CITY OF BEACON, NEW YORK
THE PLANNING BOARD WILL MEET ON TUESDAY, JANUARY 12, 2021 AT 7:00 PM. A WORK SESSION WILL TAKE PLACE AT 7:00 PM FOR A TRAINING WORKSHOP, DISCUSSION OF AGENDA ITEMS AND/OR TOPICS OF INTEREST TO THE PLANNING BOARD. THE REGULAR MEETING WILL BEGIN IMMEDIATELY THEREAFTER, BUT NOT LATER THAN 7:30 PM. DUE TO PUBLIC HEALTH AND SAFETY CONCERNS RELATED TO COVID-19, THE PLANNING BOARD WILL NOT BE MEETING IN-PERSON. IN ACCORDANCE WITH THE GOVERNORâ€™S EXECUTIVE ORDER 202.1, THE JANUARY 12, 2021 MEETING WILL BE HELD VIA VIDEOCONFERENCING, AND A TRANSCRIPT WILL BE PROVIDED AT A LATER DATE. THE PUBLIC CAN WATCH THE LIVE MEETING ONLINE AT YOUTUBE AT HTTPS://WWW.YOUTUBE.COM/CHANNEL/UCVPPIGGWZDERSUDXG. IF ANY INTERESTED MEMBERS OF THE PUBLIC WOULD LIKE TO PROVIDE COMMENTS ON THE APPLICATION, COMMENTS CAN BE CALLED IN DURING THE MEETING AT (929) 205-6099; WEBINAR ID: 875 9462 7823; PASSWORD: 513783; OR VIA EMAIL NO LATER THAN 5PM ON JANUARY 12, 2021 TO

Len Warner
Karen Quiana
Kevin Byrne
Jill Reynolds
J. Randall Williams
Richard Muscat
Chair John Gunn

ETHA GROGAN
EGROGAN@CITYOFBEACON.ORG

January 12, 2021
7:00 PM
Planning Board Agenda

Regular Meeting

1. Continue public hearing for SEQRA environmental review on applications for Subdivision and Site Plan Approval, "Beacon Views Townhouses" 40 units, Conklin Street, submitted by Beacon Views, LLC
2. Continue public hearing on applications for Special Use Permit and Site Plan Approval, accessory apartment, 179 Union Street, submitted by John Kittredge & Amanda Gisonni
3. Public hearing on application for Site Plan Approval, rear yard open pavilion addition, 184 Main Street, submitted by 184 Main, LLC
4. Continue review of application for Site Plan Approval, gallery/garage addition, 469 Main Street, submitted by David Rich & Paulette Myers-Rich (PhotoBook Works)
5. Continue review of applications for Special Use Permit and Site Plan Approval, change from residential (rectory) to gallery, 61 Leonard Street, submitted by Beacon Historical Society (owner St. Joachim's Church)
6. Continue review of application for Subdivision, one lot, 4 Liam Drive, submitted by West End Lofts II Associates
7. Review application for Site Plan Approval, small cell wireless facility on new pole and one antenna, 7 Cross Street, submitted by Verizon Wireless of the East, LP (dba Verizon Wireless)
8. Review application for Subdivision, 2 residential lots, Monell Place, submitted by Allison Cross & Henry Nye

Miscellaneous Business

1. Zoning Board of Appeals - No applications submitted for the January meeting
2. Consider request for two 90-day extensions of Subdivision Approval - 25 Townsend Street, submitted by AK Property Holding, LLC

Architectural Review

1. 508 Main Street - Sign
2. 248 Tioronda Avenue - Finalize Building Elevations

City of Beacon Planning Board Agenda
01/12/2021

Title:

Continue public hearing for SEQRA environmental review on applications for Subdivision and Site Plan Approval, "Beacon Views Townhouses" 40 units, Conklin Street, submitted by Beacon Views, LLC

ATTACHMENTS

Beacon Views Cover Letter.pdf

Beacon Views Plan Set.pdf

Beacon Views SWPPP.pdf

Beacon Views Waste Water Engineers Report.pdf

Beacon Views Wetland Mitigation Overview.pdf

Planner Review Letter.pdf

Engineer Review Letter.pdf

INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.

December 29, 2020

City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

RE: Beacon Views Site Plan and Conservation Subdivision
Conklin Street
Beacon, New York
Tax Parcel ID: 6055-03-331123

Dear Chairman Gunn and Members of the Board:

Enclosed please find the following documents in support of the subject application:

- Site Plan Set and Architectural Plans (consisting of 20 sheets), revised December 29, 2020.
- Stormwater Pollution Prevention Plan, dated December 29, 2020.
- Water and Wastewater Engineering Report, dated December 29, 2020.
- Wetland Mitigation Overview, from Mike Nowicki, dated December 28, 2020.

In response to the comments provided in a letter from John Clarke Planning and Design, dated August 6, 2020, we offer the following responses:

1. The unit density calculations on EX-1 now cite the Schedule of Dimensional Regulations.

2. The applicant envisions the central green to be primarily made up of open lawn area, to facilitate play, and active recreation. Benches have been added to the green, but the applicant would prefer not to add walkways, to maintain more open contiguous lawn area.

3. The width of the sidewalks and a planting list has been shown on sheet SP-5. The sidewalk is 5' wide in all locations except for a portion between the existing edge of pavement and the property line where it needs to be tapered to 4' to stay on the property.

4. The following updates are provided for the items requested:

   a. The applicant continues to seek an agreement with the owner of the Highland Meadows property, pursuant to the improvements required by the easement agreement. The applicant no longer seeks to do wetland mitigation within the easement.

   b. After dialogue between the Fire Department, David Buckley, and this office, a request was made for the inclusion of an additional fire hydrant internal to the rear driveway area. A hydrant has been added between buildings 20 and 21. This was the only comment received.

   c. Please see the enclosed letter regarding the proposed mitigation from Mike Nowicki of Ecological Solutions, LLC.

In response to the comments provided in a letter from John Russo of Lanc & Tully Engineering and Surveying, P.C., dated August 7, 2020, we offer the following responses:

General Comments

1. A note has been added to the Alternative Grading Plan for Conklin Street Emergency Access on sheet SP-4, clarifying what is to occur if this contingency is necessary at the outset of project construction and occupancy, and is later rendered obsolete by the construction of the Townsend Street primary access, which would shift the emergency access to the Hastings Drive connection. In this event the existing Conklin Street connection would continue to serve as a pedestrian connection and could function as a secondary emergency access.

2. The Off-Site Improvements Plan has been shared with representatives of the operator of the Highland Meadows Senior Housing facility, and the applicant continues to seek an agreement as to the required improvements pursuant to the easement agreement.

3. The applicant no longer proposes to do any portion of the wetland mitigation within the easement area.

4. After dialogue between the Fire Department, David Buckley, and this office, a request was made for the inclusion of an additional fire hydrant internal to the rear driveway area. A hydrant has been added between buildings 20 and 21. This was the only comment received. The revised plans have been resubmitted and a letter has been requested, which we will provide with our next submission.

5. Please see the enclosed letter regarding the proposed mitigation from Mike Nowicki of Ecological Solutions, LLC.

6. All Dutchess County Department of Health (DCDOH) correspondence will be shared with the Board.

Water & Sewer Report Comments:

1. System dynamics have been provided in the Water and Wastewater Engineering Report.

2. A hydrant flow test was performed and witnessed by this office and the City of Beacon. Testing results are provided on Figure 1 of the Water and Wastewater Engineering Report.

3. Preliminary fire flows and pressures have been provided.

Preliminary Subdivision Plat:

1. The final plat will include bearings and distances for the proposed property lines.

2. Written descriptions will be provided with the final plat submission.

Grading and Drainage Plan:

1. The project attorney will correspond with the City attorney to finalize the legal mechanism by which these rights can be guaranteed to the City.

2. Additional top and bottom of wall elevations have been provided along all retaining walls, as requested.

Off Site Improvements Plan:

1. The width of the sidewalks has been shown on sheet SP-5. The sidewalk is 5’ wide in all locations except for a portion between the existing edge of pavement and the property line where it needs to be tapered to 4’ to stay on the property.

2. A plant list has been shown on the Off-Site Improvements Plan on Shee

Water & Sewer Profiles

1. The degree of bends for both vertical and horizontal bends have been indicated on the water main profiles.

SWPPP Comments

1. The rainfall intensity shown in red on the Pipe Sizing Calculations are less due to the increased time of concentration (Tc). Based on the rainfall data obtained from the information provided by Northeast Regional Climate Center (NRCC) and the Natural Resources Conservation Service (NRCS), the rainfall intensity is 9.2 inches per hour for a Tc of 6 minutes and 6.4 inches per hour for a Tc of 15 minutes. The rainfall intensity differs from the rainfall depth provided in the project SWPPP. The precipitation values in Table 2.0.1 of the SWPPP is the depth of rainfall, in inches, for the 24-hour rainfall event. The rainfall intensity used to calculate the peak discharge (Q) in the pipe sizing calculations is a rate of inches per hour for a storm event.
2. The pipe sizing calculations for DI 14 to ES 13 have been revised to include the anticipated peak flow of 35.64 cfs from the 25 Townsend site.
3. The berm for the P-5 Pocket Pond has been increased to 12’ wide to provide maintenance access.
4. The grading around end sections ES 21 and ES 29 have been revised to ensure the discharge will bypass the stormwater basin.
5. Trees have been moved away from the P-5 Pocket Pond.
6. The bioretention filter has been removed. The construction sequence has been revised accordingly.

We request appearance before the Board at their January 12, 2020 meeting to further discuss the revised materials we have provided and closing of the SEQRA Public Hearing.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: _____
Jeffrey J. Contelmo, PE
Senior Principal Engineer

JJC/adt

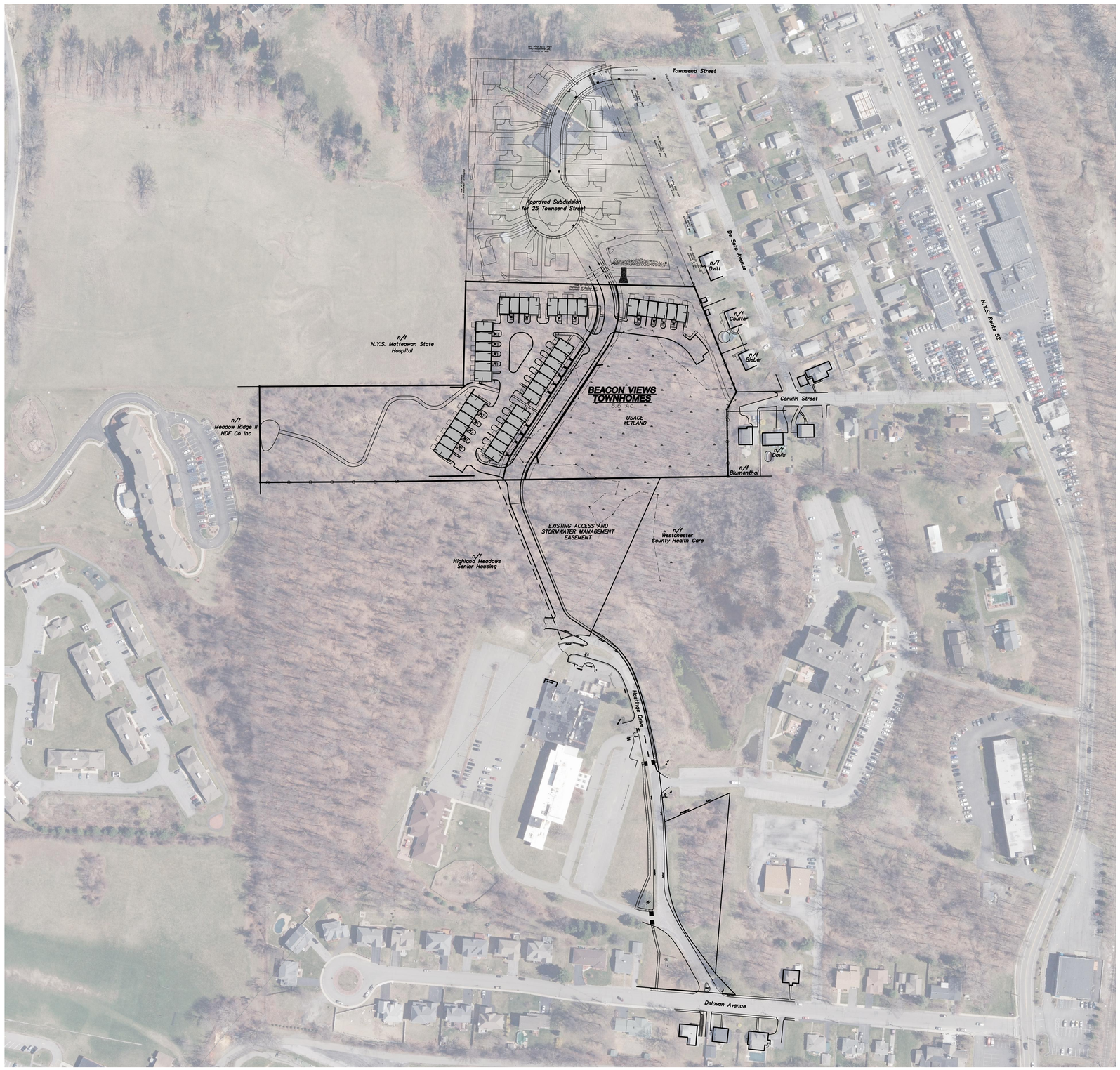
Enclosures

cc: Nathan Kahn
Greg Kamedulski
Richard Cantor, Esq. (Email Only
Aryeh Siegel (Email Only)
Phil Grealy, P.E. (Email Only)

Insite File No. 19131.100

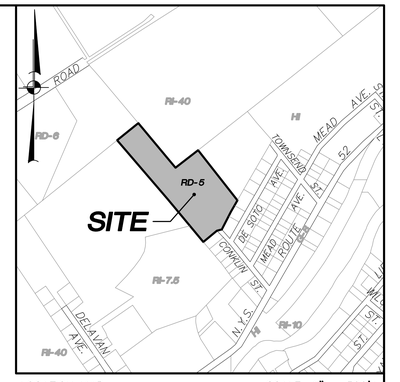
BEACON VIEWS

HASTINGS DRIVE / CONKLIN STREET
CITY OF BEACON, NY



ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

SITE PLAN DRAWING LIST		
DRAWING NO.	DRAWING NAME	SHEET NO.
CS-1	COVER SHEET	1
EX-1	EXISTING CONDITIONS & REMOVALS PLAN	2
SP-1	LAYOUT & LANDSCAPE PLAN	3
SP-2.1	GRADING & DRAINAGE PLAN	4
SP-2.2	UTILITIES PLAN	5
SP-3	EROSION & SEDIMENT CONTROL PLAN	6
SP-4	ENLARGED PLANS	7
SP-5	OFF-SITE IMPROVEMENTS PLAN	8
SP-6	VEHICLE MANEUVERING PLAN	9
LP-1	LIGHTING PLAN	10
PR-1	DRAINAGE PROFILES	11
PR-2	WATER & SEWER PROFILES	12
D-1	DETAILS	13
D-2	DETAILS	14
D-3	DETAILS	15
D-4	DETAILS	16
D-5	DETAILS	17
A-1	BUILDING PLANS - FRONT GARAGE	18
A-2	BUILDING PLANS - REAR GARAGE	19
A-3	ELEVATIONS / VIEWS	20



LOCATION MAP SCALE: 1" = 500'±

Applicant:
Beacon Views, LLC
500 River Avenue, Suite 145
Wakefield, NJ 08701

Record Owner:
Highlands at Beacon, LLC
2847 Church Street
Pine Plains, NY 12567

Site Data:

Tax Map No.:	6055-03-331123
Total Lot Area:	8.6 AC.
Zone:	RD-5

General Notes:

1. Property line shown on these plans is based upon a map entitled "Boundary and Topographic Survey of Property prepared for Beacon Community Foundation, Inc.", dated March 22, 2005 as prepared by Insite Engineering, Surveying & Landscape Architecture, P.C.
2. Topography shown on these plans are based upon aerial photography dated April 14, 2003 and is photogrametrically compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D. 1988) as derived by GPS observation. The contour interval is 2'.
3. Site features and topography at the boundary of the access and stormwater easement where it meets Hastings Drive were field located on August 8, 2019 by Insite Engineering, Surveying & Landscape Architecture, P.C.
4. The existing wetland limit line as shown on these plans is based on a field delineation performed by Ecological Solutions, LLC on April 15, 2019 and survey located by Insite Engineering, Surveying & Landscape Architecture, P.C. The area of the wetland on the subject property is 2.55 acres.

Site Access Notes:

1. The applicant seeks to utilize the proposed connection to the right of way through the approved subdivision on 25 Townsend Street as its primary means of access for the Beacon Views Properties.
2. The road shown in the existing easement on the Highland Meadows Senior Housing Property would be utilized as an emergency access only, in this case.
3. In the event there is a delay in the construction of the road in the approved 25 Townsend Street right of way, the applicant would exercise the easement over the Highland Meadows Senior Housing Property, and utilize the proposed road thereon as the primary access to the site, until such time as the 25 Townsend Street road was constructed. In this event, the proposed alternate grading plan for Conklin Street emergency access on sheet SP-4 would be constructed. When access becomes available through the 25 Townsend Subdivision, the road through the Highland Meadows Senior Housing Property easement would be gated and transitioned to emergency access only, as stated above.
4. In the event that the road through the 25 Townsend Street subdivision is not built, the applicant and subsequent owner will retain ownership of the main road shown within the proposed right of way, and will be responsible for maintaining it. When the 25 Townsend Street access is constructed, the right of way will be dedicated to the city, as proposed.

Affordable-Workforce-Housing Notes:

1. The project shall comply with the requirements of city code Chapter 223 Zoning, Article IVB Affordable Workforce Housing.
2. Based on the proposed unit count of 40 townhomes, there shall be four (4) townhomes meeting the requirements for below-market-rate requirements of the code.

Habitat Protection Notes:

1. Trees clearing will only occur between the period of October 1 through March 31 when bats are not in the vicinity of the site.
2. Lighting on the site will use City of Beacon Planning Board approved light fixtures that have tops that direct light down to minimize light pollution and not interfere with potential bat foraging activities.
3. Implementing soil conservation and dust control best management practices, such as watering dry disturbed soil areas to keep dust down, and using staked, recessed silt fence and anti tracking pads to prevent erosion and sedimentation in surface waters on the site.
4. Stormwater pond/s will not be maintained with any chemicals that might adversely affect bats or insect populations on which they may feed.

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

Site Plan

Approved by resolution of the Beacon Planning Board on the 30th day of June, 2020.

Chairman, City Planning Board Date

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5-26-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4-28-20	RESUBMISSION TO PLANNING BOARD	JFR

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Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-enp.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

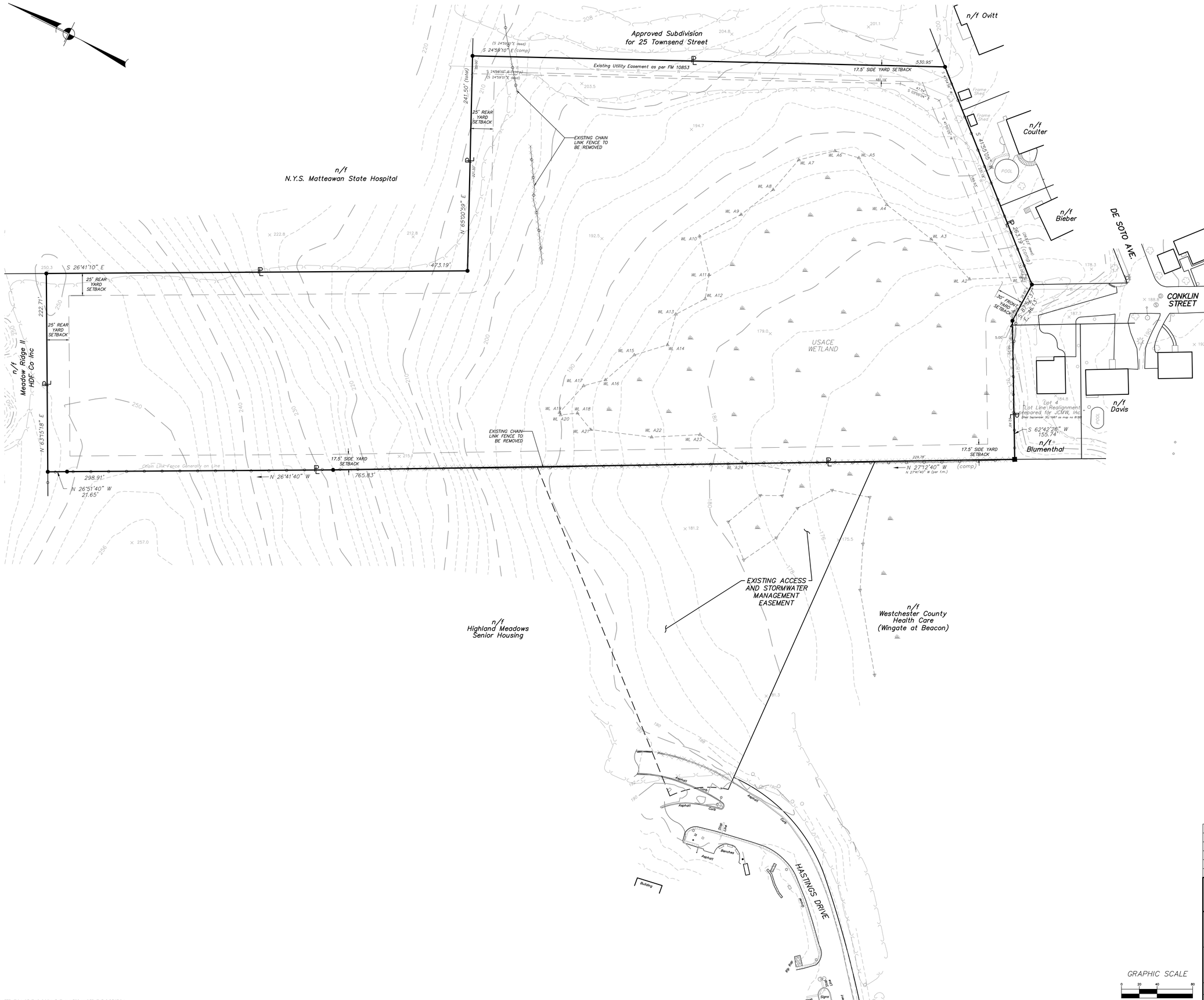
DRAWING:
COVER SHEET

STATE OF NEW YORK - JAMES J. CONTI - 21937 - LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	1" = 100'	CHECKED BY	A.D.T.

DRAWING NO. CS-1 SHEET 1 / 20

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG (Wt. A23 – Wt. A24)
- EXISTING TREE LINE
- EXISTING 10' CONTOUR (190)
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE (× 215.1)
- EXISTING ITEMS TO BE REMOVED

General Notes:

1. Property line shown on these plans is based upon a map entitled "Boundary and Topographic Survey of Property prepared for Beacon Community Foundation, Inc.", dated March 22, 2005 as prepared by Insite Engineering, Surveying & Landscape Architecture, P.C.
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4. The existing wetland limit line as shown on these plans is based on a field delineation performed by Ecological Solutions, LLC on April 15, 2019 and survey located by Insite Engineering, Surveying & Landscape Architecture, P.C. The area of the wetland on the subject property is 2.55 acres.

UNIT DENSITY CALCULATIONS (RD–5)

Based on note "H" of Chapter 223–17D Schedule of Dimensional Regulations

Total Parcel (8.6 acres)	= 374,518 SF±
Wetland	= 111,078 SF±
Slopes 25% or Greater	= 8,500 SF±
Buildable Area	= 254,940 SF
Permitted Units @ 5,000 SF per Unit	= 50 Units
Proposed Units	= 40 Units

* Pursuant to article IVB of the city code, four (4) units of the proposed forty (40) are to be below–market–rate.

GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

NO.	DATE	REVISION	BY
5	12–29–20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7–28–20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6–30–20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5–26–20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4–28–20	RESUBMISSION TO PLANNING BOARD	JFR

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(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
EXISTING CONDITIONS & REMOVALS PLAN

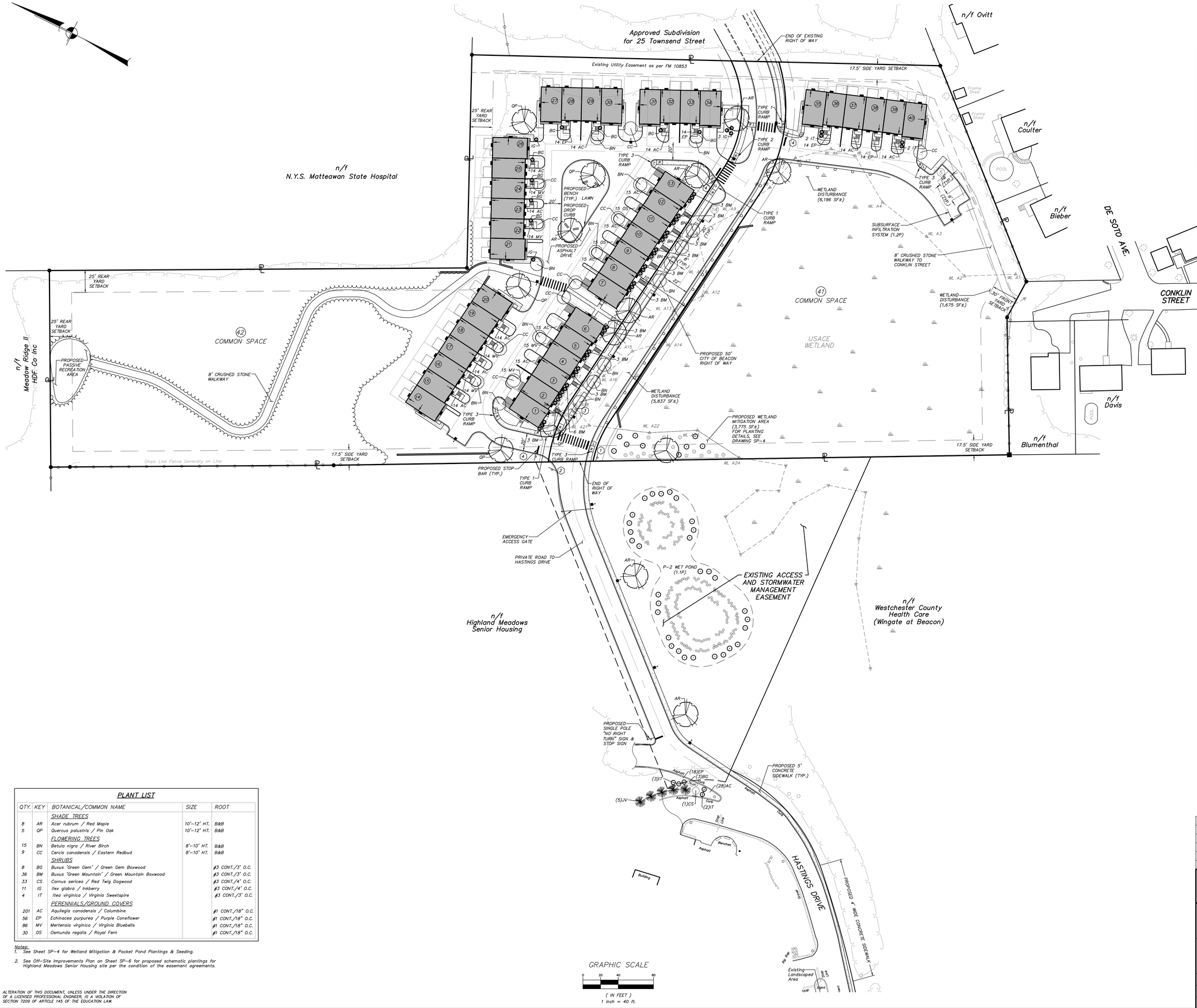
STATE OF NEW YORK — JAMES J. CONTENTO — 21931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8–27–19	DRAWN BY	J.F.R.
SCALE	1" = 40'	CHECKED BY	A.D.T.

DRAWING NO. EX–1 SHEET 2 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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GENERAL NOTES:

1. Trash and recycling to be collected at each unit by a privately hired waste management contractor.

RD–5 ZONE REQUIREMENTS:

	Required/Permitted:	Provided:
Minimum Lot Area:	5,000 SF	374,518 SF±
Minimum Lot Width:	50'	440'±
Minimum Lot Depth:	100'	848'±
Minimum Yard Setbacks:		
Front:	30'	30'
Minimum Side:	17.5'	35'
Total of 2:	20'	75'
Rear:	25'	25'
Minimum Distance Between Buildings on the Same Lot:	30'	20'*
Maximum Building Height:	3 Stories or 35'	Less than 35'
Minimum Building Height:	1 Story and 12'	More than 12'
Maximum Building Coverage		
Multi–family:	20%	8.1%
Other uses:	30%	0%
Maximum No. of Dwelling Units per Building	16	7

* Seeking relief from minimum distance as part of terms of conservation subdivision.

PARKING REQUIREMENTS:

2 per Dwelling Unit + .25 Spaces per Bedroom	= 110 Spaces
Garage Spaces	= 80 Spaces
Driveway Spaces	= 40 Spaces
Visitor Spaces	= 19 Spaces
	= 139 Spaces Provided

RECREATION AREAS SUMMARY

Required SF @ 2,000 for First 20 Units Required 100 SF for Each Additional Unit	= 4,000 SF Required
Western Trail Passive Recreation Area	= 7,590 SF
Southern Trail to Conklin Street Area	= 1,385 SF
	= 8,975 SF Provided

WETLANDS SUMMARY

U.S.A.C.E. WETLAND PFOIE

TOTAL PROPOSED DISTURBANCE = 13,708 SF±
POTENTIAL TOTAL WETLAND DISTURBANCE PER ALTERNATE GRADING PLAN FOR ACCESS TO CONKLIN STREET ON SHEET SP–4 = 15,246 SF±
PROPOSED ON–SITE MITIGATION AREA = 3,775 SF±
PROPOSED OFF–SITE MITIGATION AREA = 11,525 SF±
TOTAL PROPOSED MITIGATION = 15,300 SF±

*SEE WETLAND MITIGATION NOTES ON SP–4

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING TREE LINE
- PROPOSED SIGN
- PROPOSED DOOR LOCATION
- PROPOSED # OF STALLS TO BE STRIPED
- PROPOSED CONCRETE CURB
- PROPOSED EDGE OF SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED PAINTED STOPBAR
- PROPOSED CROSSWALK
- PROPOSED LANDSCAPING
- PROPOSED GUIDE RAIL
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED BUILDING MOUNTED LIGHT

SIGN DATA TABLE

LOCATION NO.	TEXT	M.U.T.C.D. NUMBER	SIZE OF SIGN (s.f.)	DESCRIPTION
1		R3–1	30" x 30"	White Background Black Arrow Red Symbol Black Border
2	NO OUTLET		12" x 18"	Red on White
3	RIGHT LANE MUST TURN RIGHT	R3–32C	30" x 30"	Black on White
4	STOP	R1–1C	30" x 30"	White on Red

PLANT LIST

QTY.	KEY	BOTANICAL/COMMON NAME	SIZE	ROOT
		SHADE TREES		
8	AR	Acer rubrum / Red Maple	10'–12' HT.	B&B
5	QP	Quercus palustris / Pin Oak	10'–12' HT.	B&B
		FLOWERING TREES		
15	BN	Betula nigra / River Birch	8'–10' HT.	B&B
9	CC	Cercis canadensis / Eastern Redbud	8'–10' HT.	B&B
		SHRUBS		
8	BG	Buxus 'Green Gem' / Green Gem Boxwood		#3 CONT./3' O.C.
36	BM	Buxus 'Green Mountain' / Green Mountain Boxwood		#3 CONT./3' O.C.
33	CS	Cornus sericea / Red Twig Dogwood		#3 CONT./4' O.C.
11	IG	Ilex glabra / Inkberry		#3 CONT./4' O.C.
4	IT	Itea virginica / Virginia Sweetspire		#3 CONT./3' O.C.
		PERENNIALS/GROUND COVERS		
201	AC	Aquilegia canadensis / Columbine		#1 CONT./18" O.C.
56	EP	Echinacea purpurea / Purple Coneflower		#1 CONT./18" O.C.
86	MV	Mertensia virginica / Virginia Bluebells		#1 CONT./18" O.C.
30	OS	Osmunda regalis / Royal Fern		#1 CONT./18" O.C.

Notes:
1. See Sheet SP–4 for Wetland Mitigation & Pocket Pond Plantings & Seeding.
2. See Off–Site Improvements Plan on Sheet SP–6 for proposed schematic plantings for Highland Meadows Senior Housing site per the condition of the easement agreements.

NO.	DATE	REVISION	BY
5	12–29–20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7–28–20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6–30–20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5–26–20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4–28–20	RESUBMISSION TO PLANNING BOARD	JFR

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(845) 225–9717 fax
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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
LAYOUT & LANDSCAPE PLAN

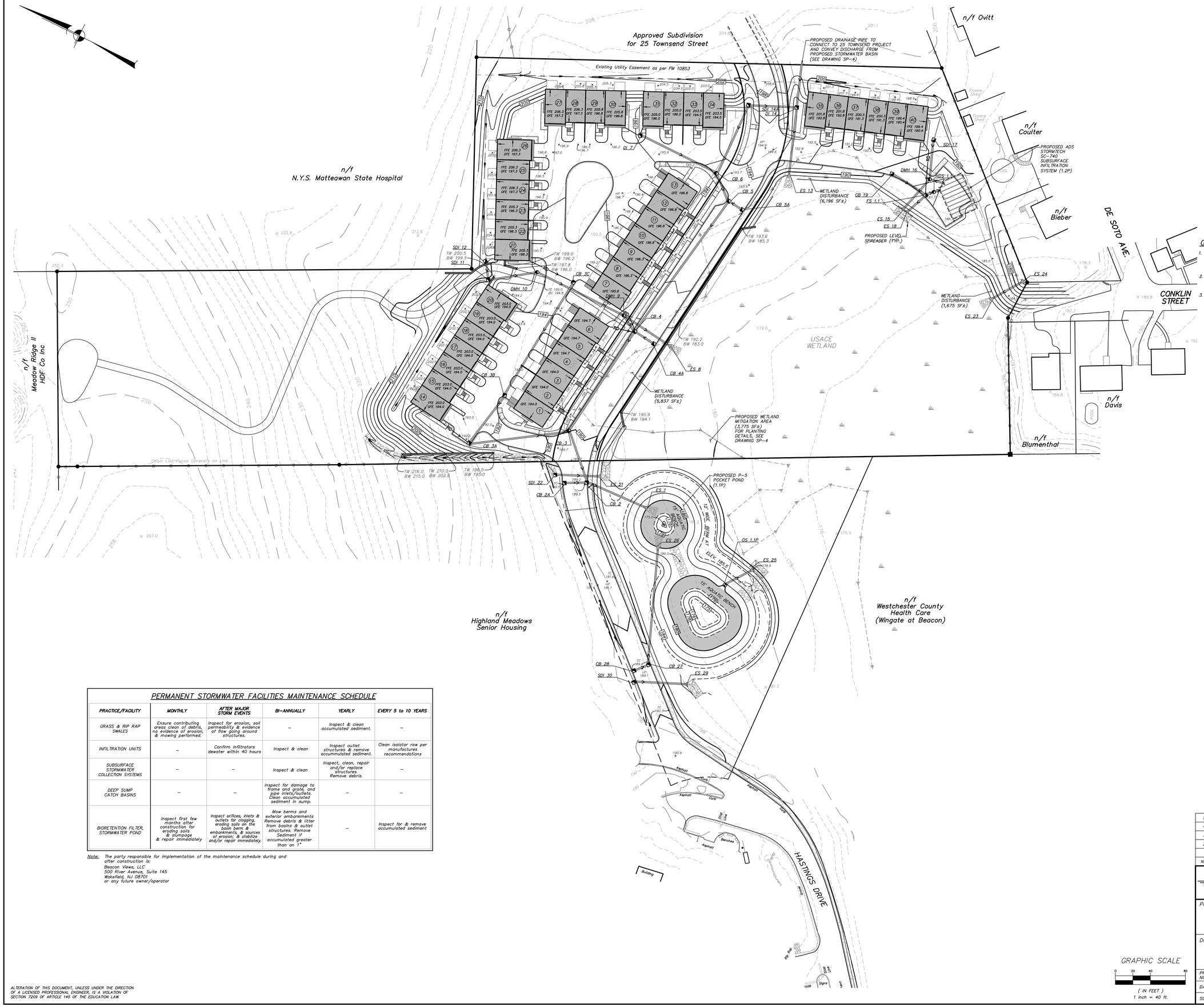
STATE OF NEW YORK — JAMES J. CONTENTO — 91931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8–27–19	DRAWN BY	J.F.R.
SCALE	AS SHOWN	CHECKED BY	A.D.T.

DRAWING NO. SP–1 SHEET 3 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TOP OF WALL & BOTTOM OF WALL ELEVATIONS
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED HDPE DRAINAGE PIPE (SIZE AS NOTED)
- PROPOSED GRASS SWALE

General Notes:

1. Stormwater management facilities located within the access and utility easement on the Highland Meadows property are to be maintained by the applicant and subsequent ownership of the proposed project. Maintenance of these facilities will not fall on the City, or the Highland Meadows ownership.
2. In an emergency event the City of Beacon will have the right to maintain the drainage between CB3 and ES1, if the applicant or subsequent owners fail to fulfill their maintenance obligations.
3. All drainage improvements within the proposed City right of way are to be dedicated to the City of Beacon.

PROPOSED DRAINAGE TABLE

STRUCTURE	RIM	INV.	PIPE	LENGTH	SLOPE
DI 7	195.8	192.6			
			12" HDPE	97 L.F.	2.3%
CB 6	193.6	190.4			
			12" HDPE	35 L.F.	1.2%
CB 5	193.5	IN 190.0 | OUT 189.7			
			15" HDPE	183 L.F.	1.3%
CB 4	191.2	IN 187.3 | OUT 187.0			
			18" HDPE	136 L.F.	1.0%
CB 3	190.2	IN 185.6 | OUT 185.1			
			24" HDPE	63 L.F.	3.7%
CB 2	189.0	182.7			
			24" HDPE	76 L.F.	3.6%
ES 1	--	180.0			
CB 5A	193.5	190.3			
			12" HDPE	18 L.F.	1.7%
CB 5	193.5	190.0			
CB 4A	191.2	188.0			
			12" HDPE	26 L.F.	1.9%
CB 4	191.2	187.5			
CB 2A	189.0	185.8			
			12" HDPE	25 L.F.	2.0%
CB 2	189.0	185.3			
CB 3C	195.2	189.5			
			15" HDPE	151 L.F.	1.1%
CB 3B	192.7	187.9			
			15" HDPE	68 L.F.	1.0%
CB 3A	193.2	IN 187.2 | OUT 186.5			
			18" HDPE	115 L.F.	1.1%
CB 3	190.2	185.6			
SDI 22	190.0	186.6			
			15" HDPE	52 L.F.	4.0%
ES 21	--	184.5			
SDI 12	202.9	198.8			
			12" HDPE	22 L.F.	9.2%
SDI 11	199.9	IN 196.8 | OUT 195.5			
			15" HDPE	57 L.F.	5.8%
DMH 10	195.9	192.5			
			15" HDPE	110 L.F.	2.9%
DMH 9	192.9	IN 189.3 | OUT 187.7			
			15" HDPE	60 L.F.	8.3%
ES 8	--	182.5			
SDI 14A	196.0	192.6			
			15" HDPE	55 L.F.	4.5%
DI 14	193.8	IN 190.1 | OUT 189.7			
			24" HDPE	80 L.F.	4.1%
ES 13	--	186.0			
SDI 17	190.5	187.1			
			12" HDPE	45 L.F.	7.3%
DMH 16	188.1	183.8			
			12" HDPE	47 L.F.	1.7%
ES 15	--	183.0			
CB 19	189.3	186.1			
			12" HDPE	46 L.F.	3.1%
FS 1.1	187.7	184.7			
			12" HDPE	30 L.F.	5.7%
ES 18	--	183.0			
FS 1.1	187.7	184.7			
			8" HDPE	10 L.F.	2.0%
HDS 1.1	187.8	184.5			
			8" HDPE	9 L.F.	2.2%
1.2P	--	184.3			
1.2P	--	184.5			
			6" HDPE	17 L.F.	1.2%
DMH 16	188.1	184.3			
ES 24	--	176.0			
			15" HDPE	44 L.F.	1.1%
ES 23	--	175.5			
OS 1.1P	184.5	179.0			
			18" HDPE	37 L.F.	1.4%
ES 25	--	178.5			
CB 28	188.9	185.7			
			12" HDPE	18 L.F.	2.8%
CB 27	188.9	185.2			
			12" HDPE	136 L.F.	3.8%
ES 26	--	180.0			
SDI 30	189.5	186.3			
			12" HDPE	61 L.F.	3.8%
ES 29	--	184..0			

PERMANENT STORMWATER FACILITIES MAINTENANCE SCHEDULE

PRACTICE/FACILITY	MONTHLY	AFTER MAJOR STORM EVENTS	BI-ANNUALLY	YEARLY	EVERY 5 to 10 YEARS
GRASS & RIP RAP SWALES	Ensure contributing areas clean of debris, no evidence of erosion, & mowing performed.	Inspect for erosion, soil permeability & evidence of flow going around structures.	–	Inspect & clean accumulated sediment.	–
INFILTRATION UNITS	–	Confirm infiltrators dewater within 40 hours	Inspect & clean	Inspect outlet structures & remove accummulated sediment.	Clean isolator row per manufactures recommendations
SUBSURFACE STORMWATER COLLECTION SYSTEMS	–	–	Inspect & clean	Inspect, clean, repair and/or replace structures. Remove debris.	–
DEEP SUMP CATCH BASINS	–	–	Inspect for damage to frame and grate, and pipe inlets/outlets. Clean accumulated sediment in sump.	–	–
BIORETENTION FILTER, STORMWATER POND	Inspect first few months after construction for eroding soils & slumpage & repair immediately	Inspect orifices, inlets & outlets for clogging, eroding soils on the basin berm & embankments, & sources of erosion; & stabilize and/or repair immediately.	Mow berms and exterior embankments Remove debris & litter from basins & outlet structures. Remove Sediment if accumulated greater than an 1"	–	Inspect for & remove accumulated sediment

Note: The party responsible for implementation of the maintenance schedule during and after construction is:
Beacon Views, LLC
500 River Avenue, Suite 145
Wakefield, NJ 08701
or any future owner/operator

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5-26-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4-28-20	RESUBMISSION TO PLANNING BOARD	JFR

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3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
GRADING & DRAINAGE PLAN

STATE OF NEW YORK — JAMES J. CONKLIN — 091931 — LICENSED PROFESSIONAL ENGINEER

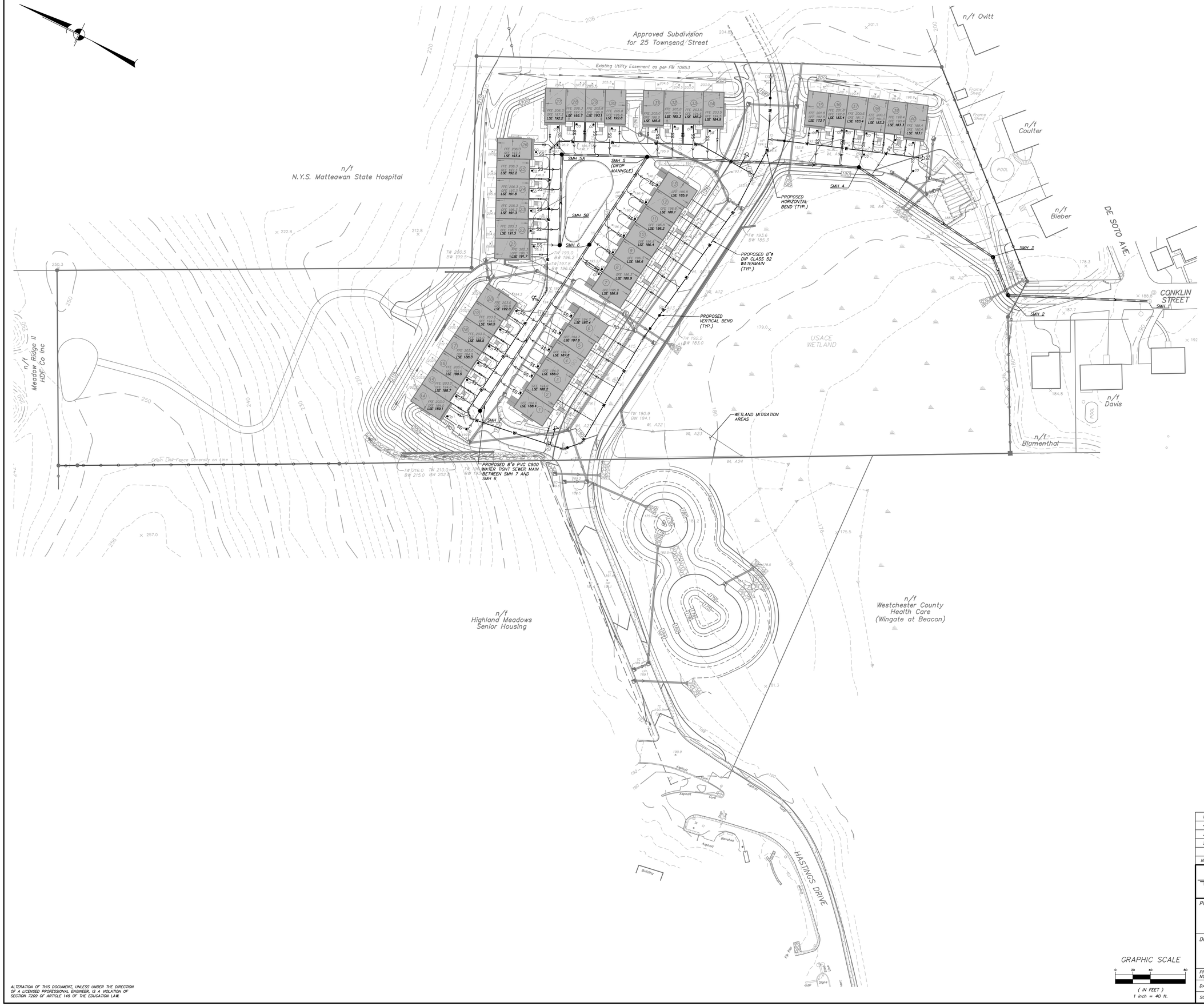
GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

PROJECT NUMBER	191.31.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	1" = 40'	CHECKED BY	A.D.T.

DRAWING NO. SP-2.1
SHEET 4 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG (Wl. A23 / Wl. A24)
- EXISTING 10' CONTOUR (190)
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE (× 215.1)
- EXISTING 12"ø WATER MAIN (W)
- PROPOSED 10' CONTOUR (190)
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION (× 188.8 / 188.8)
- PROPOSED TOP OF WALL & BOTTOM OF WALL ELEVATIONS (TW 187.8 / BW 184.0)
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED WATER GATE VALVE (GV)
- PROPOSED FIRE HYDRANT
- PROPOSED HDPE DRAINAGE PIPE (SIZE AS NOTED)
- PROPOSED 8"ø PVC SDR 35 SEWER MAIN (UNLESS OTHERWISE NOTED) (SS)
- PROPOSED 4"ø PVC SDR 35 SEWER SERVICE WITH CLEANOUT (SS, CO)
- PROPOSED 8"ø DIP CLASS 52 WATER MAIN (W)
- PROPOSED 1"ø DIP WATER SERVICE LINE (WS)
- PROPOSED GRASS SWALE

PROPOSED SEWER TABLE

STRUCTURE	RIM.	INV.	PIPE	LENGTH	SLOPE
SMH 7	192.5	188.0			
SMH 6	194.7	IN 186.2 | OUT 186.0	8" PVC	227 L.F.	0.8%
SMH 5	196.0	IN 185.1 | OUT 185.0	8" PVC	120 L.F.	0.8%
SMH 4	190.4	IN 182.4 | OUT 182.2	8" PVC	242 L.F.	1.1%
SMH 3	185.0	IN 180.8 | OUT 180.3	8" PVC	184 L.F.	0.8%
SMH 2	184.5	IN 180.3 | OUT 180.2	8" PVC	47 L.F.	0.9%
SMH 1	188.8	178.9	8" PVC	161 L.F.	0.8%
SMH 5B	195.2	191.0			
SMH 5A	196.6	IN 190.1 | OUT 190.0	8" PVC	104 L.F.	0.9%
SMH 5	196.1	IN 189.1 | OUT 185.0	8" PVC	97 L.F.	0.9%

General Notes:

1. The City of Beacon shall own, operate and maintain the water main and all hydrants/stubs.
2. All sanitary sewer mains and manholes up to the existing manhole shall be owned, operated, and maintained by the City of Beacon.
3. Blanket agreements and easements to be granted to the City of Beacon for access and utility maintenance purposes.

GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

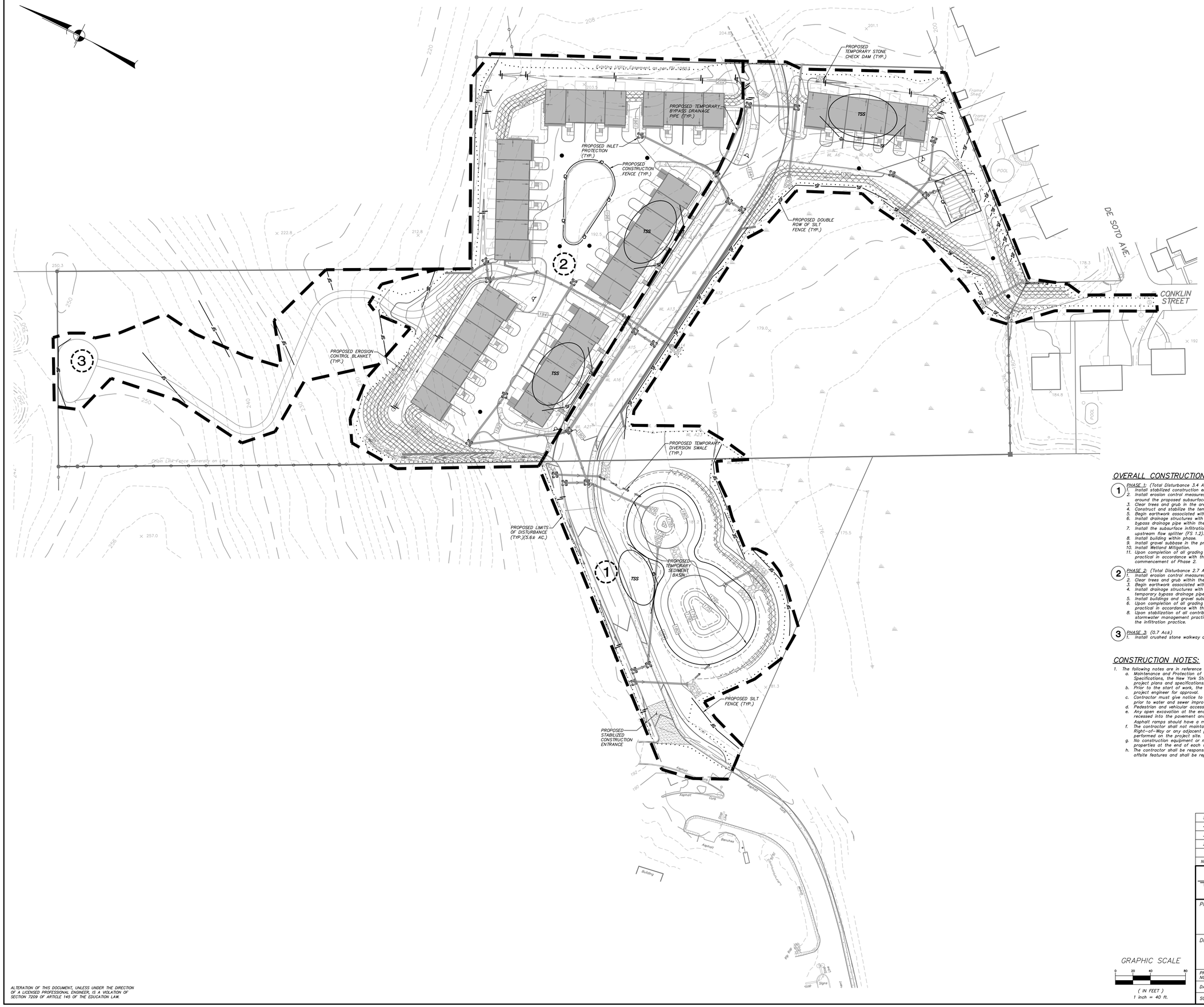
DRAWING:
UTILITIES PLAN

STATE OF NEW YORK — JEFFREY J. CONTENTO — 21931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	8-27-19	DRAWN BY	J.F.R.	SP-2.2	5 / 20
SCALE	1" = 40'	CHECKED BY	A.D.T.		

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED FIRE HYDRANT
- PROPOSED GRASS SWALE
- SF — PROPOSED SILT FENCE
- CF — PROPOSED CONSTRUCTION FENCE
- PROPOSED STONE RIP-RAP
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED STONE CHECK DAM
- PROPOSED TEMPORARY DIVERSION SWALE
- TSS / SF — PROPOSED TEMPORARY SOIL STOCKPILE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED DRAINAGE STRUCTURE W/ INLET PROTECTION
- PROPOSED PHASING LINE
- (1) PROPOSED PHASING NUMBER

OVERALL CONSTRUCTION SEQUENCE:

(1) PHASE 1: (Total Disturbance 3.4 Ac. ±)
1. Install stabilized construction entrances in accordance with the notes and details at location shown on drawing.
2. Install erosion control measures shown on the plan in accordance with the details. Install construction fence around the proposed subsurface infiltration system (1.2P).
3. Clear trees and grub in the area of stormwater basin 1.1P.
4. Construct and stabilize the temporary sediment basin in accordance with the notes and details.
5. Begin earthwork associated with the road, parking area and building within limits of the phase.
6. Install drainage structures with inlet protection as shown and pipes within limits of phase. Install temporary bypass drainage pipe within the phase to direct stormwater runoff to the temporary sediment basin.
7. Install the subsurface infiltration system (1.2P) and plug the outlet pipe to the infiltration practice in the upstream flow splitter (FS 1.2).
8. Install building within phase.
9. Install gravel subbase in the proposed paved areas.
10. Install Wetland Mitigation.
11. Upon completion of all grading operations topsoil, seed, and mulch any and all disturbed areas as soon as practical in accordance with the sedimentation and erosion control notes. Phase 1 must be stabilized prior to the commencement of Phase 2.

(2) PHASE 2: (Total Disturbance 2.7 Ac. ±)
1. Install erosion control measures shown on the plan in accordance with the details.
2. Clear trees and grub within the limits of the phase.
3. Begin earthwork associated with the parking area and buildings.
4. Install drainage structures with inlet protection as shown and pipes within the limits of the phase. Install temporary bypass drainage pipe within the phase to direct stormwater runoff to the temporary sediment basin.
5. Install buildings and gravel subbase in the proposed paved areas.
6. Upon completion of all grading operations topsoil, seed, and mulch any and all disturbed areas as soon as practical in accordance with the sedimentation and erosion control notes.
8. Upon stabilization of all contributing area complete, convert the temporary sediment basin to the proposed stormwater management practice per the notes and details and remove plug from primary outlet in FS 1.2 to the infiltration practice.

(3) PHASE 3: (0.7 Ac±)
1. Install crushed stone walkway and passive recreation area.

CONSTRUCTION NOTES:

1. The following notes are in reference to the proposed water and sewer main improvements on Conklin Street:
   a. Maintenance and Protection of Traffic shall be provide in accordance with Section 619 of the Standard Specifications, the New York State Manual of Uniform Control Devices, and any provisions contained in the project plans and specifications.
   b. Prior to the start of work, the contractor shall submit a Maintenance and Protection of Traffic Plan to the project engineer for approval.
   c. Contractor must give notice to all effected residential dwellings on Conklin Street fourty-eight (48) hours prior to water and sewer improvement connections on Conklin Street.
   d. Pedestrian and vehicular access to all residence must be maintained at all times during construction.
   e. Any open excavation at the end of the work day must be covered with steel plates. Plates must be recessed into the pavement and pinned or pinned with asphalt ramps placed along all sides of the plate. Asphalt ramps should have a maximum slope of $\frac{1}{2}$ inch per foot.
   f. The contractor shall not maintain construction equipment or stored overnight within the City of Beacon Right-of-Way or any adjacent properties. Construction equipment maintenance and storage must be performed on the project site.
   g. No construction equipment or material is to be left within the City of Beacon Right-of-Way or adjacent properties at the end of each work day.
   h. The contractor shall be responsible for the restoration of any offsite disturbance and/or damage to existing offsite features and shall be repaired or replaced in kind at the expense of the contractor.

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5-26-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4-28-20	RESUBMISSION TO PLANNING BOARD	JFR

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3 Garrett Place
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(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
EROSION & SEDIMENT CONTROL PLAN

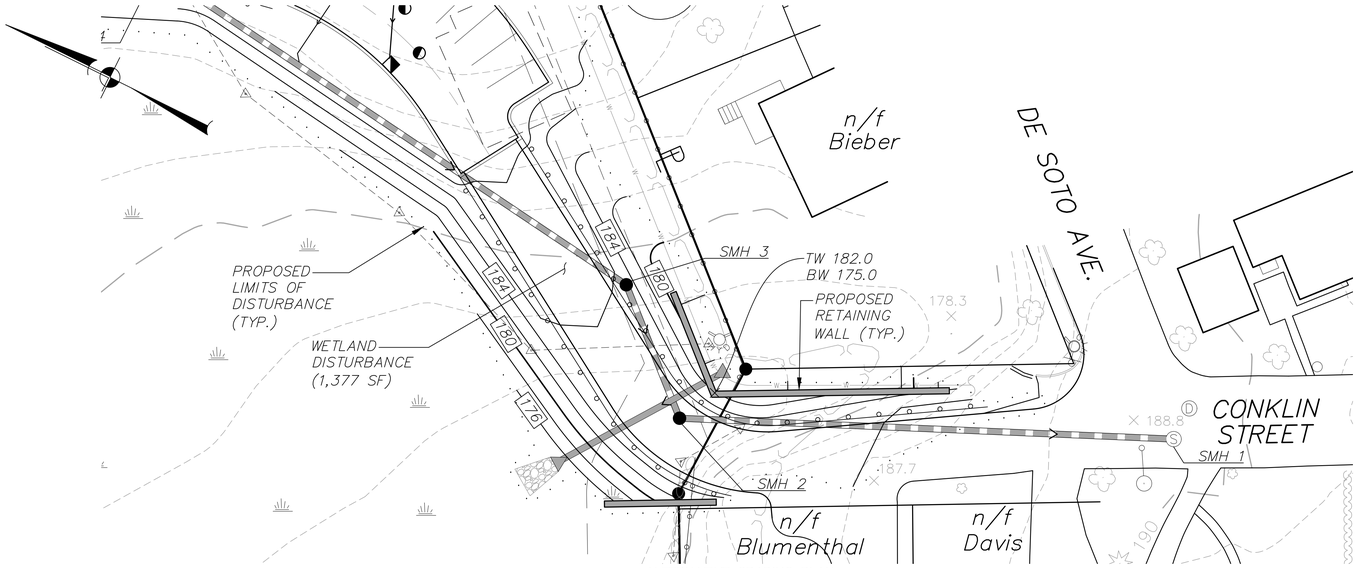
GRAPHIC SCALE
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(IN FEET)
1 inch = 40 ft.

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	1" = 40'	CHECKED BY	A.D.T.

DRAWING NO. SP-3 SHEET 6 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

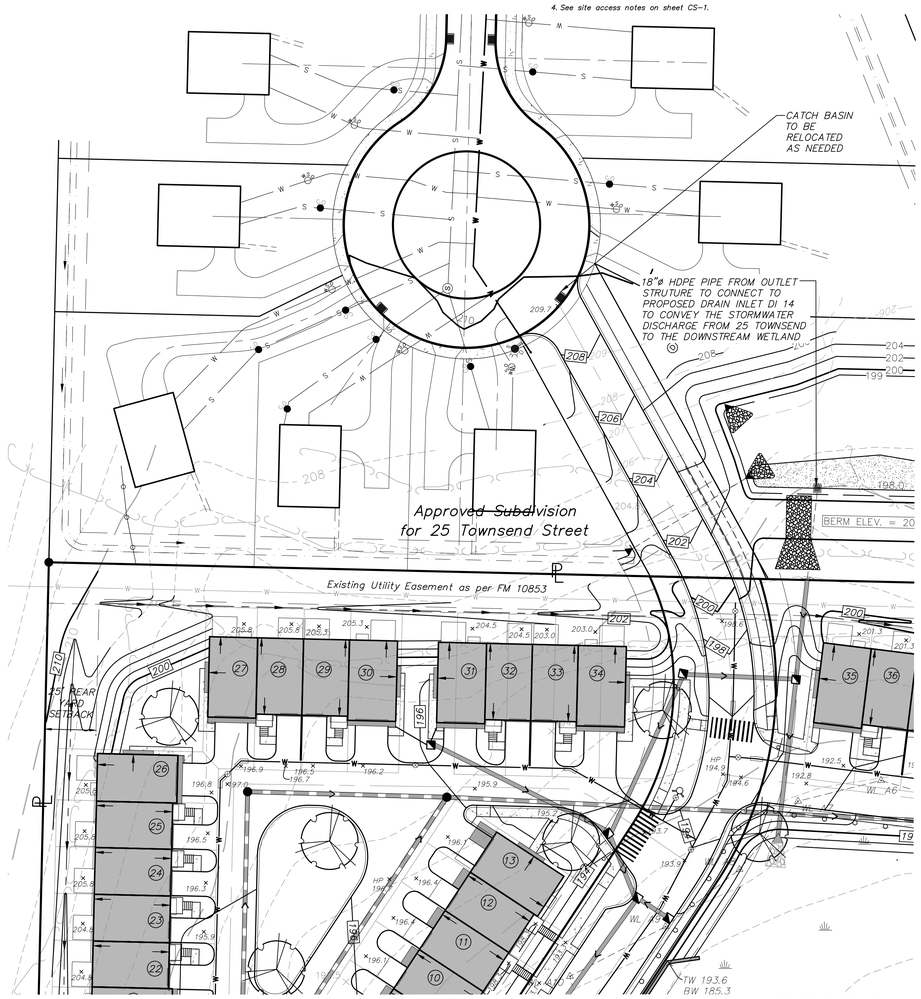
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ALTERNATIVE GRADING PLAN FOR CONKLIN STREET EMERGENCY ACCESS

Notes:
1. The above grading is proposed in the event that an emergency access must be connected through to Conklin Street. See Site Access Notes for primary and contingency options for accessing the subdivision.
2. This contingency emergency access point will generate 1,377 SF± of additional wetland disturbance. The wetland mitigation area shown in this plan set accounts for the potential additional disturbance on a 1:1 basis.
3. In the event that this contingency emergency access is built, and at a later date, the proposed emergency access to Hastings Drive is made available after the construction of the proposed primary access to Townsend Street, the Conklin Street connection will continue to serve as a pedestrian path, and could, at the discretion of emergency services, function as a secondary emergency access.
4. See site access notes on sheet CS-1.

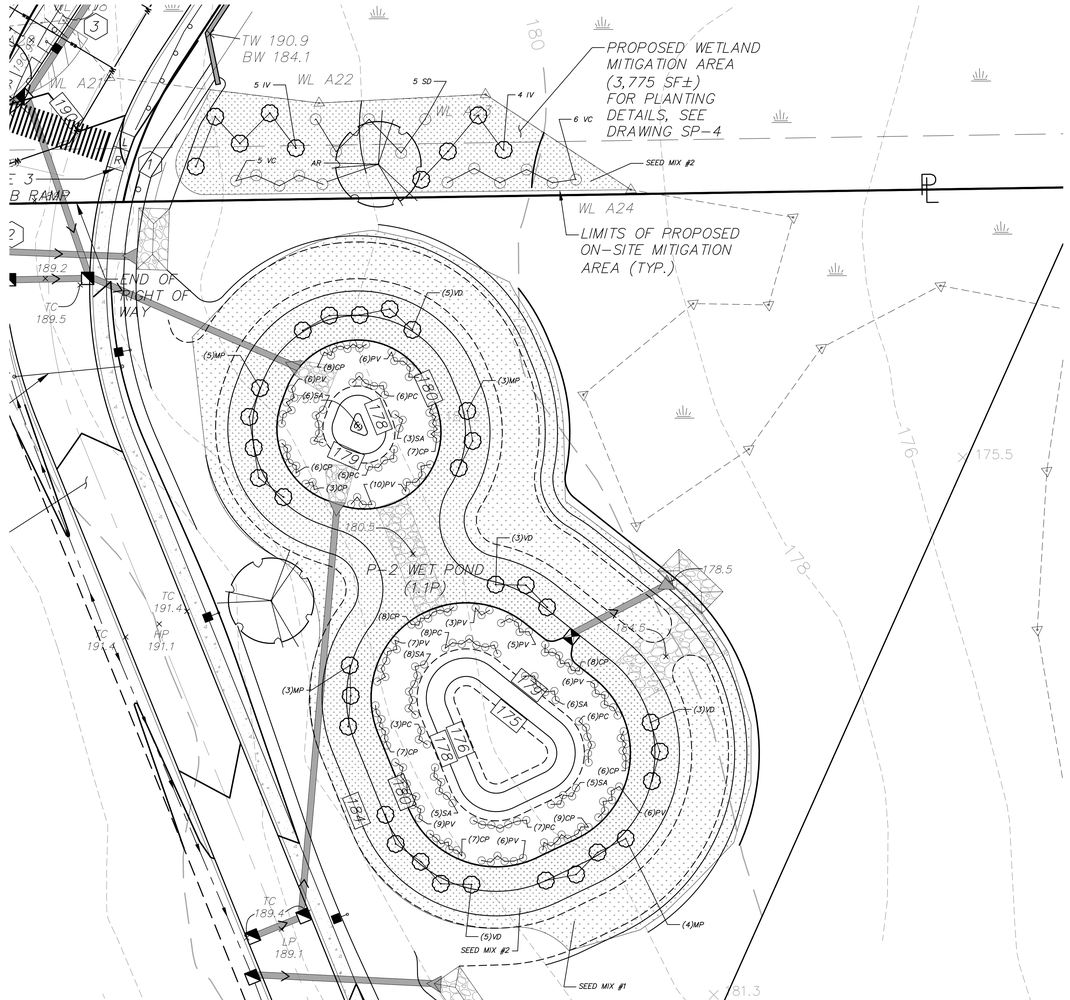
GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.



25 TOWNSEND STREET THROUGH CONNECTION

Note: See site access notes on sheet CS-1.

GRAPHIC SCALE
0 15 30 60
(IN FEET)
1 inch = 30 ft.



WETLAND MITIGATION & POCKET POND PLANTINGS & SEEDING PLAN

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING TREE LINE
- PROPOSED SIGN
- PROPOSED DOOR LOCATION
- PROPOSED # OF STALLS TO BE STRIPED
- PROPOSED CONCRETE CURB
- PROPOSED EDGE OF SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED PAINTED STOPBAR
- PROPOSED CROSSWALK
- PROPOSED LANDSCAPING
- PROPOSED GUIDE RAIL
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED BUILDING MOUNTED LIGHT

WETLAND MITIGATION NOTES:

1. Limits of both on-site and off-site wetland mitigation areas will be staked prior to the commencement of mitigation.
2. In addition to the plantings shown hereon the mitigation area is to be seeded at a rate of 25 lbs. per acre: New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites from New England Wetland Plants, Inc. of Amherst, MA. See seeding notes for additional information.
3. All plant material to be nursery grown.
4. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
5. Plants shall be taken from healthy nursery stock.
6. Plants shall be grown under climate conditions similar to those in the locality of the project.
7. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
8. Provide a 3" layer of shredded mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
9. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.
10. All landscape and mitigation plantings shall be installed by hand. No mechanical equipment shall be permitted.

WETLAND MITIGATION & POCKET POND PLANT LIST

QTY.	KEY	BOTANICAL/COMMON NAME	SIZE	ROOT
		SHADE TREES		
1	AR	Acer rubrum / Red Maple	10'-12' HT.	B&B
		SHRUBS		
9	IV	Ilex verticillata / Winterberry		#5 CONT./15" O.C.
15	MP	Myrica pensylvanica / Bayberry		#2 CONT./10" O.C.
5	SD	Salix discolor / Pussy Willow		#5 CONT./15" O.C.
11	VC	Vaccinium corymbosum / Highbush Blueberry		#5 CONT./15" O.C.
16	VD	Viburnum dentatum / Arrowwood Viburnum		#2 CONT./10" O.C.
		PERENNIALS/GRASSES/GROUND COVERS		
35	PC	Pontederia cordata / Pickerelweed		#1 CONT./36" O.C.
33	SA	Schoenoplectus acutus / Hard Stem Bulrush		#1 CONT./36" O.C.
64	PV	Panicum virgatum / Switchgrass		#1 CONT./36" O.C.
69	CP	Carex pensylvanica / Pennsylvania Sedge		#1 CONT./24" O.C.

NO.	DATE	REVISION	BY
3	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR

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(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
ENLARGED PLANS

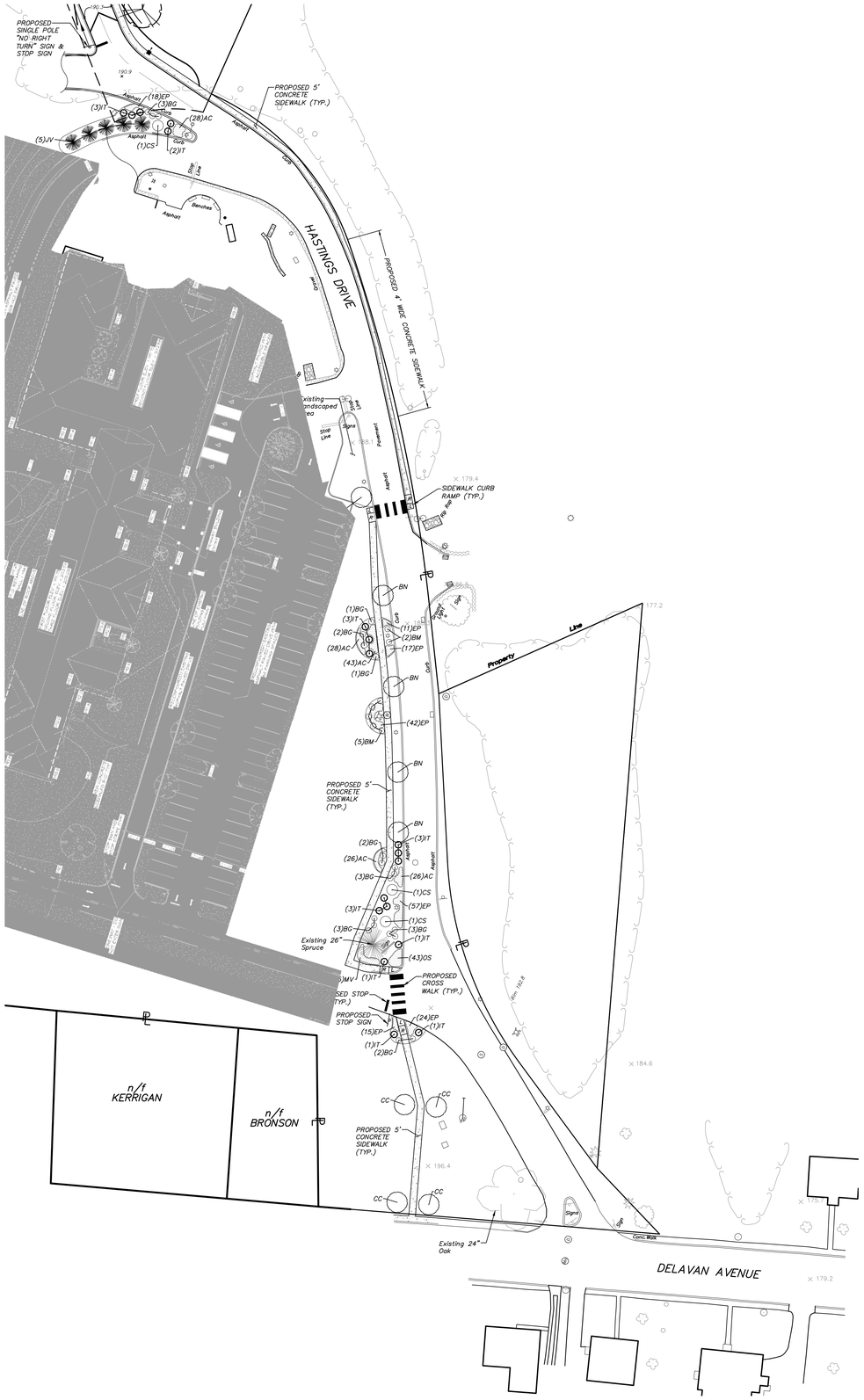
STATE OF NEW YORK — JANET J. CONTI — 21931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	191.31.100	PROJECT MANAGER	J.J.C.
DATE	5-26-20	DRAWN BY	J.F.R.
SCALE	AS SHOWN	CHECKED BY	A.D.T.

DRAWING NO. SP-4
SHEET 7 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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OFF-SITE IMPROVEMENTS PLANT LIST

QTY.	KEY	BOTANICAL/COMMON NAME	SIZE	ROOT
		EVERGREEN TREES		
5	JV	Juniperus virginiana / Eastern Red Cedar	10'–12' HT.	B&B
		FLOWERING TREES		
4	BN	Betula nigra / River Birch	8'–10' HT.	B&B
5	CC	Cercis canadensis / Eastern Redbud	8'–10' HT.	B&B
		SHRUBS		
20	BG	Buxus 'Green Gem' / Green Gem Boxwood		#3 CONT./3' O.C.
7	BM	Buxus 'Green Mountain' / Green Mountain Boxwood		#3 CONT./3' O.C.
3	CS	Cornus sericea / Red Twig Dogwood		#3 CONT./4' O.C.
18	IT	Itea virginica / Virginia Sweetspire		#3 CONT./3' O.C.
		PERENNIALS/GROUND COVERS		
151	AC	Aquilegia canadensis / Columbine		#1 CONT./18" O.C.
184	EP	Echinacea purpurea / Purple Coneflower		#1 CONT./18" O.C.
45	MV	Mertensia virginica / Virginia Bluebells		#1 CONT./18" O.C.
43	OS	Osmunda regalis / Royal Fern		#1 CONT./18" O.C.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING TREE LINE
- EXISTING UTILITY POLE W/ GUY WIRE
- EXISTING HYDRANT
- EXISTING DRAINAGE MANHOLE
- EXISTING SEWER MANHOLE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING LIGHT
- EXISTING SIGN
- EXISTING TREES
- PROPOSED SIGN
- PROPOSED CONCRETE CURB
- PROPOSED EDGE OF SIDEWALK
- PROPOSED PAINTED STOPBAR
- PROPOSED CROSSWALK
- PROPOSED LANDSCAPING

General Note:

1. Boundary information and field conditions shown hereon were field located on August 8, 2019 by Insite Engineering, Surveying & Landscape Architecture, P.C.
2. Property line information for the Kerrigan and Bronson lots were taken from the Dutchess County Tax Map.
3. Layout information for the Highland Meadows Senior Housing property was taken from design plans by The Schwartz Architectural Group, P.C., dated November 3, 2011.
4. The 140 LF portion of the proposed sidewalk that is proposed at 4' wide is reduced from the 5' width shown elsewhere to accommodate the existing edge of pavement, and its close proximity to the property line. All other proposed sidewalks shown on this plan are 5' wide.

OFF-SITE IMPROVEMENTS PLAN

Notes:
1. See Site Access Notes on Sheet CS-1.

GRAPHIC SCALE

0 20 40 80

(IN FEET)
1 inch = 40 ft.

NO.	DATE	REVISION	BY
1	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR

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(845) 225-9717 fax
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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
OFF SITE IMPROVEMENTS PLAN

STATE OF NEW YORK — JEFFREY J. CONTI, No. 21931 — LICENSED PROFESSIONAL ENGINEER

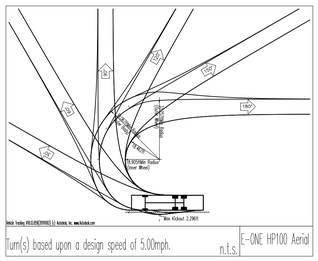
PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	7-28-20	DRAWN BY	J.F.R.
SCALE	1" = 40'	CHECKED BY	A.D.T.

DRAWING NO. SP-5 | SHEET 8 / 20

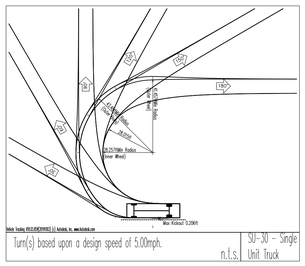
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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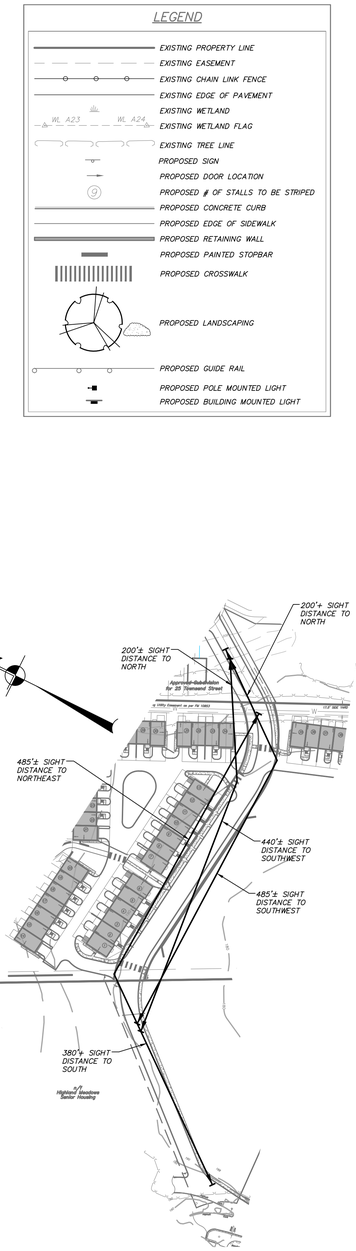
FIRE TRUCK MANEUVER 1
SCALE : 1" = 60'



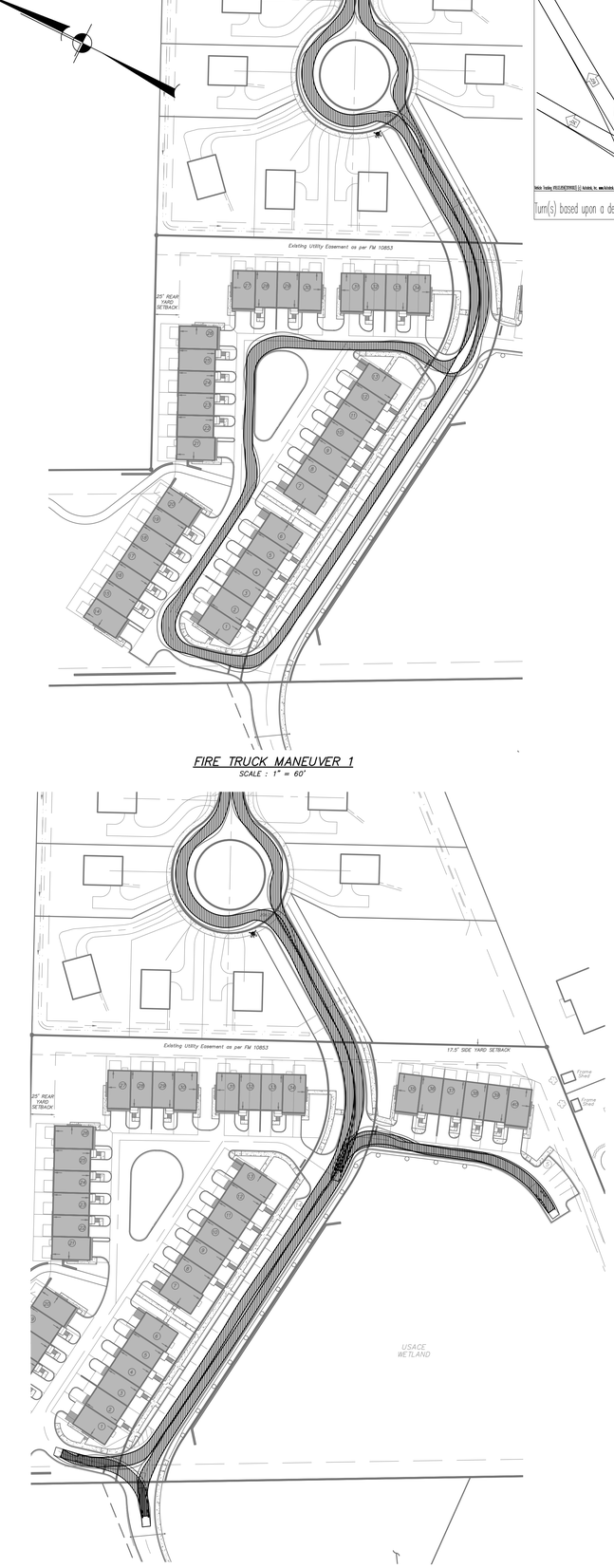
DELIVERY TRUCK MANEUVER 1
SCALE : 1" = 60'



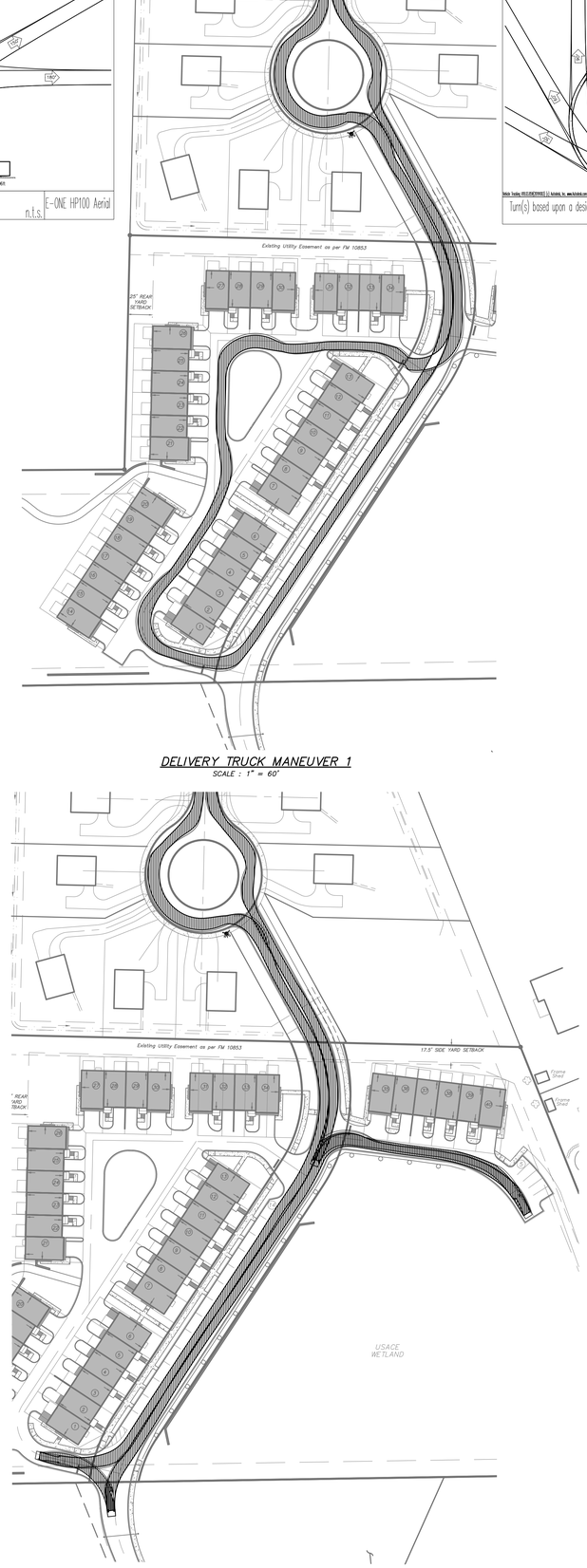
PLOW TRUCK MANEUVER 1
SCALE : 1" = 60'



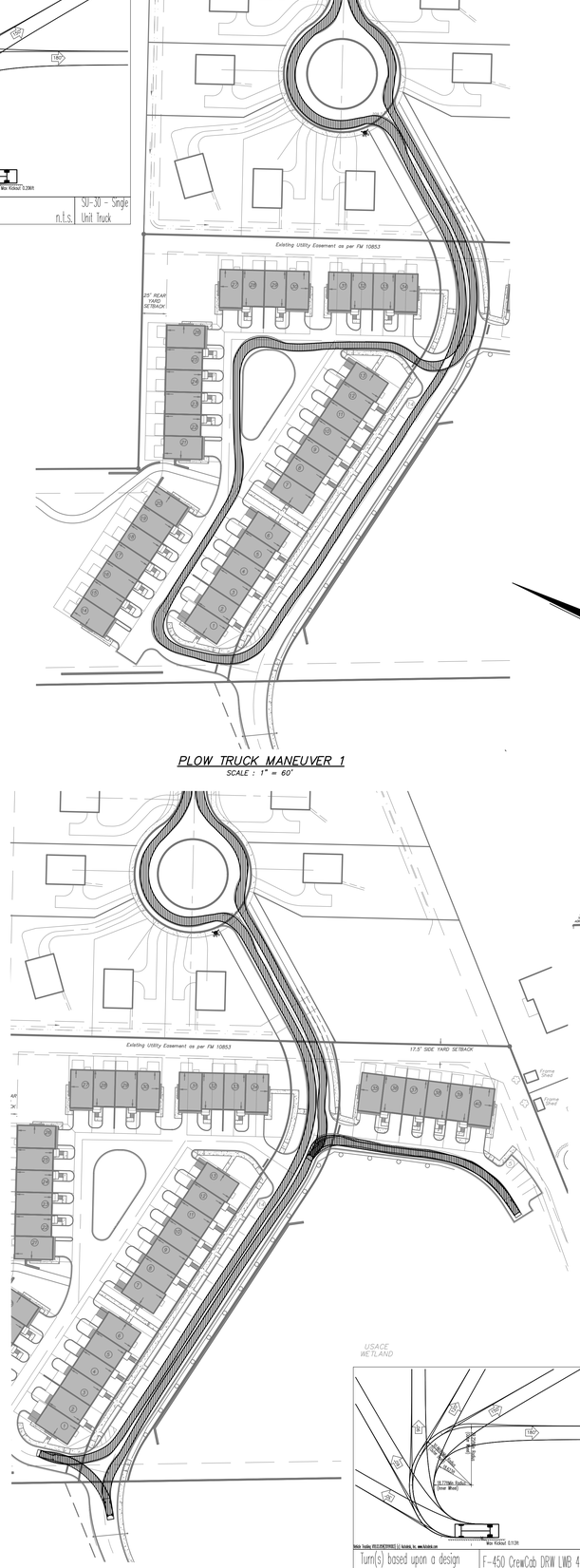
SIGHT DISTANCE ANALYSIS
SCALE : 1" = 100'



FIRE TRUCK MANEUVER 2
SCALE : 1" = 60'



DELIVERY TRUCK MANEUVER 2
SCALE : 1" = 60'



PLOW TRUCK MANEUVER 2
SCALE : 1" = 60'

REFER TO CS-1 FOR SITE ACCESS NOTES

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG (Wl. A23, Wl. A24)
- EXISTING TREE LINE
- PROPOSED SIGN
- PROPOSED DOOR LOCATION
- PROPOSED # OF STALLS TO BE STRIPED (9)
- PROPOSED CONCRETE CURB
- PROPOSED EDGE OF SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED PAINTED STOPBAR
- PROPOSED CROSSWALK
- PROPOSED LANDSCAPING
- PROPOSED GUIDE RAIL
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED BUILDING MOUNTED LIGHT

NO.	DATE	REVISION	BY
3	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR

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(845) 225-9717 fax
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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
VEHICLE MANEUVERING PLAN

STATE OF NEW YORK — JEFFREY J. CONTELMO — 51931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	6-30-20	DRAWN BY	J.F.R.
SCALE	AS SHOWN	CHECKED BY	A.D.T.

DRAWING NO. SP-6 | SHEET 9 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVERSOURCE\dwg\SP-6.dwg, 12/29/2020 11:40:55 AM, vagelpohl, 1:1



Streetworks

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

GAN=Galleon
AF=1A Drive Current
01=1
LED=Solid
U=Universal (120-277V)
T4W=Type IV Wide
8030=80 CRI 3000K[1]

DIMENSIONS

GAN
GALLEON LED

1-10 Light Squares
Solid State LED

AREA / ROADWAY LUMINAIRE
GAN-AF-01-LED-U-T4W-8030

1-Light Zinc Outdoor Wall Barn Light Sconce Lantern

by **Hampton Bay**

Details

Compatible Bulb Type	CFL,Incandescent,LED	Exterior Lighting Product Type	Outdoor Lanterns
Fixture Color/Finish	Zinc	Fixture Material	Stainless Steel
Glass/Lens Type	No Glass/Lens	Included	Hardware Included
Light Bulb Base Code	E26	Light Bulb Type Included	No Bulbs Included
Maximum Bulb Wattage	60	Maximum Wattage (watts)	0
Number of Lights	1 Light	Outdoor Lighting Features	Dark Sky,Dimmable,Weather Resistant
Power Type	Hardwired	Power Type	Hardwired
Product Size	Small	Product Size	Medium
Product Weight (lb.)	1.756	Recommended Light Bulb Shape Code	A19
Returnable	180-Day	Sconce Type	Barn Light
Size	Medium	Style	Farmhouse,Industrial,Rustic
UL Listing	1-UL Listed	Voltage Type	Line Voltage

LIGHTING NOTES:

1. *All lighting shall be as noted on the plan or approved equal.*
2. *Style and finish of all luminaires to be selected by owner and approved by the Planning Board.*
3. *Site lights will be on photocells and will run from dusk to dawn.*
4. *Photometrics for building mounted lights are not depicted in this plan.*
5. *Type, location, and shading of all proposed lighting shall prevent the spillover of light onto all adjacent residential properties.*

LIGHT CONTOUR LEGEND

0.1	*0.10 Foot Candles*
0.5	*0.50 Foot Candles*
1	*1.00 Foot Candles*

** Photometric calculations shown on plan are in foot candles.*

LUMINAIRE SCHEDULE

Symbol	Qty	Catalog Number	Description	Lamp	Mounting Height
▪■	14	GAN-AF-01-LED --U--T4W-8030	Galleon Area and Roadway Luminaire, 80 CRI, 3000K, Type 4 Distribution	LED	12' – 0"
▬	120	–	1-Light Zinc Outdoor Wall Barn Sconce Lantern Outfitted with 2700K 9W LED Bulbs CRI 80	LED	7' – 0"

GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5-26-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4-28-20	RESUBMISSION TO PLANNING BOARD	JFR

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(845) 225-9690
(845) 225-9717 fax
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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
LIGHTING PLAN

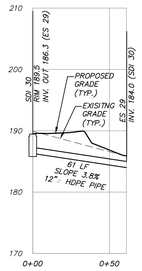
STATE OF NEW YORK — JEFFREY F. CONTI — 81931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	1" = 40'	CHECKED BY	A.D.T.

