	0.00	0.00	0.00	0.00	0	31.00
4.550	0.00	0.00	0.00	0.00	0.00	0	31.00
4.600	0.00	0.00	0.00	0.00	0.00	0	31.00
4.650	0.00	0.00	0.00	0.00	0.00	0	31.00
4.700	0.00	0.00	0.00	0.00	0.00	0	31.00
4.750	0.00	0.00	0.00	0.00	0.00	0	31.00
4.800	0.00	0.00	0.00	0.00	0.00	0	31.00
4.850	0.00	0.00	0.00	0.00	0.00	0	31.00
4.900	0.00	0.00	0.00	0.00	0.00	0	31.00
4.950	0.00	0.00	0.00	0.00	0.00	0	31.00
5.000	0.00	0.00	0.00	0.00	0.00	0	31.00
5.050	0.00	0.00	0.00	0.00	0.00	0	31.00
5.100	0.00	0.00	0.00	0.00	0.00	0	31.00
5.150	0.00	0.00	0.00	0.00	0.00	0	31.00
5.200	0.00	0.00	0.00	0.00	0.00	0	31.00
5.250	0.00	0.00	0.00	0.00	0.00	0	31.00
5.300	0.00	0.00	0.00	0.00	0.00	0	31.00
5.350	0.00	0.00	0.00	0.00	0.00	0	31.00
5.400	0.00	0.00	0.00	0.00	0.00	0	31.00
5.450	0.00	0.00	0.00	0.00	0.00	0	31.00
5.500	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
5.550	0.00	0.00	0.00	0.00	0.00	0	31.00
5.600	0.00	0.00	0.01	0.00	0.00	0	31.00
5.650	0.00	0.00	0.01	0.00	0.00	0	31.00
5.700	0.00	0.00	0.01	0.00	0.00	0	31.00
5.750	0.00	0.00	0.01	0.00	0.00	0	31.00
5.800	0.00	0.00	0.01	0.00	0.00	0	31.00
5.850	0.00	0.00	0.01	0.00	0.00	0	31.00
5.900	0.00	0.00	0.01	0.00	0.00	0	31.00
5.950	0.00	0.00	0.01	0.00	0.00	0	31.00
6.000	0.00	0.00	0.01	0.00	0.00	0	31.00
6.050	0.00	0.00	0.01	0.00	0.00	0	31.00
6.100	0.00	0.00	0.01	0.00	0.00	0	31.00
6.150	0.00	0.00	0.01	0.00	0.00	0	31.00
6.200	0.00	0.00	0.01	0.00	0.00	0	31.00
6.250	0.00	0.00	0.01	0.00	0.00	0	31.00
6.300	0.00	0.00	0.01	0.00	0.00	0	31.00
6.350	0.00	0.00	0.01	0.00	0.00	0	31.00
6.400	0.01	0.00	0.01	0.00	0.01	0	31.00
6.450	0.01	0.00	0.01	0.00	0.01	0	31.00
6.500	0.01	0.00	0.01	0.00	0.01	0	31.00
6.550	0.01	0.00	0.01	0.00	0.01	0	31.00
6.600	0.01	0.00	0.01	0.00	0.01	0	31.00
6.650	0.01	0.00	0.01	0.00	0.01	0	31.00
6.700	0.01	0.00	0.01	0.00	0.01	0	31.00
6.750	0.01	0.00	0.01	0.00	0.01	0	31.00
6.800	0.01	0.00	0.01	0.00	0.01	0	31.00
6.850	0.01	0.00	0.01	0.00	0.01	0	31.00
6.900	0.01	0.00	0.01	0.00	0.01	0	31.00
6.950	0.01	0.00	0.02	0.00	0.01	0	31.00
7.000	0.01	0.00	0.02	0.00	0.01	0	31.00
7.050	0.01	0.00	0.02	0.00	0.01	0	31.00
7.100	0.01	0.00	0.02	0.00	0.01	0	31.00
7.150	0.01	0.00	0.02	0.00	0.01	0	31.00
7.200	0.01	0.00	0.02	0.00	0.01	0	31.00
7.250	0.01	0.00	0.02	0.00	0.01	0	31.00
7.300	0.01	0.00	0.02	0.00	0.01	0	31.00
7.350	0.01	0.00	0.02	0.00	0.01	0	31.00
7.400	0.01	0.00	0.02	0.00	0.01	0	31.00
7.450	0.01	0.00	0.02	0.00	0.01	0	31.00
7.500	0.01	0.00	0.02	0.00	0.01	0	31.00
7.550	0.01	0.00	0.02	0.00	0.01	0	31.00
7.600	0.01	0.00	0.02	0.00	0.01	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
7.650	0.01	0.00	0.02	0.00	0.01	0	31.00
7.700	0.01	0.00	0.02	0.00	0.01	0	31.00
7.750	0.01	0.00	0.02	0.00	0.01	0	31.00
7.800	0.01	0.00	0.02	0.00	0.01	0	31.00
7.850	0.01	0.00	0.03	0.00	0.01	0	31.00
7.900	0.01	0.00	0.03	0.00	0.01	0	31.00
7.950	0.01	0.00	0.03	0.00	0.01	0	31.00
8.000	0.01	0.00	0.03	0.00	0.01	0	31.00
8.050	0.01	0.00	0.03	0.00	0.01	0	31.00
8.100	0.01	0.00	0.03	0.00	0.01	0	31.00
8.150	0.02	0.00	0.03	0.00	0.02	0	31.00
8.200	0.02	0.00	0.03	0.00	0.02	0	31.00
8.250	0.02	0.00	0.03	0.00	0.02	0	31.00
8.300	0.02	0.00	0.03	0.00	0.02	0	31.00
8.350	0.02	0.00	0.03	0.00	0.02	0	31.00
8.400	0.02	0.00	0.04	0.00	0.02	0	31.00
8.450	0.02	0.00	0.04	0.00	0.02	0	31.00
8.500	0.02	0.00	0.04	0.00	0.02	0	31.00
8.550	0.02	0.00	0.04	0.00	0.02	0	31.00
8.600	0.02	0.00	0.04	0.00	0.02	0	31.00
8.650	0.02	0.00	0.04	0.00	0.02	0	31.00
8.700	0.02	0.00	0.04	0.00	0.02	0	31.00
8.750	0.02	0.00	0.04	0.00	0.02	0	31.00
8.800	0.02	0.00	0.05	0.00	0.02	0	31.00
8.850	0.02	0.00	0.05	0.00	0.02	0	31.00
8.900	0.02	0.00	0.05	0.00	0.02	0	31.00
8.950	0.03	0.00	0.05	0.00	0.02	0	31.00
9.000	0.03	0.00	0.05	0.00	0.03	0	31.00
9.050	0.03	0.00	0.05	0.00	0.03	0	31.00
9.100	0.03	0.00	0.05	0.00	0.03	0	31.00
9.150	0.03	0.00	0.06	0.00	0.03	0	31.00
9.200	0.03	0.00	0.06	0.00	0.03	0	31.00
9.250	0.03	0.00	0.06	0.00	0.03	0	31.00
9.300	0.03	0.00	0.06	0.00	0.03	0	31.00
9.350	0.03	0.00	0.06	0.00	0.03	0	31.00
9.400	0.03	0.00	0.06	0.00	0.03	0	31.00
9.450	0.03	0.00	0.06	0.00	0.03	0	31.00
9.500	0.03	0.00	0.07	0.00	0.03	0	31.00
9.550	0.03	0.00	0.07	0.00	0.03	0	31.00
9.600	0.04	0.00	0.07	0.00	0.03	0	31.00
9.650	0.04	0.00	0.07	0.00	0.04	0	31.00
9.700	0.04	0.00	0.07	0.00	0.04	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
9.750	0.04	0.00	0.07	0.00	0.04	0	31.00
9.800	0.04	0.00	0.08	0.00	0.04	0	31.00
9.850	0.04	0.00	0.08	0.00	0.04	0	31.00
9.900	0.04	0.00	0.08	0.00	0.04	0	31.00
9.950	0.04	0.00	0.08	0.00	0.04	0	31.00
10.000	0.04	0.00	0.08	0.00	0.04	0	31.00
10.050	0.04	0.00	0.08	0.00	0.04	0	31.00
10.100	0.04	0.00	0.09	0.00	0.04	0	31.00
10.150	0.05	0.00	0.09	0.00	0.04	0	31.00
10.200	0.05	0.00	0.09	0.00	0.05	0	31.00
10.250	0.05	0.00	0.10	0.00	0.05	0	31.00
10.300	0.05	0.00	0.10	0.00	0.05	0	31.00
10.350	0.05	0.00	0.10	0.00	0.05	0	31.00
10.400	0.05	0.00	0.10	0.00	0.05	0	31.00
10.450	0.05	0.00	0.11	0.00	0.05	0	31.00
10.500	0.06	0.00	0.11	0.00	0.06	0	31.00
10.550	0.06	0.00	0.11	0.00	0.06	0	31.00
10.600	0.06	0.00	0.12	0.00	0.06	0	31.00
10.650	0.06	0.00	0.12	0.00	0.06	0	31.00
10.700	0.06	0.00	0.12	0.00	0.06	0	31.00
10.750	0.06	0.00	0.13	0.00	0.06	0	31.00
10.800	0.07	0.00	0.13	0.00	0.07	0	31.00
10.850	0.07	0.00	0.13	0.00	0.07	0	31.00
10.900	0.07	0.00	0.14	0.00	0.07	0	31.00
10.950	0.07	0.00	0.14	0.00	0.07	0	31.00
11.000	0.07	0.00	0.14	0.00	0.07	0	31.00
11.050	0.08	0.00	0.15	0.00	0.07	0	31.00
11.100	0.08	0.00	0.16	0.00	0.08	0	31.00
11.150	0.08	0.00	0.16	0.00	0.08	0	31.00
11.200	0.09	0.00	0.17	0.00	0.09	0	31.00
11.250	0.10	0.00	0.18	0.00	0.09	0	31.00
11.300	0.10	0.00	0.20	0.00	0.10	0	31.00
11.350	0.11	0.00	0.21	0.00	0.10	0	31.00
11.400	0.11	0.01	0.22	0.00	0.10	10	31.00
11.450	0.12	0.03	0.24	0.00	0.10	12	31.00
11.500	0.12	0.07	0.28	0.00	0.10	16	31.01
11.550	0.15	0.13	0.34	0.00	0.10	21	31.01
11.600	0.17	0.25	0.45	0.00	0.10	31	31.01
11.650	0.22	0.43	0.64	0.00	0.10	48	31.02
11.700	0.27	0.72	0.92	0.00	0.10	74	31.03
11.750	0.33	1.11	1.32	0.00	0.10	109	31.04
11.800	0.38	1.61	1.82	0.00	0.10	154	31.06

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
11.850	0.44	2.23	2.44	0.00	0.10	210	31.08
11.900	0.50	2.96	3.17	0.00	0.10	276	31.10
11.950	0.72	3.97	4.18	0.00	0.10	367	31.13
12.000	0.98	5.46	5.67	0.00	0.10	501	31.18
12.050	1.06	7.30	7.50	0.00	0.10	666	31.24
12.100	1.09	9.24	9.45	0.00	0.10	841	31.31
12.150	0.90	11.03	11.24	0.00	0.10	1,002	31.36
12.200	0.65	12.38	12.58	0.00	0.10	1,123	31.41
12.250	0.55	13.37	13.58	0.00	0.10	1,212	31.44
12.300	0.48	14.18	14.39	0.00	0.10	1,286	31.47
12.350	0.42	14.87	15.08	0.00	0.10	1,348	31.49
12.400	0.36	15.44	15.65	0.00	0.10	1,399	31.51
12.450	0.30	15.89	16.10	0.00	0.10	1,440	31.52
12.500	0.24	16.23	16.43	0.00	0.10	1,470	31.53
12.550	0.20	16.46	16.67	0.00	0.10	1,491	31.54
12.600	0.17	16.62	16.83	0.00	0.10	1,505	31.55
12.650	0.15	16.73	16.94	0.00	0.10	1,515	31.55
12.700	0.15	16.83	17.03	0.00	0.10	1,524	31.55
12.750	0.14	16.90	17.11	0.00	0.10	1,531	31.56
12.800	0.13	16.97	17.18	0.00	0.10	1,537	31.56
12.850	0.13	17.02	17.23	0.00	0.10	1,541	31.56
12.900	0.12	17.06	17.27	0.00	0.10	1,545	31.56
12.950	0.11	17.09	17.30	0.00	0.10	1,548	31.56
13.000	0.11	17.11	17.31	0.00	0.10	1,549	31.56
13.050	0.10	17.11	17.32	0.00	0.10	1,549	31.56
13.100	0.10	17.11	17.32	0.00	0.10	1,549	31.56
13.150	0.10	17.10	17.31	0.00	0.10	1,548	31.56
13.200	0.10	17.08	17.29	0.00	0.10	1,547	31.56
13.250	0.09	17.07	17.27	0.00	0.10	1,545	31.56
13.300	0.09	17.05	17.25	0.00	0.10	1,543	31.56
13.350	0.09	17.02	17.23	0.00	0.10	1,541	31.56
13.400	0.09	17.00	17.20	0.00	0.10	1,539	31.56
13.450	0.09	16.96	17.17	0.00	0.10	1,536	31.56
13.500	0.09	16.93	17.14	0.00	0.10	1,533	31.56
13.550	0.08	16.89	17.10	0.00	0.10	1,530	31.56
13.600	0.08	16.85	17.06	0.00	0.10	1,526	31.56
13.650	0.08	16.81	17.02	0.00	0.10	1,522	31.55
13.700	0.08	16.76	16.97	0.00	0.10	1,518	31.55
13.750	0.08	16.72	16.92	0.00	0.10	1,514	31.55
13.800	0.08	16.66	16.87	0.00	0.10	1,509	31.55
13.850	0.08	16.61	16.81	0.00	0.10	1,504	31.55
13.900	0.07	16.55	16.75	0.00	0.10	1,499	31.55

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
13.950	0.07	16.48	16.69	0.00	0.10	1,493	31.54
14.000	0.07	16.42	16.63	0.00	0.10	1,487	31.54
14.050	0.07	16.35	16.56	0.00	0.10	1,481	31.54
14.100	0.07	16.28	16.48	0.00	0.10	1,474	31.54
14.150	0.07	16.20	16.41	0.00	0.10	1,468	31.53
14.200	0.07	16.13	16.34	0.00	0.10	1,461	31.53
14.250	0.07	16.05	16.26	0.00	0.10	1,454	31.53
14.300	0.06	15.97	16.18	0.00	0.10	1,447	31.53
14.350	0.06	15.89	16.10	0.00	0.10	1,440	31.52
14.400	0.06	15.81	16.02	0.00	0.10	1,432	31.52
14.450	0.06	15.73	15.93	0.00	0.10	1,425	31.52
14.500	0.06	15.64	15.85	0.00	0.10	1,417	31.52
14.550	0.06	15.56	15.76	0.00	0.10	1,409	31.51
14.600	0.06	15.47	15.68	0.00	0.10	1,401	31.51
14.650	0.06	15.38	15.59	0.00	0.10	1,393	31.51
14.700	0.06	15.29	15.49	0.00	0.10	1,385	31.50
14.750	0.06	15.19	15.40	0.00	0.10	1,377	31.50
14.800	0.06	15.10	15.31	0.00	0.10	1,368	31.50
14.850	0.06	15.00	15.21	0.00	0.10	1,360	31.49
14.900	0.05	14.91	15.11	0.00	0.10	1,351	31.49
14.950	0.05	14.81	15.02	0.00	0.10	1,342	31.49
15.000	0.05	14.71	14.91	0.00	0.10	1,333	31.49
15.050	0.05	14.60	14.81	0.00	0.10	1,324	31.48
15.100	0.05	14.50	14.71	0.00	0.10	1,314	31.48
15.150	0.05	14.40	14.60	0.00	0.10	1,305	31.47
15.200	0.05	14.29	14.50	0.00	0.10	1,295	31.47
15.250	0.05	14.18	14.39	0.00	0.10	1,286	31.47
15.300	0.05	14.07	14.28	0.00	0.10	1,276	31.46
15.350	0.05	13.96	14.17	0.00	0.10	1,266	31.46
15.400	0.05	13.85	14.05	0.00	0.10	1,255	31.46
15.450	0.05	13.73	13.94	0.00	0.10	1,245	31.45
15.500	0.05	13.61	13.82	0.00	0.10	1,235	31.45
15.550	0.04	13.50	13.70	0.00	0.10	1,224	31.45
15.600	0.04	13.38	13.58	0.00	0.10	1,213	31.44
15.650	0.04	13.25	13.46	0.00	0.10	1,202	31.44
15.700	0.04	13.13	13.34	0.00	0.10	1,191	31.43
15.750	0.04	13.01	13.22	0.00	0.10	1,180	31.43
15.800	0.04	12.88	13.09	0.00	0.10	1,169	31.43
15.850	0.04	12.75	12.96	0.00	0.10	1,157	31.42
15.900	0.04	12.62	12.83	0.00	0.10	1,146	31.42
15.950	0.04	12.49	12.70	0.00	0.10	1,134	31.41
16.000	0.04	12.36	12.57	0.00	0.10	1,122	31.41

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.050	0.04	12.23	12.44	0.00	0.10	1,110	31.40
16.100	0.04	12.09	12.30	0.00	0.10	1,098	31.40
16.150	0.04	11.96	12.17	0.00	0.10	1,086	31.40
16.200	0.04	11.82	12.03	0.00	0.10	1,073	31.39
16.250	0.04	11.68	11.89	0.00	0.10	1,061	31.39
16.300	0.03	11.54	11.75	0.00	0.10	1,048	31.38
16.350	0.03	11.41	11.61	0.00	0.10	1,036	31.38
16.400	0.03	11.27	11.47	0.00	0.10	1,023	31.37
16.450	0.03	11.13	11.33	0.00	0.10	1,011	31.37
16.500	0.03	10.99	11.19	0.00	0.10	998	31.36
16.550	0.03	10.84	11.05	0.00	0.10	985	31.36
16.600	0.03	10.70	10.91	0.00	0.10	972	31.35
16.650	0.03	10.56	10.77	0.00	0.10	960	31.35
16.700	0.03	10.41	10.62	0.00	0.10	947	31.34
16.750	0.03	10.27	10.48	0.00	0.10	934	31.34
16.800	0.03	10.13	10.33	0.00	0.10	921	31.34
16.850	0.03	9.98	10.19	0.00	0.10	907	31.33
16.900	0.03	9.83	10.04	0.00	0.10	894	31.33
16.950	0.03	9.69	9.89	0.00	0.10	881	31.32
17.000	0.03	9.54	9.75	0.00	0.10	868	31.32
17.050	0.03	9.39	9.60	0.00	0.10	854	31.31
17.100	0.03	9.24	9.45	0.00	0.10	841	31.31
17.150	0.03	9.09	9.30	0.00	0.10	827	31.30
17.200	0.03	8.94	9.15	0.00	0.10	814	31.30
17.250	0.03	8.79	9.00	0.00	0.10	800	31.29
17.300	0.03	8.64	8.84	0.00	0.10	787	31.29
17.350	0.03	8.48	8.69	0.00	0.10	773	31.28
17.400	0.03	8.33	8.54	0.00	0.10	759	31.28
17.450	0.03	8.18	8.38	0.00	0.10	745	31.27
17.500	0.03	8.02	8.23	0.00	0.10	731	31.27
17.550	0.03	7.87	8.07	0.00	0.10	717	31.26
17.600	0.03	7.71	7.92	0.00	0.10	703	31.26
17.650	0.03	7.55	7.76	0.00	0.10	689	31.25
17.700	0.03	7.39	7.60	0.00	0.10	675	31.25
17.750	0.02	7.24	7.44	0.00	0.10	661	31.24
17.800	0.02	7.08	7.29	0.00	0.10	646	31.24
17.850	0.02	6.92	7.13	0.00	0.10	632	31.23
17.900	0.02	6.76	6.97	0.00	0.10	618	31.22
17.950	0.02	6.60	6.80	0.00	0.10	603	31.22
18.000	0.02	6.43	6.64	0.00	0.10	588	31.21
18.050	0.02	6.27	6.48	0.00	0.10	574	31.21
18.100	0.02	6.11	6.32	0.00	0.10	559	31.20

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.150	0.02	5.95	6.15	0.00	0.10	544	31.20
18.200	0.02	5.78	5.99	0.00	0.10	530	31.19
18.250	0.02	5.62	5.83	0.00	0.10	515	31.19
18.300	0.02	5.45	5.66	0.00	0.10	500	31.18
18.350	0.02	5.29	5.50	0.00	0.10	485	31.18
18.400	0.02	5.13	5.33	0.00	0.10	471	31.17
18.450	0.02	4.96	5.17	0.00	0.10	456	31.17
18.500	0.02	4.80	5.00	0.00	0.10	441	31.16
18.550	0.02	4.63	4.84	0.00	0.10	426	31.16
18.600	0.02	4.47	4.67	0.00	0.10	411	31.15
18.650	0.02	4.30	4.51	0.00	0.10	396	31.14
18.700	0.02	4.14	4.34	0.00	0.10	382	31.14
18.750	0.02	3.97	4.18	0.00	0.10	367	31.13
18.800	0.02	3.80	4.01	0.00	0.10	352	31.13
18.850	0.02	3.64	3.85	0.00	0.10	337	31.12
18.900	0.02	3.47	3.68	0.00	0.10	322	31.12
18.950	0.02	3.30	3.51	0.00	0.10	307	31.11
19.000	0.02	3.14	3.35	0.00	0.10	292	31.11
19.050	0.02	2.97	3.18	0.00	0.10	277	31.10
19.100	0.02	2.80	3.01	0.00	0.10	262	31.10
19.150	0.02	2.64	2.84	0.00	0.10	247	31.09
19.200	0.02	2.47	2.68	0.00	0.10	231	31.08
19.250	0.02	2.30	2.51	0.00	0.10	216	31.08
19.300	0.02	2.13	2.34	0.00	0.10	201	31.07
19.350	0.02	1.96	2.17	0.00	0.10	186	31.07
19.400	0.02	1.80	2.00	0.00	0.10	171	31.06
19.450	0.02	1.63	1.83	0.00	0.10	156	31.06
19.500	0.02	1.46	1.67	0.00	0.10	141	31.05
19.550	0.02	1.29	1.50	0.00	0.10	125	31.05
19.600	0.02	1.12	1.33	0.00	0.10	110	31.04
19.650	0.02	0.95	1.16	0.00	0.10	95	31.03
19.700	0.02	0.78	0.99	0.00	0.10	80	31.03
19.750	0.02	0.61	0.82	0.00	0.10	64	31.02
19.800	0.02	0.44	0.65	0.00	0.10	49	31.02
19.850	0.02	0.27	0.48	0.00	0.10	34	31.01
19.900	0.02	0.10	0.31	0.00	0.10	18	31.01
19.950	0.02	0.00	0.14	0.00	0.07	0	31.00
20.000	0.02	0.00	0.04	0.00	0.02	0	31.00
20.050	0.02	0.00	0.04	0.00	0.02	0	31.00
20.100	0.02	0.00	0.04	0.00	0.02	0	31.00
20.150	0.02	0.00	0.04	0.00	0.02	0	31.00
20.200	0.02	0.00	0.04	0.00	0.02	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
20.250	0.02	0.00	0.04	0.00	0.02	0	31.00
20.300	0.02	0.00	0.04	0.00	0.02	0	31.00
20.350	0.02	0.00	0.04	0.00	0.02	0	31.00
20.400	0.02	0.00	0.04	0.00	0.02	0	31.00
20.450	0.02	0.00	0.04	0.00	0.02	0	31.00
20.500	0.02	0.00	0.04	0.00	0.02	0	31.00
20.550	0.02	0.00	0.04	0.00	0.02	0	31.00
20.600	0.02	0.00	0.04	0.00	0.02	0	31.00
20.650	0.02	0.00	0.03	0.00	0.02	0	31.00
20.700	0.02	0.00	0.03	0.00	0.02	0	31.00
20.750	0.02	0.00	0.03	0.00	0.02	0	31.00
20.800	0.02	0.00	0.03	0.00	0.02	0	31.00
20.850	0.02	0.00	0.03	0.00	0.02	0	31.00
20.900	0.02	0.00	0.03	0.00	0.02	0	31.00
20.950	0.02	0.00	0.03	0.00	0.02	0	31.00
21.000	0.02	0.00	0.03	0.00	0.02	0	31.00
21.050	0.02	0.00	0.03	0.00	0.02	0	31.00
21.100	0.02	0.00	0.03	0.00	0.02	0	31.00
21.150	0.02	0.00	0.03	0.00	0.02	0	31.00
21.200	0.02	0.00	0.03	0.00	0.02	0	31.00
21.250	0.02	0.00	0.03	0.00	0.02	0	31.00
21.300	0.02	0.00	0.03	0.00	0.02	0	31.00
21.350	0.02	0.00	0.03	0.00	0.02	0	31.00
21.400	0.02	0.00	0.03	0.00	0.02	0	31.00
21.450	0.02	0.00	0.03	0.00	0.02	0	31.00
21.500	0.02	0.00	0.03	0.00	0.02	0	31.00
21.550	0.02	0.00	0.03	0.00	0.02	0	31.00
21.600	0.02	0.00	0.03	0.00	0.02	0	31.00
21.650	0.02	0.00	0.03	0.00	0.02	0	31.00
21.700	0.02	0.00	0.03	0.00	0.02	0	31.00
21.750	0.02	0.00	0.03	0.00	0.02	0	31.00
21.800	0.02	0.00	0.03	0.00	0.02	0	31.00
21.850	0.02	0.00	0.03	0.00	0.02	0	31.00
21.900	0.02	0.00	0.03	0.00	0.02	0	31.00
21.950	0.02	0.00	0.03	0.00	0.02	0	31.00
22.000	0.02	0.00	0.03	0.00	0.02	0	31.00
22.050	0.02	0.00	0.03	0.00	0.02	0	31.00
22.100	0.02	0.00	0.03	0.00	0.02	0	31.00
22.150	0.02	0.00	0.03	0.00	0.02	0	31.00
22.200	0.01	0.00	0.03	0.00	0.02	0	31.00
22.250	0.01	0.00	0.03	0.00	0.01	0	31.00
22.300	0.01	0.00	0.03	0.00	0.01	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
22.350	0.01	0.00	0.03	0.00	0.01	0	31.00
22.400	0.01	0.00	0.03	0.00	0.01	0	31.00
22.450	0.01	0.00	0.03	0.00	0.01	0	31.00
22.500	0.01	0.00	0.03	0.00	0.01	0	31.00
22.550	0.01	0.00	0.03	0.00	0.01	0	31.00
22.600	0.01	0.00	0.03	0.00	0.01	0	31.00
22.650	0.01	0.00	0.03	0.00	0.01	0	31.00
22.700	0.01	0.00	0.03	0.00	0.01	0	31.00
22.750	0.01	0.00	0.03	0.00	0.01	0	31.00
22.800	0.01	0.00	0.03	0.00	0.01	0	31.00
22.850	0.01	0.00	0.03	0.00	0.01	0	31.00
22.900	0.01	0.00	0.03	0.00	0.01	0	31.00
22.950	0.01	0.00	0.03	0.00	0.01	0	31.00
23.000	0.01	0.00	0.03	0.00	0.01	0	31.00
23.050	0.01	0.00	0.03	0.00	0.01	0	31.00
23.100	0.01	0.00	0.03	0.00	0.01	0	31.00
23.150	0.01	0.00	0.03	0.00	0.01	0	31.00
23.200	0.01	0.00	0.03	0.00	0.01	0	31.00
23.250	0.01	0.00	0.03	0.00	0.01	0	31.00
23.300	0.01	0.00	0.03	0.00	0.01	0	31.00
23.350	0.01	0.00	0.03	0.00	0.01	0	31.00
23.400	0.01	0.00	0.03	0.00	0.01	0	31.00
23.450	0.01	0.00	0.03	0.00	0.01	0	31.00
23.500	0.01	0.00	0.03	0.00	0.01	0	31.00
23.550	0.01	0.00	0.03	0.00	0.01	0	31.00
23.600	0.01	0.00	0.03	0.00	0.01	0	31.00
23.650	0.01	0.00	0.03	0.00	0.01	0	31.00
23.700	0.01	0.00	0.03	0.00	0.01	0	31.00
23.750	0.01	0.00	0.03	0.00	0.01	0	31.00
23.800	0.01	0.00	0.02	0.00	0.01	0	31.00
23.850	0.01	0.00	0.02	0.00	0.01	0	31.00
23.900	0.01	0.00	0.02	0.00	0.01	0	31.00
23.950	0.01	0.00	0.02	0.00	0.01	0	31.00
24.000	0.01	0.00	0.02	0.00	0.01	0	31.00
24.050	0.01	0.00	0.02	0.00	0.01	0	31.00
24.100	0.00	0.00	0.01	0.00	0.00	0	31.00
24.150	0.00	0.00	0.00	0.00	0.00	0	31.00
24.200	0.00	0.00	0.00	0.00	0.00	0	31.00
24.250	0.00	0.00	0.00	0.00	0.00	0	31.00
24.300	0.00	0.00	0.00	0.00	0.00	0	31.00
24.350	0.00	0.00	0.00	0.00	0.00	0	31.00
24.400	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
24.450	0.00	0.00	0.00	0.00	0.00	0	31.00
24.500	0.00	0.00	0.00	0.00	0.00	0	31.00
24.550	0.00	0.00	0.00	0.00	0.00	0	31.00
24.600	0.00	0.00	0.00	0.00	0.00	0	31.00
24.650	0.00	0.00	0.00	0.00	0.00	0	31.00
24.700	0.00	0.00	0.00	0.00	0.00	0	31.00
24.750	0.00	0.00	0.00	0.00	0.00	0	31.00
24.800	0.00	0.00	0.00	0.00	0.00	0	31.00
24.850	0.00	0.00	0.00	0.00	0.00	0	31.00
24.900	0.00	0.00	0.00	0.00	0.00	0	31.00
24.950	0.00	0.00	0.00	0.00	0.00	0	31.00
25.000	0.00	0.00	0.00	0.00	0.00	0	31.00
25.050	0.00	0.00	0.00	0.00	0.00	0	31.00
25.100	0.00	0.00	0.00	0.00	0.00	0	31.00
25.150	0.00	0.00	0.00	0.00	0.00	0	31.00
25.200	0.00	0.00	0.00	0.00	0.00	0	31.00
25.250	0.00	0.00	0.00	0.00	0.00	0	31.00
25.300	0.00	0.00	0.00	0.00	0.00	0	31.00
25.350	0.00	0.00	0.00	0.00	0.00	0	31.00
25.400	0.00	0.00	0.00	0.00	0.00	0	31.00
25.450	0.00	0.00	0.00	0.00	0.00	0	31.00
25.500	0.00	0.00	0.00	0.00	0.00	0	31.00
25.550	0.00	0.00	0.00	0.00	0.00	0	31.00
25.600	0.00	0.00	0.00	0.00	0.00	0	31.00
25.650	0.00	0.00	0.00	0.00	0.00	0	31.00
25.700	0.00	0.00	0.00	0.00	0.00	0	31.00
25.750	0.00	0.00	0.00	0.00	0.00	0	31.00
25.800	0.00	0.00	0.00	0.00	0.00	0	31.00
25.850	0.00	0.00	0.00	0.00	0.00	0	31.00
25.900	0.00	0.00	0.00	0.00	0.00	0	31.00
25.950	0.00	0.00	0.00	0.00	0.00	0	31.00
26.000	0.00	0.00	0.00	0.00	0.00	0	31.00
26.050	0.00	0.00	0.00	0.00	0.00	0	31.00
26.100	0.00	0.00	0.00	0.00	0.00	0	31.00
26.150	0.00	0.00	0.00	0.00	0.00	0	31.00
26.200	0.00	0.00	0.00	0.00	0.00	0	31.00
26.250	0.00	0.00	0.00	0.00	0.00	0	31.00
26.300	0.00	0.00	0.00	0.00	0.00	0	31.00
26.350	0.00	0.00	0.00	0.00	0.00	0	31.00
26.400	0.00	0.00	0.00	0.00	0.00	0	31.00
26.450	0.00	0.00	0.00	0.00	0.00	0	31.00
26.500	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
26.550	0.00	0.00	0.00	0.00	0.00	0	31.00
26.600	0.00	0.00	0.00	0.00	0.00	0	31.00
26.650	0.00	0.00	0.00	0.00	0.00	0	31.00
26.700	0.00	0.00	0.00	0.00	0.00	0	31.00
26.750	0.00	0.00	0.00	0.00	0.00	0	31.00
26.800	0.00	0.00	0.00	0.00	0.00	0	31.00
26.850	0.00	0.00	0.00	0.00	0.00	0	31.00
26.900	0.00	0.00	0.00	0.00	0.00	0	31.00
26.950	0.00	0.00	0.00	0.00	0.00	0	31.00
27.000	0.00	0.00	0.00	0.00	0.00	0	31.00
27.050	0.00	0.00	0.00	0.00	0.00	0	31.00
27.100	0.00	0.00	0.00	0.00	0.00	0	31.00
27.150	0.00	0.00	0.00	0.00	0.00	0	31.00
27.200	0.00	0.00	0.00	0.00	0.00	0	31.00
27.250	0.00	0.00	0.00	0.00	0.00	0	31.00
27.300	0.00	0.00	0.00	0.00	0.00	0	31.00
27.350	0.00	0.00	0.00	0.00	0.00	0	31.00
27.400	0.00	0.00	0.00	0.00	0.00	0	31.00
27.450	0.00	0.00	0.00	0.00	0.00	0	31.00
27.500	0.00	0.00	0.00	0.00	0.00	0	31.00
27.550	0.00	0.00	0.00	0.00	0.00	0	31.00
27.600	0.00	0.00	0.00	0.00	0.00	0	31.00
27.650	0.00	0.00	0.00	0.00	0.00	0	31.00
27.700	0.00	0.00	0.00	0.00	0.00	0	31.00
27.750	0.00	0.00	0.00	0.00	0.00	0	31.00
27.800	0.00	0.00	0.00	0.00	0.00	0	31.00
27.850	0.00	0.00	0.00	0.00	0.00	0	31.00
27.900	0.00	0.00	0.00	0.00	0.00	0	31.00
27.950	0.00	0.00	0.00	0.00	0.00	0	31.00
28.000	0.00	0.00	0.00	0.00	0.00	0	31.00
28.050	0.00	0.00	0.00	0.00	0.00	0	31.00
28.100	0.00	0.00	0.00	0.00	0.00	0	31.00
28.150	0.00	0.00	0.00	0.00	0.00	0	31.00
28.200	0.00	0.00	0.00	0.00	0.00	0	31.00
28.250	0.00	0.00	0.00	0.00	0.00	0	31.00
28.300	0.00	0.00	0.00	0.00	0.00	0	31.00
28.350	0.00	0.00	0.00	0.00	0.00	0	31.00
28.400	0.00	0.00	0.00	0.00	0.00	0	31.00
28.450	0.00	0.00	0.00	0.00	0.00	0	31.00
28.500	0.00	0.00	0.00	0.00	0.00	0	31.00
28.550	0.00	0.00	0.00	0.00	0.00	0	31.00
28.600	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
28.650	0.00	0.00	0.00	0.00	0.00	0	31.00
28.700	0.00	0.00	0.00	0.00	0.00	0	31.00
28.750	0.00	0.00	0.00	0.00	0.00	0	31.00
28.800	0.00	0.00	0.00	0.00	0.00	0	31.00
28.850	0.00	0.00	0.00	0.00	0.00	0	31.00
28.900	0.00	0.00	0.00	0.00	0.00	0	31.00
28.950	0.00	0.00	0.00	0.00	0.00	0	31.00
29.000	0.00	0.00	0.00	0.00	0.00	0	31.00
29.050	0.00	0.00	0.00	0.00	0.00	0	31.00
29.100	0.00	0.00	0.00	0.00	0.00	0	31.00
29.150	0.00	0.00	0.00	0.00	0.00	0	31.00
29.200	0.00	0.00	0.00	0.00	0.00	0	31.00
29.250	0.00	0.00	0.00	0.00	0.00	0	31.00
29.300	0.00	0.00	0.00	0.00	0.00	0	31.00
29.350	0.00	0.00	0.00	0.00	0.00	0	31.00
29.400	0.00	0.00	0.00	0.00	0.00	0	31.00
29.450	0.00	0.00	0.00	0.00	0.00	0	31.00
29.500	0.00	0.00	0.00	0.00	0.00	0	31.00
29.550	0.00	0.00	0.00	0.00	0.00	0	31.00
29.600	0.00	0.00	0.00	0.00	0.00	0	31.00
29.650	0.00	0.00	0.00	0.00	0.00	0	31.00
29.700	0.00	0.00	0.00	0.00	0.00	0	31.00
29.750	0.00	0.00	0.00	0.00	0.00	0	31.00
29.800	0.00	0.00	0.00	0.00	0.00	0	31.00
29.850	0.00	0.00	0.00	0.00	0.00	0	31.00
29.900	0.00	0.00	0.00	0.00	0.00	0	31.00
29.950	0.00	0.00	0.00	0.00	0.00	0	31.00
30.000	0.00	0.00	0.00	0.00	0.00	0	31.00
30.050	0.00	0.00	0.00	0.00	0.00	0	31.00
30.100	0.00	0.00	0.00	0.00	0.00	0	31.00
30.150	0.00	0.00	0.00	0.00	0.00	0	31.00
30.200	0.00	0.00	0.00	0.00	0.00	0	31.00
30.250	0.00	0.00	0.00	0.00	0.00	0	31.00
30.300	0.00	0.00	0.00	0.00	0.00	0	31.00
30.350	0.00	0.00	0.00	0.00	0.00	0	31.00
30.400	0.00	0.00	0.00	0.00	0.00	0	31.00
30.450	0.00	0.00	0.00	0.00	0.00	0	31.00
30.500	0.00	0.00	0.00	0.00	0.00	0	31.00
30.550	0.00	0.00	0.00	0.00	0.00	0	31.00
30.600	0.00	0.00	0.00	0.00	0.00	0	31.00
30.650	0.00	0.00	0.00	0.00	0.00	0	31.00
30.700	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
30.750	0.00	0.00	0.00	0.00	0.00	0	31.00
30.800	0.00	0.00	0.00	0.00	0.00	0	31.00
30.850	0.00	0.00	0.00	0.00	0.00	0	31.00
30.900	0.00	0.00	0.00	0.00	0.00	0	31.00
30.950	0.00	0.00	0.00	0.00	0.00	0	31.00
31.000	0.00	0.00	0.00	0.00	0.00	0	31.00
31.050	0.00	0.00	0.00	0.00	0.00	0	31.00
31.100	0.00	0.00	0.00	0.00	0.00	0	31.00
31.150	0.00	0.00	0.00	0.00	0.00	0	31.00
31.200	0.00	0.00	0.00	0.00	0.00	0	31.00
31.250	0.00	0.00	0.00	0.00	0.00	0	31.00
31.300	0.00	0.00	0.00	0.00	0.00	0	31.00
31.350	0.00	0.00	0.00	0.00	0.00	0	31.00
31.400	0.00	0.00	0.00	0.00	0.00	0	31.00
31.450	0.00	0.00	0.00	0.00	0.00	0	31.00
31.500	0.00	0.00	0.00	0.00	0.00	0	31.00
31.550	0.00	0.00	0.00	0.00	0.00	0	31.00
31.600	0.00	0.00	0.00	0.00	0.00	0	31.00
31.650	0.00	0.00	0.00	0.00	0.00	0	31.00
31.700	0.00	0.00	0.00	0.00	0.00	0	31.00
31.750	0.00	0.00	0.00	0.00	0.00	0	31.00
31.800	0.00	0.00	0.00	0.00	0.00	0	31.00
31.850	0.00	0.00	0.00	0.00	0.00	0	31.00
31.900	0.00	0.00	0.00	0.00	0.00	0	31.00
31.950	0.00	0.00	0.00	0.00	0.00	0	31.00
32.000	0.00	0.00	0.00	0.00	0.00	0	31.00
32.050	0.00	0.00	0.00	0.00	0.00	0	31.00
32.100	0.00	0.00	0.00	0.00	0.00	0	31.00
32.150	0.00	0.00	0.00	0.00	0.00	0	31.00
32.200	0.00	0.00	0.00	0.00	0.00	0	31.00
32.250	0.00	0.00	0.00	0.00	0.00	0	31.00
32.300	0.00	0.00	0.00	0.00	0.00	0	31.00
32.350	0.00	0.00	0.00	0.00	0.00	0	31.00
32.400	0.00	0.00	0.00	0.00	0.00	0	31.00
32.450	0.00	0.00	0.00	0.00	0.00	0	31.00
32.500	0.00	0.00	0.00	0.00	0.00	0	31.00
32.550	0.00	0.00	0.00	0.00	0.00	0	31.00
32.600	0.00	0.00	0.00	0.00	0.00	0	31.00
32.650	0.00	0.00	0.00	0.00	0.00	0	31.00
32.700	0.00	0.00	0.00	0.00	0.00	0	31.00
32.750	0.00	0.00	0.00	0.00	0.00	0	31.00
32.800	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
32.850	0.00	0.00	0.00	0.00	0.00	0	31.00
32.900	0.00	0.00	0.00	0.00	0.00	0	31.00
32.950	0.00	0.00	0.00	0.00	0.00	0	31.00
33.000	0.00	0.00	0.00	0.00	0.00	0	31.00
33.050	0.00	0.00	0.00	0.00	0.00	0	31.00
33.100	0.00	0.00	0.00	0.00	0.00	0	31.00
33.150	0.00	0.00	0.00	0.00	0.00	0	31.00
33.200	0.00	0.00	0.00	0.00	0.00	0	31.00
33.250	0.00	0.00	0.00	0.00	0.00	0	31.00
33.300	0.00	0.00	0.00	0.00	0.00	0	31.00
33.350	0.00	0.00	0.00	0.00	0.00	0	31.00
33.400	0.00	0.00	0.00	0.00	0.00	0	31.00
33.450	0.00	0.00	0.00	0.00	0.00	0	31.00
33.500	0.00	0.00	0.00	0.00	0.00	0	31.00
33.550	0.00	0.00	0.00	0.00	0.00	0	31.00
33.600	0.00	0.00	0.00	0.00	0.00	0	31.00
33.650	0.00	0.00	0.00	0.00	0.00	0	31.00
33.700	0.00	0.00	0.00	0.00	0.00	0	31.00
33.750	0.00	0.00	0.00	0.00	0.00	0	31.00
33.800	0.00	0.00	0.00	0.00	0.00	0	31.00
33.850	0.00	0.00	0.00	0.00	0.00	0	31.00
33.900	0.00	0.00	0.00	0.00	0.00	0	31.00
33.950	0.00	0.00	0.00	0.00	0.00	0	31.00
34.000	0.00	0.00	0.00	0.00	0.00	0	31.00
34.050	0.00	0.00	0.00	0.00	0.00	0	31.00
34.100	0.00	0.00	0.00	0.00	0.00	0	31.00
34.150	0.00	0.00	0.00	0.00	0.00	0	31.00
34.200	0.00	0.00	0.00	0.00	0.00	0	31.00
34.250	0.00	0.00	0.00	0.00	0.00	0	31.00
34.300	0.00	0.00	0.00	0.00	0.00	0	31.00
34.350	0.00	0.00	0.00	0.00	0.00	0	31.00
34.400	0.00	0.00	0.00	0.00	0.00	0	31.00
34.450	0.00	0.00	0.00	0.00	0.00	0	31.00
34.500	0.00	0.00	0.00	0.00	0.00	0	31.00
34.550	0.00	0.00	0.00	0.00	0.00	0	31.00
34.600	0.00	0.00	0.00	0.00	0.00	0	31.00
34.650	0.00	0.00	0.00	0.00	0.00	0	31.00
34.700	0.00	0.00	0.00	0.00	0.00	0	31.00
34.750	0.00	0.00	0.00	0.00	0.00	0	31.00
34.800	0.00	0.00	0.00	0.00	0.00	0	31.00
34.850	0.00	0.00	0.00	0.00	0.00	0	31.00
34.900	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
34.950	0.00	0.00	0.00	0.00	0.00	0	31.00
35.000	0.00	0.00	0.00	0.00	0.00	0	31.00
35.050	0.00	0.00	0.00	0.00	0.00	0	31.00
35.100	0.00	0.00	0.00	0.00	0.00	0	31.00
35.150	0.00	0.00	0.00	0.00	0.00	0	31.00
35.200	0.00	0.00	0.00	0.00	0.00	0	31.00
35.250	0.00	0.00	0.00	0.00	0.00	0	31.00
35.300	0.00	0.00	0.00	0.00	0.00	0	31.00
35.350	0.00	0.00	0.00	0.00	0.00	0	31.00
35.400	0.00	0.00	0.00	0.00	0.00	0	31.00
35.450	0.00	0.00	0.00	0.00	0.00	0	31.00
35.500	0.00	0.00	0.00	0.00	0.00	0	31.00
35.550	0.00	0.00	0.00	0.00	0.00	0	31.00
35.600	0.00	0.00	0.00	0.00	0.00	0	31.00
35.650	0.00	0.00	0.00	0.00	0.00	0	31.00
35.700	0.00	0.00	0.00	0.00	0.00	0	31.00
35.750	0.00	0.00	0.00	0.00	0.00	0	31.00
35.800	0.00	0.00	0.00	0.00	0.00	0	31.00
35.850	0.00	0.00	0.00	0.00	0.00	0	31.00
35.900	0.00	0.00	0.00	0.00	0.00	0	31.00
35.950	0.00	0.00	0.00	0.00	0.00	0	31.00
36.000	0.00	0.00	0.00	0.00	0.00	0	31.00

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.10	0.00	0.05	0	31.00
0.050	0.00	0.00	0.00	0.00	0.00	0	31.00
0.100	0.00	0.00	0.00	0.00	0.00	0	31.00
0.150	0.00	0.00	0.00	0.00	0.00	0	31.00
0.200	0.00	0.00	0.00	0.00	0.00	0	31.00
0.250	0.00	0.00	0.00	0.00	0.00	0	31.00
0.300	0.00	0.00	0.00	0.00	0.00	0	31.00
0.350	0.00	0.00	0.00	0.00	0.00	0	31.00
0.400	0.00	0.00	0.00	0.00	0.00	0	31.00
0.450	0.00	0.00	0.00	0.00	0.00	0	31.00
0.500	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.550	0.00	0.00	0.00	0.00	0.00	0	31.00
0.600	0.00	0.00	0.00	0.00	0.00	0	31.00
0.650	0.00	0.00	0.00	0.00	0.00	0	31.00
0.700	0.00	0.00	0.00	0.00	0.00	0	31.00
0.750	0.00	0.00	0.00	0.00	0.00	0	31.00
0.800	0.00	0.00	0.00	0.00	0.00	0	31.00
0.850	0.00	0.00	0.00	0.00	0.00	0	31.00
0.900	0.00	0.00	0.00	0.00	0.00	0	31.00
0.950	0.00	0.00	0.00	0.00	0.00	0	31.00
1.000	0.00	0.00	0.00	0.00	0.00	0	31.00
1.050	0.00	0.00	0.00	0.00	0.00	0	31.00
1.100	0.00	0.00	0.00	0.00	0.00	0	31.00
1.150	0.00	0.00	0.00	0.00	0.00	0	31.00
1.200	0.00	0.00	0.00	0.00	0.00	0	31.00
1.250	0.00	0.00	0.00	0.00	0.00	0	31.00
1.300	0.00	0.00	0.00	0.00	0.00	0	31.00
1.350	0.00	0.00	0.00	0.00	0.00	0	31.00
1.400	0.00	0.00	0.00	0.00	0.00	0	31.00
1.450	0.00	0.00	0.00	0.00	0.00	0	31.00
1.500	0.00	0.00	0.00	0.00	0.00	0	31.00
1.550	0.00	0.00	0.00	0.00	0.00	0	31.00
1.600	0.00	0.00	0.00	0.00	0.00	0	31.00
1.650	0.00	0.00	0.00	0.00	0.00	0	31.00
1.700	0.00	0.00	0.00	0.00	0.00	0	31.00
1.750	0.00	0.00	0.00	0.00	0.00	0	31.00
1.800	0.00	0.00	0.00	0.00	0.00	0	31.00
1.850	0.00	0.00	0.00	0.00	0.00	0	31.00
1.900	0.00	0.00	0.00	0.00	0.00	0	31.00
1.950	0.00	0.00	0.00	0.00	0.00	0	31.00
2.000	0.00	0.00	0.00	0.00	0.00	0	31.00
2.050	0.00	0.00	0.00	0.00	0.00	0	31.00
2.100	0.00	0.00	0.00	0.00	0.00	0	31.00
2.150	0.00	0.00	0.00	0.00	0.00	0	31.00
2.200	0.00	0.00	0.00	0.00	0.00	0	31.00
2.250	0.00	0.00	0.00	0.00	0.00	0	31.00
2.300	0.00	0.00	0.00	0.00	0.00	0	31.00
2.350	0.00	0.00	0.00	0.00	0.00	0	31.00
2.400	0.00	0.00	0.00	0.00	0.00	0	31.00
2.450	0.00	0.00	0.00	0.00	0.00	0	31.00
2.500	0.00	0.00	0.00	0.00	0.00	0	31.00
2.550	0.00	0.00	0.00	0.00	0.00	0	31.00
2.600	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.650	0.00	0.00	0.00	0.00	0.00	0	31.00
2.700	0.00	0.00	0.00	0.00	0.00	0	31.00
2.750	0.00	0.00	0.00	0.00	0.00	0	31.00
2.800	0.00	0.00	0.00	0.00	0.00	0	31.00
2.850	0.00	0.00	0.00	0.00	0.00	0	31.00
2.900	0.00	0.00	0.00	0.00	0.00	0	31.00
2.950	0.00	0.00	0.00	0.00	0.00	0	31.00
3.000	0.00	0.00	0.00	0.00	0.00	0	31.00
3.050	0.00	0.00	0.00	0.00	0.00	0	31.00
3.100	0.00	0.00	0.00	0.00	0.00	0	31.00
3.150	0.00	0.00	0.00	0.00	0.00	0	31.00
3.200	0.00	0.00	0.00	0.00	0.00	0	31.00
3.250	0.00	0.00	0.00	0.00	0.00	0	31.00
3.300	0.00	0.00	0.01	0.00	0.00	0	31.00
3.350	0.00	0.00	0.01	0.00	0.00	0	31.00
3.400	0.00	0.00	0.01	0.00	0.00	0	31.00
3.450	0.00	0.00	0.01	0.00	0.00	0	31.00
3.500	0.00	0.00	0.01	0.00	0.00	0	31.00
3.550	0.00	0.00	0.01	0.00	0.00	0	31.00
3.600	0.00	0.00	0.01	0.00	0.00	0	31.00
3.650	0.00	0.00	0.01	0.00	0.00	0	31.00
3.700	0.00	0.00	0.01	0.00	0.00	0	31.00
3.750	0.01	0.00	0.01	0.00	0.00	0	31.00
3.800	0.01	0.00	0.01	0.00	0.01	0	31.00
3.850	0.01	0.00	0.01	0.00	0.01	0	31.00
3.900	0.01	0.00	0.01	0.00	0.01	0	31.00
3.950	0.01	0.00	0.01	0.00	0.01	0	31.00
4.000	0.01	0.00	0.01	0.00	0.01	0	31.00
4.050	0.01	0.00	0.01	0.00	0.01	0	31.00
4.100	0.01	0.00	0.01	0.00	0.01	0	31.00
4.150	0.01	0.00	0.01	0.00	0.01	0	31.00
4.200	0.01	0.00	0.01	0.00	0.01	0	31.00
4.250	0.01	0.00	0.02	0.00	0.01	0	31.00
4.300	0.01	0.00	0.02	0.00	0.01	0	31.00
4.350	0.01	0.00	0.02	0.00	0.01	0	31.00
4.400	0.01	0.00	0.02	0.00	0.01	0	31.00
4.450	0.01	0.00	0.02	0.00	0.01	0	31.00
4.500	0.01	0.00	0.02	0.00	0.01	0	31.00
4.550	0.01	0.00	0.02	0.00	0.01	0	31.00
4.600	0.01	0.00	0.02	0.00	0.01	0	31.00
4.650	0.01	0.00	0.02	0.00	0.01	0	31.00
4.700	0.01	0.00	0.02	0.00	0.01	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.750	0.01	0.00	0.02	0.00	0.01	0	31.00
4.800	0.01	0.00	0.02	0.00	0.01	0	31.00
4.850	0.01	0.00	0.02	0.00	0.01	0	31.00
4.900	0.01	0.00	0.02	0.00	0.01	0	31.00
4.950	0.01	0.00	0.02	0.00	0.01	0	31.00
5.000	0.01	0.00	0.02	0.00	0.01	0	31.00
5.050	0.01	0.00	0.02	0.00	0.01	0	31.00
5.100	0.01	0.00	0.03	0.00	0.01	0	31.00
5.150	0.01	0.00	0.03	0.00	0.01	0	31.00
5.200	0.01	0.00	0.03	0.00	0.01	0	31.00
5.250	0.01	0.00	0.03	0.00	0.01	0	31.00
5.300	0.01	0.00	0.03	0.00	0.01	0	31.00
5.350	0.01	0.00	0.03	0.00	0.01	0	31.00
5.400	0.01	0.00	0.03	0.00	0.01	0	31.00
5.450	0.01	0.00	0.03	0.00	0.01	0	31.00
5.500	0.02	0.00	0.03	0.00	0.01	0	31.00
5.550	0.02	0.00	0.03	0.00	0.02	0	31.00
5.600	0.02	0.00	0.03	0.00	0.02	0	31.00
5.650	0.02	0.00	0.03	0.00	0.02	0	31.00
5.700	0.02	0.00	0.03	0.00	0.02	0	31.00
5.750	0.02	0.00	0.03	0.00	0.02	0	31.00
5.800	0.02	0.00	0.03	0.00	0.02	0	31.00
5.850	0.02	0.00	0.03	0.00	0.02	0	31.00
5.900	0.02	0.00	0.03	0.00	0.02	0	31.00
5.950	0.02	0.00	0.04	0.00	0.02	0	31.00
6.000	0.02	0.00	0.04	0.00	0.02	0	31.00
6.050	0.02	0.00	0.04	0.00	0.02	0	31.00
6.100	0.02	0.00	0.04	0.00	0.02	0	31.00
6.150	0.02	0.00	0.04	0.00	0.02	0	31.00
6.200	0.02	0.00	0.04	0.00	0.02	0	31.00
6.250	0.02	0.00	0.04	0.00	0.02	0	31.00
6.300	0.02	0.00	0.04	0.00	0.02	0	31.00
6.350	0.02	0.00	0.04	0.00	0.02	0	31.00
6.400	0.02	0.00	0.04	0.00	0.02	0	31.00
6.450	0.02	0.00	0.04	0.00	0.02	0	31.00
6.500	0.02	0.00	0.05	0.00	0.02	0	31.00
6.550	0.02	0.00	0.05	0.00	0.02	0	31.00
6.600	0.02	0.00	0.05	0.00	0.02	0	31.00
6.650	0.02	0.00	0.05	0.00	0.02	0	31.00
6.700	0.03	0.00	0.05	0.00	0.03	0	31.00
6.750	0.03	0.00	0.05	0.00	0.03	0	31.00
6.800	0.03	0.00	0.05	0.00	0.03	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.850	0.03	0.00	0.05	0.00	0.03	0	31.00
6.900	0.03	0.00	0.05	0.00	0.03	0	31.00
6.950	0.03	0.00	0.06	0.00	0.03	0	31.00
7.000	0.03	0.00	0.06	0.00	0.03	0	31.00
7.050	0.03	0.00	0.06	0.00	0.03	0	31.00
7.100	0.03	0.00	0.06	0.00	0.03	0	31.00
7.150	0.03	0.00	0.06	0.00	0.03	0	31.00
7.200	0.03	0.00	0.06	0.00	0.03	0	31.00
7.250	0.03	0.00	0.06	0.00	0.03	0	31.00
7.300	0.03	0.00	0.07	0.00	0.03	0	31.00
7.350	0.03	0.00	0.07	0.00	0.03	0	31.00
7.400	0.03	0.00	0.07	0.00	0.03	0	31.00
7.450	0.03	0.00	0.07	0.00	0.03	0	31.00
7.500	0.04	0.00	0.07	0.00	0.04	0	31.00
7.550	0.04	0.00	0.07	0.00	0.04	0	31.00
7.600	0.04	0.00	0.07	0.00	0.04	0	31.00
7.650	0.04	0.00	0.07	0.00	0.04	0	31.00
7.700	0.04	0.00	0.08	0.00	0.04	0	31.00
7.750	0.04	0.00	0.08	0.00	0.04	0	31.00
7.800	0.04	0.00	0.08	0.00	0.04	0	31.00
7.850	0.04	0.00	0.08	0.00	0.04	0	31.00
7.900	0.04	0.00	0.08	0.00	0.04	0	31.00
7.950	0.04	0.00	0.08	0.00	0.04	0	31.00
8.000	0.04	0.00	0.08	0.00	0.04	0	31.00
8.050	0.04	0.00	0.09	0.00	0.04	0	31.00
8.100	0.04	0.00	0.09	0.00	0.04	0	31.00
8.150	0.05	0.00	0.09	0.00	0.04	0	31.00
8.200	0.05	0.00	0.09	0.00	0.05	0	31.00
8.250	0.05	0.00	0.09	0.00	0.05	0	31.00
8.300	0.05	0.00	0.10	0.00	0.05	0	31.00
8.350	0.05	0.00	0.10	0.00	0.05	0	31.00
8.400	0.05	0.00	0.10	0.00	0.05	0	31.00
8.450	0.05	0.00	0.11	0.00	0.05	0	31.00
8.500	0.05	0.00	0.11	0.00	0.05	0	31.00
8.550	0.06	0.00	0.11	0.00	0.06	0	31.00
8.600	0.06	0.00	0.11	0.00	0.06	0	31.00
8.650	0.06	0.00	0.12	0.00	0.06	0	31.00
8.700	0.06	0.00	0.12	0.00	0.06	0	31.00
8.750	0.06	0.00	0.12	0.00	0.06	0	31.00
8.800	0.06	0.00	0.13	0.00	0.06	0	31.00
8.850	0.06	0.00	0.13	0.00	0.06	0	31.00
8.900	0.07	0.00	0.13	0.00	0.07	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.950	0.07	0.00	0.13	0.00	0.07	0	31.00
9.000	0.07	0.00	0.14	0.00	0.07	0	31.00
9.050	0.07	0.00	0.14	0.00	0.07	0	31.00
9.100	0.07	0.00	0.14	0.00	0.07	0	31.00
9.150	0.07	0.00	0.15	0.00	0.07	0	31.00
9.200	0.08	0.00	0.15	0.00	0.07	0	31.00
9.250	0.08	0.00	0.15	0.00	0.08	0	31.00
9.300	0.08	0.00	0.16	0.00	0.08	0	31.00
9.350	0.08	0.00	0.16	0.00	0.08	0	31.00
9.400	0.08	0.00	0.16	0.00	0.08	0	31.00
9.450	0.08	0.00	0.16	0.00	0.08	0	31.00
9.500	0.08	0.00	0.17	0.00	0.08	0	31.00
9.550	0.09	0.00	0.17	0.00	0.09	0	31.00
9.600	0.09	0.00	0.17	0.00	0.09	0	31.00
9.650	0.09	0.00	0.18	0.00	0.09	0	31.00
9.700	0.09	0.00	0.18	0.00	0.09	0	31.00
9.750	0.09	0.00	0.18	0.00	0.09	0	31.00
9.800	0.09	0.00	0.19	0.00	0.09	0	31.00
9.850	0.10	0.00	0.19	0.00	0.10	0	31.00
9.900	0.10	0.00	0.19	0.00	0.10	0	31.00
9.950	0.10	0.00	0.20	0.00	0.10	0	31.00
10.000	0.10	0.00	0.20	0.00	0.10	0	31.00
10.050	0.10	0.00	0.20	0.00	0.10	0	31.00
10.100	0.11	0.00	0.21	0.00	0.10	9	31.00
10.150	0.11	0.01	0.21	0.00	0.10	10	31.00
10.200	0.11	0.02	0.22	0.00	0.10	11	31.00
10.250	0.11	0.03	0.24	0.00	0.10	12	31.00
10.300	0.12	0.06	0.26	0.00	0.10	14	31.01
10.350	0.12	0.09	0.29	0.00	0.10	17	31.01
10.400	0.12	0.12	0.33	0.00	0.10	20	31.01
10.450	0.13	0.16	0.37	0.00	0.10	24	31.01
10.500	0.13	0.21	0.42	0.00	0.10	28	31.01
10.550	0.13	0.27	0.47	0.00	0.10	33	31.01
10.600	0.14	0.33	0.53	0.00	0.10	39	31.01
10.650	0.14	0.39	0.60	0.00	0.10	45	31.02
10.700	0.14	0.47	0.67	0.00	0.10	51	31.02
10.750	0.15	0.55	0.75	0.00	0.10	58	31.02
10.800	0.15	0.63	0.84	0.00	0.10	66	31.02
10.850	0.15	0.72	0.93	0.00	0.10	74	31.03
10.900	0.16	0.82	1.03	0.00	0.10	83	31.03
10.950	0.16	0.93	1.14	0.00	0.10	93	31.03
11.000	0.16	1.04	1.25	0.00	0.10	103	31.04

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
11.050	0.17	1.16	1.37	0.00	0.10	114	31.04
11.100	0.17	1.30	1.50	0.00	0.10	126	31.05
11.150	0.18	1.45	1.66	0.00	0.10	140	31.05
11.200	0.20	1.62	1.83	0.00	0.10	155	31.06
11.250	0.21	1.82	2.02	0.00	0.10	173	31.06
11.300	0.22	2.03	2.24	0.00	0.10	192	31.07
11.350	0.23	2.27	2.48	0.00	0.10	214	31.08
11.400	0.24	2.54	2.75	0.00	0.10	238	31.09
11.450	0.25	2.83	3.03	0.00	0.10	264	31.10
11.500	0.27	3.14	3.34	0.00	0.10	292	31.11
11.550	0.31	3.50	3.71	0.00	0.10	325	31.12
11.600	0.37	3.98	4.18	0.00	0.10	367	31.13
11.650	0.46	4.60	4.81	0.00	0.10	423	31.15
11.700	0.57	5.42	5.63	0.00	0.10	497	31.18
11.750	0.68	6.46	6.67	0.00	0.10	591	31.21
11.800	0.79	7.71	7.92	0.00	0.10	704	31.26
11.850	0.90	9.19	9.40	0.00	0.10	837	31.30
11.900	1.01	10.90	11.11	0.00	0.10	990	31.36
11.950	1.43	13.14	13.35	0.00	0.10	1,192	31.43
12.000	1.94	16.30	16.51	0.00	0.10	1,477	31.54
12.050	2.08	20.11	20.32	0.00	0.10	1,820	31.66
12.100	2.12	24.10	24.31	0.00	0.10	2,179	31.79
12.150	1.74	27.76	27.97	0.00	0.10	2,508	31.91
12.200	1.25	30.35	30.75	0.00	0.20	2,750	32.00
12.250	1.05	29.03	32.65	0.00	1.81	2,776	32.01
12.300	0.91	30.18	30.99	0.00	0.40	2,753	32.00
12.350	0.79	29.56	31.89	0.00	1.17	2,765	32.01
12.400	0.68	30.15	31.03	0.00	0.44	2,753	32.00
12.450	0.57	29.90	31.40	0.00	0.75	2,759	32.00
12.500	0.46	30.23	30.92	0.00	0.35	2,752	32.00
12.550	0.38	30.13	31.07	0.00	0.47	2,754	32.00
12.600	0.32	30.30	30.83	0.00	0.26	2,751	32.00
12.650	0.29	30.24	30.90	0.00	0.33	2,752	32.00
12.700	0.28	30.31	30.81	0.00	0.25	2,750	32.00
12.750	0.26	30.28	30.85	0.00	0.28	2,751	32.00
12.800	0.25	30.32	30.80	0.00	0.24	2,750	32.00
12.850	0.24	30.31	30.81	0.00	0.25	2,750	32.00
12.900	0.23	30.33	30.78	0.00	0.22	2,750	32.00
12.950	0.22	30.33	30.78	0.00	0.22	2,750	32.00
13.000	0.20	30.35	30.75	0.00	0.20	2,750	32.00
13.050	0.20	30.35	30.75	0.00	0.20	2,750	32.00
13.100	0.19	30.36	30.74	0.00	0.19	2,749	32.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
13.150	0.18	30.36	30.73	0.00	0.19	2,749	32.00
13.200	0.18	30.37	30.73	0.00	0.18	2,749	32.00
13.250	0.18	30.37	30.72	0.00	0.18	2,749	32.00
13.300	0.17	30.37	30.72	0.00	0.17	2,749	32.00
13.350	0.17	30.37	30.72	0.00	0.17	2,749	32.00
13.400	0.17	30.38	30.71	0.00	0.17	2,749	32.00
13.450	0.17	30.38	30.71	0.00	0.17	2,749	32.00
13.500	0.16	30.38	30.71	0.00	0.16	2,749	32.00
13.550	0.16	30.38	30.70	0.00	0.16	2,749	32.00
13.600	0.16	30.39	30.70	0.00	0.16	2,749	32.00
13.650	0.15	30.39	30.70	0.00	0.15	2,749	32.00
13.700	0.15	30.39	30.69	0.00	0.15	2,749	32.00
13.750	0.15	30.39	30.69	0.00	0.15	2,749	32.00
13.800	0.14	30.40	30.68	0.00	0.14	2,749	32.00
13.850	0.14	30.40	30.68	0.00	0.14	2,749	32.00
13.900	0.14	30.40	30.68	0.00	0.14	2,749	32.00
13.950	0.13	30.40	30.67	0.00	0.13	2,748	32.00
14.000	0.13	30.41	30.67	0.00	0.13	2,748	32.00
14.050	0.13	30.41	30.67	0.00	0.13	2,748	32.00
14.100	0.13	30.41	30.66	0.00	0.13	2,748	32.00
14.150	0.12	30.41	30.66	0.00	0.12	2,748	32.00
14.200	0.12	30.41	30.66	0.00	0.12	2,748	32.00
14.250	0.12	30.41	30.66	0.00	0.12	2,748	32.00
14.300	0.12	30.42	30.66	0.00	0.12	2,748	32.00
14.350	0.12	30.42	30.65	0.00	0.12	2,748	32.00
14.400	0.12	30.42	30.65	0.00	0.12	2,748	32.00
14.450	0.12	30.42	30.65	0.00	0.12	2,748	32.00
14.500	0.11	30.42	30.65	0.00	0.11	2,748	32.00
14.550	0.11	30.42	30.65	0.00	0.11	2,748	32.00
14.600	0.11	30.42	30.65	0.00	0.11	2,748	32.00
14.650	0.11	30.42	30.64	0.00	0.11	2,748	32.00
14.700	0.11	30.43	30.64	0.00	0.11	2,748	32.00
14.750	0.11	30.43	30.64	0.00	0.11	2,748	32.00
14.800	0.11	30.43	30.64	0.00	0.11	2,748	32.00
14.850	0.10	30.43	30.64	0.00	0.10	2,748	32.00
14.900	0.10	30.43	30.64	0.00	0.10	2,748	32.00
14.950	0.10	30.42	30.63	0.00	0.10	2,747	32.00
15.000	0.10	30.42	30.62	0.00	0.10	2,747	32.00
15.050	0.10	30.41	30.61	0.00	0.10	2,746	32.00
15.100	0.10	30.39	30.60	0.00	0.10	2,745	32.00
15.150	0.10	30.38	30.58	0.00	0.10	2,743	32.00
15.200	0.09	30.36	30.56	0.00	0.10	2,741	32.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
15.250	0.09	30.33	30.54	0.00	0.10	2,739	32.00
15.300	0.09	30.31	30.52	0.00	0.10	2,737	32.00
15.350	0.09	30.28	30.49	0.00	0.10	2,735	32.00
15.400	0.09	30.25	30.46	0.00	0.10	2,732	31.99
15.450	0.09	30.21	30.42	0.00	0.10	2,729	31.99
15.500	0.08	30.18	30.38	0.00	0.10	2,725	31.99
15.550	0.08	30.14	30.34	0.00	0.10	2,722	31.99
15.600	0.08	30.09	30.30	0.00	0.10	2,718	31.99
15.650	0.08	30.05	30.26	0.00	0.10	2,714	31.99
15.700	0.08	30.00	30.21	0.00	0.10	2,709	31.99
15.750	0.08	29.95	30.15	0.00	0.10	2,704	31.98
15.800	0.08	29.89	30.10	0.00	0.10	2,700	31.98
15.850	0.07	29.83	30.04	0.00	0.10	2,694	31.98
15.900	0.07	29.77	29.98	0.00	0.10	2,689	31.98
15.950	0.07	29.71	29.92	0.00	0.10	2,683	31.98
16.000	0.07	29.64	29.85	0.00	0.10	2,677	31.97
16.050	0.07	29.57	29.78	0.00	0.10	2,671	31.97
16.100	0.07	29.50	29.71	0.00	0.10	2,664	31.97
16.150	0.07	29.42	29.63	0.00	0.10	2,658	31.97
16.200	0.07	29.35	29.56	0.00	0.10	2,651	31.96
16.250	0.07	29.27	29.48	0.00	0.10	2,644	31.96
16.300	0.06	29.19	29.40	0.00	0.10	2,637	31.96
16.350	0.06	29.12	29.32	0.00	0.10	2,630	31.96
16.400	0.06	29.03	29.24	0.00	0.10	2,622	31.95
16.450	0.06	28.95	29.16	0.00	0.10	2,615	31.95
16.500	0.06	28.87	29.08	0.00	0.10	2,608	31.95
16.550	0.06	28.79	28.99	0.00	0.10	2,600	31.95
16.600	0.06	28.70	28.91	0.00	0.10	2,592	31.94
16.650	0.06	28.61	28.82	0.00	0.10	2,584	31.94
16.700	0.06	28.52	28.73	0.00	0.10	2,577	31.94
16.750	0.06	28.43	28.64	0.00	0.10	2,568	31.93
16.800	0.06	28.34	28.55	0.00	0.10	2,560	31.93
16.850	0.06	28.25	28.46	0.00	0.10	2,552	31.93
16.900	0.06	28.16	28.37	0.00	0.10	2,544	31.93
16.950	0.06	28.06	28.27	0.00	0.10	2,535	31.92
17.000	0.06	27.97	28.17	0.00	0.10	2,526	31.92
17.050	0.05	27.87	28.08	0.00	0.10	2,518	31.92
17.100	0.05	27.77	27.98	0.00	0.10	2,509	31.91
17.150	0.05	27.67	27.88	0.00	0.10	2,500	31.91
17.200	0.05	27.57	27.78	0.00	0.10	2,491	31.91
17.250	0.05	27.47	27.67	0.00	0.10	2,481	31.90
17.300	0.05	27.36	27.57	0.00	0.10	2,472	31.90

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
17.350	0.05	27.26	27.47	0.00	0.10	2,463	31.90
17.400	0.05	27.15	27.36	0.00	0.10	2,453	31.89
17.450	0.05	27.04	27.25	0.00	0.10	2,443	31.89
17.500	0.05	26.93	27.14	0.00	0.10	2,433	31.89
17.550	0.05	26.82	27.03	0.00	0.10	2,423	31.88
17.600	0.05	26.71	26.92	0.00	0.10	2,413	31.88
17.650	0.05	26.60	26.81	0.00	0.10	2,403	31.87
17.700	0.05	26.48	26.69	0.00	0.10	2,393	31.87
17.750	0.05	26.37	26.58	0.00	0.10	2,383	31.87
17.800	0.05	26.25	26.46	0.00	0.10	2,372	31.86
17.850	0.04	26.13	26.34	0.00	0.10	2,361	31.86
17.900	0.04	26.01	26.22	0.00	0.10	2,351	31.86
17.950	0.04	25.89	26.10	0.00	0.10	2,340	31.85
18.000	0.04	25.77	25.98	0.00	0.10	2,329	31.85
18.050	0.04	25.65	25.86	0.00	0.10	2,318	31.84
18.100	0.04	25.52	25.73	0.00	0.10	2,306	31.84
18.150	0.04	25.40	25.61	0.00	0.10	2,295	31.84
18.200	0.04	25.27	25.48	0.00	0.10	2,284	31.83
18.250	0.04	25.15	25.35	0.00	0.10	2,273	31.83
18.300	0.04	25.02	25.23	0.00	0.10	2,261	31.82
18.350	0.04	24.89	25.10	0.00	0.10	2,250	31.82
18.400	0.04	24.77	24.98	0.00	0.10	2,238	31.81
18.450	0.04	24.64	24.85	0.00	0.10	2,227	31.81
18.500	0.04	24.51	24.72	0.00	0.10	2,215	31.81
18.550	0.04	24.38	24.59	0.00	0.10	2,204	31.80
18.600	0.04	24.26	24.46	0.00	0.10	2,192	31.80
18.650	0.04	24.13	24.33	0.00	0.10	2,181	31.79
18.700	0.04	24.00	24.21	0.00	0.10	2,169	31.79
18.750	0.04	23.87	24.08	0.00	0.10	2,157	31.79
18.800	0.04	23.74	23.95	0.00	0.10	2,146	31.78
18.850	0.04	23.61	23.82	0.00	0.10	2,134	31.78
18.900	0.04	23.48	23.68	0.00	0.10	2,122	31.77
18.950	0.04	23.35	23.55	0.00	0.10	2,110	31.77
19.000	0.04	23.21	23.42	0.00	0.10	2,099	31.76
19.050	0.04	23.08	23.29	0.00	0.10	2,087	31.76
19.100	0.04	22.95	23.16	0.00	0.10	2,075	31.76
19.150	0.04	22.82	23.02	0.00	0.10	2,063	31.75
19.200	0.04	22.68	22.89	0.00	0.10	2,051	31.75
19.250	0.04	22.55	22.76	0.00	0.10	2,039	31.74
19.300	0.04	22.42	22.62	0.00	0.10	2,027	31.74
19.350	0.04	22.28	22.49	0.00	0.10	2,015	31.73
19.400	0.04	22.15	22.35	0.00	0.10	2,003	31.73

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
19.450	0.04	22.01	22.22	0.00	0.10	1,990	31.72
19.500	0.04	21.88	22.08	0.00	0.10	1,978	31.72
19.550	0.04	21.74	21.95	0.00	0.10	1,966	31.72
19.600	0.04	21.60	21.81	0.00	0.10	1,954	31.71
19.650	0.04	21.47	21.68	0.00	0.10	1,941	31.71
19.700	0.04	21.33	21.54	0.00	0.10	1,929	31.70
19.750	0.04	21.19	21.40	0.00	0.10	1,917	31.70
19.800	0.04	21.05	21.26	0.00	0.10	1,904	31.69
19.850	0.03	20.92	21.12	0.00	0.10	1,892	31.69
19.900	0.03	20.78	20.99	0.00	0.10	1,879	31.68
19.950	0.03	20.64	20.85	0.00	0.10	1,867	31.68
20.000	0.03	20.50	20.71	0.00	0.10	1,854	31.67
20.050	0.03	20.36	20.57	0.00	0.10	1,842	31.67
20.100	0.03	20.22	20.43	0.00	0.10	1,829	31.67
20.150	0.03	20.08	20.29	0.00	0.10	1,816	31.66
20.200	0.03	19.94	20.15	0.00	0.10	1,804	31.66
20.250	0.03	19.80	20.01	0.00	0.10	1,791	31.65
20.300	0.03	19.66	19.86	0.00	0.10	1,778	31.65
20.350	0.03	19.51	19.72	0.00	0.10	1,766	31.64
20.400	0.03	19.37	19.58	0.00	0.10	1,753	31.64
20.450	0.03	19.23	19.44	0.00	0.10	1,740	31.63
20.500	0.03	19.09	19.30	0.00	0.10	1,727	31.63
20.550	0.03	18.95	19.15	0.00	0.10	1,714	31.62
20.600	0.03	18.80	19.01	0.00	0.10	1,702	31.62
20.650	0.03	18.66	18.87	0.00	0.10	1,689	31.61
20.700	0.03	18.51	18.72	0.00	0.10	1,676	31.61
20.750	0.03	18.37	18.58	0.00	0.10	1,663	31.61
20.800	0.03	18.23	18.43	0.00	0.10	1,650	31.60
20.850	0.03	18.08	18.29	0.00	0.10	1,637	31.60
20.900	0.03	17.94	18.15	0.00	0.10	1,624	31.59
20.950	0.03	17.79	18.00	0.00	0.10	1,611	31.59
21.000	0.03	17.65	17.85	0.00	0.10	1,598	31.58
21.050	0.03	17.50	17.71	0.00	0.10	1,584	31.58
21.100	0.03	17.36	17.56	0.00	0.10	1,571	31.57
21.150	0.03	17.21	17.42	0.00	0.10	1,558	31.57
21.200	0.03	17.06	17.27	0.00	0.10	1,545	31.56
21.250	0.03	16.92	17.12	0.00	0.10	1,532	31.56
21.300	0.03	16.77	16.98	0.00	0.10	1,518	31.55
21.350	0.03	16.62	16.83	0.00	0.10	1,505	31.55
21.400	0.03	16.47	16.68	0.00	0.10	1,492	31.54
21.450	0.03	16.32	16.53	0.00	0.10	1,479	31.54
21.500	0.03	16.18	16.38	0.00	0.10	1,465	31.53

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.550	0.03	16.03	16.24	0.00	0.10	1,452	31.53
21.600	0.03	15.88	16.09	0.00	0.10	1,438	31.52
21.650	0.03	15.73	15.94	0.00	0.10	1,425	31.52
21.700	0.03	15.58	15.79	0.00	0.10	1,412	31.51
21.750	0.03	15.43	15.64	0.00	0.10	1,398	31.51
21.800	0.03	15.28	15.49	0.00	0.10	1,385	31.50
21.850	0.03	15.13	15.34	0.00	0.10	1,371	31.50
21.900	0.03	14.98	15.19	0.00	0.10	1,357	31.49
21.950	0.03	14.83	15.04	0.00	0.10	1,344	31.49
22.000	0.03	14.68	14.88	0.00	0.10	1,330	31.48
22.050	0.03	14.53	14.73	0.00	0.10	1,317	31.48
22.100	0.03	14.37	14.58	0.00	0.10	1,303	31.47
22.150	0.03	14.22	14.43	0.00	0.10	1,289	31.47
22.200	0.03	14.07	14.28	0.00	0.10	1,276	31.46
22.250	0.03	13.92	14.12	0.00	0.10	1,262	31.46
22.300	0.03	13.76	13.97	0.00	0.10	1,248	31.45
22.350	0.03	13.61	13.82	0.00	0.10	1,234	31.45
22.400	0.03	13.46	13.66	0.00	0.10	1,220	31.44
22.450	0.03	13.30	13.51	0.00	0.10	1,207	31.44
22.500	0.03	13.15	13.36	0.00	0.10	1,193	31.43
22.550	0.03	12.99	13.20	0.00	0.10	1,179	31.43
22.600	0.03	12.84	13.05	0.00	0.10	1,165	31.42
22.650	0.03	12.68	12.89	0.00	0.10	1,151	31.42
22.700	0.03	12.53	12.74	0.00	0.10	1,137	31.41
22.750	0.03	12.37	12.58	0.00	0.10	1,123	31.41
22.800	0.03	12.22	12.42	0.00	0.10	1,109	31.40
22.850	0.03	12.06	12.27	0.00	0.10	1,095	31.40
22.900	0.03	11.90	12.11	0.00	0.10	1,081	31.39
22.950	0.03	11.75	11.95	0.00	0.10	1,067	31.39
23.000	0.03	11.59	11.80	0.00	0.10	1,052	31.38
23.050	0.03	11.43	11.64	0.00	0.10	1,038	31.38
23.100	0.02	11.27	11.48	0.00	0.10	1,024	31.37
23.150	0.02	11.12	11.32	0.00	0.10	1,010	31.37
23.200	0.02	10.96	11.17	0.00	0.10	996	31.36
23.250	0.02	10.80	11.01	0.00	0.10	981	31.36
23.300	0.02	10.64	10.85	0.00	0.10	967	31.35
23.350	0.02	10.48	10.69	0.00	0.10	953	31.35
23.400	0.02	10.32	10.53	0.00	0.10	938	31.34
23.450	0.02	10.16	10.37	0.00	0.10	924	31.34
23.500	0.02	10.00	10.21	0.00	0.10	910	31.33
23.550	0.02	9.84	10.05	0.00	0.10	895	31.33
23.600	0.02	9.68	9.89	0.00	0.10	881	31.32

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.650	0.02	9.52	9.73	0.00	0.10	866	31.32
23.700	0.02	9.36	9.57	0.00	0.10	852	31.31
23.750	0.02	9.20	9.40	0.00	0.10	837	31.30
23.800	0.02	9.04	9.24	0.00	0.10	823	31.30
23.850	0.02	8.87	9.08	0.00	0.10	808	31.29
23.900	0.02	8.71	8.92	0.00	0.10	793	31.29
23.950	0.02	8.55	8.76	0.00	0.10	779	31.28
24.000	0.02	8.38	8.59	0.00	0.10	764	31.28
24.050	0.01	8.21	8.42	0.00	0.10	749	31.27
24.100	0.00	8.02	8.23	0.00	0.10	731	31.27
24.150	0.00	7.82	8.03	0.00	0.10	713	31.26
24.200	0.00	7.61	7.82	0.00	0.10	694	31.25
24.250	0.00	7.40	7.61	0.00	0.10	676	31.25
24.300	0.00	7.20	7.40	0.00	0.10	657	31.24
24.350	0.00	6.99	7.20	0.00	0.10	638	31.23
24.400	0.00	6.78	6.99	0.00	0.10	620	31.23
24.450	0.00	6.57	6.78	0.00	0.10	601	31.22
24.500	0.00	6.36	6.57	0.00	0.10	582	31.21
24.550	0.00	6.16	6.36	0.00	0.10	563	31.21
24.600	0.00	5.95	6.16	0.00	0.10	545	31.20
24.650	0.00	5.74	5.95	0.00	0.10	526	31.19
24.700	0.00	5.53	5.74	0.00	0.10	507	31.18
24.750	0.00	5.32	5.53	0.00	0.10	488	31.18
24.800	0.00	5.12	5.32	0.00	0.10	470	31.17
24.850	0.00	4.91	5.12	0.00	0.10	451	31.16
24.900	0.00	4.70	4.91	0.00	0.10	432	31.16
24.950	0.00	4.49	4.70	0.00	0.10	414	31.15
25.000	0.00	4.28	4.49	0.00	0.10	395	31.14
25.050	0.00	4.08	4.28	0.00	0.10	376	31.14
25.100	0.00	3.87	4.08	0.00	0.10	357	31.13
25.150	0.00	3.66	3.87	0.00	0.10	339	31.12
25.200	0.00	3.45	3.66	0.00	0.10	320	31.12
25.250	0.00	3.24	3.45	0.00	0.10	301	31.11
25.300	0.00	3.04	3.24	0.00	0.10	283	31.10
25.350	0.00	2.83	3.04	0.00	0.10	264	31.10
25.400	0.00	2.62	2.83	0.00	0.10	245	31.09
25.450	0.00	2.41	2.62	0.00	0.10	226	31.08
25.500	0.00	2.20	2.41	0.00	0.10	208	31.08
25.550	0.00	2.00	2.20	0.00	0.10	189	31.07
25.600	0.00	1.79	2.00	0.00	0.10	170	31.06
25.650	0.00	1.58	1.79	0.00	0.10	152	31.06
25.700	0.00	1.37	1.58	0.00	0.10	133	31.05

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.750	0.00	1.16	1.37	0.00	0.10	114	31.04
25.800	0.00	0.96	1.16	0.00	0.10	95	31.03
25.850	0.00	0.75	0.96	0.00	0.10	77	31.03
25.900	0.00	0.54	0.75	0.00	0.10	58	31.02
25.950	0.00	0.33	0.54	0.00	0.10	39	31.01
26.000	0.00	0.12	0.33	0.00	0.10	20	31.01
26.050	0.00	0.00	0.12	0.00	0.06	0	31.00
26.100	0.00	0.00	0.00	0.00	0.00	0	31.00
26.150	0.00	0.00	0.00	0.00	0.00	0	31.00
26.200	0.00	0.00	0.00	0.00	0.00	0	31.00
26.250	0.00	0.00	0.00	0.00	0.00	0	31.00
26.300	0.00	0.00	0.00	0.00	0.00	0	31.00
26.350	0.00	0.00	0.00	0.00	0.00	0	31.00
26.400	0.00	0.00	0.00	0.00	0.00	0	31.00
26.450	0.00	0.00	0.00	0.00	0.00	0	31.00
26.500	0.00	0.00	0.00	0.00	0.00	0	31.00
26.550	0.00	0.00	0.00	0.00	0.00	0	31.00
26.600	0.00	0.00	0.00	0.00	0.00	0	31.00
26.650	0.00	0.00	0.00	0.00	0.00	0	31.00
26.700	0.00	0.00	0.00	0.00	0.00	0	31.00
26.750	0.00	0.00	0.00	0.00	0.00	0	31.00
26.800	0.00	0.00	0.00	0.00	0.00	0	31.00
26.850	0.00	0.00	0.00	0.00	0.00	0	31.00
26.900	0.00	0.00	0.00	0.00	0.00	0	31.00
26.950	0.00	0.00	0.00	0.00	0.00	0	31.00
27.000	0.00	0.00	0.00	0.00	0.00	0	31.00
27.050	0.00	0.00	0.00	0.00	0.00	0	31.00
27.100	0.00	0.00	0.00	0.00	0.00	0	31.00
27.150	0.00	0.00	0.00	0.00	0.00	0	31.00
27.200	0.00	0.00	0.00	0.00	0.00	0	31.00
27.250	0.00	0.00	0.00	0.00	0.00	0	31.00
27.300	0.00	0.00	0.00	0.00	0.00	0	31.00
27.350	0.00	0.00	0.00	0.00	0.00	0	31.00
27.400	0.00	0.00	0.00	0.00	0.00	0	31.00
27.450	0.00	0.00	0.00	0.00	0.00	0	31.00
27.500	0.00	0.00	0.00	0.00	0.00	0	31.00
27.550	0.00	0.00	0.00	0.00	0.00	0	31.00
27.600	0.00	0.00	0.00	0.00	0.00	0	31.00
27.650	0.00	0.00	0.00	0.00	0.00	0	31.00
27.700	0.00	0.00	0.00	0.00	0.00	0	31.00
27.750	0.00	0.00	0.00	0.00	0.00	0	31.00
27.800	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.850	0.00	0.00	0.00	0.00	0.00	0	31.00
27.900	0.00	0.00	0.00	0.00	0.00	0	31.00
27.950	0.00	0.00	0.00	0.00	0.00	0	31.00
28.000	0.00	0.00	0.00	0.00	0.00	0	31.00
28.050	0.00	0.00	0.00	0.00	0.00	0	31.00
28.100	0.00	0.00	0.00	0.00	0.00	0	31.00
28.150	0.00	0.00	0.00	0.00	0.00	0	31.00
28.200	0.00	0.00	0.00	0.00	0.00	0	31.00
28.250	0.00	0.00	0.00	0.00	0.00	0	31.00
28.300	0.00	0.00	0.00	0.00	0.00	0	31.00
28.350	0.00	0.00	0.00	0.00	0.00	0	31.00
28.400	0.00	0.00	0.00	0.00	0.00	0	31.00
28.450	0.00	0.00	0.00	0.00	0.00	0	31.00
28.500	0.00	0.00	0.00	0.00	0.00	0	31.00
28.550	0.00	0.00	0.00	0.00	0.00	0	31.00
28.600	0.00	0.00	0.00	0.00	0.00	0	31.00
28.650	0.00	0.00	0.00	0.00	0.00	0	31.00
28.700	0.00	0.00	0.00	0.00	0.00	0	31.00
28.750	0.00	0.00	0.00	0.00	0.00	0	31.00
28.800	0.00	0.00	0.00	0.00	0.00	0	31.00
28.850	0.00	0.00	0.00	0.00	0.00	0	31.00
28.900	0.00	0.00	0.00	0.00	0.00	0	31.00
28.950	0.00	0.00	0.00	0.00	0.00	0	31.00
29.000	0.00	0.00	0.00	0.00	0.00	0	31.00
29.050	0.00	0.00	0.00	0.00	0.00	0	31.00
29.100	0.00	0.00	0.00	0.00	0.00	0	31.00
29.150	0.00	0.00	0.00	0.00	0.00	0	31.00
29.200	0.00	0.00	0.00	0.00	0.00	0	31.00
29.250	0.00	0.00	0.00	0.00	0.00	0	31.00
29.300	0.00	0.00	0.00	0.00	0.00	0	31.00
29.350	0.00	0.00	0.00	0.00	0.00	0	31.00
29.400	0.00	0.00	0.00	0.00	0.00	0	31.00
29.450	0.00	0.00	0.00	0.00	0.00	0	31.00
29.500	0.00	0.00	0.00	0.00	0.00	0	31.00
29.550	0.00	0.00	0.00	0.00	0.00	0	31.00
29.600	0.00	0.00	0.00	0.00	0.00	0	31.00
29.650	0.00	0.00	0.00	0.00	0.00	0	31.00
29.700	0.00	0.00	0.00	0.00	0.00	0	31.00
29.750	0.00	0.00	0.00	0.00	0.00	0	31.00
29.800	0.00	0.00	0.00	0.00	0.00	0	31.00
29.850	0.00	0.00	0.00	0.00	0.00	0	31.00
29.900	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.950	0.00	0.00	0.00	0.00	0.00	0	31.00
30.000	0.00	0.00	0.00	0.00	0.00	0	31.00
30.050	0.00	0.00	0.00	0.00	0.00	0	31.00
30.100	0.00	0.00	0.00	0.00	0.00	0	31.00
30.150	0.00	0.00	0.00	0.00	0.00	0	31.00
30.200	0.00	0.00	0.00	0.00	0.00	0	31.00
30.250	0.00	0.00	0.00	0.00	0.00	0	31.00
30.300	0.00	0.00	0.00	0.00	0.00	0	31.00
30.350	0.00	0.00	0.00	0.00	0.00	0	31.00
30.400	0.00	0.00	0.00	0.00	0.00	0	31.00
30.450	0.00	0.00	0.00	0.00	0.00	0	31.00
30.500	0.00	0.00	0.00	0.00	0.00	0	31.00
30.550	0.00	0.00	0.00	0.00	0.00	0	31.00
30.600	0.00	0.00	0.00	0.00	0.00	0	31.00
30.650	0.00	0.00	0.00	0.00	0.00	0	31.00
30.700	0.00	0.00	0.00	0.00	0.00	0	31.00
30.750	0.00	0.00	0.00	0.00	0.00	0	31.00
30.800	0.00	0.00	0.00	0.00	0.00	0	31.00
30.850	0.00	0.00	0.00	0.00	0.00	0	31.00
30.900	0.00	0.00	0.00	0.00	0.00	0	31.00
30.950	0.00	0.00	0.00	0.00	0.00	0	31.00
31.000	0.00	0.00	0.00	0.00	0.00	0	31.00
31.050	0.00	0.00	0.00	0.00	0.00	0	31.00
31.100	0.00	0.00	0.00	0.00	0.00	0	31.00
31.150	0.00	0.00	0.00	0.00	0.00	0	31.00
31.200	0.00	0.00	0.00	0.00	0.00	0	31.00
31.250	0.00	0.00	0.00	0.00	0.00	0	31.00
31.300	0.00	0.00	0.00	0.00	0.00	0	31.00
31.350	0.00	0.00	0.00	0.00	0.00	0	31.00
31.400	0.00	0.00	0.00	0.00	0.00	0	31.00
31.450	0.00	0.00	0.00	0.00	0.00	0	31.00
31.500	0.00	0.00	0.00	0.00	0.00	0	31.00
31.550	0.00	0.00	0.00	0.00	0.00	0	31.00
31.600	0.00	0.00	0.00	0.00	0.00	0	31.00
31.650	0.00	0.00	0.00	0.00	0.00	0	31.00
31.700	0.00	0.00	0.00	0.00	0.00	0	31.00
31.750	0.00	0.00	0.00	0.00	0.00	0	31.00
31.800	0.00	0.00	0.00	0.00	0.00	0	31.00
31.850	0.00	0.00	0.00	0.00	0.00	0	31.00
31.900	0.00	0.00	0.00	0.00	0.00	0	31.00
31.950	0.00	0.00	0.00	0.00	0.00	0	31.00
32.000	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
32.050	0.00	0.00	0.00	0.00	0.00	0	31.00
32.100	0.00	0.00	0.00	0.00	0.00	0	31.00
32.150	0.00	0.00	0.00	0.00	0.00	0	31.00
32.200	0.00	0.00	0.00	0.00	0.00	0	31.00
32.250	0.00	0.00	0.00	0.00	0.00	0	31.00
32.300	0.00	0.00	0.00	0.00	0.00	0	31.00
32.350	0.00	0.00	0.00	0.00	0.00	0	31.00
32.400	0.00	0.00	0.00	0.00	0.00	0	31.00
32.450	0.00	0.00	0.00	0.00	0.00	0	31.00
32.500	0.00	0.00	0.00	0.00	0.00	0	31.00
32.550	0.00	0.00	0.00	0.00	0.00	0	31.00
32.600	0.00	0.00	0.00	0.00	0.00	0	31.00
32.650	0.00	0.00	0.00	0.00	0.00	0	31.00
32.700	0.00	0.00	0.00	0.00	0.00	0	31.00
32.750	0.00	0.00	0.00	0.00	0.00	0	31.00
32.800	0.00	0.00	0.00	0.00	0.00	0	31.00
32.850	0.00	0.00	0.00	0.00	0.00	0	31.00
32.900	0.00	0.00	0.00	0.00	0.00	0	31.00
32.950	0.00	0.00	0.00	0.00	0.00	0	31.00
33.000	0.00	0.00	0.00	0.00	0.00	0	31.00
33.050	0.00	0.00	0.00	0.00	0.00	0	31.00
33.100	0.00	0.00	0.00	0.00	0.00	0	31.00
33.150	0.00	0.00	0.00	0.00	0.00	0	31.00
33.200	0.00	0.00	0.00	0.00	0.00	0	31.00
33.250	0.00	0.00	0.00	0.00	0.00	0	31.00
33.300	0.00	0.00	0.00	0.00	0.00	0	31.00
33.350	0.00	0.00	0.00	0.00	0.00	0	31.00
33.400	0.00	0.00	0.00	0.00	0.00	0	31.00
33.450	0.00	0.00	0.00	0.00	0.00	0	31.00
33.500	0.00	0.00	0.00	0.00	0.00	0	31.00
33.550	0.00	0.00	0.00	0.00	0.00	0	31.00
33.600	0.00	0.00	0.00	0.00	0.00	0	31.00
33.650	0.00	0.00	0.00	0.00	0.00	0	31.00
33.700	0.00	0.00	0.00	0.00	0.00	0	31.00
33.750	0.00	0.00	0.00	0.00	0.00	0	31.00
33.800	0.00	0.00	0.00	0.00	0.00	0	31.00
33.850	0.00	0.00	0.00	0.00	0.00	0	31.00
33.900	0.00	0.00	0.00	0.00	0.00	0	31.00
33.950	0.00	0.00	0.00	0.00	0.00	0	31.00
34.000	0.00	0.00	0.00	0.00	0.00	0	31.00
34.050	0.00	0.00	0.00	0.00	0.00	0	31.00
34.100	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
34.150	0.00	0.00	0.00	0.00	0.00	0	31.00
34.200	0.00	0.00	0.00	0.00	0.00	0	31.00
34.250	0.00	0.00	0.00	0.00	0.00	0	31.00
34.300	0.00	0.00	0.00	0.00	0.00	0	31.00
34.350	0.00	0.00	0.00	0.00	0.00	0	31.00
34.400	0.00	0.00	0.00	0.00	0.00	0	31.00
34.450	0.00	0.00	0.00	0.00	0.00	0	31.00
34.500	0.00	0.00	0.00	0.00	0.00	0	31.00
34.550	0.00	0.00	0.00	0.00	0.00	0	31.00
34.600	0.00	0.00	0.00	0.00	0.00	0	31.00
34.650	0.00	0.00	0.00	0.00	0.00	0	31.00
34.700	0.00	0.00	0.00	0.00	0.00	0	31.00
34.750	0.00	0.00	0.00	0.00	0.00	0	31.00
34.800	0.00	0.00	0.00	0.00	0.00	0	31.00
34.850	0.00	0.00	0.00	0.00	0.00	0	31.00
34.900	0.00	0.00	0.00	0.00	0.00	0	31.00
34.950	0.00	0.00	0.00	0.00	0.00	0	31.00
35.000	0.00	0.00	0.00	0.00	0.00	0	31.00
35.050	0.00	0.00	0.00	0.00	0.00	0	31.00
35.100	0.00	0.00	0.00	0.00	0.00	0	31.00
35.150	0.00	0.00	0.00	0.00	0.00	0	31.00
35.200	0.00	0.00	0.00	0.00	0.00	0	31.00
35.250	0.00	0.00	0.00	0.00	0.00	0	31.00
35.300	0.00	0.00	0.00	0.00	0.00	0	31.00
35.350	0.00	0.00	0.00	0.00	0.00	0	31.00
35.400	0.00	0.00	0.00	0.00	0.00	0	31.00
35.450	0.00	0.00	0.00	0.00	0.00	0	31.00
35.500	0.00	0.00	0.00	0.00	0.00	0	31.00
35.550	0.00	0.00	0.00	0.00	0.00	0	31.00
35.600	0.00	0.00	0.00	0.00	0.00	0	31.00
35.650	0.00	0.00	0.00	0.00	0.00	0	31.00
35.700	0.00	0.00	0.00	0.00	0.00	0	31.00
35.750	0.00	0.00	0.00	0.00	0.00	0	31.00
35.800	0.00	0.00	0.00	0.00	0.00	0	31.00
35.850	0.00	0.00	0.00	0.00	0.00	0	31.00
35.900	0.00	0.00	0.00	0.00	0.00	0	31.00
35.950	0.00	0.00	0.00	0.00	0.00	0	31.00
36.000	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.10	0.00	0.05	0	31.00
0.050	0.00	0.00	0.00	0.00	0.00	0	31.00
0.100	0.00	0.00	0.00	0.00	0.00	0	31.00
0.150	0.00	0.00	0.00	0.00	0.00	0	31.00
0.200	0.00	0.00	0.00	0.00	0.00	0	31.00
0.250	0.00	0.00	0.00	0.00	0.00	0	31.00
0.300	0.00	0.00	0.00	0.00	0.00	0	31.00
0.350	0.00	0.00	0.00	0.00	0.00	0	31.00
0.400	0.00	0.00	0.00	0.00	0.00	0	31.00
0.450	0.00	0.00	0.00	0.00	0.00	0	31.00
0.500	0.00	0.00	0.00	0.00	0.00	0	31.00
0.550	0.00	0.00	0.00	0.00	0.00	0	31.00
0.600	0.00	0.00	0.00	0.00	0.00	0	31.00
0.650	0.00	0.00	0.00	0.00	0.00	0	31.00
0.700	0.00	0.00	0.00	0.00	0.00	0	31.00
0.750	0.00	0.00	0.00	0.00	0.00	0	31.00
0.800	0.00	0.00	0.00	0.00	0.00	0	31.00
0.850	0.00	0.00	0.00	0.00	0.00	0	31.00
0.900	0.00	0.00	0.00	0.00	0.00	0	31.00
0.950	0.00	0.00	0.00	0.00	0.00	0	31.00
1.000	0.00	0.00	0.00	0.00	0.00	0	31.00
1.050	0.00	0.00	0.00	0.00	0.00	0	31.00
1.100	0.00	0.00	0.00	0.00	0.00	0	31.00
1.150	0.00	0.00	0.00	0.00	0.00	0	31.00
1.200	0.00	0.00	0.00	0.00	0.00	0	31.00
1.250	0.00	0.00	0.00	0.00	0.00	0	31.00
1.300	0.00	0.00	0.00	0.00	0.00	0	31.00
1.350	0.00	0.00	0.00	0.00	0.00	0	31.00
1.400	0.00	0.00	0.00	0.00	0.00	0	31.00
1.450	0.00	0.00	0.00	0.00	0.00	0	31.00
1.500	0.00	0.00	0.00	0.00	0.00	0	31.00
1.550	0.00	0.00	0.00	0.00	0.00	0	31.00
1.600	0.00	0.00	0.00	0.00	0.00	0	31.00
1.650	0.00	0.00	0.00	0.00	0.00	0	31.00
1.700	0.00	0.00	0.00	0.00	0.00	0	31.00
1.750	0.00	0.00	0.00	0.00	0.00	0	31.00
1.800	0.00	0.00	0.00	0.00	0.00	0	31.00
1.850	0.00	0.00	0.00	0.00	0.00	0	31.00
1.900	0.00	0.00	0.00	0.00	0.00	0	31.00
1.950	0.00	0.00	0.00	0.00	0.00	0	31.00
2.000	0.00	0.00	0.00	0.00	0.00	0	31.00
2.050	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
2.100	0.00	0.00	0.00	0.00	0.00	0	31.00
2.150	0.00	0.00	0.00	0.00	0.00	0	31.00
2.200	0.00	0.00	0.00	0.00	0.00	0	31.00
2.250	0.00	0.00	0.00	0.00	0.00	0	31.00
2.300	0.00	0.00	0.00	0.00	0.00	0	31.00
2.350	0.00	0.00	0.00	0.00	0.00	0	31.00
2.400	0.00	0.00	0.00	0.00	0.00	0	31.00
2.450	0.00	0.00	0.00	0.00	0.00	0	31.00
2.500	0.00	0.00	0.00	0.00	0.00	0	31.00
2.550	0.00	0.00	0.00	0.00	0.00	0	31.00
2.600	0.00	0.00	0.00	0.00	0.00	0	31.00
2.650	0.00	0.00	0.01	0.00	0.00	0	31.00
2.700	0.00	0.00	0.01	0.00	0.00	0	31.00
2.750	0.00	0.00	0.01	0.00	0.00	0	31.00
2.800	0.00	0.00	0.01	0.00	0.00	0	31.00
2.850	0.00	0.00	0.01	0.00	0.00	0	31.00
2.900	0.00	0.00	0.01	0.00	0.00	0	31.00
2.950	0.00	0.00	0.01	0.00	0.00	0	31.00
3.000	0.01	0.00	0.01	0.00	0.01	0	31.00
3.050	0.01	0.00	0.01	0.00	0.01	0	31.00
3.100	0.01	0.00	0.01	0.00	0.01	0	31.00
3.150	0.01	0.00	0.01	0.00	0.01	0	31.00
3.200	0.01	0.00	0.01	0.00	0.01	0	31.00
3.250	0.01	0.00	0.01	0.00	0.01	0	31.00
3.300	0.01	0.00	0.01	0.00	0.01	0	31.00
3.350	0.01	0.00	0.02	0.00	0.01	0	31.00
3.400	0.01	0.00	0.02	0.00	0.01	0	31.00
3.450	0.01	0.00	0.02	0.00	0.01	0	31.00
3.500	0.01	0.00	0.02	0.00	0.01	0	31.00
3.550	0.01	0.00	0.02	0.00	0.01	0	31.00
3.600	0.01	0.00	0.02	0.00	0.01	0	31.00
3.650	0.01	0.00	0.02	0.00	0.01	0	31.00
3.700	0.01	0.00	0.02	0.00	0.01	0	31.00
3.750	0.01	0.00	0.02	0.00	0.01	0	31.00
3.800	0.01	0.00	0.02	0.00	0.01	0	31.00
3.850	0.01	0.00	0.02	0.00	0.01	0	31.00
3.900	0.01	0.00	0.02	0.00	0.01	0	31.00
3.950	0.01	0.00	0.02	0.00	0.01	0	31.00
4.000	0.01	0.00	0.02	0.00	0.01	0	31.00
4.050	0.01	0.00	0.03	0.00	0.01	0	31.00
4.100	0.01	0.00	0.03	0.00	0.01	0	31.00
4.150	0.01	0.00	0.03	0.00	0.01	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
4.200	0.01	0.00	0.03	0.00	0.01	0	31.00
4.250	0.01	0.00	0.03	0.00	0.01	0	31.00
4.300	0.01	0.00	0.03	0.00	0.01	0	31.00
4.350	0.02	0.00	0.03	0.00	0.02	0	31.00
4.400	0.02	0.00	0.03	0.00	0.02	0	31.00
4.450	0.02	0.00	0.03	0.00	0.02	0	31.00
4.500	0.02	0.00	0.03	0.00	0.02	0	31.00
4.550	0.02	0.00	0.03	0.00	0.02	0	31.00
4.600	0.02	0.00	0.03	0.00	0.02	0	31.00
4.650	0.02	0.00	0.03	0.00	0.02	0	31.00
4.700	0.02	0.00	0.04	0.00	0.02	0	31.00
4.750	0.02	0.00	0.04	0.00	0.02	0	31.00
4.800	0.02	0.00	0.04	0.00	0.02	0	31.00
4.850	0.02	0.00	0.04	0.00	0.02	0	31.00
4.900	0.02	0.00	0.04	0.00	0.02	0	31.00
4.950	0.02	0.00	0.04	0.00	0.02	0	31.00
5.000	0.02	0.00	0.04	0.00	0.02	0	31.00
5.050	0.02	0.00	0.04	0.00	0.02	0	31.00
5.100	0.02	0.00	0.04	0.00	0.02	0	31.00
5.150	0.02	0.00	0.04	0.00	0.02	0	31.00
5.200	0.02	0.00	0.04	0.00	0.02	0	31.00
5.250	0.02	0.00	0.04	0.00	0.02	0	31.00
5.300	0.02	0.00	0.04	0.00	0.02	0	31.00
5.350	0.02	0.00	0.05	0.00	0.02	0	31.00
5.400	0.02	0.00	0.05	0.00	0.02	0	31.00
5.450	0.02	0.00	0.05	0.00	0.02	0	31.00
5.500	0.02	0.00	0.05	0.00	0.02	0	31.00
5.550	0.02	0.00	0.05	0.00	0.02	0	31.00
5.600	0.02	0.00	0.05	0.00	0.02	0	31.00
5.650	0.03	0.00	0.05	0.00	0.03	0	31.00
5.700	0.03	0.00	0.05	0.00	0.03	0	31.00
5.750	0.03	0.00	0.05	0.00	0.03	0	31.00
5.800	0.03	0.00	0.05	0.00	0.03	0	31.00
5.850	0.03	0.00	0.05	0.00	0.03	0	31.00
5.900	0.03	0.00	0.05	0.00	0.03	0	31.00
5.950	0.03	0.00	0.05	0.00	0.03	0	31.00
6.000	0.03	0.00	0.06	0.00	0.03	0	31.00
6.050	0.03	0.00	0.06	0.00	0.03	0	31.00
6.100	0.03	0.00	0.06	0.00	0.03	0	31.00
6.150	0.03	0.00	0.06	0.00	0.03	0	31.00
6.200	0.03	0.00	0.06	0.00	0.03	0	31.00
6.250	0.03	0.00	0.06	0.00	0.03	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
6.300	0.03	0.00	0.06	0.00	0.03	0	31.00
6.350	0.03	0.00	0.06	0.00	0.03	0	31.00
6.400	0.03	0.00	0.07	0.00	0.03	0	31.00
6.450	0.03	0.00	0.07	0.00	0.03	0	31.00
6.500	0.03	0.00	0.07	0.00	0.03	0	31.00
6.550	0.04	0.00	0.07	0.00	0.04	0	31.00
6.600	0.04	0.00	0.07	0.00	0.04	0	31.00
6.650	0.04	0.00	0.07	0.00	0.04	0	31.00
6.700	0.04	0.00	0.08	0.00	0.04	0	31.00
6.750	0.04	0.00	0.08	0.00	0.04	0	31.00
6.800	0.04	0.00	0.08	0.00	0.04	0	31.00
6.850	0.04	0.00	0.08	0.00	0.04	0	31.00
6.900	0.04	0.00	0.08	0.00	0.04	0	31.00
6.950	0.04	0.00	0.08	0.00	0.04	0	31.00
7.000	0.04	0.00	0.08	0.00	0.04	0	31.00
7.050	0.04	0.00	0.09	0.00	0.04	0	31.00
7.100	0.04	0.00	0.09	0.00	0.04	0	31.00
7.150	0.05	0.00	0.09	0.00	0.04	0	31.00
7.200	0.05	0.00	0.09	0.00	0.05	0	31.00
7.250	0.05	0.00	0.09	0.00	0.05	0	31.00
7.300	0.05	0.00	0.09	0.00	0.05	0	31.00
7.350	0.05	0.00	0.10	0.00	0.05	0	31.00
7.400	0.05	0.00	0.10	0.00	0.05	0	31.00
7.450	0.05	0.00	0.10	0.00	0.05	0	31.00
7.500	0.05	0.00	0.10	0.00	0.05	0	31.00
7.550	0.05	0.00	0.10	0.00	0.05	0	31.00
7.600	0.05	0.00	0.11	0.00	0.05	0	31.00
7.650	0.05	0.00	0.11	0.00	0.05	0	31.00
7.700	0.05	0.00	0.11	0.00	0.05	0	31.00
7.750	0.06	0.00	0.11	0.00	0.06	0	31.00
7.800	0.06	0.00	0.11	0.00	0.06	0	31.00
7.850	0.06	0.00	0.11	0.00	0.06	0	31.00
7.900	0.06	0.00	0.12	0.00	0.06	0	31.00
7.950	0.06	0.00	0.12	0.00	0.06	0	31.00
8.000	0.06	0.00	0.12	0.00	0.06	0	31.00
8.050	0.06	0.00	0.12	0.00	0.06	0	31.00
8.100	0.06	0.00	0.12	0.00	0.06	0	31.00
8.150	0.06	0.00	0.13	0.00	0.06	0	31.00
8.200	0.07	0.00	0.13	0.00	0.07	0	31.00
8.250	0.07	0.00	0.13	0.00	0.07	0	31.00
8.300	0.07	0.00	0.14	0.00	0.07	0	31.00
8.350	0.07	0.00	0.14	0.00	0.07	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
8.400	0.07	0.00	0.14	0.00	0.07	0	31.00
8.450	0.07	0.00	0.15	0.00	0.07	0	31.00
8.500	0.08	0.00	0.15	0.00	0.08	0	31.00
8.550	0.08	0.00	0.16	0.00	0.08	0	31.00
8.600	0.08	0.00	0.16	0.00	0.08	0	31.00
8.650	0.08	0.00	0.16	0.00	0.08	0	31.00
8.700	0.08	0.00	0.17	0.00	0.08	0	31.00
8.750	0.09	0.00	0.17	0.00	0.08	0	31.00
8.800	0.09	0.00	0.17	0.00	0.09	0	31.00
8.850	0.09	0.00	0.18	0.00	0.09	0	31.00
8.900	0.09	0.00	0.18	0.00	0.09	0	31.00
8.950	0.09	0.00	0.18	0.00	0.09	0	31.00
9.000	0.10	0.00	0.19	0.00	0.09	0	31.00
9.050	0.10	0.00	0.19	0.00	0.10	0	31.00
9.100	0.10	0.00	0.20	0.00	0.10	0	31.00
9.150	0.10	0.00	0.20	0.00	0.10	0	31.00
9.200	0.10	0.00	0.20	0.00	0.10	0	31.00
9.250	0.11	0.00	0.21	0.00	0.10	9	31.00
9.300	0.11	0.00	0.21	0.00	0.10	10	31.00
9.350	0.11	0.01	0.22	0.00	0.10	10	31.00
9.400	0.11	0.02	0.23	0.00	0.10	12	31.00
9.450	0.11	0.04	0.25	0.00	0.10	13	31.00
9.500	0.12	0.06	0.27	0.00	0.10	15	31.01
9.550	0.12	0.08	0.29	0.00	0.10	17	31.01
9.600	0.12	0.11	0.32	0.00	0.10	19	31.01
9.650	0.12	0.14	0.35	0.00	0.10	22	31.01
9.700	0.12	0.18	0.39	0.00	0.10	26	31.01
9.750	0.13	0.22	0.43	0.00	0.10	29	31.01
9.800	0.13	0.26	0.47	0.00	0.10	33	31.01
9.850	0.13	0.31	0.52	0.00	0.10	38	31.01
9.900	0.13	0.37	0.57	0.00	0.10	42	31.02
9.950	0.13	0.42	0.63	0.00	0.10	47	31.02
10.000	0.14	0.48	0.69	0.00	0.10	53	31.02
10.050	0.14	0.55	0.76	0.00	0.10	59	31.02
10.100	0.14	0.62	0.83	0.00	0.10	65	31.02
10.150	0.14	0.70	0.90	0.00	0.10	72	31.03
10.200	0.15	0.78	0.99	0.00	0.10	80	31.03
10.250	0.15	0.87	1.08	0.00	0.10	88	31.03
10.300	0.16	0.98	1.18	0.00	0.10	97	31.04
10.350	0.16	1.08	1.29	0.00	0.10	107	31.04
10.400	0.16	1.20	1.41	0.00	0.10	117	31.04
10.450	0.17	1.32	1.53	0.00	0.10	129	31.05

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
10.500	0.17	1.46	1.66	0.00	0.10	140	31.05
10.550	0.18	1.60	1.80	0.00	0.10	153	31.06
10.600	0.18	1.74	1.95	0.00	0.10	166	31.06
10.650	0.18	1.90	2.11	0.00	0.10	180	31.07
10.700	0.19	2.07	2.27	0.00	0.10	195	31.07
10.750	0.19	2.24	2.45	0.00	0.10	211	31.08
10.800	0.20	2.42	2.63	0.00	0.10	227	31.08
10.850	0.20	2.61	2.81	0.00	0.10	244	31.09
10.900	0.20	2.80	3.01	0.00	0.10	262	31.10
10.950	0.21	3.01	3.22	0.00	0.10	280	31.10
11.000	0.21	3.22	3.43	0.00	0.10	299	31.11
11.050	0.22	3.45	3.65	0.00	0.10	320	31.12
11.100	0.23	3.69	3.90	0.00	0.10	341	31.12
11.150	0.24	3.95	4.16	0.00	0.10	365	31.13
11.200	0.26	4.24	4.45	0.00	0.10	391	31.14
11.250	0.27	4.56	4.77	0.00	0.10	420	31.15
11.300	0.29	4.91	5.12	0.00	0.10	452	31.16
11.350	0.30	5.29	5.50	0.00	0.10	486	31.18
11.400	0.32	5.70	5.91	0.00	0.10	522	31.19
11.450	0.33	6.14	6.35	0.00	0.10	562	31.20
11.500	0.35	6.61	6.81	0.00	0.10	604	31.22
11.550	0.41	7.15	7.36	0.00	0.10	653	31.24
11.600	0.48	7.83	8.03	0.00	0.10	714	31.26
11.650	0.60	8.70	8.90	0.00	0.10	792	31.29
11.700	0.74	9.82	10.03	0.00	0.10	893	31.33
11.750	0.87	11.23	11.43	0.00	0.10	1,020	31.37
11.800	1.02	12.91	13.12	0.00	0.10	1,171	31.43
11.850	1.16	14.88	15.09	0.00	0.10	1,349	31.49
11.900	1.30	17.14	17.34	0.00	0.10	1,552	31.56
11.950	1.84	20.07	20.28	0.00	0.10	1,816	31.66
12.000	2.48	24.19	24.39	0.00	0.10	2,186	31.80
12.050	2.65	29.11	29.32	0.00	0.10	2,630	31.96
12.100	2.70	27.77	34.47	0.00	3.35	2,801	32.02
12.150	2.22	29.00	32.69	0.00	1.84	2,776	32.01
12.200	1.59	28.92	32.81	0.00	1.95	2,778	32.01
12.250	1.33	29.60	31.83	0.00	1.12	2,764	32.01
12.300	1.16	29.43	32.08	0.00	1.33	2,768	32.01
12.350	1.01	29.77	31.59	0.00	0.91	2,761	32.00
12.400	0.86	29.73	31.64	0.00	0.95	2,762	32.01
12.450	0.72	29.96	31.32	0.00	0.68	2,757	32.00
12.500	0.58	30.00	31.26	0.00	0.63	2,756	32.00
12.550	0.48	30.13	31.06	0.00	0.46	2,754	32.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
12.600	0.40	30.16	31.02	0.00	0.43	2,753	32.00
12.650	0.37	30.22	30.93	0.00	0.35	2,752	32.00
12.700	0.35	30.22	30.94	0.00	0.36	2,752	32.00
12.750	0.33	30.25	30.90	0.00	0.33	2,752	32.00
12.800	0.32	30.25	30.90	0.00	0.33	2,752	32.00
12.850	0.30	30.27	30.87	0.00	0.30	2,751	32.00
12.900	0.29	30.27	30.86	0.00	0.29	2,751	32.00
12.950	0.27	30.29	30.84	0.00	0.27	2,751	32.00
13.000	0.26	30.30	30.82	0.00	0.26	2,751	32.00
13.050	0.25	30.31	30.81	0.00	0.25	2,750	32.00
13.100	0.24	30.32	30.80	0.00	0.24	2,750	32.00
13.150	0.23	30.32	30.79	0.00	0.23	2,750	32.00
13.200	0.23	30.33	30.79	0.00	0.23	2,750	32.00
13.250	0.22	30.33	30.78	0.00	0.22	2,750	32.00
13.300	0.22	30.33	30.78	0.00	0.22	2,750	32.00
13.350	0.22	30.34	30.77	0.00	0.22	2,750	32.00
13.400	0.21	30.34	30.77	0.00	0.21	2,750	32.00
13.450	0.21	30.34	30.76	0.00	0.21	2,750	32.00
13.500	0.21	30.35	30.76	0.00	0.21	2,750	32.00
13.550	0.20	30.35	30.75	0.00	0.20	2,750	32.00
13.600	0.20	30.35	30.75	0.00	0.20	2,750	32.00
13.650	0.19	30.36	30.74	0.00	0.19	2,749	32.00
13.700	0.19	30.36	30.74	0.00	0.19	2,749	32.00
13.750	0.19	30.36	30.73	0.00	0.19	2,749	32.00
13.800	0.18	30.37	30.73	0.00	0.18	2,749	32.00
13.850	0.18	30.37	30.72	0.00	0.18	2,749	32.00
13.900	0.17	30.37	30.72	0.00	0.17	2,749	32.00
13.950	0.17	30.37	30.72	0.00	0.17	2,749	32.00
14.000	0.17	30.38	30.71	0.00	0.17	2,749	32.00
14.050	0.16	30.38	30.71	0.00	0.16	2,749	32.00
14.100	0.16	30.38	30.70	0.00	0.16	2,749	32.00
14.150	0.16	30.39	30.70	0.00	0.16	2,749	32.00
14.200	0.16	30.39	30.70	0.00	0.16	2,749	32.00
14.250	0.15	30.39	30.70	0.00	0.15	2,749	32.00
14.300	0.15	30.39	30.69	0.00	0.15	2,749	32.00
14.350	0.15	30.39	30.69	0.00	0.15	2,749	32.00
14.400	0.15	30.39	30.69	0.00	0.15	2,749	32.00
14.450	0.15	30.39	30.69	0.00	0.15	2,749	32.00
14.500	0.14	30.40	30.69	0.00	0.14	2,749	32.00
14.550	0.14	30.40	30.68	0.00	0.14	2,749	32.00
14.600	0.14	30.40	30.68	0.00	0.14	2,749	32.00
14.650	0.14	30.40	30.68	0.00	0.14	2,749	32.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
14.700	0.14	30.40	30.68	0.00	0.14	2,749	32.00
14.750	0.14	30.40	30.67	0.00	0.14	2,749	32.00
14.800	0.13	30.41	30.67	0.00	0.13	2,748	32.00
14.850	0.13	30.41	30.67	0.00	0.13	2,748	32.00
14.900	0.13	30.41	30.67	0.00	0.13	2,748	32.00
14.950	0.13	30.41	30.67	0.00	0.13	2,748	32.00
15.000	0.13	30.41	30.66	0.00	0.13	2,748	32.00
15.050	0.12	30.41	30.66	0.00	0.12	2,748	32.00
15.100	0.12	30.41	30.66	0.00	0.12	2,748	32.00
15.150	0.12	30.42	30.66	0.00	0.12	2,748	32.00
15.200	0.12	30.42	30.65	0.00	0.12	2,748	32.00
15.250	0.12	30.42	30.65	0.00	0.12	2,748	32.00
15.300	0.11	30.42	30.65	0.00	0.11	2,748	32.00
15.350	0.11	30.42	30.65	0.00	0.11	2,748	32.00
15.400	0.11	30.42	30.65	0.00	0.11	2,748	32.00
15.450	0.11	30.43	30.64	0.00	0.11	2,748	32.00
15.500	0.11	30.43	30.64	0.00	0.11	2,748	32.00
15.550	0.11	30.43	30.64	0.00	0.11	2,748	32.00
15.600	0.10	30.43	30.64	0.00	0.10	2,748	32.00
15.650	0.10	30.43	30.63	0.00	0.10	2,748	32.00
15.700	0.10	30.42	30.63	0.00	0.10	2,747	32.00
15.750	0.10	30.41	30.61	0.00	0.10	2,746	32.00
15.800	0.10	30.39	30.60	0.00	0.10	2,745	32.00
15.850	0.09	30.37	30.58	0.00	0.10	2,743	32.00
15.900	0.09	30.35	30.56	0.00	0.10	2,741	32.00
15.950	0.09	30.32	30.53	0.00	0.10	2,739	32.00
16.000	0.09	30.29	30.50	0.00	0.10	2,736	32.00
16.050	0.09	30.26	30.47	0.00	0.10	2,733	31.99
16.100	0.09	30.22	30.43	0.00	0.10	2,730	31.99
16.150	0.08	30.19	30.39	0.00	0.10	2,726	31.99
16.200	0.08	30.15	30.35	0.00	0.10	2,722	31.99
16.250	0.08	30.10	30.31	0.00	0.10	2,719	31.99
16.300	0.08	30.06	30.27	0.00	0.10	2,715	31.99
16.350	0.08	30.01	30.22	0.00	0.10	2,711	31.99
16.400	0.08	29.97	30.18	0.00	0.10	2,706	31.98
16.450	0.08	29.92	30.13	0.00	0.10	2,702	31.98
16.500	0.08	29.87	30.08	0.00	0.10	2,698	31.98
16.550	0.08	29.82	30.02	0.00	0.10	2,693	31.98
16.600	0.08	29.76	29.97	0.00	0.10	2,688	31.98
16.650	0.08	29.71	29.92	0.00	0.10	2,683	31.98
16.700	0.08	29.65	29.86	0.00	0.10	2,678	31.97
16.750	0.07	29.59	29.80	0.00	0.10	2,673	31.97

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.800	0.07	29.53	29.74	0.00	0.10	2,667	31.97
16.850	0.07	29.47	29.68	0.00	0.10	2,662	31.97
16.900	0.07	29.41	29.62	0.00	0.10	2,656	31.97
16.950	0.07	29.34	29.55	0.00	0.10	2,650	31.96
17.000	0.07	29.28	29.48	0.00	0.10	2,644	31.96
17.050	0.07	29.21	29.41	0.00	0.10	2,638	31.96
17.100	0.07	29.14	29.34	0.00	0.10	2,632	31.96
17.150	0.07	29.07	29.27	0.00	0.10	2,625	31.96
17.200	0.07	28.99	29.20	0.00	0.10	2,619	31.95
17.250	0.07	28.92	29.12	0.00	0.10	2,612	31.95
17.300	0.07	28.84	29.05	0.00	0.10	2,605	31.95
17.350	0.06	28.76	28.97	0.00	0.10	2,598	31.95
17.400	0.06	28.68	28.89	0.00	0.10	2,591	31.94
17.450	0.06	28.60	28.81	0.00	0.10	2,583	31.94
17.500	0.06	28.52	28.73	0.00	0.10	2,576	31.94
17.550	0.06	28.43	28.64	0.00	0.10	2,568	31.93
17.600	0.06	28.35	28.55	0.00	0.10	2,561	31.93
17.650	0.06	28.26	28.47	0.00	0.10	2,553	31.93
17.700	0.06	28.17	28.38	0.00	0.10	2,545	31.93
17.750	0.06	28.08	28.29	0.00	0.10	2,536	31.92
17.800	0.06	27.98	28.19	0.00	0.10	2,528	31.92
17.850	0.06	27.89	28.10	0.00	0.10	2,519	31.92
17.900	0.06	27.79	28.00	0.00	0.10	2,511	31.91
17.950	0.05	27.70	27.90	0.00	0.10	2,502	31.91
18.000	0.05	27.60	27.80	0.00	0.10	2,493	31.91
18.050	0.05	27.49	27.70	0.00	0.10	2,484	31.90
18.100	0.05	27.39	27.60	0.00	0.10	2,475	31.90
18.150	0.05	27.29	27.50	0.00	0.10	2,465	31.90
18.200	0.05	27.19	27.39	0.00	0.10	2,456	31.89
18.250	0.05	27.08	27.29	0.00	0.10	2,447	31.89
18.300	0.05	26.98	27.18	0.00	0.10	2,437	31.89
18.350	0.05	26.87	27.08	0.00	0.10	2,428	31.88
18.400	0.05	26.77	26.97	0.00	0.10	2,418	31.88
18.450	0.05	26.66	26.87	0.00	0.10	2,409	31.88
18.500	0.05	26.55	26.76	0.00	0.10	2,399	31.87
18.550	0.05	26.45	26.65	0.00	0.10	2,389	31.87
18.600	0.05	26.34	26.55	0.00	0.10	2,380	31.87
18.650	0.05	26.23	26.44	0.00	0.10	2,370	31.86
18.700	0.05	26.12	26.33	0.00	0.10	2,360	31.86
18.750	0.05	26.01	26.22	0.00	0.10	2,350	31.86
18.800	0.05	25.90	26.11	0.00	0.10	2,341	31.85
18.850	0.05	25.79	26.00	0.00	0.10	2,331	31.85

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.900	0.05	25.68	25.89	0.00	0.10	2,321	31.84
18.950	0.05	25.57	25.78	0.00	0.10	2,311	31.84
19.000	0.05	25.46	25.67	0.00	0.10	2,301	31.84
19.050	0.05	25.35	25.56	0.00	0.10	2,291	31.83
19.100	0.05	25.23	25.44	0.00	0.10	2,280	31.83
19.150	0.05	25.12	25.33	0.00	0.10	2,270	31.83
19.200	0.05	25.01	25.22	0.00	0.10	2,260	31.82
19.250	0.05	24.89	25.10	0.00	0.10	2,250	31.82
19.300	0.05	24.78	24.99	0.00	0.10	2,240	31.81
19.350	0.05	24.66	24.87	0.00	0.10	2,229	31.81
19.400	0.05	24.55	24.76	0.00	0.10	2,219	31.81
19.450	0.05	24.43	24.64	0.00	0.10	2,208	31.80
19.500	0.05	24.32	24.52	0.00	0.10	2,198	31.80
19.550	0.05	24.20	24.41	0.00	0.10	2,187	31.80
19.600	0.05	24.08	24.29	0.00	0.10	2,177	31.79
19.650	0.04	23.96	24.17	0.00	0.10	2,166	31.79
19.700	0.04	23.85	24.05	0.00	0.10	2,155	31.78
19.750	0.04	23.73	23.93	0.00	0.10	2,145	31.78
19.800	0.04	23.61	23.82	0.00	0.10	2,134	31.78
19.850	0.04	23.49	23.70	0.00	0.10	2,123	31.77
19.900	0.04	23.37	23.58	0.00	0.10	2,112	31.77
19.950	0.04	23.25	23.45	0.00	0.10	2,102	31.76
20.000	0.04	23.12	23.33	0.00	0.10	2,091	31.76
20.050	0.04	23.00	23.21	0.00	0.10	2,080	31.76
20.100	0.04	22.88	23.09	0.00	0.10	2,069	31.75
20.150	0.04	22.76	22.97	0.00	0.10	2,058	31.75
20.200	0.04	22.63	22.84	0.00	0.10	2,046	31.74
20.250	0.04	22.51	22.72	0.00	0.10	2,035	31.74
20.300	0.04	22.39	22.60	0.00	0.10	2,024	31.74
20.350	0.04	22.26	22.47	0.00	0.10	2,013	31.73
20.400	0.04	22.14	22.35	0.00	0.10	2,002	31.73
20.450	0.04	22.01	22.22	0.00	0.10	1,991	31.72
20.500	0.04	21.89	22.10	0.00	0.10	1,979	31.72
20.550	0.04	21.76	21.97	0.00	0.10	1,968	31.72
20.600	0.04	21.64	21.84	0.00	0.10	1,957	31.71
20.650	0.04	21.51	21.72	0.00	0.10	1,945	31.71
20.700	0.04	21.38	21.59	0.00	0.10	1,934	31.70
20.750	0.04	21.26	21.46	0.00	0.10	1,922	31.70
20.800	0.04	21.13	21.34	0.00	0.10	1,911	31.70
20.850	0.04	21.00	21.21	0.00	0.10	1,899	31.69
20.900	0.04	20.87	21.08	0.00	0.10	1,888	31.69
20.950	0.04	20.74	20.95	0.00	0.10	1,876	31.68

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
21.000	0.04	20.61	20.82	0.00	0.10	1,865	31.68
21.050	0.04	20.49	20.69	0.00	0.10	1,853	31.67
21.100	0.04	20.36	20.56	0.00	0.10	1,841	31.67
21.150	0.04	20.23	20.43	0.00	0.10	1,830	31.67
21.200	0.04	20.10	20.30	0.00	0.10	1,818	31.66
21.250	0.04	19.96	20.17	0.00	0.10	1,806	31.66
21.300	0.04	19.83	20.04	0.00	0.10	1,794	31.65
21.350	0.04	19.70	19.91	0.00	0.10	1,782	31.65
21.400	0.04	19.57	19.78	0.00	0.10	1,771	31.64
21.450	0.04	19.44	19.65	0.00	0.10	1,759	31.64
21.500	0.04	19.30	19.51	0.00	0.10	1,747	31.64
21.550	0.04	19.17	19.38	0.00	0.10	1,735	31.63
21.600	0.04	19.04	19.25	0.00	0.10	1,723	31.63
21.650	0.04	18.90	19.11	0.00	0.10	1,711	31.62
21.700	0.04	18.77	18.98	0.00	0.10	1,699	31.62
21.750	0.04	18.63	18.84	0.00	0.10	1,686	31.61
21.800	0.04	18.50	18.71	0.00	0.10	1,674	31.61
21.850	0.04	18.36	18.57	0.00	0.10	1,662	31.60
21.900	0.04	18.23	18.44	0.00	0.10	1,650	31.60
21.950	0.04	18.09	18.30	0.00	0.10	1,638	31.60
22.000	0.04	17.96	18.16	0.00	0.10	1,625	31.59
22.050	0.04	17.82	18.03	0.00	0.10	1,613	31.59
22.100	0.04	17.68	17.89	0.00	0.10	1,601	31.58
22.150	0.04	17.55	17.75	0.00	0.10	1,588	31.58
22.200	0.04	17.41	17.62	0.00	0.10	1,576	31.57
22.250	0.03	17.27	17.48	0.00	0.10	1,564	31.57
22.300	0.03	17.13	17.34	0.00	0.10	1,551	31.56
22.350	0.03	16.99	17.20	0.00	0.10	1,539	31.56
22.400	0.03	16.85	17.06	0.00	0.10	1,526	31.56
22.450	0.03	16.71	16.92	0.00	0.10	1,513	31.55
22.500	0.03	16.57	16.78	0.00	0.10	1,501	31.55
22.550	0.03	16.43	16.64	0.00	0.10	1,488	31.54
22.600	0.03	16.29	16.50	0.00	0.10	1,475	31.54
22.650	0.03	16.15	16.36	0.00	0.10	1,463	31.53
22.700	0.03	16.01	16.22	0.00	0.10	1,450	31.53
22.750	0.03	15.87	16.07	0.00	0.10	1,437	31.52
22.800	0.03	15.72	15.93	0.00	0.10	1,424	31.52
22.850	0.03	15.58	15.79	0.00	0.10	1,412	31.51
22.900	0.03	15.44	15.65	0.00	0.10	1,399	31.51
22.950	0.03	15.29	15.50	0.00	0.10	1,386	31.50
23.000	0.03	15.15	15.36	0.00	0.10	1,373	31.50
23.050	0.03	15.01	15.21	0.00	0.10	1,360	31.49

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
23.100	0.03	14.86	15.07	0.00	0.10	1,347	31.49
23.150	0.03	14.72	14.92	0.00	0.10	1,334	31.49
23.200	0.03	14.57	14.78	0.00	0.10	1,321	31.48
23.250	0.03	14.43	14.63	0.00	0.10	1,308	31.48
23.300	0.03	14.28	14.49	0.00	0.10	1,294	31.47
23.350	0.03	14.13	14.34	0.00	0.10	1,281	31.47
23.400	0.03	13.99	14.19	0.00	0.10	1,268	31.46
23.450	0.03	13.84	14.05	0.00	0.10	1,255	31.46
23.500	0.03	13.69	13.90	0.00	0.10	1,242	31.45
23.550	0.03	13.54	13.75	0.00	0.10	1,228	31.45
23.600	0.03	13.40	13.60	0.00	0.10	1,215	31.44
23.650	0.03	13.25	13.45	0.00	0.10	1,202	31.44
23.700	0.03	13.10	13.31	0.00	0.10	1,188	31.43
23.750	0.03	12.95	13.16	0.00	0.10	1,175	31.43
23.800	0.03	12.80	13.01	0.00	0.10	1,161	31.42
23.850	0.03	12.65	12.86	0.00	0.10	1,148	31.42
23.900	0.03	12.50	12.71	0.00	0.10	1,134	31.41
23.950	0.03	12.35	12.55	0.00	0.10	1,121	31.41
24.000	0.03	12.20	12.40	0.00	0.10	1,107	31.40
24.050	0.02	12.03	12.24	0.00	0.10	1,092	31.40
24.100	0.00	11.85	12.06	0.00	0.10	1,076	31.39
24.150	0.00	11.64	11.85	0.00	0.10	1,057	31.38
24.200	0.00	11.44	11.65	0.00	0.10	1,039	31.38
24.250	0.00	11.23	11.44	0.00	0.10	1,020	31.37
24.300	0.00	11.02	11.23	0.00	0.10	1,001	31.36
24.350	0.00	10.81	11.02	0.00	0.10	983	31.36
24.400	0.00	10.61	10.81	0.00	0.10	964	31.35
24.450	0.00	10.40	10.61	0.00	0.10	945	31.34
24.500	0.00	10.19	10.40	0.00	0.10	926	31.34
24.550	0.00	9.98	10.19	0.00	0.10	908	31.33
24.600	0.00	9.77	9.98	0.00	0.10	889	31.32
24.650	0.00	9.57	9.77	0.00	0.10	870	31.32
24.700	0.00	9.36	9.57	0.00	0.10	852	31.31
24.750	0.00	9.15	9.36	0.00	0.10	833	31.30
24.800	0.00	8.94	9.15	0.00	0.10	814	31.30
24.850	0.00	8.73	8.94	0.00	0.10	795	31.29
24.900	0.00	8.53	8.73	0.00	0.10	777	31.28
24.950	0.00	8.32	8.53	0.00	0.10	758	31.28
25.000	0.00	8.11	8.32	0.00	0.10	739	31.27
25.050	0.00	7.90	8.11	0.00	0.10	721	31.26
25.100	0.00	7.69	7.90	0.00	0.10	702	31.26
25.150	0.00	7.49	7.69	0.00	0.10	683	31.25

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
25.200	0.00	7.28	7.49	0.00	0.10	664	31.24
25.250	0.00	7.07	7.28	0.00	0.10	646	31.23
25.300	0.00	6.86	7.07	0.00	0.10	627	31.23
25.350	0.00	6.65	6.86	0.00	0.10	608	31.22
25.400	0.00	6.45	6.65	0.00	0.10	590	31.21
25.450	0.00	6.24	6.45	0.00	0.10	571	31.21
25.500	0.00	6.03	6.24	0.00	0.10	552	31.20
25.550	0.00	5.82	6.03	0.00	0.10	533	31.19
25.600	0.00	5.61	5.82	0.00	0.10	515	31.19
25.650	0.00	5.41	5.61	0.00	0.10	496	31.18
25.700	0.00	5.20	5.41	0.00	0.10	477	31.17
25.750	0.00	4.99	5.20	0.00	0.10	458	31.17
25.800	0.00	4.78	4.99	0.00	0.10	440	31.16
25.850	0.00	4.57	4.78	0.00	0.10	421	31.15
25.900	0.00	4.37	4.57	0.00	0.10	402	31.15
25.950	0.00	4.16	4.37	0.00	0.10	384	31.14
26.000	0.00	3.95	4.16	0.00	0.10	365	31.13
26.050	0.00	3.74	3.95	0.00	0.10	346	31.13
26.100	0.00	3.53	3.74	0.00	0.10	327	31.12
26.150	0.00	3.33	3.53	0.00	0.10	309	31.11
26.200	0.00	3.12	3.33	0.00	0.10	290	31.11
26.250	0.00	2.91	3.12	0.00	0.10	271	31.10
26.300	0.00	2.70	2.91	0.00	0.10	253	31.09
26.350	0.00	2.49	2.70	0.00	0.10	234	31.09
26.400	0.00	2.29	2.49	0.00	0.10	215	31.08
26.450	0.00	2.08	2.29	0.00	0.10	196	31.07
26.500	0.00	1.87	2.08	0.00	0.10	178	31.06
26.550	0.00	1.66	1.87	0.00	0.10	159	31.06
26.600	0.00	1.45	1.66	0.00	0.10	140	31.05
26.650	0.00	1.25	1.45	0.00	0.10	122	31.04
26.700	0.00	1.04	1.25	0.00	0.10	103	31.04
26.750	0.00	0.83	1.04	0.00	0.10	84	31.03
26.800	0.00	0.62	0.83	0.00	0.10	65	31.02
26.850	0.00	0.41	0.62	0.00	0.10	47	31.02
26.900	0.00	0.21	0.41	0.00	0.10	28	31.01
26.950	0.00	0.00	0.21	0.00	0.10	0	31.00
27.000	0.00	0.00	0.00	0.00	0.00	0	31.00
27.050	0.00	0.00	0.00	0.00	0.00	0	31.00
27.100	0.00	0.00	0.00	0.00	0.00	0	31.00
27.150	0.00	0.00	0.00	0.00	0.00	0	31.00
27.200	0.00	0.00	0.00	0.00	0.00	0	31.00
27.250	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
27.300	0.00	0.00	0.00	0.00	0.00	0	31.00
27.350	0.00	0.00	0.00	0.00	0.00	0	31.00
27.400	0.00	0.00	0.00	0.00	0.00	0	31.00
27.450	0.00	0.00	0.00	0.00	0.00	0	31.00
27.500	0.00	0.00	0.00	0.00	0.00	0	31.00
27.550	0.00	0.00	0.00	0.00	0.00	0	31.00
27.600	0.00	0.00	0.00	0.00	0.00	0	31.00
27.650	0.00	0.00	0.00	0.00	0.00	0	31.00
27.700	0.00	0.00	0.00	0.00	0.00	0	31.00
27.750	0.00	0.00	0.00	0.00	0.00	0	31.00
27.800	0.00	0.00	0.00	0.00	0.00	0	31.00
27.850	0.00	0.00	0.00	0.00	0.00	0	31.00
27.900	0.00	0.00	0.00	0.00	0.00	0	31.00
27.950	0.00	0.00	0.00	0.00	0.00	0	31.00
28.000	0.00	0.00	0.00	0.00	0.00	0	31.00
28.050	0.00	0.00	0.00	0.00	0.00	0	31.00
28.100	0.00	0.00	0.00	0.00	0.00	0	31.00
28.150	0.00	0.00	0.00	0.00	0.00	0	31.00
28.200	0.00	0.00	0.00	0.00	0.00	0	31.00
28.250	0.00	0.00	0.00	0.00	0.00	0	31.00
28.300	0.00	0.00	0.00	0.00	0.00	0	31.00
28.350	0.00	0.00	0.00	0.00	0.00	0	31.00
28.400	0.00	0.00	0.00	0.00	0.00	0	31.00
28.450	0.00	0.00	0.00	0.00	0.00	0	31.00
28.500	0.00	0.00	0.00	0.00	0.00	0	31.00
28.550	0.00	0.00	0.00	0.00	0.00	0	31.00
28.600	0.00	0.00	0.00	0.00	0.00	0	31.00
28.650	0.00	0.00	0.00	0.00	0.00	0	31.00
28.700	0.00	0.00	0.00	0.00	0.00	0	31.00
28.750	0.00	0.00	0.00	0.00	0.00	0	31.00
28.800	0.00	0.00	0.00	0.00	0.00	0	31.00
28.850	0.00	0.00	0.00	0.00	0.00	0	31.00
28.900	0.00	0.00	0.00	0.00	0.00	0	31.00
28.950	0.00	0.00	0.00	0.00	0.00	0	31.00
29.000	0.00	0.00	0.00	0.00	0.00	0	31.00
29.050	0.00	0.00	0.00	0.00	0.00	0	31.00
29.100	0.00	0.00	0.00	0.00	0.00	0	31.00
29.150	0.00	0.00	0.00	0.00	0.00	0	31.00
29.200	0.00	0.00	0.00	0.00	0.00	0	31.00
29.250	0.00	0.00	0.00	0.00	0.00	0	31.00
29.300	0.00	0.00	0.00	0.00	0.00	0	31.00
29.350	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
29.400	0.00	0.00	0.00	0.00	0.00	0	31.00
29.450	0.00	0.00	0.00	0.00	0.00	0	31.00
29.500	0.00	0.00	0.00	0.00	0.00	0	31.00
29.550	0.00	0.00	0.00	0.00	0.00	0	31.00
29.600	0.00	0.00	0.00	0.00	0.00	0	31.00
29.650	0.00	0.00	0.00	0.00	0.00	0	31.00
29.700	0.00	0.00	0.00	0.00	0.00	0	31.00
29.750	0.00	0.00	0.00	0.00	0.00	0	31.00
29.800	0.00	0.00	0.00	0.00	0.00	0	31.00
29.850	0.00	0.00	0.00	0.00	0.00	0	31.00
29.900	0.00	0.00	0.00	0.00	0.00	0	31.00
29.950	0.00	0.00	0.00	0.00	0.00	0	31.00
30.000	0.00	0.00	0.00	0.00	0.00	0	31.00
30.050	0.00	0.00	0.00	0.00	0.00	0	31.00
30.100	0.00	0.00	0.00	0.00	0.00	0	31.00
30.150	0.00	0.00	0.00	0.00	0.00	0	31.00
30.200	0.00	0.00	0.00	0.00	0.00	0	31.00
30.250	0.00	0.00	0.00	0.00	0.00	0	31.00
30.300	0.00	0.00	0.00	0.00	0.00	0	31.00
30.350	0.00	0.00	0.00	0.00	0.00	0	31.00
30.400	0.00	0.00	0.00	0.00	0.00	0	31.00
30.450	0.00	0.00	0.00	0.00	0.00	0	31.00
30.500	0.00	0.00	0.00	0.00	0.00	0	31.00
30.550	0.00	0.00	0.00	0.00	0.00	0	31.00
30.600	0.00	0.00	0.00	0.00	0.00	0	31.00
30.650	0.00	0.00	0.00	0.00	0.00	0	31.00
30.700	0.00	0.00	0.00	0.00	0.00	0	31.00
30.750	0.00	0.00	0.00	0.00	0.00	0	31.00
30.800	0.00	0.00	0.00	0.00	0.00	0	31.00
30.850	0.00	0.00	0.00	0.00	0.00	0	31.00
30.900	0.00	0.00	0.00	0.00	0.00	0	31.00
30.950	0.00	0.00	0.00	0.00	0.00	0	31.00
31.000	0.00	0.00	0.00	0.00	0.00	0	31.00
31.050	0.00	0.00	0.00	0.00	0.00	0	31.00
31.100	0.00	0.00	0.00	0.00	0.00	0	31.00
31.150	0.00	0.00	0.00	0.00	0.00	0	31.00
31.200	0.00	0.00	0.00	0.00	0.00	0	31.00
31.250	0.00	0.00	0.00	0.00	0.00	0	31.00
31.300	0.00	0.00	0.00	0.00	0.00	0	31.00
31.350	0.00	0.00	0.00	0.00	0.00	0	31.00
31.400	0.00	0.00	0.00	0.00	0.00	0	31.00
31.450	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
31.500	0.00	0.00	0.00	0.00	0.00	0	31.00
31.550	0.00	0.00	0.00	0.00	0.00	0	31.00
31.600	0.00	0.00	0.00	0.00	0.00	0	31.00
31.650	0.00	0.00	0.00	0.00	0.00	0	31.00
31.700	0.00	0.00	0.00	0.00	0.00	0	31.00
31.750	0.00	0.00	0.00	0.00	0.00	0	31.00
31.800	0.00	0.00	0.00	0.00	0.00	0	31.00
31.850	0.00	0.00	0.00	0.00	0.00	0	31.00
31.900	0.00	0.00	0.00	0.00	0.00	0	31.00
31.950	0.00	0.00	0.00	0.00	0.00	0	31.00
32.000	0.00	0.00	0.00	0.00	0.00	0	31.00
32.050	0.00	0.00	0.00	0.00	0.00	0	31.00
32.100	0.00	0.00	0.00	0.00	0.00	0	31.00
32.150	0.00	0.00	0.00	0.00	0.00	0	31.00
32.200	0.00	0.00	0.00	0.00	0.00	0	31.00
32.250	0.00	0.00	0.00	0.00	0.00	0	31.00
32.300	0.00	0.00	0.00	0.00	0.00	0	31.00
32.350	0.00	0.00	0.00	0.00	0.00	0	31.00
32.400	0.00	0.00	0.00	0.00	0.00	0	31.00
32.450	0.00	0.00	0.00	0.00	0.00	0	31.00
32.500	0.00	0.00	0.00	0.00	0.00	0	31.00
32.550	0.00	0.00	0.00	0.00	0.00	0	31.00
32.600	0.00	0.00	0.00	0.00	0.00	0	31.00
32.650	0.00	0.00	0.00	0.00	0.00	0	31.00
32.700	0.00	0.00	0.00	0.00	0.00	0	31.00
32.750	0.00	0.00	0.00	0.00	0.00	0	31.00
32.800	0.00	0.00	0.00	0.00	0.00	0	31.00
32.850	0.00	0.00	0.00	0.00	0.00	0	31.00
32.900	0.00	0.00	0.00	0.00	0.00	0	31.00
32.950	0.00	0.00	0.00	0.00	0.00	0	31.00
33.000	0.00	0.00	0.00	0.00	0.00	0	31.00
33.050	0.00	0.00	0.00	0.00	0.00	0	31.00
33.100	0.00	0.00	0.00	0.00	0.00	0	31.00
33.150	0.00	0.00	0.00	0.00	0.00	0	31.00
33.200	0.00	0.00	0.00	0.00	0.00	0	31.00
33.250	0.00	0.00	0.00	0.00	0.00	0	31.00
33.300	0.00	0.00	0.00	0.00	0.00	0	31.00
33.350	0.00	0.00	0.00	0.00	0.00	0	31.00
33.400	0.00	0.00	0.00	0.00	0.00	0	31.00
33.450	0.00	0.00	0.00	0.00	0.00	0	31.00
33.500	0.00	0.00	0.00	0.00	0.00	0	31.00
33.550	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
33.600	0.00	0.00	0.00	0.00	0.00	0	31.00
33.650	0.00	0.00	0.00	0.00	0.00	0	31.00
33.700	0.00	0.00	0.00	0.00	0.00	0	31.00
33.750	0.00	0.00	0.00	0.00	0.00	0	31.00
33.800	0.00	0.00	0.00	0.00	0.00	0	31.00
33.850	0.00	0.00	0.00	0.00	0.00	0	31.00
33.900	0.00	0.00	0.00	0.00	0.00	0	31.00
33.950	0.00	0.00	0.00	0.00	0.00	0	31.00
34.000	0.00	0.00	0.00	0.00	0.00	0	31.00
34.050	0.00	0.00	0.00	0.00	0.00	0	31.00
34.100	0.00	0.00	0.00	0.00	0.00	0	31.00
34.150	0.00	0.00	0.00	0.00	0.00	0	31.00
34.200	0.00	0.00	0.00	0.00	0.00	0	31.00
34.250	0.00	0.00	0.00	0.00	0.00	0	31.00
34.300	0.00	0.00	0.00	0.00	0.00	0	31.00
34.350	0.00	0.00	0.00	0.00	0.00	0	31.00
34.400	0.00	0.00	0.00	0.00	0.00	0	31.00
34.450	0.00	0.00	0.00	0.00	0.00	0	31.00
34.500	0.00	0.00	0.00	0.00	0.00	0	31.00
34.550	0.00	0.00	0.00	0.00	0.00	0	31.00
34.600	0.00	0.00	0.00	0.00	0.00	0	31.00
34.650	0.00	0.00	0.00	0.00	0.00	0	31.00
34.700	0.00	0.00	0.00	0.00	0.00	0	31.00
34.750	0.00	0.00	0.00	0.00	0.00	0	31.00
34.800	0.00	0.00	0.00	0.00	0.00	0	31.00
34.850	0.00	0.00	0.00	0.00	0.00	0	31.00
34.900	0.00	0.00	0.00	0.00	0.00	0	31.00
34.950	0.00	0.00	0.00	0.00	0.00	0	31.00
35.000	0.00	0.00	0.00	0.00	0.00	0	31.00
35.050	0.00	0.00	0.00	0.00	0.00	0	31.00
35.100	0.00	0.00	0.00	0.00	0.00	0	31.00
35.150	0.00	0.00	0.00	0.00	0.00	0	31.00
35.200	0.00	0.00	0.00	0.00	0.00	0	31.00
35.250	0.00	0.00	0.00	0.00	0.00	0	31.00
35.300	0.00	0.00	0.00	0.00	0.00	0	31.00
35.350	0.00	0.00	0.00	0.00	0.00	0	31.00
35.400	0.00	0.00	0.00	0.00	0.00	0	31.00
35.450	0.00	0.00	0.00	0.00	0.00	0	31.00
35.500	0.00	0.00	0.00	0.00	0.00	0	31.00
35.550	0.00	0.00	0.00	0.00	0.00	0	31.00
35.600	0.00	0.00	0.00	0.00	0.00	0	31.00
35.650	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
35.700	0.00	0.00	0.00	0.00	0.00	0	31.00
35.750	0.00	0.00	0.00	0.00	0.00	0	31.00
35.800	0.00	0.00	0.00	0.00	0.00	0	31.00
35.850	0.00	0.00	0.00	0.00	0.00	0	31.00
35.900	0.00	0.00	0.00	0.00	0.00	0	31.00
35.950	0.00	0.00	0.00	0.00	0.00	0	31.00
36.000	0.00	0.00	0.00	0.00	0.00	0	31.00

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
0.000	0.00	0.00	0.10	0.00	0.05	0	31.00
0.050	0.00	0.00	0.00	0.00	0.00	0	31.00
0.100	0.00	0.00	0.00	0.00	0.00	0	31.00
0.150	0.00	0.00	0.00	0.00	0.00	0	31.00
0.200	0.00	0.00	0.00	0.00	0.00	0	31.00
0.250	0.00	0.00	0.00	0.00	0.00	0	31.00
0.300	0.00	0.00	0.00	0.00	0.00	0	31.00
0.350	0.00	0.00	0.00	0.00	0.00	0	31.00
0.400	0.00	0.00	0.00	0.00	0.00	0	31.00
0.450	0.00	0.00	0.00	0.00	0.00	0	31.00
0.500	0.00	0.00	0.00	0.00	0.00	0	31.00
0.550	0.00	0.00	0.00	0.00	0.00	0	31.00
0.600	0.00	0.00	0.00	0.00	0.00	0	31.00
0.650	0.00	0.00	0.00	0.00	0.00	0	31.00
0.700	0.00	0.00	0.00	0.00	0.00	0	31.00
0.750	0.00	0.00	0.00	0.00	0.00	0	31.00
0.800	0.00	0.00	0.00	0.00	0.00	0	31.00
0.850	0.00	0.00	0.00	0.00	0.00	0	31.00
0.900	0.00	0.00	0.00	0.00	0.00	0	31.00
0.950	0.00	0.00	0.00	0.00	0.00	0	31.00
1.000	0.00	0.00	0.00	0.00	0.00	0	31.00
1.050	0.00	0.00	0.00	0.00	0.00	0	31.00
1.100	0.00	0.00	0.00	0.00	0.00	0	31.00
1.150	0.00	0.00	0.00	0.00	0.00	0	31.00
1.200	0.00	0.00	0.00	0.00	0.00	0	31.00
1.250	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
1.300	0.00	0.00	0.00	0.00	0.00	0	31.00
1.350	0.00	0.00	0.00	0.00	0.00	0	31.00
1.400	0.00	0.00	0.00	0.00	0.00	0	31.00
1.450	0.00	0.00	0.00	0.00	0.00	0	31.00
1.500	0.00	0.00	0.00	0.00	0.00	0	31.00
1.550	0.00	0.00	0.00	0.00	0.00	0	31.00
1.600	0.00	0.00	0.00	0.00	0.00	0	31.00
1.650	0.00	0.00	0.00	0.00	0.00	0	31.00
1.700	0.00	0.00	0.00	0.00	0.00	0	31.00
1.750	0.00	0.00	0.00	0.00	0.00	0	31.00
1.800	0.00	0.00	0.00	0.00	0.00	0	31.00
1.850	0.00	0.00	0.01	0.00	0.00	0	31.00
1.900	0.00	0.00	0.01	0.00	0.00	0	31.00
1.950	0.00	0.00	0.01	0.00	0.00	0	31.00
2.000	0.00	0.00	0.01	0.00	0.00	0	31.00
2.050	0.01	0.00	0.01	0.00	0.00	0	31.00
2.100	0.01	0.00	0.01	0.00	0.01	0	31.00
2.150	0.01	0.00	0.01	0.00	0.01	0	31.00
2.200	0.01	0.00	0.01	0.00	0.01	0	31.00
2.250	0.01	0.00	0.01	0.00	0.01	0	31.00
2.300	0.01	0.00	0.02	0.00	0.01	0	31.00
2.350	0.01	0.00	0.02	0.00	0.01	0	31.00
2.400	0.01	0.00	0.02	0.00	0.01	0	31.00
2.450	0.01	0.00	0.02	0.00	0.01	0	31.00
2.500	0.01	0.00	0.02	0.00	0.01	0	31.00
2.550	0.01	0.00	0.02	0.00	0.01	0	31.00
2.600	0.01	0.00	0.02	0.00	0.01	0	31.00
2.650	0.01	0.00	0.02	0.00	0.01	0	31.00
2.700	0.01	0.00	0.02	0.00	0.01	0	31.00
2.750	0.01	0.00	0.03	0.00	0.01	0	31.00
2.800	0.01	0.00	0.03	0.00	0.01	0	31.00
2.850	0.01	0.00	0.03	0.00	0.01	0	31.00
2.900	0.01	0.00	0.03	0.00	0.01	0	31.00
2.950	0.02	0.00	0.03	0.00	0.02	0	31.00
3.000	0.02	0.00	0.03	0.00	0.02	0	31.00
3.050	0.02	0.00	0.03	0.00	0.02	0	31.00
3.100	0.02	0.00	0.03	0.00	0.02	0	31.00
3.150	0.02	0.00	0.03	0.00	0.02	0	31.00
3.200	0.02	0.00	0.04	0.00	0.02	0	31.00
3.250	0.02	0.00	0.04	0.00	0.02	0	31.00
3.300	0.02	0.00	0.04	0.00	0.02	0	31.00
3.350	0.02	0.00	0.04	0.00	0.02	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
3.400	0.02	0.00	0.04	0.00	0.02	0	31.00
3.450	0.02	0.00	0.04	0.00	0.02	0	31.00
3.500	0.02	0.00	0.04	0.00	0.02	0	31.00
3.550	0.02	0.00	0.04	0.00	0.02	0	31.00
3.600	0.02	0.00	0.05	0.00	0.02	0	31.00
3.650	0.02	0.00	0.05	0.00	0.02	0	31.00
3.700	0.02	0.00	0.05	0.00	0.02	0	31.00
3.750	0.02	0.00	0.05	0.00	0.02	0	31.00
3.800	0.03	0.00	0.05	0.00	0.02	0	31.00
3.850	0.03	0.00	0.05	0.00	0.03	0	31.00
3.900	0.03	0.00	0.05	0.00	0.03	0	31.00
3.950	0.03	0.00	0.05	0.00	0.03	0	31.00
4.000	0.03	0.00	0.05	0.00	0.03	0	31.00
4.050	0.03	0.00	0.06	0.00	0.03	0	31.00
4.100	0.03	0.00	0.06	0.00	0.03	0	31.00
4.150	0.03	0.00	0.06	0.00	0.03	0	31.00
4.200	0.03	0.00	0.06	0.00	0.03	0	31.00
4.250	0.03	0.00	0.06	0.00	0.03	0	31.00
4.300	0.03	0.00	0.06	0.00	0.03	0	31.00
4.350	0.03	0.00	0.06	0.00	0.03	0	31.00
4.400	0.03	0.00	0.06	0.00	0.03	0	31.00
4.450	0.03	0.00	0.06	0.00	0.03	0	31.00
4.500	0.03	0.00	0.07	0.00	0.03	0	31.00
4.550	0.03	0.00	0.07	0.00	0.03	0	31.00
4.600	0.03	0.00	0.07	0.00	0.03	0	31.00
4.650	0.03	0.00	0.07	0.00	0.03	0	31.00
4.700	0.04	0.00	0.07	0.00	0.04	0	31.00
4.750	0.04	0.00	0.07	0.00	0.04	0	31.00
4.800	0.04	0.00	0.07	0.00	0.04	0	31.00
4.850	0.04	0.00	0.07	0.00	0.04	0	31.00
4.900	0.04	0.00	0.07	0.00	0.04	0	31.00
4.950	0.04	0.00	0.08	0.00	0.04	0	31.00
5.000	0.04	0.00	0.08	0.00	0.04	0	31.00
5.050	0.04	0.00	0.08	0.00	0.04	0	31.00
5.100	0.04	0.00	0.08	0.00	0.04	0	31.00
5.150	0.04	0.00	0.08	0.00	0.04	0	31.00
5.200	0.04	0.00	0.08	0.00	0.04	0	31.00
5.250	0.04	0.00	0.08	0.00	0.04	0	31.00
5.300	0.04	0.00	0.08	0.00	0.04	0	31.00
5.350	0.04	0.00	0.08	0.00	0.04	0	31.00
5.400	0.04	0.00	0.09	0.00	0.04	0	31.00
5.450	0.04	0.00	0.09	0.00	0.04	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
5.500	0.04	0.00	0.09	0.00	0.04	0	31.00
5.550	0.04	0.00	0.09	0.00	0.04	0	31.00
5.600	0.05	0.00	0.09	0.00	0.05	0	31.00
5.650	0.05	0.00	0.09	0.00	0.05	0	31.00
5.700	0.05	0.00	0.09	0.00	0.05	0	31.00
5.750	0.05	0.00	0.09	0.00	0.05	0	31.00
5.800	0.05	0.00	0.09	0.00	0.05	0	31.00
5.850	0.05	0.00	0.10	0.00	0.05	0	31.00
5.900	0.05	0.00	0.10	0.00	0.05	0	31.00
5.950	0.05	0.00	0.10	0.00	0.05	0	31.00
6.000	0.05	0.00	0.10	0.00	0.05	0	31.00
6.050	0.05	0.00	0.10	0.00	0.05	0	31.00
6.100	0.05	0.00	0.10	0.00	0.05	0	31.00
6.150	0.05	0.00	0.10	0.00	0.05	0	31.00
6.200	0.05	0.00	0.11	0.00	0.05	0	31.00
6.250	0.05	0.00	0.11	0.00	0.05	0	31.00
6.300	0.06	0.00	0.11	0.00	0.06	0	31.00
6.350	0.06	0.00	0.11	0.00	0.06	0	31.00
6.400	0.06	0.00	0.11	0.00	0.06	0	31.00
6.450	0.06	0.00	0.12	0.00	0.06	0	31.00
6.500	0.06	0.00	0.12	0.00	0.06	0	31.00
6.550	0.06	0.00	0.12	0.00	0.06	0	31.00
6.600	0.06	0.00	0.12	0.00	0.06	0	31.00
6.650	0.06	0.00	0.13	0.00	0.06	0	31.00
6.700	0.07	0.00	0.13	0.00	0.06	0	31.00
6.750	0.07	0.00	0.13	0.00	0.07	0	31.00
6.800	0.07	0.00	0.13	0.00	0.07	0	31.00
6.850	0.07	0.00	0.14	0.00	0.07	0	31.00
6.900	0.07	0.00	0.14	0.00	0.07	0	31.00
6.950	0.07	0.00	0.14	0.00	0.07	0	31.00
7.000	0.07	0.00	0.14	0.00	0.07	0	31.00
7.050	0.07	0.00	0.15	0.00	0.07	0	31.00
7.100	0.07	0.00	0.15	0.00	0.07	0	31.00
7.150	0.08	0.00	0.15	0.00	0.08	0	31.00
7.200	0.08	0.00	0.15	0.00	0.08	0	31.00
7.250	0.08	0.00	0.16	0.00	0.08	0	31.00
7.300	0.08	0.00	0.16	0.00	0.08	0	31.00
7.350	0.08	0.00	0.16	0.00	0.08	0	31.00
7.400	0.08	0.00	0.16	0.00	0.08	0	31.00
7.450	0.08	0.00	0.17	0.00	0.08	0	31.00
7.500	0.08	0.00	0.17	0.00	0.08	0	31.00
7.550	0.09	0.00	0.17	0.00	0.09	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
7.600	0.09	0.00	0.17	0.00	0.09	0	31.00
7.650	0.09	0.00	0.18	0.00	0.09	0	31.00
7.700	0.09	0.00	0.18	0.00	0.09	0	31.00
7.750	0.09	0.00	0.18	0.00	0.09	0	31.00
7.800	0.09	0.00	0.18	0.00	0.09	0	31.00
7.850	0.09	0.00	0.19	0.00	0.09	0	31.00
7.900	0.09	0.00	0.19	0.00	0.09	0	31.00
7.950	0.10	0.00	0.19	0.00	0.10	0	31.00
8.000	0.10	0.00	0.19	0.00	0.10	0	31.00
8.050	0.10	0.00	0.20	0.00	0.10	0	31.00
8.100	0.10	0.00	0.20	0.00	0.10	0	31.00
8.150	0.10	0.00	0.20	0.00	0.10	0	31.00
8.200	0.11	0.00	0.21	0.00	0.10	9	31.00
8.250	0.11	0.01	0.22	0.00	0.10	10	31.00
8.300	0.11	0.02	0.23	0.00	0.10	11	31.00
8.350	0.11	0.04	0.24	0.00	0.10	13	31.00
8.400	0.12	0.06	0.27	0.00	0.10	15	31.01
8.450	0.12	0.09	0.29	0.00	0.10	17	31.01
8.500	0.12	0.12	0.33	0.00	0.10	20	31.01
8.550	0.12	0.16	0.36	0.00	0.10	23	31.01
8.600	0.13	0.20	0.41	0.00	0.10	27	31.01
8.650	0.13	0.25	0.46	0.00	0.10	32	31.01
8.700	0.13	0.30	0.51	0.00	0.10	37	31.01
8.750	0.14	0.36	0.57	0.00	0.10	42	31.02
8.800	0.14	0.43	0.64	0.00	0.10	48	31.02
8.850	0.14	0.50	0.71	0.00	0.10	54	31.02
8.900	0.14	0.57	0.78	0.00	0.10	61	31.02
8.950	0.15	0.65	0.86	0.00	0.10	68	31.02
9.000	0.15	0.74	0.95	0.00	0.10	76	31.03
9.050	0.15	0.83	1.04	0.00	0.10	84	31.03
9.100	0.15	0.93	1.14	0.00	0.10	93	31.03
9.150	0.16	1.04	1.24	0.00	0.10	103	31.04
9.200	0.16	1.14	1.35	0.00	0.10	112	31.04
9.250	0.16	1.26	1.47	0.00	0.10	123	31.04
9.300	0.17	1.38	1.59	0.00	0.10	134	31.05
9.350	0.17	1.51	1.71	0.00	0.10	145	31.05
9.400	0.17	1.64	1.84	0.00	0.10	157	31.06
9.450	0.17	1.77	1.98	0.00	0.10	169	31.06
9.500	0.18	1.92	2.12	0.00	0.10	182	31.07
9.550	0.18	2.07	2.27	0.00	0.10	195	31.07
9.600	0.18	2.22	2.43	0.00	0.10	209	31.08
9.650	0.19	2.38	2.59	0.00	0.10	224	31.08

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
9.700	0.19	2.55	2.75	0.00	0.10	238	31.09
9.750	0.19	2.72	2.92	0.00	0.10	254	31.09
9.800	0.19	2.89	3.10	0.00	0.10	270	31.10
9.850	0.20	3.08	3.28	0.00	0.10	286	31.10
9.900	0.20	3.26	3.47	0.00	0.10	303	31.11
9.950	0.20	3.46	3.67	0.00	0.10	321	31.12
10.000	0.21	3.66	3.87	0.00	0.10	339	31.12
10.050	0.21	3.87	4.07	0.00	0.10	357	31.13
10.100	0.21	4.08	4.29	0.00	0.10	377	31.14
10.150	0.22	4.30	4.51	0.00	0.10	397	31.14
10.200	0.22	4.54	4.75	0.00	0.10	418	31.15
10.250	0.23	4.78	4.99	0.00	0.10	440	31.16
10.300	0.24	5.04	5.25	0.00	0.10	463	31.17
10.350	0.24	5.31	5.52	0.00	0.10	487	31.18
10.400	0.25	5.59	5.80	0.00	0.10	512	31.19
10.450	0.25	5.88	6.09	0.00	0.10	539	31.20
10.500	0.26	6.18	6.39	0.00	0.10	566	31.21
10.550	0.26	6.50	6.70	0.00	0.10	594	31.22
10.600	0.27	6.82	7.03	0.00	0.10	623	31.23
10.650	0.28	7.16	7.37	0.00	0.10	654	31.24
10.700	0.28	7.51	7.71	0.00	0.10	685	31.25
10.750	0.29	7.86	8.07	0.00	0.10	717	31.26
10.800	0.29	8.24	8.44	0.00	0.10	751	31.27
10.850	0.30	8.62	8.83	0.00	0.10	785	31.29
10.900	0.30	9.01	9.22	0.00	0.10	820	31.30
10.950	0.31	9.42	9.63	0.00	0.10	857	31.31
11.000	0.32	9.83	10.04	0.00	0.10	894	31.33
11.050	0.33	10.27	10.48	0.00	0.10	934	31.34
11.100	0.34	10.73	10.94	0.00	0.10	975	31.35
11.150	0.36	11.22	11.43	0.00	0.10	1,019	31.37
11.200	0.38	11.75	11.96	0.00	0.10	1,067	31.39
11.250	0.40	12.32	12.53	0.00	0.10	1,118	31.41
11.300	0.42	12.93	13.14	0.00	0.10	1,173	31.43
11.350	0.44	13.59	13.80	0.00	0.10	1,232	31.45
11.400	0.46	14.29	14.50	0.00	0.10	1,295	31.47
11.450	0.49	15.03	15.24	0.00	0.10	1,362	31.50
11.500	0.51	15.81	16.02	0.00	0.10	1,432	31.52
11.550	0.59	16.71	16.91	0.00	0.10	1,513	31.55
11.600	0.70	17.79	18.00	0.00	0.10	1,611	31.59
11.650	0.88	19.16	19.37	0.00	0.10	1,734	31.63
11.700	1.07	20.91	21.11	0.00	0.10	1,891	31.69
11.750	1.27	23.05	23.25	0.00	0.10	2,083	31.76

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
11.800	1.48	25.59	25.80	0.00	0.10	2,312	31.84
11.850	1.68	28.54	28.75	0.00	0.10	2,578	31.94
11.900	1.89	29.40	32.11	0.00	1.36	2,768	32.01
11.950	2.66	28.13	33.95	0.00	2.91	2,793	32.02
12.000	3.58	27.84	34.36	0.00	3.26	2,799	32.02
12.050	3.81	27.24	35.23	0.00	4.00	2,811	32.02
12.100	3.88	27.45	34.93	0.00	3.74	2,807	32.02
12.150	3.18	27.74	34.50	0.00	3.38	2,801	32.02
12.200	2.27	28.65	33.19	0.00	2.27	2,783	32.01
12.250	1.90	28.91	32.82	0.00	1.96	2,778	32.01
12.300	1.65	29.16	32.46	0.00	1.65	2,773	32.01
12.350	1.44	29.31	32.25	0.00	1.47	2,770	32.01
12.400	1.23	29.50	31.98	0.00	1.24	2,766	32.01
12.450	1.03	29.65	31.76	0.00	1.06	2,763	32.01
12.500	0.82	29.83	31.50	0.00	0.84	2,760	32.00
12.550	0.69	29.94	31.34	0.00	0.70	2,758	32.00
12.600	0.57	30.04	31.20	0.00	0.58	2,756	32.00
12.650	0.53	30.08	31.13	0.00	0.53	2,755	32.00
12.700	0.50	30.10	31.11	0.00	0.50	2,754	32.00
12.750	0.48	30.12	31.08	0.00	0.48	2,754	32.00
12.800	0.45	30.14	31.05	0.00	0.46	2,754	32.00
12.850	0.43	30.16	31.03	0.00	0.43	2,753	32.00
12.900	0.41	30.17	31.00	0.00	0.41	2,753	32.00
12.950	0.39	30.19	30.98	0.00	0.39	2,753	32.00
13.000	0.37	30.21	30.95	0.00	0.37	2,752	32.00
13.050	0.35	30.22	30.93	0.00	0.35	2,752	32.00
13.100	0.34	30.23	30.92	0.00	0.34	2,752	32.00
13.150	0.33	30.24	30.91	0.00	0.33	2,752	32.00
13.200	0.33	30.25	30.90	0.00	0.33	2,752	32.00
13.250	0.32	30.25	30.89	0.00	0.32	2,752	32.00
13.300	0.31	30.26	30.89	0.00	0.32	2,751	32.00
13.350	0.31	30.26	30.88	0.00	0.31	2,751	32.00
13.400	0.30	30.27	30.87	0.00	0.30	2,751	32.00
13.450	0.30	30.27	30.87	0.00	0.30	2,751	32.00
13.500	0.29	30.27	30.86	0.00	0.29	2,751	32.00
13.550	0.29	30.28	30.85	0.00	0.29	2,751	32.00
13.600	0.28	30.28	30.85	0.00	0.28	2,751	32.00
13.650	0.28	30.29	30.84	0.00	0.28	2,751	32.00
13.700	0.27	30.29	30.83	0.00	0.27	2,751	32.00
13.750	0.26	30.30	30.83	0.00	0.26	2,751	32.00
13.800	0.26	30.30	30.82	0.00	0.26	2,751	32.00
13.850	0.25	30.31	30.81	0.00	0.25	2,750	32.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
13.900	0.25	30.31	30.81	0.00	0.25	2,750	32.00
13.950	0.24	30.32	30.80	0.00	0.24	2,750	32.00
14.000	0.24	30.32	30.79	0.00	0.24	2,750	32.00
14.050	0.23	30.32	30.79	0.00	0.23	2,750	32.00
14.100	0.23	30.33	30.78	0.00	0.23	2,750	32.00
14.150	0.22	30.33	30.78	0.00	0.22	2,750	32.00
14.200	0.22	30.33	30.78	0.00	0.22	2,750	32.00
14.250	0.22	30.33	30.77	0.00	0.22	2,750	32.00
14.300	0.22	30.34	30.77	0.00	0.22	2,750	32.00
14.350	0.21	30.34	30.77	0.00	0.21	2,750	32.00
14.400	0.21	30.34	30.76	0.00	0.21	2,750	32.00
14.450	0.21	30.34	30.76	0.00	0.21	2,750	32.00
14.500	0.21	30.35	30.76	0.00	0.21	2,750	32.00
14.550	0.20	30.35	30.75	0.00	0.20	2,750	32.00
14.600	0.20	30.35	30.75	0.00	0.20	2,750	32.00
14.650	0.20	30.35	30.75	0.00	0.20	2,750	32.00
14.700	0.19	30.35	30.74	0.00	0.20	2,749	32.00
14.750	0.19	30.36	30.74	0.00	0.19	2,749	32.00
14.800	0.19	30.36	30.74	0.00	0.19	2,749	32.00
14.850	0.19	30.36	30.74	0.00	0.19	2,749	32.00
14.900	0.18	30.36	30.73	0.00	0.18	2,749	32.00
14.950	0.18	30.37	30.73	0.00	0.18	2,749	32.00
15.000	0.18	30.37	30.73	0.00	0.18	2,749	32.00
15.050	0.18	30.37	30.72	0.00	0.18	2,749	32.00
15.100	0.17	30.37	30.72	0.00	0.17	2,749	32.00
15.150	0.17	30.37	30.72	0.00	0.17	2,749	32.00
15.200	0.17	30.38	30.71	0.00	0.17	2,749	32.00
15.250	0.17	30.38	30.71	0.00	0.17	2,749	32.00
15.300	0.16	30.38	30.71	0.00	0.16	2,749	32.00
15.350	0.16	30.38	30.70	0.00	0.16	2,749	32.00
15.400	0.16	30.39	30.70	0.00	0.16	2,749	32.00
15.450	0.15	30.39	30.70	0.00	0.16	2,749	32.00
15.500	0.15	30.39	30.69	0.00	0.15	2,749	32.00
15.550	0.15	30.39	30.69	0.00	0.15	2,749	32.00
15.600	0.15	30.39	30.69	0.00	0.15	2,749	32.00
15.650	0.14	30.40	30.68	0.00	0.14	2,749	32.00
15.700	0.14	30.40	30.68	0.00	0.14	2,749	32.00
15.750	0.14	30.40	30.68	0.00	0.14	2,749	32.00
15.800	0.14	30.40	30.68	0.00	0.14	2,749	32.00
15.850	0.13	30.41	30.67	0.00	0.13	2,748	32.00
15.900	0.13	30.41	30.67	0.00	0.13	2,748	32.00
15.950	0.13	30.41	30.67	0.00	0.13	2,748	32.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
16.000	0.13	30.41	30.66	0.00	0.13	2,748	32.00
16.050	0.12	30.41	30.66	0.00	0.12	2,748	32.00
16.100	0.12	30.41	30.66	0.00	0.12	2,748	32.00
16.150	0.12	30.42	30.66	0.00	0.12	2,748	32.00
16.200	0.12	30.42	30.65	0.00	0.12	2,748	32.00
16.250	0.12	30.42	30.65	0.00	0.12	2,748	32.00
16.300	0.12	30.42	30.65	0.00	0.12	2,748	32.00
16.350	0.12	30.42	30.65	0.00	0.12	2,748	32.00
16.400	0.11	30.42	30.65	0.00	0.11	2,748	32.00
16.450	0.11	30.42	30.65	0.00	0.11	2,748	32.00
16.500	0.11	30.42	30.65	0.00	0.11	2,748	32.00
16.550	0.11	30.42	30.65	0.00	0.11	2,748	32.00
16.600	0.11	30.43	30.64	0.00	0.11	2,748	32.00
16.650	0.11	30.43	30.64	0.00	0.11	2,748	32.00
16.700	0.11	30.43	30.64	0.00	0.11	2,748	32.00
16.750	0.11	30.43	30.64	0.00	0.11	2,748	32.00
16.800	0.10	30.43	30.64	0.00	0.10	2,748	32.00
16.850	0.10	30.43	30.64	0.00	0.10	2,748	32.00
16.900	0.10	30.43	30.63	0.00	0.10	2,748	32.00
16.950	0.10	30.42	30.63	0.00	0.10	2,747	32.00
17.000	0.10	30.41	30.62	0.00	0.10	2,747	32.00
17.050	0.10	30.40	30.61	0.00	0.10	2,746	32.00
17.100	0.10	30.39	30.60	0.00	0.10	2,745	32.00
17.150	0.10	30.38	30.59	0.00	0.10	2,743	32.00
17.200	0.09	30.36	30.57	0.00	0.10	2,742	32.00
17.250	0.09	30.34	30.55	0.00	0.10	2,740	32.00
17.300	0.09	30.32	30.53	0.00	0.10	2,738	32.00
17.350	0.09	30.30	30.51	0.00	0.10	2,736	32.00
17.400	0.09	30.27	30.48	0.00	0.10	2,734	31.99
17.450	0.09	30.24	30.45	0.00	0.10	2,731	31.99
17.500	0.09	30.21	30.42	0.00	0.10	2,729	31.99
17.550	0.09	30.18	30.39	0.00	0.10	2,726	31.99
17.600	0.09	30.15	30.35	0.00	0.10	2,722	31.99
17.650	0.08	30.11	30.32	0.00	0.10	2,719	31.99
17.700	0.08	30.07	30.28	0.00	0.10	2,716	31.99
17.750	0.08	30.03	30.23	0.00	0.10	2,712	31.99
17.800	0.08	29.98	30.19	0.00	0.10	2,708	31.99
17.850	0.08	29.93	30.14	0.00	0.10	2,703	31.98
17.900	0.08	29.89	30.09	0.00	0.10	2,699	31.98
17.950	0.08	29.83	30.04	0.00	0.10	2,694	31.98
18.000	0.08	29.78	29.99	0.00	0.10	2,690	31.98
18.050	0.08	29.72	29.93	0.00	0.10	2,684	31.98

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
18.100	0.07	29.67	29.87	0.00	0.10	2,679	31.97
18.150	0.07	29.61	29.81	0.00	0.10	2,674	31.97
18.200	0.07	29.55	29.75	0.00	0.10	2,669	31.97
18.250	0.07	29.49	29.69	0.00	0.10	2,663	31.97
18.300	0.07	29.43	29.63	0.00	0.10	2,658	31.97
18.350	0.07	29.36	29.57	0.00	0.10	2,652	31.97
18.400	0.07	29.30	29.51	0.00	0.10	2,646	31.96
18.450	0.07	29.24	29.45	0.00	0.10	2,641	31.96
18.500	0.07	29.17	29.38	0.00	0.10	2,635	31.96
18.550	0.07	29.11	29.32	0.00	0.10	2,629	31.96
18.600	0.07	29.04	29.25	0.00	0.10	2,623	31.95
18.650	0.07	28.98	29.19	0.00	0.10	2,617	31.95
18.700	0.07	28.91	29.12	0.00	0.10	2,611	31.95
18.750	0.07	28.84	29.05	0.00	0.10	2,605	31.95
18.800	0.07	28.78	28.98	0.00	0.10	2,599	31.95
18.850	0.07	28.71	28.91	0.00	0.10	2,593	31.94
18.900	0.07	28.64	28.85	0.00	0.10	2,587	31.94
18.950	0.07	28.57	28.77	0.00	0.10	2,580	31.94
19.000	0.07	28.50	28.70	0.00	0.10	2,574	31.94
19.050	0.07	28.42	28.63	0.00	0.10	2,568	31.93
19.100	0.07	28.35	28.56	0.00	0.10	2,561	31.93
19.150	0.07	28.28	28.49	0.00	0.10	2,554	31.93
19.200	0.07	28.21	28.41	0.00	0.10	2,548	31.93
19.250	0.07	28.13	28.34	0.00	0.10	2,541	31.92
19.300	0.07	28.06	28.26	0.00	0.10	2,534	31.92
19.350	0.07	27.98	28.19	0.00	0.10	2,528	31.92
19.400	0.07	27.90	28.11	0.00	0.10	2,521	31.92
19.450	0.07	27.83	28.03	0.00	0.10	2,514	31.91
19.500	0.06	27.75	27.96	0.00	0.10	2,507	31.91
19.550	0.06	27.67	27.88	0.00	0.10	2,500	31.91
19.600	0.06	27.59	27.80	0.00	0.10	2,492	31.91
19.650	0.06	27.51	27.72	0.00	0.10	2,485	31.90
19.700	0.06	27.43	27.64	0.00	0.10	2,478	31.90
19.750	0.06	27.35	27.56	0.00	0.10	2,471	31.90
19.800	0.06	27.27	27.47	0.00	0.10	2,463	31.90
19.850	0.06	27.18	27.39	0.00	0.10	2,456	31.89
19.900	0.06	27.10	27.31	0.00	0.10	2,448	31.89
19.950	0.06	27.01	27.22	0.00	0.10	2,441	31.89
20.000	0.06	26.93	27.14	0.00	0.10	2,433	31.89
20.050	0.06	26.84	27.05	0.00	0.10	2,425	31.88
20.100	0.06	26.76	26.97	0.00	0.10	2,418	31.88
20.150	0.06	26.67	26.88	0.00	0.10	2,410	31.88

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
20.200	0.06	26.58	26.79	0.00	0.10	2,402	31.87
20.250	0.06	26.50	26.70	0.00	0.10	2,394	31.87
20.300	0.06	26.41	26.62	0.00	0.10	2,386	31.87
20.350	0.06	26.32	26.53	0.00	0.10	2,378	31.87
20.400	0.06	26.23	26.44	0.00	0.10	2,370	31.86
20.450	0.06	26.14	26.35	0.00	0.10	2,362	31.86
20.500	0.06	26.05	26.26	0.00	0.10	2,354	31.86
20.550	0.06	25.96	26.17	0.00	0.10	2,346	31.85
20.600	0.06	25.87	26.07	0.00	0.10	2,337	31.85
20.650	0.06	25.77	25.98	0.00	0.10	2,329	31.85
20.700	0.06	25.68	25.89	0.00	0.10	2,321	31.84
20.750	0.06	25.59	25.80	0.00	0.10	2,312	31.84
20.800	0.06	25.49	25.70	0.00	0.10	2,304	31.84
20.850	0.06	25.40	25.61	0.00	0.10	2,295	31.84
20.900	0.06	25.30	25.51	0.00	0.10	2,287	31.83
20.950	0.06	25.21	25.42	0.00	0.10	2,278	31.83
21.000	0.06	25.11	25.32	0.00	0.10	2,270	31.83
21.050	0.06	25.02	25.23	0.00	0.10	2,261	31.82
21.100	0.06	24.92	25.13	0.00	0.10	2,252	31.82
21.150	0.06	24.82	25.03	0.00	0.10	2,244	31.82
21.200	0.05	24.73	24.93	0.00	0.10	2,235	31.81
21.250	0.05	24.63	24.84	0.00	0.10	2,226	31.81
21.300	0.05	24.53	24.74	0.00	0.10	2,217	31.81
21.350	0.05	24.43	24.64	0.00	0.10	2,208	31.80
21.400	0.05	24.33	24.54	0.00	0.10	2,199	31.80
21.450	0.05	24.23	24.44	0.00	0.10	2,190	31.80
21.500	0.05	24.13	24.34	0.00	0.10	2,181	31.79
21.550	0.05	24.03	24.23	0.00	0.10	2,172	31.79
21.600	0.05	23.92	24.13	0.00	0.10	2,162	31.79
21.650	0.05	23.82	24.03	0.00	0.10	2,153	31.78
21.700	0.05	23.72	23.93	0.00	0.10	2,144	31.78
21.750	0.05	23.61	23.82	0.00	0.10	2,135	31.78
21.800	0.05	23.51	23.72	0.00	0.10	2,125	31.77
21.850	0.05	23.41	23.61	0.00	0.10	2,116	31.77
21.900	0.05	23.30	23.51	0.00	0.10	2,106	31.77
21.950	0.05	23.19	23.40	0.00	0.10	2,097	31.76
22.000	0.05	23.09	23.30	0.00	0.10	2,087	31.76
22.050	0.05	22.98	23.19	0.00	0.10	2,078	31.76
22.100	0.05	22.87	23.08	0.00	0.10	2,068	31.75
22.150	0.05	22.77	22.97	0.00	0.10	2,058	31.75
22.200	0.05	22.66	22.87	0.00	0.10	2,049	31.75
22.250	0.05	22.55	22.76	0.00	0.10	2,039	31.74

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
22.300	0.05	22.44	22.65	0.00	0.10	2,029	31.74
22.350	0.05	22.33	22.54	0.00	0.10	2,019	31.73
22.400	0.05	22.22	22.43	0.00	0.10	2,009	31.73
22.450	0.05	22.11	22.31	0.00	0.10	1,999	31.73
22.500	0.05	21.99	22.20	0.00	0.10	1,989	31.72
22.550	0.05	21.88	22.09	0.00	0.10	1,979	31.72
22.600	0.05	21.77	21.98	0.00	0.10	1,969	31.72
22.650	0.05	21.66	21.87	0.00	0.10	1,959	31.71
22.700	0.05	21.54	21.75	0.00	0.10	1,948	31.71
22.750	0.05	21.43	21.64	0.00	0.10	1,938	31.71
22.800	0.05	21.31	21.52	0.00	0.10	1,928	31.70
22.850	0.05	21.20	21.41	0.00	0.10	1,917	31.70
22.900	0.05	21.08	21.29	0.00	0.10	1,907	31.69
22.950	0.05	20.97	21.18	0.00	0.10	1,896	31.69
23.000	0.05	20.85	21.06	0.00	0.10	1,886	31.69
23.050	0.05	20.73	20.94	0.00	0.10	1,875	31.68
23.100	0.04	20.61	20.82	0.00	0.10	1,865	31.68
23.150	0.04	20.50	20.70	0.00	0.10	1,854	31.67
23.200	0.04	20.38	20.59	0.00	0.10	1,843	31.67
23.250	0.04	20.26	20.47	0.00	0.10	1,833	31.67
23.300	0.04	20.14	20.35	0.00	0.10	1,822	31.66
23.350	0.04	20.02	20.23	0.00	0.10	1,811	31.66
23.400	0.04	19.90	20.10	0.00	0.10	1,800	31.66
23.450	0.04	19.78	19.98	0.00	0.10	1,789	31.65
23.500	0.04	19.65	19.86	0.00	0.10	1,778	31.65
23.550	0.04	19.53	19.74	0.00	0.10	1,767	31.64
23.600	0.04	19.41	19.62	0.00	0.10	1,756	31.64
23.650	0.04	19.28	19.49	0.00	0.10	1,745	31.63
23.700	0.04	19.16	19.37	0.00	0.10	1,734	31.63
23.750	0.04	19.03	19.24	0.00	0.10	1,722	31.63
23.800	0.04	18.91	19.12	0.00	0.10	1,711	31.62
23.850	0.04	18.78	18.99	0.00	0.10	1,700	31.62
23.900	0.04	18.66	18.86	0.00	0.10	1,688	31.61
23.950	0.04	18.53	18.74	0.00	0.10	1,677	31.61
24.000	0.04	18.40	18.61	0.00	0.10	1,666	31.61
24.050	0.03	18.26	18.47	0.00	0.10	1,653	31.60
24.100	0.01	18.08	18.29	0.00	0.10	1,637	31.60
24.150	0.00	17.88	18.09	0.00	0.10	1,619	31.59
24.200	0.00	17.68	17.88	0.00	0.10	1,600	31.58
24.250	0.00	17.47	17.68	0.00	0.10	1,582	31.58
24.300	0.00	17.26	17.47	0.00	0.10	1,563	31.57
24.350	0.00	17.05	17.26	0.00	0.10	1,544	31.56