DRAWING NO. LP-1 SHEET 10 / 20

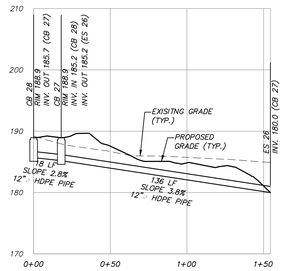
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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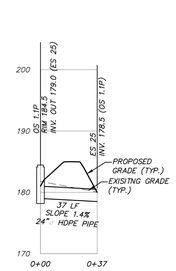
SDI 30 TO ES 29

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



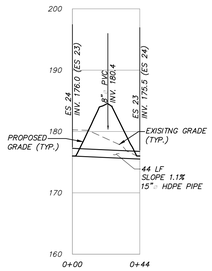
CB 28 TO ES 26

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



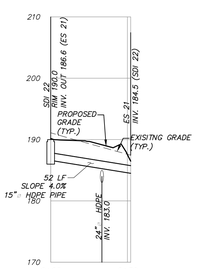
OS 1.1P TO ES 25

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



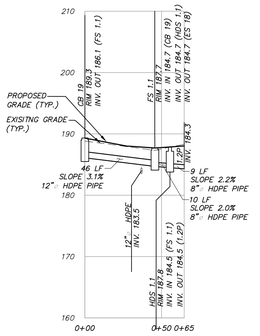
ES 24 TO ES 23

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



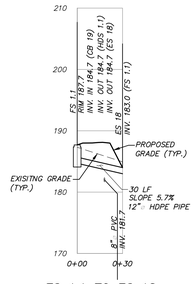
SDI 22 TO ES 21

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



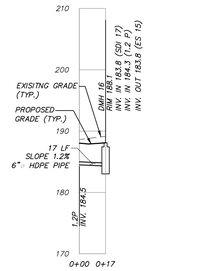
CB 19 TO INFILTRATION SYSTEM 1.2P

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



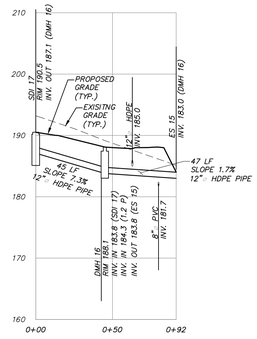
FS 1.1 TO ES 18

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



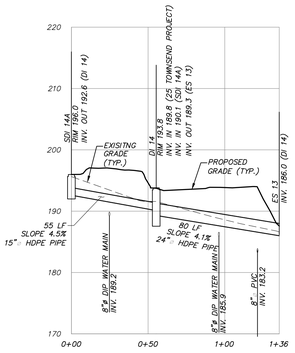
INFILTRATION SYSTEM 1.1P TO DMH 16

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



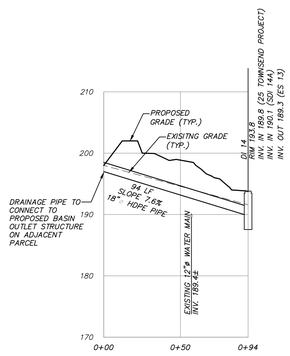
SDI 17 TO ES 15

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



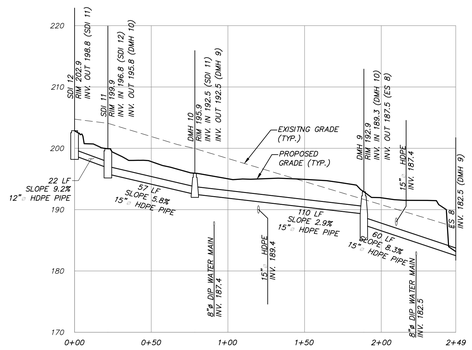
SDI 14A TO ES 13

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



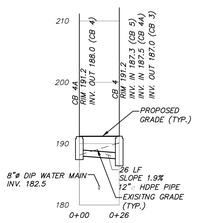
DRAINAGE EXTENSION FROM ADJACENT PROJECT TO DI 14

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



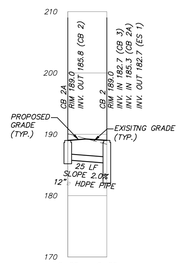
SDI 12 TO ES 8

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VER. 1" = 10'



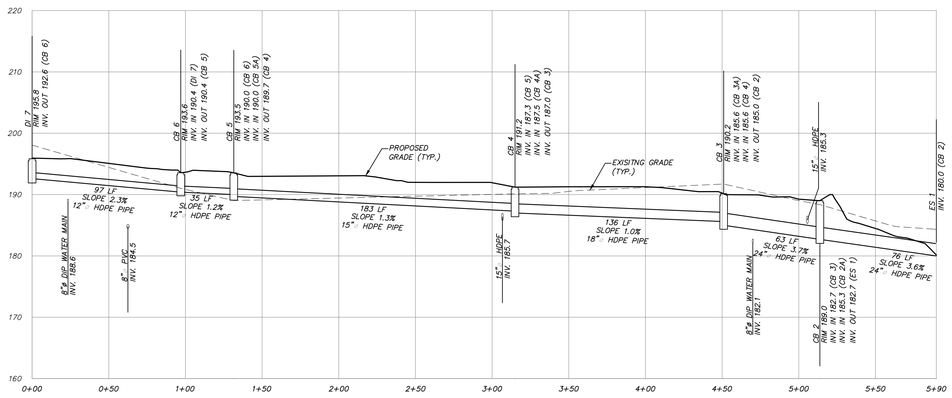
CB 4A TO CB 4

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



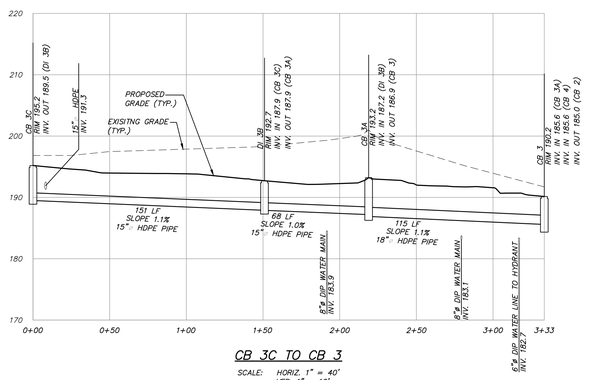
CB 2A TO CB 2

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



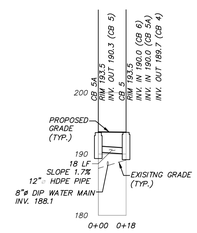
DI 7 TO ES 1

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



CB 3C TO CB 3

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



CB 5A TO CB 5

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'

NO.	DATE	REVISION	BY
3	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR

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3 Garrett Place
Carmel, NY 10512
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(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DRAINAGE PROFILES

STATE OF NEW YORK — JAMES J. CONTE — 21931 — LICENSED PROFESSIONAL ENGINEER

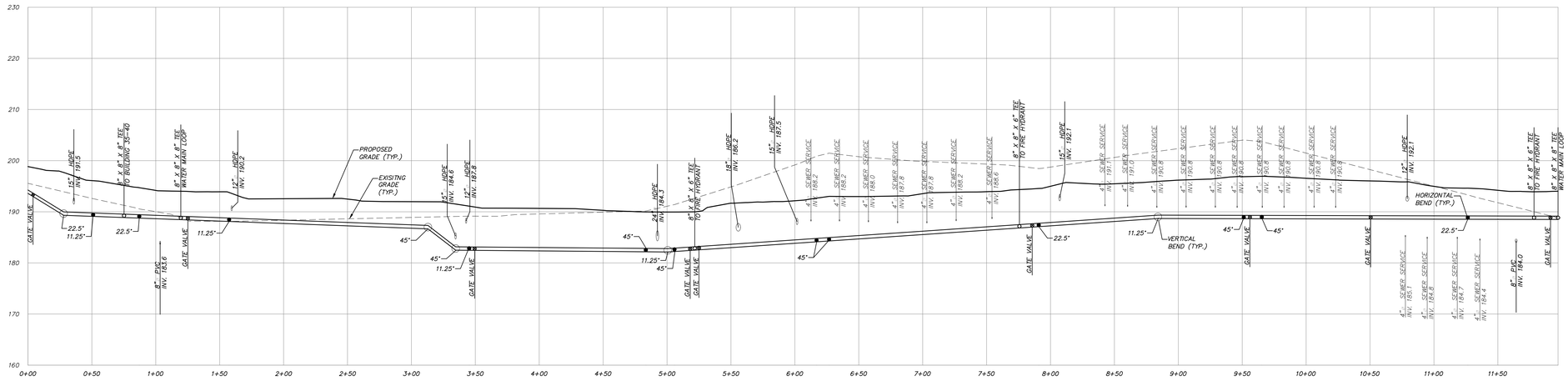
PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	E.J.P.
SCALE	AS SHOWN	CHECKED BY	Z.M.P.

DRAWING NO. PR-1 SHEET 11 / 20

GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

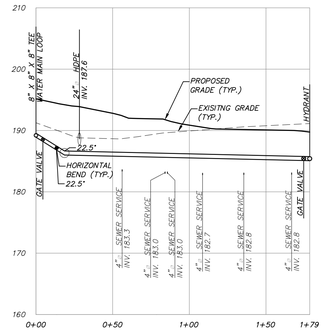
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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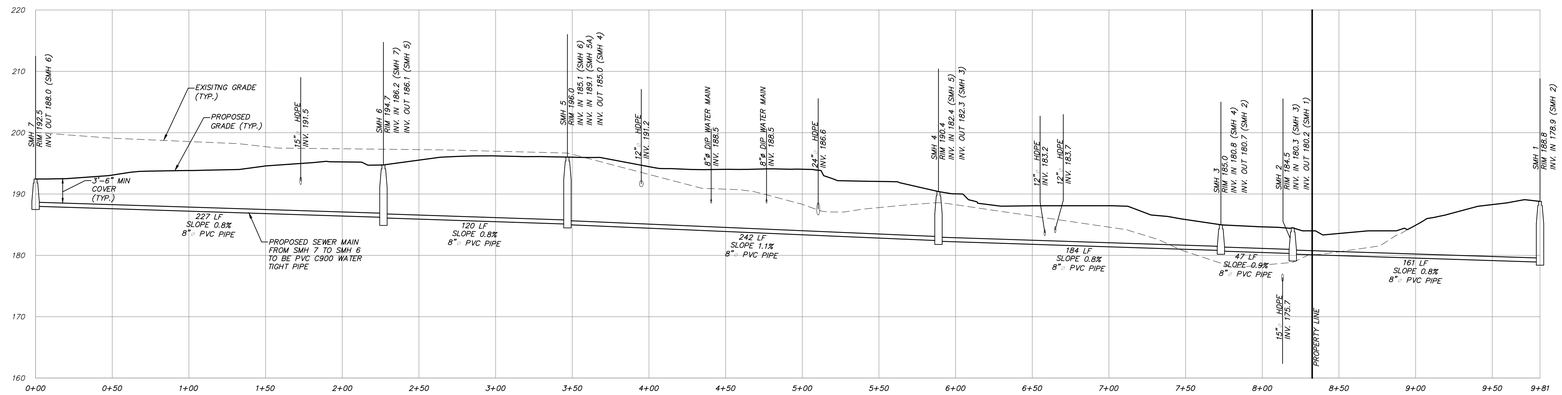
PROPOSED WATER MAIN LOOP PROFILE

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



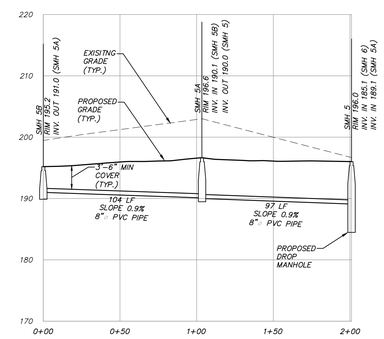
PROPOSED WATER MAIN EXTENSION TO BUILDING 35-40

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



SMH 7 TO SMH 1

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



SMH 5B TO SMH 5

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'

GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

NO.	DATE	REVISION	BY
3	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR

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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
WATER & SEWER PROFILES

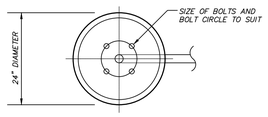
STATE OF NEW YORK — JEFFREY J. CONTARINO — 091931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	E.J.P.
SCALE	AS SHOWN	CHECKED BY	Z.M.P.

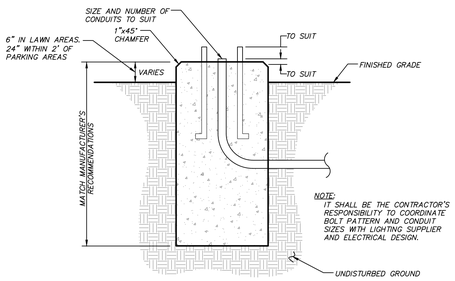
DRAWING NO. PR-2
SHEET 12 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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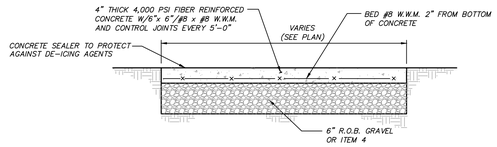
PLAN VIEW



SECTION

LIGHT POLE BASE DETAIL

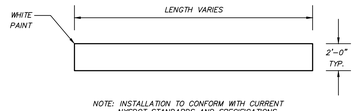
(N.T.S.)



NOTE: INSTALL EXPANSION JOINTS EVERY 10'-0"
AND CONTROL JOINTS EVERY 5'-0"

CONCRETE SIDEWALK DETAIL

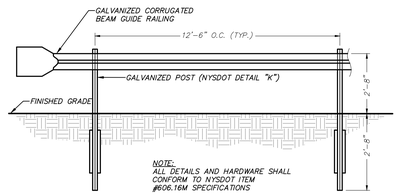
(N.T.S.)



NOTE: INSTALLATION TO CONFORM WITH CURRENT
NYSDOT STANDARDS AND SPECIFICATIONS.

PAINTED STOP BAR DETAIL

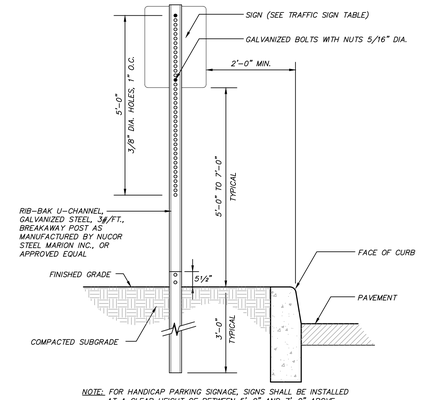
(N.T.S.)



NOTE:
ALL DETAILS AND HARDWARE SHALL
CONFORM TO NYSDOT ITEM
#606.16M SPECIFICATIONS

GUIDERAIL DETAIL

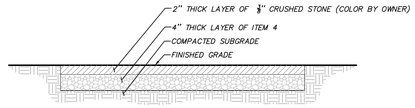
(N.T.S.)



NOTE: FOR HANDICAP PARKING SIGNAGE, SIGNS SHALL BE INSTALLED
AT A CLEAR HEIGHT OF BETWEEN 5'-0" AND 7'-0" ABOVE
GRADE OF PARKING SPACE AND SUCH THAT SIGNS SHALL NOT
BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.

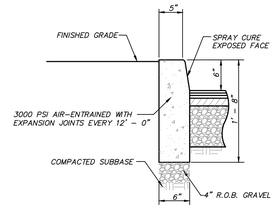
TRAFFIC SIGN DETAIL

(N.T.S.)



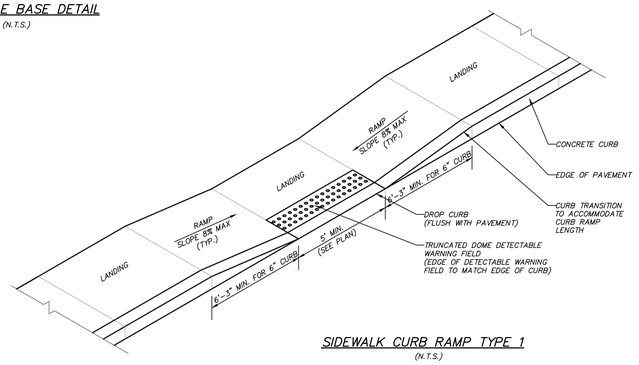
GRAVEL WALKWAY DETAIL

(N.T.S.)



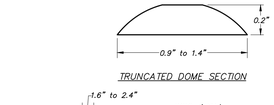
CONCRETE CURB DETAIL

(N.T.S.)

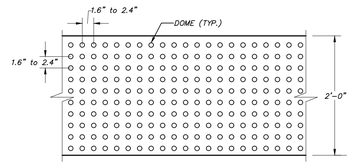


SIDEWALK CURB RAMP TYPE 1

(N.T.S.)



TRUNCATED DOME SECTION



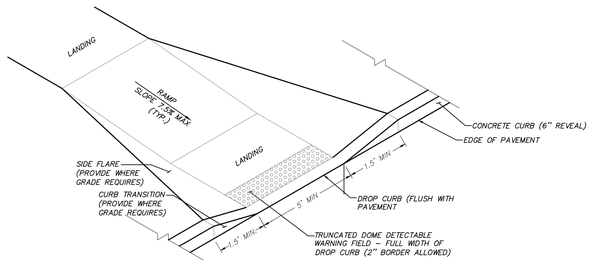
TRUNCATED DOME SPACING

TRUNCATED DOME DETAIL

(N.T.S.)

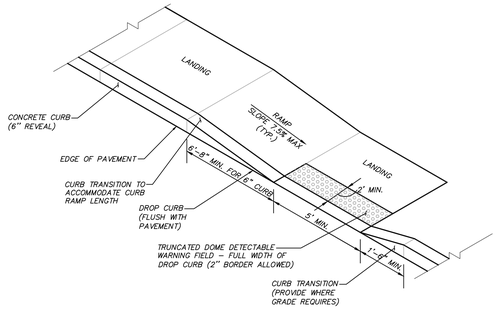
TRUNCATED DOME DETECTABLE WARNING FIELD NOTES:

1. The detectable warning field shall consist of raised truncated domes with a nominal diameter of 0.9 inches, a nominal height of 0.2 inches, and a nominal spacing of 2.35 inches on center in accordance with the most recent version of ANSI ICC A117.1.
2. The details provided are not drawn to scale. The quantity of domes depicted on the detectable warning field (the domes and the entire 24 inch level surface) is for illustration only.
3. The size of the detectable warning field shall be 24 inches in the direction of travel and shall extend the full width of the curb ramp or flush surface, exclusive of side flares.
4. Detectable warnings shall be located so that the edge of the warning field nearest to the roadway or street surface is 6 inches to 9 inches from the edge of the roadway/street, or from the front of the dropped curb, where a dropped curb continues across the bottom of the sidewalk curb ramp.
5. Domes shall be aligned on a square grid in the predominant direction of travel.
6. The detectable warning field shall be yellow.



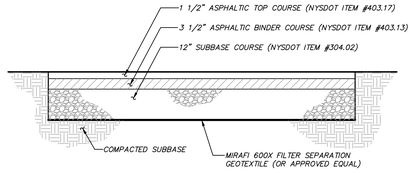
SIDEWALK CURB RAMP TYPE 2

(N.T.S.)



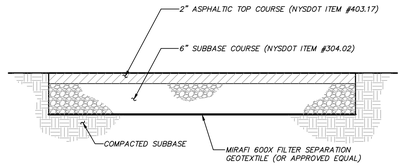
SIDEWALK CURB RAMP TYPE 3

(N.T.S.)



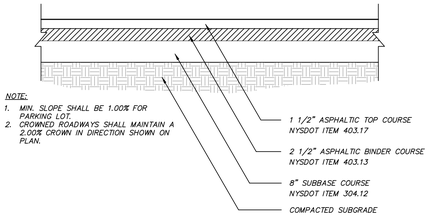
RIGHT OF WAY ASPHALT DETAIL

(N.T.S.)



PRIVATE DRIVEWAY ASPHALT DETAIL

(N.T.S.)



NOTE:
1. MIN. SLOPE SHALL BE 1.00% FOR PARKING LOT.
2. CROWNED ROADWAYS SHALL MAINTAIN A 2.00% CROWN IN DIRECTION SHOWN ON PLAN.

PRIVATE ROAD PAVEMENT DETAIL

(N.T.S.)

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5-26-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4-28-20	RESUBMISSION TO PLANNING BOARD	JFR

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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DETAILS

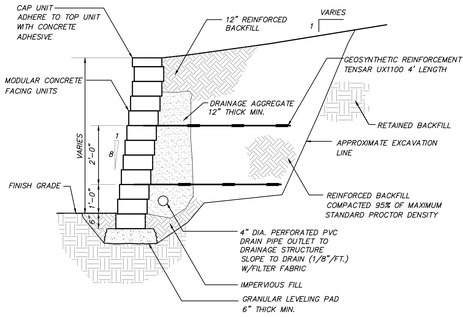
STATE OF NEW YORK — JEFFREY J. CONTEGNI — 91931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	AS NOTED	CHECKED BY	A.D.T.

DRAWING NO. D-1 — SHEET 13 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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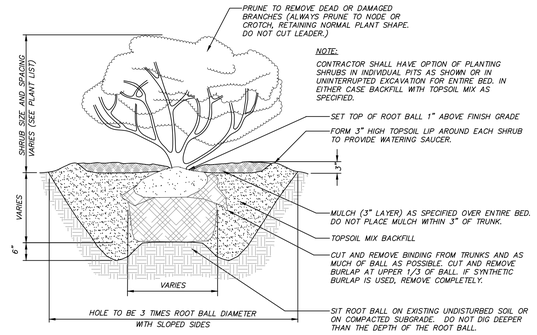


NOTES:

1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6".
8. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
9. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
10. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
11. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
12. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
13. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
14. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
15. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
16. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. MODULAR BLOCK RETAINING WALL AT STEPS TO BE INSTALLED VERTICALLY (NO BATTER)
18. MODULAR BLOCK RETAINING WALL MANUFACTURER TO SUPPLY CONSTRUCTION DETAILS OF WALL SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF NEW YORK.

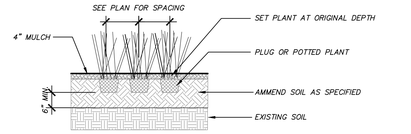
MODULAR BLOCK RETAINING WALL DETAIL

(N.T.S.)



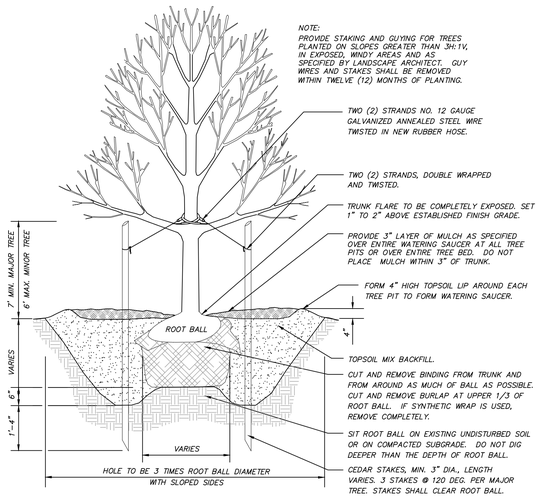
SHRUB PLANTING DETAIL

(N.T.S.)



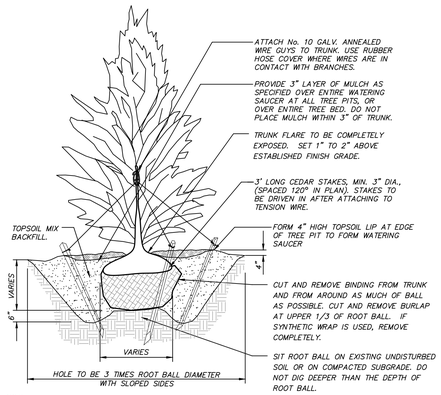
PERENNIAL / ORNAMENTAL GRASS PLANTING DETAIL

(N.T.S.)



TREE PLANTING DETAIL

(N.T.S.)



NOTE:
PROVIDE STAKING AND GUYING FOR TREES PLANTED ON SLOPES GREATER THAN 3H:1V, IN EXPOSED, WINDY AREAS AND AS SPECIFIED BY LANDSCAPE ARCHITECT. GUY WIRES AND STAKES SHALL BE REMOVED WITHIN TWELVE MONTHS OF PLANTING.

EVERGREEN TREE PLANTING DETAIL

(N.T.S.)

GENERAL PLANTING NOTES:

1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded pine bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.

GENERAL SITE SEEDING NOTES:

1. All proposed seeded areas to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
   - select seed mixture per drawings and seeding notes.
   - fertilizer applied at the manufacturer's recommended rate using Lesco 10-0-18 (no phosphorous) fertilizer or equivalent.
   - mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
   - If the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
3. Seed Mix #1 for areas as shown on the drawings, including tops of berms and backslopes of embankments of stormwater basins at a rate of 25 lbs. per acre: New England Conservation/Wildlife Mix from New England Wetland Plants, Inc. of Amherst, MA.
4. Seed Mix #2 for areas as shown on the drawings in stormwater basins with no standing water at a rate of 18 lbs per acre: Erosion Control/ Restoration Mix for Detention Basins and Moist Sites from New England Wetland Plants, Inc. of Amherst MA.
5. Seed Mix #3 for all other disturbed areas not specified as seed mix #1 or #2. Primarily for lawn areas and mow strip along roads at a rate of 100 lbs. per acre:

Kentucky Bluegrass	20%
Creeping Red Fescue	40%
Perennial Ryegrass	20%
Annual Ryegrass	20%

6. Seed mixes to be planted between March 21 and May 20, or between August 15 and October 15 or as directed by project representative.
7. Mulch: Salt hay or small grain straw applied at a rate of 90 lbs./1000 S.F. or 2 tons/acre, to be applied and anchored according to "New York Standards and Specification For Erosion and Sediment Control," latest edition.
8. Grass seed mix may be applied by either mechanical or hydroseeding methods. Seeding shall be performed in accordance with the current edition of the "NYSDOT Standard Specification, Construction and Materials, Section 610-3.02, Method No. 1". Hydroseeding shall be performed using materials and methods as approved by the site engineer.

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DETAILS

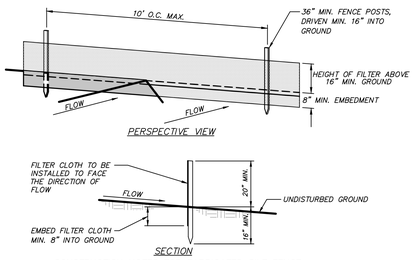
STATE OF NEW YORK — JEFFREY J. CONTARINO — 51937 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	AS NOTED	CHECKED BY	A.D.T.

DRAWING NO. D-2
SHEET 14 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

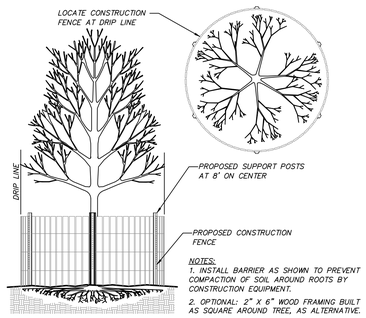
POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FILTER CLOTH: FILTER X, MIRAFI 100X, STABLINKA T140N, OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE DETAIL

(N.T.S.)



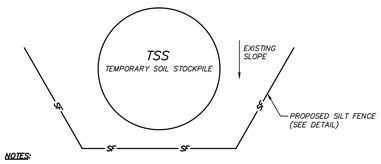
NOTES:
1. INSTALL BARRIER AS SHOWN TO PREVENT COMPACTION OF SOIL AROUND ROOTS BY CONSTRUCTION EQUIPMENT.
2. OPTIONAL: 2" X 6" WOOD FRAMING BUILT AS SQUARE AROUND TREE, AS ALTERNATIVE.

TREE PROTECTION DETAIL

(N.T.S.)

TREE PROTECTION NOTES:

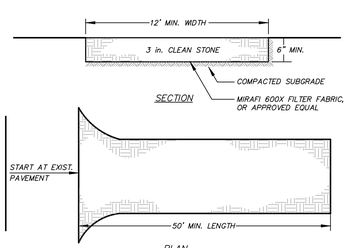
1. Trees to be preserved in proximity to disturbance areas shall be marked in the field by the Landscape Architect prior to start of construction.
2. Install tree protection measures prior to start of site clearing & construction.
3. No construction equipment shall be parked and no earth or construction materials shall be stockpiled or stored under the canopy of trees to be preserved.
4. During tree removal operations associated with construction, do not damage adjacent trees to remain. Lower limbs and tree trunks, do not drop them.
5. Carefully tie back any tree branches that conflict with construction equipment.
6. Where trenching for utilities is required within a root zone, tunneling under and around roots shall be by hand digging. If roots 3" or larger are encountered immediately adjacent to the location of new construction and relocation is not practical, the roots shall be hand pruned under the supervision of a Certified Arborist or Landscape Architect to 6" back from the new construction limit. All exposed roots to receive appropriate treatment prior to backfilling.
7. If tree protection fencing to protect the root zone is not possible, six to eight inches of wood chip mulch and 3/4 inch plywood shall be placed over the entire affected root zone area to prevent soil compaction.
8. Any tree damaged during construction activities must be immediately repaired by a qualified arborist at no additional cost to the owner.



NOTES:
1. AREA CHOSEN FOR STOCKPILE LOCATION SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE IMMEDIATELY SEEDED WITH K31 PERENNIAL TALL FESCUE.
4. ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED ON THE DOWNGRADIENT SIDE.

TEMPORARY SOIL STOCKPILE DETAIL

(N.T.S.)

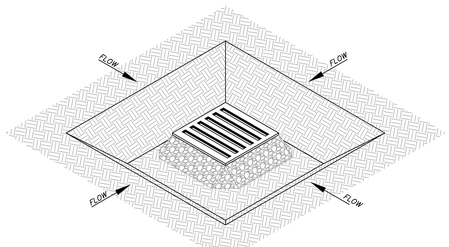


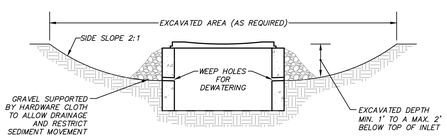
INSTALLATION NOTES

1. STONE SIZE – USE 3" STONE
2. LENGTH – AS REQUIRED, BUT 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 – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
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 RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT 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.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

(N.T.S.)





1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY, AND STABILIZE WITH PERMANENT SEEDING
5. MAXIMUM DRAINAGE AREA = 1 ACRE

EXCAVATED DROP INLET PROTECTION DETAIL

(N.T.S.)

REQUIRED EROSION CONTROL SWPPP CONTENTS:

Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP–0–20–001), all Stormwater Pollution Prevention Plan's (SWPPP) shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of required SWPPP components is provided in accordance with Part III.B.1a–l of General Permit GP–0–20–001:

a. Background Information: The subject project consists of the construction of (7) townhome buildings with appurtenances and utilities.

b. Site map / construction drawing: These plans serve to satisfy this SWPPP requirement.

c. Description of the soils present at the site: Onsite soils located within the proposed limits of disturbance consist of Bernardston Silt Loam (BnB), Canandaigua Silt Loam (Ca), and Nassau–Cardigan Complex (NwC) as identified on the Soil Conservation Service Websoil Survey. These soil types belong to the Hydrologic Soil Group "C/D" and "D".

d. Construction phasing plan / sequence of operations: The Construction Sequence and phasing found on these plans provide the required phasing. A Construction Sequence and Erosion and Sediment Control Maintenance Schedule has been provided. The Sedimentation and Erosion Control Notes contained hereon outline a general sequence of operations for the proposed project. In general all erosion and sediment control facilities shall be installed prior to commencement with land disturbing activities, and areas of disturbance shall be limited to the shortest period of time as practicable.

e. Description of erosion and sediment control practices: This plan, and details / notes shown hereon serve to satisfy this SWPPP requirement.

f. Temporary and permanent soil stabilization plan: The Sedimentation and Erosion Control Notes and Details provided heron identify temporary and permanent stabilization measures to be employed with respect to specific elements of the project, and at the various stages of development.

g. Site map / construction drawing: This plan set serves to satisfy this SWPPP requirement.

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices: The details, Erosion and Sediment Control Notes, and Erosion and Sediment Control Maintenance Schedule serve to satisfy this SWPPP requirement.

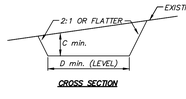
i. An inspection schedule: Inspections are to be performed twice weekly and by a qualified professional as required by the General Permit GP–0–20–001. In addition the NYSDEC Trained Contractor shall perform additional inspections as cited in the Erosion and Sediment Control Notes.

j. A description of pollution prevention measures that will be used to control litter, construction chemicals and construction debris: In general, all construction litter / debris shall be collected and removed from the site. The general contractor shall supply either waste barrels or dumpster for proper waste disposal. Any construction chemicals utilized during construction shall either be removed from site daily by the contractor or stored in a structurally sound and weatherproof building. No hazardous waste shall be disposed of onsite, and shall ultimately be disposed of in accordance with all federal, state and local regulations. Material Safety Data Sheets (MSDS), material inventory, and emergency contact numbers shall be maintained by the general contractor for all construction chemicals utilized onsite. Finally, temporary sanitary facilities (portable toilets) shall be provided onsite during the entire length of construction, and inspected weekly for evidence of leaking holding tanks.

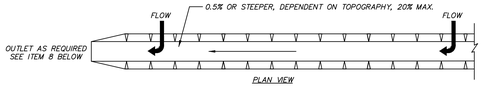
k. A description and location of any stormwater discharges associated with industrial activity other than construction at the site: There are no known industrial stormwater discharges present or proposed at the site.

l. Identification of any elements of the design that are not in conformance with the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." All proposed elements of this SWPPP have been designed in accordance with the "New York Standards and Specifications for Erosion and Sediment Control."

	SWALE A (< 5 AC.)	SWALE B (5–10 AC.)
C	1'	1'
D	4'	6'



CROSS SECTION



PLAN VIEW

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY 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 STABILIZED AREA AT NON–EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTION–ABLE 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 IRREGULAR–ITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PRO–VIDED AFTER EACH RAIN EVENT.
9. STABILIZATION SHALL BE AS PER THE CHART BELOW:

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC. OR LESS)	B (5–10 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" RECYCLED CONCRETE EQUIVALENT
4	8.1–20%	LINED 4–8" RIP–RAP	ENGINEERED DESIGN

TEMPORARY SWALE DETAIL

(N.T.S.)

REQUIRED POST–CONSTRUCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP–0–20–001), all construction projects needing post–construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post–construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a–g and III.B.3:

   a. Identification of all post–construction stormwater management practices to be constructed as part of the project; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

   b. A site map/construction drawing(s) showing the specific location and size of each post–construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

   A Stormwater Modeling and Analysis Report including pre–development conditions, post–development conditions, the results of the stormwater modeling, a summary table demonstrating that each practice has been designed in conformance with the sizing criteria, identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required. The required analysis will be provided in a Preliminary Stormwater Pollution Prevention Plan.

   c. Soil testing results and locations. This SWPPP requirement will be provided in the Preliminary Stormwater Pollution Prevention Plan.

   d. Infiltration testing results. This SWPPP requirement will be provided in the Preliminary Stormwater Pollution Prevention Plan.

   e. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post–construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice. The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.

2. Enhanced Phosphorus Removal Standards – Beginning on September 30, 2008, all construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post–construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the most current version of the technical standard, New York Stormwater Management Design Manual. At a minimum, the post–construction stormwater management practice component of the SWPPP shall include items 2.a – 2.f above: These standards do not apply to the subject project.

EROSION & SEDIMENT CONTROL NOTES:

1. The Erosion and Sediment Control Plan is only to be referred to for the installation of erosion and sediment control measures. For all other construction related activities, including, but not limited to, grading and utilities, refer to the appropriate drawings.
2. Each contractor or subcontractor responsible for soil disturbance shall have a NYSDEC trained contractor onsite during soil disturbing activities. The NYSDEC trained contractor will be responsible to comply with the stormwater pollution prevention plan and for the implementation and maintenance of erosion and sediment control measures on this site prior to and during construction. The NYSDEC trained contractor shall sign a certification statement required by GP–0–20–001.
3. All construction activities involving the removal or disposition of soil are to be provided with appropriate protective measures to minimize erosion and contain sediment disposition within. Minimum soil erosion and sediment control measures shall be implemented as shown on the plans and shall be installed in accordance with "New York Standards and Specifications For Erosion and Sediment Control," latest edition.
4. Wherever feasible, natural vegetation should be retained and protected. Disturbance shall be minimized in the areas required to perform construction. No more than 5 acres of unprotected soil shall be exposed at any one time, unless prior authorization is granted by the MS4.
5. When land is exposed during development, the exposure shall be kept to the shortest practical period of time, but in no case more than 7 days after the construction activity in that portion of the site has ceased. Disturbance shall be minimized in the areas required to perform construction.
6. All construction vehicles shall be kept clear of the watercourses and wetland control areas and outside the areas of proposed development. Silt fence and orange construction fence shall be installed in the areas where the grading is in close proximity of the watercourses or wetland control areas.
7. The stabilized construction entrance and silt fence shall be installed as shown on the plans prior to beginning any clearing, grubbing or earthwork.
8. All topsoil to be stripped from the area being developed shall be stockpiled and immediately seeded with a rye grass mixture having a quick germination time.
9. Any graded areas not subject to further disturbance or construction traffic shall, within 7 days of final grading, receive permanent vegetation cover in combination with a suitable mulch. Refer to "Site Seeding Notes" for additional detail and application rate.
10. Grass seed mix may be applied by either mechanical or hydroseeding methods. Turf establishment shall be performed in accordance with the current edition of the NYSDOT Standard Specification, Construction and Materials, Section 610–3.02, Method No. 1".
11. Cut or fill (all) slopes steeper than 3:1 shall be stabilized immediately after grading with a rolled erosion control product (RECP) such as, Curlex I Single Net Erosion Control Blanket, or approved equal.
12. Paved roadways shall be kept clean at all times.
13. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
14. All storm drainage outlets shall be stabilized, as required, before the discharge points become operational.
15. Stormwater from disturbed areas must be passed through erosion control barriers before discharge beyond disturbed areas or discharged into other drainage systems.
16. Erosion and sediment control measures shall be inspected and maintained on a daily basis by the NYSDEC Trained Contractor, to insure that channels, temporary and permanent ditches and pipes are clear of debris, that embankments and berms have not been breached and that all straw bales and silt fences are intact. Any failure of erosion and sediment control measures shall be immediately repaired by the contractor and inspected for approval by the site engineer.
17. Dust shall be controlled by sprinkling or other approved methods as necessary, or as directed by the trained contractor or site engineer.
18. Cut and fills shall not endanger adjoining property, nor divert water onto the property of others.
19. All fills shall be placed and compacted in 6" lifts to provide stability of material and to prevent settlement.
20. The NYSDEC Trained Contractor shall inspect downstream conditions for evidence of sedimentation on a weekly basis and after rainstorms.
21. As warranted by field conditions, special additional erosion and sediment control measures, as specified by the site engineer and the Town Engineer shall be installed by the contractor.
22. Erosion and sediment control measures shall remain in place until all disturbed areas are suitably stabilized.
23. After completion of the site improvements, the owner will assume responsibility for maintenance of the access drive, parking lot, drainage system and stormwater facilities. Each spring the paved areas shall be cleaned to remove the winter accumulation of traction sand. After this is completed all drain inlet and catch basin sumps should be cleaned. All pipes should be checked for debris and blockage and cleaned as required. During the cleaning process, the drain inlets, catch basins and pipes should be inspected for structural integrity and overall condition. Repairs and/or replacements should be made as required.
24. Inspection of the stormwater basin should be performed every 6 months and after large storm events. These inspections should, at a minimum, check the outlet pipes for blockage and the general overall integrity of the basin and appurtenances.
25. Maintain basin vegetation including removal of trees and replacement of vegetation that should die. Remove any litter which accumulates as necessary. Typically, the accumulated silt will be required to be removed every 10 to 20 years. Any accumulated silt shall be removed from the stormwater basins once the site has been stabilized.
26. Refer to the Stormwater Pollution Prevention Plan for additional details regarding long–term maintenance of the storm drainage facilities.

EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

	MONITORING REQUIREMENTS			MAINTENANCE REQUIREMENTS	
PRACTICE	DAILY	WEEKLY	AFTER RAINFALL	DURING CONSTRUCTION	AFTER CONSTRUCTION
SILT FENCE BARRIER	–	Inspect	Inspect	Clean/Replace	Remove
STABILIZED CONSTRUCTION ENTRANCE	Inspect	–	Inspect	Clean/Replace Stone and Fabric	Remove
DUST CONTROL	Inspect	–	Inspect	Mulching/ Spraying Water	N/A
*VEGETATIVE ESTABLISHMENT	–	Inspect	Inspect	Water/Reseed/ Remulch	Reseed to 80% Coverage
INLET PROTECTION	–	Inspect	Inspect	Clean/Repair/ Replace	Remove
SOIL STOCKPILES	–	Inspect	Inspect	Mulching/ Silt Fence Repair	Remove
SWALES	–	Inspect	Inspect	Clean/Mulch/ Repair	Mow Permanent Grass/Replace/ Repair Rip Rap
CHECK DAMS	–	Inspect	Inspect	Clean/Replace Stones/Repair	Clean/Replace Stones/Repair
CONCRETE DRAINAGE STRUCTURES	–	Inspect	Inspect	Clean Sumps/ Remove Debris/ Repair/Replace	Clean Sumps/ Remove Debris/ Repair/Replace
DRAINAGE PIPES	–	Inspect	Inspect	Clean/Repair	Clean/Repair
ROAD & PAVEMENT	–	Inspect	Inspect	Clean	Clean

* Permanent vegetation is considered stabilized when 80% of the plant density is established. Erosion control measures shall remain in place until all disturbed areas area permanently stabilized.

Note: The party responsible for implementation of the maintenance schedule during and after construction is:

BEACON VIEWS, LLC
500 RIVER AVENUE
WAKEFIELD, NEW JERSEY 08701

and/or the current owner(s) of the subject property.

SOIL RESTORATION REQUIREMENTS[1,2]

(ONSITE SOILS WITHIN THE LIMIT OF DISTURBANCE BELONG TO THE HYDROLOGIC SOIL GROUP (HSG) C/D)

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" of topsoil~~	Aerate[3] and apply 6" of topsoil	
Areas of cut or fill	~~HSG A & B~~	HSG C & D	
	~~Aerate and apply 6" of topsoil~~	Apply full Soil Restoration[4]	
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[5] (de–compaction and compost enhancement)[6]		
Areas where runoff reduction and/or infiltration practices are applied	Restoration not required, but may be applied for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practices from any ongoing construction activities construction 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.~~		

1. Table taken from Chapter 5 of the "New York State Stormwater Management Design Manual"
2. Items struck out on the table are items that are not applicable to this project.
3. 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 functions like a mini–subsoiler.
4. Per "Deep Ripping and Decompaction, DEC 2008"
5. During periods of relatively low to moderate subsoil moisture, the disturbed soils are returned to rough grade and the following Soil Restoration steps applied:
   5.1. Apply 3 inches of compost over subsoil.
   5.2. 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.
   5.3. Rock–pick until uplifted stone/rock materials of four inches and larger size area cleaned off the site.
   5.4. Apply topsoil to a depth of 6 inches.
   5.5. Vegetate as required by Erosion & Sediment Control Note #9.
   5.6. Tilling should not be performed within the drip line of any existing trees or over any utility installations that are within 24 inches of the surface
6. Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.

NO.	DATE	REVISION	BY
5	12–29–20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7–28–20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6–30–20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5–26–20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4–28–20	RESUBMISSION TO PLANNING BOARD	JFR

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(845) 225–9717 fax
www.insite–eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DETAILS

STATE OF NEW YORK — JEFFREY J. CONTENTO — 21931 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8–27–19	DRAWN BY	J.F.R.
SCALE	AS NOTED	CHECKED BY	A.D.T.

DRAWING NO. D–3
SHEET 15 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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SEWER TESTING PROCEDURES

TESTS FOR NON-PRESSURE PIPELINES FOR TRANSPORT OF SEWAGE

The leakage shall be determined by exfiltration, infiltration or low pressure air.

A. *Exfiltration Testing*

1. *Exfiltration tests shall be made by filling a section of pipeline with water and measuring the quantity of leakage.*
2. *The head of water at the beginning of the test shall be at least 2 feet above the highest pipe within the section being tested.*
   a. *Should groundwater be present within the section being tested, the head of water for the test shall be 2 feet above the hydraulic gradient of the groundwater.*
   b. *Should the requirement of 2 feet of water above the highest pipe subject any joint at the lower end of the test section to a differential head of greater than 11.5 feet, another method of testing shall be employed.*

B. *Infiltration Testing*

1. *Infiltration tests will be allowed only when the water table gauges determine the groundwater level to be 2 feet or more above the highest pipe of the section being tested.*
2. *Infiltration test shall be made by measuring the quantity of water leaking into a section of pipeline.*
3. *Measurement of the infiltration shall be by means of a calibrated weir constructed at the outlet of the section being tested.*

C. *Allowable Leakage for Non-Pressure Pipelines*

1. *The allowable leakage (exfiltration or infiltration) for non-pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per 1000 feet of pipe:*

Type of Pipe	Leakage
Ductile iron – mechanical or push-on joints	100
Polyvinyl chloride, thermal plastic or fiberglass with rubber joints	100
Cast iron soil pipe	0

2. *Regardless of the above allowable leakage, any spurting leaks detected shall be permanently stopped.*

D. *Low Pressure Air Testing*

1. *Air testing for acceptance shall not be performed until the backfilling has been completed.*
2. *Low pressure air tests shall conform to ASTM F1417-92, Section 8.2.2, Time-Pressure Drop Method for a 0.5 psi drop, except as specified herein and shall not be limited to type or size of pipe.*
3. *All sections of pipelines shall be cleaned and flushed prior to testing.*
4. *The air test shall be based on the starting pressure of 3.5 to 4.0 psi gauge. The time allowed for the 0.5 psi drop in pressure, measured in seconds, will be computed based on the size and length of the test section by the Engineer.*
   a. *When groundwater is present, the average test pressure of 3 psig shall be above any back pressure due to the groundwater level.*
   b. *The maximum pressure allowed under any condition in air testing shall be 10 psig. The maximum groundwater level for air testing is 13 feet above the top of the pipe.*
5. *The equipment required for air testing shall be furnished by the Contractor and shall include the necessary compressor, valves, gauges and plugs to allow for the monitoring of the pressure, release of pressure and a separable test gauge.*
   a. *The test gauge shall be sized to allow for the measuring of the 0.5 psig loss allowed during the test period and shall be on a separate line to the test section.*

E. *Deflection Testing*

1. *Deflection testing shall be performed 30 days after backfilling. The test shall be made by passing a ball or cylinder no less than 95% of the pipe diameter through the pipe. The test shall be performed without mechanical pulling devices.*

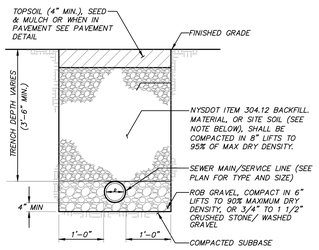
F. *Manhole Testing*

1. *General*
   a. *Each manhole shall be tested by vacuum testing.*
2. *Vacuum testing shall be performed after backfilling in accordance with the latest revision of ASTM C1244-11 as follows:*
   a. *The test head shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.*
   b. *A vacuum of 10 in. of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 in. of mercury.*
   c. *The manhole shall pass if the time for the vacuum reading to drop from 10 in. of mercury to 9 in. of mercury meets or exceeds the values indicated below:*

Minimum Test Times for Various Manhole Diameters in Seconds:

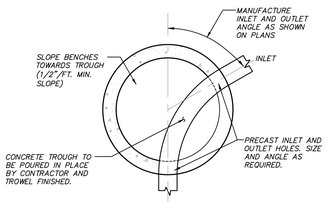
Depth (ft)	Diameter (inches) 48	60
	Time (seconds)	
8 or less	20	26
10	25	33
12	30	39
14	35	46
16	40	52
18	45	59
20	50	65

   d. *If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.*



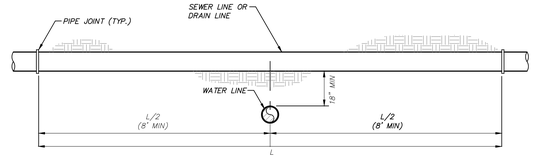
SANITARY SEWER / SANITARY SERVICE LINE TRENCH DETAIL

(N.T.S.)



MANHOLE TROUGH DETAIL

(N.T.S.)



WATER LINE CROSSING UNDER SANITARY SEWER LINE OR STORM DRAIN LINE

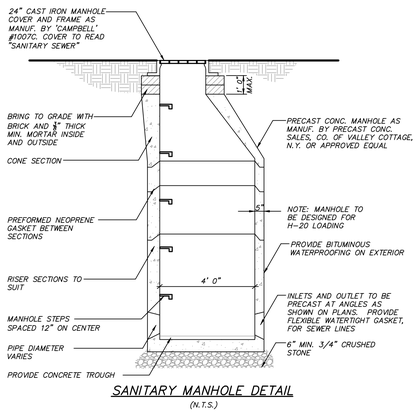
NOTES:
1. *WHEN 18" SEPARATION CANNOT BE MAINTAINED, THE WATER LINE SHALL BE ENCASED IN CONCRETE (SEE DETAIL) ONLY WITH PRIOR APPROVAL OF THE DESIGN ENGINEER AND DEPARTMENT OF HEALTH.*
2. *PROVIDE PIPE AND FITTING RESTRAINT AS REQUIRED.*
3. *THE 18" SEPARATION APPLIES TO WATER MAINS AND WATER SERVICE CONNECTIONS.*

WATER LINE CROSSING DETAIL

(N.T.S.)

NOTES:

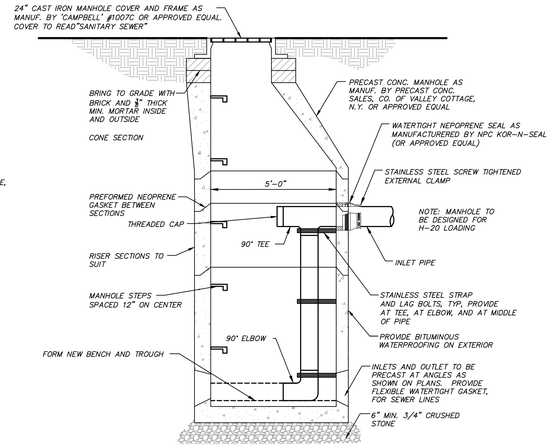
1. *WHERE WATERMAIN TRENCHES LIE WITHIN THE PROPOSED CITY OF BEACON R.O.W., TRENCHES ARE TO BE BACKFILLED WITH NYSDOT ITEM 304.12 BACKFILL MATERIAL. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF MAX DRY DENSITY.*
2. *WHERE WATERMAIN AND SERVICE CONNECTION TRENCHES LIE OUTSIDE THE PUBLIC R.O.W., TRENCHES TO BE FILLED WITH CLEAN SITE SOIL.*



SANITARY MANHOLE DETAIL

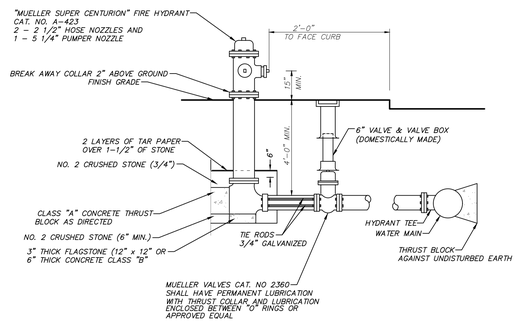
(N.T.S.)

NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.



INTERNAL DROP SANITARY MANHOLE DETAIL

(N.T.S.)



HYDRANT NOTES:

1. *PUMPER OUTLET SHALL FACE STREET;*
2. *HOSE OUTLETS SHALL BE PARALLEL TO STREET.*
3. *1-1/2" STONE SHALL BE PLACED AROUND THE HYDRANT FROM THE BOTTOM OF THE TRENCH, BUT AT LEAST 6" BELOW THE BASE OF THE HYDRANT TO 6" ABOVE THE WASTE OPENING AND TO A DISTANCE OF 12" AROUND THE ELBOW.*
4. *IF GROUND WATER IS ENCOUNTERED WITHIN 7' OF SURFACE, THEN HYDRANT DRAINS SHOULD BE PLUGGED. WHEN THE DRAINS ARE PLUGGED, THE BARRELS MUST BE PUMPED DRY AFTER USE DURING FREEZING WEATHER. WHERE HYDRANT DRAINS ARE NOT PLUGGED, A GRAVEL POCKET OR DRY WELL SHALL BE PROVIDED UNLESS THE NATURAL SOILS WILL PROVIDE ADEQUATE DRAINAGE. HYDRANT DRAINS SHALL NOT BE CONNECTED TO OR LOCATED WITHIN 10 FEET OF SANITARY SEWERS OR STORM DRAINS.*

HYDRANT DETAIL

(N.T.S.)

DUCTILE IRON PIPE WATER TESTING PROCEDURES

TESTS ON PRESSURE PIPING FOR TRANSPORT OF WATER

A. *Hydrostatic Pressure Test*
Hydrostatic testing shall be performed in accordance with the revision of AWWA C600, Section 5.2, "Hydrostatic Testing".

1. *Test pressure shall be as scheduled or, where no pressure is scheduled, shall be 150 psi, or 1.25 times the static operating pressure, whichever is higher.*
2. *Test pressure shall be held on the piping for a period of at least 2 hours, unless a longer period is requested by the Engineer.*
3. *The test medium shall be water.*

B. *Hydrostatic Leakage Test*

1. *The leakage test shall be conducted concurrently with the pressure test.*
2. *The rate of leakage shall be determined at 15-minute intervals by means of volumetric measurement of the makeup water added to maintain the test pressure. The test shall proceed until the rate of leakage has stabilized or is decreasing below an allowable value, for three consecutive 15-minute intervals. After this, the test pressure shall be maintained for at least another 15 minutes.*
   a. *At the completion of the test, the pressure shall be released at the furthermost point from the point of application.*
3. *All exposed piping shall be examined during the test and all leaks, defective material or joints shall be repaired or replaced before repeating the tests.*
4. *The allowable leakage will be determined by the following formula.*

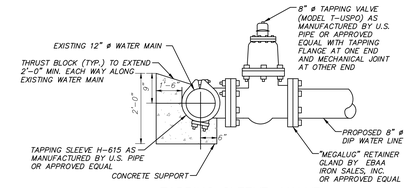
$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

Where:
Q = quantity of makeup water, in gallons per hour
L = length of pipe tested, in feet
D = nominal diameter of the pipe, in inches
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)

5. *Regardless of the above allowables, any visible leaks shall be permanently stopped.*
6. *The test medium shall be water.*

C. *Disinfection*
Prior to placing the water main into service, the new pipe shall be cleaned and disinfected in accordance with the latest revision of AWWA C651, Section 4.4.3, "The Continuous Feed Method". The "Tablet Method" will not be accepted.

1. *All work under this section shall be performed in the presence of the Design Engineer, and a representative of the public health authority having jurisdiction, as required.*
2. *Chlorination shall be scheduled such that sampling and flushing will be performed during normal daylight working hours. The contractor shall provide acceptable backflow prevention on all supply water to prevent any potential backflow contamination or cross connection.*
3. *Chlorination shall be by the use of a solution of water and liquid chlorine, calcium hypochlorite or sodium hypochlorite and the solution shall be contained in the pipe or structure as specified.*
4. *Prior to chlorination, all dirt and foreign matter shall be removed by a thorough cleaning and flushing of the pipeline or structure.*
5. *The chlorine solution shall be introduced to pipelines through corporation stops placed in the horizontal axis of the pipe, to structures by means of tubing extending directly into the structure, or other approved methods.*
6. *The application of the chlorine solution shall be by means of a controlled solution feed device. The rate of chlorine solution flow shall be in such proportion to the rate of water entering the pipe or structure that the resulting free chlorine residual shall be between 25 and 50 parts per million (PPM) or milligrams per liter (mg/l).*
7. *The chlorine treated water shall be retained in the pipe or structure at least 24 hours, unless otherwise directed. During the retention period, all valves and hydrants within the treated sections shall be operated.*
8. *The chlorine residual shall be not less than 10 PPM (or mg/l) at any point in the pipe or structure at the end of the 24-hour retention period.*
9. *When making repairs to, or when specified, structures and portions of pipelines shall be chlorinated by a concentrated chlorine solution containing not less than 200 PPM (mg/l) of free chlorine. The solution shall be applied with a brush or sprayed on the entire inner surface of the empty pipes or structures. The structures disinfected shall remain in contact with the strong chlorine solution for at least 30 minutes.*
10. *After the required retention of chlorinated water in the pipe or structures, they shall be thoroughly flushed until the replacement water shall, upon test, both chemically and bacteriological, be proven equal to water quality served by the public from the existing water supply system.*
11. *The disposal of chlorinated water from any pipe or structure shall be such that it will not cause damage to any vegetation, fish, or animal life.*
12. *The Contractor shall make all arrangements for the testing of water quality by an approved independent laboratory. Two acceptable bacteriological test, taken at least 24 hours apart, shall be collected from the new water main. At least 1 set of samples must be collected from every 1,000 LF of the new water main, plus one set from the end of the line and at least one set from each branch. The results for all tests shall be forwarded to the Design Engineer and the public health authority having jurisdiction.*
13. *All water quality requirements shall be fulfilled prior to the passage of any water through the new system to a public supply or the use of the new system.*



TAPPING SLEEVE, VALVE, AND THRUST BLOCK DETAIL

(N.T.S.)

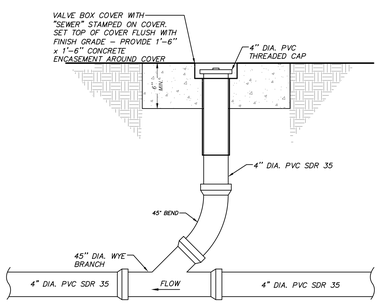
Dutchess County Department of Health Notes:

Standard Notes for Projects with Central Water & Sewer

1. *The design, construction and installation shall be in accordance with this plan and generally accepted standards in effect at the time of construction which include:*
   - *"New York State Design Standards for Intermediate Sized Wastewater Treatment Systems", NYSDEC*
   - *"Recommended Standards for Sewage Treatment Works, (Ten States)."*
   - *"Recommended Standards for Water Works, (Ten States)."*
   - *"New York State Department of Health and Dutchess County Environmental Health Services Division policies, procedures and standards."*
   - *"Dutchess County and New York State Sanitary Codes."*
   - *"Dutchess County Environmental Health Services Division Certificate of Approval letter."*
2. *This plan is approved as meeting the appropriate and applied technical standards, guidelines, policies and procedures for arrangement of sewage disposal and water supply facilities.*
3. *Upon completion of the facilities, the finished works shall be inspected, tested, and certified complete to the DC EHSD by the New York State licensed Professional Engineer supervising construction. No part of the facilities shall be placed into service until accepted by the DC EHSD.*
4. *Approval of any plan(s) or amendment thereto shall be valid for a period of five (5) years from the date of approval. Following the expiration of said approval, the plan(s) shall be re-submitted to the Commissioner of Health for consideration for re-approval. Re-submission or revised submission of plans and/or associated documents shall be subject to compliance with the technical standards, guidelines, policies and procedures in effect at the time of the re-submission.*
5. *No cellar, footing, floor, garage, cooler or roof drains shall be discharged into the sewage collection system.*
6. *All buildings shall be constructed at an elevation high enough to ensure gravity flow to the sewage collection system.*
7. *All required Erosion & Sediment Control and Stormwater Pollution Prevention Water Quality & Quantity Control structures, permanent and temporary, are shown on the plans.*
8. *The DC EHSD shall be notified sixty days prior to any change in use; use changes may require re-approval by the DC EHSD.*
9. *No buildings are to be occupied and the new water system shall not be placed into service, until a "Completed Works Approval" is issued under section 5-1.22(d) of Part 5 of the New York State Sanitary Code (10NYCRRS).*
10. *No buildings are to be occupied and the new wastewater collection system shall not be placed into service until, a "Certificate of Construction Compliance" is issued under section 19.7 of Article 19 of the Dutchess County Sanitary Code.*
11. *All service lines are the responsibility of the owner up to the property line. The water and sewer companies shall be responsible for all valves and pipes which are not on the owner's property.*
12. *The retaining wall / slope stabilization details shown on the project plans are not certified for structural integrity by the DC EHSD.*
13. *The undersigned owners of the property hereon state that they are familiar with this map, its contents and its legends and hereby consent to all sold terms and conditions as stated hereon.*

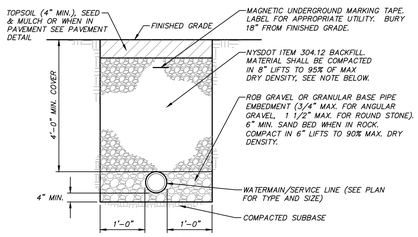
_____ Owner Signature

_____ Date



SEWER LINE CLEANOUT DETAIL

(N.T.S.)



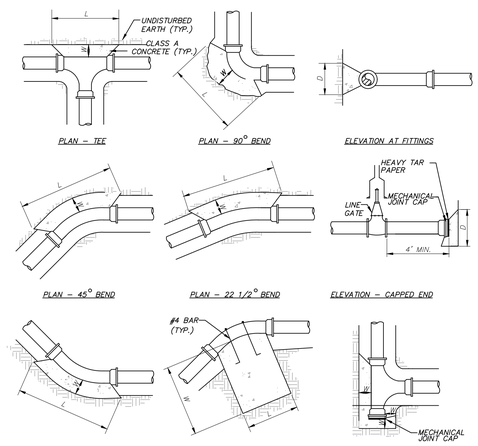
NOTE: THE WATER TRENCH SHALL BE COMPLETELY BACKFILLED WITH NYSDOT ITEM 304.12 WITHIN THE NYSDOT RIGHT OF WAY

WATERMAIN/SERVICE LINE TRENCH DETAIL

(N.T.S.)

NOTES:

1. *WHERE WATERMAIN TRENCHES LIE WITHIN THE PROPOSED CITY OF BEACON R.O.W., TRENCHES ARE TO BE BACKFILLED WITH NYSDOT ITEM 304.12 BACKFILL MATERIAL. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF MAX DRY DENSITY.*
2. *WHERE WATERMAIN AND SERVICE CONNECTION TRENCHES LIE OUTSIDE THE PUBLIC R.O.W., TRENCHES TO BE FILLED WITH CLEAN SITE SOIL.*



THRUST BLOCK SCHEDULE										
PIPE SIZE	CAP/TEE L	CAP/TEE D	22 1/2° L	22 1/2° D	45° L	45° D	90° L	90° D	W
6"	2'	1.5'	2'	1.5'	2'	1.5'	2'	1.5'	1.5'

THRUST BLOCK DETAILS

(N.T.S.)

NO.	DATE	REVISION	BY
5	12-29-20	REVISED PER PLANNING BOARD COMMENTS	JFR
4	7-28-20	REVISED PER PLANNING BOARD COMMENTS	JFR
3	6-30-20	REVISED PER PLANNING BOARD COMMENTS	JFR
2	5-26-20	REVISED PER PLANNING BOARD COMMENTS	JFR
1	4-28-20	RESUBMISSION TO PLANNING BOARD	JFR

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DETAILS

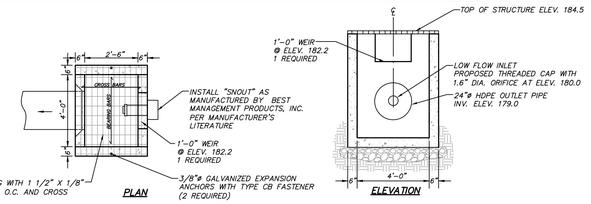
STATE OF NEW YORK — JEFFREY J. CONTARINO — 091931 — LICENSED PROFESSIONAL ENGINEER

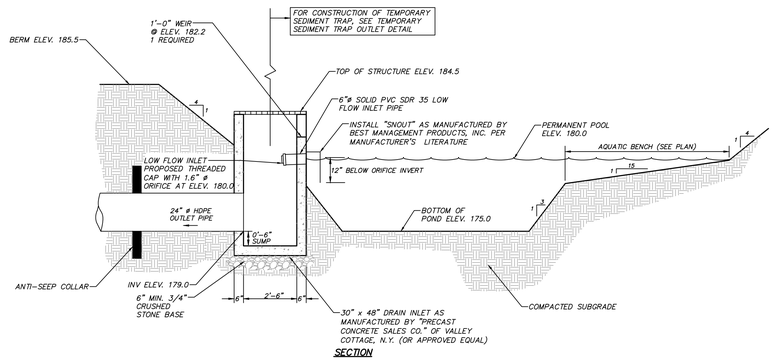
PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	AS NOTED	CHECKED BY	A.D.T.

DRAWING NO. D-4 — SHEET 16 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVS\19100\Admin\13 5-1 Aug 02\29\2020 12:07:11 PM, vaspagnuo, 1:1





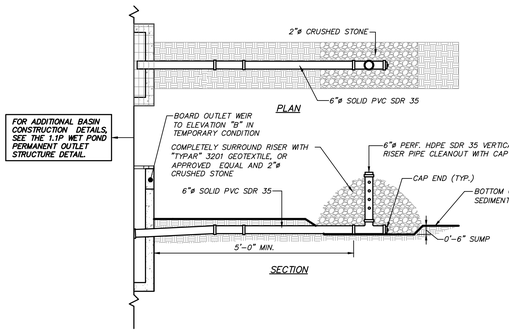
NOTE: THE "SNOUT" ON THE OUTLET STRUCTURE IS PROVIDED AS AN ANTI-CLOGGING DEVICE TO MEET THE REQUIREMENTS OF THE "NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL".

1.1P POCKET POND (NYSDEC DESIGN P-5) PERMANENT OUTLET STRUCTURE DETAIL

(N.T.S.)

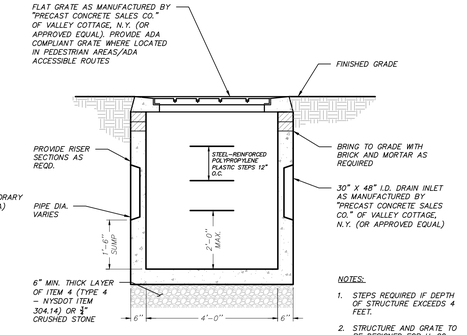
POCKET POND OUTLET NOTES

1. THE POCKET POND (1.1P) BASIN IS PROPOSED TO BE UTILIZED AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION.
2. AFTER THE CONTRIBUTING AREAS TO THE BASIN HAS BEEN PERMANENTLY STABILIZED, THE FOLLOWING SHALL BE ACCOMPLISHED:
   - A. CLEAN BASIN AND OUTLET STRUCTURE AND REMOVE 6"ø PERFORATED VERTICAL RISER PIPE, CRUSHED STONE AND FILTER FABRIC.
   - B. ADD THREADED CAP WITH ORIFICE AT DISCHARGE END OF 6"ø SOLID PVC SDR 35 PIPES PER DETAIL.
   - C. REPLACE THE PERFORATED PIPE AND CRUSHED STONE. DO NOT REPLACE FILTER FABRIC.
   - D. ESTABLISH THE FINAL VEGETATION IN THE BASIN IN ACCORDANCE WITH THE TYPICAL P-2 WET POND BASIN PLANTING DETAIL.
3. FOLLOWS: * WHEN INITIALLY USED AS THE TEMPORARY SEDIMENT BASIN DEWATERING DEVICE THE RISER SHALL BE WRAPPED WITH TYPAR 3201 GEOTEXTILE OR APPROVED EQUAL AND SURROUNDED WITH 2"ø STONE. THE TOP OF THE RISER SHALL BE SET AT THE SAME ELEVATION AS THE WEIRS AS SHOWN IN THE STORMWATER BASIN OUTLET STRUCTURE DETAILS.



TEMPORARY SEDIMENT TRAP OUTLET STRUCTURE DETAIL

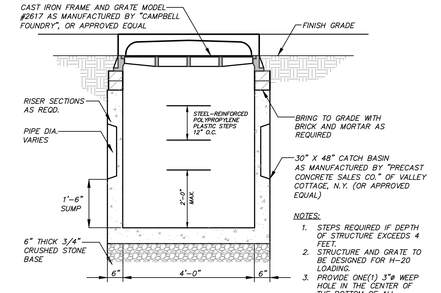
(N.T.S.)



30" X 48" DRAIN INLET DETAIL

(N.T.S.)

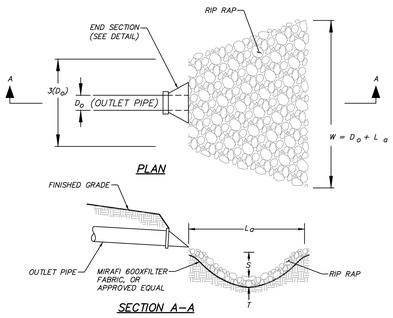
NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.



CATCH BASIN DETAIL

(N.T.S.)

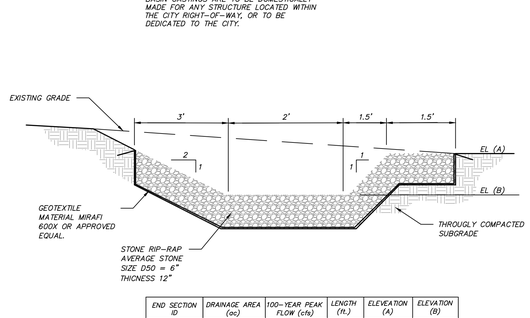
NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.



END SECTION ID	OUTLET PIPE DIAMETER (D_o)	CONTRIBUTING DRAINAGE AREA (AC.)	DISCHARGE (100-YEAR)	D50 RIP RAP SIZE	MAX. RIP RAP SIZE	THICKNESS RIP RAP (T)	LENGTH (L_a)MIN.	SUMP DEPTH (S)
ES 1	18"	3.4	8.1 CFS	6"	9"	14"	11 FT	2 FT.
ES 8	15"	4.3	8.3 CFS	6"	9"	14"	8 FT	2 FT.
ES 13	24"	4.4	8.4 CFS	6"	9"	14"	12 FT	2 FT.
ES 23	15"	0.8	4.1 CFS	6"	9"	14"	8 FT	2 FT.
ES 26	12"	0.2	1.1 CFS	6"	9"	14"	6 FT	2 FT.

ROCK OUTLET PROTECTION DETAIL

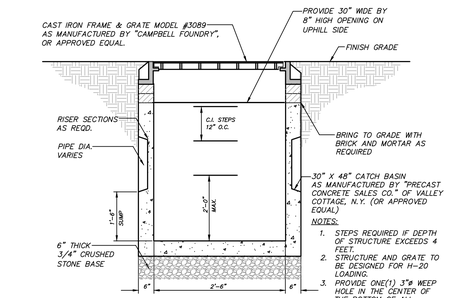
(N.T.S.)



END SECTION ID	DRAINAGE AREA (ac)	100-YEAR PEAK FLOW (cfs)	LENGTH (ft.)	ELEVEATION (A)	ELEVATION (B)
ES 15 & ES 18	1.0	3.8	8	183.0	181.5
ES 21	2.2	4.2	9	186.0	184.5
ES 25	3.5	8.9	18	178.5	177.0
ES 29	1.5	2.9	6	185.5	184.0

LEVEL SPREADER DETAIL

(N.T.S.)

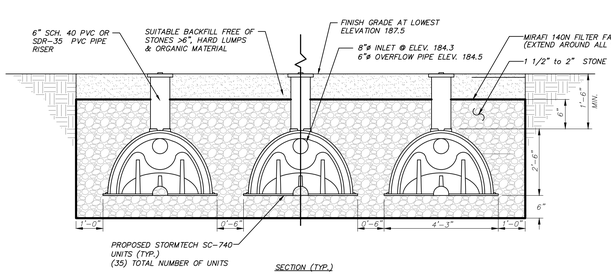


SIDE DRAIN INLET DETAIL

(N.T.S.)

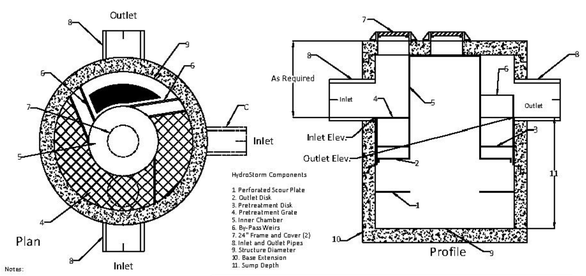
(STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING)

NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.



STORMWATER INFILTRATION SYSTEM 1.2P (NYSDEC DESIGN I-4) DETAIL

(N.T.S.)



Notes:

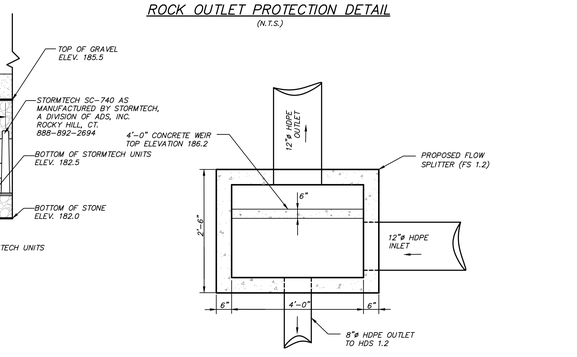
A. Use a headloss K factor of 1.04 for hydraulic gradeline calculations
B. Sump depths shown are minimums. Additional depth can be added for site specific capacities
C. Multiple inlet pipes allowed
D. Drops allowed
E. Inlet invert elevations should be the same or higher than the outlet invert elevation. Inlet can be up to 12" lower than outlet if pretreatment area is omitted but 12" must be added to sump depth to maintain overall treatment volume
F. Solid Cover shown. HydroStorm can be designed with an inlet grate if required.
G. Oil capacities given are spill capacities. Oil should be removed from the unit once an oil depth of 2" or more is measured in the inner chamber
H. Sediment depths are maximum holding capacities and not recommended capacities for regular maintenance. Maintenance is recommended annually or once every 2 years.
I. Capacities are rounded down to nearest 5 gal or ft3
J. Base Extensions not provided on standard units. Extensions can be provided if required due to groundwater/buoyancy concerns at the request of the engineer of record

HydroStorm by Hydroworks, LLC
Patent Pending.
www.hydroworks.com
888-290-7500

HydroStorm Dimensions / Capacities							
Model	Diameter (ft) (9)	Sump Depth (ft) (11)	Inner Chamber (ft) (5)	Max. Pipe (in) (8)	Volume (gal)	Oil (gal)	Sediment (ft3)
HS 7	7	6	3.5	42	1725	410	140
HS 8	8	7	4	48	2630	615	220
HS 9	9	7.5	4.5	54	3565	850	295
HS 10	10	8	5	60	4700	1130	385
HS 12	12	9.5	6	72	8035	1875	605

HDS 1.2 HYDROWORKS HYDROSTORM HS 6 HYDRODYNAMIC SEPARATOR DETAIL

(N.T.S.)

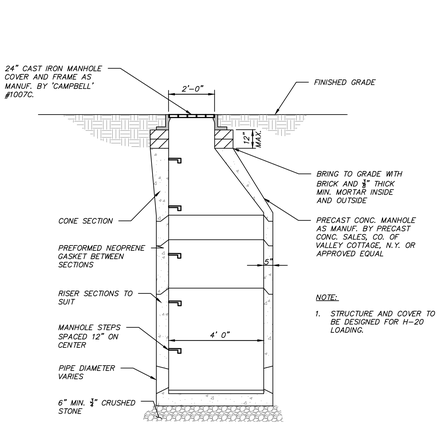


DRAINAGE LINE TRENCH DETAIL

(N.T.S.)

NOTES:

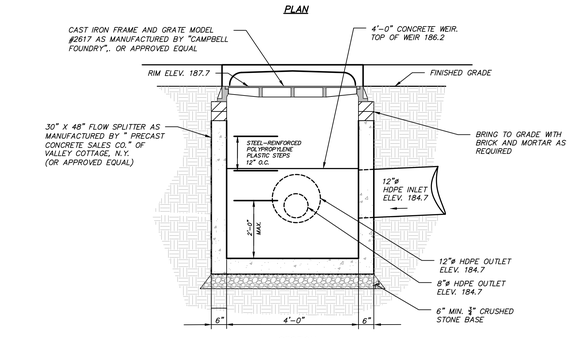
1. WHERE WATERMAIN TRENCHES LIE WITHIN THE PROPOSED CITY OF BEACON R.O.W., TRENCHES ARE TO BE BACKFILLED WITH NYSDOT ITEM 304.12 BACKFILL MATERIAL. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF MAX DRY DENSITY.
2. WHERE WATERMAIN AND SERVICE CONNECTION TRENCHES LIE OUTSIDE THE PUBLIC R.O.W., TRENCHES TO BE FILLED WITH CLEAN SITE SOIL.



DRAINAGE MANHOLE DETAIL

(N.T.S.)

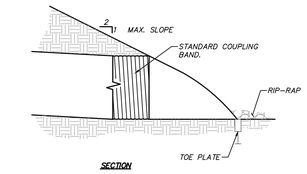
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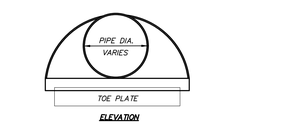


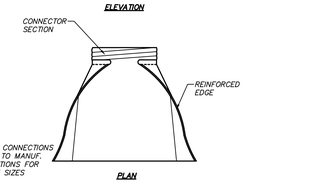
FLOW SPLITTER FS 1.2 DETAIL

(N.T.S.)

NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.







NOTE: END SECTION CONNECTIONS TO CONFORM TO MANUF. RECOMMENDATIONS FOR VARIOUS PIPE SIZES

END SECTION DETAIL

(N.T.S.)

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1	4-28-20	RESUBMISSION TO PLANNING BOARD	JFR

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CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

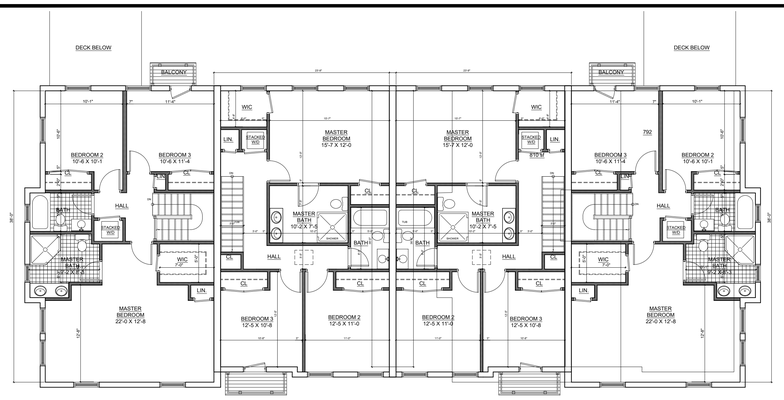
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DATE	8-27-19	DRAWN BY	J.F.R.
SCALE	AS NOTED	CHECKED BY	A.D.T.

DRAWING NO. D-5
SHEET 17 / 20

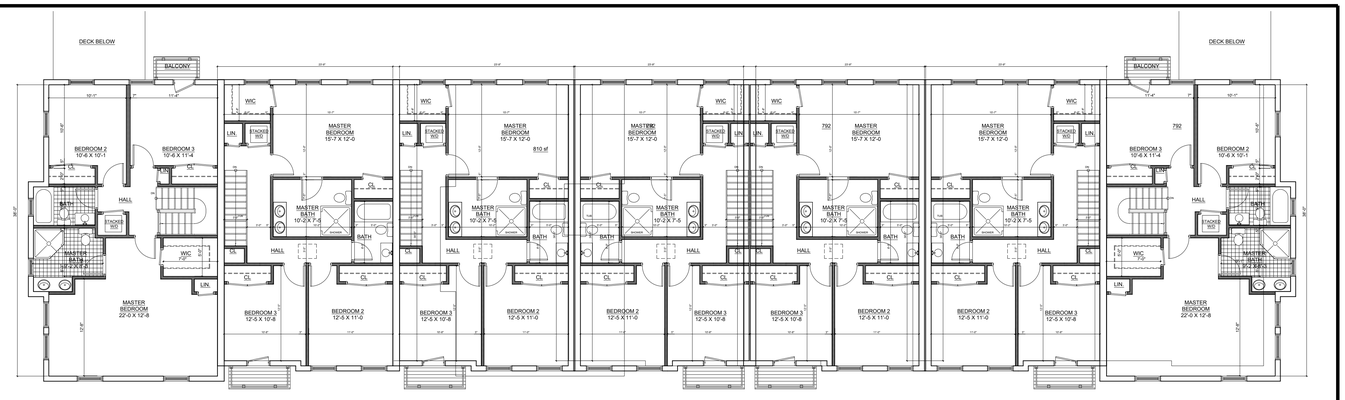
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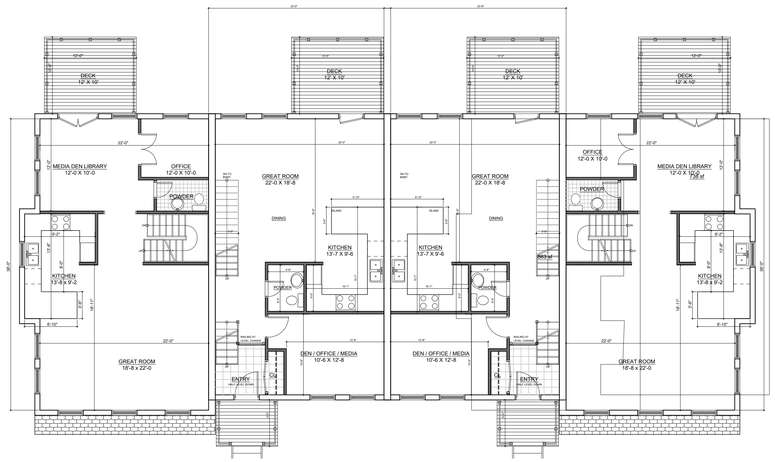
2nd Floor Plan

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



2nd Floor Plan

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



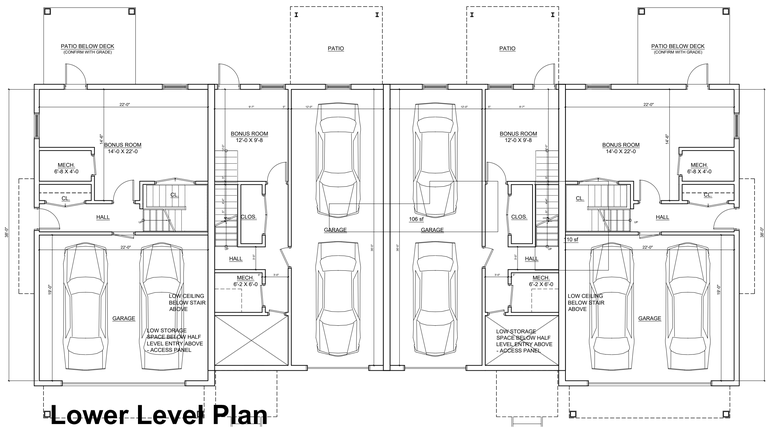
1st Floor Plan

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



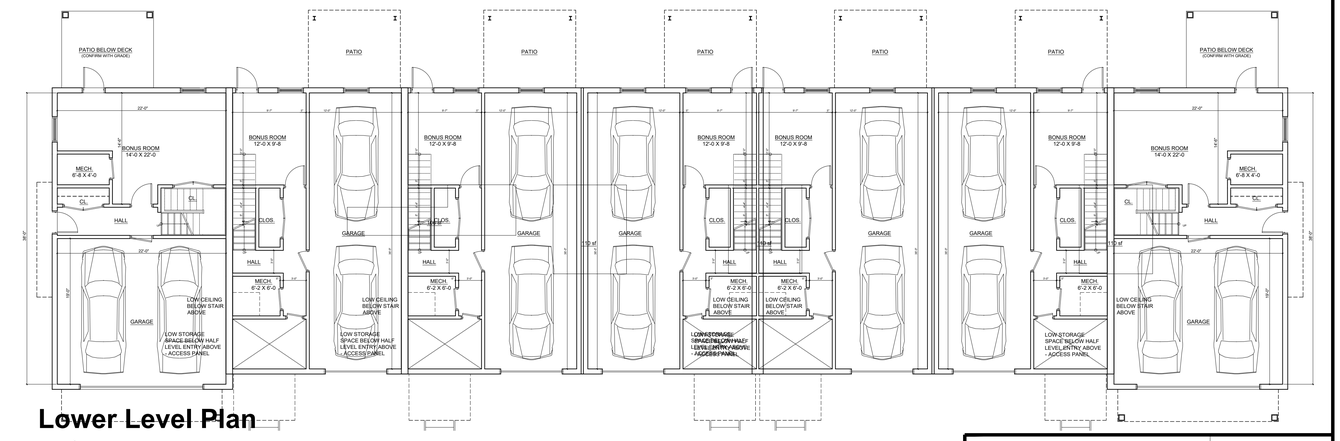
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Scale: $\frac{1}{8}$" = 1'-0"



Lower Level Plan

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



Lower Level Plan

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

4 Unit Townhouse Plans - Front Garage

7 Unit Townhouse Plans - Front Garage

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_____ SECRETARY

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1	2/25/20	REVISED PER PLANNING BOARD COMMENTS	AJS

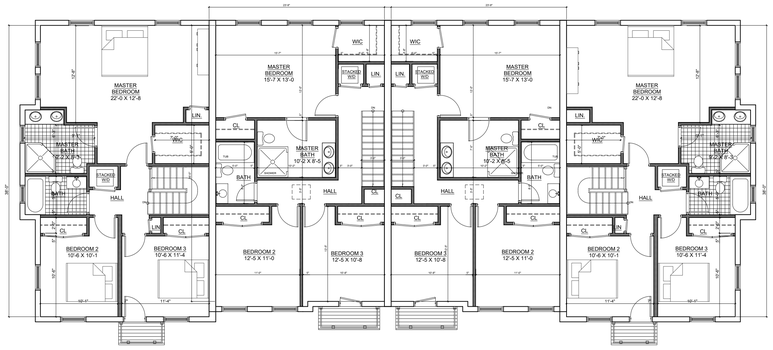
Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

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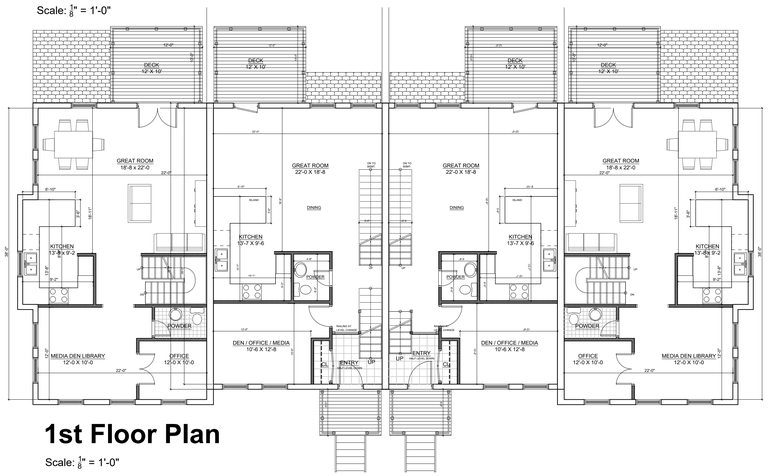
DRAWING:
Building Plans - Front Garage

PROJECT NUMBER: 19131.100
PROJECT MANAGER:
DATE: 10-29-19
DRAWN BY: AJS
SCALE: Not to Scale
CHECKED BY:
DRAWING NO.: A-1
SHEET: 18 / 20



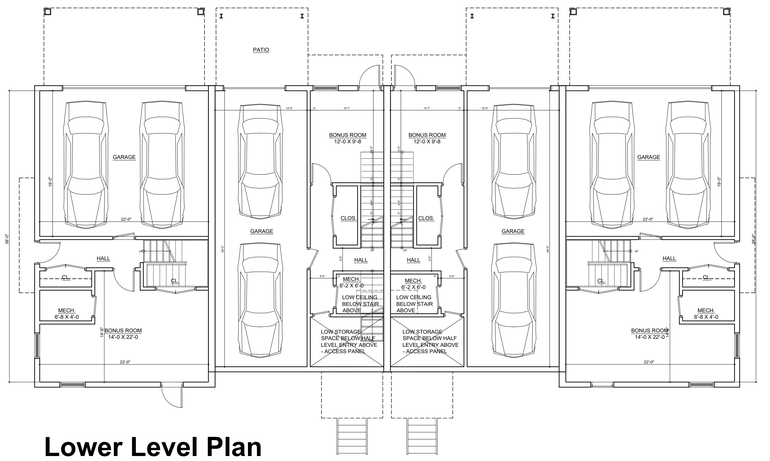
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1st Floor Plan

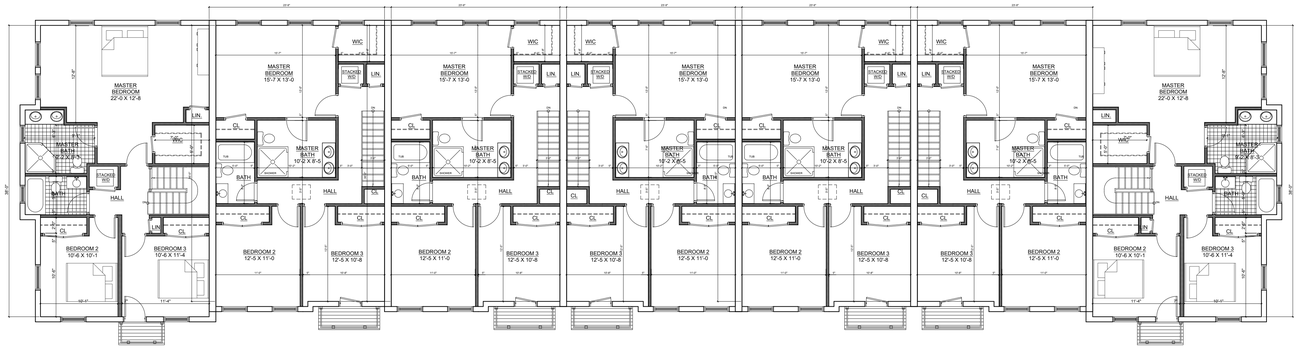
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Lower Level Plan

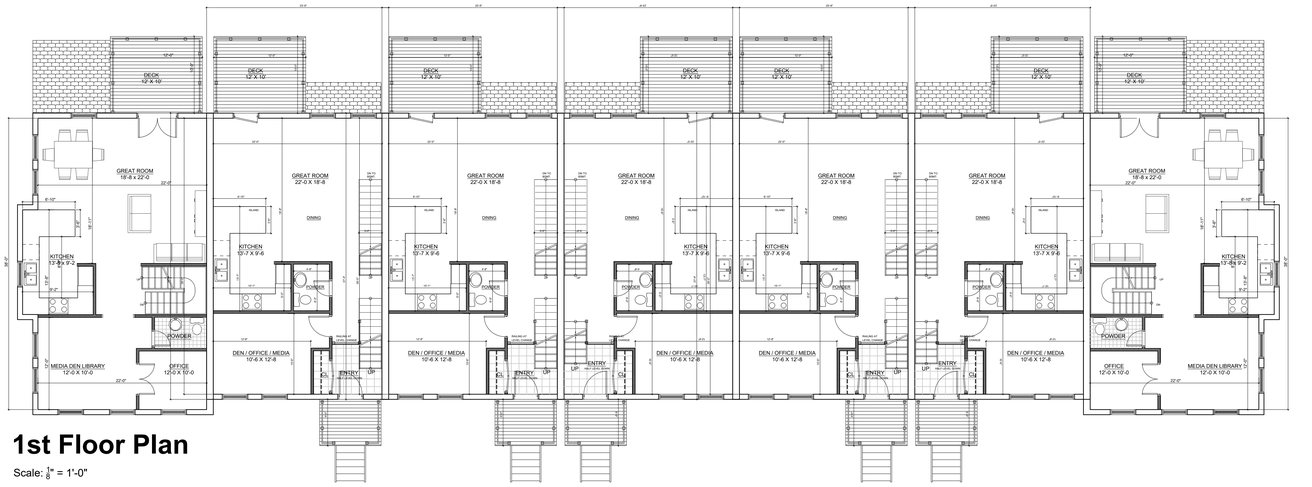
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4 Unit Townhouse Plans - Rear Garage



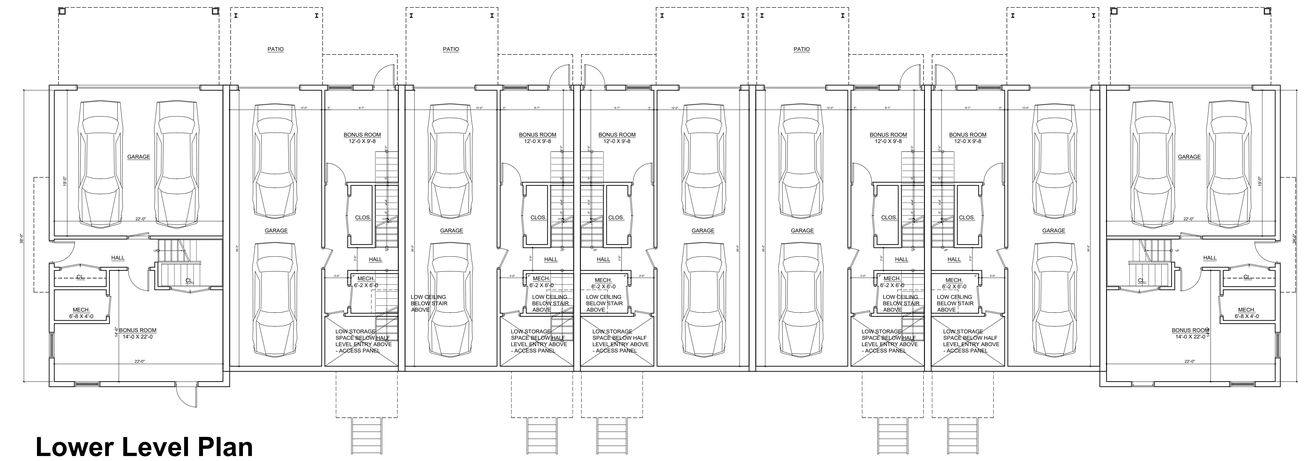
2nd Floor Plan

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



1st Floor Plan

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



Lower Level Plan

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

7 Unit Townhouse Plans - Rear Garage

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1	2/25/20	REVISED PER PLANNING BOARD COMMENTS	AJS

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

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Carmel, NY 10512
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PROJECT: BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING: Building Plans – Rear Garage

PROJECT NUMBER	19131.100	PROJECT MANAGER	
DATE	10-29-19	DRAWN BY	AJS
SCALE	Not to Scale	CHECKED BY	

DRAWING NO. A-2 | SHEET 19 / 20

ROOF:
ARCHITECTURAL ASPHALT SHINGLES. COLOR: GRAY

PARAPETS:
SHEET METAL FLASHING. COLOR: LEAD GRAY

WINDOWS:
VINYL CLAD DOUBLE HUNG WINDOWS BY ANDERSEN OR APPROVED EQUAL. COLOR: WHITE

SIDING:
HORIZONTAL VINYL SIDING. COLOR: VARIATIONS ON LIGHT GRAY SHADES. NOTE THAT EACH BUILDING GROUP WILL BE ONE COLOR, BUT THERE WILL BE 3 COLORS OF SIDING THROUGHOUT THE PROJECT

WINDOW TRIM:
AZEK. COLOR: WHITE

PORCH & BALCONY TRIM:
AZEK. COLOR: LIGHT GRAY



Elevation: Front

BRICK:
GLEN GARY THIN BRICK. COLOR: 56DD OR APPROVED EQUAL



Elevation: Right Side



Elevation: Left Side

RAILING:
TREX RAILING SYSTEM AND DECKING, OR APPROVED EQUAL. COLOR: LIGHT GRAY

GARAGE DOOR:
AUTOMATIC ROLLUP GARAGE DOOR. PANELS AND GLAZING SIMILAR TO DRAWING. COLOR: LIGHT GRAY



Elevation: Rear

Elevations: Rear Garage Entrance

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



View at Garage Side

Not to Scale

ROOF:
ARCHITECTURAL ASPHALT SHINGLES. COLOR: GRAY

PARAPETS:
SHEET METAL FLASHING. COLOR: LEAD GRAY

WINDOWS:
VINYL CLAD DOUBLE HUNG WINDOWS BY ANDERSEN OR APPROVED EQUAL. COLOR: WHITE

SIDING:
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GLEN GARY THIN BRICK. COLOR: 56DD OR APPROVED EQUAL



Elevation: Right Side



Elevation: Left Side

RAILING:
TREX RAILING SYSTEM AND DECKING, OR APPROVED EQUAL. COLOR: LIGHT GRAY

GARAGE DOOR:
AUTOMATIC ROLLUP GARAGE DOOR. PANELS AND GLAZING SIMILAR TO DRAWING. COLOR: LIGHT GRAY



Elevation: Rear

Elevations: Front Garage Entrance

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



View at Entry Side

Not to Scale

NOTE THAT THE 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. CHANGES TO DESIGN ELEMENTS MAY OCCUR IN THE FINAL CONSTRUCTION DOCUMENTS TO SUIT TENANT LAYOUTS AND BUILDING CODE REQUIREMENTS

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1	2/25/20	REVISED PER PLANNING BOARD COMMENTS	AJS

Architect:
Aryeh Siegel, Architect
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Beacon, New York 12508

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PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
Elevations / Views

PROJECT NUMBER	19131.100	PROJECT MANAGER	
DATE	10-29-19	DRAWN BY	AJS
SCALE	Not to Scale	CHECKED BY	

DRAWING NO. A-3

SHEET 20 / 20

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LANDSCAPE ARCHITECTURE, P.C.

STORMWATER POLLUTION PREVENTION PLAN

Prepared For

BEACON VIEWS

City of Beacon, New York

December 29, 2020



Applicant Information:

Beacon Views, LLC
500 River Avenue
Wakefield, New Jersey 08701

Note: This report in conjunction with the project plans make up the complete Stormwater Pollution Prevention Plan.