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
24.400	0.00	16.84	17.05	0.00	0.10	1,525	31.56
24.450	0.00	16.64	16.84	0.00	0.10	1,507	31.55
24.500	0.00	16.43	16.64	0.00	0.10	1,488	31.54
24.550	0.00	16.22	16.43	0.00	0.10	1,469	31.53
24.600	0.00	16.01	16.22	0.00	0.10	1,450	31.53
24.650	0.00	15.80	16.01	0.00	0.10	1,432	31.52
24.700	0.00	15.60	15.80	0.00	0.10	1,413	31.51
24.750	0.00	15.39	15.60	0.00	0.10	1,394	31.51
24.800	0.00	15.18	15.39	0.00	0.10	1,376	31.50
24.850	0.00	14.97	15.18	0.00	0.10	1,357	31.49
24.900	0.00	14.76	14.97	0.00	0.10	1,338	31.49
24.950	0.00	14.56	14.76	0.00	0.10	1,319	31.48
25.000	0.00	14.35	14.56	0.00	0.10	1,301	31.47
25.050	0.00	14.14	14.35	0.00	0.10	1,282	31.47
25.100	0.00	13.93	14.14	0.00	0.10	1,263	31.46
25.150	0.00	13.72	13.93	0.00	0.10	1,245	31.45
25.200	0.00	13.52	13.72	0.00	0.10	1,226	31.45
25.250	0.00	13.31	13.52	0.00	0.10	1,207	31.44
25.300	0.00	13.10	13.31	0.00	0.10	1,188	31.43
25.350	0.00	12.89	13.10	0.00	0.10	1,170	31.43
25.400	0.00	12.68	12.89	0.00	0.10	1,151	31.42
25.450	0.00	12.48	12.68	0.00	0.10	1,132	31.41
25.500	0.00	12.27	12.48	0.00	0.10	1,114	31.41
25.550	0.00	12.06	12.27	0.00	0.10	1,095	31.40
25.600	0.00	11.85	12.06	0.00	0.10	1,076	31.39
25.650	0.00	11.64	11.85	0.00	0.10	1,057	31.38
25.700	0.00	11.44	11.64	0.00	0.10	1,039	31.38
25.750	0.00	11.23	11.44	0.00	0.10	1,020	31.37
25.800	0.00	11.02	11.23	0.00	0.10	1,001	31.36
25.850	0.00	10.81	11.02	0.00	0.10	982	31.36
25.900	0.00	10.60	10.81	0.00	0.10	964	31.35
25.950	0.00	10.40	10.60	0.00	0.10	945	31.34
26.000	0.00	10.19	10.40	0.00	0.10	926	31.34
26.050	0.00	9.98	10.19	0.00	0.10	908	31.33
26.100	0.00	9.77	9.98	0.00	0.10	889	31.32
26.150	0.00	9.56	9.77	0.00	0.10	870	31.32
26.200	0.00	9.36	9.56	0.00	0.10	851	31.31
26.250	0.00	9.15	9.36	0.00	0.10	833	31.30
26.300	0.00	8.94	9.15	0.00	0.10	814	31.30
26.350	0.00	8.73	8.94	0.00	0.10	795	31.29
26.400	0.00	8.52	8.73	0.00	0.10	777	31.28
26.450	0.00	8.32	8.52	0.00	0.10	758	31.28

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
26.500	0.00	8.11	8.32	0.00	0.10	739	31.27
26.550	0.00	7.90	8.11	0.00	0.10	720	31.26
26.600	0.00	7.69	7.90	0.00	0.10	702	31.26
26.650	0.00	7.48	7.69	0.00	0.10	683	31.25
26.700	0.00	7.28	7.48	0.00	0.10	664	31.24
26.750	0.00	7.07	7.28	0.00	0.10	646	31.23
26.800	0.00	6.86	7.07	0.00	0.10	627	31.23
26.850	0.00	6.65	6.86	0.00	0.10	608	31.22
26.900	0.00	6.44	6.65	0.00	0.10	589	31.21
26.950	0.00	6.24	6.44	0.00	0.10	571	31.21
27.000	0.00	6.03	6.24	0.00	0.10	552	31.20
27.050	0.00	5.82	6.03	0.00	0.10	533	31.19
27.100	0.00	5.61	5.82	0.00	0.10	514	31.19
27.150	0.00	5.40	5.61	0.00	0.10	496	31.18
27.200	0.00	5.20	5.40	0.00	0.10	477	31.17
27.250	0.00	4.99	5.20	0.00	0.10	458	31.17
27.300	0.00	4.78	4.99	0.00	0.10	440	31.16
27.350	0.00	4.57	4.78	0.00	0.10	421	31.15
27.400	0.00	4.36	4.57	0.00	0.10	402	31.15
27.450	0.00	4.16	4.36	0.00	0.10	383	31.14
27.500	0.00	3.95	4.16	0.00	0.10	365	31.13
27.550	0.00	3.74	3.95	0.00	0.10	346	31.13
27.600	0.00	3.53	3.74	0.00	0.10	327	31.12
27.650	0.00	3.32	3.53	0.00	0.10	309	31.11
27.700	0.00	3.12	3.32	0.00	0.10	290	31.11
27.750	0.00	2.91	3.12	0.00	0.10	271	31.10
27.800	0.00	2.70	2.91	0.00	0.10	252	31.09
27.850	0.00	2.49	2.70	0.00	0.10	234	31.09
27.900	0.00	2.28	2.49	0.00	0.10	215	31.08
27.950	0.00	2.08	2.28	0.00	0.10	196	31.07
28.000	0.00	1.87	2.08	0.00	0.10	178	31.06
28.050	0.00	1.66	1.87	0.00	0.10	159	31.06
28.100	0.00	1.45	1.66	0.00	0.10	140	31.05
28.150	0.00	1.24	1.45	0.00	0.10	121	31.04
28.200	0.00	1.04	1.24	0.00	0.10	103	31.04
28.250	0.00	0.83	1.04	0.00	0.10	84	31.03
28.300	0.00	0.62	0.83	0.00	0.10	65	31.02
28.350	0.00	0.41	0.62	0.00	0.10	46	31.02
28.400	0.00	0.20	0.41	0.00	0.10	28	31.01
28.450	0.00	0.00	0.20	0.00	0.10	0	31.00
28.500	0.00	0.00	0.00	0.00	0.00	0	31.00
28.550	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
28.600	0.00	0.00	0.00	0.00	0.00	0	31.00
28.650	0.00	0.00	0.00	0.00	0.00	0	31.00
28.700	0.00	0.00	0.00	0.00	0.00	0	31.00
28.750	0.00	0.00	0.00	0.00	0.00	0	31.00
28.800	0.00	0.00	0.00	0.00	0.00	0	31.00
28.850	0.00	0.00	0.00	0.00	0.00	0	31.00
28.900	0.00	0.00	0.00	0.00	0.00	0	31.00
28.950	0.00	0.00	0.00	0.00	0.00	0	31.00
29.000	0.00	0.00	0.00	0.00	0.00	0	31.00
29.050	0.00	0.00	0.00	0.00	0.00	0	31.00
29.100	0.00	0.00	0.00	0.00	0.00	0	31.00
29.150	0.00	0.00	0.00	0.00	0.00	0	31.00
29.200	0.00	0.00	0.00	0.00	0.00	0	31.00
29.250	0.00	0.00	0.00	0.00	0.00	0	31.00
29.300	0.00	0.00	0.00	0.00	0.00	0	31.00
29.350	0.00	0.00	0.00	0.00	0.00	0	31.00
29.400	0.00	0.00	0.00	0.00	0.00	0	31.00
29.450	0.00	0.00	0.00	0.00	0.00	0	31.00
29.500	0.00	0.00	0.00	0.00	0.00	0	31.00
29.550	0.00	0.00	0.00	0.00	0.00	0	31.00
29.600	0.00	0.00	0.00	0.00	0.00	0	31.00
29.650	0.00	0.00	0.00	0.00	0.00	0	31.00
29.700	0.00	0.00	0.00	0.00	0.00	0	31.00
29.750	0.00	0.00	0.00	0.00	0.00	0	31.00
29.800	0.00	0.00	0.00	0.00	0.00	0	31.00
29.850	0.00	0.00	0.00	0.00	0.00	0	31.00
29.900	0.00	0.00	0.00	0.00	0.00	0	31.00
29.950	0.00	0.00	0.00	0.00	0.00	0	31.00
30.000	0.00	0.00	0.00	0.00	0.00	0	31.00
30.050	0.00	0.00	0.00	0.00	0.00	0	31.00
30.100	0.00	0.00	0.00	0.00	0.00	0	31.00
30.150	0.00	0.00	0.00	0.00	0.00	0	31.00
30.200	0.00	0.00	0.00	0.00	0.00	0	31.00
30.250	0.00	0.00	0.00	0.00	0.00	0	31.00
30.300	0.00	0.00	0.00	0.00	0.00	0	31.00
30.350	0.00	0.00	0.00	0.00	0.00	0	31.00
30.400	0.00	0.00	0.00	0.00	0.00	0	31.00
30.450	0.00	0.00	0.00	0.00	0.00	0	31.00
30.500	0.00	0.00	0.00	0.00	0.00	0	31.00
30.550	0.00	0.00	0.00	0.00	0.00	0	31.00
30.600	0.00	0.00	0.00	0.00	0.00	0	31.00
30.650	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
30.700	0.00	0.00	0.00	0.00	0.00	0	31.00
30.750	0.00	0.00	0.00	0.00	0.00	0	31.00
30.800	0.00	0.00	0.00	0.00	0.00	0	31.00
30.850	0.00	0.00	0.00	0.00	0.00	0	31.00
30.900	0.00	0.00	0.00	0.00	0.00	0	31.00
30.950	0.00	0.00	0.00	0.00	0.00	0	31.00
31.000	0.00	0.00	0.00	0.00	0.00	0	31.00
31.050	0.00	0.00	0.00	0.00	0.00	0	31.00
31.100	0.00	0.00	0.00	0.00	0.00	0	31.00
31.150	0.00	0.00	0.00	0.00	0.00	0	31.00
31.200	0.00	0.00	0.00	0.00	0.00	0	31.00
31.250	0.00	0.00	0.00	0.00	0.00	0	31.00
31.300	0.00	0.00	0.00	0.00	0.00	0	31.00
31.350	0.00	0.00	0.00	0.00	0.00	0	31.00
31.400	0.00	0.00	0.00	0.00	0.00	0	31.00
31.450	0.00	0.00	0.00	0.00	0.00	0	31.00
31.500	0.00	0.00	0.00	0.00	0.00	0	31.00
31.550	0.00	0.00	0.00	0.00	0.00	0	31.00
31.600	0.00	0.00	0.00	0.00	0.00	0	31.00
31.650	0.00	0.00	0.00	0.00	0.00	0	31.00
31.700	0.00	0.00	0.00	0.00	0.00	0	31.00
31.750	0.00	0.00	0.00	0.00	0.00	0	31.00
31.800	0.00	0.00	0.00	0.00	0.00	0	31.00
31.850	0.00	0.00	0.00	0.00	0.00	0	31.00
31.900	0.00	0.00	0.00	0.00	0.00	0	31.00
31.950	0.00	0.00	0.00	0.00	0.00	0	31.00
32.000	0.00	0.00	0.00	0.00	0.00	0	31.00
32.050	0.00	0.00	0.00	0.00	0.00	0	31.00
32.100	0.00	0.00	0.00	0.00	0.00	0	31.00
32.150	0.00	0.00	0.00	0.00	0.00	0	31.00
32.200	0.00	0.00	0.00	0.00	0.00	0	31.00
32.250	0.00	0.00	0.00	0.00	0.00	0	31.00
32.300	0.00	0.00	0.00	0.00	0.00	0	31.00
32.350	0.00	0.00	0.00	0.00	0.00	0	31.00
32.400	0.00	0.00	0.00	0.00	0.00	0	31.00
32.450	0.00	0.00	0.00	0.00	0.00	0	31.00
32.500	0.00	0.00	0.00	0.00	0.00	0	31.00
32.550	0.00	0.00	0.00	0.00	0.00	0	31.00
32.600	0.00	0.00	0.00	0.00	0.00	0	31.00
32.650	0.00	0.00	0.00	0.00	0.00	0	31.00
32.700	0.00	0.00	0.00	0.00	0.00	0	31.00
32.750	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
32.800	0.00	0.00	0.00	0.00	0.00	0	31.00
32.850	0.00	0.00	0.00	0.00	0.00	0	31.00
32.900	0.00	0.00	0.00	0.00	0.00	0	31.00
32.950	0.00	0.00	0.00	0.00	0.00	0	31.00
33.000	0.00	0.00	0.00	0.00	0.00	0	31.00
33.050	0.00	0.00	0.00	0.00	0.00	0	31.00
33.100	0.00	0.00	0.00	0.00	0.00	0	31.00
33.150	0.00	0.00	0.00	0.00	0.00	0	31.00
33.200	0.00	0.00	0.00	0.00	0.00	0	31.00
33.250	0.00	0.00	0.00	0.00	0.00	0	31.00
33.300	0.00	0.00	0.00	0.00	0.00	0	31.00
33.350	0.00	0.00	0.00	0.00	0.00	0	31.00
33.400	0.00	0.00	0.00	0.00	0.00	0	31.00
33.450	0.00	0.00	0.00	0.00	0.00	0	31.00
33.500	0.00	0.00	0.00	0.00	0.00	0	31.00
33.550	0.00	0.00	0.00	0.00	0.00	0	31.00
33.600	0.00	0.00	0.00	0.00	0.00	0	31.00
33.650	0.00	0.00	0.00	0.00	0.00	0	31.00
33.700	0.00	0.00	0.00	0.00	0.00	0	31.00
33.750	0.00	0.00	0.00	0.00	0.00	0	31.00
33.800	0.00	0.00	0.00	0.00	0.00	0	31.00
33.850	0.00	0.00	0.00	0.00	0.00	0	31.00
33.900	0.00	0.00	0.00	0.00	0.00	0	31.00
33.950	0.00	0.00	0.00	0.00	0.00	0	31.00
34.000	0.00	0.00	0.00	0.00	0.00	0	31.00
34.050	0.00	0.00	0.00	0.00	0.00	0	31.00
34.100	0.00	0.00	0.00	0.00	0.00	0	31.00
34.150	0.00	0.00	0.00	0.00	0.00	0	31.00
34.200	0.00	0.00	0.00	0.00	0.00	0	31.00
34.250	0.00	0.00	0.00	0.00	0.00	0	31.00
34.300	0.00	0.00	0.00	0.00	0.00	0	31.00
34.350	0.00	0.00	0.00	0.00	0.00	0	31.00
34.400	0.00	0.00	0.00	0.00	0.00	0	31.00
34.450	0.00	0.00	0.00	0.00	0.00	0	31.00
34.500	0.00	0.00	0.00	0.00	0.00	0	31.00
34.550	0.00	0.00	0.00	0.00	0.00	0	31.00
34.600	0.00	0.00	0.00	0.00	0.00	0	31.00
34.650	0.00	0.00	0.00	0.00	0.00	0	31.00
34.700	0.00	0.00	0.00	0.00	0.00	0	31.00
34.750	0.00	0.00	0.00	0.00	0.00	0	31.00
34.800	0.00	0.00	0.00	0.00	0.00	0	31.00
34.850	0.00	0.00	0.00	0.00	0.00	0	31.00

Hydrologic Calculations

Subsection: Pond Routing Calculations (Total Out)

Label: SP (OUT)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Pond Routing Calculations (Total Out)

Time (hours)	Flow (Total In) (ft ³ /s)	2S/t - O (ft ³ /s)	2S/t + O (ft ³ /s)	Infiltration (ft ³ /s)	Flow (Outlet) (ft ³ /s)	Volume (ft ³)	Elevation (ft)
34.900	0.00	0.00	0.00	0.00	0.00	0	31.00
34.950	0.00	0.00	0.00	0.00	0.00	0	31.00
35.000	0.00	0.00	0.00	0.00	0.00	0	31.00
35.050	0.00	0.00	0.00	0.00	0.00	0	31.00
35.100	0.00	0.00	0.00	0.00	0.00	0	31.00
35.150	0.00	0.00	0.00	0.00	0.00	0	31.00
35.200	0.00	0.00	0.00	0.00	0.00	0	31.00
35.250	0.00	0.00	0.00	0.00	0.00	0	31.00
35.300	0.00	0.00	0.00	0.00	0.00	0	31.00
35.350	0.00	0.00	0.00	0.00	0.00	0	31.00
35.400	0.00	0.00	0.00	0.00	0.00	0	31.00
35.450	0.00	0.00	0.00	0.00	0.00	0	31.00
35.500	0.00	0.00	0.00	0.00	0.00	0	31.00
35.550	0.00	0.00	0.00	0.00	0.00	0	31.00
35.600	0.00	0.00	0.00	0.00	0.00	0	31.00
35.650	0.00	0.00	0.00	0.00	0.00	0	31.00
35.700	0.00	0.00	0.00	0.00	0.00	0	31.00
35.750	0.00	0.00	0.00	0.00	0.00	0	31.00
35.800	0.00	0.00	0.00	0.00	0.00	0	31.00
35.850	0.00	0.00	0.00	0.00	0.00	0	31.00
35.900	0.00	0.00	0.00	0.00	0.00	0	31.00
35.950	0.00	0.00	0.00	0.00	0.00	0	31.00
36.000	0.00	0.00	0.00	0.00	0.00	0	31.00

Subsection: Pond Inflow Summary

Label: SP (IN)

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Summary for Hydrograph Addition at 'SP'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1C	4,014	12.100	1.09
Flow (In)	SP	4,014	12.100	1.09

Hydrologic Calculations

Subsection: Pond Inflow Summary

Label: SP (IN)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

Summary for Hydrograph Addition at 'SP'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1C	8,156	12.100	2.12
Flow (In)	SP	8,156	12.100	2.12

Subsection: Pond Inflow Summary

Label: SP (IN)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

Summary for Hydrograph Addition at 'SP'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1C	10,566	12.100	2.70
Flow (In)	SP	10,566	12.100	2.70

Subsection: Pond Inflow Summary

Label: SP (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

Summary for Hydrograph Addition at 'SP'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (hours)	Flow (Peak) (ft ³ /s)
Flow (From)	PDA-1C	15,491	12.100	3.88
Flow (In)	SP	15,491	12.100	3.88

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APPENDIX B

NYSDEC STORMWATER SIZING CALCULATIONS

**WATER QUALITY VOLUME WORKSHEET
FOR REDEVELOPMENT PROJECTS**

JMC Project: **18119**
Design Point: **1**

	Drainage Area:	Site
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Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I _E	I _N	%I	R _V	WQ _V
VALUE	1.4	0.85	0.76	0.46	144.60	1.351367156	5,824
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ _V = 1-yr Storm Runoff)						

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit		
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL		
UNITS	Ac	Ac

Net Water Quality Treatment Volume for Standard Practices (25% I_E + 100% I_N)

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I _E	I _N	%I	R _V	WQ _V
VALUE	1.4	0.85	0.19	0.46	77.13	0.744163192	3,207
UNITS	In	Ac	Ac	Ac	%	CF	CF

Net Water Quality Treatment Volume = Adjusted WQ_V - Provided RR_V

Initial Water Quality Treatment Volume	5,824	CF
Adjusted Water Quality Treatment Volume	3,207	CF
Provided Runoff Reduction Volume	965	CF
Net Water Quality Treatment Volume	2,242	CF

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project: **18119**

Design Point: **1**

	Drainage Area:	1A
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Total Water Quality Treatment Volume

DESCRIPTION	SYMBOL	VALUE	UNITS
Initial Water Quality Volume	WQ _V	5,824	CF
Adjusted Water Quality Volume	WQ _V	3,207	CF

Minimum Runoff Reduction Volume

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number] or [1-yr Storm Depth]	P	1.4	In
Total Area of <i>new</i> Impervious Cover	A _{ic}	0.46	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R _V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x A _{ic}]	A _i	0.19	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x A_i) / 12]	RR _V	895	CF

Runoff Reduction Techniques (Volume)

GREEN INFRASTRUCTURE PRACTICE / SMP	SYMBOL	VALUE	UNITS
Planter #1	RR _V	100	CF
Planter #2	RR _V	33	CF
Planter #3	RR _V	71	CF
Planter #4	RR _V	85	CF
Planter #5	RR _V	130	CF
Planter #6	RR _V	49	CF
Planter #7	RR _V	48	CF
Planter #8	RR _V	41	CF
Planter #9	RR _V	290	CF
Planter #10	RR _V	118	CF
TOTAL	RR _V	965	CF

Runoff Reduction

Is Total RR _V > Adjusted WQ _V ?	NO
Is Total RR _V > Minimum RR _V ?	YES

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #1

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.05	Ac
Area	A	0.05	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	223	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	223	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	267.74	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	281.87	SF
Actual Volume Provided		141	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	223	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	100	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	67	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #2

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.01	Ac
Area	A	0.01	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	72	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	72	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	86.80	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	117.64	SF
Actual Volume Provided		59	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	72	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	33	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	22	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #3

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.03	Ac
Area	A	0.03	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	158	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	158	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	190.19	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	191.61	SF
Actual Volume Provided		96	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	158	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	71	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	48	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #4

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.04	Ac
Area	A	0.04	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	188	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	188	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	225.51	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	282.12	SF
Actual Volume Provided		141	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	188	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	85	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	56	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #5

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.06	Ac
Area	A	0.06	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	290	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	290	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	347.62	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	377.46	SF
Actual Volume Provided		189	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	290	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	130	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	87	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #6

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.02	Ac
Area	A	0.02	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	108	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	108	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	129.68	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	146.46	SF
Actual Volume Provided		73	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	108	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	49	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	32	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #7

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.02	Ac
Area	A	0.02	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	107	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	107	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	128.27	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	131.74	SF
Actual Volume Provided		66	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	107	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	48	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	32	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #8

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.02	Ac
Area	A	0.02	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	91	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	91	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	108.87	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	111.21	SF
Actual Volume Provided		56	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	91	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	41	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	27	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #9

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.13	Ac
Area	A	0.13	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	643	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	643	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	772.20	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	781.64	SF
Actual Volume Provided		391	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	643	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	290	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	193	CF

STORMWATER PLANTER WORKSHEET

JMC Project: **18119**

Design Point: **1**

Planter #10

Drainage Area: **1A**

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.05	Ac
Area	A	0.05	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	263	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Minimum Planter Bed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	263	CF
Coefficient of permeability of filter media (hydraulic conductivity)	k	4.00	Ft / Day
Planter bed Depth (soil media)	d_f	2.00	Ft
Average Height of water above planter bed	h_f	0.50	Ft
Design planter bed drain Time	t_f	4.00	Hours
Required Surface Area of Planter Bed $[A_f = (WQ_v \times d_f) / (k \times (h_f + d_f) \times t_f)]$	A_f	315.83	SF

Proposed Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Calculated planter bed area (Length x Width)			SF
Surface Area of Planter Bed Provided	A_f	319.27	SF
Actual Volume Provided		160	CF

Runoff Reduction

DESCRIPTION	VALUE	UNITS
Is Proposed $A_f >$ Required A_f ?	YES	
Type of Planter	FLOW-THROUGH	
RRv Provided for Infiltration Planter	263	CF
RRv Provided for Flow-Through Planter in HSG 'C' Soils	118	CF
RRv Provided for Flow-Through Planter in HSG 'D' Soils	79	CF

PROPRIETARY PRACTICE WORKSHEET

JMC Project: **18119**

Design Point: **1**

Drainage Area: **1B**

Cascade Separator

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak	C_0	-1.774	0.3301	2.4577
$[R = I_a / P]$	C_1	1.8622	-0.7397	-0.4627
$[C_i = A \times R^2 + B \times R + C]$	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.09	Ac
Area	A	0.09	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.95	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	429	CF

Water Quality Peak Flow Calculation

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	429	CF
Design Storm [90% Rainfall Event Number] or [1-yr Storm Depth]	P	1.4	In
Time of Concentration	t_c	0.0833	Hr
Runoff Volume $[Q = WQ_v / (A \times 3630)]$	Q	1.33	In
Curve Number $[CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25 QP)^{1/2})]$	CN	99.40	
Curve Number	CN	98	
Initial Abstraction $[I_a = 200 / CN - 2]$	I_a	0.04	In
Ratio $[R = I_a / P]$	R	0.03	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.47	
$C_1 = A \times R^2 + B \times R + C$	C_1	-0.48	
$C_2 = A \times R^2 + B \times R + C$	C_2	-0.19	
Unit Peak Discharge	q_u	588.00	cfs/mi ² /in
Peak Discharge $[Q_p = q_u \times A \times Q / 640]$	Q_p	0.11	cfs

Proposed Device

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Peak Flow Provided	Q_p	1.02	cfs
Water Quality Volume Provided $[WQ_v = 640 \times 3600 \times Q_p / q_u]$	WQ_v	3,997	CF
Model Designation	3' FIRST DEFENSE		
Quantity		1	

PROPRIETARY PRACTICE WORKSHEET

JMC Project: **18119**

Design Point: **1**

Drainage Area: **1A**

Jellyfish Filter

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak	C_0	-1.774	0.3301	2.4577
$[R = I_a / P]$	C_1	1.8622	-0.7397	-0.4627
$[C_i = A \times R^2 + B \times R + C]$	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.62	Ac
Area	A	0.73	Ac
Percent Impervious	%I	84.45	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	R_v	0.81	CF
TOTAL VOLUME Required $[WQ_v = (P \times R_v \times A) / 12]$	WQ_v	3,018	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required (TMDL) $[WQ_v = 1\text{-yr Storm Runoff}]$	WQ_v		CF

Water Quality Peak Flow Calculation

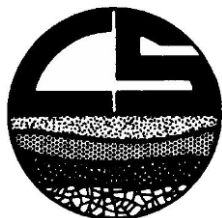
DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ_v	3,018	CF
Design Storm [90% Rainfall Event Number] or [1-yr Storm Depth]	P	1.4	In
Time of Concentration	t_c	0.0833	Hr
Runoff Volume $[Q = WQ_v / (A \times 3630)]$	Q	1.13	In
Curve Number $[CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25 QP)^{1/2})]$	CN	97.51	
Curve Number	CN	98	
Initial Abstraction $[I_a = 200 / CN - 2]$	I_a	0.05	In
Ratio $[R = I_a / P]$	R	0.04	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.47	
$C_1 = A \times R^2 + B \times R + C$	C_1	-0.49	
$C_2 = A \times R^2 + B \times R + C$	C_2	-0.18	
Unit Peak Discharge	q_u	599.44	cfs/mi ² /in
Peak Discharge $[Q_p = q_u \times A \times Q / 640]$	Q_p	0.78	cfs

Proposed Device

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Peak Flow Provided	Q_p	1.02	cfs
Water Quality Volume Provided $[WQ_v = 640 \times 3600 \times Q_p / q_u]$	WQ_v	3,920	CF
Model Designation	54" Jellyfish Filter		
Quantity		1	

APPENDIX C

SOIL TESTING DATA



CARLIN • SIMPSON & ASSOCIATES
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28 September 2020

Farrell Building Company
2317 Montauk Highway
Bridgehampton, NY 11932

Attn: Mr. Stephen H. Zagoren

Re: Report on Subsurface Soil and Foundation Investigation
Proposed Apartment Building
16 West Main St.
Beacon, NY (CSA Job #20-07)

Dear Mr. Zagoren:

In accordance with our revised proposal dated 14 January 2020 and your subsequent authorization, we have completed a Subsurface Soil and Foundation Investigation for the referenced site. The purpose of this study was to determine the nature and engineering properties of the subsurface soil and groundwater conditions for the new construction, to recommend a practical foundation scheme, to determine the allowable bearing capacity of the site soils, and to determine the soil permeability in the new stormwater management area.

We understand that the planned construction will consist of two apartment buildings. The proposed construction will also include a new stormwater management system. To guide us in our study, JMC has provided us with site plans that indicate the location of the proposed construction.

Our scope of work for this project included the following:

1. Reviewed the proposed layout, the existing site conditions, the expected soil conditions, and planned this study.
2. Retained General Borings Inc. to advance twelve (12) test borings at the subject site.
3. Laid out the boring locations in the field, provided full time inspection of the explorations, obtained soil samples, and prepared detailed logs and a Boring Location Plan.

4. Analyzed the field data and prepared this report containing the results of this study.

1.0 SITE DESCRIPTION

The project site is located at 16 West Main Street in Beacon, New York. The site is currently occupied by an existing single-story building. The remainder of the site is occupied by asphalt parking lots and grass landscape areas. Site grades generally slope down from west to east. Elevations range from approximately +45.0 to +32.0

2.0 PROPOSED CONSTRUCTION

We understand that the planned construction will consist of two new four-story apartment buildings. The proposed buildings will have a finished floor elevation of +37.75. Site development will also include a new stormwater management system.

At the time of this report the column loads of the new buildings were not known. Once the planned construction drawings have been further completed, a copy of the final plans should be forwarded to our office so that we can review them along with the recommendations in this report. At that time, any changes or additional recommendations can be provided, if required.

3.0 SUBSURFACE CONDITIONS

To determine the subsurface soil and groundwater conditions at the site, twelve (12) test borings were advanced by General Borings, Inc. at the locations shown on the enclosed Boring Location Plan. The borings were performed using hollow stem augers and split spoon sampling. Detailed boring logs have been prepared and are included in this report. The borings were completed in July 2020 under the full-time inspection of Carlin-Simpson & Associates. Our field engineer visually identified all of the soil samples obtained during the boring operations.

3.1 Soils

The soil descriptions shown on the boring logs are based on the Burmister Classification System. In this system, the soil is divided into three components: Sand (S), Silt (S) and Gravel (G). The major component is indicated in all capital letters, the lesser in lower case letters. The following modifiers indicate the quantity of each lesser component:

<u>Modifier</u>	<u>Quantity</u>
trace (t)	0 -10%
little (l)	10% - 20%
some (s)	20% - 35%
and (a)	35% - 50%

The subsurface soil conditions encountered in the test borings can be summarized as follows:

<u>Stratum 1A</u> Topsoil	At the surface in portions of the site is topsoil that ranges from approximately 1 to 6 inches in thickness.
<u>Stratum 1B</u> Asphalt	At the surface in the remaining borings is asphalt pavement that ranges from approximately 1 to 3 inches in thickness.
<u>Stratum 2</u> Existing Fill	Below the surface layer in the majority of the site is existing fill that generally consists of brown, black coarse to fine SAND, little (to some) Silt, little (to and) coarse to fine Gravel. Debris including asphalt, brick, concrete, and other possible obstructions was encountered within the existing fill. The existing fill generally extends to depths ranging from 2'0" to 14'0" below the existing ground surface throughout the site.
<u>Stratum 3</u> Sandy Clay and Silt	Below the existing fill in borings B-5, B-6, and B-9 is brown, gray soft to medium stiff Clayey Silt or SILT and CLAY little (to and), coarse to fine Sand. Where encountered, this stratum extends to depths ranging from 6'3" to 19'0" below the existing ground surface.
<u>Stratum 4</u> Silty Sand with Gravel (Glacial Till)	Below Stratum 2 and Stratum 3 is medium dense to very dense brown coarse to fine Sand, trace (to and) Silt, little (to and) coarse to fine Gravel. The majority of the borings were terminated in this stratum at auger refusal at depths ranging from 13'0" to 23'0" below the existing ground surface.
<u>Stratum 5</u> Weathered Schist Bedrock	Underlying the upper Strata in portions of the site is highly to completely weathered Shale bedrock. This stratum was encountered in borings B-10, B-11, and B-12 at depths ranging from 14'0" to 19'0" below the existing ground surface.

3.2 **Groundwater**

Observations for groundwater were made during sampling and upon completion of the drilling operations at each boring location. During the subsurface investigation, groundwater was encountered in most of the test borings at depths ranging from 4'10" to 21'0" below the existing ground surface (elevations +34.5 to +21.5). We expect that groundwater may be encountered in portions of the site during construction.

Groundwater on the subject site will be controlled by the topography and the underlying bedrock surface. As surface water infiltrates the ground, the water will travel along the soil/rock interface and through fractures in the bedrock. Variations in the location of the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, and other factors not immediately apparent at the time of this exploration.

3.3 Summary of Boring Observations

A summary of the boring observations is provided in Table 1 below.

Table 1 – Summary of Boring Observations

Boring No.	Approximate Ground Surface Elevation	Depth to Groundwater (Elevation)	Depth to Bottom of Existing Fill (Elevation)	Depth to Bottom of Soft Soils (Elevation)	Depth to Bedrock (Elevation)
East Building Borings					
B-1	+42.0	15'0" (+27.0)	3'0" (+39.0)	NE	NE to 22'0"
B-2	+42.0	17'0" (+25.0)	NE	NE	NE to 21'10"
B-3	+36.5	15'0" (+21.5)	5'0" (+31.5)	NE	25'3" (+11.3)
West Building Borings					
B-4	+32.5	6'0" (+26.5)	6'0" (+26.5)	NE	AR @ 13'0" (+19.5)
B-5	+34.0	10'0" (+24.0)	10'0" (+24.0)	19'0" (+15.0)	NE to 22'0"
B-6	+35.0	13'6" (+21.5)	9'0" (+26.0)	18'6" (+16.5)	AR @ 23'0" (+12.0)
B-9	+37.5	5'9" (+31.8)	9'6" (+28.0)	20'6" (+17.0)	AR @ 23'0" (+14.5)
B-11	+46.0	NE to 22'0"	14'0" (+32.0)	NE	CWR @ 17'0" (+29.0)
B-12	+40.5	7'6" (+33.0)	9'6" (+31.0)	NE	CWR @ 19'0" (+21.5)
Site Borings					
B-10	+53.0	21'0" (+32.0)	2'0" (+51.0)	NE	CWR @ 14'0" (+39.0)
B-7	+39.5	5'0" (+34.5)	8'0" (+31.5)	> 17'0"	NE to 17'0"
B-8	+38.0	4'10" (+33.2)	10'0" (+27.0)	> 14'0"	NE to 14'0"

AR – Auger Refusal on Probable Bedrock

CWR – Completely Weathered Rock

NE – Not Encountered

4.0 SUMMARY OF DESIGN RECOMMENDATIONS

Below is a summary of the major design and construction considerations for this project. Additional recommendations are provided in the following sections of this report.

- Subsurface Conditions (Section 3.0)
 - Existing Fill is present at the site to depths of 3'0" to 14'0" below the existing ground surface (elevations +51.0 to +22.5).
 - Soft silt and clay soils were encountered in borings B-5, B-6, and B-9 extending to depths ranging from 18'6" to 20'6" (elevations +17.0 to +15.0) below the existing ground surface.
 - Groundwater is present at depths ranging from 4'10" to 21'0" below the existing ground surface (elevations +34.5 to +21.5).
 - Shale bedrock or auger refusal on probable bedrock was encountered throughout the site at depths ranging from 13'0" to 23'0" below the existing ground surface (elevations +39.0 to +12.0).
 - A summary of the subsurface observations is provided in Table 1 above.

- *Building Foundation Recommendations (Section 5.2)*
 - The existing fill and soft clays and silts present the possibility of intolerable differential settlements under the new building loads.
 - New fill required to achieve the desired grades must be placed early in the construction schedule to consolidate the potential soft compressible soils and reduce future settlements.
 - Based on the proposed site grades and presence of unsuitable soils we recommend two foundation options for the proposed buildings.
 - *West Building Pile Foundations (Section 5.2)*
 - Driven timber piles or concrete-filled steel pipe piles are suitable for support of the proposed building columns and structural floor slab.
 - Pre-drilling or excavation of obstructions within the existing fill may be required.
 - *Driven concrete-filled steel pipe piles*
 - 8-inch diameter
 - Allowable capacity: 40 tons.
 - Anticipated pile depths: 15 to 25 feet below the existing ground surface.
 - *Driven timber piles*
 - Minimum tip diameter: 8-inch
 - Allowable capacity: 35 tons.
 - Anticipated pile depths: 15 to 25 feet below the existing ground surface.
 - Pile supported structural floor slab
 - *Preliminary East Building Foundations (Section 5.3)*
 - *Additional borings must be performed in the footprint of the East Building to verify the extent and transition areas between the soft silt and clay (Stratum 3).*
 - *If soft soils (Stratum 3) are encountered in the required additional borings, the east building foundations will likely need to be designed as a drilled pile foundation.*
 - Pending the results of the additional borings, our preliminary recommendations for the East Building are as follows.
 - We anticipate that some of the existing fill will be removed from the new west building footprint during excavation to the planned subgrade elevation.
 - Where existing fill is encountered below the planned subgrade elevation, it must be completely removed and replaced with new compacted fill.
 - Preliminarily, we anticipate that the East Building foundations may be designed with a net allowable bearing pressure of 4,000 psf. The building slab may be designed as a slab on grade bearing on virgin soil or new compacted fill.

5.0 **BUILDING EVALUATION**

We understand that the planned construction will consist of two new four-story apartment buildings. The new buildings will have a finished floor elevation of +37.75. A summary of the boring observations performed in the proposed building area is provided in Table 1 above.

Existing fill (Stratum 2) is present throughout the site to depths ranging from depths of 3'0" to 14'0" below the existing ground surface (elevations +51.0 to +22.5). The depth of the existing fill is variable and may be deeper in unexplored areas of the site. The existing fill is not an acceptable bearing material for the new building foundations or floor slab. The consistency and density of the fill are not predictable. Certain areas may contain clean dense soils while other areas may contain loose material, void spaces, and/or debris, as shown by the boring data. The existing fill material creates the possibility of intolerable differential settlements under loading.

In addition, soft Sandy Clays and Silts (Stratum 3) soils were encountered in borings B-5, B-6, and B-9 on the border between the East and West building. The soft soils were encountered to depths ranging from 18'6" to 20'6" below the existing ground surface. These soils are susceptible to long term consolidation settlements due to additional loads from raising site grades and the new building.

West Building Foundations

Existing site grades in the proposed West building range from approximately elevation +50.0 to +29.0. Cuts of up to 12 feet are anticipated in the northern portion of the west building. Fills of up to 9 feet are anticipated in the southern portion of the west building.

New fill to raise site grades must be placed early in the project schedule to induce any settlements of the underlying soft Sandy Clays and Silts (Stratum 3).

The existing fill (Stratum 2) and soft Sandy Clays and Silts (Stratum 3) soils are not suitable for support of the new West Building foundations or floor slab. The new building and floor slab loads must be transferred to the underlying medium dense to dense soils or bedrock using a pile foundation. The West Building slab must be designed as a pile supported structural slab. Pile recommendations are provided in Section 5.2 below.

Preliminary East Building Foundations

Existing site grades in the area of the proposed East Building range from approximately elevation +44.0 to +36.0. With a proposed finished floor elevation of +37.75, cuts of up to 6 feet are anticipated in the East Building footprint. Minor fills of up to 1.5 feet area anticipated in the western portion of the East Building footprint. As result, we anticipate that some of the existing fill will be removed from the East Building footprint during excavation to the planned subgrade elevation.

Soft Sandy Clays and Silts (Stratum 3) were encountered in the vicinity of the East Building. However, the extent of the unsuitable soft soils is not clear based on the performed borings. ***Three (3) additional borings must be performed in the northwestern portion of the East Building to verify the extent of the unsuitable soft soils.*** If soft soils are not encountered in the footprint of the East building, and the existing fill is completely removed, we anticipate that the new foundations may be designed as shallow spread footings. The new building loads must be provided to Carlin-Simpson & Associates to

perform a settlement analysis and refine our recommendations. If the East and West building are supported on different foundations systems (i.e. piles and shallow spread footings) a structural break to prevent hard points and differential settlements must be included in the structural design.

If soft soils are encountered in the additional required borings, we anticipate that a pile foundation will be required to support the East Building foundations and structural floor slab. The East Building piles will likely need to be designed as drilled piles to avoid short driven piles. Carlin-Simpson & Associates will provide additional foundation recommendations after the additional borings are completed.

5.1 Site Preparation

As part of the site development, the existing structures, on the site will be demolished. All debris resulting from the demolition of these structures must be completely removed from the new construction areas, extending at least ten (10) feet beyond the new building limits, where practical. This shall include the complete removal of all foundations, walls, floor slabs, utilities, pavement, and miscellaneous debris. Where the removal of existing structures or associated materials extends below the planned structures, the resulting excavations shall be backfilled with new compacted fill as described below.

Densification of Subgrade Soils (Proofrolling)

After the demolition of the existing structures and the surface materials are removed as outlined above; the exposed subgrade shall be proofrolled with at least five (5) passes of a large vibratory drum roller (i.e. Dynapac CA 250 or equivalent). The proofrolling is necessary to densify the underlying soils. The proofrolling must be performed prior to the excavation for new foundations and the placement of new fill in the canopy areas. In areas where the existing subgrade is to be cut, the proofrolling of the subgrade in those areas should be performed once the proposed subgrade is achieved.

A representative from Carlin-Simpson & Associates shall observe the proofrolling operation. If any excessive movement is noted during the proofrolling, the soft soil shall be removed and replaced with new compacted fill. The Carlin-Simpson & Associates representative shall be responsible for determining what material, if any, is to be removed and will direct the Contractor during this operation.

Handling Water and Wet Subgrades in the Site Excavations

As shown in Table 1, groundwater was encountered in each of the test borings at depths ranging from 4'10" to 21'0" beneath the existing ground surface. These depths correlate to groundwater levels ranging from approximately elevation +34.5 to +21.5. Based on the boring observations and the site conditions, groundwater may be encountered in the site excavations. Proper groundwater control measures (i.e. sumps and pumps) will be required in the event that water is encountered in the site excavations.

If required, temporary groundwater control measures shall consist of one (1) or more sumps and pumps. The sumps shall consist of a perforated pipe at least eight (8) inches in diameter, surrounded by crushed stone and filter fabric. The sump pits must be installed just outside the planned excavation area and at least two (2) feet below the lowest anticipated subgrade elevation. The sumps and pumps must be set and in operation prior to excavating below the water table. The pumps shall be used to temporarily lower the surrounding groundwater level and keep the building excavation relatively dry. Electric pumps equipped with an automatic shut off and capable of operating 24 hours a day are recommended. Swales and ditches should be constructed to collect and direct the water seepage to the sump pits.

In the event that the exposed building subgrade at the bottom of the excavation is wet, stabilizing the subgrade surface with geotextile fabric and crushed stone may be required prior to the placement of new compacted fill. Carlin-Simpson & Associates will determine this during construction as the conditions are exposed. Where needed, the subgrade should be stabilized with geotextile fabric, such as Mirafi 500X or equivalent, and 3/4-inch clean crushed stone.

To prepare the subgrade surface for the geotextile fabric and crushed stone, all surface water, loose soil, mud, topsoil and organic material must be removed from the area. After the subgrade is prepared, a layer of geotextile fabric (Mirafi 500X or equivalent) shall be laid out on the subgrade surface. Adjacent layers of geotextile fabric should be overlapped a minimum of six (6) inches. The excavation shall then be filled with 12 to 18 inches of 3/4-inch clean crushed stone. The crushed stone shall be placed in maximum 12-inch layers and compacted by several passes of a small vibratory drum roller. The crushed stone can then be used to support the proposed building foundations and floor slab. The area may also be brought to planned subgrade elevation with compacted backfill. If this is the case, the stone should be covered with a layer of geotextile fabric (Mirafi 500X or equivalent). The area may then be backfilled with new fill compacted to 95% of its Maximum Modified Dry Density (ASTM D1557) as described above.

Installation of New Structural Fill

New fill required to achieve the final site grades must be placed early in the planned construction schedule to induce any possible settlements of the underlying soft Sandy Silts and Clays (Stratum 3).

New fill required to achieve final grades shall consist of either engineer-approved on-site soil or imported sand and gravel. Imported sand and gravel shall contain less than 20% by weight passing a No. 200 sieve. The new fill shall be placed in layers not exceeding one (1) foot in thickness and each layer shall be compacted to at least 95% of its Maximum Modified Dry Density (ASTM D1557). Each layer must be compacted, tested, and approved the Carlin-Simpson & Associates field representative prior to placing subsequent layers. The suitability of the excavated soil for reuse as compacted structural fill is discussed in Section 6.4 below.

If imported structural fill will be required during construction, the imported structural fill shall meet the following specified gradation:

<u>US Standard Sieve Size</u>	<u>Percent Finer By Weight</u>
3 inch	100
No. 4	30-80
No. 40	10-50
No. 200	0-20

5.2 West Building – Pile Foundations

The existing fill and soft soils are not suitable for support of the new West Building foundations and floor slab. The West Building foundations and structural floor slab must be pile supported. We anticipate that driven concrete filled steel pipe piles or timber piles can be considered for support of the West Building. Pending the results of the additional borings in the East Building footprint, Carlin-Simpson & Associates can also provide drilled pile foundation recommendations for the West Building.

Obstructions (cobbles, boulders, brick, concrete, wood, etc.) are present within the existing fill. Depending upon the depth of the obstruction below the bottom of the pile cap or grade beam, the contractor shall either remove the obstruction or clear away the obstruction by excavating or other means, or abandon the pile and install an additional pile at the locations determined by the project structural engineer. Alternatively, pre-drilling of pile locations can be considered.

5.2.1 Driven Concrete-Filled Steel Pipe Piles

Concrete-filled steel pipe piles may be considered for support of the proposed West Building foundations and floor slab. The concrete-filled steel pipe piles must be driven through the unsuitable site soils (Strata 2 and 3) and into medium dense to dense virgin soils or bedrock. These piles will be primarily end-bearing piles. The pile depths will be variable across the site. The number of piles required and their locations shall be determined by the project structural engineer. A summary of the recommendations for pipe piles is provided in Table 2, below.

Table 2 – Driven Pipe Pile Recommendations

Description	Value
Pipe Pile Diameter	8 inches
Allowable Axial Capacity	40 tons
Estimated Depth to Capacity From Existing Ground Surface	15 to 25 feet or greater

The piles shall have a minimum nominal wall thickness of 3/8-inch. Steel pipe piles must conform to the requirements of the New York State Building Code. Each pile shall be inspected for damage after driving. After completion of inspection, the piles shall also be filled with 5,000 psi concrete.

5.2.2 Driven Timber Pile Foundations

Timber piles can also be considered for support of the proposed West Building foundations and floor slab. These piles must be driven through the unsuitable site soils (Strata 2 and 3) and into medium dense to dense virgin soils or bedrock. These piles will be primarily end-bearing piles. The pile depths will be variable across the site. The number of piles required and their locations shall be determined by the project structural engineer. A summary of the recommendations for pipe piles is provided in Table 3, below.

The timber piles for the planned building shall be treated structural timber piles driven. The timber piles must be fitted with steel driving shoe to prevent damage during driving through the existing fill. Timber piles must conform to the requirements of the New York State Building Code.

Table 3 – Driven Timber Pile Recommendations

Description	Value
Minimum Tip Diameter	8 inches
Allowable Axial Capacity	35 tons
Estimated Depth to Capacity From Existing Ground Surface	15 to 25 feet or greater

5.2.3 Driven Pile Installation and Testing

For driven piles, the final driving resistance that must be achieved will be the resistance computed by the Engineering News Record (ENR) formula for a 35 or 40 ton pile plus the resistance per foot needed to penetrate through the bottom of the unsuitable materials. By adding these together the resistance developed by the upper soil layers above the bearing layer is not considered a portion of the final driving resistance. The Engineering News Record (ENR) formula considers the type and size of hammer selected by the contractor. Final driving resistance will be determined when the hammer to be used is known. We recommend the pile hammer be capable of delivering at least 15,000 ft. lbs. per blow.

A pile load test is not required for allowable timber pile capacities not greater than 35 tons or pipe pile capacities not greater than 40 tons. However, a PDA test program is recommended to establish the pile capacity, verify the energy output of the pile contractors hammer, and further refine the expected pile depths.

5.2.4 West Building Slab Recommendations

We recommend that the new floor slab be designed as structural floor slab supported by piles. Pile recommendations are discussed in the previous section of this report.

5.3 Preliminary East Building Foundation Recommendations

Soft Sandy Clays and Silts (Stratum 3) were encountered in the vicinity of the East Building. However, the extent of the unsuitable soft soils is not clear based on the performed borings. ***Three (3) additional borings must be performed in the northwestern portion of the East Building to verify the extent of the unsuitable soft soils.*** If soft soils are not encountered in the footprint of the East building, and the existing fill is completely removed, we anticipate that the new foundations may be designed as shallow spread footings. Preliminary recommendations for a shallow spread footing system are provided below.

The new building loads must be provided to Carlin-Simpson & Associates to perform a settlement analysis and refine our recommendations. If the East and West building are supported on different foundations systems (i.e. piles and shallow spread footings) a structural break to prevent hard points and differential settlements must be included in the structural design.

If soft soils are encountered in the additional required borings, we anticipate that a pile foundation will be required to support the East Building foundations and structural floor slab. The East Building piles will likely need to be designed as drilled piles to avoid short driven piles. Carlin-Simpson & Associates will provide additional foundation recommendations after the additional borings are completed.

5.3.1 East Building Area Preparation

Provided that the existing fill is completely removed from the East Building area as described below, the new footings may be designed as shallow spread footings bearing on virgin soil or new compacted fill. The new floor slab may be designed as a slab on grade.

If the East and West building are supported on different foundations systems (i.e. piles and shallow spread footings) a structural break to prevent hard points and differential settlements must be included in the structural design. As an alternative to completely removing the existing fill, the new East Building foundations can be supported on pile foundations, in this case a structural break will not be required.

Removal of Existing Fill – East Building

The boring data indicates that existing fill is present in the East Building to depths ranging from 3'0" to 5'0" below the existing ground surface (elevations +39.0 to +31.5). With a finished floor elevation of +37.75, we anticipate that some of the existing fill will be removed from the building footprint during excavation to the planned subgrade elevation. As discussed above, the existing fill is not a suitable bearing material for the new building foundations or floor slab and must be completely removed and replaced as described below.

Based on the boring observations and the proposed construction, we anticipate an over-excavation of up to approximately 6 feet below the existing ground surface will be

required in the western portion of the East Building footprint. The over-excavation shall extend through the existing fill, down to the virgin soil. At the bottom of the excavation, the removal of the unsuitable material shall extend horizontally beyond the building limits a minimum distance of 1'0" plus a distance equal to the depth of the excavation below the planned foundation bearing elevation. For example, if the removal of the existing fill extends vertically 6'0" below the planned foundation bearing elevation, the excavation must extend horizontally a minimum of 7'0" (1'0" plus 6'0") beyond the new building limits at that location.

The removal of the existing fill from the proposed building area shall be performed under the full time inspection of Carlin-Simpson & Associates. The on-site representative from Carlin-Simpson & Associates shall direct the contractor during this operation to ensure that all of the unsuitable material has been removed from the proposed building area.

During the removal of the unsuitable material, the contractor should segregate the potentially re-usable existing soil/fill material from the non-reusable fill (i.e. ash, debris and topsoil). The on-site representative from Carlin-Simpson & Associates shall evaluate the suitability of the excavated materials for use as compacted fill during the excavation and prior to its re-use. Potentially usable fill should be stockpiled and covered with tarps or plastic sheeting for protection from excess moisture. Any fill material that is or becomes wet must be dried prior to its re-use.

After the surface materials and existing fill have been removed and prior to the placement of new structural fill, the exposed subgrade soil must be graded level and proofrolled by several passes of a vibratory drum roller. The proofrolling operation is necessary to densify the underlying soils. Carlin-Simpson & Associates shall be retained to observe the proofrolling of the subgrade. If any soft or otherwise unsuitable soils are noted, the unsuitable material shall be removed and replaced with new structural fill. Carlin-Simpson & Associates shall be responsible for determining what material, if any, is to be removed and will direct the contractor during this operation.

Installation of New Structural Fill

New fill required to achieve final grades shall consist of either engineer-approved on-site soil or imported sand and gravel. Imported sand and gravel shall contain less than 20% by weight passing a No. 200 sieve. The new fill shall be placed in layers not exceeding one (1) foot in thickness and each layer shall be compacted to at least 95% of its Maximum Modified Dry Density (ASTM D1557). Each layer must be compacted, tested, and approved by the Carlin-Simpson & Associates field representative or a qualified geotechnical engineering firm prior to placing subsequent layers. The suitability of the excavated soil for reuse as compacted structural fill is discussed in Section 6.4 below.

If imported structural fill will be required during construction, the imported structural fill shall meet the following specified gradation:

<u>US Standard Sieve Size</u>	<u>Percent Finer By Weight</u>
3 inch	100
No. 4	30-80
No. 40	10-50
No. 200	0-20

5.3.2 Preliminary East Building Foundation – Spread Footings

Preliminarily, shallow spread footings can be considered for support of the East Building. Additional borings must be performed in the East Building footprint to verify the extent of the unsuitable soils. If unsuitable soils are not encountered, and the building area is prepared as described in Section 5.3.1 above, the new foundations may be constructed on the virgin site soils or new compacted fill. The new building foundations may be designed as shallow spread footings using net design bearing pressures as listed in the Table 4 below. All of the exterior footings shall bear at the minimum depth listed below for protection from frost. Interior column footings may bear on the virgin soil or new structural fill just below the floor slab provided the structure is heated during winter. The footings shall have minimum dimensions as listed below.

The excavations for the new foundations shall be performed under the full-time inspection of Carlin-Simpson & Associates or a qualified geotechnical engineering firm. The on-site representative shall confirm that the foundation bearing material is capable of supporting the design bearing pressure.

Table 4 – Building Foundation Design Parameters

Description	Value
Foundation Bearing Material	Virgin Soil or New Compacted Fill
Net Design Bearing Pressure	4,000 psf
Minimum Frost Depth	42 inches
Minimum Column Dimension	30 inches
Minimum Wall Dimension	18 inches

Prior to the placement of formwork, reinforcement steel, and concrete, the bearing subgrade soil shall be cleaned of all loose soil and where soil is encountered at the subgrade elevation, it shall be compacted with several passes of a small vibratory drum trench compactor (i.e. Wacker Model RT560), a heavy vibratory plate tamper (i.e. Wacker BPU 3545A or equivalent), or “jumping jack” style tamper (i.e. Wacker Model BS 600). This must be performed under the observation of Carlin-Simpson & Associates or a qualified geotechnical engineer. If instability is observed during the compaction of the bearing subgrade, the soft soil shall be removed and replaced with new compacted fill.

5.3.3 Floor Slabs on Grade

The floor slab may be designed as a slab on grade bearing on densified virgin soil or on new engineer-approved structural fill. Floor slab design parameters are provided in

Table 5 below. A minimum of 6 inches of 3/4-inch clean crushed stone is recommended beneath the concrete slab for additional support and drainage.

Table 5 – Building Floor Slab Design Parameters

Description	Value
Slab Subgrade Material	Densified Virgin Soil or New Structural Fill
Modulus of Subgrade Reaction (k)	200 pci
Crushed Stone Cushion Thickness	6 inches

5.3.4 East Building Settlement

Settlement of individual footings, designed in accordance with recommendations presented in this report, is expected to be within tolerable limits for the proposed building. For footings placed on natural soils or new compacted fill approved by Carlin-Simpson & Associates and constructed in accordance with the requirements outlined in this report, maximum total settlement is expected to be on the order of 1-inch or less. Maximum differential settlement between adjacent columns or load bearing walls is expected to be half the total settlement.

The above settlement values are based on our engineering experience with similar soil conditions and the anticipated structural loading, and are to guide the structural engineer with his design. To minimize difficulties during the foundation installation phase, it is critical that Carlin-Simpson & Associates be retained to observe the foundation bearing surfaces and to confirm the recommended bearing pressures and that the existing fill and unsuitable materials have been removed from beneath the new foundations.

5.4 Building Foundation Walls

Where foundation walls are required, the soil adjacent to the foundation walls will exert a horizontal pressure against the wall. This pressure is based on the soil density and Coefficient of Earth Pressure at Rest (k_o), which is applicable to non-yielding building walls. Foundation wall design parameters are listed in Table 6 below.

Table 6 – Foundation Wall Design Parameters

Soil Type	Value
Moist Unit Weight (γ)	130 pcf
Coefficient of Earth Pressure at Rest (k_o)	0.5
Equivalent Fluid Pressure	65 psf/ft
Foundation Sliding Coefficient.	
Virgin Soils or New Structural Fill:	0.45
Clean Sound Rock:	0.55

Where foundation walls are required, we recommend that a footing drain be placed around the exterior of the new structure to prevent water from accumulating against the foundation wall. This drain may consist of a minimum four (4) inch diameter, rigid wall

perforated PVC pipe surrounded by at least 12 inches of 3/4-inch clean crushed stone. The stone shall be wrapped in a geotextile fabric, such as Mirafi 140N or equivalent. The foundation drainpipe should be extended to daylight or to the stormwater collection system. The outside face of the foundation wall, where it extends below grade, must be damp proofed or waterproofed.

Outside the structure, the backfill placed adjacent to the foundation walls and above the footing drain shall consist of either clean crushed stone or an imported sand and gravel mixture containing less than 10% by weight passing a No. 200 sieve and placed in layers not exceeding one (1) foot in thickness. This clean sand and gravel or crushed stone backfill shall extend a minimum of one (1) foot horizontally from the back face of the foundation walls, and shall extend vertically up the wall face to two (2) feet below the finished ground surface elevation. Where retained soils are not covered by concrete or pavement and are exposed to weather, the top two (2) feet of backfill should consist of low permeable soil. This will help to minimize water infiltration behind the wall. Surface grades should be sloped away from the building to prevent water from accumulating adjacent to the wall.

Beyond this point, the foundation walls should be backfilled with suitable soil placed in layers up to one (1) foot in thickness. The suitability of the on-site soil for reuse as compacted fill is discussed in a separate section below. The new fill should be compacted with a vibratory drum trench compactor (i.e. Wacker Model RT560), a heavy vibratory plate tamper (i.e. Wacker BPU 3545A or equivalent), or “jumping jack” style tamper (i.e. Wacker Model BS 600) to at least 92% of its Maximum Modified Dry Density (ASTM D-1557). Heavy equipment should not be operated near the building walls as damage to the walls could occur.

5.5 Seismic Design Considerations

From site-specific test boring data, the Site Class was determined from New York State Building Code Section 1613.2.2. The site-specific data used to determine the Site Class typically includes soil test borings to determine Standard Penetration resistances (N-values). Based on estimated average N-values in the upper 100 feet of soil profile, the site can be classified as Site Class D – Stiff Soil Profile.

New structures should be designed to resist stress produced by lateral forces computed in accordance with Section 1613 of the International Building Code – New York State Edition. The values in Table 7 shall be used for this project.

Table 7 – Seismic Design Values

Description	Value
Mapped Spectral Response Acceleration for Short Periods, [Fig 1613.2.1 (1)]	$S_s=0.233g$
Mapped Spectral Response Acceleration at 1-Second Period, [Fig 1613.2.1 (2)]	$S_1=0.057g$
Site Coefficient [Table 1613.2.3 (1)]	$F_a= 1.60$
Site Coefficient [Table 1613.2.3 (2)]	$F_v= 2.40$
Max Considered Earthquake Spectral Response for Short Periods [Eq 16-36]	$S_{MS}=0.373g$
Max Considered Earthquake Spectral Response at 1-Second Period [Eq 16-37]	$S_{M1}=0.137g$
Design Spectral Response Acceleration for Short Periods [Eq 16-38]	$S_{DS}=0.249g$
Design Spectral Response Acceleration for 1-Second Period [Eq 16-39]	$S_{D1}=0.091g$

6.0 SITE EVALUATION

We understand that the site developments will include stormwater management, new utilities, pavement, suitability of onsite soils for reuse, and suspected contaminated soils are provided below. A summary of the subsurface conditions encountered throughout the site are provided in Table 1 above.

New fill required to achieve the final site grades must be placed early in the planned construction schedule to induce any possible settlements of the underlying soft Sandy Silts and Clays (Stratum 3).

6.1 Stormwater Management System

It is our understanding that a new stormwater management system is planned as part of the proposed site developments. Infiltration testing was planned as a part of this study but could not be performed due to the presence of existing fill and shallow groundwater in the area of the proposed system. Additional testing must be performed to verify the infiltration characteristics of the site soils once the existing building in the area of the proposed system is demolished. A summary of the groundwater conditions encountered at the site can be found in Table 1 above.

Should stormwater management areas be planned in other portions of the property, they should be evaluated on a case-by-case basis. The stormwater management systems must be designed in accordance with the applicable New York State Department of Environmental Conservation (NYSDEC) regulations and the New York State Stormwater Management Design Manual (January 2015). The testing requirements are outlined in Appendix D of the manual.

6.2 Utilities

Existing fill was encountered throughout the site to depths ranging from 2'0" to 14'0" feet below the existing ground surface. The existing fill contains debris including asphalt, brick, and concrete. New utilities may bear in the densified existing fill and virgin site soils or new compacted fill. The bottom of all trenches should be excavated clean and shaped so a hard bottom is provided for the pipe support. If any soft or unsuitable soil

conditions are encountered during construction, the unsuitable materials must be removed and replaced with new compacted fill.

In the event that the trench bottom becomes soft due to the inflow of surface or trapped water, the soft soil shall be removed and the excavation filled with a minimum of six (6) inches of 3/4-inch clean crushed stone to provide a firm base for support of the pipe. Sump pits and pumps should be adequate to keep the excavations dry.

After the utility is installed, the trench must be backfilled with compacted fill. The fill shall consist of suitable on-site soil or imported sand and gravel. Imported fill shall contain less than 20% by weight passing a No. 200 sieve. Controlled compacted fill shall be placed in one (1) foot loose layers and each layer shall be compacted to at least 95% of its Maximum Modified Dry Density (ASTM D-1557). The backfill must be free of topsoil, debris, and large boulders or rock fragments.

6.3 Pavement

We understand that the proposed construction will also include new asphalt paved parking areas and driveways. We expect that varying cuts and fills will be required to achieve the planned subgrade elevations in the new pavement areas. Densified existing fill or virgin site soils, and new compacted fill may be used to support the pavement.

To prepare the new pavement areas, the existing surface materials (i.e. topsoil, vegetation, etc.) must be removed from the planned pavement areas. In the proposed pavement areas, the existing structures and debris resulting from the demolition of these structures must be completely removed from the new pavement area, extending at least five (5) feet beyond the new paving limits, where practical. The excavations resulting from the removal of existing structures shall be backfilled using controlled compacted fill. New fill shall consist of either suitable on-site soil or imported sand and gravel placed in one (1) foot loose layers and compacted to at least 95% of its Maximum Modified Dry Density (ASTM D-1557).

Existing fill was present throughout the site to depths ranging from 2'0" to 14'0" below the existing ground surface. Areas where existing fill is encountered shall be compacted in place. Carlin-Simpson & Associates must evaluate these areas for the presence of soft or unsuitable material within the existing fill matrix. Portions of this fill may have to be removed and replaced with new compacted fill. Carlin-Simpson & Associates will determine this during construction.

After all surface materials have been removed, the area can be excavated to the planned subgrade elevation. Where soil is encountered at the subgrade elevation, the subgrade shall be proofrolled with a large vibratory drum roller (i.e. Dynapac 250 or equivalent) to densify the underlying soils. The on-site representative from Carlin-Simpson & Associates shall witness the proofrolling operation. If any excessive movement is noted during the proofrolling, the soft or unsuitable soil shall be removed and replaced with new compacted fill.

Where new fill is required to achieve final grades, it shall consist of either suitable on-site soil or imported sand and gravel. Imported sand and gravel shall contain less than 20% by weight passing a No. 200 sieve. New fill shall be placed in layers not exceeding one (1) foot in loose thickness and each layer shall be compacted to at least 95% of its Maximum Modified Dry Density (ASTM D-1557). After the planned subgrade has been proofrolled and new compacted fill has been placed as required, the new pavement subbase may be placed on the existing site soils, bedrock, and new compacted fill.

A minimum of six (6) inches of dense graded aggregate (DGA) or crushed stone is recommended for sub-pavement drainage and additional pavement support. We recommend that the following pavement sections be used for the parking lots and driveways. This pavement section is subject to local government approval.

Asphalt Pavement Section

The new pavement subbase may be placed on engineer-approved densified existing fill, virgin soil, or new compacted fill. A minimum of six (6) inches of dense graded aggregate (DGA) is recommended for the subbase layer for drainage and additional pavement support. We recommend that the following pavement section be used for the parking lots and driveways. This pavement section is subject to local government approval.

2"	Asphalt Top Course	NYSDOT, Type 6F
4"	Asphalt Base Course	NYSDOT, Type 3
8"	Stone Subbase (DGA)	NYSDOT, Type 1
	Approved Compacted Subgrade (Minimum CBR = 10)	

Rigid (Concrete) Pavement

We understand that concrete pavement will be used in portions of the site. Typically, a five (5) inch thick, 4,000-psi concrete section supported on six (6) inches of dense graded aggregate (DGA) base and an approved compacted subgrade is adequate for passenger vehicle traffic and occasional truck traffic.

Based on the boring data and the laboratory test results, we anticipate that the densified site soils and new compacted fill will provide a CBR value that is equal to or greater than 10, which can adequately support the above pavement sections.

6.4 Suitability of the In-Situ Soils for Use as Compacted Fill

The suitability of each soil stratum for use as compacted fill is discussed below.

Stratum 2 The existing fill generally consists of brown, black coarse to fine SAND, Existing Fill little (to some) Silt, little (to and) coarse to fine Gravel. Debris including asphalt, brick, concrete, and other possible obstructions was encountered within the existing fill.

The existing fill must remain relatively dry for optimum compaction and

all the debris (asphalt, brick and concrete) is removed prior to reuse as compacted fill.

Stratum 3 Stratum 3 generally consists of Clayey Silt or SILT and CLAY little (to Sandy Clay and), coarse to fine Sand. This stratum is generally unsuitable for reuse as and Silt compacted fill due to its high fines content and moisture sensitivity.

The boring observations indicate that the on-site soils contain a low to moderate percentage of silt (10 to >50%). The moderate to high silt content soils will be moisture sensitive. If the soil becomes too wet, it will be difficult to achieve adequate compaction. In addition, the site soils that extend below the groundwater table are completely saturated and therefore, unsuitable for reuse.

Proper moisture conditioning of the soil will be required. New compacted fill should be within 2% (+/-) of its optimum moisture content at the time of placement. In the event that the on-site material is too wet at the time of placement and cannot be adequately compacted, the soil should be aerated and allowed to dry or the material removed and a drier cleaner fill material used. In the event that the on-site material is too dry at the time of placement and cannot be adequately compacted, water may be needed to increase the soil moisture content for proper compaction.

The in-situ soils which exist throughout the site may become soft and weave if exposed to excessive moisture and construction traffic. The instability will occur quickly when exposed to these elements and it will be difficult to stabilize the subgrade. We recommend that adequate site drainage be implemented early in the construction schedule and if the subgrade becomes wet, the contractor should limit construction activity until the soil has dried.

The minimum compaction requirements for the various areas of the site are summarized in Table 8 below.

Table 8 – Minimum Compaction Requirements

Area	Maximum Modified Dry Density (ASTM D-1557)
Below Foundations	95%
Below Floor Slabs	92%
Pavement Areas	95%
Exterior Slabs and Sidewalks	92%
Utility Trenches	95%
Landscape Areas	90%

6.5 Related Environmental Concerns of On-Site Soils and Groundwater

During our subsurface exploration, a fuel/ petroleum odor was noted in borings B-7 indicating possible contamination of the site soils. During construction, special handling, testing, and/or disposal of potentially contaminated soil and groundwater may be required.

An environmental engineering firm must address the suitability of the on-site soils for use on the project site with respect to any environmental concerns. Proper disposal of all contaminated soil and water must be performed in accordance with applicable federal and state regulations. An environmental engineering firm should be retained by the owner to address these potential issues. Carlin-Simpson & Associates can provide environmental engineering services upon request.

7.0 GENERAL

The findings, conclusions and recommendations presented in this report represent our professional opinions concerning subsurface conditions at the site. The opinions presented are relative to the dates of our site work and should not be relied on to represent conditions at later dates or at locations not explored. The opinions included herein are based on information provided to us, the data obtained at specific locations during the study and our past experience. If additional information becomes available that might impact our geotechnical opinions, it will be necessary for Carlin-Simpson & Associates to review the information, reassess the potential concerns, and re-evaluate our conclusions and recommendations.

Regardless of the thoroughness of a geotechnical exploration, there is the possibility that conditions between borings and test pits will differ from those encountered at specific boring or test pit locations, that conditions are not as anticipated by the designers and/or the contractors, or that either natural events or the construction process have altered the subsurface conditions. These variations are an inherent risk associated with subsurface conditions in this region and the approximate methods used to obtain the data. These variations may not be apparent until construction.

The professional opinions presented in this geotechnical report are not final. Field observations and foundation installation monitoring by the geotechnical engineer, as well as soil density testing and other quality assurance functions associated with site earthwork and foundation construction, are an extension of this report. Therefore, Carlin-Simpson & Associates should be retained by the Owner to observe all earthwork and foundation construction, to document that the conditions anticipated in this study actually exist, and to finalize or amend our conclusions and recommendations. Carlin-Simpson & Associates is not responsible or liable for the conclusions and recommendations presented in this report if Carlin-Simpson & Associates does not perform the observation and testing services.

Therefore, in order to preserve continuity in this project, the Owner must retain the services of Carlin-Simpson & Associates to provide full time geotechnical related monitoring and testing during construction. At a minimum, this shall include the observation and testing of the following: 1) the removal of existing fill and unsuitable soil, where required; 2) the installation and placement of compacted fill; 3) subgrade and evaluation of the site excavations; and 4) installation and testing of pile foundations.

This report has been prepared in accordance with generally accepted geotechnical engineering practice. No other warranty is expressed or implied. The evaluations and recommendations presented in this report are based on the available project information, as

well as on the results of the exploration. Carlin-Simpson & Associates should be given the opportunity to review the final drawings and site plans for this project to determine if changes to the recommendations outlined in this report are needed. Should the nature of the project change, these recommendations should be re-evaluated.

This report is provided for the exclusive use of Farrell Building Company and the project specific design team and may not be used or relied upon in connection with other projects or by other third parties. Carlin-Simpson & Associates disclaims liability for any such third-party use or reliance without express written permission. Use of this report or the findings, conclusions or recommendations by others will be at the sole risk of the user. Carlin-Simpson & Associates is not responsible or liable for the interpretation by others of the data in this report, nor their conclusions, recommendations or opinions.

If the conditions encountered during construction vary significantly from those stated in this report, this office should be notified immediately so that additional recommendations can be made.

Thank you for allowing us to assist you with this project. Should you have any questions or comments, please contact this office.

Stephen Rossi

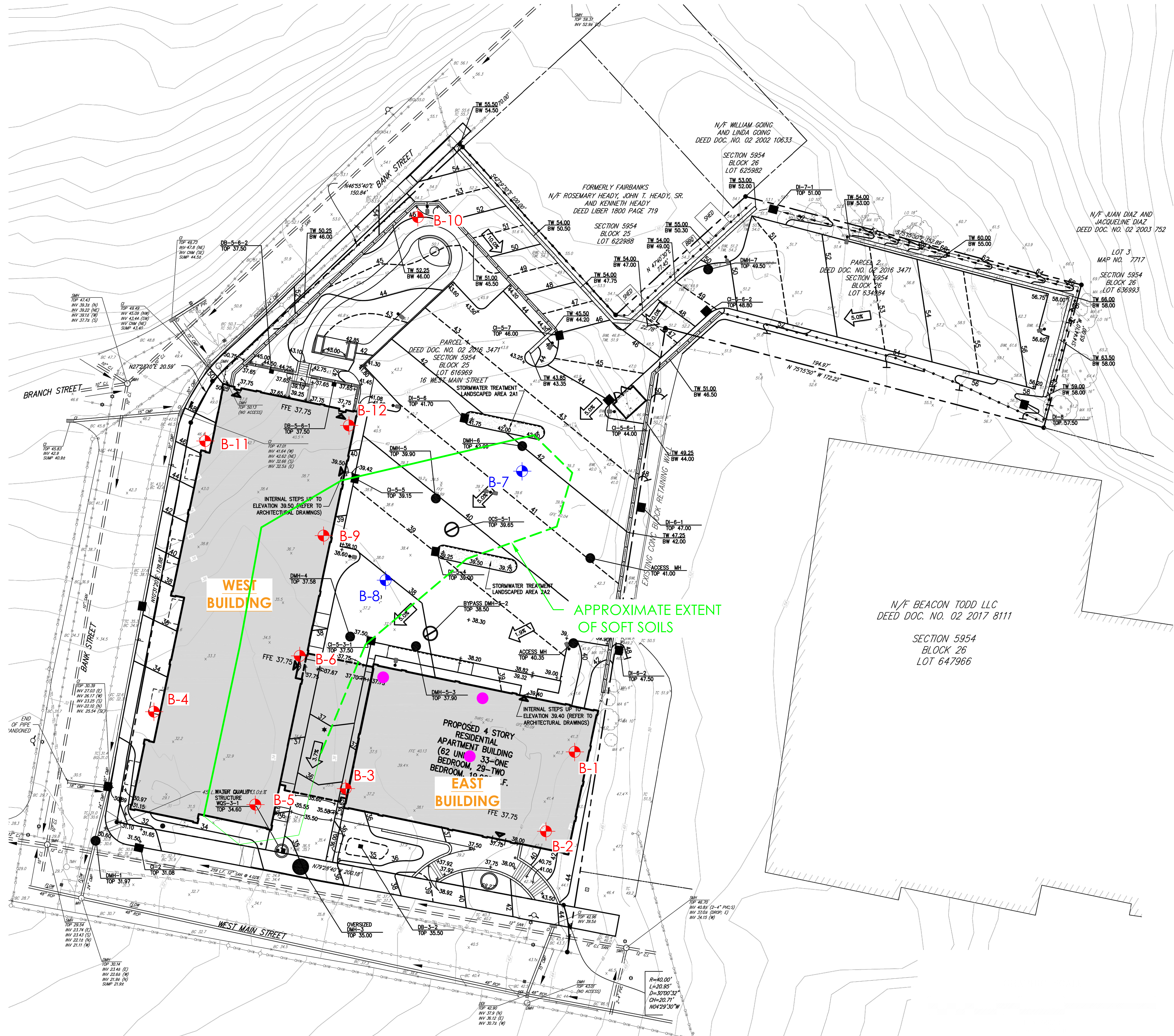
STEPHEN ROSSI, P.E.
Project Engineer

Robert Simpson

ROBERT B. SIMPSON, P.E.



File No. 20-07

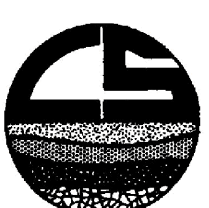


- GENERAL NOTES:
1. GENERAL LAYOUT WAS OBTAINED FROM A DRAWING PREPARED BY JMC, PLLC, ENTITLED "UTILITIES PLAN", DATED 29 OCTOBER 2019.
 2. BORING LOCATIONS WERE LAID OUT IN THE FIELD BY CARLIN-SIMPSON & ASSOCIATES (CSA).
 3. BORINGS WERE PERFORMED BY GENERAL BORINGS INC. IN JULY 2020. UNDER THE FULL TIME INSPECTION OF CSA.
 4. LOCATIONS ARE APPROXIMATE.

- LEGEND:
- BORING LOCATION
 - PROPOSED BORING LOCATION
 - APPROXIMATE EXTENT OF SOFT SILT AND CLAY



ROBERT B. SIMPSON, P.E. PROFESSIONAL ENGINEER			
LICENSE NO.		SIGNATURE	
BORING LOCATION PLAN			
PROPOSED APARTMENT BUILDINGS 16 WEST MAIN STREET BECON, NEW YORK			
DRAWN	CKS	SCALE	1" = 20'
CHECKED	RBS	DATE	28-SEP-20
PROJECT NO.	20-07	DWG NO.	FIG -1
APPROVED		CARLIN-SIMPSON AND ASSOCIATES 61 Main Street Sayreville, NJ 08872 Consulting Geotechnical and Environmental Engineers	



CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ					TEST BORING LOG					BORING NUMBER B-1	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY										SHEET NO.: 1 of 1	
Client: Farrell Building Co										JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc										ELEVATION: +42.0	
GROUNDWATER						CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE		TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 21-Jul-20	
21-Jul-20		1330	15'0"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 21-Jul-20	
					WGHT		140#			DRILLER: JC	
					FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION					REMARKS	
1		S-1	6		<u>Topsoil</u>					0'4"	
			13		FILL (Br cf S, s \$, l (-) cf G, w/brick)					Rec = 6" moist	
			50/2"		<u>FILL (Brown coarse to fine SAND, some Silt, little (-) coarse to fine Gravel, with brick)</u>						
2											
3										3'0"	
4		S-2	10		Br, gr \$ s, cf S, t (+) cf G <u>Brown, gray SILT some, coarse to fine SAND, trace (+) coarse to fine Gravel</u>					Rec = 18" moist	
			11								
			14								
5			16								
6		S-3	9		same, no cf G					Rec = 10" moist Dense drilling	
			12								
			50/3"								
7											
8											
9											
10											
11		S-4	18		Br cf S, l (+) \$, l (+) cf G					Rec = 7" wet Dense drilling	
			18								
			24								
12			21								
13					<u>Brown coarse to fine SAND, little (+) Silt, little (+) coarse to fine Gravel</u>						
14											
15											
16		S-5	24		same					Rec = 18" wet Dense drilling	
			27								
			31								
17			36								
18											
19											
20											
21		S-6	11		same, gr, s \$, l cf G					Rec = 20" wet	
			13								
			23								
22			27		End of Boring @ 22'0"					22'0"	

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ				TEST BORING LOG					BORING NUMBER B-2	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 1	
Client: Farrell Building Co									JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc									ELEVATION: +42.0	
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 21-Jul-20	
21-Jul-20	1530	17'0"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 21-Jul-20	
				WGHT		140#			DRILLER: JC	
				FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION				REMARKS	
1		S-1	4		Topsoil				0'6"	
			10		Br, gr Cy \$ s, cf S, t cf G				Rec = 16" moist	
2			9							
			9							
3		S-2	8							
			11		same, l (+) mf S, no G				Rec = 20" moist	
4			13							
			17							
5										
6		S-3	8		Brown, gray Clayey SILT some, coarse to fine Sand, trace coarse to fine Gravel				Rec = 22" moist	
			8							
7			12							
			14							
8		S-4	14							
			15		same				rec = 24" moist	
9			16							
			23							
10									10'0"	
11		S-5	7							
			11		Br cf S, l (+) \$, l cf G				Rec = 6" moist	
12			18							
			19							
13										
14										
15					Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel					
16		S-6	40							
			50/4"		same, gr a cf G				Rec = 2" moist	
17										
18										
19										
20										
21		S-7	21							
			34		same, gr s (-) cf G				Rec = 12" wet	
22			42							
			50/4"		End of Boring @ 21'10"				21'10"	

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.					TEST BORING LOG					BORING NUMBER B-3	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY										SHEET NO.: 1 of 2	
Client: Farrell Building Co										JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc										ELEVATION: +36.5	
GROUNDWATER						CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE		TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 21-Jul-20	
21-Jul-20		1015	15'0"	HSA	DIA.		1 3/8"			FINISH DATE: 21-Jul-20	
					WGHT		140#			DRILLER: JC	
					FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION					REMARKS	
1		S-1			Asphalt					0'2"	
2			7		FILL (Br cf S, t (+) \$, a cf G, w/brick, concrete) <u>FILL (Brown coarse to fine SAND, trace (+) Silt, and coarse to fine Gravel, with brick, concrete, debris)</u>					Rec = 4"	
3			50/3"							moist	
4		26		Auger refusal on concrete 2.5'							
5		S-2	20		FILL (same, l \$, s cf G)					Rec = 10"	
6			15		Br, gr, or mttld C & \$ s, cf S, t cf G					moist	
7		9		5'0"							
8		S-3	2							*mottling, possible perched	
9			3		moist						
10			11								
11		S-4	5		same, lt gr, br, no G					Rec = 19"	
12			7							moist	
13			11								
14		S-5	15		<u>Brown, gray, orange mottled Clay and SILT some, coarse to fine Sand, trace coarse to fine Gravel</u>					Rec = 21"	
15			6							wet	
16			15								
17		S-6	6		same, l mf S					Rec = 24"	
18			9							wet	
19			12								
20		S-7			18'0"						
21											
22											
23		S-7			<u>Gray coarse to fine SAND, little Silt, and coarse to fine Gravel, with cobbles</u>						
24											
25											
26		S-7	17		Gr cf S, l \$, a cf G					Rec = 0"	
27			26							wet	
28			22								
29			27								

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG		BORING NUMBER B-3		
Project:				Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY		SHEET NO.: 2 of 2		
Client:				Farrell Building Co		JOB NUMBER: 20-07		
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	S y m	IDENTIFICATION	REMARKS		
23		S-8			<u>Gray coarse to fine SAND, little Silt, and coarse to fine Gravel</u>	Dense drilling		
24								
25								
26			50/3"		Gr cf S, 1 \$, a cf G	25'3"	Rec = 4"	
27						<u>End of Boring @ 25'3"</u>	wet	
28							Likely bedrock	
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ				TEST BORING LOG					BORING NUMBER B-4	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 1	
Client: Farrell Building Co									JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc									ELEVATION: +32.5	
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 22-Jul-20	
22-Jul-20	14:30	6'0"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 22-Jul-20	
				WGHT		140#			DRILLER: JC	
				FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION				REMARKS	
1					Asphalt				0'2"	
2		S-1	8		FILL (Br cf S, l \$, s (+) cf G, w/brick, concrete) FILL (Brown coarse to fine SAND, little Silt, some (+) coarse to fine Gravel, with brick, concrete)				Rec = 7" moist	
3			9							
4			12							
5		S-2	27		FILL (Br, gr Cy \$ s, cf S) FILL (Brown, gray Clayey SITL some, coarse to fine Sand)				Rec = 10" moist	
6			12							
7			6							
8		S-3	5		FILL (Br, bk cf S, s (-) \$, a cf G, w/fibers) FILL (Brown, black coarse to fine SAND, some (-) Silt, and coarse to fine Gravel, with fibers)				Rec = 6" wet	
9			4							
10			3							
11		S-4	2		FILL (Gr \$ & C l, cf S) FILL (Gray SILT and Clay little, coarse to fine Sand)				Rec = 12" wet	
12			3							
13			3							
14		S-5	1		Br cf S, t (+) \$, a cf G Brown coarse to fine SAND, trace (+) Silt, and coarse to fine Gravel				Rec = 7" wet	
15			7							
16			6							
17			50/3"		End of Boring @ 13'0"				Auger refusal @ 13'0"	
18										
19										
20										
21										
22										

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ				TEST BORING LOG					BORING NUMBER B-5	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 1	
Client: Farrell Building Co									JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc									ELEVATION: +34.0	
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 22-Jul-20	
22-Jul-20	1043	10'0"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 22-Jul-20	
				WGHT		140#			DRILLER: JC	
				FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION				REMARKS	
1		S-1	12		Topsoil				0'1"	
			17		FILL (Br cf S, t (+) \$, a cf G)				Rec = 10" moist	
2		S-2	10		<u>FILL (Brown coarse to fine SAND, trace (+) Silt, and coarse to fine Gravel)</u>				Rec = 0 Boulder	
			17							
50/2"										
3										
4										
5									5'0"	
6		S-3	7		FILL (Gr C & \$ l, cf S, w/roots, sticks)				Rec = 14" wet	
			3							
			2							
7					<u>FILL (Gray Clay and SILT little, coarse to fine Sand, with roots, sticks, glass)</u>				slightly mottled	
8		S-4	3		FILL (same, dk gr, l (-) cf G, w/glass)				wet Rec = 24"	
			5							
			5							
10									10'0"	
11		S-5	4		Br, gr \$y C l (-), mf S				Rec = 24" wet	
			4							
			5							
13					<u>Brown, gray SILTY Clay little (-), medium to fine Sand</u>					
14										
15										
16		S-6	WOH/12							
			1							
17			2		same, gr				Rec = 24" wet	
18										
19										
20									19'0"	
21		S-7	10		<u>Brown coarse to fine SAND, little Silt, some coarse to fine Gravel</u>					
			8							
22			12		Br cf S, l \$, s cf G				Rec = 7" wet	
			22		End of Boring @ 22'0"				22'0"	

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG					BORING NUMBER B-6	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 2	
Client: Farrell Building Co									JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc									ELEVATION: +35.0	
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 23-Jul-20	
23-Jul-20	930	13'6"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 23-Jul-20	
				WGHT		140#			DRILLER: JC	
				FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION				REMARKS	
1		S-1			<u>Asphalt</u>				0'3"	
2			7		FILL (Br cf S, l (-) \$, s cf G, w/brick)				Rec = 7" moist Brick cutting coming up	
3			19							
4			50/2"							
5										
6		S-2	27		FILL (same, a cf G, w/brick)				Rec = 7" moist Boulder (possible old floor slab)	
7			43							
8			50/1"							
9										
10		S-3			9'0"					
11			4							
12			6							
13			7							
14		S-4	8		Brown, gray Clayey SILT little, medium to fine Sand				Rec = 24" moist mottled	
15										
16										
17										
18		S-5	1/12"		same, gr \$ & C				Rec = 24" wet	
19			1							
20			1							
21										
22					18'6"					
		S-5	9		Brown coarse to fine GRAVEL some, coarse to fine Sand, trace Silt				Rec = 5" wet	
			6							
			14							
			30							

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG		BORING NUMBER B-6	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY						SHEET NO.: 2 of 2	
Client: Farrell Building Co						JOB NUMBER: 20-07	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	S y m	IDENTIFICATION	REMARKS	
23					<u>Brown coarse to fine GRAVEL some,</u>	Auger refusal 23'0" Likely Bedrock	
24					<u>coarse to fine Sand, trace Silt</u>		
					<u>End of Boring @ 23'0"</u>		
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ				TEST BORING LOG					BORING NUMBER B-7	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 1	
Client: Farrell Building Co									JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc									ELEVATION: +39.5	
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 23-Jul-20	
23-Jul-20	1230	5'0"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 23-Jul-20	
23-Jul-20	1330	5'0"	HSA	WGHT		140#			DRILLER: JC	
				FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION				REMARKS	
1		S-1			Asphalt				0'1"	Rec = 14" moist
			3		FILL (Br, gr cf S, l \$, s cf G, w/brick, asphalt)					
2			4							
		15								
3		S-2	8		FILL (same, brick, asphalt)					Rec = 6" moist
			6							
4			5							
		S-3	3		FILL (Brown, gray coarse to fine SAND, little Silt, some coarse to fine Gravel, with brick, asphalt, wood)					
5			4							
			1							
6			1/12"		FILL (same, bk t \$, w/wood)				Rec = 4"	wet Petroleum Odor Boulder
7			50/0"							
8									8'0"	
		S-4	1		Gr cf G s, cf S, s \$					Rec = 6" wet
9			2							
			5							
10		S-5	10		Gray coarse to fine GRAVEL some, coarse to fine Sand, some Silt					Rec = 3" wet
			2							
11			8	same						
			3							
12			3							
13									13'0"	
14		S-6			Brown Clay and SILT little, coarse to fine Sand, trace coarse to fine Gravel					Rec = 20" wet
15										
			2		Br C&\$ l, cf S, t cf G					
16			3							
			5							
17			8						17'0"	
18					End of Boring @ 17'0"					
19										
20										
21										
22										

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ				TEST BORING LOG					BORING NUMBER B-8	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY				SHEET NO.:		1 of 1				
Client: Farrell Building Co				JOB NUMBER:		20-07				
Drilling Contractor: General Borings Inc				ELEVATION:		+38.0				
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 23-Jul-20	
23-Jul-20	1115	5'0"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 23-Jul-20	
23-Jul-20	1230	4'10"	Open	WGHT		140#			DRILLER: JC	
				FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION				REMARKS	
1		S-1			Asphalt				0'3"	Rec = 10" moist
			7							
2			6		FILL (Br, gr cf S, l \$, s cf G, w/brick)					
		S-2	9							Rec = 12" moist
3			8							
			8		FILL (same)					
4		S-3	27		FILL (Brown, gray coarse to fine SAND, little Silt, some coarse to fine Gravel, with brick, wood)					Rec = 6" wet wood
			50/2"							
5			6							
6		S-4	6		FILL (same, w/wood)					Rec = 6" wet
			50/1"							
7										
8		S-5								Rec = 20" wet
			3							
9			7		FILL (same, gr a cf G, w/wood)					
		S-6	8							Rec = 18" wet
10			12		10'0"					
			4							
11		S-5	5		Br, gr \$&C l, cf S					Rec = 20" wet
			6							
12			9		Brown, gray SILT and Clay little, coarse to fine Sand					
		S-6	2		same, br t cf G					Rec = 18" wet
13			4							
			4		14'0"					
14					End of Boring @ 14'0"					
15										
16										
17										
18										
19										
20										
21										
22										

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG					BORING NUMBER B-9	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 2	
Client: Farrell Building Co									JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc									ELEVATION: +37.5	
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 24-Jul-20	
24-Jul-20	1015	5'9"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 24-Jul-20	
				WGHT		140#			DRILLER: J Casson	
				FALL		30"			INSPECTOR: KWA	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	S y m	IDENTIFICATION				REMARKS	
1		S-1			Asphalt				0'3"	
2			4		FILL (Gr Cy \$ s, cf S, t (-) f G, w/t roots, asphalt)				Rec = 10" moist	
3			6							
4		10								
5		S-2	6		FILL (same, w/brick) <u>FILL (Gray Clayev SILT some, coarse to fine Sand, trace (-) fine Gravel, with trace roots, asphalt, cinders, bricks)</u>				Rec = 10" moist	
6			4							
7			15							
8		S-3	10		FILL (Dk gr cinders w/brick)				Rec = 11" wet	
9			8							
10			3							
11		S-4	3		FILL (same)				Rec = 9" wet fuel odor	
12			2							
13			2							
14		S-5	2		Gr Cy \$ t (+), mf S, w/ t O				Rec = 9" wet	
15			3							
16			3							
17		S-6			<u>Gray Clayey SILT trace (+), medium to fine Sand</u>				Oil Scheen on cuttings	
18										
19										
20		S-7			Gr Cy \$ t, f S				Rec = 6" wet	
21			1							
22			1							
23		S-7			Gr cf S, a \$, l cf G (till) <u>Gray coarse to fine SAND, and Silt, little coarse to fine Gravel</u>				20'6"	
24										
25										
26		S-7	7		Gr cf S, a \$, l cf G (till) <u>Gray coarse to fine SAND, and Silt, little coarse to fine Gravel</u>				Rec = 8" wet	
27			48							
28			50/1"							

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG		BORING NUMBER B-9	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY						SHEET NO.: 2 of 2	
Client: Farrell Building Co						JOB NUMBER: 20-07	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	S y m	IDENTIFICATION	REMARKS	
23					<u>Gray coarse to fine SAND, and Silt,</u> <u>little coarse to fine Gravel</u> 23'0"	Auger refusal 23'0" Likely Bedrock	
24					<u>End of Boring @ 23'0"</u>		
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ				TEST BORING LOG					BORING NUMBER B-10	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 1	
Client: Farrell Building Co									JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc									ELEVATION: +53.0	
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 24-Jul-20	
24-Jul-20	1515	21'0"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 24-Jul-20	
				WGHT		140#			DRILLER: J Casson	
				FALL		30"			INSPECTOR: KWA	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION				REMARKS	
1		S-1			Asphalt				0'3"	
					FILL (Brown, gray coarse to fine SAND, little (-) Silt, some coarse to fine Gravel)					
2			20						2'0"	
			16		Br cf S, s \$				Rec = 7" moist	
			7							
3			5							
4										
5										
		S-2	7							
6			11		same, s (+) \$				Rec = 15" moist	
			13		Brown coarse to fine SAND, some Silt					
7			15							
8										
9										
10										
		S-3	7							
11			8		Mttld br, gr, or br Cy \$ l (+), cf S				11'0"	
			15		Br, gr Cy \$ l (+), cf S, t cf G				Rec = 22" moist	
12			18							
					Brown, gray Clayey SILT little (+), coarse to fine Sand, trace coarse to fine Gravel				14'0"	
13										
14										
15										
		S-4	62							
16			20/1"		Shale, highly to completely weathered				Rec = 2" moist	
17										
18										
					Shale, highly to completely weathered					
19										
20										
		S-5	36							
21			50/3"		same				Rec = 3" moist to wet	
22					End of Boring @ 22'0"				22'0" Refusal on auger 22'0"	

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ					TEST BORING LOG					BORING NUMBER B-11	
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY										SHEET NO.: 1 of 1	
Client: Farrell Building Co										JOB NUMBER: 20-07	
Drilling Contractor: General Borings Inc										ELEVATION: +46.0	
GROUNDWATER						CASING	SAMPLE	CORE	TUBE	DATUM: Topo	
DATE		TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 22-Jul-20	
No Groundwater Encountered					DIA.	3 1/4"	1 3/8"			FINISH DATE: 22-Jul-20	
					WGHT		140#			DRILLER: JC	
					FALL		30"			INSPECTOR: JP	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION					REMARKS	
1		S-1	13		<u>Topsoil</u>					0'1"	
	12		FILL (Br cf S, t (+) \$, a cf G, w/brick)					Rec = 6" moist			
	7										
2		S-2	6								
	4		FILL (same)					Rec = 4" moist			
	6		<u>FILL (Brown coarse to fine SAND, trace (+) Silt, and coarse to fine Gravel, with brick)</u>								
3		S-3	16								
	10										
								5'0"			
4		S-4	3		<u>FILL (Gray SILT & CLAY little, coarse to fine Sand</u>					6'0"	
	6		FILL (Br cf S, s (-) \$, l cf G, w/brick, roots)					Rec = 10" wet			
	17										
5		S-5	9								
	50/2"		FILL (same, a cf G, w/brick)					Rec = 3" moist			
6		S-6			<u>FILL (Brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel, with brick, roots)</u>						
7		S-7	3								
	3		FILL (same)					Rec = 4" moist			
	50/3"										
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ				TEST BORING LOG					BORING NUMBER B-12		
Project: Proposed Soil Testing Beacon Commons, 16 West Main St, Beacon NY									SHEET NO.: 1 of 1		
Client: Farrell Building Co									JOB NUMBER: 20-07		
Drilling Contractor: General Borings Inc									ELEVATION: +40.5		
GROUNDWATER					CASING	SAMPLE	CORE	TUBE	DATUM: Topo		
DATE		TIME	DEPTH	CASING	TYPE	HSA	SS			START DATE: 24-Jul-20	
24-Jul-20		1300	7'6"	HSA	DIA.	3 1/4"	1 3/8"			FINISH DATE: 24-Jul-20	
					WGHT		140#			DRILLER: J Casson	
					FALL		30"			INSPECTOR: KWA	
Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION					REMARKS	
1		S-1			<u>Asphalt</u>					0'2"	
2			11		<u>FILL (Gray, brown Clayey SITL little, coarse to fine Sand, trace fine Gravel, with brick, cinders, wood)</u>					Rec = 0	
3			13								
4		11									
5		S-2	8		FILL (Gr br Cy \$ l, cf S, t f G, w/brick, cinders, wood)					Rec = 10"	
6			6							moist	
7		S-3	7							fuel odor on cuttings	
8			50/1"		FILL (cobbles, boulders)					5'0"	
9					<u>FILL (cobbles, boulders)</u>						
10											
11											
12		S-4	2		FILL (Gr br Cy \$ l, cf S)					Rec = 20"	
13			4		<u>FILL (Gray brown Clayey SILT, little coarse to fine Sand</u>					wet	
14			4							9'6"	
15		S-5	6		Br Cy \$ l (-), mf S					Rec = 10"	
16			6								
17			7								
18			10		<u>Brown Clayev SILT little (-), medium to fine Sand</u>					Rec = 10"	
19											
20											
21		S-6	27		Dk br cf G s (-), cf S, s \$					Rec = 11"	
22			14								
23			14								
24					<u>Dark Brown coarse to fine GRAVEL some (-), coarse to fine Sand, some Silt</u>					9'0"	
25		S-7			<u>Shale, highly to completely weathered</u>					Rec = 11"	
26											
27											
28			50/3"		Shale, highly to completely weathered					20'3"	
29					<u>End of Boring @ 20'3"</u>					Rec = 2"	
30										wet	

APPENDIX D

WEB SOIL SURVEY REPORT

Hydrologic Soil Group—Dutchess County, New York



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 15, Sep 2, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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	18.4	77.8%
DxB	Dutchess-Cardigan-Urban land complex, undulating, rocky		3.4	14.6%
NwC	Nassau-Cardigan complex, rolling, very rocky	D	1.7	7.2%
Ud	Udorthents, smoothed	A	0.1	0.5%
Totals for Area of Interest			23.7	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

Drainage Class—Dutchess County, New York



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

	Excessively drained		Excessively drained
	Somewhat excessively drained		Somewhat excessively drained
	Well drained		Well drained
	Moderately well drained		Moderately well drained
	Somewhat poorly drained		Somewhat poorly drained
	Poorly drained		Poorly drained
	Very poorly drained		Very poorly drained
	Subaqueous		Subaqueous
	Not rated or not available		Not rated or not available

Soil Rating Lines

	Excessively drained
	Somewhat excessively drained
	Well drained
	Moderately well drained
	Somewhat poorly drained
	Poorly drained
	Very poorly drained
	Subaqueous
	Not rated or not available

Soil Rating Points

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 15, Sep 2, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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.

Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	Well drained	18.4	77.8%
DxB	Dutchess-Cardigan-Urban land complex, undulating, rocky	Well drained	3.4	14.6%
NwC	Nassau-Cardigan complex, rolling, very rocky	Well drained	1.7	7.2%
Ud	Udorthents, smoothed	Well drained	0.1	0.5%
Totals for Area of Interest			23.7	100.0%

Description

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Saturated Hydraulic Conductivity (Ksat)—Dutchess County, New York



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Background

 Aerial Photography

Soils

Soil Rating Polygons

-  ≤ 7.9787
-  > 7.9787 and ≤ 9.0000
-  > 9.0000 and ≤ 23.9909
-  Not rated or not available

Soil Rating Lines

-  ≤ 7.9787
-  > 7.9787 and ≤ 9.0000
-  > 9.0000 and ≤ 23.9909
-  Not rated or not available

Soil Rating Points

-  ≤ 7.9787
-  > 7.9787 and ≤ 9.0000
-  > 9.0000 and ≤ 23.9909
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

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 15, Sep 2, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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.

Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	9.0000	18.4	77.8%
DxB	Dutchess-Cardigan-Urban land complex, undulating, rocky	9.0000	3.4	14.6%
NwC	Nassau-Cardigan complex, rolling, very rocky	7.9787	1.7	7.2%
Ud	Udorthents, smoothed	23.9909	0.1	0.5%
Totals for Area of Interest			23.7	100.0%

Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Rating Options

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 72

Units of Measure: Inches

APPENDIX E

TEMPORARY EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE CHECKLIST

PERMANENT STORMWATER PRACTICE OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST

Temporary Erosion and Sediment Control Inspection and Maintenance Checklist

Erosion and Sediment Control Measure	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Stabilized Construction Entrance	Daily	• Periodic top dressing with additional aggregate as required • Clean sediment in public right-of-ways immediately
Silt Fence	Weekly + After Each Rain	• Remove & redistribute sediment when bulges develop in the silt fence.
Inlet Protection	Weekly + After Each Rain	• Remove sediment as necessary and replace filter fabric, crushed stone etc. • Any broken and damaged components should be replaced. • Check all materials for proper anchorage and secure as necessary.
Haybales	Daily	• Remove sediment and debris • Check that all bales are tight against each other and the ground surface.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
StormTech Subsurface Detention Facility	(See Maintenance Guidelines in Appendix E)	• Check level of sediment accumulated within the isolator row through the access manhole. If 3 inches of sediment or greater, clean out utilizing a high pressure water nozzle to scour and suspend sediments. • Flush all sediment to access manhole and remove using a vacuum truck.
Drain Inlets	Monthly	• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary. • Check for sediment and debris collected within sumps and clean out as necessary.
Cascade Separator Water Quality Structure	(See Maintenance Guidelines in Appendix E)	• Open access cover for visual inspection and measure the distance from the standing water surface to the sediment pile with a measuring stick or tape. If less than 4 feet, insert hose from vacuum truck into the sump and screen through both access covers to clean out the standing water, layer of oil, sediment, trash, etc. • The screen must be powerwashed to ensure it is free of trash and debris.

Stormwater Planters	Early Spring (before new growth is 3 inches high)	• Cut and remove dead stalks and seed heads remaining from previous season. • Remove sticks and debris. • Prune shrubs if necessary. • Divide and move perennials if they are too crowded. • Replenish mulch layer to maintain a • 3 inch layer of shredded bark.
	Late Spring	• Remove weeds. • Water as needed during periods of drought.
	Fall	• Removed weeds and diseased plants. • Remove excess leaves. • If fall is dry, continue to water trees and shrubs until ground begins to freeze (later October). These woody plants need moisture entering winter to ensure survival.

The owner/operator responsible for inspection and maintenance as outlined above:

Farrell Building Company
Mr. Stephen Zagoren
2317 Montauk Highway
Bridgehampton, NY 11932
Phone: (631) 766-0023
Email: zags1413@gmail.com

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Cascade Separator® Inspection and Maintenance Guide



Maintenance

The Cascade Separator® system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects sediment and debris will depend upon on-site activities and site pollutant characteristics. For example, unstable soils or heavy winter sanding will cause the sediment storage sump to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (i.e. spring and fall). However, more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment wash-down areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

A visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet chamber, flumes or outlet channel. The inspection should also quantify the accumulation of hydrocarbons, trash and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided in this Inspection and Maintenance Guide.

Access to the Cascade Separator unit is typically achieved through one manhole access cover. The opening allows for inspection and cleanout of the center chamber (cylinder) and sediment storage sump, as well as inspection of the inlet chamber and slanted skirt. For large units, multiple manhole covers allow access to the chambers and sump.

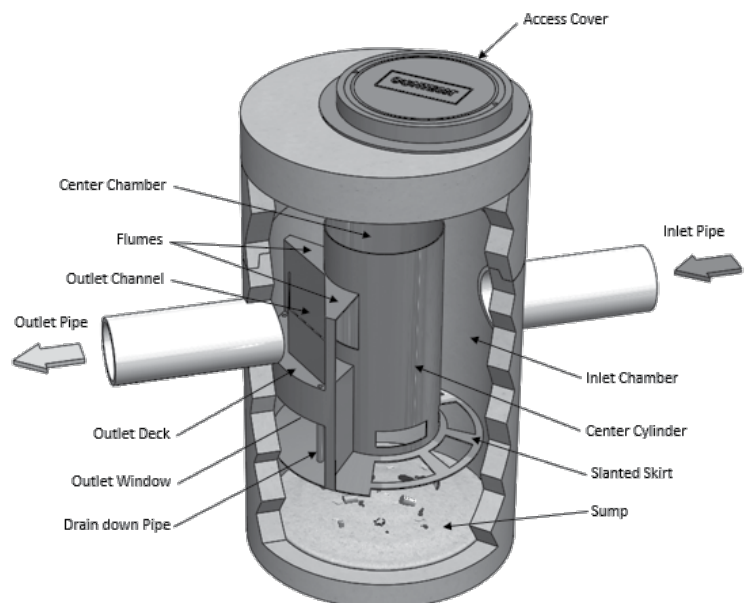
The Cascade Separator system should be cleaned before the level of sediment in the sump reaches the maximum sediment depth and/or when an appreciable level of hydrocarbons and trash has accumulated. If sorbent material is used, it must be replaced when significant discoloration has occurred. Performance may be impacted when maximum sediment storage capacity is exceeded. Contech recommends maintaining the system when sediment level reaches 50% of maximum storage volume. The level of sediment is easily determined by measuring the distance from the system outlet invert (standing water level) to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Finer, silty particles at the top of the pile typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the chart in this document to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage.

Cleaning

Cleaning of a Cascade Separator system should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole cover and insert the vacuum tube down through the center chamber and into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The areas outside the center chamber and the slanted skirt should also be washed off if pollutant build-up exists in these areas.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. Then the system should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and to ensure proper safety precautions. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the Cascade Separator system must be done in accordance with local regulations. In many locations, disposal of evacuated sediments may be handled in the same manner as disposal of sediments removed from catch basins or deep sump manholes. Check your local regulations for specific requirements on disposal. If any components are damaged, replacement parts can be ordered from the manufacturer.



Cascade Separator® Maintenance Indicators and Sediment Storage Capacities

Model Number	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y ³	m ³
CS-3	3	0.9	1.5	0.5	0.4	0.3
CS-4	4	1.2	2.5	0.8	0.7	0.5
CS-5	5	1.3	3	0.9	1.1	0.8
CS-6	6	1.8	3.5	1	1.6	1.2
CS-8	8	2.4	4.8	1.4	2.8	2.1
CS-10	10	3.0	6.2	1.9	4.4	3.3
CS-12	12	3.6	7.5	2.3	6.3	4.8

Note: The information in the chart is for standard units. Units may have been designed with non-standard sediment storage depth.



A Cascade Separator unit can be easily cleaned in less than 30 minutes.



A vacuum truck excavates pollutants from the systems.

Cascade Separator® Inspection & Maintenance Log

[illegible]

1. The depth to sediment is determined by taking a measurement from the manhole outlet invert (standing water level) to the top of the sediment pile. Once this measurement is recorded, it should be compared to the chart in the maintenance guide to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage. Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.
2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

SUPPORT

- Drawings and specifications are available at www.ContechES.com.
- Site-specific design support is available from our engineers.

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Jellyfish[®] Filter Owner's Manual



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THANK YOU FOR PURCHASING THE JELLYFISH® FILTER!

Contech Engineered Solutions would like to thank you for selecting the Jellyfish Filter to meet your project's stormwater treatment needs. With proper inspection and maintenance, the Jellyfish Filter is designed to deliver ongoing, high levels of stormwater pollutant removal.

If you have any questions, please feel free to call us or e-mail us:

Contech Engineered Solutions

9025 Centre Pointe Drive, Suite 400 | West Chester, OH 45069

513-645-7000 | 800-338-1122

www.ContechES.com

info@conteches.com

Jellyfish Filter Patents

The Jellyfish Filter is protected by one or more of the following patents:

U.S. Patent Nos. 8,123,935; 8,287,726; 8,221,618

Australia Patent Nos. 2008, 286, 748

Canadian Patent Nos. 2,696,482;

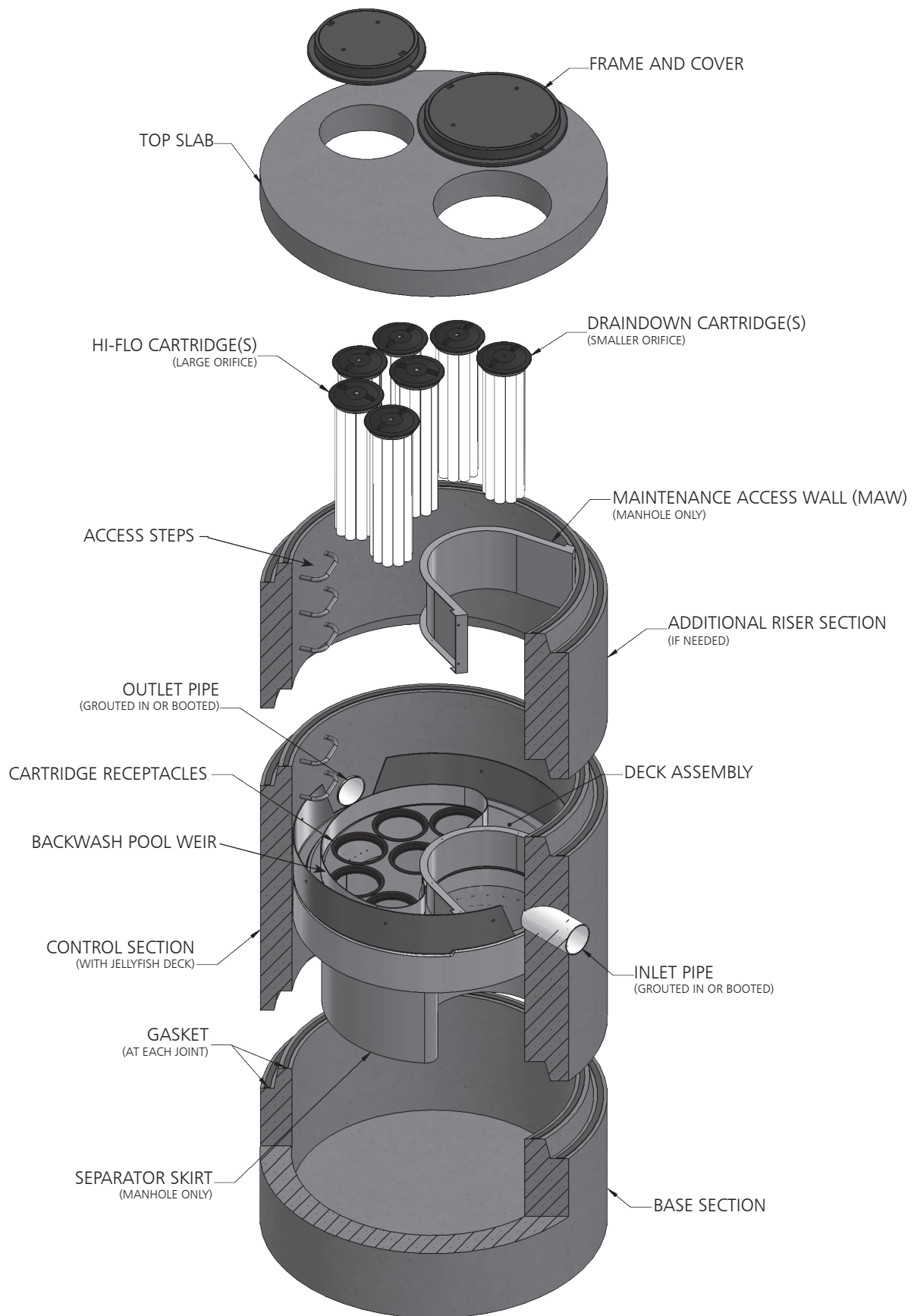
Japanese Patent No. 5,646,681

Korean Patent Nos. 10-1287539; 10-1400257

New Zealand Patent Nos. 583,461; 604,227

South African Patent No. 2010,01068

*other patents pending



WARNINGS / CAUTION

1. FALL PROTECTION may be required.
2. WATCH YOUR STEP if standing on the Jellyfish Filter Deck at any time; Great care and safety must be taken while walking or maneuvering on the Jellyfish Filter Deck. Attentive care must be taken while standing on the Jellyfish Filter Deck at all times to prevent stepping onto a lid, into or through a cartridge hole or slipping on the deck.
3. The Jellyfish Filter Deck can be SLIPPERY WHEN WET.
4. If the Top Slab, Covers or Hatches have not yet been installed, or are removed for any reason, great care must be taken to NOT DROP ANYTHING ONTO THE JELLYFISH FILTER DECK. The Jellyfish Filter Deck and Cartridge Receptacle Rings can be damaged under high impact loads. This type of activity voids all warranties. All damaged items to be replaced at owner's expense.
5. Maximum deck load 2 persons, total weight 450 lbs.

Safety Notice

Jobsite safety is a topic and practice addressed comprehensively by others. The inclusions here are intended to be reminders to whole areas of Safety Practice that are the responsibility of the Owner(s), Manager(s) and Contractor(s). OSHA and Canadian OSH, and Federal, State/Provincial, and Local Jurisdiction Safety Standards apply on any given site or project. The knowledge and applicability of those responsibilities is the Contractor's responsibility and outside the scope of Contech Engineered Solutions.

Confined Space Entry

Secure all equipment and perform all training to meet applicable local and OSHA regulations regarding confined space entry. It is the Contractor's or entry personnel's responsibility to proceed safely at all times.

Personal Safety Equipment

Contractor is responsible to provide and wear appropriate personal protection equipment as needed including, but not limited to safety boots, hard hat, reflective vest, protective eyewear, gloves and fall protection equipment as necessary. Make sure all equipment is staffed with trained and/or certified personnel, and all equipment is checked for proper operation and safety features prior to use.

- Fall protection equipment
- Eye protection
- Safety boots
- Ear protection
- Gloves
- Ventilation and respiratory protection
- Hard hat
- Maintenance and protection of traffic plan

Chapter 1

1.0 – Owner Specific Jellyfish Filter Product Information

Below you will find a reference page that can be filled out according to your Jellyfish Filter specification to help you easily inspect, maintain and order parts for your system.

Owner Name:	
Phone Number:	
Site Address:	
Site GPS Coordinates/unit location:	
Unit Location Description:	
Jellyfish Filter Model No.:	
Contech Project & Sequence Number	
No. of Hi-Flo Cartridges	
No. of Cartridges:	
Length of Draindown Cartridges:	
No. of Blank Cartridge Lids:	
Bypass Configuration (Online/Offline):	

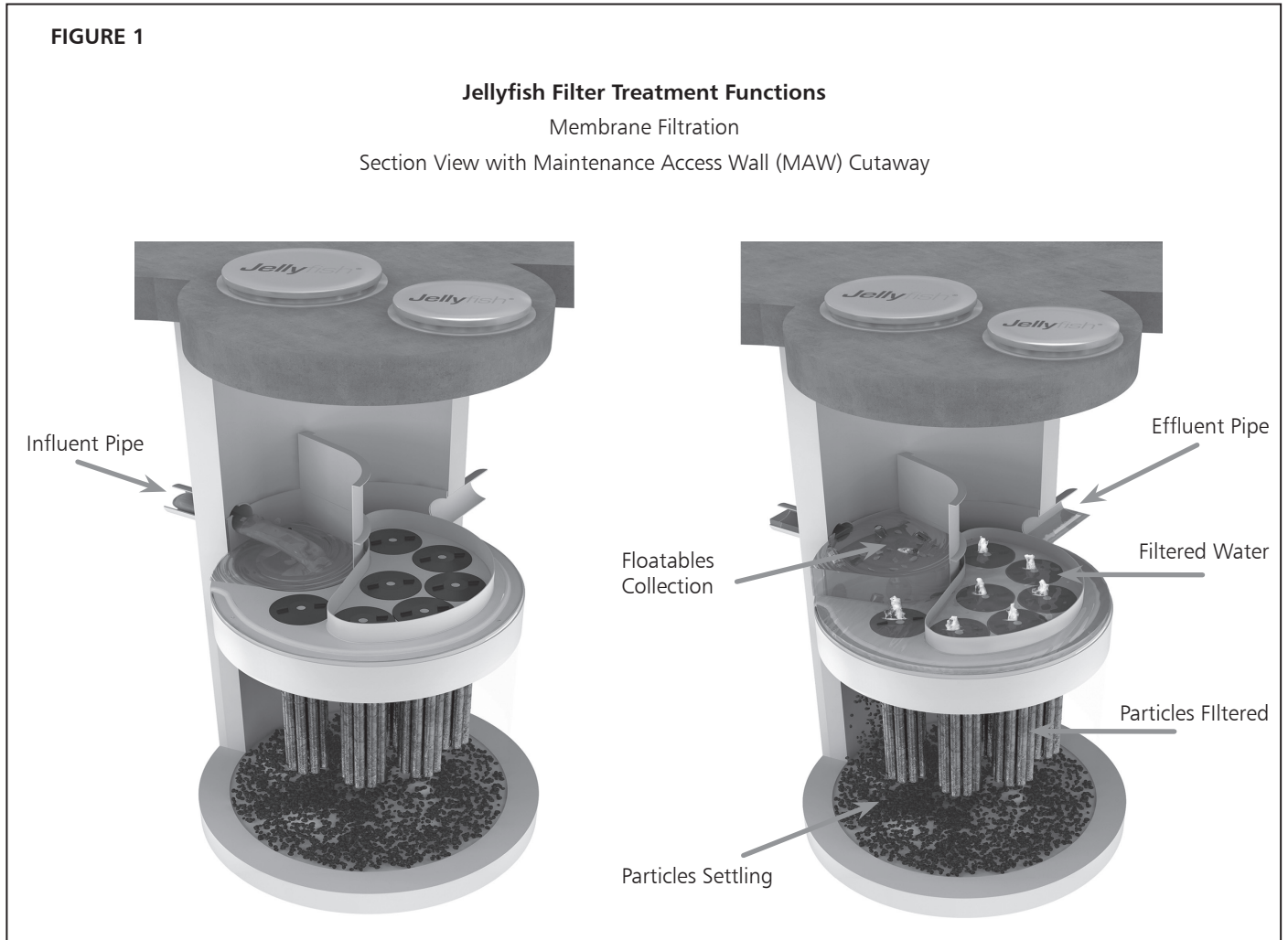
Notes:

Chapter 2

2.0 – Jellyfish Filter System Operations and Functions

The Jellyfish Filter is an engineered stormwater quality treatment technology that removes a high level and wide variety of stormwater pollutants. Each Jellyfish Filter cartridge consists of eleven membrane - encased filter elements (“filtration tentacles”) attached to a cartridge head plate. The filtration tentacles provide a large filtration surface area, resulting in high flow and high pollutant removal capacity.

The Jellyfish Filter functions are depicted in Figure 1 below.

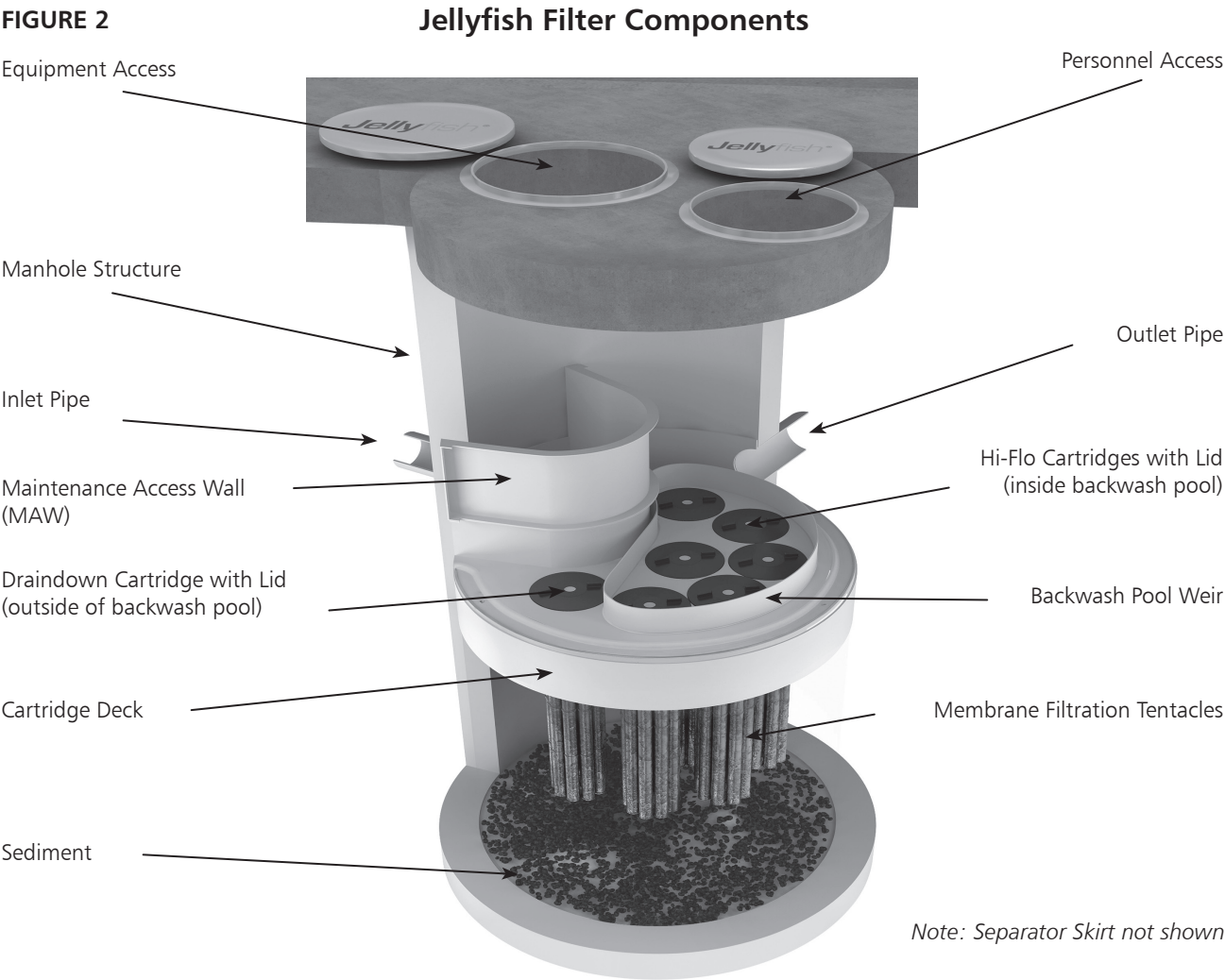


Jellyfish Filter cartridges are backwashed after each peak storm event, which removes accumulated sediment from the membranes. This backwash process extends the service life of the cartridges and increases the time between maintenance events.

For additional details on the operation and pollutant capabilities of the Jellyfish Filter please refer to additional details on our website at www.ContechES.com.

2.1 – Components and Cartridges

The Jellyfish Filter and components are depicted in Figure 2 below.



Tentacles are available in various lengths as depicted in Table 1 below.

Table 1 – Cartridge Lengths / Weights and Cartridge Lid Orifice Diameters

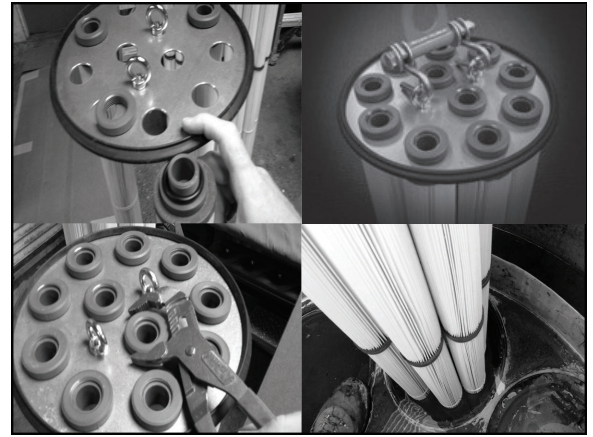
Cartridge Lengths	Dry Weight	Hi-Flo Orifice Diameter	Draindown Orifice Diameter
15 inches (381 mm)	10 lbs (4.5 kg)	35 mm	20 mm
27 inches (686 mm)	14.5 lbs (6.6 kg)	45 mm	25 mm
40 inches (1,016 mm)	19.5 lbs (8.9 kg)	55 mm	30 mm
54 inches (1,372 mm)	25 lbs (11.4 kg)	70 mm	35 mm

2.2 – Jellyfish Membrane Filtration Cartridge Assembly

The Jellyfish Filter utilizes multiple membrane filtration cartridges. Each cartridge consists of removable cylindrical filtration “tentacles” attached to a cartridge head plate. Each filtration tentacle has a threaded pipe nipple and o-ring. To attach, insert the top pipe nipples with the o-ring through the head plate holes and secure with locking nuts. Hex nuts to be hand tightened and checked with a wrench as shown below.

2.3 – Jellyfish Membrane Filtration Cartridge Installation

- Cartridge installation will be performed by trained individuals and coordinated with the installing site Contractor. Flow diversion devices are required to be in place until the site is stabilized (final paving and landscaping in place). Failure to address this step completely will reduce the time between required maintenance.
- Descend to the cartridge deck (see Safety Notice and page 3).
- Refer to Contech's submittal drawings to determine proper quantity and placement of Hi-Flo, Draindown and Blank cartridges with appropriate lids. Lower the Jellyfish membrane filtration cartridges into the cartridge receptacles within the cartridge deck. It is possible that not all cartridge receptacles will be filled with a filter cartridge. In that case, a blank headplate and blank cartridge lid (no orifice) would be installed.



Cartridge Assembly

Do not force the tentacles down into the cartridge receptacle, as this may damage the membranes. Apply downward pressure on the cartridge head plate to seat the lubricated rim gasket (thick circular gasket surrounding the circumference of the head plate) into the cartridge receptacle. (See Figure 3 for details on approved lubricants for use with rim gasket.)

- Examine the cartridge lids to differentiate lids with a small orifice, a large orifice, and no orifice.
 - Lids with a small orifice are to be inserted into the Draindown cartridge receptacles, outside of the backwash pool weir.
 - Lids with a large orifice are to be inserted into the Hi-Flo cartridge receptacles within the backwash pool weir.
 - Lids with no orifice (blank cartridge lids) and a blank headplate are to be inserted into unoccupied cartridge receptacles.
- To install a cartridge lid, align both cartridge lid male threads with the cartridge receptacle female threads before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation.

3.0 Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system. Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Additional maintenance activities may be required in the event of non-storm event runoff, such as base-flow or seasonal flow, an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted from surface observations and include:

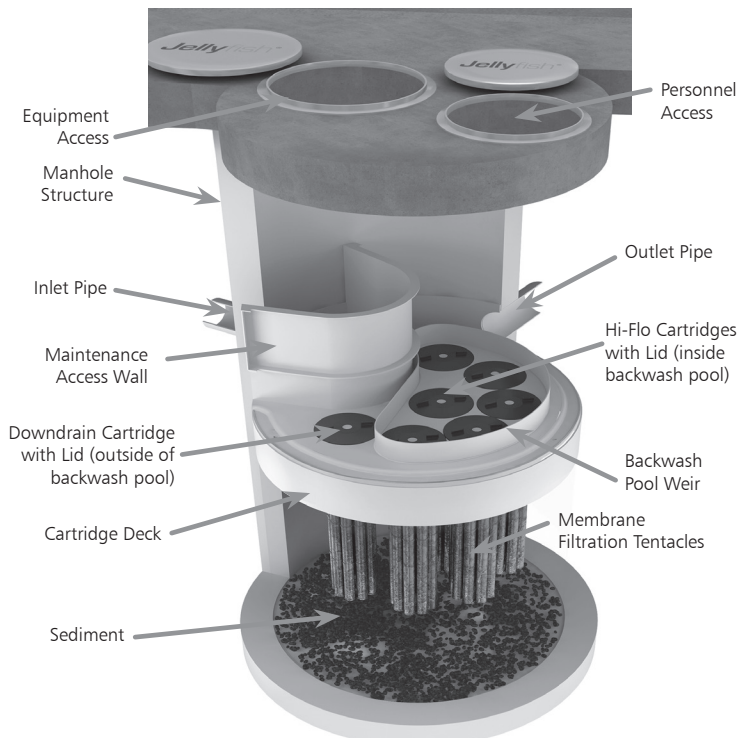
- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW) or inlet bay for vault systems

Maintenance activities include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed

4.0 Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of, the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; *or per the approved project stormwater quality documents (if applicable), whichever is more frequent.*



Note: Separator Skirt not shown

1. A minimum of quarterly inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
2. Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
3. Inspection is recommended after each major storm event.
4. Inspection is required immediately after an upstream oil, fuel or other chemical spill.

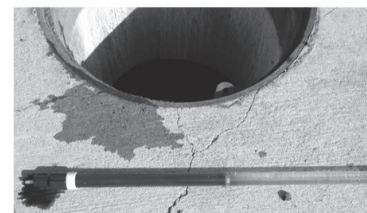
5.0 Inspection Procedure

The following procedure is recommended when performing inspections:

1. Provide traffic control measures as necessary.
2. Inspect the MAW or inlet bay for floatable pollutants such as trash, debris, and oil sheen.
3. Measure oil and sediment depth in several locations, by lowering a sediment probe until contact is made with the floor of the structure. Record sediment depth, and presences of any oil layers.
4. Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
5. Inspect the MAW (where appropriate), cartridge deck and receptacles, and backwash pool weir, for damaged or broken components.

5.1 Dry weather inspections

- Inspect the cartridge deck for standing water, and/or sediment on the deck.
- No standing water under normal operating conditions.
- Standing water inside the backwash pool, but not outside the backwash pool indicates, that the filter cartridges need to be rinsed.



Inspection Utilizing Sediment Probe

- Standing water outside the backwash pool is not anticipated and may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- Any appreciable sediment ($\geq 1/16"$) accumulated on the deck surface should be removed.

5.2 Wet weather inspections

- Observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW or inlet bay.
- Less than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
- Greater than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
- 18 inches or greater and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges need to be rinsed.

6.0 Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

1. Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.
2. Floatable trash, debris, and oil removal.
3. Deck cleaned and free from sediment.
4. Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
5. Replace tentacles if rinsing does not restore adequate hydraulic capacity, remove accumulated sediment, or if damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
6. Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
7. The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged or compromised by the spill.

7.0 Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

1. Provide traffic control measures as necessary.
2. Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures.
Caution: Dropping objects onto the cartridge deck may cause damage.
3. Perform Inspection Procedure prior to maintenance activity.

4. To access the cartridge deck for filter cartridge service, descend into the structure and step directly onto the deck. Caution: Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
5. Maximum weight of maintenance crew and equipment on the cartridge deck not to exceed 450 lbs.

7.1 Filter Cartridge Removal

1. Remove a cartridge lid.
2. Remove cartridges from the deck using the lifting loops in the cartridge head plate. Rope or a lifting device (available from Contech) should be used. **Caution: Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Wet cartridges typically weigh between 100 and 125 lbs.**
3. Replace and secure the cartridge lid on the exposed empty receptacle as a safety precaution. Contech does not recommend exposing more than one empty cartridge receptacle at a time.

7.2 Filter Cartridge Rinsing

1. Remove all 11 tentacles from the cartridge head plate. Take care not to lose or damage the O-ring seal as well as the plastic threaded nut and connector.



Cartridge Removal & Lifting Device

2. Position tentacles in a container (or over the MAW), with the threaded connector (open end) facing down, so rinse water is flushed through the membrane and captured in the container.
3. Using the Jellyfish rinse tool (available from Contech) or a low-pressure garden hose sprayer, direct water spray onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. **Caution: Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane.**

4. Collected rinse water is typically removed by vacuum hose.
5. Reassemble cartridges as detailed later in this document. Reuse O-rings and nuts, ensuring proper placement on each tentacle.

7.3 Sediment and Floatables Extraction

1. Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning only through the maintenance access wall (MAW) opening. Be careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck on manhole systems. Do not lower the vacuum wand through a cartridge receptacle, as damage to the receptacle will result.
2. Vacuum floatable trash, debris, and oil, from the MAW opening or inlet bay. Alternatively, floatable solids may be removed by a net or skimmer.



Rinsing Cartridge with Contech Rinse Tool

3. Pressure wash cartridge deck and receptacles to remove all sediment and debris. Sediment should be rinsed into the sump area. Take care not to flush rinse water into the outlet pipe.
4. Remove water from the sump area. Vacuum or pump equipment should only be introduced through the MAW or inlet bay.
5. Remove the sediment from the bottom of the unit through the MAW or inlet bay opening.



Vacuuming Sump Through MAW

6. For larger diameter Jellyfish Filter manholes (≥ 8 -ft) and some vaults complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.

7.4 Filter Cartridge Reinstallation and Replacement

1. Cartridges should be installed after the deck has been cleaned. It is important that the receptacle surfaces be free from grit and debris.
2. Remove cartridge lid from deck and carefully lower the filter cartridge into the receptacle until head plate gasket is seated squarely in receptacle. **Caution: Do not force the cartridge downward; damage may occur.**
3. Replace the cartridge lid and check to see that both male threads are properly seated before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation. See next page for additional details.
4. If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.

7.5 Chemical Spills

Caution: If a chemical spill has been captured, do not attempt maintenance. Immediately contact the local hazard response agency and contact Contech.

7.6 Material Disposal

The accumulated sediment found in stormwater treatment and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments to contain measurable concentrations of heavy metals and organic chemicals (such as pesticides and petroleum products). Areas with the greatest potential for high pollutant loading include industrial areas and heavily traveled roads. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.

Jellyfish Filter Components & Filter Cartridge Assembly and Installation

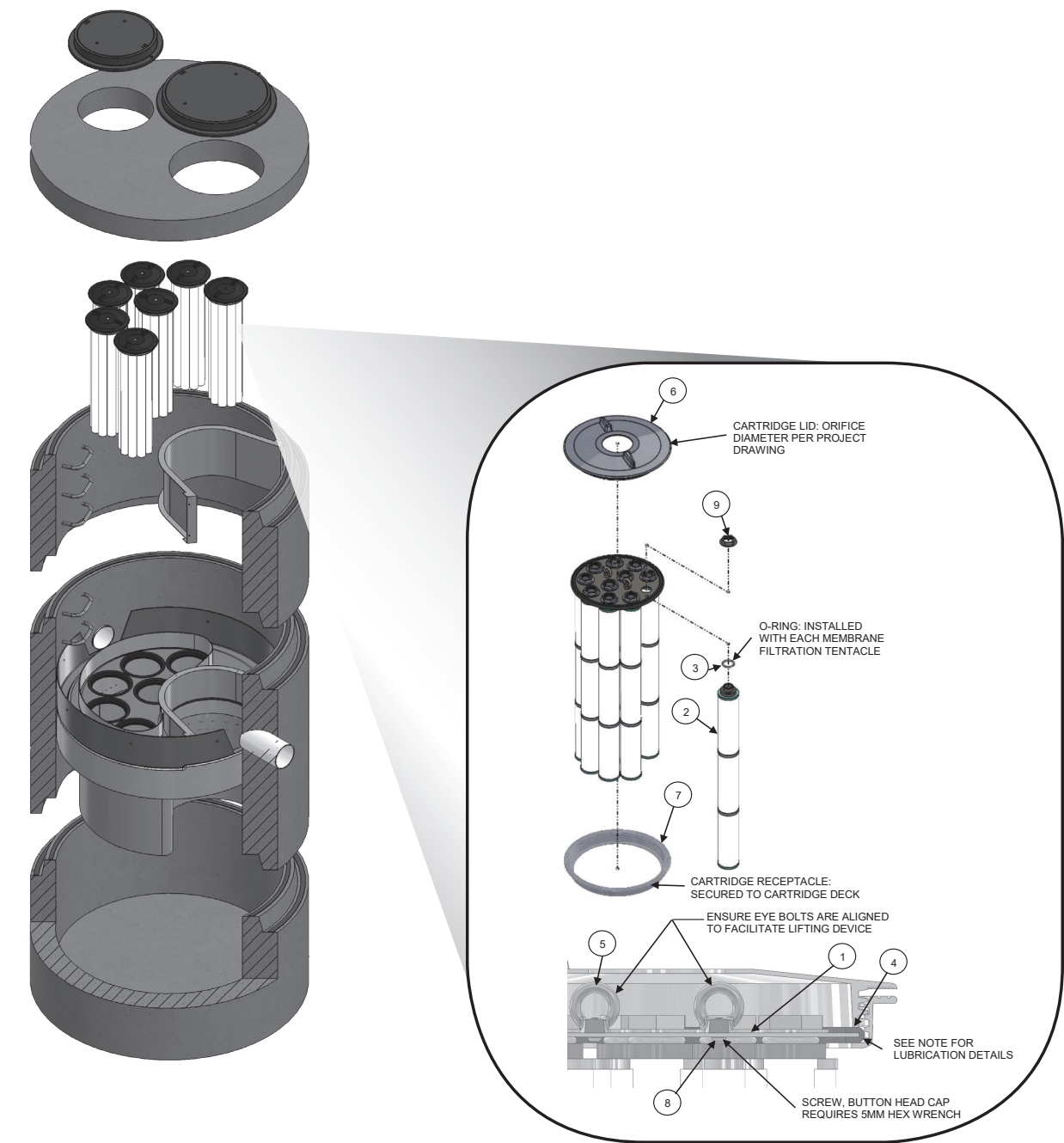


TABLE 1: BOM

ITEM NO.	DESCRIPTION
1	JF HEAD PLATE
2	JF TENTACLE
3	JF O-RING
4	JF HEAD PLATE GASKET
5	JF CARTRIDGE EYELET
6	JF 14IN COVER
7	JF RECEPTACLE
8	BUTTON HEAD CAP SCREW M6X14MM SS
9	JF CARTRIDGE NUT

TABLE 2: APPROVED GASKET LUBRICANTS

PART NO.	MFR	DESCRIPTION
78713	LA-CO	LUBRI-JOINT
40501	HERCULES	DUCK BUTTER
30600	OATEY	PIPE LUBRICANT
PSLUBXL1Q	PROSELECT	PIPE JOINT LUBRICANT

NOTES:

Head Plate Gasket Installation:
Install Head Plate Gasket (Item 4) onto the Head Plate (Item 1) and liberally apply a lubricant from Table 2: Approved Gasket Lubricants onto the gasket where it contacts the Receptacle (Item 7) and Cartridge Lid (Item 6). Follow Lubricant manufacturer's instructions.

Lid Assembly:
Rotate Cartridge Lid counter-clockwise until both male threads drop down and properly seat. Then rotate Cartridge Lid clock-wise approximately one-third of a full rotation until Cartridge Lid is firmly secured, creating a watertight seal.

Jellyfish Filter Inspection and Maintenance Log

Owner: _____ Jellyfish Model No.: _____

Location: _____ GPS Coordinates: _____

Land Use: Commercial: _____ Industrial: _____ Service Station: _____

Road/Highway: _____ Airport: _____ Residential: _____ Parking Lot: _____

Date/Time:					
Inspector:					
Maintenance Contractor:					
Visible Oil Present: (Y/N)					
Oil Quantity Removed					
Floatable Debris Present: (Y/N)					
Floatable Debris removed: (Y/N)					
Water Depth in Backwash Pool					
Cartridges externally rinsed/re-commissioned: (Y/N)					
New tentacles put on Cartridges: (Y/N)					
Sediment Depth Measured: (Y/N)					
Sediment Depth (inches or mm):					
Sediment Removed: (Y/N)					
Cartridge Lids intact: (Y/N)					
Observed Damage:					
Comments:					

**Save Valuable Land and
Protect Water Resources**



Isolator® Row O&M Manual
StormTech® Chamber System for Stormwater Management

1.0 The Isolator[®] Row

1.1 INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a patented technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.



Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.

1.2 THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

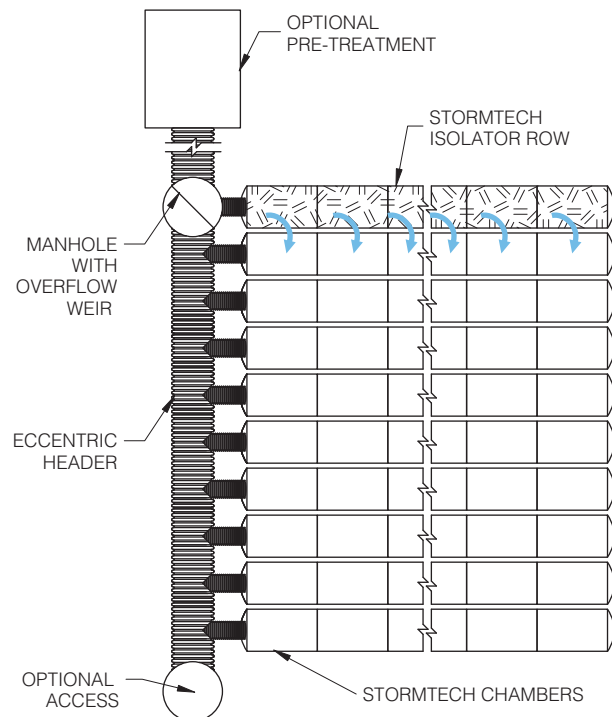
Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the “first flush” and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.

StormTech Isolator Row with Overflow Spillway (not to scale)



2.0 Isolator Row Inspection/Maintenance



2.1 INSPECTION

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

2.2 MAINTENANCE

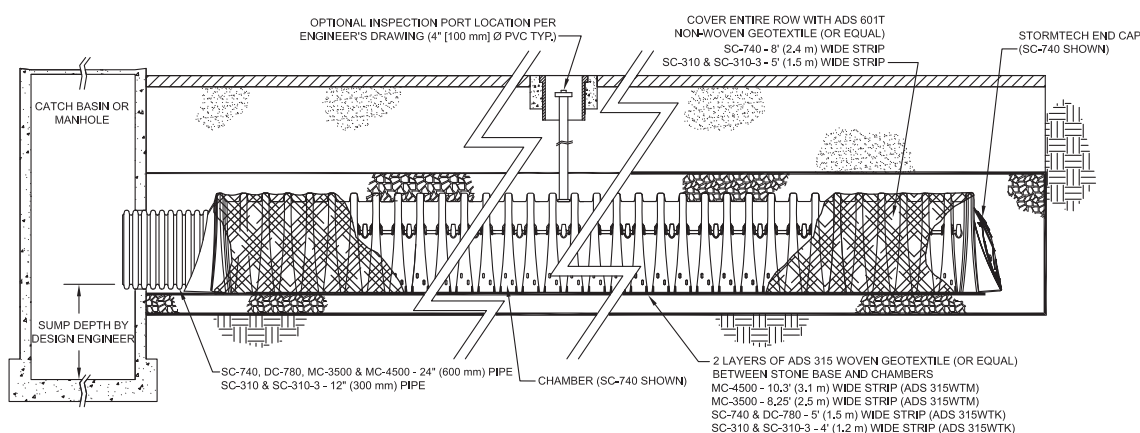
The Isolator Row was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.



Examples of culvert cleaning nozzles appropriate for Isolator Row maintenance. (These are not StormTech products.)

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

StormTech Isolator Row (not to scale)



NOTE: NON-WOVEN FABRIC IS ONLY REQUIRED OVER THE INLET PIPE CONNECTION INTO THE END CAP FOR DC-780, MC-3500 AND MC-4500 CHAMBER MODELS AND IS NOT REQUIRED OVER THE ENTIRE ISOLATOR ROW.

3.0 Isolator Row Step By Step Maintenance Procedures

Step 1) Inspect Isolator Row for sediment

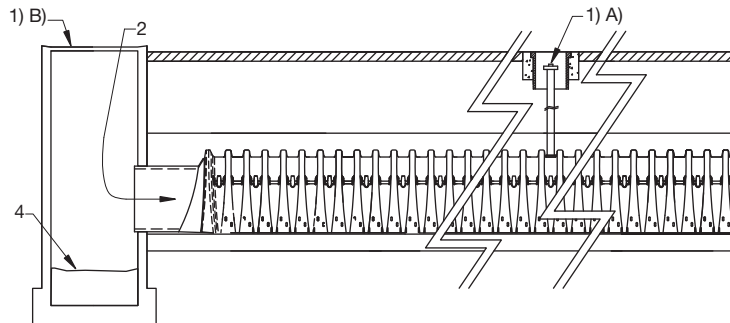
A) Inspection ports (if present)

- i. Remove lid from floor box frame
- ii. Remove cap from inspection riser
- iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.
- iv. If sediment is at, or above, 3 inch depth proceed to Step 2. If not proceed to step 3.

B) All Isolator Rows

- i. Remove cover from manhole at upstream end of Isolator Row
- ii. Using a flashlight, inspect down Isolator Row through outlet pipe
 1. Mirrors on poles or cameras may be used to avoid a confined space entry
 2. Follow OSHA regulations for confined space entry if entering manhole
- iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches) proceed to Step 2. If not proceed to Step 3.

StormTech Isolator Row (not to scale)



Step 2) Clean out Isolator Row using the JetVac process

- A) A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
- B) Apply multiple passes of JetVac until backflush water is clean
- C) Vacuum manhole sump as required

Step 3) Replace all caps, lids and covers, record observations and actions

Step 4) Inspect & clean catch basins and manholes upstream of the StormTech system

Sample Maintenance Log

Date	Stadia Rod Readings		Sediment Depth (1) - (2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/01	6.3 ft.	none		New installation. Fixed point is CI frame at grade	djm
9/24/01		6.2	0.1 ft.	Some grit felt	sm
6/20/03		5.8	0.5 ft.	Mucky feel, debris visible in manhole and in Isolator row, maintenance due	rv
7/7/03	6.3 ft.		0	System jetted and vacuumed	djm



70 Inwood Road, Suite 3 | Rocky Hill | Connecticut | 06067
 860.529.8188 | 888.892.2694 | fax 866.328.8401 | www.stormtech.com

ADS "Terms and Conditions of Sale" are available on the ADS website, www.ads-pipe.com

Advanced Drainage Systems, the ADS logo, and the green stripe are registered trademarks of Advanced Drainage Systems.

Stormtech® and the Isolator® Row are registered trademarks of StormTech, Inc.

Green Building Council Member logo is a registered trademark of the U.S. Green Building Council.

APPENDIX F

CONTRACTOR'S CERTIFICATION



Site Planning
Civil Engineering
Landscape Architecture
Land Surveying
Transportation Engineering

Environmental Studies
Entitlements
Construction Services
3D Visualization
Laser Scanning

JMC Project 18119
Beacon Commons
16 West Main Street
City of Beacon, NY

CONTRACTOR'S CERTIFICATION

"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"

Company Name: _____

Address: _____

Telephone Number: _____

Name and Title: _____

Signature: _____ Date: _____

Permit Identification No.: _____

Name and Title of Trained Contractor: _____

Elements of the SWPPP Contractor is responsible for: _____

p:\2018\18119\drainage\reports\18119-nys contractors certification.docx

APPENDIX G

SPDES GENERAL PERMIT NO. GP-0-20-001 & MS4 ACCEPTANCE FORM

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-0-20-001

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)

F a r r e l l B u i l d i n g C o m p a n y

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Z a g o r e n

Owner/Operator Contact Person First Name

S t e p h e n

Owner/Operator Mailing Address

2 3 1 7 M o n t a u k H i g h w a y

City

B r i d g e h a m p t o n

State

N Y

Zip

1 1 9 3 2 -

Phone (Owner/Operator)

6 3 1 - 7 6 6 - 0 0 2 3

Fax (Owner/Operator)

- - - - -

Email (Owner/Operator)

Z a g s 1 4 1 3 @ g m a i l . c o m

FED TAX ID

- (not required for individuals)

Project Site Information

Project/Site Name

B e a c o n C o m m o n s

Street Address (NOT P.O. BOX)

1 6 W e s t M a i n S t r e e t

Side of Street

☒ North ☐ South ☐ East ☐ West

City/Town/Village (THAT ISSUES BUILDING PERMIT)

B e a c o n

State Zip

N Y

1 2 5 0 8

-

County

D u t c h e s s

DEC Region

3

Name of Nearest Cross Street

B a n k S t r e e t

Distance to Nearest Cross Street (Feet)

0

Project In Relation to Cross Street

☐ North ☐ South ☒ East ☐ WestTax Map Numbers
Section-Block-Parcel

5 8 5 4 - 2 5 - 6 1 6 9 6 9

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

<https://gisservices.dec.ny.gov/gis/stormwater/>

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

-7 3 9 8 1 7

Ex. -73.749

Y Coordinates (Northing)

4 1 5 0 8 3

Ex. 42.652

2. What is the nature of this construction project?

- ☐ New Construction
- ☒ Redevelopment with increase in impervious area
- ☐ Redevelopment with no increase in impervious area

SELECT ONLY ONE CHOICE FOR EACH

Post-Development Future 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

[illegible]

- | | Number of Lots | | |
|--|----------------|--|--|
| ☐ SINGLE FAMILY HOME | | | |
| ☐ SINGLE FAMILY SUBDIVISION | | | |
| ☐ 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 | | | |

[illegible]

***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

			1	.	5
--	--	--	---	---	---

Total Area To Be Disturbed

			1	.	7
--	--	--	---	---	---

**Existing Impervious
Area To Be Disturbed**

			0	.	7
--	--	--	---	---	---

Future Impervious Area Within Disturbed Area

			1	.	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		
		0 %

B		
1	0	0 %

C		
		0 %

D		
		0 %

7. Is this a phased project? ☐ Yes ☒ No

8. Enter the planned start and end dates of the disturbance activities.

Start Date

	/		/	
--	---	--	---	--

End Date

	/		/	
--	---	--	---	--

Name

[illegible]

☐ 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

[illegible]

- ☐ Regulatory Map
- ☐ Delineated by Consultant
- ☐ Delineated by Army Corps of Engineers
- ☐ Other (identify)

[illegible]

☐ Yes ☒ No

☐ Yes ☒ No

☐ Yes ☒ No

☐ Yes ☒ No

--	--	--	--	--	--

☐ 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?

[illegible]

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

[illegible]

SWPPP Preparer

[illegible]

Contact Name (Last, Space, First)

[illegible]

Mailing Address

[illegible]

City

[illegible]

State Zip

N	Y
---	---

1	0	5	0	4
---	---	---	---	---

-

--	--	--	--

Phone

9	1	4
---	---	---

-

2	7	3
---	---	---

-

5	2	2	5
---	---	---	---

Fax

--	--	--	--

Email

[illegible][illegible]

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-0-20-001. 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

[illegible]

MI

7

Last Name

[illegible]

Signature

--

Date _____

	/		/	
--	---	--	---	--

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**

Other

[illegible]

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

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 7 6 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)

RR Techniques (Area Reduction)	Total Contributing Area (acres)	Total Contributing Impervious Area (acres)
○ 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)	.	0 2
● Stormwater Planter (RR-7)	.	3 5
○ 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)	.	.
○ 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)**

<u>Alternative SMP</u>	<u>Total Contributing Impervious Area(acres)</u>																														
☒ Hydrodynamic	<table><tr><td></td><td></td><td>0</td><td>.</td><td>1</td><td>4</td><td></td></tr><tr><td></td><td></td><td></td><td>.</td><td></td><td></td><td></td></tr></table>			0	.	1	4					.																			
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			.																												
			.																												

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name

H	y	d	r	o		I	n	t	e	r	n	a	t	i	o	n	a	l	/	C	o	n	t	e	c	h						
---	---	---	---	---	--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--

Manufacturer

F	i	r	s	t		D	e	f	e	n	s	e	/	J	e	l	l	y	f	i	s	h										
---	---	---	---	---	--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--

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	.	0	2	0
--	--	---	---	---	---	---

 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	.	0	2	0
--	--	---	---	---	---	---

 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 8 9 **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).

. 1 0 9

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

1 5 . 0 8 **CFS**

Post-development

1 3 . 0 7 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

3 5 . 3 7 **CFS**

Post-development

3 4 . 6 4 **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

- 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

☒ Yes ☐ No

If Yes, Identify the entity responsible for the long term
Operation and Maintenance

[illegible]

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.

- ☐ 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

☐ Other

☐ None

- Wetland Permit? ☐ ☐ ☐ ☐ ☐ ☐
- If Yes, Indicate Size of Impact. .

- (If No, skip question 43)

- executive officer of ranking elected official and submitted along with this NOI?

- coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.
- | N | Y | R | | | | | | | |
|---|---|---|--|--|--|--|--|--|--|
|---|---|---|--|--|--|--|--|--|--|

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

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

MI

--

Print Last Name

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Owner/Operator Signature

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Date

		/			/				
--	--	---	--	--	---	--	--	--	--



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: | Farrell Building Company |
| 2. Contact Person: | Mr. Stephen Zagoren |
| 3. Street Address: | 2317 Montauk Highway |
| 4. City/State/Zip: | Bridgehampton, NY 11932 |

II. Project Site Information

- | | |
|-----------------------|--------------------------|
| 5. Project/Site Name: | Beacon Commons |
| 6. Street Address: | 16 West Main Street |
| 7. City/State/Zip: | City of 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 H

HYDRAULIC PIPE CALCULATIONS

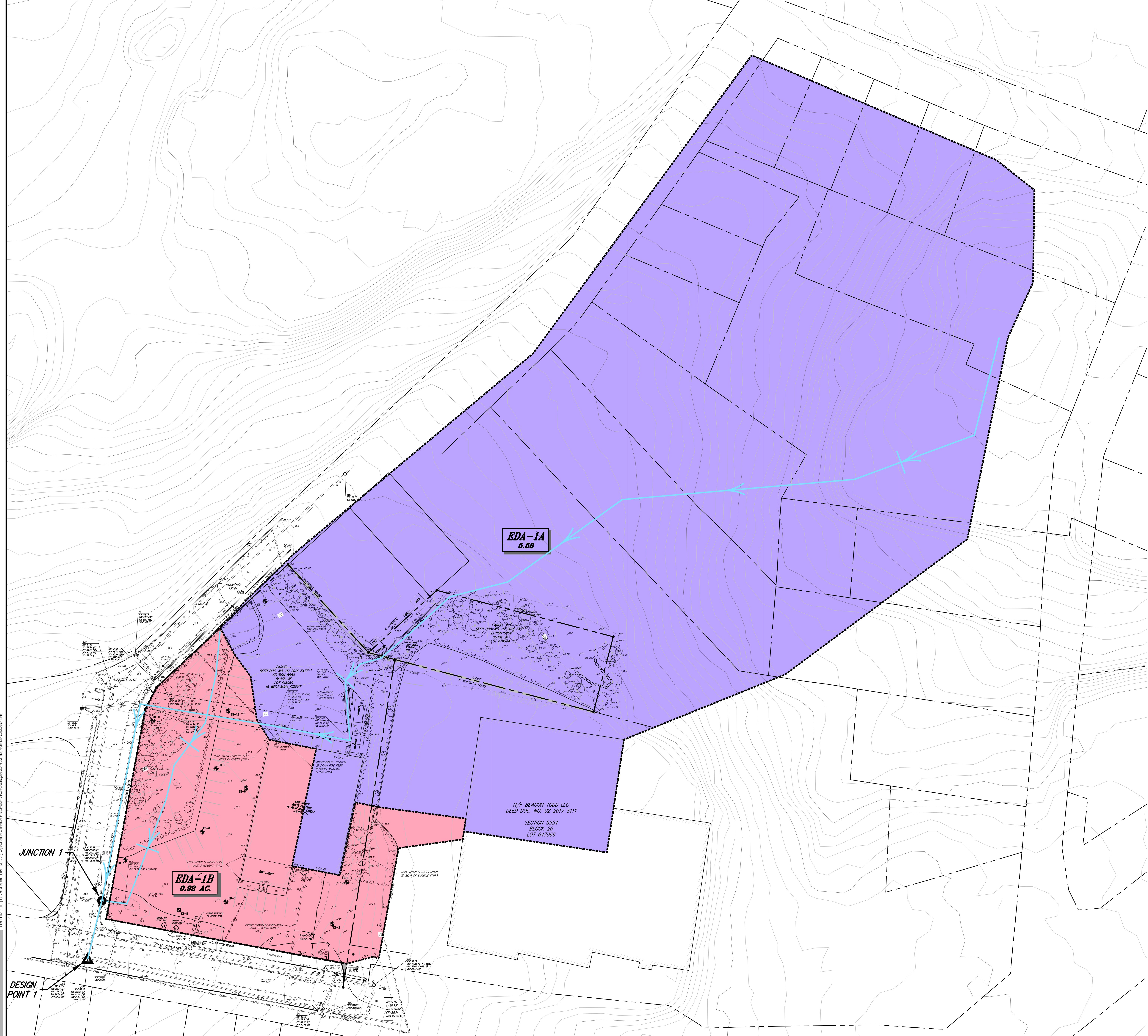
Link Summary

From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio
		(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)	
dmh-a2 (STORM)	dmh-a1 (STORM)	9.23	29.00	28.70	3.3000	24.000	0.0130	10.99	41.07	0.27	11.07	0.71	0.35
dmh-a3 (STORM)	dmh-a2 (STORM)	31.40	32.00	31.85	0.4800	24.000	0.0130	10.99	15.64	0.70	5.39	1.24	0.62
db-a11-1 (STORM)	di-a11 (STORM)	57.90	35.10	34.75	0.6000	12.000	0.0130	0.11	2.77	0.04	1.73	0.13	0.13
di-a11 (STORM)	ci-a10 (STORM)	76.76	34.75	34.30	0.5900	15.000	0.0130	1.90	4.95	0.38	3.81	0.54	0.43
ci-a12 (STORM)	di-a11 (STORM)	52.89	38.80	34.75	7.6600	15.000	0.0130	1.55	17.88	0.09	8.95	0.25	0.20
db-9 (STORM)	dmh-a3 (STORM)	18.25	32.25	32.00	1.3700	15.000	0.0130	1.09	7.56	0.14	4.41	0.32	0.26
wqs-a3-1 (STORM)	dmh-a3 (STORM)	10.15	32.15	32.00	1.4800	15.000	0.0130	0.61	7.85	0.08	3.80	0.23	0.19
DB-a11-2 (STORM)	db-a11-1 (STORM)	29.12	35.25	35.10	0.5200	12.000	0.0130	0.11	2.56	0.04	2.28	0.14	0.14
di-a5-2 (STORM)	di-a5-1 (STORM)	63.75	44.25	43.75	0.7800	15.000	0.0130	3.02	5.72	0.53	6.25	0.64	0.52
di-a4-1 (STORM)	dmh-a4 (STORM)	247.69	46.00	34.50	4.6400	24.000	0.0130	7.14	48.75	0.15	11.11	0.52	0.26
di-a4-2 (STORM)	di-a4-1 (STORM)	141.17	53.50	47.00	4.6000	24.000	0.0130	0.63	48.54	0.01	5.55	0.16	0.08
di-a5-1 (STORM)	dmh-a5 (STORM)	26.24	37.75	35.50	8.5800	15.000	0.0130	6.59	18.92	0.35	14.03	0.51	0.41
wqs-a8 (STORM)	bypass-a7 (STORM)	16.90	33.65	33.50	0.8900	15.000	0.0130	3.97	6.09	0.65	5.28	0.73	0.59
dmh-a4 (STORM)	dmh-a3 (STORM)	116.87	32.65	32.00	0.5600	24.000	0.0130	9.44	16.87	0.56	5.55	1.07	0.53
ocs-a6 (STORM)	dmh-a5 (STORM)	10.56	33.40	33.30	0.9500	15.000	0.0130	1.05	6.29	0.17	3.80	0.35	0.28
ci-a13 (STORM)	ci-a12 (STORM)	30.41	39.00	38.80	0.6600	15.000	0.0130	1.27	5.24	0.24	4.18	0.42	0.33
di-a3-2 (STORM)	wqs-a3-1 (STORM)	87.74	34.05	32.15	2.1700	15.000	0.0130	0.50	9.51	0.05	6.01	0.19	0.16
di-a9 (STORM)	wqs-a8 (STORM)	33.32	34.00	33.65	1.0500	15.000	0.0130	3.97	6.62	0.60	5.64	0.70	0.56
Slotted-Drain	di-a9 (STORM)	46.10	35.50	35.25	0.5400	12.000	0.0130	1.02	2.62	0.39	4.25	0.43	0.43
ci-a10 (STORM)	di-a9 (STORM)	41.05	34.30	34.00	0.7300	15.000	0.0130	2.37	5.52	0.43	4.34	0.57	0.46
dmh-a5 (STORM)	dmh-a4 (STORM)	90.76	33.30	32.65	0.7200	24.000	0.0130	7.57	19.14	0.40	5.79	0.87	0.44

APPENDIX I

DRAWINGS AND ROOF DRAINAGE FIGURE

NOT FOR CONSTRUCTION



EXISTING DRAINAGE LEGEND		
	EXISTING GRADE	
	WATERSHED BOUNDARY LINE	
	BOUNDARY OF COVER TYPE LINE	
	FLOW PATH LINE	

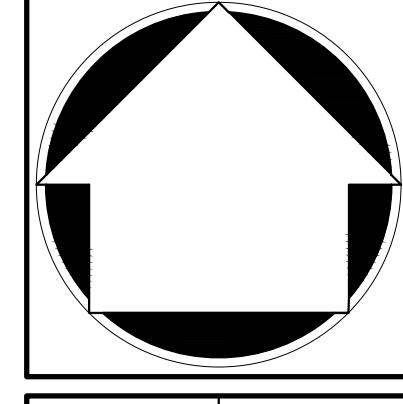
SOIL TYPE TABLE		
DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
DwB	B	DUTCHESS-CARDIGAN COMPLEX, UNULATING, ROCKY

No.	Revision	Date	By
1.	REVISED PER CITY COMMENTS	12/30/19	AH
2.	REVISED PER CITY COMMENTS	02/24/2020	AH
3.	REVISED PER CITY COMMENTS	09/29/2020	AH
4.	REVISED PER CITY COMMENTS	07/27/2021	BMS

APPLICANT/OWNER
FARRELL BUILDING COMPANY
2317 MONTAUK HIGHWAY
BRIDGEHAMPTON, NY 11932

ARCHITECT
ARYEH SIEGEL ARCHITECT
84 MASON CIRCLE
BEACON, NY 12508

JMC Planning, Engineering, Landscape
Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

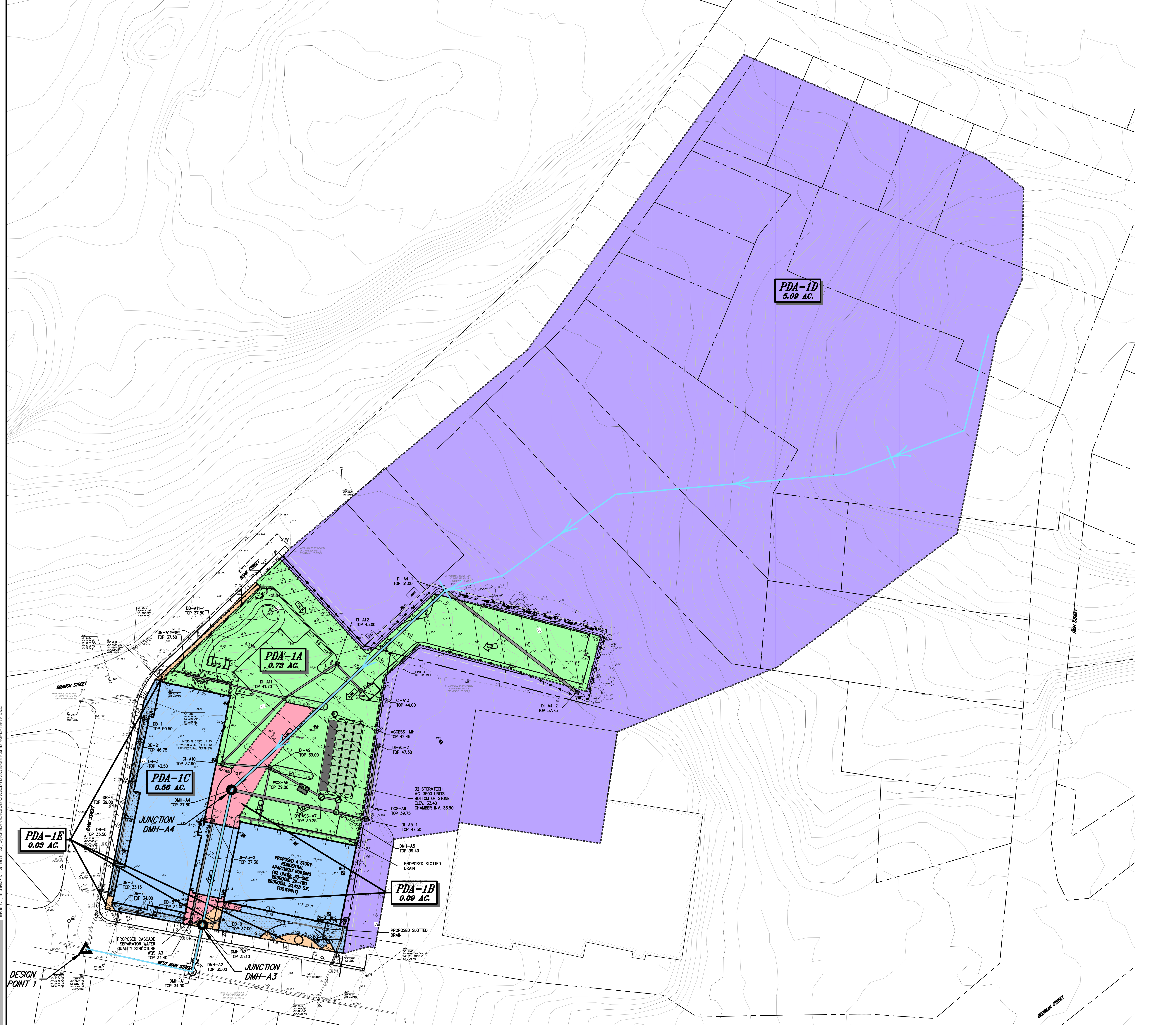


**EXISTING DRAINAGE
AREA MAP**
BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

ANY ALTERATION OF PLANS,
SPECIFICATIONS, PLATS AND
REPORTS BEARING THE SEAL
OF A LICENSED PROFESSIONAL
ENGINEER OR LICENSED LAND
SURVEYOR IS A VIOLATION OF
SECTION 7209 OF THE NEW
YORK STATE EDUCATION LAW,
EXCEPT AS PROVIDED FOR BY
SECTION 7209, SUBSECTION 2.

Drawn	BMS	Approved	SS
Scale:	1" = 30'		
Date:	10/29/2019		
Project No:	18119		
WITH-DRAWN	EDA	EDA.sor	
DA-1			

NOT FOR CONSTRUCTION



PROPOSED DRAINAGE LEGEND	
	EXISTING GRADE
	PROPOSED FINISHED GRADE
	WATERSHED BOUNDARY LINE
	FLOW PATH LINE
	PROPOSED BUILDING LINE
	PROPOSED CONCRETE CURB
	PROPOSED MANHOLE
	EXISTING DRAIN INLET
	PROPOSED DRAIN INLET (DI)

SOIL TYPE TABLE		
DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
DwB	B	DUTCHESS-CARDIGAN COMPLEX, UNULATING, ROCKY

No.	Revision	Date	By
1.	REVISED PER CITY COMMENTS	12/30/19	AH
2.	REVISED PER CITY COMMENTS	02/24/2020	AH
3.	REVISED PER CITY COMMENTS	09/29/2020	AH
4.	REVISED PER CITY COMMENTS	07/27/2021	BMS

APPLICANT/OWNER
FARRELL BUILDING COMPANY
2317 MONTAUK HIGHWAY
BRIDGEHAMPTON, NY 11932

ARCHITECT
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John Meyer Consulting, Inc.

120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

PROPOSED DRAINAGE
AREA MAP

BEACON COMMONS
16 WEST MAIN STREET
BEACON, NY 12508

ANY ALTERATION OF PLANS,
SPECIFICATIONS, PLATS AND
REPORTS BEARING THE SEAL
OF A LICENSED PROFESSIONAL
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SURVEYOR IS A VIOLATION OF
SECTION 7209 OF THE NEW
YORK STATE EDUCATION LAW,
EXCEPT AS PROVIDED FOR BY
SECTION 7209, SUBSECTION 2.

Drawn: BMS Approved: SS

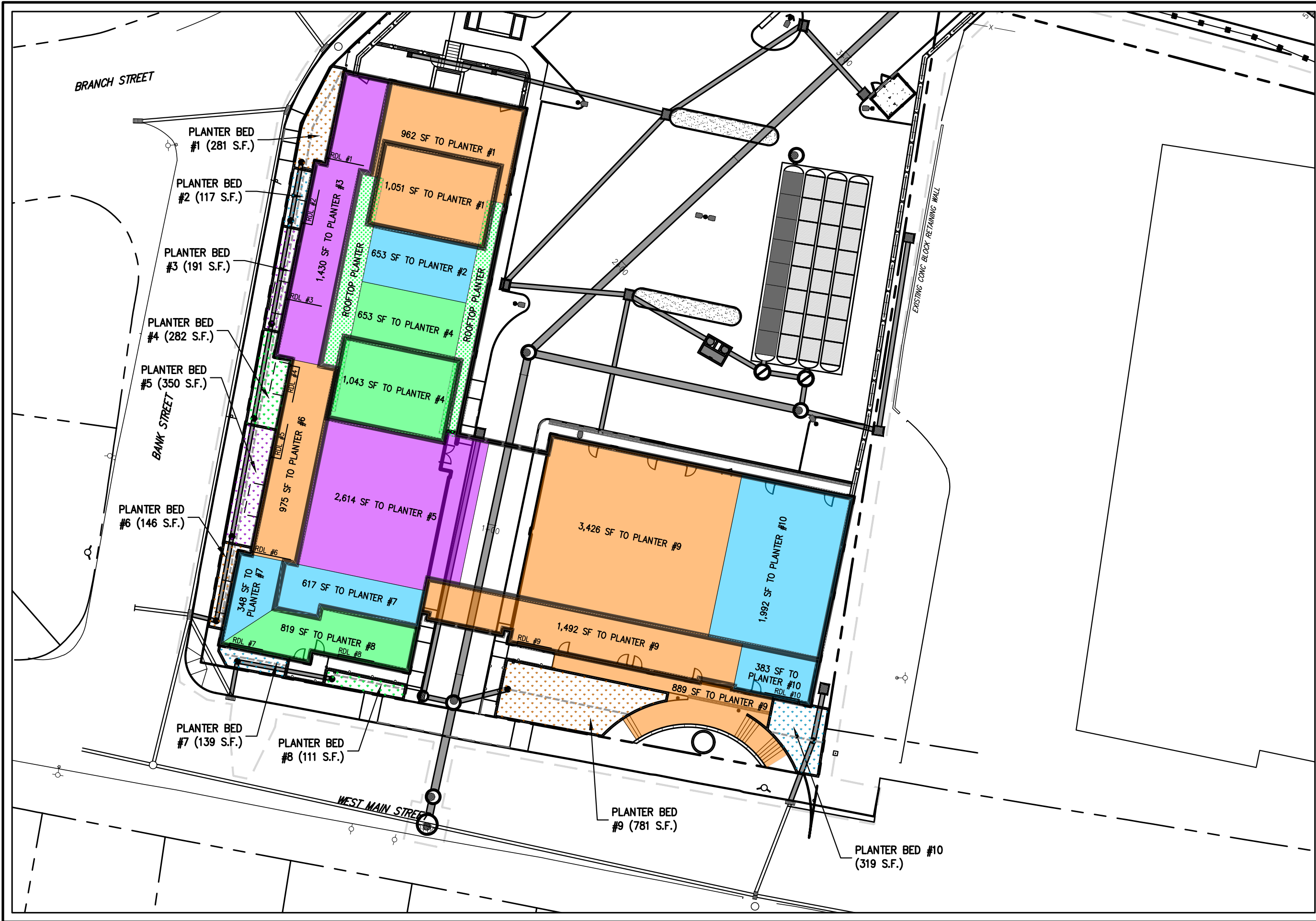
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Date: 10/29/2019

Project No: 18119

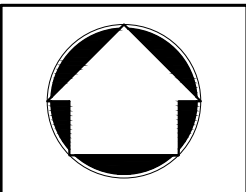
WBS-DRAWING: PDA PDA.scr

Drawing No: DA-2



JMC

120 BEDFORD RD
ARMONK
NY 10504
(914) 273-5225
fax 273-2102
JMCPLLC.COM



BEACON COMMONS

16 WEST MAIN STREET
BEACON, NY 12508

ROOF DRAINAGE FIGURE

DATE: 10/01/2020
DATE: 09/29/2020
DATE: 07/27/2021

JMC PROJECT: 18119

FIGURE: 2

SCALE: 1" = 30'

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To: John Gunn, Chair, and the City of Beacon Planning Board

Date: August 5, 2021

Re: **416-420 Main Street Architectural Review**

I have reviewed the July 27, 2021 cover letter from Aryeh Siegel and revised sheets 4 and 5, dated July 27, 2021, from a previous 11-sheet Site Plan set by Aryeh Siegel and Hudson Land Design.

Proposal

The applicant is proposing to construct a 4-story, mixed-use building with 11,715 square feet on the front portion of the parcel in the Central Main Street (CMS) district and a 1,320 square foot live/work building on the rear portion of the parcel in the Transitional (T) district. The entire 0.245-acre site is also in the Historic District and Landmark Overlay (HDLO) zone.

Comments and Recommendations

The Site Plan was previously approved, but a Certificate of Appropriateness is needed for the rear live/work structure. The live/work building is new construction in the HDLO district, so it must be consistent with the specific design standards in Section 134-7. Two conflicts still remain:

1. Primary individual window proportions are required to be greater in height than width, with certain exceptions, but on the east elevation the dormer window and the window below it are both horizontally proportioned.
2. All-glass walls are not permitted. For the south elevation, the applicant has proposed an 8-inch frame "knee wall" on otherwise all-glass walls. The addition of knee walls or panels below the windows was suggested as an option to bring the building into compliance with the all-glass prohibition. However, knee walls are typically at least 18 inches high.

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Aryeh Siegel, Project Architect

LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal
John Queenan, P.E., Principal

Rodney C. Knowlton, L.S., Principal
Jerry A. Woods, L.S., Principal

John D. Russo, P.E., Principal
John Lanc, P.E., L.S.
Arthur R. Tully, P.E.

October 12, 2020

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 16 West Main Street/Beacon Commons
City of Beacon
Tax Map No. 5954-25-616969

Dear Mr. Gunn:

My office has received the following in regard to the above application:

- Response correspondence from JMC dated July 27, 2021.
- Stormwater Pollution Prevention Plan (SWPPP) titled "Beacon Commons – 16 West Main", last revised September 29, 2020, as prepared by JMC.
- Plan set titled "Site Plan Drawings – Beacon Commons", with the latest revision date of July 27, 2021, and consisting of Sheets 1 of 26 through 26 of 26, as prepared by JMC, and Sheets A-100, A-101 and A-200 dated July 27, 2021 as prepared by Aryeh Siegel, Architect.

Based upon our review of the above referenced documents and plans, we offer the following comments:

General Comments:

1. A Performance Bond will need to be posted for all public improvements proposed as part of the project. As the project progresses, the applicant's engineer should prepare an itemized cost estimate for all public improvements and submit to the City Engineer's office for review.

Geotechnical Report:

1. The report notes several times that "New fill to raise site grades must be placed early in the project schedule to induce any settlements of the underlying soft sandy clays and silts." How far in advance of construction must this material be placed? Will the consolidation of the soft soils be monitored once the fill has been placed? **The applicants notes that fill material is to be placed 2 to 3 months before construction of the building, and that the installation of the soils will be monitored by Carlin Simpson & Associates.** Notes shall be added to the plan set with regards to this and shall also reference the geotechnical report that was prepared for this project.

2. The report recommends driving piles to support the new buildings. How many piles are to be driven at the site, how long will the process take to install all piles, what are the noise impacts on the neighboring residents during the pile driving process and what will be the vibration impacts on the neighbors from the driving process? Have other methods, such as auger piles, been looked at to reduce the noise impacts from the site during the driving of the piles? **The applicant notes that the process for driving the piles will take 3 to 6 weeks, with 30 to 40 piles driven per day. The applicant further notes that driven piles are the best method because it is quick, easy and can measure capacity from hammer.** Although the applicant is stating that they will drive the piles, this does not address the concerns of impacts on the surrounding neighbors with regards to noise and vibration from the pile driving operations. How does the applicant propose to address these concerns?
3. The report discusses the possibility of needing to install sumps with pumps to control groundwater at the site. Where will this ground water be discharged to and how will it be treated, if necessary, to ensure that turbid waters are not leaving the site? Although the applicant notes that this work will be done in conjunction with erosion and sediment control measures proposed for the site, it is recommended that the contractor provide additional measures, such as silt socks, to help in reducing the chances of sediment runoff from the site during these operations.

Site Plan (Sheet 4 of 26)

1. Given the amount of parking area that will require clearing during snowstorm events, it does not appear that sufficient area has been provided for snow storage. Snow should not be stored within parking stalls. How does the applicant plan on handling snow storage and removal from the site? This information shall also be provided on the plan.
2. The plan notes in several locations that the proposed retaining walls and fencing atop of these walls is to be designed by others. Construction details should be added to the plan at this time to show the specific type of retaining wall to be used, along with the proposed safety fence atop of the wall. Although construction easements are called out on Sheet 6 of 26 to allow for the construction of these walls, without knowing the type of wall to be used and the requirements for the construction of that wall, it is unclear as to whether the proposed easements are large enough. **Applicant notes that the wall design will be based upon the site constraints and available easement areas.** Although the wall design is being prepared by others, the type of wall to be used, should be noted on the plans, along with the wall color and visual facing. This allow for a more comprehensive review as to what is proposed visually for the site. This information could be added to retaining wall detail on Sheet 24 of 26.

Utilities Plan (Sheet 6 of 26):

1. The sewer lateral running out from the lower building to the City sewer collection system will be in conflict with the existing storm drainage structure located in this area. Additional room shall be provided between the storm drainage structure and sewer lateral to allow for proper maintenance/replacement of either utility without impact the other utility.

2. It is unclear as to how the proposed storm line will connect to the back of the existing catch basin on West Main Street, as it will conflict with the existing storm line that runs to the catch basin on Bank Street. This is also the same issue for the storm pipe proposed to enter the rear of the catch basin on Bank Street.
3. The pipe invert information provided for drainage structure DMH-A4 should be clarified as to what invert is associated with what pipe. This would also apply to other drainage structures, such as DI-A9, DI-A11, DMH-A3, By-Pass A-7, DMH-A-5, etc.
4. Provide enlarged view of area at intersection of Bank Street and West Main Street to clearly show and call out utilities and their connections.
5. Construction details shall be added to the plans to show how the new water service line and sewer service line will be connected to the City's water and sewer mains. Although the plans note that connection per City requirements, construction details for these connections shall be provided on the plans. The applicant's consultant shall discuss with each of the City Departments how connections shall be made and with what materials.
6. The applicant should verify the pressures within the water mains along Bank Street and West Main Street, along with the available fire flows from the hydrants. This information will be required for the design of the sprinkler system that will be required in the building. **The applicant has noted that the MEP Engineer will coordinate with the City to obtain fire flow data and pressures needed for the design of the fire suppression system.**

Storm Profile (Sheet 7 of 26):

1. The profile shows the proposed storm drainage pipe to be installed on West Main Street will be directly atop of the existing water main. This does not comply with NYSDOH requirements for separation, which requires a minimum of 18" of separation between the two. Furthermore, at least 12" should be provided between utilities to allow for proper maintenance repair of them. The plan shall be revised to show proper separation distances in accordance with NYSDOH standards.
2. The storm drainage is shown to have approximately 6 to 7 inches of cover from the road surface. This is insufficient coverage over the pipe, as the pipe will flex at the joints and continue to deteriorate the pavement in this area, which will be a continual maintenance issue for the highway department. Additional coverage shall be provided over the pipe.
3. The pipe runs between structures DMH-A4, DI-A4-1 and DI-A4-2 show less than 12 inches of cover over the storm lines. The manufacturer requires a minimum of 12" of coverage over the pipe to achieve H-25 loading for traffic areas. The pavement shall not be considered as part of the 12 inches of coverage, as per the manufacturers "Technical Note – TN 2.02", which outlines the minimum and maximum coverage for HDPE pipe.

Construction Details (Sheet 19 of 26):

1. The manhole details shall note that all manhole for sanitary sewer use shall have a minimum of two coatings of bitumastic on the exterior of the structure and shall be touched up on site as needed or as directed by City Engineer.

2. Although the detail for the proposed storm water facility notes to see the SWPPP for maintenance requirements, the short-term and long-term maintenance requirements shall also be added to the plans.
3. All trench and utility details shall note the use of NYSDOT Item No. 304.12 for backfill material within the City's road right-of-ways.

Construction Details (Sheet 21 of 26):

4. The "Pavement over Trench Detail" shall be revised to note that the backfill within trenches shall be NYSDOT Item No. 304.12 (Item No. 4, Type 2).

Stormwater Pollution Prevention Plan (SWPPP):

These comments are provided as a general review of the information within the Site Plan, SWPPP and supporting information submitted to the City of Beacon for the October Planning Board meeting. A comprehensive review of the proposed stormwater details has not been completed at this time. Once the comments provided below are adequately addressed, a more detailed review of the SWPPP and proposed construction details will be provided.

1. SWPPP report states that infiltration practices are proposed but it also states that on-site testing indicated that a subsurface infiltration practice is not an ideal practice. Please clarify if subsurface infiltration is proposed.
2. Post development time of concentrations should be added to show that they do not exceed the minimum Tc value.
3. Since the offsite catchment is not large in size, it should be broken down to Woods, Lawn, and Impervious (like EDA-1A & EDA-1B) to obtain a more accurate CN value. This can be accomplished using available aerial mapping.
4. A Construction Schedule should be provided within the SWPPP report. The first item of the Construction Schedule should be a pre-construction meeting with the site contractor, City of Beacon personnel, and the site engineer to discuss general construction procedures and sequencing. The schedule shall reflect all aspects of the work on site, including, pre-construction meeting, installation of erosion control, demolition, installation of utilities, installation of retaining walls, installation of buildings, installation of storm water facility, and all other operations at the site.
5. A note in regard to the tree clearing restrictions stated on Page 2 of the SWPPP shall be added to the plan set.
6. Since the "Cascade Separator" and "Jellyfish" treatment systems are designed to be an online practice, a calculation should be provided showing that they can pass the 100-year design storm.
7. Documentation should be provided showing that the "Cascade Separator" is an approved NYSDEC system, the provided brochure did not have this information.

8. Boring test results indicate that ground water was located at elevation 34.50' in boring hole #7, which is located in the area of the proposed subsurface storage system. This would surcharge the proposed storage system. If the system is surcharged from ground water, the system will not operate properly during storm events.
9. The online Notice of Intent (NOI) shall be filled out and provided within the SWPPP.
10. Roof planters are shown but not included in the calculations, are they proposed to be used?
11. DI-A5-1 which collects a portion of the offsite drainage is routed to DMH-A5. DMH-A5 has the invert in from (OCS-A6) and the invert out at the same elevation. This could surcharge the underground storage system. The inverts should be adjusted accordingly.
12. Retaining wall underdrains shall be called out on the plans.
13. Time of concentration shall have a maximum sheet flow length of 100 feet.
14. Pre time of concentration for EDA-1B is longer than the total 195' used in the pond pack model.
15. Post time of concentration paths are not shown on the Post Development maps for PDA-1A and PDA-1B.
16. PDA-1B, PDA-1C, and PDA-1E use a user defined TC, while it is understood that the calculated time of concentration is less than 5 minutes the calculations should be added to the pond pack model to show that they do not exceed 5 minutes.
17. On the water quality volume worksheet for the site, the impervious area exceeds the site area used. This should be checked and corrected accordingly.
18. The water quality volume worksheet for the site, uses a site area of 0.85 Acres while total site area is approximately 1.4 +/- acres, please explain.
19. The water quality volume required for each individual stormwater planter shall be provided.
20. The drainage areas for the stormwater planter worksheets shall be correctly labeled.
21. The proposed "Cascade separator" is shown to provide 3,997 CF of WQv, the catchment 1B has a required WQv of 429 CF. It is unclear whether or not the 3,997 CF is being taken for credit. While additional treatment volume exceeding the required volume can be taken credit for, this should be limited to a justifiable volume.
22. Each proposed planter shall be modeled individually to ensure that stormwater is contained within the planters, over topping onto the city sidewalks is not permissible during any storm event.

This completes our review at this time. Further comments may be forthcoming based upon 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: John Clarke, Planner
Jennifer Gray, Esq.
David Buckley, Building Inspector

City of Beacon Planning Board Agenda
08/10/2021

Title:

Continue review of application for Site Plan Approval, mixed-use multi-family residential and commercial uses, 364 Main Street, submitted by O'Donnell Construction Corp.

ATTACHMENTS

[364 Main Street Cover Letter.pdf](#)

[364 Main Street Exhibit A - Mark Day Response.pdf](#)

[364 Main Street Exhibit B - Updated Full Environmental Form.pdf](#)

[364 Main Street Exhibit C -Updated Applications for SUP & Site plan Approval.pdf](#)

[364 Main Street Exhibit D - Inflow & Infiltration Study Report.pdf](#)

[364 Main Street Exhibit E - Traffic & Parking Study.pdf](#)

[364 Main Street Site Plan Sheets 1-11.pdf](#)

[Engineer Review Letter.pdf](#)

[Planner Review Letter.pdf](#)



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Taylor M. Palmer, Esq.
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July 27, 2021

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: Supplemental Submission – Application for Special Use Permit & Site Plan Approval
Commercial and Multi-Family Residential Mixed-Use Development
Premises: 364 Main Street & Eliza Street, Beacon, New York
Tax Parcel IDs: (6054-29-006819 & 6054-29-004836)

Dear Chairman Gunn and Members of the Planning Board:

On behalf of O'Donnell Construction Corp. (the "Applicant"), the owner of the above-referenced Premises, we respectfully submit this letter and the referenced enclosures in furtherance of the Applicant's pending Application for Special Use Permit and Site Plan Approval (collectively the "Applications").

Since we last appeared before your Board on June 8, 2020, the Applicant spent a great deal of time updating and improving the building program in response to the comments from the Planning Board and its consultants.

REFINED BUILDING PROGRAM:

As is more fully detailed in the updated site plans included in the enclosed updated site plan set, the Applicant has significantly refined the building program in response to the Planning Board's comments. As this Board is aware, the Applicant originally proposed a four (4)-story 39,558 sq. ft. mixed-use commercial residential development. The refined building program now consists of a three (3)-story 29,673 sq. ft. mixed-use development, which includes the following updates:

- The proposed story height of the development project was reduced from four (4) stories down to three (3) stories;
- The overall building height was reduced by 10.0 feet from 48.0 feet down to 38.0 feet in height;



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- The total number of apartment units was reduced by seven (7) units from twenty-seven (27) units to twenty (20) units, which represents an approximately twenty-six percent (26%) reduction in the total number of residential units;
- The total number of bedrooms was reduced from 43 bedrooms down to 31 total bedrooms, which represents an approximately twenty-eight percent (28%) reduction in the number of bedrooms;
- Site circulation has been adjusted and the Elisa Street parking area was updated pursuant to the comments from the City's Planning Consultant;
- The first-floor commercial space was reduced from 7,795 sq. ft. to 7,506 sq. ft.; and
- The total square footage on the proposed second and third stories for the proposed multi-family residential use was reduced by 9,963 sq. ft. from 30,605 sq. ft. to 20,642 sq. ft.

In support of this supplemental submission, we respectfully submit copies of the revised site plans and renderings entitled "364 Main Street", prepared by Day & Stokosa Engineering P.C. and Aryeh Siegel, Architect, dated April 2, 2021, last revised July 20, 2021 (unless otherwise noted), numbered and titled as follows:

- Sheet 1 of 11 – Cover Sheet (CS.1);
- Sheet 2 of 11 – Existing Conditions (EC.1);
- Sheet 3 of 11 – Site Plan (SP.1);
- Sheet 4 of 11 – Landscaping Plan (LP.1);
- Sheet 5 of 11 – Lighting Plan (LP.2);
- Sheet 6 of 11 – Construction Details (CD.1);
- Sheet 7 of 11 – Construction Details (CD.2);
- Sheet 8 of 11 – Erosion and Sediment Control Plan (ESC.1);
- Sheet 9 of 11 – Erosion and Sediment Control Details (ESC.2);
- Sheet 10 of 11 – Building Plans (dated May 25, 2021, revised July 27, 2021); and
- Sheet 11 of 11 – Building Elevations (dated May 25, 2021, revised July 27, 2021).

PROCEDURAL UPDATE – A SPECIAL USE PERMIT IS NOT REQUIRED FOR PROPOSED THE THREE-STORY BUILDING:

As noted above, the Applicant originally proposed a four (4)-story 39,558 sq. ft. mixed-use commercial residential development, which required a Special Use Permit regarding the proposed fourth story. The refined building program now consists of a three (3)-story 29,673 sq. ft. mixed-use development, which involves a permitted as-of-right use in the CMS Zoning District.



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While a Special Use Permit is no longer required for the proposed mixed-use building, the Applicant's revised Application instead requests a Special Use Permit for the Eliza Street lot to serve as a parking lot.¹ See **Exhibit C** – Updated Special Use Permit Application Form. As this Board is aware, the Eliza Street Lot is presently a stand-alone parking lot located directly across the street from the City's Eliza Street parking lot. The Applicant is merely proposing to enhance the existing conditions of the parking consistent with the building program proposed for 364 Main Street and consistent with the comments in the City Planner's comments.

Indeed, as is more fully shown on the enclosed updated site plans – in a rare instance along Main Street – the Premises provides all required off-street parking internal on-site. As designed, the Main Street Lot provides twenty (20) off-street parking spaces adjacent to the building. Accordingly, the Main Street Lot provides all of the required residential off-street parking for the development project. Additionally, as is more fully detailed in the Applicant's Traffic and Parking Study, the existing Eliza Street lot which will be improved over the existing conditions will provide thirty-three (33) parking spaces. In total, the updated site plans show fifty-three (53) total off-street parking spaces, which includes one (1) handicap-accessible parking space where thirty-six (36) total spaces are required for the project.²

UPDATED TRAFFIC IMPACT AND PARKING STUDY:

In addition to the parking details noted above, as noted in the Applicant's May 25th submission to this Board that included a Preliminary Report of Traffic and Parking Impacts, the Applicant's traffic consultant, Colliers Engineering & Design, reviewed additional traffic and parking data and prepared the Traffic Impact and Parking Study dated July 26, 2021 (the "Traffic Study") for the refined building program. The Traffic Study also reviewed the proposed access to the Premises to and from Eliza Street and to and from Main Street as is more fully shown on the updated site plans.

As is more fully detailed in the Traffic Study enclosed as **Exhibit E**, as a result of the reduced

¹ Note: The Applicant proposes to maintain both existing lots as separate lots, and to prepare access, parking and maintenance easements for review by the Planning Board Attorney, as necessary.

² Note: The commercial component of the development Project requires sixteen (16) total off-street parking spaces. As this Board is aware, pursuant to Zoning Code Section 223-41.18(G)(3), the Planning Board is authorized to modify the minimum number of off-street parking spaces where there is sufficient public parking within 800 feet of the site within the CMS District to meet foreseeable parking needs of the proposed use and the surrounding uses for the duration of the proposed use. A waiver of these off-street parking requirements was recently granted for the commercial component of the redevelopment project at 416 Main Street.



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building program the total off-street parking required for the Project has been reduced to 36 spaces. The Traffic Study also considered that three (3) public parking lots are located in the vicinity of the Premises; however, use of the public parking should not be necessary because the parking requirements of the Code can be accommodated onsite.

The Traffic Study incorporates recommended signage and striping improvements that will be implemented by the Applicant and goes on to concluded that:

“... Based on the analysis summarized above it is not anticipated that the proposed development Project will have a significant impact on future traffic and/or parking conditions in the vicinity of the Project site.

See **Exhibit E**, page 6.

Based on the Traffic Study, it is not anticipated that the proposed development will not have a significant impact or parking impact.

ADDITIONAL RESPONSE TO COMMENTS MEMORANDA & INDEX OF ENCLOSED DOCUMENTS:

Additionally, in further support of this Application, enclosed please find copies of the following Response to Comments letters prepared by the Applicant’s Engineering Consultant, Day Stokosa Engineering P.C.:

- Day Stokosa Engineering P.C. Response to Comments Letter Dated June 30, 2020, in response to the letters prepared by Lanc & Tully and John Clarke Planning and Design both dated June 3, 2021 (**Exhibit A**).

For ease of reference, in addition to the updated site plan sheets referenced above, the following documents are enclosed herein for consideration in advance of the Planning Board’s August 10th meeting Agenda:³

Exhibit A: Day Stokosa Engineering P.C. Response to Comments Letter Dated June 30, 2020, in response to the letters prepared by Lanc & Tully and John Clarke Planning and Design both Dated June 3, 2021

Exhibit B: Updated Full Environmental Assessment Form;

Exhibit C: Updated Application for Special Use Permit and Site Plan Approval Form; and

³ Note: Copies of these enclosures are also being submitted on a CD-ROM.



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Exhibit D: Inflow & Infiltration Study Report Prepared by Day Stokosa Engineering P.C.; and

Exhibit E: Traffic and Parking Study prepared by Collier Engineering & Design, Dated July 26, 2021.

We look forward to appearing at the Planning Board's August 10th regular meeting to continue the review of the Project and to initiate the environmental review process. In the meantime, should the Planning Board or City Staff have any questions or comments with regard to the foregoing, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read 'TP', with a long horizontal flourish extending to the right.

Taylor M. Palmer

Enclosures

Cc: Jennifer L. Gray, Esq.
John Clarke Planning and Design
Lanc & Tully
Aryeh J. Seigel Architect
Mark A. Day, P.E. – Day Stokosa Engineering, P.C.
Colliers Engineering & Design

3 Van Wyck Lane
Suite 2
Wappingers Falls, New York 12590
Phone: 845-223-3202

July 24, 2021

Mr. John Gunn, Chair, and the City of Beacon Planning Board
City of Beacon City Hall
1 Municipal Plaza
Beacon, New York 12508

Re: 364 Main Street Site Plan Application
364 Main Street
City of Beacon
Dutchess County, New York

Mr. Chairman and Board members:

This office has received comment letters from both the office of the City Engineering Office and the City Planning Office. This cover letter and the accompanying submission is in response to the comments. I offer the following:

Lanc & Tully – June 3, 2021:

1. The fourth floor has been eliminated as part of the current proposal.
2. We concur that the parking proposed on the rear lot will require a Special Use Permit since it is in the Transitional (T) District.
3. The revised site plan proposes 20 dwelling units (31 total bedrooms) and approximately 6,781 s.f. of commercial space. The average daily flow is projected to be 31 bedrooms x 110 gpd/bedroom + 6,781 s.f. x 0.1 gpd/s.f. $\approx$ 4,088 gpd.
4. Our experience on this site is that the groundwater is very high in this location of the City. It is my belief that the use of subsurface drainage on this site would not be effective due to the high groundwater on the site. The proposed site plan reduces the amount of impervious by approximately 10% through the use of new landscaping and lawn areas.
5. The Applicant wishes not to combine the two parcels as part of this application.
6. The existing building discharges both the roof drains and an internal sump pit into the sanitary system. An I&I study has been prepared for this project and has been submitted as part of this latest submission.

7. The fourth floor has been eliminated as part of this current proposal.
8. The existing condition plan has been updated to provide the utilities located near Eliza Street.
9. The plans have been updated to show the current utilities in Main Street.
10. The existing guide rail on the north and east side of the parking area will be removed and has been indicated on the plans.
11. The extra labels have been eliminated.
12. The proposed bike racks have been eliminated.
13. The accessible ramp is in the sidewalk in front of the accessible loading area.
14. I am not sure what the bold line is. I believe it is gone now.
15. The existing and proposed utilities have been shown on the revised site plan.
16. The proposed traffic signs have been shown on the plan.
17. The existing sanitary lateral currently exiting the building will be used for sanitary. It is currently in the basement. The new addition will be plumbed to that existing sewer lateral.
18. Regrading on the site will be minimal and will not affect the grading on the site plan. The majority of the site will be repaved and thus will not affect the existing contours.
19. The lighting plan has been revised to eliminate the heavy hatching.
20. The refuse enclosure was updated to show the footing concrete strength and the yield stress of the reinforcing steel.
21. The duplicate details have been eliminated from the plan set.

John Clark Planning & Design – June 3, 2021:

1. Cover Sheet
 - a. The Parcel Data Table has been amended to state that the rear parcel is in the Transitional (T) District and will require a Special Use Permit. The District Lines have been shown on the Vicinity Map.
 - b. The Zoning Data table has been amended to represent the current proposal. The fourth floor has been omitted from the current proposal. The frontage occupancy has been correctly calculated including landscaping in the front to hide parking

spaces on the west side of the building. A note has been added stating that the Planning Board may reduce the required frontage if public open space is provided although the current proposal does not include public open space.

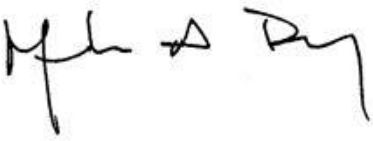
- c. I defer to the Applicant's Counsel with respect to the information about the lease agreement for the Eliza Street lot and whether the market has any access rights.
- 2. The removal of the guardrail note has been added to the plan for the north end of the project site.
- 3. Sheet 3 – Site Plan:
 - a. The parking on the site plan has been amended.
 - b. The drive aisle behind the building has been revised to show 24.16'.
 - c. The bike racks have been relocated to the front of the building.
 - d. There is one existing street tree in front of the building. The well of the existing tree only allows approximately 5' of passage between the tree and the existing curbing. There is approximately 5.9' feet passage between the existing light poles and the existing curb.
 - e. The proposed plaza has been eliminated.
- 4. Sheet 4 – Landscaping Plan:
 - a. A revised landscaping plan will be provided on the next submission which will include both parcels.
 - b. See response above.
 - c. See response above.
- 5. Sheet 5 – Lighting Plan:
 - a. The fixtures and specifications have been placed on the lighting plan and demonstrate compliance with Section 223-14B including full cutoff downlighting, color temperatures and Color Rendering Index. The specifications for the lights are attached to this letter.
 - b. The parking lot lighting has been more evenly distributed.
 - c. The lighting in the pedestrian areas has been limited to no more than 15'. LED fixtures have been used. Decorative downlighting has been used in lieu of

wallpacks. The wall-mounted light fixtures are the same fixtures as proposed for the pole-mounted lights in the parking area.

6. Sheet 6 – Construction Details: The standard parking space has been revised to 9'x18' and the ADA space was reduced to 8'x18' with an 8' aisle.
7. Sheets 10 and 11- Building Plans:
 - a. The building has been revised to a 3-story building. Building Lines above the rear parking area are shown on the plan.
 - b. The side elevations have been revised to reflect the 3-story building and have been redesigned to add interest to these facades. Towered bay windows reflect the adjacent church spire, and recesses and exposed steel lintels in the 1st floor façade provide texture to the side view. All windows are now greater in height than width.
 - c. Comment noted.

Please feel free to contact me if you have any questions about the information in this response letter or in the plan set.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Mark A. Day'.

Mark A. Day, PE

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 1 is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: 364 MAIN STREET - APPLICATION FOR SITE PLAN & SPECIAL USE PERMIT APPROVAL		
Project Location (describe, and attach a general location map): 364 MAIN STREET, BEACON, NEW YORK 12508		
Brief Description of Proposed Action (include purpose or need): Application for Site Plan and Special Use Permit approval proposing to add two (2) stories to an existing one (1)-story commercial building and to construct a three (3)-story addition to the rear of the same building for a commercial and multi-family residential mixed-use building fronting on Main Street. The first story will consist of 7,506 s.f. of commercial space and 1,525 s.f. of residential common area space. The second and third floors will include a total of 20,642 s.f. of multi-family residential space, consisting of 20 apartments with 31 total bedrooms. The property is comprised of two (2) lots, and the site will provide off-street parking facilities with driveway connections to Main Street and Eliza Street.		
Name of Applicant/Sponsor: O'DONNELL CONSTRUCTION CORP.		Telephone: 845-590-0622
		E-Mail: SEANEO64@GMAIL.COM
Address: P.O. BOX 526		
City/PO: FISHKILL	State: NEW YORK	Zip Code: 12524
Project Contact (if not same as sponsor; give name and title/role): TAYLOR M. PALMER, ESQ., - CUDDY & FEDER LLP - ATTORNEY FOR APPLICANT		Telephone: 914-761-1300
		E-Mail: TPALMER@CUDDYFEDER.COM
Address: 300 WESTAGE BUSINESS CENTER, SUITE 300		
City/PO: FISHKILL	State: NEW YORK	Zip Code: 12524
Property Owner (if not same as sponsor): SAME		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, ☐ Yes ☒ No or Village Board of Trustees		
b. City, Town or Village Planning Board or Commission ☒ Yes ☐ No	PLANNING BOARD- SITE PLAN AND SPECIAL USE PERMIT APPROVALS	05/25/2021 / Amended 7/26/2021
c. City, Town or Village Zoning Board of Appeals ☐ Yes ☒ No		
d. Other local agencies ☒ Yes ☐ No	BUILDING DEPARTMENT-BUILDING PERMIT	03/1/2022
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?

CMS - CENTRAL MAIN STREET DISTRICT & T - TRANSITIONAL DISTRICT.

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

c. Which fire protection and emergency medical services serve the project site?

CITY OF BEACON FIRE DEPARTMENT

d. What parks serve the project site?

MOUNT BEACON, GREEN STREET PARK, MEMORIAL 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, RESIDENTIAL MIXED USES.

b. a. Total acreage of the site of the proposed action? 0.85 acres

b. Total acreage to be physically disturbed? 0.54 acres

c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0.85 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)? % 11.3% - 795 S.F. Units: 20

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: 12 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.				
	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	_____	_____	_____	20
At completion of all phases	_____	_____	_____	20

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: _____ 38' height; _____ 69.8' width; and _____ 152' length iii. Approximate extent of building space to be heated or cooled: _____ 30,180.1 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): _____ _____	

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: _____ 4088 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: CITY OF BEACON
- 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: _____ 4088 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 TREATMENT PLANT
- Name of district: CITY OF BEACON
- 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? _____ • Will a line extension within an existing district be necessary to serve the project? _____ If Yes: • Describe extensions or capacity expansions proposed to serve this project: _____ _____ _____	☒ Yes ☐ No ☐ Yes ☒ No	
iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? _____ If Yes: • Applicant/sponsor for new district: _____ • Date application submitted or anticipated: _____ • What is the receiving water for the wastewater discharge? _____	☐ Yes ☒ No	
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? _____ 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 ☐ Yes ☐ No ☐ Yes ☐ No	
iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? _____		
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? _____ 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) _____ _____	☐ Yes ☒ No	
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? _____ 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) _____ ii. In addition to emissions as calculated in the application, the project will generate: • _____ Tons/year (short tons) of Carbon Dioxide (CO₂) • _____ Tons/year (short tons) of Nitrous Oxide (N₂O) • _____ Tons/year (short tons) of Perfluorocarbons (PFCs) • _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆) • _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydrofluorocarbons (HFCs) • _____ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)		☐ Yes ☒ No ☐ Yes ☐ No

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: _____ TBD 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 CO. 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. <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> i. During Construction: • Monday - Friday: _____ 7 AM - 5 PM • Saturday: _____ 9 AM - 5 PM • Sunday: _____ 9 AM - 5 PM • Holidays: _____ N/A </td> <td style="width: 50%; vertical-align: top;"> ii. During Operations: • Monday - Friday: _____ TBD • Saturday: _____ TBD • Sunday: _____ TBD • Holidays: _____ TBD </td> </tr> </table>		i. During Construction: • Monday - Friday: _____ 7 AM - 5 PM • Saturday: _____ 9 AM - 5 PM • Sunday: _____ 9 AM - 5 PM • Holidays: _____ N/A	ii. During Operations: • Monday - Friday: _____ TBD • Saturday: _____ TBD • Sunday: _____ TBD • Holidays: _____ TBD
i. During Construction: • Monday - Friday: _____ 7 AM - 5 PM • Saturday: _____ 9 AM - 5 PM • Sunday: _____ 9 AM - 5 PM • Holidays: _____ N/A	ii. During Operations: • Monday - Friday: _____ TBD • Saturday: _____ TBD • Sunday: _____ TBD • Holidays: _____ TBD		

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: Ambient noise levels will increase slightly during construction only.	
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: See Lighting Plan There will be building mounted lighting over entry/exit doors on the building, as well as light poles in the parking area. The closest light pole to the nearest occupied structure is approximately 50'. The light fixtures will be shielded LED, which will comply with the City's requirements for light spill.	
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: _____ 1.0 tons per _____ MONTH (unit of time) • Operation : _____ 0.3 tons per _____ MONTH (unit of time) ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste: • Construction: <u>RECYCLING</u> • Operation: <u>RECYCLING</u> iii. Proposed disposal methods/facilities for solid waste generated on-site: • Construction: <u>APPROVED CONTRACTOR TO AN APPROVED SITE</u> • Operation: <u>APPROVED CONTRACTOR TO AN APPROVED SITE</u>	

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): RESIDENTIAL - MULTIFAMILY

ii. If mix of uses, generally describe:

MIXED USES CONSISTENT WITH MAIN STREET AND THE SURROUNDING CMS AND TRANSITIONAL DISTRICTS.

b. Land uses and coverytypes on the project site.

Land use or Coverytype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.85	0.82	-0.03
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	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: <u>LANDSCAPING</u>	0	0.03	+0.03

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? GREATER THAN 7.0 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:	
KuB-KNICKERBOCKER-URBAN	12.6 %
Ur-URBAN LAND	87.4 %
_____	_____ %
d. What is the average depth to the water table on the project site? Average: _____ >5' feet	
e. Drainage status of project site soils: ☐ Well Drained: _____ % of site ☐ Moderately Well Drained: _____ % of site ☒ Poorly Drained 100 % of site	
f. Approximate proportion of proposed action site with slopes: ☒ 0-10%: 100 % 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>i</i> or <i>ii</i> , 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: _____ BIRDS _____ SQUIRREL _____ SMALL MAMMALS _____ RACCOON _____	
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): _____ 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: Eligible property: EMPIRE NAT. BANK, Eligible property: ROOSA COMMERCIAL, Eligible property: STAVROS COMMERCIAL, Eligible...

iii. Brief description of attributes on which listing is based:
 AUTO-FILLED BY THE EAF MAPPER. PROPERTY IS NOT LOCATED IN THE CITY'S HISTORIC DISTRICT AND LANDMARK OVERLAY DISTRICT.

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 five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☒ Yes ☐ No

If Yes:

i. Identify resource: MOUNT BEACON, HUDSON RIVER, LONG DOCK PARK.

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): STATE OR LOCAL PARK

iii. Distance between project and resource: _____ 1.5 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 O'DONNELL CONSTRUCTION CORP. Date 7/26/2021

Signature  BY: SEAN O'DONNELL Title PRESIDENT

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]	No
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]	B00130, C314118
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]	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]	Eligible property:EMPIRE NAT. BANK, Eligible property:ROOSA COMMERCIAL, Eligible property:STAVROS COMMERCIAL, Eligible property:ANGELO COMMERCIAL, Eligible property:DUMKE COMMERCIAL, Eligible property:Memorial Building, Brett, Madam Catharyna, Homestead, US Post Office--Beacon
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

APPLICATION FOR SPECIAL USE PERMIT & SITE PLAN APPROVAL

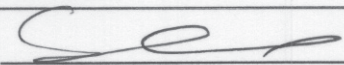
Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: O'Donnell Construction Corp.

Address: P.O. Box 526

Fishkill, NY 12524

Signature: 

Date: 7/26/2021

Phone: 845-590-0622

(For Official Use Only)

Application & Fee Rec'd
Initial Review Public Hearing

Date Initials

Conditional Approval

Final Approval

IDENTIFICATION OF REPRESENTATIVE / DESIGN PROFESSIONAL

Name: Cuddy & Feder, LLP

Address: 300 Westage Business

Center Dr., Suite 380, Fishkill, NY

Phone: 914-761-1300

Fax: 914-761-5378

Email address: tpalmer@cuddyfeder.com

IDENTIFICATION OF SUBJECT PROPERTY:

Property Address: 346 Main Street & Eliza Street, Beacon, NY 12508

Tax Map Designation: Section 6054 Block 29

Lot(s) 006819 & 004836

Land Area: .54 acres 364 Main St. & .31 acres Elisa St.

Zoning District(s) CMS, T

DESCRIPTION OF PROPOSED DEVELOPMENT:

Proposed Use: Mixed-Use Multi-Family Residential and Commercial

Gross Non-Residential Floor Space: Existing 7,031+/- sq. ft.

Proposed 68 sq. ft.

TOTAL: 7,099 sq. ft.

Dwelling Units (bv type): Existing 0

Proposed 20 multi-family units

TOTAL: 20

ITEMS TO ACCOMPANY THIS APPLICATION

- 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.
- 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.
- One electronic and five (5) **folded** paper copies of additional sketches, renderings or other information.
- An application fee, payable to the City of Beacon, computed per the attached fee schedule.
- 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	<u>Residential</u> \$500 + \$250 per dwelling unit <u>Commercial</u> \$500 + \$250 per 1,000 s.f.
Special Use Permit	<u>Residential</u> \$500 + \$250 per dwelling unit <u>Commercial</u> \$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
Zoning Board of Appeals	Use Variance \$500 Area Variance \$250 Interpretation \$250

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)	\$ 2,500	\$ 1,000	Current bills + \$1,000
6-15	\$ 7,500	\$ 2,500	Current bills + \$1,000
Over 15	\$ 15,000	\$ 5,000	Current bills + \$5,000

NON-RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

	Initial Deposit	Depleted to	Replenishment
Existing Buildings/Change of Use with no site development	\$ 1,500	\$ 1,000	Current bills + \$500
Up to 3,000 s.f. gross floor area	\$ 2,500	\$ 1,000	Current bills + \$1,000
3,000 to 10,000 s.f. gross floor area	\$ 2,500 + \$0.50 per sq.ft. over 3,000	\$ 2,500	Current bills + \$2,500
Over 10,000 s.f. gross floor area	\$ 7,500 + \$0.50 per sq.ft. over 10,000	\$ 2,500	Current bills + \$2,500

ZONING

<i>* if required by Chairman</i>	Initial Deposit	Depleted to	Replenishment
Use Variance*	\$ 1,000	\$500	Current bills + \$500
Area Variance*	\$ 1,000	\$500	Current bills + \$500
Interpretation*	\$ 1,000	\$500	Current bills + \$500

ARCHITECTURAL REVIEW OR CERTIFICATE OF APPROPRIATENESS *(if not currently before PB)*

<i>* if required by Chairman</i>	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: O'Donnell Construction Corp.

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.

Sean O'Donnell.

List all properties in the City of Beacon that you hold a 5% interest in:

Eliza Street – (Parcel ID: 5954-36-994862)

Applicant Address: P.O. Box 526, Fishkill, New York 12524

Project Address: 364 Main Street & Eliza Street

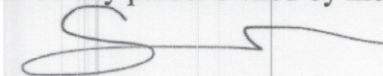
Project Tax Grid # 6054-29-006819 & 6054-29-004836

Type of Application: Special Permit & Site Plan Approval for Proposed Mixed-Used Development

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, Sean O'Donnell, 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 | <u>X</u> |
| 2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon | <u>N/A</u> |
| 3. ALL tax payments due to the City of Beacon are current | <u>X</u> |
| 4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon | <u>N/A</u> |
| 5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon | <u>N/A</u> |
| 6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current | <u>X</u> |



Signature of Owner
By: Sean O'Donnell

President, O'Donnell Construction Corp.

Title if owner is corporation

Office Use Only:

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)

NO	YES	Initial
___	___	___
___	___	___
___	___	___

**CITY OF BEACON
SITE PLAN SPECIFICATION FORM**

Name of Application: 364 Main Street – Application for Site Plan & Special Permit Approval

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.	✓	
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.	✓	
The location and plans for any outdoor signs.	✓	
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.	✓	
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.	✓	
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.	✓	
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.		✓

For all items marked "NO" above, please explain below why the required information has not been provided:

Please See Attached Project Application Narrative

Applicant/Sponsor Name: O'Donnell Construction Corp.

Signature: 

By: Sean O'Donnell, President

Date: 7/28/21

CITY OF BEACON
1 Municipal Plaza, Beacon, NY
Telephone (845) 838-5000 • <http://cityofbeacon.org/>

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: O'Donnell Construction Corp.

Address of Applicant: P.O. Box 526, Fishkill, NY 12524

Telephone Contact Information: 845-590-0622

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.
O'Donnell Construction Corp.	P.O. Box 526, Fishkill, NY 12524	845-590-0622	3/6/2017 Deed	3/16/2017 Dutchess County Clerk's Office

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, Sean O'Donnell being first duly sworn, according to law, deposes and says that the statements made herein are true, accurate, and complete.

O'Donnell Construction Corp.
(Print) By: Sean O'Donnell, President

(Signature) 

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 O'Donnell Construction Corp.	Telephone Contact Information 845-590-0622
Principal Place of Business of Entity P.O. Box 526, Fishkill, NY 12524	Place and Date of incorporation New York New York State Dept. of State (7/20/1995)
Method of Incorporation Domestic Business Corporation	Official place where the documents and papers of incorporation were filed New York State Dept. of State

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
Sean O'Donnell	P.O. Box 526, Fishkill, New York 12524	845-590-0622	100%

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.
O'Donnell Construction Corp.	P.O. Box 526, Fishkill, NY 12524		3/6/2017 Deed	3/16/2017 Dutchess County Clerk's Office

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
O'Donnell Construction Corp.	P.O. Box 526, Fishkill, New York 12524
CRE JV Five Branch Holdings LLC	C/o Grammercy Property Trust, 90 Park Avenue, 32 nd Floor, New York, NY 10016

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.

N/A

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 O'Donnell Construction Corp.	Telephone Contact Information 845-590-0622
Principal Business Address P.O. Box 526, Fishkill, New York 12524	Place and Date of Incorporation New York State Dept. of State (7/20/1995)
Method of Incorporation Domestic Business Corporation	Official place where the documents and papers of incorporation were filed New York Dept. of State

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	Residence or business address	Telephone number
Sean O'Donnell	P.O. Box 526, Fishkill, New York 12524	845-590-0622

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

☒

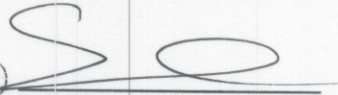
NO

I, Sean O'Donnell being first duly sworn, according to law, deposes and says that I am (Title) President, an active and qualified member of O'Donnell Construction Corp., 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.

O'Donnell Construction Corp.

(Print) By: Sean O'Donnell, President

(Signature)



3 Van Wyck Lane
Suite 2
Wappingers Falls, New York 12590
Phone: 845-223-3202

Mr. Gunn & Members of the Planning Board
City of Beacon Planning Board
City of Beacon City Hall
1 Municipal Plaza
Beacon, New York 12508

Re: Inflow & Infiltration Study
364 Main Street Application
City of Beacon
Tax Map No. 6054-29-006819 & 004836

Mr. Chairman & Board Members,

Pursuant to the request of Lanc & Tully, in their comment letter dated June 3, 2021, this office conducted an Inflow and Infiltration inspection and have prepared this report for the subject building located at 364 Main Street. Based on our inspection, I offer the following:

The building is a one-story structure which was constructed in 1950 per the Dutchess County Tax Department records. During our inspection I noted that the internal roof drains exist the building through the front foundation wall of the building.

There is an internal sump pump system in the basement of the existing building that exits through the front foundation wall of the building.

It is my belief based on a very brief look in the manhole on Main Street that the interior roof drains are connected into the sanitary sewer. There were traces of what appeared to be the dye in the sanitary flow. It should be noted that we had a very limited time to look in the manhole due to traffic on Main Street.

I estimate the area of the roof that drains into the sanitary line to be approximately 7,030 square feet.

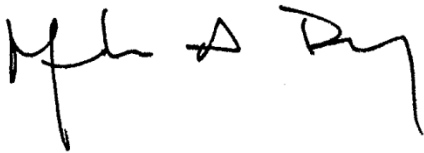
Based on a 24-hour rainfall of 2.9", 3.5", 4", 5" and 6" for a 1-yr, 2-yr, 5-yr, 10-yr and 25-yr storm, respectively, I estimate the volume of I&I for each storm as follows:

Design Storm	24-Hr Rain, in.	Volume, ft ³
1-year	2.9	1,699
2-year	3.5	2,050
5-year	4	2,343
10-year	5	2,929
25-year	6	3,515

The existing I&& generated by this project site will be remediated when the building is renovated, and the new addition is constructed. The renovated building and the new addition will discharge the roof drainage and sump pits into the existing storm sewer system in Main Street.

Please feel free to contact me if you have any questions.

Very truly yours,



Mark A. Day, PE

July 26, 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 7,826 sq. ft. of commercial space and 1,155 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 53 off-street parking spaces, including one (1) handicap-accessible parking spaces, for the Project. The off-street parking will consist of 33 spaces on the Eliza Street Lot and 20 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.

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 – 7,826 Sq. Ft.					
Weekday AM Peak Hour	1.54	12	1.41	11	23
Weekday PM Peak Hour	2.05	16	2.18	17	33
Saturday Midday Peak Hour	2.31	18	2.18	17	35
Totals					
Weekday AM Peak Hour	---	16	---	20	36
Weekday PM Peak Hour	---	25	---	23	48
Saturday Midday Peak Hour	---	26	---	23	49

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.

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. The anticipated arrival and departure distributions are shown on Figures No. 14 and 15, respectively.

The Site Generated Traffic Volumes were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting site generated traffic volumes for each of the study area intersections are shown on Figures No. 16, 17 and 18 for each of the peak hours, respectively. The site generated traffic volumes were then added to the Year 2026 No-Build Traffic Volumes to obtain the 2026 Build Traffic Volumes. The resulting 2026 Build Traffic Volumes are

shown on Figures No. 19, 20 and 21 for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours, respectively.

Capacity analyses which take into consideration appropriate truck percentages, pedestrian activity, on-street parking, roadway grades and other factors were performed at the study area intersections utilizing the procedures outlined in the *Highway Capacity Manual, 6th Edition*, published by the Transportation Research Board to determine the Levels of Service and average vehicle delays. The results of these analyses are summarized in Table No. 2 contained in Appendix B. The analysis results indicate that the Project will not have a significant impact on traffic operating conditions on the surrounding roadway network. As discussed further below, some recommendations have been provided to ensure safe and efficient traffic and pedestrian flow in and around the Site.

Parking Requirements

The parking requirements for the Project were also reviewed based on the City of Beacon Zoning Code (the "Zoning Code") requirements for the CMS District as specified in Section 223-41.18.G.(2) of the Zoning Code. The Zoning Code requires that properties within the CMS district provide one (1) parking space per residential dwelling unit and two (2) parking spaces per 1,000 sq. ft. of commercial space. Table No. 3 below provides a summary of the required parking spaces for the Project based on these Zoning Code requirements. The Project is required to provide a total of 36 parking spaces. As indicated previously the Project proposes to provide 53 off-street parking spaces, which will accommodate the anticipated parking needs of the proposed development.

Table No. 3 – Summary of Required Parking

Use	Size	City of Beacon Code Requirement	Required Spaces
Residential	20 Units	1 Space per Dwelling Unit	20 Spaces
Commercial	7,826 sq. ft.	2 Spaces per 1,000 sq. ft.	16 Spaces
Total			36 Spaces

Source: City of Beacon Code Section 223-41.18.G.(2)

A shared parking analysis was previously conducted as part of our initial traffic and parking review identifying anticipated parking utilization based on the differing peak hours of parking demand for the residential and commercial uses. However, considering that the Project now proposed to provide a parking surplus of approximately 17 parking spaces more than sufficient parking will be present throughout the day to accommodate the parking needs of the development.

Additionally, the Project site is located within 200-300 ft. of three (3) City of Beacon Public parking lots including the Chestnut and Teller parking lots between Main Street and Henry Street and the Eliza Street parking lot located opposite the Eliza Street portion of the Project site. While the Project site is near these existing public parking lots, based on the above analysis it is anticipated that the required parking demand for the Project will be met by off-street parking being provided on the Site and that the Project will not result in a significant impact to existing parking conditions in these existing public parking lots or to on-street public parking in the vicinity of the Project site.

Summary & Recommendations

Based on the analysis summarized above it is not anticipated that the proposed development Project will have a significant impact on future traffic and/or parking conditions in the vicinity of the Project site. However, it is anticipated that the both the commercial and residential portions of the development will generate additional pedestrian traffic. Therefore, various signing and striping improvements have been identified for the Main Street crosswalk located at the existing exit driveway intersection from the subject property. These improvements, which are identified in Exhibit 1 below include restriping of the existing crosswalk to increase its visibility, installation of a detectable warning field on the existing sidewalk curb ramp on the north side of Main Street and new pedestrian crosswalk warning signage.



In addition, this Exhibit also indicates recommended one-way signage for the exit only driveway to Main Street as well as "Do Not Enter" signage recommended to be installed on-site at the one-way entry only driveway to ensure there are no wrong-way maneuvers at these driveway locations. These modifications improvements should be completed by the Applicant as part of the proposed development.

Sincerely,

Colliers Engineering & Design CT, P.C.

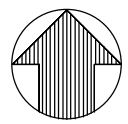
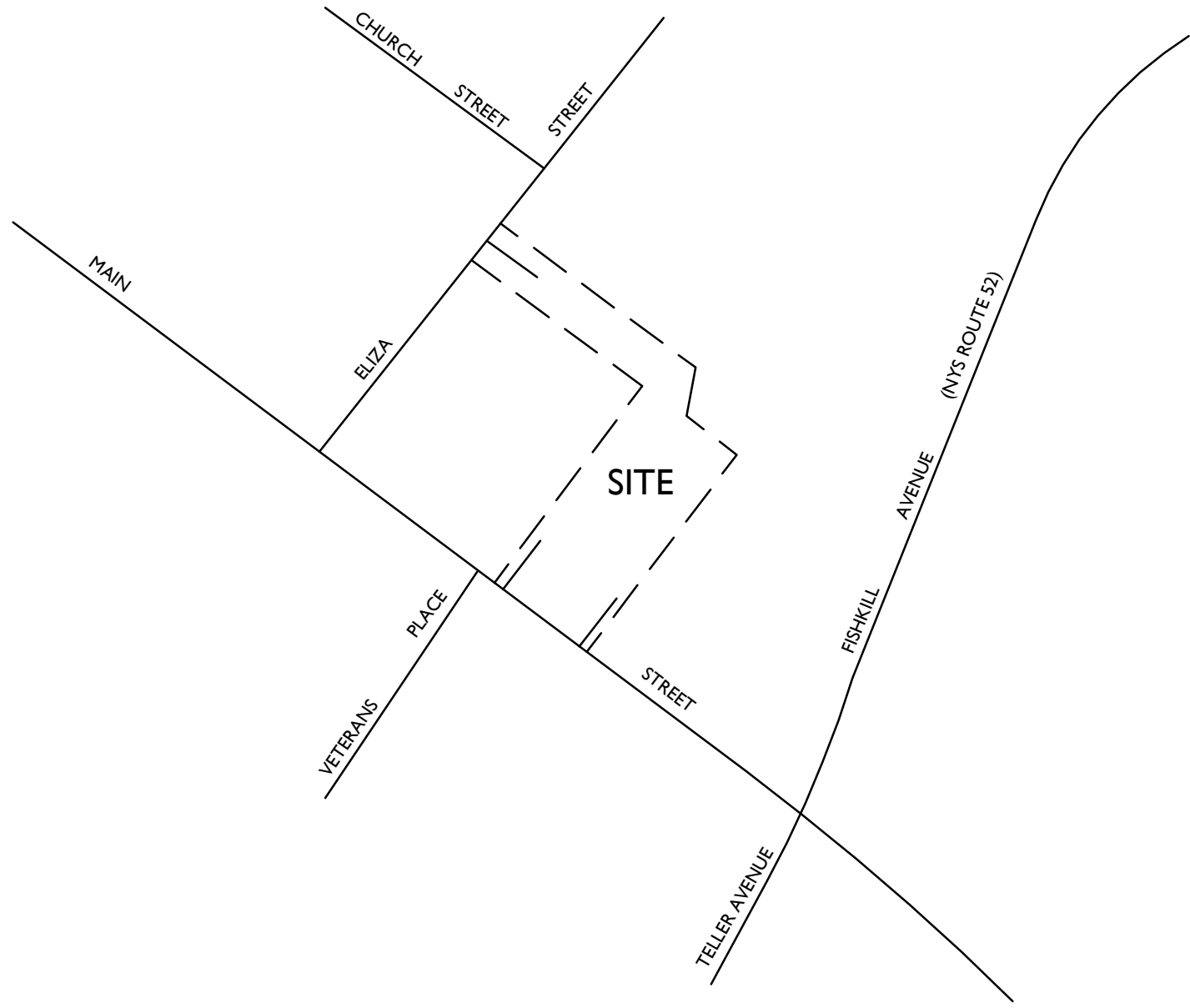


Richard D'Andrea, P.E., PTOE
Assistant Department Manager

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Appendix

Appendix A | Figures



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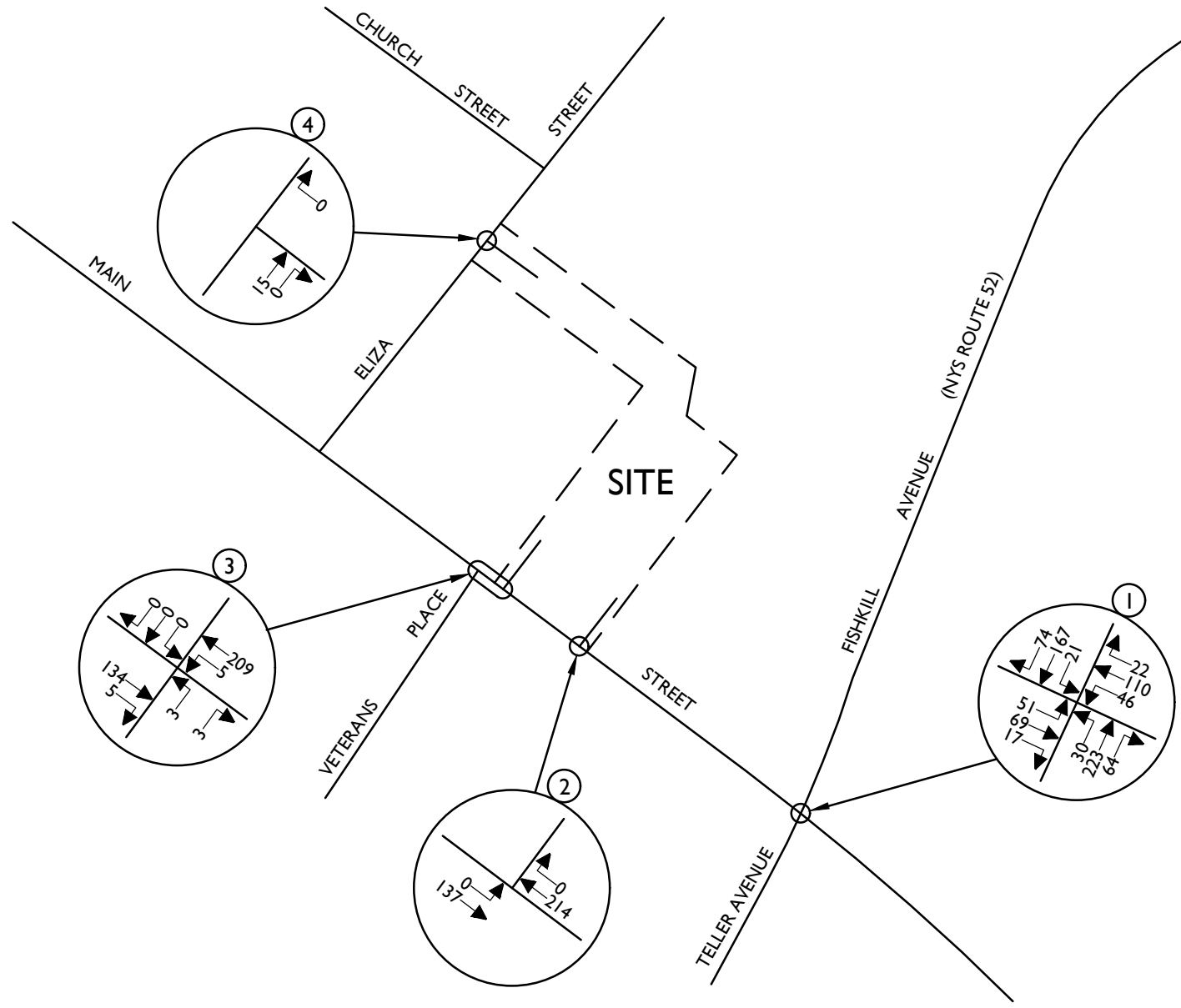
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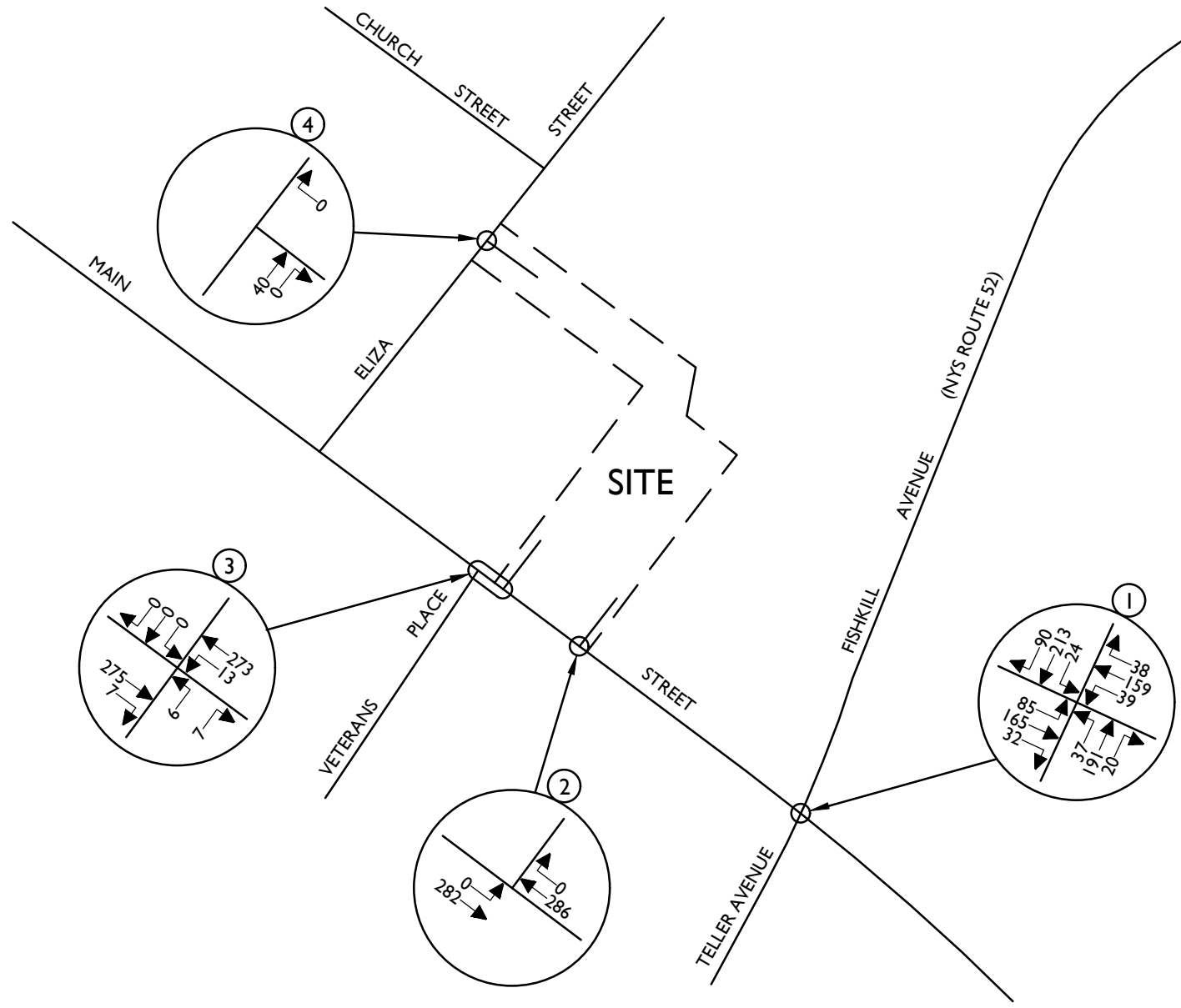
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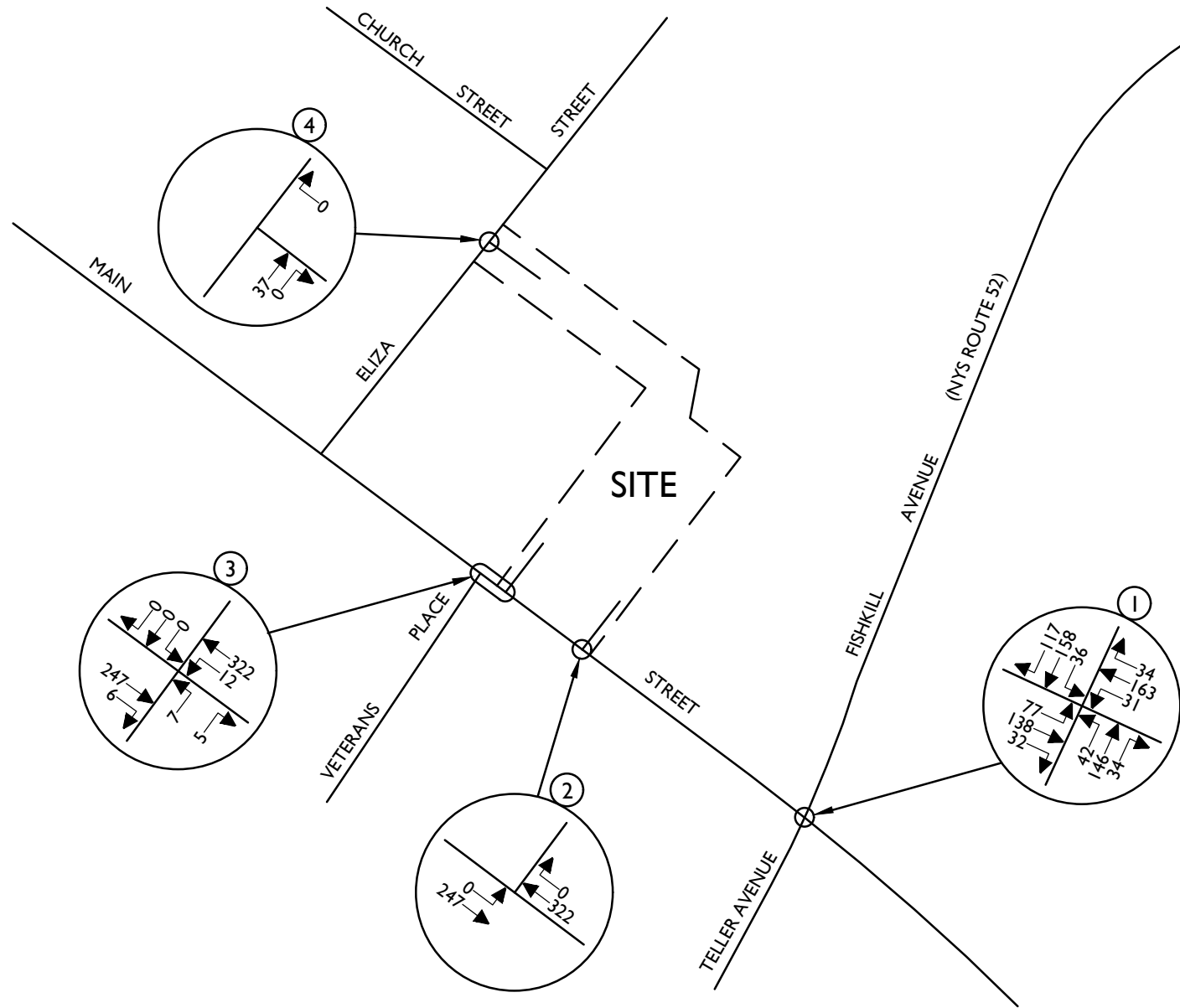
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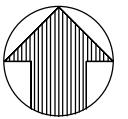
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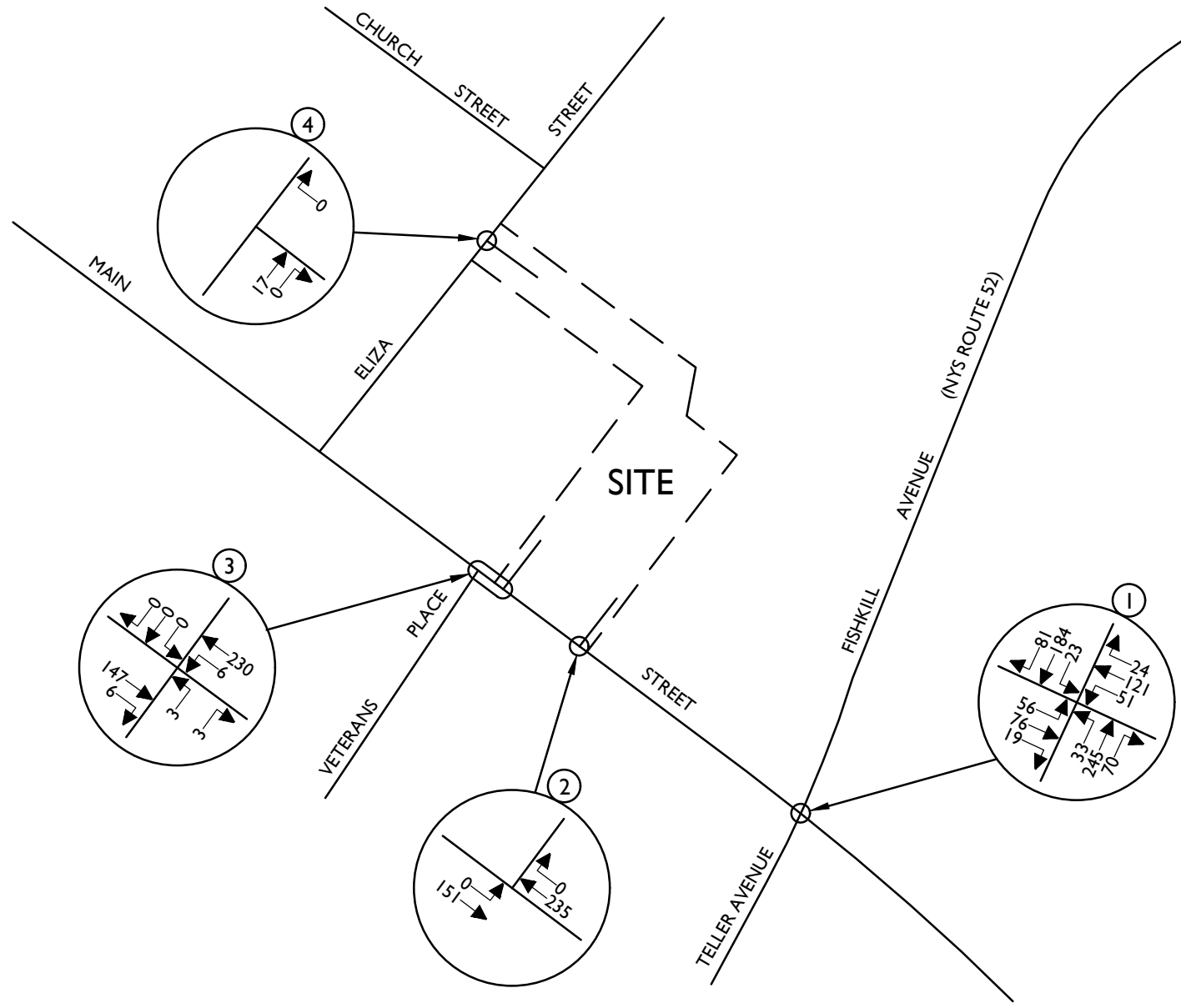
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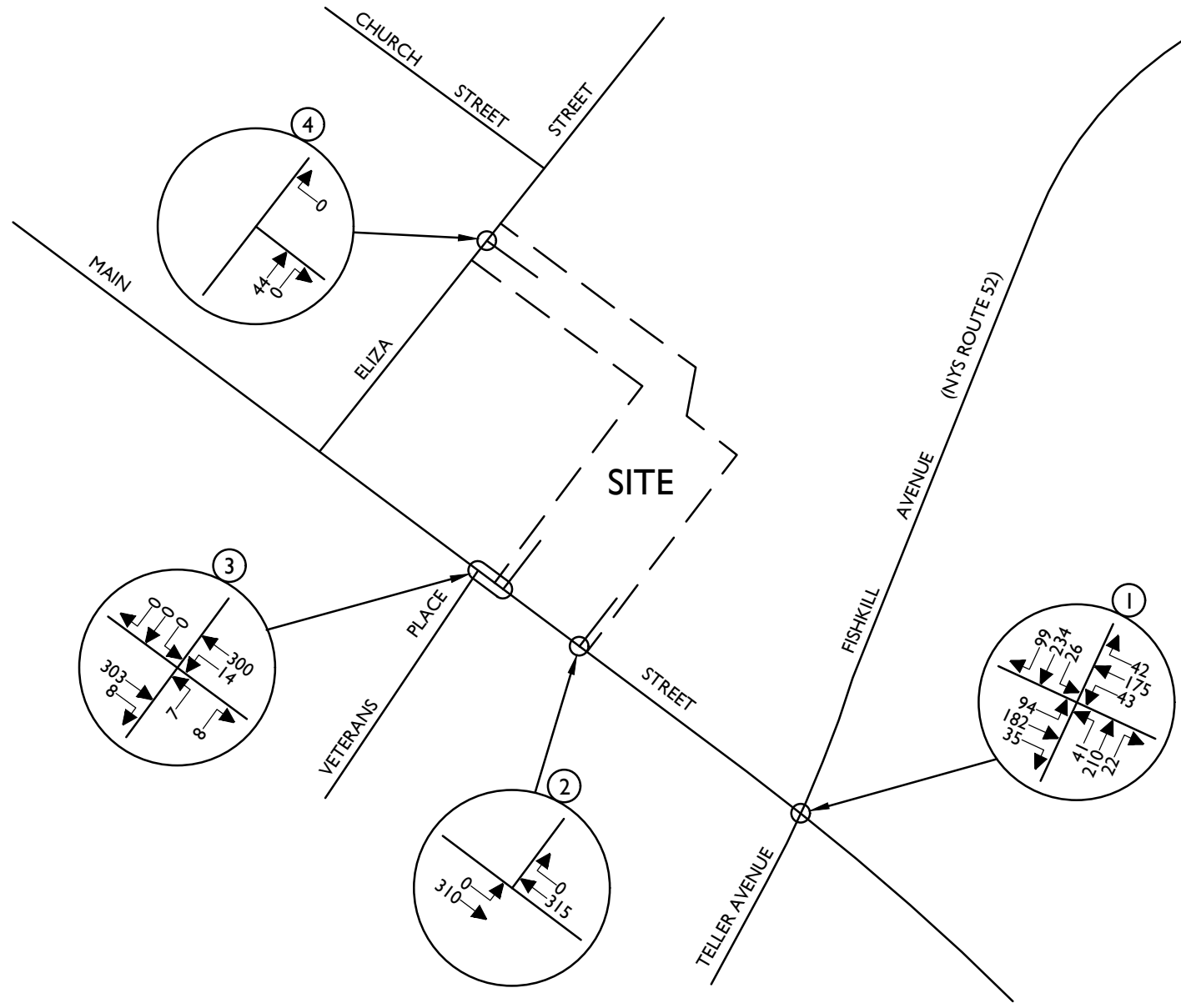
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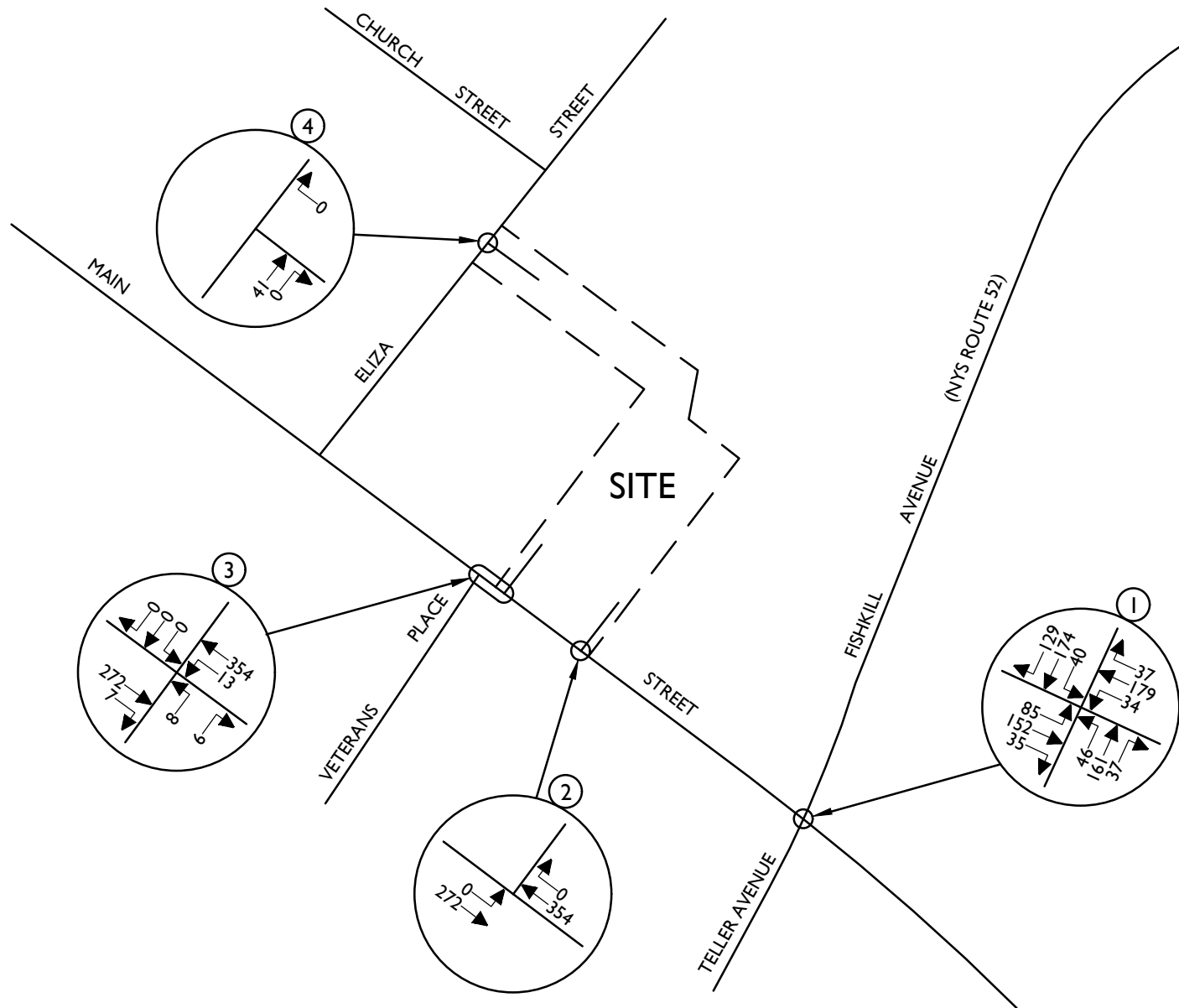
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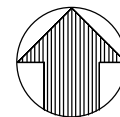
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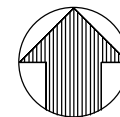
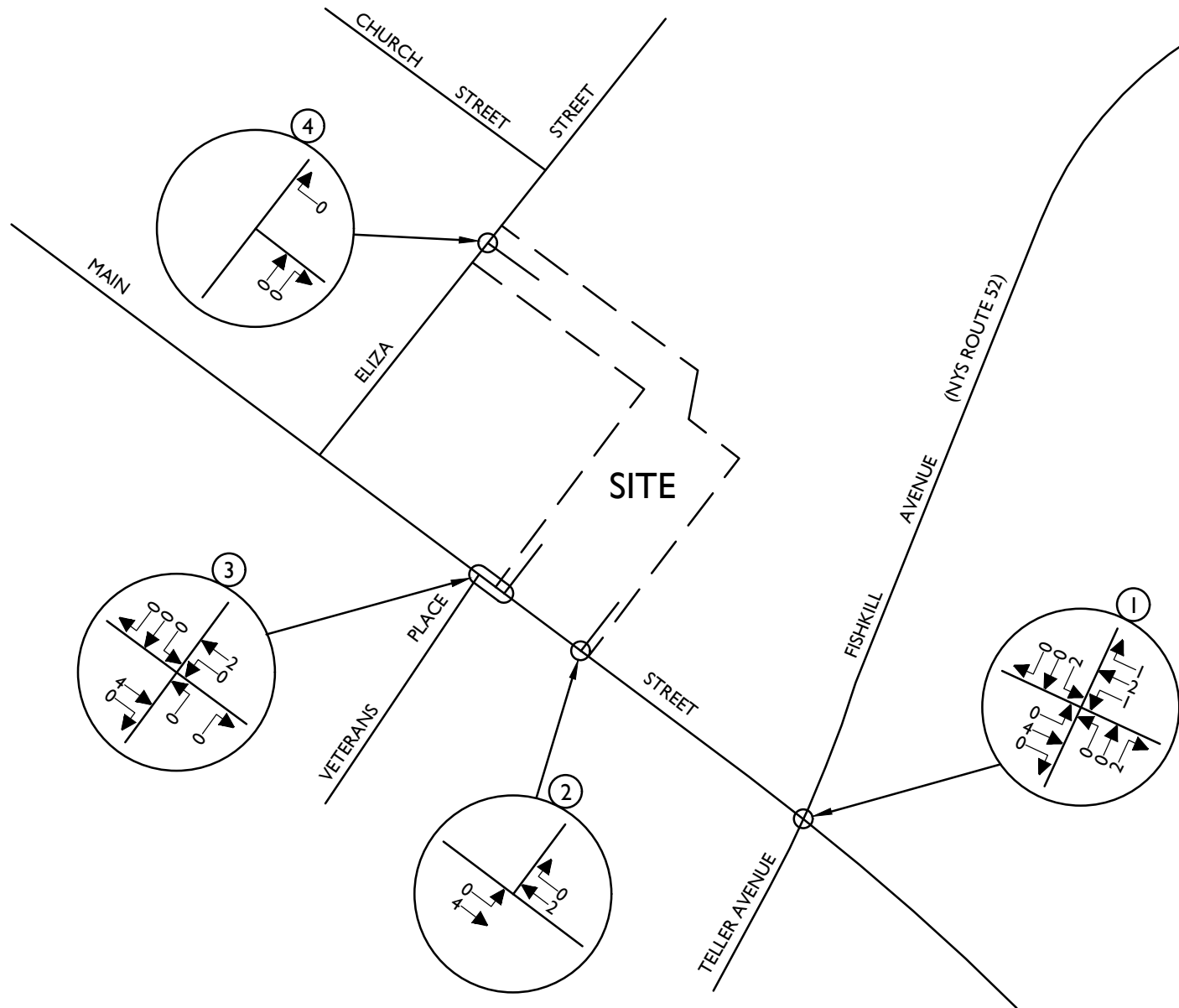
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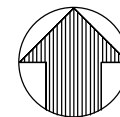
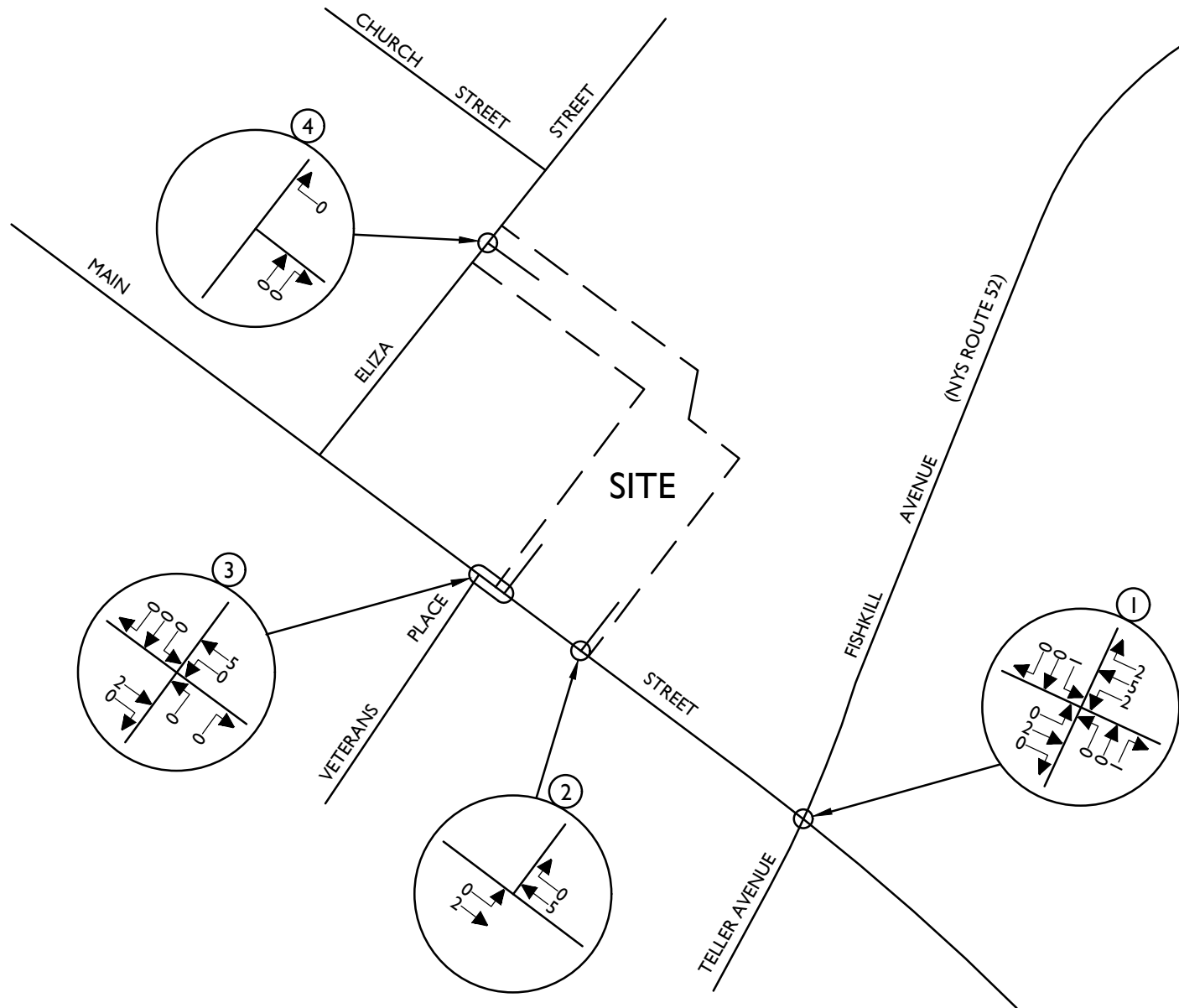
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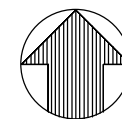
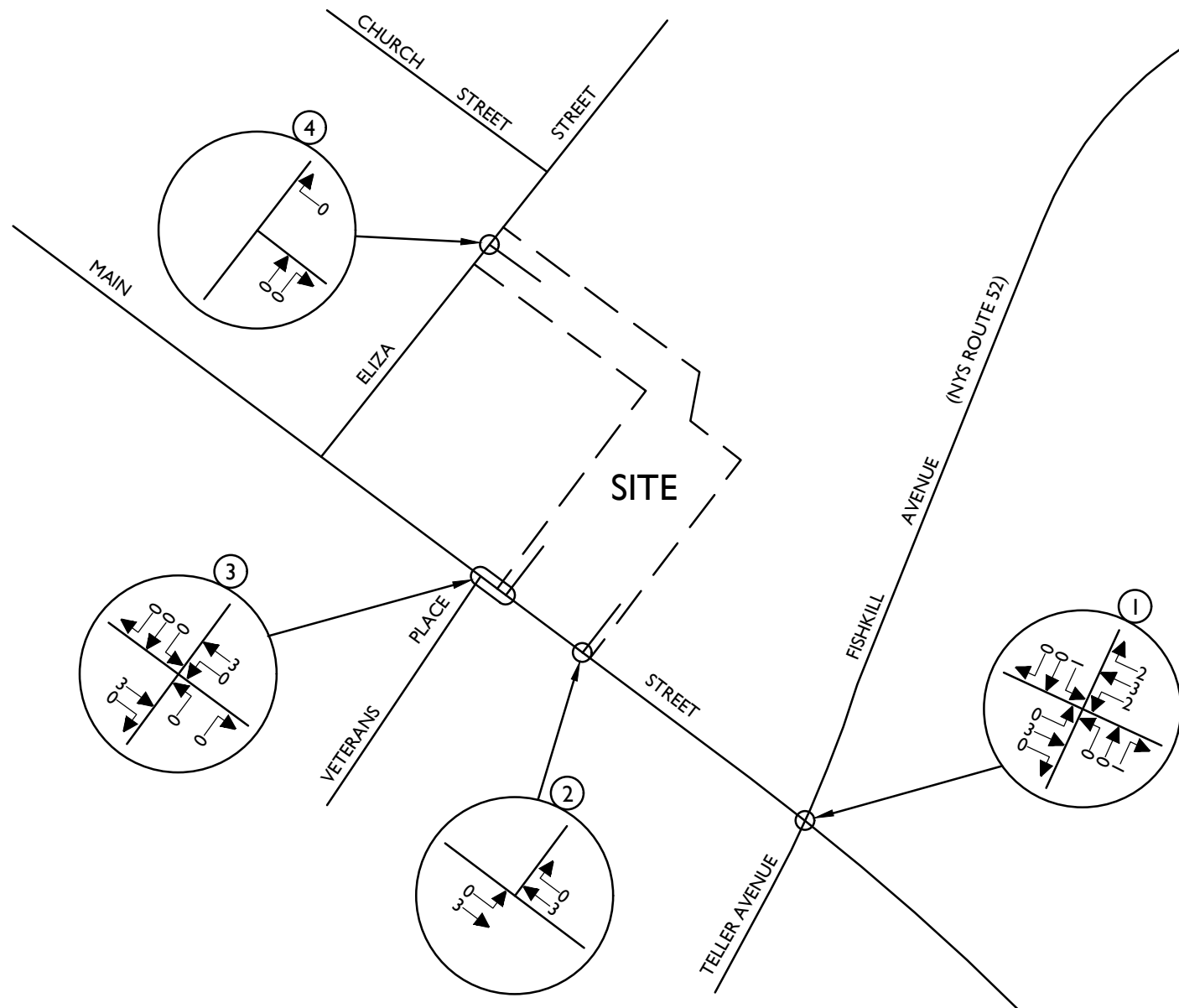
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SHEET TITLE:
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TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER:
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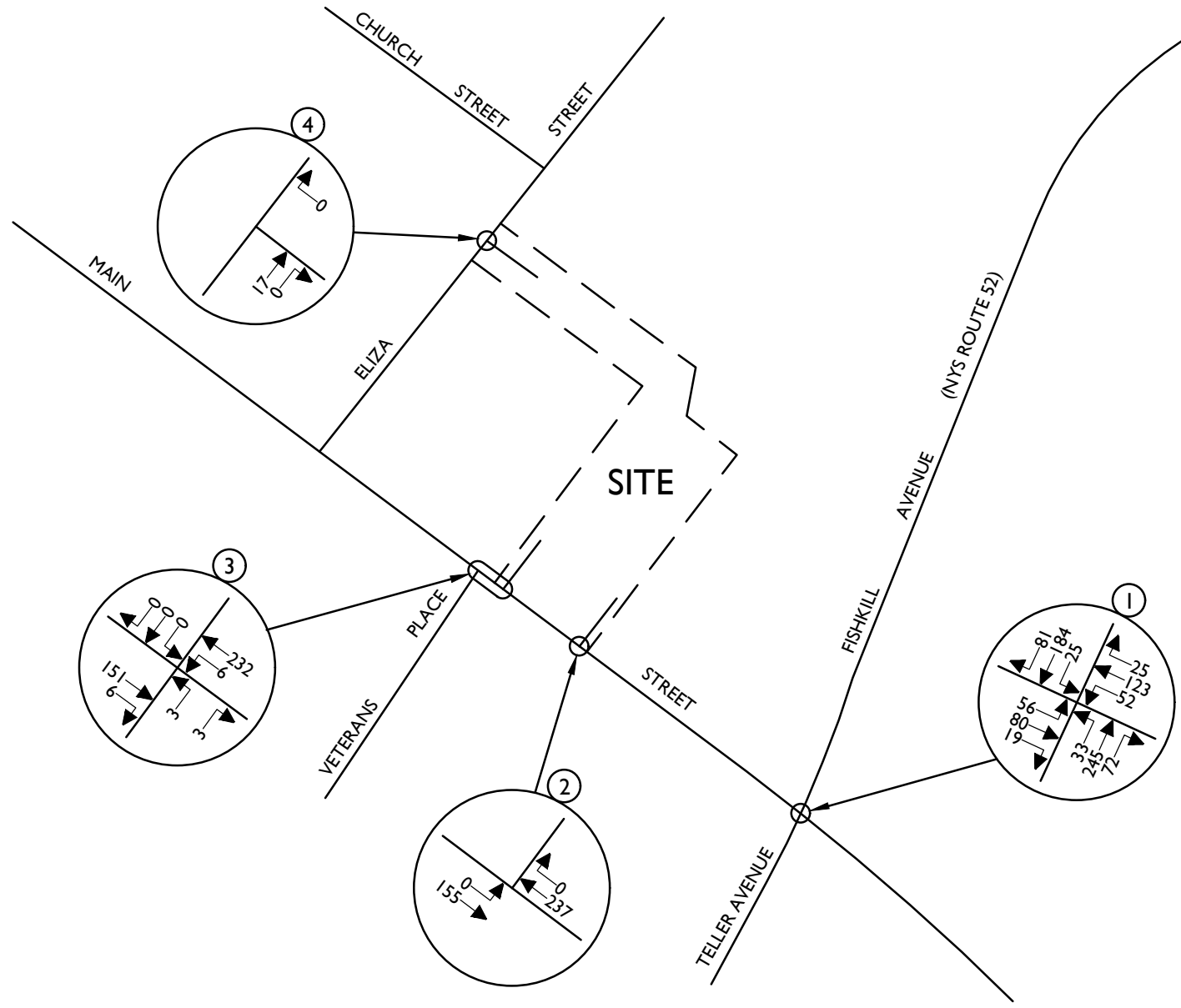
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SATURDAY PEAK HOUR

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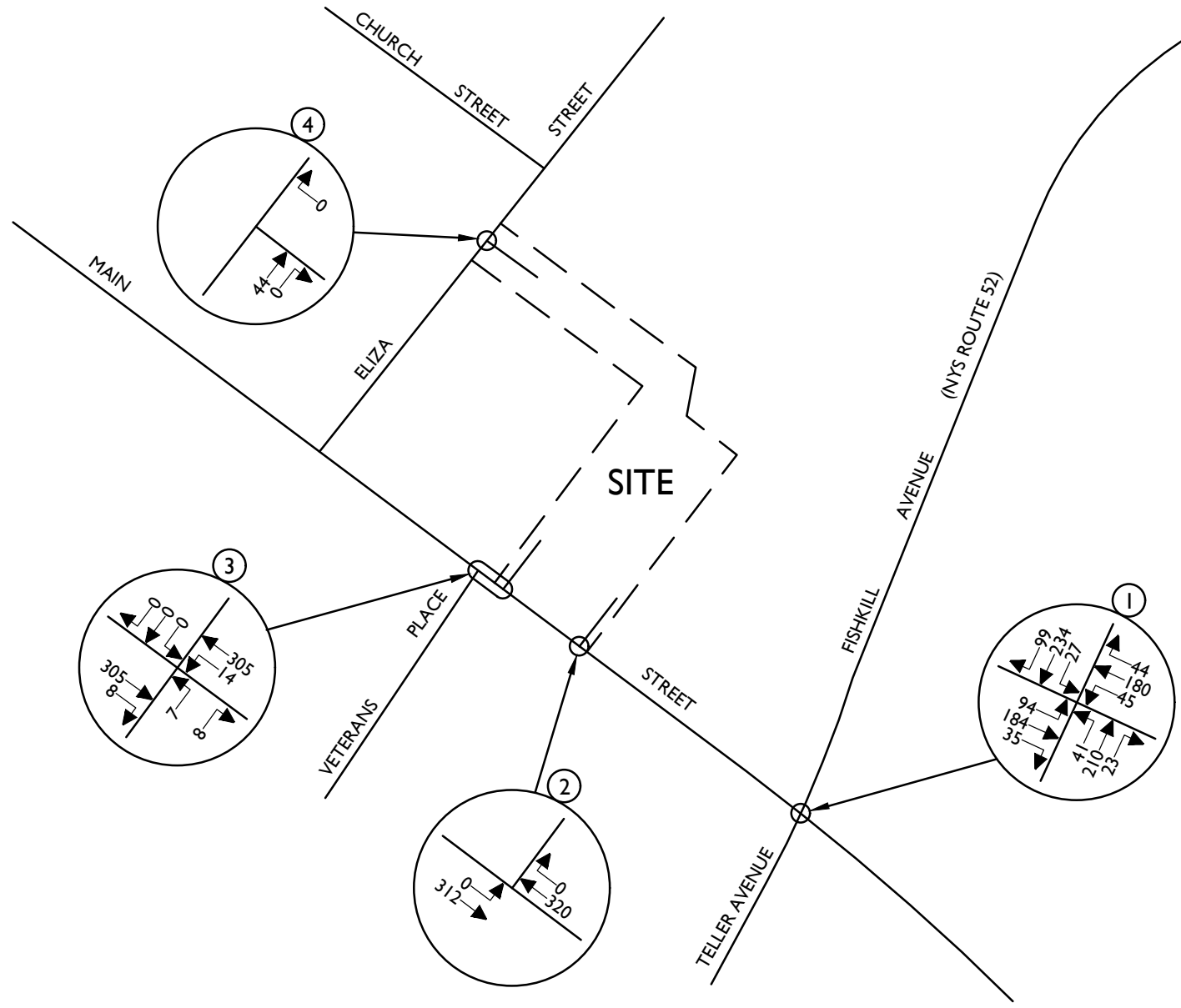
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WEEKDAY PEAK AM HOUR**

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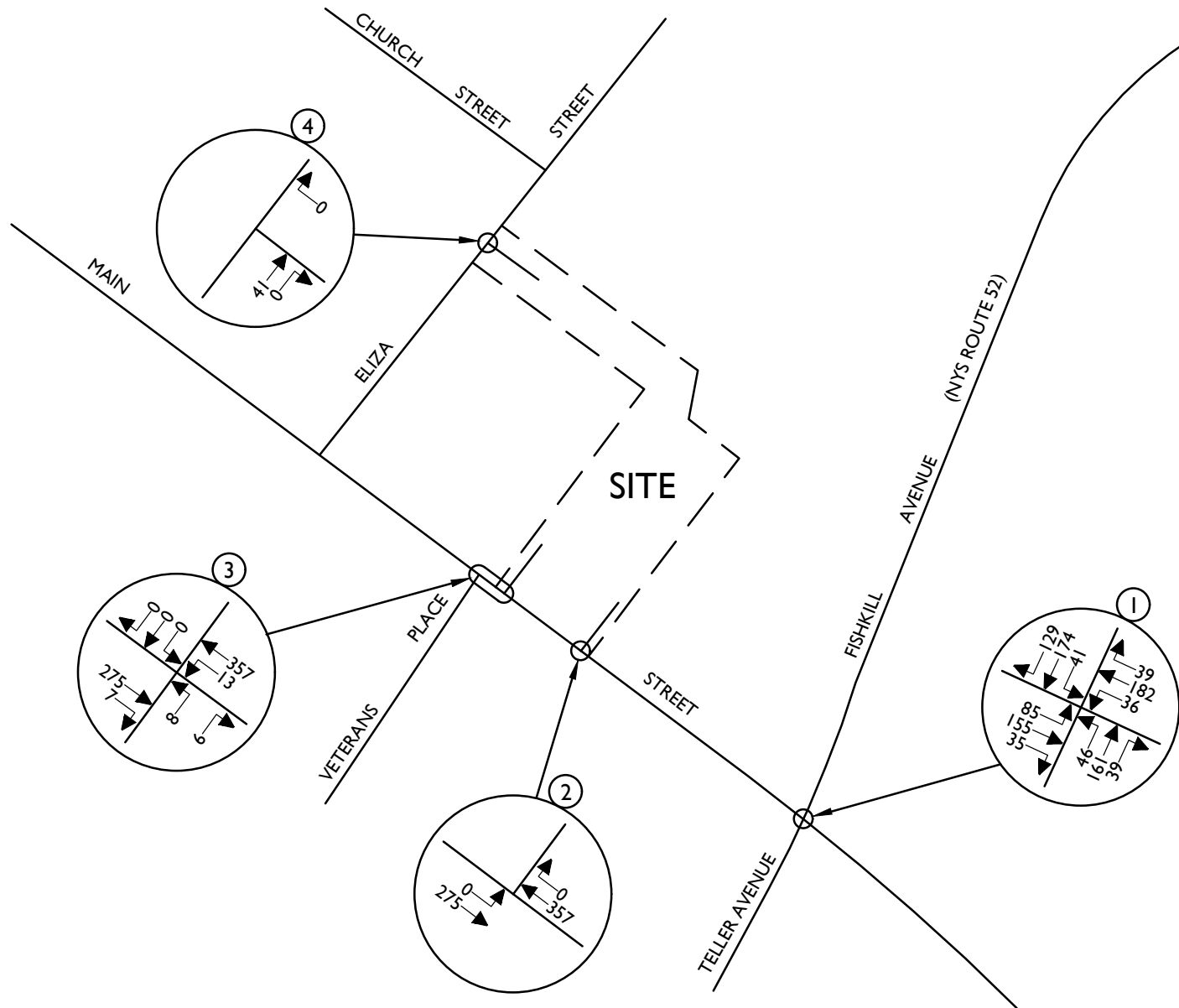
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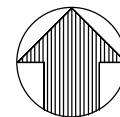
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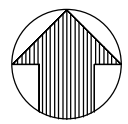
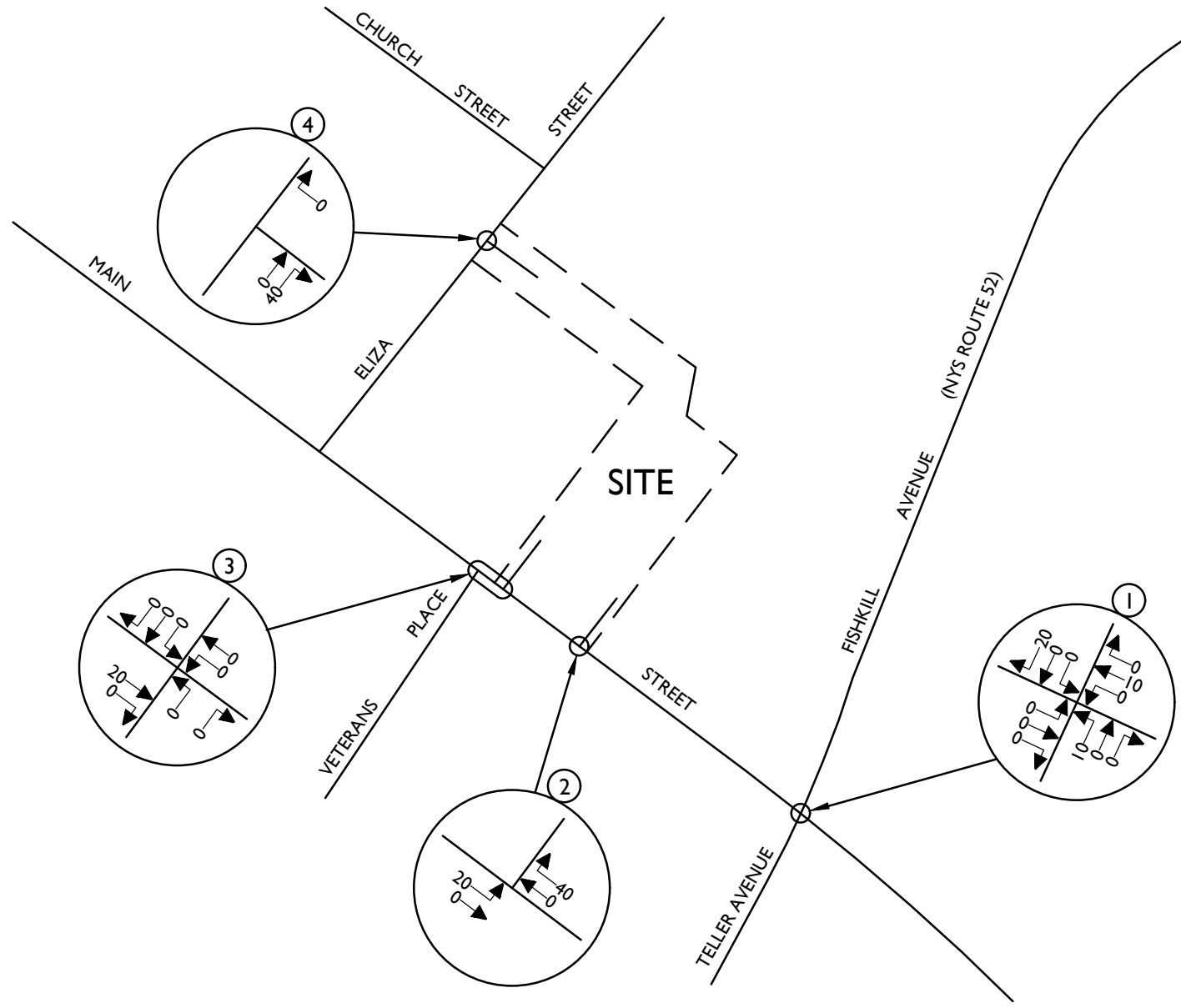
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SATURDAY PEAK HOUR

SHEET NUMBER:
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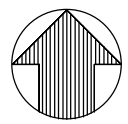
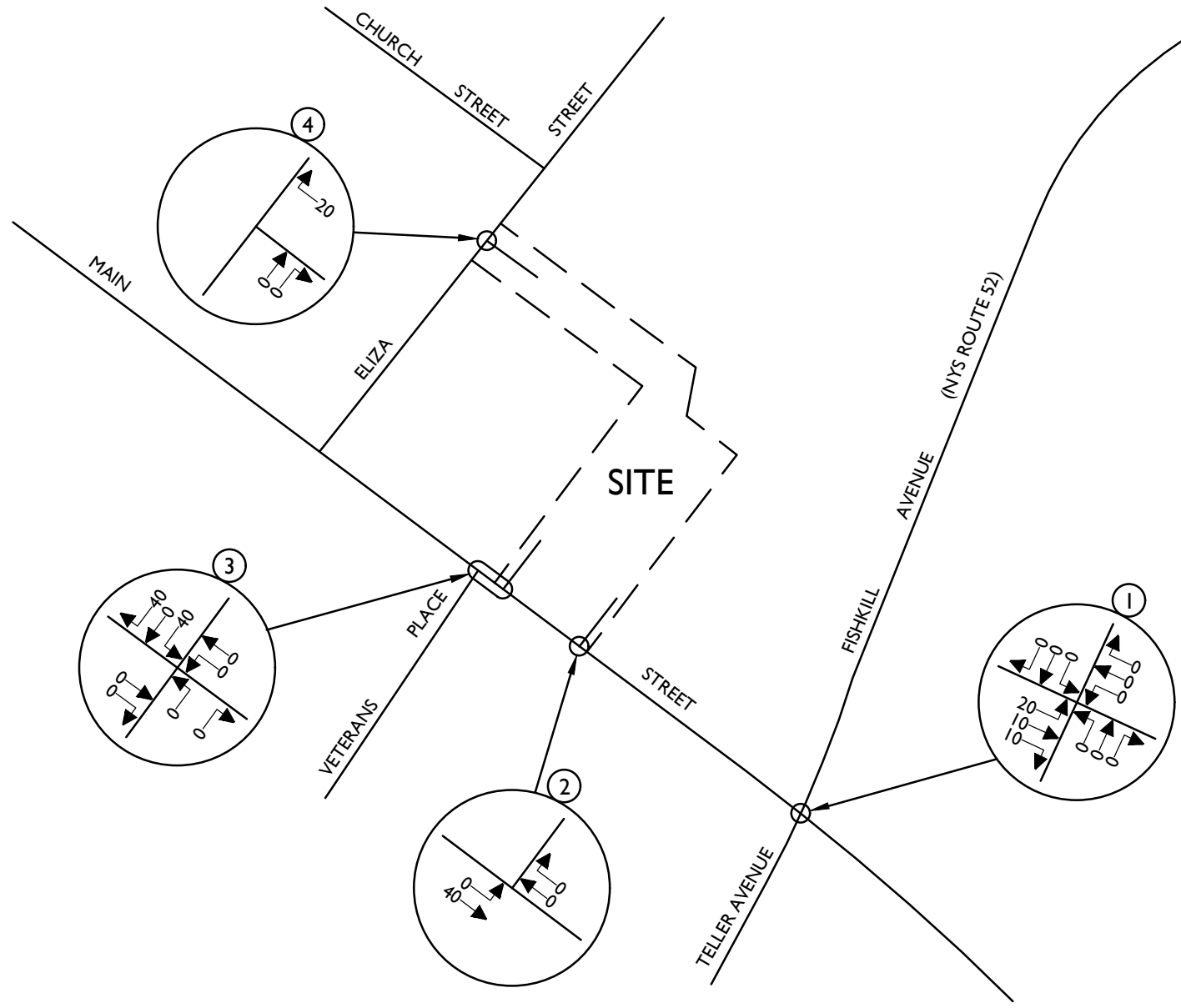
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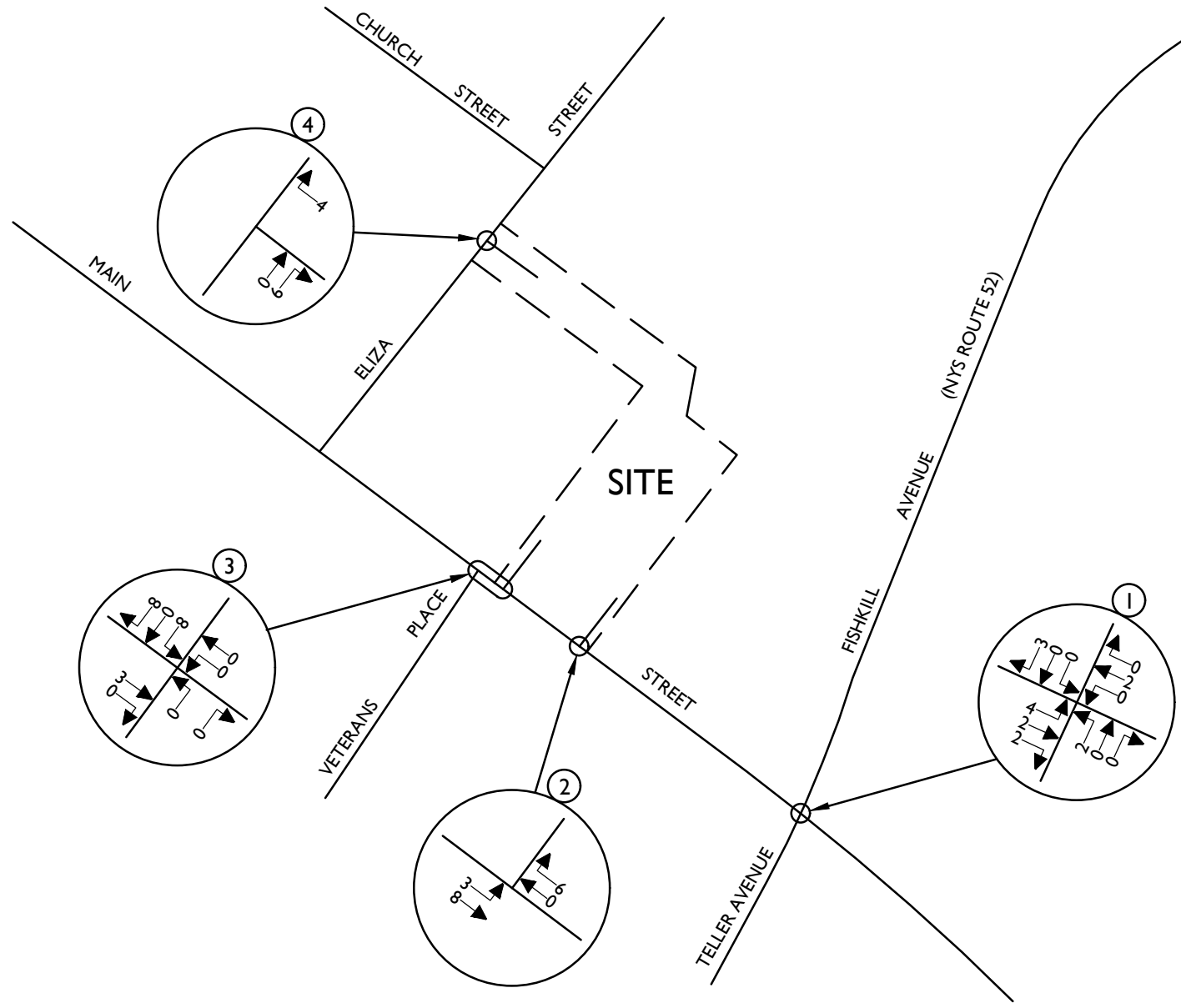
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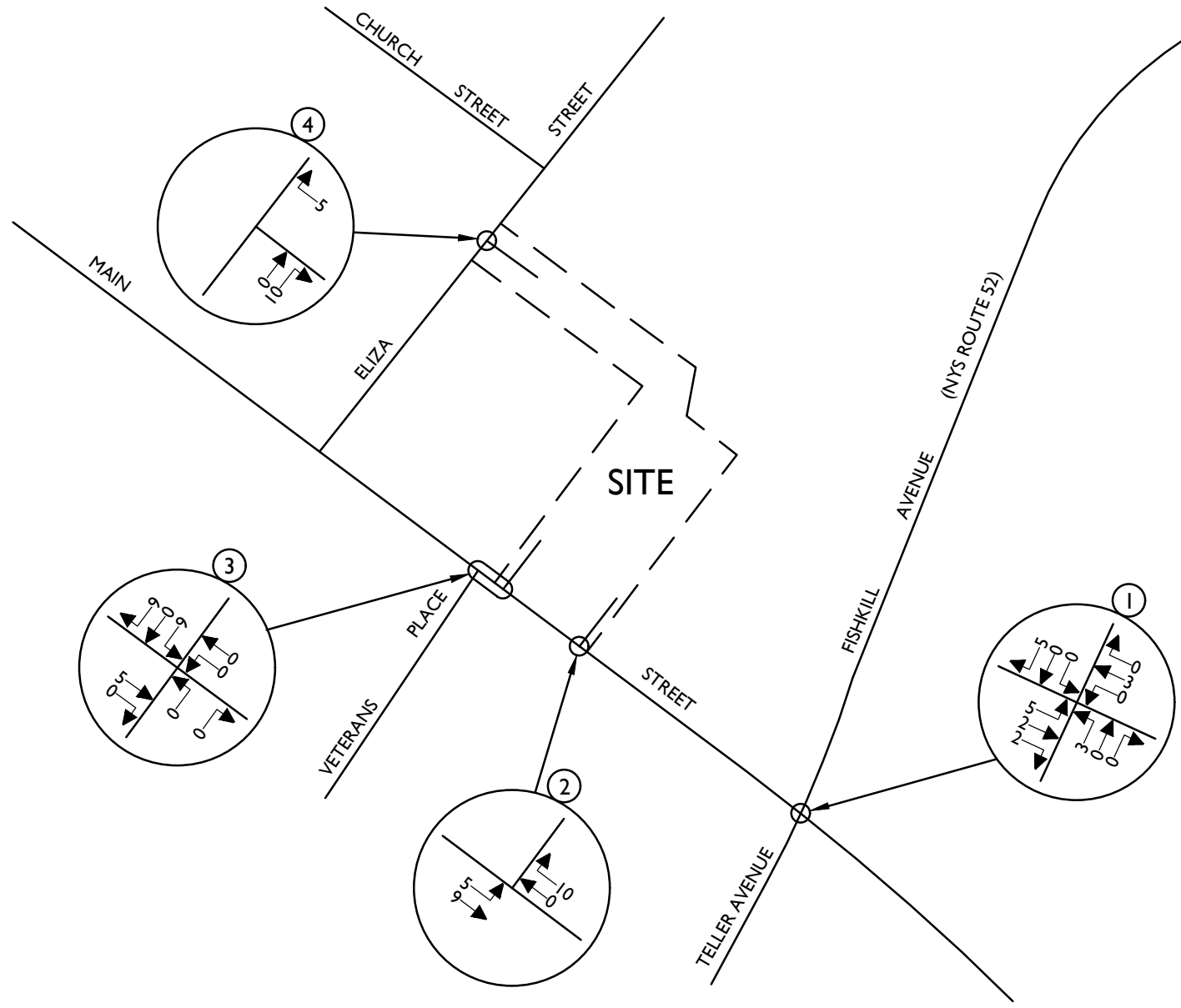
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PROJECT NUMBER:	DRAWING NAME:		
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SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER:
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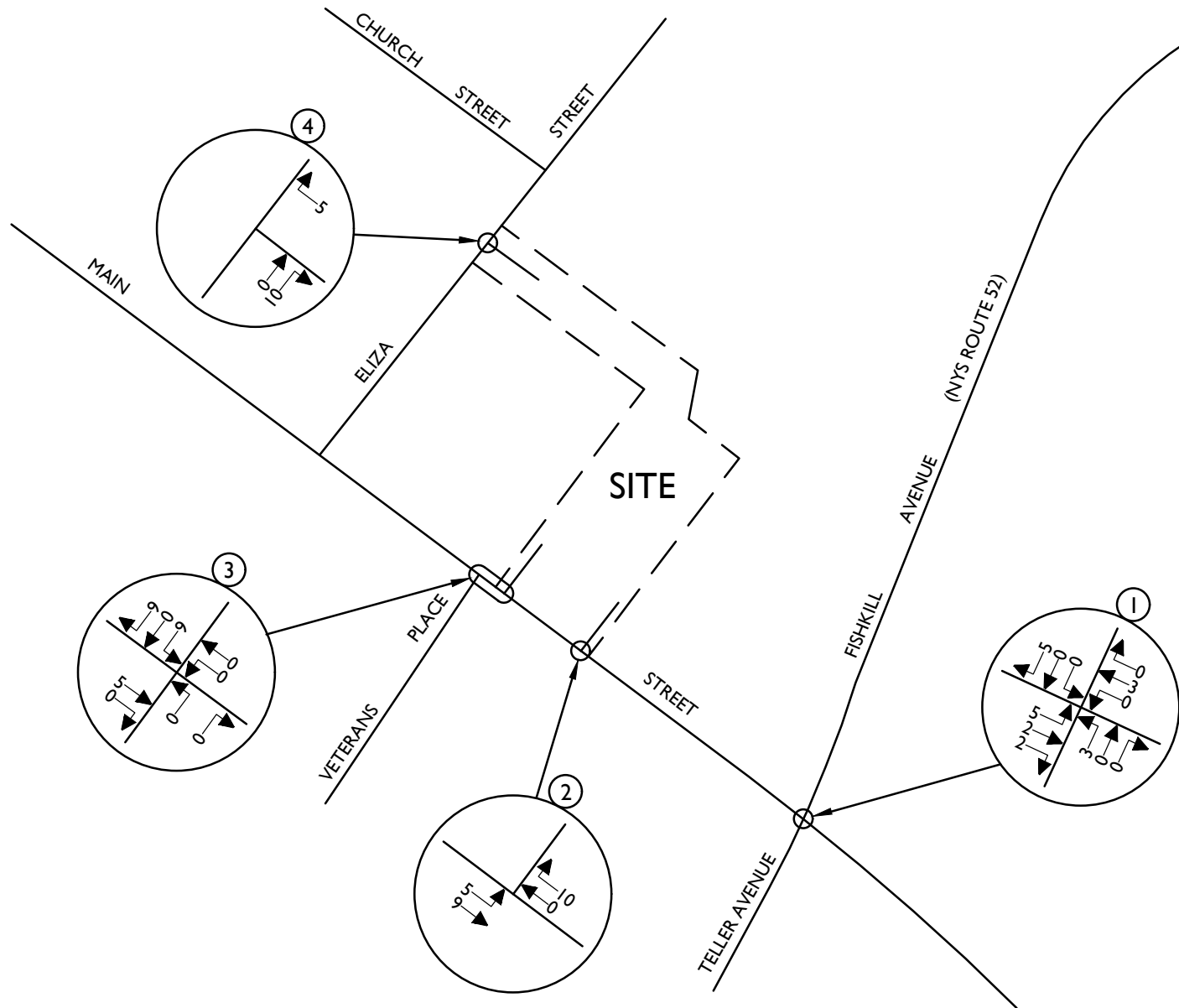
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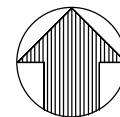
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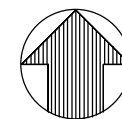
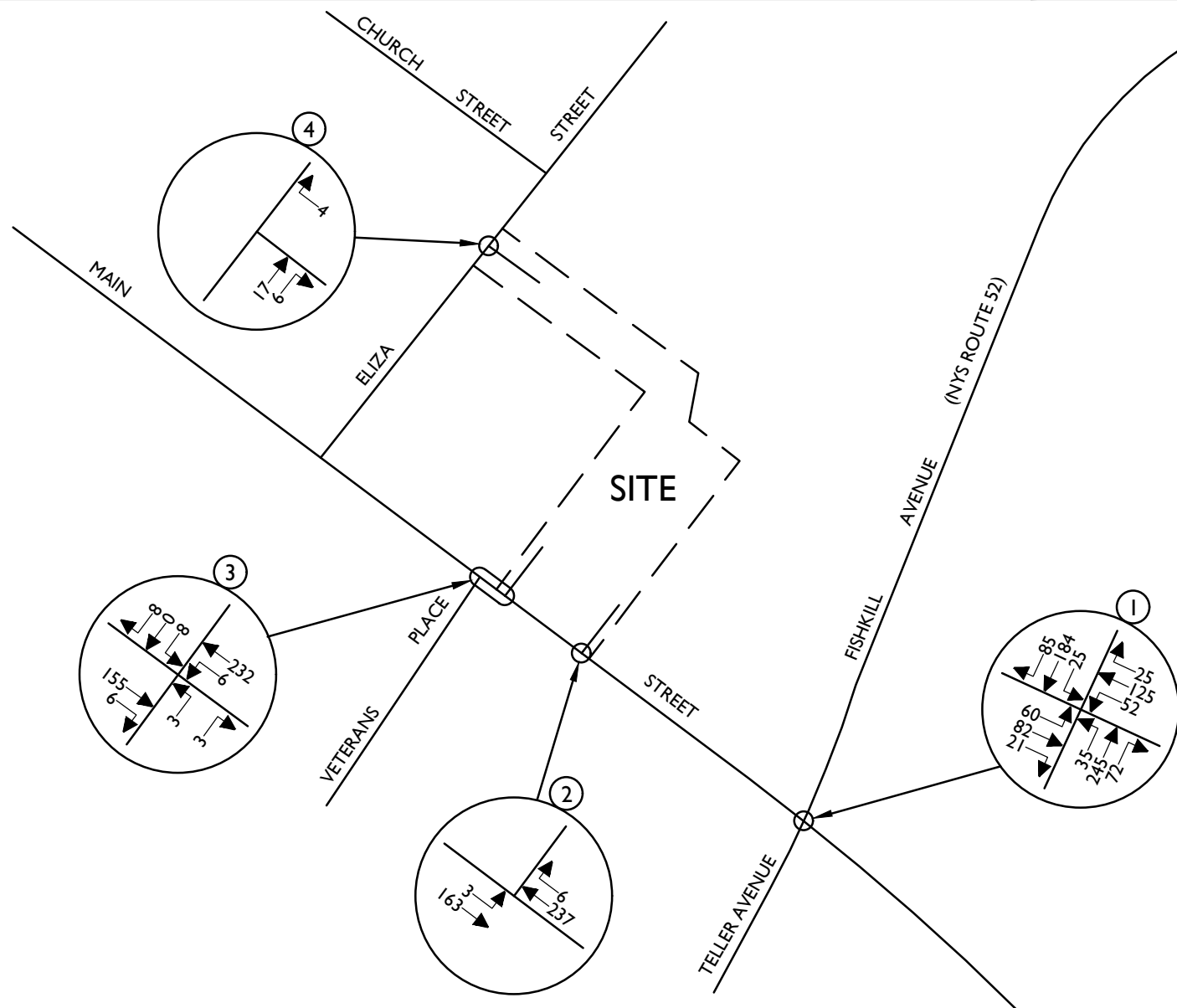
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SATURDAY PEAK HOUR