Prepared by:
Insite Engineering, Surveying & Landscape Architecture, P.C.
3 Garrett Place
Carmel, New York 10512

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APPENDICES

Appendix A	NYSDEC Water Quality Volume and Runoff Reduction Calculations
Appendix B	Pre-Development Computer Data
Appendix C	Post-Development Computer Data
Appendix D	Project and Owner information
Appendix E	NYSDEC SPDES for Construction Activities Construction Site Log Book
Appendix F	NYSDEC Stormwater Design Manual Chapter 5 Analysis
Appendix G	NYSDEC Stormwater Management Practice Construction and Maintenance Inspection Checklist
Appendix H	Hydrodynamic Separator Sizing and Maintenance Manual
Appendix I	NYSDEC Full Environmental Assessment Form
Appendix J	Pipe Sizing Calculations
Appendix K	Swale Sizing Calculations
Appendix L	Draft NYSDEC Notice of Intent

FIGURES

Figure 1: Location Map
Figure 2: Pre-Development Drainage Map
Figure 3: Post-Development Drainage Map
Figure 4: Testing Plan

1.0 INTRODUCTION

1.1 Project Description

The proposed project is located off of Conklin Street in the City of Beacon. The site is approximately 8.6 acres and is identified as Tax Map No. 6055-03-331123. The parcel is located in the RD-5 zoning district. The subject parcel and surroundings are shown on Figure 1. The project proposes seven (7) multi-family townhouse buildings (40 total townhouse units) and associated appurtenances. The primary access to the site will be off Hastings Drive, through the adjoining the former St. Francis Hospital property. An emergency access drive will be provided to the north, through the adjacent parcel. It is proposed to capture and treat the stormwater runoff associated with the proposed improvements.

1.2 Existing Stormwater Runoff Conditions

The subject project is located on one tax parcel off of Conklin Street, immediately north of Hastings Drive. The existing ground cover on the site is characterized as a mixture of woods, open grassed meadow areas and impervious surfaces from the adjacent properties. The property generally drains from north to south down to the onsite wetland.

The hydrologic soils groups for the project consists of C/D soils. The designations of the onsite soils located within the proposed limits of disturbance consist of Bernardston Silt Loam (BeB), Canandigua Silt Loam (Ca), and Nassau-Cardigan Complex (NwC) as identified on the Soil Conservation Service Web Soil Survey. The soils boundaries are shown on Figure 2 and 3 of this report.

As previously stated, the stormwater runoff from the existing property generally drains from north to south towards the existing onsite wetland. Approximately 20 acres of offsite stormwater runoff is conveyed through the subject property from offsite runoff. The analysis included in the project SWPPP utilizes one design line, Design Line 1, to assess the stormwater runoff from the property and any potential impacts from development to the existing natural resources on the property. Design Line 1 is located along a portion of the proposed wetland boundary in the post-development condition in order to analyze the stormwater runoff from all developed areas in the post-development condition. The Pre-Development Drainage Map (Figure 2 of this report) shows the location of Design Line 1. The contributing area to Design Line 1 is identified as subcatchment PRE.

1.3 Proposed Stormwater Runoff Conditions

As previously stated, the proposed application includes the construction of seven (7) multi-family town house buildings, asphalt driveway, parking areas and associated appurtenances. Stormwater mitigation for the newly created impervious surfaces will be provided in the form of proposed stormwater management practices (SMP's) discussed further in later sections of this report. The proposed SMP's will be designed to capture and treat runoff from the impervious surfaces associated with the proposed buildings, driveway, parking areas and pedestrian walkways.

It is proposed to maintain the existing drainage patterns on the site to the maximum extent practical in the proposed condition to minimize the impact to the existing downstream wetland. As previously discussed, the stormwater analysis included in the SWPPP utilizes one design line, Design Line 1. Design Line 1, is located along the proposed wetland boundary line in order to analyze the stormwater runoff from all areas of the propose development. Stormwater treatment for the subject project will be accomplished with two different practices including a subsurface infiltration system and a P-5 Pocket Pond. The stormwater management practices have been sized to capture and treat the Water Quality Volume from the developed area. A hydrodynamic separator is proposed upstream of the subsurface infiltration system for pretreatment only to satisfy the requirements of the Design Manual.

The stormwater runoff from the proposed development will be captured in a collection system and conveyed to the stormwater management practices. The stormwater runoff will be treated by two (2) stormwater management practices, including a I-4 Subsurface Infiltration System (1.2P) and a P-5 Pocket Pond (1.1P). Pretreatment of the stormwater runoff will be provided with a hydrodynamic separator upstream of the proposed subsurface infiltration system, and a forebay in the pocket pond. A flow splitter is proposed upstream of the subsurface infiltration system to discharge the water quality volume to the practice for treatment and bypass the larger storm events.

The contributing area to the subsurface infiltration system (1.2P) is shown as subcatchment 1.2S. Subcatchment 1.2S consists of proposed impervious surface on the southeast side of the project site including townhouse units 35-40 and associated parking area and is collected and conveyed to the proposed infiltration system through roof drains, drain inlets and drainage piping. The contributing area to the pocket pond (1.1P) is shown as subcatchment 1.1S. Subcatchment 1.2S consists of the majority of the proposed impervious area that is collected and conveyed through roof drains, drainage structures and drainage piping. The untreated/undeveloped area directly tributary to Design Line 1 in the post-development condition is shown as subcatchment 1.0S. The subcatchments are shown in Figure 3 of this report. A summary of the subcatchments in the post-development condition including the downstream treatment practice, total area and amount of impervious area within the subcatchment is shown in Table 1.3.1 below.

Table 1.3.1 – Post Development Subcatchment Summary

Subcatchment	Stormwater Management Practice	Total Area[1] (ac)	Impervious Area[1] (ac)
1.0S	Not Treated	18.4	0.5[2]
1.1S	1.1P	3.55	2.35
1.2S	1.2P	0.55	0.45

[1] Refer to subcatchment areas in Appendix C.
[2] The impervious area within subcatchment 1.0S is existing from the properties adjacent to the project site that are also tributary to Design Line 1.

As shown in the following sections of this report, the stormwater quality and quantity for the proposed development have been mitigated to the maximum extent practicable to minimize the impacts to the existing conditions of the downstream, onsite wetland. Additionally, an erosion and sediment control plan has been prepared in accordance with the *New York State Standards and Specifications for Erosion and Sediment Control* to protect the existing waterbodies and drainage features during construction activities and in the post development condition.

2.0 STORMWATER MANAGEMENT

The proposed stormwater management system for the Beacon Views has been designed to meet the requirements of local, city, and state stormwater ordinances and guidelines, including but not limited to those of the City of Beacon and the NYSDEC.

Since the subject project proposes the disturbance of more than one (1) acre, coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001 is required. In order to meet the requirements, set forth by this permit, the latest edition of the NYSDEC *New York State Stormwater Management Design Manual* (NYSSMDM) was referenced for the design of the proposed stormwater management system. The NYSSMDM specifies five design criteria that are discussed in detail below. They are Runoff Reduction Volume, Water Quality Volume, Stream Channel Protection Volume, Overbank Flood Control, and Extreme Flood Control. The first two of the requirements relates to treating water quality, while the later pertain to stormwater quantity (peak flow) attenuation.

To address stormwater quantity requirements of the NYSDEC, the “HydroCAD” Stormwater Modeling System,” by HydroCAD Software Solutions LLC in Tamworth, New Hampshire, was used to model and

assess the peak stormwater flows for the subject project. HydroCAD is a computer aided design program for modeling the hydrology and hydraulics of stormwater runoff. It is based primarily on hydrology techniques developed by the United States Department of Agriculture, Soil Conservation Service (USDA, SCS) TR-20 method combined with standard hydraulic calculations. For details on the input data for the subcatchments and design storms, please refer to Appendices B and C.

The input requirements for the HydroCAD computer program are as follows:

Subcatchments (contributing watershed/sub-watersheds)

- Design storm rainfall in inches
- CN (runoff curve number) values which are based on soil type and land use/ground cover
- Tc (time of concentration) flow path information
- Watershed Area in Acres

Stormwater Basins

- Surface area at appropriate elevations
- Flood elevation
- Outlet structure information

The precipitation values and intensity duration frequency (IDF) curves for the 1-Year, 10-Year, 100-Year 24-hour design storm events and rainfall distribution curves utilized for this report were obtained from the information provided by Northeast Regional Climate Center (NRCC) and the Natural Resources Conservation Service (NRCS) which is available online at *www.precip.eas.cornell.edu.* The values provided for all design storms analyzed have been listed below.

Table 2.0.1 – Precipitation Values for Corresponding Design Storms

Design Storm	24-Hour Rainfall
1-Year	2.6”
10-Year	4.7”
100-Year	8.3”

The CN (runoff curve number) values utilized in this report were referenced from the USDA, SCS publication *Urban Hydrology for Small Watersheds*. The following is a summary of the various land uses/ground covers and their associated CN values utilized in this report.

Table 2.0.2 – Project Ground Cover and Associated Curve Numbers (CN)

Land Use/Ground Cover	CN Value
Woods, D Soil	77
Meadow, D Soil	78
>75% Grass Cover, D Soil	80
Impervious Surface	98

2.1 NYSDEC Runoff Reduction Volume, RR_v

The Runoff Reduction Volume (RR_v) criterion is intended to replicate pre-development hydrology by maintaining preconstruction infiltration, peak flow runoff, discharge volume, as well as minimizing concentrated stormwater flow. As stated in Chapter 4 of the Design Manual, RR_v may be treated with standard SMP’s with RR_v capacity sized in accordance with the Chapter 4/6 requirements, or with green infrastructure practices (GIP’s) sized in accordance with the requirements set forth in Chapter 5. Runoff reduction is achieved when runoff from a site is captured, directed to a

SMP or a GIP, infiltrated to the ground, reused, or removed by evapotranspiration, so it does not contribute to the stormwater discharge from the site. The goal for each site is to reduce the entire WQ_v (100%) through the implementation of GIP's and standard SMP's with RR_v capacity. However, if 100% of the WQ_v cannot be reduced by applying a combination of green infrastructure techniques and standard SMP's with RR_v capacity, "they must, at a minimum, reduce runoff from a percentage of the impervious area constructed as part of the project using the green infrastructure techniques and standard SMPs with RR_v capacity. In addition, the designer must provide justification in the SWPPP that evaluates each of the green infrastructure techniques listed in Table 3.2 and identify the specific site limitations that make application of the technique(s) infeasible."

The project SWPPP cannot provide 100% of the WQ_v through the implementation of GIP's or standard SMP's with RR_v capacity. This is because the onsite soils conditions and depth to groundwater in portions of the site, thus minimizing the area where infiltration practices for treatment of the RR_v / WQ_v is possible. With respect to runoff volume, the project SWPPP addresses and satisfies the RR_V requirements of the Design Manual. In order to meet these requirements to the maximum extent practicable, the project SWPPP has minimized the creation of impervious surfaces to the maximum extent practicable. The types of GIP's and standard SMP's with RR_v capacity that can be employed onsite are limited. The project SWPPP as required by the Design Manual meets and exceeds the RR_v minimum required. In addition, as required by the Design Manual, an analysis evaluating each of the green infrastructure techniques in Table 3.2 has been provided in Appendix F. For this project there is one proposed infiltration practice employed towards meeting the RR_v requirements.

The project proposes an I-4 Subsurface Infiltration System in an area of the project site where the soil conditions meet the Design Manual requirements. These stormwater practice, sized in accordance with the Design Manual, will be applied as a GIP/SMP with volume reduction towards meeting the RR_v minimum. Sizing calculations for the subsurface infiltration practice are provided in Section 2.2 below.

For a calculation of the Initial WQ_v / RR_v, the RR_v minimum, the RR_v / WQ_v required, and the RR_v provided, refer to Appendix A. In calculating the RR_v minimum, onsite soils belongs to the Hydrologic Soil Groups D. These soil groups have a specific reduction factor of 0.20. The table below summarizes the RR_v requirements for the site, as calculated in Appendix A.

Table 2.1.1 Runoff Reduction Volume Summary

Design Line	Initial WQ_v / RR_v (c.f.)[1]	RR_v Minimum (c.f.)	WQ_v RR_v Required (Initial WQ_v / RR_v minus RR_v provided through GIP with Area Reduction) (c.f.)	RR_v Provided (c.f.)	WQ_v Required for Downstream SMP (c.f.)
Design Line 1	13,300	2,704	13,300	3,572	9,728

[1] Refer to Appendix A for Initial WQ_v Calculations

As noted in the table above the project has provided greater than the RR_v minimum. By implementing GIP's to the greatest extent practicable, and exceeding the RR_v minimum, the NYSDEC RR_v requirement has been addressed. As previously stated, 100% of the WQ_v/RR_v required could not be provided due to onsite soil conditions and the limited area where infiltration is feasible. As 100% of the WQ_v / RR_v required was not provided for the subcatchments, a downstream standard SMP must be provided to treat the difference between the WQ_v / RR_v required and the RR_v provided. A P-5 Pocket Pond will be provided as the primary downstream stormwater management practice to treat the remaining WQ_v for the subcatchments. As the WQv for subcatchment 1.1S, shown in Table

2.2.1, is greater than the remaining WQv required, the Pocket Pond has been sized to treat the greater WQ_v. The proposed Pocket Pond is being provided to meet stormwater quality/quantity requirements of the NYSDEC.

2.2 NYSDEC Water Quality Volume, WQ_v

The stormwater management practices have been designed in accordance with the *Performance Criteria* (Chapter 4) of the NYSSMDM. As outlined in Chapter 4, the WQv is the runoff volume produced during the 90% storm. The proposed infiltration practices have been designed to treat the WQv in accordance with the NYSSMDM. The following equation, per Chapter 4, was used to determine the water quality volume for the 90% storm for each of the contributing areas to the treatment practices:

$$\text{The water quality volume shall be } WQ_v = \frac{(P)(R_v)(A)}{12}$$

Where,

WQ_v = water quality volume (in acre-feet)
P = 90% Rainfall Event Number
R_v = 0.05 + 0.009(I), where I is percent impervious cover
A = site area in acres

The stormwater management practices have been designed in accordance with the *Performance Criteria* (Chapter 4) of the NYSSMDM. As outlined in Chapter 4, the WQv is the runoff volume produced during the 90% storm. The proposed infiltration practices have been designed to treat the WQv in accordance with the NYSSMDM. The equation above, per Chapter 4, was used to determine the water quality volume for the 90% storm for each of the contributing areas to the treatment practices:

Table 2.2.1 - Water Quality Volume Calculation Summary

Subcatchment	WQ_v[1] (cf)
1.1S	11,163
1.2S	2,136

[1] For detailed calculations see Appendix A

As previously stated, there are two stormwater management practices proposed as part of the development of the site to meet both the WQv and RRv requirements. Each practice has been designed to treat the Water Quality Volume from the contributing area. The subsurface infiltration practice is designed as an offline practice with a flow splitter upstream of the practice. The infiltration practice is sized to treat at a minimum the WQv from the contributing area, while allowing portions of larger storms to discharge from the infiltration practice through an overflow pipe as allowed by the NYSSMDM. The overflow pipe is set to allow the full WQv storage within the practice as required by the Design Manual. The calculation of the WQv is performed per the methods of the NYSSMDM in Appendix A.

Soil testing was performed in the location of the proposed stormwater management practices. Infitlration testing was performed for the proposed subsurface infiltration system. Testing results can be found on Figure 4. Soil and infiltration test results meet the stormwater infiltration practice requirements set forth in the Design Manual for separation to distances and an infiltration rate greater than 0.5 inches per hour.

Pretreatment has been provided for the proposed subsurface infiltration system in the form of a hydrodynamic separator. The hydrodynamic separator is proposed for pretreatment only and is not deisnged as a proprietary stormwater management practice to treat the stormwater runoff. The peak

flow for the 1-year storm was used to size the hydrodynamic separator used as pretreatment for the infiltration system. Per the Design Manual requirements a minimum pretreatment volume of 100% of the WQ_v must be provided for an infiltration facility where the infiltration rate for the underlaying soils is greater than 5.0 inches per hour. By sizing the hydrodynamic separator for the peak flow from the 1-year storm event, pretreatment for greater than 100% of the WQ_v is provided. The data (including capacities) for the hydrodynamic separator is included in Appendix H. Although the Hydroworks HydroStorm HS 6 does not meet the NYSDEC requirements of TSS and phosphorous removal to be used as a proprietary practice to treat new impervious development, it is a verified proprietary practice to be used for pretreatment. The table below summarizes the WQv-year peak flows and hydrodynamic separate flow rates.

Table 2.2.2 – Pretreatment Hydrodynamic Separator Summary

Stormwater Management Practice	WQv[1] Peak Flow (C.F.S).	Hydrodynamic Separator Model	Hydrodynamic Separator Capacity (C.F.S.)
1.2P	1.84	HydroStorm HS 6	1.98 CFS

[1] For detailed calculations see Appendix A

As noted in the table above the capacity of the hydrodynamic separator exceeds the calculated WQv peak flow. The hydrodynamic separator has an internal bypass capable of passing the flows from the contributing areas from the larger storm events.

The P-5 pocket pond has been sized in accordance with Chapter 6 of the Design Manual as shown in the table below. The P-5 Pocket Pond has been sized to store a minimum of 50% of the WQv in the permanent pool and a maximum of 50% in extended detention. As previously stated, the P-5 Pocket Pond has been sized for the WQv calculated in Appendix A as the WQv from the contributing area. The provided volume for the P-5 Pocket Pond can be verified in the stage storage tables contained in Appendix C. A P-5 Pocket Pond was chosen due to the overall contributing area to the proposed basin.

Table 2.1.3 P-5 Pocket Pond Summary

Design Elements	Required	Provided	Remarks
Pond Location	Not within Jurisdictional Waters	Outside of Jurisdictional Waters	See Project Plans
Forebay Volume	10% of WQv (1,116 cubic feet)	18% of WQv (2,050 cubic feet)	See Appendix C
Forebay Depth	4' Min. – 6' Max.	5' Provided	See Project Plans
WQv Storage	50% Min. within Permanent Pool (5,582 cubic feet)	50%+ within Permanent Pool (10,715 cubic feet)	See Appendix C
Minimum Length to Width Ratio	1.5 : 1	Greater than 2 : 1	See Project Plans
Minimum Surface Area to Drainage Area Ratio	1 : 100	1 : 39	See Project Plans
Benches at Water Level	Aquatic Bench	Aquatic Bench	See Project Plans
Landscaping	Pond and Buffer Plantings Required	Pond and Buffer Plantings Provided	See Project Plans
Center-of-Mass Detention Time (1-Year, 24-Hour Storm Event)	1,440 minutes	1,512 minutes	See Appendix C

2.3 NYSDEC Stream Channel Protection Volume, CP_v

The Stream Channel Protection (CP_v) criterion is intended to protect stream channels from erosion and is accomplished by the 24-hour extended detention of the 1-year, 24-hour storm event or by fully infiltrating the stormwater runoff from the 1-year, 24-hour storm event. The Stream Channel Protection Volume is calculated using the runoff volume from 1-year, 24-hour storm event from the HydroCAD modeling in Appendix C. Table 2.3.1 below provides a summary of the peak flow rate from each stormwater management practice proposed to provide CP_v for the 1-year, 24-hour storm event. The table provides the maximum allowable discharge rate based on the 1-year, 24-hour runoff volume over a 24-hour period, and the design discharge rate from each practice as shown in Appendix C. As shown in Appendix C, the proposed I-4 Subsurface Infiltration System has been designed to fully infiltrate the stormwater runoff from the 1-year, 24-hour design storm and the P-5 Pocket Pond has been designed to provide 24-hour extended detention of the 1-year, 24-hour storm, therefore the CPv criterion has been met for the proposed areas of new development.

Table 2.2.1 – Stream Channel Protection Volume Summary

Subcatchment	Stormwater Management Practice	1-Year, 24-Hour Runoff Volume (af)	Maximum Allowable Discharge Rate (cfs)	Provided Discharge Rate (cfs)
1.1S	1.1P	0.531	0.27	0.11
1.2S	1.2P	0.095	0.05	0.0

[1] See Appendix C for the runoff volume from the 1-Year, 24-Hour Storm Event

2.4 NYSDEC Overbank Flood Control, Q_p, and Extreme Flood Control, Q_f

The Overbank Flood Control (Q_p) requirement is intended to prevent an increase in the frequency and magnitude of out-of-bank flooding events generated by urban development. Overbank control requires storage to attenuate the post-development 10-year, 24-hour peak discharge to pre-development rates. The Extreme Flood Control (Q_f) requirement is intended to prevent the increased risk of flood damage from large storm events, maintain the boundaries of the pre-development 100-year flood plain, and protect the physical integrity of stormwater management practices. Extreme flood control requires storage to attenuate the post-development 100-year, 24-hour peak discharge to pre-development rates. As shown in Table 2.4.1 attenuation for both the 10-year and 100-year 24-hour storms has been provided thus satisfying the Q_p and Q_f requirements. As requested by the City of Beacon, in addition to the requirements of the Design Manual, attenuation of the peak flows for the 1-year, 24-hour design storm has been provided as shown in Table 2.4.1. The following table summarizes the pre and post development peak flows expected for the proposed project.

Table 2.4.1– Pre and Post-Development Peak Flows

24-HOUR DESIGN STORM PEAK FLOWS (c.f.s.)						
	1-YEAR		10-YEAR (Overbank Flood Control)		100-YEAR (Extreme Flood Control)	
	Pre	Post	Pre	Post	Pre	Post
Design Line 1	14.1	12.6	39.7	35.2	84.5	78.7

As shown in the above table the peak flows discharging to the design line in the proposed condition have been mitigated to slightly below the existing condition levels. Since the rate of runoff in the proposed condition is less than the existing condition, the proposed onsite stormwater improvements will mitigate the potential impact of the peak flows downstream in the final condition.

3.0 STORMWATER CONVEYANCE SYSTEM

The stormwater collection and conveyance systems for the project will consist of catch basins, drain inlets, drainage manholes, swales and HDPE pipe. The system will be sized to collect and convey at minimum the 100-year, 1-hour design storm using the Rational Method. The Rational Method is a standard method used by engineers to develop flow rates for sizing collection systems. The Rational Method calculates flows based on a one-hour design storm. Calculations are provided in Appendix J and K.

4.0 EROSION AND SEDIMENT CONTROL

Erosion and sediment control should be accomplished by four basic principles: diversion of clean water, containment of sediment, treatment of dirty water, and stabilization of disturbed areas. Diversion of clean water should be accomplished with swales. This diverted water should be safely conveyed around the construction area as necessary and discharged downstream of the disturbed areas. Sediment should be contained with the use of silt fence at the toe of disturbed slopes and excavation of the temporary sediment basin. Disturbed areas should be permanently stabilized within 14 days of final grading to limit the required length of time that the temporary facilities must be utilized. The owner will be responsible for the maintenance of the temporary erosion control facilities.

4.1 Temporary Erosion and Sediment Control Facilities

Temporary erosion and sediment control facilities should be installed and maintained as required to reduce the impacts to off-site properties. The owner will be required to provide maintenance for the temporary erosion and sediment control facilities. In general, the following temporary methods and materials should be used to control erosion and sedimentation from the project site:

- Stabilized Construction Entrance
- Silt Fence Barriers
- Storm Drain Inlet Protection

A stabilized construction entrance should be installed at the entrance to the site as shown on the plan. The design drawings will include details to guide the contractor in the construction of this entrance. The intent of the stabilized construction entrance is to prevent the “tracking” of soil from the site. Dust control should be accomplished with water sprinkling trucks if required. During dry periods, sprinkler trucks should wet all exposed earth surfaces as required to prevent the transport of air-borne particles to adjoining areas.

Siltation barriers constructed of geosynthetic filter cloth should be installed at the toe of all disturbed slopes. The intent of these barriers is to contain silt and sediment at the source and inhibit its transport by stormwater runoff. The siltation barriers will also help reduce the rate of runoff by creating filters through which the stormwater must pass.

4.2 Permanent Erosion and Sediment Control Facilities

Permanent erosion and sediment control will be accomplished by diverting stormwater runoff from steep slopes, controlling/reducing stormwater runoff velocities and volumes, and vegetative and structural surface stabilization. All of the permanent facilities are relatively maintenance free and only require periodic inspections. The owner will provide maintenance for all the permanent erosion and sediment control facilities.

The temporary sediment trap shall be cleaned of all sediment and debris, and converted to an extended detention dry stormwater basin per the final elevations and dimensions, and stabilized with the vegetation as indicated on the project drawings. Riprap aprons will be used at the discharge end of all piped drainage systems. Runoff velocities will be reduced to levels that are non-erosive to the receiving waterbodies through use of these aprons.

Other than the buildings and paved surfaces, disturbed surfaces will be stabilized with vegetation. The vegetation will control stormwater runoff by preventing soil erosion, reducing runoff volume and velocities, and providing a filter medium. Permanent seeding should optimally be undertaken in the spring from March 21st through May 20th and in late summer from August 15th to October 15th.

5.0 IMPLEMENTATION, MAINTENANCE & GENERAL HOUSEKEEPING

5.1 Construction Phase

Details associated with the implementation and maintenance of the proposed stormwater facilities and erosion control measures during construction are shown on the project drawings. A Construction Sequence has been provided on the project plans to guide the contractor in the installation of the erosion control measures as well as the site plan features. In accordance with NYSDEC SPDES General Permit GP-0-20-001 no phase will exceed the maximum of 5 acres of disturbance at any given time as less than 5 acres of disturbance is proposed. The erosion control plan includes associated details and notes to aid the contractor in implementing the plan.

During construction, a Site Log Book, Appendix E, is required to be kept per NYSDEC SPDES General Permit GP-0-20-001. Erosion and sediment control inspections are required to be conducted as necessary under coverage of the permit (minimum twice a week) and an updated logbook and a copy of the SWPPP is required to be kept on site for the duration of the construction activities. The Construction Site Log Book is an appendix taken from the *New York Standards and Specifications for Erosion and Sediment Control* (Blue Book).

In addition to the proposed erosion and sediment control facilities, the following good housekeeping best management practices shall be implemented to mitigate potential pollution during the construction phase of the project. The general contractor overseeing the day-to-day site operation shall be responsible for the good housekeeping best management practices included in the following general categories:

- Material Handling and Waste Management
- Establishment of Building Material Staging Areas
- Establishment of Washout Areas
- Proper Equipment Fueling and Maintenance Practices
- Spill Prevention and Control Plan

All construction waste materials shall be collected and removed from the site regularly by the general contractor. The general contractor shall supply waste barrels for proper disposal of waste materials. All personnel working on the site shall be instructed of the proper procedures for construction waste disposal.

Although it is not anticipated any hazardous waste materials will be utilized during construction, any hazardous waste materials shall be disposed of in accordance with federal, state, and local regulations. No hazardous waste shall be disposed of on-site. Hazardous waste materials shall be stored in appropriate and clearly marked containers and segregated from the other non-waste materials. All hazardous waste shall be stored in a structurally sound and sealed shipping containers located in the staging areas. Material safety data sheets, material inventory, and emergency contact numbers will be maintained in the office trailer. All personnel working on the site shall be instructed of the proper procedures for hazardous waste disposal.

Temporary sanitary facilities (portable toilets) shall be provided on site during the entire length of construction. The sanitary facilities shall be in an alternate area away from the construction activities on the site. The portable toilets shall be inspected weekly for evidence of leaking holding tanks.

All recyclables, including wood pallets, cardboard boxes, and all other recyclable construction scraps shall be disposed of in a designated recycling barrel provided by the contractor and removed from the site

regularly. All personnel working on the site shall be instructed of the proper procedures for construction waste recycling.

All construction equipment and maintenance materials shall be stored in a designated staging area. Silt fence shall be installed down gradient of the construction staging area. Shipping containers shall be utilized to store hand tools, small parts, and other construction materials, not taken off site daily. Construction waste barrels, recycling barrels and if necessary hazardous waste containers shall be located within the limits of the construction staging area.

Throughout the construction of the project, several types of vehicles and equipment will be used on-site. Fueling of the equipment shall occur within the limits of the construction staging area. Fuel will be delivered to the site as needed, by the general contractor, or a party chosen by the general contractor. Only minor vehicle equipment maintenance shall occur on-site, all major maintenance shall be performed off-site. All equipment fluids generated from minor maintenance activities shall be disposed of into designated drums and stored in accordance with the hazardous waste storage as previously discussed.

Vehicles and equipment shall be inspected on each day of use. Any leak discovered shall be repaired immediately. All leaking equipment unable to be repaired shall be removed from the site. Ample supplies of absorbent, spill-cleanup materials, and spill kits shall be located in the construction staging area. All spills shall be cleaned up immediately upon discovery. Spent absorbent materials and rags shall be hauled off-site immediately after the spill is cleaned for disposal at a local landfill. All personnel working on the site shall be instructed of the proper procedures for spill prevention and control. Any spill large enough to discharge to surface water will be immediately reported to the local fire / police departments and the National Response Center 1-800-424-8802.

During the initial year of planting, the plants may require watering to germinate and establish. Note that several seedings may be required during the first year to completely establish vegetation on the site.

As shown in the NYSDEC Full Environmental Assessment Form in Appendix I of this report, the project site is located in an area with threatened or endangered animals. The Indiana Bat and is listed as a threatened or endangered animal in the area of the proposed project site. Additional care should be taken during construction to monitor for the Indiana Bat and appropriate measures should be taken for protection of the Indiana Bat if one is to be observed onsite. The following conservation measures are proposed for the project:

- Tree clearing will only occur between the period of October 1 through March 31 when bats are not in the vicinity of the site.
- Lighting on the site will use City of Beacon Planning Board approved light fixtures that have tops that direct light down to minimize light pollution and not interfere with potential bat foraging activities.
- Implementing soil conservation and dust control best management practices, such as watering dry disturbed soil areas to keep dust down, recessed silt fence and anti-tracking pads to prevent erosion and sediment in surface waters on the site.
- Stormwater pond(s) will not be maintained with any chemicals that might adversely affect bats or insect populations on which they may feed.

5.2 Soil Restoration

Soil Restoration is required to be applied across areas of the development site where soils have been disturbed and will be vegetated. The purpose is to recover the original properties and porosity of the soil compacted during construction activity. Soil Restoration is applied in the cleanup, restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate, deep-rooted groundcover to help maintain the restored soil structure. Soil restoration includes mechanical decompaction and compost amendment. The table below describes various soil

disturbance activities related to land development, soil types and the requirements for soil restoration for each activity as identified in the Design Manual. Restoration is applied across areas of a development site where soils have been compacted and will be vegetated according to the criteria defined in the table below:

<table>
<tr><th colspan="4">Soil Restoration Requirements[1, 2,4]
(Onsite soils within the limit of disturbance belong to Hydrologic Soil Groups (HSG) D)</th></tr>
<tr><th>Type of Soil Disturbance</th><th colspan="2">Soil Restoration Requirement</th><th>Comments/Examples</th></tr>
<tr><td>No soil disturbance</td><td colspan="2">Restoration not permitted</td><td>Preservation of Natural Features</td></tr>
<tr><td>Minimal soil disturbance</td><td colspan="2">Restoration not required</td><td>Clearing and grubbing</td></tr>
<tr><td rowspan="2">Areas where topsoil is stripped only - no change in grade</td><td>HSG A & B</td><td>HSG C&D</td><td rowspan="2">Protect area from any ongoing construction activities.</td></tr>
<tr><td>Apply 6 inches of topsoil</td><td>Aerate[3] and apply 6 inches of topsoil</td></tr>
<tr><td rowspan="2">Areas of cut or fill</td><td>HSG A &B</td><td>HSG C&D</td><td rowspan="2"></td></tr>
<tr><td>Aerate[1] and apply 6 inches of topsoil</td><td>Apply full Soil Restoration [2]</td></tr>
<tr><td>Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5-foot perimeter around foundation walls)</td><td colspan="2">Apply full Soil Restoration (decompaction and compost Enhancement[6])</td><td></td></tr>
<tr><td>Areas where Runoff Reduction and/or Infiltration practices are applied</td><td colspan="2">Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.</td><td>Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area</td></tr>
<tr><td>Redevelopment projects</td><td colspan="2">Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.</td><td></td></tr>
</table>

1. 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.
2. Per "Deep Ripping and De-compaction, DEC 2008".
3. 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 functions like a mini-subsoiler.
4. During periods of relatively low to moderate subsoil moisture, the disturbed soils are returned to rough grade and the following Soil Restoration steps applied:
   - 5.1. Apply 3 inches of compost over subsoil.
   - 5.2. 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.
   - 5.3. Rock-pick until uplifted stone/rock materials of four inches and larger size area cleaned off the site.
   - 5.4. Apply topsoil to a depth of 6 inches.
   - 5.5. Vegetate as required by seeding notes located on the project drawings.
   - 5.6. Tilling should not be performed within the drip line of any existing trees or over any utility installations that are within 24 inches of the surface.
6. Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.

After soil restoration is completed an inspector should be able to push a 3/8" metal bar twelve inches into the soil with just body weight. Following decompaction/soil restoration activities, the following maintenance is anticipated during the first year:

- Initial inspections for the first six months (once after each storm greater than a half-inch).
- Reseeding to repair bare or eroding areas to assure grass stabilization.
- Water once every three days for first month, and then provide a half inch of water per week during first year. Irrigation plan may be adjusted according to the rain event.
- Fertilization may be needed in the fall after the first growing season to increase plant vigor.

In order to ensure the soil remains decompacted the following ongoing maintenance is recommended:

- Planting the appropriate ground cover with deep roots to maintain the soil structure.
- Keeping the site free of vehicular and foot traffic or other weight loads. Consider pedestrian footpaths (sometimes it may be necessary to de-thatch the turf every few years).

5.3 Long Term Maintenance Plan

Each spring the paved areas should be cleaned to remove the winter's accumulation of traction sand. After this is completed, all drain inlets sumps and the stormwater basins should be cleaned. All pipes should be checked for debris and blockages and cleaned as required. During the cleaning process, the drain inlets, catch basins, and pipes should be inspected for structural integrity and overall condition; repairs and/or replacement will be made as required.

The stormwater facilities for the subject project have been designed to minimize the required maintenance. This section discusses the minimum maintenance requirements to insure long-term performance of the stormwater facilities. Initially the stormwater facilities will require an increased maintenance and inspection schedule until all portions of the site are stable. Generally, the stormwater facilities consist of either collection and conveyance components or treatment components.

The stormwater collection and conveyance system is composed of HDPE, drainage pipe and precast concrete drainage structures. The owner will assume the maintenance responsibilities for the drainage system. Minimal maintenance is typically required for these facilities. All pipes should be checked for debris and blockages and cleaned as required. All drain inlet sumps, including the sumps within the hydrodynamic separators, shall be inspected bi-annually and cleaned to removed deposited sediment. During the cleaning process, the pipes should be inspected for structural integrity and overall condition; repairs and/or replacement should be made as required. Additionally, the detention systems shall be checked for deposited sediment as well. Visual inspection of system through the inspection ports shall take place yearly, and the system shall be cleaned / jetted as necessary to remove deposited sediment.

The stormwater facilities have been designed to limit the routine maintenance requirements. Initially the filter will require regular maintenance until the permanent vegetation is established. Permanent vegetation is considered established when 80% of the final plant density is established. Vegetation should be inspected weekly during construction as part of coverage under NYSDEC SPDES General Permit GP-0-20-001 during construction and in the permanent condition. Damaged areas should be immediately re-seeded and re-mulched. The floor of the filter will be planted with a seed mixture that contains plants that are tolerant of occasional flooding. The seed mixtures contain several plant species that vary slightly in their needs for survival. It is expected that not all of the species will survive within the basin due to variations such as water, nutrients, and light. During the initial year of planting, the plants may require watering to germinate and become established. Note that several seedings may be required during the first year to completely establish vegetation within the basin. After the initial year of establishment, the filter does not need to be fertilized or watered. A natural selection process will occur over the first few years, such that the species within the seed mixture most suitable to the conditions will survive.

Refer to the Infiltration Trench and Basin Inspection & Maintenance checklist found in Appendix G of this report prepared for all portions of this project the requirements to insure long-term performance of all stormwater facilities

Refer to the Hydroworks Hydrostorm Operations & Maintenance Manual in Appendix H of this report for the manufacture maintenance requirements for the proposed hydrodynamic separator.

APPENDIX A

NYSDEC Water Quality Volume and Runoff Reduction Calculations

WQv Calculation Worksheet

Project: Beacon Views, LLC
Project #: 19131.100
Date: 7/28/2020

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

The following calculation determines the water quality flow rate for the 90% Water Quality Event using the Small Storm Hydrology Method specified in Appendix B of the New York State Stormwater Management Design Manual.

Subcatchment ID: 1.1

1.Water Quality Volume $=WQ_v = \frac{P * R_v * A}{12}$

P = WQv 24-hour Rainfall Amount	=	1.4	in.
A = Subcatchment Area	=	151880	SF
Ai= Impervious Area within Subcatchment Area	=	98640	
I = Ai/A	=	64.9	%
Rv = 0.05 + 0.009 (I%)	=	0.63	
WQv = Water Quality Volume	=	11,163	CF

Subcatchment ID: 1.2

1.Water Quality Volume $=WQ_v = \frac{P * R_v * A}{12}$

P = WQv 24-hour Rainfall Amount	=	1.4	in.
A = Subcatchment Area	=	21800	SF
Ai= Impervious Area within Subcatchment Area	=	19100	
I = Ai/A	=	87.6	%
Rv = 0.05 + 0.009 (I%)	=	0.84	
WQv = Water Quality Volume	=	2,136	CF

RRv Calculation Worksheet - Design Line 1

Project: Beacon Views, LLC
Project #: 19131.100
Date: 7/28/2020

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

1. RRv Initial = Water Quality Volume (WQv) *0.305 ac-ft* = *13,300 c.f.*
(refer to Water Quality Volume Calculation Sheet)

2. *RRv Minimum* = [(P) (Rv) (S) (Aic)] /12 where…

P = Rainfall (in.)	=	1.40	in.
Rv = 0.05 + 0.009 (100%)	=	0.95	
S = Hydrologic Soil Group Specific Reduction Factor	=	0.20	
[HSG A = 0.55] [HSG B = 0.40] [HSG C = 0.30] [HSG D = 0.20]			
Aic = Total area of new impervious cover	=	2.8	Acres
RRv Minimum	=	*2,704*	*c.f.*

3. *RRv Required* = RRv Initial - Green Infrastructure Practice (GIP) with Area Reduction

GIP with Area Reduction Applied in Project		
5.3.1 Conservation of Natural Area	N/A	
5.3.2 Sheet Flow to Riparian Buffers or Filter Strips	N/A	
5.3.4 Tree Planting / Tree Box (37 trees at 100 s.f. per tree)		c.f.
5.3.5 Disconnection of Rooftop Runoff	-	
5.3.6 Stream Daylighting	N/A	
RRv Required(=WQv-RRV by area)	= 13,300	c.f.

4. *RRv Provided*

GIP with Volume Reduction Applied in Project	WQv Treated (c.f.)	% of WQv Applied to *RRv Provided*	*RRv Provided (c.f.)*
5.3.3 Vegetated Open Swales		20%	0
[HSG A / B = 20%] [HSG C / D = 10%] {Modified HSG C - D = 15% - 12%]		10%	0
5.3.7 Rain Garden		40%	0
[No underdrains / Good Soils = 100%] [With underdrains / Poor Soils = 40%]			
5.3.8 Green Roof		100%	N/A
[RRv provided equals volume provided in Green Roof]			
5.3.9 Stormwater Planters		45%	N/A
[Infiltration Planters = 100%] [Flow Through HSG C = 45%] [Flow Though HSG D = 30%]			
5.3.10 Rain Tank / Cisterns		100%	N/A
5.3.11 Porous Pavement		100%	0
Infiltration Practice (Standard SMP)	3572	100%	3,572
Bioretention Practice (Standard SMP)		40%	0
[Without Underdrains HSG A/B = 80%] [With Underdrain HSG C\D = 40%]			
Dry Swale (Open Channel Practice) (Standard SMP)		20%	N/A
[HSG A/B = 40%] [HSG C/D = 20%]			
RRv Provided =			*3,572*

5. Summary

RRv Initial	=	13,300	c.f.
RRv Required	=	13,300	c.f.
RRv Minimum	=	2,704	c.f.
RRv Provided	=	3,572	c.f.
WQv Required for Downstream SMP	=	9,728	c.f. (= RRv Required - RRv Provided)

Is RRv Provided greater than or equal to RRv Minimum? Yes

APPENDIX B

Pre-Development Computer Data



Subcat Reach Pond Link

Routing Diagram for Pre Development

Prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., Printed 7/27/2020

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Summary for Subcatchment PRE:

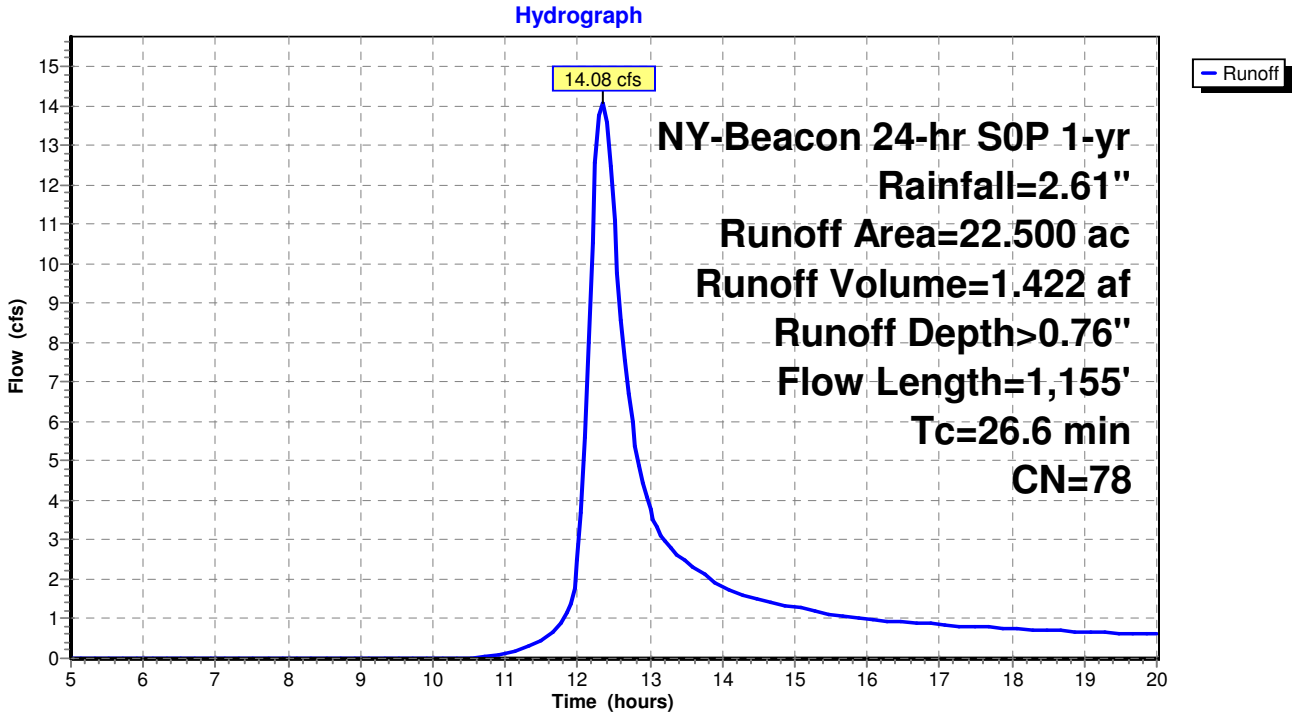
Runoff = 14.08 cfs @ 12.34 hrs, Volume= 1.422 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

Area (ac)	CN	Description
15.700	77	Woods, Good, HSG D
5.800	78	Meadow, non-grazed, HSG D
0.500	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
22.500	78	Weighted Average
22.000		97.78% Pervious Area
0.500		2.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0600	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
4.7	345	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	170	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	340	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.0	200	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
26.6	1,155	Total			

Subcatchment PRE:



Summary for Subcatchment PRE:

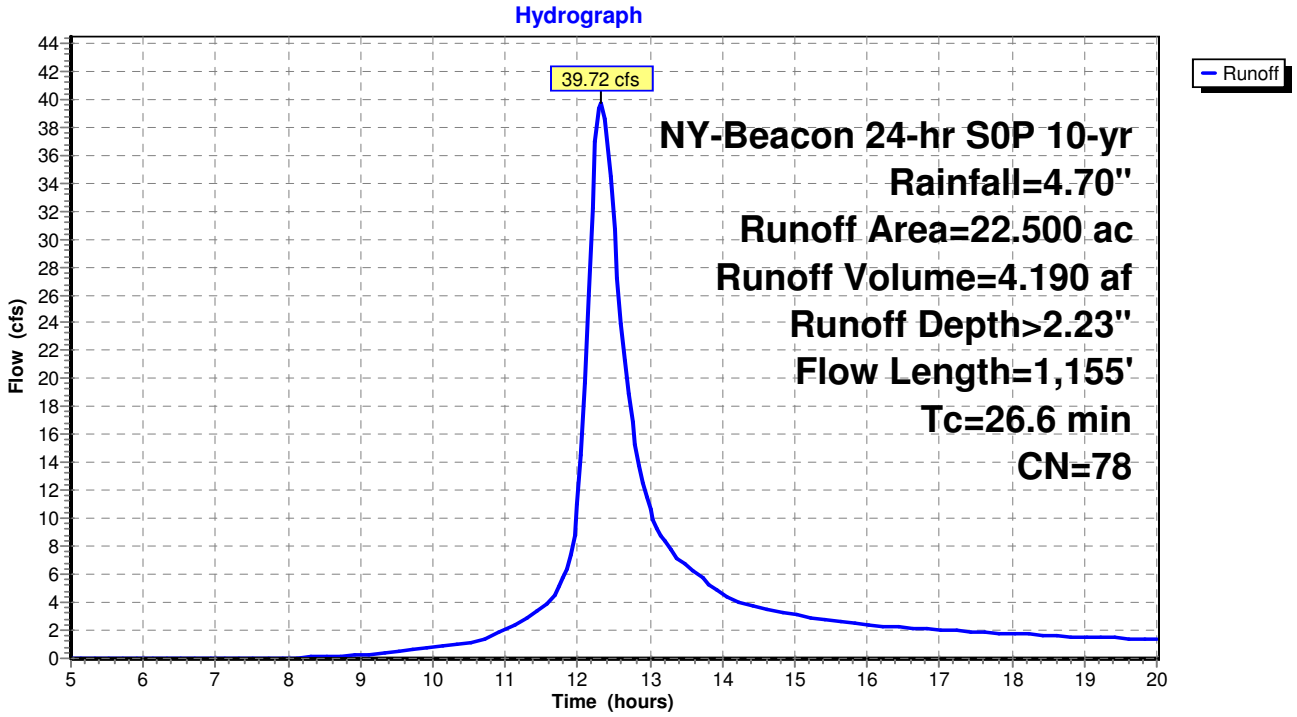
Runoff = 39.72 cfs @ 12.33 hrs, Volume= 4.190 af, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

Area (ac)	CN	Description
15.700	77	Woods, Good, HSG D
5.800	78	Meadow, non-grazed, HSG D
0.500	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
22.500	78	Weighted Average
22.000		97.78% Pervious Area
0.500		2.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0600	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
4.7	345	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	170	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	340	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.0	200	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
26.6	1,155	Total			

Subcatchment PRE:



Summary for Subcatchment PRE:

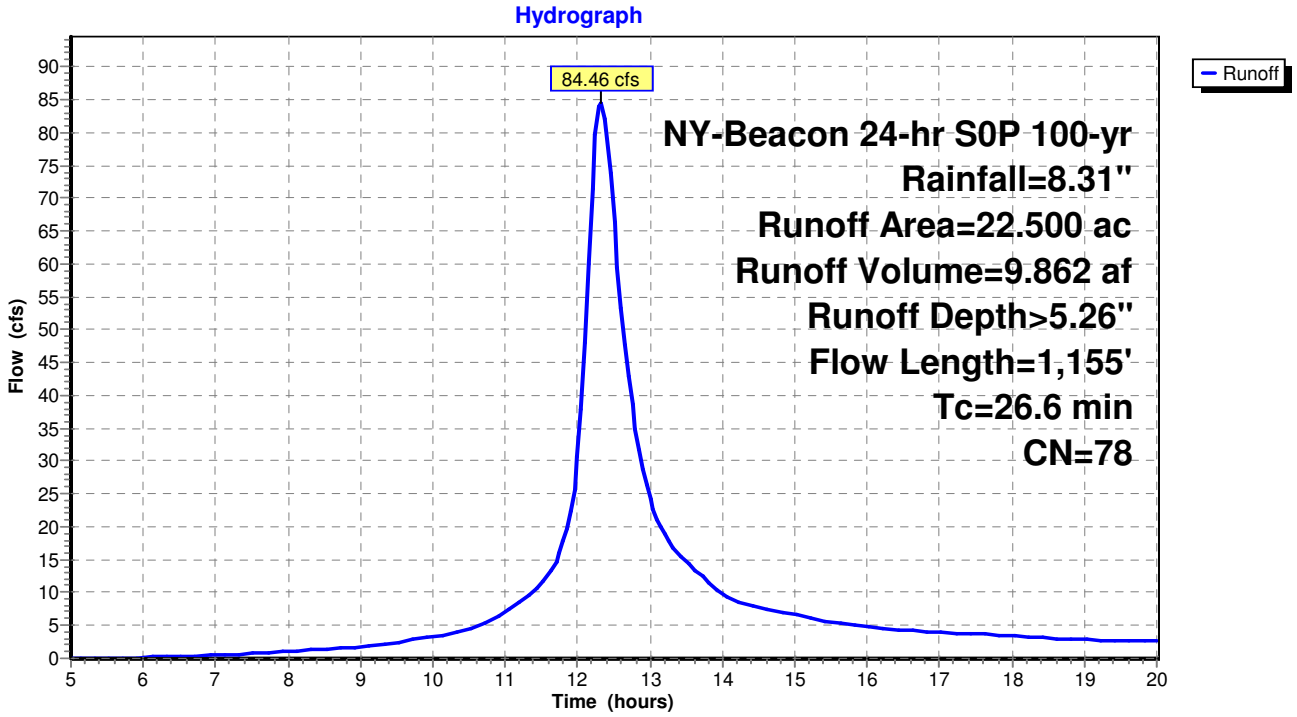
Runoff = 84.46 cfs @ 12.32 hrs, Volume= 9.862 af, Depth> 5.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

Area (ac)	CN	Description
15.700	77	Woods, Good, HSG D
5.800	78	Meadow, non-grazed, HSG D
0.500	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
22.500	78	Weighted Average
22.000		97.78% Pervious Area
0.500		2.22% Impervious Area

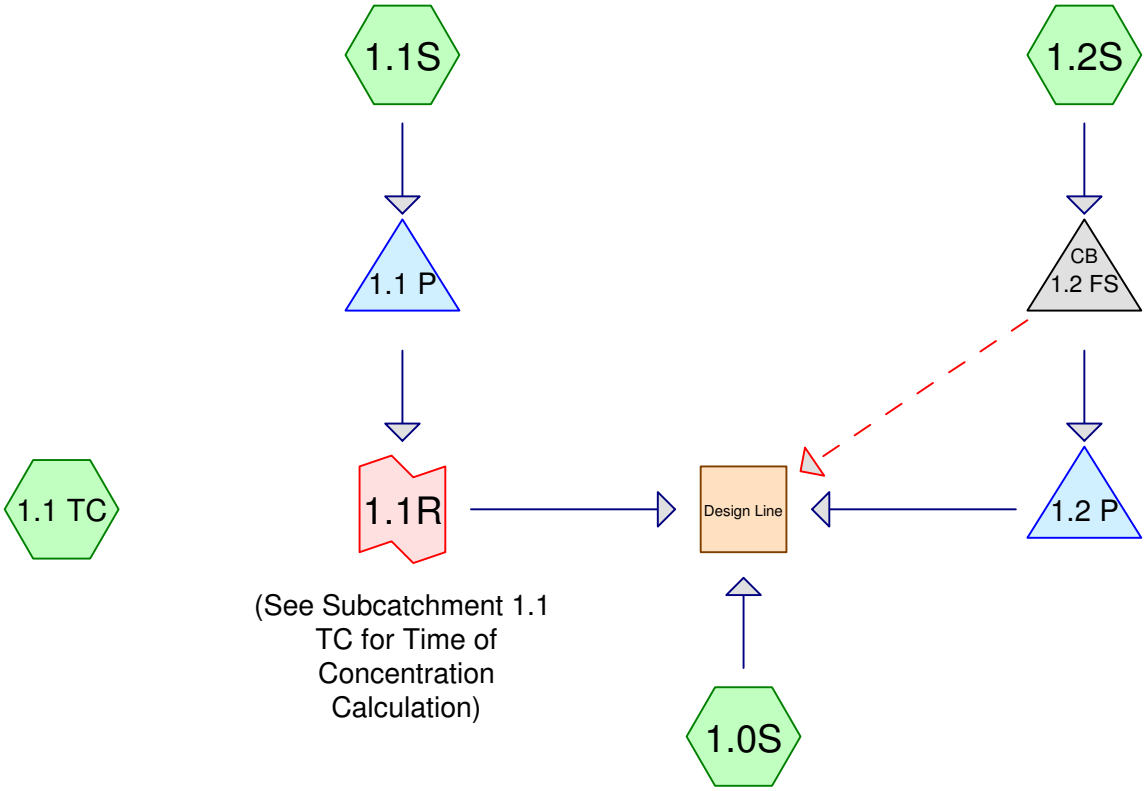
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0600	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
4.7	345	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	170	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	340	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.0	200	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
26.6	1,155	Total			

Subcatchment PRE:



APPENDIX C

Post-Development Computer Data



Subcat Reach Pond Link

Routing Diagram for Post Development

Prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., Printed 7/27/2020

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Summary for Subcatchment 1.0S:

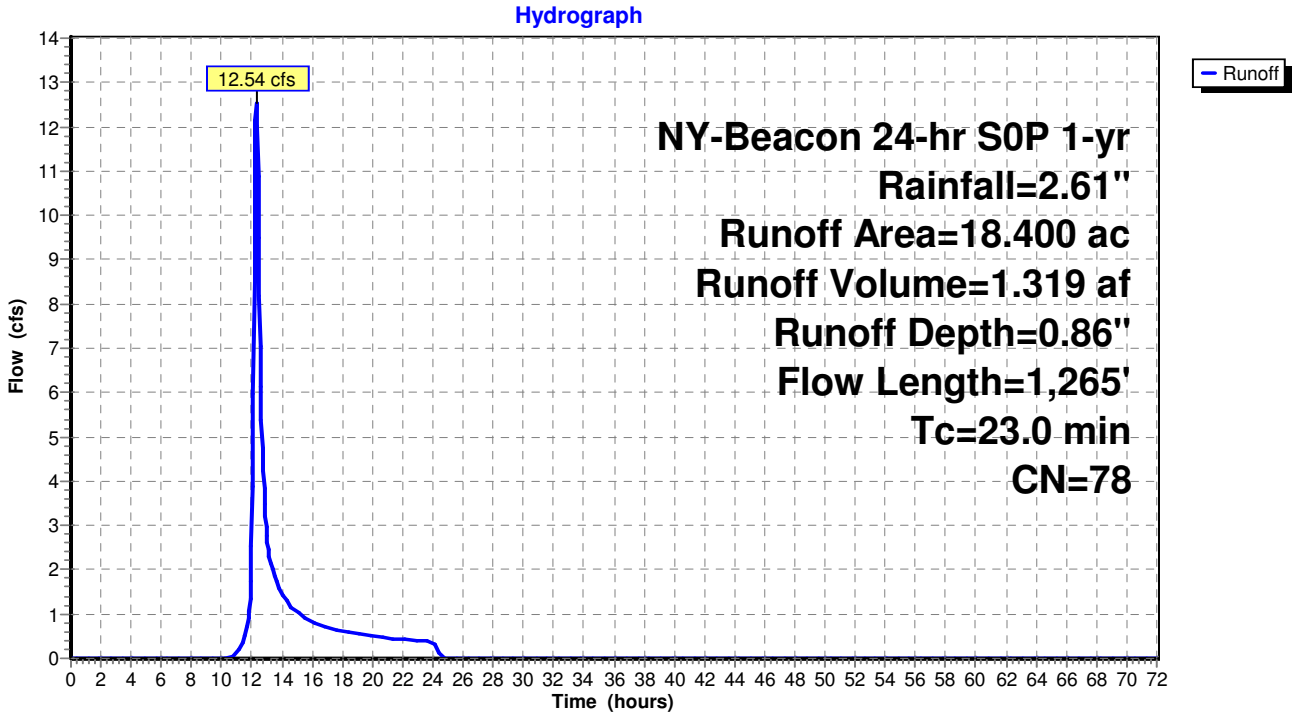
Runoff = 12.54 cfs @ 12.30 hrs, Volume= 1.319 af, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

Area (ac)	CN	Description
11.100	77	Woods, Good, HSG D
5.800	78	Meadow, non-grazed, HSG D
1.000	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
18.400	78	Weighted Average
17.900		97.28% Pervious Area
0.500		2.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0800	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
4.7	345	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	170	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.1	280	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	235	0.0500	3.35		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	55	0.0450	11.17	13.70	**Pipe Channel, SDI 14A TO DI 14** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.1	80	0.0410	14.58	45.81	**Pipe Channel, DI 14 TO ES 13** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
23.0	1,265	Total			

Subcatchment 1.0S:



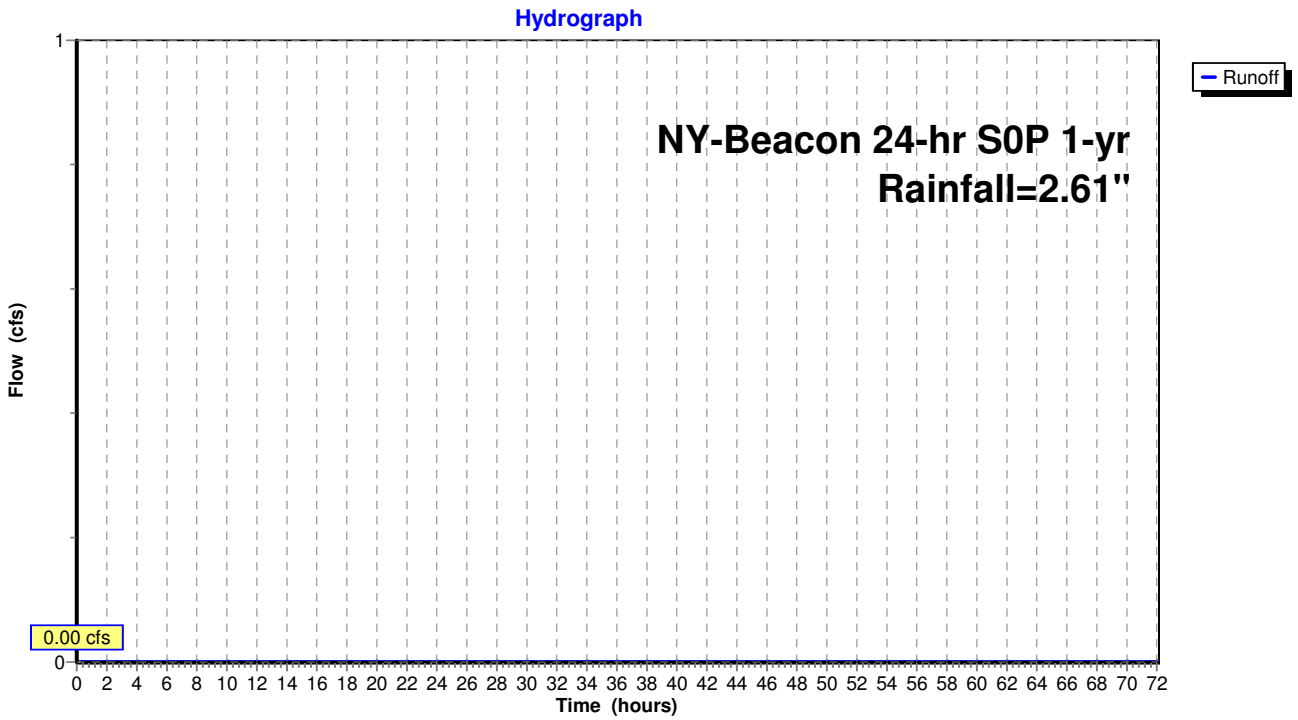
Summary for Subcatchment 1.1 TC:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.4	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
0.6	30	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.0	130	Total			

Subcatchment 1.1 TC:



Summary for Subcatchment 1.1S:

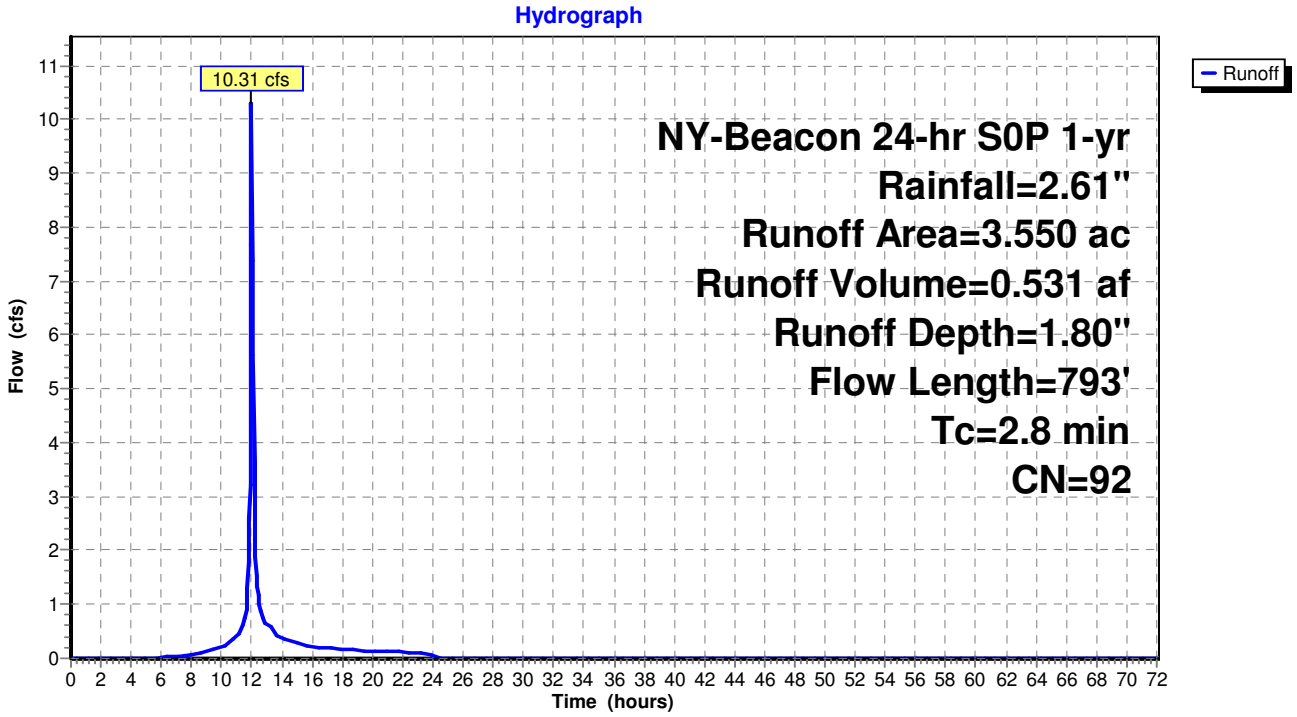
Runoff = 10.31 cfs @ 12.00 hrs, Volume= 0.531 af, Depth= 1.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

Area (ac)	CN	Description
2.350	98	Paved parking, HSG D
1.200	80	>75% Grass cover, Good, HSG D
3.550	92	Weighted Average
1.200		33.80% Pervious Area
2.350		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0600	2.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.7	200	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	35	0.0120	4.97	3.90	**Pipe Channel, CB 6 TO CB 5** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.5	183	0.0130	6.00	7.37	**Pipe Channel, CB 5 TO CB 4** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.4	136	0.0100	5.94	10.50	**Pipe Channel, CB 4 TO CB 3** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.2	63	0.0100	5.94	10.50	**Pipe Channel, CB 3 TO CB 2** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.1	76	0.0360	11.28	19.93	**Pipe Channel, CB 2 TO ES 1** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
2.8	793	Total			

Subcatchment 1.1S:



Summary for Subcatchment 1.2S:

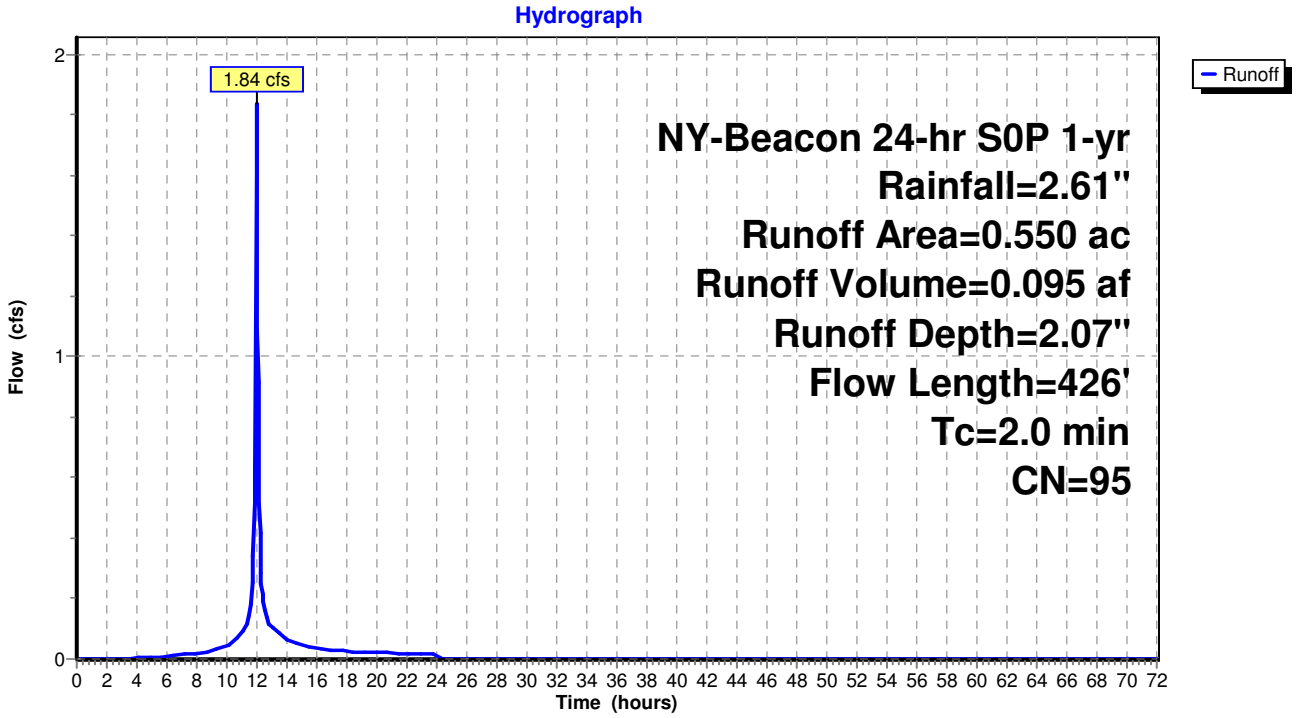
Runoff = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.100	80	>75% Grass cover, Good, HSG D
0.550	95	Weighted Average
0.100		18.18% Pervious Area
0.450		81.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0600	2.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.4	120	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.7	160	0.0350	3.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	46	0.0300	7.86	6.17	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.0	426	Total			

Subcatchment 1.2S:

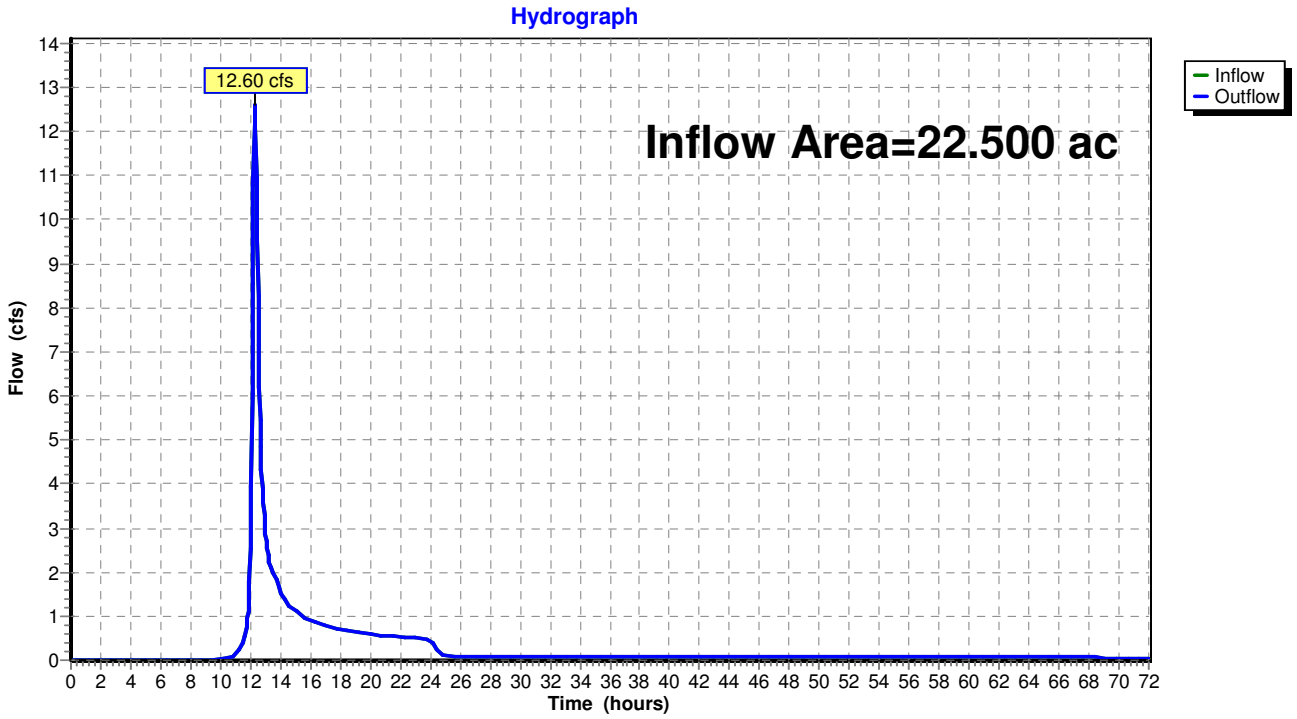


Summary for Reach Design Line:

Inflow Area = 22.500 ac, 14.67% Impervious, Inflow Depth > 0.93" for 1-yr event
Inflow = 12.60 cfs @ 12.30 hrs, Volume= 1.737 af
Outflow = 12.60 cfs @ 12.30 hrs, Volume= 1.737 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach Design Line:



Summary for Pond 1.1 P:

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth = 1.80" for 1-yr event
Inflow = 10.31 cfs @ 12.00 hrs, Volume= 0.531 af
Outflow = 0.11 cfs @ 23.08 hrs, Volume= 0.420 af, Atten= 99%, Lag= 665.1 min
Primary = 0.11 cfs @ 23.08 hrs, Volume= 0.420 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Starting Elev= 180.00' Surf.Area= 7,640 sf Storage= 10,715 cf
Peak Elev= 182.22' @ 23.08 hrs Surf.Area= 13,499 sf Storage= 29,210 cf (18,495 cf above start)
Flood Elev= 184.50' Surf.Area= 19,225 sf Storage= 60,459 cf (49,744 cf above start)

Plug-Flow detention time= 2,709.8 min calculated for 0.174 af (33% of inflow)
Center-of-Mass det. time= 1,511.7 min (2,320.7 - 809.1)

Volume	Invert	Avail.Storage	Storage Description
#1	175.00'	2,050 cf	**Forebay (Prismatic)** Listed below (Recalc)
#2	175.00'	67,360 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		69,410 cf	Total Available Storage

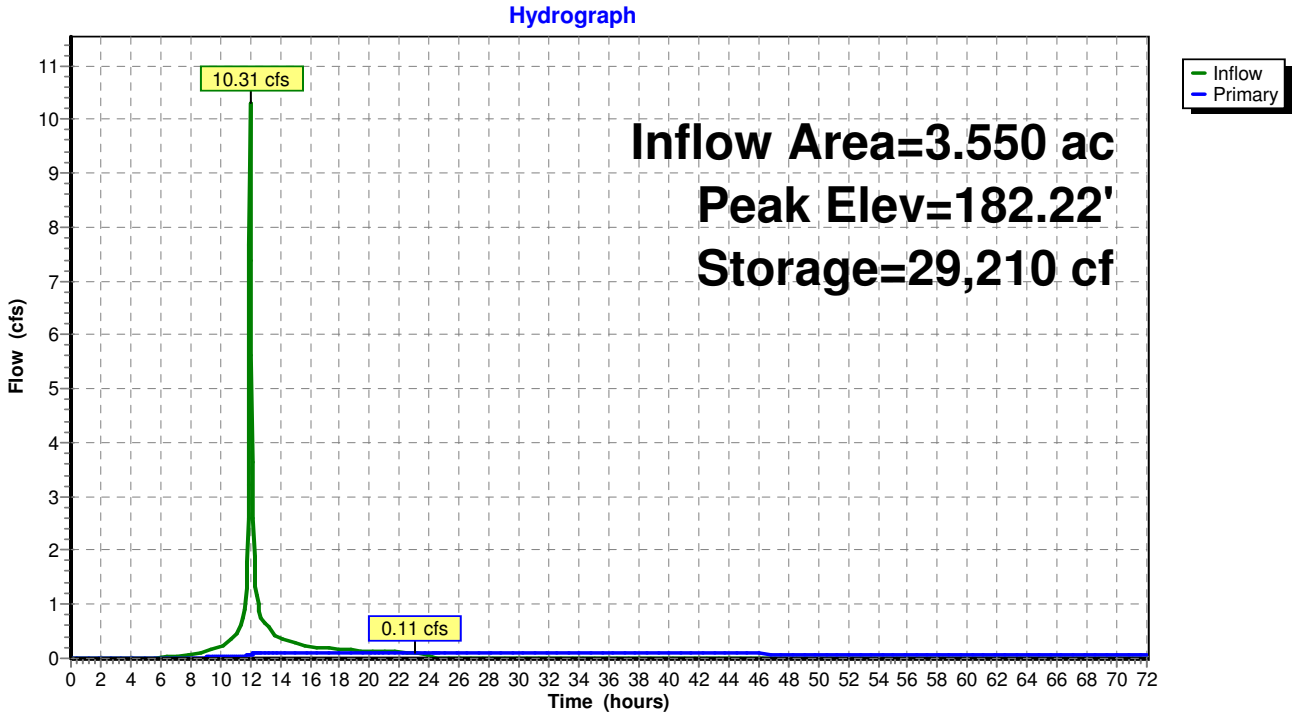
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
175.00	5	0	0
177.00	110	115	115
179.00	450	560	675
180.00	2,300	1,375	2,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
175.00	500	0	0
177.00	1,180	1,680	1,680
179.00	2,090	3,270	4,950
180.00	5,340	3,715	8,665
182.00	10,730	16,070	24,735
184.00	14,970	25,700	50,435
185.00	18,880	16,925	67,360

Device	Routing	Invert	Outlet Devices
#1	Primary	179.00'	**24.0" Round Culvert** L= 37.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 179.00' / 178.50' S= 0.0135 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	180.00'	**1.6" Vert. Orifice/Grate** C= 0.600
#3	Device 1	182.20'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.11 cfs @ 23.08 hrs HW=182.22' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.11 cfs of 22.54 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.10 cfs @ 7.07 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.41 fps)

Pond 1.1 P:


Hydrograph
Inflow Area=3.550 ac
Peak Elev=182.22'
Storage=29,210 cf
10.31 cfs
0.11 cfs
Inflow
Primary
Flow (cfs)
Time (hours)
0 1 2 3 4 5 6 7 8 9 10 11
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Stage-Area-Storage for Pond 1.1 P:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
175.00	0	180.20	11,837
175.10	52	180.30	12,438
175.20	109	180.40	13,067
175.30	169	180.50	13,722
175.40	233	180.60	14,404
175.50	302	180.70	15,113
175.60	374	180.80	15,849
175.70	450	180.90	16,612
175.80	530	181.00	17,403
175.90	613	181.10	18,219
176.00	701	181.20	19,063
176.10	793	181.30	19,934
176.20	889	181.40	20,832
176.30	988	181.50	21,757
176.40	1,092	181.60	22,709
176.50	1,199	181.70	23,687
176.60	1,310	181.80	24,693
176.70	1,426	181.90	25,725
176.80	1,545	182.00	26,785
176.90	1,668	182.10	27,869
177.00	1,795	182.20	28,973
177.10	1,927	182.30	30,099
177.20	2,065	182.40	31,247
177.30	2,210	182.50	32,415
177.40	2,361	182.60	33,605
177.50	2,518	182.70	34,815
177.60	2,681	182.80	36,047
177.70	2,851	182.90	37,301
177.80	3,027	183.00	38,575
177.90	3,209	183.10	39,871
178.00	3,398	183.20	41,187
178.10	3,592	183.30	42,525
178.20	3,793	183.40	43,885
178.30	4,000	183.50	45,265
178.40	4,214	183.60	46,667
178.50	4,433	183.70	48,089
178.60	4,659	183.80	49,533
178.70	4,891	183.90	50,999
178.80	5,130	184.00	52,485
178.90	5,374	184.10	54,002
179.00	5,625	184.20	55,557
179.10	5,904	184.30	57,152
179.20	6,235	184.40	58,786
179.30	6,617	184.50	60,459
179.40	7,049	184.60	62,171
179.50	7,533	184.70	63,922
179.60	8,067	184.80	65,712
179.70	8,652	184.90	67,542
179.80	9,289	185.00	**69,410**
179.90	9,977		
180.00	10,715		
180.10	11,262		

Summary for Pond 1.2 FS:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 2.07" for 1-yr event
Inflow = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af
Outflow = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min
Primary = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

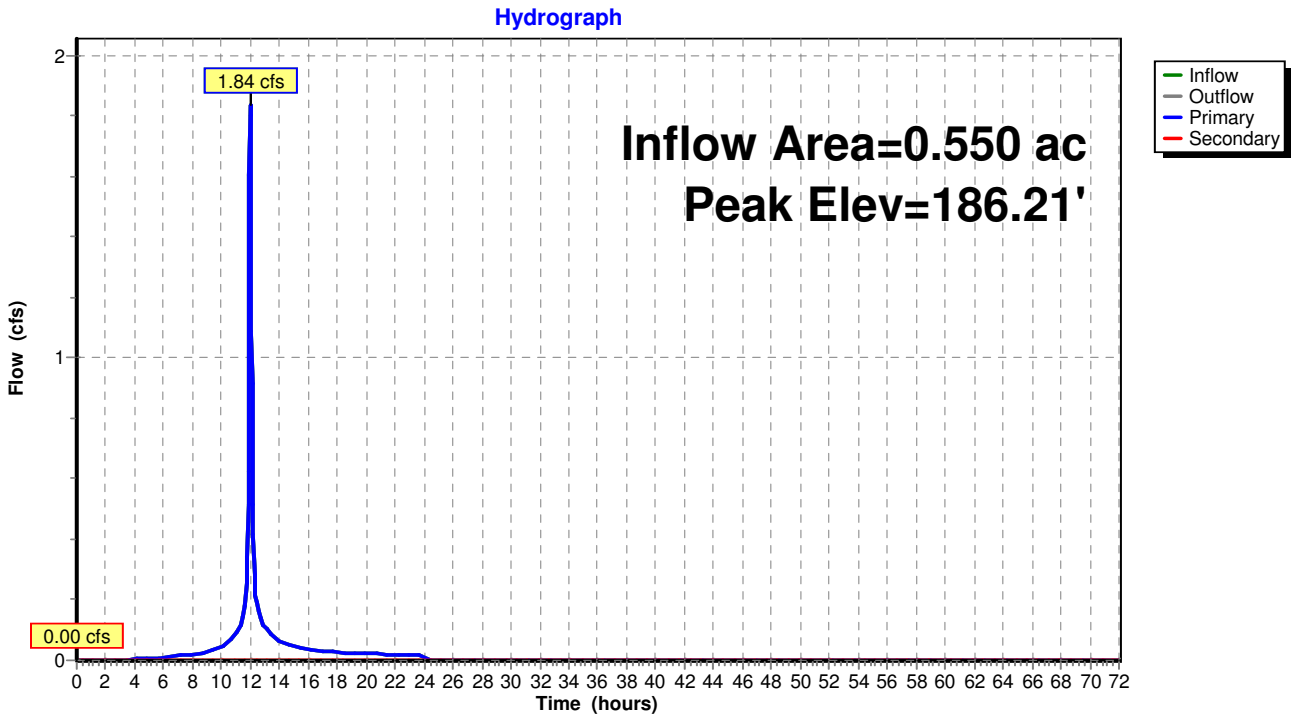
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 186.21' @ 11.99 hrs
Flood Elev= 187.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	184.70'	**8.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.70' / 184.50' S= 0.0167 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Secondary	184.70'	**12.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.70' / 184.00' S= 0.0233 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	186.20'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.75 cfs @ 11.99 hrs HW=186.11' TW=182.48' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.75 cfs @ 5.00 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=184.70' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1.2 FS:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=186.21'
1.84 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 1 2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Stage-Area-Storage for Pond 1.2 FS:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
184.70	**0**	185.74	0	186.78	0
184.72	0	185.76	0	186.80	0
184.74	0	185.78	0	186.82	0
184.76	0	185.80	0	186.84	0
184.78	0	185.82	0	186.86	0
184.80	0	185.84	0	186.88	0
184.82	0	185.86	0	186.90	0
184.84	0	185.88	0	186.92	0
184.86	0	185.90	0	186.94	0
184.88	0	185.92	0	186.96	0
184.90	0	185.94	0	186.98	0
184.92	0	185.96	0	187.00	0
184.94	0	185.98	0	187.02	0
184.96	0	186.00	0	187.04	0
184.98	0	186.02	0	187.06	0
185.00	0	186.04	0	187.08	0
185.02	0	186.06	0	187.10	0
185.04	0	186.08	0	187.12	0
185.06	0	186.10	0	187.14	0
185.08	0	186.12	0	187.16	0
185.10	0	186.14	0	187.18	0
185.12	0	186.16	0	187.20	0
185.14	0	186.18	0	187.22	0
185.16	0	186.20	0	187.24	0
185.18	0	186.22	0	187.26	0
185.20	0	186.24	0	187.28	0
185.22	0	186.26	0	187.30	0
185.24	0	186.28	0	187.32	0
185.26	0	186.30	0	187.34	0
185.28	0	186.32	0	187.36	0
185.30	0	186.34	0	187.38	0
185.32	0	186.36	0	187.40	0
185.34	0	186.38	0	187.42	0
185.36	0	186.40	0	187.44	0
185.38	0	186.42	0	187.46	0
185.40	0	186.44	0	187.48	0
185.42	0	186.46	0	187.50	0
185.44	0	186.48	0	187.52	0
185.46	0	186.50	0	187.54	0
185.48	0	186.52	0	187.56	0
185.50	0	186.54	0	187.58	0
185.52	0	186.56	0	187.60	0
185.54	0	186.58	0	187.62	0
185.56	0	186.60	0	187.64	0
185.58	0	186.62	0	187.66	0
185.60	0	186.64	0	187.68	0
185.62	0	186.66	0	187.70	0
185.64	0	186.68	0		
185.66	0	186.70	0		
185.68	0	186.72	0		
185.70	0	186.74	0		
185.72	0	186.76	0		

Summary for Pond 1.2 P:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 2.07" for 1-yr event
Inflow = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af
Outflow = 0.64 cfs @ 11.95 hrs, Volume= 0.095 af, Atten= 65%, Lag= 0.0 min
Discarded = 0.64 cfs @ 11.95 hrs, Volume= 0.095 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 182.77' @ 12.14 hrs Surf.Area= 0.030 ac Storage= 0.013 af

Plug-Flow detention time= 4.0 min calculated for 0.095 af (100% of inflow)
Center-of-Mass det. time= 4.0 min (792.2 - 788.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	182.00'	0.028 af	**34.75'W x 38.04'L x 3.50'H Field A** 0.106 af Overall - 0.037 af Embedded = 0.069 af x 40.0% Voids
#2A	182.50'	0.037 af	**ADS_StormTech SC-740** x 35 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 7 rows
		0.065 af	Total Available Storage

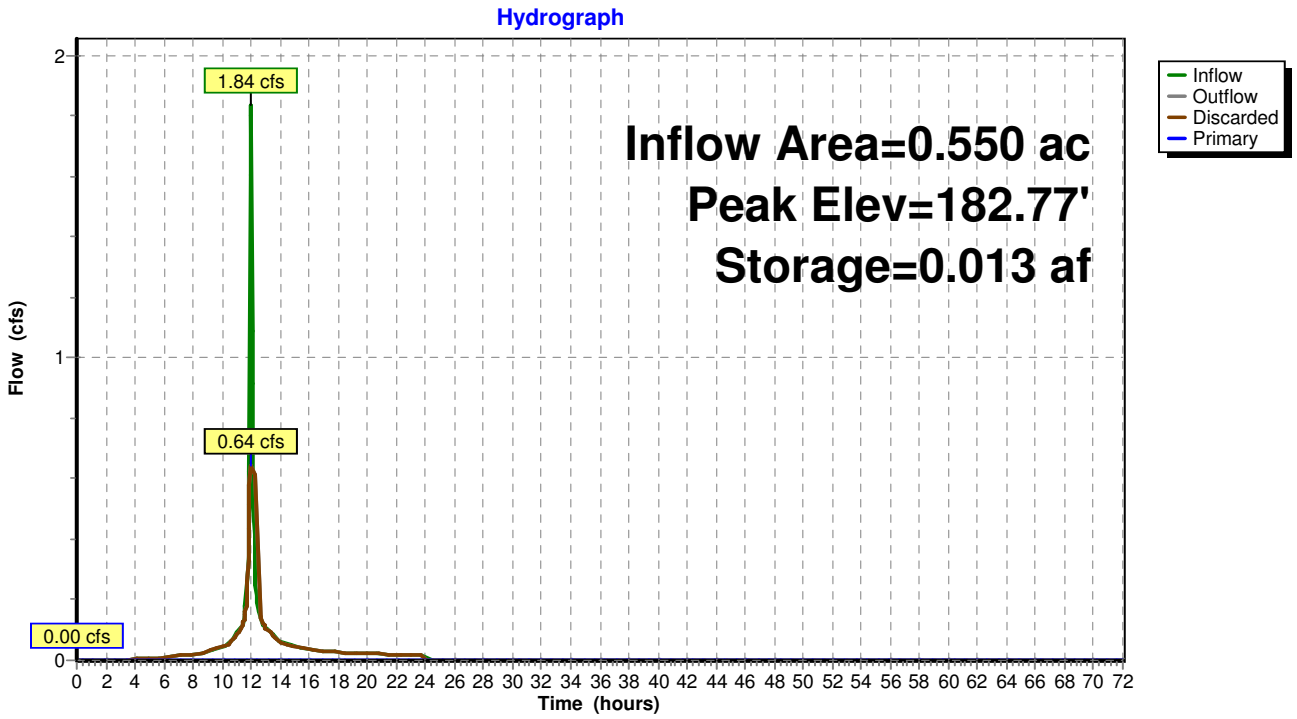
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	182.00'	**21.000 in/hr Exfiltration over Horizontal area** Phase-In= 0.10'
#2	Primary	184.50'	**6.0" Round Culvert** L= 17.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.50' / 184.30' S= 0.0118 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Discarded OutFlow Max=0.64 cfs @ 11.95 hrs HW=182.26' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.64 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=182.00' TW=0.00' (Dynamic Tailwater)
↑**2=Culvert** (Controls 0.00 cfs)

Pond 1.2 P:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=182.77'
Storage=0.013 af
1.84 cfs
0.64 cfs
0.00 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0
1
2

Stage-Area-Storage for Pond 1.2 P:

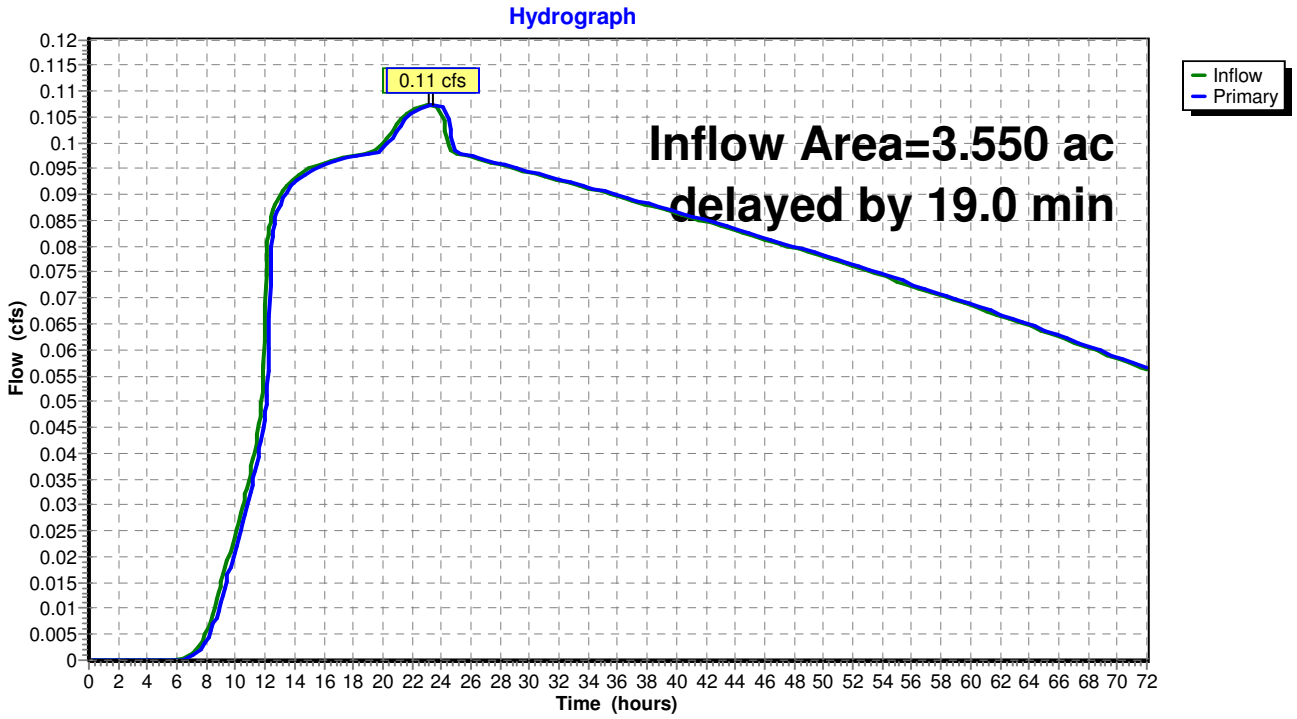
Elevation (feet)	Horizontal (acres)	Storage (acre-feet)
182.00	**0.030**	0.000
182.05	0.030	0.001
182.10	0.030	0.001
182.15	0.030	0.002
182.20	0.030	0.002
182.25	0.030	0.003
182.30	0.030	0.004
182.35	0.030	0.004
182.40	0.030	0.005
182.45	0.030	0.005
182.50	0.030	0.006
182.55	0.030	0.007
182.60	0.030	0.009
182.65	0.030	0.010
182.70	0.030	0.011
182.75	0.030	0.012
182.80	0.030	0.014
182.85	0.030	0.015
182.90	0.030	0.016
182.95	0.030	0.017
183.00	0.030	0.018
183.05	0.030	0.020
183.10	0.030	0.021
183.15	0.030	0.022
183.20	0.030	0.023
183.25	0.030	0.024
183.30	0.030	0.026
183.35	0.030	0.027
183.40	0.030	0.028
183.45	0.030	0.029
183.50	0.030	0.030
183.55	0.030	0.032
183.60	0.030	0.033
183.65	0.030	0.034
183.70	0.030	0.035
183.75	0.030	0.036
183.80	0.030	0.037
183.85	0.030	0.038
183.90	0.030	0.039
183.95	0.030	0.040
184.00	0.030	0.041
184.05	0.030	0.043
184.10	0.030	0.044
184.15	0.030	0.045
184.20	0.030	0.046
184.25	0.030	0.047
184.30	0.030	0.048
184.35	0.030	0.049
184.40	0.030	0.050
184.45	0.030	0.050
184.50	0.030	0.051
184.55	0.030	0.052
184.60	0.030	0.053
184.65	0.030	0.054
184.70	0.030	0.055
184.75	0.030	0.056
184.80	0.030	0.056
184.85	0.030	0.057
184.90	0.030	0.058
184.95	0.030	0.058
185.00	0.030	0.059
185.05	0.030	0.059
185.10	0.030	0.060
185.15	0.030	0.061
185.20	0.030	0.061
185.25	0.030	0.062
185.30	0.030	0.062
185.35	0.030	0.063
185.40	0.030	0.064
185.45	0.030	0.064
185.50	0.030	**0.065**

Summary for Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth > 1.42" for 1-yr event
Inflow = 0.11 cfs @ 23.08 hrs, Volume= 0.420 af
Primary = 0.11 cfs @ 23.40 hrs, Volume= 0.418 af, Atten= 0%, Lag= 19.0 min

Primary outflow = Inflow delayed by 19.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)



Summary for Subcatchment 1.0S:

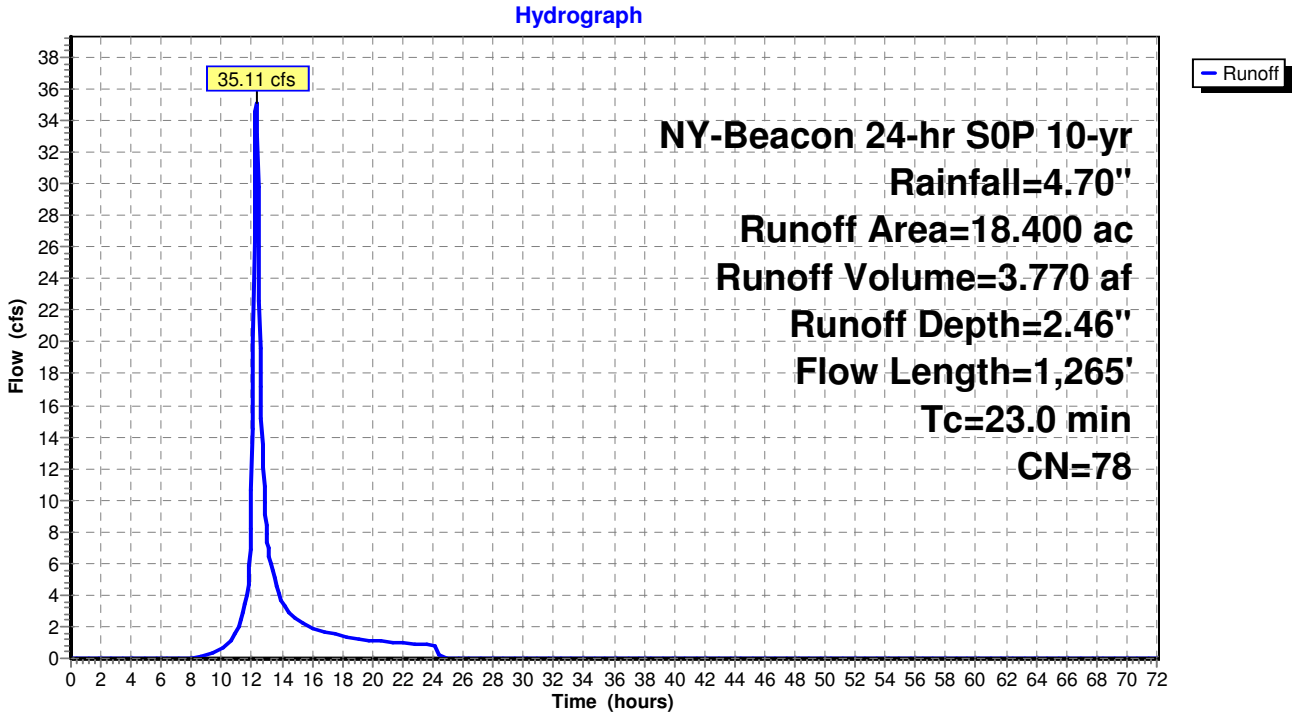
Runoff = 35.11 cfs @ 12.28 hrs, Volume= 3.770 af, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

Area (ac)	CN	Description
11.100	77	Woods, Good, HSG D
5.800	78	Meadow, non-grazed, HSG D
1.000	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
18.400	78	Weighted Average
17.900		97.28% Pervious Area
0.500		2.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0800	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
4.7	345	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	170	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.1	280	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	235	0.0500	3.35		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	55	0.0450	11.17	13.70	**Pipe Channel, SDI 14A TO DI 14** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.1	80	0.0410	14.58	45.81	**Pipe Channel, DI 14 TO ES 13** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
23.0	1,265	Total			

Subcatchment 1.0S:



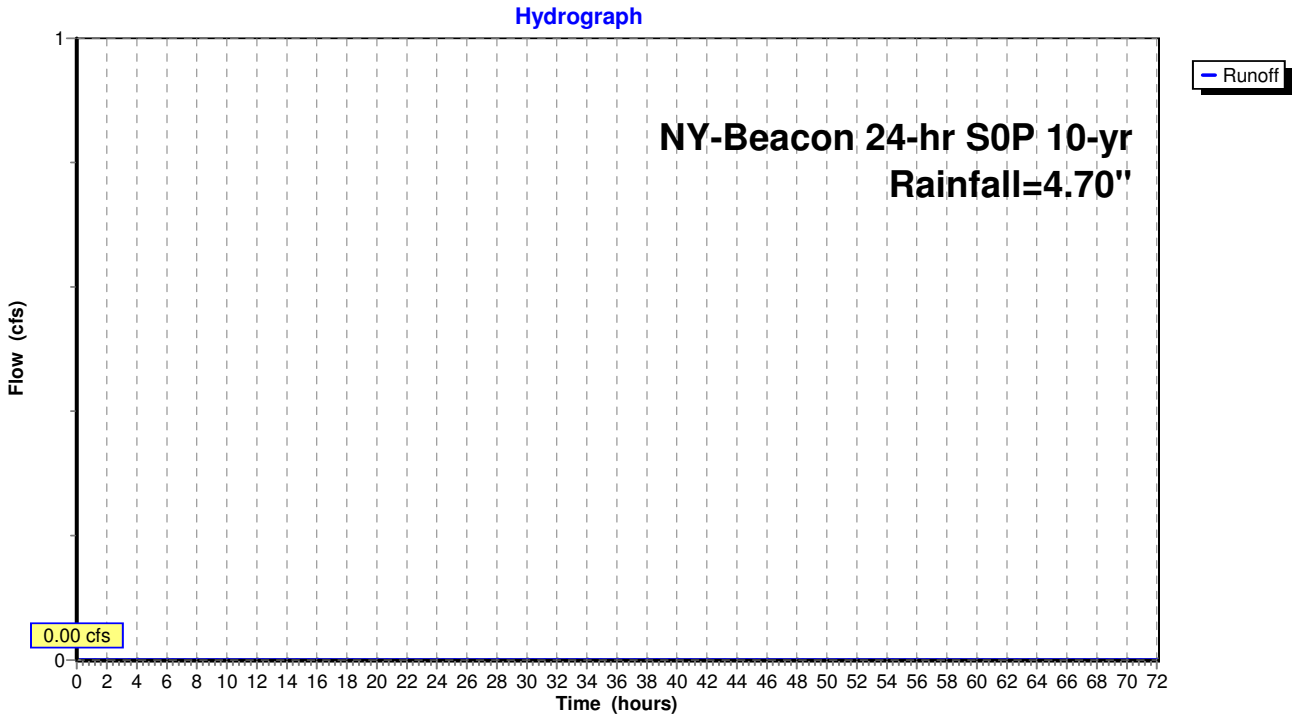
Summary for Subcatchment 1.1 TC:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.4	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
0.6	30	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.0	130	Total			

Subcatchment 1.1 TC:



Summary for Subcatchment 1.1S:

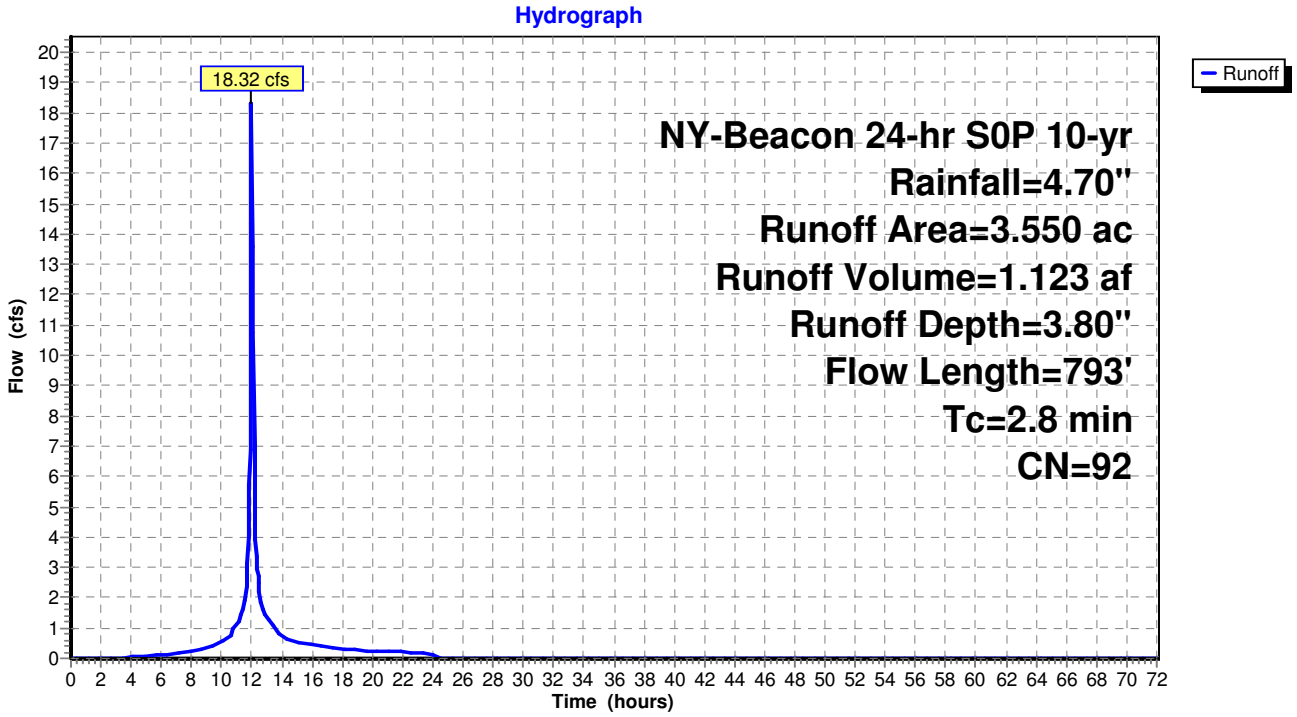
Runoff = 18.32 cfs @ 12.00 hrs, Volume= 1.123 af, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

Area (ac)	CN	Description
2.350	98	Paved parking, HSG D
1.200	80	>75% Grass cover, Good, HSG D
3.550	92	Weighted Average
1.200		33.80% Pervious Area
2.350		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0600	2.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.7	200	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	35	0.0120	4.97	3.90	**Pipe Channel, CB 6 TO CB 5** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.5	183	0.0130	6.00	7.37	**Pipe Channel, CB 5 TO CB 4** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.4	136	0.0100	5.94	10.50	**Pipe Channel, CB 4 TO CB 3** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.2	63	0.0100	5.94	10.50	**Pipe Channel, CB 3 TO CB 2** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.1	76	0.0360	11.28	19.93	**Pipe Channel, CB 2 TO ES 1** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
2.8	793	Total			

Subcatchment 1.1S:



Summary for Subcatchment 1.2S:

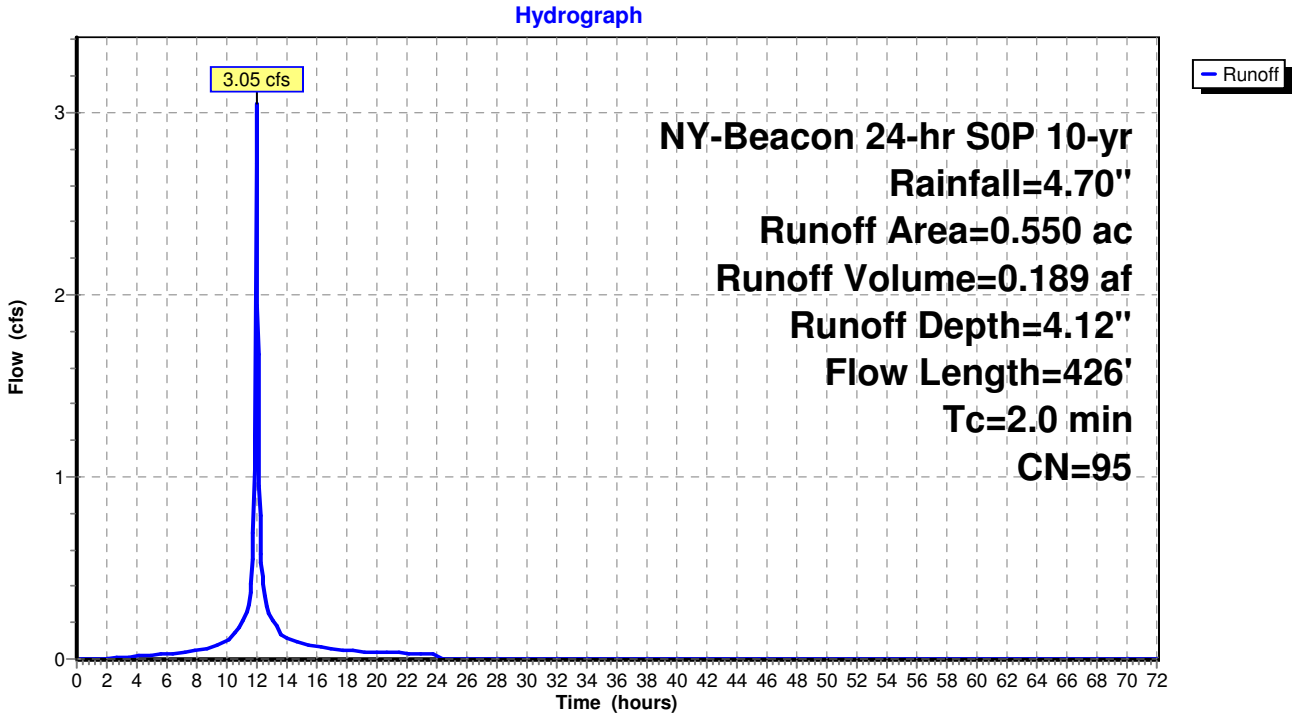
Runoff = 3.05 cfs @ 11.99 hrs, Volume= 0.189 af, Depth= 4.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.100	80	>75% Grass cover, Good, HSG D
0.550	95	Weighted Average
0.100		18.18% Pervious Area
0.450		81.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0600	2.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.4	120	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.7	160	0.0350	3.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	46	0.0300	7.86	6.17	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.0	426	Total			

Subcatchment 1.2S:

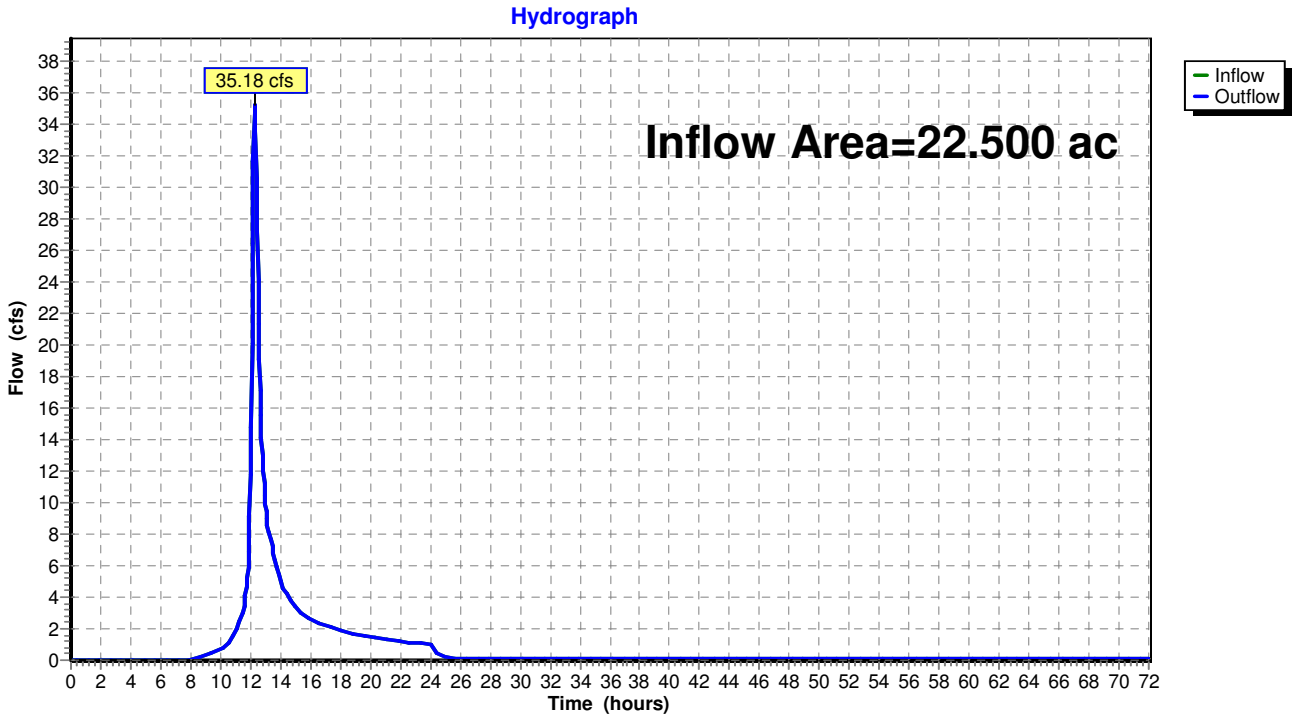


Summary for Reach Design Line:

Inflow Area = 22.500 ac, 14.67% Impervious, Inflow Depth > 2.55" for 10-yr event
Inflow = 35.18 cfs @ 12.29 hrs, Volume= 4.779 af
Outflow = 35.18 cfs @ 12.29 hrs, Volume= 4.779 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach Design Line:



Summary for Pond 1.1 P:

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth = 3.80" for 10-yr event
Inflow = 18.32 cfs @ 12.00 hrs, Volume= 1.123 af
Outflow = 2.11 cfs @ 12.55 hrs, Volume= 1.002 af, Atten= 88%, Lag= 33.1 min
Primary = 2.11 cfs @ 12.55 hrs, Volume= 1.002 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Starting Elev= 180.00' Surf.Area= 7,640 sf Storage= 10,715 cf
Peak Elev= 182.93' @ 12.55 hrs Surf.Area= 14,995 sf Storage= 37,641 cf (26,926 cf above start)
Flood Elev= 184.50' Surf.Area= 19,225 sf Storage= 60,459 cf (49,744 cf above start)

Plug-Flow detention time= 1,085.8 min calculated for 0.756 af (67% of inflow)
Center-of-Mass det. time= 731.9 min (1,516.9 - 785.0)

Volume	Invert	Avail.Storage	Storage Description
#1	175.00'	2,050 cf	**Forebay (Prismatic)** Listed below (Recalc)
#2	175.00'	67,360 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		69,410 cf	Total Available Storage

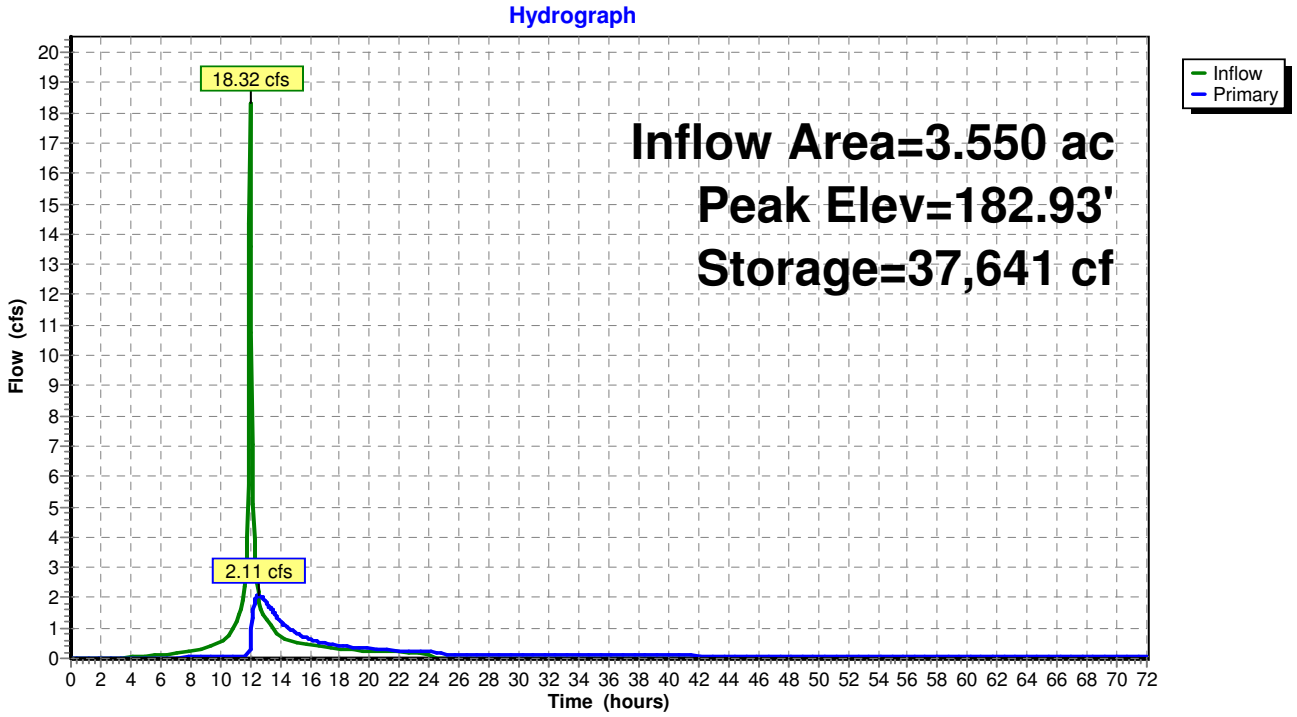
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
175.00	5	0	0
177.00	110	115	115
179.00	450	560	675
180.00	2,300	1,375	2,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
175.00	500	0	0
177.00	1,180	1,680	1,680
179.00	2,090	3,270	4,950
180.00	5,340	3,715	8,665
182.00	10,730	16,070	24,735
184.00	14,970	25,700	50,435
185.00	18,880	16,925	67,360

Device	Routing	Invert	Outlet Devices
#1	Primary	179.00'	**24.0" Round Culvert** L= 37.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 179.00' / 178.50' S= 0.0135 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	180.00'	**1.6" Vert. Orifice/Grate** C= 0.600
#3	Device 1	182.20'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.11 cfs @ 12.55 hrs HW=182.93' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.11 cfs of 25.88 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.11 cfs @ 8.14 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 2.00 cfs @ 2.74 fps)

Pond 1.1 P:


Hydrograph
Inflow Area=3.550 ac
Peak Elev=182.93'
Storage=37,641 cf
18.32 cfs
2.11 cfs
Inflow
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Stage-Area-Storage for Pond 1.1 P:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
175.00	0	180.20	11,837
175.10	52	180.30	12,438
175.20	109	180.40	13,067
175.30	169	180.50	13,722
175.40	233	180.60	14,404
175.50	302	180.70	15,113
175.60	374	180.80	15,849
175.70	450	180.90	16,612
175.80	530	181.00	17,403
175.90	613	181.10	18,219
176.00	701	181.20	19,063
176.10	793	181.30	19,934
176.20	889	181.40	20,832
176.30	988	181.50	21,757
176.40	1,092	181.60	22,709
176.50	1,199	181.70	23,687
176.60	1,310	181.80	24,693
176.70	1,426	181.90	25,725
176.80	1,545	182.00	26,785
176.90	1,668	182.10	27,869
177.00	1,795	182.20	28,973
177.10	1,927	182.30	30,099
177.20	2,065	182.40	31,247
177.30	2,210	182.50	32,415
177.40	2,361	182.60	33,605
177.50	2,518	182.70	34,815
177.60	2,681	182.80	36,047
177.70	2,851	182.90	37,301
177.80	3,027	183.00	38,575
177.90	3,209	183.10	39,871
178.00	3,398	183.20	41,187
178.10	3,592	183.30	42,525
178.20	3,793	183.40	43,885
178.30	4,000	183.50	45,265
178.40	4,214	183.60	46,667
178.50	4,433	183.70	48,089
178.60	4,659	183.80	49,533
178.70	4,891	183.90	50,999
178.80	5,130	184.00	52,485
178.90	5,374	184.10	54,002
179.00	5,625	184.20	55,557
179.10	5,904	184.30	57,152
179.20	6,235	184.40	58,786
179.30	6,617	184.50	60,459
179.40	7,049	184.60	62,171
179.50	7,533	184.70	63,922
179.60	8,067	184.80	65,712
179.70	8,652	184.90	67,542
179.80	9,289	185.00	**69,410**
179.90	9,977		
180.00	10,715		
180.10	11,262		

Summary for Pond 1.2 FS:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 4.12" for 10-yr event
Inflow = 3.05 cfs @ 11.99 hrs, Volume= 0.189 af
Outflow = 3.05 cfs @ 11.99 hrs, Volume= 0.189 af, Atten= 0%, Lag= 0.0 min
Primary = 1.97 cfs @ 11.98 hrs, Volume= 0.181 af
Secondary = 1.07 cfs @ 11.99 hrs, Volume= 0.008 af

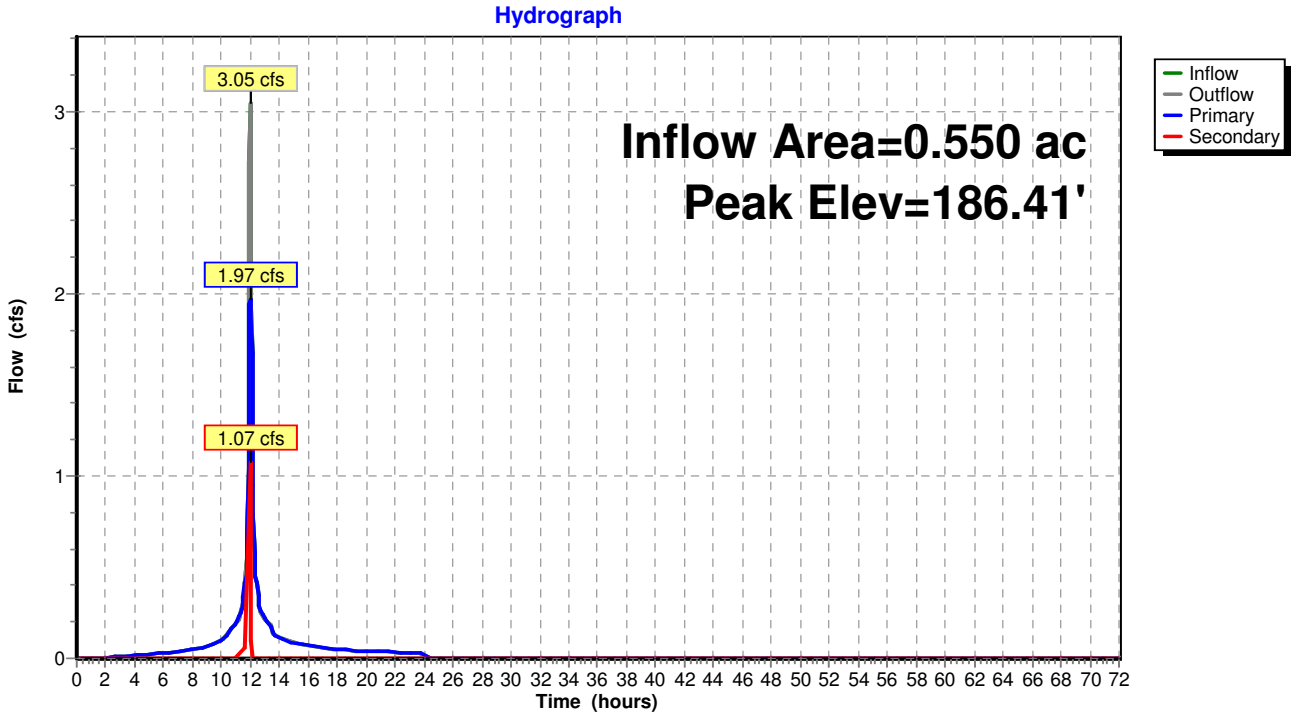
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 186.41' @ 11.98 hrs
Flood Elev= 187.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	184.70'	**8.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.70' / 184.50' S= 0.0167 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Secondary	184.70'	**12.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.70' / 184.00' S= 0.0233 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	186.20'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.96 cfs @ 11.98 hrs HW=186.39' TW=182.73' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.96 cfs @ 5.61 fps)

Secondary OutFlow Max=0.95 cfs @ 11.99 hrs HW=186.39' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.95 cfs of 4.13 cfs potential flow)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.95 cfs @ 1.23 fps)

Pond 1.2 FS:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=186.41'
3.05 cfs
1.97 cfs
1.07 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 1 2 3
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Stage-Area-Storage for Pond 1.2 FS:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
184.70	**0**	185.74	0	186.78	0
184.72	0	185.76	0	186.80	0
184.74	0	185.78	0	186.82	0
184.76	0	185.80	0	186.84	0
184.78	0	185.82	0	186.86	0
184.80	0	185.84	0	186.88	0
184.82	0	185.86	0	186.90	0
184.84	0	185.88	0	186.92	0
184.86	0	185.90	0	186.94	0
184.88	0	185.92	0	186.96	0
184.90	0	185.94	0	186.98	0
184.92	0	185.96	0	187.00	0
184.94	0	185.98	0	187.02	0
184.96	0	186.00	0	187.04	0
184.98	0	186.02	0	187.06	0
185.00	0	186.04	0	187.08	0
185.02	0	186.06	0	187.10	0
185.04	0	186.08	0	187.12	0
185.06	0	186.10	0	187.14	0
185.08	0	186.12	0	187.16	0
185.10	0	186.14	0	187.18	0
185.12	0	186.16	0	187.20	0
185.14	0	186.18	0	187.22	0
185.16	0	186.20	0	187.24	0
185.18	0	186.22	0	187.26	0
185.20	0	186.24	0	187.28	0
185.22	0	186.26	0	187.30	0
185.24	0	186.28	0	187.32	0
185.26	0	186.30	0	187.34	0
185.28	0	186.32	0	187.36	0
185.30	0	186.34	0	187.38	0
185.32	0	186.36	0	187.40	0
185.34	0	186.38	0	187.42	0
185.36	0	186.40	0	187.44	0
185.38	0	186.42	0	187.46	0
185.40	0	186.44	0	187.48	0
185.42	0	186.46	0	187.50	0
185.44	0	186.48	0	187.52	0
185.46	0	186.50	0	187.54	0
185.48	0	186.52	0	187.56	0
185.50	0	186.54	0	187.58	0
185.52	0	186.56	0	187.60	0
185.54	0	186.58	0	187.62	0
185.56	0	186.60	0	187.64	0
185.58	0	186.62	0	187.66	0
185.60	0	186.64	0	187.68	0
185.62	0	186.66	0	187.70	0
185.64	0	186.68	0		
185.66	0	186.70	0		
185.68	0	186.72	0		
185.70	0	186.74	0		
185.72	0	186.76	0		

Summary for Pond 1.2 P:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 3.95" for 10-yr event
Inflow = 1.97 cfs @ 11.98 hrs, Volume= 0.181 af
Outflow = 0.64 cfs @ 11.80 hrs, Volume= 0.181 af, Atten= 67%, Lag= 0.0 min
Discarded = 0.64 cfs @ 11.80 hrs, Volume= 0.181 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 183.37' @ 12.24 hrs Surf.Area= 0.030 ac Storage= 0.027 af

Plug-Flow detention time= 8.1 min calculated for 0.181 af (100% of inflow)
Center-of-Mass det. time= 8.1 min (778.3 - 770.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	182.00'	0.028 af	**34.75'W x 38.04'L x 3.50'H Field A** 0.106 af Overall - 0.037 af Embedded = 0.069 af x 40.0% Voids
#2A	182.50'	0.037 af	**ADS_StormTech SC-740** x 35 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 7 rows
		0.065 af	Total Available Storage

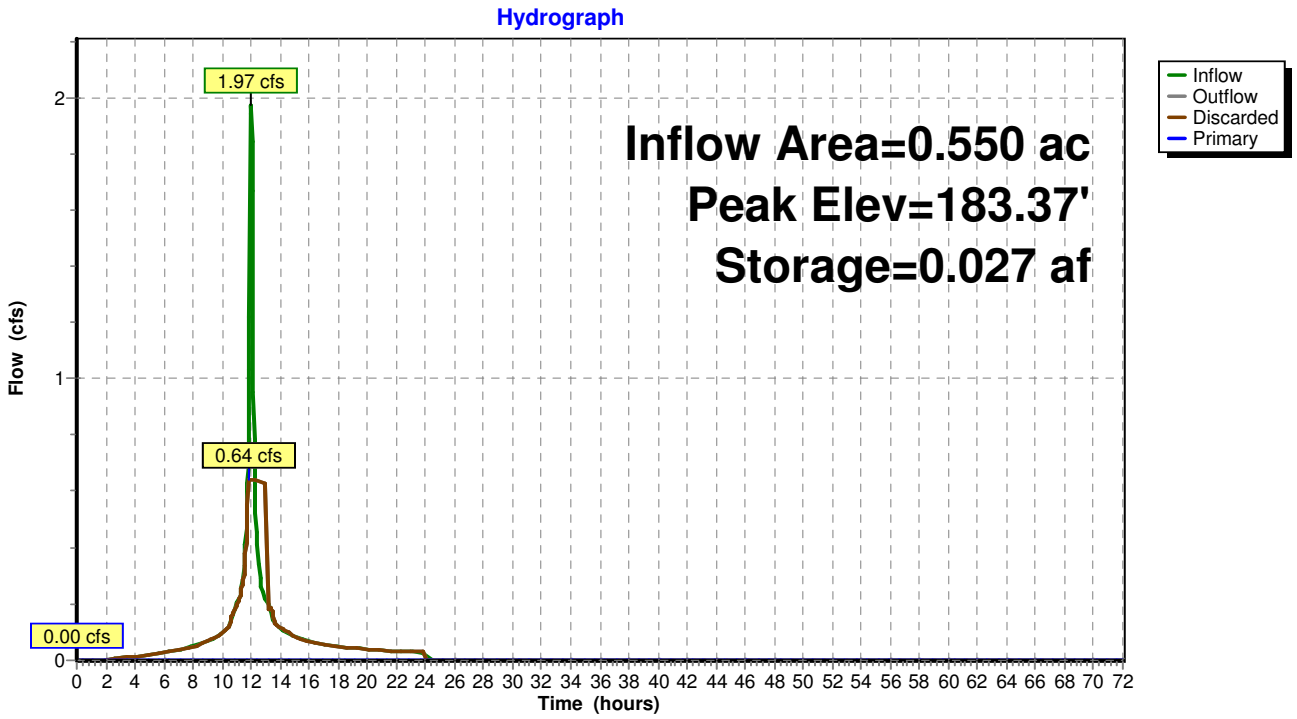
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	182.00'	**21.000 in/hr Exfiltration over Horizontal area** Phase-In= 0.10'
#2	Primary	184.50'	**6.0" Round Culvert** L= 17.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.50' / 184.30' S= 0.0118 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Discarded OutFlow Max=0.64 cfs @ 11.80 hrs HW=182.11' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.64 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=182.00' TW=0.00' (Dynamic Tailwater)
2=Culvert (Controls 0.00 cfs)

Pond 1.2 P:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=183.37'
Storage=0.027 af
1.97 cfs
0.64 cfs
0.00 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0
1
2

Stage-Area-Storage for Pond 1.2 P:

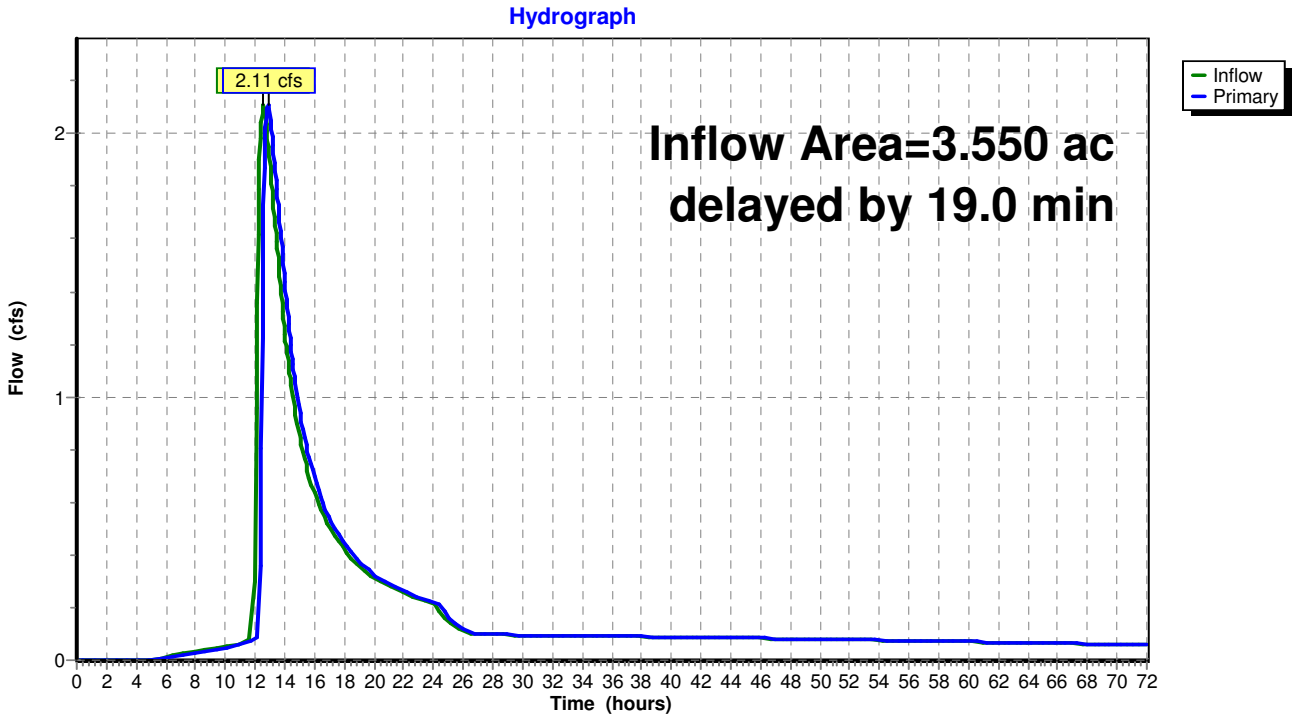
Elevation (feet)	Horizontal (acres)	Storage (acre-feet)
182.00	**0.030**	0.000
182.05	0.030	0.001
182.10	0.030	0.001
182.15	0.030	0.002
182.20	0.030	0.002
182.25	0.030	0.003
182.30	0.030	0.004
182.35	0.030	0.004
182.40	0.030	0.005
182.45	0.030	0.005
182.50	0.030	0.006
182.55	0.030	0.007
182.60	0.030	0.009
182.65	0.030	0.010
182.70	0.030	0.011
182.75	0.030	0.012
182.80	0.030	0.014
182.85	0.030	0.015
182.90	0.030	0.016
182.95	0.030	0.017
183.00	0.030	0.018
183.05	0.030	0.020
183.10	0.030	0.021
183.15	0.030	0.022
183.20	0.030	0.023
183.25	0.030	0.024
183.30	0.030	0.026
183.35	0.030	0.027
183.40	0.030	0.028
183.45	0.030	0.029
183.50	0.030	0.030
183.55	0.030	0.032
183.60	0.030	0.033
183.65	0.030	0.034
183.70	0.030	0.035
183.75	0.030	0.036
183.80	0.030	0.037
183.85	0.030	0.038
183.90	0.030	0.039
183.95	0.030	0.040
184.00	0.030	0.041
184.05	0.030	0.043
184.10	0.030	0.044
184.15	0.030	0.045
184.20	0.030	0.046
184.25	0.030	0.047
184.30	0.030	0.048
184.35	0.030	0.049
184.40	0.030	0.050
184.45	0.030	0.050
184.50	0.030	0.051
184.55	0.030	0.052
184.60	0.030	0.053
184.65	0.030	0.054
184.70	0.030	0.055
184.75	0.030	0.056
184.80	0.030	0.056
184.85	0.030	0.057
184.90	0.030	0.058
184.95	0.030	0.058
185.00	0.030	0.059
185.05	0.030	0.059
185.10	0.030	0.060
185.15	0.030	0.061
185.20	0.030	0.061
185.25	0.030	0.062
185.30	0.030	0.062
185.35	0.030	0.063
185.40	0.030	0.064
185.45	0.030	0.064
185.50	0.030	**0.065**

Summary for Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth > 3.39" for 10-yr event
Inflow = 2.11 cfs @ 12.55 hrs, Volume= 1.002 af
Primary = 2.11 cfs @ 12.87 hrs, Volume= 1.000 af, Atten= 0%, Lag= 19.0 min

Primary outflow = Inflow delayed by 19.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)



Summary for Subcatchment 1.0S:

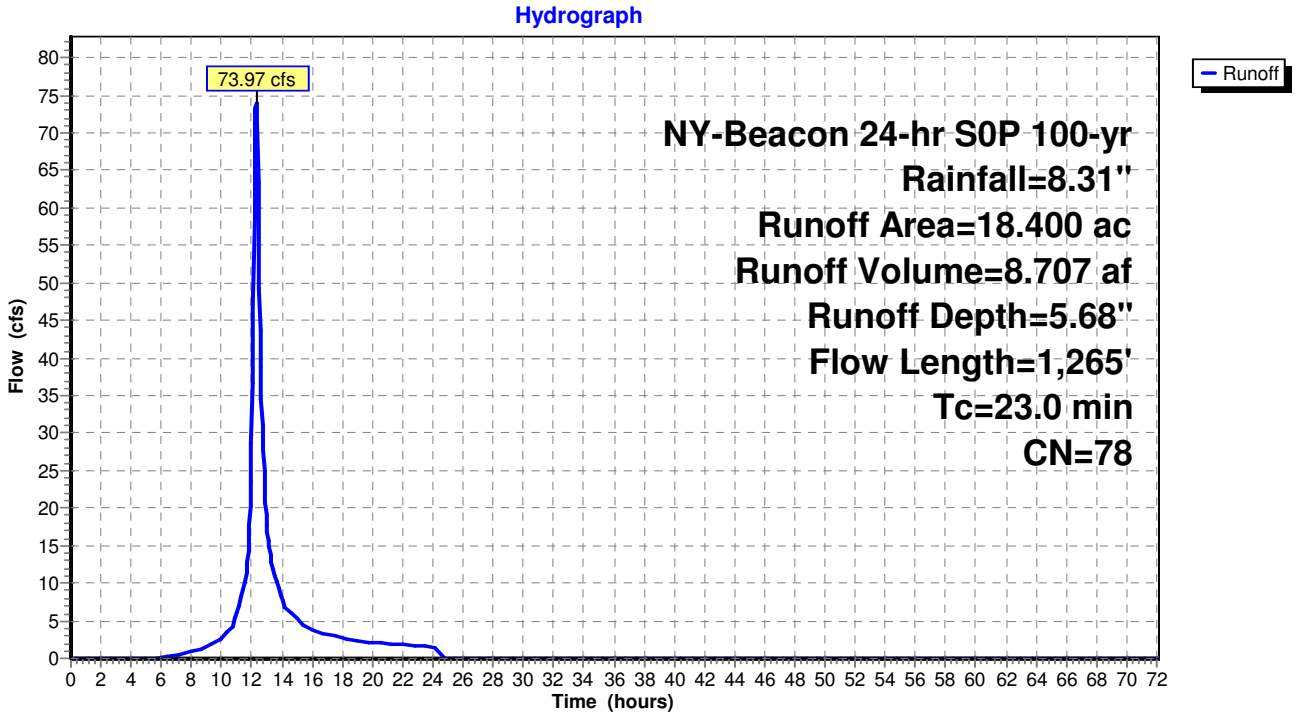
Runoff = 73.97 cfs @ 12.28 hrs, Volume= 8.707 af, Depth= 5.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

Area (ac)	CN	Description
11.100	77	Woods, Good, HSG D
5.800	78	Meadow, non-grazed, HSG D
1.000	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
18.400	78	Weighted Average
17.900		97.28% Pervious Area
0.500		2.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0800	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
4.7	345	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	170	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.1	280	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	235	0.0500	3.35		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	55	0.0450	11.17	13.70	**Pipe Channel, SDI 14A TO DI 14** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.1	80	0.0410	14.58	45.81	**Pipe Channel, DI 14 TO ES 13** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
23.0	1,265	Total			

Subcatchment 1.0S:



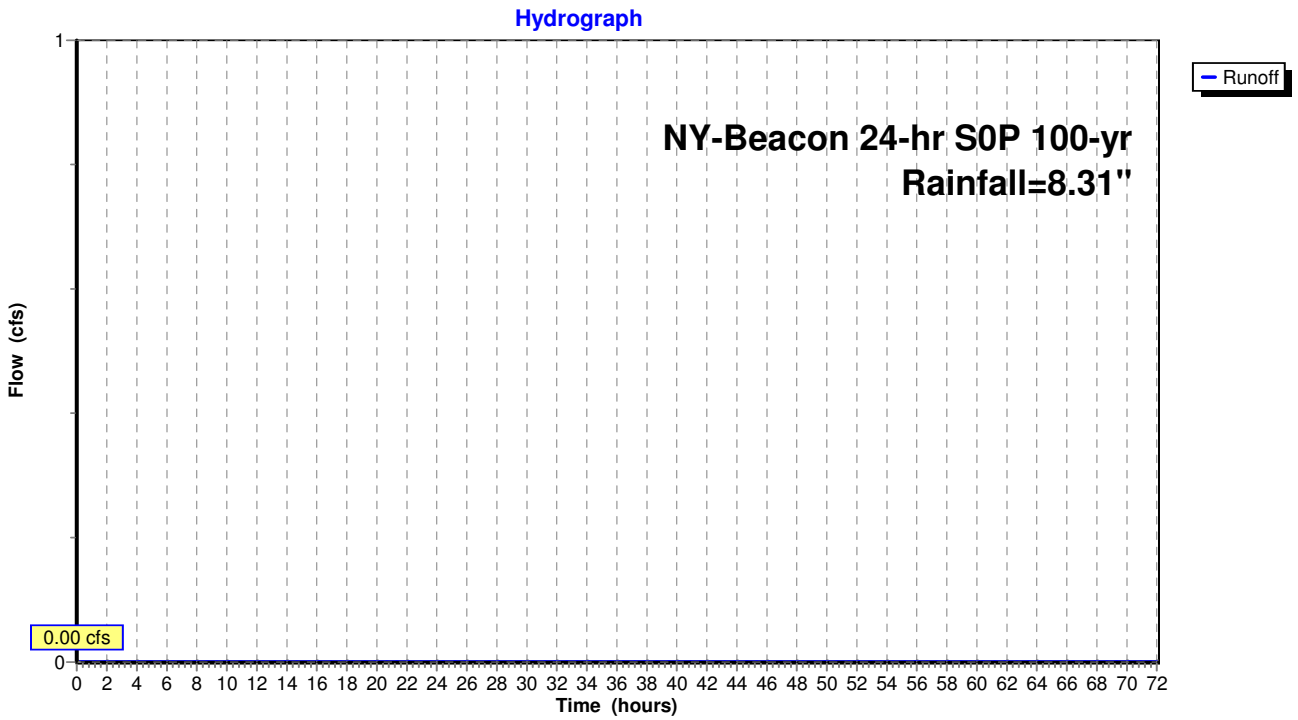
Summary for Subcatchment 1.1 TC:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.4	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16"
0.6	30	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.0	130	Total			

Subcatchment 1.1 TC:



Summary for Subcatchment 1.1S:

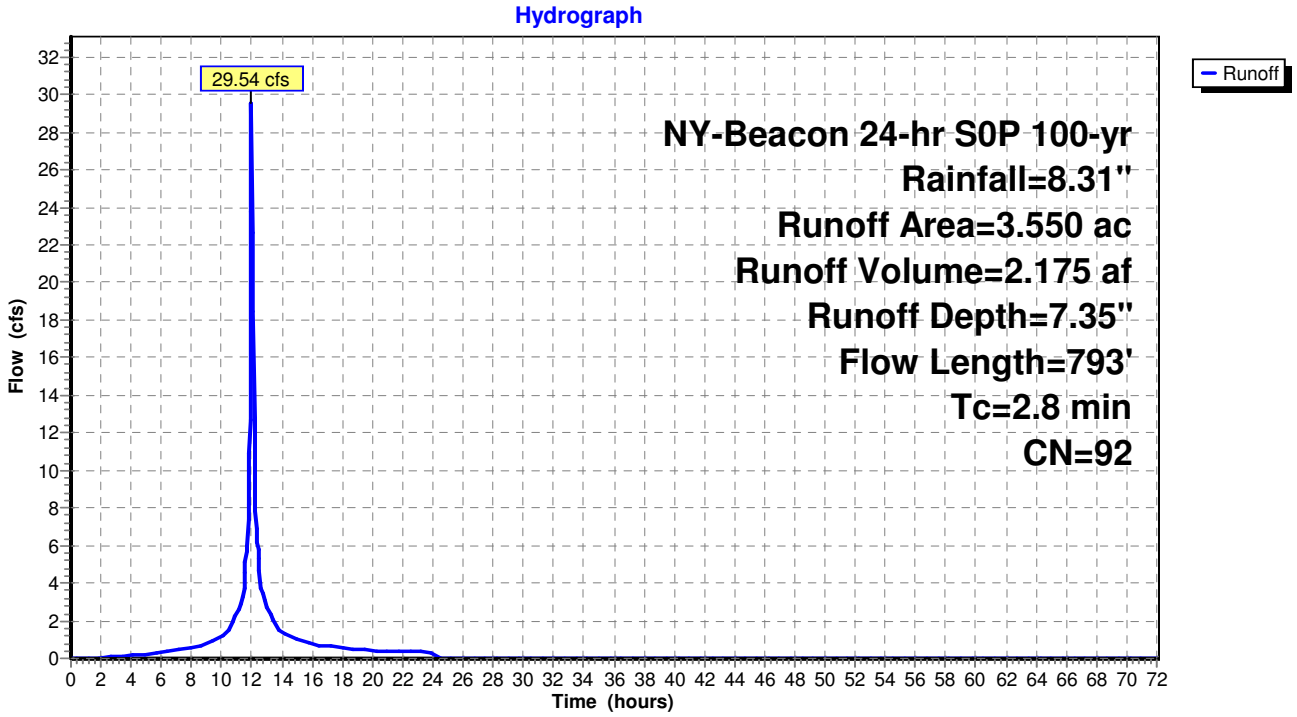
Runoff = 29.54 cfs @ 12.00 hrs, Volume= 2.175 af, Depth= 7.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

Area (ac)	CN	Description
2.350	98	Paved parking, HSG D
1.200	80	>75% Grass cover, Good, HSG D
3.550	92	Weighted Average
1.200		33.80% Pervious Area
2.350		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0600	2.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.7	200	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	35	0.0120	4.97	3.90	**Pipe Channel, CB 6 TO CB 5** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.5	183	0.0130	6.00	7.37	**Pipe Channel, CB 5 TO CB 4** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.4	136	0.0100	5.94	10.50	**Pipe Channel, CB 4 TO CB 3** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.2	63	0.0100	5.94	10.50	**Pipe Channel, CB 3 TO CB 2** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.1	76	0.0360	11.28	19.93	**Pipe Channel, CB 2 TO ES 1** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
2.8	793	Total			

Subcatchment 1.1S:



Summary for Subcatchment 1.2S:

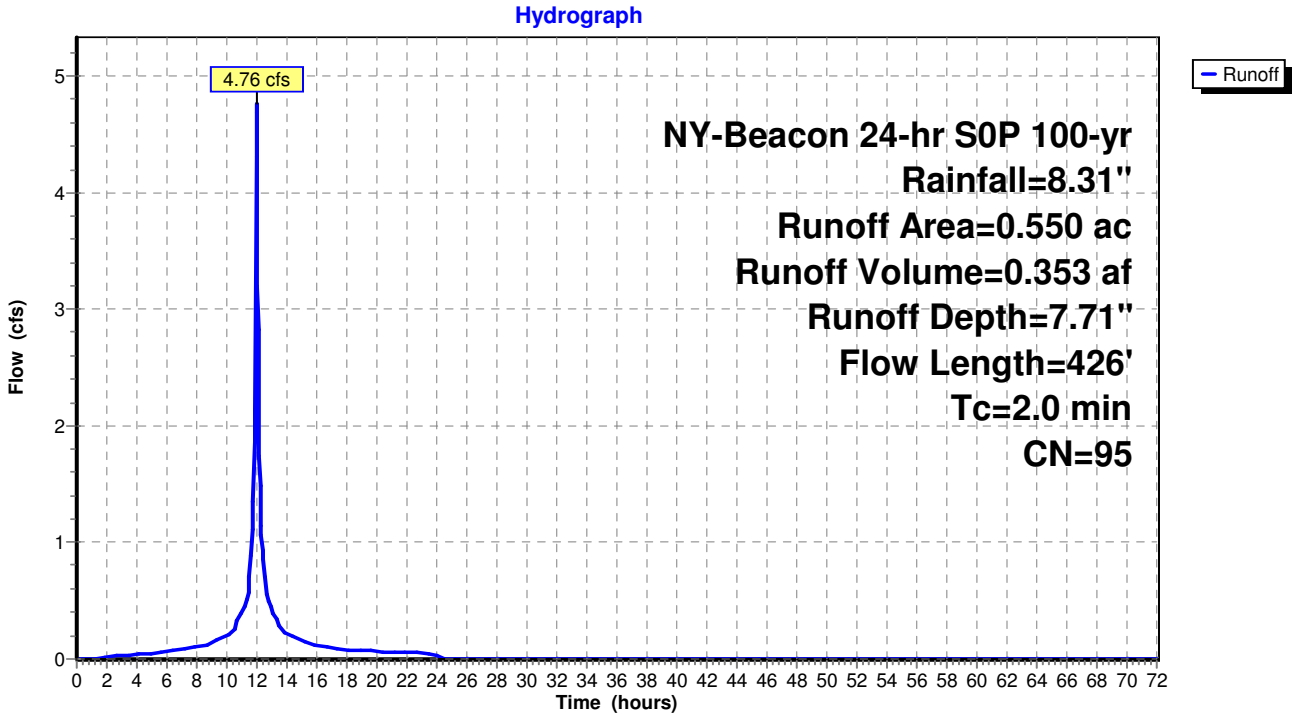
Runoff = 4.76 cfs @ 11.99 hrs, Volume= 0.353 af, Depth= 7.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

Area (ac)	CN	Description
0.450	98	Paved parking, HSG D
0.100	80	>75% Grass cover, Good, HSG D
0.550	95	Weighted Average
0.100		18.18% Pervious Area
0.450		81.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0600	2.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.4	120	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.7	160	0.0350	3.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	46	0.0300	7.86	6.17	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.0	426	Total			

Subcatchment 1.2S:

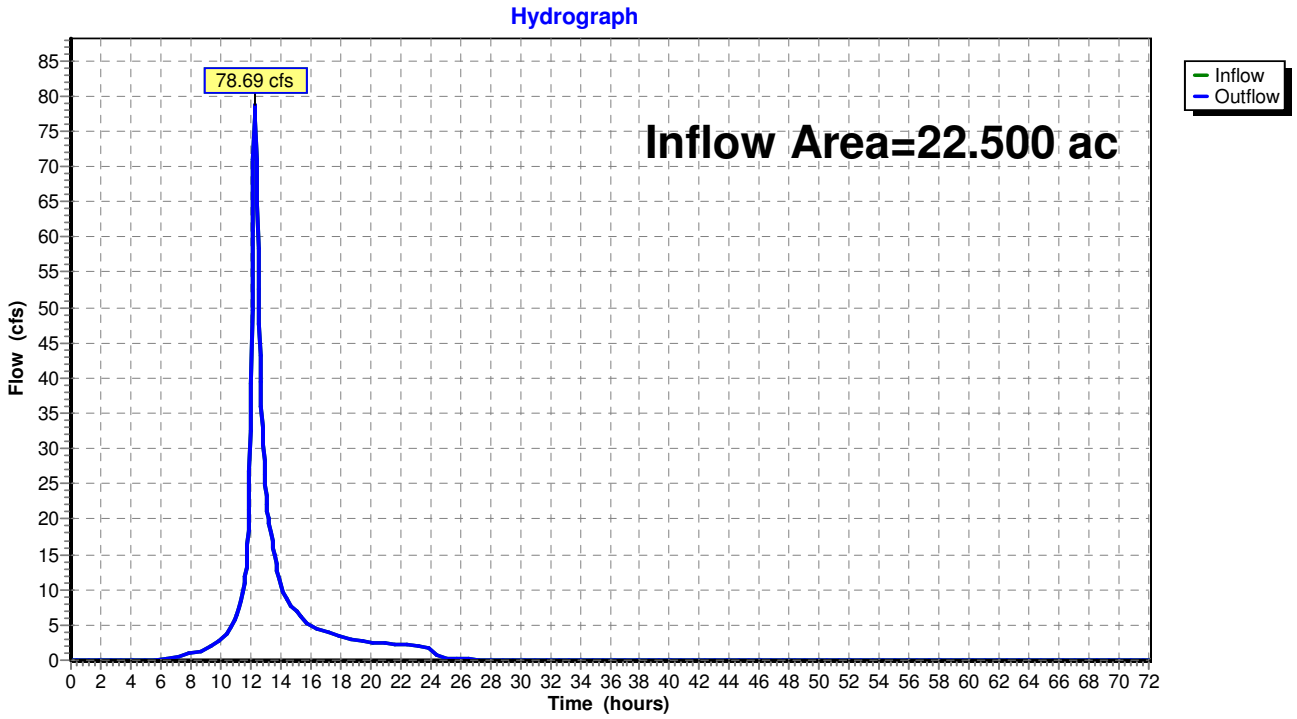


Summary for Reach Design Line:

Inflow Area = 22.500 ac, 14.67% Impervious, Inflow Depth > 5.75" for 100-yr event
Inflow = 78.69 cfs @ 12.30 hrs, Volume= 10.788 af
Outflow = 78.69 cfs @ 12.30 hrs, Volume= 10.788 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Reach Design Line:



Summary for Pond 1.1 P:

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth = 7.35" for 100-yr event
Inflow = 29.54 cfs @ 12.00 hrs, Volume= 2.175 af
Outflow = 8.92 cfs @ 12.22 hrs, Volume= 2.049 af, Atten= 70%, Lag= 13.5 min
Primary = 8.92 cfs @ 12.22 hrs, Volume= 2.049 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Starting Elev= 180.00' Surf.Area= 7,640 sf Storage= 10,715 cf
Peak Elev= 184.11' @ 12.22 hrs Surf.Area= 17,710 sf Storage= 54,193 cf (43,478 cf above start)
Flood Elev= 184.50' Surf.Area= 19,225 sf Storage= 60,459 cf (49,744 cf above start)

Plug-Flow detention time= 545.5 min calculated for 1.803 af (83% of inflow)
Center-of-Mass det. time= 406.2 min (1,172.2 - 766.0)

Volume	Invert	Avail.Storage	Storage Description
#1	175.00'	2,050 cf	**Forebay (Prismatic)** Listed below (Recalc)
#2	175.00'	67,360 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		69,410 cf	Total Available Storage

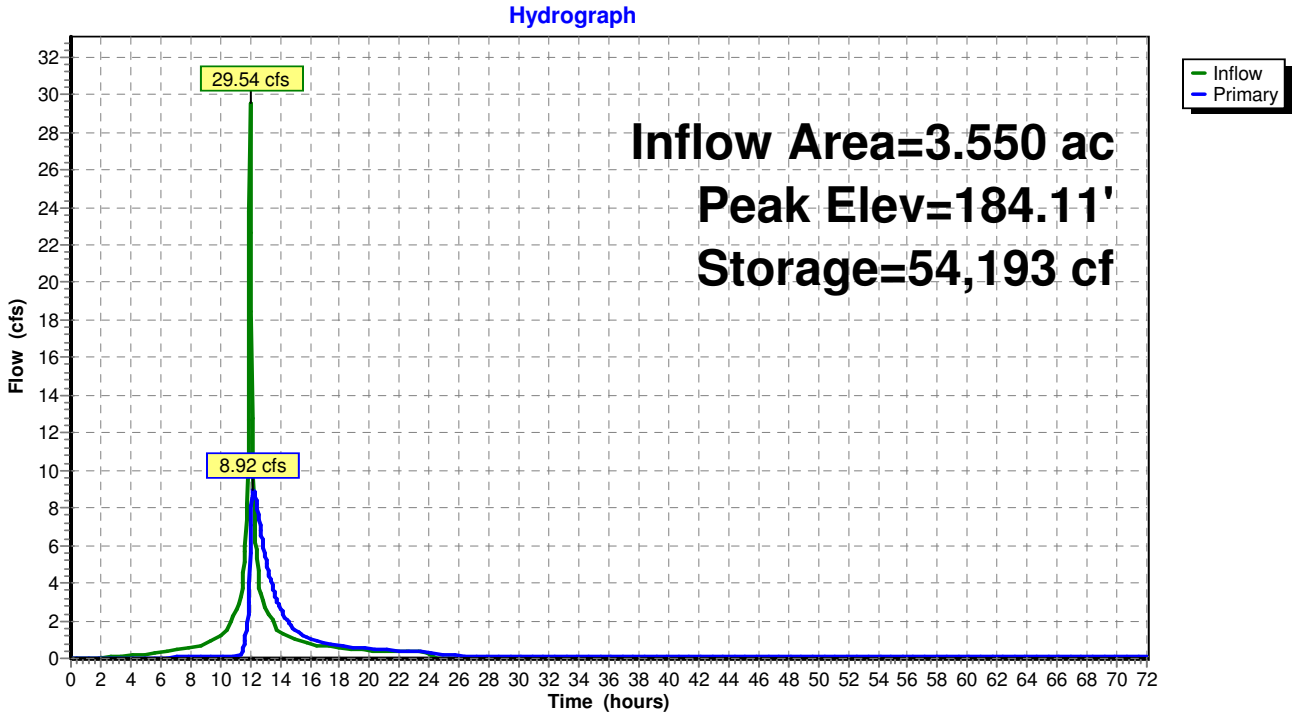
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
175.00	5	0	0
177.00	110	115	115
179.00	450	560	675
180.00	2,300	1,375	2,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
175.00	500	0	0
177.00	1,180	1,680	1,680
179.00	2,090	3,270	4,950
180.00	5,340	3,715	8,665
182.00	10,730	16,070	24,735
184.00	14,970	25,700	50,435
185.00	18,880	16,925	67,360

Device	Routing	Invert	Outlet Devices
#1	Primary	179.00'	**24.0" Round Culvert** L= 37.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 179.00' / 178.50' S= 0.0135 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	180.00'	**1.6" Vert. Orifice/Grate** C= 0.600
#3	Device 1	182.20'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=8.89 cfs @ 12.22 hrs HW=184.11' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 8.89 cfs of 30.66 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.14 cfs @ 9.68 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 8.75 cfs @ 4.59 fps)

Pond 1.1 P:


Hydrograph
Inflow Area=3.550 ac
Peak Elev=184.11'
Storage=54,193 cf
29.54 cfs
8.92 cfs
Inflow
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Stage-Area-Storage for Pond 1.1 P:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
175.00	0	180.20	11,837
175.10	52	180.30	12,438
175.20	109	180.40	13,067
175.30	169	180.50	13,722
175.40	233	180.60	14,404
175.50	302	180.70	15,113
175.60	374	180.80	15,849
175.70	450	180.90	16,612
175.80	530	181.00	17,403
175.90	613	181.10	18,219
176.00	701	181.20	19,063
176.10	793	181.30	19,934
176.20	889	181.40	20,832
176.30	988	181.50	21,757
176.40	1,092	181.60	22,709
176.50	1,199	181.70	23,687
176.60	1,310	181.80	24,693
176.70	1,426	181.90	25,725
176.80	1,545	182.00	26,785
176.90	1,668	182.10	27,869
177.00	1,795	182.20	28,973
177.10	1,927	182.30	30,099
177.20	2,065	182.40	31,247
177.30	2,210	182.50	32,415
177.40	2,361	182.60	33,605
177.50	2,518	182.70	34,815
177.60	2,681	182.80	36,047
177.70	2,851	182.90	37,301
177.80	3,027	183.00	38,575
177.90	3,209	183.10	39,871
178.00	3,398	183.20	41,187
178.10	3,592	183.30	42,525
178.20	3,793	183.40	43,885
178.30	4,000	183.50	45,265
178.40	4,214	183.60	46,667
178.50	4,433	183.70	48,089
178.60	4,659	183.80	49,533
178.70	4,891	183.90	50,999
178.80	5,130	184.00	52,485
178.90	5,374	184.10	54,002
179.00	5,625	184.20	55,557
179.10	5,904	184.30	57,152
179.20	6,235	184.40	58,786
179.30	6,617	184.50	60,459
179.40	7,049	184.60	62,171
179.50	7,533	184.70	63,922
179.60	8,067	184.80	65,712
179.70	8,652	184.90	67,542
179.80	9,289	185.00	**69,410**
179.90	9,977		
180.00	10,715		
180.10	11,262		

Summary for Pond 1.2 FS:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 7.71" for 100-yr event
Inflow = 4.76 cfs @ 11.99 hrs, Volume= 0.353 af
Outflow = 4.76 cfs @ 11.99 hrs, Volume= 0.353 af, Atten= 0%, Lag= 0.0 min
Primary = 2.09 cfs @ 11.98 hrs, Volume= 0.324 af
Secondary = 2.67 cfs @ 11.99 hrs, Volume= 0.030 af

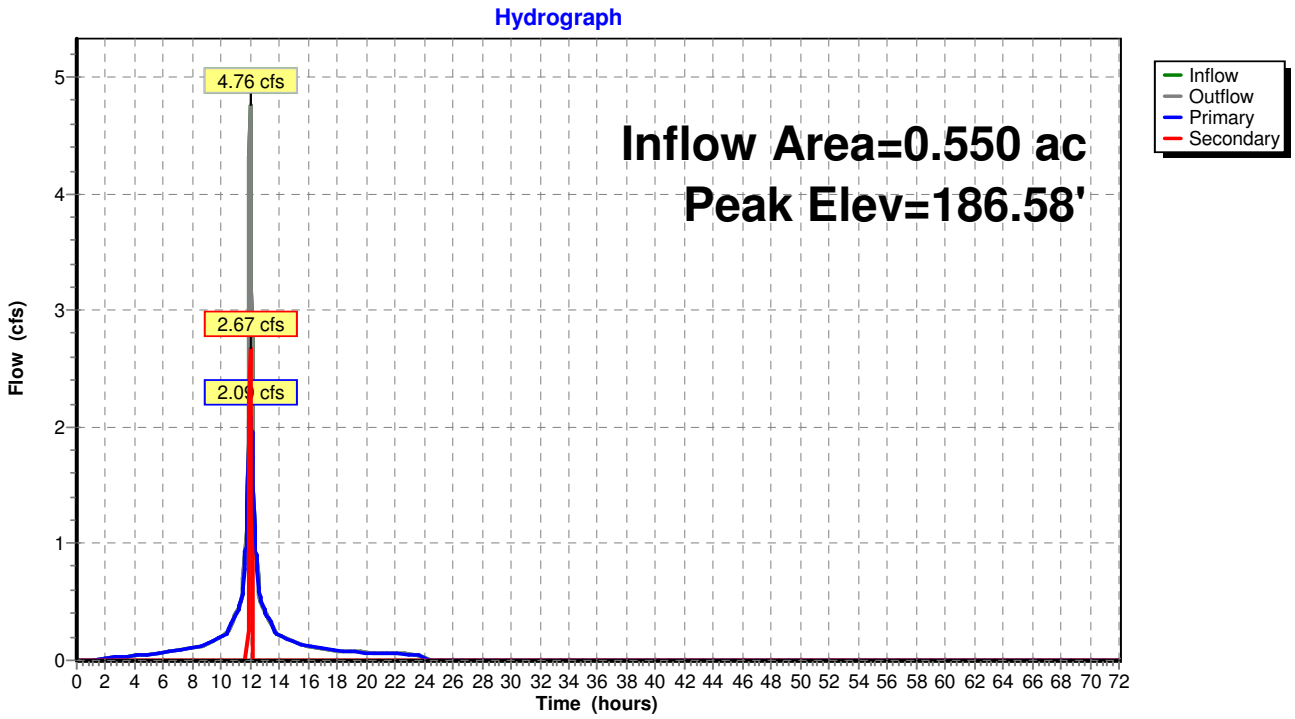
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 186.58' @ 11.98 hrs
Flood Elev= 187.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	184.70'	**8.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.70' / 184.50' S= 0.0167 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Secondary	184.70'	**12.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.70' / 184.00' S= 0.0233 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	186.20'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.08 cfs @ 11.98 hrs HW=186.56' TW=183.38' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 2.08 cfs @ 5.95 fps)

Secondary OutFlow Max=2.49 cfs @ 11.99 hrs HW=186.56' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 2.49 cfs of 4.41 cfs potential flow)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 2.49 cfs @ 1.73 fps)

Pond 1.2 FS:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=186.58'
4.76 cfs
2.67 cfs
2.09 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 1 2 3 4 5
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Stage-Area-Storage for Pond 1.2 FS:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
184.70	**0**	185.74	0	186.78	0
184.72	0	185.76	0	186.80	0
184.74	0	185.78	0	186.82	0
184.76	0	185.80	0	186.84	0
184.78	0	185.82	0	186.86	0
184.80	0	185.84	0	186.88	0
184.82	0	185.86	0	186.90	0
184.84	0	185.88	0	186.92	0
184.86	0	185.90	0	186.94	0
184.88	0	185.92	0	186.96	0
184.90	0	185.94	0	186.98	0
184.92	0	185.96	0	187.00	0
184.94	0	185.98	0	187.02	0
184.96	0	186.00	0	187.04	0
184.98	0	186.02	0	187.06	0
185.00	0	186.04	0	187.08	0
185.02	0	186.06	0	187.10	0
185.04	0	186.08	0	187.12	0
185.06	0	186.10	0	187.14	0
185.08	0	186.12	0	187.16	0
185.10	0	186.14	0	187.18	0
185.12	0	186.16	0	187.20	0
185.14	0	186.18	0	187.22	0
185.16	0	186.20	0	187.24	0
185.18	0	186.22	0	187.26	0
185.20	0	186.24	0	187.28	0
185.22	0	186.26	0	187.30	0
185.24	0	186.28	0	187.32	0
185.26	0	186.30	0	187.34	0
185.28	0	186.32	0	187.36	0
185.30	0	186.34	0	187.38	0
185.32	0	186.36	0	187.40	0
185.34	0	186.38	0	187.42	0
185.36	0	186.40	0	187.44	0
185.38	0	186.42	0	187.46	0
185.40	0	186.44	0	187.48	0
185.42	0	186.46	0	187.50	0
185.44	0	186.48	0	187.52	0
185.46	0	186.50	0	187.54	0
185.48	0	186.52	0	187.56	0
185.50	0	186.54	0	187.58	0
185.52	0	186.56	0	187.60	0
185.54	0	186.58	0	187.62	0
185.56	0	186.60	0	187.64	0
185.58	0	186.62	0	187.66	0
185.60	0	186.64	0	187.68	0
185.62	0	186.66	0	187.70	0
185.64	0	186.68	0		
185.66	0	186.70	0		
185.68	0	186.72	0		
185.70	0	186.74	0		
185.72	0	186.76	0		

Summary for Pond 1.2 P:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 7.06" for 100-yr event
Inflow = 2.09 cfs @ 11.98 hrs, Volume= 0.324 af
Outflow = 0.82 cfs @ 12.46 hrs, Volume= 0.324 af, Atten= 61%, Lag= 28.5 min
Discarded = 0.64 cfs @ 11.55 hrs, Volume= 0.319 af
Primary = 0.17 cfs @ 12.46 hrs, Volume= 0.004 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 184.77' @ 12.46 hrs Surf.Area= 0.030 ac Storage= 0.056 af

Plug-Flow detention time= 18.7 min calculated for 0.323 af (100% of inflow)
Center-of-Mass det. time= 18.7 min (774.4 - 755.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	182.00'	0.028 af	**34.75'W x 38.04'L x 3.50'H Field A** 0.106 af Overall - 0.037 af Embedded = 0.069 af x 40.0% Voids
#2A	182.50'	0.037 af	**ADS_StormTech SC-740** x 35 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 7 rows
		0.065 af	Total Available Storage

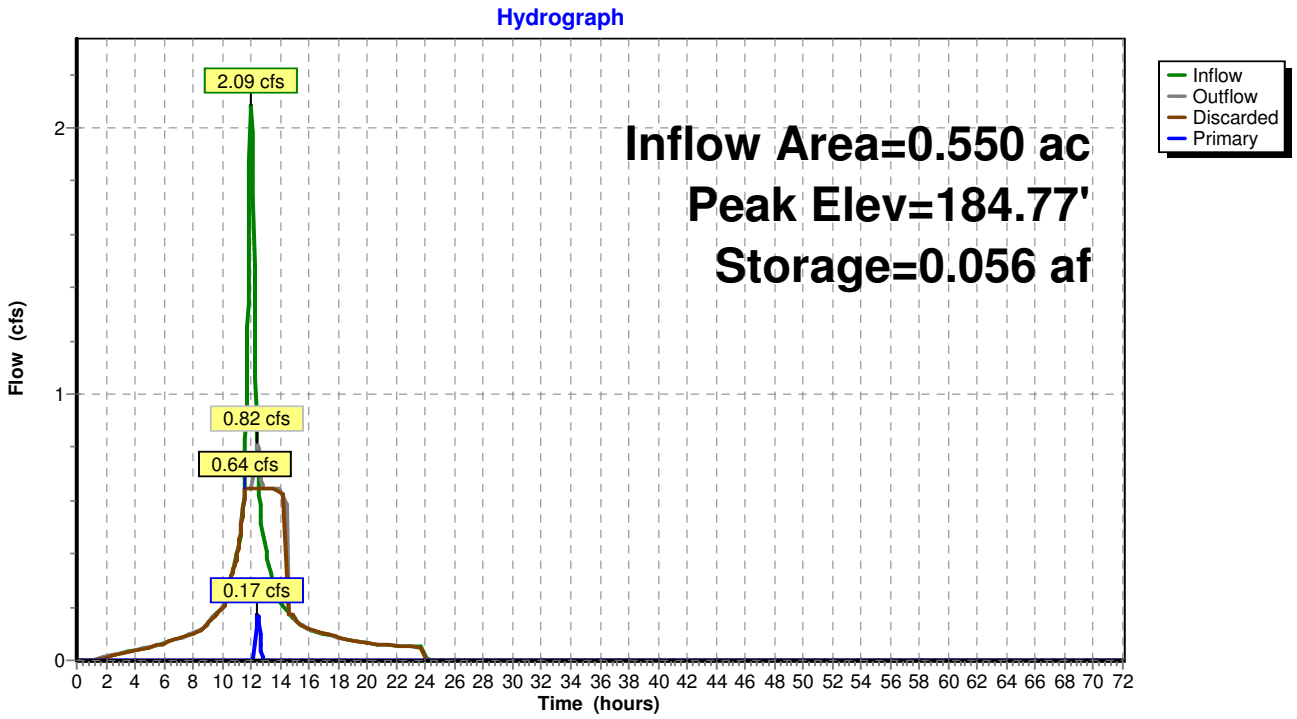
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	182.00'	**21.000 in/hr Exfiltration over Horizontal area** Phase-In= 0.10'
#2	Primary	184.50'	**6.0" Round Culvert** L= 17.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 184.50' / 184.30' S= 0.0118 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Discarded OutFlow Max=0.64 cfs @ 11.55 hrs HW=182.12' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.64 cfs)

Primary OutFlow Max=0.17 cfs @ 12.46 hrs HW=184.77' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Barrel Controls 0.17 cfs @ 2.34 fps)

Pond 1.2 P:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=184.77'
Storage=0.056 af
2.09 cfs
0.82 cfs
0.64 cfs
0.17 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0
1
2

Stage-Area-Storage for Pond 1.2 P:

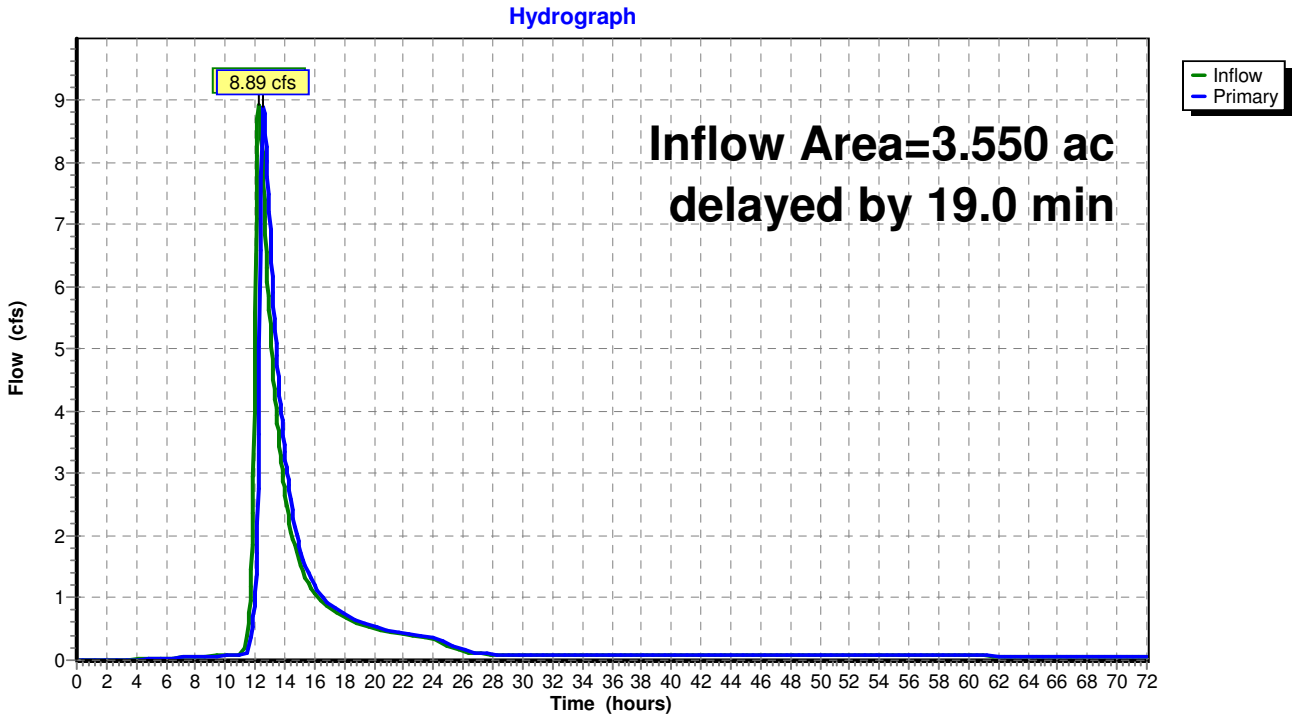
Elevation (feet)	Horizontal (acres)	Storage (acre-feet)
182.00	**0.030**	0.000
182.05	0.030	0.001
182.10	0.030	0.001
182.15	0.030	0.002
182.20	0.030	0.002
182.25	0.030	0.003
182.30	0.030	0.004
182.35	0.030	0.004
182.40	0.030	0.005
182.45	0.030	0.005
182.50	0.030	0.006
182.55	0.030	0.007
182.60	0.030	0.009
182.65	0.030	0.010
182.70	0.030	0.011
182.75	0.030	0.012
182.80	0.030	0.014
182.85	0.030	0.015
182.90	0.030	0.016
182.95	0.030	0.017
183.00	0.030	0.018
183.05	0.030	0.020
183.10	0.030	0.021
183.15	0.030	0.022
183.20	0.030	0.023
183.25	0.030	0.024
183.30	0.030	0.026
183.35	0.030	0.027
183.40	0.030	0.028
183.45	0.030	0.029
183.50	0.030	0.030
183.55	0.030	0.032
183.60	0.030	0.033
183.65	0.030	0.034
183.70	0.030	0.035
183.75	0.030	0.036
183.80	0.030	0.037
183.85	0.030	0.038
183.90	0.030	0.039
183.95	0.030	0.040
184.00	0.030	0.041
184.05	0.030	0.043
184.10	0.030	0.044
184.15	0.030	0.045
184.20	0.030	0.046
184.25	0.030	0.047
184.30	0.030	0.048
184.35	0.030	0.049
184.40	0.030	0.050
184.45	0.030	0.050
184.50	0.030	0.051
184.55	0.030	0.052
184.60	0.030	0.053
184.65	0.030	0.054
184.70	0.030	0.055
184.75	0.030	0.056
184.80	0.030	0.056
184.85	0.030	0.057
184.90	0.030	0.058
184.95	0.030	0.058
185.00	0.030	0.059
185.05	0.030	0.059
185.10	0.030	0.060
185.15	0.030	0.061
185.20	0.030	0.061
185.25	0.030	0.062
185.30	0.030	0.062
185.35	0.030	0.063
185.40	0.030	0.064
185.45	0.030	0.064
185.50	0.030	**0.065**

Summary for Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth > 6.92" for 100-yr event
Inflow = 8.92 cfs @ 12.22 hrs, Volume= 2.049 af
Primary = 8.89 cfs @ 12.55 hrs, Volume= 2.047 af, Atten= 0%, Lag= 19.4 min

Primary outflow = Inflow delayed by 19.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)



APPENDIX D

Project and Owner information

Site Data:

Beacon Views
City of Beacon
Dutchess County, New York

Owner Information:

Highlands @ Beacon, LLC
2847 Church Street
Pine Plains, New York 12567

Applicant Information:

Beacon Views, LLC
500 River Avenue
Wakefield, New Jersey 08701

Party Responsible for Implementation of the Stormwater Pollution Prevention Plan (Including Maintenance During and After Construction):

Beacon Views, LLC
500 River Avenue
Wakefield, New Jersey 08701

Qualified Professional Responsible for Inspection of the Stormwater Pollution Prevention Plan:

Inspector to be determined at time of construction

APPENDIX E

NYSDEC SPDES for Construction Activities Construction Site Log Book

APPENDIX F
CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG BOOK

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

SAMPLE CONSTRUCTION SITE LOG BOOK

Table of Contents

I. Pre-Construction Meeting Documents
   a. Preamble to Site Assessment and Inspections
   b. Pre-Construction Site Assessment Checklist

II. Construction Duration Inspections
   a. Directions
   b. Modification to the SWPPP

I. **PRE-CONSTRUCTION MEETING DOCUMENTS**

Project Name _____

Permit No. _____ **Date of Authorization** _____

Name of Operator _____

Prime Contractor _____

a. **Preamble to Site Assessment and Inspections**

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector[1] conduct an assessment of the site prior to the commencement of construction[2] and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization[3] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to "Qualified Inspector" inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.
2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.
3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

b. Pre-construction Site Assessment Checklist
(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

[ ] [ ] [ ] Has a Notice of Intent been filed with the NYS Department of Conservation?
[ ] [ ] [ ] Is the SWPPP on-site? Where?_____
[ ] [ ] [ ] Is the Plan current? What is the latest revision date?_____
[ ] [ ] [ ] Is a copy of the NOI (with brief description) onsite? Where?_____
[ ] [ ] [ ] Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

[ ] [ ] [ ] Are construction limits clearly flagged or fenced?
[ ] [ ] [ ] Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
[ ] [ ] [ ] Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

[ ] [ ] [ ] Clean stormwater runoff has been diverted from areas to be disturbed.
[ ] [ ] [ ] Bodies of water located either on site or in the vicinity of the site have been identified and protected.
[ ] [ ] [ ] Appropriate practices to protect on-site or downstream surface water are installed.
[ ] [ ] [ ] Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Access

Yes No NA

[ ] [ ] [ ] A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
[ ] [ ] [ ] Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
[ ] [ ] [ ] Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Sediment Controls

Yes No NA

[ ] [ ] [ ] Silt fence material and installation comply with the standard drawing and specifications.
[ ] [ ] [ ] Silt fences are installed at appropriate spacing intervals
[ ] [ ] [ ] Sediment/detention basin was installed as first land disturbing activity.
[ ] [ ] [ ] Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

[ ] [ ] [ ] The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
[ ] [ ] [ ] The plan is contained in the SWPPP on page _____
[ ] [ ] [ ] Appropriate materials to control spills are onsite. Where? _____

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:

Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and

6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

_____ _____

Inspector (print name) **Date of Inspection**

_____ _____

Qualified Inspector (print name) **Qualified Inspector Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA
[ ] [ ] [ ] Is there an increase in turbidity causing a substantial visible contrast to natural conditions at the outfalls?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease at the outfalls?
[ ] [ ] [ ] All disturbance is within the limits of the approved plans.
[ ] [ ] [ ] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA
[ ] [ ] [ ] Is construction site litter, debris and spoils appropriately managed?
[ ] [ ] [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ] [ ] [ ] Is construction impacting the adjacent property?
[ ] [ ] [ ] Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA
[ ] [ ] [ ] Maximum diameter pipes necessary to span creek without dredging are installed.
[ ] [ ] [ ] Installed non-woven geotextile fabric beneath approaches.
[ ] [ ] [ ] Is fill composed of aggregate (no earth or soil)?
[ ] [ ] [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

3. Stabilized Construction Access

Yes No NA
[ ] [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.
[ ] [ ] [ ] Installed per standards and specifications?
[ ] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

Runoff Control Practices

1. Excavation Dewatering

Yes No NA
[ ] [ ] [ ] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ] [ ] [ ] Clean water from upstream pool is being pumped to the downstream pool.
[ ] [ ] [ ] Sediment laden water from work area is being discharged to a silt-trapping device.
[ ] [ ] [ ] Constructed upstream berm with one-foot minimum freeboard.

Runoff Control Practices (continued)

2. Flow Spreader

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ] [ ] [ ] Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

[ ] [ ] [ ] Installed per plan with minimum side slopes 2H:1V or flatter.
[ ] [ ] [ ] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ] [ ] [ ] Sediment-laden runoff directed to sediment trapping structure

4. Stone Check Dam

Yes No NA

[ ] [ ] [ ] Is channel stable? (flow is not eroding soil underneath or around the structure).
[ ] [ ] [ ] Check is in good condition (rocks in place and no permanent pools behind the structure).
[ ] [ ] [ ] Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

[ ] [ ] [ ] Stockpiles are stabilized with vegetation and/or mulch.
[ ] [ ] [ ] Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

[ ] [ ] [ ] Temporary seedings and mulch have been applied to idle areas.
[ ] [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Silt Fence and Linear Barriers

Yes No NA

[ ] [ ] [ ] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ] [ ] [ ] Joints constructed by wrapping the two ends together for continuous support.
[ ] [ ] [ ] Fabric buried 6 inches minimum.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

2. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated; Filter Sock or Manufactured practices)

Yes No NA

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre or less.
[ ] [ ] [ ] Excavated area is 900 cubic feet.
[ ] [ ] [ ] Excavated side slopes should be 2:1.
[ ] [ ] [ ] 2" x 4" frame is constructed and structurally sound.
[ ] [ ] [ ] Posts 3-foot maximum spacing between posts.
[ ] [ ] [ ] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
[ ] [ ] [ ] Manufactured insert fabric is free of tears and punctures.
[ ] [ ] [ ] Filter Sock is not torn or flattened and fill material is contained within the mesh sock.

Sediment accumulation ___% of design capacity.

3. Temporary Sediment Trap

Yes No NA

[ ] [ ] [ ] Outlet structure is constructed per the approved plan or drawing.
[ ] [ ] [ ] Geotextile fabric has been placed beneath rock fill.
[ ] [ ] [ ] Sediment trap slopes and disturbed areas are stabilized.

Sediment accumulation is ___% of design capacity.

4. Temporary Sediment Basin

Yes No NA

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
[ ] [ ] [ ] Sediment basin dewatering pool is dewatering at appropriate rate.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design. All practices shall be maintained in accordance with their respective standards.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

APPENDIX F

NYSDEC Stormwater Design Manual Chapter 5 Analysis

Table Key: ● = Practice Used in Accordance with Chapter 5 Requirements
o = Practice Not Used
- = Practice is Not Applicable

NYSDEC Chapter 5 Requirements	Subcatchments		Remarks
	1.1	1.2	
Chapter 5, Section 5.1: Preservation if Natural Features and Conservation Design			
Practices			
Preservation of Undisturbed Areas	●	●	See Note #2
Preservation of Buffers	-	-	
Reduction of Clearing & Grading	●	●	See Note #4
Locating Development in Less Sensitive Areas	●	●	See Note #4
Open Space Design	-	-	
Soil Restoration	●	●	See Note #5
Chapter 5, Section 5.2: Reduction of Impervious Cover			
Practices			
Roadway Reduction	●	-	See Note #1
Sidewalk Reduction	●	●	
Driveway Reduction	●	●	See Note #1
Cul-de-sac Reduction	-	-	
Building Footprint Reduction	●	●	See Note #3
Parking Reduction	●	●	See Note #4
Conservation of Natural Areas	●	●	See Note #2
Sheetflow to Riparian Buffers or Filter Strips	-	-	
Vegetated Swale	●	●	
Tree Planting / Tree Pit	-	-	
Disconnection of Rooftop Runoff	-	-	
Stream Daylighting	-	-	
Rain Gardens	-	-	
Green Roofs	-	-	
Stormwater Planters	-	-	
Rain Barrels / Cisterns	-	-	
Porous Pavement	-	-	

Notes:

1. The proposed driveways and road have been designed to provide a minimum width for safe ingress and egress for the development.
2. Although no formal calculations have been provided, the subject project has provided conservation of natural areas to the maximum extent practical.
3. The proposed buildings are multi-story, thus minimize the building footprints.
4. The reduction in clearing and grading, as well as the driveway and parking areas foot print reduction will be enforced with the approval of the project SWPPP. Notes on the project plans, establish that any changes in the project plans would require an amended approval from the necessary regulatory agencies
5. Soil restoration requirements per NYSDEC stantards shown on project plans.

APPENDIX G

NYSDEC Stormwater Management Practice Construction and Maintenance Inspection Checklist

Stormwater/Wetland Pond Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Pipe Spillway Installation		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		
Fill placed in maximum 8 inch lifts		
Backfill taken minimum 2 feet above top of anti-seep collar elevation before traversing with heavy equipment		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
Forms stripped & inspected for “honeycomb” prior to backfilling; parge if necessary		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Pond benches		
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		
Filter fabric in place		
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture or sod		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
10. Miscellaneous		
Drain for ponds having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Stormwater Wetlands		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place Reinforcement budget for additional plantings		
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)		
Wetland buffer area preserved to maximum extent possible		

Comments:

Actions to be Taken:

Infiltration Trench Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Soil permeability tested		
Groundwater / bedrock sufficient at depth		
2. Excavation		
Size and location		
Side slopes stable		
Excavation does not compact subsoils		
3. Filter Fabric Placement		
Fabric specifications		
Placed on bottom, sides, and top		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
4. Aggregate Material		
Size as specified		
Clean / washed material		
Placed properly		
5. Observation Well		
Pipe size		
Removable cap / footplate		
Initial depth =_____feet		
6. Final Inspection		
Pretreatment facility in place		
Contributing watershed stabilized prior to flow diversion		
Outlet		

Comments:

Actions to be Taken:

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

Infiltration Trench Operation, Maintenance, and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Trench surface clear of debris		
Inflow pipes clear of debris		
Overflow spillway clear of debris		
Inlet area clear of debris		
2. Sediment Traps or Forebays (Annual)		
Obviously trapping sediment		
Greater than 50% of storage volume remaining		
3. Dewatering (Monthly)		
Trench dewaters between storms		
4. Sediment Cleanout of Trench (Annual)		
No evidence of sedimentation in trench		
Sediment accumulation doesn't yet require cleanout		
5. Inlets (Annual)		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Good condition		
No evidence of erosion		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repair		
No evidence of erosion		
7. Aggregate Repairs (Annual)		
Surface of aggregate clean		
Top layer of stone does not need replacement		
Trench does not need rehabilitation		

Comments:

Actions to be Taken:

APPENDIX H

Hydrodynamic Separator Sizing and Maintenance Manual

State of New Jersey

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code – 401-02B
Division of Water Quality
Bureau of Nonpoint Pollution Control
P.O. Box 420 – 401 E. State St.
Trenton, NJ 08625-0420
Phone: (609) 633-7021 / Fax: (609) 777-0432
http://www.state.nj.us/dep/dwq/bnpc_home.htm

CATHERINE R. McCABE
Acting Commissioner

March 27, 2018

Graham Bryant, M.Sc., P.E.
President
Hydroworks, LLC
136 Central Avenue
Clark, NJ 07066

Re: MTD Lab Certification
HydroStorm Hydrodynamic Separator by Hydroworks, LLC
Online Installation

TSS Removal Rate 50%

Dear Mr. Bryant:

The Stormwater Management rules under N.J.A.C. 7:8-5.5(b) and 5.7 (c) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by the New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP). Hydroworks, LLC has requested an MTD Laboratory Certification for the Hydroworks HydroStorm Hydrodynamic Separator.

The project falls under the "Procedure for Obtaining Verification of a Stormwater Manufactured Treatment Device from New Jersey Corporation for Advance Technology" dated January 25, 2013. The applicable protocol is the "New Jersey Laboratory Testing Protocol to Assess Total Suspended Solids Removal by a Hydrodynamic Sedimentation Manufactured Treatment Device" dated January 25, 2013.

NJCAT verification documents submitted to the NJDEP indicate that the requirements of the aforementioned protocol have been met or exceeded. The NJCAT letter also included a recommended certification TSS removal rate and the required maintenance plan. The NJCAT Verification Report with the Verification Appendix (dated February 2018) for this device is published online at http://www.njcat.org/verification-process/technology-verification-database.html.

The NJDEP certifies the use of the HydroStorm by Hydroworks, LLC at a TSS removal rate of 50% when designed, operated, and maintained in accordance with the information provided in the Verification Appendix and the following conditions:

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1. The maximum treatment flow rate (MTFR) for the manufactured treatment device (MTD) is calculated using the New Jersey Water Quality Design Storm (1.25 inches in 2 hrs) in N.J.A.C. 7:8-5.5.

2. The HydroStorm shall be installed using the same configuration reviewed by NJCAT and shall be sized in accordance with the criteria specified in item 6 below.

3. This HydroStorm cannot be used in series with another MTD or a media filter (such as a sand filter) to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.

4. Additional design criteria for MTDs can be found in Chapter 9.6 of the New Jersey Stormwater Best Management Practices (NJ Stormwater BMP) Manual, which can be found online at www.njstormwater.org.

5. The maintenance plan for a site using this device shall incorporate, at a minimum, the maintenance requirements for the Hydrostorm. A copy of the maintenance plan is attached to this certification. However, it is recommended to review the maintenance website at http://www.hydroworks.com/hydrostormo&m.pdf for any changes to the maintenance requirements.

6. Sizing Requirement:

   The example below demonstrates the sizing procedure for the Hydrostorm:

   Example: A 0.25-acre impervious site is to be treated to 50% TSS removal using a HydroStorm. The impervious site runoff (Q) based on the New Jersey Water Quality Design Storm was determined to be 0.79 cfs.

   Maximum Treatment Flow Rate (MTFR) Evaluation:

   The site runoff (Q) was based on the following:
   time of concentration = 10 minutes
   i = 3.2 in/hr (page 5-8, Fig. 5-3 of the NJ Stormwater BMP Manual)
   c = 0.99 (runoff coefficient for impervious)
   Q = ciA = 0.99 x 3.2 x 0.25 = 0.79 cfs

   Given the site runoff is 0.79 cfs and based on Table 1 below, the HydroStorm Model HS4 with a MTFR of 0.88 cfs could be used for this site to remove 50% of the TSS from the impervious area without exceeding the MTFR.

   The sizing table corresponding to the available system models is noted below. Additional specifications regarding each model can be found in the Verification Appendix under Table A-1.

Table 1 HydroStorm Sizing Information

HydroStorm Model	NJDEP 50% TSS Maximum Treatment Flow Rate (cfs)	Treatment Area (ft^2)	Hydraulic Loading Rate (gpm/ft^2)	50% Maximum Sediment Storage (ft^3)
HS3	0.50	7.1	31.4	3.6
HS4	0.88	12.6	31.4	6.3
HS5	1.37	19.6	31.4	9.8
HS6	1.98	28.3	31.4	14.2
HS7	2.69	38.5	31.4	19.3
HS8	3.52	50.3	31.4	25.2
HS9	4.45	63.6	31.4	31.8
HS10	5.49	78.5	31.4	39.3
HS11	6.65	95.0	31.4	47.5
HS12	7.91	113.0	31.4	56.5

A detailed maintenance plan is mandatory for any project with a Stormwater BMP subject to the Stormwater Management Rules, N.J.A.C. 7:8. The plan must include all of the items identified in the Stormwater Management Rules, N.J.A.C. 7:8-5.8. Such items include, but are not limited to, the list of inspection and maintenance equipment and tools, specific corrective and preventative maintenance tasks, indication of problems in the system, and training of maintenance personnel. Additional information can be found in Chapter 8: Maintenance and Retrofit of Stormwater Management Measures.