SHEET NUMBER:
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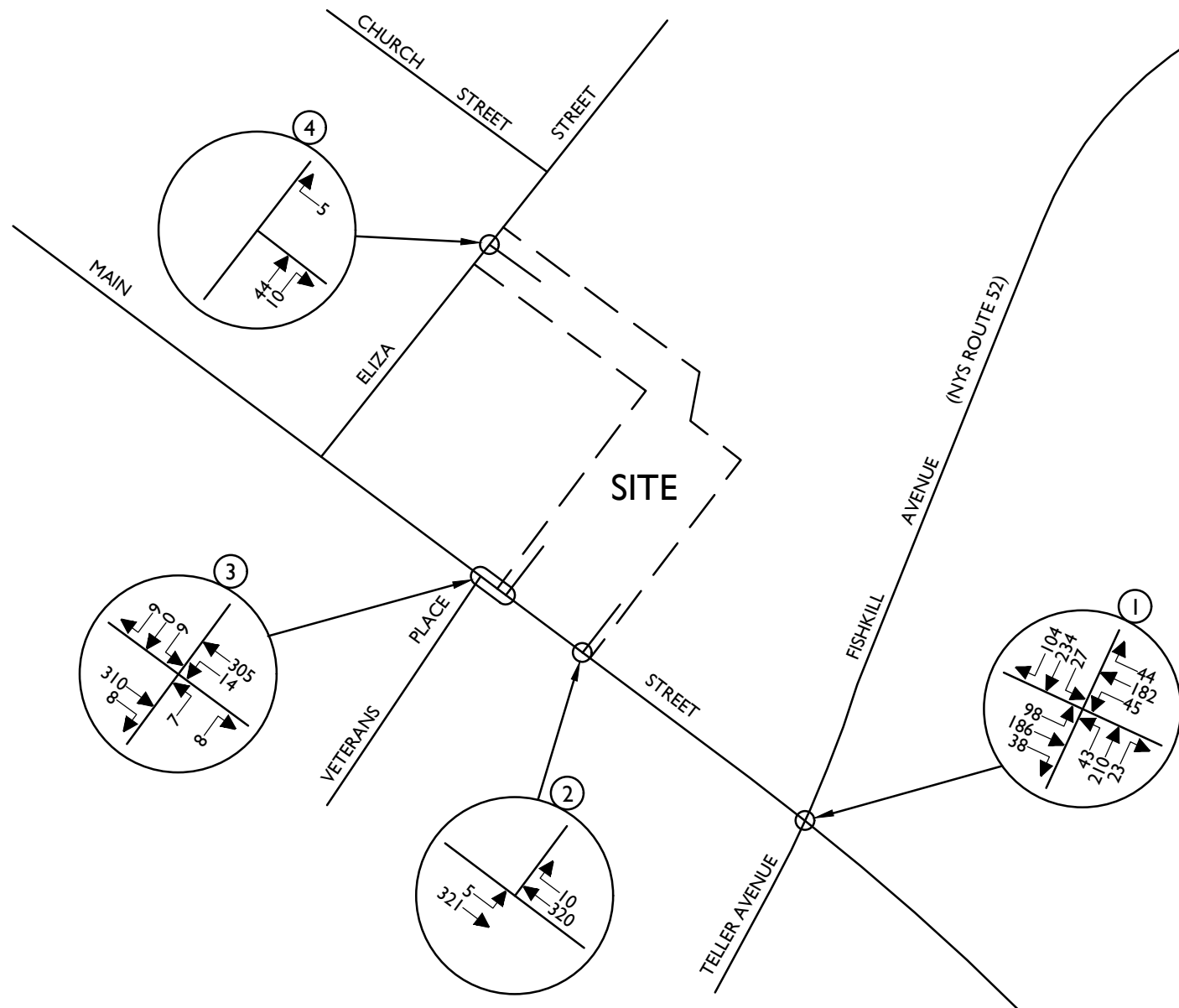
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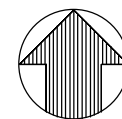
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SHEET NUMBER:
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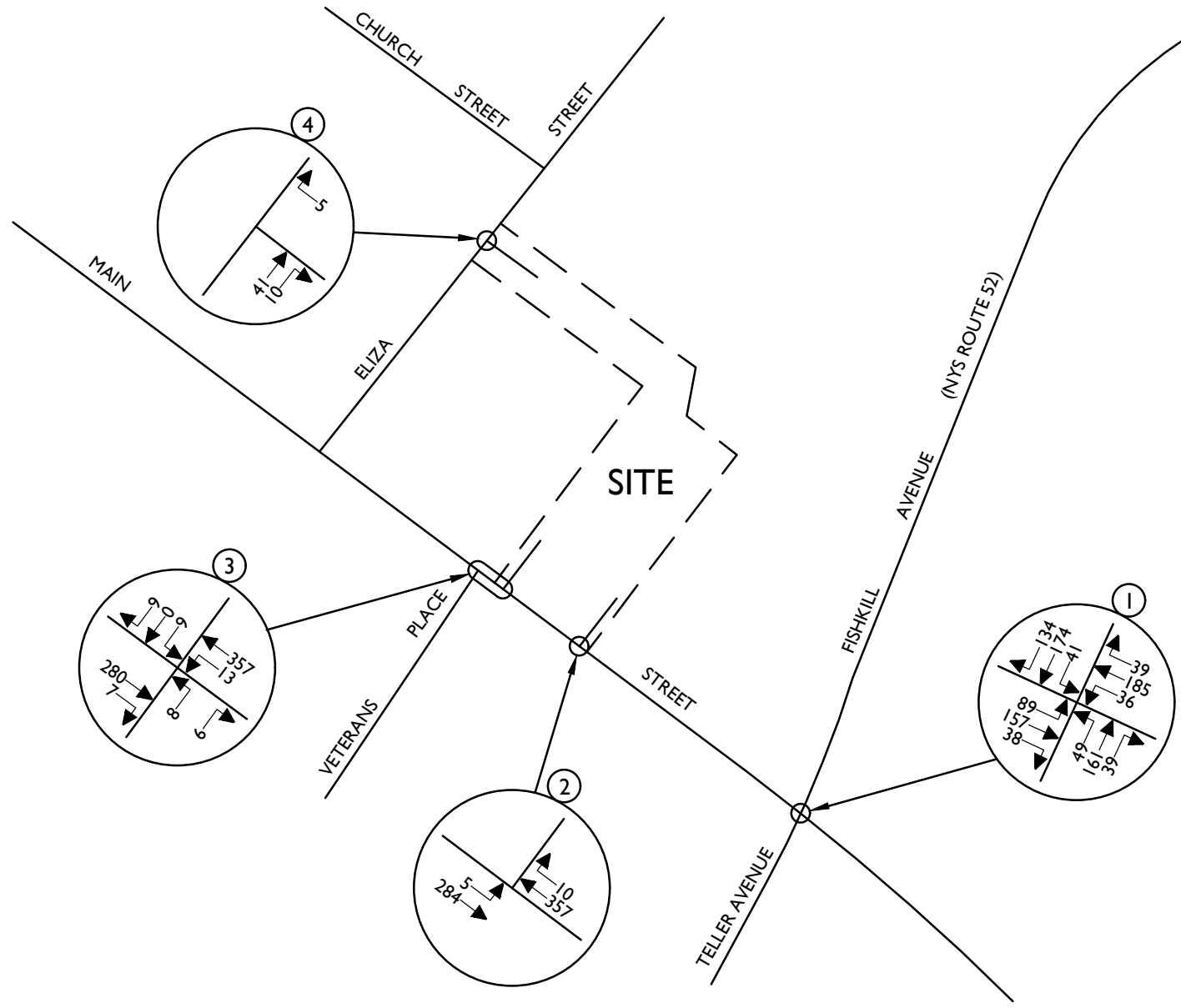
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PROJECT NUMBER:	DRAWING NAME:		
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SHEET TITLE:
**2026 BUILD TRAFFIC VOLUMES
SATURDAY PEAK HOUR**

SHEET NUMBER:
21

Appendix

Appendix B | Tables

Table No. 2
Level of Service Summary Table

				2021 Existing			2026 No-Build			2026 Build								
				AM		PM		SAT	AM		PM		SAT	AM		PM		SAT
1	Main Street & Fishkill Avenue/Teller Avenue			Signalized														
							Main Street	EB	LTR	B (15.2)	B (19.3)	B (17.3)	B (15.7)	C (21.2)	B (18.1)	B (15.9)	C (21.8)	B (18.5)
							Main Street	WB	LTR	B (15.9)	B (17.0)	B (16.2)	B (16.5)	B (18.0)	B (16.9)	B (16.5)	B (18.1)	B (16.9)
							Teller Avenue	NB	LTR	B (14.2)	B (12.5)	B (11.7)	B (15.0)	B (12.9)	B (12.0)	B (15.1)	B (12.9)	B (12.0)
							Fishkill Avenue	SB	LTR	B (12.8)	B (13.5)	B (12.7)	B (13.3)	B (14.1)	B (13.2)	B (13.4)	B (14.2)	B (13.3)
				Overall			B (14.2)	B (15.5)	B (14.4)	B (14.9)	B (16.5)	B (15.0)	B (15.0)	B (16.7)	B (15.2)			
2	Main Street & Site Entry Driveway			Unsignalized														
							Main Street	EB	LT	-	-	-	-	-	-	-	-	A (7.8)
3	Main Street & Veterans Place/Site Exit Driveway			Unsignalized														
							Main Street	WB	LTR	A (7.7)	A (8.1)	A (8.0)	A (7.8)	A (8.2)	A (8.0)	A (7.8)	A (8.2)	A (8.1)
							Veterans Place	NB	LR	B (11.2)	B (13.0)	B (13.6)	B (11.6)	B (13.7)	B (13.6)	B (12.2)	B (14.8)	C (15.7)
							Site Exit Driveway	SB	LR	-	-	-	-	-	-	-	-	B (11.7)
4	Eliza Street & Site Access			Unsignalized														
							Site Access	WB	LR	-	-	-	-	-	-	-	A (8.4)	A (8.6)

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.

Appendix

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)	$v/c \leq 1.0$	$v/c \geq 1.0$
≤ 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)	$v/c \leq 1.0$	$v/c \geq 1.0$
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.

Level of Service Criteria For All-Way Stop-Controlled (AWSC) Unsignalized Intersections

The Levels of Service (LOS) for all-way stop-controlled (AWSC) intersections are given in Exhibit 21-8. As the exhibit notes, LOS F is assigned if the volume-to-capacity (v/c) ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

The Level of Service Criteria for AWSC unsignalized intersections are given in Exhibit 21-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 21-8 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	$v/c \leq 1.0$	$v/c \geq 1.0$
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

For approaches and intersection wide assessment, LOS is defined solely by control delay.

Appendix

Appendix D | Capacity Analysis

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	30	223	64	21	167	74	51	69	17	46	110	22
Future Volume (vph)	30	223	64	21	167	74	51	69	17	46	110	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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			0.99			0.98			0.99	
Frt		0.973			0.962			0.983			0.983	
Flt Protected		0.995			0.996			0.982			0.987	
Satd. Flow (prot)	0	1745	0	0	1736	0	0	1367	0	0	1402	0
Flt Permitted		0.951			0.958			0.836			0.895	
Satd. Flow (perm)	0	1666	0	0	1669	0	0	1150	0	0	1266	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	11		7	7		11	31		14	14		31
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	10%	5%	4%	2%	4%	2%	2%	4%	7%	5%	2%	2%
Parking (#/hr)									0			0
Adj. Flow (vph)	34	253	73	24	190	84	58	78	19	52	125	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	360	0	0	298	0	0	155	0	0	202	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	0.99	1.17	1.14	1.01	1.14	1.15	1.38	1.15	1.13	1.35	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	9	9		9	9		22	22		22	22	

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.47			0.39			0.35			0.42	
Control Delay		14.6			13.4			17.1			17.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.6			13.4			17.1			17.9	
Queue Length 50th (ft)		93			73			42			57	
Queue Length 95th (ft)		153			123			83			106	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		768			770			442			486	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.47			0.39			0.35			0.42	

Intersection Summary

Area Type: CBD

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street

 Ø2 (R)	 Ø4
35 s	30 s
 Ø6 (R)	 Ø8
35 s	30 s

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	30	223	64	21	167	74	51	69	17	46	110	22
Future Volume (veh/h)	30	223	64	21	167	74	51	69	17	46	110	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		0.99	0.97		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No				No				No			No
Adj Sat Flow, veh/h/ln	1596	1659	1596	1691	1759	1691	1651	1585	1651	1754	1684	1754
Adj Flow Rate, veh/h	34	253	73	24	190	84	58	78	19	52	125	25
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	4	4	4	4	4	4	2	2	2
Cap, veh/h	96	534	145	87	511	211	224	262	57	170	354	64
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	76	1156	313	59	1107	458	385	681	149	262	921	167
Grp Volume(v), veh/h	360	0	0	298	0	0	155	0	0	202	0	0
Grp Sat Flow(s),veh/h/ln	1545	0	0	1624	0	0	1215	0	0	1350	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear(g_c), s	10.2	0.0	0.0	7.6	0.0	0.0	5.0	0.0	0.0	6.5	0.0	0.0
Prop In Lane	0.09		0.20	0.08		0.28	0.37		0.12	0.26		0.12
Lane Grp Cap(c), veh/h	774	0	0	809	0	0	543	0	0	589	0	0
V/C Ratio(X)	0.47	0.00	0.00	0.37	0.00	0.00	0.29	0.00	0.00	0.34	0.00	0.00
Avail Cap(c_a), veh/h	774	0	0	809	0	0	543	0	0	589	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	11.5	0.0	0.0	13.9	0.0	0.0	14.3	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.0	1.6	0.0	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	3.6	0.0	0.0	2.8	0.0	0.0	1.6	0.0	0.0	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	0.0	0.0	12.8	0.0	0.0	15.2	0.0	0.0	15.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h	360				298				155			
Approach Delay, s/veh	14.2				12.8				15.2			
Approach LOS	B				B				B			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.0		30.0		35.0		30.0					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		25.0		30.0		25.0					
Max Q Clear Time (g_c+I1), s	12.2		7.0		9.6		8.5					
Green Ext Time (p_c), s	1.4		0.5		1.2		0.7					
Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

2021 Existing Traffic Volumes
3: Veterans Place & Main Street

Peak AM Hour
07/26/2021

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	134	5	5	209	3	3
Future Volume (vph)	134	5	5	209	3	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	12	9	11	12
Grade (%)	0%			-2%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1501	0	0	1522	1467	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1501	0	0	1522	1467	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	447			150	232	
Travel Time (s)	10.2			3.4	5.3	
Confl. Peds. (#/hr)		43	44		43	44
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	152	6	6	238	3	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	0	0	244	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.30	1.14	1.13	1.29	1.20	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2021 Existing Traffic Volumes
3: Veterans Place & Main Street

Peak AM Hour
07/26/2021

Intersection

Int Delay, s/veh 0.3

Movement SET SER NWL NWT NEL NER

Lane Configurations	↶			↷	↷	
Traffic Vol, veh/h	134	5	5	209	3	3
Future Vol, veh/h	134	5	5	209	3	3
Conflicting Peds, #/hr	0	43	44	0	43	44
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	0	-	-	0	0	-
Grade, %	0	-	-	-2	1	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	152	6	6	238	3	3

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	202	0	492	243
Stage 1	-	-	-	-	199	-
Stage 2	-	-	-	-	293	-
Critical Hdwy	-	-	4.12	-	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1370	-	522	790
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	745	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1317	-	484	736
Mov Cap-2 Maneuver	-	-	-	-	484	-
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	722	-

Approach SE NW NE

HCM Control Delay, s	0	0.2	11.2
HCM LOS			B

Minor Lane/Major MvmNELn1 NWL NWT SET SER

Capacity (veh/h)	584	1317	-	-	-
HCM Lane V/C Ratio	0.012	0.004	-	-	-
HCM Control Delay (s)	11.2	7.7	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	37	191	20	24	213	90	85	165	32	39	159	38
Future Volume (vph)	37	191	20	24	213	90	85	165	32	39	159	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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		1.00			0.99			0.97			0.98	
Frt		0.989			0.963			0.985			0.978	
Flt Protected		0.993			0.996			0.985			0.992	
Satd. Flow (prot)	0	1776	0	0	1739	0	0	1390	0	0	1394	0
Flt Permitted		0.916			0.968			0.847			0.910	
Satd. Flow (perm)	0	1636	0	0	1689	0	0	1175	0	0	1272	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	9		7	7		9	61		39	39		61
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%	6%	5%	2%	4%	2%	2%	2%	2%	3%	2%	3%
Parking (#/hr)									0			0
Adj. Flow (vph)	39	201	21	25	224	95	89	174	34	41	167	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	344	0	0	297	0	0	248	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	0.99	1.17	1.14	1.01	1.14	1.15	1.38	1.15	1.13	1.35	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	8	8		8	8		50	50		50	50	

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.35			0.44			0.66			0.51	
Control Delay		12.9			14.1			25.1			19.8	
Queue Delay		0.0			0.0			3.5			0.0	
Total Delay		12.9			14.1			28.6			19.8	
Queue Length 50th (ft)		63			87			94			73	
Queue Length 95th (ft)		111			149			#180			136	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		755			779			451			489	
Starvation Cap Reductn		0			0			83			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.35			0.44			0.81			0.51	

Intersection Summary

Area Type: CBD

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

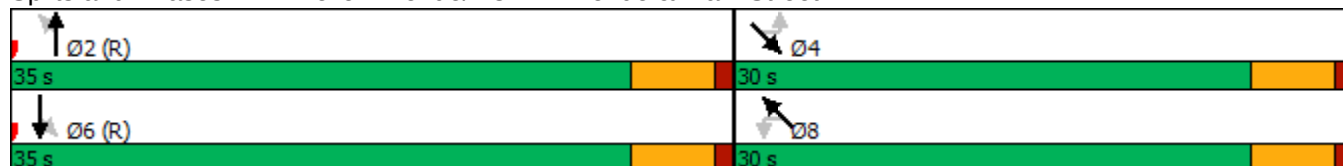
Natural Cycle: 55

Control Type: Pretimed

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street



2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	37	191	20	24	213	90	85	165	32	39	159	38
Future Volume (veh/h)	37	191	20	24	213	90	85	165	32	39	159	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	0.95		0.92	0.96		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1582	1646	1582	1691	1759	1691	1678	1611	1678	1754	1684	1754
Adj Flow Rate, veh/h	39	201	21	25	224	95	89	174	34	41	167	40
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, %	6	6	6	4	4	4	2	2	2	2	2	2
Cap, veh/h	129	576	56	85	522	209	186	312	55	119	390	86
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	142	1249	122	55	1131	452	298	812	143	141	1015	222
Grp Volume(v), veh/h	261	0	0	344	0	0	297	0	0	248	0	0
Grp Sat Flow(s),veh/h/ln	1513	0	0	1638	0	0	1252	0	0	1379	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	0.0	9.1	0.0	0.0	11.4	0.0	0.0	8.3	0.0	0.0
Prop In Lane	0.15		0.08	0.07		0.28	0.30		0.11	0.17		0.16
Lane Grp Cap(c), veh/h	762	0	0	815	0	0	554	0	0	595	0	0
V/C Ratio(X)	0.34	0.00	0.00	0.42	0.00	0.00	0.54	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	762	0	0	815	0	0	554	0	0	595	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.2	0.0	0.0	11.9	0.0	0.0	15.7	0.0	0.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	1.6	0.0	0.0	3.7	0.0	0.0	2.1	0.0	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	2.4	0.0	0.0	3.3	0.0	0.0	3.7	0.0	0.0	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.5	0.0	0.0	13.5	0.0	0.0	19.3	0.0	0.0	17.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h	261				344				297		248	
Approach Delay, s/veh	12.5				13.5				19.3		17.0	
Approach LOS	B				B				B		B	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.0		30.0		35.0		30.0					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		25.0		30.0		25.0					
Max Q Clear Time (g_c+I1), s	8.7		13.4		11.1		10.3					
Green Ext Time (p_c), s	1.0		1.0		1.4		0.8					
Intersection Summary												
HCM 6th Ctrl Delay			15.5									
HCM 6th LOS			B									

2021 Existing Traffic Volumes
3: Veterans Place & Main Street

Peak PM Hour
07/26/2021

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	275	7	13	273	6	7
Future Volume (vph)	275	7	13	273	6	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	12	9	11	12
Grade (%)	0%			-2%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997				0.927	
Flt Protected				0.998	0.977	
Satd. Flow (prot)	1504	0	0	1521	1460	0
Flt Permitted				0.998	0.977	
Satd. Flow (perm)	1504	0	0	1521	1460	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	447			150	232	
Travel Time (s)	10.2			3.4	5.3	
Confl. Peds. (#/hr)		43	44		43	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	289	7	14	287	6	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	296	0	0	301	13	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.30	1.14	1.13	1.29	1.20	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2021 Existing Traffic Volumes
3: Veterans Place & Main Street

Peak PM Hour
07/26/2021

Intersection

Int Delay, s/veh 0.5

Movement SET SER NWL NWT NEL NER

Lane Configurations

Traffic Vol, veh/h 275 7 13 273 6 7

Future Vol, veh/h 275 7 13 273 6 7

Conflicting Peds, #/hr 0 43 44 0 43 44

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - 0 -

Veh in Median Storage# - - 0 0 -

Grade, % 0 - - -2 1 -

Peak Hour Factor 95 95 95 95 95 95

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 289 7 14 287 6 7

Major/Minor Major1 Major2 Minor1

Conflicting Flow All 0 0 340 0 695 381

Stage 1 - - - - 337 -

Stage 2 - - - - 358 -

Critical Hdwy - - 4.12 - 6.62 6.32

Critical Hdwy Stg 1 - - - - 5.62 -

Critical Hdwy Stg 2 - - - - 5.62 -

Follow-up Hdwy - -2.218 -3.518 3.318

Pot Cap-1 Maneuver - - 1219 - 393 659

Stage 1 - - - - 710 -

Stage 2 - - - - 693 -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver - - 1172 - 361 614

Mov Cap-2 Maneuver - - - - 361 -

Stage 1 - - - - 674 -

Stage 2 - - - - 672 -

Approach SE NW NE

HCM Control Delay, s 0 0.4 13

HCM LOS B

Minor Lane/Major MvmNELn1 NWL NWT SET SER

Capacity (veh/h) 464 1172 - - -

HCM Lane V/C Ratio 0.029 0.012 - - -

HCM Control Delay (s) 13 8.1 0 - -

HCM Lane LOS B A A - -

HCM 95th %tile Q(veh) 0.1 0 - - -

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak SAT Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	42	146	34	36	158	117	77	138	32	31	163	34
Future Volume (vph)	42	146	34	36	158	117	77	138	32	31	163	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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			0.95			0.96	
Frt		0.979			0.949			0.983			0.980	
Flt Protected		0.991			0.994			0.985			0.993	
Satd. Flow (prot)	0	2005	0	0	1902	0	0	1527	0	0	1536	0
Flt Permitted		0.894			0.947			0.845			0.934	
Satd. Flow (perm)	0	1801	0	0	1808	0	0	1269	0	0	1429	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	25		15	15		25	106		83	83		106
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 (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%
Parking (#/hr)									0			0
Adj. Flow (vph)	45	155	36	38	168	124	82	147	34	33	173	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	236	0	0	330	0	0	263	0	0	242	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	0.86	1.02	0.99	0.88	0.99	1.01	1.21	1.01	0.99	1.19	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	20	20		20	20		55	55		55	55	

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak SAT Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.28			0.40			0.54			0.44	
Control Delay		12.0			13.3			20.6			18.0	
Queue Delay		0.0			0.0			2.2			0.0	
Total Delay		12.0			13.3			22.7			18.0	
Queue Length 50th (ft)		55			81			79			69	
Queue Length 95th (ft)		98			138			146			126	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		831			834			488			549	
Starvation Cap Reductn		0			0			117			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.28			0.40			0.71			0.44	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street

 Ø2 (R)	 Ø4
35 s	30 s
 Ø6 (R)	 Ø8
35 s	30 s

2021 Existing Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak SAT Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	42	146	34	36	158	117	77	138	32	31	163	34
Future Volume (veh/h)	42	146	34	36	158	117	77	138	32	31	163	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.97	0.92		0.86	0.92		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1890	1817	1909	1986	1909	1864	1790	1864	1949	1871	1949
Adj Flow Rate, veh/h	45	155	36	38	168	124	82	147	34	33	173	36
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	550	118	114	459	308	201	320	67	107	454	87
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	224	1191	255	113	995	667	334	833	173	115	1180	226
Grp Volume(v), veh/h	236	0	0	330	0	0	263	0	0	242	0	0
Grp Sat Flow(s),veh/h/ln	1670	0	0	1776	0	0	1341	0	0	1521	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.2	0.0	0.0	7.7	0.0	0.0	8.5	0.0	0.0	7.1	0.0	0.0
Prop In Lane	0.19		0.15	0.12		0.38	0.31		0.13	0.14		0.15
Lane Grp Cap(c), veh/h	837	0	0	881	0	0	588	0	0	648	0	0
V/C Ratio(X)	0.28	0.00	0.00	0.37	0.00	0.00	0.45	0.00	0.00	0.37	0.00	0.00
Avail Cap(c_a), veh/h	837	0	0	881	0	0	588	0	0	648	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.8	0.0	0.0	11.5	0.0	0.0	14.9	0.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.2	0.0	0.0	2.4	0.0	0.0	1.6	0.0	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	2.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	0.0	0.0	12.7	0.0	0.0	17.3	0.0	0.0	16.2	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		236			330			263			242	
Approach Delay, s/veh		11.7			12.7			17.3			16.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.0		30.0		35.0		30.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		30.0		25.0		30.0		25.0				
Max Q Clear Time (g_c+I1), s		7.2		10.5		9.7		9.1				
Green Ext Time (p_c), s		0.9		1.0		1.4		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				14.4								
HCM 6th LOS				B								

2021 Existing Traffic Volumes
3: Veterans Place & Main Street

Peak SAT Hour
07/26/2021

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	247	6	12	322	7	5
Future Volume (vph)	247	6	12	322	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	12	9	11	12
Grade (%)	0%			-2%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997				0.944	
Flt Protected				0.998	0.972	
Satd. Flow (prot)	1504	0	0	1521	1480	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	1504	0	0	1521	1480	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	447			150	232	
Travel Time (s)	10.2			3.4	5.3	
Confl. Peds. (#/hr)		43	44		43	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	260	6	13	339	7	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	266	0	0	352	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.30	1.14	1.13	1.29	1.20	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2021 Existing Traffic Volumes
3: Veterans Place & Main Street

Peak SAT Hour
07/26/2021

Intersection						
Int Delay, s/veh	0.4					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	247	6	12	322	7	5
Future Vol, veh/h	247	6	12	322	7	5
Conflicting Peds, #/hr	0	43	44	0	43	44
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	260	6	13	339	7	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	310	0	715	351
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	408	-
Critical Hdwy	-	-	4.12	-	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1250	-	382	686
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1202	-	351	639
Mov Cap-2 Maneuver	-	-	-	-	351	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	636	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.3		13.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	432	1202	-	-	-	
HCM Lane V/C Ratio	0.029	0.011	-	-	-	
HCM Control Delay (s)	13.6	8	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile O(veh)	0.1	0	-	-	-	

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	33	245	72	25	184	81	56	80	19	52	123	25
Future Volume (vph)	33	245	72	25	184	81	56	80	19	52	123	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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			0.99			0.98			0.99	
Frt		0.972			0.962			0.983			0.983	
Flt Protected		0.995			0.996			0.982			0.987	
Satd. Flow (prot)	0	1743	0	0	1736	0	0	1366	0	0	1402	0
Flt Permitted		0.946			0.950			0.828			0.884	
Satd. Flow (perm)	0	1656	0	0	1655	0	0	1139	0	0	1250	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	11		7	7		11	31		14	14		31
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	10%	5%	4%	2%	4%	2%	2%	4%	7%	5%	2%	2%
Parking (#/hr)									0			0
Adj. Flow (vph)	38	278	82	28	209	92	64	91	22	59	140	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	398	0	0	329	0	0	177	0	0	227	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	0.99	1.17	1.14	1.01	1.14	1.15	1.38	1.15	1.13	1.35	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	9	9		9	9		22	22		22	22	

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.52			0.43			0.40			0.47	
Control Delay		15.5			14.0			18.1			19.1	
Queue Delay		0.0			0.0			0.7			0.0	
Total Delay		15.5			14.0			18.8			19.1	
Queue Length 50th (ft)		105			83			50			66	
Queue Length 95th (ft)		173			139			96			121	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		764			763			438			480	
Starvation Cap Reductn		0			0			85			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.52			0.43			0.50			0.47	

Intersection Summary

Area Type: CBD

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street

 Ø2 (R)	 Ø4
35 s	30 s
 Ø6 (R)	 Ø8
35 s	30 s

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	33	245	72	25	184	81	56	80	19	52	123	25
Future Volume (veh/h)	33	245	72	25	184	81	56	80	19	52	123	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		0.99	0.98		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1596	1659	1596	1691	1759	1691	1651	1585	1651	1754	1684	1754
Adj Flow Rate, veh/h	38	278	82	28	209	92	64	91	22	59	140	28
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	4	4	4	4	4	4	2	2	2
Cap, veh/h	97	527	146	91	507	209	218	269	58	172	352	64
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	80	1142	317	66	1098	452	371	698	152	265	916	166
Grp Volume(v), veh/h	398	0	0	329	0	0	177	0	0	227	0	0
Grp Sat Flow(s),veh/h/ln	1539	0	0	1616	0	0	1221	0	0	1346	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear(g_c), s	11.6	0.0	0.0	8.6	0.0	0.0	5.9	0.0	0.0	7.5	0.0	0.0
Prop In Lane	0.10		0.21	0.09		0.28	0.36		0.12	0.26		0.12
Lane Grp Cap(c), veh/h	771	0	0	806	0	0	545	0	0	588	0	0
V/C Ratio(X)	0.52	0.00	0.00	0.41	0.00	0.00	0.32	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	771	0	0	806	0	0	545	0	0	588	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.6	0.0	0.0	11.7	0.0	0.0	14.1	0.0	0.0	14.6	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0	1.5	0.0	0.0	1.6	0.0	0.0	1.9	0.0	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	4.1	0.0	0.0	3.1	0.0	0.0	1.9	0.0	0.0	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	0.0	0.0	13.3	0.0	0.0	15.7	0.0	0.0	16.5	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h	398		329				177				227	
Approach Delay, s/veh	15.0		13.3				15.7				16.5	
Approach LOS	B		B				B				B	
Timer - Assigned Phs	2		4				6				8	
Phs Duration (G+Y+Rc), s	35.0		30.0				35.0				30.0	
Change Period (Y+Rc), s	5.0		5.0				5.0				5.0	
Max Green Setting (Gmax), s	30.0		25.0				30.0				25.0	
Max Q Clear Time (g_c+I1), s	13.6		7.9				10.6				9.5	
Green Ext Time (p_c), s	1.6		0.6				1.3				0.8	
Intersection Summary												
HCM 6th Ctrl Delay	14.9											
HCM 6th LOS	B											

2026 No-Build Traffic Volumes
3: Veterans Place & Main Street

Peak AM Hour
07/26/2021

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	151	6	6	232	3	3
Future Volume (vph)	151	6	6	232	3	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	12	9	11	12
Grade (%)	0%			-2%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1501	0	0	1522	1467	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1501	0	0	1522	1467	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	447			150	232	
Travel Time (s)	10.2			3.4	5.3	
Confl. Peds. (#/hr)		43	44		43	44
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	172	7	7	264	3	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	0	271	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.30	1.14	1.13	1.29	1.20	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 No-Build Traffic Volumes
3: Veterans Place & Main Street

Peak AM Hour
07/26/2021

Intersection

Int Delay, s/veh 0.3

Movement SET SER NWL NWT NEL NER

Lane Configurations	↶			↷	↶	↷
Traffic Vol, veh/h	151	6	6	232	3	3
Future Vol, veh/h	151	6	6	232	3	3
Conflicting Peds, #/hr	0	43	44	0	43	44
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	0	-	-	0	0	-
Grade, %	0	-	-	-2	1	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	172	7	7	264	3	3

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	223	0	541	264
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	321	-
Critical Hdwy	-	-	4.12	-	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1346	-	487	769
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	722	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1294	-	451	716
Mov Cap-2 Maneuver	-	-	-	-	451	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	700	-

Approach SE NW NE

HCM Control Delay, s	0	0.2	11.6
HCM LOS			B

Minor Lane/Major MvmNELn1 NWL NWT SET SER

Capacity (veh/h)	553	1294	-	-	-
HCM Lane V/C Ratio	0.012	0.005	-	-	-
HCM Control Delay (s)	11.6	7.8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	41	210	23	27	234	99	94	184	35	45	180	44
Future Volume (vph)	41	210	23	27	234	99	94	184	35	45	180	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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		1.00			0.99			0.98			0.98	
Frt		0.989			0.963			0.985			0.978	
Flt Protected		0.993			0.996			0.985			0.992	
Satd. Flow (prot)	0	1776	0	0	1739	0	0	1391	0	0	1394	0
Flt Permitted		0.908			0.964			0.826			0.900	
Satd. Flow (perm)	0	1622	0	0	1683	0	0	1147	0	0	1258	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	9		7	7		9	61		39	39		61
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%	6%	5%	2%	4%	2%	2%	2%	2%	3%	2%	3%
Parking (#/hr)									0			0
Adj. Flow (vph)	43	221	24	28	246	104	99	194	37	47	189	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	288	0	0	378	0	0	330	0	0	282	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	0.99	1.17	1.14	1.01	1.14	1.15	1.38	1.15	1.13	1.35	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	8	8		8	8		50	50		50	50	

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.39			0.49			0.75			0.58	
Control Delay		13.4			14.8			30.5			21.8	
Queue Delay		0.0			0.0			6.7			0.0	
Total Delay		13.4			14.8			37.2			21.8	
Queue Length 50th (ft)		71			98			109			86	
Queue Length 95th (ft)		124			166			#234			159	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		748			776			441			483	
Starvation Cap Reductn		0			0			72			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.39			0.49			0.89			0.58	

Intersection Summary

Area Type: CBD

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

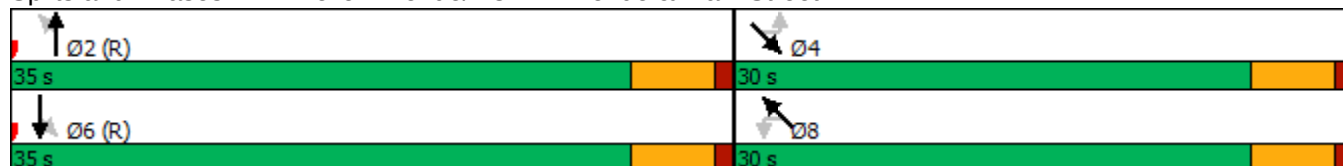
Natural Cycle: 55

Control Type: Pretimed

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street



2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	41	210	23	27	234	99	94	184	35	45	180	44
Future Volume (veh/h)	41	210	23	27	234	99	94	184	35	45	180	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	0.96		0.92	0.97		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No				No			No			No	
Adj Sat Flow, veh/h/ln	1582	1646	1582	1691	1759	1691	1678	1611	1678	1754	1684	1754
Adj Flow Rate, veh/h	43	221	24	28	246	104	99	194	37	47	189	46
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, %	6	6	6	4	4	4	2	2	2	2	2	2
Cap, veh/h	129	572	58	87	520	208	185	309	53	120	390	87
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	141	1239	125	59	1126	450	293	804	139	144	1014	226
Grp Volume(v), veh/h	288	0	0	378	0	0	330	0	0	282	0	0
Grp Sat Flow(s),veh/h/ln	1506	0	0	1634	0	0	1236	0	0	1384	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.6	0.0	0.0	10.2	0.0	0.0	13.7	0.0	0.0	9.7	0.0	0.0
Prop In Lane	0.15		0.08	0.07		0.28	0.30		0.11	0.17		0.16
Lane Grp Cap(c), veh/h	759	0	0	814	0	0	547	0	0	597	0	0
V/C Ratio(X)	0.38	0.00	0.00	0.46	0.00	0.00	0.60	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	759	0	0	814	0	0	547	0	0	597	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.5	0.0	0.0	12.2	0.0	0.0	16.3	0.0	0.0	15.3	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	1.9	0.0	0.0	4.9	0.0	0.0	2.7	0.0	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	2.7	0.0	0.0	3.8	0.0	0.0	4.3	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	0.0	14.1	0.0	0.0	21.2	0.0	0.0	18.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h	288				378				330		282	
Approach Delay, s/veh	12.9				14.1				21.2		18.0	
Approach LOS	B				B				C		B	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.0		30.0		35.0		30.0					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		25.0		30.0		25.0					
Max Q Clear Time (g_c+I1), s	9.6		15.7		12.2		11.7					
Green Ext Time (p_c), s	1.1		1.0		1.5		0.9					
Intersection Summary												
HCM 6th Ctrl Delay			16.5									
HCM 6th LOS			B									

2026 No-Build Traffic Volumes
3: Veterans Place & Main Street

Peak PM Hour
07/26/2021

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	305	8	14	305	7	8
Future Volume (vph)	305	8	14	305	7	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	12	9	11	12
Grade (%)	0%			-2%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997				0.928	
Flt Protected				0.998	0.977	
Satd. Flow (prot)	1504	0	0	1521	1462	0
Flt Permitted				0.998	0.977	
Satd. Flow (perm)	1504	0	0	1521	1462	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	447			150	232	
Travel Time (s)	10.2			3.4	5.3	
Confl. Peds. (#/hr)		43	44		43	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	321	8	15	321	7	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	329	0	0	336	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.30	1.14	1.13	1.29	1.20	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 No-Build Traffic Volumes
3: Veterans Place & Main Street

Peak PM Hour
07/26/2021

Intersection

Int Delay, s/veh 0.5

Movement SET SER NWL NWT NEL NER

Lane Configurations						
Traffic Vol, veh/h	305	8	14	305	7	8
Future Vol, veh/h	305	8	14	305	7	8
Conflicting Peds, #/hr	0	43	44	0	43	44
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	0	-	-	0	0	-
Grade, %	0	-	-	-2	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	321	8	15	321	7	8

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	373	0	763	413
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	394	-
Critical Hdwy	-	-	4.12	-	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	-	-2.218	-	-3.518	3.318	
Pot Cap-1 Maneuver	-	-1185	-	357	632	
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-1139	-	327	589	
Mov Cap-2 Maneuver	-	-	-	327	-	
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	646	-

Approach SE NW NE

HCM Control Delay, s	0	0.4	13.7
HCM LOS			B

Minor Lane/Major MvmNELn1 NWL NWT SET SER

Capacity (veh/h)	429	1139	-	-	-
HCM Lane V/C Ratio	0.037	0.013	-	-	-
HCM Control Delay (s)	13.7	8.2	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak SAT Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	46	161	39	41	174	129	85	155	35	36	182	39
Future Volume (vph)	46	161	39	41	174	129	85	155	35	36	182	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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			0.95			0.96	
Frt		0.979			0.949			0.983			0.980	
Flt Protected		0.991			0.994			0.985			0.993	
Satd. Flow (prot)	0	2004	0	0	1902	0	0	1528	0	0	1535	0
Flt Permitted		0.886			0.939			0.834			0.925	
Satd. Flow (perm)	0	1785	0	0	1793	0	0	1256	0	0	1416	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	25		15	15		25	106		83	83		106
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 (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%
Parking (#/hr)									0			0
Adj. Flow (vph)	49	171	41	44	185	137	90	165	37	38	194	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	366	0	0	292	0	0	273	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	0.86	1.02	0.99	0.88	0.99	1.01	1.21	1.01	0.99	1.19	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	20	20		20	20		55	55		55	55	

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak SAT Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.32			0.44			0.60			0.50	
Control Delay		12.4			14.0			22.5			19.2	
Queue Delay		0.0			0.0			3.1			0.0	
Total Delay		12.4			14.0			25.6			19.2	
Queue Length 50th (ft)		62			93			90			80	
Queue Length 95th (ft)		108			155			166			145	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		823			827			483			544	
Starvation Cap Reductn		0			0			108			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.32			0.44			0.78			0.50	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street

 Ø2 (R)	 Ø4
35 s	30 s
 Ø6 (R)	 Ø8
35 s	30 s

2026 No-Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak SAT Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	46	161	39	41	174	129	85	155	35	36	182	39
Future Volume (veh/h)	46	161	39	41	174	129	85	155	35	36	182	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.97	0.92		0.86	0.93		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1890	1817	1909	1986	1909	1864	1790	1864	1949	1871	1949
Adj Flow Rate, veh/h	49	171	41	44	185	137	90	165	37	38	194	41
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	548	121	118	454	306	200	326	66	108	450	88
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	218	1187	262	122	984	662	332	847	171	118	1170	228
Grp Volume(v), veh/h	261	0	0	366	0	0	292	0	0	273	0	0
Grp Sat Flow(s),veh/h/ln	1667	0	0	1768	0	0	1350	0	0	1516	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	0.0	8.7	0.0	0.0	9.7	0.0	0.0	8.3	0.0	0.0
Prop In Lane	0.19		0.16	0.12		0.37	0.31		0.13	0.14		0.15
Lane Grp Cap(c), veh/h	835	0	0	878	0	0	592	0	0	646	0	0
V/C Ratio(X)	0.31	0.00	0.00	0.42	0.00	0.00	0.49	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	835	0	0	878	0	0	592	0	0	646	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.0	0.0	0.0	11.8	0.0	0.0	15.2	0.0	0.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	1.5	0.0	0.0	2.9	0.0	0.0	2.0	0.0	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	2.3	0.0	0.0	3.5	0.0	0.0	3.4	0.0	0.0	3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	0.0	13.2	0.0	0.0	18.1	0.0	0.0	16.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		261			366			292			273	
Approach Delay, s/veh		12.0			13.2			18.1			16.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.0		30.0		35.0		30.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		30.0		25.0		30.0		25.0				
Max Q Clear Time (g_c+I1), s		7.8		11.7		10.7		10.3				
Green Ext Time (p_c), s		1.1		1.1		1.5		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				15.0								
HCM 6th LOS				B								

2026 No-Build Traffic Volumes
3: Veterans Place & Main Street

Peak SAT Hour
07/26/2021

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	247	6	12	322	7	5
Future Volume (vph)	247	6	12	322	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	12	9	11	12
Grade (%)	0%			-2%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997				0.944	
Flt Protected				0.998	0.972	
Satd. Flow (prot)	1504	0	0	1521	1480	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	1504	0	0	1521	1480	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	447			150	232	
Travel Time (s)	10.2			3.4	5.3	
Confl. Peds. (#/hr)		43	44		43	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	260	6	13	339	7	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	266	0	0	352	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.30	1.14	1.13	1.29	1.20	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 No-Build Traffic Volumes
3: Veterans Place & Main Street

Peak SAT Hour
07/26/2021

Intersection						
Int Delay, s/veh	0.4					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	247	6	12	322	7	5
Future Vol, veh/h	247	6	12	322	7	5
Conflicting Peds, #/hr	0	43	44	0	43	44
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	260	6	13	339	7	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	310	0	715	351
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	408	-
Critical Hdwy	-	-	4.12	-	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1250	-	382	686
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1202	-	351	639
Mov Cap-2 Maneuver	-	-	-	-	351	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	636	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.3		13.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	432	1202	-	-	-	
HCM Lane V/C Ratio	0.029	0.011	-	-	-	
HCM Control Delay (s)	13.6	8	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile O(veh)	0.1	0	-	-	-	

2026 Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	35	245	72	25	184	85	60	82	21	52	125	25
Future Volume (vph)	35	245	72	25	184	85	60	82	21	52	125	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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			0.99			0.98			0.99	
Frt		0.972			0.961			0.982			0.983	
Flt Protected		0.995			0.996			0.982			0.987	
Satd. Flow (prot)	0	1743	0	0	1734	0	0	1365	0	0	1402	0
Flt Permitted		0.942			0.951			0.822			0.883	
Satd. Flow (perm)	0	1648	0	0	1655	0	0	1130	0	0	1249	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	11		7	7		11	31		14	14		31
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	10%	5%	4%	2%	4%	2%	2%	4%	7%	5%	2%	2%
Parking (#/hr)									0			0
Adj. Flow (vph)	40	278	82	28	209	97	68	93	24	59	142	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	400	0	0	334	0	0	185	0	0	229	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	0.99	1.17	1.14	1.01	1.14	1.15	1.38	1.15	1.13	1.35	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	9	9		9	9		22	22		22	22	

2026 Build Traffic Volumes

1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour

07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.53			0.44			0.43			0.48	
Control Delay		15.6			14.1			18.6			19.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.6			14.1			18.6			19.2	
Queue Length 50th (ft)		107			84			52			66	
Queue Length 95th (ft)		175			141			101			122	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		760			763			434			480	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.53			0.44			0.43			0.48	

Intersection Summary

Area Type: CBD

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street

 Ø2 (R)	 Ø4
35 s	30 s
 Ø6 (R)	 Ø8
35 s	30 s

2026 Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak AM Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	35	245	72	25	184	85	60	82	21	52	125	25
Future Volume (veh/h)	35	245	72	25	184	85	60	82	21	52	125	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		0.99	0.98		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No				No				No			No
Adj Sat Flow, veh/h/ln	1596	1659	1596	1691	1759	1691	1651	1585	1651	1754	1684	1754
Adj Flow Rate, veh/h	40	278	82	28	209	97	68	93	24	59	142	28
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	4	4	4	4	4	4	2	2	2
Cap, veh/h	100	524	145	90	499	216	221	262	61	170	355	63
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	85	1135	315	65	1080	469	377	681	158	262	922	165
Grp Volume(v), veh/h	400	0	0	334	0	0	185	0	0	229	0	0
Grp Sat Flow(s),veh/h/ln	1534	0	0	1614	0	0	1215	0	0	1349	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	11.7	0.0	0.0	8.8	0.0	0.0	6.2	0.0	0.0	7.5	0.0	0.0
Prop In Lane	0.10		0.20	0.08		0.29	0.37		0.13	0.26		0.12
Lane Grp Cap(c), veh/h	769	0	0	805	0	0	543	0	0	588	0	0
V/C Ratio(X)	0.52	0.00	0.00	0.42	0.00	0.00	0.34	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	769	0	0	805	0	0	543	0	0	588	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.6	0.0	0.0	11.8	0.0	0.0	14.2	0.0	0.0	14.6	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0	1.6	0.0	0.0	1.7	0.0	0.0	1.9	0.0	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	4.2	0.0	0.0	3.2	0.0	0.0	2.0	0.0	0.0	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	0.0	13.4	0.0	0.0	15.9	0.0	0.0	16.5	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h	400				334				185			
Approach Delay, s/veh	15.1				13.4				15.9			
Approach LOS	B				B				B			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.0		30.0		35.0		30.0					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		25.0		30.0		25.0					
Max Q Clear Time (g_c+I1), s	13.7		8.2		10.8		9.5					
Green Ext Time (p_c), s	1.6		0.6		1.3		0.8					
Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

2026 Build Traffic Volumes
2: Main Street & Site Entry Access

Peak AM Hour
07/26/2021



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	3	163	237	6	0	0
Future Volume (vph)	3	163	237	6	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	9	12	12	12
Grade (%)		1%	-2%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997			
Flt Protected		0.999				
Satd. Flow (prot)	0	1444	1519	0	1676	0
Flt Permitted		0.999				
Satd. Flow (perm)	0	1444	1519	0	1676	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		150	247		142	
Travel Time (s)		3.4	5.6		3.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	3	185	269	7	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	188	276	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.15	1.38	1.29	1.13	1.14	1.14
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 Build Traffic Volumes
2: Main Street & Site Entry Access

Peak AM Hour
07/26/2021

Intersection						
Int Delay, s/veh	0					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	3	163	237	6	0	0
Future Vol, veh/h	3	163	237	6	0	0
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, %	-	1	-2	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	185	269	7	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	276	0	-	0	464	273
Stage 1	-	-	-	-	273	-
Stage 2	-	-	-	-	191	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1287	-	-	-	556	766
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1287	-	-	-	554	766
Mov Cap-2 Maneuver	-	-	-	-	554	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	841	-
Approach	SE	NW		SW		
HCM Control Delay, s	0.1	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	NWT	NWR	SEL	SE	SWLn1	
Capacity (veh/h)	-	-	1287	-	-	
HCM Lane V/C Ratio	-	-	0.003	-	-	
HCM Control Delay (s)	-	-	7.8	0	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	-	-	

2026 Build Traffic Volumes
3: Veterans Place/Site Exit Access & Main Street

Peak AM Hour
07/26/2021

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	155	6	6	232	0	3	0	3	8	0	8
Future Volume (vph)	0	155	6	6	232	0	3	0	3	8	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	12	12	9	12	11	11	12	12	12	12
Grade (%)		0%			-2%			1%			0%	
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		0.995						0.932			0.932	
Flt Protected					0.999			0.976			0.976	
Satd. Flow (prot)	0	1501	0	0	1522	0	0	1467	0	0	1525	0
Flt Permitted					0.999			0.976			0.976	
Satd. Flow (perm)	0	1501	0	0	1522	0	0	1467	0	0	1525	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			150			232			86	
Travel Time (s)		10.2			3.4			5.3			2.0	
Confl. Peds. (#/hr)			43	44			43		44	8		7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	176	7	7	264	0	3	0	3	9	0	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	271	0	0	6	0	0	18	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.13	1.29	1.13	1.20	1.20	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											

2026 Build Traffic Volumes
3: Veterans Place/Site Exit Access & Main Street

Peak AM Hour
07/26/2021

Intersection												
Int Delay, s/veh	0.7											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↱			↱			↱			↱	
Traffic Vol, veh/h	0	155	6	6	232	0	3	0	3	8	0	8
Future Vol, veh/h	0	155	6	6	232	0	3	0	3	8	0	8
Conflicting Peds, #/hr	0	0	43	44	0	0	43	0	44	8	0	7
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-2	-	-	1	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	176	7	7	264	0	3	0	3	9	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	227	0	0	550	502	268	503	505	307
Stage 1	-	-	-	-	-	-	224	224	-	278	278	-
Stage 2	-	-	-	-	-	-	326	278	-	225	227	-
Critical Hdwy	-	-	-	4.12	-	-	7.32	6.72	6.32	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.32	5.72	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.32	5.72	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1341	-	0	432	458	765	479	470	733
Stage 1	0	-	-	-	-	0	769	709	-	728	680	-
Stage 2	0	-	-	-	-	0	674	670	-	778	716	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1289	-	-	396	438	712	460	449	710
Mov Cap-2 Maneuver	-	-	-	-	-	-	396	438	-	460	449	-
Stage 1	-	-	-	-	-	-	769	682	-	728	676	-
Stage 2	-	-	-	-	-	-	641	666	-	750	689	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0.2	12.2	11.7
HCM LOS			B	B

Minor Lane/Major Mvm	NELn1	NWL	NWT	SET	SE	SWLn1
Capacity (veh/h)	509	1289	-	-	-	558
HCM Lane V/C Ratio	0.013	0.005	-	-	-	0.033
HCM Control Delay (s)	12.2	7.8	0	-	-	11.7
HCM Lane LOS	B	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	-	0.1

2026 Build Traffic Volumes
4: Eliza Street & Site Access

Peak AM Hour
07/26/2021

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	4	17	6	0	0
Future Volume (vph)	0	4	17	6	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.964			
Flt Protected						
Satd. Flow (prot)	0	1450	1832	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1450	1832	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	96		73			99
Travel Time (s)	2.2		1.7			2.3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	5	19	7	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	0.97	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 Build Traffic Volumes
4: Eliza Street & Site Access

Peak AM Hour
07/26/2021

Intersection						
Int Delay, s/veh	1.2					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	4	17	6	0	0
Future Vol, veh/h	0	4	17	6	0	0
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	-	-22355	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	19	7	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	23	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.22	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.318	-	-		
Pot Cap-1 Maneuver	0	1054	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	1054	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	NW	NE				
HCM Control Delay, s	8.4	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NET	NER	NWL	n1		
Capacity (veh/h)	-	-	1054			
HCM Lane V/C Ratio	-	-	0.004			
HCM Control Delay (s)	-	-	8.4			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

2026 Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	43	210	23	27	234	104	98	186	38	45	182	44
Future Volume (vph)	43	210	23	27	234	104	98	186	38	45	182	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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		1.00			0.99			0.97			0.98	
Frt		0.989			0.962			0.984			0.978	
Flt Protected		0.992			0.996			0.985			0.992	
Satd. Flow (prot)	0	1774	0	0	1737	0	0	1389	0	0	1394	0
Flt Permitted		0.903			0.965			0.819			0.902	
Satd. Flow (perm)	0	1613	0	0	1682	0	0	1136	0	0	1261	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	9		7	7		9	61		39	39		61
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%	6%	5%	2%	4%	2%	2%	2%	2%	3%	2%	3%
Parking (#/hr)									0			0
Adj. Flow (vph)	45	221	24	28	246	109	103	196	40	47	192	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	290	0	0	383	0	0	339	0	0	285	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	0.99	1.17	1.14	1.01	1.14	1.15	1.38	1.15	1.13	1.35	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	8	8		8	8		50	50		50	50	

2026 Build Traffic Volumes

1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour

07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.39			0.49			0.78			0.59	
Control Delay		13.5			15.0			32.8			21.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.5			15.0			32.8			21.9	
Queue Length 50th (ft)		71			100			114			87	
Queue Length 95th (ft)		125			170			#246			161	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		744			776			436			485	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.39			0.49			0.78			0.59	

Intersection Summary

Area Type: CBD

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street

					
Ø2 (R)			Ø4		
35 s			30 s		
					
Ø6 (R)			Ø8		
35 s			30 s		

2026 Build Traffic Volumes
1: Teller Avenue/Fishkill Avenue & Main Street

Peak PM Hour
07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	43	210	23	27	234	104	98	186	38	45	182	44
Future Volume (veh/h)	43	210	23	27	234	104	98	186	38	45	182	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	0.96		0.92	0.97		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1582	1646	1582	1691	1759	1691	1678	1611	1678	1754	1684	1754
Adj Flow Rate, veh/h	45	221	24	28	246	109	103	196	40	47	192	46
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, %	6	6	6	4	4	4	2	2	2	2	2	2
Cap, veh/h	133	567	57	86	512	214	186	303	56	119	392	86
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	149	1228	124	58	1110	464	296	787	145	141	1018	223
Grp Volume(v), veh/h	290	0	0	383	0	0	339	0	0	285	0	0
Grp Sat Flow(s),veh/h/ln	1501	0	0	1632	0	0	1228	0	0	1383	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.6	0.0	0.0	10.4	0.0	0.0	14.5	0.0	0.0	9.8	0.0	0.0
Prop In Lane	0.16		0.08	0.07		0.28	0.30		0.12	0.16		0.16
Lane Grp Cap(c), veh/h	757	0	0	813	0	0	545	0	0	596	0	0
V/C Ratio(X)	0.38	0.00	0.00	0.47	0.00	0.00	0.62	0.00	0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h	757	0	0	813	0	0	545	0	0	596	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.5	0.0	0.0	12.2	0.0	0.0	16.5	0.0	0.0	15.3	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	0.0	2.0	0.0	0.0	5.3	0.0	0.0	2.7	0.0	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	2.7	0.0	0.0	3.8	0.0	0.0	4.5	0.0	0.0	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	0.0	14.2	0.0	0.0	21.8	0.0	0.0	18.1	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h	290				383				339		285	
Approach Delay, s/veh	12.9				14.2				21.8		18.1	
Approach LOS	B				B				C		B	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.0		30.0		35.0		30.0					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		25.0		30.0		25.0					
Max Q Clear Time (g_c+1), s	9.6		16.5		12.4		11.8					
Green Ext Time (p_c), s	1.1		1.0		1.5		1.0					
Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									

2026 Build Traffic Volumes
2: Main Street & Site Entry Access

Peak PM Hour
07/26/2021

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	5	321	320	10	0	0
Future Volume (vph)	5	321	320	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	9	12	12	12
Grade (%)		1%	-2%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996			
Flt Protected		0.999				
Satd. Flow (prot)	0	1444	1518	0	1676	0
Flt Permitted		0.999				
Satd. Flow (perm)	0	1444	1518	0	1676	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		150	247		142	
Travel Time (s)		3.4	5.6		3.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)				0		0
Adj. Flow (vph)	5	338	337	11	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	343	348	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.15	1.38	1.29	1.13	1.14	1.14
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 Build Traffic Volumes
2: Main Street & Site Entry Access

Peak PM Hour
07/26/2021

Intersection						
Int Delay, s/veh	0					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	5	321	320	10	0	0
Future Vol, veh/h	5	321	320	10	0	0
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, %	-	1	-2	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	338	337	11	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	348	0	-	0	691	343
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	348	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1211	-	-	-	410	700
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1211	-	-	-	408	700
Mov Cap-2 Maneuver	-	-	-	-	408	-
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	715	-
Approach	SE	NW		SW		
HCM Control Delay, s	0.1	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	NWT	NWR	SEL	SE\$	SWLn1	
Capacity (veh/h)	-	-	1211	-	-	
HCM Lane V/C Ratio	-	-	0.004	-	-	
HCM Control Delay (s)	-	-	8	0	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	-	-	

2026 Build Traffic Volumes
3: Veterans Place/Site Exit Access & Main Street

Peak PM Hour
07/26/2021

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	310	8	14	305	0	7	0	8	9	0	9
Future Volume (vph)	0	310	8	14	305	0	7	0	8	9	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	12	12	9	12	11	12	12	12	12	12
Grade (%)		0%			-2%			1%			0%	
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		0.997						0.928			0.932	
Flt Protected					0.998			0.977			0.976	
Satd. Flow (prot)	0	1504	0	0	1521	0	0	1512	0	0	1525	0
Flt Permitted					0.998			0.977			0.976	
Satd. Flow (perm)	0	1504	0	0	1521	0	0	1512	0	0	1525	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			150			232			102	
Travel Time (s)		10.2			3.4			5.3			2.3	
Confl. Peds. (#/hr)			43	44			43		44	8		7
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
Adj. Flow (vph)	0	326	8	15	321	0	7	0	8	9	0	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	334	0	0	336	0	0	15	0	0	18	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.13	1.29	1.13	1.20	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											

2026 Build Traffic Volumes
3: Veterans Place/Site Exit Access & Main Street

Peak PM Hour
07/26/2021

Intersection												
Int Delay, s/veh	0.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↱			↱			↱			↱	
Traffic Vol, veh/h	0	310	8	14	305	0	7	0	8	9	0	9
Future Vol, veh/h	0	310	8	14	305	0	7	0	8	9	0	9
Conflicting Peds, #/hr	0	0	43	44	0	0	43	0	44	8	0	7
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-2	-	-	1	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	8	15	321	0	7	0	8	9	0	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	378	0	0	773	725	418	729	729	364
Stage 1	-	-	-	-	-	-	374	374	-	351	351	-
Stage 2	-	-	-	-	-	-	399	351	-	378	378	-
Critical Hdwy	-	-	-	4.12	-	-	7.32	6.72	6.32	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.32	5.72	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.32	5.72	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1180	-	0	303	338	628	338	350	681
Stage 1	0	-	-	-	-	0	634	605	-	666	632	-
Stage 2	0	-	-	-	-	0	613	620	-	644	615	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1131	-	-	274	319	583	319	330	660
Mov Cap-2 Maneuver	-	-	-	-	-	-	274	319	-	319	330	-
Stage 1	-	-	-	-	-	-	634	580	-	666	622	-
Stage 2	-	-	-	-	-	-	576	610	-	615	589	-
Approach	SE			NW			NE			SW		
HCM Control Delay, s	0			0.4			14.8			13.8		
HCM LOS							B			B		
Minor Lane/Major Mvm	NELn1	NWL	NWT	SET	SE	SWLn1						
Capacity (veh/h)	382	1131	-	-	-	430						
HCM Lane V/C Ratio	0.041	0.013	-	-	-	0.044						
HCM Control Delay (s)	14.8	8.2	0	-	-	13.8						
HCM Lane LOS	B	A	A	-	-	B						
HCM 95th %tile Q(veh)	0.1	0	-	-	-	0.1						

2026 Build Traffic Volumes
4: Eliza Street & Site Access

Peak PM Hour
07/26/2021

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	5	44	10	0	0
Future Volume (vph)	0	5	44	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.975			
Flt Protected						
Satd. Flow (prot)	0	1450	1853	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1450	1853	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	96		73			99
Travel Time (s)	2.2		1.7			2.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	6	49	11	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	6	60	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	0.97	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 Build Traffic Volumes
4: Eliza Street & Site Access

Peak PM Hour
07/26/2021

Intersection						
Int Delay, s/veh	0.7					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	5	44	10	0	0
Future Vol, veh/h	0	5	44	10	0	0
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	-	-22355	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	49	11	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	55	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.22	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.318	-	-		
Pot Cap-1 Maneuver	0	1012	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	1012	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	NW	NE				
HCM Control Delay, s	8.6	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NET	NER	NWL	n1		
Capacity (veh/h)	-	-	1012			
HCM Lane V/C Ratio	-	-	0.005			
HCM Control Delay (s)	-	-	8.6			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

2026 Build Traffic Volumes

Peak SAT Hour

1: Teller Avenue/Fishkill Avenue & Main Street

07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	49	161	39	41	174	134	89	157	38	36	185	39
Future Volume (vph)	49	161	39	41	174	134	89	157	38	36	185	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	15	12	12	8	12	12	8	12
Grade (%)		3%			-1%			1%			-2%	
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			0.95			0.96	
Frt		0.979			0.948			0.982			0.980	
Flt Protected		0.990			0.994			0.985			0.993	
Satd. Flow (prot)	0	2002	0	0	1899	0	0	1525	0	0	1535	0
Flt Permitted		0.878			0.939			0.826			0.925	
Satd. Flow (perm)	0	1769	0	0	1790	0	0	1241	0	0	1417	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		179			231			247			315	
Travel Time (s)		4.1			5.3			5.6			7.2	
Confl. Peds. (#/hr)	25		15	15		25	106		83	83		106
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 (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%
Parking (#/hr)									0			0
Adj. Flow (vph)	52	171	41	44	185	143	95	167	40	38	197	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	0	0	372	0	0	302	0	0	276	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	0.86	1.02	0.99	0.88	0.99	1.01	1.21	1.01	0.99	1.19	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	20	20		20	20		55	55		55	55	

Synchro 10 Report

Page 1

2026 Build Traffic Volumes

Peak SAT Hour

1: Teller Avenue/Fishkill Avenue & Main Street

07/26/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio		0.32			0.45			0.63			0.51	
Control Delay		12.5			14.1			23.5			19.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.5			14.1			23.5			19.3	
Queue Length 50th (ft)		63			94			94			81	
Queue Length 95th (ft)		110			159			175			146	
Internal Link Dist (ft)		99			151			167			235	
Turn Bay Length (ft)												
Base Capacity (vph)		816			826			477			545	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.32			0.45			0.63			0.51	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 1: Teller Avenue/Fishkill Avenue & Main Street

 Ø2 (R)	 Ø4
35 s	30 s
 Ø6 (R)	 Ø8
35 s	30 s

2026 Build Traffic Volumes

Peak SAT Hour

1: Teller Avenue/Fishkill Avenue & Main Street

07/26/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	49	161	39	41	174	134	89	157	38	36	185	39
Future Volume (veh/h)	49	161	39	41	174	134	89	157	38	36	185	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.97	0.93		0.86	0.93		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1817	1890	1817	1909	1986	1909	1864	1790	1864	1949	1871	1949
Adj Flow Rate, veh/h	52	171	41	44	185	143	95	167	40	38	197	41
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	540	119	117	446	313	203	317	68	108	452	87
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	233	1170	258	120	967	679	338	825	178	116	1176	225
Grp Volume(v), veh/h	264	0	0	372	0	0	302	0	0	276	0	0
Grp Sat Flow(s),veh/h/ln	1661	0	0	1766	0	0	1341	0	0	1518	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0	8.9	0.0	0.0	10.3	0.0	0.0	8.4	0.0	0.0
Prop In Lane	0.20		0.16	0.12		0.38	0.31		0.13	0.14		0.15
Lane Grp Cap(c), veh/h	833	0	0	877	0	0	588	0	0	647	0	0
V/C Ratio(X)	0.32	0.00	0.00	0.42	0.00	0.00	0.51	0.00	0.00	0.43	0.00	0.00
Avail Cap(c_a), veh/h	833	0	0	877	0	0	588	0	0	647	0	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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.0	0.0	0.0	11.8	0.0	0.0	15.4	0.0	0.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	1.5	0.0	0.0	3.2	0.0	0.0	2.1	0.0	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	2.3	0.0	0.0	3.5	0.0	0.0	3.6	0.0	0.0	3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	0.0	13.3	0.0	0.0	18.5	0.0	0.0	16.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		264			372			302			276	
Approach Delay, s/veh		12.0			13.3			18.5			16.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.0		30.0		35.0		30.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		30.0		25.0		30.0		25.0				
Max Q Clear Time (g_c+I1), s		7.9		12.3		10.9		10.4				
Green Ext Time (p_c), s		1.1		1.1		1.5		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				15.2								
HCM 6th LOS				B								

2026 Build Traffic Volumes
3: Veterans Place & Main Street

Peak SAT Hour
07/26/2021

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	280	7	13	357	0	8	0	6	9	0	9
Future Volume (vph)	0	280	7	13	357	0	8	0	6	9	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	12	12	9	12	11	12	12	12	12	12
Grade (%)		0%			-2%			1%			0%	
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		0.997						0.865			0.932	
Flt Protected					0.998		0.950				0.976	
Satd. Flow (prot)	0	1504	0	0	1521	0	1532	0	0	0	1525	0
Flt Permitted					0.998		0.950				0.976	
Satd. Flow (perm)	0	1504	0	0	1521	0	1532	0	0	0	1525	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			150			232			123	
Travel Time (s)		10.2			3.4			5.3			2.8	
Confl. Peds. (#/hr)			43	44			43		44			
Peak Hour Factor	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	295	7	14	376	0	8	0	6	10	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	302	0	0	390	0	8	6	0	0	20	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.13	1.29	1.13	1.20	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											

2026 Build Traffic Volumes
3: Veterans Place & Main Street

Peak SAT Hour
07/26/2021

Intersection												
Int Delay, s/veh	0.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↱			↱		↱				↱↲	
Traffic Vol, veh/h	0	280	7	13	357	0	8	0	6	9	0	9
Future Vol, veh/h	0	280	7	13	357	0	8	0	6	9	0	9
Conflicting Peds, #/hr	0	0	43	44	0	0	43	0	44	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-2	-	-	1	-	-	0	-
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	295	7	14	376	0	8	0	6	10	0	10

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	346	0	0	795	-	387	750	750	419
Stage 1	-	-	-	-	-	-	343	-	-	404	404	-
Stage 2	-	-	-	-	-	-	452	-	-	346	346	-
Critical Hdwy	-	-	-	4.12	-	-	7.32	-	6.32	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.32	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.32	-	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1213	-	0	292	0	654	328	340	634
Stage 1	0	-	-	-	-	0	660	0	-	623	599	-
Stage 2	0	-	-	-	-	0	573	0	-	670	635	-
Platoon blocked, %		-	-	-	-	-	-		-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1166	-	-	265	-	609	311	322	615
Mov Cap-2 Maneuver	-	-	-	-	-	-	265	-	-	311	322	-
Stage 1	-	-	-	-	-	-	660	-	-	623	590	-
Stage 2	-	-	-	-	-	-	538	-	-	642	611	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0.3	15.7	14.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SERSWLn1
Capacity (veh/h)	350	1166	-	-	413
HCM Lane V/C Ratio	0.042	0.012	-	-	0.047
HCM Control Delay (s)	15.7	8.1	0	-	14.2
HCM Lane LOS	C	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1

2026 Build Traffic Volumes
4: Eliza Street & Site Access

Peak SAT Hour
07/26/2021

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	5	41	10	0	0
Future Volume (vph)	0	5	41	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.974			
Flt Protected						
Satd. Flow (prot)	0	1450	1851	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1450	1851	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	96		73			99
Travel Time (s)	2.2		1.7			2.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	6	46	11	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	6	57	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	0.97	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

2026 Build Traffic Volumes
4: Eliza Street & Site Access

Peak SAT Hour
07/26/2021

Intersection						
Int Delay, s/veh	0.8					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	5	41	10	0	0
Future Vol, veh/h	0	5	41	10	0	0
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	-	-	22355
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	46	11	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	52	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.22	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.318	-	-		
Pot Cap-1 Maneuver	0	1016	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	1016	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	NW	NE				
HCM Control Delay, s	8.6	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NET	NERNWLn1				
Capacity (veh/h)	-	- 1016				
HCM Lane V/C Ratio	-	- 0.005				
HCM Control Delay (s)	-	- 8.6				
HCM Lane LOS	-	- A				
HCM 95th %tile Q(veh)	-	- 0				

2026 Build Traffic Volumes
102: Main Street & Site Entry Access

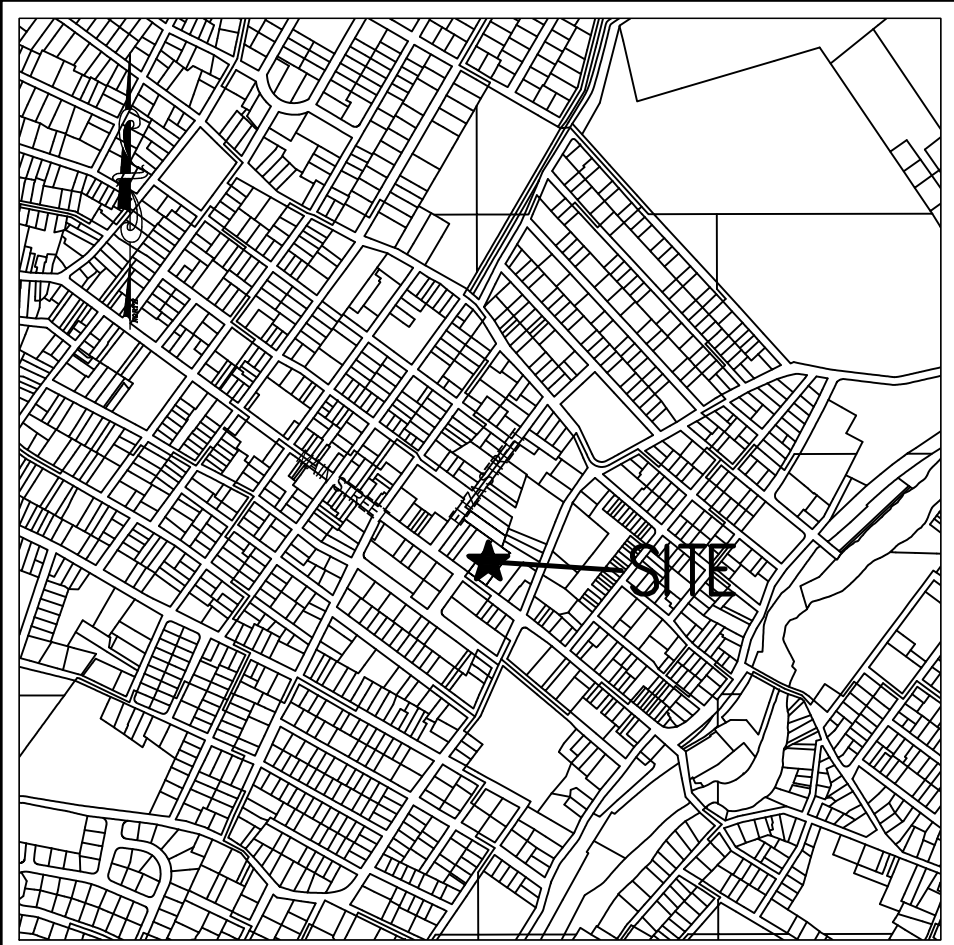
Peak SAT Hour
07/26/2021

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	5	321	320	10	0	0
Future Volume (vph)	5	321	320	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	8	9	12	12	12
Grade (%)		1%	-2%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996			
Flt Protected		0.999				
Satd. Flow (prot)	0	1444	1518	0	1676	0
Flt Permitted		0.999				
Satd. Flow (perm)	0	1444	1518	0	1676	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		150	247		142	
Travel Time (s)		3.4	5.6		3.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)				0		0
Adj. Flow (vph)	5	338	337	11	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	343	348	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.15	1.38	1.29	1.13	1.14	1.14
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

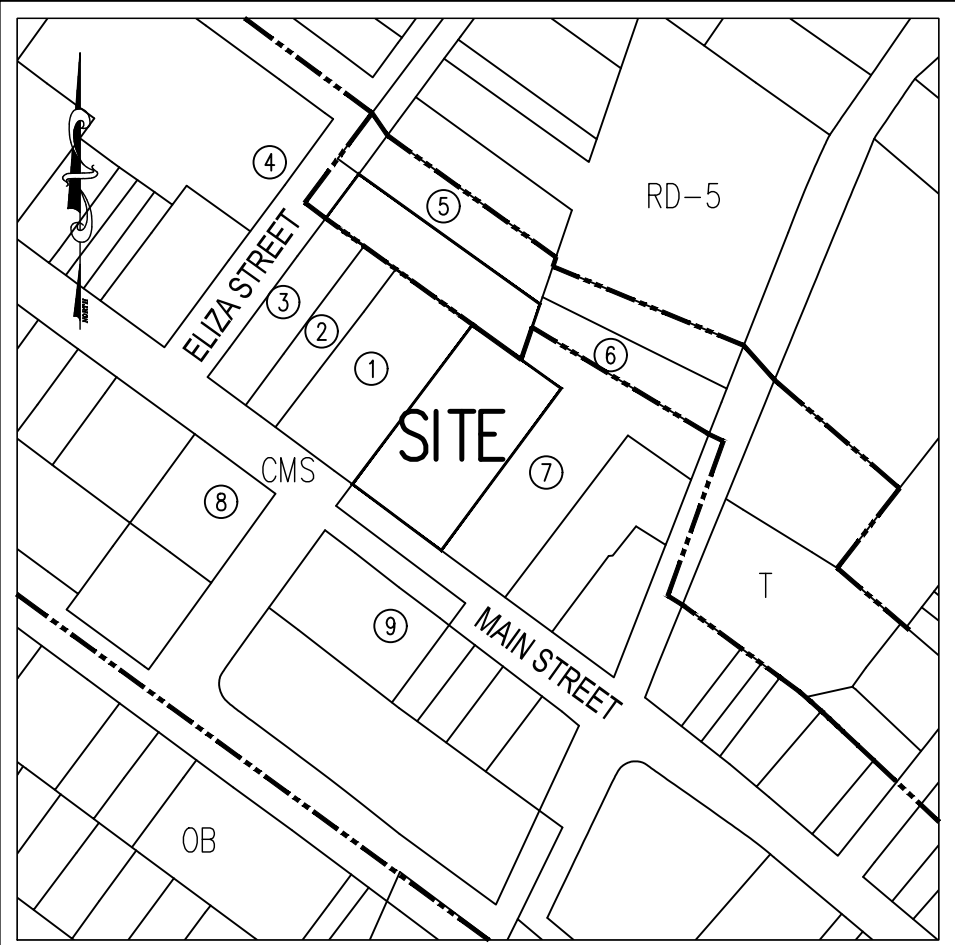
2026 Build Traffic Volumes
102: Main Street & Site Entry Access

Peak SAT Hour
07/26/2021

Intersection						
Int Delay, s/veh	0					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	5	321	320	10	0	0
Future Vol, veh/h	5	321	320	10	0	0
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, %	-	1	-2	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	338	337	11	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	348	0	-	0	691	343
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	348	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1211	-	-	-	410	700
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1211	-	-	-	408	700
Mov Cap-2 Maneuver	-	-	-	-	408	-
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	715	-
Approach	SE	NW		SW		
HCM Control Delay, s	0.1	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1		
Capacity (veh/h)	-	-	1211	-	-	-
HCM Lane V/C Ratio	-	-	0.004	-	-	-
HCM Control Delay (s)	-	-	8	0	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	-	-	



Area Map
1" = 1,000'



Vicinity Map
1" = 20'

Adjacent Property Owners

CITY OF BEACON:

- MASJID-UR-RASHID
- BEACON 348 CORP.
- 344 MAIN HOLDINGS, LLC
- CITY OF BEACON
- JOHN & TARA THOM
- KIMBERLY L. GARCIA
- SUSAN & RAYMOND CLARY
- THE SALVATION ARMY
- U S POST OFFICE
- STELLAR KIDS, LLC.

- PO BOX 805, BEACON, NEW YORK 12508
15 W 81st STREET, NEW YORK, NEW YORK 10024
344 MAIN STREET, BEACON, NEW YORK 12508
1 MUNICIPAL PLAZA, BEACON, NEW YORK 12508
82 SUNRISE HILL ROAD, FISHKILL, NEW YORK 12524
159 FISHKILL AVENUE, BEACON, NEW YORK 12508
27 ELIZA STREET, BEACON, NEW YORK 12508
120-130 W. 14th STREET, NEW YORK, NEW YORK 10011
369 MAIN STREET, BEACON, NEW YORK 12508
60 E. 42nd STREET, NEW YORK, NEW YORK 10165

Parcel Data

TAX MAP No.: 130200-6054-29-006819
130200-6054-29-004836

PARCEL ADDRESS: 364 MAIN STREET
BEACON, NEW YORK 12508

DEED REFERENCE: LIBER 22017, PAGE 1852
LIBER 22006, PAGE 9740

LOT AREA: 0.54 ACRES (+/-)
0.31 ACRES (+/-)

ZONING: CENTRAL MAIN STREET (CMS)
TRANSITIONAL DISTRICT (T)
(REAR PARCEL)*

WATER & SEWER: CITY OF BEACON

*Rear parcel requires in the T District will require Special Use Permit

Owner Information

O'DONNELL CONSTRUCTION CORP.
P. O. BOX 526
FISHKILL, NEW YORK 12524

Applicant Information

O'DONNELL CONSTRUCTION CORP.
P. O. BOX 526
FISHKILL, NEW YORK 12524

Zoning Data

CMS DISTRICT	REQUIRED	PROVIDED
LOT AREA	-	0.85 Acres
LOT WIDTH	-	112.0'
LOT DEPTH	75'	210.0'
FRONT SETBACK	0'-10'	12.87'
SIDE SETBACK	0'	17.61'
REAR SETBACK	25'	43.06'
LANDSCAPED AREA	10%	11.0%
FRONTAGE OCCUPANCY	80%	89.5% (100.25'/112') *
BUILDING HEIGHT	2 - 3 Stories / 38'	3 Stories / 38'
PEDESTRIAN CLEARWAY	8'	>= 9.25'

*The Planning Board may reduce the required frontage if public open space is provided

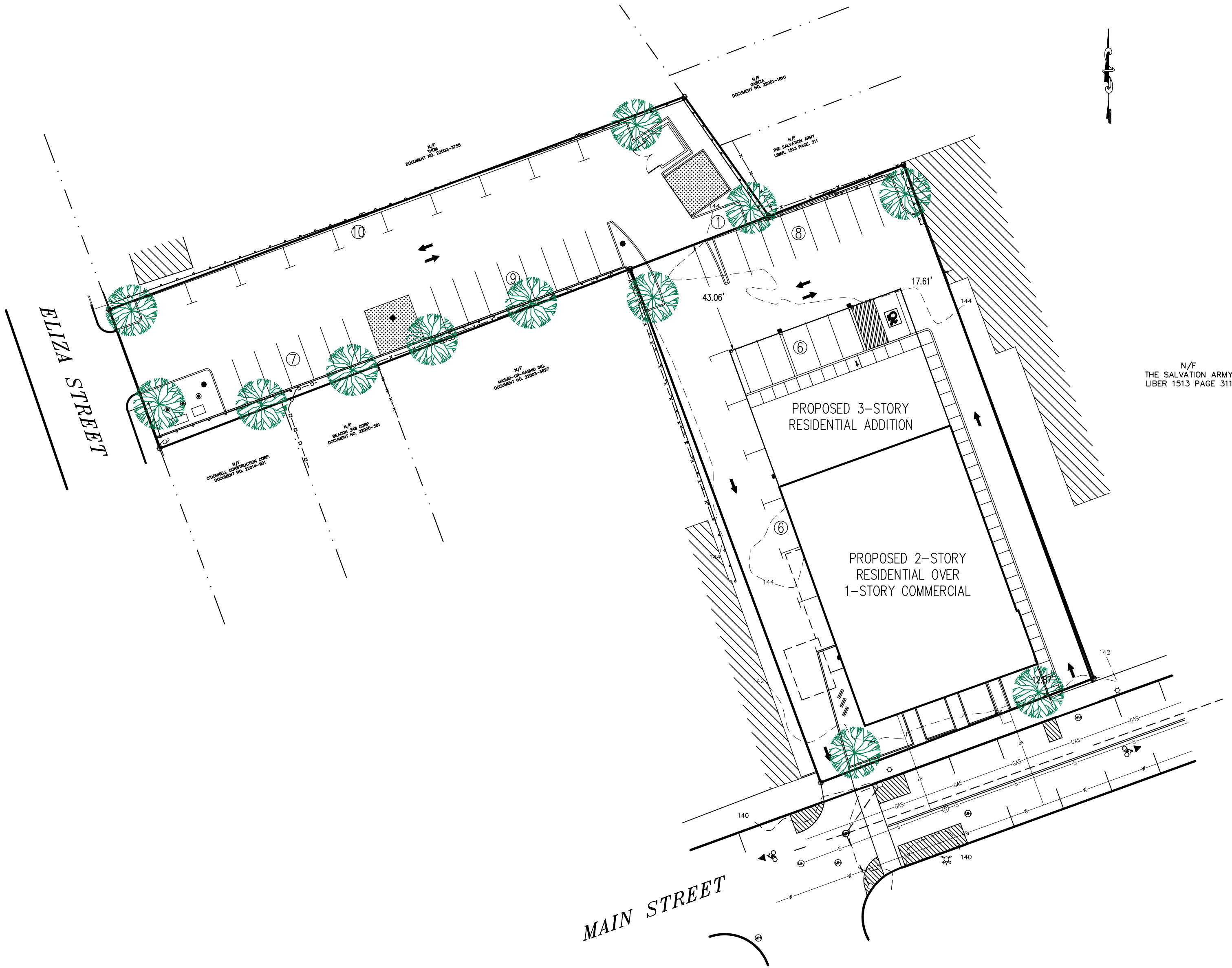
Parking Calculations & Tables

CMS DISTRICT:
Residential = 1 Space per Unit
20 Units = 20 Spaces

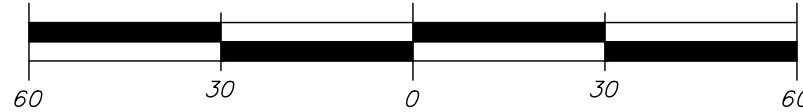
Retail Commercial = 2 Spaces per 1,000s.f. of Floor Area
6,781s.f. = 14 Spaces

Total Spaces Required = 34 Spaces

Total Spaces Provided = 47 Spaces



SITE PLAN



Owner's Consent Note

THE UNDERSIGNED OWNER OF THIS PROPERTY HEREON STATES THAT HE/SHE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

DATE

Planning Board Endorsement

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE DAY OF _____, 2016, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGES, ERASURES, MODIFICATIONS, OR REVISIONS OF THIS SITE PLAN AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED FOR THE PLANNING BOARD BY:

CHAIRMAN

DATE

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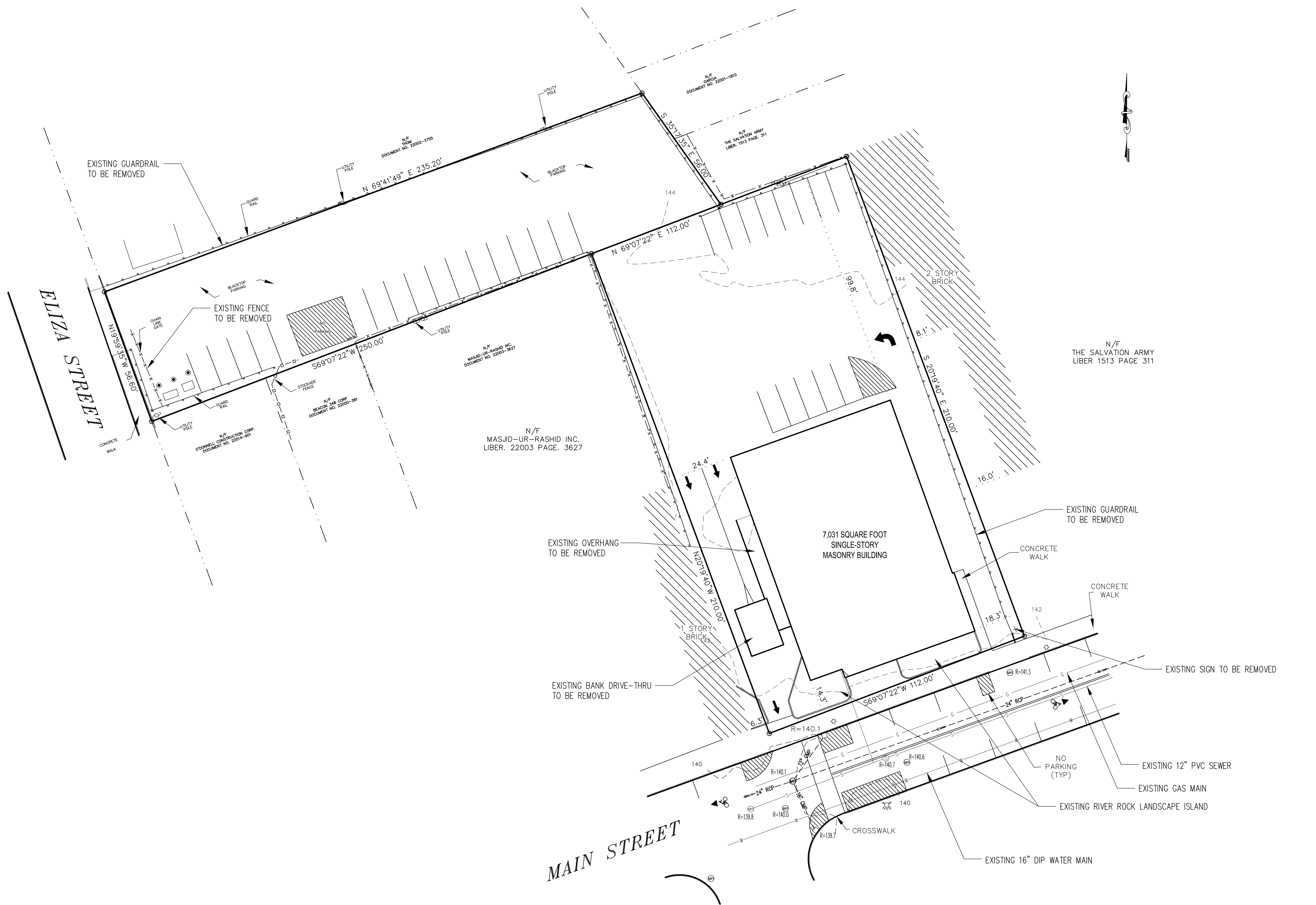
Mark A. Day, PE
Revisions
07-20-21
Project No. 2020.475
License No. 069646

DAY | STOKOSA
ENGINEERING P.C.