If you have any questions regarding the above information, please contact Brian Salvo or Nick Grotts of my office at (609) 633-7021.

Sincerely,

James J. Murphy, Chief
Bureau of Nonpoint Pollution Control

Attachment: Maintenance Plan

cc: Chron File
Richard Magee, NJCAT
Vince Mazzei, NJDEP - DLUR
Ravi Patraju, NJDEP - BES
Gabriel Mahon, NJDEP - BNPC
Brian Salvo, NJDEP – BNPC
Nick Grotts, NJDEP – BNPC

Hydroworks® HydroStorm

Operations & Maintenance Manual

Version 1.0

Please call Hydroworks at 888-290-7900 or email us at support@hydroworks.com if you have any questions regarding the Inspection Checklist. Please fax a copy of the completed checklist to Hydroworks at 888-783-7271 for our records.

Introduction

The HydroStorm is a state of the art hydrodynamic separator. Hydrodynamic separators remove solids, debris and lighter than water (oil, trash, floating debris) pollutants from stormwater. Hydrodynamic separators and other water quality measures are mandated by regulatory agencies (Town/City, State, Federal Government) to protect storm water quality from pollution generated by urban development (traffic, people) as part of new development permitting requirements.

As storm water treatment structures fill up with pollutants they become less and less effective in removing new pollution. Therefore, it is important that storm water treatment structures be maintained on a regular basis to ensure that they are operating at optimum performance. The HydroStorm is no different in this regard and this manual has been assembled to provide the owner/operator with the necessary information to inspect and coordinate maintenance of their HydroStorm.

Hydroworks® HydroStorm Operation

The Hydroworks HydroStorm (HS) separator is a unique hydrodynamic by-pass separator. It incorporates a protected submerged pretreatment zone to collect larger solids, a treatment tank to remove finer solids, and a dual set of weirs to create a high flow bypass. High flows are conveyed directly to the outlet and do not enter the treatment area, however, the submerged pretreatment area still allows removal of coarse solids during high flows.

Under normal or low flows, water enters an inlet area with a horizontal grate. The area underneath the grate is submerged with openings to the main treatment area of the separator. Coarse solids fall through the grate and are either trapped in the pretreatment area or conveyed into the main treatment area depending on the flow rate. Fines are transported into the main treatment area. Openings and weirs in the pretreatment area allow entry of water and solids into the main treatment area and cause water to rotate in the main treatment area creating a vortex motion. Water in the main treatment area is forced to rise along the walls of the separator to discharge from the treatment area to the downstream pipe.

The vortex motion forces solids and floatables to the middle of the inner chamber. Floatables are trapped since the inlet to the treatment area is submerged. The design maximizes the retention of settled solids since solids are forced to the center of the inner chamber by the vortex motion of water while water must flow up the walls of the separator to discharge into the downstream pipe.

A set of high flow weirs near the outlet pipe create a high flow bypass over both the pretreatment area and main treatment chamber. The rate of flow into the treatment area is regulated by the number and size of openings into the treatment chamber and the height of by-pass weirs. High flows flow over the weirs directly to the outlet pipe preventing the scour and resuspension of any fines collected in the treatment chamber.

A central access tube is located in the structure to provide access for cleaning. The arrangement of the inlet area and bypass weirs near the outlet pipe facilitate the use of multiple inlet pipes.

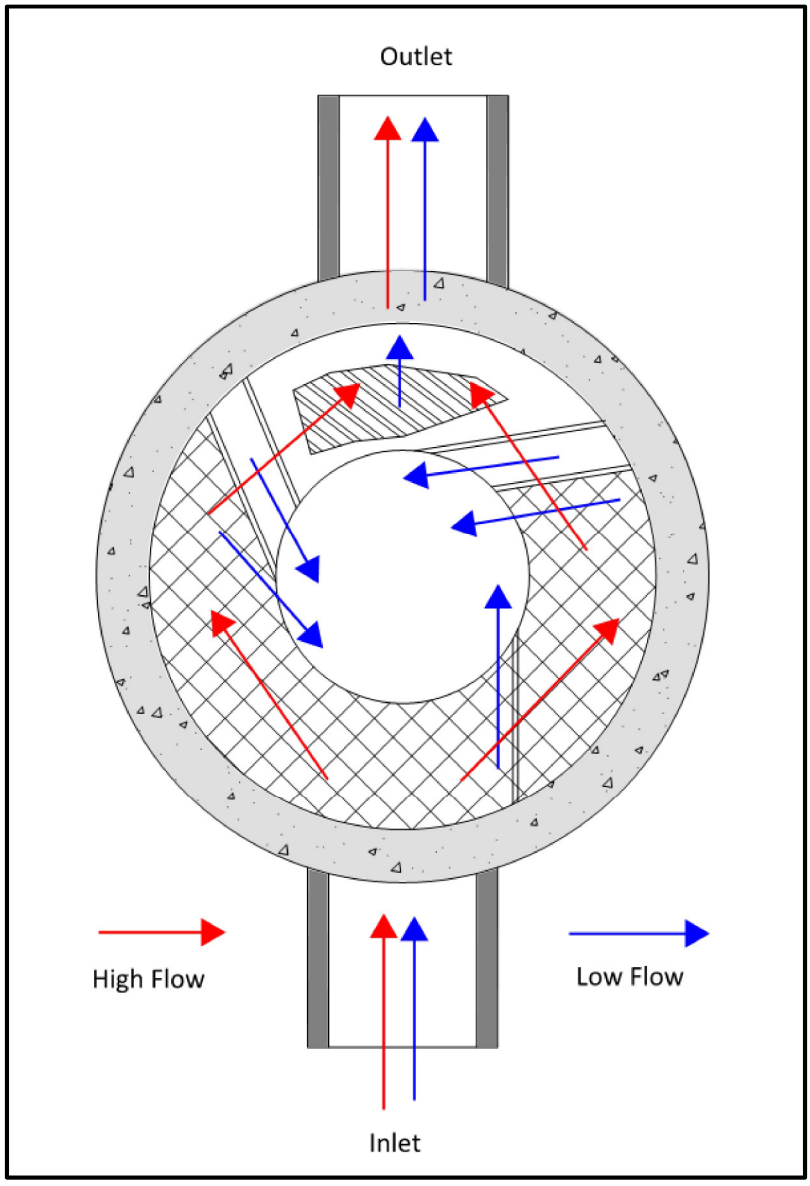


Figure 1. Hydroworks HydroStorm Operation – Plan View

Figure 2 is a profile view of the HydroStorm separator showing the flow patterns for low and high flows.

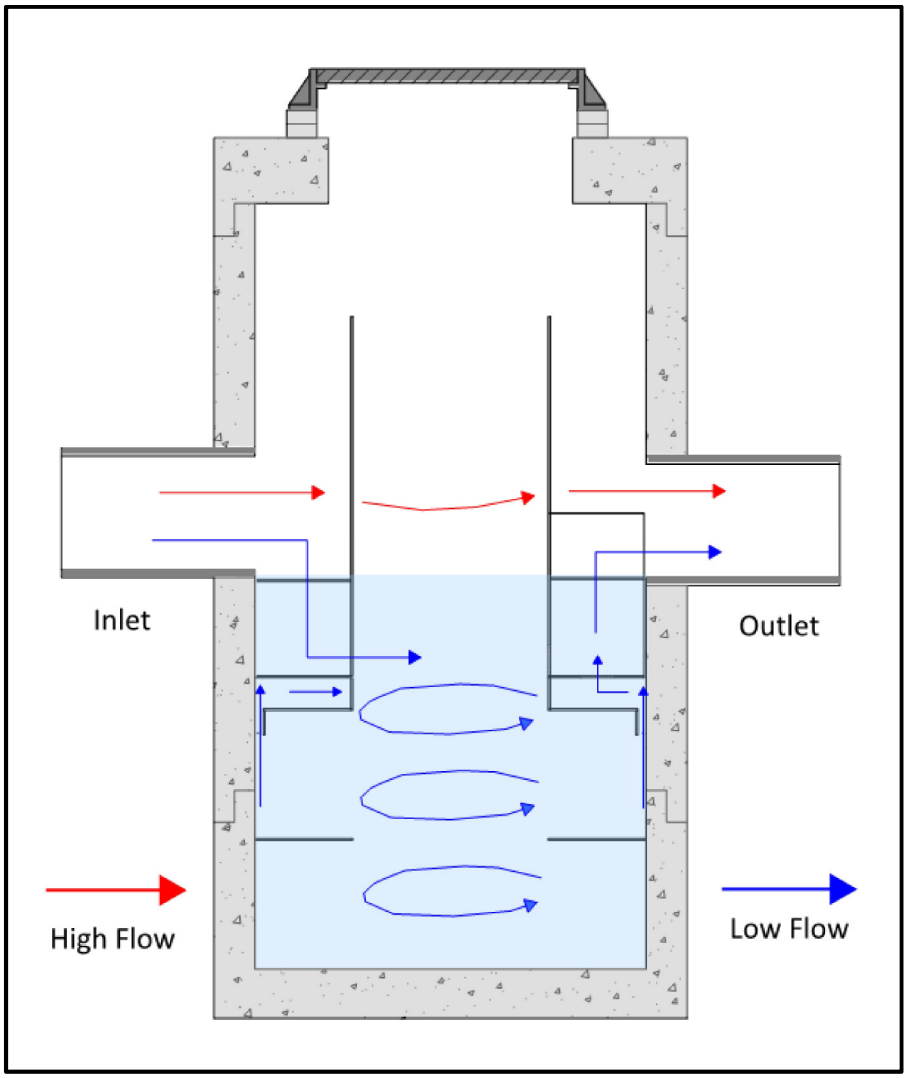


Figure 2. Hydroworks HydroStorm Operation – Profile View

The HS 4i is an inlet version of the HS 4 separator. There is a catch-basin grate on top of the HS 4i. A funnel sits sits underneath the grate on the frame and directs the water to the inlet side of the separator to ensure all lows flows are properly treated. The whole funnel is removed for inspection and cleaning.

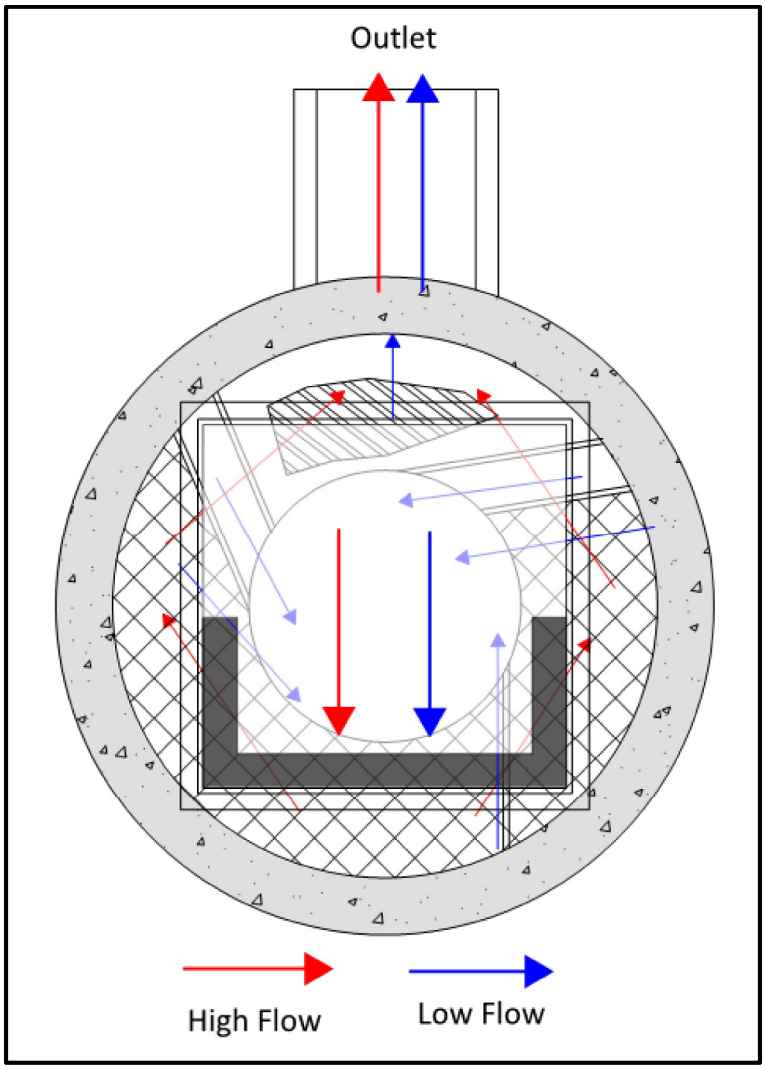


Figure 3. Hydroworks HS 4i Funnel

Inspection

Procedure

Floatables

A visual inspection can be conducted for floatables by removing the covers and looking down into the center access tube of the separator. Separators with an inlet grate (HS 4i or custom separator) will have a plastic funnel located under the grate that must be removed from the frame prior to inspection or maintenance. If you are missing a funnel please contact Hydroworks at the numbers provided at the end of this document.

TSS/Sediment

Inspection for TSS build-up can be conducted using a Sludge Judge®, Core Pro®, AccuSludge® or equivalent sampling device that allows the measurement of the depth of TSS/sediment in the unit. These devices typically have a ball valve at the bottom of the tube that allows water and TSS to flow into the tube when lowering the tube into the unit. Once the unit touches the bottom of the device, it is quickly pulled upward such that the water and TSS in the tube forces the ball valve closed allowing the user to see a full core of water/TSS in the unit. The unit should be inspected for TSS through each of the access covers. Several readings (2 or 3) should be made at each access cover to ensure that an accurate TSS depth measurement is recorded.

Frequency

Construction Period

The HydroStorm separator should be inspected every four weeks and after every large storm (over 0.5" (12.5 mm) of rain) during the construction period.

Post-Construction Period

The Hydroworks HydroStorm separator should be inspected during the first year of operation for normal stabilized sites (grassed or paved areas). If the unit is subject to oil spills or runoff from unstabilized (storage piles, exposed soils) areas the HydroStorm separator should be inspected more frequently (4 times per year). The initial annual inspection will indicate the required future frequency of inspection and maintenance if the unit was maintained after the construction period.

Reporting

Reports should be prepared as part of each inspection and include the following information:

1. Date of inspection
2. GPS coordinates of Hydroworks unit
3. Time since last rainfall
4. Date of last inspection
5. Installation deficiencies (missing parts, incorrect installation of parts)
6. Structural deficiencies (concrete cracks, broken parts)
7. Operational deficiencies (leaks, blockages)
8. Presence of oil sheen or depth of oil layer
9. Estimate of depth/volume of floatables (trash, leaves) captured
10. Sediment depth measured
11. Recommendations for any repairs and/or maintenance for the unit
12. Estimation of time before maintenance is required if not required at time of inspection

A sample inspection checklist is provided at the end of this manual.

Maintenance

Procedure

The Hydroworks HydroStorm unit is typically maintained using a vacuum truck. There are numerous companies that can maintain the HydroStorm separator. Maintenance with a vacuum truck involves removing all of the water and sediment together. The water is then separated from the sediment on the truck or at the disposal facility.

A central access opening (24" or greater) is provided to the gain access to the lower treatment tank of the unit. This is the primary location to maintain by vacuum truck. The pretreatment area can also be vacuumed and/or flushed into the lower treatment tank of the separator for cleaning via the central access once the water level is lowered below the pretreatment floor.

In instances where a vacuum truck is not available other maintenance methods (i.e. clamshell bucket) can be used, but they will be less effective. If a clamshell bucket is used the water must be decanted prior to cleaning since the sediment is under water and typically fine in nature. Disposal of the water will depend on local requirements. Disposal options for the decanted water may include:

1. Discharge into a nearby sanitary sewer manhole
2. Discharge into a nearby LID practice (grassed swale, bioretention)
3. Discharge through a filter bag into a downstream storm drain connection

The local municipality should be consulted for the allowable disposal options for both water and sediments prior to any maintenance operation. Once the water is decanted the sediment can be removed with the clamshell bucket.

Disposal of the contents of the separator depend on local requirements. Maintenance of a Hydroworks HydroStorm unit will typically take 1 to 2 hours based on a vacuum truck and longer for other cleaning methods (i.e. clamshell bucket).

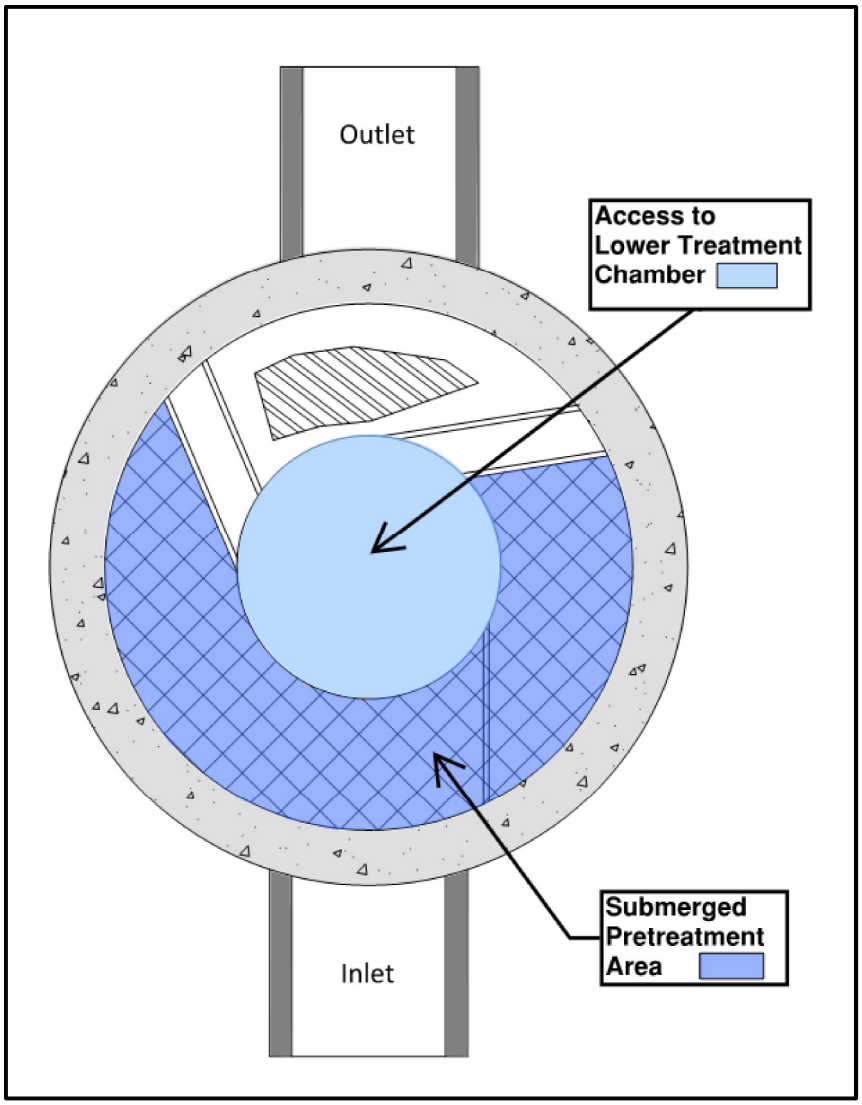


Figure 3. Maintenance Access

Frequency

Construction Period

A HydroStorm separator can fill with construction sediment quickly during the construction period. The HydroStorm must be maintained during the construction period when the depth of TSS/sediment reaches 24" (600 mm). It must also be maintained during the construction period if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the area of the separator

The HydroStorm separator should be maintained at the end of the construction period, prior to operation for the post-construction period.

Post-Construction Period

The HydroStorm was independently tested by Alden Research Laboratory in 2017. A HydroStorm HS 4 was tested for scour with a 50% sediment depth of 0.5 ft. Therefore, maintenance for sediment accumulation is required if the depth of sediment is 1 ft or greater in separators with standard water (sump) depths (Table 1).

There will be designs with increased sediment storage based on specifications or site-specific criteria. A measurement of the total water depth in the separator through the central access tube should be taken and compared to water depth given in Table 1. The standard water depth from Table 1 should be subtracted from the measured water depth and the resulting extra depth should be added to the 1 ft to determine the site-specific sediment maintenance depth for that separator.

For example, if the measured water depth in the HS-7 is 7 feet, then the sediment maintenance depth for that HS-7 is 2 ft (= 1 + 7 – 6) and the separator does not need to be cleaned for sediment accumulation until the measure sediment depth is 2 ft.

The HydroStorm separator must also be maintained if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the water surface of the separator.

Table 1 Standard Dimensions for Hydroworks HydroStorm Models

Model	Diameter (ft)	Total Water Depth (ft)	Sediment Maintenance Depth for Table 1 Total Water Depth(ft)
HS-3	3	3	1
HS-4	4	4	1
HS-5	5	4	1
HS-6	6	4	1
HS-7	7	6	1
HS-8	8	7	1
HS-9	9	7.5	1
HS-10	10	8	1
HS-11	11	9	1
HS-12	12	9.5	1

HYDROSTORM INSPECTION SHEET

Date _____
Date of Last Inspection _____

Site _____
City _____
State _____
Owner _____

GPS Coordinates _____

Date of last rainfall _____

Site Characteristics	**Yes**	**No**
Soil erosion evident	☐	☐
Exposed material storage on site	☐	☐
Large exposure to leaf litter (lots of trees)	☐	☐
High traffic (vehicle) area	☐	☐

HydroStorm	**Yes**	**No**
Obstructions in the inlet or outlet	☐ *	☐
Missing internal components	☐ **	☐
Improperly installed inlet or outlet pipes	☐ ***	☐
Internal component damage (cracked, broken, loose pieces)	☐ **	☐
Floating debris in the separator (oil, leaves, trash)	☐	☐
Large debris visible in the separator	☐ *	☐
Concrete cracks/deficiencies	☐ ***	☐
Exposed rebar	☐ **	☐
Water seepage (water level not at outlet pipe invert)	☐ ***	☐

Water level depth below outlet pipe invert _____"

Routine Measurements

Floating debris depth	**< 0.5" (13mm)**	☐	**>0.5" 13mm)**	☐ *
Floating debris coverage	**< 50% of surface area**	☐	**> 50% surface area**	☐ *
Sludge depth	**< 12" (300mm)**	☐	**> 12" (300mm)**	☐ *

* Maintenance required
** Repairs required
*** Further investigation is required

Hydroworks

Other Comments:

Hydroworks® HydroStorm

One Year Limited Warranty

Hydroworks, LLC warrants, to the purchaser and subsequent owner(s) during the warranty period subject to the terms and conditions hereof, the Hydroworks HydroStorm to be free from defects in material and workmanship under normal use and service, when properly installed, used, inspected and maintained in accordance with Hydroworks written instructions, for the period of the warranty. The standard warranty period is 1 year.

The warranty period begins once the separator has been manufactured and is available for delivery. Any components determined to be defective, either by failure or by inspection, in material and workmanship will be repaired, replaced or remanufactured at Hydroworks' option provided, however, that by doing so Hydroworks, LLC will not be obligated to replace an entire insert or concrete section, or the complete unit. This warranty does not cover shipping charges, damages, labor, any costs incurred to obtain access to the unit, any costs to repair/replace any surface treatment/cover after repair/replacement, or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to any material that has been disassembled or modified without prior approval of Hydroworks, LLC, that has been subjected to misuse, misapplication, neglect, alteration, accident or act of God, or that has not been installed, inspected, operated or maintained in accordance with Hydroworks, LLC instructions and is in lieu of all other warranties expressed or implied. Hydroworks, LLC does not authorize any representative or other person to expand or otherwise modify this limited warranty.

The owner shall provide Hydroworks, LLC with written notice of any alleged defect in material or workmanship including a detailed description of the alleged defect upon discovery of the defect. Hydroworks, LLC should be contacted at 136 Central Ave., Clark, NJ 07066 or any other address as supplied by Hydroworks, LLC. (888-290-7900).

This limited warranty is exclusive. There are no other warranties, express or implied, or merchantability or fitness for a particular purpose and none shall be created whether under the uniform commercial code, custom or usage in the industry or the course of dealings between the parties. Hydroworks, LLC will replace any goods that are defective under this warranty as the sole and exclusive remedy for breach of this warranty.

Subject to the foregoing, all conditions, warranties, terms, undertakings or liabilities (including liability as to negligence), expressed or implied, and howsoever arising, as to the condition, suitability, fitness, safety, or title to the Hydroworks HydroStorm are hereby negated and excluded and Hydroworks, LLC gives and makes no such representation, warranty or undertaking except as expressly set forth herein. Under no circumstances shall Hydroworks, LLC be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the HydroStorm, or the cost of other goods or services related to the purchase and installation of the HydroStorm. For this Limited Warranty to apply, the HydroStorm must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Hydroworks' written installation instructions.

Hydroworks, LLC expressly disclaims liability for special, consequential or incidental damages (even if it has been advised of the possibility of the same) or breach of expressed or implied warranty. Hydroworks, LLC shall not be liable for penalties or liquidated damages, including loss of production and profits; labor and materials; overhead costs; or other loss or expense incurred by the purchaser or any third party. Specifically excluded from limited warranty coverage are damages to the HydroStorm arising from ordinary wear and tear; alteration, accident, misuse, abuse or neglect; improper maintenance, failure of the product due to improper installation of the concrete sections or improper sizing; or any other event not caused by Hydroworks, LLC. This limited warranty represents Hydroworks' sole liability to the purchaser for claims related to the HydroStorm, whether the claim is based upon contract, tort, or other legal basis.

APPENDIX I

NYSDEC Full Environmental Assessment Form

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Beacon Views Townhouses		
Project Location (describe, and attach a general location map): 100 Conklin Street, Beacon, NY 12508		
Brief Description of Proposed Action (include purpose or need): Application for Site Development Plan approval proposing the development of 40 townhomes subdivided into individual townhouse lots, and supporting improvements including a road, stormwater management facilities and public utility connections.		
Name of Applicant/Sponsor: Beacon Views, LLC	Telephone: 718-258-9027 E-Mail: ctadult@aol.com	
Address: 500 River Avenue, Suite 145		
City/PO: Lakewood	State: NJ	Zip Code: 08701
Project Contact (if not same as sponsor; give name and title/role): Greg Kamedulski	Telephone: 203-313-9412 E-Mail: gkamedulsky@gmail.com	
Address: 500 River Avenue, Suite 145		
City/PO: Lakewood	State: NJ	Zip Code: 08701
Property Owner (if not same as sponsor): Highlands at Beacon LLC	Telephone: 917-539-7132 E-Mail: ctadult@aol.com	
Address: 2847 Church Street		
City/PO: Pine Plains	State: NY	Zip Code: 12567

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Beacon Planning Board - Site Plan Approval & Subdivision Approval	8/27/19
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Dutchess County Planning Dutchess County Department of Health	10/1/19
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC GP-0-20-001 Stormwater General Permit	10/1/19
h. Federal agencies ☑Yes ☐No	ACOE Wetland General Permit	10/1/19

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?
RD-5 - Designed Residence 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 Schools

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?
City of Beacon Parks and Recreation, 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)? Residential

b. a. Total acreage of the site of the proposed action? 8.6 acres
b. Total acreage to be physically disturbed? 4.26 onsite, 1.44 addl for offsite access and utility improvements acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 8.6 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☑ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
Residential, Creation of townhouse lots.
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? 42 (40 Townhouses/2 Common)
iv. Minimum and maximum proposed lot sizes? Minimum 1,800 Maximum 3.2 ac

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 24 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☑ Yes ☐ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	40			
At completion of all phases	40			

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☑ No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑ Yes ☐ No

If Yes,

i. Purpose of the impoundment: Stormwater Management

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Stormwater runoff

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: 0.5 million gallons; surface area: 0.4 acres

v. Dimensions of the proposed dam or impounding structure: 5'-6" height; 390' length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): Earth Fill

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑ Yes ☐ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Federal flagged wetland PF01E

_____

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:
The proposed project would fill the existing wetland by approximately 13,880.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: In order to limit disturbance into the wetland, retaining walls will be installed.

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: .22 ac±
- expected acreage of aquatic vegetation remaining after project completion: 2.33 ac±
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Site grading.
- proposed method of plant removal: Excavation
- if chemical/herbicide treatment will be used, specify product(s): None

v. Describe any proposed reclamation/mitigation following disturbance:
1 to 1 creation of wetlands

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: 13,200 (max day) gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑ Yes ☐ No
If Yes:

- Name of district or service area: 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: 13,200 (max day) gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
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
- 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? ☑ Yes ☐ No
- Will a line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑ Yes ☐ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 2.26 acres (impervious surface)

_____ Square feet or 8.6 acres (parcel size)

ii. Describe types of new point sources. Roadway catch basins, roof drain connections, cut off swales

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)?

Onsite stormwater management facilities

- If to surface waters, identify receiving water bodies or wetlands: Onsite wetland
- Will stormwater runoff flow to adjacent properties? ☑ Yes ☐ No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑ Yes ☐ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

Heavy equipment during construction.

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

None.

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

Natural gas boilers for each residential unit.

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing 0 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

N/A

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7 am - 5 pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Typical noise associated with excavation and general construction during business hours.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☑ Yes ☐ No

Describe: Limited tree clearing for improvements. New landscape screening will be installed.

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:

Roadway pole mounted lights at 18' high with house side shields.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☑ Yes ☐ No

Describe: Limited tree clearing for improvements. New landscape screening will be installed.

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

N/A

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

N/A

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☑ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces		2.1 ac±	
• Forested	6.0 ac±	2.6 ac±	
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)	2.6 ac±	2.3 ac±	
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: Slope, Lawn and Landscape Areas		1.6 ac±	

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Beacon High School, Roundbout Middle School, Wingate at Beacon, Hedgewood Home for Adults, and Highland Meadows Senior Housing.

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 6.5 feet average feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Bernardston Silt (BeB) (BeC)	52 %
Canandaigua Silt (Ca)	29 %
Nassau Cardigan Complex (NwC)	19 %

d. What is the average depth to the water table on the project site? Average: 2 feet average feet

e. Drainage status of project site soils:
☑ Well Drained: 66 % of site
☐ Moderately Well Drained: _____ % of site
☑ Poorly Drained 34 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 50 % of site
☑ 10-15%: 15 % of site
☑ 15% or greater: 35 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.
i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No
ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No
If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.
iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No
iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Wetland PF01E Approximate Size 2.55 ac onsite
- 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:
Whitetail Deer, Gray Squirrel
Racoon

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: Matteawan State Hospital

iii. Brief description of attributes on which listing is based:
Area of social history, health and medicine and institutional architecture

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Hudson Highlands Scenic Area

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Hudson River Valley Scenic Area of Statewide Significance

iii. Distance between project and resource: 2.4 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 Jeffrey J. Contelmo, P.E. Date 6/30/20

Insite Engineering, Surveying & Landscape Architecture, P.C.

Signature _____ Title Senior Principal Engineer

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]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
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]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

APPENDIX J

Pipe Sizing Calculations

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

DRAINAGE SYSTEM CALCULATIONS
Design Storm: 100-Year

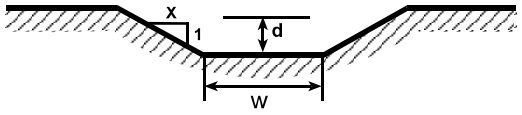
PROJECT: **Beacon Views**
JOB NUMBER: **19131.100**
BY: EJP DATE: 12-29-2020
CHK: ZMP

STRUCTURE		IMPERVIOUS AREA			PERVIOUS AREA			CA	TIME OF CONC. (min.)			I	Q (cfs)		PIPE DESIGN				
FROM	TO	A (ac.)	C	CA	A (ac.)	C	CA		INLET	PIPE	TOTAL		DESIGN	CAP.	V(ft/s)	n	s (%)	L (ft)	DIA (in)
DI 7	CB 6	**0.20**	0.9	0.18	**0.02**	0.3	0.01	0.19	**6**	-	6	**9.2**	1.7	5.9	6.5	**0.012**	**2.3**	**97**	**12**
CB 6	CB 5	**0.16**	0.9	0.14	**0.02**	0.3	0.01	0.34	**6**	-	6	**9.2**	3.1	4.2	5.9	**0.012**	**1.2**	**35**	**12**
CB 5	CB 4	**0.10**	0.9	0.09	**0.06**	0.3	0.02	0.47	**6**	-	6	**9.2**	4.3	8.0	6.6	**0.012**	**1.3**	**183**	**15**
CB 4	CB 3	**0.40**	0.9	0.36	**0.10**	0.3	0.03	0.92	**6**	-	6	**9.2**	8.5	11.4	7.1	**0.012**	**1.0**	**136**	**18**
CB 3	CB 2	**0.15**	0.9	0.14	**0.06**	0.3	0.02	2.01	**6**	-	6	**9.2**	18.5	47.1	14.1	**0.012**	**3.7**	**63**	**24**
CB 2	ES 1	**0.11**	0.9	0.10	**0.00**	0.3	0.00	2.20	**6**	-	6	**9.2**	20.2	46.5	14.3	**0.012**	**3.6**	**76**	**24**
CB 5A	CB 5	**0.02**	0.9	0.02	**0.00**	0.3	0.00	0.02	**6**	-	6	**9.2**	0.2	5.0	3.1	**0.012**	**1.7**	**18**	**12**
CB 4A	CB 4	**0.07**	0.9	0.06	**0.00**	0.3	0.00	0.06	**6**	-	6	**9.2**	0.6	5.3	4.4	**0.012**	**1.9**	**26**	**12**
CB 2A	CB 2	**0.10**	0.9	0.09	**0.00**	0.3	0.00	0.09	**6**	-	6	**9.2**	0.8	5.5	5.0	**0.012**	**2.0**	**25**	**12**
CB 3C	CB 3B	**0.48**	0.9	0.43	**0.22**	0.3	0.07	0.50	**6**	-	6	**9.2**	4.6	7.3	6.3	**0.012**	**1.1**	**151**	**15**
CB 3B	CB 3A	**0.20**	0.9	0.18	**0.02**	0.3	0.01	0.69	**6**	-	6	**9.2**	6.3	7.0	6.5	**0.012**	**1.0**	**68**	**15**
CB 3A	CB 3	**0.23**	0.9	0.21	**0.10**	0.3	0.03	0.93	**6**	-	6	**9.2**	8.6	11.9	7.4	**0.012**	**1.1**	**115**	**18**
SDI 22	ES 21	**0.00**	0.9	0.00	**2.20**	0.3	0.66	0.66	**15**	-	15	**6.4**	4.2	14.0	10.0	**0.012**	**4.0**	**52**	**15**
SDI 12	SDI 11	**0.00**	0.9	0.00	**1.60**	0.3	0.48	0.48	**15**	-	15	**6.4**	3.1	11.7	12.6	**0.012**	**9.2**	**22**	**12**
SDI 11	DMH 10	**0.00**	0.9	0.00	**2.70**	0.3	0.81	1.29	**15**	-	15	**6.4**	8.3	16.9	13.7	**0.012**	**5.8**	**57**	**15**
DMH 10	DMH 9	**0.00**	0.9	0.00	**0.00**	0.3	0.00	1.29	**15**	-	15	**6.4**	8.3	11.9	10.5	**0.012**	**2.9**	**110**	**15**
DMH 9	ES 8	**0.00**	0.9	0.00	**0.00**	0.3	0.00	1.29	**15**	-	15	**6.4**	8.3	20.2	15.6	**0.012**	**8.3**	**60**	**15**
SDI 14A	DI 14	**0.00**	0.9	0.00	**0.50**	0.3	0.15	0.15	**6**	-	6	**9.2**	1.4	14.8	7.6	**0.012**	**4.5**	**55**	**15**
DI 14	ES 13	**0.00**	0.9	0.00	**0.05**	0.3	0.02	0.17	**6**	-	6	**9.2**	37.2	49.6	17.4	**0.012**	**4.1**	**80**	**24**
25 TOWNSEND	DI 14	**18" DIAMETER HDPE (TAKEN FROM 25 TOWNSEND STREET APPROVED PLANS)**																	
SDI 17	DMH 16	**0.00**	0.9	0.00	**0.40**	0.3	0.12	0.12	**15**	-	15	**6.4**	0.8	10.4	7.8	**0.012**	**7.3**	**45**	**12**
DMH 16	ES 15	**0.00**	0.9	0.00	**0.00**	0.3	0.00	0.12	**15**	-	15	**6.4**	1.1	5.0	5.1	**0.012**	**1.7**	**47**	**12**
CB 19	FS 1.1	**0.25**	0.9	0.23	**0.01**	0.3	0.00	0.23	**6**	-	6	**9.2**	2.1	6.8	7.7	**0.012**	**3.1**	**46**	**12**
FS 1.1	ES 18	**SIZED IN HYDROCAD**																	
FS 1.1	HDS 1.1	**SIZED IN HYDROCAD**																	
HDS 1.1	1.2P	**SIZED IN HYDROCAD**																	
1.2P	DMH 16	**SIZED IN HYDROCAD (0.29 CFS)**																	
ES 24	ES 23	**0.50**	0.9	0.45	**0.30**	0.3	0.09	0.54	**10**	-	10	**7.5**	4.1	7.3	6.1	**0.012**	**1.1**	**44**	**15**
OS 1.1P	ES 25	**SIZED IN HYDROCAD**																	
CB 28	CB 27	**0.07**	0.9	0.06	**0.00**	0.3	0.00	0.06	**6**	-	6	**9.2**	0.6	6.5	5.0	**0.012**	**2.8**	**18**	**12**
CB 27	ES 26	**0.07**	0.9	0.06	**0.00**	0.3	0.00	0.12	**6**	-	6	**9.2**	1.1	7.5	6.9	**0.012**	**3.8**	**136**	**12**
SDI 30	ES 29	**0.00**	0.9	0.00	**1.50**	0.3	0.45	0.45	**15**	-	15	**6.4**	2.9	7.5	9.0	**0.012**	**3.8**	**61**	**12**

APPENDIX K

Swale Sizing Calculations

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.



Appendix K
SWALE SIZING CALCULATIONS

Design Storm: 100-Year
Project: Beacon Views
Job #: 19131.100
Date: 7/28/2020
By: EJP
Sheet: 1 of 1

SMP ID	Swale Type	Q (cfs)	w (ft)	d (ft)	x	n	S (%)	A (ft^2)	W_p (ft)	R_h (ft)	V (ft/s)	Q (cfs)
		design flow	swale bottom width	depth of flow	swale side slope (x:1)	Manning's "n"	swale slope	swale area	wetted perimeter	hydraulic radius	swale velocity	swale capacity
A	Grass	0.8	1.00	0.3	2.00	0.035	2.00	0.40	2.16	0.18	1.9	**0.8**
A	Grass	0.8	1.00	0.1	2.00	0.035	20.00	0.18	1.63	0.11	4.4	**0.8**
B	Grass	8.3	1.00	0.8	2.00	0.035	2.00	2.27	4.78	0.48	3.7	**8.3**
B	Grass	8.3	1.00	0.5	2.00	0.035	13.00	1.14	3.43	0.33	7.3	**8.3**
C	Grass	3.1	1.00	0.5	2.00	0.035	2.00	1.09	3.37	0.32	2.8	**3.1**
C	Grass	3.1	1.00	0.4	2.00	0.035	10.00	0.61	2.59	0.23	5.1	**3.1**
D	Grass	5.2	1.00	0.7	2.00	0.035	2.00	1.60	4.04	0.40	3.3	**5.2**
D	Grass	5.2	1.00	0.5	2.00	0.035	5.00	1.14	3.44	0.33	4.6	**5.2**
E	Rip Rap	1.3	1.00	0.3	2.00	0.050	5.00	0.55	2.48	0.22	2.4	**1.3**
E	Rip Rap	1.3	1.00	0.2	2.00	0.050	20.00	0.34	2.03	0.17	4.0	**1.3**
F	Grass	3.0	1.00	0.6	2.00	0.035	1.00	1.39	3.77	0.37	2.2	**3.0**
F	Grass	3.0	1.00	0.5	2.00	0.035	2.00	1.06	3.33	0.32	2.8	**3.0**
G	Grass	1.5	1.00	0.4	2.00	0.035	1.00	0.83	2.97	0.28	1.8	**1.5**
G	Grass	1.5	1.00	0.4	2.00	0.035	2.00	0.64	2.65	0.24	2.3	**1.5**

Swale A is located behind Units 35-40 and is tributary to SDI 17
Swale B is located behind Units 27-34 and is tributary to SDI 14A
Swale C is located behind Units 21-26 and is tributary to SDI 12
Swale D is located behind Units 14-20 and is tributary to SDI 11
Swale E is located along between the western property line and proposed retaining wall and is tributary to SDI 22
Swale F is located along the entrance drive off Hastings Drive and is tributary to SDI 22
Swale G is located along the entrance drive off Hastings Drive and is tributary to SDI 30

APPENDIX L

Draft NYSDEC Notice of Intent

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	BEACON VIEWS, LLC
2. Contact Person:	GREGORY KAMEDULSKI
3. Street Address:	500 RIVER AVENUE, SUITE 145
4. City/State/Zip:	LAKEWOOD, NEW JERSEY 08701
II. Project Site Information	
5. Project/Site Name:	BEACON VIEWS
6. Street Address:	100 CONKLIN STREET
7. City/State/Zip:	BEACON, NEW YORK 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)

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

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)
BEACON VIEWS, LLC

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
KAMEDULSKI

Owner/Operator Contact Person First Name
GREGORY

Owner/Operator Mailing Address
500 RIVER AVENUE, SUITE 145

City
LAKEWOOD

State
NJ

Zip
08701-____

Phone (Owner/Operator)
203-313-9412

Fax (Owner/Operator)
___-___-____

Email (Owner/Operator)
GKAMEDULSKI@GMAIL.COM

FED TAX ID
__-_____ (not required for individuals)

Project Site Information

Project/Site Name
BEACON VIEWS

Street Address (NOT P.O. BOX)
100 CONKLIN STREET

Side of Street
● **North** ○ **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
BEACON

State: NY
Zip: 12508-
County: DUTCHESS
DEC Region: 3

Name of Nearest Cross Street
DESOTO AVENUE

Distance to Nearest Cross Street (Feet)
100

Project In Relation to Cross Street
○ **North** ○ **South** ○ **East** ● **West**

Tax Map Numbers
Section-Block-Parcel
6055-03-331123

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)
-73.955
Ex. -73.749

Y Coordinates (Northing)
41.512
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**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use	**Post-Development Future Land Use**
● FOREST	○ SINGLE FAMILY HOME
○ PASTURE/OPEN LAND	● SINGLE FAMILY SUBDIVISION
○ CULTIVATED LAND	○ TOWN HOME RESIDENTIAL
○ SINGLE FAMILY HOME	○ MULTIFAMILY RESIDENTIAL
○ SINGLE FAMILY SUBDIVISION	○ INSTITUTIONAL/SCHOOL
○ TOWN HOME RESIDENTIAL	○ INDUSTRIAL
○ MULTIFAMILY RESIDENTIAL	○ COMMERCIAL
○ INSTITUTIONAL/SCHOOL	○ MUNICIPAL
○ INDUSTRIAL	○ ROAD/HIGHWAY
○ COMMERCIAL	○ RECREATIONAL/SPORTS FIELD
○ ROAD/HIGHWAY	○ BIKE PATH/TRAIL
○ RECREATIONAL/SPORTS FIELD	○ LINEAR UTILITY (water, sewer, gas, etc.)
○ BIKE PATH/TRAIL	○ PARKING LOT
○ LINEAR UTILITY	○ CLEARING/GRADING ONLY
○ PARKING LOT	○ DEMOLITION, NO REDEVELOPMENT
○ OTHER	○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
	○ OTHER

Number of Lots: 42

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	**Total Area To Be Disturbed**	**Existing Impervious Area To Be Disturbed**	**Future Impervious Area Within Disturbed Area**
8.6	5.7	0.0	2.8

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ● **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	**B**	**C**	**D**
0 %	0 %	0 %	100 %

7. Is this a phased project? ● **Yes** ○ **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date 08/01/2020 – **End Date** 12/01/2022

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

USACE WETLAND PF01E

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ● Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ● Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ○ **Yes** ● **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ○ **No**
If Yes, what is the acreage to be disturbed?

.

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ○ **Yes** ● **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ **Yes** ● **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ● **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ● **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ **Yes** ● **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ● **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ● **Yes** ○ **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ● **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer
INSITE ENGINEERING

Contact Name (Last, Space, First)
CONTELMO, JEFFREY

Mailing Address
3 GARRETT PLACE

City
CARMEL

State NY Zip 10512-

Phone 845-225-9690 Fax ---

Email
JCONTELMO@INSITE-ENG.COM

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. 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 JEFFREY **MI** J

Last Name CONTELMO, PE

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

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ● Grassed Waterway
- ● Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ● Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ● Retaining Wall
- ○ Riprap Slope Protection
- ● Rock Outlet Protection
- ○ Streambank Protection

Other

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ● **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ● **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ● **Building Footprint Reduction**
- ● **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ● All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

		0	.	3	0	5

acre-feet

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area (acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)		and/or	
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or	
○ Tree Planting/Tree Pit (RR-3)		and/or	
○ Disconnection of Rooftop Runoff (RR-4)		and/or	
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			
○ Rain Garden (RR-6)			
○ Stormwater Planter (RR-7)			
○ Rain Barrel/Cistern (RR-8)			
○ Porous Pavement (RR-9)			
○ Green Roof (RR-10)			
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			
○ Infiltration Basin (I-2)			
○ Dry Well (I-3)			
● Underground Infiltration System (I-4)			0.45
○ 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)			2.35
○ Surface Sand Filter (F-1)			
○ Underground Sand Filter (F-2)			
○ Perimeter Sand Filter (F-3)			
○ Organic Filter (F-4)			
○ Shallow Wetland (W-1)			
○ Extended Detention Wetland (W-2)			
○ Pond/Wetland System (W-3)			
○ Pocket Wetland (W-4)			
○ Wet Swale (O-2)			

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
○ **Hydrodynamic**	
○ **Wet Vault**	
○ **Media Filter**	
○ **Other** [ ]	

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name

Manufacturer

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

0.082 **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

0.062 **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

0.245 **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). 0.334

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

0.626 **acre-feet**

CPv Provided

0.626 **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

39.7 **CFS**

Post-development

35.2 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

84.5 **CFS**

Post-development

78.7 **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ● **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

BEACON VIEWS, LLC

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP [N][Y][R][ ][ ][ ][ ][ ][ ]
- ○ Other [ ]
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ● **Yes** ○ **No**
If Yes, Indicate Size of Impact. [ ][ ][ ][ ][0].[3]

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ● **Yes** ○ **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. [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

GREGORY

MI

Print Last Name

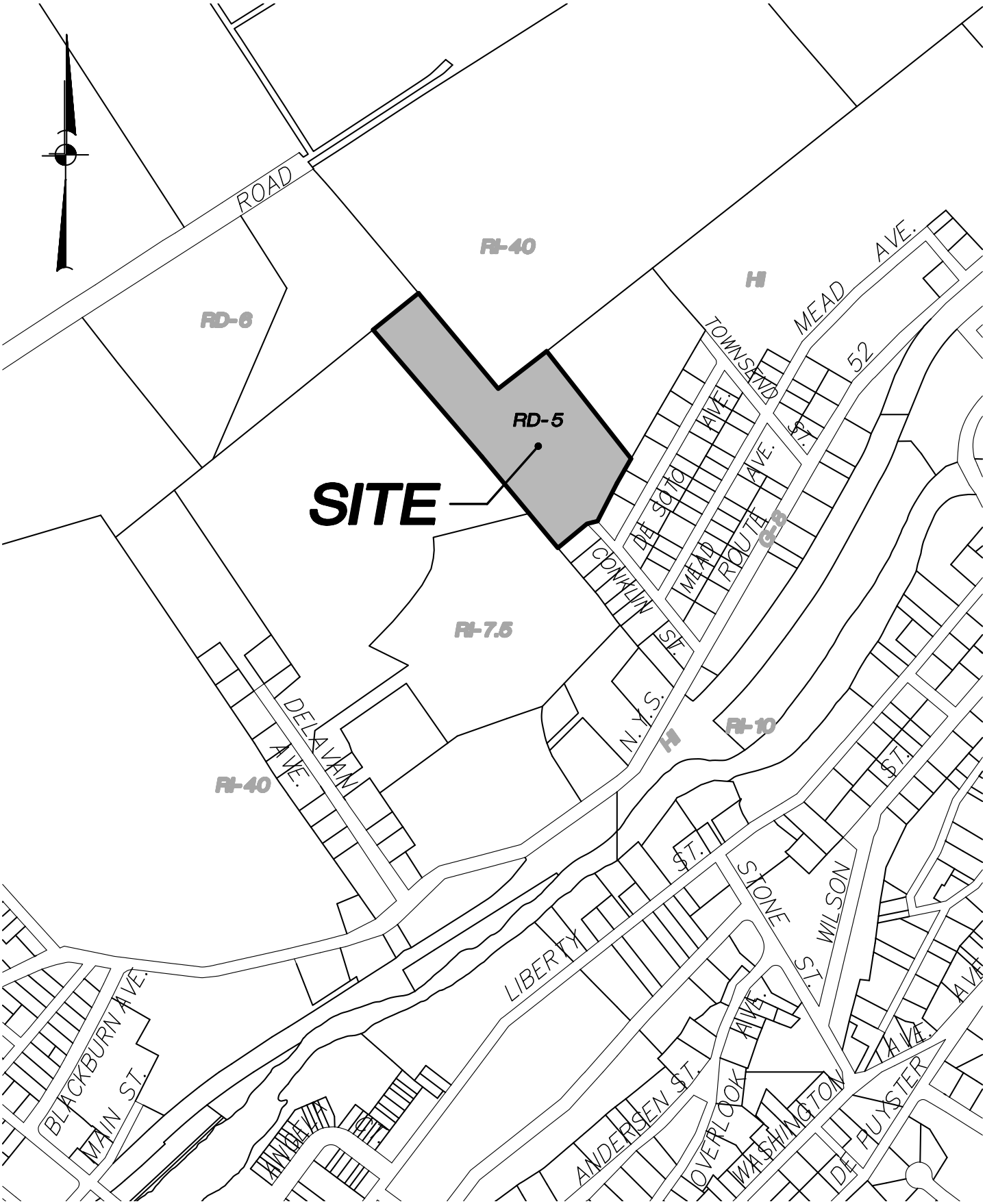
KAMEDULSKI

Owner/Operator Signature

Date

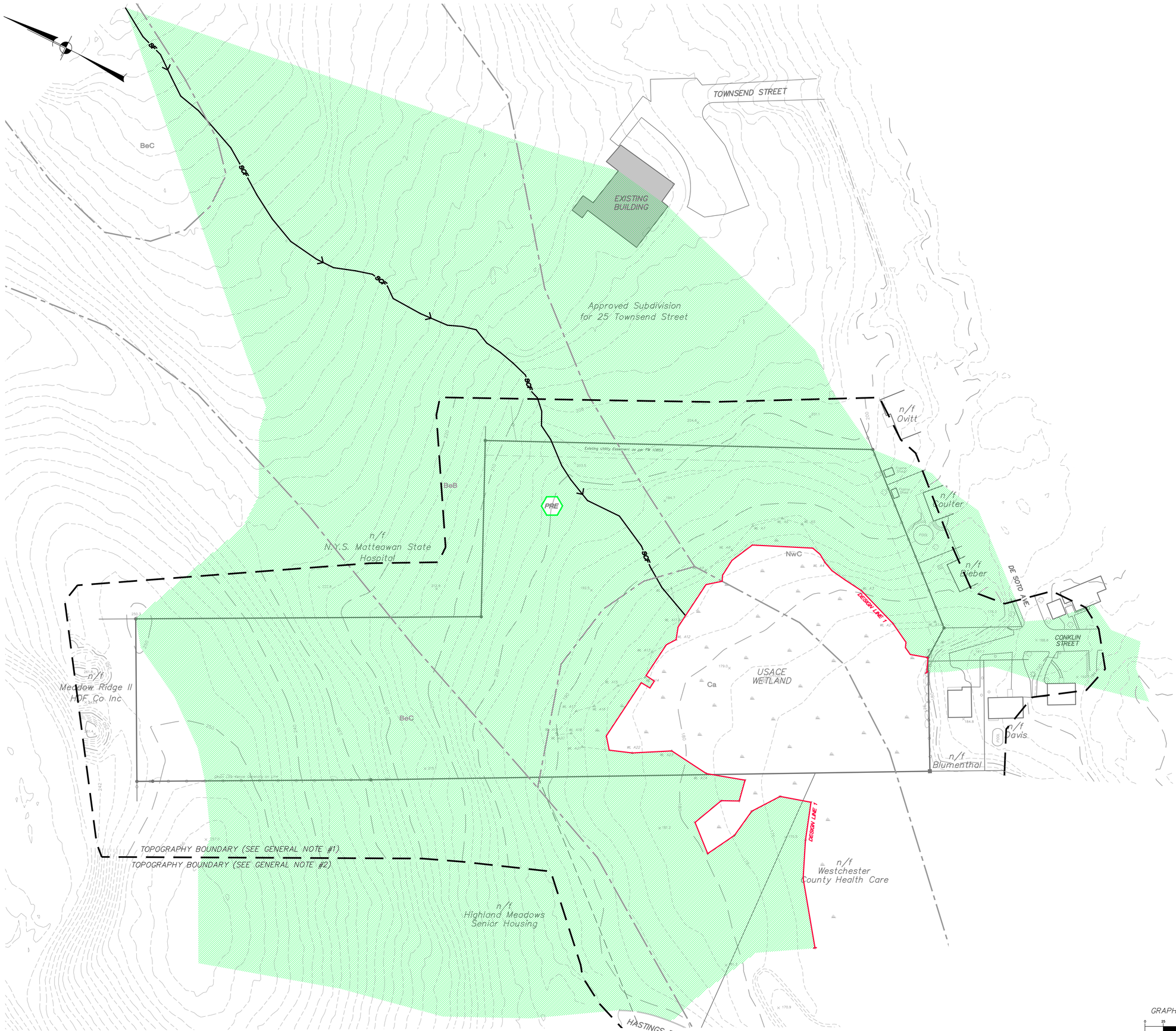
/ /

FIGURES



PROJECT: BEACON VIEWS CITY OF BEACON, DUTCHESS COUNTY, NEW YORK	PREPARED BY: INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C. 3 Garrett Place • Carmel, New York 10512 Phone (845) 225-9690 • Fax (845) 225-9717 www.insite-eng.com	DATE: 8-26-19
		SCALE: 1" = 500'
		PROJECT NO.: 19131.100
DRAWING: LOCATION MAP		FIGURE: 1

Z:\E\19131100\Stormwater\Figures\Figure 1 - Location Map.dwg, 8/26/2019 7:56:56 AM, ependleton, 1:1



SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
BeB	Bernardston Silt Loam, 3% to 8% slope	C/D
BeC	Bernardston Silt Loam, 8% to 15% slope	C/D
Ca	Canandaigua Silt Loam, Nuetral Substratum	C/D
NwC	Nassau–Cardigan Complex, Rolling, Very Rocky	D
	NRCS Soil Boundary Line	

LEGEND

PRE	SUBCATCHMENT
SF →	TIME OF CONCENTRATION SHEET FLOW
SCF →	TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
DESIGN LINE	DESIGN LINE
	SUBCATCHMENT CONTRIBUTING AREA

General Notes:

1. Topography shown hereon within the project site and topography boundary are based upon aerial photography dated April 14, 2003 and is photogrametrically compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D. 1988) as derived by GPS observation. The contour interval is 2'.
2. Topography shown hereon outside of the topography boundary are based upon Dutchess County 2' contour, GIS data.
3. Design Line 1 generally follows the wetland boundary on the project site. Portions of the Design Line were adjusted within the wetland to include all drainage areas in the post–development condition in the stormwater analysis.

GRAPHIC SCALE

0 25 50 100

(IN FEET)
1 inch = 50 ft.

NO.	DATE	REVISION	BY
2	6–30–20	REVISED PER PLANNING BOARD COMMENTS	EJP
1	5–26–20	REVISED PER PLANNING BOARD COMMENTS	EJP

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(845) 225–9717 fax
www.insite–eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
PRE–DEVELOPMENT DRAINAGE MAP

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8–26–19	DRAWN BY	E.J.P.
SCALE	1" = 50'	CHECKED BY	Z.M.P.

FIGURE NO. 2

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E\19131\00 Admin\Stormwater\Figures\Figure 2 - Pre Development.dwg, 8/30/2020 4:09:02 AM, epeckham, 1:1

TOWNSEND STREET

EXISTING BUILDING

Approved Subdivision for 25 Townsend Street

FOR OFFSITE IMPROVEMENTS SEE DRAWING SP-4

n/f Ovitt

n/f Coulter

n/f N.Y.S. Matteawan State Hospital

n/f Meadow Ridge II HDF Co Inc

n/f Weber

n/f Davis

n/f Blumenthal

n/f Westchester County Health Care

n/f Highland Meadows Senior Housing

USACE WETLAND

DESIGN LINE 1

DESIGN LINE 1

DE SOTO AVE.

CONKLIN STREET

HASTINGS DRIVE

TOPOGRAPHY BOUNDARY (SEE GENERAL NOTE #1)

TOPOGRAPHY BOUNDARY (SEE GENERAL NOTE #2)

BeC

BeB

NwC

Ca

SF

SCF

PF

CF

1.0S

1.1P

1.2P

1.1R

1.2S

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
BeB	Bernardston Silt Loam, 3% to 8% slope	C/D
BeC	Bernardston Silt Loam, 8% to 15% slope	C/D
Ca	Canandaigua Silt Loam, Nuetral Substratum	C/D
NwC	Nassau–Cardigan Complex, Rolling, Very Rocky	D
	NRCS Soil Boundary Line	

LEGEND

- 1.0S — SUBCATCHMENT
- 1.1P — STORMWATER MANAGEMENT PRACTICE
- SF — TIME OF CONCENTRATION SHEET FLOW
- SCF — TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
- PF — TIME OF CONCENTRATION PIPE FLOW
- CF — TIME OF CONCENTRATION CHANNEL FLOW
- DESIGN LINE — DESIGN LINE
- SUBCATCHMENT CONTRIBUTING AREA
- STORMWATER MANAGEMENT PRACTICE AREA

General Notes:

1. Topography shown hereon within the project site and topography boundary are based upon aerial photography dated April 14, 2003 and is photogrametrically compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D. 1988) as derived by GPS observation. The contour interval is 2'.
2. Topography shown hereon outside of the topography boundary are based upon Dutchess County 2' contour, GIS data.
3. Design Line 1 generally follows the wetland boundary on the project site. Portions of the Design Line were adjusted within the wetland to include all drainage areas in the post–development condition in the stormwater analysis.

GRAPHIC SCALE

0 25 50 100

(IN FEET)

1 inch = 50 ft.

NO.	DATE	REVISION	BY
4	7–28–20	REVISED PER PLANNING BOARD COMMENTS	EJP
3	6–30–20	REVISED PER PLANNING BOARD COMMENTS	EJP
2	5–26–20	REVISED PER PLANNING BOARD COMMENTS	EJP
1	4–28–20	RESUBMISSION TO PLANNING BOARD	EJP

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(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT: BEACON VIEWS

CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

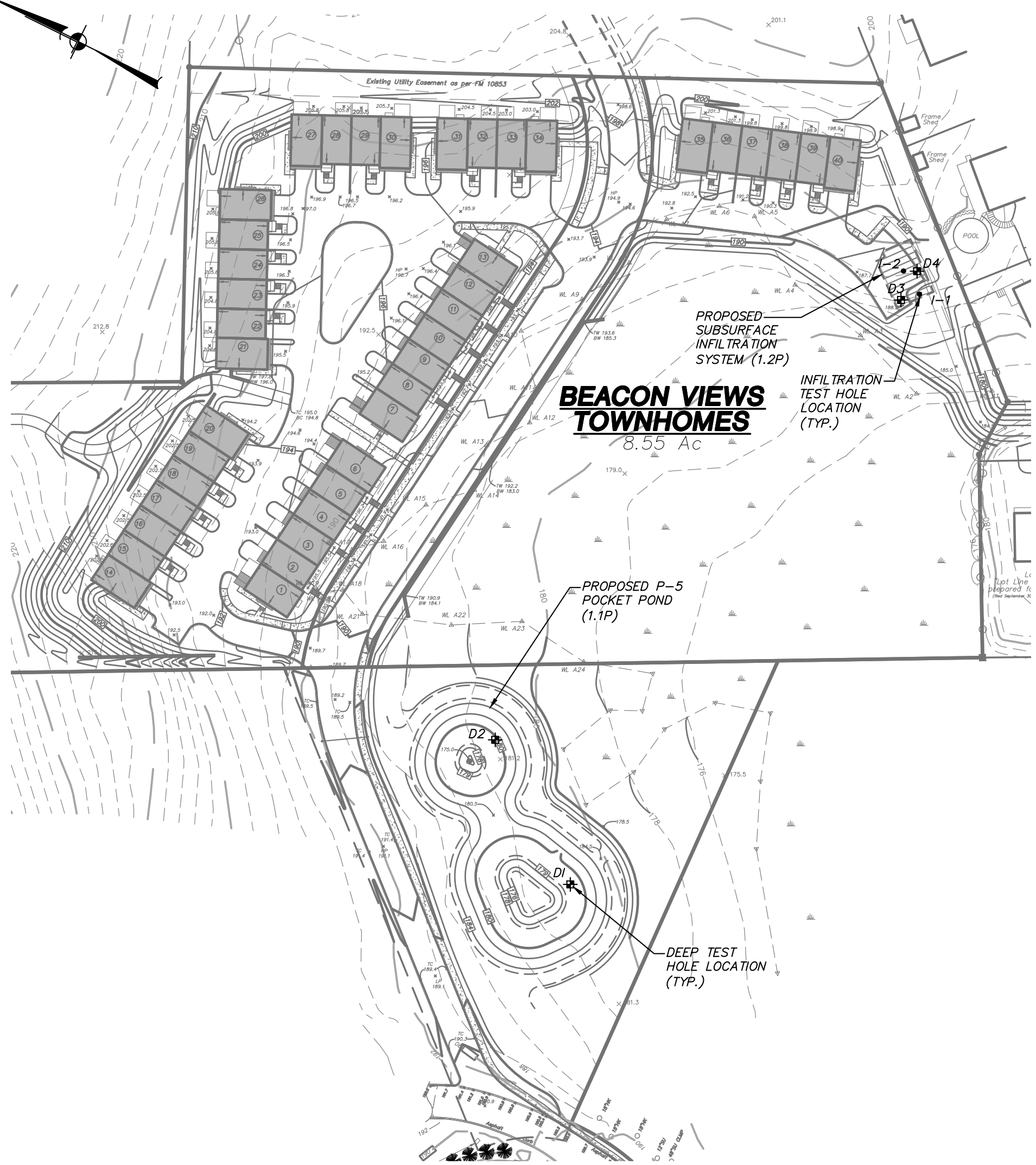
DRAWING: POST–DEVELOPMENT DRAINAGE MAP

PROJECT NUMBER	19131.100	PROJECT MANAGER	J.J.C.
DATE	8–26–19	DRAWN BY	E.J.P.
SCALE	1" = 50'	CHECKED BY	Z.M.P.

FIGURE NO. 3

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\CIVIL\19131.100 Main\Stormwater\Figures\Figure 3 - Post Development.dwg, 12/29/2020 1:58:59 PM, epeedleer, 1:1



DEEP HOLE TEST RESULTS:
DEEP TESTS PERFORMED: 12-16-2019 (D-1, D-2, D-3) & 6-24-2020 (D-4)
DEEP TESTS WITNESSED BY:
EVAN PENDLETON (INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.) & CASSANDRA BIBBO AND SCOTT SICINA (LANC AND TULLY ENGINEERING AND SURVEYING, P.C.)

D-1:	0"-2"	TOPSOIL
	2"-64"+	BROWN SILTY LOAM
		GROUNDWATER @ 36". NO ROCK.
D-2:	0"-2"	TOPSOIL
	2"-48"+	BROWN SILTY LOAM
		GROUNDWATER @ 18". NO ROCK.
D-3:	0"-2"	TOPSOIL
	2"-84"+	BROWN LOAM
		GROUNDWATER @ 84". NO ROCK.
D-4:	0"-6"	TOPSOIL
	6"-48"	COMPACT BROWN LOAM
	48"-102"+	BROWN LOAM

INFILTRATION TEST RESULTS:
INFILTRATION TEST PERFORMED: 6-25-20
INFILTRATION TESTS PERFORMED BY: EVAN PENDLETON (INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.)
WITNESSED BY: STEVEN PADIN (LANC AND TULLY ENGINEERING AND SURVEYING, P.C.)

I-3:	60" IN./HR.
I-4:	21" IN./HR.

GRAPHIC SCALE
0 40 80 160
(IN FEET)
1 inch = 80 ft.

PROJECT: BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING: TESTING PLAN

PREPARED BY:
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place • Carmel, New York 10512
Phone (845) 225-9690 • Fax (845) 225-9717
www.insite-eng.com

DATE: 7-28-20
SCALE: 1" = 80'
PROJECT NO.: 19131.100
FIGURE: FIG - 4

Z:\E\19131100 Kahn\Stormwater\Figures\Figure 4 - Testing Plan.dwg, 7/27/2020 8:41:34 AM, ependleton, 1:1

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

WATER & WASTEWATER ENGINEERING REPORT

For

Beacon Views
City of Beacon, New York

December 29, 2020



Prepared By
Insite Engineering, Surveying & Landscape Architecture, P.C.
3 Garrett Place
Carmel, New York 10512

PAGE

1.0 INTRODUCTION 1

2.0 WATER AND WASTEWATER DESIGN FLOWS 1

3.0 PROPOSED WATER CONNECTION TO CITY OF BEACON SYSTEM 2
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3.2 Service Connection 2
3.2.1 Static Pressure 2
3.2.2 Residual Pressure – Peak Combined Flow 3
3.2.3 Onsite Fire Flow at Proposed Hydrant 3

4.0 PROPOSED WASTEWATER CONNECTIONS TO CITY OF BEACON SYSTEM 3

APPENDICES

Appendix A City of Beacon – Town of Fishkill Water Agreement
Appendix B HDR Memo Addressing Sewer Impacts
Appendix C Email correspondence from the Town of Fishkill
Appendix D Headloss Calculations

FIGURES

Figure 1 Hydrant Flow Test Figure

1.0 INTRODUCTION

The Beacon Views project is located on a parcel adjacent to Conklin Street and Hastings Drive. The subject property is in the City's RD-5 District and is identified as Tax Map No. 6055-03-331123. The applicant, Beacon Views, LLC wishes to construct nine buildings containing 40 townhomes.

The project is in the City of Beacon Water and Sewer area. Water for the development will be provided by an 8" diameter watermain connection to the existing watermain running through the site. The existing 12" diameter onsite watermain is the subject of a water agreement between the City of Beacon and Town of Fishkill (see Appendix A). It is proposed to install an 8" City of Beacon watermain extension to provide water service to the development.

Sewer will be provided with an 8" diameter gravity main through the site that will collect service connections from each unit. The 8" diameter gravity main will discharge to the existing city sewer system in Conklin Street. The City's Consultant HDR has performed an analysis of the existing sewer system and concluded the system can handle the project sewer flows (see Appendix B).

2.0 PROJECT DESIGN FLOWS AND ANTICIPATED FLOWS

Design maximum daily wastewater flows for the proposed project, Beacon Views, are based on the hydraulic loading rates given in the New York State Department of Environmental Conservation (NYSDEC) publication *Design Standards for Intermediate Sized Wastewater Treatment Works – 2014* (DEC 14). The design maximum daily water use is a conservative design flow on which the water infrastructure will be designed. This value does not represent the average daily flow which is expected to be substantially less.

The following table calculates the hydraulic loading rates and the design flow rates (gallons per day or gpd) for the proposed project.

Table 1: Beacon Views Project Design Maximum Daily Flow Rate

Proposed Use	Hydraulic Loading Rate	Design Maximum Daily Flow (gpd)
40 –Three Bedroom Townhome	330 gpd/dwelling	13,200
	Total	**13,200**

The anticipated design average daily flows for the project are expected to be significantly less than the design maximum daily design flow. The design maximum daily flows represent conservative flows to ensure that the proposed sewer infrastructure is designed with an ample factor of safety. The anticipated average daily flows are based on occupancy rates and measured data for water use. Statistical data (obtained from *Rutgers University, Center for Urban Policy Research*, *Residential Demographic Multipliers*, June 2006) for the average number of occupants in rental units (based on number of bedrooms) is 3.0. In order to provide a conservative estimate and average occupancy rate of 3.5 people per unit was used to calculate the expected number of residents anticipated for the project as shown in the table below. Data from the American Water Works Association (AWWA) shows that the average in home water use is 69 gpd per person. This number is reduced to 45 gpd per person when water saving fixtures are used, which is the case for this project.

Table 2: Design Average Daily Flow

Proposed Use	Average Occupancy Rate	Total Anticipated Residents	Water Use Per Resident (gpd)	Water Use (gpd)
40 –Three Bedroom Townhome	3.5 people/unit	140	45	6,300
			Total Anticipated Water Use (gpd)	**6,300**

As demonstrated above, through the use of water saving fixtures as required by current building code, a design maximum flow of 13,200 gpd is proposed for the project, while the design average daily flows are anticipated to be substantially less 6,300 gpd.

The peak hourly flow is calculated using a peaking factor that is based on the population of the subject project. A peaking factor of four will be used for the project based on Figure 1 from *Recommended Standards for Wastewater Facilities* (RRWW).

Peak Hourly Domestic Flow

13,200 gpd ÷ (24 hr/day) ÷ (60 min/hr) = 9.2 gallons per minute (gpm)

Peak Hourly Flow = 9.2 gpm x 4 = 36.8 gpm

Although the anticipated flows (design average daily flow) for the project are lower than the design maximum daily flows, the design maximum daily flows are used for the design of the system. This provides an additional factor of safety in the proposed design.

The requirements for fire water demand were preliminarily established for the project. The fire flow for the proposed onsite hydrants is 500 gpm at 50 psi. The fire flow should be verified by the project MEP. This results in a peak fire and domestic combined flow of;

Peak Fire and Domestic Combined Flow

36.8 gpm + 500 gpm = **536.8 gpm = 537 gpm**

3.0 PROPOSED WATER CONNECTION TO THE CITY OF BEACON SYSTEM

3.1 System Characteristics

Based on review of existing system in vicinity of the subject project, there is an existing 12" diameter watermain located on the subject property. It is proposed to extend an 8" watermain from the existing 12" diameter watermain on the property to service the proposed development.

3.2 Proposed Water Service Connection

The existing watermain which the project proposes to connect to is a City watermain used to transport water to the Town of Fishkill. Discussions with the City of Beacon Water and Sewer Department will be required regarding the potential connection to the existing watermain in this location. The project proposes one (1) 8" diameter DIP watermain extension from the existing watermain. The water service lines to the buildings will be sized for each of the residential building units.

Four (4) fire hydrants are proposed throughout the proposed development. All hydrants will be manufactured by Mueller as required by the City.

Restrained joint connections will be provided at all pipe bends. Upon completion of the water service installation pressure testing, disinfection, and flushing will be performed in accordance with AWWA standards.

RSWW recommends that the normal working pressure not be below 35 psi, and both the RSWW and the *American Water Works Association* (AWWA) M 31 recommend that a minimum of 20 psi be maintained at all points in the water distribution system during fire flows.

Flow testing on the existing watermain in Conklin Street was performed and witnessed by the City on August 27, 2020. The hydrant at the corner of Conklin Street and De Soto Avenue was flowed and the residual was measured at the next hydrant to the north, on the subject propert. A static pressure of 68 psi was measured at the residual hydrant and during the flow test a residual pressure of 66 psi was witnessed with a flow of 1,250 gpm.

3.2.1 Static Pressures

The static pressure at the first-floor elevation (FFE) will be calculated by comparing the approximate elevation of the tested hydrant to the elevation of the first floor of the building and the elevation of the proposed hydrant:

Static Pressure at Residual Hydrant (SPH)	= 68 psi
Elevation of Residual Pressure Hydrant	= 177' ±
First Floor Elevation of Highest Building (FFE):	= 206' ±
Static Head Change = Hydrant Elevation - FFE = 177' – 206' =	= -29' ±

Static Pressure Change (SPC) = Static Head Change / 2.31 ft/psi

SPCB = -29' / 2.31 ft/psi = = -13 psi

Static Pressure at FFE = SPH + SPC = 68 psi + (-13 psi) = = 55 psi

3.2.2 Residual Pressure – Peak Combined Flow

The equation below is taken from AWWA M17. The equation is used to calculate flow available at different pressures or differences in the residual pressure that would result from different flow rates. Here the equation is used to calculate the residual pressure at the observation hydrant for the peak combined flow, using the pressures and flow rates measured during the flow test. The proposed water service lines will be sized for the peak combined flow to 537 gpm (500 gpm sprinkler flow and 37 gpm domestic flow).

$Q_R = Q_F * h_r^{0.54} / h_f^{0.54}$

Where:

Q_R = peak combined flow (537 gpm)
Q_F = flow from hydrant during test (1250 gpm)
h_r = the difference in pressure between the static pressure measured at the observation hydrant and the residual pressure at the total combined flow
h_f = the difference between the static pressure and residual pressure measured at the observation hydrant during the flow test, (2 psi)

537 gpm = 1250 gpm * $h_r^{0.54}$ / 2psi $^{0.54}$

h_r = 1 psi

The results in a residual pressure of 67 psi at the residual pressure hydrant.

Next the frictional head loss must be calculated for the main from the tested hydrant to the proposed building. As shown in the attached calculations in Appendix D head loss of 3 ft (2 psi) for the peak combined flow is calculated. This results in a calculated pressure of:

67 psi – loss in main + Static Pressure Change

67 psi – 2 psi + (-13 psi) = 52 psi

Based on the calculated residual pressures at the observation hydrants used for the flow testing and the head loss calculations included in Appendix D there is adequate pressure and flow available in the existing watermains to meet the 35 psi minimum pressure per RSWW recommendations.

3.2.3 Onsite Fire Flow at Proposed Hydrant

Based on the results of the flow test similar flows (1250 gpm +/-) can be anticipated at the onsite hydrants. As shown in the fire flow test figure attached to this report, the highest proposed hydrant is approximately 18 feet higher than the residual pressure hydrant used for the flow test. As shown in Appendix D, there is a total static and dynamic headloss of -26' (-11 psi) from the residual pressure hydrant to the proposed onsite fire hydrant. This results in a pressure of 56 psi at the proposed onsite fire hydrant.

4.0 PROPOSED WASTEWATER CONNECTION TO THE CITY OF BEACON SYSTEM

Sanitary sewer connection for the Beacon Views development will be provided via a gravity sewer main through the development with a connection to the gravity sewer system located east of the project site, on Conklin Street. The proposed onsite gravity sewer main will be 8" PVC SDR 35. The sewer main will convey the wastewater flows from the project site to the existing sewer manhole on the corner of Conklin Street and De Soto Avenue.

Wastewater flow from each building will be conveyed by 4" diameter PVC SDR 35 sewer service lines to the proposed 8" main. The service connections will be installed with a minimum slope of ¼" per

foot slope meeting the requirements of DEC14. All PVC pipe will contain rubber push on gaskets at pipe connections. Cleanouts will be provided on each sewer service connection just outside of each building. Upon installation of the sewer mains will be tested with low pressure air tests in conformance with ASTM F1417-92 and the sewer manholes shall be vacuum tested in conformance with ASTM 1244-02, per the notes on the project plans. As stated above all sewer service lines will be 4" PVC SDR 35 at a minimum of 2% slope.

APPENDIX A

City of Beacon – Town of Fishkill Water Agreement

AGREEMENT

THIS AGREEMENT, made this 13th day of November, 2001, among the CITY OF BEACON, New York, a municipal corporation with offices at One Municipal Plaza, Beacon, New York 12508 (hereinafter called the "City" and sometimes referred to as the "Seller"), the TOWN OF FISHKILL, a municipal corporation with offices at the Town Hall, 807 Route 52, Fishkill, New York 12524 (hereinafter called the "Town"), the Rombout Water District, a special improvement district established by the Town, also with offices at the Town Hall, 401 Route 52, Fishkill, New York 12524 (hereinafter called the "District"), the Town and the District being sometimes referred to herein collectively as "the Purchasers".

WITNESSETH:

WHEREAS, the City has a water supply and distribution system that can accommodate a portion of the water requirements of the Town and the District; and

WHEREAS, the Town and the District desire to purchase part of the existing and future unused capacity of the City water supply under a program that will benefit the parties; and

WHEREAS, the implementation of this Agreement will serve the regional water needs of two growing municipalities through economies of scale; and

WHEREAS, the City agrees to sell water to the Purchasers, and the Purchasers agree to purchase water from the City under the following terms and conditions:

1. **Area To Be Serviced.** The service area, which shall be the subject of this contract, will be the (*current*) franchise area of the Hudson View Water Works Transportation Corporation as currently defined within Water Supply Permit No. 8463, dated November 21, 1991.

2. **Term of the Agreement.**

(a) The duration of this Agreement shall be for a period of forty (40) years

from the effective date as hereafter defined.

(b) The Purchasers shall have a right to terminate this Agreement for any reason after twenty (20) years or more elapse from the effective date, provided that the Purchasers have communicated a written notice of such intention to terminate to the City not less than one (1) year prior to the stated date of termination. Notice of such termination must be served on the City Administrator or on the City Mayor either personally or by registered mail or certified mail. Such termination shall be without penalty to the Purchasers.

(c) In the event of termination notice by the Purchaser, the City shall have the right to continuation of this Agreement in the event the City promptly offers to match the cost of the Purchaser's acquisition of an alternative source of supply from another source.

3. Maximum Quantity. Purchaser shall be limited to a maximum daily usage of 500,000 gallons (6,100,000 cf/quarter/annually).

4. Minimum Percentage Consumption. No later than the fifth (5th) anniversary of the effective date of this agreement, the Purchaser will purchase a quantity of water amounting to no less than fifty (50%) of the Rombout Water District's total customer consumption.

5. **Minimum Quantity.** Between the effective date of this agreement and the end of the calendar year which includes the third (3rd) anniversary of the effective date, Purchaser shall purchase from the City a minimum of 60,000 gallons per day (which is the equivalent of 731,000 cf/quarter/annually). Effective for the calendar year which follows the third (3rd) anniversary of the effective date, the minimum quantity to be purchased shall be adjusted annually, but shall never fall below 60,000 gallons per day. Each annual adjustment to the minimum quantity required to be purchased shall be based upon the Purchaser's average monthly metered usage, measured at the master meter hereinafter described in paragraph "16", for the twelve (12) month period of August 31 through September 1 (the "measurement period") preceding the calendar year for which the adjustment shall be

made, so as to allow the Purchaser the opportunity to budget for each calendar year in advance. The adjusted minimum quantity required to be purchased, for each succeeding calendar year, shall be sixty-five (65%) of the averaged monthly metered usage during the preceding twelve (12) month measurement period.

6. **Engineering Specifications.**

(a) All plans, design and specifications for new transmission and connection lines to be installed for the Rombout Water District, or any other new transmission lines and connections shall be subject to review and comment of the City and the City's engineering consultants (but such right of review shall extend only to those lines which are direct connections to City mains).

(b) the Purchasers agree that the design and construction of the improvements related to connection of the Rombout Water District to the City system shall be compatible with the City's existing water transmission lines. All such plans, design and specifications as required herein shall be made available to the City's engineering consultants routinely throughout the design phase of such improvements.

(c) The City and the Purchasers shall at all reasonable times, upon prior notice, have reciprocal rights to inspect the other party's water supply facilities and transmissions lines.

7. **Permits**. The Purchaser's shall be responsible, at their sole expense, for obtaining all requisite permits or approvals from any county or state agency pertaining to the subject matter of this Agreement. (Except that the Purchasers shall not be responsible for obtaining permits directly related to the City's operation of its water supply system, or improvements/modifications to the City's system mandated by county, state, or federal agencies.) Copies of applications for permits or approvals from such agencies shall be provided to the City simultaneous to filing with the pertinent county or state agency. The City shall on reasonable notice of the Purchaser, promptly make available any information or documents necessary to aid the Purchaser in obtaining regulatory agency approvals.

8. **Quality**. The City covenants that as a condition to the performance of this Agreement by the Purchasers, the City shall produce water that conforms in all respects to the requirements of Chapter I, the New York State Sanitary Code, Sub-part 5-1 as amended; the Dutchess County Sanitary Code and the requirements of the Dutchess County Department of Health. The City covenants that at all times a chlorine residual of not less than 0.2 mg./l will be maintained at the point of connection of the Purchaser's meter and conveyance facilities to be determined by the City Engineer and the Town Engineer.

9. **Purchase Price**. The Town of Fishkill proposes the following price terms for the purchase of water:

(a) 1.25 times the non-commercial in-city customer rate (currently 2.67 / ccf ~~$2.875/ccf~~), with that rate to apply until Town usage reaches 60,000 gallons per day (the equivalent of 722,000 cf/quarter/annually);

(b) A rate of 1.2 times the non-commercial in-city customer rate for all usage once the Town exceeds 60,000 gallons per day;

(c) A rate of 1.1 times the non-commercial in-city rate for all usage once the Town exceeds 120,000 gallons per day (the equivalent of 1.4 million cf/quarter/annually);

(d) A rate of 1.0 times the non-commercial in-city rate for all usage when usage reaches the threshold of 180,000 gallons per day (the equivalent of 2.1 million cf/quarter/annually);

(e) Upon reaching the 240,000 gallons per day threshold, the rate for all usage shall fall to 0.90 times the non-commercial in-City rate, but in no event shall the rate paid by the purchasers fall below, or be less than, the commercial user rate charged by the City.

The non-commercial in-city rate in effect as of the making of this Agreement shall not be upwardly adjusted by the City, insofar as that rate affects the purchase prices set forth in this Agreement,

to reflect any future debt service or capital expenditures incurred by the City under the following circumstances: (a) for the design and/or making of capital improvements to the City's water supply system to make additional capacity available to proposed future user(s), other than the Purchasers, pursuant to a water use or purchase agreements, and (b) such user(s) default in obligations owed to the City under such water use or purchase agreements which induced the City to undertake such design and capital improvement expenditures.

10. No Additional Charges. All costs sustained by the City under this contract are included in the purchase price stated herein. There shall be no additional costs charged to the Purchasers.

11. Access to Meter. The Purchaser and the City shall have shared access to the meters described in paragraph "13" through the respective duly authorized representatives of each, in order to monitor the flow of water and the accuracy of the meters.

12. Water Conservation.

(a) The Parties acknowledge their obligation to promote water conservation measures each in their own respective jurisdictions. This commitment to conservation coincides with the policy imperatives contained in the Environmental Conservation Law that all agencies must conduct their affairs with an awareness that they are stewards of the air, water and land and that they have an obligation to protect the environment for the use and enjoyment of future generations.

(b) On and after the date of this Agreement, the Purchasers shall require all users who connect to any of the Purchasers' distribution systems to obtain a water line connection permit from the Purchasers prior to connection, such permit to be granted upon such conditions as the Town and the District may from time to time establish. The Purchasers shall not issue such permit if it would cause the total water volume entering the Purchasers' distribution system from the City distribution system to exceed the Purchaser's maximum reserved capacity established in this Agreement.

(c) The specific scope and methods of water conservation are left to each Party to be satisfied as dictated by local authority. This Agreement shall not be interpreted to require any specific conservation measures in order to achieve the goal of water conservation, except where the City has declared a water emergency as set forth below.

(d) In the event that the lawful authority of the City declares a water shortage or emergency and imposes water usage restrictions on City water users, it is expressly prohibited from limiting the supply of public water delivered to the Purchasers during such period except in accordance with the following procedure in paragraph "13".

13. Water Emergency Procedure.

(a) Where the City has declared a water emergency and has imposed mandatory supply and usage reductions on its residents, the City shall serve official notice on the Town Supervisor of the Town of Fishkill of said emergency declaration, citing specifically the reasons for mandatory conservation measures, the nature of restrictions imposed and the official date of commencement of such restrictions. The Purchasers shall then decide whether to impose the same, or similar, water restrictions on Town residents served pursuant to this Agreement, and, in addition, shall specify such conservation measures as are practicable, and shall otherwise regulate water use within the Town in a manner consistent with applicable Town conservation regulations.

(b) In the event that water consumption in the Town and the District falls below the minimum usage established in paragraph "3" of this Agreement, due to a formal declaration of water emergency by the City and Town Board, the minimum consumption requirements in paragraph "3" shall be suspended until such water emergency order is rescinded by the City and Town.

(c) In addition, the Parties acknowledge that water supply shortages may cause decreased pressure in the water supplied to Purchasers, due to pressure reductions system-wide. Such system-wide decreases in water pressure shall not constitute a breach of this Agreement. However,

actual mechanical reductions in the supply by the City are expressly prohibited under the terms of this Agreement.

14. Reserved Capacity.

(a) The Purchasers represent that the estimated total demand upon the Rombout Water District, as of full build out of the properties located therein, is 600,000 gallons per day, and that an entity known as AVR Realty is actively pursuing build-out of nearly all of the remaining unimproved property of the district pursuant to rezoning and site development plan approvals previously granted for the "Waterfront at Fishkill" project.

(b) Under paragraph "4" of this agreement, the Purchasers are required to purchase, as of the fifth (5^{th}) anniversary of the effective date, fifty (50%) percent of the total customer consumption of the Rombout Water District from the City.

(c) Consequently, upon full build-out of the properties of the Rombout Water District, the Purchasers may possess an obligation to purchase an estimated sum of 300,000 gallons per day under this agreement, i.e., 50% of 600,000 gallons per day.

(d) Under paragraph "5" of this agreement, the Purchasers have committed to the eventual phased escalation of an initial 60,000 gallons per day minimum purchase obligation, i.e., to make minimum purchases of 65% of the monthly usage during a 12 month measurement period.

(e) The Purchasers are concerned with assuring the City's maintenance of the ability to provide the water supply which the Purchasers become committed to purchase hereunder, and that concern is amplified by the Purchasers' need to construct, at an estimated cost in excess of $500,000, a transmission pipeline to connect to the City's water supply system.

(f) The City is concerned with assuming an indefinite obligation to hold in reserve its finite current surplus capacity, represented by the City to currently amount to approximately 500,000 gallons per day, for the Purchasers under this agreement which has a maximum duration of 40

years, given the potential of demands upon that capacity arising from future development or changes of use of properties situated in the City.

(g) To reconcile these concerns, and in lieu of City's committing over the full duration of this agreement to reservation of 500,000 gallons per day for the Purchasers, the parties agree as follows.

(h) The parties shall regularly keep each other advised of significant actual or potential future demands for customer use affecting the remaining capacity of the City's water supply system. No later than September 1 of each year of this agreement's duration, the parties shall meet to disclose, share and review any available information or projections of increased water usage of their respective systems, at which time the City shall report its actual remaining excess capacity.

(i) For the period of three (3) years following the effective date, the Purchasers shall be entitled to an unconditional 500,000 gallons per day of capacity reserved by the City for their use. Thereafter, and for the duration of this agreement, the Purchasers shall have a conditional reserved capacity of 500,000 per day, in that

(i) the City shall retain water supply capacity sufficient to meet 500,000 gallons per day usage by the Purchasers upon demand, until and unless the City experiences demand from new or expanded use, or change of use, of city properties which would result in the need to make use of any of the Purchasers' remaining reserved capacity;

(ii) in that event, the City shall upon written notice of not less than sixty (60) days give the Purchasers the right to commit to make actual use, within one (1) year, of the amount of the Purchasers' reserved capacity which would need to be taken back by the City to satisfy the new demand by in-city properties; the Purchasers shall have the option, exercisable within 60 days of receipt of the City's notice, to commit to make such actual use within one (1) year, or to consent to the City's taking back of that portion of the Town's reserved, but unused capacity;

(iii) in the event that the Purchasers elect to commit to use of the subject amount of reserved capacity, and the City is consequently required to make capital improvements to its system specifically to establish added capacity to meet the new in-city demand of which notice was given, then the Purchasers at their option shall at the close of the (1) year period either "take or pay" for subject amount of water, or defray and reimburse as liquidated damages the actual unit costs of the City in making the capital improvements necessary to service the new in-city demand of which notice was given; upon the exercise of either payment option, the subject amount of capacity shall be deemed unconditionally reserved to the Purchasers by the City for the duration of the agreement;

(iv) in the event, and to the extent, that the City takes back any of the Purchasers' reserved capacity under the above circumstances, the City shall be obligated, within one (1) year of written notice by the Purchasers to make any capital improvements to its water supply system necessary to meet the Purchasers' actual subsequent demand up to 500,000 gallons per day, and the actual costs of such improvements shall be not be surcharged against the Purchasers, but shall instead be recaptured per customary factoring into the City's generally prevailing water rates; in the event that the Purchasers make demand, and to the extent that the City expends to make the capital improvements necessary to meet the demand, the Purchasers shall at the end of one (1) year "take or pay" for the capacity demanded, or at the Purchasers' option, shall defray and reimburse the City as liquidated damages the actual unit costs of the City in making the capital improvements necessary to satisfy the Purchasers' demand; upon the exercise of either payment option, the subject amount of capacity shall be deemed unconditionally reserved to the Purchasers by the City for the duration of the agreement;

15. Third-Party Use of Purchasers' Transmission Line.

(a) Purchasers will be constructing a transmission line, at their expense, to reach the water supply system of the City, and a significant portion of that line shall be located in the City. After completion of the transmission line, Purchasers shall transfer

ownership of the portion of the line between Purchasers' meter pit and its connection point to the City's water supply system (the "Transferred Line") to the City.

(b) The Transferred Line will pass through or adjacent to City properties which may in the future connect to the City's water supply system through the Transferred Line. Purchasers shall be entitled to recover a portion of their capital expenditure on the construction of the Transferred Line from properties connecting to that line. No applicant for connection shall be permitted to connect to the Transferred Line by the City of Beacon unless the applicant has paid a one time capital cost reduction fee (the "Connection Fee") to Purchasers. The Connection Fee for each such property connection shall be calculated as set forth in subparagraph (c).

(c) Each Connection Fee shall be calculated as follows:

(i) each City property to be connected to the Transferred Line shall be assigned the number of benefit units prescribed by the Benefit Unit Formulation Chart annexed hereto as Exhibit "A".

(ii) the Connection Fee per Benefit Unit shall be derived by dividing the total cost of the construction of the Transferred Line (the "Total Cost") by 11,133, the total number of benefit units assigned in the District as of the date of this Agreement. (Total Cost ÷ 11,133 = Connection Fee per Benefit Unit)

(iii) Total Cost is calculated by determining the actual cost of construction of the Transferred Line as of the date of completion of construction and adding to it nine percent (9%) for professional services. (Total Cost = cost of construction plus 9%)

(iv) An applicant's Connection Fee shall be the number of benefits units assigned to the applicant's property multiplied by the Connection Fee per Benefit Unit. (Connection Fee = Benefit Units x Connection Fee per Benefit Unit)

(v) An applicant's Connection Fee shall be increased by eight percent (8%) for each year that has passed at the time of applicant's payment of the Connection Fee since the date of completion of the Transferred Line.

(d) City property owners connected to the Transferred Line shall be and shall remain the exclusive customers of the City of Beacon for the purchase of water.

16. Meters.

(a) All water supplied to the Purchasers by the City shall be metered. Such meters shall be installed at no cost to the City, and shall be of a type and arrangement which are acceptable to the City and the Purchasers. The Purchasers shall cause the meters used for billing purposes under this Agreement to be maintained, calibrated and certified in accordance with the manufacturer's recommended schedule, but not less than one time per year. Copies of the certification shall be filed with the City Administrator.

(b) In the event that any of the meters are found to read incorrectly or are out of service, the City will bill the Town for each day the meter is not functioning at the average daily consumption rate as determined by the records for the previous four (4) quarters of water actually consumed by the Purchasers. If four (4) quarters of data is not available, the calculation will employ all of the data that is available. The charge shall be added to the quarterly billing to the Purchasers.

(c) The point of delivery of water by the City shall be at or about a meter pit generally located in close proximity to the corporate boundary line separating the parties, and to be further determined by the parties.

17. Representations and Warranties by the City. The City hereby represents and warrants as follows:

(a) The City facility, including, without limitation, its pipes, well mechanisms and pumping stations, have the mechanical capacity and shall be maintained adequately so

that they draw and transmit the water purchased under this Agreement and the design capacity is sufficient to service the reserved capacity to the Purchasers as provided herein; the facility is in compliance with all applicable laws, rules and regulations of any state, federal or municipal agency or body having jurisdiction, and all permits, licenses and approvals issued pursuant to same.

(b) The City shall maintain and operate its supply facility and distribution system in full compliance with all applicable laws, rules and regulations of any state, federal or municipal agency or body having jurisdiction and all permits, licenses and approvals issued pursuant to same. The City shall provide the Purchasers with notice of any unusual occurrences, system malfunctions or improvements which may affect normal service.

18. Representations and Warranties by the Purchasers.

(a) Purchasers shall, through the term of this Agreement, maintain a permit system for any users who connect to any distribution system serviced under this Agreement; and no user shall be allowed to connect to the system without first obtaining a water line connection permit from the Town. The Town represents and warrants that it will adequately police the system so as to prevent unlawful connection to the distribution system serviced under this Agreement.

(b) The Purchasers shall maintain and operate their respective distribution systems in full compliance with all applicable laws, rules and regulations of any state, federal or municipal agency or body having jurisdiction and all permits, licenses and approvals issued pursuant to same. The Purchasers shall provide the City with notice of any unusual occurrences, system malfunctions or improvements which may affect demand for water supply under this Agreement.

(c) The Purchasers covenant that all reasonable steps will be taken to keep their distribution systems in good repair, so as to prevent substantial water loss during the term of this Agreement.

19. Indemnification.

(a) The Purchasers shall indemnify, defend and hold harmless the City, its agents and employees, from and against all losses, damages, suits, claims, judgements and decrees, including reasonable attorneys' fees and court costs, resulting from breach by, and any material inaccuracy of the representations of the Purchasers set forth herein.

(b) The City shall indemnify, defend and hold harmless the Purchasers, its agents and employees, from and against all losses, costs, damages, suits, claims, judgements, decrees and reasonable attorney's fees and litigation costs, resulting from breach by the City of any material provision of this Agreement.

20. Compliance with Laws.

(a) The Parties shall comply with all applicable laws, rules, and regulations of any county, state or federal agency with respect to the water pipes and facilities within their municipal boundaries.

(b) Each party shall exercise due diligence to prosecute, or seek prosecution for the violation of such laws, rules and regulations against persons or entities who damage the distribution system or facility within such parties' boundaries or who endanger any portion of the water supply as transmitted through the respective distribution system belonging to the Parties.

(c) In the event that the City becomes aware that a maximum contaminant level is exceeded under the regulations contained in Chapter I of the New York State Sanitary Code Sub-part 5-1, Section 5-1.52 Tables 1 through 7 as amended, the City shall immediately notify the Town Supervisor about the source and nature of the contaminant. The City covenants that it will transmit such notice by telephone in advance of, or concurrently with, the transmission of such notice to the Department of Health in accord with the notification requirements indicated in that same Sub-part, Section 5-1.52 Table 13.

21. Waiver of Right of Termination. Except as expressly provided herein to the contrary or by law, if at any time during the term of this Agreement the City or Purchasers materially breach this Agreement, neither party may terminate this Agreement and each party expressly waives any right of termination.

22. Municipal Approvals. This Agreement has been agreed to and approved by formal resolutions of the Town Board of the Town of Fishkill, the Board of Commissioners of the Rombout Water District and the Common Council of the City of Beacon, New York.

23. Assignability. This Agreement may not be assigned by a party without the express written consent by the other parties hereto.

24. Severability. Should any provision of this Agreement be found by a court of competent jurisdiction to be for any reason whatsoever, invalid, void or unenforceable, it shall be deemed severed from the balance of this Agreement and the balance of the Agreement shall remain in full force and effect.

25. Waiver. The Waiver by either party of the breach of any one or more of the covenants of this Agreement is not a waiver of any other provision hereof or of a subsequent breach of the same covenant or covenants.

26. No Oral Modification. This document contains the entire Agreement among the parties and may not be changed, modified or in any way amended, except by agreement in writing.

27. No Implication of Joint Venture. The Parties agree that the execution, delivery and performance of this Agreement does not constitute a joint venture, partnership or other joint association of the Parties, and that except as limited by this Agreement, the City has sole control of the operation of the wells and distribution system in the City.

28. Notices. All notices hereunder shall be in writing sent by certified mail, return receipt requested, or by personal delivery to the address of the respective parties set forth above and

hereafter designated by such party in the manner required for the giving of notice hereunder.

29. Effective Date. The date on which all transmission facilities and related improvements constructed by the purchasers to connect the Rombout Water District to the City's water system are approved for usage by all relevant state or local regulatory agencies.

IN WITNESS WHEREOF, the undersigned have hereunto subscribed their names, the date and year set forth above.

TOWN OF FISHKILL

By: _____
HON. JOAN A. PAGONES
Supervisor

ROMBOUT WATER DISTRICT

By: _____
HON. JOAN A. PAGONES
Chairman of the Board of Commissioners

CITY OF BEACON

By: _____
HON. CLARA LOU GOULD
Mayor

By: _____
JOSEPH BRAUN
City Administrator

STATE OF NEW YORK)
County of Dutchess)ss:

On November 7, 2001, before me personally came **JOAN A. PAGONES**, to be known, who, being by me duly sworn, did depose and says that she resides in the Town of Fishkill, County of Dutchess, State of New York and she is the Supervisor of the Town of Fishkill, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

RONALD C. BLASS, JR.
Notary Public, State of New York
No. 4954821
Qualified in Dutchess County
Commission Expires August 21, ~~19~~ 2005

NOTARY PUBLIC

STATE OF NEW YORK)
County of Dutchess)ss:

On November 13, 2001, before me personally came **CLARA LOU GOULD**, to be known, who, being by me duly sworn, did depose and says that he resides in the City of Beacon, Dutchess County, State of New York and she is the Mayor of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

NOTARY PUBLIC

STATE OF NEW YORK)
County of Dutchess)ss:

On November 13, 2001, before me personally came **JOSEPH BRAUN**, to be known, who, being by me duly sworn, did depose and says that he resides in the Town of Marlborough, Dutchess County, State of New York and he is the City Administrator of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

NOTARY PUBLIC

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RIDER TO AGREEMENT BETWEEN CITY OF BEACON ("CITY") AND TOWN OF FISHKILL ("TOWN") AND ROMBOUT WATER DISTRICT ("DISTRICT")

WHEREAS, on even date herewith, the parties entered into an agreement (the "main agreement") for sale of water by the City to the Town and the District; and

WHEREAS, the effective date of the main agreement is the completion of construction by the District of certain permanent subsurface transmission facilities connecting the District's facilities to the water supply facilities of the City (see paragraph "20" of the main agreement); and

WHEREAS, during the formulation of the main agreement, the District has experienced a water supply shortage which requires redress immediately, and in advance of the District's undertaking of construction of the transmission facilities contemplated within the main agreement; and

WHEREAS, by this rider to the main agreement, the parties undertake to arrange a source of water supply to the District's facilities by the City in advance of construction of the transmission facilities contemplated in the main agreement, and the parties do so by this rider to avoid triggering the effective date of all terms of the main agreement;

NOW, IT IS HEREBY AGREED, by and between the parties for mutual and valuable consideration that:

1. The City agrees to sell water to the District on an as needed basis, effective the date of this rider, up to the maximum sum of 500,000 gallons per day at the purchase prices set forth in paragraph "9" of the main agreement for transmission by the District by means of temporary facilities over or through the lands and improvements of the New York State Bridge Authority near with the easterly terminus to the Beacon-Newburgh Bridge, and the means of connection of the Beacon water supply system to the District by this means, and the metering of the District's usage by this means, shall be subject to the advance approval of the City, said approval not to be unreasonably withheld.

2. The Town and the District shall exercise good faith and due diligence to construct and to complete the permanent subsurface facilities contemplated within the main agreement, at which time that main agreement shall become effective, and upon that event the District shall discontinue and hold in reserve until necessary due to emergency at some future time, if at all, the transmission of water purchased from the City over and through the property of the Bridge Authority. Said future

transmission over the property of the Bridge Authority shall be subject to the advance consent of the City, said consent not to be unreasonably witheld.

3. In the event of future use of the transmission of water over or through the property of the Bridge Authority after the effective date of the main agreement, all terms of the main agreement shall govern.

4. The terms of this rider shall have a duration commencing with its execution by the parties, and ceasing as of the expiration or earlier termination of the main agreement.

IN WITNESS WHEREOF, the undersigned have hereunto subscribed their names, the date and year set forth above.

TOWN OF FISHKILL

By: _____
HON. JOAN A. PAGONES
Supervisor

ROMBOUT WATER DISTRICT

By: _____
HON. JOAN A. PAGONES
Chairman, Board of Commissioners

CITY OF BEACON

By: _____
HON. CLARA LOU GOULD
Mayor

By: _____
JOSEPH BRAUN
City Administrator

STATE OF NEW YORK)
) ss.:
COUNTY OF DUTCHESS)

On November 7, 2001 before me personally came **JOAN A. PAGONES**, to me known, who, being by me duly sworn, did depose and says that she resides in the Town of Fishkill, County of Dutchess, State of New York and she is the Supervisor of the Town of Fishkill, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that ait was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

RONALD C. BLASS, JR.
Notary Public, State of New York
No. 4954821
Qualified in Dutchess County
Commission Expires August 21, ~~1920~~ 2005

_____
NOTARY PUBLIC

STATE OF NEW YORK)
) ss.:
COUNTY OF DUTCHESS)

On November 13, 2001, before me personally came **CLARA LOU GOULD**, to me known, who, being by me duly sworn, did depose and says that she resides in the City of Beacon, Dutchess County, State of New York and she is the Mayor of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

_____
NOTARY PUBLIC

STATE OF NEW YORK)
) ss.:
COUNTY OF DUTCHESS)

On November 13, 2001, before me personally came **JOSEPH BRAUN**, to me known, who, being by me duly sworn, did depose and says that he resides in the Town of Marlborough, Dutchess County, State of New York and he is the City Administrator of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

NOTARY PUBLIC

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APPENDIX B

HDR Memo Addressing Sewer Impacts

Memo

Date:	Monday, July 13, 2020
To:	Anthony Ruggiero, Ed Balicki, Nick Ward Willis, John Russo
From:	Nitin Katiyar, PE Yingying Wu
Subject:	Hydraulic Impact Analyses of Proposed Development with Sewer Connection at Beacon Views (Conklin St at De Soto Ave)

Henningson, Durham & Richardson Architecture and Engineering, PC (HDR) evaluated the impact of the development proposed for connection at Beacon Views development on the hydraulic capacity of the City of Beacon's (City) sanitary sewer system during critical conditions. This memorandum presents a high-level summary of the results and conclusions of that analysis.

Methodology

HDR applied the City's InfoWorks CS sanitary sewer system model to evaluate the impact of the development proposed for connection at Conklin St at De Soto Ave on sewer system hydraulics from the point of connection to the Sewage Treatment Plant (STP). This development represent an additional average daily flow of 13,200 gpd, or additional peak hourly flow of 56,760 gpd using a peaking factor of 4.3 (in accordance with the Ten State Standards.) In order to analyze the impact of this additional flow on the sewer system hydraulics, HDR expanded the existing model, which previously extended only to Townsend St, to extend to the point of connection at Conklin St at De Soto Ave. For purposes of this analysis, and to be consistent with previous similar analyses, HDR applied conditions associated with a large, 5.6-inch rainfall event from September 27, 2011 (a one-in-17-year storm event). These analyses also assume that previously approved developments at 25 Townsend Ave and 511 Fishkill Ave would also be in place.

The results of the analysis indicate that no sanitary sewer overflows (SSOs) are expected to occur anywhere in the sewer system from the proposed connection point through to the STP, with or without the proposed development. Table 1 summarizes the calculated increases in peak water levels at locations from the point of connection to the STP. In segments where the sewer pipe is 8 inches (Hanna Street to Conklin St), the proposed development is expected to increase peak water levels as much as 1.27 ft.

Conclusions

1. The additional flow from development proposed for connection to Beacon's sewer system at Beacon Views development is not expected to cause SSOs, even during extreme conditions associated with a large (5.6-inch, 1-in-17-year) storm.

2. During extreme wet-weather conditions, the proposed developments are expected to increase hydraulic grade lines by as much as 1.27 ft. along Fishkill Ave near Delevan

St. Table 1 provides the differences in hydraulic grade lines expected at several locations from the point of connection to the STP.

Table 1.
Model Results for Peak Water Levels, With and Without Proposed Development, During Critical Conditions (5.6-inch Storm)

Location	Manhole ID	Peak Water Level (ft)		
		Future Baseline	Future With Proposed Development	Difference
Fishkill Ave at Townsend	7380	172.48	172.53	0.05
Fishkill Ave at Delevan	7054	149.87	151.14	1.27
Herbert and Main St	3214	119.18	119.25	0.08
S. Interceptor north of Wolcott	8277	74.35	74.41	0.06
S. Interceptor near Heaney	8125	61.52	61.62	0.10
S. Interceptor near Kristy	8325	51.55	51.61	0.06
S. Interceptor near South Ave	8809	27.88	28.00	0.12
Sewage Treatment Plant	STP_Junction	13.02	13.03	0.01

Please do not hesitate to contact us with any questions that you may have regarding this analysis.

APPENDIX C

Email Correspondence from the Town of Fishkill

Evan Pendleton

From: Sharon Mitchell <smitchell@fishkill-ny.gov>
Sent: Friday, July 24, 2020 2:34 PM
To: Jeff Contelmo
Cc: Gregory Kamedulski
Subject: RE: Town of Fishkill/City of Beacon

Jeff,

I have been able to ascertain that the total cost of construction only for the transferred line is Four Hundred Twenty Thousand Eight Hundred Ninety Three dollars ($420,893). These expenditures were incurred in 2002.

Please let me know if you need any additional information. My apologies for the delay in obtaining a confirmation of the amount for you.

Sharon A Mitchell
Town of Fishkill
Comptroller
845-831-7800 ext. 3331 | smitchell@fishkill-ny.gov
807 Route 52, Fishkill, NY 12524
www.fishkill-ny.gov

Office hours: Monday - Friday: 8:00am - 4:30pm

From: Jeff Contelmo [mailto:JContelmo@insite-eng.com]
Sent: Friday, July 24, 2020 2:10 PM
To: Sharon Mitchell <smitchell@fishkill-ny.gov>
Cc: Gregory Kamedulski <gkamedulski@gmail.com>
Subject: RE: Town of Fishkill/City of Beacon

Sharon,
Is there any updates you can provide?
Thanks,
Jeff

Jeffrey J. Contelmo, PE
Senior Principal Engineer

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, New York 10512
(845) 225-9690 x114
(845) 225-9717 Fax
www.insite-eng.com

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From: Sharon Mitchell <smitchell@fishkill-ny.gov>
Sent: Friday, July 17, 2020 4:18 PM
To: Jeff Contelmo <JContelmo@insite-eng.com>
Subject: Town of Fishkill/City of Beacon

Jeff,

I just wanted to touch base with you, I had promised to reach out by the end of the week. We have been reviewing the Town files and I believe that we have found the cost of construction for the transmission to connect to the City of Beacon's water supply to the Town's Rombout Water District. (Beacon High school was completed before the transmission line was completed).

Before I give you the information, I just want to confirm with the Town's engineer and water/sewer operator.

Thank you for your patience. Have a great weekend!

Sharon A Mitchell

Town of Fishkill
Comptroller
845-831-7800 ext. 3331 | smitchell@fishkill-ny.gov
807 Route 52, Fishkill, NY 12524
www.fishkill-ny.gov

Office hours: Monday - Friday: 8:00am - 4:30pm

APPENDIX D

Headloss Calculations

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

Beacon Views
Head Loss Calculations

Head Loss in Existing 12" Water Main from Residual Pressure Hydrant to Proposed Connection.

C	110		Roughness coefficient for ductile iron pipe
d	12	in	Diameter of water main
L	550	ft	Length of 12" Watermain
Q	537	gpm	Flow Rate
V	1.5	ft/s	Velocity
L_e	35	ft	Equivalent length to account for losses in valves and bends
L_t	180	ft	Total Length = L + L_e
HL	0	ft	HL = $\frac{10.44(L_t)(Q^{1.85})}{(C^{1.85})(d^{4.87})}$

Head Loss in Proposed 8" Watermain

C	110		Roughness coefficient for ductile iron pipe
d	8	in	Diameter of water service line
L	420	ft	Length of 8" Watermain
Q	537	gpm	Flow Rate
V	3.4	ft/s	Velocity
L_e	20	ft	Equivalent length to account for losses in valves and bends
L_t	440	ft	Total Length = L + L_e
HL	3	ft	HL = $\frac{10.44(L_t)(Q^{1.85})}{(C^{1.85})(d^{4.87})}$

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

Beacon Views
From Residual Pressure Hydrant to Furthest Proposed Hydrant at Highest Elevation

Static Head Loss	-18	ft	Vertical distance from Residual Hydrant to Proposed Hydrant

Loss in 12" Watermain

C	110		Roughness coefficient for ductile iron pipe
d	12	in	Diameter of Pipe
L	550	ft	Length of Pipe
Q	1250	gpm	Flow Rate
V	3.5	ft/s	Velocity
L_e	50	ft	Equivalent length to account for losses in valves and bends
L_t	600	ft	Total Length = L + L_e
Head Loss in Watermain	-3	ft	$HL = \frac{10.44(L_t)(Q^{1.85})}{(C^{1.85})(d^{4.87})}$

Loss in 8" Watermain

C	110		Roughness coefficient for smooth plastic pipe
d	8	in	Diameter of Pipe
L	550	ft	Length of Pipe
Q	537	gpm	Flow Rate
V	3.4	ft/s	Velocity
L_e	25	ft	Equivalent length to account for losses in valves and bends
L_t	575	ft	Total Length = L + L_e
Head Loss in Watermain	-5	ft	$HL = \frac{10.44(L_t)(Q^{1.85})}{(C^{1.85})(d^{4.87})}$

Total Dynamic Head Loss	-26	ft	=	-11	psi

FIGURES

n/f
N.Y.S. Matteawan State Hospital

PROPOSED ONSITE HYDRANT (TYP.) (4 TOTAL)

Existing Utility Easement as per Flr 10853

n/f Ovitt

n/f Coulter

n/f Bieber

FIRE HYDRANT FLOWED

DE SOTO AVE.

CONKLIN STREET

RESIDUAL FIRE HYDRANT

USACE WETLAND

n/f Davis

n/f Blumenthal

n/f Westchester

Lot 1
"Lot Line Realignment prepared for JCMW, Inc"
filed September 30, 1987 as map no 8136

Generally on Line

80 0 40 80

(IN FEET)
1 inch = 80 ft.

General Notes:

1. Property line shown on these plans is based upon a map entitled "Boundary and Topographic Survey of Property prepared for Beacon Community Foundation, Inc.", dated March 22, 2005 as prepared by Insite Engineering, Surveying & Landscape Architecture, P.C.

2. Topography shown on these plans are based upon aerial photography dated April 14, 2003 and is photogrametrically compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D, 1988) as derived by GPS observation. The contour interval is 2'.

3. Flow testing on the existing watermain in Conklin Street was performed and witnessed by the City on August 27, 2020. The hydrant at the corner of Conklin Street and DeSoto Avenue was flowed and the residual was measured at the next hydrant to the north, on the subject property. A static pressure of 68 psi was measured at the residual hydrant and during the flow test a residual pressure of 66 psi was witnessed with a flow of 1,250 gpm

DATE: 12-29-2020
SCALE: 1" = 80'
PROJECT NO.: 19131.100
FIGURE: 1

PREPARED BY:
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www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK 12508

DRAWING:
HYDRANT FLOW TEST FIGURE

Z:\E\19131100 Kahn\Water & Wastewater\Figures\01 Fig-1.dwg, 12/28/2020 2:33:57 PM, ependleton, 1:1

Wetland Mitigation Overview (Onsite and Offsite)

Beacon Views Site
Conklin Street
City of Beacon
Dutchess County, New York

December 28, 2020

Prepared by:

Michael Nowicki
Ecological Solutions, LLC
1248 Southford Road
Southbury, Connecticut 06488

1.0 WETLAND MITIGATION INTRODUCTION - 2008 COMPENSATORY MITIGATION RULE

Land development activities may adversely impact wetlands that are protected under federal, state, and local regulatory programs. Wetlands receive legal protection because they are a significant ecological resource and because they provide a variety of functions that are of value to humans, including water purification, flood storage, sediment trapping, wildlife habitat, and groundwater recharge.

The primary source of federal regulatory jurisdiction over wetlands is the Federal Water Pollution Control Act, or the Clean Water Act (CWA). The CWA was established to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Section 404 of the CWA regulates "discharges" of "dredged or fill material" to waters of the United States, including wetlands and other aquatic resources. Several types of activities, such as normal, on-going farming, ranching, and silviculture activities, are exempt from regulation under §404(f) of the CWA unless they convert a wetland to a new use and impair the flow or circulation of waters of the United States or reduce the reach of such waters.

Because of the historical role played by the U.S. Army Corps of Engineers (Corps) in regulating dredging and other activities in navigable waters, Congress assigned the agency primary responsibility for administering the §404 permitting program. Day-to-day permitting activities are carried out by the Corps' 38 district offices (§404(e)). The Corps has the authority to issue individual permits or general permits. General permits are intended to be issued for categories of activities that are similar in nature and are determined to have only minimal adverse environmental impacts. Individuals or organizations wishing to fill a wetland must first obtain authorization from the Corps.

Corps' regulations define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

In June 2001, the National Academy of Sciences (NAS) released its report, Compensating for Wetland Losses Under the Clean Water Act. The two-year study was initiated in response to a request by the EPA. Among other charges, the Committee on Mitigating Wetland Losses was asked to evaluate the ability of wetland restoration, enhancement, creation, and preservation to adequately restore wetland functions and to evaluate options for improving the ecological effectiveness of wetland mitigation. The report offered 26 recommendations for improving the ecological effectiveness of federally required compensatory mitigation.

The 2001 NAS study included several recommendations related to adopting a watershed approach to compensatory mitigation. For example, the NAS study states, "preference for on-site and in-kind mitigation should not be automatic, but should follow from an analytically based assessment of the wetland needs in the watershed and the potential for the compensatory wetland to persist over time." However, though the NAS study does promote out-of-kind mitigation when advantageous at a watershed scale, it also states "opportunities for in-kind compensation need to be sought within the larger landscape context." In addition, the NAS report concludes that "third-party compensation approaches (mitigation banks, in-lieu fee programs) offer some advantages over permittee-responsible mitigation."

In response to a Congressional mandate, on April 10, 2008 EPA and the Corps jointly issued the first federal regulation governing compensatory mitigation for impacts to wetlands and other aquatic resources (The Mitigation Rule). Although the Rule is largely focused on codifying requirements for compensatory mitigation, it reiterates and codifies the sequencing steps of avoidance and minimization explained in the §404(b)(1) Guidelines and the 1990 Mitigation MOA.

The Rule is intended to improve the planning, implementation, and management of compensatory mitigation by creating higher standards for compensatory mitigation, and requiring, to the extent practicable and appropriate, that all mitigation decisions be made within the context of a watershed approach (33 CFR 332.3(c)(1)). The 2008 regulations incorporate a majority of the recommendations presented in the NAS 2001 report into the compensatory mitigation program. The reliance on a watershed approach, a clear hierarchy in the preference for which mitigation mechanism should be used to offset impacts (see below), and the establishment of equivalent standards for all three mitigation mechanisms are the three fundamental changes in compensatory mitigation practice.

The overarching objective of a watershed approach, according to the Rule, "is to maintain and improve the quality and quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites." Individual Corps district engineers are given authority for implementation of a watershed approach, granting regional officers considerable regulatory discretion in compensatory mitigation site selection and necessitating acquisition of adequate data to assess watershed needs. The Rule stipulates that district engineers utilize appropriate watershed plans, when available, along with "information provided by the project sponsor or available from other sources" to guide a watershed approach; however the Rule does not require development of watershed plans when they are not previously available. In the absence of a suitable watershed plan, district engineers may use data on "current trends in habitat loss or conversion; cumulative impacts of past development activities; current development trends; the presence and needs of sensitive species; site conditions that favor or hinder the success of compensatory mitigation projects; and chronic environmental problems" to prioritize compensation under a watershed approach.

The Rule provides flexible siting criteria for compensation, holding that "a watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation (including mitigation banks or in-lieu fee programs), or a combination of on-site and off-site compensatory mitigation." Corps district engineers may also decide that out-of-kind compensatory mitigation is permissible in instances where it "will serve the aquatic resource needs of the watershed," though in-kind replacement is encouraged for difficult-to-replace aquatic resource types. District engineers may also allow compensation in uplands, buffer zones, or through preservation when they determine it is ecologically preferable and will provide effective enhancement of watershed function.

The 2008 compensatory mitigation regulations defer decisions on watershed scale to the district engineer and note that "the size of watershed addressed using a watershed approach should not be larger than is appropriate to ensure that the aquatic resources provided through compensation activities will effectively compensate for adverse environmental impacts." Without clear watershed boundaries, the changes promulgated by the Corps and EPA hold no guarantee that mitigation (including mitigation credits generated for out-of-kind mitigation, preservation, uplands, and buffers) will occur in close proximity to permitted impacts.

The Rule states that the watershed approach is designed to enhance the aquatic resource mitigation program, rather than diminish the ability of the program to support the policy of no net loss of wetland and stream functions. For this to hold true, watershed management must be employed with appropriate safeguards. In its report, NAS acknowledged the risks of the watershed approach: "The committee is aware of the concern that a watershed approach might weaken the commitment during the permitting process to protect individual wetlands and the functions they provide, with existing wetlands being too readily traded for compensatory wetlands that might not be ecologically functional." Successful attainment of the advantages of a watershed approach envisioned by the NAS study will require thorough consideration of landscape trends to properly site compensatory wetlands where they will maintain "no net loss" of wetland functions and services.

2.0 BEACON VIEWS GENERAL WETLAND MITIGATION PLAN

The compensatory wetland mitigation plan is based on the proposed mitigation areas (on and offsite) having higher functional value and diversity due to the proposed structure of the mitigation areas and their placement in close proximity to existing wetlands. The mitigation effort involves two major components: one to retain the existing hydrological regime, and the other to establish wetland terrain including placement of seed and wetland plantings throughout the mitigation areas. The proposed wetland mitigation areas are being planned based on the following three principles:

- The water table in the wetland mitigation areas must be maintained near the finished grade;
- The mitigation area must not be flooded for prolonged periods of time as a result of significant rainstorms;
- The mitigation areas must be planted with sufficient hydrophytic vegetation and seeding to allow wetland communities to emerge within a reasonable time period. This area will be filled to an appropriate depth conducive to the establishment of scrub/shrub and forested wetland communities. The goal is to create a diverse wetland community.

2.1 Hydrology of the Mitigation Area

Site investigations within the mitigation areas were conducted to examine and predict the soils capacity to retain sufficient water for the proposed mitigation and groundwater table. The field investigation revealed that the wetland mitigation areas are generally overlaid by low to moderate amounts of organic matter (1-2" in depth). Beneath this layer exist clay, silt, and silty loam. Groundwater was evidenced in the mitigation areas.

2.2 Proposed Vegetation of the Mitigation Area

2.2.1 Diversity and Locations of Vegetative Cover Types

One major goal of the wetland mitigation plan is to maximize the floristic diversity and availability of ecotonal, "edge habitat" for subsequent colonization by wildlife. The strategy to achieve this goal is to enhance the proposed wetland plant species and vegetative cover type diversity by over-seeding using a commercially available wetland meadow species at appropriate elevations and water depths within the mitigation area. Creating successional wetland cover types such as scrub/shrub wetland, in addition to the forested wetland, will provide replacement functions and values, stability, biological diversity, interspersion of cover types, and increased wildlife habitat. Generally, wildlife populations thrive when edge habitat between cover and food types is increased. Increased edge equates to more resources being available to an animal in a smaller area. By maximizing the amounts and types of these ecotonal areas, both the colonization of the area by local wildlife and the natural successional formation of shrub and forested wetland habitats will be considerably accelerated.

The design of an interconnected system of existing riparian wetland with a combination of scrub/shrub and forested wetland mitigation is intended so that the existing wetlands serve as a “regeneration nucleus” around which a wide range of vegetative cover types may be established. This layout was selected to increase the amount of “edge habitat” adjacent to the undisturbed portions of the existing wetland, and to exploit the predicted hydrologic condition of the mitigation area.

Since different plant species within the same wetland may often exhibit a wide range of moisture requirements and flooding tolerances, the proposed grading methodology ranges within the wetland mitigation area will provide a micro-topographic moisture gradient conducive to species diversity.

The wetland mitigation area is designed to receive and retain rainwater and overwash from upland watersheds. However, the wetland mitigation has also been located in a manner that minimizes the distances between the proposed vegetative cover types and open water to which access may be needed during periods of summer drought as part of the contingency irrigation plan. The combination of existing riparian wetland with shrub and forested mitigation area is expected to ensure vegetative establishment and long-term survival, even under summer conditions. The design of this system will maximize surface water availability to both wetland plantings and areas to be seeded with herbaceous wetland species.

These adjustments provide the potential for increased structural/floristic complexity, and functional value of the mitigation/existing wetland ecosystem.

2.2.2 Site Grading

The design of the wetland mitigation will strive to create edge habitat in bands adjacent to existing wetland types. Rough finish grades will be established evenly across proposed mitigation area. This process will provide locations for establishment of forested and scrub/shrub wetland plant species in a diverse arrangement, mimicking natural species diversification.

The finished grades of the mitigation area will create an increasing moisture gradient from the existing uplands through the mitigation area that will improve chances for establishment of a diverse wetland community. These finished grades also will facilitate seasonal fluctuations in water elevations, which are widely recognized as crucial to seed germination and seedling establishment of both woody and herbaceous wetland plant species. The remainder of the terrain will be seeded with a mixture of herbaceous wet meadow species in order to stabilize soils and establish a perennial wetland vegetative community.

2.2.3 Soil Preparations

Additional soil amendments will be required, since the proposed vegetative cover types require a suitable substrate and a wide range of soil conditions, with pH values from slightly acidic to neutral. Baseline soil analyses for the mitigation area and adjacent wetland, however, will be indispensable in the monitoring and assessment phase of the relative success of the mitigation effort.

2.2.4 Vegetative Planting and Seeding

The planned mitigation planting areas can be field adjusted to take advantage of the natural contours, proximity to the existing wetlands, and available facultative and facultative wet species existing in upland habitat.

Tree species will be supplied as either container and/or bare root and will be located primarily on and adjacent to mounded areas. Scrub/shrub material will be supplied as bare-root stock and will be located primarily between mounded and depressed areas. Broadcasting seeding across the entire mitigation area will focus primarily on depressional areas. Prescriptions for supplemental seeding of those areas not receiving mitigation plantings are based on published data regarding the water depth tolerances of indigenous wetland species, as well as the commercial availability of seed of those species. Seeds of indigenous wetland species and genera were prescribed, and potentially problematic, weedy species also were deliberately not prescribed for the mitigation areas. Due to the potential for invasive problematic species in root-stock from disturbed areas, a decision has been made not to use root-stock transplants from impacted wetlands.

All bare areas within the mitigation zones will be overseeded with wetland species. Over-seeding of the mitigation area with wetland species will stabilize and enhance the vegetative establishment of wetland communities in portions of the mitigation area not planted with hydrophytic vegetation. The overseeding prescriptions of the mitigation area, presented in Table 1, are based on the site-specific ecological suitability of commercially available seed of indigenous wetland plant species.

These plants identified for the wetland mitigation planting provide excellent food and cover resources for waterfowl and other wildlife populations.

Table 1 - Northeast Wetland Native Wildflower Mix, Restorative Seeding Components

COVER TYPE & SPECIES		COMMON NAME
For Seeding All Mitigation Areas:		
22.33%	Eupatorium perfoliatum	- Boneset
20.80%	Verbena hastata	- Blue Vervain
19.75%	Panicum dichotomiflorum	- Smooth Panic-Grass
8.89%	Solidago rugosa	- Wrinkled Goldenrod
8.74%	Eupatorium maculatum	- Joe Pye Weed
6.65%	Euthamia graminifolia	- Grass Leaf Goldenrod
4.59%	Polygonum pensylvanicum	- Pennsylvania Smartweed
4.33%	Vernonia Novebocacensis	- New York Iron Weed
2.80%	Aster novae-angliae	- New England Aster
0.79%	Bidens cernua	- Nodding Beggar's Tick
0.21%	Asclepias incamata	- Swamp Milkweed
0.12%	Iris versicolor	- Blue Flag

RATE: 1 POUND WILL COVER 11,000 SQ. FT. @ 50 SEEDS PER SQ. FT.

This mix is designed to seed the early growing season draw down and saturated soil zones. The species also provide colorful flowers at various times of the growing season especially in late summer. The mix is produced using hand-collected seed from western New York and northwestern Pennsylvania; only a limited amount of the seed mix is available. A seeding rate of 1 pounds per 11,000 s.f. is specified as a supplement to plantings of bare root herbaceous and woody species plantings.

Following overseeding, straw bales will be broken up and spread over the mitigation areas to enhance microfaunal establishment and thus accelerate the establishment of a food chain. This technique and other aspects of the mitigation system and associated wetland vegetation are expected to enhance the overall wildlife habitat value, soil microbial activity, and fertility of the mitigation area.

The herbaceous wet meadow flora will act as "living mulch" and thus enhance the potential for germination of dormant seeds. The selection of the proposed seed species, dicotyledons, will serve to minimize the formation of a dense thatch that could otherwise inhibit germination and establishment of all but the most vigorous woody plant seeds.

Once established, seedlings of woody species will rapidly overtop their herbaceous counterparts and eventually displace those herbs with high light requirements. Little or no competition for water is expected between these woody and herbaceous components so that they can be expected to complement, rather than compete with one another during the early stages of successional formation of the mitigation area. The gradual displacement of these wet meadow species, by shrubs, trees and more shade-tolerant herbs is the natural successional process that is desired for the long-term establishment of a shrub-dominated wetland and, ultimately, a mature riparian forested wetland community.

It is expected that even with successful establishment of diverse cover types, the relative patterns and proportions of these cover types will fluctuate over ecological time due to weather patterns and natural processes. It is anticipated that the majority of the proposed mitigation wetland area will develop, ultimately, into a mixture of mature forested wetland and intermediate scrub/shrub swamp in varying successional stages.

John Clarke Planning and Design jclarkeplandesign@gmail.com
25 Beech Street, Rhinebeck NY 12572 845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **Beacon Views Townhouses Site Plan and Subdivision**

I reviewed a December 29, 2020 response letter from Insite Engineering, a December 28, 2020 Wetland Mitigation Overview by Ecological Solutions, and 20-sheet Site Plan set by Insite Engineering, with sheets 1-17 dated December 29, 2020 and sheets 18-20 dated July 28, 2020.

Proposal

The applicant is proposing to subdivide and develop an 8.6-acre site with 40 for-sale townhouse units. The parcel is in the RD-5 zoning district. The applicant is requesting a conservation subdivision under Section 223-12 J, which allows the Board to modify lot sizes, setbacks, building separations, streets, and other requirements in order to help preserve natural features in the site.

Comments and Recommendations

1. The applicant should be prepared to update the Board on the status for the following issues:

    a. Use of the Highland Meadows easement parcel for access and stormwater management, as well as an agreement for off-site improvements.

    b. The wetland mitigation plan, including on-site and off-site proposals, and the Army Corps of Engineers and NYSDEC permit review of the Wetland Evaluation and Impact Report and the Federal and State Threatened and Endangered Species Habitat Assessment Report.

2. The previously proposed wood guiderail, which will prominently run along most of the wetland frontage, is now shown on Sheet D-1 as a standard galvanized guiderail. Is there a good reason for this change?

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
Jeffrey Contelmo, P.E., Project 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.

January 8, 2021

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

RE: Beacon Views
City of Beacon
Special Use & Site Plan Application

Dear Mr. Gunn:

Our office has received the following in regard to the Beacon Views project, located adjacent to the 25 Townsend project and The Highland Meadows Senior Housing parcel:

- Response correspondence from INSITE Engineering & Surveying, dated December 29, 2020.
- Report titled "Wetland Mitigation Overview (Onsite and Offsite) – Beacon Views", dated December 28, 2020, as prepared by Ecological Solutions.
- Report titled "Water & Wastewater Engineering Report for Beacon Views", dated December 29, 2020, as prepared by INSITE Engineering and Surveying.
- Report titled "Stormwater Pollution Prevention Plan prepared for Beacon Views", dated December 29, 2020, as prepared by INSITE Engineering and Surveying.
- Plan set titled "Beacon Views", with the latest revision date of December 29, 2020 and consisting of Sheets 1 of 20 through 20, as prepared by INSITE Engineering and Surveying.

Based on our review of the above materials, we would like to offer the following comments:

General Comments:

1. The proposed project will be disturbing 13,708 square feet of wetlands on the site to allow for construction of the project as currently proposed. The disturbance of these wetlands will require that the applicant provide mitigation for this disturbance, which is typically the construction of wetland mitigation areas that are 1.5 times the area of that disturbed. Based upon this the applicant would have to provide 20,562 square feet of mitigation, of which, 3,775 square feet of mitigation is proposed on site, leaving a balance of 16,787 square feet of mitigation required.

   The Wetland Mitigation Report that has been submitted provides an overview of what must occur with regards for mitigation, and where mitigation for disturbed wetlands may occur, which also includes the construction of wetland mitigation areas off-site, if approved by the Army Corp. of Engineers. Although this may be allowable by the Army Corp., the Planning Board

should consider the impacts to the ecosystem at the site and within the City of Beacon, consider as to whether or not off-site mitigation would be allowed, and if so, would off-site mitigation need to be constructed within the City limits, or could it occur within another municipality.

2. The Wetland Mitigation Report shall be expanded upon to include mapping of all proposed mitigation areas, along with plans for the construction of the mitigation areas.

3. The applicant should submit a copy of the "Off Site Improvements Plan" (Sheet 8 of 20) to Highland Meadows for their review and acceptance of the proposed improvements across their parcel. A letter from Highland Meadows should be submitted to the Planning Board noting their comments and/or acceptance of the plan as currently depicted on the plan. ***The applicant notes that the offsite improvements have been shared with representatives of Highland Meadows and that they continue to seek an agreement with Highland Meadows as to the required improvements pursuant to the easement agreement.***

4. Once the applicant and Planning Board have agreed upon allowable areas for the proposed wetland mitigation, the application will need to submit to the Army Corp. of Engineers for approval of the proposed mitigation area(s). The applicant shall provide copies of all correspondences between the applicant and Army Corp. of Engineers to the Planning Board and City Engineer's office once submission has been made to the Army Corp.

5. The proposed water and sewer system will need to be reviewed and approved by the Dutchess County Department of Health (DCDOH). All correspondences to and from the DCDOH shall be copied to the Planning Board and City Engineer's office.

Water & Sewer Report Comments:

1. Appendix "A" of the report includes a copy of the agreement between the City of Beacon and the Town of Fishkill for the water main that traverses across the project site and other properties within the City limits. Section 15 of this agreement requires that anyone within the City of Beacon proposing to connect to the water line shall pay to the Town of Fishkill a calculated fee to allow for recovery of a portion of their capital expenditures on the construction of the line. Appendix "C" of the report includes an e-mail chain between the applicant's engineer and the Town of Fishkill, in which the capital expenditure cost for the line running through Beacon has been established to allow for the calculation of the monies that must be paid to the Town of Fishkill by the applicant to allow for connection. It should be clearly noted that prior to final signing of the plans, a letter from the Town of Fishkill shall be required to show that the required calculated fee has been paid and that they are authorizing the proposed connection to the existing water main.

Preliminary Subdivision Plat Comments:

1. Plat shall show all metes and bounds for all proposed parcel boundary lines and easements. ***The applicant has stated "The final plat will include bearings and distances for the proposed property lines".***

2. Descriptions shall be prepared for easements and the road right-of-way and provided to the Planning Board Attorney and City Engineer for review. ***The applicant has stated "Written descriptions will be provided with a future submission".***

Grading & Drainage Plan (Sheet 4 of 20):

1. Although a note has been added to the plan stating "In an emergency event the City of Beacon will have the right to maintain the drainage between CB-3 and ES-1, if the applicant or subsequent owners fail to fulfill their maintenance obligations", it is not clear how this note allows for the City of Beacon to enter onto the neighboring parcel which is under different ownership. Documentation would need to be provided by the neighboring parcel owner stating that the City of Beacon would have the right to enter onto their property to perform this task in the event of an emergency. ***Applicant notes that the project attorney will correspond with the City Attorney to finalize the legal mechanism by which these rights can be guaranteed to the City.***

2. The plan shows a drainage line running between structure SDI-14A and CB-6, but no information is provided for this pipe run in the "Proposed Drainage Table" on this sheet. It should be further noted that the "Erosion & Sediment Control Plan" (Sheet 6 of 20) notes this pipe to be a "Temporary Bypass Drainage Pipe". If this pipe is only temporary during construction, then it should be removed from the Grading and Drainage plan.

3. The plan shows a drainage line running between structure DMH-9 and CB-4, but no information is provided for this pipe run in the "Proposed Drainage Table" on this sheet. Is this another temporary by-pass pipe that is to be employed as part of the erosion and sediment control? If so, this pipe should be removed from the Grading and Drainage plan and labeled as a temporary bypass pipe on the erosion and sediment control plan.

Utilities Plan (Sheet 5 of 20):

1. The stationing along with proposed utilities shall be darkened so that it is legible.

Off Site Improvements Plan (Sheet 8 of 20):

1. A portion of the proposed sidewalk along the south side of Hastings Drive is noted as only being 4-foot wide. Why is this section of sidewalk not proposed at 5-foot wide as all other sidewalk is proposed?

Details (Sheet 17 of 20):

1. The Short-Term and Long-Term maintenance requirements for the proposed infiltration system, pocket pond and hydrodynamic separator shall be provided on the plans with each specific detail. A note shall also be added that copies of inspection reports shall be provided to the Building Department to verify continued maintenance of these stormwater management facilities. The inspection reports shall include, at a minimum, the date of the inspection, who performed the inspection, findings of the inspection, recommendations, and work that was taken to address findings and recommendations.

SWPPP Comments:

1. On the grading and utilities plan a drainage pipe has been shown going from SDI-14A to CB-6. This would route offsite stormwater to the proposed pocket pond, this offsite area was not intended to be routed there per the SWPPP report provided. This pipe is labeled as a temporary bypass drainage pipe on the erosion and sediment control plan. Please clarify if this is temporary or a permanent.

2. Sediment basin sizing should be prepared and included in the report and on the plans.

3. Construction Sequence should add a Pre-Construction meeting with Site Contractor, Site Design Engineer, City Engineer & City Personnel to discuss general construction procedures and sequencing. During this meeting sensitive areas of the property shall be delineated and marked-out with orange construction fence.

4. On the grading and utilities plan a drainage pipe has been shown going from DMH-9 to CB-4. This would route offsite stormwater to the proposed pocket pond, this offsite area was not intended to be routed there per the SWPPP report provided. Please clarify.

5. The hydrodynamic separator detail provided should show the model specified on the plans.

6. Detail for FS 1.2 should show the proposed roof leader connection.

This completes our review at this time. Further comments may be forth coming 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
01/12/2021

Title:

Continue public hearing on applications for Special Use Permit and Site Plan Approval, accessory apartment, 179 Union Street, submitted by John Kittredge & Amanda Gisonni

ATTACHMENTS

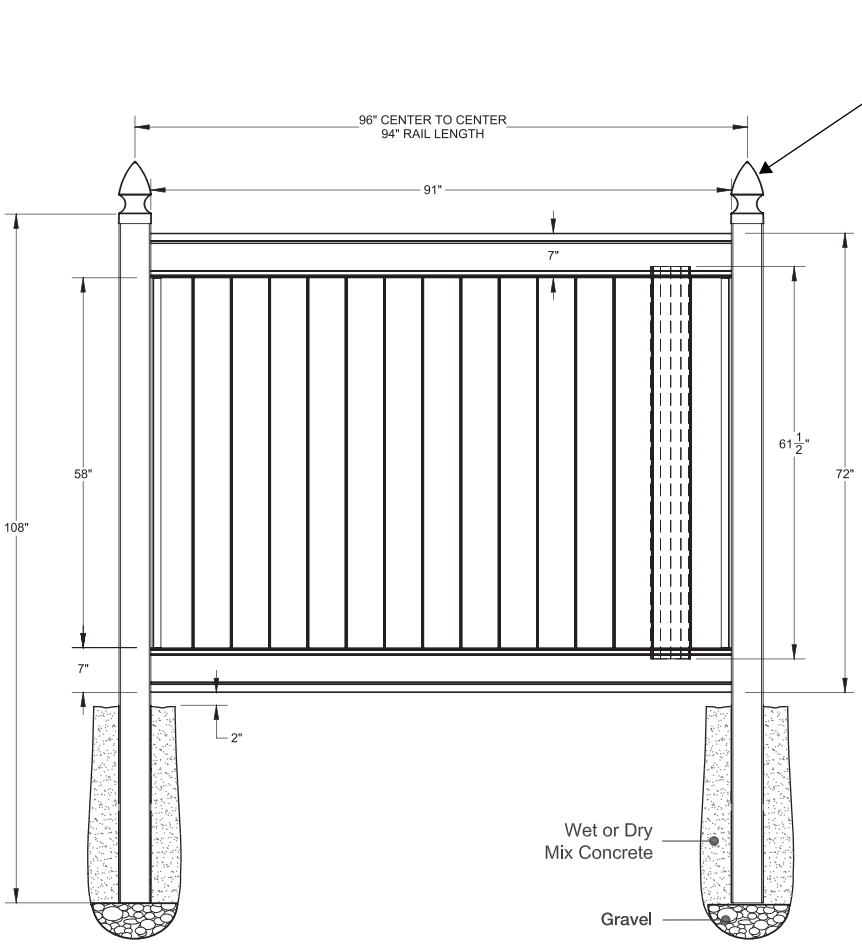
179 Union Street Fence Details.pdf

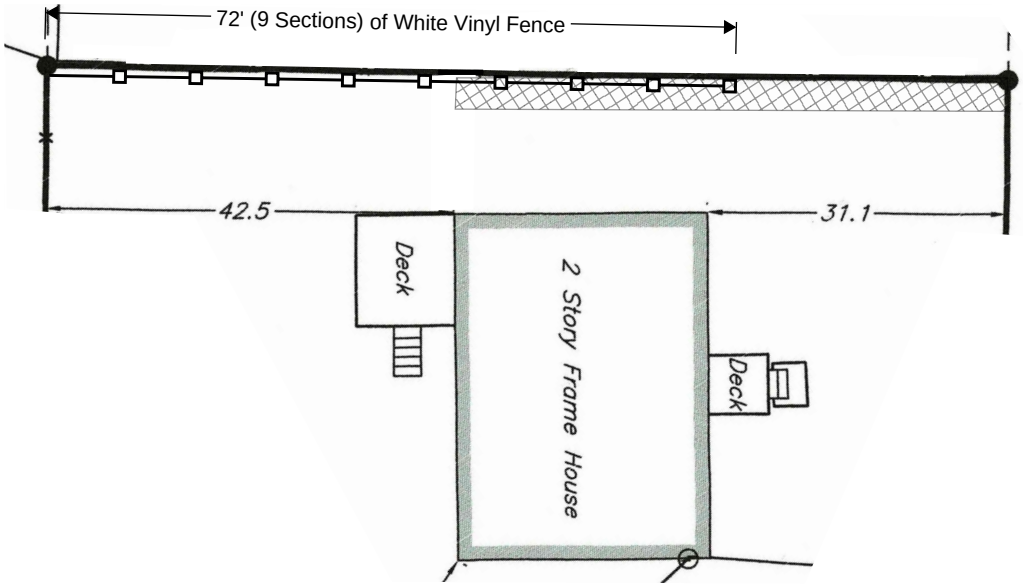
179 Union Street Site Plan.pdf

179 Union Street Survey.pdf

Planner Review Letter.pdf

Engineer Review Letter.pdf


White Vinyl Fence
"Freedom Outdoor Living -
Emblem Vinyl Fence"
96" CENTER TO CENTER
94" RAIL LENGTH
91"
7"
108"
58"
7"
2"
61 1/2"
72"
Wet or Dry
Mix Concrete
Gravel


72' (9 Sections) of White Vinyl Fence
42.5
31.1
Deck
2 Story Frame House
Deck

Property Owner to Occupy One Dwelling Unit on Lot

General Regulations - Zoning District R1-7.5		
Regulation	**Allowable**	**Existing/Proposed**
Lot Area	7500sf	8581sf*
Min. Lot Width	75ft	85.78ft
Min. Depth	100ft	100ft*
Min. Distance Between Buildings	N/A	N/A
Stories	2.5	2*
Max. Structure Height (ft)	35ft	29ft*
Min. Structure Height	12ft	29ft*
Min.Front Yard Set-Back	20ft	31.1ft*
Min.Side Yard Set-Back	10ft	14.9ft (smallest side)*
Min. Rear Yard Set-Back	25ft	42.5ft*
Max. No. of Dwelling Units per Building	1+ Accessory	1+ Accessory
Maximum Building Coverage	30%	11%*
Existing Dwelling SF	7500sf	1860sf*
Accessory Unit SF	650sf	518sf. <30% of Total Floor Area
Parking Spaces	3	3
* - Denotes Existing Condition		



DEED REFERENCE

Liber: 2020 Page: 1716
Lyons
To
Kittredge
04/17/2020

TAX PARCEL NUMBER

City of Beacon, Dutchess County, New York
130200-6054-47-302511

AREA

8,581 Square Feet
0.197 Acres

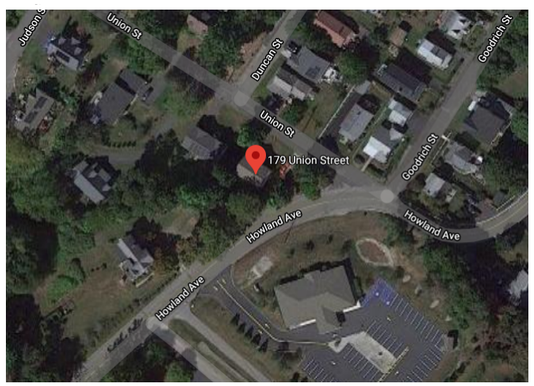
CERTIFICATIONS

John Kittredge
Amanda Gisonni

Drawing Issue		
No.	Date	Description
0	9/16/2020	Planning Board Submission
1	11/22/2020	Public Hearing Submission
2	12/19/2020	Public Hearing Clarifications

Key	
O	Existing Tree Location

Site Plan Layout Based on Survey Provided by TEC Land Surveying, dated May 29, 2020.



Aerial View



Partial Zoning Map

Reviewed by:

STATE OF NEW YORK
WILLIAM J. MOREAU
No. 060987
LICENSED PROFESSIONAL ENGINEER

John Kittredge & Amanda Gisonni - 179 Union Street

SITE PLAN

CITY OF BEACON, COUNTY OF DUTCHESS, STATE OF NEW YORK

tax id	6054-47-302511
address	179 UNION STREET
date	drawn
scale	1" = 20' checked
project no.	
project name	179 UNION STREET
sheet	1 OF 1

SURVEY NOTES

1. Copyright TEC Land Surveying. All Rights Reserved. Reproduction or copying of this document may be a violation of copyright law unless permission of the author and / or copyright holder is obtained.

2. Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 7209, sub-division 2, of the New York State Education Law.

3. Only boundary survey maps with the surveyor's embossed or red inked seal are genuine true and correct copies of the surveyor's original work and opinion. A copy of this document without a proper application of the surveyor's embossed or red inked seal should be assumed to be an unauthorized copy.

4. Certifications on this boundary survey map signify that the map was prepared in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. The certification is limited to persons for whom the boundary survey map is prepared, to the title company, to the governmental agency, and to the lending institution listed on this boundary survey map.

5. The certifications herein are not transferable.

6. The location of underground improvements or encroachments are not always known and often must be estimated. If any underground improvements or encroachments exist or are shown, the improvements or encroachments are not covered by this certificate.

7. Subject to the findings of a current title search.

8. Subject to covenants, easements, restrictions, conditions and agreements of record.

9. Subject to any right, title or interest the public may have for highway use.

10. Bearings and North shown hereon are referenced to NAD 83-NY East using NYSNET RTN GPS.

DEED REFERENCE

Liber: 2020 Page: 1716
Lyons
To
Kittredge
04/17/2020

TAX PARCEL NUMBER

City of Beacon, Dutchess County, New York
130200-6054-47-302511

AREA

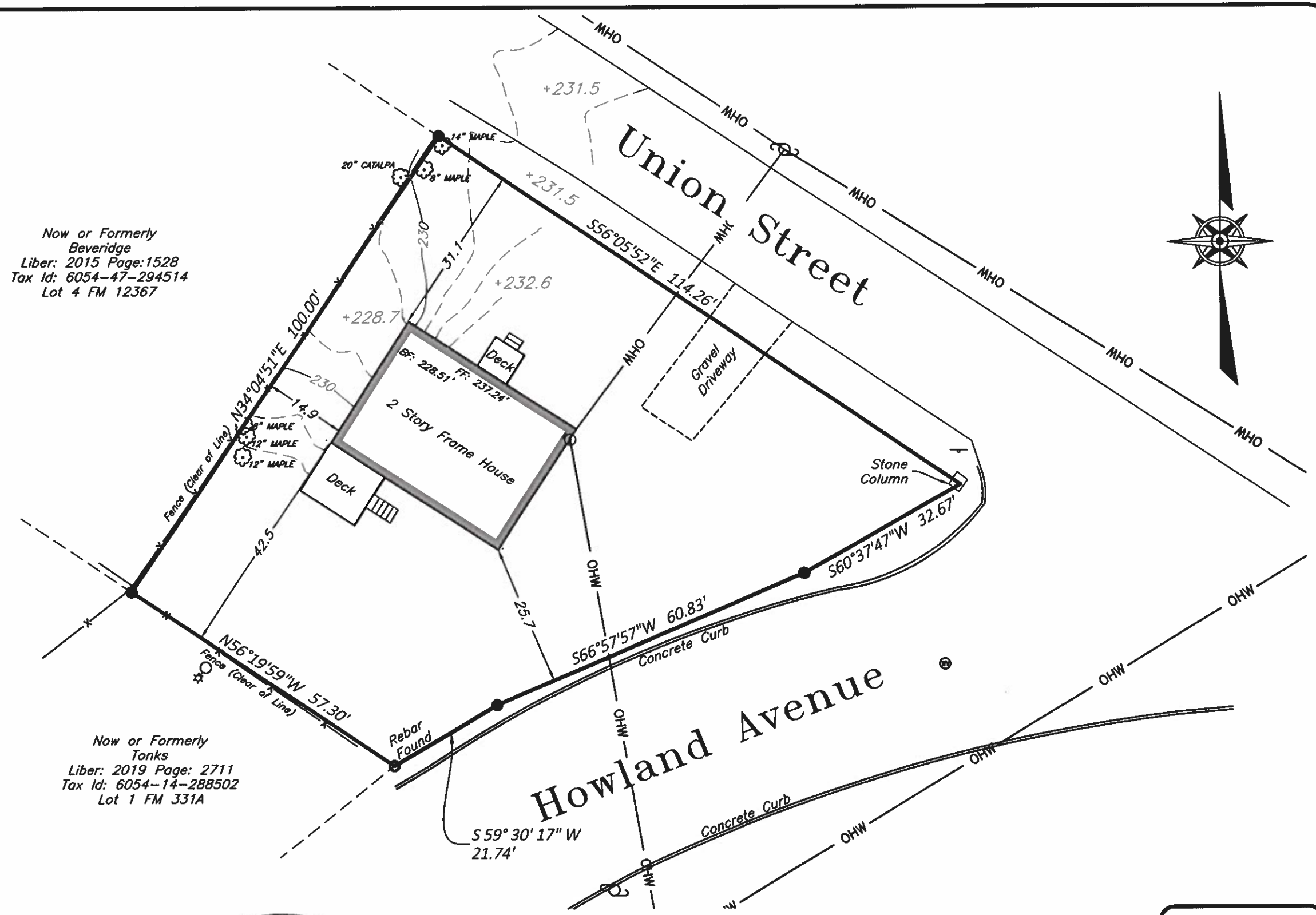
8,581 Square Feet
0.197 Acres

CERTIFICATIONS

John Kittredge
Amanda Gisonni

DATE OF SURVEY

Field Completion: January 4, 2020



Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

STATE OF NEW YORK
THOMAS E. CERCHIARA JR.
050732
LICENSED LAND SURVEYOR

THOMAS E. CERCHIARA, P.L.S.
P.L.S. No. 50732

179 UNION STREET

BOUNDARY AND TOPOGRAPHIC SURVEY PREPARED OF 179 UNION STREET

CITY OF BEACON, COUNTY OF DUTCHESS, STATE OF NEW YORK

tax id	6054-47-302511
address	179 UNION STREET
date	01/04/2021
drawn	CJB
scale	1"=20'
checked	TEC
project no.	20-049
project name	179 UNION STREET
sheet	1 OF 1

John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **179 Union Street, Accessory Apartment Special Permit and Site Plan**

I have reviewed a January 4, 2021 Survey by MJ Engineering and Land Surveying, an undated fence detail, and a Site Plan sheet with the last revision date of December 19, 2020.

Proposal

The applicant is proposing to convert a walk-out basement in an existing house into an accessory apartment. The 8,581 square foot parcel is in the R1-7.5 district.

Comments and Recommendations

1. The proposed privacy fence detail should be incorporated onto the Site Plan sheets and should include the distance of the fence from the property line. If the fence has a more finished side, a note should be included that the finished side should face the neighboring property, as required in Section 223-13G(2).

2. The note referring to driveway grading should reference the latest survey from MJ Engineering and Land Surveying, P.C.

3. The applicant has addressed all my other previous comments, and I have no objection to Board consideration of an approval resolution that includes appropriate conditions.

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
Mazzarelli Architects, 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.

January 7, 2021

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

RE: 179 Union Street
Accessory Apartment
Tax Parcel 6054-47-302511
City of Beacon

Dear Mr. Gunn:

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

- Site Plan titled "John Kittredge & Amanda Gisonni – 179 Union Street", last revised December 19, 2020, as prepared by William Moreau, P.E.
- White vinyl fence detail.

The proposed project entails the finishing of a basement to allow for an accessory apartment in the R1-7.5 Zone on a 0.197-acre parcel. Based upon our review of the above documents and plans, our previous engineering comments 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

City of Beacon Planning Board Agenda
01/12/2021

Title:

Public hearing on application for Site Plan Approval, rear yard open pavilion addition, 184 Main Street, submitted by 184 Main, LLC

ATTACHMENTS

184 Main Street Cover Letter.pdf

184 Main Street Plan Set.pdf

184 Main Street Drainage Plan 1 of 2.pdf

184 Main Street Drainage Plan 2 of 2.pdf

184 Main Street Drainage Report.pdf

Planner Review Letter.pdf

Engineer Review Letter.pdf

Liscum
McCormack
VanVoorhis LLP
ARCHITECTURE
PLANNING
INTERIORS

181 Church Street
Poughkeepsie, NY 12601
Tel: 845•452•2268
Fax: 845•452•3752
www.lmvarchitects.com

December 29, 2020

Ms. Etha Grogan
City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

Re: 184 Main Street, Beacon, NY
Site Plan Review Supplemental

Hand Delivered

Dear Ms. Grogan:

As a follow-up to our initial submission on November 17, 2020, Liscum McCormack VanVoorhis is pleased to provide you with the enclosed supplemental documents for Site Plan Approval associated with the planned renovation and rear yard open pavilion addition to the Meyer's Olde Dutch restaurant at 184 Main Street in the City of Beacon, New York.

We have reviewed the commentary letters received in regard to this application and have addressed the concerns raised as follows.

Mr. Russo, Lanc & Tully Engineering, letter dated December 3, 2020:

1. In accordance with the previously approved site plan, we have updated our project drawings to include a new street tree to be installed on Main Street. We coordinated with Mr. Robert Lieblein, Chair of the Beacon Tree Advisory Committee, who recommended for this location a Nyssa Sylvatica (Black Gum) tree. A beautiful, upright and salt-tolerant species at 2-3" caliper. We are showing this planting and information on updated drawings C-101 and G-101. Exterior lighting along the easement access side of the building, from the previously approved amendments has been added as three (3) wall packs indicated on updated drawings A-101 and A-201. Proposed rear yard fencing as shown on Floor Plan 1/A-101will be Shadow Box type with 1x6 PT dog ear pickets. Fencing is proposed to be 6'-0" in height at the access areaway and 8'-0" where adjoining other rear yard properties to the North and East for increased sound protection and privacy. Fencing construction details are shown at Drawing A-301.

2. The applicant has engaged Mr. Michael Bodendorf, P.E. of Hudson Land Design Professional Engineering, P.C. who conducted infiltration testing in accordance with NYSDEC requirements in the rear yard and prepared calculations for the sizing of the planned drywell. His report is attached. The documents and details associated with the drywell sizing and installation details provided by Hudson Land Design supersede the drawings and details shown on the documents prepared by Liscum McCormack VanVoorhis.

3. The drainage system placement and installation details have been updated by Hudson Land Design Professional Engineering, P.C. whose drawings supersede those prepared by Liscum McCormack VanVoorhis.

Mr. John Clarke, Beacon Planning Consultant, email letter dated December 4, 2020:

1. The building is a contributing structure in the Lower Main Street National Register Historic District, in the HDLO and subject to the Certificate of Appropriateness approval process. The Main Street façade is a repair and reconstruction that greatly preserves the majority off the wood façade components, profiles and sizes. The pant color selection for these wood component has been previously submitted for approval. There is no change to the existing signage.

2. Sheet C-101 has been updated to include an existing conditions plan for the rear section of the parcel (Detail 2) to better illustrate the proposed changes. The existing conditions have a perimeter wood stockade fence, gravel base and six picnic tables for exterior dining.

3. A note has been added to Sheet C-101 describing the access easement for the alley, which is defined as: The right to use for all ordinary purposes of ingress and egress.

4. The proposed cooler structure (Kold Locker Standard Series Model No. 68) has been relocated to greater than 10'-0" from the rear lot line and out of the approved setback. It is shown at Floor Plan 1/A-101 and will be placed under the pavilion canopy behind the proposed perimeter fencing.

5. Proposed rear yard fencing as shown on Floor Plan 1/A-101will be Shadow Box type with 1x6 PT dog ear pickets. Fencing is proposed to be 6'-0" in height at the access areaway and 8'-0" where adjoining other rear yard properties to the North and East for increased sound protection and privacy. Fencing construction details are shown at Drawing A-301.

6. We have updated our project drawings to include a new street tree to be installed on Main Street, in coordination with the Beacon Tree Advisory Committee, who recommended for this location a Nyssa Sylvatica (Black Gum) tree, at 2-3" caliper. We are showing this planting and information on updated drawings C-101 and G-101.

Attached are three hard copy sets and an electronic file of the following:

- Updated Project Drawings, Revision 1, dated 12/28/2020
- Drainage Report, dated 12/29/20, as prepared by Hudson Land Design.
- Drainage Plan, Drawing GD-1, dated 12/28/20, as prepared by Hudson Land Design.
- Underground Infiltration / Detention System Details, Drawing CD-1, as prepared by Hudson Land Design.

We look forward to meeting with the Planning Board at the January 12th meeting.

Sincerely,

LISCUM McCORMACK VANVOORHIS



Donald J. Petruncola, RA
Sr. Associate

CONSTRUCTION DOCUMENTS FOR:

MEYER OLDE DUTCH RESTAURANT

184 MAIN ST., BEACON, NY 12508

SCOPE

THIS SET OF DRAWINGS INDICATES THE GENERAL SCOPE OF THE PROJECT IN TERMS OF THE DESIGN CONCEPT, THE DIMENSIONS OF THE BUILDING, LIGHTING LAYOUT AND AN OUTLINE OF MAJOR ELEMENTS OF CONSTRUCTION. AS A "SCOPE" DOCUMENT THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL OF THE WORK REQUIRED FOR THE FULL PERFORMANCE AND COMPLETION OF THE PROJECT. PRICING WILL BE BASED ON THESE DOCUMENTS WITH THE UNDERSTANDING THAT THE GENERAL CONTRACTOR, SUBCONTRACTORS AND/OR MATERIALS SUPPLIERS ARE TO FURNISH ALL ITEMS REQUIRED FOR PROPER COMPLETION OF THE WORK WITHOUT ADJUSTMENT TO CONTRACT OR SUBCONTRACT PRICE. IT IS INTENDED THAT THE WORK BE OF SOUND, QUALITY CONSTRUCTION IN FULL COMPLIANCE WITH ALL GOVERNING CODES AND ORDINANCES. THE GENERAL CONTRACTOR , SUBCONTRACTORS, AND MATERIAL SUPPLIERS SHALL BE SOLELY RESPONSIBLE FOR THE INCLUSION OF ADEQUATE AMOUNTS TO COVER INSTALLATION OF ALL ITEMS INDICATED, DESCRIBED OR IMPLIED.

THE ARCHITECT SHALL BE THE SOLE INTERPRETER OF THE SCOPE DOCUMENTS. DECISIONS OF THE ARCHITECT AS TO ITEMS OF WORK INCLUDED WITHIN THE "SCOPE" OF THESE DRAWINGS SHALL BE FINAL.

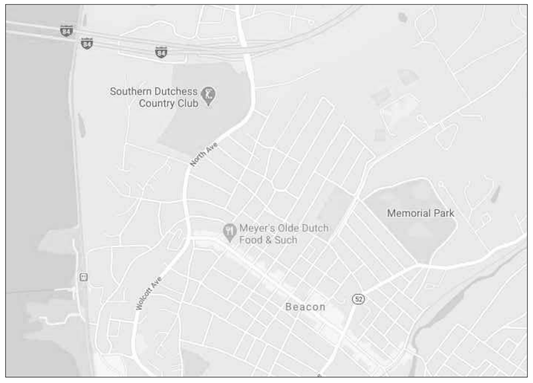
DIMENSIONS SHOWN ARE FRAMED DIMENSIONS. VERIFY ACTUAL CONDITIONS BEFORE BEGINNING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THE FRAMING DIMENSIONS WILL PRODUCE THE FINISH FLOOR PLANS AS SHOWN IN THE DRAWINGS. CONTRACTOR TO HAVE ALL CHANGES APPROVED IN WRITING BY ARCHITECT.

NOTES

1. G.C. IS RESPONSIBLE FOR HAVING ALL PROJECT SUBCONTRACTORS COORDINATE THEIR WORK WITH THE WORK OF THE OTHER TRADES AND IS RESPONSIBLE FOR THE COORDINATION OF ALL TRADES AND WORK INCLUDING WORK NOT IN THE CONTRACT AND WORK PERFORMED BY SEPARATE SUBCONTRACTORS RETAINED BY THE OWNER UNDER SEPARATE AGREEMENT. ALL SUCH WORK NOT IN CONTRACT SHALL BE REVIEWED WITH THE ARCHITECT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. G.C. IS TO FAMILIARIZE HIMSELF WITH THE CONDITIONS OF THE SITE AND CONSTRUCTION DOCUMENTS PRIOR TO SUBMITTING A BID. CONTRACTOR TO VERIFY ALL CONDITIONS AT SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO STARTING THE WORK.
3. CONTRACTOR IS TO FILE FOR AND SECURE ALL APPROVALS, PERMITS, TESTS, INSPECTIONS AND CERTIFICATES OF COMPLIANCE AS REQUIRED.
4. LAYOUT IS TO BE REVIEWED IN FIELD WITH THE ARCHITECT & THE OWNER PRIOR TO CONSTRUCTION.
5. G.C. IS TO FURNISH THE ARCHITECT, OWNER AND BUILDING INSPECTOR WITH INSURANCE CERTIFICATES AS REQUIRED BY THE ARCHITECT & THE OWNER AS WELL AS WITH ALL WAIVERS OF LIENS SPECIFIED BY THE ARCHITECT & THE OWNER PRIOR TO THE RECEIPT OF ANY AND ALL PAYMENTS.
6. G.C. TO COORDINATE HIS ACTIVITIES DURING CONSTRUCTION WITH THE ARCHITECT AND TO PROVIDE THE ARCHITECT AND THE OWNER'S AGENT WITH A PROJECT SCHEDULE FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY WORK.
7. G.C. IS TO KEEP A FULL SET OF COMPLETE AND UP TO DATE PLANS AVAILABLE AT THE JOB SITE AT ALL TIMES.
8. G.C. IS RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS NECESSARY FOR SUCCESSFUL COMPLETION OF THE WORK AND AS REQUIRED BY LAW.
9. G.C. TO PROVIDE ADEQUATE TEMPORARY SHORING WHERE AND WHEN NECESSARY.
10. G.C. IS TO TAKE CAUTION NOT TO DAMAGE OR DEFACE ANY PORTION OF THE ADJOINING PROPERTIES DURING CONSTRUCTION. ANY ADJOINING PROPERTY THAT IS DAMAGED AND/OR DEFACED DUE TO THE WORK OR NEGLECT OF THE CONTRACTOR OR HIS SUBCONTRACTORS SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
11. ALL MATERIALS SUPPLIED BY G.C. TO BE NEW AND OF BEST QUALITY AVAILABLE. ALL LABOR AND MATERIAL TO BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL PAYMENT. CONTRACTOR TO INSTALL ALL MATERIAL AND LABOR, UNLESS SPECIFICALLY NOTED, FOR THE COMPLETE INSTALLATION OF ALL WORK AS SPECIFIED HEREIN. DELIVER PRODUCTS SCHEDULED FOR USE IN THE WORK IN THE MANUFACTURERS ORIGINAL CONTAINER WITH LABELS INTACT. MAINTAIN FINISHED SURFACES CLEAN, UNMARRED, AND SUITABLY PROTECTED UNTIL ACCEPTED BY OWNER. IN THE EVENT OF DAMAGE , PROMPTLY REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER OR EXTENSION IN THE CONTRACT TIME OF COMPLETION.
12. ALL WORK TO BE PERFORMED AND ALL MATERIALS AND FINISHES TO BE INSTALLED SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND APPLICABLE NATIONAL CODES. G.C. TO PROVIDE OWNER WITH CERTIFICATE OF OCCUPANCY PRIOR TO RECEIPT OF FINAL PAYMENT.\
13. PROJECT CONTRACT CLOSE-OUT SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO :
PROJECT RECORD DOCUMENTS , OPERATION AND MAINTENANCE DATA, WARRANTIES AND BONDS, KEYS AND KEYING SCHEDULE , SPARE PARTS AND MATERIAL STOCK , CERTIFICATES OF INSPECTION / OCCUPANCY / INSURANCE, EVIDENCE OF PAYMENT AND RELEASE OF LIENS, AND A LIST OF SUBCONTRACTORS , PRINCIPAL VENDORS AND SERVICE ORGANIZATIONS, INCLUDING EMERGENCY TELEPHONE NUMBERS. INSTRUCT THE OWNER ON THE PROPER OPERATION AND MAINTENANCE OF SYSTEMS, EQUIPMENT AND SIMILAR ITEMS PRIOR TO RELEASE OF FINAL PAYMENT TO THE GENERAL CONTRACTOR AND/OR RELATED SUBCONTRACTOR.
14. G.C. IS RESPONSIBLE FOR THE REMOVAL OF THE CONSTRUCTION DEBRIS AS PER ALL GOVERNING CODES AND ORDINANCES. FINAL CLEAN UP OF ALL WORK AND MATERIALS SHALL BE TO THE DESIGNER'S & THE OWNER'S SATISFACTION PRIOR TO FINAL COMPLETION. THROUGHOUT THE CONSTRUCTION PERIOD, G.C. TO MAINTAIN THE BUILDING AND SITE IN A CLEAN MANNER AND STORE ITEMS IN AN ORDERLY ARRANGEMENT ALLOWING MAXIMUM ACCESS, NOT IMPEDING THE CONSTRUCTION PROCESS OF ANY SUBCONTRACTOR AND PROVIDING THE REQUIRED PROTECTION OF MATERIALS. G.C. SHALL NOT ALLOW THE ACCUMULATION OF SCRAP, DEBRIS, AND WASTE MATERIAL. AT THE END OF THE PROJECT, THE G.C. IS TO REMOVE DUST, DEBRIS, OILS, STAINS, FINGERPRINTS AND LABELS FROM EXPOSED FINISHED SURFACES, INCLUDING GLAZING.
15. SUBSTITUTIONS EQUAL TO THE ITEMS SPECIFIED WILL BE CONSIDERED ONLY WHEN REQUIRED BY CODE OR INSURANCE, WHEN PROVEN UNAVAILABLE OR UNSAFE, WHEN A MANUFACTURER REFUSES TO CERTIFY PERFORMANCE, WHEN IT WOULD BE SUBSTANTIALLY TO THE OWNER'S BEST INTEREST IN TERMS OF COST, TIME OR OTHER CONSIDERATION. ALL SUBSTITUTIONS SHALL BE APPROVED IN WRITING BY THE ARCHITECT AND THE OWNER'S AGENT IN ADVANCE OF THEIR PURCHASE OR INSTALLATION BY THE G.C.
16. FURNISH SHOP DRAWINGS, SAMPLES AND PROJECT DATA WHEN NOTED FOR REVIEW AND APPROVAL BY THE ARCHITECT AFTER CHECKING AND CERTIFYING COMPLIANCE WITH THE CONTRACT DOCUMENTS.
17. PROVIDE TEMPORARY FACILITIES AND CONTROLS REQUIRED FOR THE WORK, INCLUDING, BUT NOT LIMITED TO TEMPORARY UTILITIES SUCH AS HEAT, WATER, ELECTRICITY, TELEPHONE, FIELD OFFICE, SANITARY FACILITIES, ENCLOSURES SUCH AS TARPAULINS, BARRICADES AND CANOPIES. G.C. TO PROVIDE NECESSARY SAFETY PROTECTIONS FOR GENERAL PUBLIC AT ALL TIMES.
18. G.C. TO UNCOVER WORK TO PROVIDE FOR INSPECTION OR INSTALLATION OF ILL-TIMED WORK. REMOVE AND REPLACE ALL WORK NOT CONFORMING TO REQUIREMENTS OF THE CONTRACT DOCUMENTS AT THE GENERAL CONTRACTORS OWN COST.
19. THIS SET OF DRAWINGS CONTAINS THE DESIGN PORTION OF THE PROJECT, AS WELL AS, ELECTRICAL DIAGRAMMATIC LAYOUTS.
20. SHOULD THE ARCHITECT NOT BE RETAINED TO PERFORM REVIEWS AND INSPECTIONS, THE OWNER SHALL BE RESPONSIBLE TO COMPLETE ALL SUCH REVIEWS AND INSPECTIONS. THE OWNER SHALL INDEMNIFY AND HOLD THE LICENCED PROFESSIONAL HARMLESS FROM ANY LIABILITY THAT MAY OCCUR DUE TO DECISIONS MADE BY OTHERS ON THE ARCHITECT BEHALF IN THE FIELD.
21. G.C. TO VERIFY THE LOCATION OF ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES AND SEPTIC INSTALLATIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
22. DO NOT SCALE DRAWINGS - WRITTEN DIMENSIONS TAKE PRECEDENT.
23. IN CASE OF DISCREPANCIES OR CONFLICTS WITHIN THE INFORMATION SET FORTH IN THESE DRAWINGS COMPARED TO FIELD CONDITIONS, NOTIFY ARCHITECT PRIOR TO PERFORMANCE OF SUCH ITEMS IN QUESTION.

DRAWING LIST:

G-101	COVER SHEET
C-101	SITE PLOT PLAN
A-101	FLOOR & ROOF PLANS
A-102	SLAB PLAN
A-103	FLOOR FINISH PLAN
A-201	SIDE & REAR EXTERIOR ELEVATIONS
A-301	PAVILION SECTIONS, ROOF DETAILS, & FENCE DETAILS
A-401	STOREFRONT ELEVATIONS, & DETAILS
S-001	STRUCTURAL NOTES
S-101	STRUCTURAL PLAN & DETAILS



SITE LOCATION MAP

N.T.S.

1

SYMBOL LEGEND

SECTION INDICATOR

ELEVATION INDICATOR

WINDOW TAG

DOOR TAG

WALL TAG

KITCHEN — ROOM NAME
105 — ROOM NUMBER
WOOD — FLOOR FINISH

ITEMS BELOW

ITEMS ABOVE

PROPERTY LINE

SITE PLANTING NOTES:

THE WORK OF FURNISHING AND PLANTING TREES, SHRUBS AND VINES AS SHOWN ON THE PLANS AND AS APPROVED BY THE CITY OF BEACON PLANNING BOARD SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ACCEPTED, ESTABLISHED HORTICULTURAL PRACTICE. ANY CHANGES IN PLANT TYPE (ETC.) OR LOCATION REQUIRE THE WRITTEN APPROVAL OF THE CITY OF BEACON PLANNING BOARD.

PLANTS - COMMON AND SCIENTIFIC NAMES OF PLANTS SHALL BE IN CONFORMITY WITH S.P.N. (STANDARDIZED PLANT NAMES). PLANTS, INCLUDING ROOT SPREAD AND BALL SIZE, SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK". PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND BE TYPICALLY CHARACTERISTIC OF THEIR RESPECTIVE KINDS. PLANTS SHALL BE FREE FROM INJURY, INSECT DAMAGE AND DISEASE. CONTAINER GROWN PLANTS SHALL GROWN LONG ENOUGH FOR NEW FIBROUS ROOTS TO HAVE DEVELOPED. SHRUBS AND VINES SHALL HAVE GOOD FIBROUS ROOT SYSTEMS. NO PLANTING SHALL BE DONE WHEN THERE ARE UNSATISFACTORY CONDITIONS AS DETERMINED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. ROCK OR OTHER UNDERGROUND OBSTRUCTIONS SHALL BE REMOVED TO A DEPTH AS DIRECTED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. ALL PLANTS SHALL BE PROTECTED FROM DRYING OUT.

ANTIDESSICANTS SHALL BE APPLIED TO ALL PLANTINGS ACCORDING TO THE MANUFACTURER's DIRECTIONS. THIS MATERIAL SHALL BE APPLIED TO EVERGREENS WITHIN TWO WEEKS OF PLANTING, AND TO DECIDUOUS PLANTINGS IN THE FALL WHEN AIR TEMPERATURE IS ABOVE 40° F OR IN THE SPRING WHEN LEAVES HAVE REACHED 75% OF MATURE SIZE.

ALL DEAD, UNHEALTHY OR BADLY IMPAIRED PLANTS, AS DETERMINED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE, SHALL BE PROMPTLY REMOVED FROM THE PROJECT. IN THE EVENT OF THE THREAT OF SERIOUS DAMAGE FROM INSECTS, DISEASE OR RODENTS, THE PLANTS SHALL BE TREATED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AS APPROVED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE.

LOCATIONS FOR PLANTS AND PLANTINGS SHALL BE MARKED OUT ON THE GROUND BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. ALL PLANTS SHALL BE SET IN ACCORDANCE WITH GOOD ESTABLISHED HORTICULTURAL PRACTICE. ALL PLANTS SHALL BE SET PLUMB AT A LEVEL SUCH THAT AFTER SETTLEMENT, THEY BEAR THE SAME RELATIONSHIP TO THE LEVEL OF SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. BACKFILL SHALL BE THOROUGHLY SETTLED BY TAMPING. BACKFILL IS TO BE PLACED INTO PLANT PITS IN LAYERS NOT TO EXCEED 4" INCHES AND TAMPED. THOROUGH WATERING SHOULD ACCOMPANY BACKFILLING, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. A SAUCER CAPABLE OF HOLDING WATER TO A DEPTH AS SHOWN ON THE PLANS SHALL BE FORMED ABOUT EACH PLANT PIT. ALL PLANTS SHALL BE WATERED TO PROVIDE NOT LESS THAN 5 GALLONS OF WATER PER SQUARE YARD OF PLANT PIT OR BED AREAS. ALL CLOTH, ROPES, ETC. SHALL BE REMOVED FROM THE TOPS OF BALLS, BUT NOT PULLED OUT FROM UNDER THE BALLS. ALL TRUNKS OF DECIDUOUS TREES SHALL BE WRAPPED IMMEDIATELY AFTER PLANTING WITH A MATERIAL AS APPROVED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. ALL TREES SHALL BE FIRMLY GUYED OR STAKED OR ANCHORED, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. PRUNING SHALL BE DONE IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AS DIRECTED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE. MULCHING SHALL COVER THE PLANT PIT OR THE PLANTING BED TO A DEPTH AS SPECIFIED ON THE PLANS. THE AREA DISTURBED BY THE PLANTING OPERATION SHALL BE RESTORED TO AN ORDERLY CONDITION AS APPROVED BY THE CITY ENGINEER OR BUILDING INSPECTOR AS IS APPLICABLE.

1	GENERAL REVISIONS	12/28/2020

Liscum McCormack VanVoorhis LLP
ARCHITECTURE PLANNING INTERIORS
181 CHURCH STREET
POUGHKEEPSIE, NEW YORK 12601
PHONE 845-452-2268 FAX 845-452-3752

PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

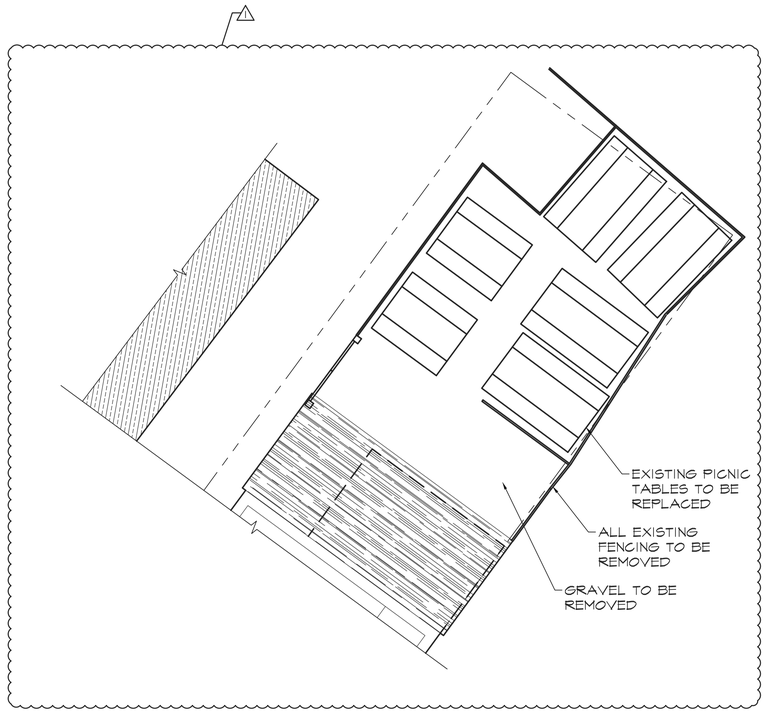
DRAWING
COVER SHEET

SEAL
REGISTERED ARCHITECT MICHAEL T.J. McCORMACK No. 019302-1 STATE OF NEW YORK

DRAWN BY	PROJECT NUMBER
MT	-
CHECKED BY	DATE
-	10/13/2020

DRAWING NUMBER
G-101

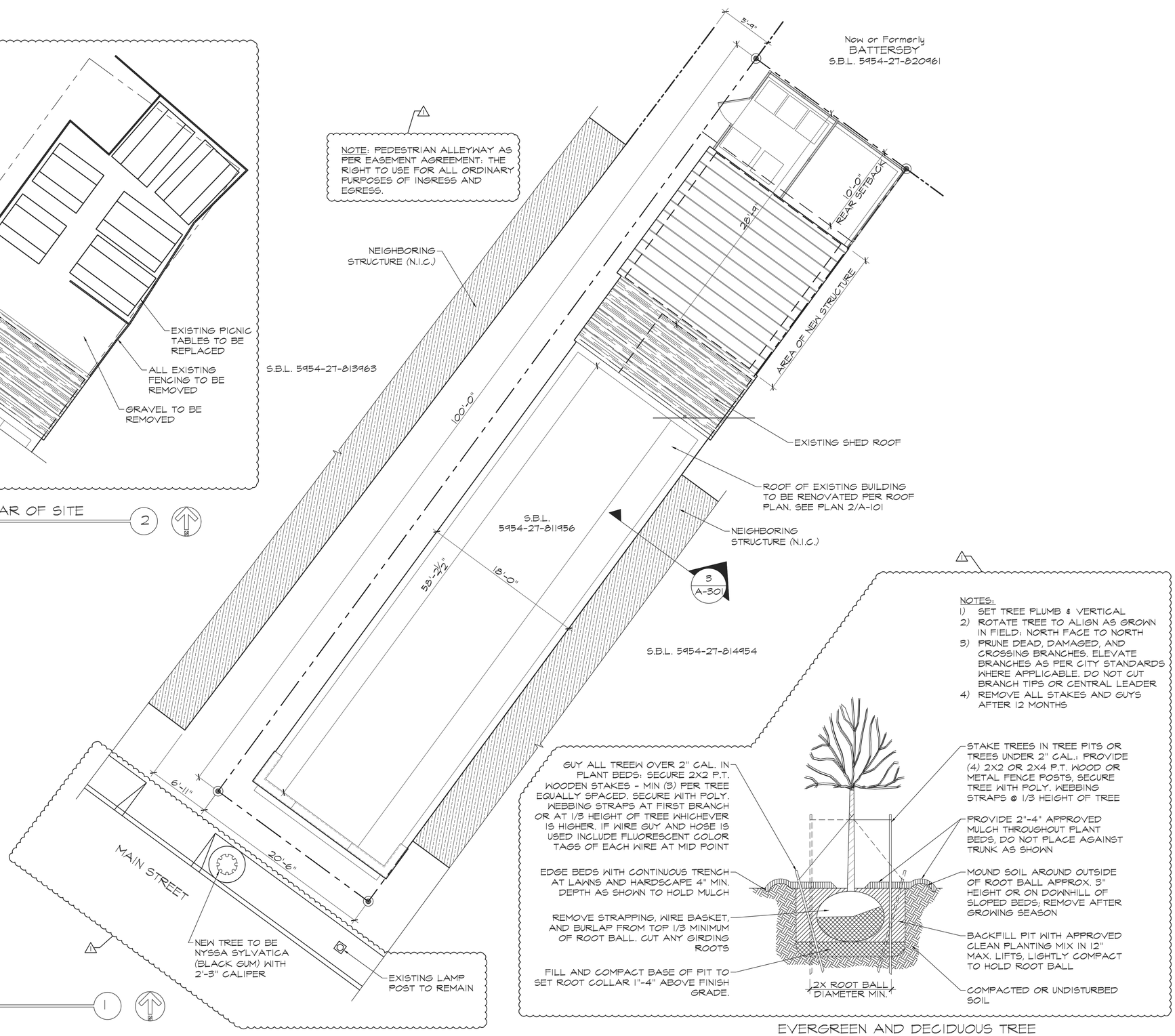
FILE P:\2000\JOB # - JOB NAME\



EXISTING CONDITIONS @ REAR OF SITE

2

SCALE: 3/16" = 1'-0"



SITE PLOT PLAN

1

SCALE: 3/16" = 1'-0"

EVERGREEN AND DECIDUOUS TREE PLANTING DETAIL

3

SCALE: N.T.S

1	GENERAL REVISIONS	12/28/2020

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181 CHURCH STREET
POUGHKEEPSIE, NEW YORK 12601
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PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

DRAWING
SITE PLOT PLAN

SEAL: REGISTERED ARCHITECT MICHAEL T.J. McCORMACK No. 019532-1 STATE OF NEW YORK

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MT	-
CHECKED BY	DATE
-	10/13/2020

DRAWING NUMBER
C-101

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WALL TYPE LEGEND



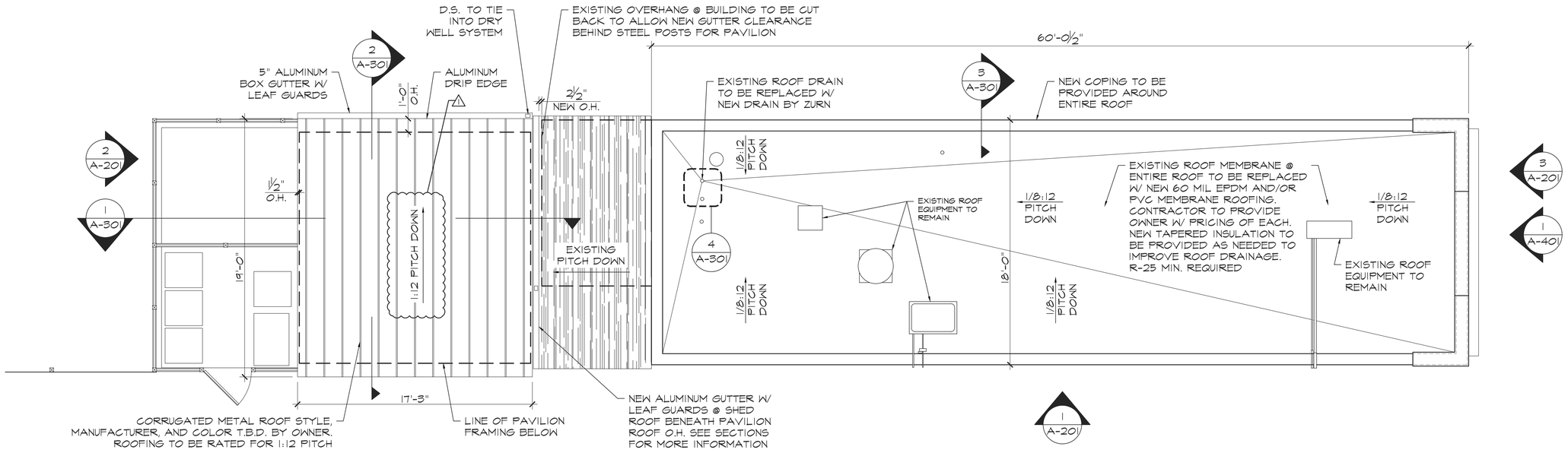
NOTE: SET EXTERIOR OF PVC SHEATHING FLUSH WITH EXTERIOR OF EXISTING CMU (SEE FLOOR PLAN)

-5/8" GYPSUM BD. INTERIOR SIDE
-2X6 WOOD STUDS @ 16" O.C.
-R-21 KRAFT FACED FIBERGLASS INSULATION
-1/2" EXT. GRADE CDX PLYWOOD SHEATHING
-1/2" CELLULAR PVC SHEET PRODUCT

DOOR SCHEDULE

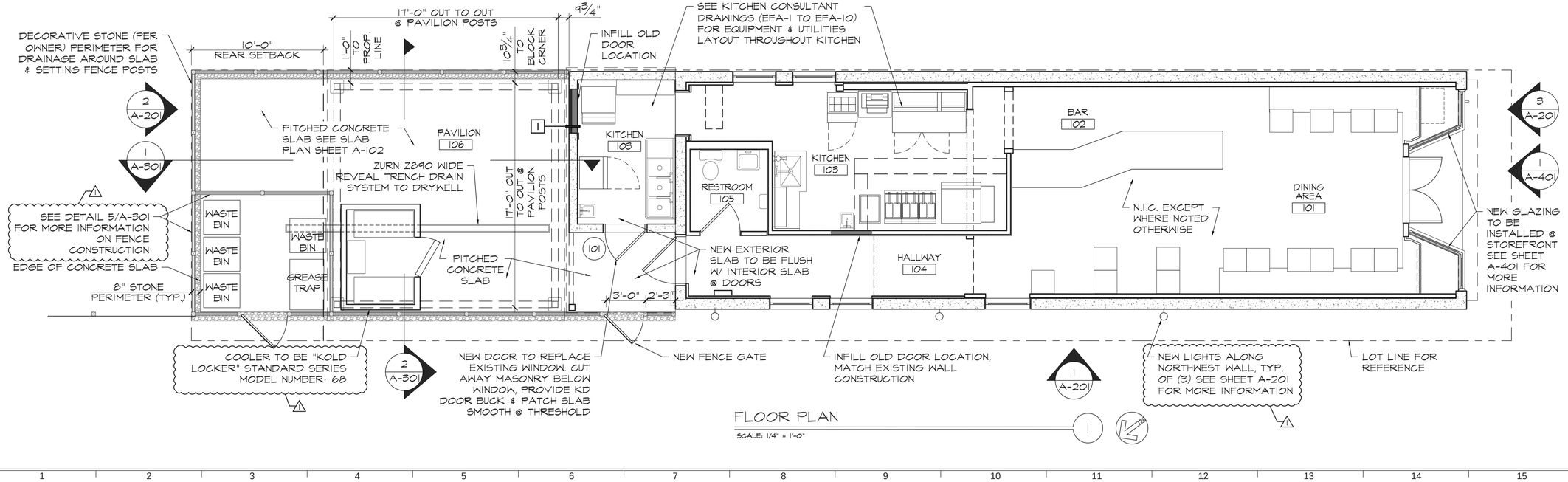
NO.	DOOR SIZE		LOCATION	COMMENTS
	W	H		
FIRST FLOOR				
101	3' - 0"	6' - 8"	KITCHEN	INSULATED EXTERIOR

EXACT STYLES AND MANUFACTURER T.B.D. BY OWNER. G.C. TO PROVIDE ALLOWANCE FOR DOOR MATERIAL COST AND PROVIDE LABOR COST.



ROOF PLAN

SCALE: 1/4" = 1'-0"



FLOOR PLAN

SCALE: 1/4" = 1'-0"

1	GENERAL REVISIONS	12/28/2020

Liscum McCormack VanVoorhis LLP
ARCHITECTURE PLANNING INTERIORS
181 CHURCH STREET
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PHONE 845-452-2268 FAX 845-452-3752

PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

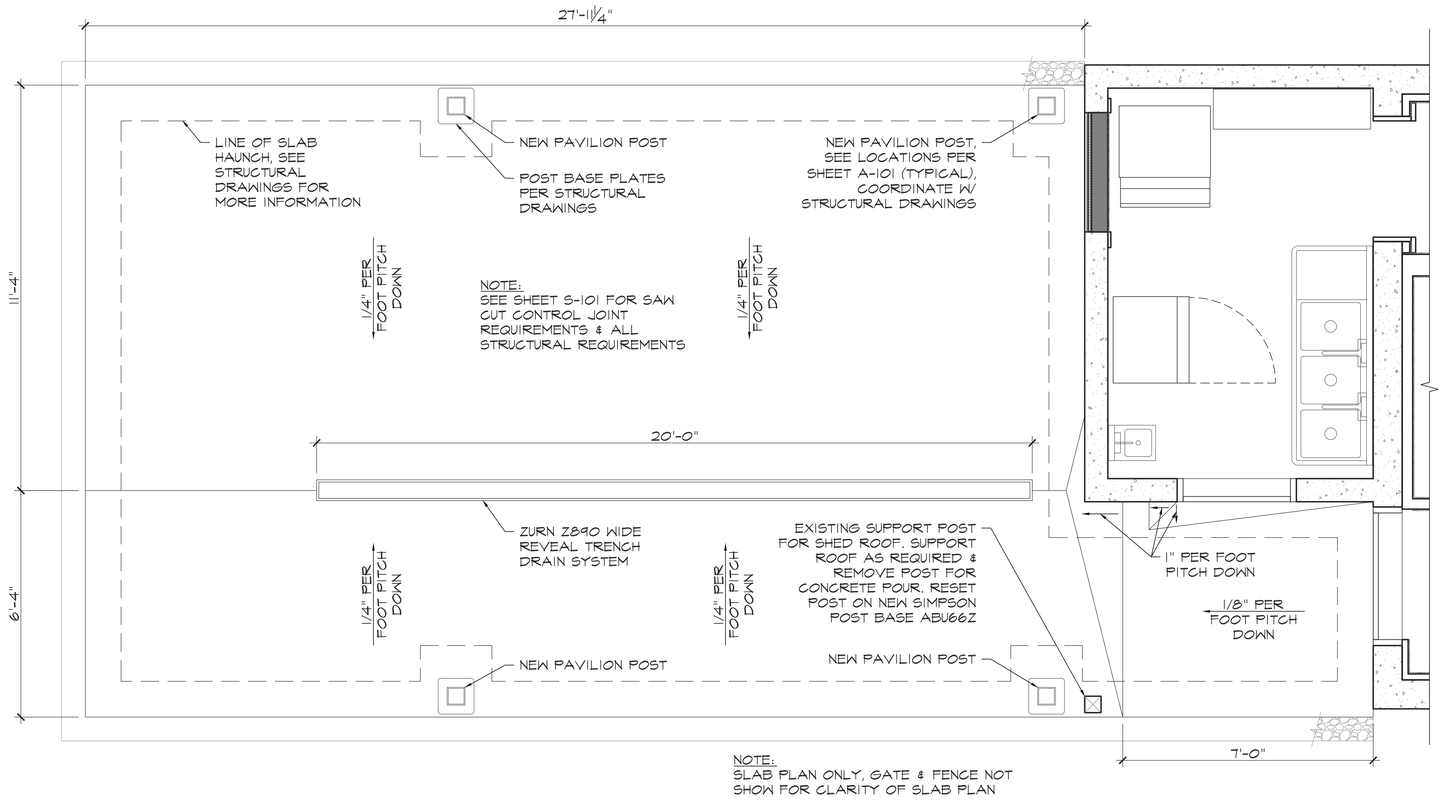
DRAWING
FLOOR & ROOF PLANS

SEAL: REGISTERED ARCHITECT MICHAEL T.J. McCORMACK No. 019332-1 STATE OF NEW YORK

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MT	-
CHECKED BY	DATE
-	10/13/2020

DRAWING NUMBER
A-101

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NOTE:
SLAB PLAN ONLY, GATE & FENCE NOT SHOW FOR CLARITY OF SLAB PLAN

SLAB PLAN

SCALE: 1/2" = 1'-0"

1	GENERAL REVISIONS	12/28/2020

Liscum McCormack VanVoorhis LLP
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181 CHURCH STREET
POUGHKEEPSIE, NEW YORK 12601
PHONE 845-452-2268 FAX 845-452-3752

PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

DRAWING
SLAB PLAN

SEAL
REGISTERED ARCHITECT MICHAEL T.J. MCCORMACK No. 016522-1 STATE OF NEW YORK

DRAWN BY	PROJECT NUMBER
MT	-
CHECKED BY	DATE
-	10/13/2020

DRAWING NUMBER
A-102

FILE P:\2000\JOB # - JOB NAME\

ROOM FINISH SCHEDULE

NUMBER	ROOM NAME	BASE/WALL TRIM	FLOOR	WALLS				CEILING		NOTES
				N	S	E	W	MATL	HEIGHT	
FIRST FLOOR										
101	DINING ROOM	WDB	PC	GB/PT	GB/PT	GB/PT	GB/PT	SEE NOTE 1	-	-
102	BAR	WDB	PC	GB/PT	GB/PT	GB/PT	GB/PT	SEE NOTE 1	-	-
103	KITCHEN	VB	TLI	FRP	FRP	FRP	FRP	EXISTING	-	-
104	HALLWAY	WDB	PC	GB/PT	GB/PT	GB/PT	GB/PT	EXISTING	-	-
105	RESTROOM	VB	PC	GB/PT	GB/PT	GB/PT	GB/PT	EXISTING	-	-
106	PAVILION	N/A	CONC	N/A	N/A	N/A	N/A	PT/PWC	-	-

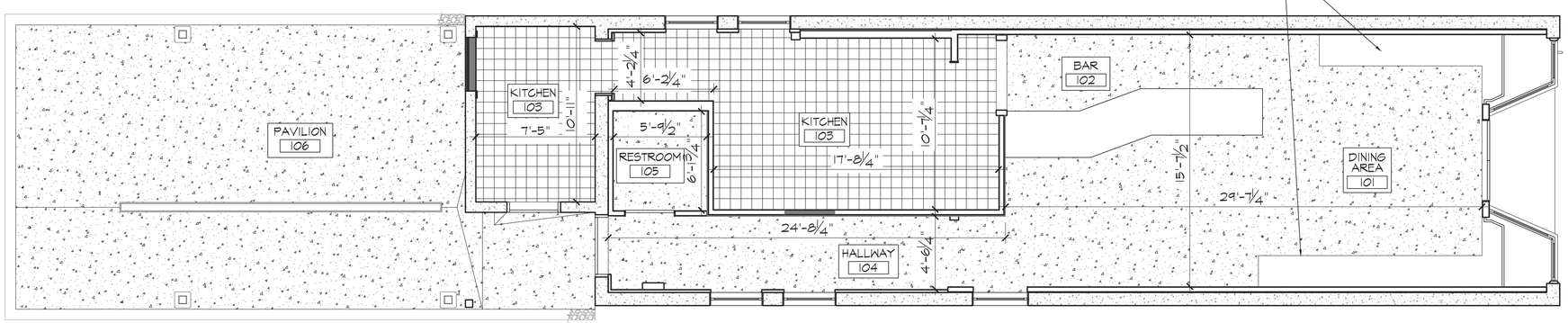
NOTE 1: CEILING OF DINING AREA AND BAR TO BE SOUND ABSORPTION TILES. IF POSSIBLE CLEAN AND REUSE EXISTING, OTHERWISE REPLACE WITH NEW.