3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

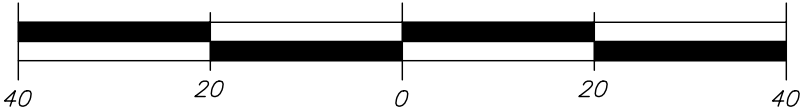
PROJECT: 364 Main Street
City of Beacon Dutchess County, New York

DRAWING: Cover Sheet		
SCALE: 1" = 30'	DRAWN BY: MAD	CS.1 1 of 11
DATE: 04-02-21	CHECKED BY: MAD	



AREA = 0.54 ACRES (+/-)

SITE PLAN



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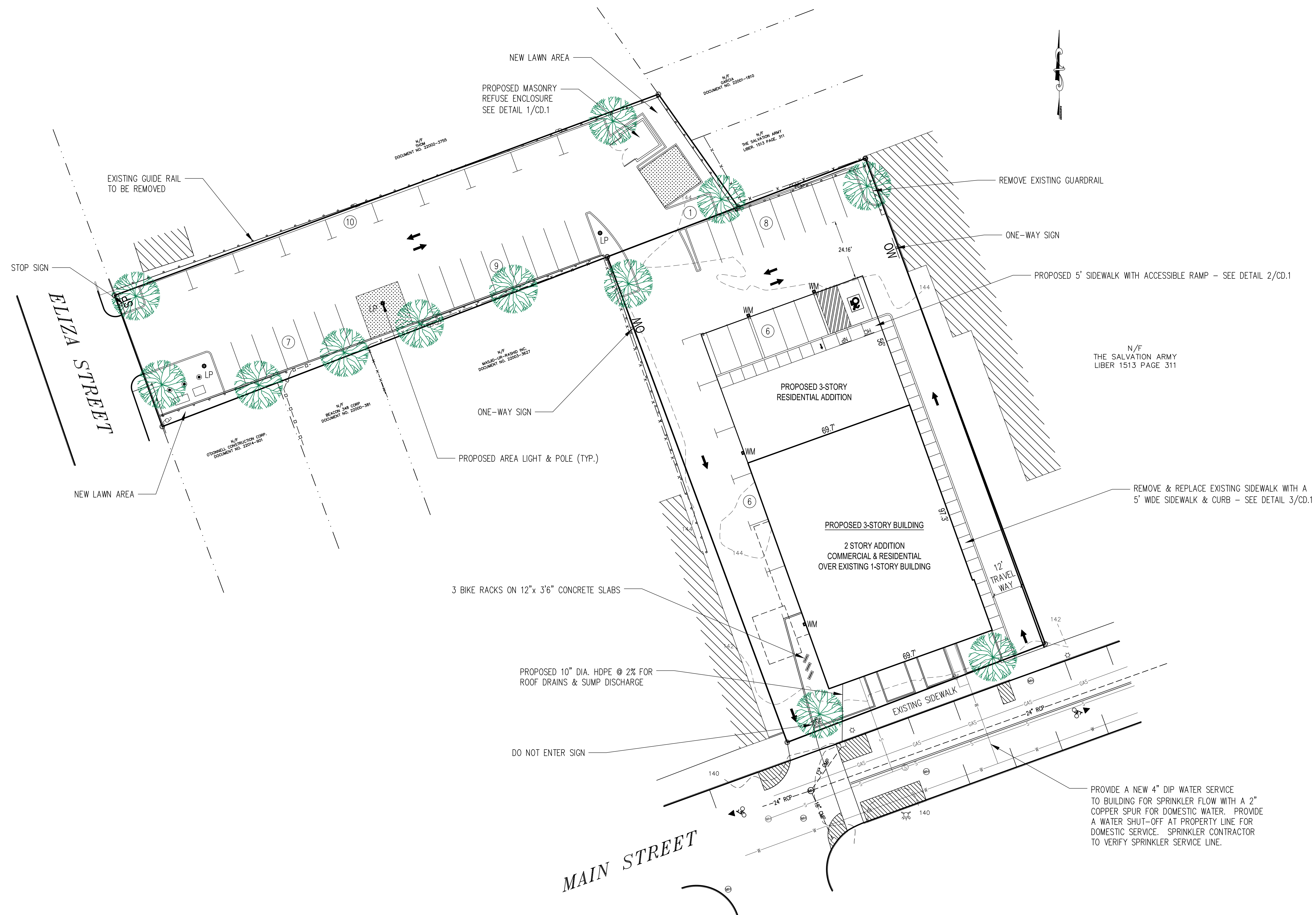
Mark A. Day, PE	
Revisions	07-20-21
Project No.	2020.475
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ENGINEERING P.C.

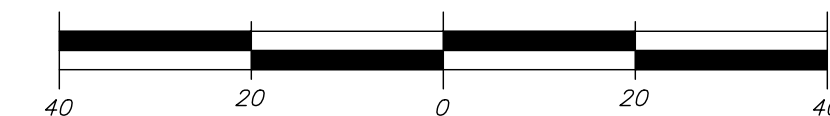
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT
364 Main Street
City of Beacon Dutchess County, New York

Existing Condtions		
DATE	DRAWN BY	DRAWING NO.
04-02-21	MAD	EC.1
CHECKED BY	2 of 11	
MAD		



SITE PLAN



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	Mark A. Day, PE
Revisions	
Project No.	License No. 069646
2020,475	

DAY|STOKOSA
ENGINEERING P.C.

3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT

364 Main Street

City of Beacon Dutchess County, New York

Site Plan

SCALE 1" = 20'	DRAWN BY MAD	DRAWING No. SP.1 3 of 11
DATE 04-02-21	CHECKED BY MAD	

TOPSOIL SPECIFICATIONS:

- 1. EXISTING EXCESS TOPSOIL SHALL BE REMOVED AND STORED IN TOPSOIL STOCKPILES SUFFICIENTLY REMOVED FROM OTHER EXCAVATION OR DISTURBANCE TO AVOID MIXING. SILT FENCE SHALL BE INSTALLED AROUND TOPSOIL STOCKPILE AREAS.

SITE PREPARATION:

- 1. COMPLETE ROUGH GRADING AND FINAL GRADE, ALLOWING FOR DEPTH OF TOPSOIL TO BE ADDED.
- 2. SCARIFY ALL COMPACT, SLOWLY PERMEABLE, MEDIUM AND FINE TEXTURED SUBSOIL AREAS. SCARIFY AT APPROXIMATELY RIGHT ANGLES TO THE SLOPE DIRECTION IN SOIL AREAS THAT ARE STEEPER THAN 5%.
- 3. REMOVE REFUSE, WOODY PLANT PARTS, STONES OVER 3 INCHES IN DIAMETER, AND OTHER LITTER.

TOPSOIL MATERIALS:

- 1. NEW TOPSOIL SHALL BE BETTER THAN OR EQUAL TO THE QUALITY OF THE EXISTING ADJACENT TOPSOIL. IT SHALL MEET THE FOLLOWING CRITERIA:
 - A. ORIGINAL LOAM TOPSOIL, WELL DRAINED HOMOGENEOUS TEXTURE AND OF UNIFORM GRADE, WITHOUT THE ADMIXTURE OF SUBSOIL MATERIAL AND FREE OF DENSE MATERIAL, HARDPAN, CLAY, STONES, SOD OR OTHER OBJECTIONABLE MATERIAL.
 - B. CONTAINING NOT LESS THAN 5% NOR MORE THAN 20% ORGANIC MATTER IN THAT PORTION OF A SAMPLING PASSING A 1/4" SIEVE WHEN DETERMINED BY THE WET COMBUSTION METHOD ON A SAMPLE DRIED AT 105°C.
 - C. CONTAINING A PH VALUE WITHIN THE RANGE OF 6.5 TO 7.5 ON THAT PORTION OF THE SAMPLE WHICH PASSES A 1/4" SIEVE.
 - D. CONTAINING THE FOLLOWING WASHED GRADATIONS:

SIEVE DESIGNATION	% PASSING
1"	100
1/4"	97-100
NO 200	20-60

APPLICATION AND GRADING:

- 1. TOPSOIL SHALL BE DISTRIBUTED TO A UNIFORM DEPTH OF 4" OVER THE AREA. IT SHALL NOT BE PLACED WHEN IT IS PARTLY FROZEN, MUDDY, OR ON FROZEN SLOPES OR OVER ICE, SNOW, OR STANDING WATER.
- 2. TOPSOIL PLACED AND GRADED ON SLOPES STEEPER THAN 5% SHALL BE PROMPTLY FERTILIZED, SEEDED, MULCHED AND STABILIZED BY "TRACKING" WITH SUITABLE EQUIPMENT.

VEGETATIVE COVER SPECIFICATIONS:

PERMANENT VEGETATIVE COVER (AFTER CONSTRUCTION):

- 1. SITE PREPARATION
 - A. BRING AREA TO BE SEEDED TO REQUIRED GRADE. A MINIMUM OF 4" OF TOPSOIL IS REQUIRED.
 - B. PREPARE SEEDBED BY LOOSENING SOIL TO A DEPTH OF 4 INCHES.
 - C. REMOVE ALL STONES OVER 1 INCH IN DIAMETER, STICKS AND FOREIGN MATTER FROM THE SURFACE.
 - D. LIME TO PH OF 6.5.
 - E. FERTILIZER: USE 5-10-5 (NPK) OR EQUIVALENT. APPLY AT RATE OF 4 LBS/1000 SF.
 - F. INCORPORATE LIME AND FERTILIZER IN THE TOP 4 INCHES OF TOPSOIL.
 - G. SMOOTH AND FIRM THE SEEDBED.
- 2. SEED MIXTURE FOR USE ON LAWN AREAS:
 - PROVIDE FRESH, CLEAN, NEW-CROP SEED MIXED IN THE PROPORTIONS SPECIFIED FOR SPECIES AND VARIETY, AND CONFORMING TO FEDERAL AND STATE STANDARDS.

LAWN SEED MIX: (APPLY AT RATE OF 5 TO 6 LBS PER 1000 SF)

AMOUNT BY:	SPECIES OR VARIETY	MINIMUM % PURITY	% GERMINATION
WEIGHT			
40%	KENTUCKY BLUE GRASS	95%	60%
35%	PERENNIAL RYE	98%	90%
25%	RED FESCUE	97%	85%
100%			

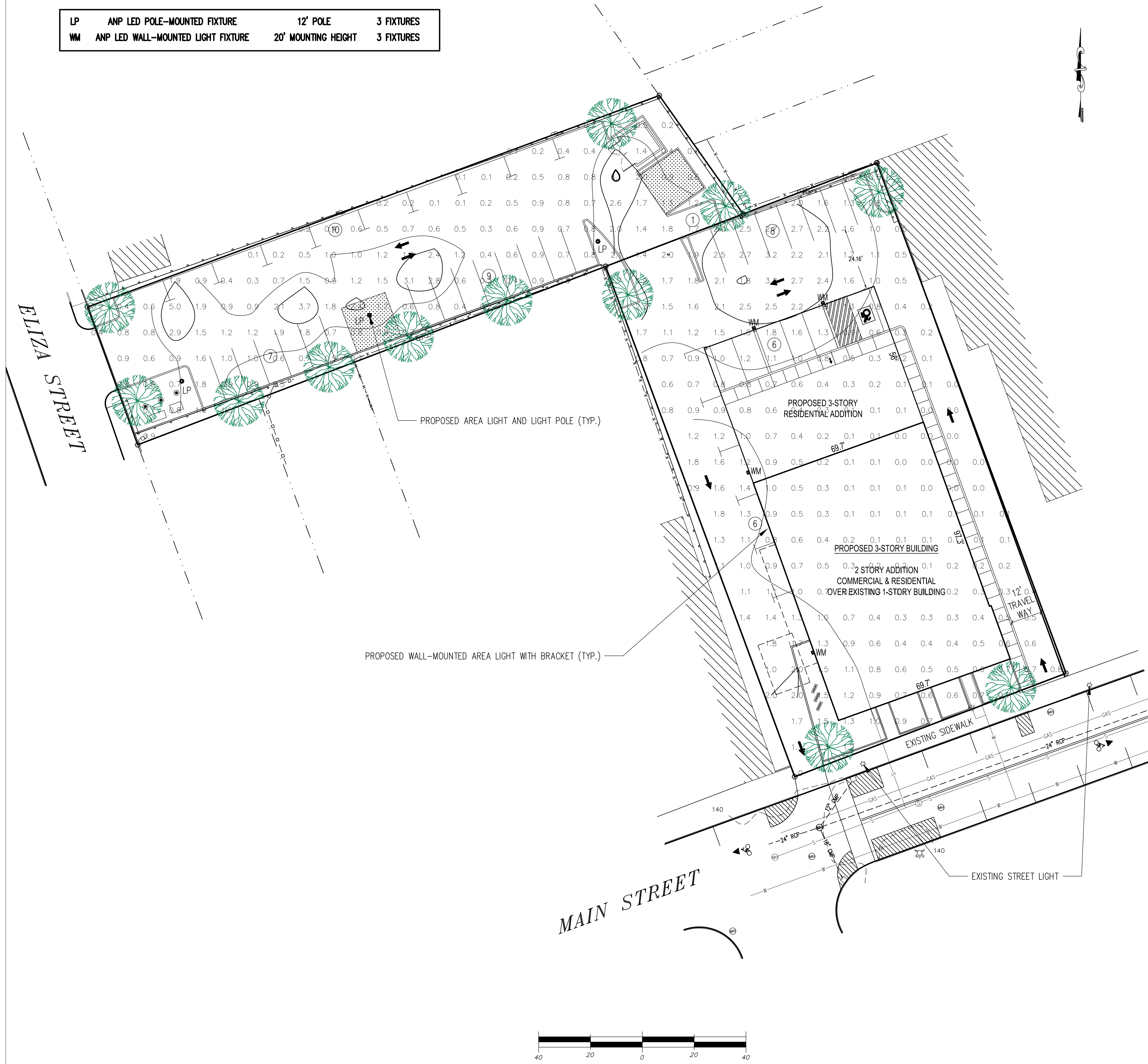
- 3. SEEDING
 - A. APPLY SEED UNIFORMLY BY CYCLONE SEEDER CULTI-PACKER OR HYDRO-SEEDER AT RATE INDICATED.
 - B. ALL SEEDED AREAS SHALL BE PROTECTED FROM EROSION BY ONE OF THE FOLLOWING METHODS:
 - i. A UNIFORM BLANKET OF STRAW APPLIED AT A RATE OF 2 TONS /ACRE MIN., TO BE APPLIED ONCE SEEDING IS COMPLETE.
 - ii. WOOD FIBER CELLULOSE APPLIED WITH SEED MIX BY HYDROSEEDER AT RATE OF 2,000 LBS/ACRE.
 - C. ALL SEEDED SLOPES 3:1 OR GREATER SHALL BE PROTECTED FROM EROSION WITH JUTE MESH OR APPROVED EQUAL.
 - D. IRRIGATE TO FULLY SATURATE SOIL LAYER, BUT NOT TO DISLodge PLANTING SOIL.
 - E. UNLESS OTHERWISE DIRECTED IN WRITING, SEED FROM MARCH 15TH TO JUNE 15TH, AND FROM AUGUST 15TH TO OCTOBER 15TH.

GENERAL LANDSCAPING 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 CITY ENGINEER 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. NOMENCLATURE: 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. WHEN AUTHORIZED, ADJUSTMENTS OF CONTRACT AMOUNT (IF ANY) WILL BE MADE BY CHANGE ORDER.
- 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.
 - C. AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WHERE LAWNS OR PLANTINGS ARE TO BE ESTABLISHED AND WORK IS COMPLETE, SHALL BE RESTORED WITH PERMANENT VEGETATIVE COVER AS SOON AS SITE AREAS ARE AVAILABLE AND WITHIN 14 DAYS AFTER WORK IS COMPLETE; WORK SHALL BE WITHIN THE SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED. PROVIDE STABILIZATION WITH TEMPORARY VEGETATIVE COVER (TOPSOIL AND TEMPORARY COVER SEED MIX) WITHIN 14 DAYS AFTER WORK IS COMPLETE, FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.
- 8. EXECUTION:
 - A. LANDSCAPE WORK SHALL BE UNDERTAKEN AS SOON AS SITE AREAS ARE AVAILABLE.
 - B. TOPSOIL SHALL BE SPREAD NO LESS THAN 4" OVER SUB-GRADE MATERIAL. SOIL AMENDMENTS SHALL BE THOROUGHLY MIXED INTO THE TOP 4" OF TOPSOIL, FOLLOWING THE SPECIFICATIONS STATED BELOW.
 - C. PERFORM FINE GRADING TO FINISHED ELEVATION ONLY IMMEDIATELY PRIOR TO PLANTING. PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN SURFACE, FREE OF DEPRESSIONS OR RIDGES WITH A UNIFORM LOOSE, FINE TEXTURE.
 - D. FERTILIZING:
 - i. THE SOIL SHALL BE TESTED FOR PH AND LIME ADDED AS NECESSARY. ALL AMENDMENTS SHALL BE CHECKED AND APPROVED BY LANDSCAPE ARCHITECT BEFORE AMENDMENTS ARE MADE.
 - ii. APPLY FERTILIZER AT RATE OF 4 LBS/1000 SF FOR LAWN AREAS.
 - E. LAWN:
 - i. LAWN SEED MIX: SEED AT THE RATE OF 5 TO 6 LBS PER 1,000 SF.
 - F. ALL SEEDED AREAS SHALL BE PROTECTED FROM EROSION BY ONE OF THE FOLLOWING METHODS:
 - i. A UNIFORM BLANKET OF STRAW APPLIED AT A RATE OF 2 TONS/ACRE MIN, TO BE APPLIED ONCE SEEDING IS COMPLETE.
 - ii. WOOD FIBER CELLULOSE APPLIED WITH SEED MIX BY A HYDROSEEDER AT A RATE OF 2,000 LBS/ACRE.
 - G. ALL SEEDED SLOPES 3:1 OR GREATER SHALL BE PROTECTED FROM EROSION WITH JUTE MESH OR APPROVED EQUAL.
 - H. ALL NEWLY PLANTED AREAS SHALL BE KEPT MOIST BY WATERING UNTIL GRASSES AND GROUND COVERS ARE WELL ESTABLISHED. THE LANDSCAPE CONTRACTOR MUST WATER PLANT MATERIAL WHEN NECESSARY FOR 60 DAYS AFTER INSTALLATION.
- I. LAWNS ARE TO BE WARRANTED UNTIL THEY BECOME ESTABLISHED, UNTIL FINAL ACCEPTANCE, AND NOT LESS THAN 60 DAYS AFTER COMPLETION OF ALL WORK. TREES, SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE WARRANTED AGAINST DEFECTS INCLUDING POOR GROWTH AND DEATH, EXCEPT WHEN RESULTING FROM OWNER NEGLECT, INCIDENTS THAT ARE BEYOND THE CONTROL OF THE LANDSCAPE INSTALLER AND DAMAGE OR ABUSE BY OTHERS, FOR AT LEAST ONE FULL YEAR AFTER PROJECT COMPLETION.

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		Mark A. Day, PE	
Revision		07-20-21	
Project No.		2020.475	
		License No. 069646	
DAYSTOKOSA ENGINEERING P.C.			
3 Van Wyck Lane Suite 2 Wappingers Falls, New York (845)-223-3202			
PROJECT 364 Main Street City of BeaconDutchess County, New York			
DRAWING Landscaping Plan			
SCALE	DRAWN BY	DRAWING NO.	
1" = 20'	MAD	LP.1	
DATE	CHECKED BY	4 of 11	
04-02-21	MAD		

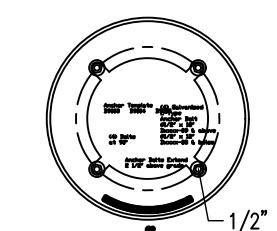


ANP POLE MOUNTED LED FIXTURE
LA792-1-PO46LD4-D-T3-35K-PC-PA5151-41
WM5161 WALL MOUNT BRACKET
COLOR TEMPERATURE - 3500K
FULL CUTOFF/DOWNLIGHT
POLE COLOR - BLACK

1 ANP POLE & WALL MOUNTED FIXTURES

NOT TO SCALE

Orientation/Anchor Guide



FIXTURE DETAILS

Materials
Cast Aluminum Fitter
Electrical
4kv Pulse Rated Socket
The Ballast used shall be of the
High Power Factor design

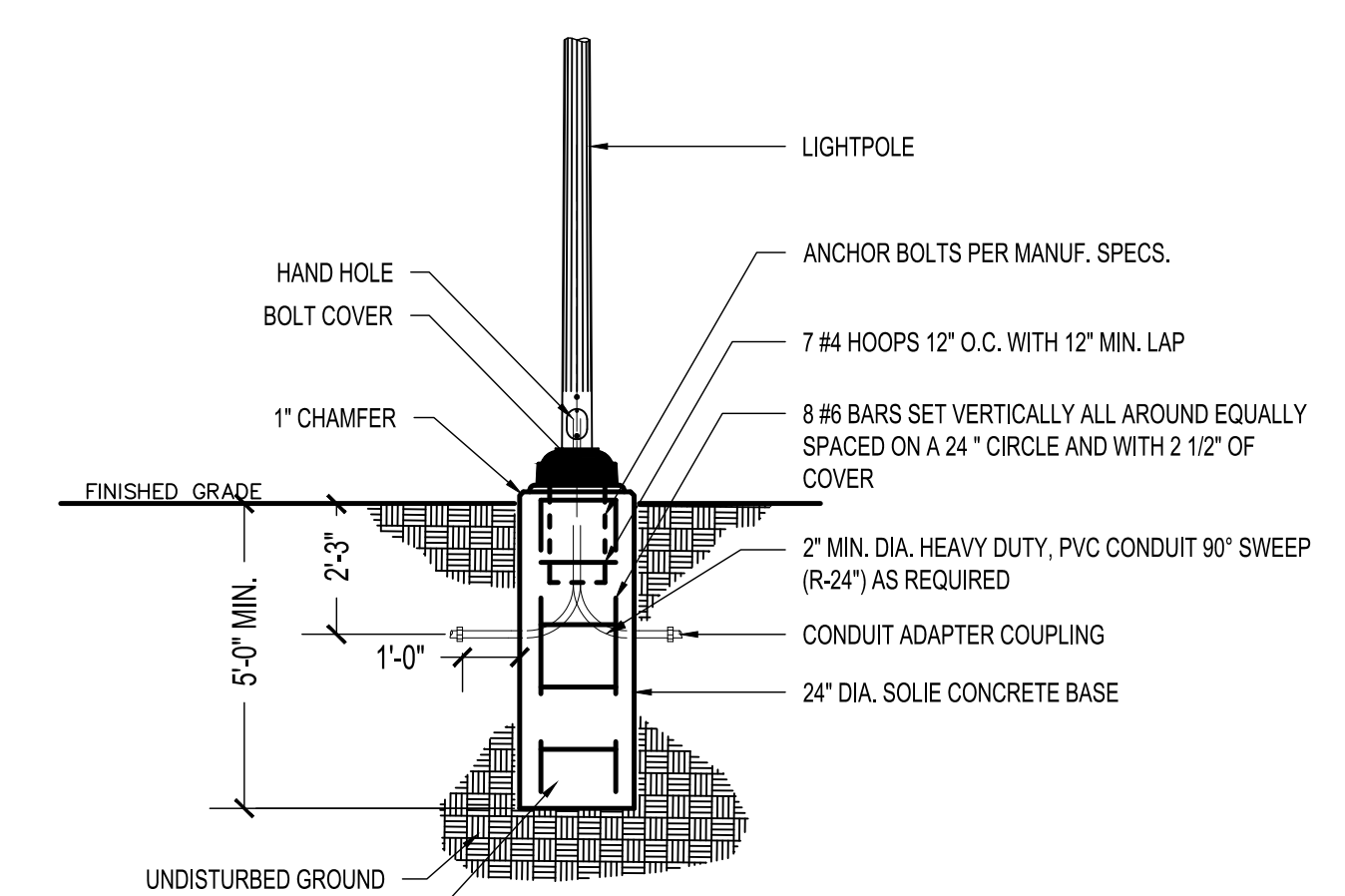
POLE DETAILS

Shaft
Ø4\"/>

IT SHALL BE THE RESPONSIBILITY OF THE LIGHTING
CONTRACTOR TO VERIFY ALL CONDITIONS IN THE FIELD

2 LIGHT POLE DETAIL

NOT TO SCALE



- NOTE:
- CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI, WITH AIR-ENTAINMENT OF 5-7%
 - CHAMFER EXPOSED EDGES OF ALL FOUNDATIONS.
 - COLOR OF LUMINAIRE SHALL MATCH COLOR OF POLE

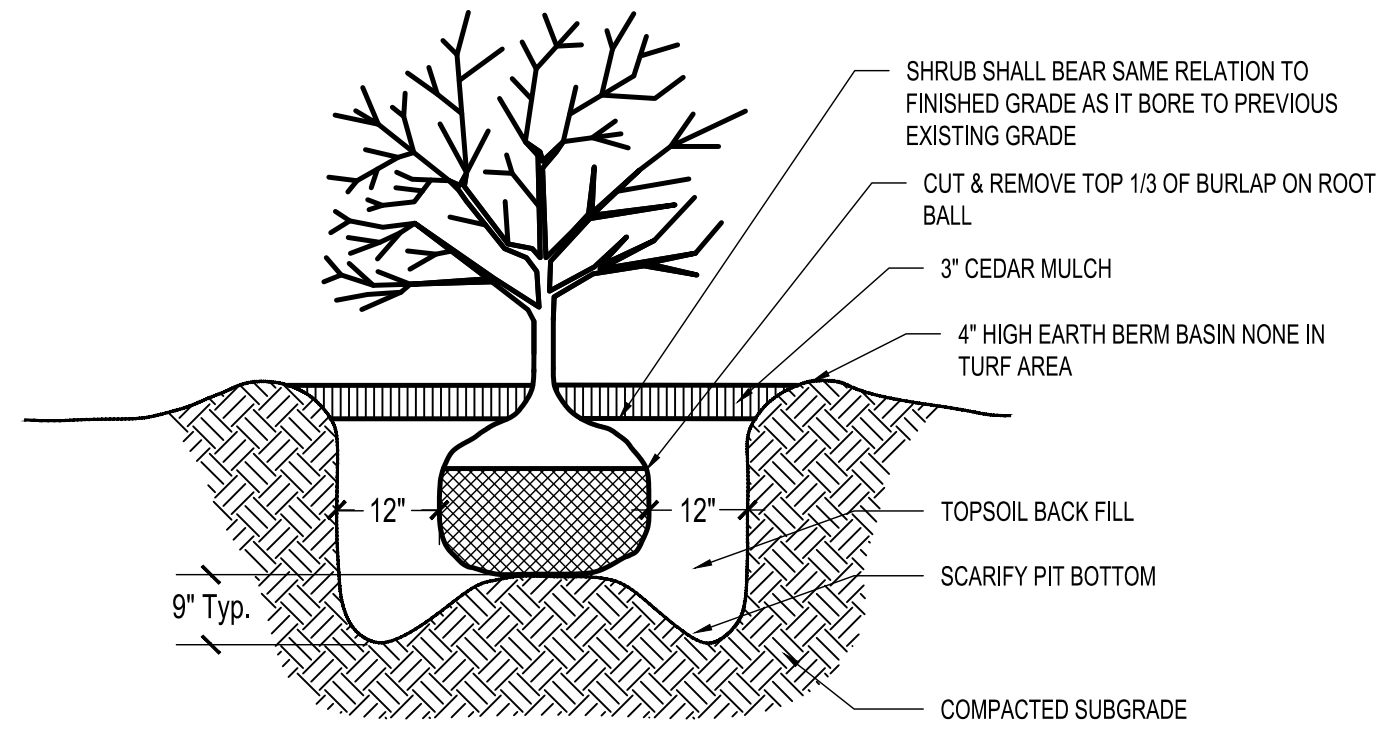
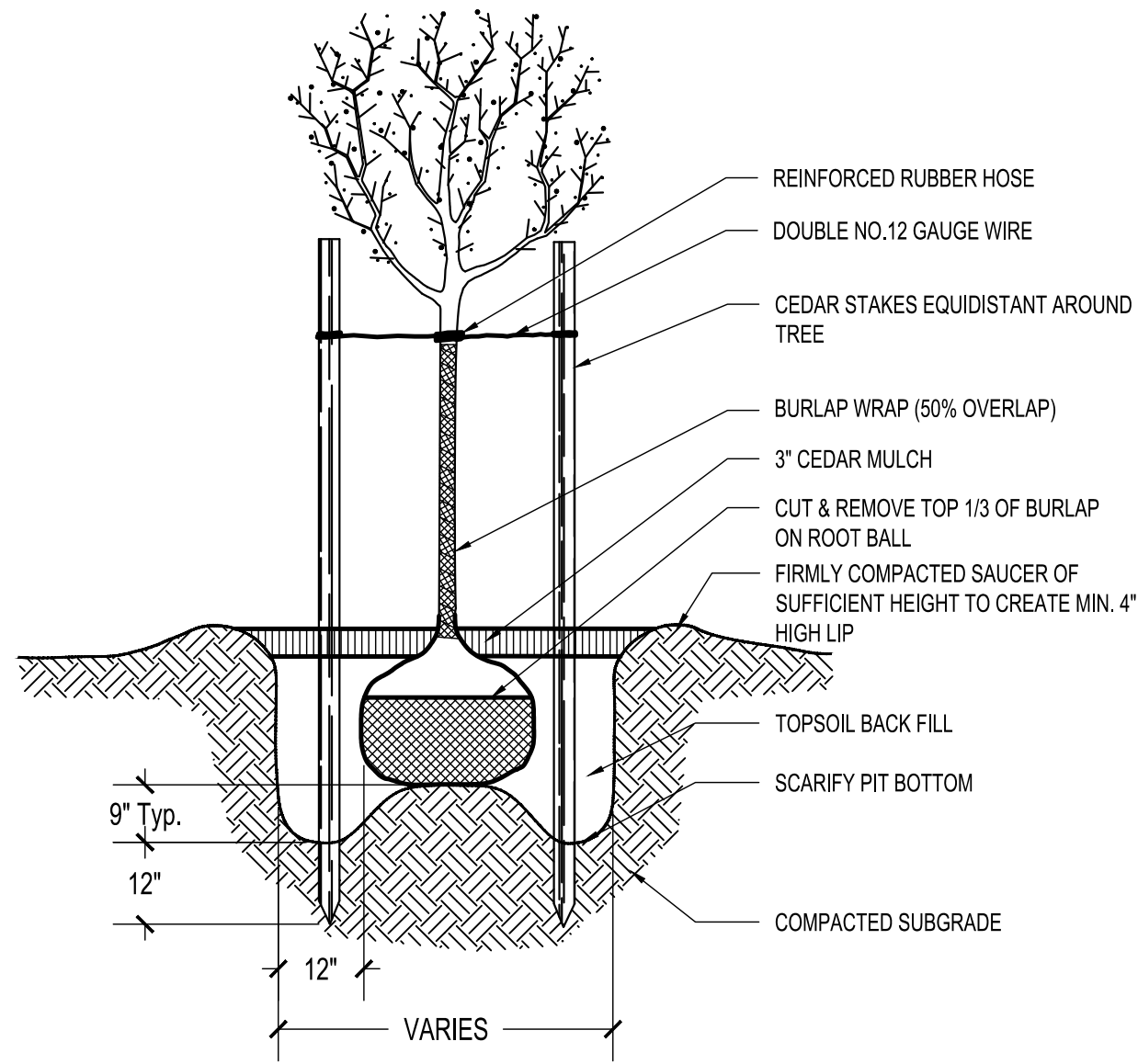
IT SHALL BE THE RESPONSIBILITY OF THE LIGHTING
CONTRACTOR TO VERIFY ALL CONDITIONS IN THE FIELD

3 LIGHTPOLE DETAIL

NOT TO SCALE

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Revisions	
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DAY STOKOSA ENGINEERING P.C.	
3 Van Wyck Lane Suite 2 Wappingers Falls, New York (845)-223-3202	
PROJECT 364 Main Street City of Beacon Dutchess County, New York	
DRAWING Lighting Plan	
SCALE 1" = 20'	DRAWN BY MAD
DATE 04-02-21	CHECKED BY MAD
LP.2 5 of 11	



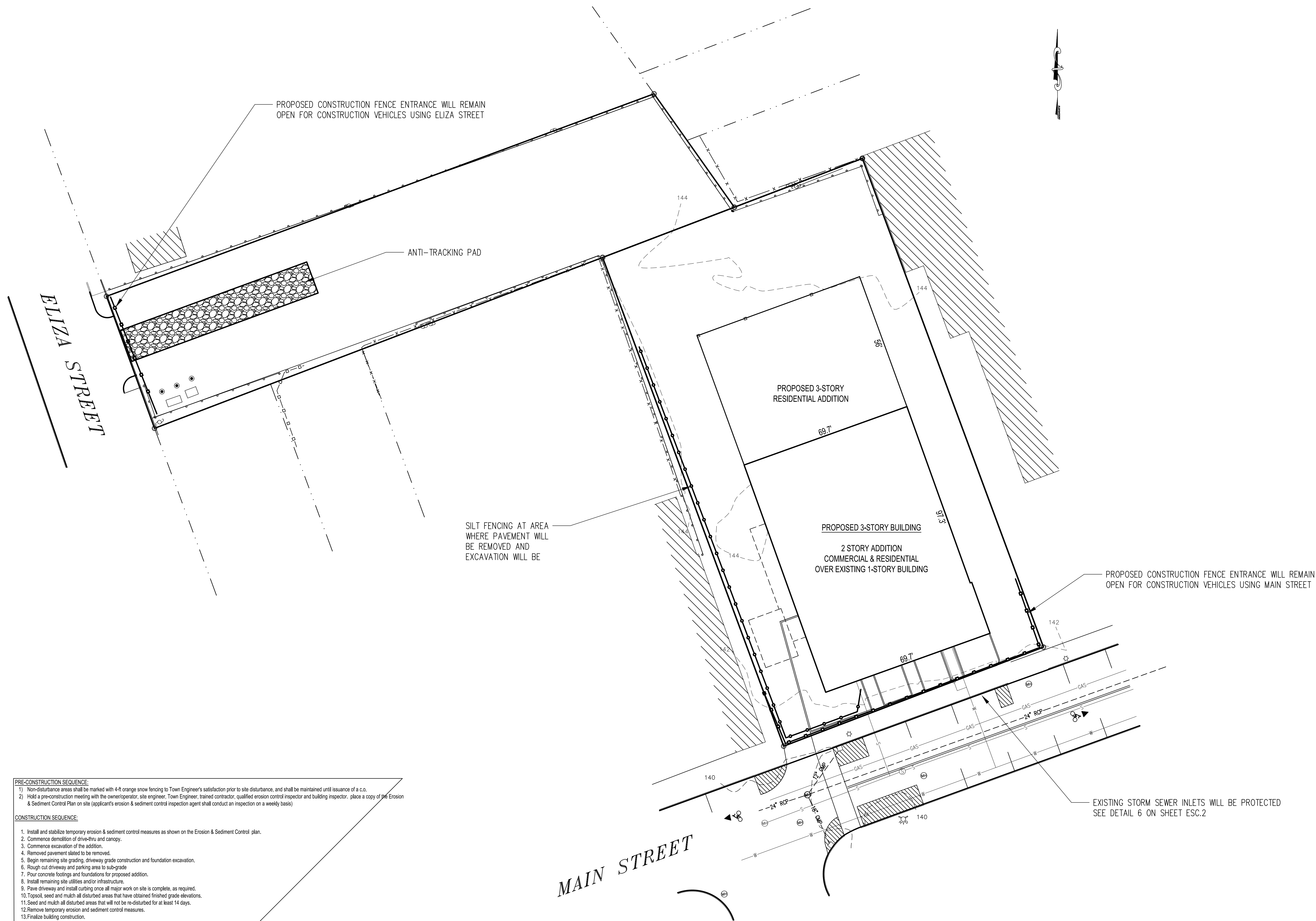
- NOTES:
1. IF CONTAINERS ARE USED CAREFULLY REMOVE TOP 1/3 OF CONTAINER (IF CONTAINER IS NON-ORGANIC, REMOVE COMPLETELY). CUT VARIOUS SLITS IN ORGANIC CONTAINER TO FACILITATE ROOT PENETRATION (OR REMOVE CONTAINER BOTTOM).
 2. DO NOT ALLOW ANY PORTION OF CONTAINER TO REMAIN EXPOSED.
 3. WATER THOROUGHLY SUBSEQUENT TO INSTALLATION.

10 PLANTING DETAILS

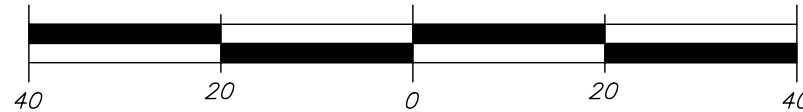
NOT TO SCALE

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		Mark A. Day, PE	
Revisions		07-20-21	
Project No.		2020.475	
		License No. 069646	
DAY STOKOSA ENGINEERING P.C.			
3 Van Wyck Lane Suite 2 Wappingers Falls, New York (845)-223-3202			
PROJECT 364 Main Street City of Beacon Dutchess County, New York			
DRAWING Construction Details			
SCALE	As Noted	DRAWN BY	MAD
DATE	04-02-21	CHECKED BY	MAD
			CD.2 7 of 11



- PRE-CONSTRUCTION SEQUENCE:**
- 1) Non-disturbance areas shall be marked with 4-ft orange snow fencing to Town Engineer's satisfaction prior to site disturbance, and shall be maintained until issuance of a c.o.
 - 2) Hold a pre-construction meeting with the owner/operator, site engineer, Town Engineer, trained contractor, qualified erosion control inspector and building inspector. place a copy of the Erosion & Sediment Control Plan on site (applicant's erosion & sediment control inspection agent shall conduct an inspection on a weekly basis)
- CONSTRUCTION SEQUENCE:**
1. Install and stabilize temporary erosion & sediment control measures as shown on the Erosion & Sediment Control plan.
 2. Commence demolition of drive-bins and canopy.
 3. Commence excavation of the addition.
 4. Removed pavement slated to be removed.
 5. Begin remaining site grading, driveway grade construction and foundation excavation.
 6. Rough out driveway and parking area to sub-grade.
 7. Pour concrete footings and foundations for proposed addition.
 8. Install remaining site utilities and/or infrastructure.
 9. Pave driveway and install curbing once all major work on site is complete, as required.
 10. Topsoil, seed and mulch all disturbed areas that have obtained finished grade elevations.
 11. Seed and mulch all disturbed areas that will not be re-disturbed for at least 14 days.
 12. Remove temporary erosion and sediment control measures.
 13. Finalize building construction.
 14. Pave parking area and drives with final top-coat of asphalt.
 15. Strip parking spaces, as required by the Site Plan.



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	Mark A. Day, PE
Revisions	07-20-21
Project No.	2020.475
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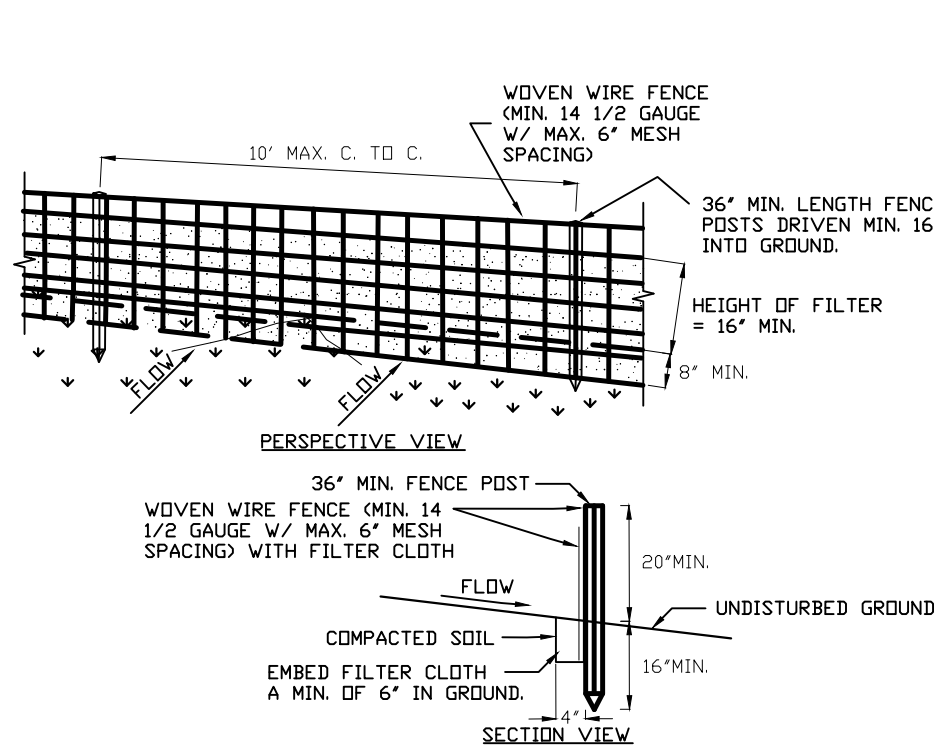
DAY | STOKOSA
ENGINEERING P.C.

3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT
364 Main Street
City of Beacon Dutchess County, New York

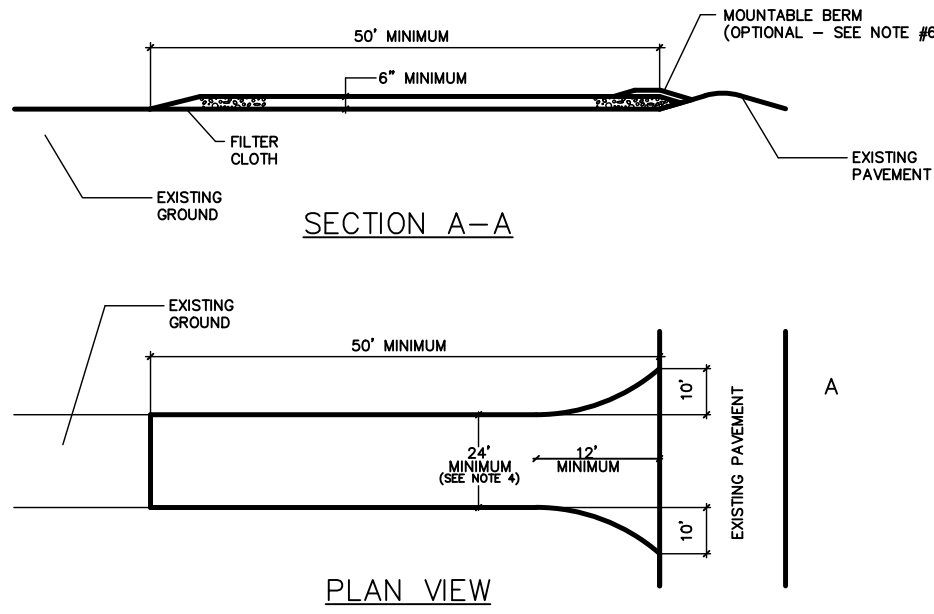
DRAWING
Erosion & Sediment Control Plan

SCALE 1" = 20'	DRAWN BY MAD	DRAWING NO. ESC.1
DATE 04-02-21	CHECKED BY MAD	8 of 11



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 1" OR 1 1/2" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEDFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
 3. THICKNESS - NOT LESS THAN 3/4 (6) INCHES.
 4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INDESS OR DEPRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.
 5. FILTER CLOTH - 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 PIPIED ACROSS 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 OF 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 TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. 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.
1. ALL SEDIMENT & EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THESE PLANS & DETAILS. CHANGES, OMISSIONS AND/OR OTHER ALTERATIONS CAN NOT BE MADE TO THESE PLANS WITHOUT THE CONSENT OF THE DESIGN ENGINEER.
2. SILT FENCE SHALL BE INSTALLED AS SHOWN ON THIS DRAWING PRIOR TO BEGINNING ANY CLEARING, GRUBBING AND EARTHWORK.
3. EXPOSED SLOPES AND ALL GRADED AREAS SHALL BE SEEDED WITH THE FOLLOWING GRASS SEED MIX IMMEDIATELY UPON COMPLETION OF ITS CONSTRUCTION, OR IF PLANNED TO BE LEFT UNDISTURBED FOR MORE THAN 21 DAYS, GRASS SEED MIX TO BE APPLIED AT A RATE OF 50 POUNDS PER ACRE IN THE FOLLOWING PROPORTIONS:

KENTUCKY BLUEGRASS 40% CREEPING
RED FESCUE 40% RYE GRASS
20%

4. GRASS SEED MIX MAY BE APPLIED BY EITHER MECHANICAL OR HYDROSEEDING METHODS. HYDROSEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF THE NYSDOT STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS, SECTION 810-1.02, METHOD NO. 1.
5. SEEDED AREAS SHALL BE MULCHED WITH STRAW AT A RATE OF 2 TONS PER ACRE, OR 30 LBS. PER 1,000 SQUARE FEET, SUCH THAT IT FORMS A CONTINUOUS BLANKET.
6. SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS BY THE OWNER'S FIELD REPRESENTATIVE.
7. DUST SHALL BE CONTROLLED BY SPRINKLING OF WATER OR OTHER APPROVED METHODS AS NECESSARY AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.
8. CUTS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTY, NOR DIVERT SURFACE WATER ONTO ADJOINING PROPERTIES.
9. ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIALS AND TO PREVENT SETTLEMENT.
10. EXCAVATIONS AND FILLS TO BE ROLLED, SEALED AND STABILIZED AT COMPLETION OF EACH DAY'S WORK.
11. THE OWNER'S FIELD REPRESENTATIVE SHALL INSPECT THE DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A WEEKLY BASIS AND AFTER RAINSTORMS.
12. AS WARRANTED BY FIELD CONDITIONS, SPECIAL ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES MAY BE ADDED TO THIS PLAN BY THE SITE ENGINEER, TOWN ENGINEER AND HIGHWAY SUPERINTENDENT. ANY REVISIONS TO THIS PLAN MUST BE SUBMITTED TO THE SITE ENGINEER. ANY CHANGES DEEMED NECESSARY TO THIS PLAN SHALL BE DICTATED BY THE SITE ENGINEER AS NECESSARY TO CARRY-OUT THE INTENT OF THIS PLAN.

Construction Waste Management Plan

Construction waste management practices are designed to maintain a clean and orderly work environment. This will reduce the potential for significant materials to come into contact with stormwater. A maintenance schedule shall be developed for these areas. The general contractor shall implement the following practices:

1. Material resulting from the clearing and grubbing operation will be stockpiled up slope from adequate sedimentation controls.
2. Equipment cleaning, maintenance, and repair areas shall be designated and protected by a temporary perimeter berm.
3. The use of detergents for large scale washing is prohibited (i.e., vehicles, buildings, pavement surfaces, etc.).

Spill Prevention and Response

A Spill Prevention and Response Plan shall be developed for the site by the general contractor. The plan shall detail the steps needed to be followed in the event of an accidental spill and shall identify contact names and phone numbers of people and agencies that must be notified.

The plan shall include Material Safety Data Sheets (MSDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

Material Storage

Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that minimizes the impacts of the construction materials effecting stormwater quality.

Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated and disposed at an approved solid waste or chemical disposal facility.

Temporary Concrete Washout Facility

Temporary concrete washout facilities should be located a minimum of 50 ft from storm drain inlets, open drainage facilities, and watercourses. Each facility should be located away from construction traffic or access areas to prevent disturbance or tracking. A sign should be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.

When temporary concrete washout facilities are no longer required for the work, the hardened concrete shall be removed and disposed of. Materials used to construct the temporary concrete washout facilities shall be removed from the site and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and/or repaired and seeded and mulched for final stabilization.

Solid Waste Disposal

No solid materials, including building materials, are allowed to be discharged from the site with stormwater. All solid waste, including disposable materials incidental to the major construction activities, must be collected and placed in containers. The containers will be emptied periodically by a contract trash disposal service and hauled away from the site.

Substances that have the potential for polluting surface and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site. As an example, special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed so that it will not flow from the site or enter groundwater, even if this requires removal, treatment, and disposal of soil. In this regard, potentially polluting substances should be handled in a manner consistent with the impact they represent.

Water Source

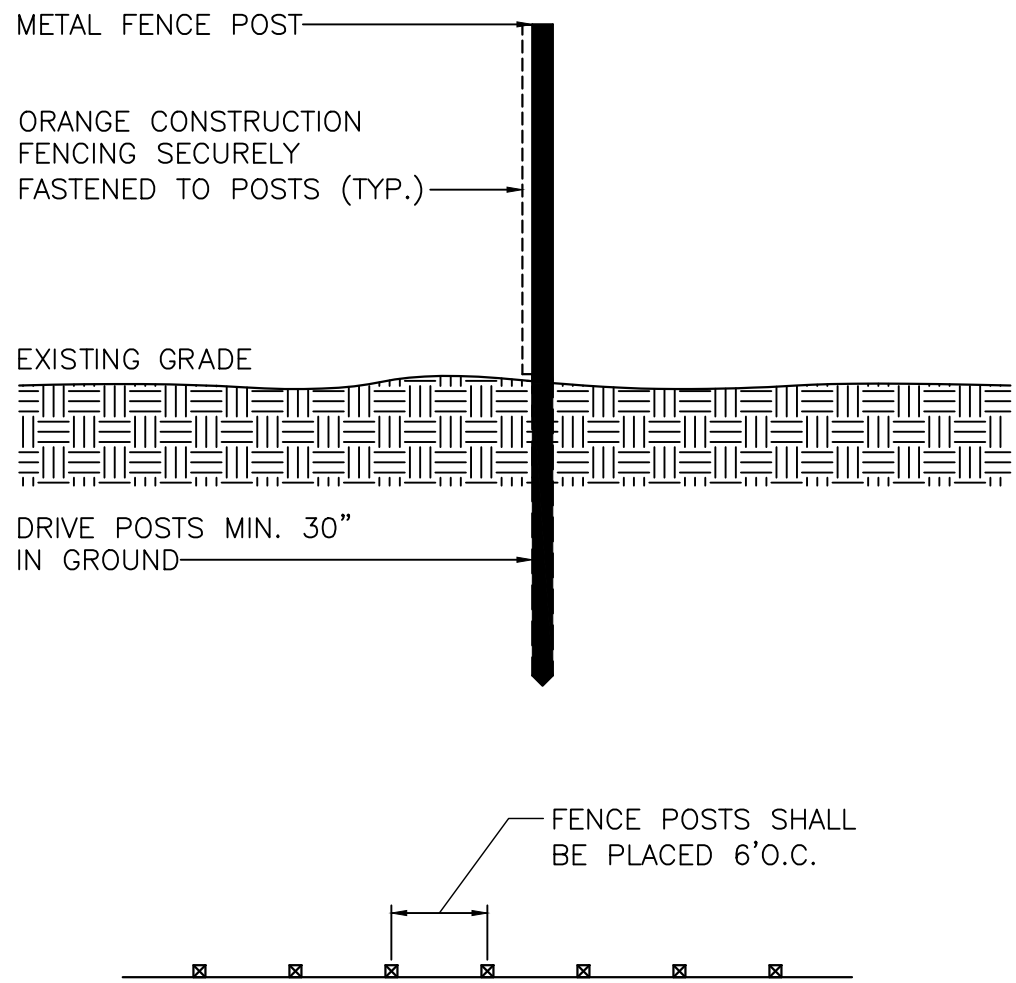
Non-stormwater components of site discharge must be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or private well approved by the Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site. It can be retained in the ponds until it infiltrates and evaporates.

CONSTRUCTION WASTE MANAGEMENT PLAN

NOT TO SCALE

1 SILT FENCE DETAIL

NOT TO SCALE



3 TYPICAL ORANGE CONSTRUCTION FENCE DETAIL

NOT TO SCALE

EROSION AND SEDIMENT CONTROL MEASURES:
1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE IN STRICT COMPLIANCE WITH "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", AUGUST 2005.

2. DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
3. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE SCOPE AND DURATION OF SOIL DISRUPTION.
4. PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL POINTS OF ENTRY ONTO THE PROJECT SITE.
5. SEEDED AREAS TO BE MULCHED WITH STRAW OR HAY MULCH IN ACCORDANCE WITH VEGETATIVE COVER SPECIFICATIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST BY SPRINKLING EXPOSED SOIL AREAS PERIODICALLY WITH WATER AS REQUIRED. THE CONTRACTOR IS TO SUPPLY ALL EQUIPMENT AND WATER.
8. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES:

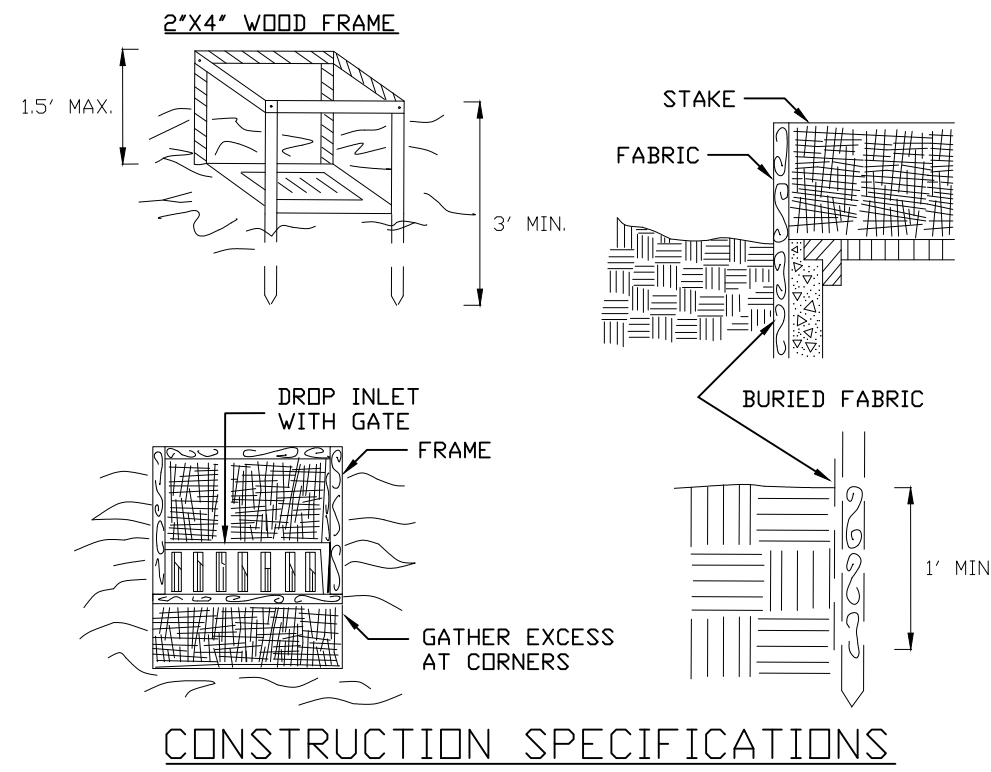
- A. PERMANENT AND TEMPORARY VEGETATION:
INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.
- B. STABILIZED CONSTRUCTION ENTRANCE:
INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. RESHAPE PAD AS NEEDED FOR DRAINAGE AND 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.
- C. SILT FENCE:
INSPECT FOR DAMAGE EVERY SEVEN DAYS. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 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.
- D. INLET PROTECTION:
INSPECT INLET PROTECTION FOR DAMAGE EVERY SEVEN DAYS. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT AS NECESSARY TO PROVIDE FOR ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.
- E. 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.

5 EROSION & SEDIMENT CONTROL NOTES

NOT TO SCALE

4 SEEDING & MULCHING NOTES

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

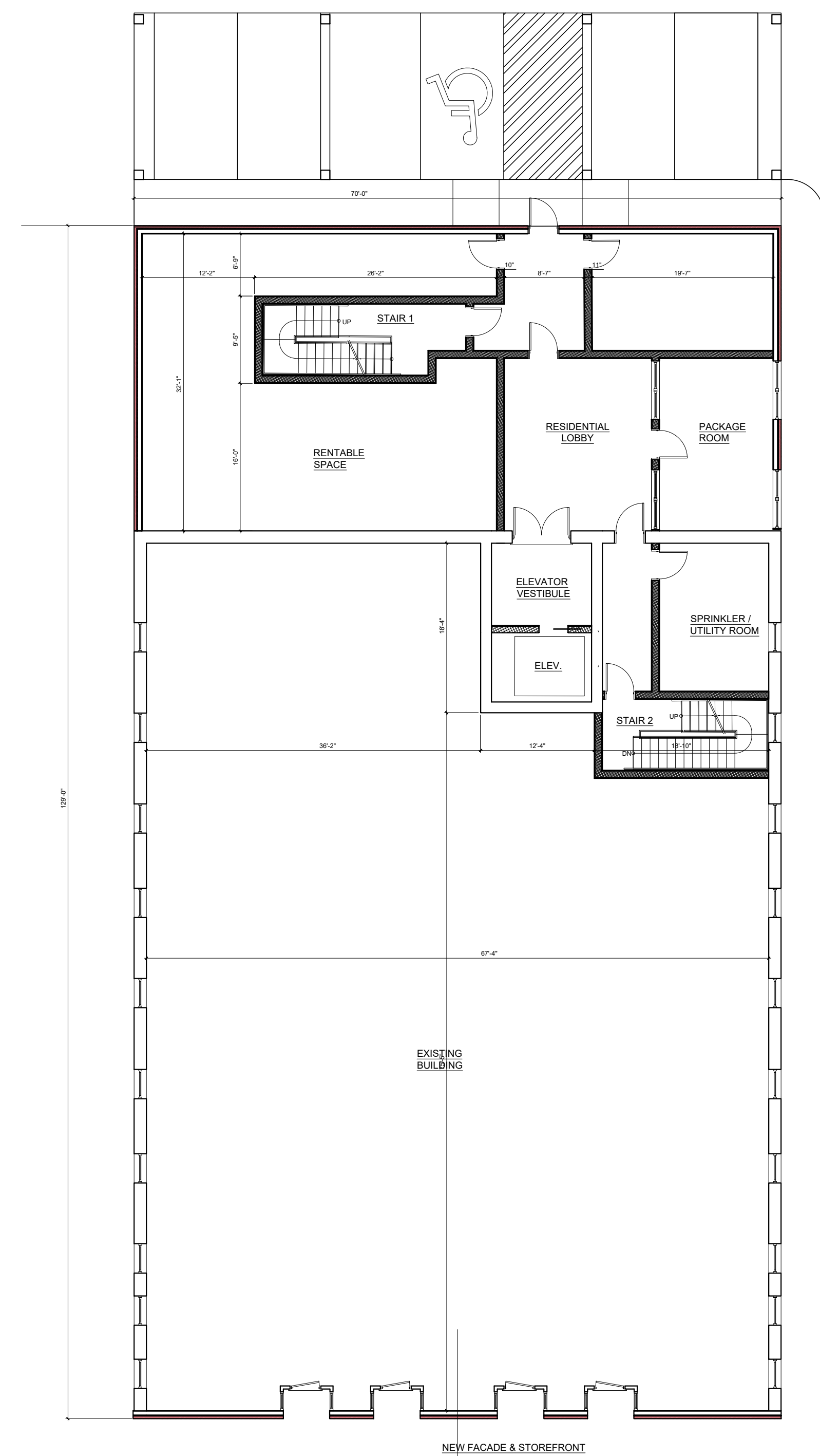
1. FILTER FABRIC SHALL HAVE AN EDS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2' x 4' WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
MAXIMUM DRAINAGE AREA 1 ACRE

6 FILTER FABRIC DROP INLET PROTECTION DETAIL

NOT TO SCALE

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Mark A. Day, PE	
Revised	07-20-21
Project No.	2020.475
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DAY STOKOSA ENGINEERING P.C.	
3 Van Wyck Lane Suite 2 Wappingers Falls, New York (845)-223-3202	
PROJECT 364 Main Street City of Beacon Dutchess County, New York	
DRAWING Erosion & Sediment Control Details	
SCALE As Noted	DRAWN BY MAD
DATE 04-02-21	CHECKED BY MAD
ESC.2 9 of 11	

[illegible]

Site Plan Application

Sheet 10 of 11 - Building Plans

Sheet 10 of 11 - Building Plans

Owner:
O'Donnell Construction Corp.
P.O. Box 526
Fishkill, NY 12524

Architect:
Aryeh Siegel, Architect
84 Mason Circle
P.O. Box 140500
New York, NY 10108

Site / Civil Engineer:
Day & Stokosa Engineering P.C
3 Van Wyck Lane
Wappingers Falls, New York 12590

364 Main Street
Beacon, New York
Scale: $\frac{3}{32}" = 1'-0"$
May 25, 2021

Scale: $\frac{3}{32}'' = 1'-0''$
May 25, 2021

REVISIONS:				880
NO.	DATE	DESCRIPTION	BY	
1	07/27/21	REVISED PER PLANNING BOARD COMMENTS	AJS	



Elevation: South

Scale: 1/8" = 1'-0"



View: From Main Street

Not to Scale



Elevation: East

Scale: 1/8" = 1'-0"



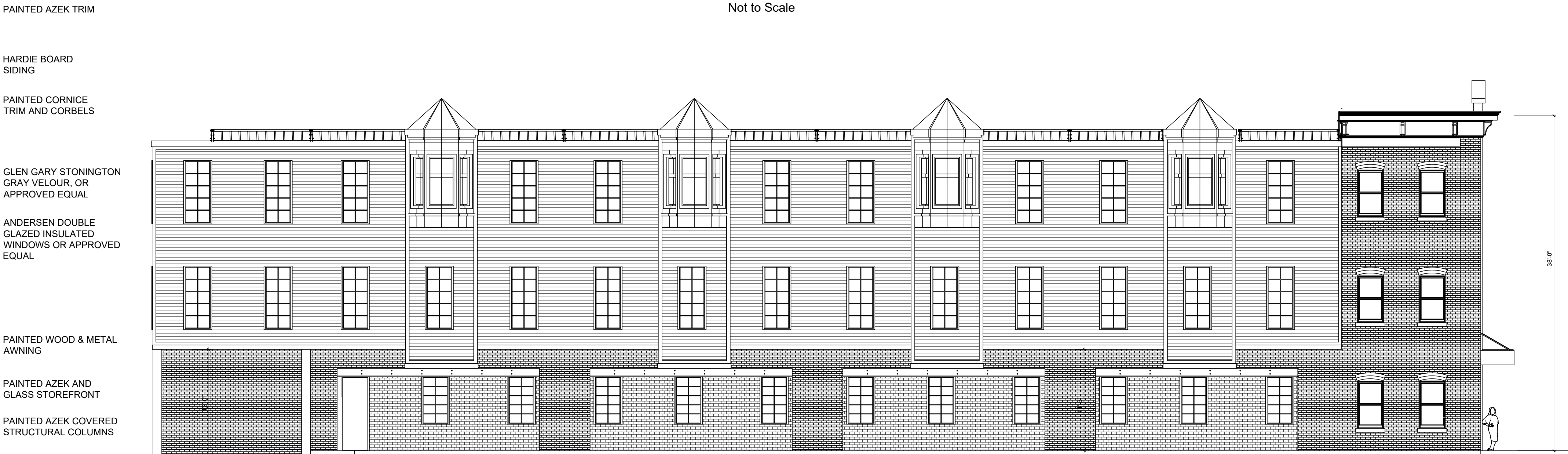
View: From Main Street

Not to Scale



Elevation: North

Scale: 1/8" = 1'-0"



Elevation: West

Scale: 1/8" = 1'-0"

Site Plan Application

Sheet 11 of 11 - Building Elevations

Owner:
O'Donnell Construction Corp.
P.O. Box 526
Fishkill, NY 12524

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

Site / Civil Engineer:
Day & Stokosa Engineering P.C
3 Van Wyck Lane
Wappingers Falls, New York 12590

364 Main Street
Beacon, New York
Scale: 1/8" = 1'-0"
May 25, 2021

LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal
John Queenan, P.E., Principal

Rodney C. Knowlton, L.S., Principal
Jerry A. Woods, L.S., Principal

John D. Russo, P.E., Principal
John Lenc, P.E., L.S.
Arthur R. Tully, P.E.

August 5, 2021

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 364 Main Street
Tax No. 6054-29-006819
Special Use & Site Plan
City of Beacon

Dear Mr. Gunn:

My office has received the following in regard to the above application:

- Introduction correspondence dated July 27, 2021, from Taylor Palmer, Esq. of Cuddy & Feder, LLP.
- Correspondence dated July 24, 2021, from Day/Stokosa Engineering.
- Full Environmental Assessment Form dated July 26, 2021.
- Application documents for Special Use Permit and Site Plan Approval.
- Report titled "Inflow & Infiltration Study – 364 Main Street", as prepared by Day/Stokosa Engineering.
- Traffic & Parking Review, dated July 26, 2021, as prepared by Colliers Engineering & Design.
- Plans titled "364 Main Street" and consisting of 11 sheets, with Sheets 1 through 9 having the latest revision date of July 20, 2021, as prepared by Day/Stokosa Engineering and Sheets 10 and 11, having the latest revision date of July 27, 2021, as prepared by Aryeh Seigel, Architect.

The proposed project is comprised of two parcels, totaling 0.85± acres, with the main parcel being located on Main Street and the 2nd parcel be located on Eliza Street. The parcel on Main Street is located in the "CMS" (Central Main Street) zoning district, whereas the parcel on Eliza Street is located within the "T" (Transitional) zoning district. The applicant is seeking to develop a mixed-use commercial and multi-family residential development, with commercial space and a residential common area on the 1st floor and 20 residential apartments to be located on the 2nd and 3rd floors.

Based on our review of the above documents and plans, we would like to offer the following comments:

General Comments:

1. The submitted Inflow & Infiltration Study notes that the internal roof drains and sump pump drain into the City's sanitary sewer collection system, which is in violation of the City's Code. Based upon the study the site is conveying anywhere from 12,709 gallons to the sewer system for a 1-year storm event, up to 26,294 gallons during a 100-year storm event. The applicant notes that this will be corrected as the project is constructed and notes and shows on Sheet 3 of 11 the connection of the sump pump and roof drains being connected to the catch basin located in front of the project on Main Street.
2. The "Parking Calculation Table" on the cover sheet of the plans notes a total retail commercial area of 6,781 square feet, whereas the submitted cover letter and Full EAF note a commercial area of 7,506 square feet, and the traffic report notes a commercial area of 7,826 square feet. The total commercial area to be developed for the project should be verified and all documents coordinated so that they are consistent.
3. The applicant was previously requested to give consideration to reducing stormwater runoff from the site. **The applicant notes that they are doing so by reducing the amount of impervious at the site by approximately 10% due to the addition of new landscaping and lawn areas.** As there is more parking than necessary for the site, based upon the parking table, we would recommend that the applicant look at removing the 6 parking stalls located on the west side of the building and providing lawn and landscaping in this area to further reduce the amount of impervious area on the site.
4. As previously noted, as the proposed parking on the lot located on Eliza Street is dedicated to the commercial and residential uses on the Main Street parcel, we would recommend that the two parcels be combined into a single parcel. **The applicant states that they do not wish to combine the parcels, but rather provide access, parking and maintenance easements of the parking lot.** The Planning Board may wish to discuss this further as to whether they want to see the lots combined or will allow for the use of the easements over the parcel on Eliza Street.

Cover Sheet – Sheet 1 of 11:

1. The parking table shall be updated to reflect the correct commercial are for the project as noted in General Comment No. 2 above.

Site Plan – Sheet 3 of 11:

1. The plan shall be updated to provide spot elevations along the curb lines and the paved areas.
2. The plan shall show the accessible ramp for the access aisle next the ADA parking stall at the rear of the building.
3. The plan should note what the hatched area to the right of the proposed refuse enclosure represents.
4. It is recommended that the single parking stall shown next to the hatched area at the rear of the Eliza Street parking lot be eliminated, as this is located in an area with poor sight distance for vehicles turning through this area from either direction. This area could be converted to additional landscaped area.

Landscaping Plan – Sheet 4 of 11:

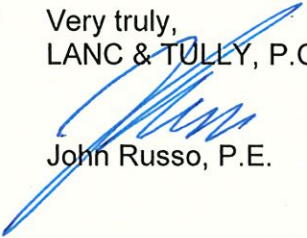
1. Although this plan includes notes with regards to landscaping, there is no landscaping plan shown on the sheet. The sheet shall also include a planting schedule of what is proposed to be planted on the site.

Construction Details – Sheet 6 of 11:

1. The "Bike Rack" detail shall be updated to reflect the thickness of the concrete pad for the racks.
2. The plan shall be updated to include construction details for the proposed 4" fire service line to be installed from the far side of Main Street into the building, along with the 2" service line. This would include trench details, valve details, wet tap details, corporation and curb stop details, and pavement restoration details.

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: John Clarke, Planner
Jennifer Gray, Esq.
David Buckley, Building Inspector

To: John Gunn, Chair, and the City of Beacon Planning Board

Date: August 5, 2021

Re: **Beacon Commons, 16 West Main Street, Site Plan and Merger of Three Lots**

I have reviewed a July 27, 2021 response letter from JMC and a 29-sheet Site Plan set with the last revision dates of July 27, 2021.

Proposal

The applicant is proposing to construct a 62-unit multifamily building on a 1.5-acre site in the Linkage and R1-7.5 districts and within the Local Waterfront Revitalization Program (LWRP) boundary.

Comments and Recommendations

The applicant did not respond to the points in my previous October 9, 2020 comment memo, so some of those comments are repeated below.

1. The Traffic Study and SEQRA review should consider walkability to the Train Station as part of its cumulative analysis of traffic impacts.
2. Parking in the adjacent residential district will need a Special Permit from the City Council. The Planning Board should issue a recommendation to the Council.
3. For the Sheet 9 Lighting Plan, the fixture specifications should be shown to confirm that the full cut-off requirement, temperatures, and Color Rendering Index comply with Section 223-14 B.
4. For the Sheet 26 Landscaping Plan:
 - a. The trees in the parking areas must have a minimum caliper of three inches, according to Section 223-26 C(3).
 - b. The latest plan omits the four trees previously shown along the West Main Street frontage. Street trees on average 30-40 feet apart should be provided along both frontages.
5. For the Sheets A-100 and A-200 Building Plans:
 - a. On June 15, 2020, the City Council adopted changes to the Section 223-41.21 Linkage district that affect the building program for this project. Like the Central Main Street district standards, an apartment 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 on facades facing the north side of West Main Street. The 1st floor plans still show apartments along the West Main Street frontage.

- b. The revised renderings are not fully consistent with the recommendations from the Architectural Review Subcommittee meeting on March 13, 2020, but the project architect has stated that he is working to address these items for further review.
- c. Tinted glass windows are not permitted.
- d. Scaled elevations should be provided with building heights and floor-to-floor heights noted.
- e. The rooftop accessory structures may be limited under Section 223-41.21 D(5), including the need for a 15-foot setback from the front edge of the roof.

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

- c: Dave Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Aryeh Siegel, Project Architect

City of Beacon Planning Board Agenda
08/10/2021

Title:

Zoning Board of Appeals - August Meeting

ATTACHMENTS

City of Beacon Planning Board Agenda
08/10/2021

Title:

Continue review of Small Cell Wireless Facility Design and Review Guideline Policy

ATTACHMENTS

City of Beacon Planning Board Agenda
08/10/2021

Title:

Certificate of Appropriateness - 199 Main Street; new facade color

ATTACHMENTS

[199 Main Street Application.pdf](#)

[199 Main Street Existing Facade Color.JPG](#)

[199 Main Street Proposed Facade Color.png](#)

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: July 7, 2021

Project Address: 199 Main Street Beacon, NY 12508

Project Architect/Engineer: _____

Owner/Builder: Kenneth Baldwin Rose Hill Group LLC (DBA Little King)

Contact Phone No.: 845-600-6170

Approval Requested: ☒ Certificate of Appropriateness ☐ New Single Family House

Color/Materials: Sherwin Williams White Exterior Paint

Siding: Wood Exterior Store Front - Painting Exterior White

Roofing: N/A

Windows: Color: Glass

Type: _____

Trim: Wood

Garage Door: N/A

Stone/Brick: N/A



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 - pd





City of Beacon Planning Board Agenda
08/10/2021

Title:

Certificate of Appropriateness - 475 Main Street; mural

ATTACHMENTS

[475 Main Street Application.jpg](#)

[475 Main Street Fridman Gallery Mural.pdf](#)

[Dindga McCannon Mural Proposal \(Fridman Gallery\).pdf](#)

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: 7/15/21

Project Address: 475 Main Street, Beacon, NY 12508

Project Architect/Engineer: Artist: Dindga McCannon

Owner/Builder: Fridman Gallery (tenant) Michael Benisman (owner)

Contact Phone No.: 917-608-7442

Approval Requested: ☒ Certificate of Appropriateness ☐ New Single Family House

Color/Materials: 17 X 10 ft mural painted by Dindga McCannon

Siding: see attached images and description.

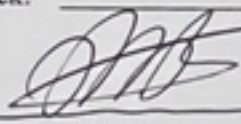
Roofing: see attached images and description.

Windows: Color: _____ Type: _____

Trim: _____

Garage Door: _____

Stone/Brick: _____


signature of owner

Karlyn Benson, Fridman Gallery
Signature of ~~Owner~~ gallery

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

Fridman Gallery would like to receive approval for a mural painted on the side of 475 Main Street. The artist is [Dindga McCannon](#), an African-American artist, fiber artist, muralist, teacher, author and illustrator.

The title of the mural is *Maybe if the mothers of the world unite we could all live in peace*. Please see the design on page 2.

Notes about the design:

- The white space will be filled in with the colors of the rainbow
- The top edge should be curved as the top of the image shows, per the photograph attached

Dindga McCannon's previous public art works include the following:

- 1985: "United Community," 50 ft by 6 stories, 25 Furman Ave, Brooklyn, NY, Dept of Cultural Affairs
- 2000: "Amazing Life of Althea Gibson," 60 inches by 120 inches art story quilt, Disney Inc for ESPN Zone, 42nd Street and Brady, NYC
- 2001: "Winning the Vote," Art Quilt on the Pioneers of Women's voting history America, Scholastic Magazine
- 2008: "Zora Neale Hurston," B.O.S.S. (Barnard Organization of Soul Sisters), Columbia University, NY

The space available for the mural is 17 feet wide (between the cables) and 10 feet high from the bush in the photo to the top of the mural. See page 3.

Contact:

Fridman Gallery
475 Main Street
Beacon, NY 12508
Attn: Karlyn Benson
karlyn@fridmangallery.com
917-608-7442

Dindga McCannon, *Maybe if the mothers of the world unite we could all live in peace*





The space available for the mural is 17 feet wide (between the cables) and 10 feet high from the bush in the photo to the top of the mural.

Dindga McCannon

*Maybe if the mothers of the world unite
we could all live in peace*

Proposal from Fridman Gallery (475 Main Street)
to the Beacon, NY Architectural Planning Board

August 10, 2021

On behalf of the celebrated artist Dindga McCannon, Fridman Gallery proposes a new public mural at 475 Main Street for the enjoyment of our neighbors, nearby businesses and cultural centers, Hudson Valley visitors, and the communities of the Beacon - Newburgh greater area.



About Dindga McCannon

In a time of deep social and political unrest surrounding issues of race and gender, McCannon's five-decade career puts the long road to racial equity into perspective. Born in New York City and raised in Harlem and the Bronx, Dindga came of age as an artist and young mother during the rise of feminist art in New York City and the civil rights movement across the nation. Dindga began her career studying under Harlem Renaissance artists such as Jacob Lawrence, Charles Alston, Richard Mayhew, and Al Loving at the Art Students League of New York and the Robert Blackburn Printmaking Workshop. She went on to become a pillar of the influential African-American art collective Weusi, and later a co-founder of Where We At Black Women Artists, a noteworthy collective affiliated with the Black Arts Movement. Throughout Dindga's career, she created space for her own artistic exploration while creating a support network for generations of Black artists to create, to commune, and to make a living.

McCannon's work is in the public collections of the Brooklyn Museum, the Studio Museum in Harlem, Michigan State University, and the Schomburg Center for Research in Black Culture, among others. Her work has been included in recent exhibitions *We Wanted A Revolution: Black Radical Women, 1965-1985* organized by the Brooklyn Museum; *Black Power* at the National Civil Rights Museum, Memphis, TN; and *Phillips X Presents: Dindga McCannon*.



Proposed design by Dindga McCannon. The space available for the mural is 17 feet wide (between the cables) and 10 feet high from the bush in the photo to the top of the mural.



McCannon's original sketch

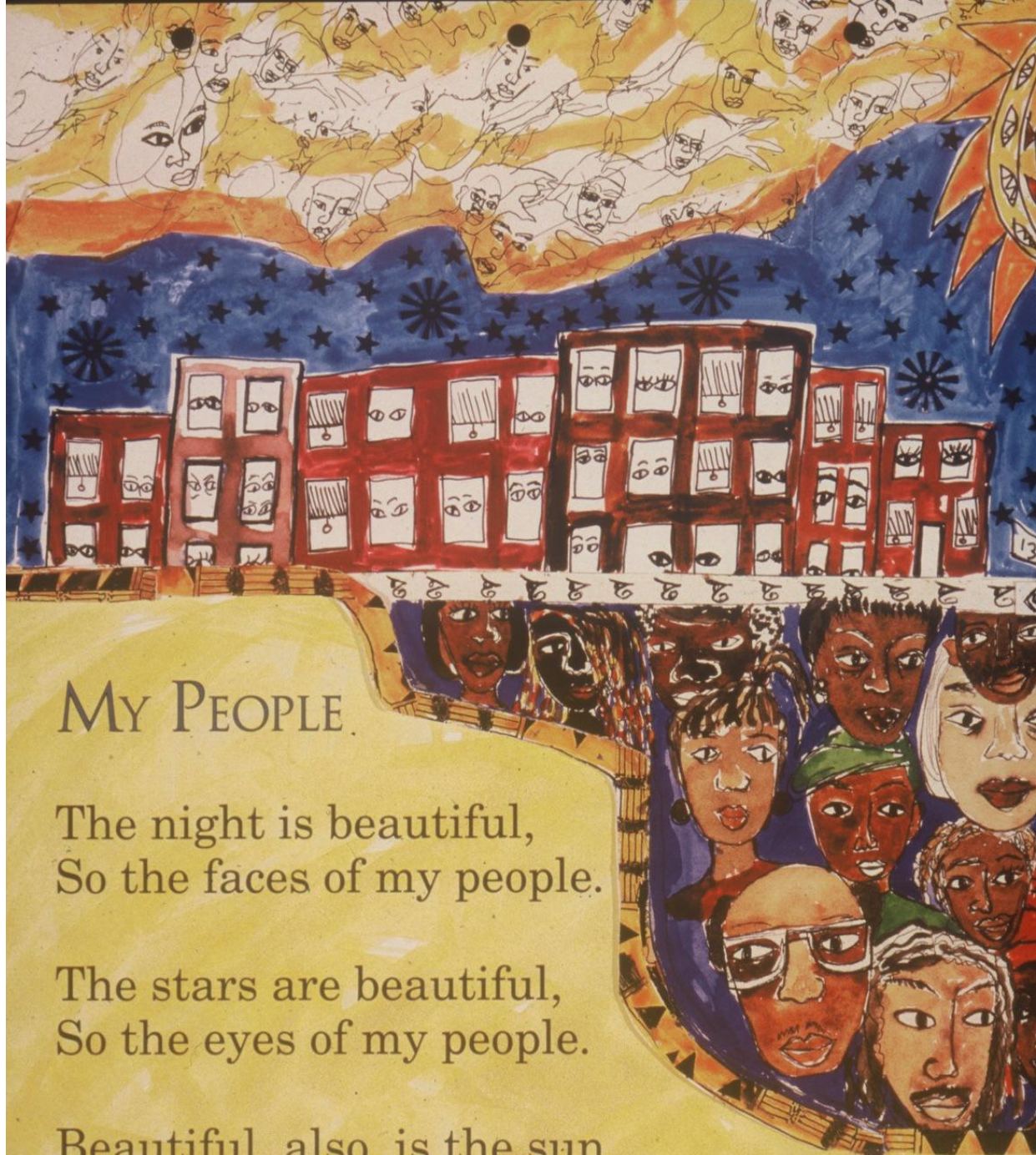




Harlem Stoop Scene (1972) 10' x 8'. 126 and Adam Clayton Powell Jr. Blvd. Commissioned by the Studio Museum in Harlem's Artist in Residence program.



Public mural at the Wright Brothers School (PS 28) 475 W 155th St, New York, NY.



MY PEOPLE.

The night is beautiful,
So the faces of my people.

The stars are beautiful,
So the eyes of my people.

Beautiful, also, is the sun.
Beautiful, also, are the souls of my people.

—Langston Hughes

Dindga McCannon's previous public art works include the following:

- 1985: "United Community," 50 ft by 6 stories, 25 Furman Ave, Brooklyn, NY, Dept of Cultural Affairs
- 2000: "Amazing Life of Althea Gibson," 60 inches by 120 inches art story quilt, Disney Inc for ESPN Zone, 42nd Street and Brady, NYC
- 2001: "Winning the Vote," Art Quilt on the Pioneers of Women's voting history America, Scholastic Magazine
- 2008: "Zora Neale Hurston," B.O.S.S. (Barnard Organization of Soul Sisters), Columbia University, NY

FRIDMAN GALLERY

475 Main Street
Beacon, NY 12508

www.fridmangallery.com

info@fridmangallery.com
917-608-7442

City of Beacon Planning Board Agenda
08/10/2021

Title:

Certificate of Appropriateness - 5 Leonard Street; exterior improvements

ATTACHMENTS

[5 Leonard Street Application.pdf](#)

[5 Leonard Street Elevations.pdf](#)

ARCHITECTURAL REVIEW BOARD APPLICATION

Date: 07-01-21

Project Address: 5 LEONARD ST

Project Architect/Engineer: JOSEPH POTACKI

Owner/Builder: 5 LEONARD LLC / HARSHVIR S. MANGAT

Contact Phone No.: 845-242-1971

Approval Requested: ☒ Certificate of Appropriateness ☐ New Single Family House

Color/Materials:

Siding: WOODSTOCK BROWN - HARDIEBOARD SIDING

Roofing: BLACK METAL

Windows: Color: BLACK FRAME Type: DOUBLE HUNG w/ GRILLES

Trim: IRON GRAY

Garage Door: N/A

Stone/Brick: EXISTING BRICK FOR FOUNDATION



Signature of Owner

FOR OFFICE USE ONLY:

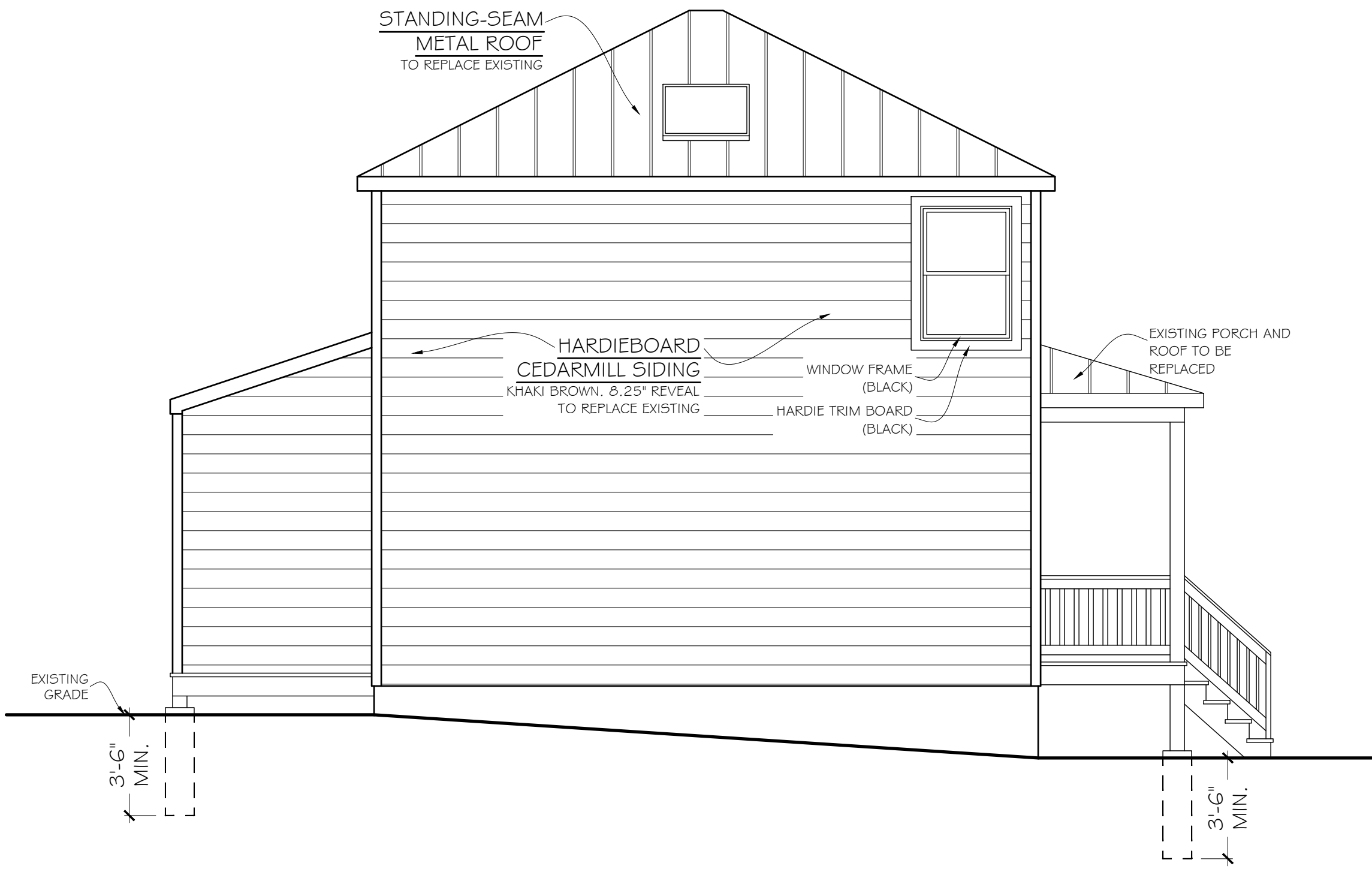
The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

FEE: \$100.00



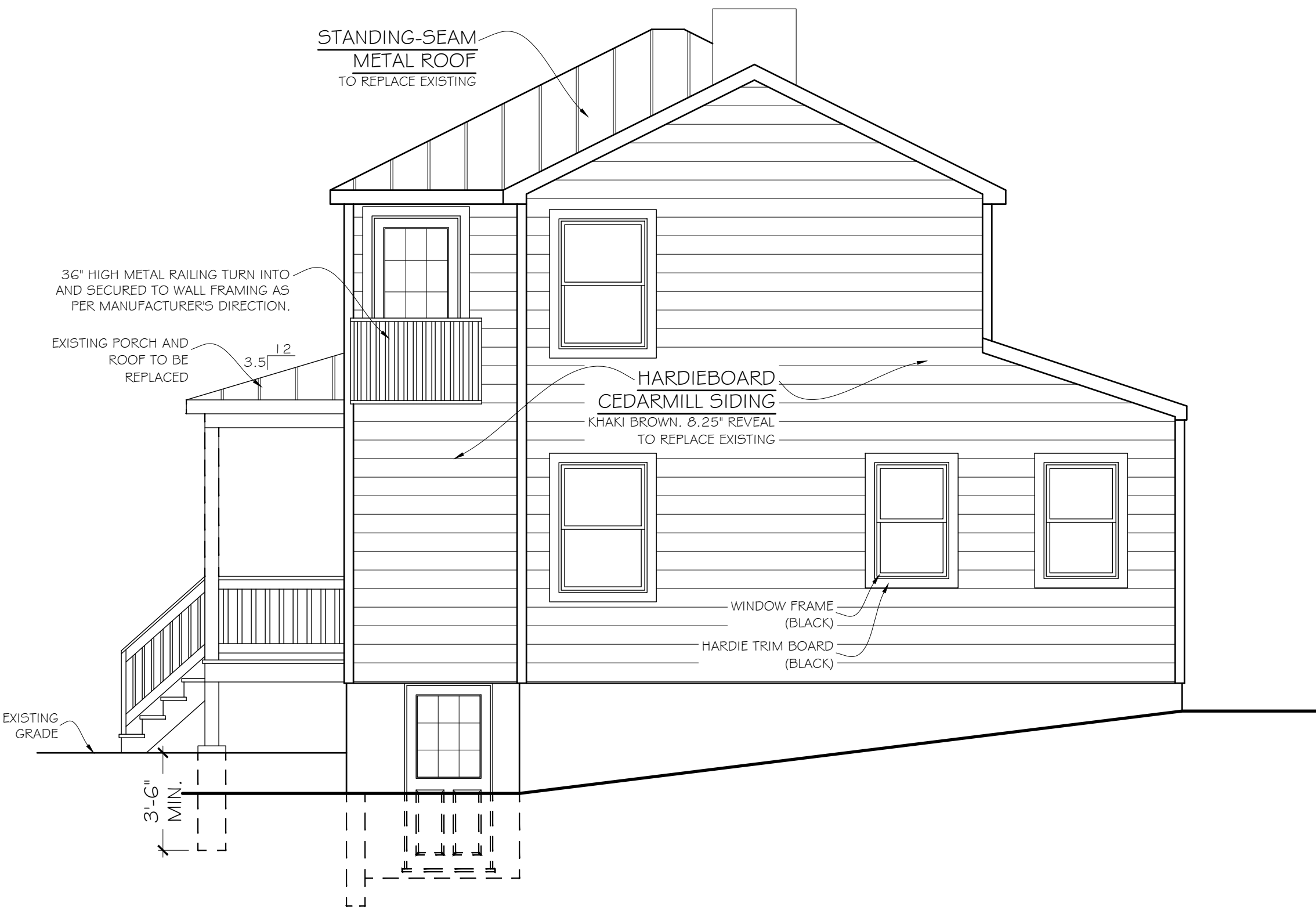
LEFT SIDE ELEVATION

SCALE 1/4" = 1'-0"



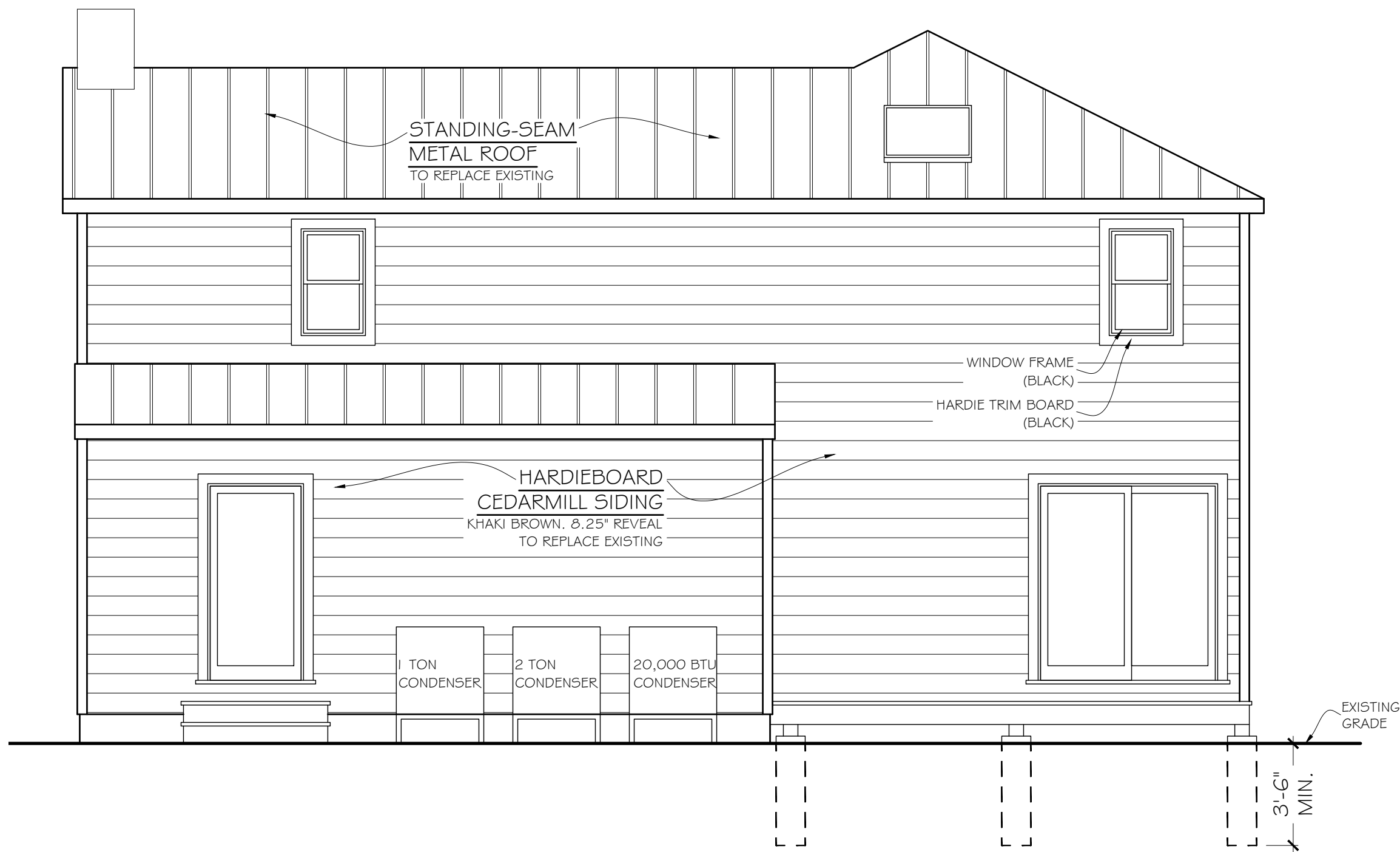
FRONT ELEVATION

SCALE 1/4" = 1'-0"



RIGHT SIDE ELEVATION

SCALE 1/4" = 1'-0"



REAR ELEVATION

SCALE 1/4" = 1'-0"

DESIGN LOADS

	LIVE LOAD	DEAD LOAD
FIRST FLOOR	50 PSF	10 PSF
SECOND FLOOR	40	10
ATTIC	20	10
GROUND SNOW LOAD	30	
PARTITIONS		25
WIND LOAD	30	
WIND SPEED	115-120 MPH	
DECKING	50	

NOTES:

1. THESE PLANS ARE PREPARED IN COMPLIANCE WITH THE 2020 EDITION OF THE NYS BUILDING CODE.
2. ALL HVAC COMPONENTS ARE TO BE DESIGNED BY OTHERS TO COMPLY WITH ENERGY CONSERVATION COMPLIANCE CODE.
3. NOTE: THIS IS AN ADDITION TO AN EXISTING HOUSE THAT IS INHABITED. ALL STRUCTURAL BEARING POINTS AND SUPPORTS MUST BE CONFIRMED ON SITE AT STARTING OF CONSTRUCTION. CONTRACTOR IS TO CONTACT THE DESIGNER TO ARRANGE FOR INSPECTION AND ADDRESS ANY NEEDED MODIFICATIONS. CERTAIN CHANGES AND SOME ADDITIONAL SUPPORTS MAYBE REQUIRED AFTER INSPECTION.
4. IT IS A VIOLATION OF ARTICLE 145 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN VERIFICATION OR ADOPTION BY A N.Y.S. LICENSED ENGINEER IN ACCORDANCE WITH SECTION 7209(2).
5. TO THE BEST OF MY KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH CHAPTER 4 OF THE 2015 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP.	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP.
	SPEED (MPH)	TOPO EFFECTS	SPECIAL WIND REGION	WIND-BORNE DEBRIS ZONE		WEATHERING	FROST LINE DEPTH						
30 PSF	*SPECIAL WIND REGION	NO	YES	NO	C	SEVERE	42"	MODERATE TO HEAVY	7	YES	**	2000	51.6

*115 MPH - 120 MPH, THE SPECIAL WIND REGION SHOULD SERVE AS A WARNING TO DESIGN PROFESSIONALS IN EVALUATING WIND LOADING CONDITIONS. WIND SPEEDS HIGHER THAN THE DERIVED VALUES TAKEN FROM SECTION 1609 OF THE IBC AND FIGURE R301.2(4)A OF THE IRC ARE LIKELY TO OCCUR AND SHOULD BE CONSIDERED IN THE DESIGN.