FINISH KEY			
WD	WOOD FLOORING	SLC	SEALED CONCRETE
TL	TILE	PC	POLISHED CONCRETE
LM	LINOLEUM	GB	GYPSUM BOARD
PWC	POWDER COAT	FRP	FIBERGLASS REINFORCED PANELS
ER	EPOXY RESIN	PT	PAINT
VB	VINYL BASEBOARD	WDB	WOOD BASEBOARD

FINISH LEGEND	
TLI	6X6 QUARRY TILE

NOTE: SEE SLAB PLAN FOR NEW PAVILION SLAB DIMENSIONS

BUILT IN WALL MOUNTED BENCHES, FLOORING UNDERNEATH TO BE FINISHED AS NOTED FOR DINING AREA



FLOOR FINISH PLAN

SCALE: 1/4" = 1'-0"

1	GENERAL REVISIONS	12/28/2020

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181 CHURCH STREET
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PHONE 845-452-2268 FAX 845-452-3752

PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

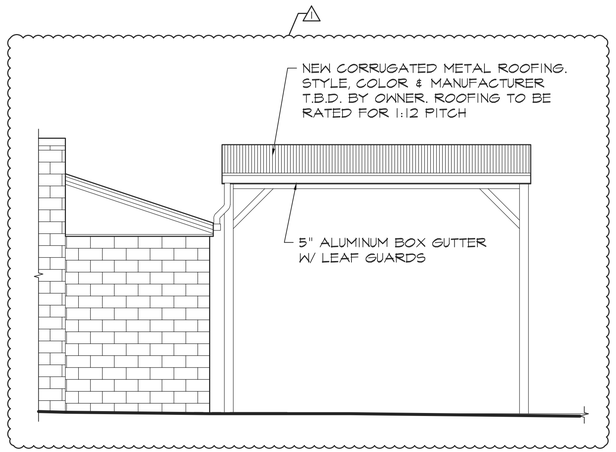
DRAWING
FLOOR FINISH PLAN

SEAL
REGISTERED ARCHITECT MICHAEL T. J. McCORMACK No. 018332-1 STATE OF NEW YORK

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A-103

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SOUTH-EAST (SIDE) PARTIAL ELEVATION 4

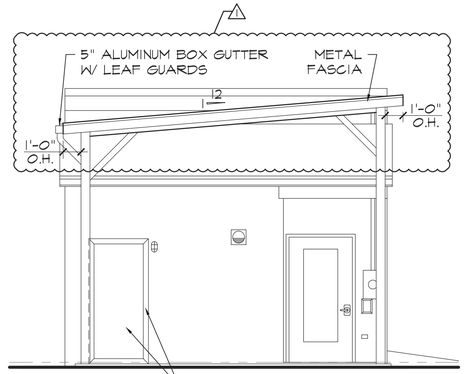
SCALE: 1/4" = 1'-0"

NOTE:
SEE SHEET A-401 FOR INFORMATION ON WORK TO BE DONE



SOUTH-WEST (FRONT) ELEVATION 3

SCALE: 1/4" = 1'-0"

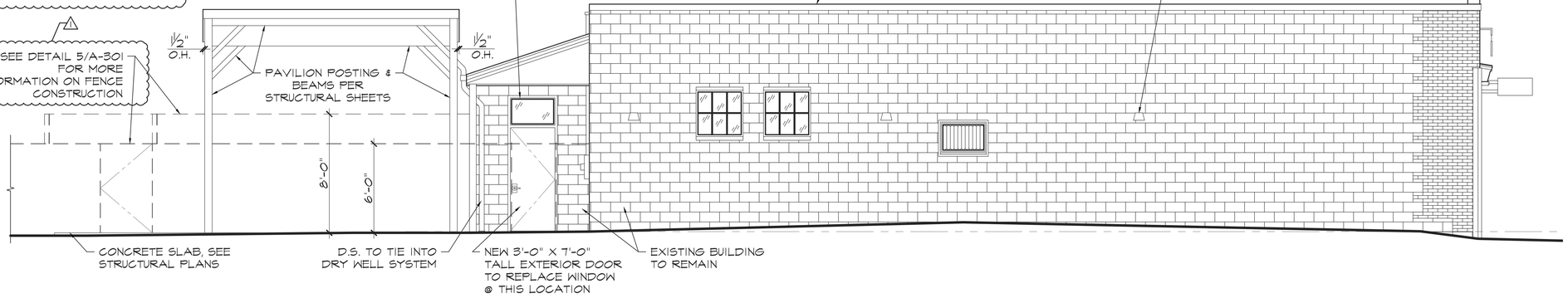


NORTH-EAST (REAR) ELEVATION 2

SCALE: 1/4" = 1'-0"

NOTE: NEW EXTERIOR LIGHTS TO BE "BOWMAN" WALL SCONCE BY TECH LIGHTING:
- INTEGRATED LED
- 699 LUMENS
- 17.8 WATTS
- 120 VOLTS
- 2700K COLOR TEMP
- NIGHT SKY, TITLE 24 RATED

SEE DETAIL 5/A-301 FOR MORE INFORMATION ON FENCE CONSTRUCTION



NORTH-WEST (SIDE) ELEVATION 1

SCALE: 1/4" = 1'-0"

1	GENERAL REVISIONS	12/28/2020

Liscum McCormack VanVoorhis LLP
181 CHURCH STREET
ARCHITECTURE POUGHKEEPSIE, NEW YORK 12601
PLANNING INTERIORS PHONE 845-452-2268 FAX 845-452-3752

PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

DRAWING
SIDE & REAR EXTERIOR ELEVATIONS

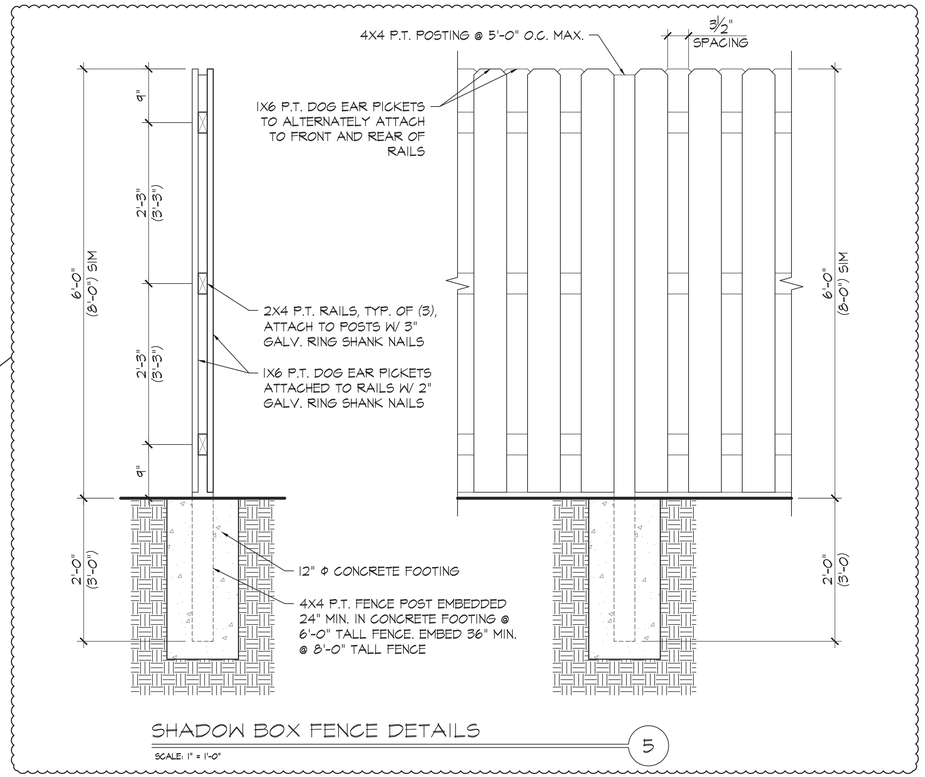
SEAL

REGISTERED ARCHITECT MICHAEL T.J. McCORMACK No. 019502-1 STATE OF NEW YORK

DRAWN BY	PROJECT NUMBER
MT	-
CHECKED BY	DATE
-	10/13/2020

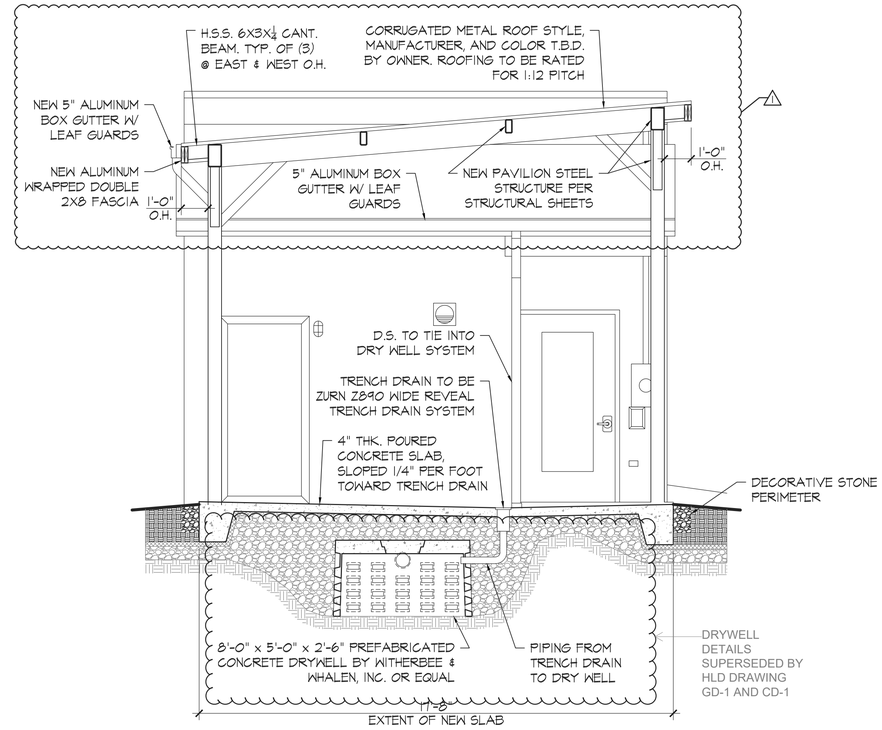
DRAWING NUMBER
A-201

FILE P:\2000\JOB # - JOB NAME\



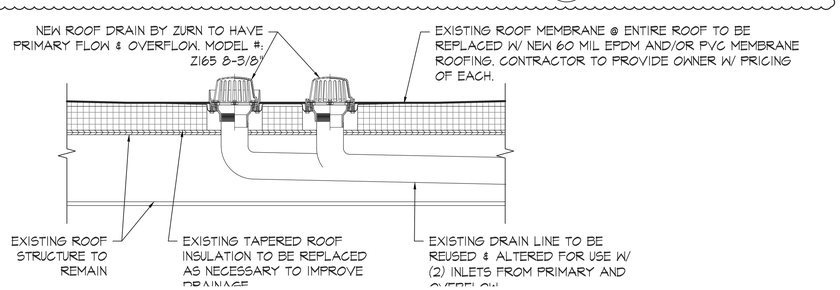
SHADOW BOX FENCE DETAILS 5

SCALE: 1" = 1'-0"



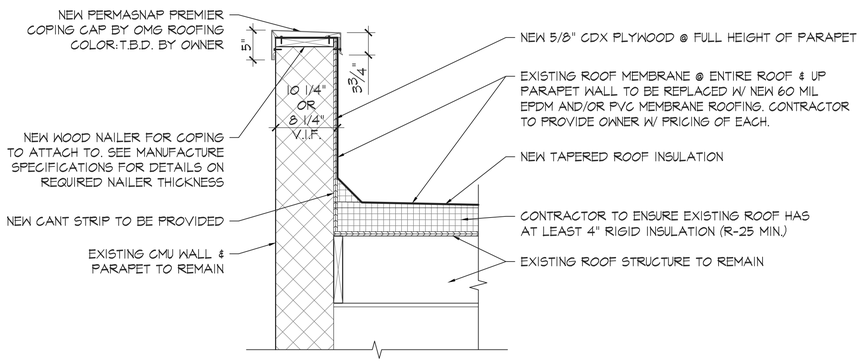
PAVILION SECTION 2

SCALE: 3/8" = 1'-0"



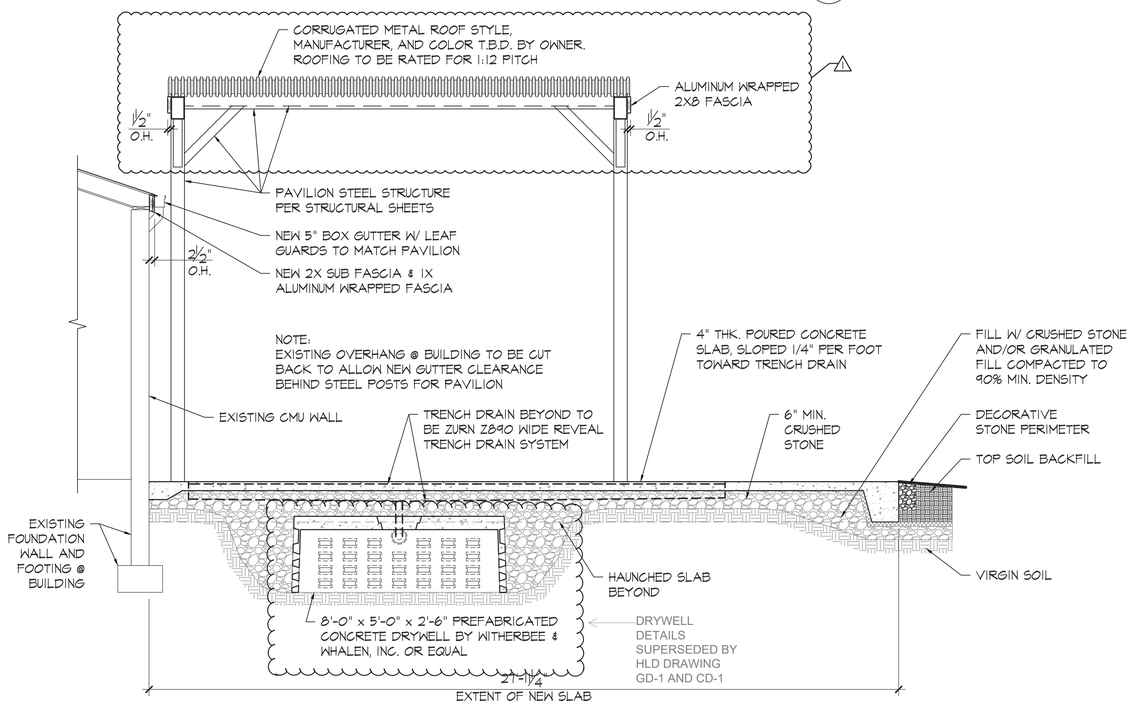
ROOF DRAIN SECTION DETAIL 4

SCALE: 1" = 1'-0"



TYPICAL CMU PARAPET SECTION DETAIL 3

SCALE: 3/4" = 1'-0"



PAVILION SECTION 1

SCALE: 3/8" = 1'-0"

⚠	GENERAL REVISIONS	12/28/2020

Liscum McCormack VanVoorhis LLP
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181 CHURCH STREET
POUGHKEEPSIE, NEW YORK 12601
PHONE 845-452-2268 FAX 845-452-3752

PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

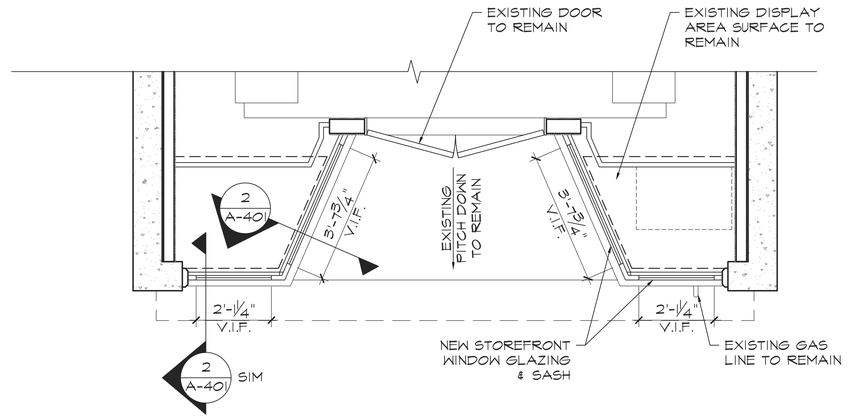
DRAWING
PAVILION SECTIONS, ROOF DETAILS, & FENCE DETAILS

SEAL: REGISTERED ARCHITECT MICHAEL T.J. McCORMACK No. 019322-1 STATE OF NEW YORK

DRAWN BY	PROJECT NUMBER
MT	-
CHECKED BY	DATE
-	10/13/2020

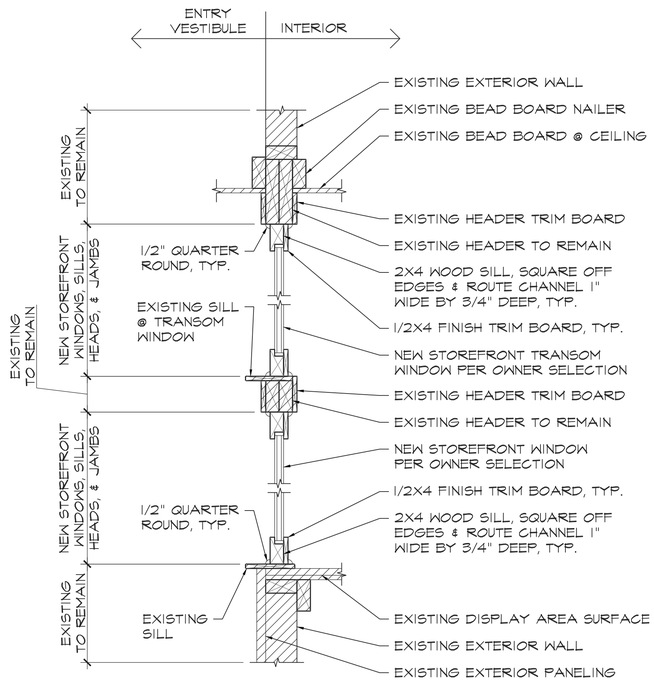
DRAWING NUMBER
A-301

FILE P:\2000\JOB # - JOB NAME\



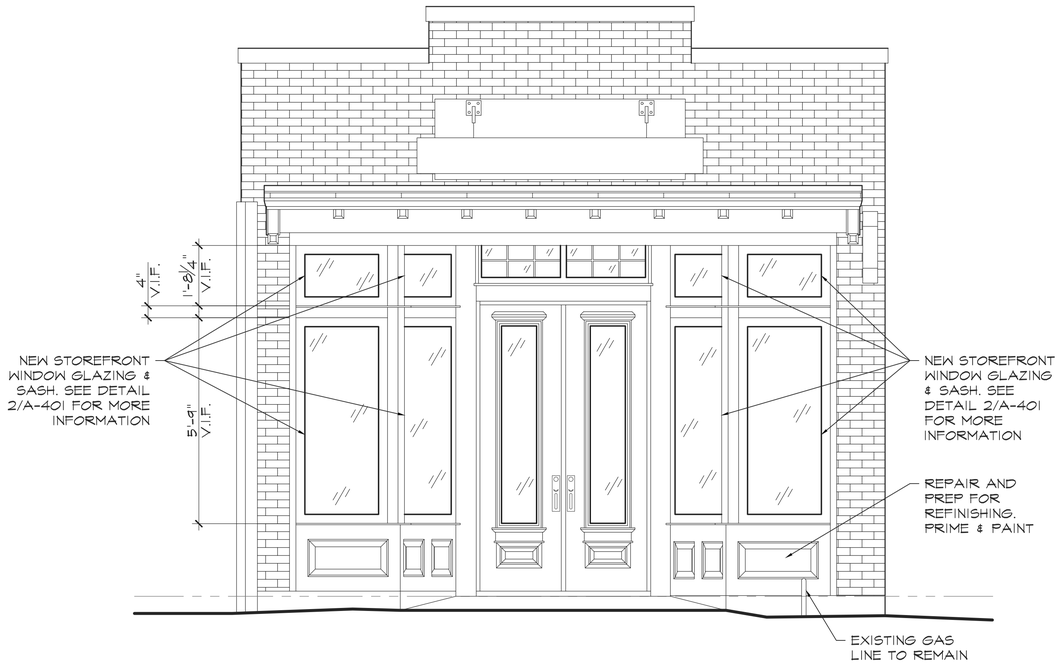
ENLARGED STOREFRONT PLAN 3

SCALE: 1/2" = 1'-0"



STOREFRONT WINDOW SILL & HEAD SECTION DETAILS 2

SCALE: 1 1/2" = 1'-0"



SOUTH-WEST (FRONT) ELEVATION 1

SCALE: 1/2" = 1'-0"

1	GENERAL REVISIONS	12/28/2020

Liscum McCormack VanVoorhis LLP
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181 CHURCH STREET
POUGHKEEPSIE, NEW YORK 12601
PHONE 845-452-2268 FAX 845-452-3752

PROJECT
MEYER'S OLDE DUTCH RESTAURANT
184 MAIN ST.
BEACON, NEW YORK 12508

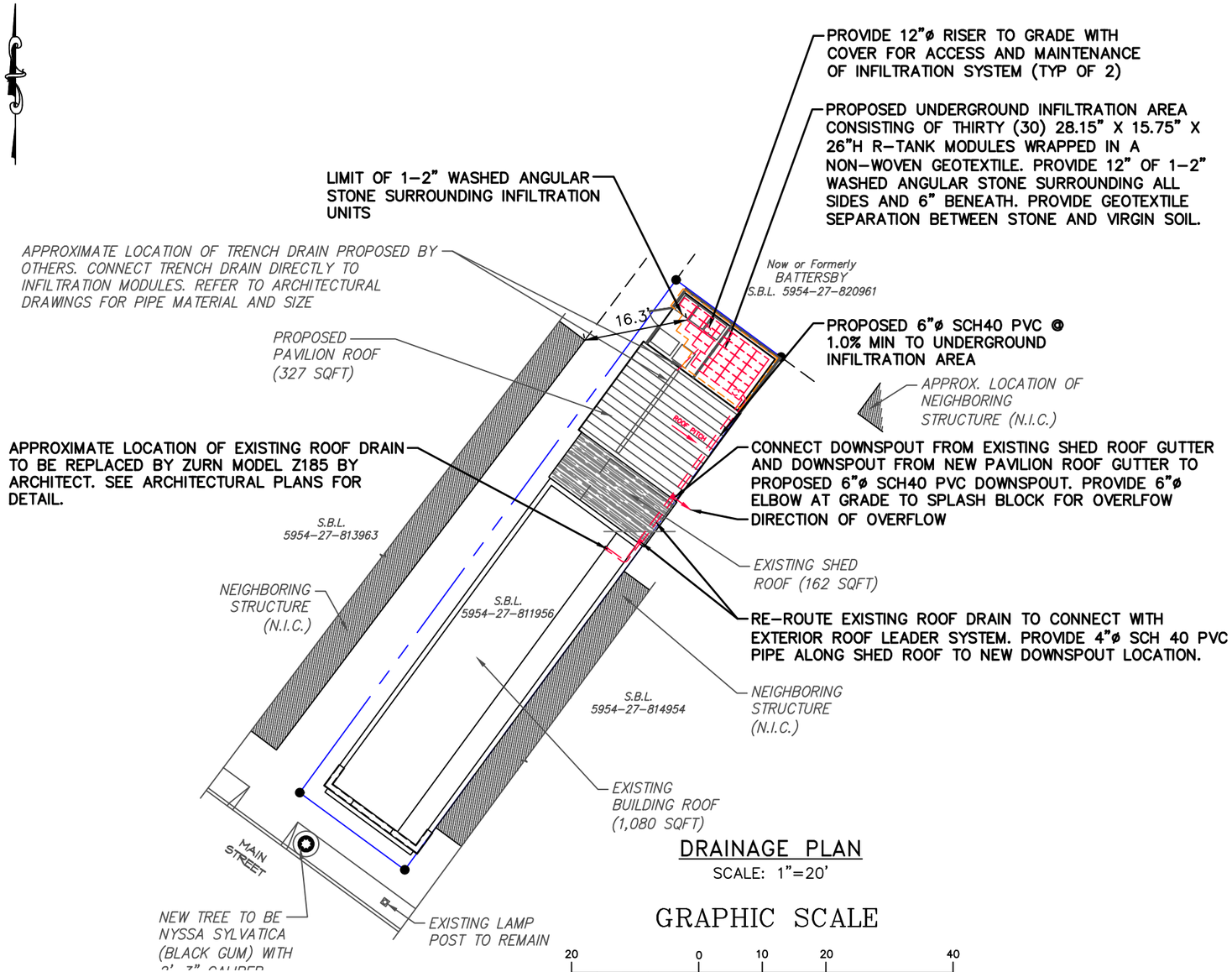
DRAWING
STOREFRONT ELEVATION & DETAILS

SEAL
REGISTERED ARCHITECT MICHAEL T. J. McCORMACK No. 019302-1 STATE OF NEW YORK

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MT	-
CHECKED BY	DATE
-	10/13/2020

DRAWING NUMBER
A-401

FILE P:\2000\JOB # - JOB NAME\



DRAINAGE PLAN

SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- PROPOSED STORM CHAMBERS
- PROPOSED ROOF LEADER LINE

PROJECT INFORMATION:

PARCEL OWNER:	184 MAIN ST., LLC; 1282 DUTCHESS TPKE, POUGHKEEPSIE, NY
PROJECT ENGINEER:	HUDSON LAND DESIGN P.C., 174 MAIN STREET, BEACON NY 12508
PARCEL LOCATION:	184 MAIN STREET, BEACON, NY 12508
TAX PARCEL ID:	5954-27-811956
PARCEL AREA:	±0.05-ACRES
WATER SUPPLY:	MUNICIPAL - CITY OF BEACON
SEWAGE DISPOSAL:	MUNICIPAL - CITY OF BEACON

INFILTRATION TEST TABLE:

INFILTRATION TESTS RESULTS ESTABLISHED ON 12/15/2020

TEST ID	TEST HOLE BOTTOM ELEVATION	RESULTS
IT-1	45" BG	20" PER HOUR; 17" PER HOUR; 16.5" PER HOUR; 16.5" PER HOUR

INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES

ROOF LEADER PIPING:

ALL PIPING GUTTERS AND ROOF LEADERS SHALL BE INSPECTED EVERY SPRING AND FALL. LOOK FOR OBSTRUCTIONS, VEGETATION, DEBRIS, LITTER, SEDIMENT, ETC. BLOCKING THE STRUCTURES OR PIPES. UTILIZE VACUUM TRUCK IF NECESSARY. OBSERVE THE FLOW OF WATER AFTER A RAINFALL EVENT. ANY EVIDENCE OF PONDING IN THE STRUCTURE INDICATES A POTENTIAL BLOCKAGE.

UNDERGROUND DETENTION/INFILTRATION SYSTEM:

INFILTRATION BASINS SHALL BE INSPECTED MONTHLY FOR SEDIMENT AND DEBRIS ACCUMULATION DURING THE FIRST YEAR OF OPERATION. AFTER 50 YEARS OF SERVICE LIFE THE SYSTEM SHOULD BE EVALUATED, IF THE SYSTEM IS NO LONGER FUNCTIONING IN ACCORDANCE WITH THE ORIGINAL DESIGN, THE SYSTEM SHALL BE RESTORED OR REPLACED. THERE ARE FOUR INSPECTION PORTS AT THE CORNERS OF THE SYSTEM TO PROVIDE FOR VISUAL INSPECTION, AND A MEANS OF CLEANING SYSTEM WITH A VACUUM TRUCK. IN THE SPRING AND FALL, INSPECT THE INLET AND OUTLET FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS, DEBRIS, ETC.. INSPECT THE INTERIOR OF THE STORMWATER MANAGEMENT CHAMBERS THROUGH INSPECTION PORT FOR DEBRIS EVERY FIVE YEARS. CLEAN DEBRIS FROM CHAMBERS BY USING PRESSURIZED WATER THROUGH AN INSPECTION PORT AND VACUUM OUT SEDIMENT LADEN WATER. REPEAT THIS OPERATION UNTIL WATER RUNS CLEAN

DRAWN BY: CMB CHECKED BY: MAB

REVISIONS:

NO.	DATE	DESCRIPTION	BY

STATE OF NEW YORK MICHAEL A. BODENDORF LICENSED PROFESSIONAL ENGINEER 084466 EXCELSIOR

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

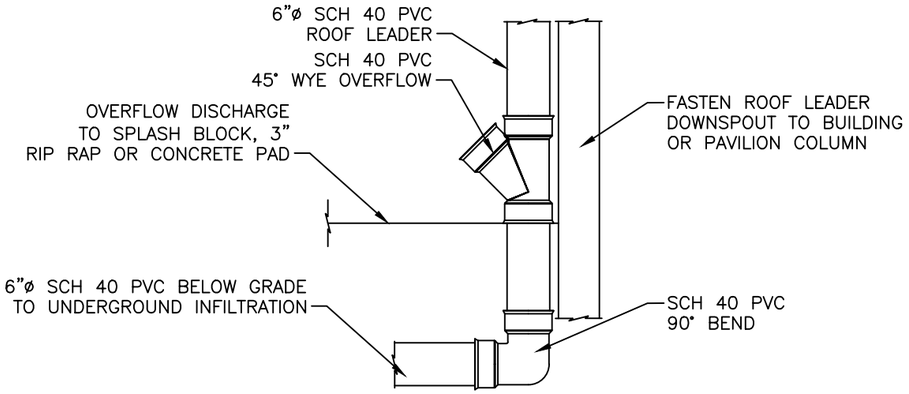
DRAINAGE PLAN

MEYER'S OLDE DUTCH RESTAURANT

184 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-27-811956

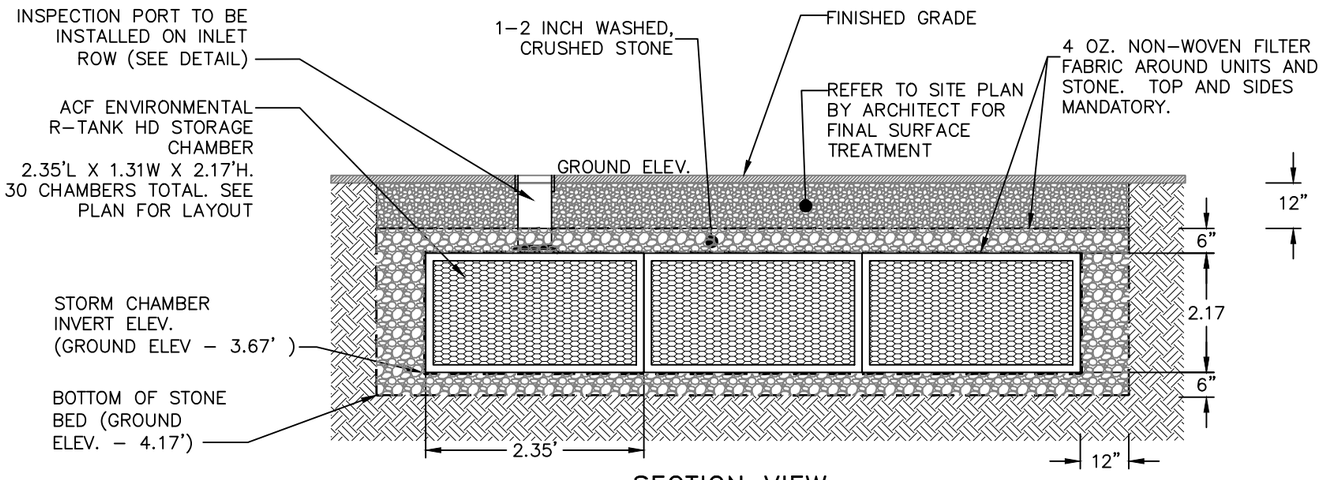
JOB #: 2020:047
DATE: 12/28/2020
SCALE: 1" = 20'
TITLE: GD-1
SHEET: 1 OF 2

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



ROOF LEADER OVERFLOW DETAIL

NOT TO SCALE



SECTION VIEW

NOTES:

1. R–TANK HD CHAMBERS BY ACF ENVIRONMENTAL. ALL CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH ACF ENVIRONMENTAL'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
2. THE BED OF THE SYSTEM FOOTPRINT SHALL BE LAID NEARLY LEVEL.
3. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IF SUBSURFACE CONDITIONS IN THE AREAS OF THE INFILTRATOR TRENCHES IS NOT CONSISTENT WITH THE INFILTRATION DATA (E.G. GROUNDWATER OR BEDROCK ENCOUNTERED, SOIL PROPERTIES ARE NOT CONSISTENT, ETC.).
4. REFER TO THE INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES NOTES ON THE GRADING SHEET.

UNDERGROUND INFILTRATION/ DETENTION SYSTEM DETAIL

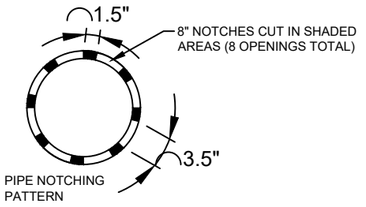
NOT TO SCALE

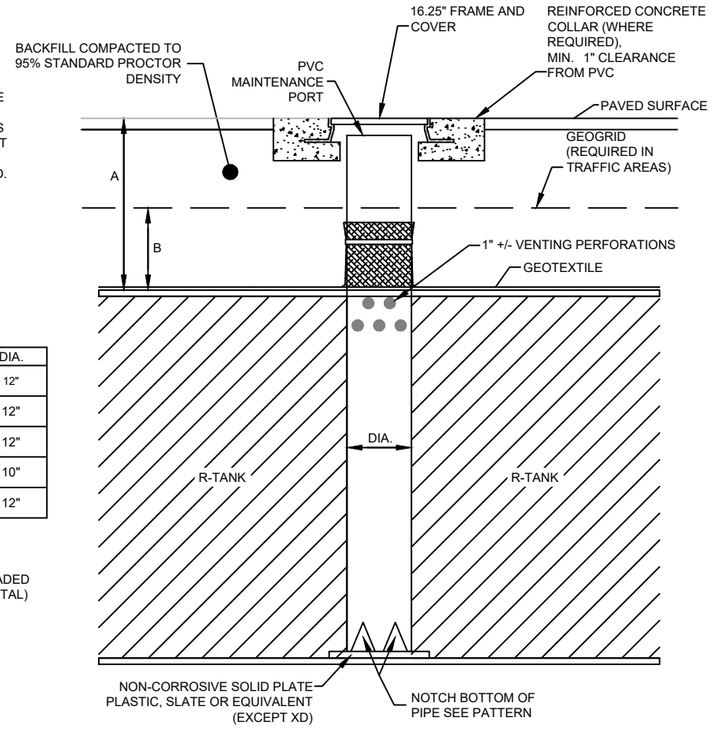
NOTES

- THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
- MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
- ONLY R-TANK^{HD}, R-TANK^{SD}, R-TANK^{UD}, AND R-TANK^{XD} MAY BE USED IN TRAFFIC APPLICATIONS.
- IF MAINTENANCE PORT IS LOCATED IN A NON-TRAFFIC AREA, A PLASTIC CAP CAN BE USED IN LEU OF A FRAME AND COVER WITH CONCRETE COLLAR.

DEPTH SUMMARY

TYPE	A	B	DIA.
R-TANK^{LD}	12" MIN - 36" MAX	AS SHOWN ON PLANS	12"
R-TANK^{HD}	20" MIN - 6.99' MAX	12"	12"
R-TANK^{SD}	18" MIN - 9.99' MAX	12"	12"
R-TANK^{UD}	12" MIN - 5.00' MAX	6"	10"
R-TANK^{XD}	6" MIN - 16.67' MAX	N/A	12"





UNDERGROUND DETENTION SYSTEM INSPECTION PORT DETAIL

NOT TO SCALE

DRAWN BY: CMB CHECKED BY: MAB

REVISIONS:

NO.	DATE	DESCRIPTION	BY

STATE OF NEW YORK
MICHAEL A. BODENDORF
084466
LICENSED PROFESSIONAL ENGINEER
EXCELSIOR

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

DRAINAGE DETAILS

MEYER'S OLDE DUTCH RESTAURANT

184 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954-27-811956

JOB #: 2020:047
DATE: 12/29/2020
SCALE: NTS
TITLE: CD-1
SHEET: 2 OF 2

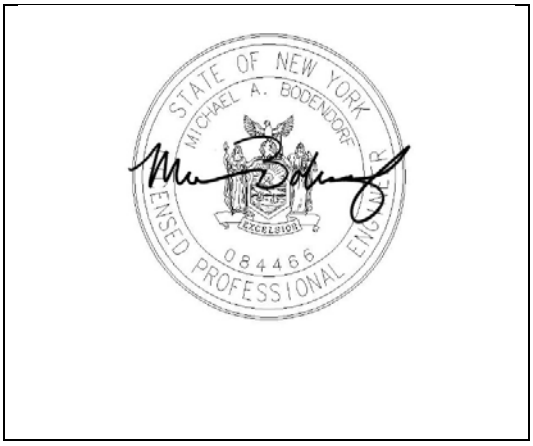
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION L

Drainage Report: for Meyer's Olde Dutch Restaurant 184 Main Street, Beacon, NY

Prepared for:

184 Main Street, LLC
282 Dutchess Tpke
Poughkeepsie NY 12603

December 29, 2020



Prepared by:
Hudson Land Design Professional Engineering, P.C.
174 Main Street
Beacon, NY 12508
Ph: (845) 440-6926

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1.0 INTRODUCTION

The Meyer's Olde Dutch project is located on the north side of 184 Main Street in the City of Beacon, Dutchess County, New York. The total parcel area consists of ±0.05 acres and contains an existing operating restaurant with a small outdoor seating area in the rear of the property. The parcel has a tax map designation of 5954-27-811956. The proposed project consists of interior renovations to the existing restaurant and exterior renovations to include a covered outdoor seating area.

2.0 METHODOLOGY AND REGULATORY COMPLIANCE

The proposed project will result a total 0.013 acres of disturbance, and therefore is not subject to the requirements of NYSDEC GP-0-20-001 General Permit for Construction Activities. Pre-development vs. post-development drainage analysis for the project was performed to evaluate stormwater runoff patterns and demonstrate that the post-development runoff rates to the existing stormwater discharge points do not exceed the pre-development runoff rates with proposed underground infiltration mitigation.

Runoff calculations were performed utilizing HydroCAD® version 10.00 published by HydroCAD Software Solutions, LLC. The software utilizes the principles of TR-55 and TR-20 to generate unit hydrographs. Rainfall events are generated utilizing Soil Conservation Service (SCS) Type III, 24-hour rainfall event for Dutchess County, NY. The Type III rainfall depths for the 1-Year, 5-Year, 10-Year, and 25-Year rainfall events are 2.61, 3.96, 4.70 and 5.90 inches, respectively.

3.0 SOIL CONDITIONS

A review of the Soil Survey of Dutchess County indicates that there is one type of soil present on the Project site and its associated contributing drainage area. The Drainage Map depicts the soil type and has been attached as Appendix B. Table III-1 below summarizes the characteristics of the soil type present within the drainage area.

Table I: Soil Types

Map Unit	Soil Names	Water Table (ft)	Bedrock	Hydrologic Soil Group	Erosion Hazard
Ur	Urban Land	N/A	N/A	C	N/A

Source: Soil Survey of Dutchess County, New York
Natural Resources Conservation Service Web Soil Survey

Supporting information has been provided in Appendix A.

4.0 EXISTING DRAINAGE CONDITIONS

4.1 Design Points

Design Points represent the location where the majority of runoff from an area exits the site. The same design point is identified in post-development conditions, so that a comparison can be made between the pre-development and post-development conditions. One design point for the main project area was selected, and is as follows:

Stormwater Discharge Point	
SDP	**Description**
1	Overland flow to adjacent property to the rear and east

4.2 Existing Watershed Areas

The overall watershed area contributing to the SDP consist of one drainage area and is graphically shown and listed on the drainage map as DA 1S. The existing watershed area consists of the existing main building roof, the existing shed roof behind the building and existing gravel area in the rear of the property. The existing roof leaders from the roofs currently discharge to the ground surface and flow overland to adjacent properties. The overall watershed is small; therefore, a six (6) minute time of concentration (Tc) has been used. Hydrologic and Hydraulic computations can be found in Appendix B.

4.3 Existing Runoff Rates

Runoff rates for existing conditions have been calculated at the designated SDP and summarized in Table II as follows:

TABLE II
EXISTING RUNOFF RATES

		Runoff Rates (cfs)			
Drainage Area	**Area (sq ft)**	**1-Year (2.61 inches)**	**5-Year (3.96 inches)**	**10-Year (4.70 inches)**	**25-Year (5.90 inches)**
DA 1S	1,831	0.09	0.14	0.17	0.22
Totals	1,831	0.09	0.14	0.17	0.22

Unit hydrograph analysis results for pre-development conditions have been included as Appendix C.

5.0 PROPOSED DRAINAGE CONDITIONS

5.1 Developed Watershed Area

The proposed project will result a total of 0.013 acres of disturbance in order to renovate the existing building and provide a covered pavilion in the outdoor dining area of the site. The re-development of the site results in a slight increase in impervious area (327 sqft) for the new pavilion roof. The remaining area will consist of permeable pavers which is similar to the pre-conditions gravel surface.

The proposed watershed area consists of the existing main building roof, the existing shed roof behind the building, the proposed pavilion roof and the permeable paver area in the rear of the property. The existing roof leaders from the roofs and new pavilion roof will be combined into a single 6" PVC downspout and directed to an underground infiltration system. The drainage areas are graphically depicted on the Drainage Map as DA 2S (representing the existing shed roof and the proposed pavilion and gravel area) and DA 5S (representing the existing rooftop). The overall watershed is small; therefore, a minimum allowable six (6) minute time of concentration (Tc) has been used.

The proposed roof leader system will primarily discharge to the underground infiltration area which is capable of infiltrating the entire runoff associated with the 1 through 10 year storms. The system will overflow during storms greater than the 10-year storm. The main roof drain will be replaced with a Zurn flow control drain to allow the existing roof to function as a detention basin that has been designed and detailed on the Architectural plans. This helps the infiltration system fully contain the larger storms without overflow. The overflow consists of a 45º wye at the bottom of the roof leader downspout just before it goes below ground to the infiltration system. A 45º bend is located after the wye to allow for overflow of the infiltration system. The roof runoff will typically flow straight through the wye to the infiltration system. For storms larger than the 10-Year storm, the 45º will allow overflow to the ground. Hydrologic and Hydraulic computations can be found in Appendix C, and drainage maps can be found in Appendix D.

5.2 Proposed Runoff Rates

Runoff rates for proposed conditions have been calculated at the designated SDP and summarized in Table III as follows:

TABLE III
PROPOSED RUNOFF RATES WITHOUT MITIGATION

		Runoff Rates (cfs)			
Drainage Area	**Area (sq ft)**	**1-Year (2.61 inches)**	**5-Year (3.96 inches)**	**10-Year (4.70 inches)**	**25-Year (5.90 inches)**
DA 2S	751	0.03	0.06	0.07	0.09
DA 5S	1,080	0.06	0.09	0.11	0.14
Totals	1,831	0.09	0.15	0.18	0.23

TABLE IV
PROPOSED RUNOFF RATES TO SURFACE WITH INFILTRATION

		Runoff Rates (cfs)			
Drainage Area	**Area (sq ft)**	**1-Year (2.61 inches)**	**5-Year (3.96 inches)**	**10-Year (4.70 inches)**	**25-Year (5.90 inches)**
2S & 5S	1,831	0.00	0.00	0.00	0.03

Unit hydrograph analysis results for post-development conditions have been included as Appendix D.

6.0 DRAINAGE ANALYSIS CONCLUSIONS

The stormwater runoff rates to the ground surface at SDP1 under pre-development and post-development conditions are summarized below.

SDP	**1 – Year (cfs)**		**5 – Year (cfs)**		**10 – Year (cfs)**		**25 – Year (cfs)**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
1	0.09	0.00	0.14	0.00	0.17	0.00	0.22	0.03

The runoff rates to the ground surface at SDP1 decrease from pre-development to post-development conditions by use of the existing building roof flow control drain and the underground infiltration system. Infiltration tests revealed that the existing soils can support an infiltration rate of 16.5" per hour. The infiltration system has been conservatively modeled using an infiltration rate of 5" per hour. Therefore, there will be much less surface runoff generated from the site to offsite properties. Supporting hydrologic analyses for pre-development and post-development conditions are included in Appendices B and C.

7.0 EROSION AND SEDIMENT CONTROL

Contractors shall adhere to the temporary and permanent erosion control measures as indicated on the plan. Repairs shall be made as necessary to remain in compliance with the New York State Standards and Specifications for Erosion and Sediment Control, 2016.

APPENDIX A

SUPPORTING DATA

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New York
Location	
Longitude	73.975 degrees West
Latitude	41.508 degrees North
Elevation	0 feet
Date/Time	Mon, 21 Dec 2020 15:18:03 -0500

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.33	0.50	0.62	0.82	1.02	1.26	**1yr**	0.88	1.19	1.45	1.77	2.15	2.61	2.96	**1yr**	2.31	2.85	3.29	3.95	4.59	**1yr**
2yr	0.39	0.60	0.74	0.98	1.23	1.53	**2yr**	1.06	1.43	1.75	2.14	2.61	3.16	3.57	**2yr**	2.80	3.43	3.93	4.64	5.28	**2yr**
5yr	0.46	0.71	0.89	1.19	1.52	1.91	**5yr**	1.31	1.76	2.20	2.70	3.28	3.96	4.52	**5yr**	3.51	4.35	5.00	5.77	6.53	**5yr**
10yr	0.51	0.80	1.02	1.38	1.79	2.27	**10yr**	1.55	2.07	2.62	3.22	3.90	4.70	5.40	**10yr**	4.16	5.20	5.99	6.82	7.67	**10yr**
25yr	0.60	0.95	1.21	1.67	2.23	2.85	**25yr**	1.92	2.56	3.30	4.06	4.93	5.90	6.86	**25yr**	5.23	6.59	7.63	8.50	9.50	**25yr**
50yr	0.68	1.09	1.39	1.95	2.63	3.39	**50yr**	2.27	3.00	3.93	4.84	5.86	7.02	8.21	**50yr**	6.21	7.89	9.16	10.05	11.18	**50yr**
100yr	0.77	1.24	1.60	2.28	3.10	4.03	**100yr**	2.68	3.53	4.68	5.77	6.99	8.34	9.84	**100yr**	7.38	9.46	11.00	11.88	13.16	**100yr**
200yr	0.87	1.43	1.85	2.66	3.67	4.79	**200yr**	3.17	4.15	5.58	6.89	8.33	9.93	11.79	**200yr**	8.79	11.34	13.22	14.06	15.49	**200yr**
500yr	1.05	1.73	2.26	3.28	4.59	6.03	**500yr**	3.96	5.15	7.04	8.70	10.51	12.50	14.99	**500yr**	11.06	14.41	16.88	17.57	19.25	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.53	0.72	0.88	1.09	**1yr**	0.76	1.06	1.24	1.59	2.01	2.08	2.36	**1yr**	1.84	2.27	2.54	3.30	4.11	**1yr**
2yr	0.37	0.58	0.71	0.96	1.19	1.42	**2yr**	1.03	1.39	1.61	2.05	2.58	3.07	3.45	**2yr**	2.72	3.32	3.77	4.48	5.13	**2yr**
5yr	0.42	0.65	0.81	1.11	1.41	1.65	**5yr**	1.22	1.62	1.88	2.42	3.01	3.65	4.17	**5yr**	3.23	4.01	4.56	5.28	6.06	**5yr**
10yr	0.47	0.72	0.89	1.25	1.61	1.85	**10yr**	1.39	1.81	2.11	2.71	3.38	4.14	4.81	**10yr**	3.66	4.62	5.25	5.98	6.88	**10yr**
25yr	0.54	0.82	1.02	1.46	1.92	2.13	**25yr**	1.66	2.09	2.45	3.05	3.94	4.86	5.81	**25yr**	4.30	5.59	6.31	7.04	8.15	**25yr**
50yr	0.60	0.92	1.14	1.64	2.21	2.38	**50yr**	1.91	2.33	2.76	3.41	4.43	5.50	6.73	**50yr**	4.87	6.47	7.26	7.96	9.28	**50yr**
100yr	0.68	1.03	1.29	1.86	2.56	2.67	**100yr**	2.21	2.61	3.12	3.81	5.01	6.19	7.79	**100yr**	5.48	7.49	8.35	8.99	10.56	**100yr**
200yr	0.77	1.16	1.47	2.13	2.97	2.98	**200yr**	2.56	2.92	3.52	4.27	5.66	6.92	9.05	**200yr**	6.12	8.70	9.60	10.15	12.05	**200yr**
500yr	0.92	1.37	1.76	2.56	3.64	3.48	**500yr**	3.14	3.40	4.16	4.98	6.68	8.02	11.04	**500yr**	7.10	10.62	11.58	11.90	14.36	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.36	0.56	0.68	0.91	1.12	1.36	**1yr**	0.97	1.33	1.53	1.96	2.42	2.82	3.21	**1yr**	2.49	3.09	3.57	4.24	4.95	**1yr**
2yr	0.40	0.62	0.77	1.04	1.28	1.54	**2yr**	1.10	1.50	1.74	2.25	2.80	3.33	3.70	**2yr**	2.95	3.56	4.10	4.82	5.47	**2yr**
5yr	0.49	0.76	0.94	1.29	1.64	1.95	**5yr**	1.42	1.91	2.25	2.89	3.66	4.26	4.88	**5yr**	3.77	4.70	5.42	6.29	7.01	**5yr**
10yr	0.58	0.89	1.11	1.55	2.00	2.37	**10yr**	1.72	2.31	2.74	3.53	4.48	5.21	6.02	**10yr**	4.61	5.79	6.71	7.69	8.49	**10yr**
25yr	0.72	1.10	1.37	1.95	2.57	3.05	**25yr**	2.22	2.98	3.57	4.73	5.87	6.80	7.93	**25yr**	6.02	7.63	8.93	10.06	10.94	**25yr**
50yr	0.85	1.30	1.61	2.32	3.12	3.71	**50yr**	2.70	3.63	4.35	5.83	7.19	8.33	9.78	**50yr**	7.37	9.41	11.11	12.33	13.25	**50yr**
100yr	1.01	1.53	1.91	2.76	3.79	4.51	**100yr**	3.27	4.41	5.31	7.20	8.82	10.21	12.05	**100yr**	9.04	11.59	13.82	15.14	16.06	**100yr**
200yr	1.19	1.79	2.27	3.29	4.59	5.47	**200yr**	3.96	5.35	6.49	8.86	10.81	12.54	14.86	**200yr**	11.10	14.29	17.21	18.59	19.48	**200yr**
500yr	1.49	2.22	2.86	4.16	5.91	7.09	**500yr**	5.10	6.93	8.44	11.71	14.14	16.48	19.58	**500yr**	14.58	18.83	23.01	24.43	25.11	**500yr**

Powered by ACIS Northeast Regional Climate Center

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Dutchess County, New York

184 MAIN STREET



December 21, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

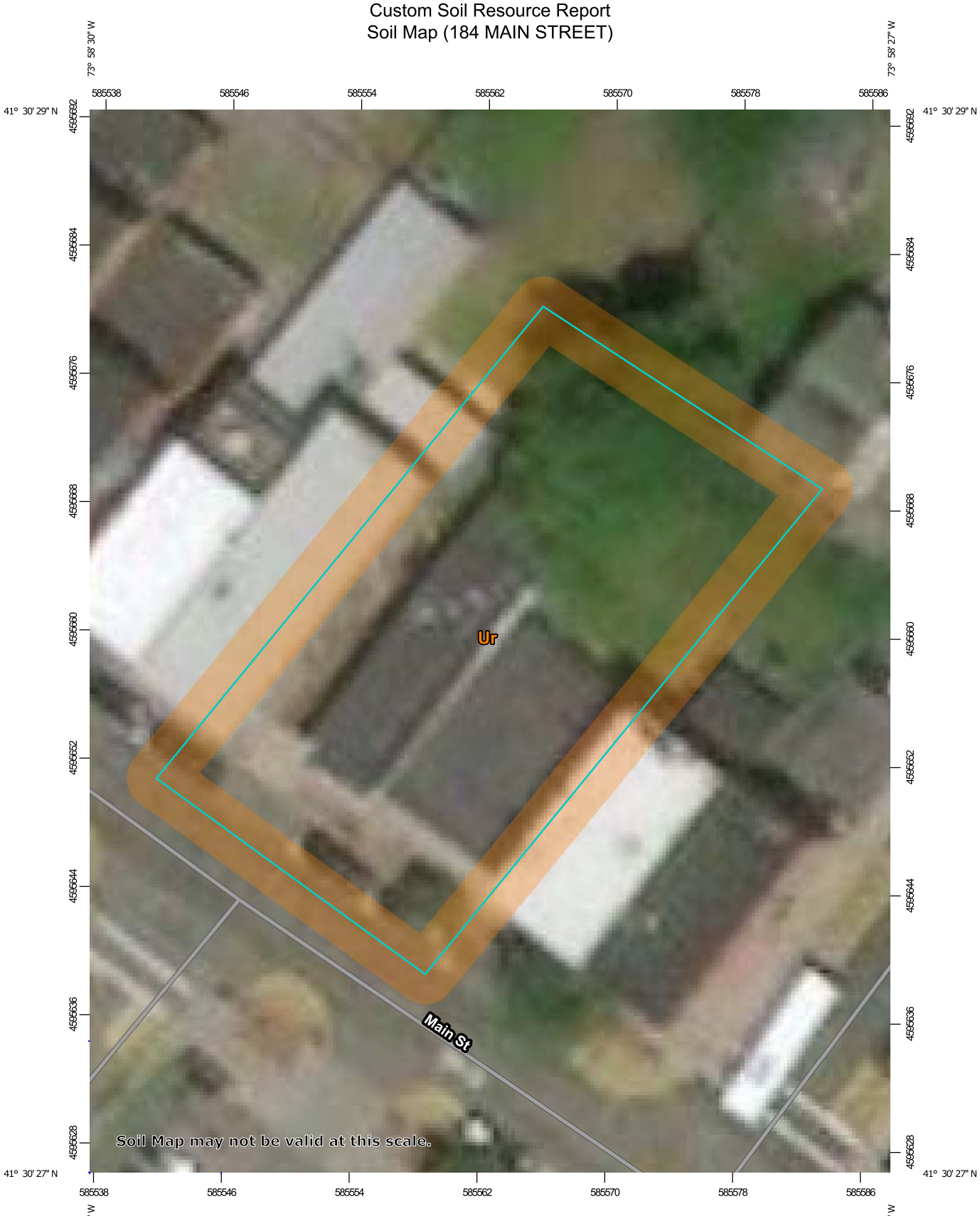
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (184 MAIN STREET)



Map Scale: 1:323 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 4 9 18 27

Feet
0 15 30 60 90

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dutchess County, New York
Survey Area Data: Version 17, Jun 11, 2020

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.

Map Unit Legend (184 MAIN STREET)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ur	Urban land	0.2	100.0%
Totals for Area of Interest		**0.2**	**100.0%**

Map Unit Descriptions (184 MAIN STREET)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Dutchess County, New York

Ur—Urban land

Map Unit Setting

National map unit symbol: 9rjb
Mean annual precipitation: 41 to 47 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Udorthents, smoothed

Percent of map unit: 5 percent
Hydric soil rating: No

Udorthents, wet substratum

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed soils, undisturbed

Percent of map unit: 1 percent
Hydric soil rating: Unranked

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: Unranked

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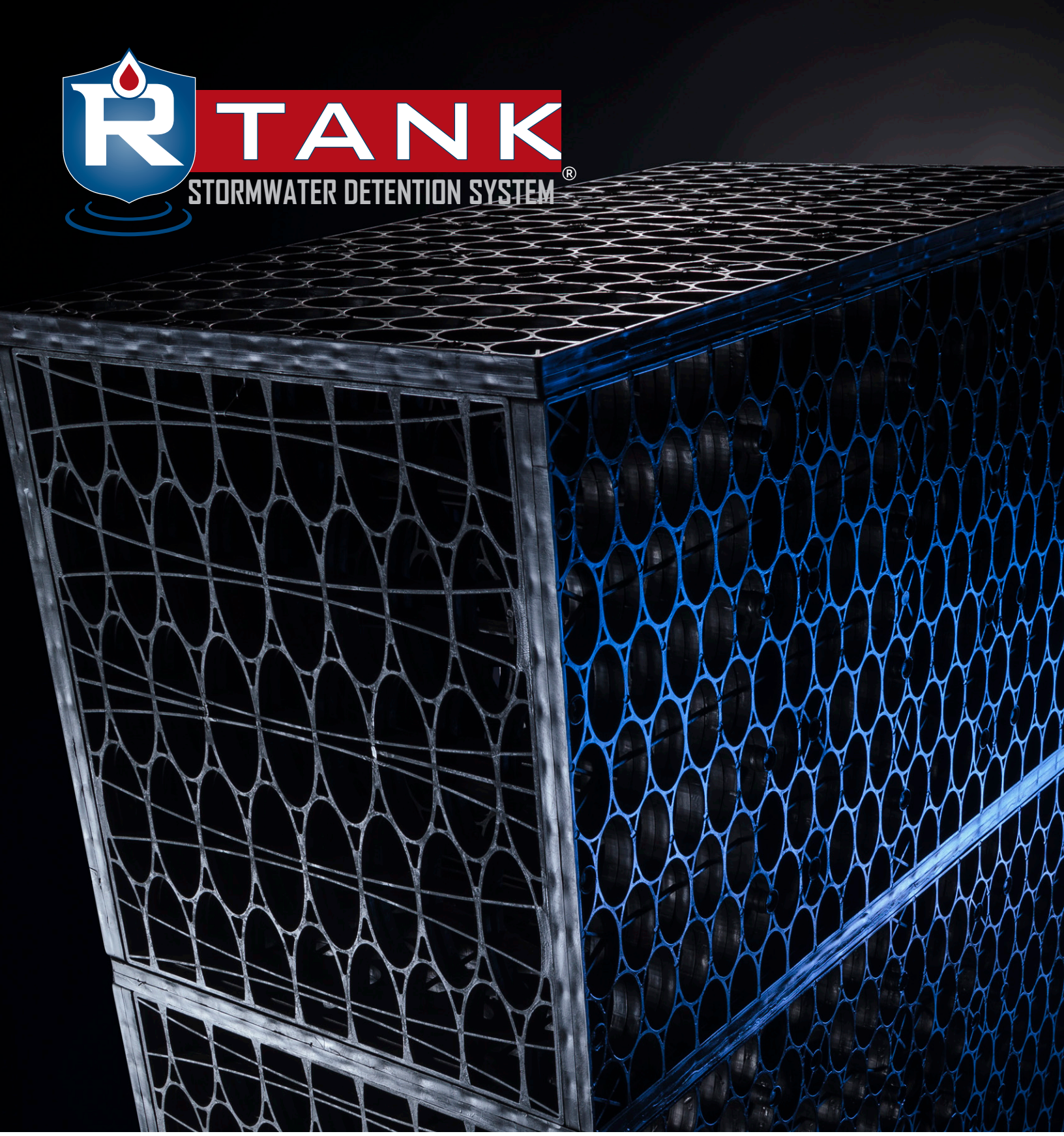
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R TANK®

STORMWATER DETENTION SYSTEM



LD HD SD UD XD

LET'S GET IT DONE®

ACF ENVIRONMENTAL



STORMWATER MANAGEMENT

IS YOUR STORMWATER SYSTEM TAKING UP TOO MUCH SPACE?

Reduce the size with the R-Tank System, an efficient and versatile underground stormwater storage system. This system will reduce your underground stormwater storage system footprint to resolve a utility conflict or free up space for a future expansion.

It will also provide additional options for vehicular loading and cover depths, and deliver greater installation versatility.

DOES YOUR PROJECT REQUIRE A UNIQUE SOLUTION DUE TO DEPTH OR TRAFFIC LOADS?

With five different module configurations, R-Tank provides system height options from 2" to over 7' deep. It also delivers support for HS-20 and HS-25 traffic, with cover depths from 6" to over 16'.

With an unlimited array of system footprints and configurations, R-Tank solves tough stormwater problems by adapting to the needs of your site - whether your're designing a project at the beach with minimal depth over a water table or a deep system in the hills.

R TANK®

R-TANK®

BENEFITS

HIGH CAPACITY
- 95% void internal area

STRENGTH
- Easily supports traffic loading from parking lots and roads
- Module options for HS-20 and HS-25 rating with cover depths from 6 inches to 16 feet

DESIGN & CONSTRUCTION VERSATILITY
- Modules can be combined into various shapes efficiently and effectively use space
- Varied height from 2 inches to 7 feet

INCREASED INFILTRATION AND EXILFILTRATION
- Outer shell is 90% open
- Increases groundwater recharge, reducing post-construction discharge volumes

EASY TO TRANSPORT
- Can be supplied unassembled for reduced delivery costs

LIGHTWEIGHT AND QUICK TO INSTALL
- Installed by hand; no cranes required
- Reduces site access delays

RECYCLED CONTENT
- Manufactured with recycled polypropylene



R-TANK LD

- Light Duty module (30 psi)
- Ideal for applications in green space
- Not rated for vehicular traffic
- 12” Minimum cover, 36” maximum cover
- Four internal plates

R-TANK HD

- Heavy Duty module (33.4 psi)
- Standard module for HS-20 traffic applications
- 20” Minimum cover,
- 84” Maximum cover
- Five internal plates



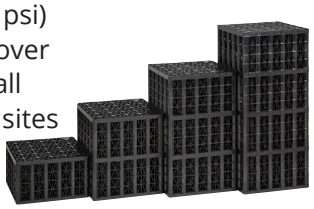
R-TANK SD

- Super Duty module (42.9 psi)
- Higher safety factors for shallow traffic applications and deeper cover
- 18” Minimum cover,
- 120” Maximum cover
- Five internal plates



R-TANK UD

- Ultra Duty module (134.2 psi)
- Traffic loads with 12” of cover
- Available from 14” – 66” tall
- Ideal for high water table sites



R-TANK XD

- Extreme Duty module (240.2 psi)
- Traffic loads with 6” cover
- 16.5’ maximum cover
- Available from 2” - 10’ tall
- 90% void



DESIGN CONSIDERATIONS

Many factors will influence the design of the R-Tank® system. While this list is not intended to be all-inclusive, the following design considerations are worth highlighting:

1. PRE-TREATMENT

Removing pollutants from runoff before they enter an underground detention system is the smart way to design & build a system. Trash Guard Plus® (see page 6) is a great tool for this. Be sure the system you select will remove, heavy sediments, gross pollutants (trash) and biodegradable debris.

2. BACKFILL MATERIALS

Backfill materials should be stone (<1.5" in diameter) or soil (GW, GP SW or SP per the Unified Soil Classification System). Material must be free from lumps, debris and sharp objects that could cut the geotextile. See the R-Tank® narrative specification section 2.03 for additional information.

3. RUNOFF REDUCTION

Most designs incorporate an outlet to drain the system at a controlled rate and/or an overflow to prevent flooding in extreme events. Any infiltration that can be achieved on the site should also be taken advantage of. Consider raising the invert of your outlet or creating a sump to capture and infiltrate the water quality volume whenever possible.

4. WATER TABLE

While installing R-Tank® below the water table is manageable, a stable base must be created to account for the system's ability to drain water out or limit its ability to enter the system. If a liner is used to prevent ground water from entering, measures must be taken to prevent the system from floating.

5. CONSTRUCTION LOADS

Construction loads are often the heaviest loads the system will experience. Care must be taken during backfilling and compaction (see specification section 3.05), and post-installation construction traffic should be routed around the system (Install Guide step 12).

6. LATERAL LOADS

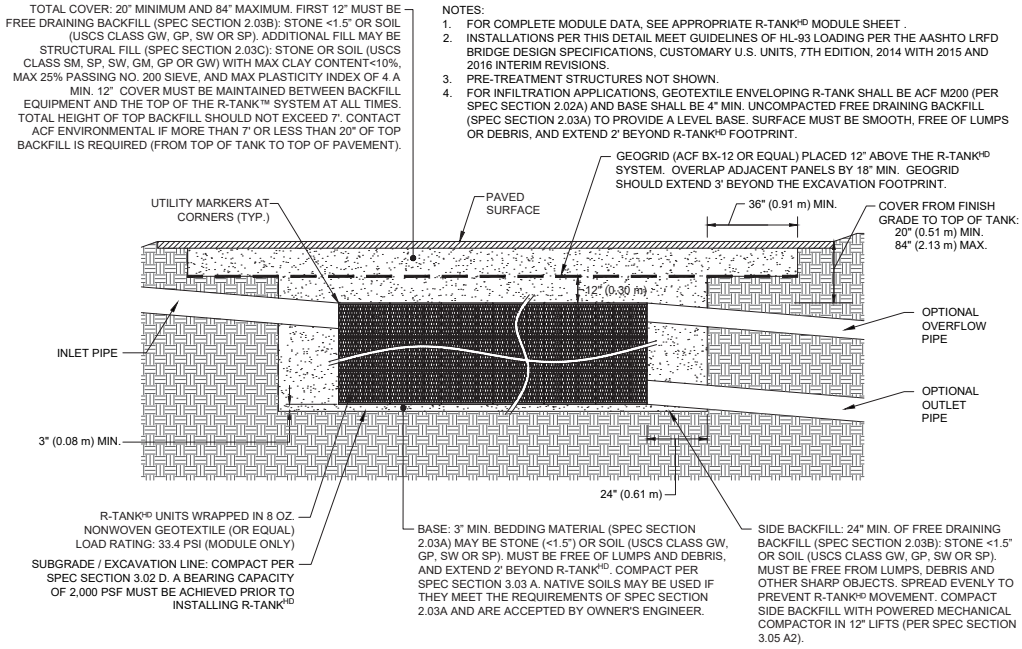
As systems get deeper, the loads acting on the sides of the tank increase. While vertical loads often control the design, lateral loads should also be considered.

7. R-TANK MODULES

Selecting the right module for your application is critical. See page 3 and the specs on the back of this brochure, for details. Our team is also here to help!

8. LOAD MODELING

A safety factor of >1.75 is required when designing an R-Tank System using the AASHTO LRFD Bridge Design Specifications. It is also necessary to run your own loading model with specific site requirements. Example models can be found in our Tech Note on loading capabilities, and minimum cover requirements can be found in the specs on the back of this brochure.



LOW IMPACT DESIGN & GREEN INFRASTRUCTURE

As much of the nation's Gray Infrastructure continues to decay, new concepts for rebuilding it are emerging through Green Infrastructure (GI) and Low Impact Development (LID). This type of reconstruction moves beyond traditional systems that do one thing well, to systems that accomplish multiple objectives simultaneously.

ACF Environmental has several technologies that dovetail with the goals of LID and GI and can play a significant role in the redevelopment process.

R-TANK®

SPACE EFFICIENT SUBSURFACE STORAGE

Pipe and stone are used in traditional systems to move and store runoff. R-Tank accomplishes the same purpose with several additional benefits.

- Stores and moves runoff
- Moves water slowly, increasing time of concentration
- Open system encourages infiltration
- Fully accessible for maintenance
- Stores 138% more water than stone
- Maximizes storage potential of GI practices
- Easily handles traffic loads
- Ships flat to reduce site disturbance

PERMEABLE PAVEMENTS

RUNOFF REDUCTION TECHNIQUES

Traditional pavements move vehicles efficiently, but are easily damaged by stormwater. ACF Environmental specializes in permeable pavements that handle traffic loads, while providing surface infiltration rates 10x higher than traditional pervious pavements, helping reduce the expense of long-term maintenance.

- Handles all vehicular loads
- Drains ten times faster than competing pervious pavements
- Reduces long-term maintenance costs
- Encourages infiltration
- Pair with R-Tank® to maximize water storage and transport

FOCALPOINT

VEGETATED/ BIOLOGICAL TREATMENT SYSTEM

Traditional landscaping adds aesthetic value to projects, but has more potential. Many developers turn to bioretention, but are forced to surrender massive land areas and dedicate significant future funds to maintenance. FocalPoint reduces the space requirements and maintenance costs of bioretention by up to 90% while providing similar pollutant removal.

- Adds aesthetic value to properties
- Cleans runoff to improve water quality
- Reduces space requirements and maintenance costs of traditional bioretention systems
- Encourages infiltration to reduce volume of water discharged
- Pairs with R-Tank® to maximize water storage and transport



R-Tank maximizes the storage capabilities of bioretention and permeable pavement systems.

MAINTENANCE

DESIGNING AN R-TANK SYSTEM WITH LONGEVITY & MAINTENANCE IN MIND IS A THREE-STEP PROCESS:

1. PREVENT

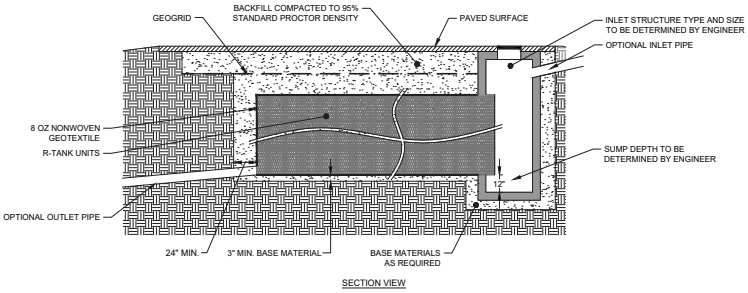
Keep debris and sediment out of the system by pre-treating runoff with the Trash Guard Plus® unit (see below). For a more centralized approach, you could consider having the R-Tank units penetrate the connecting structure, which allows the use of the R-Tank® as its own trash screen. This works best with a structure that includes a sump (see Inlet Connection drawing below).

2. ISOLATE

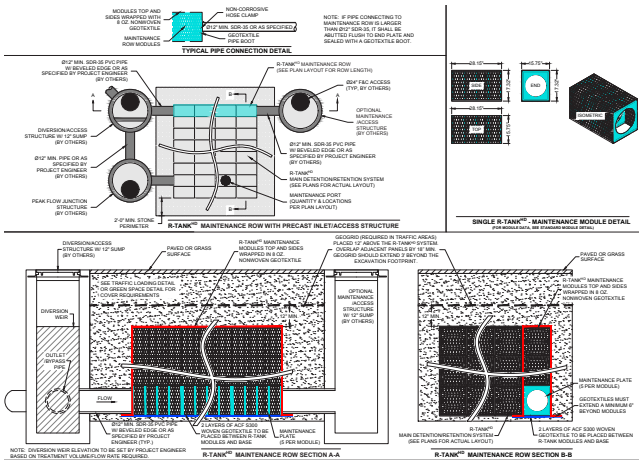
Trap solid pollutants inside the maintenance row (see Maintenance Row drawing below) where they can be easily removed, using the Maintenance Modules (available in LD, HD, and UD only). These modules are wrapped in geotextile to retain solids and are fully accessible by conventional jet-vac systems to remove captured pollutants.

3. PROTECT

Ensure a long system life by including maintenance ports to remove any pollutants that evade the pre-treatment system and maintenance row. Maintenance ports should be specified within 10’ of inlet and outlet connections, and roughly 50’ on center (see detail on page 7).



INLET CONNECTION



MAINTENANCE ROW

MAINTENANCE PREVENTION

TRASH GUARD PLUS ®

Trash Guard Plus® is a patented stormwater pretreatment device that captures debris, sediment and floatables. Easy to install and maintain, it is a fraction of the cost of other pretreatment devices.

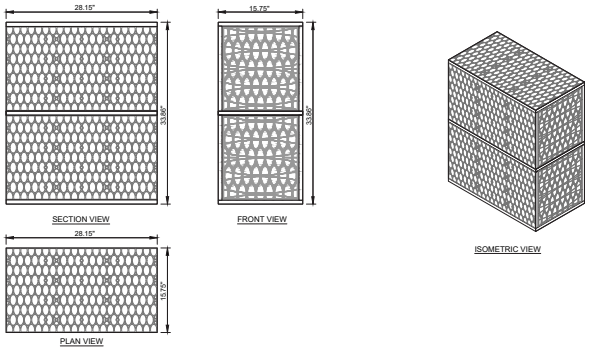
BENEFITS

- Simple retrofit to existing catch basins
- Installs without heavy equipment
- Quick and easy assembly
- Adjusts to irregular catch basin bottoms and/or walls
- Eliminates stormwater trash at public parks, beaches, and waterways
- Removes harmful nutrients and regulated metals



TYPICAL DESIGN

MODULE DRAWING - DOUBLE

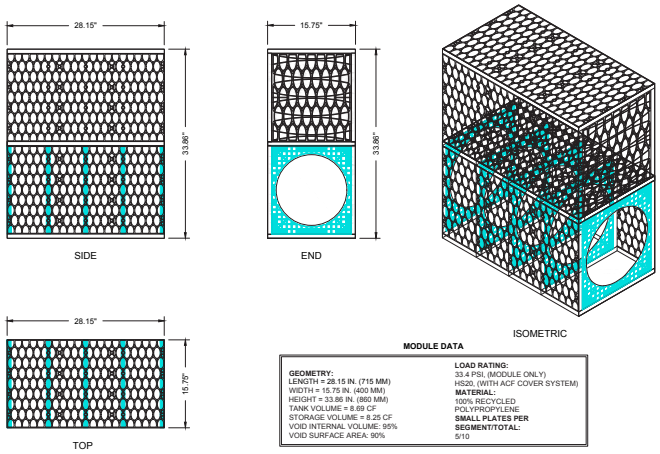


MODULE DATA

GEOMETRY: LENGTH = 28.15 IN. (715 MM)
WIDTH = 15.75 IN. (400 MM)
HEIGHT = 33.86 IN. (860 MM)
TANK VOLUME = 8.69 CF
STORAGE VOLUME = 8.25 CF
VOID INTERNAL VOLUME: 95%
VOID SURFACE AREA: 90%

LOAD RATING: 33.4 PSI, (MODULE ONLY)
HS25, (WITH ACF COVER SYSTEM)
MATERIAL: 100% RECYCLED POLYPROPYLENE
SMALL PLATES PER SEGMENT/TOTAL: 5/10

MAINTENANCE MODULE - DOUBLE

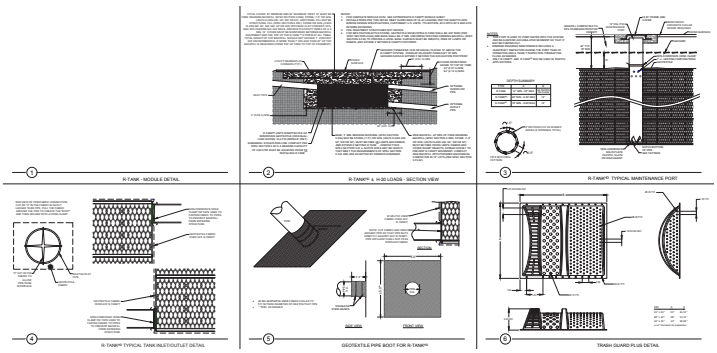


MODULE DATA

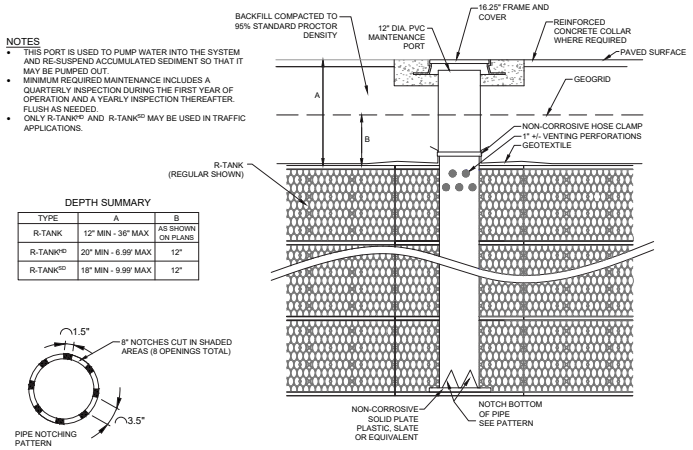
GEOMETRY:
LENGTH = 28.15 IN. (715 MM)
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HEIGHT = 33.86 IN. (860 MM)
TANK VOLUME = 8.69 CF
STORAGE VOLUME = 8.25 CF
VOID INTERNAL VOLUME: 95%
VOID SURFACE AREA: 90%

LOAD RATING:
33.4 PSI, (MODULE ONLY)
HS20, (WITH ACF COVER SYSTEM)
MATERIAL:
100% RECYCLED POLYPROPYLENE
SMALL PLATES PER SEGMENT/TOTAL:
5/10

COMPOSITE DETAILS



MAINTENANCE PORT



SELECTING THE RIGHT R-TANK MODULE

Cover Depth (inches)*	LD	HD	SD	UD	XD
Min. 6"	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	HS-20
12"	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	HS-20**	HS-20
14"	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	HS-20	HS-20
18"	Green Space - No Traffic	Green Space - No Traffic	HS-20	HS-20	HS-20
20"	Green Space - No Traffic	HS-20	HS-20	HS-20	HS-20
24"	Green Space - No Traffic	HS-20	HS-20	HS-20	HS-20
36"	Green Space - No Traffic	HS-20	HS-20	HS-20	HS-20
48"		HS-20	HS-20	HS-20	HS-20
60"		HS-20	HS-20	HS-20	HS-20
72"		HS-20	HS-20		HS-20
84"			HS-20		HS-20
120"			HS-20		HS-20
160"					HS-20
Max. 200"					HS-20

HS-20 designation based on AASHTO LRFD Bridge Design Spec for single lane traffic. HS-25 loading is available. Call ACF for details.
*Cover depth is measured from top of module to finished grade or top of pavement
**The UD module requires STONE backfill (not soil) on sides at this depth

R-TANK SPECIFICATIONS

LD HD

DIMENSIONS & CAPACITY

Module (Segments)	Width (inch)	Length (inch)	Height (in/ft)	Volume (cf)	Capacity (cf)	Weight* (lbs)
Mini	15.75	28.15	9.45”/0.79’	2.42	2.30	10.1/10.9
Single(1)	15.75	28.15	17.32”/1.44’	4.44	4.22	15.7/17.3
Single + Mini(1.5)	15.75	28.15	25.98”/2.17’	6.67	6.33	23.6/25.9
Double (2)	15.75	28.15	33.86”/2.82’	8.69	8.25	29.1/32.3
Double + Mini(2.5)	15.75	28.15	42.52”/3.54’	10.91	10.36	37.0/41.0
Triple (3)	15.75	28.15	50.39”/4.20’	12.93	12.28	42.5/47.4
Triple + Mini(3.5)	15.75	28.15	59.06”/4.92’	15.15	14.39	50.4/56.0
Quad(4)	15.75	28.15	66.93”/5.58’	17.17	16.31	55.9/62.4
Quad + Mini(4.5)	15.75	28.15	75.59”/6.30’	19.39	18.42	63.8/71.0
Pent(5)	15.75	28.15	83.46”/6.96’	21.41	20.34	69.3/77.4

*Weights shown are for LD/HD modules.

SD

DIMENSIONS & CAPACITY

Module (Segments)	Width (inch)	Length (inch)	Height (in/ft)	Volume (cf)	Capacity (cf)	Weight (lbs)
Single (1)	15.75	28.15	9.45”/0.79’	2.42	2.30	10.95
Double (2)	15.75	28.15	18.12”/1.51’	4.64	4.41	19.58
Triple (3)	15.75	28.15	26.79”/2.23’	6.86	6.52	28.21
Quad (4)	15.75	28.15	35.46”/2.96’	9.08	8.63	36.84
Pent (5)	15.75	28.15	44.13”/3.68’	11.30	10.74	45.47
Hex (6)	15.75	28.15	52.80”/4.40’	13.52	12.84	54.10
Septa (7)	15.75	28.15	61.47”/5.12’	15.74	14.95	62.73
Octo (8)	15.75	28.15	70.14”/5.85’	17.96	17.06	71.36
Nono (9)	15.75	28.15	78.81”/6.57’	20.18	19.17	79.99
Decka (10)	15.75	28.15	87.48”/7.29’	22.40	21.28	88.62

UD

DIMENSIONS & CAPACITY

Module (Segments)	Width (inch)	Length (inch)	Height (in/ft)	Volume (cf)	Capacity (cf)	Weight (lbs)
Single (1)	23.62	23.62	14.17”/1.18’	4.57	4.35	21.2
Double (2)	23.62	23.62	27.17”/2.26’	8.77	8.33	39.0
Triple (3)	23.62	23.62	40.16”/3.35’	12.97	12.32	56.8
Quad (4)	23.62	23.62	53.15”/4.43’	17.16	16.30	74.6
Pent (5)	23.62	23.62	66.14”/5.5’	21.35	20.29	92.4

XD

DIMENSIONS & CAPACITY

Module (Segments)	Width (inch)	Length (inch)	Height (inch)	Volume (cf)	Capacity (cf)	Weight (lbs)
Single (1)	19.68	23.62	1.97	0.53	0.48	4
Double (2)	19.68	23.62	3.94	1.06	0.95	8
Triple (3)	19.68	23.62	5.91	1.59	1.43	12
Quad (4)	19.68	23.62	7.87	2.12	1.91	16
Pent (5)	19.68	23.62	9.84	2.65	2.38	20

Note: XD modules may be stacked up to 10’ tall (60 layers).