** STATE IF APPLICABLE. FOR FLOOD HAZARDS, THE DESIGN PROFESSIONAL SHALL STATE IF THEY ARE APPLICABLE. Y/N. VERIFY WITH FIRM MAPS. MAPS ARE AVAILABLE IN THE ENGINEERING DEPARTMENT FOR REVIEW. IF YES, ADDITIONAL INFORMATION IS REQUIRED.

SQUARE FOOTAGE			
EXISTING TO BE RENOVATED			
1ST FLOOR	2ND FLOOR	BASEMENT	PORCH
988 S.F.	803 S.F.	708 S.F.	85 S.F.



DESIGN PLANNING CONSTRUCTION

ROY A. FREDRIKSEN, PE
DESIGN • PLANNING • CONSULTING ENGINEERING
266 SHEAR HILL RD. • MAHOPAC, NY 10541 • 845-621-4000
RAYEXDESIGN@GMAIL.COM

OWNER: MOHINDER MANGAT

PROJECT: RENOVATION OF EXISTING HOUSE LOCATED AT 5 LEONARD ST. IN BEACON, NY.

SHEET TITLE: ELEVATIONS
1 OF 5

5/28/2021
2/16/2021
12/4/2020
REVISIONS:

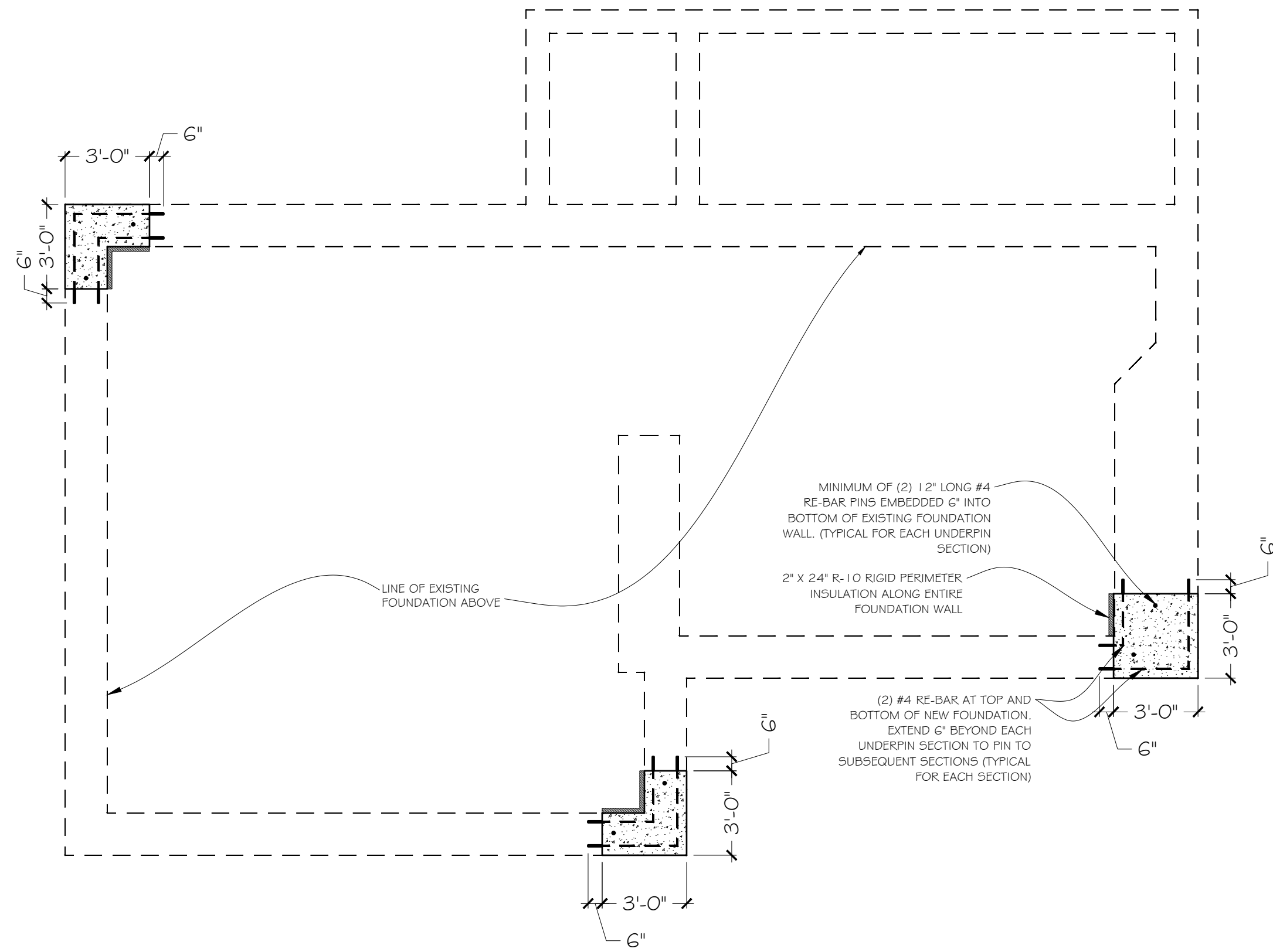
JOB #
DRN BY: JP
CHKD BY: WB
TAX MAP #:
DATE: 7/31/2020

SCALE 1/4" = 1'-0"

SCALE 1/4" = 1'-0"

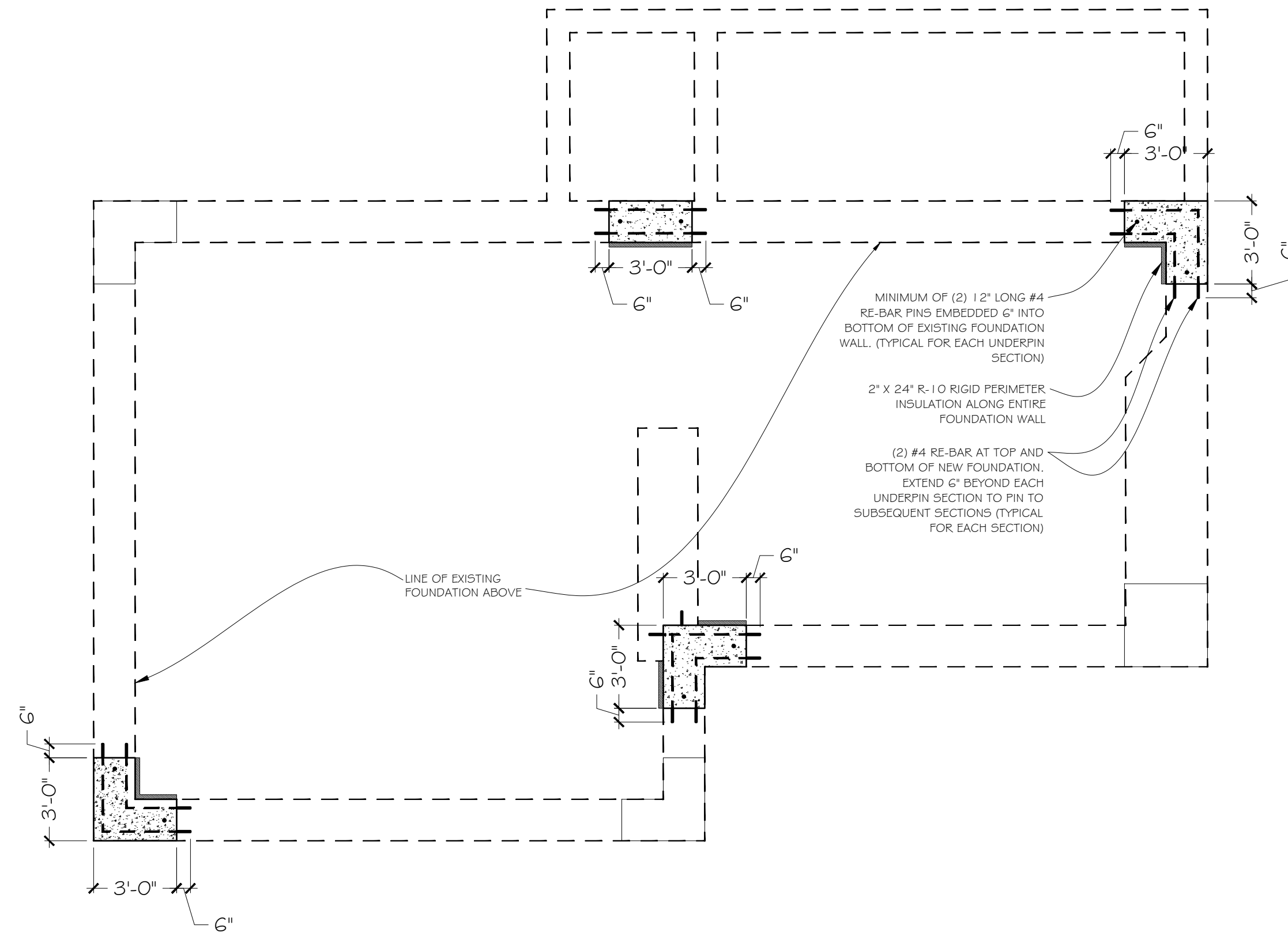
NOT TO SCALE

SCALE 1/4" = 1'-0"



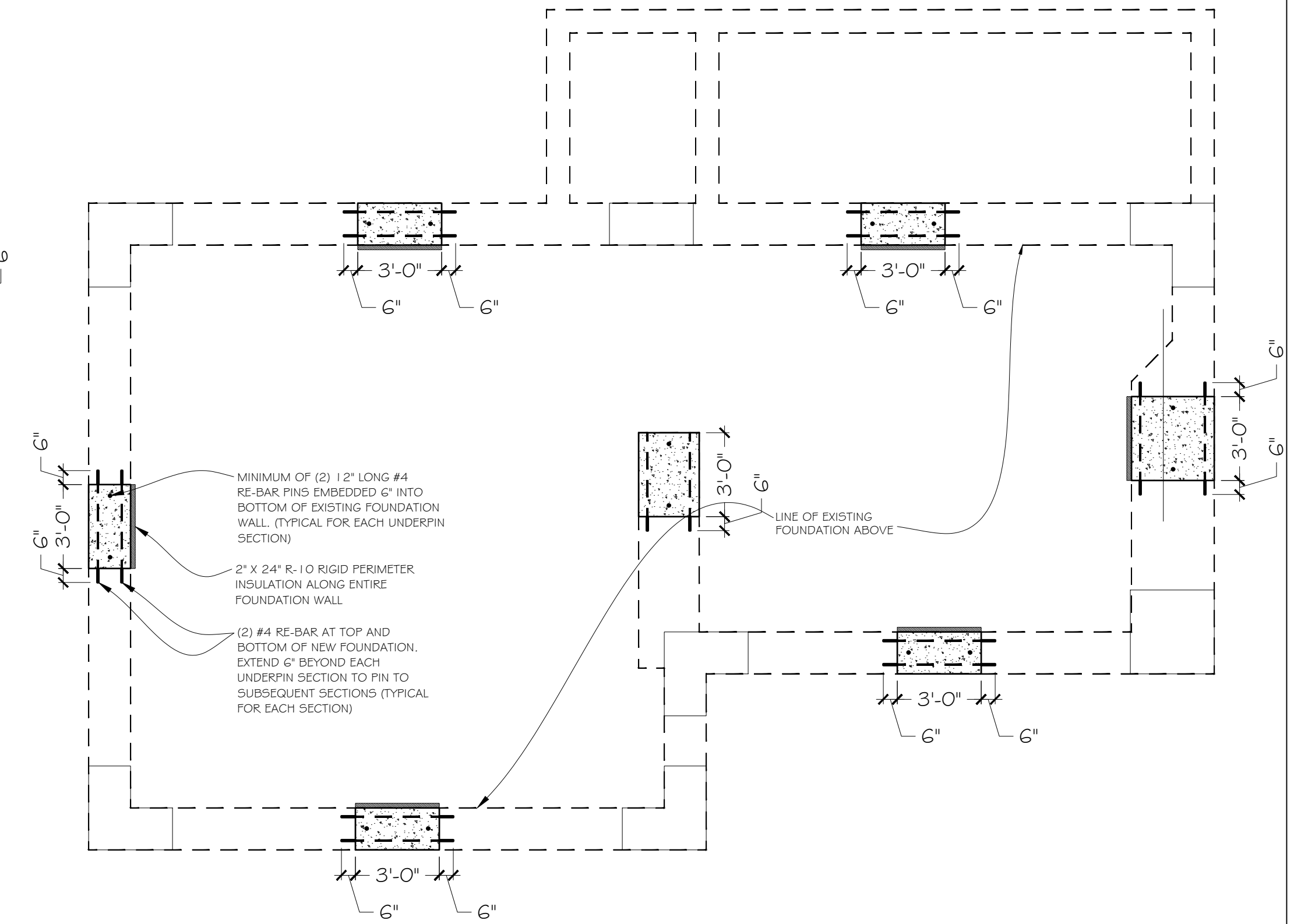
FOUNDATION WALL UNDERMINING (PHASE 1)

SCALE : 1/4" = 1'-0"



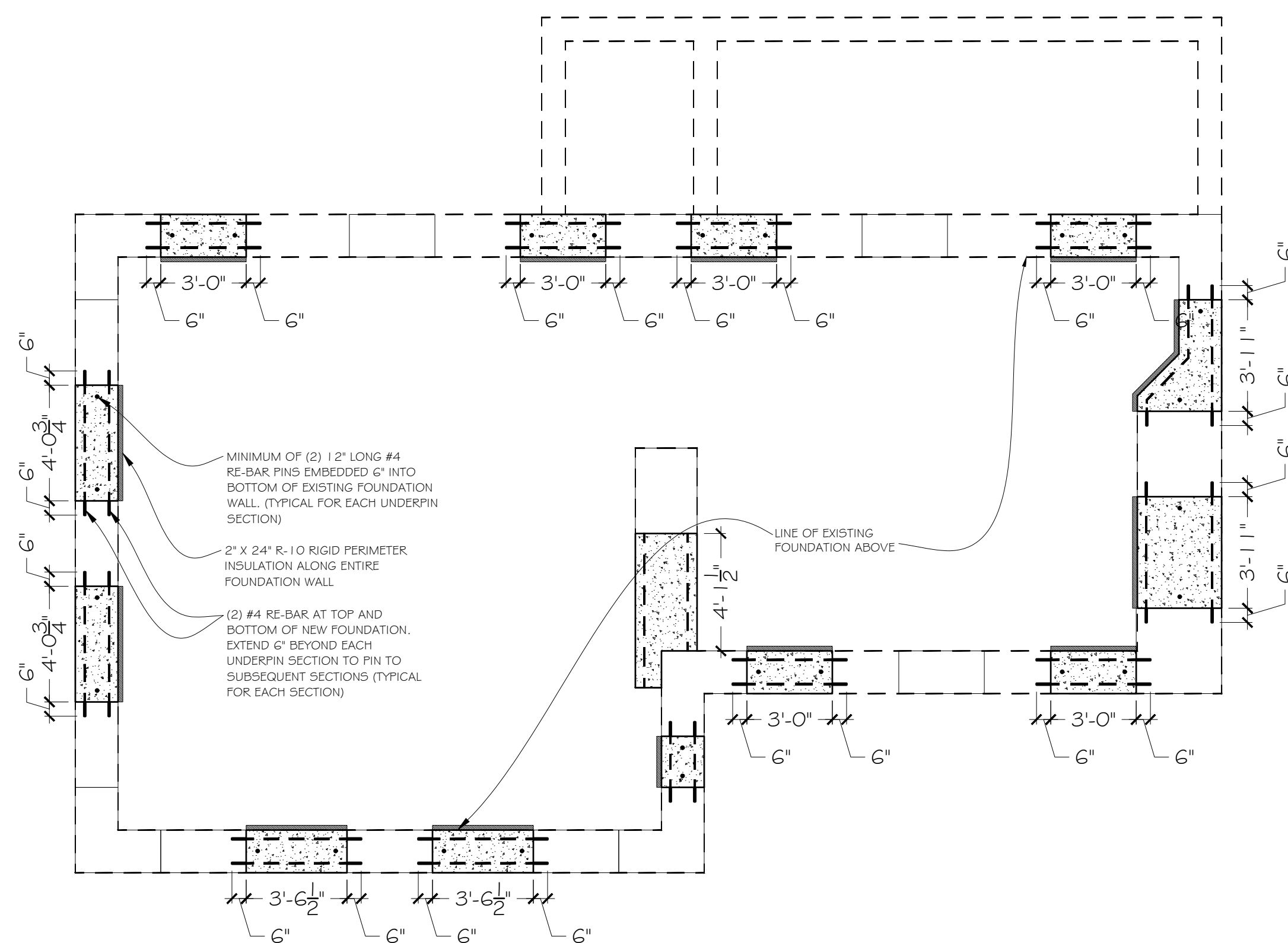
FOUNDATION WALL UNDERMINING (PHASE 2)

SCALE : 1/4" = 1'-0"



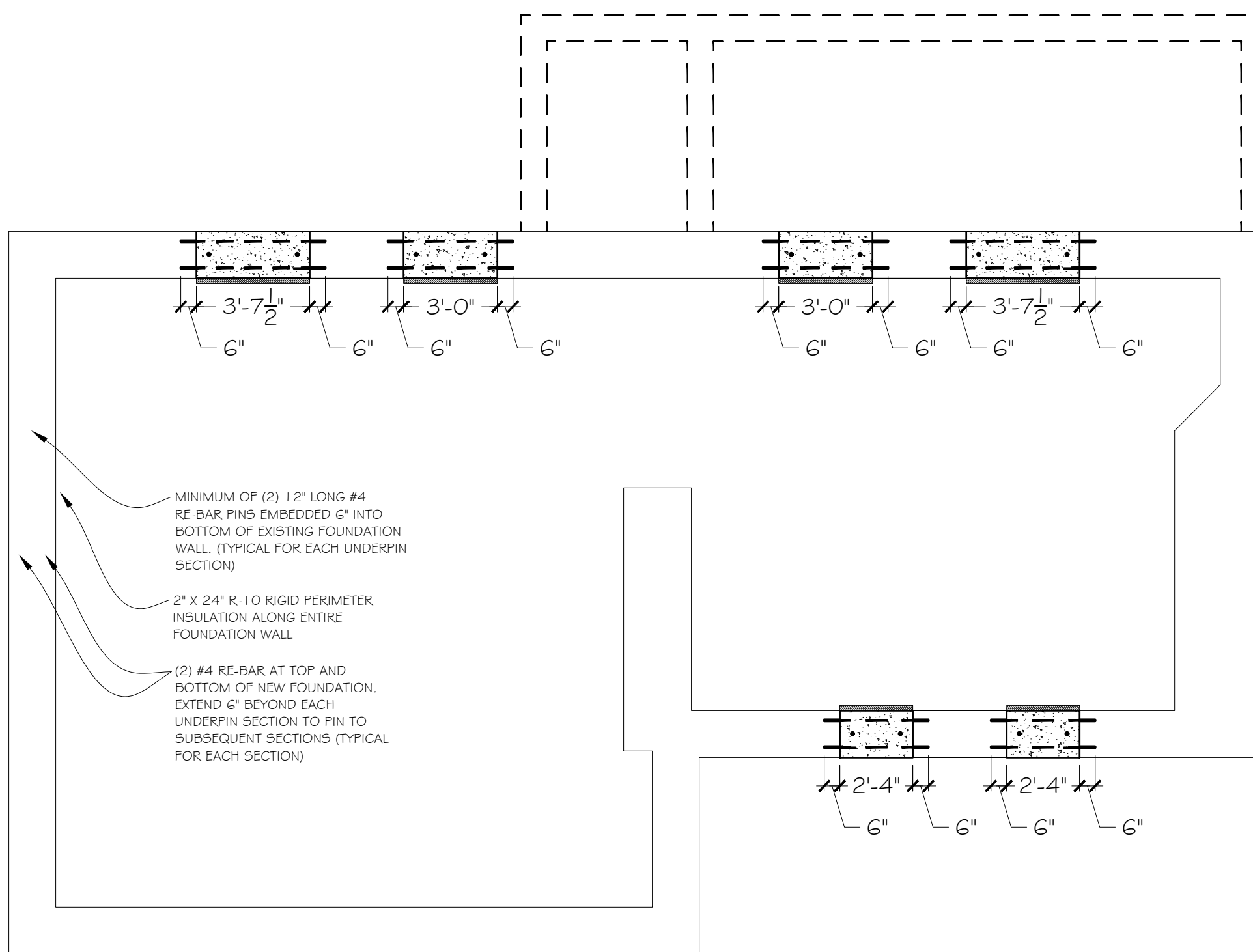
FOUNDATION WALL UNDERMINING (PHASE 3)

SCALE : 1/4" = 1'-0"



FOUNDATION WALL UNDERMINING (PHASE 4)

SCALE : 1/4" = 1'-0"



FOUNDATION WALL UNDERMINING (PHASE 5)

SCALE : 1/4" = 1'-0"

NOTES:

1. THESE PLANS ARE PREPARED TO LOWER THE EXISTING BASEMENT FLOOR AND CREATE A NEW 4" CONC. SLAB. TO DO THIS, THE EXISTING FOUNDATION WALLS MUST BE UNDERPINNED IN SECTIONAL PHASES TO PREVENT ANY MOVEMENT OR SHIFTING IN THE EXISTING FOUNDATION.

2. NOTE: THIS IS AN ADDITION TO AN EXISTING HOUSE THAT IS INHABITED. ALL STRUCTURAL BEARING POINTS AND SUPPORTS MUST BE CONFIRMED ON SITE AT STARTING OF CONSTRUCTION. CONTRACTOR IS TO CONTACT THE DESIGNER TO ARRANGE FOR INSPECTION AND ADDRESS ANY NEEDED MODIFICATIONS. CERTAIN CHANGES AND SOME ADDITIONAL SUPPORTS MAYBE REQUIRED AFTER INSPECTION.

3. IT IS A VIOLATION OF ARTICLE 145 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN VERIFICATION OR ADOPTION BY A N.Y.S. LICENSED ENGINEER IN ACCORDANCE WITH SECTION 7209(2).

DESIGN PLANNING CONSTRUCTION

ROY A. FREDRIKSEN, PE
DESIGN . PLANNING . CONSULTING ENGINEERING
 266 SHEAR HILL RD. • MAHOPAC, NY 10541 • 845-621-4000
 RAYEXDESIGN@GMAIL.COM

OWNER:	JOB #
MOHINDER MANGAT	DRN BY: JP
	CHKD BY: WB
PROJECT: RENOVATION OF EXISTING HOUSE LOCATED AT 5 LEONARD ST. IN BEACON, NY.	
TAX MAP #:	
SHEET TITLE: UNDERPINNING PLANS 3 OF 5	
5/28/2021 2/16/2021 12/4/2020 REVISIONS: DATE: 7/31/2020	

GENERAL NOTES

- THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE ALL WORK , ETC., AS SHOWN ON THE DRAWINGS NECESSARY FOR A COMPLETE JOB, UNLESS OTHERWISE SPECIFIED. ALL MATERIAL AND WORKMANSHIP SHALL BE OF BEST QUALITY.
- ALL WRITTEN FIGURES (NOTES AND DIMENSIONS) ON THE FLOOR PLANS OR SPECIFICATIONS SHALL TAKE PRECEDENCE OVER ANY DRAWN FIGURES (ELEVATIONS). DO NOT SCALE PRINTS. ALL DIMENSIONS MUST BE VERIFIED BY THE CONTRACTOR BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES ON THE PLANS OR SPECIFICATIONS MUST BE REPORTED TO THE OWNER OR THE DESIGNER PRIOR TO THE START OF CONSTRUCTION. ALL WORK AND MATERIALS MUST CONFORM TO ALL LOCAL AND THE RESIDENTIAL CODE OF NY, NATIONAL BOARD OF FIRE UNDERWRITERS, ENERGY CONSERVATION CODE OF NEW YORK STATE AND REQUIREMENTS OF THE BOARD OF HEALTH.
- SITE CONDITIONS: THE GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS BEFORE SUBMITTING HIS PROPOSAL. NO ALLOWANCE FOR EXTRA CHARGES WILL BE PERMITTED BECAUSE OF LACK ON KNOWLEDGE OF THE CONDITIONS PECULIAR THERETO EXCEPT AS OTHERWISE SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL VERIFY ALL LINES, LEVELS AND DIMENSIONS SHOWN ON THE DRAWINGS AND WILL BE HELD RESPONSIBLE FOR THE CORRECTNESS AND SETTING OUT OF HIS WORK.
- SUBCONTRACTORS: THESE CONDITIONS ARE BINDING ON THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR INSOFAR AS THEY APPLY TO THE WORK OF EITHER.
- INSURANCE: THE GENERAL CONTRACTOR SHALL PROTECT THE JOB FROM CLAIMS UNDER WORKMAN'S COMPENSATION AND PUBLIC LIABILITY ACTS AND FROM ANY CLAIMS FOR PERSONAL INJURY, INCLUDING DEATH, WHICH MAY ARISE UNDER THIS CONTRACT, WHETHER BY HIMSELF BY ANY SUB-CONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY HIM. CERTIFICATES OF INSURANCE SHALL BE FILED WITH THE OWNER BEFORE STARTING JOB AND SHALL BE SUBJECT TO OWNER'S APPROVAL.
- CONTRACTOR AND/OR ANY SUB-CONTRACTOR ARE TO PERFORM ALL WORKS AS SHOWN, IMPLIED OR THAT IS REQUIRED TO PROVIDE A COMPLETE AND FINISHED KEY-IN LOCK JOB EVEN IF EACH AND EVERY SPECIFIC TIME IS NOT SPECIFICALLY CALLED FOR.
- WHILE EVERY ATTEMPT HAS BEEN MADE IN PREPARATION OF THESE PLANS TO AVOID MISTAKES, THE PREPARER CANNOT GUARANTEE AGAINST HUMAN ERROR. THE CONTRACTOR ON THE JOB MUST CHECK AND CONFIRM ALL DETENTIONS AND DETAILS AND BE RESPONSIBLE FOR SAME.

SITE PREPARATIONS AND LANDSCAPING

- CLEARING OF TREES TO BE AS PER CONTRACT DIRECTION OR AS MINIMUM AS POSSIBLE TO ACCOMMODATE BUILDING, DRIVEWAY AND SEPTIC SYSTEM AREA.
- TOP SOIL IN CLEARED AREA TO BE REMOVED AND STORED FOR REUSE.
- PROTECT ALL REMAINING TREES AGAINST DAMAGE.
- GRADING, CUTTING AND FILLING SHALL BE AS MINIMUM AS POSSIBLE TO TRANSFORM EXISTING GRADES TO GRADES SHOWN ON DRAWINGS OR AS REQUIRED FOR ALL WORK.
- CERTIFY THAT ALL PROPER SETBACKS HAVE BEEN MET AFTER FOOTINGS HAVE BEEN FORMED AND PRIOR TO CONCRETE BEING POURED.

EXCAVATION

- EXCAVATE AS REQUIRED TO ALLOW FOR THE CONSTRUCTION OF THE BUILDING SHOW ON PLANS.
- FINISH GRADING SHALL BE ESTABLISHED TO PROVIDE SURFACE DRAINAGE IN ALL DIRECTIONS AWAY FROM THE HOUSE AND EXCAVATED AREAS.
- WHEN BACKFILLING AGAINST BASEMENT FOUNDATION WALLS, NO HEAVY MACHINERY TO COME WITHIN 8' OF FOUNDATION.

CONCRETE

- IT IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE SURE THAT THE SOIL BEARING CAPACITY IS 2,000 PSF MINIMUM.
- CONCRETE SHALL BE A MIN. FC = 3,000 PSI COMPRESSIVE STRENGTH FOR FOOTINGS & FOUNDATION WALLS AND FC = 3,500 PSI COMPRESSIVE STRENGTH FOR PORCHES, STEPS & GARAGE FLOORS. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST AMERICAN CONCRETE INSTITUTE (ACI) GUIDELINES.
- POURED CONCRETE FOUNDATION SHALL COMPLY WITH THE LATEST EDITION OF AMERICAN CONCRETE INSTITUTE SPECIFICATIONS AND SHALL BE PLUMB, STRAIGHT, LEVEL AND TRUE. FORMS TO BE PROPERLY CONSTRUCTED TO HOLD CONCRETE. PROVIDE (2) #4 BARS LOCATED AT TOP AND BOTTOM OF WALL. ALL REINFORCING BARS FOR CONCRETE WORK SHALL CONFORM TOA.S.T.M. A615 GRADE 60.

TERMITE PROTECTION

- WHERE REQUIRED UTILIZE CONTINUOUS METAL SHIELD AND PRESSURE TREATED SILL PLATES.
- OPTIONAL SOIL POISONING WITH APPROVED CHEMICALS TO BE ADDED DURING BACKFILLING.

LUMBER AND FRAMING

- ALL FRAMING TO BE IN ACCORDANCE WITH THE BUILDING CODE.
- ALL FRAMING LUMBER TO BE CONSTRUCTION GRADE DOUGLAS FIR. ALL PRESSURE TREATED LUMBER TO BE SOUTHERN YELLOW PINE WHICH TO BE USED FOR SILL PLATES AND DECK STRUCTURE. ANCHOR ALL SILL PLATES WITH ½"x16" STEEL ANCHOR BOLTS AT 6' O.C. USING MINIMUM 2 BOLTS PER PLATE.
- DESIGN LOADS:

FIRST FLOOR LOADS	LIVE LOAD	40 #/SF
	DEAD LOAD	12 #/SF
SECOND FLOOR LOADS	LIVE LOAD	30 #/SF
	DEAD LOAD	12 #/SF
ATTIC LOAD	LIVE LOAD	20 #/SF
(<4'-6" HEADROOM)	DEAD LOAD	12 #/SF
(>4'-6" HEADROOM)	LIVE LOAD	30 #/SF
GROUND SNOW LOAD	LIVE LOAD	30 #/SF
WIND SPEED DESIGN LOAD		110 MPH
- DOUBLE FLOOR JOIST UNDER ALL PARALLEL PARTITIONS INCLUDING EXTERIOR WALLS.

- AT ALL BEARING POINTS PROVIDE STUDDING 4" WIDER THAN THICKNESS OF HEADER OR GIRDER. FRAMING.
- FRAMING OF THE ENTIRE HOUSE SHALL BE ERECTED PLUMB, LEVEL AND TRUE, SECURELY NAILED. JOISTS, STUDS AND RAFTERS SHALL BE DOUBLED ABOVE ALL OPENINGS. ALL FLUSH HEADERS SHALL BE CONNECTED WITH METAL JOIST HANGERS. SIZES OF JOISTS,SHEATHING AND RAFTERS ARE SHOWN ON PLANS. PROVIDE SOLID BLOCKING UNDER ALL POSTS. CONTRACTOR TO PROVIDE ALL FIRE BLOCKING AT ALL STUD WALL OVER 10'-0" HIGH OR ALL HORIZONTAL FURRED SPACES AT 10'-0" INTERVALS MAX.
- ALL STUDS IN BEARING WALLS ARE TO BE TOE NAILED ON TOP AND BOTTOM WITH MINIMUM (6) 12D COMMON NAILS.
- ALL HEADERS ARE TO BE (2) 2X10'S UNLESS SPECIFIED.
- LAMINATED VENER BEAM: SHALL BE "MICROLAM 1.9E" BY TRUS JOIST MACMILLAN OR EQUAL, MIN. FB. 2600. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS.
- PLYWOOD JOISTS: SHALL BE "TJI/PRO" JOISTS BY TRUS JOIST MACMILLAN. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS.
- ALL WALL SHEATHING TO BE MINIMUM ½" EXTERIOR GRADE PLYWOOD.
- SUB-FLOORING TO BE ¾" T&G PLYWOOD NAILED WITH SCREW TYPE NAILS. A TOTAL OF 1¼" THICK FLOOR UNDER CERAMIC TILE.
- ALL GIRDERS AND POSTS TO BE FREE OF LARGE KNOTS, CHECKS OR OTHERWISE VISUAL IMPERFECTIONS. WHERE POST IS FREE STANDING A TECO POST BASE CONNECTOR MUST BE USED.
- WHERE JOISTS MEET A FLUSH GIRDER OR LEDGER,TECO JOIST HANGERS MUST BE USED. ALL DECK LEDGERS TO BE BOLTED TO WALL WITH ½" GALVANIZED STEEL BOLTS STAGGERED AT 24" O.C.
- PROVIDE SOLID WOOD BRIDGING AT MID-SPAN OF ALL JOISTS.
- ALL SOFFITS MUST BE VENTED UNLESS SPECIFIED.
- WHERE STEEL BEAMS ARE USED, STEEL MUST BE A-36, AND BEAMS TO BEAR ON STEEL COLUMN, OTHER STEEL OR CONCRETE FOUNDATION.

WINDOWS AND TRIM

- EXTERIOR DOORS: SHALL BE PRE-HUNG INSULATED 1¾" ENTRY DOOR SYSTEM COMPLETE WITH WEATHER STRIPPING AND HARDWARE.
- TRIM: SHALL BE STOCK SECTIONS, NEATLY FITTED, MITERED AND COMPLETE, INCLUDING DOOR AND WINDOW CASING, APRONS, STOOLS AND BASE AT FLOOR. CLOSETS TO HAVE ¾" PLYWOOD SHELVES WITH ¾" NOSING AND WOOD CLOTHES POLE ADEQUATELY SUPPORTED. LINEN CLOSETS TO HAVE (5) ADJUSTABLE ¾" SHELVES.
- INTERIOR DOORS: SHALL BE 1 3/8" SOLID CORE MASONITE DOORS PAINT GRADE UNITS COMPLETE WITH HARDWARE AND CASING. CLOSET SLIDING, BI-FOLD AND POCKET DOORS SHALL BE 1 3/8" SOLID CORE MASONITE DOORS AS SHOWN ON PLANS, COMPLETE WITH KENTRACK HARDWARE OR EQUAL. PROVIDE A SELF CLOSING INSULATED METAL FIRE DOOR "C" LABEL DOOR AND FRAME BETWEEN GARAGE AND HOUSE.
- FLOORS: WOOD FLOORS SHALL BE 25/32 STRIP OAK SECURELY NAILED TO JOISTS OVER A LAYER OF ROSIN PLYWOOD UNDERLAYMENT IN JOIST AREAS.
- FINISH: OAK FLOORS AND STAIRS SHALL BE SANDED SMOOTH AND EVEN AND RECEIVE 1 COAT SEALER AND 2 COATS OF AN OAK FLOOR POLYURETHANE FINISH.
- CABINET WORK: THE GENERAL CONTRACTOR SHALL COORDINATE ALL CABINET WORK AND ASCERTAIN THAT ALL WORK IS TO PROPER SIZE AND FIT.

EXTERIOR FINISH

- FASCIA, TRIM AND EXTERIOR AS SHOWN ON ELEVATIONS.

ROOM FINISH

- WALLS AND CEILINGS IN ALL ROOMS TO RECEIVE 1/2" GYPSUM BOARD
- FLOORS ARE TO BE FINISHED AS PER CONTRACT DIRECTIONS
- DRYWALL: ALL GYPSUM BOARD MUST BE SECURED TO WOOD MEMBERS WITH 2" LONG SCREWS. ALL NAIL HOLES AND JOINTS TO RECEIVE THREE COATS OF TAPE AND SPACKLE AND TO BE SANDED SMOOTH IN PREPARATION FOR PAINT. ALL OUTSIDE CORNERS TO RECEIVE METAL CORNET BEADS.
- CAULKING: ALL JOINTS BETWEEN TILE AND OTHER SURFACES SHALL BE CAULKED WITH COLORED ACRYLIC SEALANT, ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- FOAM INSULATION IN ALL CAVITIES AROUND ALL EXTERIOR WINDOWS, DOORS AND OTHER OPENINGS.
- AIR LEAKAGE: JOINTS, PENETRATIONS, AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE THAT ARE SOURCES OF AIR LEAKAGE MUST BE SEALED. RECESSED LIGHTS MUST BE 1) TYPE IC RATED, OR 2) INSTALLED INSIDE AN APPROPRIATE AIR TIGHT ASSEMBLY WITH A 0.5" CLEARANCE FROM COMBUSTIBLE MATERIALS. IF NON IC RATED, THE FIXTURE MUST BE INSTALLED WITH A 3" CLEARANCE FROM INSULATION.
- VAPOR RETARDER: REQUIRED ON THE WARM-IN-WINTER SIDE OF ALL NON-VENTED FRAMED CEILINGS, WALLS, AND FLOORS.
- INSULATION: CLOSED-CELL SPF

CEILINGS ADJOINING ATTIC:	R-49
CEILINGS ADJOINING ROOF:	R-30
EXTERIOR STUD WALLS:	R-21
BASEMENT FURRING WALLS:	R-21

ROOFING

- PROVIDE AND INSTALL SELF SEALING FIBERGLASS SHINGLES.
- SHINGLES ARE TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATION.
- PROVIDE 24" ALUMINUM FLASHING AT ALL VALLEYS.
- AS PER R905.2.7, PROVIDE ICE AND WATER SHIELD FROM THE LOWEST EDGE OF ALL ROOFS TO A POINT 24" MIN. HORIZONTALLY FROM THE INSIDE OF EVERY EXTERIOR ROOF BEARING WALL.
- WHERE ROOF MEETS AND PORTION OF WALL, FLASHING MUST BE USED.
- ALL RIDGES MUST BE CAPPED WITH A BLIND CONTINUOUS RIDGE VENT. ALSO ALL HIPS MUST BE CAPPED.
- GUTTERS AND LEADERS TO BE INSTALLED AS PER CONTRACT DIRECTIONS AND LOCAL CODE REQUIREMENTS.

PLUMBING

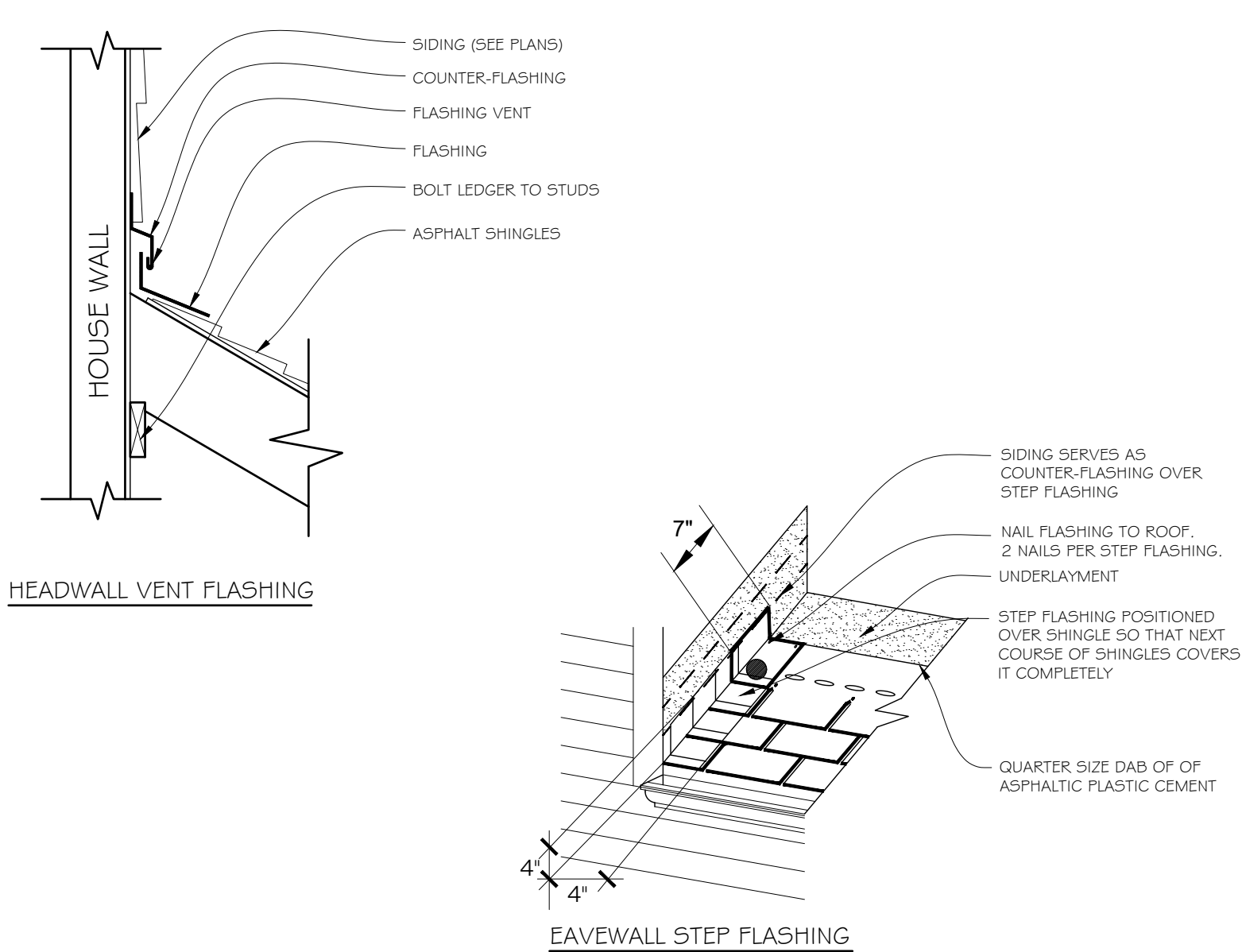
- ALL PLUMBING TO BE IN ACCORDANCE WITH THE PLUMBING CODE.

ELECTRICAL

- ALL ELECTRICAL WORK TO BE IN ACCORDANCE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS AND A CERTIFICATE OF COMPLIANCE MUST BE ISSUED.

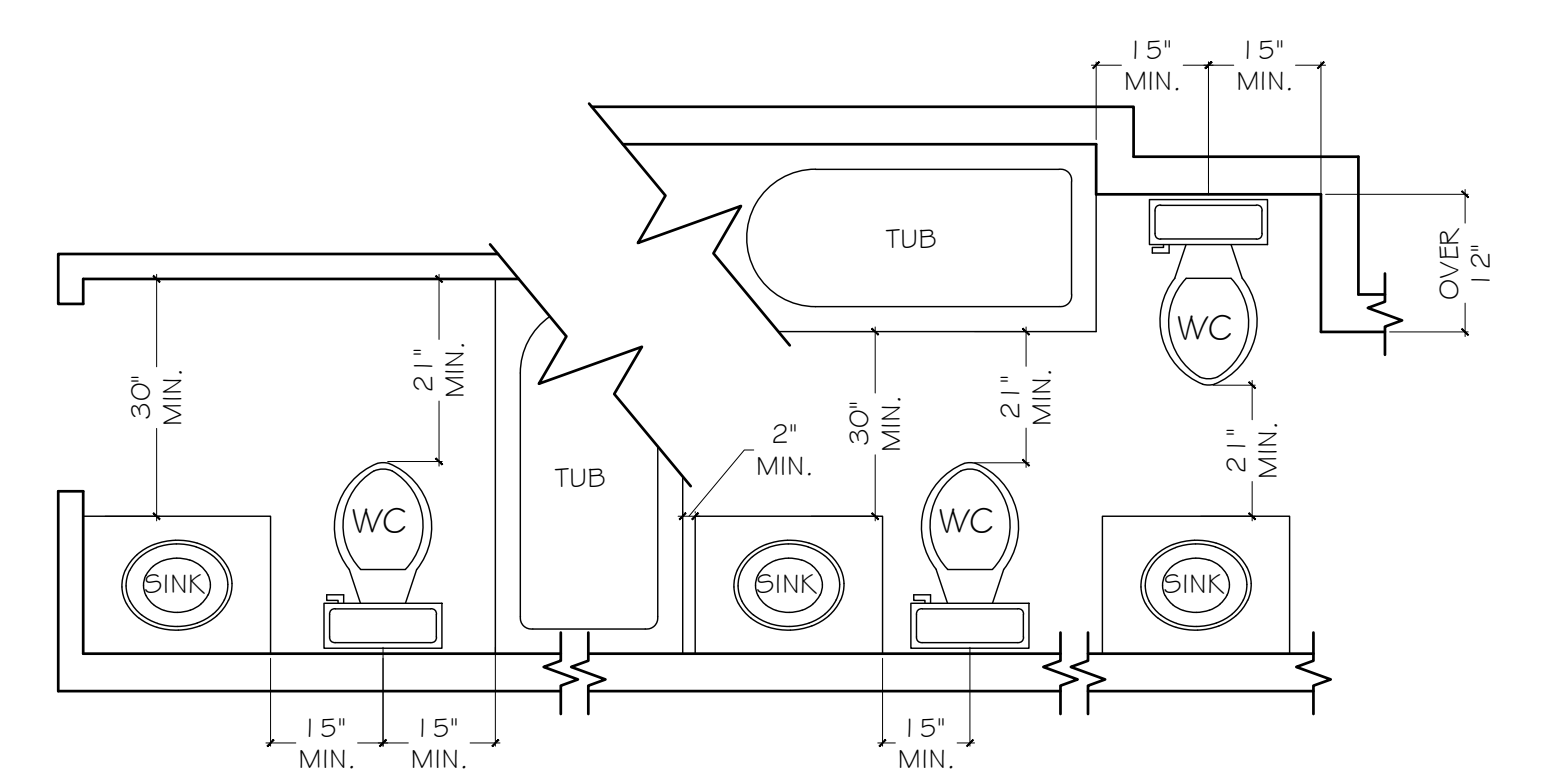
HEATING

- HEATING & AIR CONDITIONING: AS PER CONTRACT.



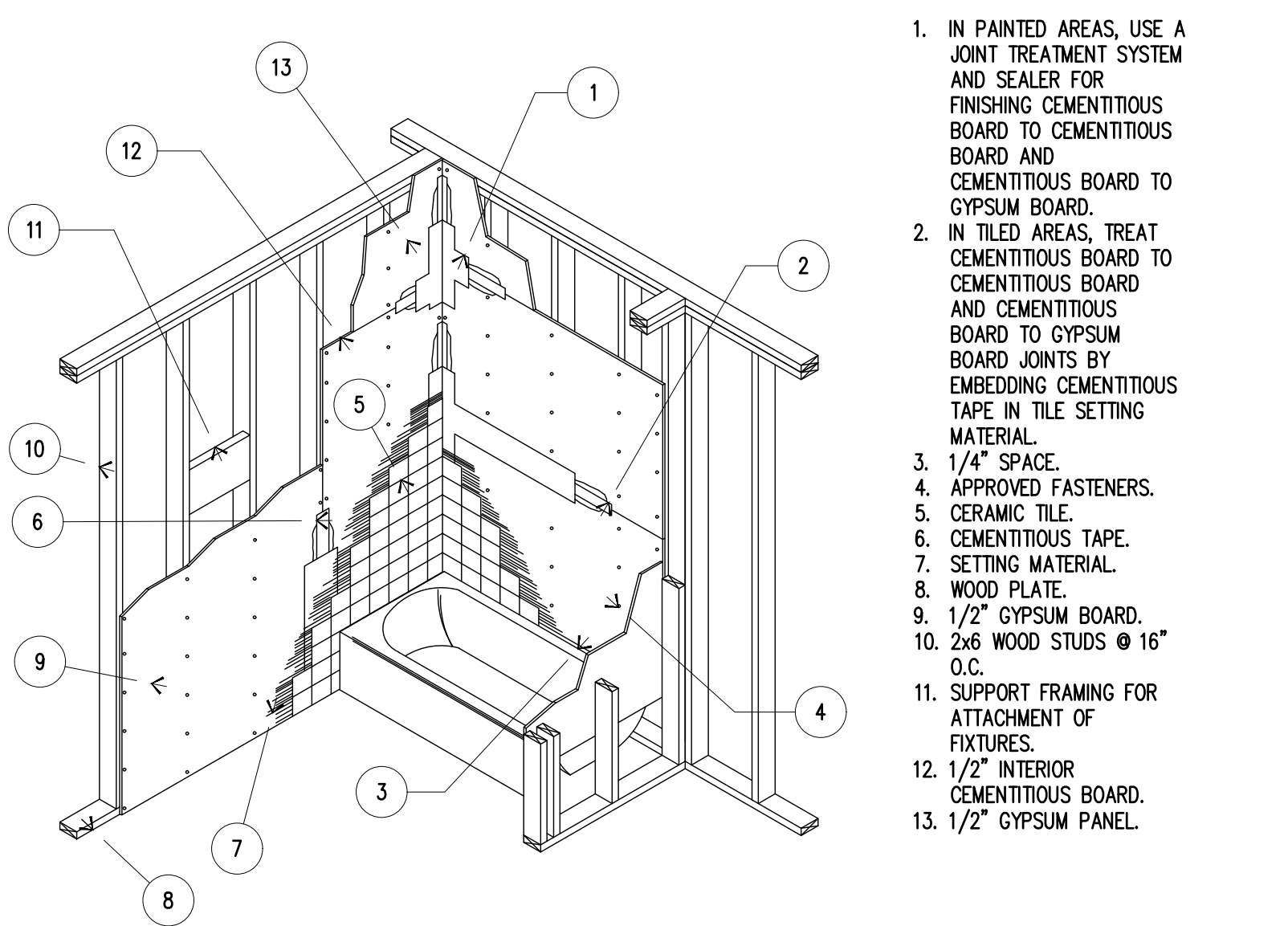
FLASHING DETAILS

N.T.S.



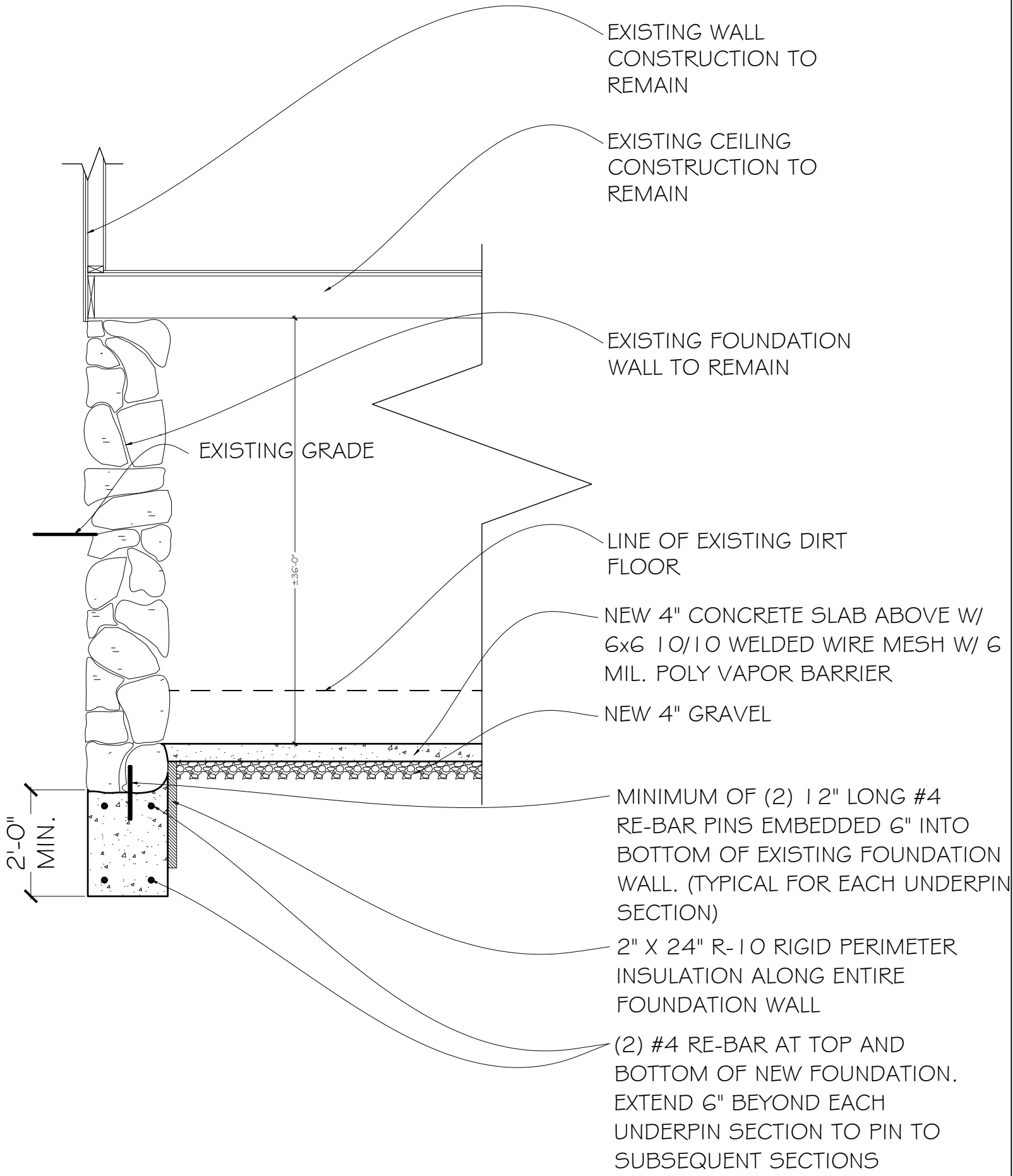
BATHROOM FIXTURE CLEARANCES

NOT TO SCALE



BATHTUB DETAIL

NOT TO SCALE



UNDERMINING DETAIL

NOT TO SCALE



ROY A. FREDRIKSEN, PE

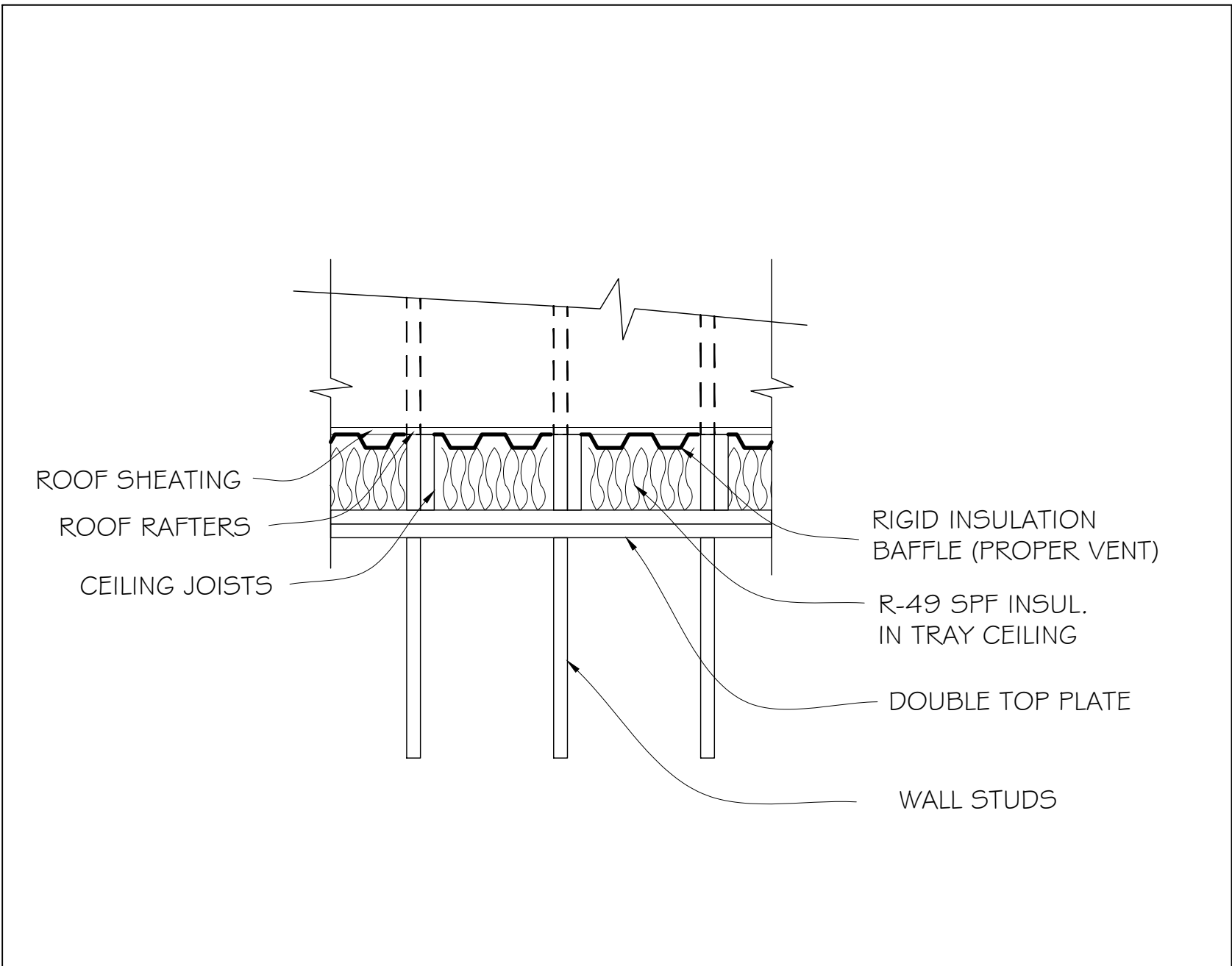
DESIGN . PLANNING . CONSULTING ENGINEERING

266 SHEAR HILL RD. • MAHOPAC, NY 10541 • 845-621-4000

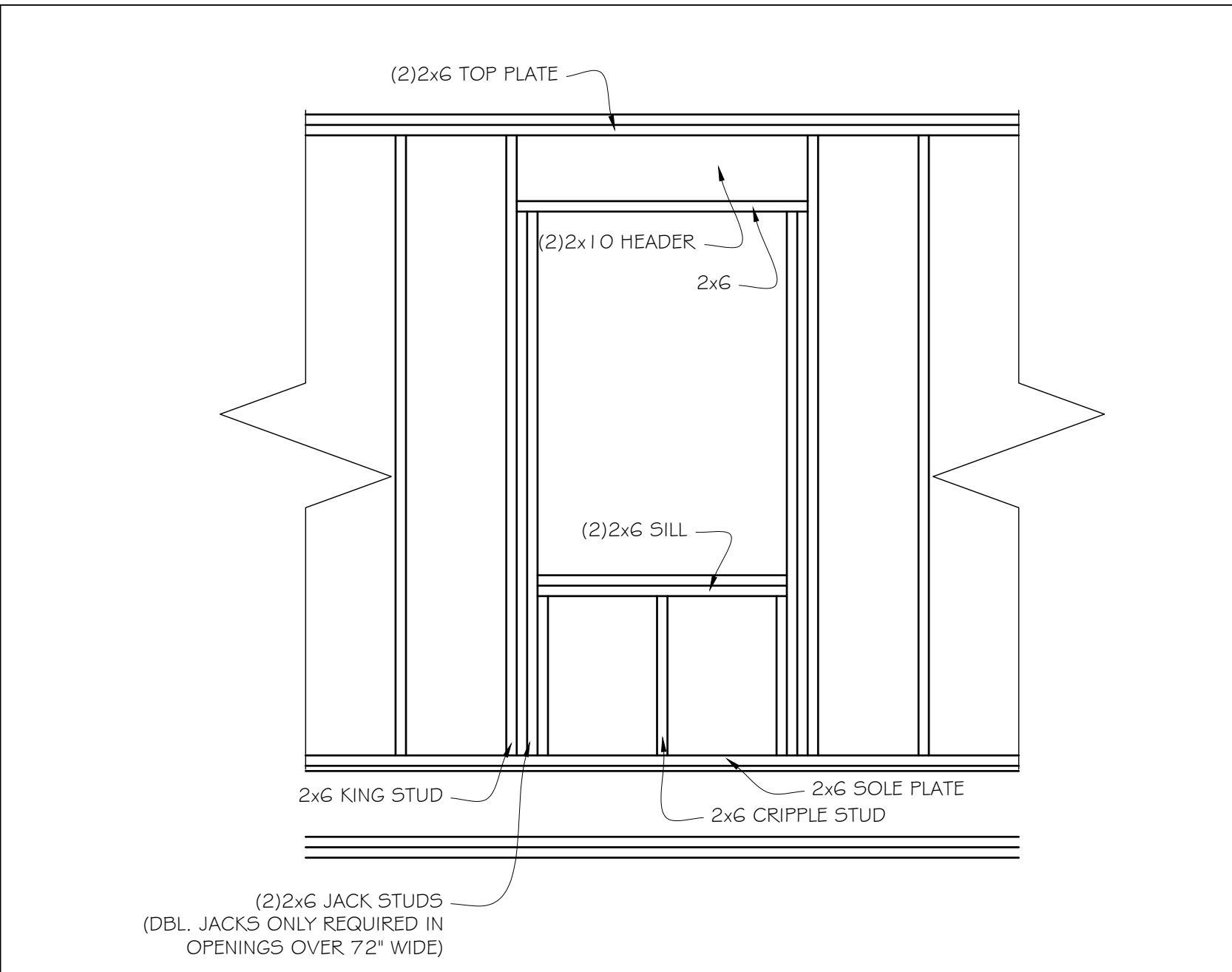
RAYEXDESIGN@GMAIL.COM

OWNER:	JOB #
MOHINDER MANGAT	DRN BY: JP
	CHKD BY: WB
PROJECT: RENOVATION OF EXISTING HOUSE LOCATED AT 5 LEONARD ST. IN BEACON, NY.	TAX MAP #:

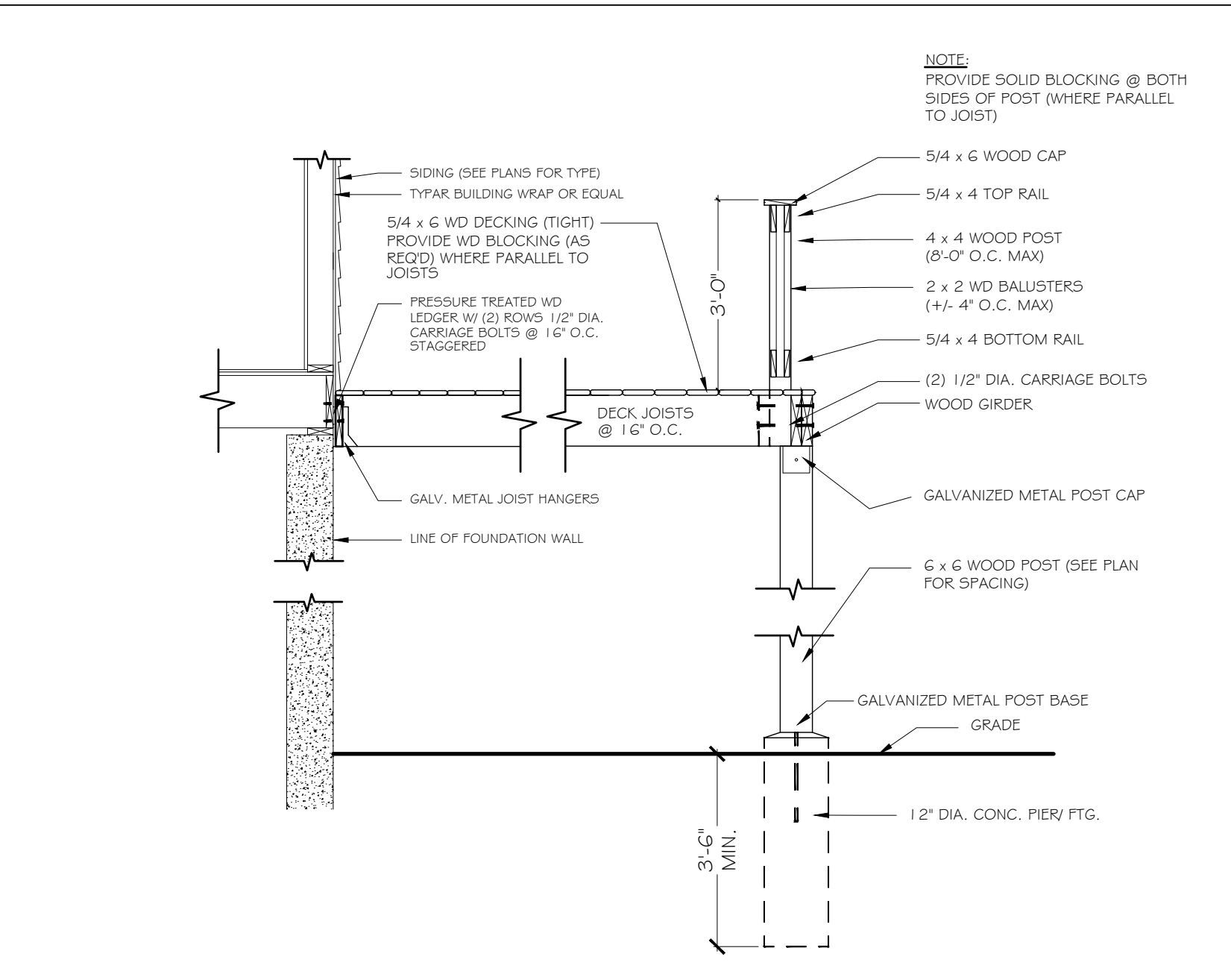
SHEET TITLE: NOTES AND 4 OF 5DETAILS	
5/28/2021 2/16/2021 12/4/2020	
REVISIONS:	DATE: 7/31/2020



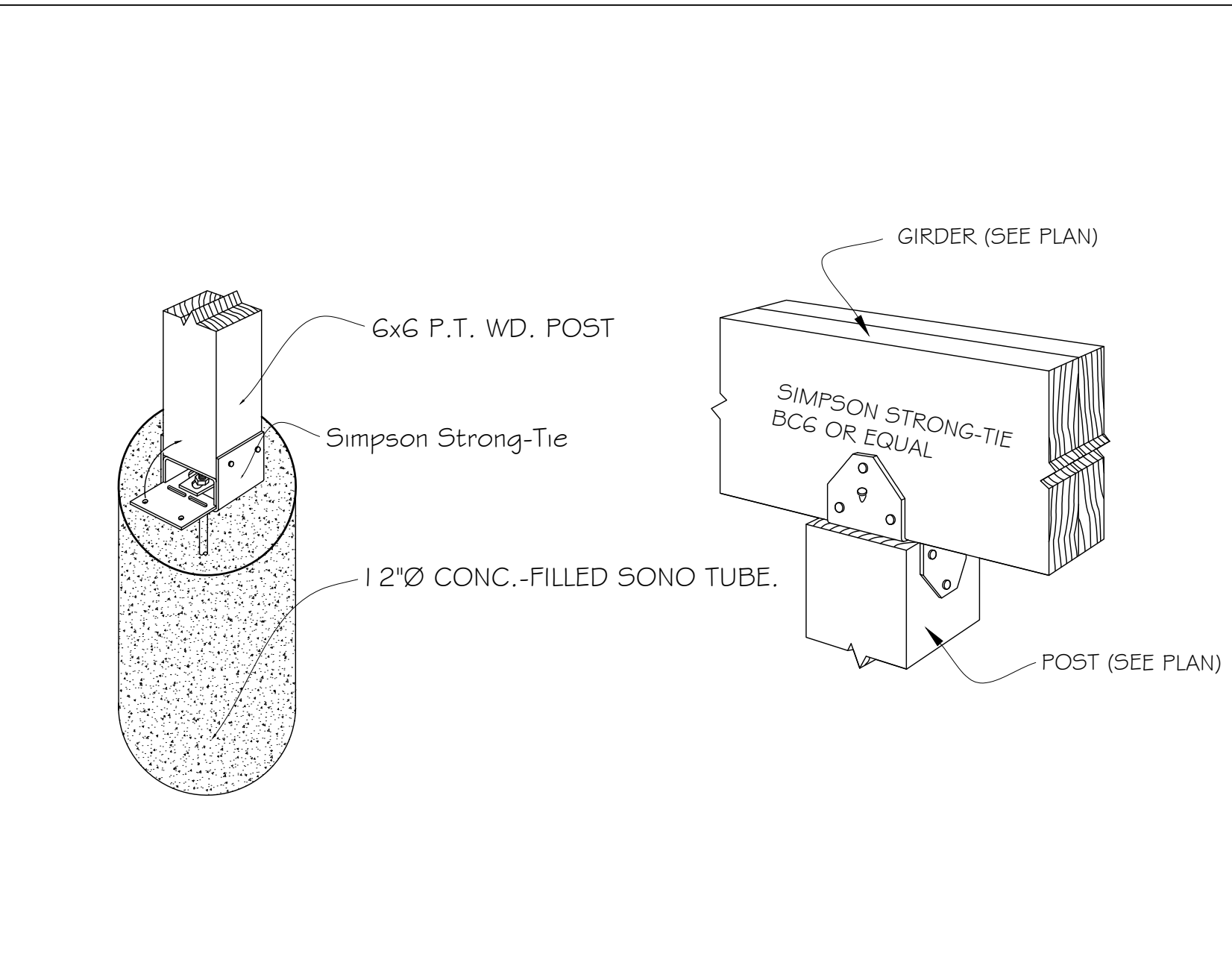
BAFFLING DETAIL AT TOP PLATE
NOT TO SCALE



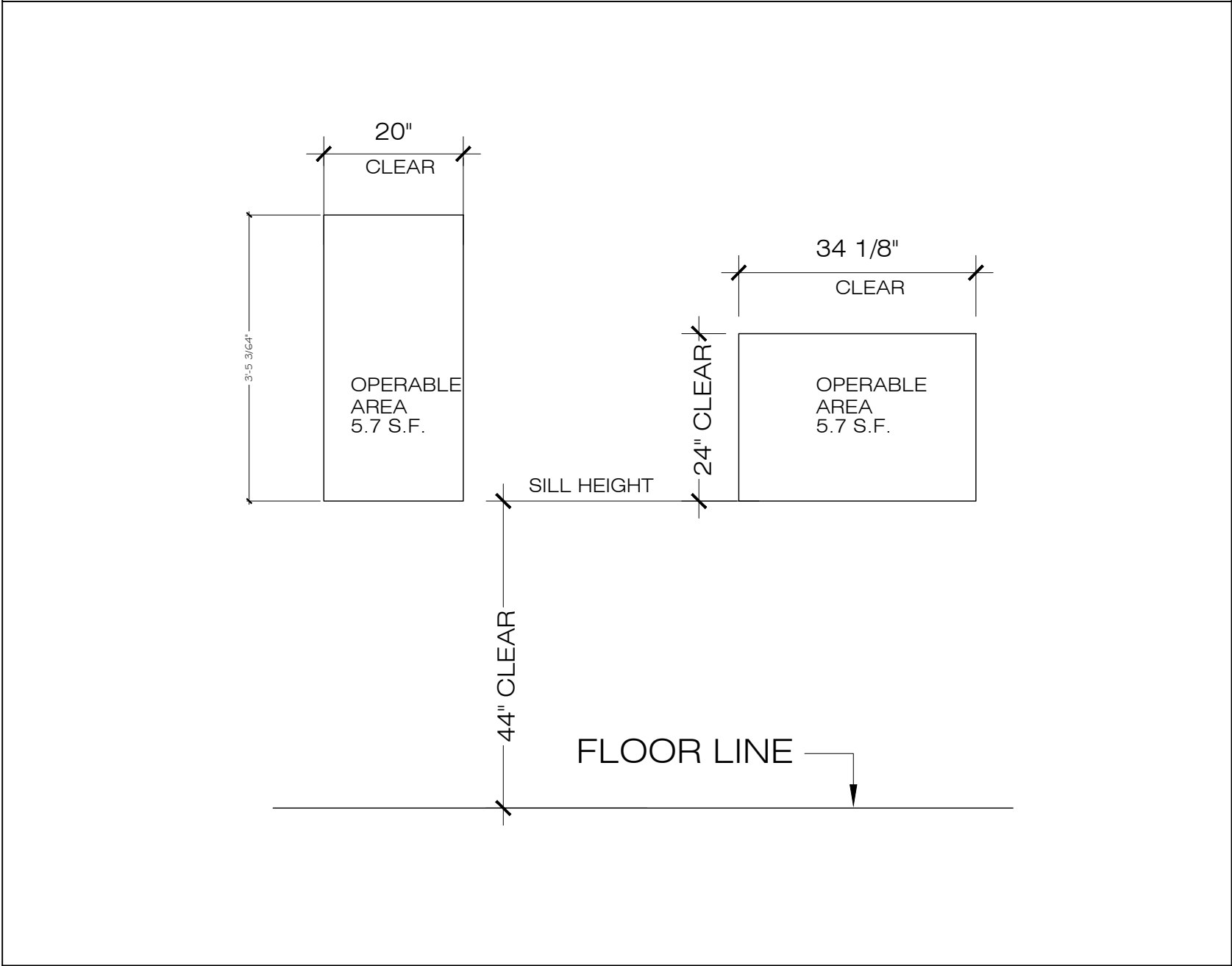
WINDOW FRAMING DETAIL
NOT TO SCALE



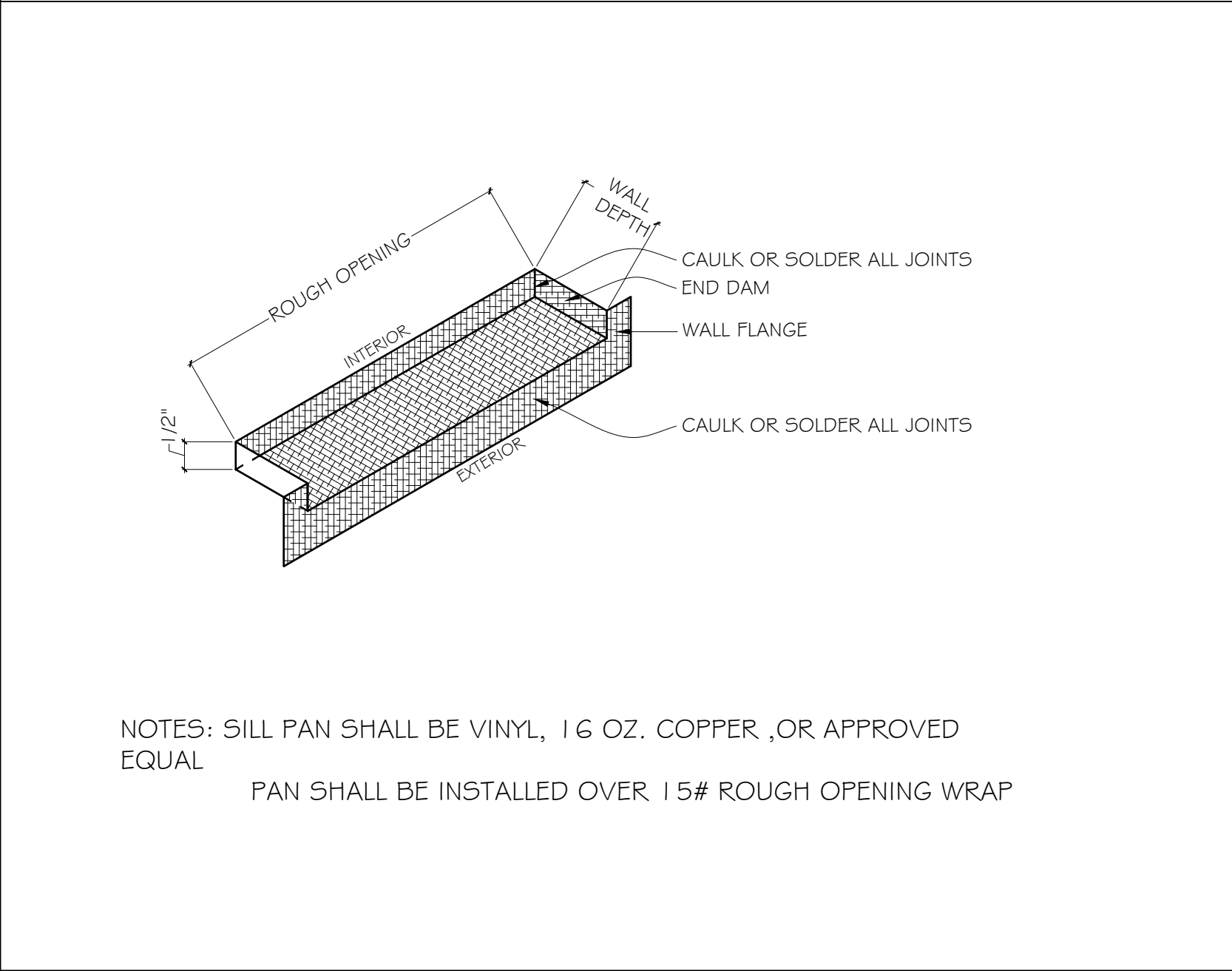
WOOD DECK DETAIL
NOT TO SCALE



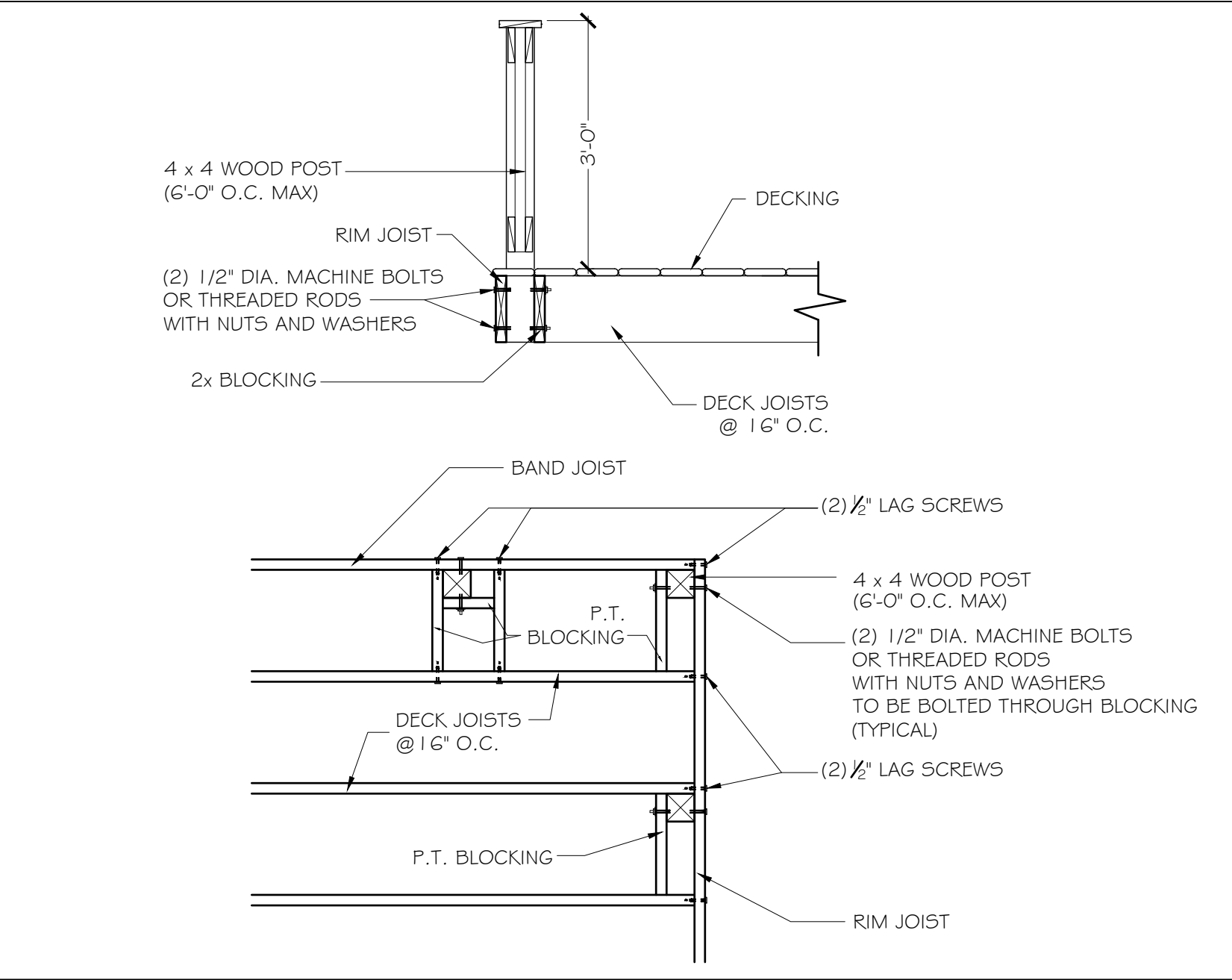
DECK POST TIE-DOWN DETAIL
NOT TO SCALE



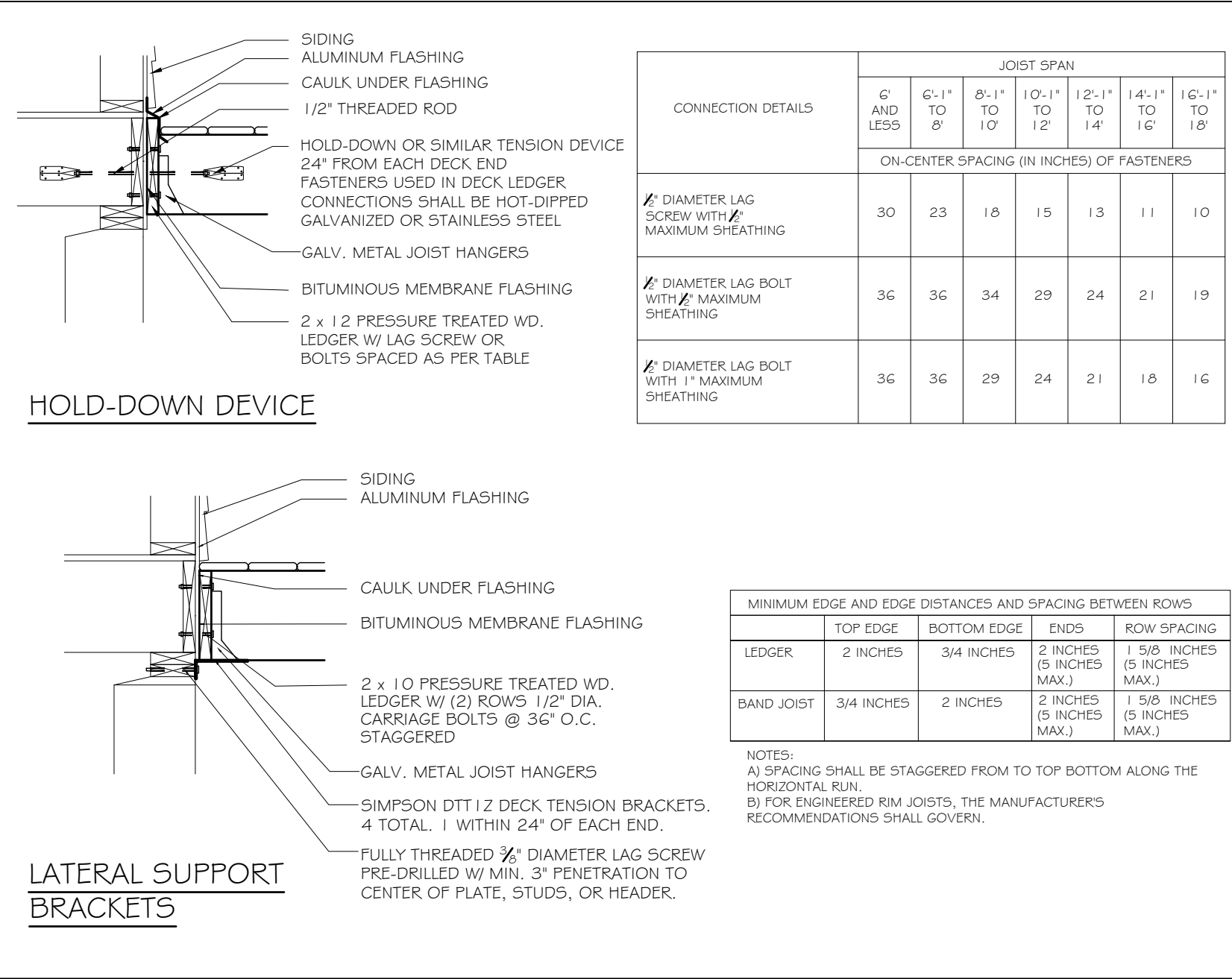
EGRESS WINDOW LAYOUT
NOT TO SCALE



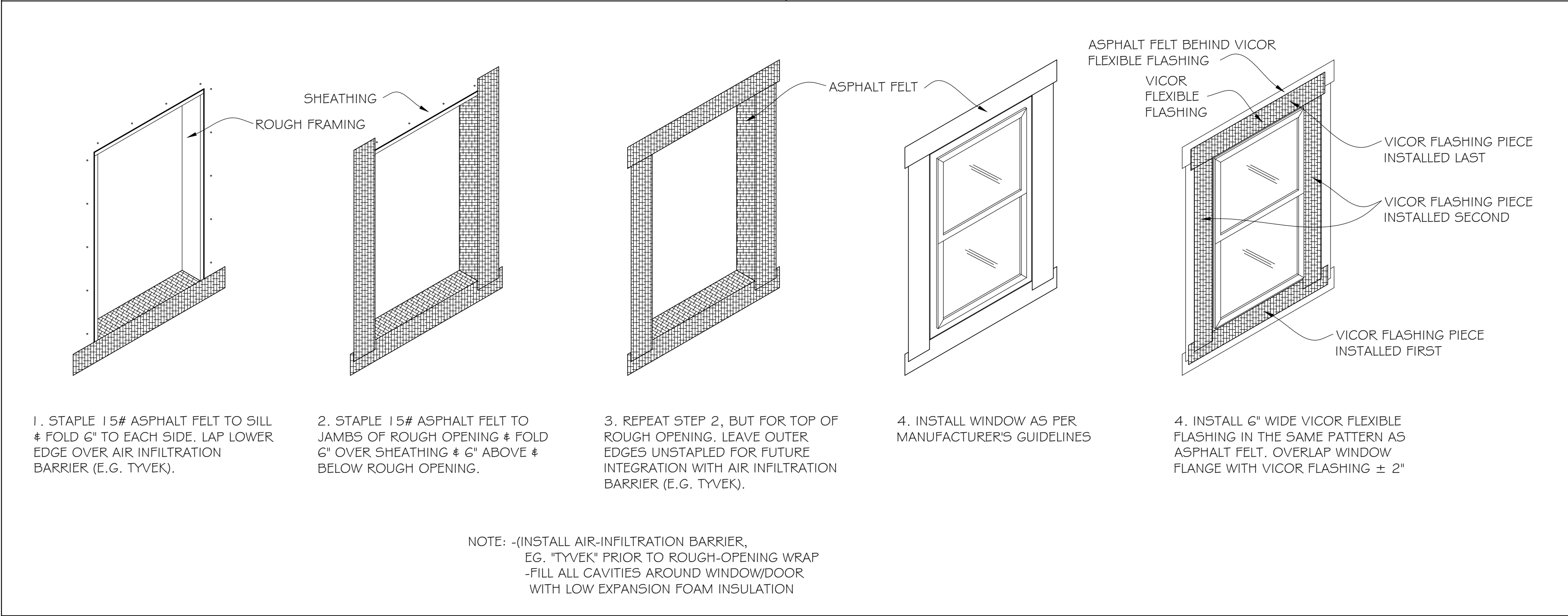
DOOR SILL PAN DETAIL
NOT TO SCALE



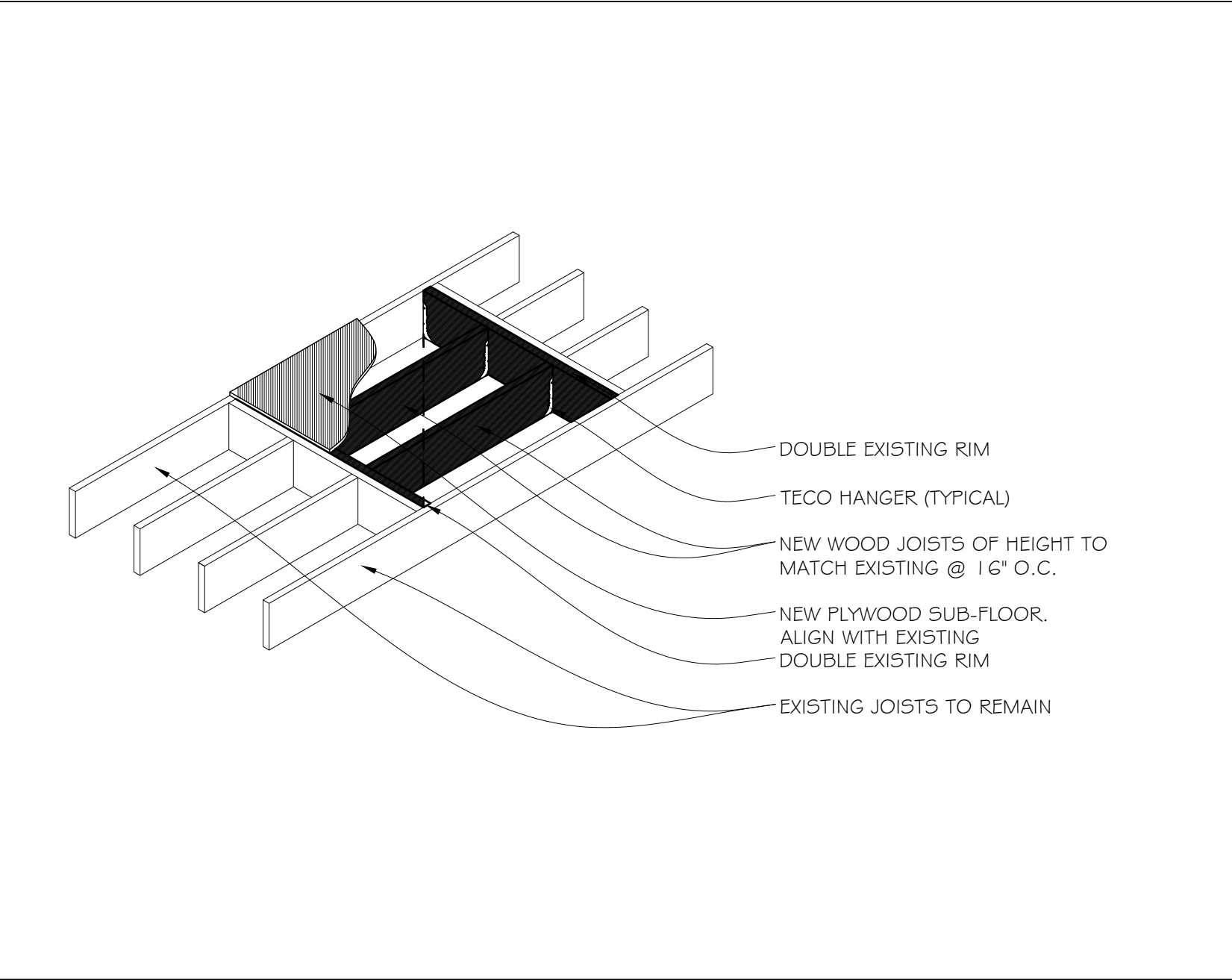
RAILING POST BRACING DETAIL
NOT TO SCALE



LEDGER DETAIL
USE EITHER 2 HOLD-DOWN TENSION DEVICES OR 4 LATERAL SUPPORT BRACKETS
NOT TO SCALE



WINDOW / DOOR ROUGH OPENING WRAP DETAIL
NOT TO SCALE



FILL-IN FRAMING DETAIL
NOT TO SCALE

DESIGN PLANNING CONSTRUCTION

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OWNER: MOHINDER MANGAT	JOB #
PROJECT: RENOVATION OF EXISTING HOUSE LOCATED AT 5 LEONARD ST. IN BEACON, NY.	DRN BY: JP
	CHKD BY: WB
	TAX MAP #:

SHEET TITLE: DETAILS 5 OF 5	
5/28/2021 2/16/2021 12/4/2020 REVISIONS:	DATE: 7/31/2020