SPECIFICATIONS

Item	Description	LD	HD	SD	UD	XD
		Value	**Value**	**Value**	**Value**	**Value**
Void Area	Volume available for water storage	95%	95%	95%	95%	90%
Surface Area Void	% of exterior available for infiltration	90%	90%	90%	90%	90%
Compressive Strength	ASTM D 2412/ ASTM F 2318	30.0 psi	33.4 psi	42.9 psi	134.2 psi	240.2 psi
Unit Weight	Weight of plastic per cubic foot of tank	3.29 lbs/cf	3.62 lbs/cf	3.96 lbs/cf	4.33 lbs/cf	7.55 lbs/cf
Rib Thickness	Thickness of load-bearing members	0.18”	0.18”	0.18”	-	-
Service Temperature	Safe temperature range for use	-14 - 167º F	-14 - 167º F	-14 - 167º F	-14 - 167º F	-14 - 167º F
Recycled Content	Use of recycled polypropylene	100%	100%	100%	100%	100%
Minimum Cover	Cover required for HS-20 loading	Not traffic rated	20”	18”	12” - 14”	6”
	Cover required for HS-25 loading	Not traffic rated	24”	18”	15” - 17”	6”
Maximum Cover	Maximum allowable cover depth	36”	6.99’	9.99’	5.0’	16.7’

INFILTRATION TEST DATA

Name: 184 Main Street City of Beacon Date: 12/15/2020

TAX GRID #

5	9	5	4		2	7	8	1	1	9	5	6

By: Clay Bodendorf

Lot No.	Test Hole No.	Test Hole Elev. (ft)	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
N/A	1	100	Sand and Gravel		Start time	11:15	12:17	13:18	14:20	
					Finish time	12:15	13:17	14:18	15:20	
					Drop (in)	20	17	16.5	16.5	
					Start time					
					Finish time					
					Drop (in)					
					Start time					
					Finish time					
					Drop (in)					
					Start time					
					Finish time					
					Drop (in)					
					Start time					
					Finish time					
					Drop (in)					
					Start time					
					Finish time					
					Drop (in)					

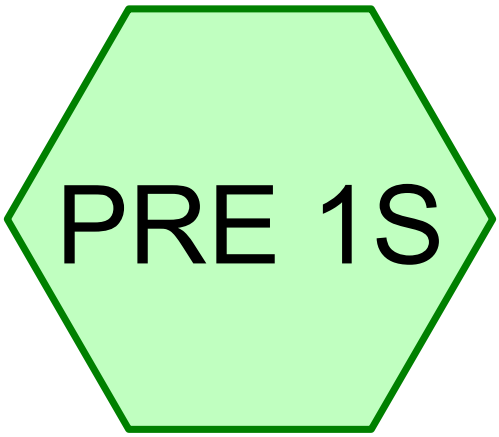
I, Michael A. Bodendorf , the undersigned, certify that these percolation tests were done by myself or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: 12/15/2020 Signature: _____

License No. (P.E.) 084466

APPENDIX B

PRE-DEVELOPMENT HYDROLOGIC AND HYDRAULIC CALCULATIONS



Existing Building Roof Existing shed Roof and Gravel Area

Subcat Reach Pond Link

Routing Diagram for Meyers Olde Dutch_184 Main Street
Prepared by Hudson Land Design
HydroCAD® 10.00-24 s/n 04797 © 2018 HydroCAD Software Solutions LLC

Summary for Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area

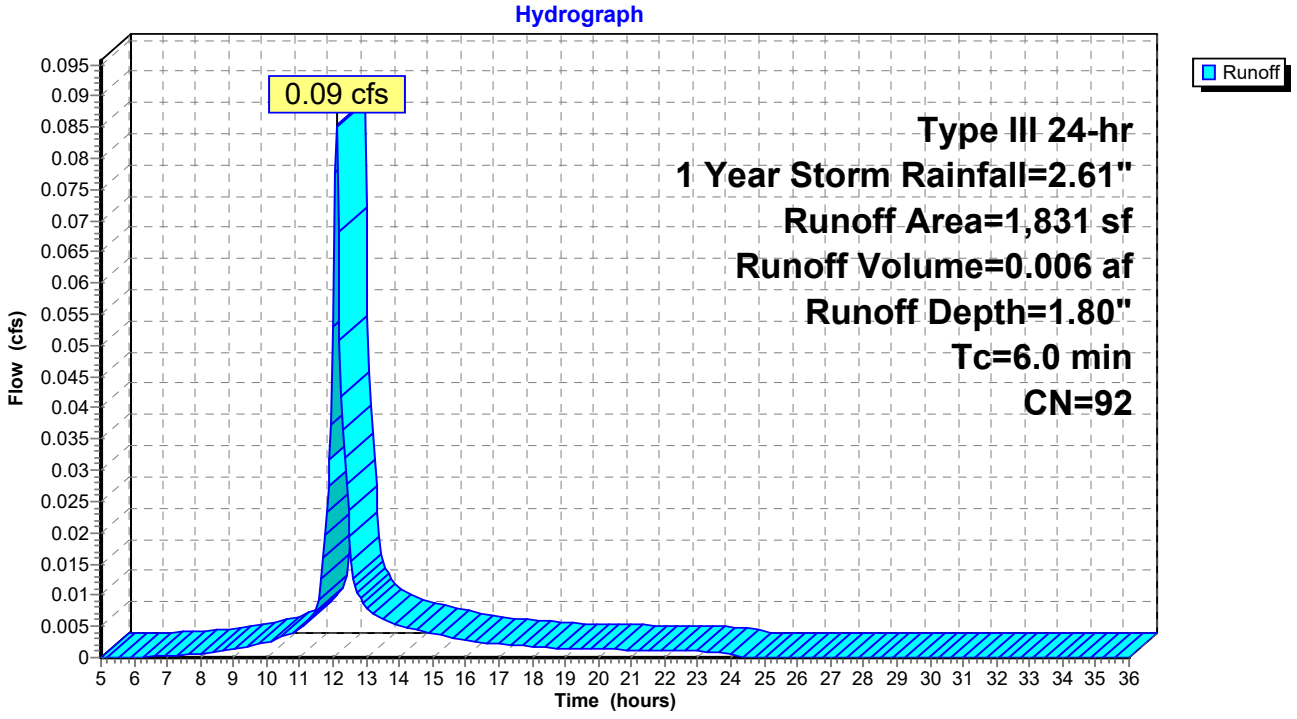
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 1.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 1 Year Storm Rainfall=2.61"

	Area (sf)	CN	Description
*	1,080	98	Existing Building Roof, HSG C
*	162	98	Existing Shed Roof, HSG C
*	589	78	Existing Gravel, C
	1,831	92	Weighted Average
	589		32.17% Pervious Area
	1,242		67.83% Impervious Area

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

Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area



Summary for Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area

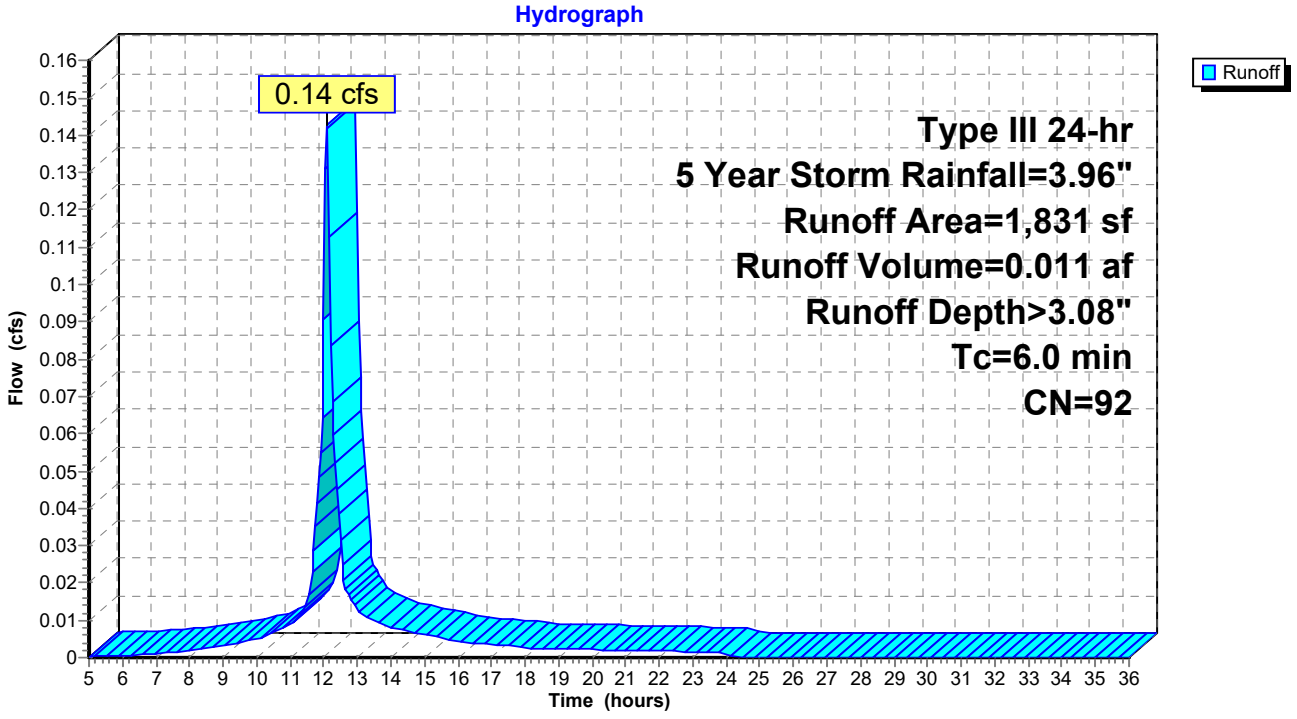
Runoff = 0.14 cfs @ 12.09 hrs, Volume= 0.011 af, Depth> 3.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 5 Year Storm Rainfall=3.96"

	Area (sf)	CN	Description
*	1,080	98	Existing Building Roof, HSG C
*	162	98	Existing Shed Roof, HSG C
*	589	78	Existing Gravel, C
	1,831	92	Weighted Average
	589		32.17% Pervious Area
	1,242		67.83% Impervious Area

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

Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area



Summary for Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area

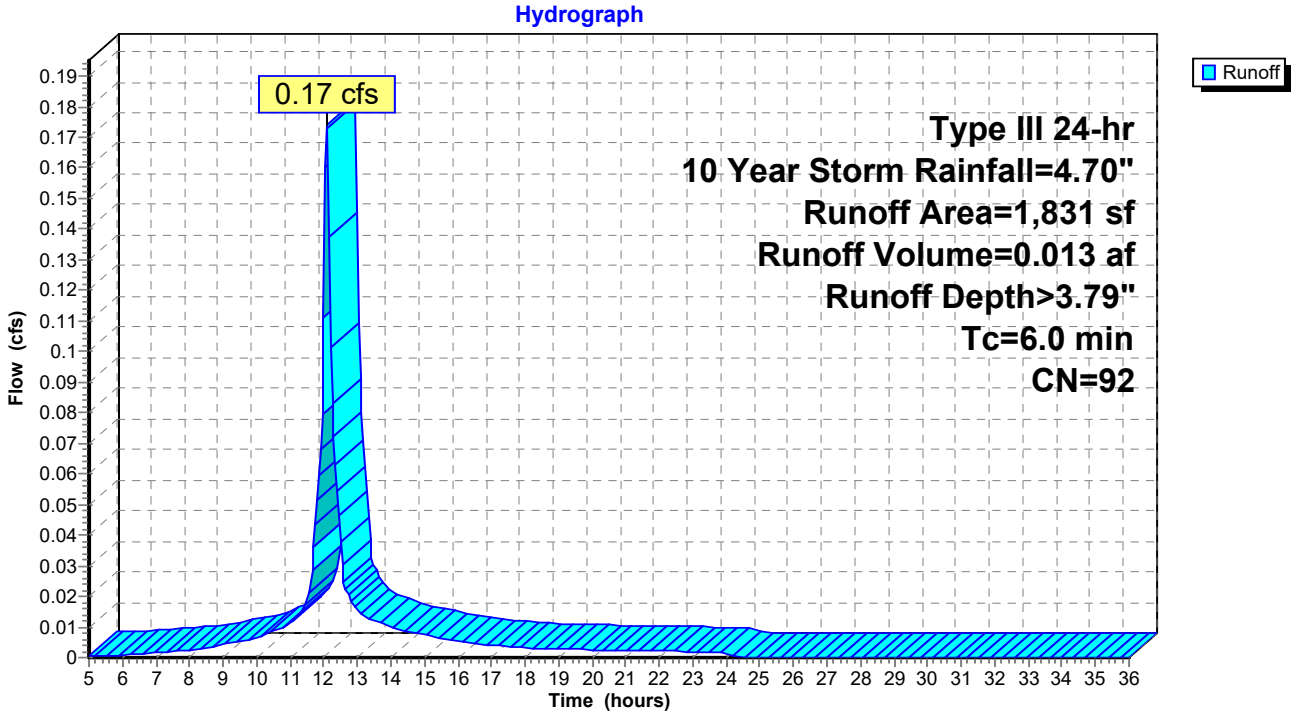
Runoff = 0.17 cfs @ 12.09 hrs, Volume= 0.013 af, Depth> 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
*	1,080	98	Existing Building Roof, HSG C
*	162	98	Existing Shed Roof, HSG C
*	589	78	Existing Gravel, C
	1,831	92	Weighted Average
	589		32.17% Pervious Area
	1,242		67.83% Impervious Area

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

Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area



Summary for Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area

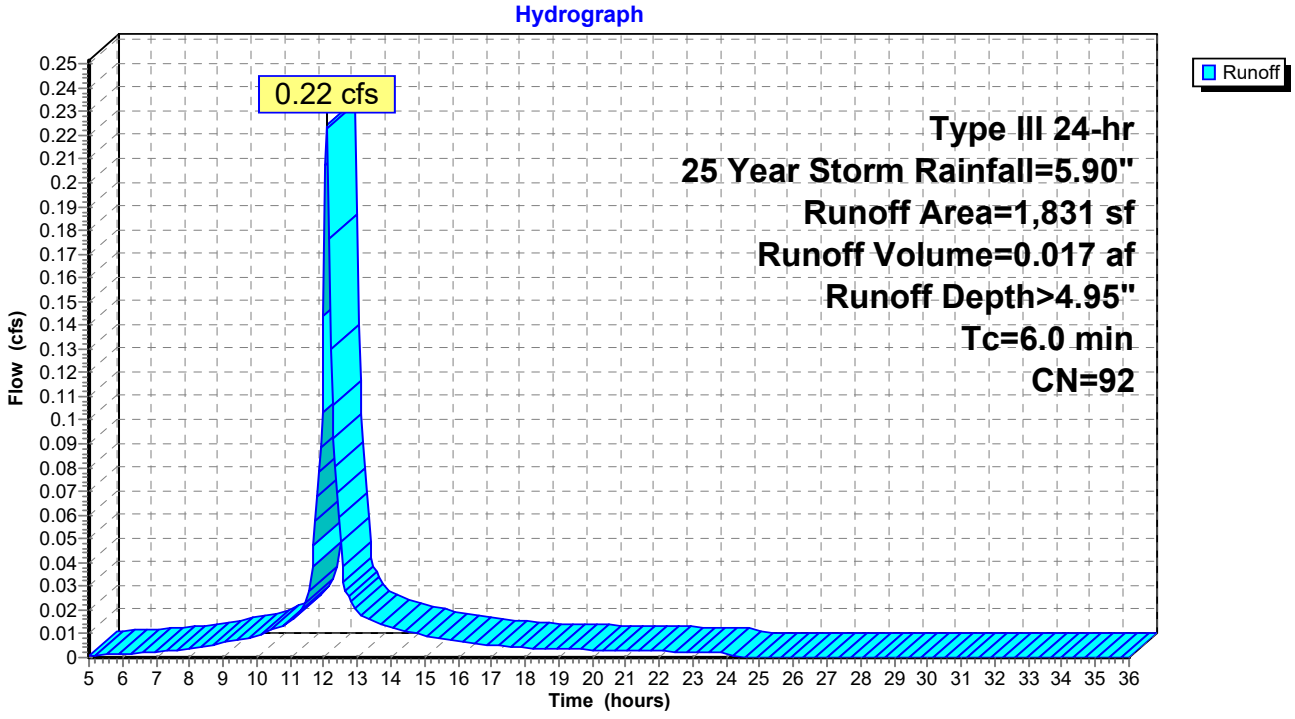
Runoff = 0.22 cfs @ 12.09 hrs, Volume= 0.017 af, Depth> 4.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Storm Rainfall=5.90"

	Area (sf)	CN	Description
*	1,080	98	Existing Building Roof, HSG C
*	162	98	Existing Shed Roof, HSG C
*	589	78	Existing Gravel, C
	1,831	92	Weighted Average
	589		32.17% Pervious Area
	1,242		67.83% Impervious Area

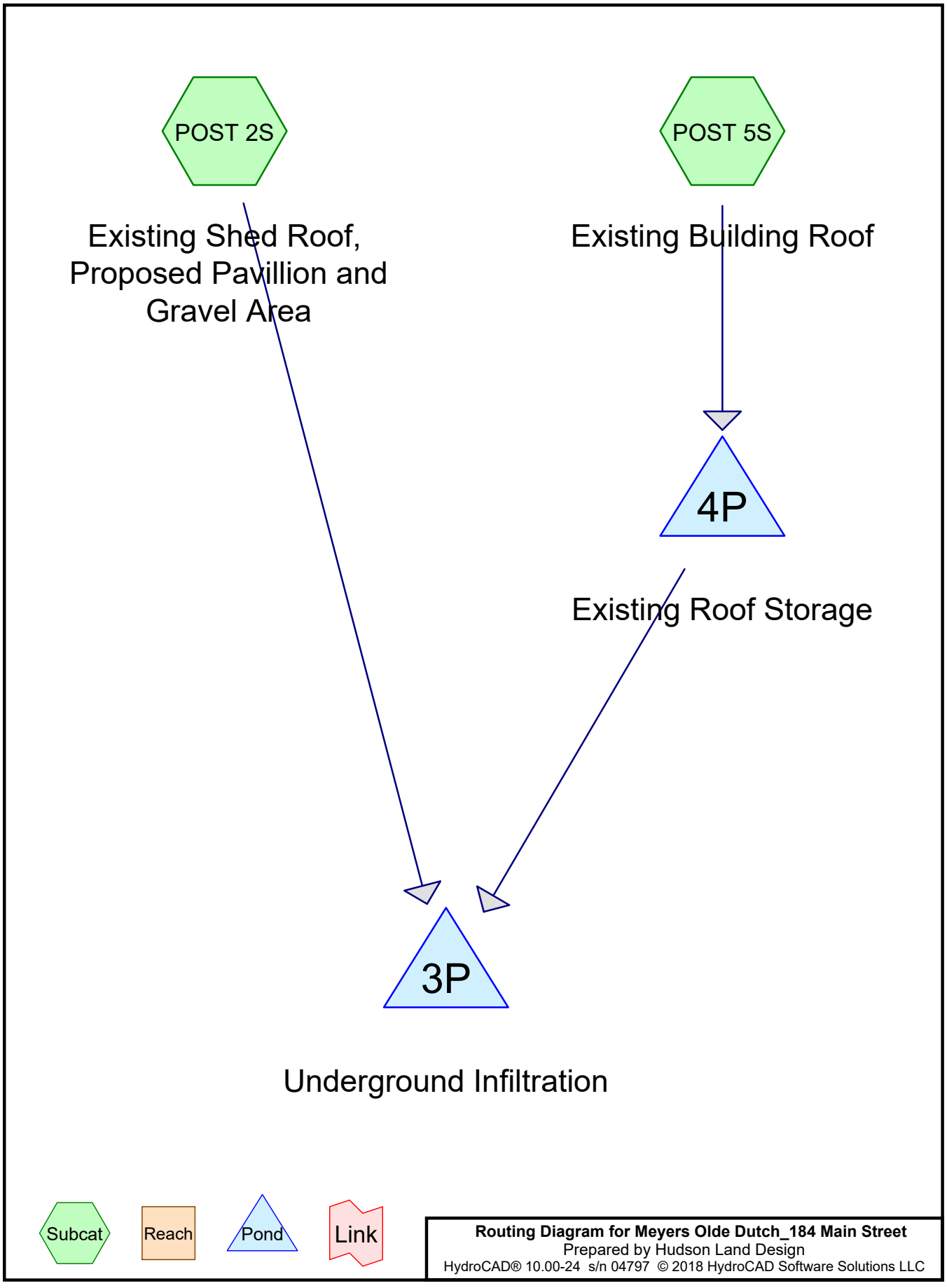
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PRE 1S: Existing Building Roof Existing shed Roof and Gravel Area



APPENDIX C

POST-DEVELOPMENT HYDROLOGIC AND HYDRAULIC CALCULATIONS


POST 2S
POST 5S
Existing Shed Roof, Proposed Pavillion and Gravel Area
Existing Building Roof
4P
Existing Roof Storage
3P
Underground Infiltration
Subcat
Reach
Pond
Link
Routing Diagram for Meyers Olde Dutch_184 Main Street
Prepared by Hudson Land Design
HydroCAD® 10.00-24 s/n 04797 © 2018 HydroCAD Software Solutions LLC

Summary for Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area

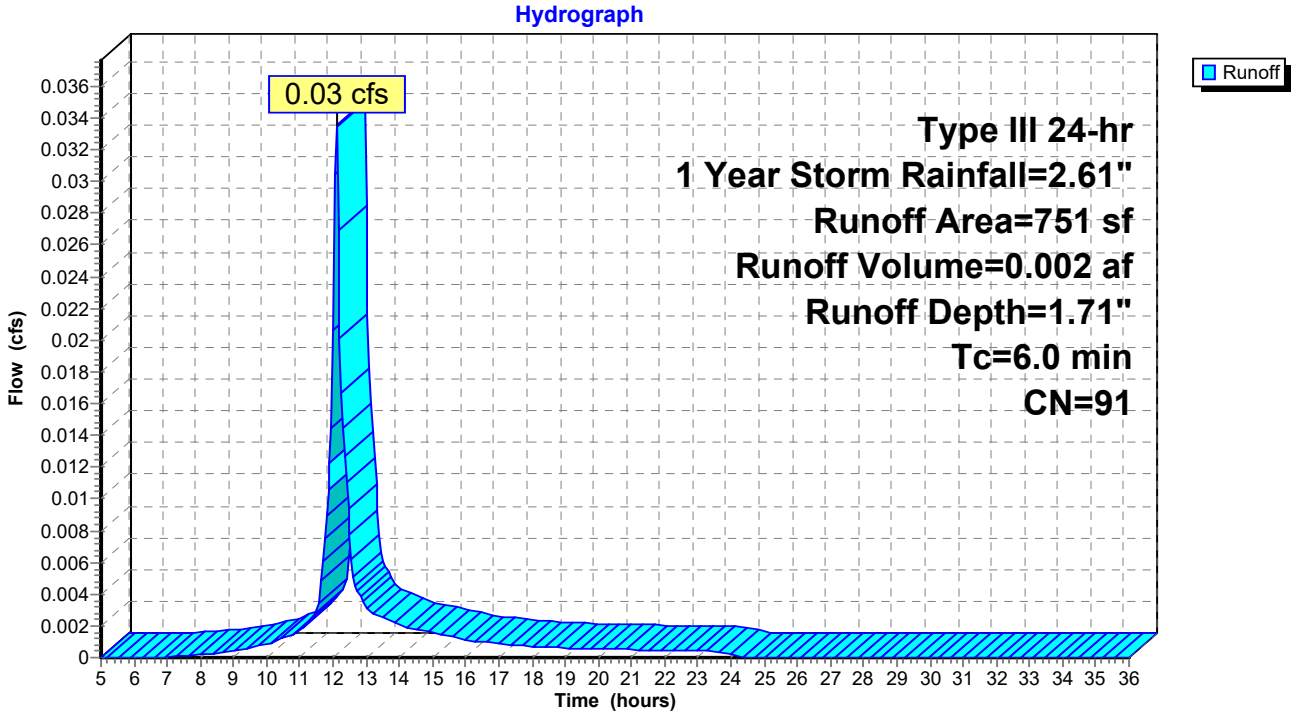
Runoff = 0.03 cfs @ 12.09 hrs, Volume= 0.002 af, Depth= 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 1 Year Storm Rainfall=2.61"

	Area (sf)	CN	Description
*	162	98	Eixting Shed Roof, HSG C
*	327	98	Proposed Paviliion Roof, HSG C
*	262	78	Permeable Pavers Soil C
	751	91	Weighted Average
	262		34.89% Pervious Area
	489		65.11% Impervious Area

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

Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area



Summary for Subcatchment POST 5S: Existing Building Roof

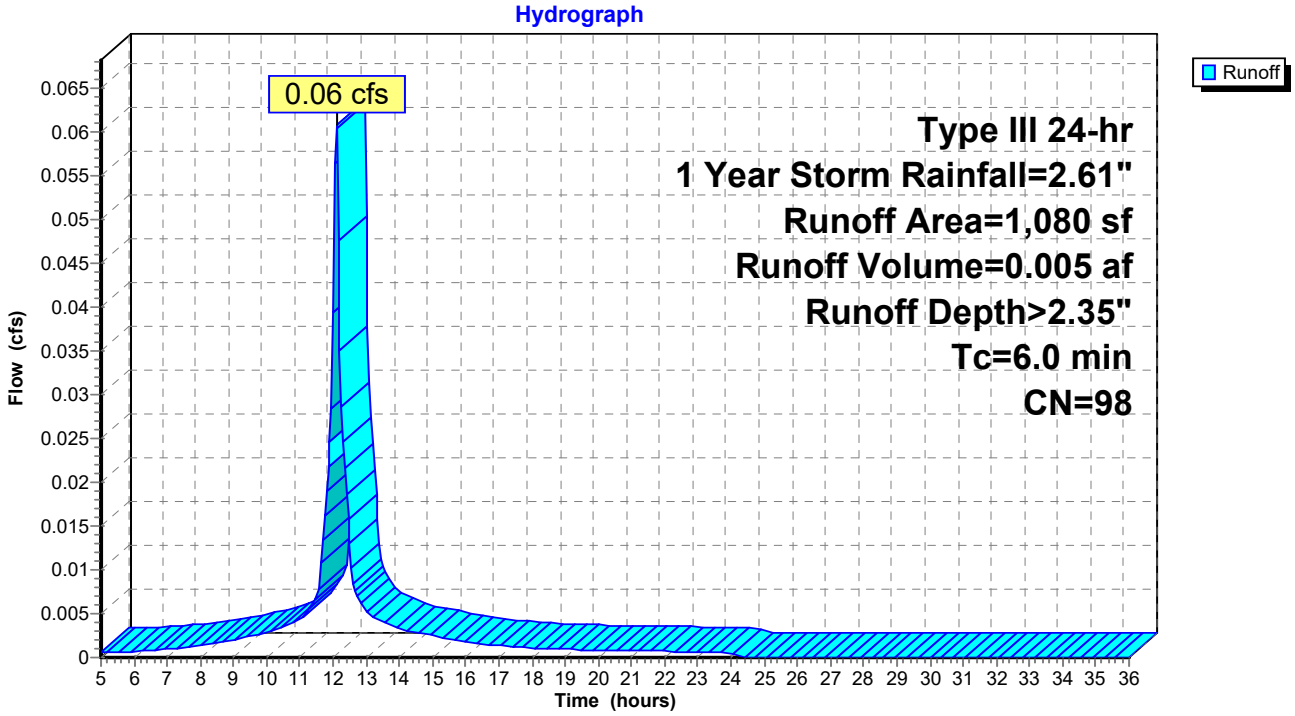
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 1 Year Storm Rainfall=2.61"

Area (sf)	CN	Description
1,080	98	Roofs, HSG C
1,080		100.00% Impervious Area

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

Subcatchment POST 5S: Existing Building Roof



Summary for Pond 3P: Underground Infiltration

Inflow Area = 0.042 ac, 85.69% Impervious, Inflow Depth > 2.08" for 1 Year Storm event
Inflow = 0.05 cfs @ 12.11 hrs, Volume= 0.007 af
Outflow = 0.02 cfs @ 12.00 hrs, Volume= 0.007 af, Atten= 71%, Lag= 0.0 min
Discarded = 0.02 cfs @ 12.00 hrs, Volume= 0.007 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 96.17' @ 13.02 hrs Surf.Area= 0.003 ac Storage= 0.001 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 26.0 min (852.6 - 826.6)

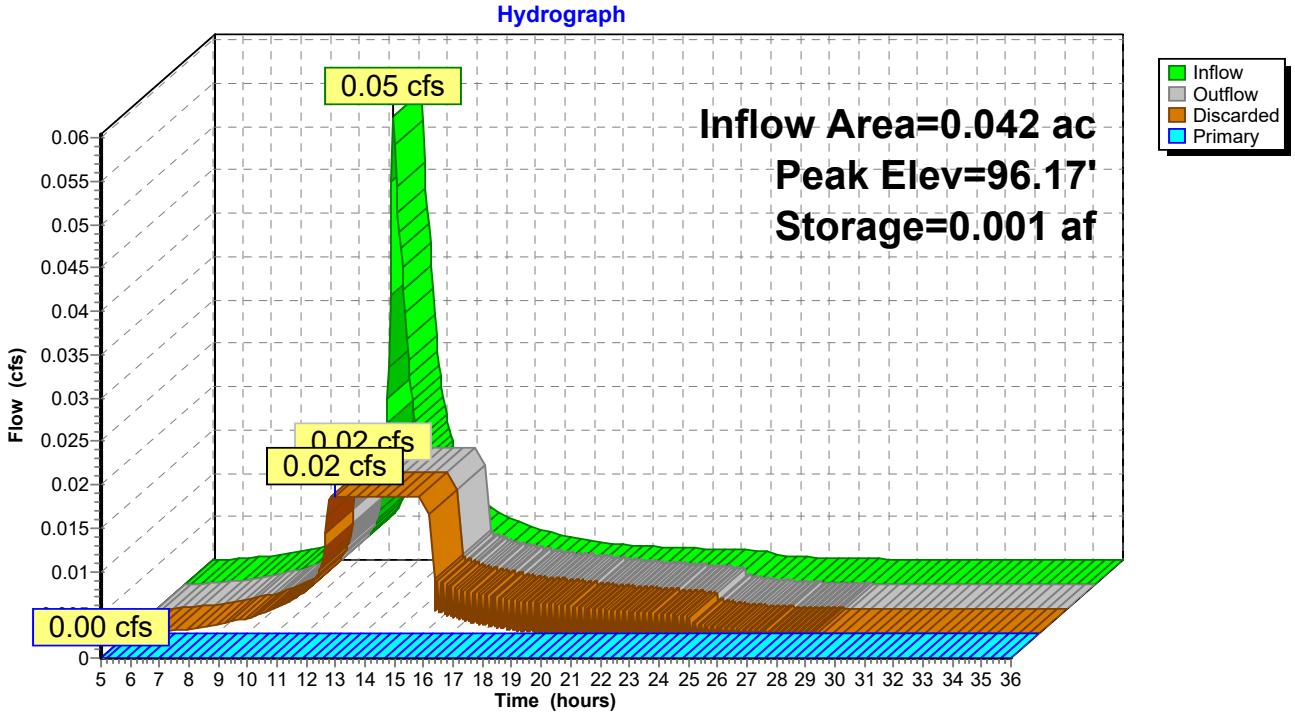
Volume	Invert	Avail.Storage	Storage Description
#1	95.30'	0.002 af	**9.87'W x 13.73'L x 3.17'H Prismatoid** 0.010 af Overall - 0.005 af Embedded = 0.005 af x 40.0% Voids
#2	95.80'	0.004 af	**ACF R-Tank HD 1.5** x 30 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 30 Chambers in 6 Rows 0.005 af Overall x 95.0% Voids
		0.006 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	100.20'	**6.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	95.30'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.00 hrs HW=95.39' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=95.30' (Free Discharge)
↑—**1=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: Underground Infiltration



Summary for Pond 4P: Existing Roof Storage

Inflow Area = 0.025 ac,100.00% Impervious, Inflow Depth > 2.35" for 1 Year Storm event
Inflow = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af
Outflow = 0.03 cfs @ 12.28 hrs, Volume= 0.005 af, Atten= 57%, Lag= 11.7 min
Primary = 0.03 cfs @ 12.28 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 120.06' @ 12.28 hrs Surf.Area= 953 sf Storage= 59 cf

Plug-Flow detention time= 66.8 min calculated for 0.005 af (100% of inflow)
Center-of-Mass det. time= 66.2 min (834.9 - 768.7)

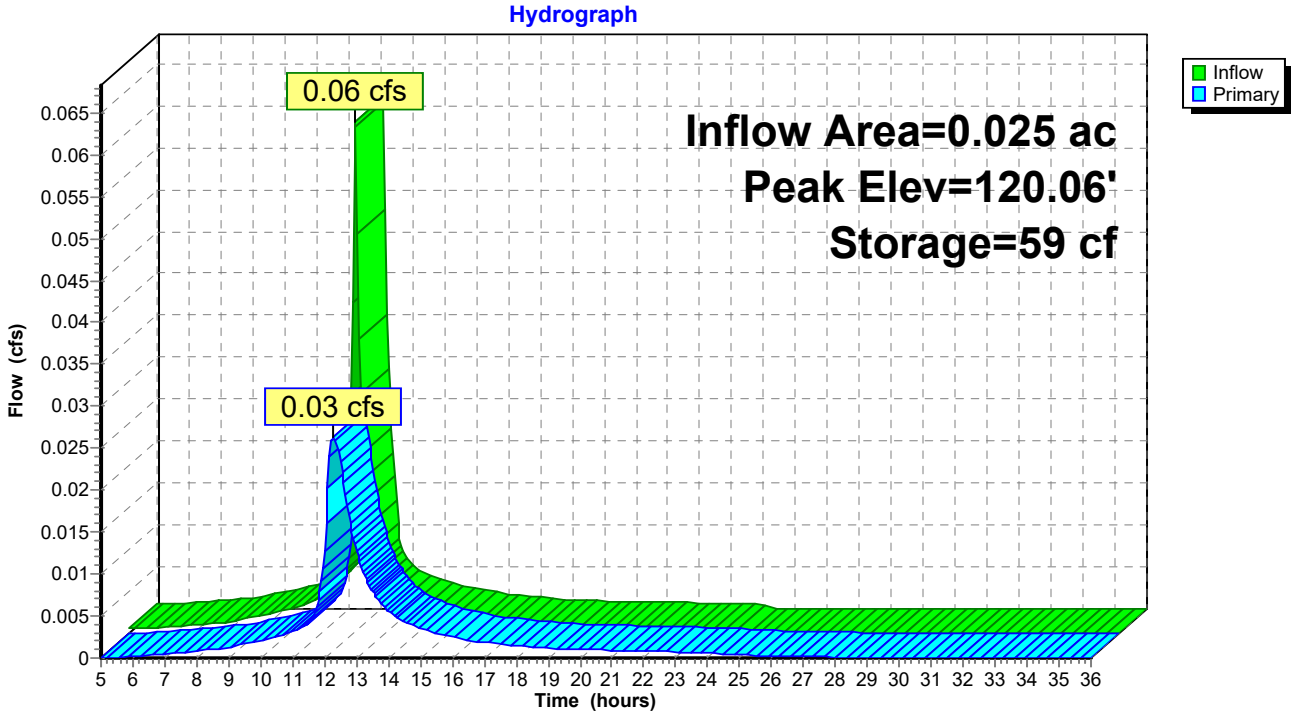
Volume	Invert	Avail.Storage	Storage Description
#1	120.00'	953 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
120.00	953	0	0
121.00	953	953	953

Device	Routing	Invert	Outlet Devices
#1	Primary	119.00'	**4.0" Round Culvert** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.00' / 118.00' S= 0.1000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Device 1	120.00'	**2.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	120.19'	**2.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.03 cfs @ 12.28 hrs HW=120.06' TW=95.89' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.03 cfs of 0.40 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.03 cfs @ 1.20 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: Existing Roof Storage



Summary for Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area

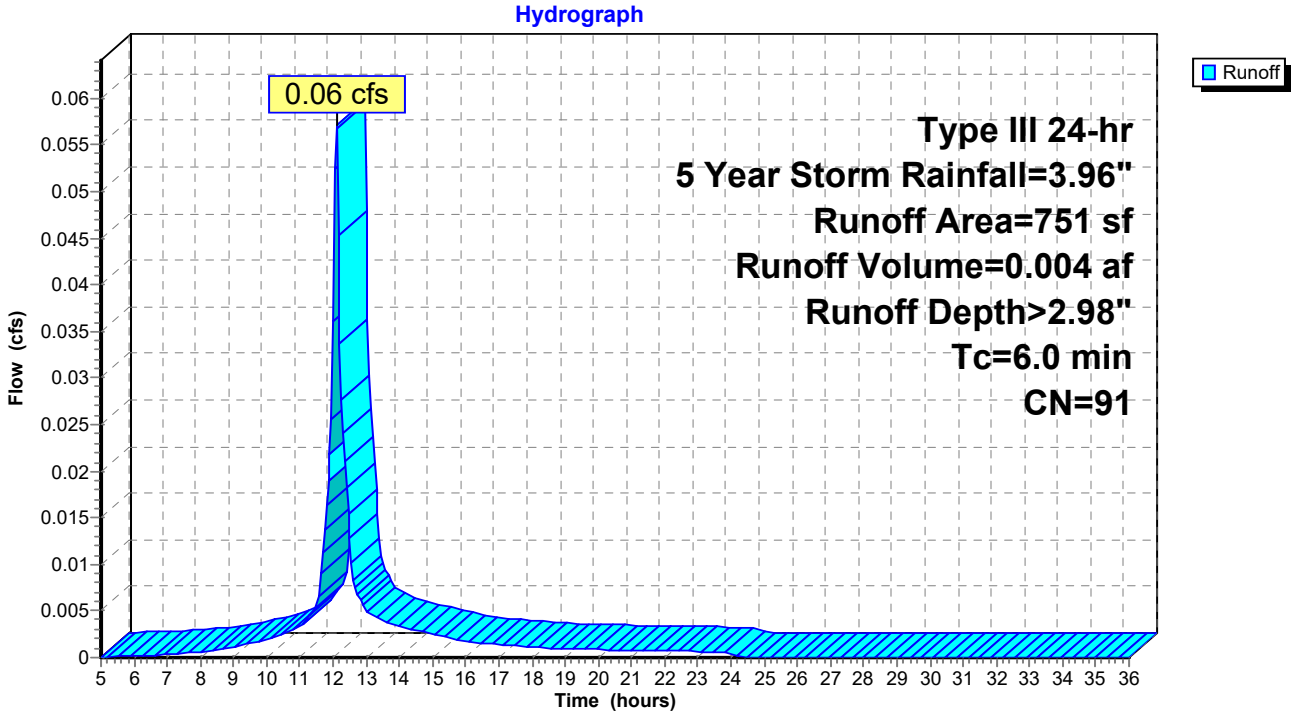
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 2.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 5 Year Storm Rainfall=3.96"

	Area (sf)	CN	Description
*	162	98	Eixting Shed Roof, HSG C
*	327	98	Proposed Paviliion Roof, HSG C
*	262	78	Permeable Pavers Soil C
	751	91	Weighted Average
	262		34.89% Pervious Area
	489		65.11% Impervious Area

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

Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area



Summary for Subcatchment POST 5S: Existing Building Roof

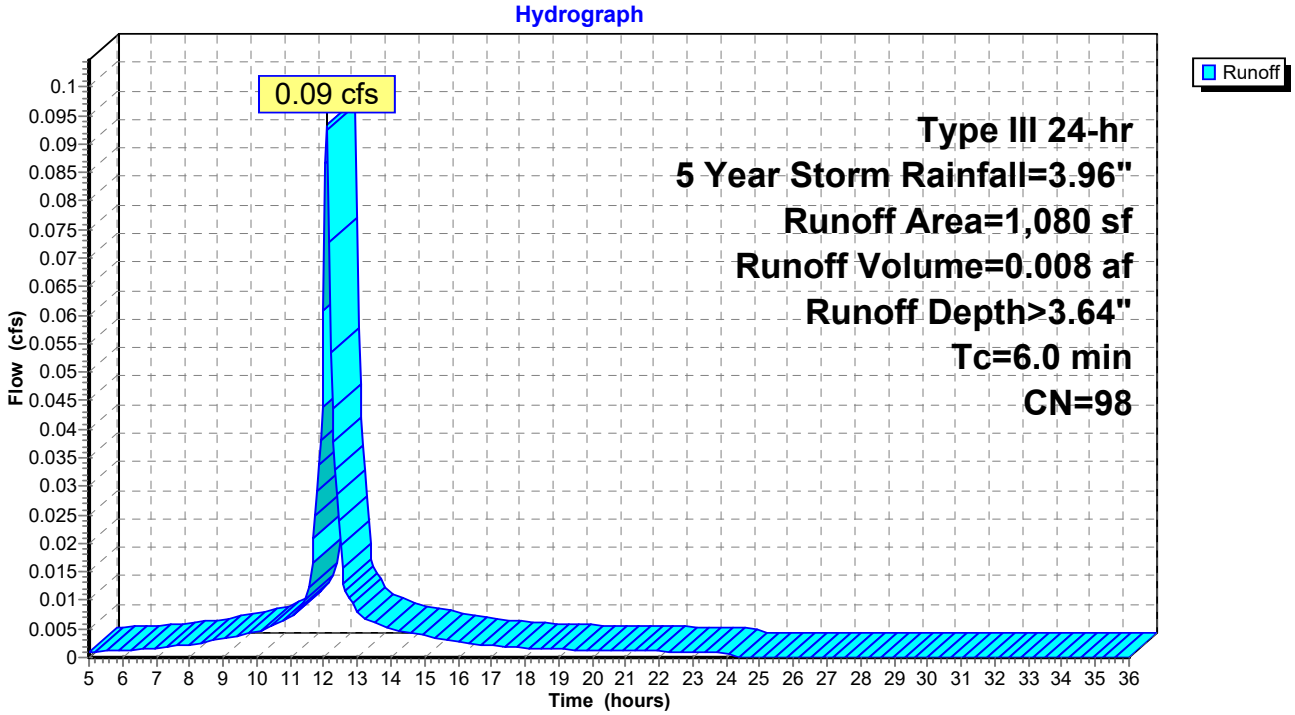
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.008 af, Depth> 3.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 5 Year Storm Rainfall=3.96"

Area (sf)	CN	Description
1,080	98	Roofs, HSG C
1,080		100.00% Impervious Area

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

Subcatchment POST 5S: Existing Building Roof



Summary for Pond 3P: Underground Infiltration

Inflow Area = 0.042 ac, 85.69% Impervious, Inflow Depth > 3.37" for 5 Year Storm event
Inflow = 0.09 cfs @ 12.10 hrs, Volume= 0.012 af
Outflow = 0.02 cfs @ 11.80 hrs, Volume= 0.012 af, Atten= 82%, Lag= 0.0 min
Discarded = 0.02 cfs @ 11.80 hrs, Volume= 0.012 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 97.07' @ 13.61 hrs Surf.Area= 0.003 ac Storage= 0.004 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 73.1 min (886.7 - 813.7)

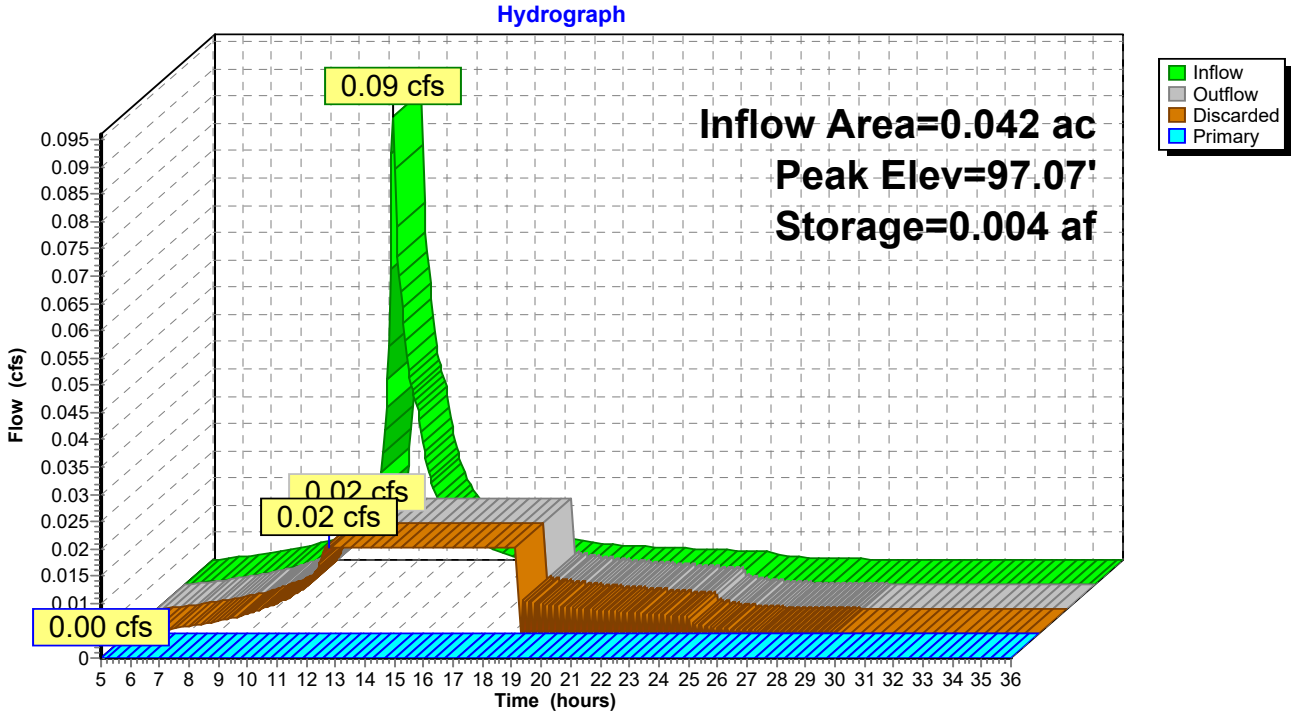
Volume	Invert	Avail.Storage	Storage Description
#1	95.30'	0.002 af	**9.87'W x 13.73'L x 3.17'H Prismatoid** 0.010 af Overall - 0.005 af Embedded = 0.005 af x 40.0% Voids
#2	95.80'	0.004 af	**ACF R-Tank HD 1.5** x 30 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 30 Chambers in 6 Rows 0.005 af Overall x 95.0% Voids
		0.006 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	100.20'	**6.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	95.30'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.80 hrs HW=95.37' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=95.30' (Free Discharge)
↑—**1=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: Underground Infiltration



Summary for Pond 4P: Existing Roof Storage

Inflow Area = 0.025 ac,100.00% Impervious, Inflow Depth > 3.64" for 5 Year Storm event
Inflow = 0.09 cfs @ 12.09 hrs, Volume= 0.008 af
Outflow = 0.03 cfs @ 12.35 hrs, Volume= 0.008 af, Atten= 65%, Lag= 16.0 min
Primary = 0.03 cfs @ 12.35 hrs, Volume= 0.008 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 120.10' @ 12.35 hrs Surf.Area= 953 sf Storage= 92 cf

Plug-Flow detention time= 61.4 min calculated for 0.008 af (100% of inflow)
Center-of-Mass det. time= 60.2 min (824.4 - 764.2)

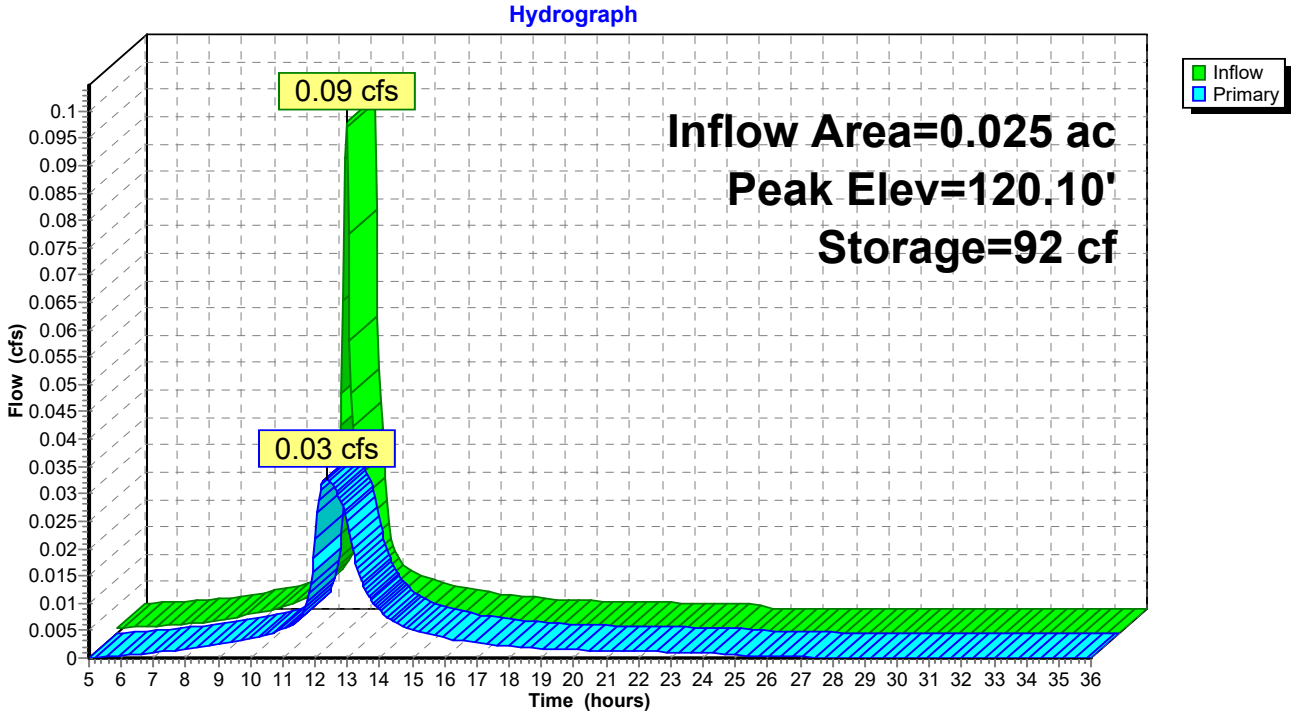
Volume	Invert	Avail.Storage	Storage Description
#1	120.00'	953 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
120.00	953	0	0
121.00	953	953	953

Device	Routing	Invert	Outlet Devices
#1	Primary	119.00'	**4.0" Round Culvert** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.00' / 118.00' S= 0.1000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Device 1	120.00'	**2.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	120.19'	**2.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.03 cfs @ 12.35 hrs HW=120.10' TW=96.40' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.03 cfs of 0.41 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.03 cfs @ 1.50 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: Existing Roof Storage



Summary for Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area

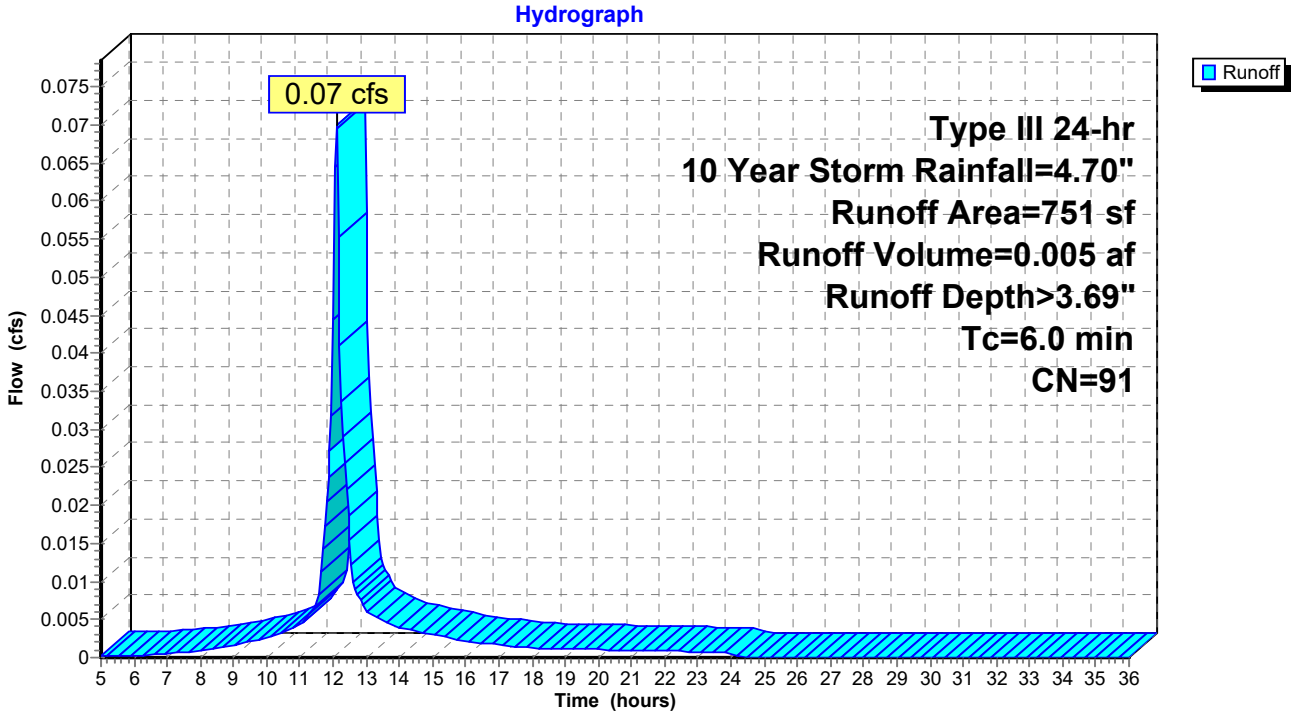
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
*	162	98	Eixting Shed Roof, HSG C
*	327	98	Proposed Paviliion Roof, HSG C
*	262	78	Permeable Pavers Soil C
	751	91	Weighted Average
	262		34.89% Pervious Area
	489		65.11% Impervious Area

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

Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area



Summary for Subcatchment POST 5S: Existing Building Roof

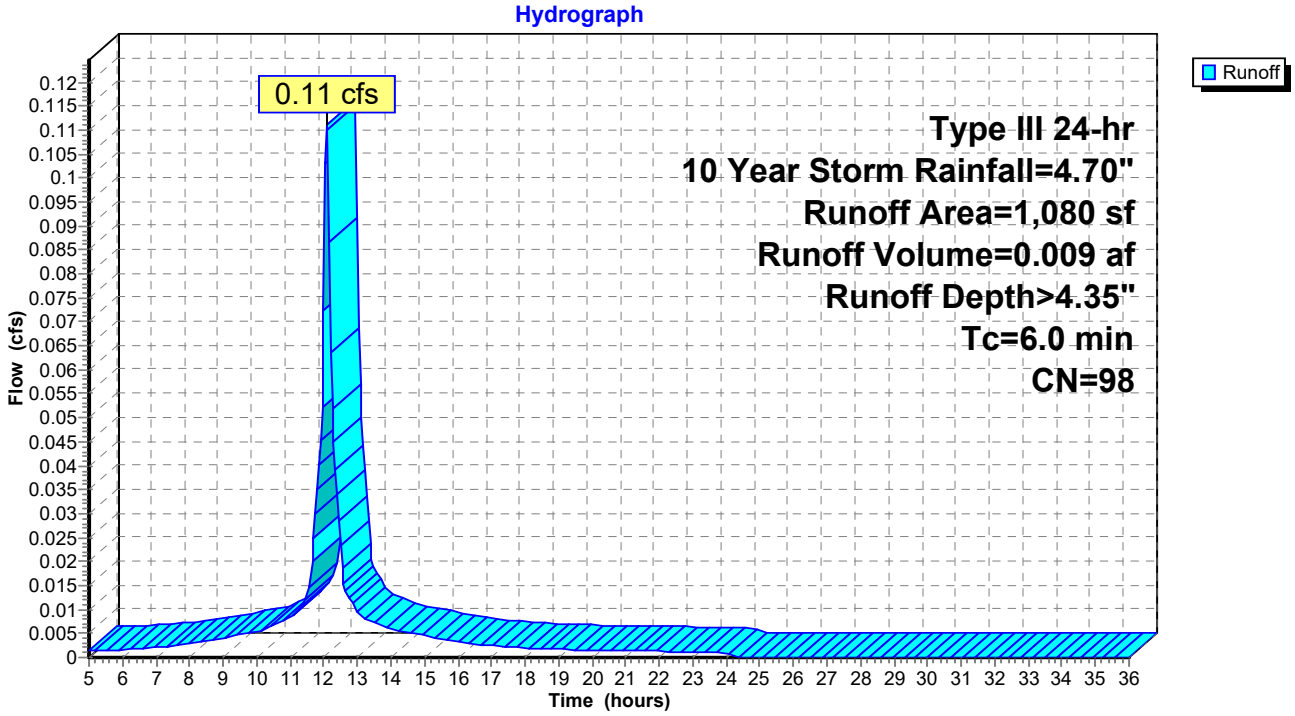
Runoff = 0.11 cfs @ 12.09 hrs, Volume= 0.009 af, Depth> 4.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=4.70"

Area (sf)	CN	Description
1,080	98	Roofs, HSG C
1,080		100.00% Impervious Area

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

Subcatchment POST 5S: Existing Building Roof



Summary for Pond 3P: Underground Infiltration

Inflow Area = 0.042 ac, 85.69% Impervious, Inflow Depth > 4.08" for 10 Year Storm event
Inflow = 0.10 cfs @ 12.09 hrs, Volume= 0.014 af
Outflow = 0.02 cfs @ 11.75 hrs, Volume= 0.014 af, Atten= 84%, Lag= 0.0 min
Discarded = 0.02 cfs @ 11.75 hrs, Volume= 0.014 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 97.62' @ 13.92 hrs Surf.Area= 0.003 ac Storage= 0.005 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 102.6 min (912.4 - 809.8)

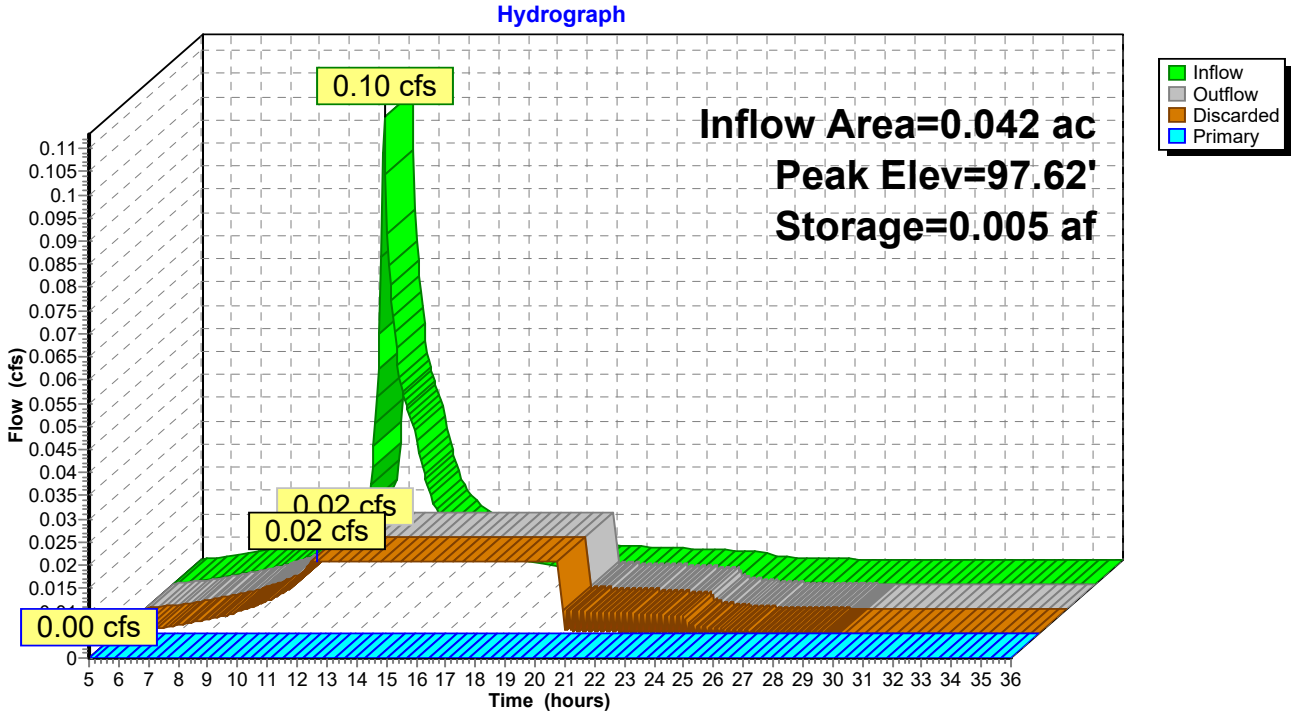
Volume	Invert	Avail.Storage	Storage Description
#1	95.30'	0.002 af	**9.87'W x 13.73'L x 3.17'H Prismatoid** 0.010 af Overall - 0.005 af Embedded = 0.005 af x 40.0% Voids
#2	95.80'	0.004 af	**ACF R-Tank HD 1.5** x 30 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 30 Chambers in 6 Rows 0.005 af Overall x 95.0% Voids
		0.006 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	100.20'	**6.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	95.30'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.75 hrs HW=95.39' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=95.30' (Free Discharge)
↑—**1=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: Underground Infiltration



Summary for Pond 4P: Existing Roof Storage

Inflow Area = 0.025 ac,100.00% Impervious, Inflow Depth > 4.35" for 10 Year Storm event
Inflow = 0.11 cfs @ 12.09 hrs, Volume= 0.009 af
Outflow = 0.04 cfs @ 12.38 hrs, Volume= 0.009 af, Atten= 68%, Lag= 17.6 min
Primary = 0.04 cfs @ 12.38 hrs, Volume= 0.009 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 120.12' @ 12.38 hrs Surf.Area= 953 sf Storage= 111 cf

Plug-Flow detention time= 59.2 min calculated for 0.009 af (100% of inflow)
Center-of-Mass det. time= 58.9 min (821.8 - 762.9)

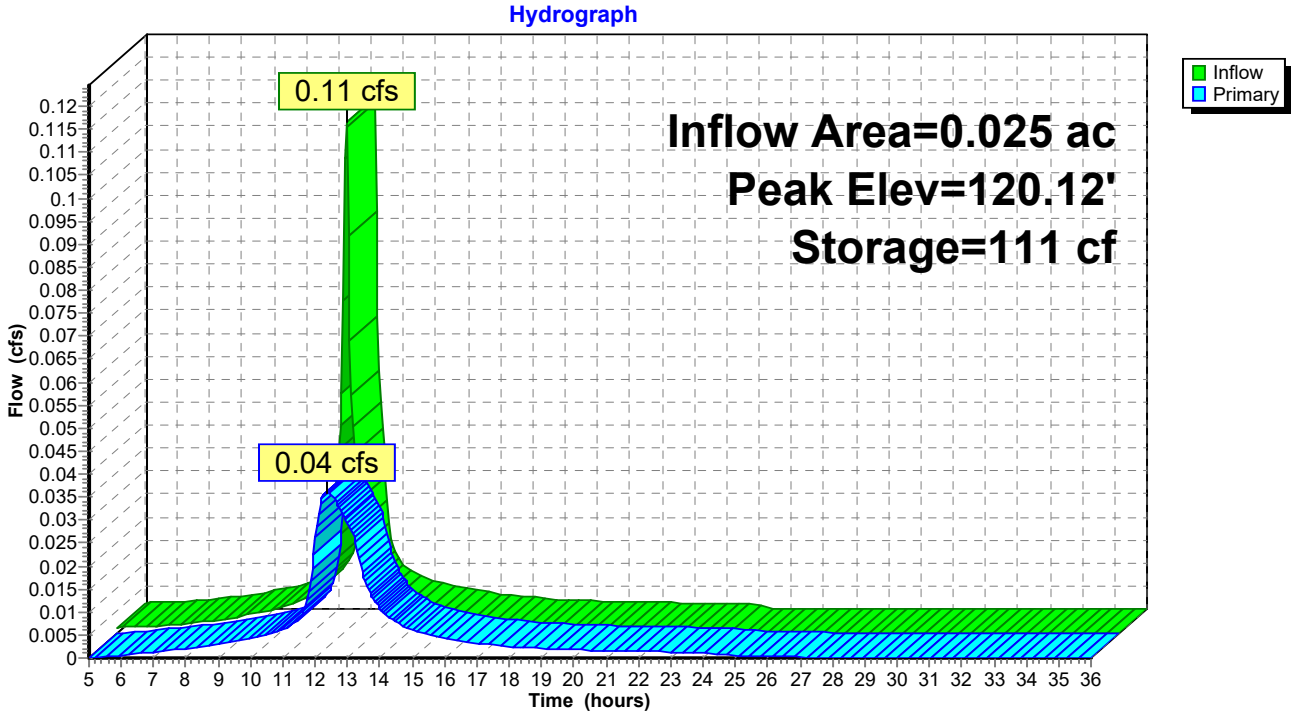
Volume	Invert	Avail.Storage	Storage Description
#1	120.00'	953 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
120.00	953	0	0
121.00	953	953	953

Device	Routing	Invert	Outlet Devices
#1	Primary	119.00'	**4.0" Round Culvert** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.00' / 118.00' S= 0.1000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Device 1	120.00'	**2.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	120.19'	**2.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.04 cfs @ 12.38 hrs HW=120.12' TW=96.69' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.04 cfs of 0.41 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.04 cfs @ 1.65 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: Existing Roof Storage



Summary for Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area

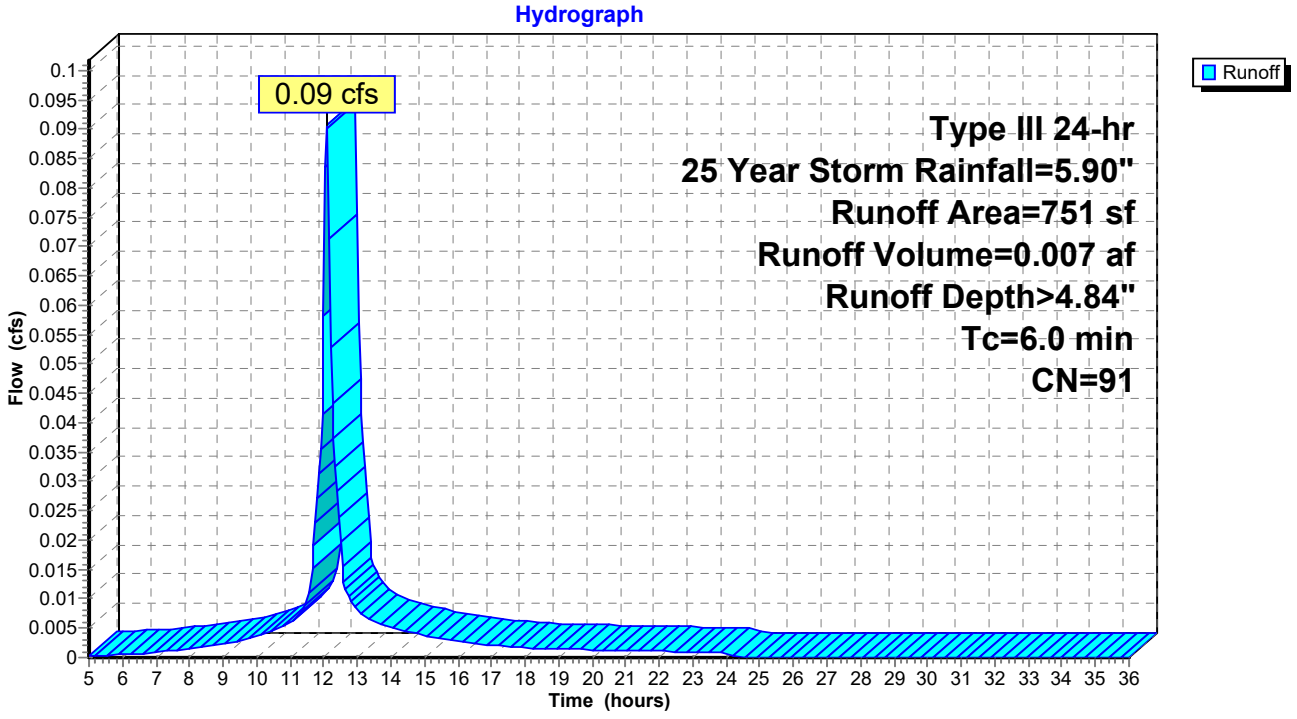
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 4.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Storm Rainfall=5.90"

	Area (sf)	CN	Description
*	162	98	Eixting Shed Roof, HSG C
*	327	98	Proposed Paviliion Roof, HSG C
*	262	78	Permeable Pavers Soil C
	751	91	Weighted Average
	262		34.89% Pervious Area
	489		65.11% Impervious Area

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

Subcatchment POST 2S: Existing Shed Roof, Proposed Pavillion and Gravel Area



Summary for Subcatchment POST 5S: Existing Building Roof

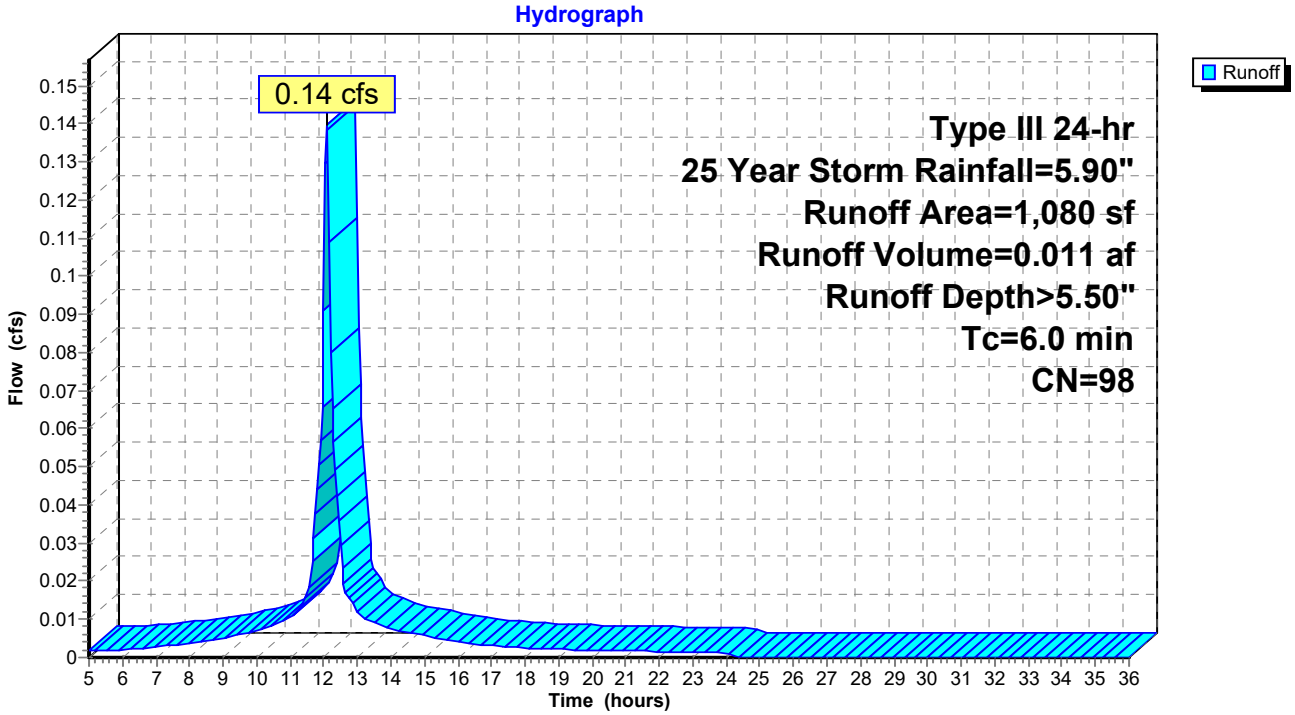
Runoff = 0.14 cfs @ 12.09 hrs, Volume= 0.011 af, Depth> 5.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Storm Rainfall=5.90"

Area (sf)	CN	Description
1,080	98	Roofs, HSG C
1,080		100.00% Impervious Area

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

Subcatchment POST 5S: Existing Building Roof



Summary for Pond 3P: Underground Infiltration

Inflow Area = 0.042 ac, 85.69% Impervious, Inflow Depth > 5.23" for 25 Year Storm event
Inflow = 0.13 cfs @ 12.09 hrs, Volume= 0.018 af
Outflow = 0.05 cfs @ 13.40 hrs, Volume= 0.018 af, Atten= 60%, Lag= 78.4 min
Discarded = 0.02 cfs @ 11.55 hrs, Volume= 0.017 af
Primary = 0.03 cfs @ 13.40 hrs, Volume= 0.001 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 100.31' @ 13.40 hrs Surf.Area= 0.003 ac Storage= 0.006 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 134.0 min (939.8 - 805.8)

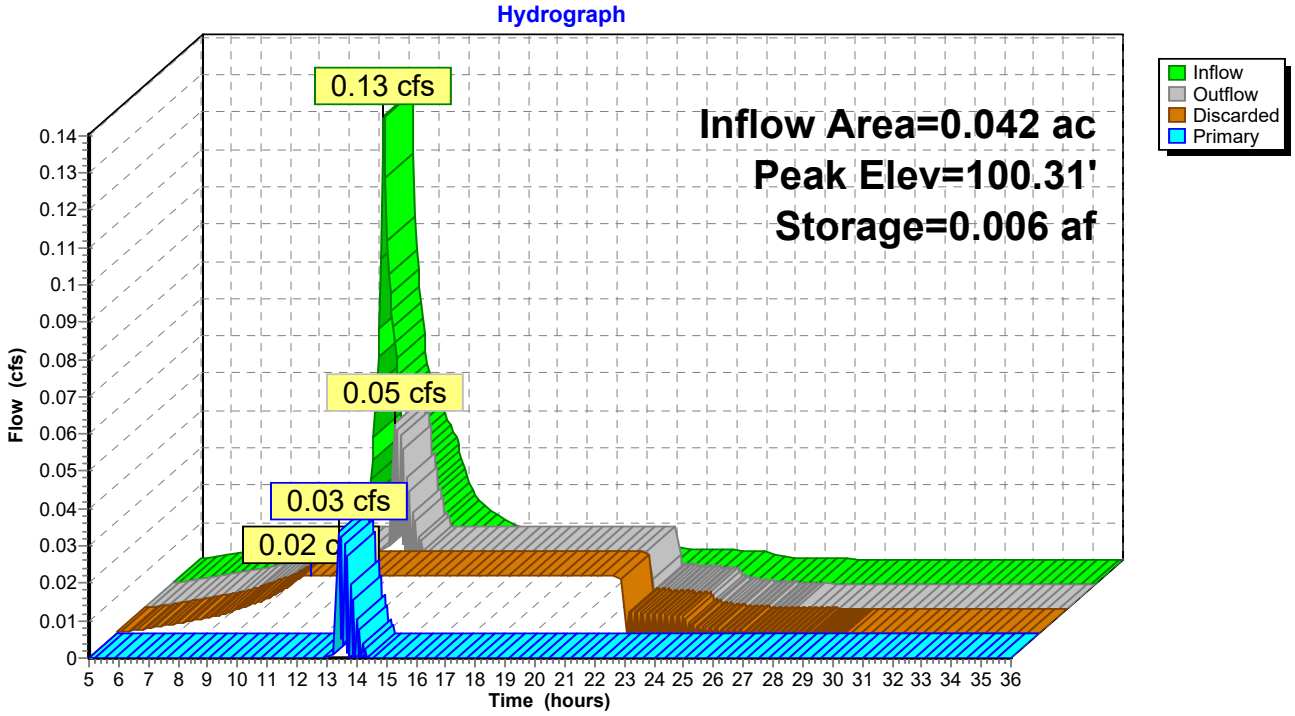
Volume	Invert	Avail.Storage	Storage Description
#1	95.30'	0.002 af	**9.87'W x 13.73'L x 3.17'H Prismatoid** 0.010 af Overall - 0.005 af Embedded = 0.005 af x 40.0% Voids
#2	95.80'	0.004 af	**ACF R-Tank HD 1.5** x 30 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 30 Chambers in 6 Rows 0.005 af Overall x 95.0% Voids
		0.006 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	100.20'	**6.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	95.30'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.55 hrs HW=95.37' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.03 cfs @ 13.40 hrs HW=100.31' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 1.11 fps)

Pond 3P: Underground Infiltration



Summary for Pond 4P: Existing Roof Storage

Inflow Area = 0.025 ac,100.00% Impervious, Inflow Depth > 5.50" for 25 Year Storm event
Inflow = 0.14 cfs @ 12.09 hrs, Volume= 0.011 af
Outflow = 0.04 cfs @ 12.41 hrs, Volume= 0.011 af, Atten= 71%, Lag= 19.6 min
Primary = 0.04 cfs @ 12.41 hrs, Volume= 0.011 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 120.15' @ 12.41 hrs Surf.Area= 953 sf Storage= 144 cf

Plug-Flow detention time= 58.4 min calculated for 0.011 af (100% of inflow)
Center-of-Mass det. time= 58.1 min (819.7 - 761.6)

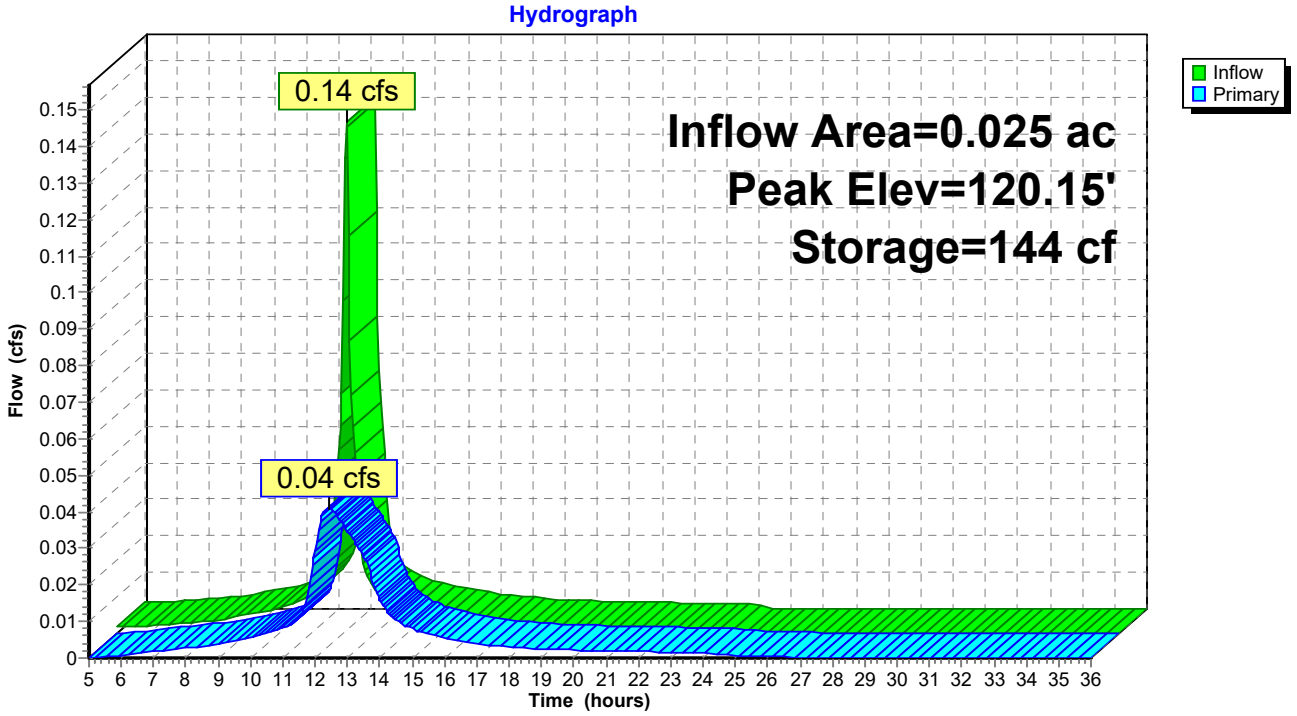
Volume	Invert	Avail.Storage	Storage Description
#1	120.00'	953 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
120.00	953	0	0
121.00	953	953	953

Device	Routing	Invert	Outlet Devices
#1	Primary	119.00'	**4.0" Round Culvert** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.00' / 118.00' S= 0.1000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#2	Device 1	120.00'	**2.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	120.19'	**2.0" Vert. Orifice/Grate** C= 0.600

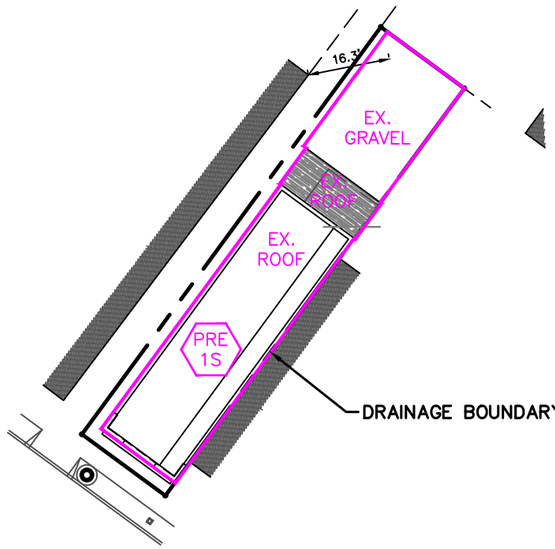
Primary OutFlow Max=0.04 cfs @ 12.41 hrs HW=120.15' TW=97.20' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.04 cfs of 0.42 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.04 cfs @ 1.87 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: Existing Roof Storage



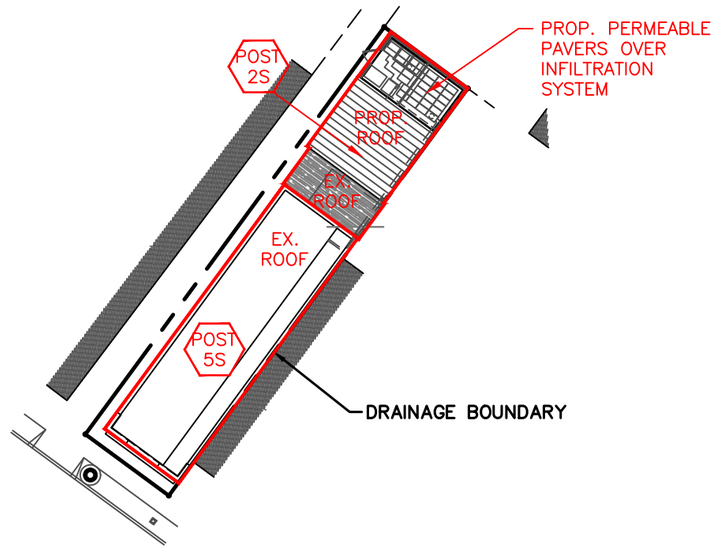
APPENDIX D

DRAINAGE MAPS



LEGEND:

EXISTING PROPERTY LINE
ADJOINING PROPERTY LINE
PROPOSED STORM CHAMBERS
PROPOSED ROOF LEADER LINE



DRAINAGE AREA 1S:

TOTAL AREA: 1,831 SQFT
EXISTING BUILDING ROOF = 1,080 SQFT
EXISTING SHED ROOF = 162 SQFT
EXISTING GRAVEL AREA = 589 SQFT

DRAINAGE AREA 2S:

TOTAL AREA: 751 SQFT
EXISTING SHED ROOF = 162 SQFT
PROPOSED PAVILION ROOF = 327 SQFT
PROPOSED PAVER AREA = 262 SQFT

DRAINAGE AREA 5S:

TOTAL AREA: 1,080 SQFT
EXISTING BUILDING ROOF = 1,080 SQFT

PRE–CONDITIONS

SCALE: 1"=30'

POST–CONDITIONS

SCALE: 1"=30'

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

DRAWN BY: CMB CHECKED BY: MAB

REVISIONS:

NO.	DATE	DESCRIPTION	BY

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926
F: 845–440–6637

DRAINAGE MAP

MEYER'S OLDE DUTCH RESTAURANT

184 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5954–27–811956

JOB #: 2020:047
DATE: 12/28/2020
SCALE: 1" = 30'
TITLE: DR–1
SHEET: 1 OF 1

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

John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **184 Main Street Amended Site Plan**

I have reviewed the December 29, 2020 response letter from Liscum McCormack VanVoorhis and the first 6 sheets of an 8-sheet Site Plan set with the last revision date of December 28, 2020.

Proposal

The applicant is proposing to renovate an existing one-story restaurant and add an open-air pavilion to the rear. The parcel is in the Central Main Street (CMS) district and the Historic District and Landmark Overlay (HDLO) Zone.

Comments and Recommendations

1. The building is a contributing structure in the Lower Main Street National Register Historic District. It is also in the HDLO and subject to the Certificate of Appropriateness approval process in Chapter 134, Historic Preservation. The existing storefront is not original to the historic building and the proposed repairs and window replacements appear consistent with the historic district.

2. The replacement fence in the rear yard is limited to 6 feet in height under Section 223-13 G(1). If the fence has a more finished side, a note should be included that the finished side will face the neighboring property, as required in Section 223-13 G(2).

3. The lighting specifications on Sheet A-201 should include an illustration of the proposed fixtures and the Color Rendering Index, consistent with Section 223-14 B.

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
Don Petruncola, 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.

January 6, 2021

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

RE: 184 Main Street
City of Beacon
Tax Parcel 5954-27-811956

Dear Mr. Gunn:

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

- Response correspondence from Liscum, McCormack & VanVoorhis, dated December 29, 2020.
- 8-Sheet plan set titled "Meyer Olde Dutch Restaurant", with the latest revision date of December 28, 2020, as prepared by Liscum, McCormack & VanVoorhis, LLP.
- Report titled "Drainage Report for Meyer's Olde Dutch Restaurant", dated December 29, 2020, as prepared by Hudson Land Design.
- Drainage Plan and Drainage Details Plan for Meyer's Olde Dutch Restaurant dated December 28, 2020, as prepared by Hudson Land Design.

Based on our review of the above documents and plans we offer the following comments.

1. The "Drawing List" on the Cover Sheet (Sheet G-101), lists out 10 sheets to be part of the plan set, but Sheet S-001 and S-101 are not present. If Sheets S-001 and S-101 are not to be part of the plan set to the Planning Board, then they should be removed from the drawing list on the cover sheet.

2. Prior to the planting of the tree located along Main Street, the applicant and contractor shall establish the actual location of the existing water and sewer services serving the building, to ensure that the tree is not planted over these utility lines. A note to this extent shall be included on the plans.

3. The two "Pavilion Section" details on Sheet A-310 shall be revised to remove the drywell and piping that was previously proposed under the slab and the two drainage plans prepared by Hudson Land Design for the proposed infiltration system shall be made part of the plan set.

4. The Drainage Plan and Drainage Detail plan shall be provided on a full sheet, to clearly show the layout of the system, the location of all proposed inspection ports, and to clearly shall all drainage piping and interconnections.

5. The Maintenance requirements for the proposed infiltration system shall be expanded upon to note that after the first year of monthly inspections, the system shall be inspected on an annual basis. Copies of all inspections of the infiltration system shall be provided to the City's Building Department. The inspection report shall contain at a minimum the date the inspection was conducted, who performed the inspection, recommendations based upon inspection and any actions taken based upon recommendations.

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

City of Beacon Planning Board Agenda
01/12/2021

Title:

Continue review of application for Site Plan Approval, gallery/garage addition, 469 Main Street, submitted by David Rich & Paulette Myers-Rich (PhotoBook Works)

ATTACHMENTS

469 Main Street Cover Letter.pdf

469 Main Street Site Plan.pdf

Planner Review Letter.pdf

Engineer Review Letter.pdf

473 MAIN STREET NO. 1
BEACON, NY 12508
T: 845.831.1318
E:info@bergmoss.com

December 22, 2020

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

Re: Photo Book Works Studio
Tax ID 6054-37-075738 (+/-0.11 acre)
469 Main Street, Beacon, NY.

Dear Chairman Gunn and Planning Board Members,

On behalf of Photo Book Works Studio, Berg + Moss Architects is submitting a Site Plan Application that addresses comments by Lanc & Tully Engineering (dated 12/1/2020) and John Clarke Planning (12/4/2020) regarding the request for Special Permit. In addition, we have responded to the concerns of the engineers below. Berg + Moss comments are in *italics.*

Lanc & Tully Engineering Comments (dated 12/1/2020):

1. 'The site plan on Sheet 1 does not properly scale to the noted scale on the drawing. The drawing shall be provided true to the scale noted on the drawing. It also appears that some of the dimensions provided should be checked for accuracy.'
   The scaling issue has been corrected.
2. Labeling should be not be obscured by the hatching on the plan.'
   Labels have been adjusted on the drawings and are now readable. In addition, the background survey has been modified to reflect current and relevant information.
3. 'The call out for extending the pavers should be enlarged so that is it legible.'
   All annotations have been updated to be the same size and are now readable.
4. 'When site was previously before the Planning Board in 2016 for the original site plan, it was noted at that time that the applicant would provide an easement to the City of Beacon for area of the parking lot and curving that encroach on the subject parcel. The applicant should inform the Planning as to the status of this easement to the City of Beacon. *The applicant has noted that the easement application is in progress.*'
   This statement remains true; the easement application is in progress.

John Clarke Planning Comments (dated 12/4/2020):

1. 'The CMS district has a 10 percent minimum landscaped area requirement, but that may be waived for lots under 5,000 square feet. This application qualifies for a waiver.'
   This statement remains true; applicant will apply and qualify for waiver.

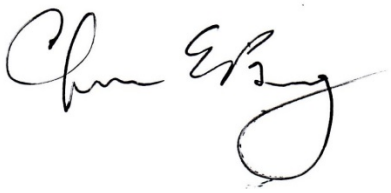
2. 'The applicant has addressed all my previous comments.'

The following materials have provided as part of the Site Plan Application:
- 3 copies of Site Plan Set, plans and elevations
- Letter to City Administrator, dated December 22, 2020.
- Copy of materials listed above on CD.

Please feel free to contact us if you have any questions or require additional information.

473 MAIN STREET NO. 1
BEACON, NY 12508
T: 845.831.1318
E:info@bergmoss.com

Sincerely,



Christopher E. Berg
Berg Moss Architects PC

PHOTO BOOK WORKS STUDIO

469 MAIN ST,
BEACON, NEW YORK 12508

SITE PLAN REVIEW - 12.22.2020

PLANNING BOARD APPROVAL

RECOMMENDED FOR APPROVAL BY THE CITY OF BEACON PLANNING BOARD ON THE DAY OF , 2020. SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGES, ERASURES, MODIFICATIONS OF REVISIIONS TO THE PLAT AS APPROVED SHALL VOID THIS APPROVAL.

CHAIRMAN DATE

DRAWING LIST

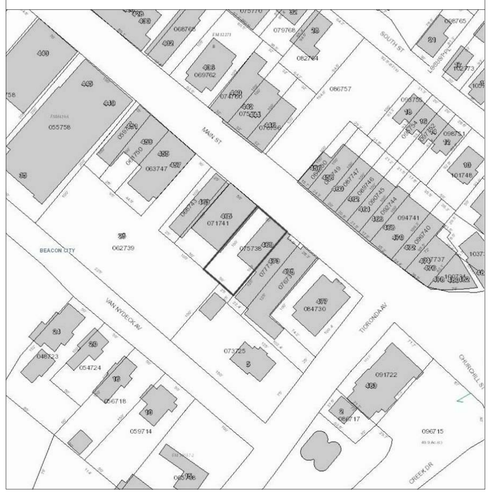
● NEW ISSUE ■ REVISED ISSUE ○ ISSUED WITH NO CHANGES

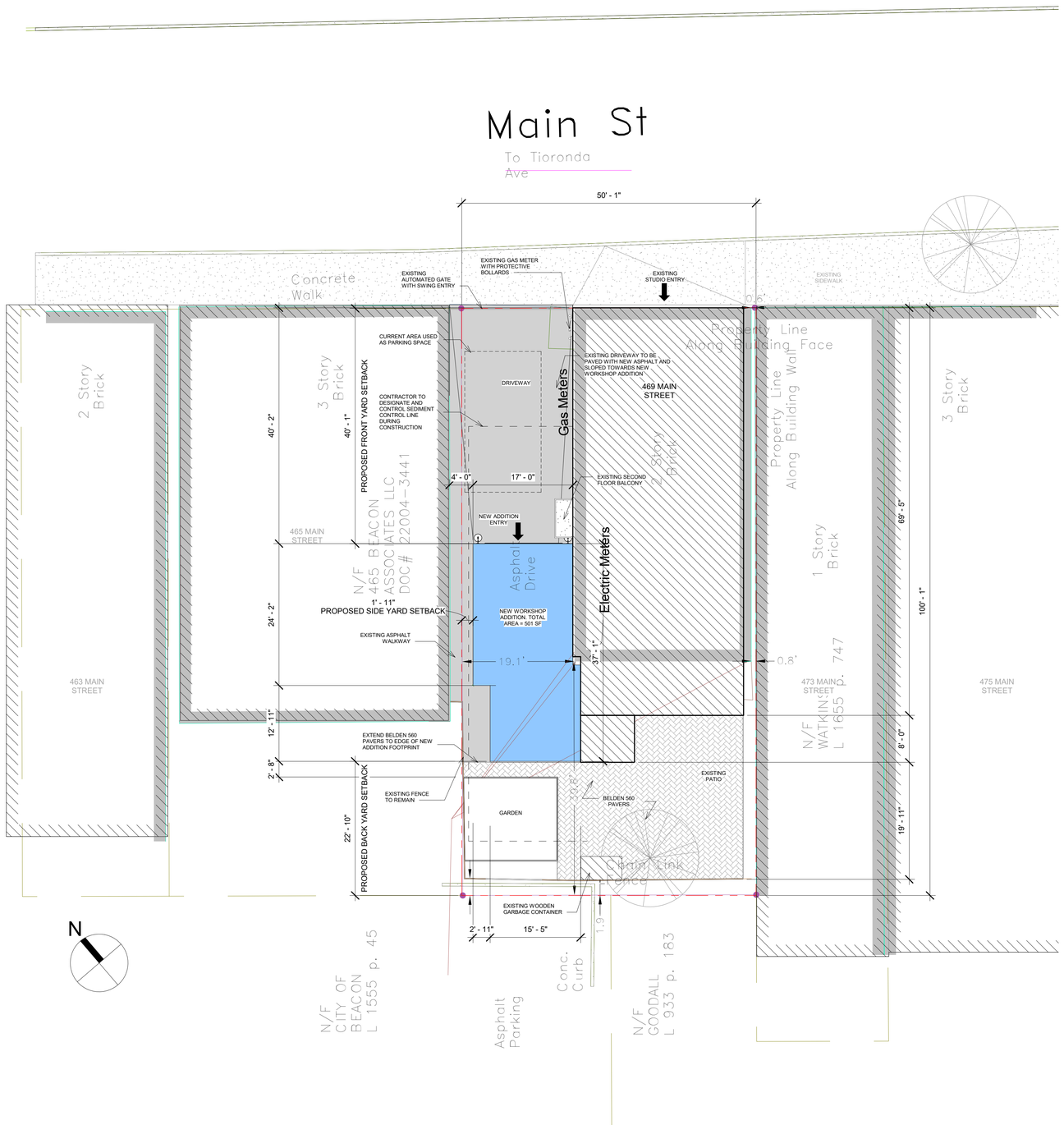
Sheet No.	Rev.	Drawing Title	Issue 1 - 10.27.20	Issue 2 - 11.24.20	Issue 3 - 12.22.20
G-000.00	3	GENERAL NOTES	•	■	■
A-101.00	3	WORKSHOP ADDITION	•	■	■
A-201.00	3	ELEVATIONS	•	■	■

GENERAL NOTES

LOCATION:	469 MAIN STREET, BEACON, NY 12508
TAX MAP:	130200-6054-37-075738-0000
DEED REFERENCE:	BOOK: 22016, PAGE: 1419
OWNER OF RECORD:	DAVID B. RICH & PAULETTE M. MYERS-RICH 469 MAIN STREET BEACON NY 12508
APPLICANT:	DAVID B. RICH & PAULETTE M. MYERS-RICH 469 MAIN STREET BEACON NY 12508
ZONING DISTRICT:	CMS - CENTRAL MAIN STREET; HISTORIC DISTRICT AND LANDMARK ZONING OVERLAY
PROPOSED USE:	ARTIST STUDIO, EXHIBITION SPACE, WORKSHOP LEARNING SPACE
NARRATIVE:	NEW ACCESSORY STRUCTURE BUILT WITHIN EXISTING PROPERTY. CURRENTLY ZONED AS CENTRAL MAIN STREET WITH A HISTORIC DISTRICT AND LANDMARK ZONING OVERLAY WITH NO CHANGES TO ZONING USE. THE PROPOSED USE AS A PLACE OF BUSINESS FOR ARTISTIC GALLERY SPACE AND WORKSHOP LEARNING FOR CHILDREN AND ADULTS.
HOURS OF OPERATION:	CURRENTLY SATURDAY - SUNDAY: 12 PM TO 6 PM. OR BY APPOINTMENT PROJECTED NO CHANGE - CURRENT HOURS OF OPERATION TO REMAIN

TAX MAP





1 SITE PLAN
1" = 10'-0"

SHEET NOTES

1. SURVEY INFORMATION SHOWN IN THE SITE PLAN WAS ORIGINALLY CREATED BY TEC LAND SURVEYING ON MARCH 17TH, 2016 FOR DAVID RICH AND PAULETTE MYERS-RICH.

2. NO EASEMENTS FOUND BETWEEN PARCEL NO. 075738 (469 MAIN ST) AND NO. 071741 (465 MAIN ST), EXISTING ASPHALT AREA TO REMAIN.

ZONING ANALYSIS

PROJECT DESCRIPTION:
LOCATION: 269 MAIN STREET, BEACON, NY 12508
TAX MAP: 130200-6054-37-075738-0000

LOT AREA: .11 ACRES,

ZONING DISTRICT: CMS: CENTRAL MAIN STREET; HISTORIC DISTRICT AND LANDMARK OVERLAY ZONE

EXISTING USE: COMMERCIAL

PROPOSED USE: NO CHANGE

ZONING ANALYSIS

	REQUIRED BY ORDINANCE	PROPOSED
ZONING DISTRICT	CMS: CENTRAL MAIN STREET; HISTORIC DISTRICT AND LANDMARK ZONING OVERLAY	
LOT AREA	.11 ACRES, (4,791.6 SF)	
STREET FRONTAGE	30 FT ON MAIN STREET	
USE GROUPS PERMITTED	RESI, BUSIN, RETAIL, SOCIAL	WORKSHOP/EXHIBITION SPACE
BUILDING FOOTPRINT	N/A	+/-502 SF ACCESSORY STRUCTURE
MAX LOT COVERAGE	N/A	TOTAL +/-3500 SF LOT COVERAGE
YARD REGULATIONS (SEC. 223-17C)		
MINIMUM LOT AREA:	N/A	NO CHANGE
MINIMUM LOT WIDTH:	N/A	50' - NO CHANGE
MINIMUM LOT DEPTH:	75FT	100' - NO CHANGE
SETBACK REGULATIONS (SEC. 223-17C)		
FRONT YARD SETBACK:	10 FT MIN	PROPOSED BUILDING FRONT IS SET BACK 40'-1"
SIDE YARD SETBACK:	0 FT MIN	PROPOSED BUILDING EDGE IS SET BACK 1'-11"
REAR YARD SETBACK:	20 FT MIN	PROPOSED BUILDING FACE IS SET BACK 22'-10"
HEIGHT REGULATIONS (SEC. 223-17C)		
MAX HEIGHT (STORIES):	3 STORIES / MAX 38 FT	NO CHANGE
LANDSCAPE REGULATIONS		
MIN OPEN SPACE:	10%	
PARKING REGULATIONS (SEC. 223-26)		
SPACES REQUIRED:	1 SPACE PER EACH 200 SF OF GFA, EXCLUDING UTILITY AREAS	PER SECTION 223-26, B (2) INCREASED USE ON SITE ACCOUNTS FOR LESS THAN 25% OF TOTAL AREA.
ACCESSIBLE SPACES:	-	

HATCHING PATTERNS

- BELDEN 560 PAVERS
- CONCRETE WALKWAY
- ASPHALT
- BUILDING MASS

Berg+Moss Architects
BMA

Architect:

BERG + MOSS ARCHITECTS PC
473 MAIN STREET No. 1
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

Consultant:

NAME
ADDRESS
PHONE
EMAIL

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EXTERIOR LIGHT FIXTURE



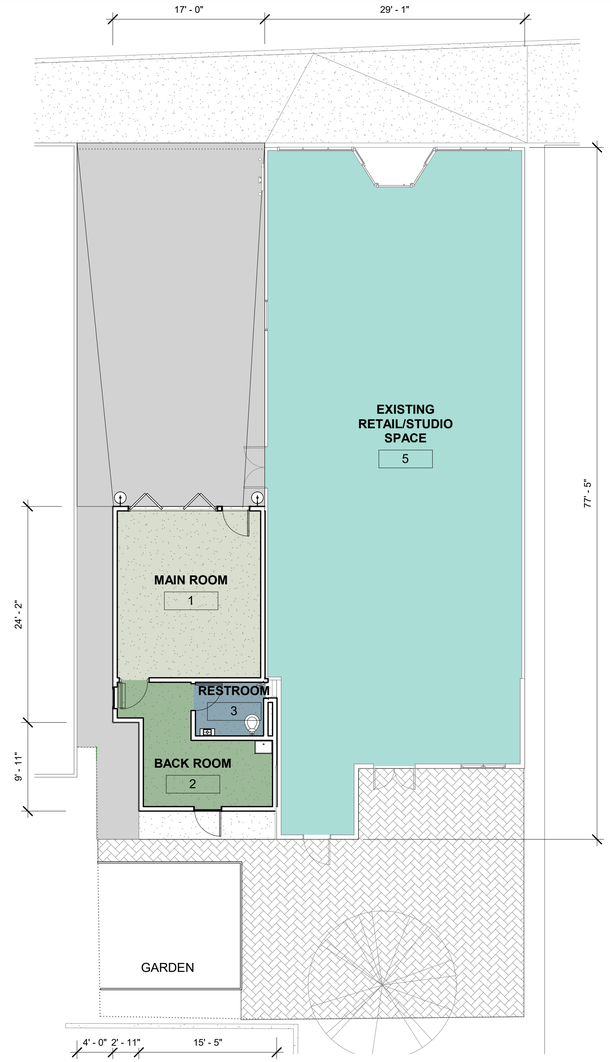
Barn Light Electric Company - The Original Gooseneck Light

Mounting Style: Gooseneck
Shade Size: WHS12
Shade Finish: 400 Barn Red
Mounting: G64

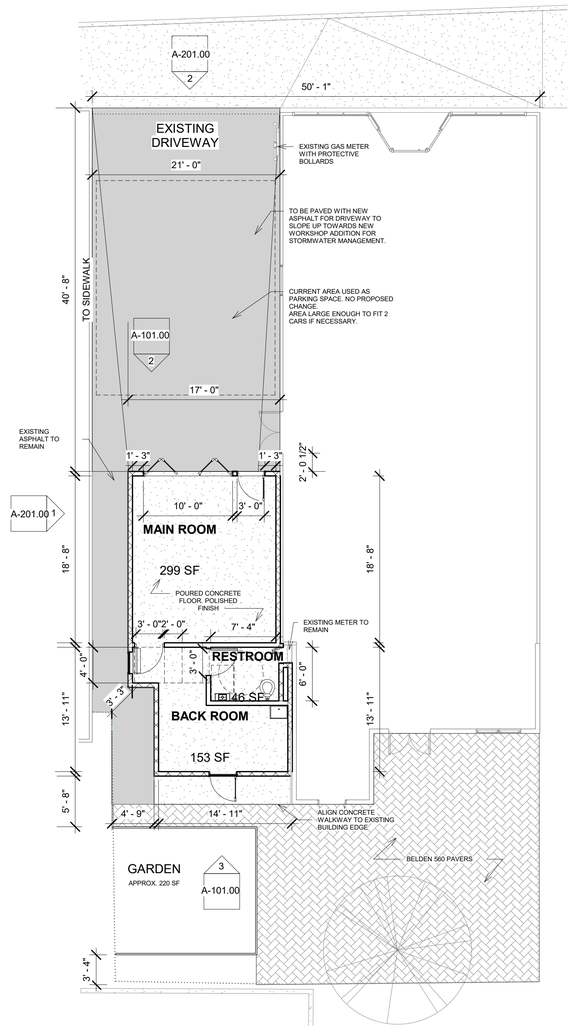
Incandescent Bulb or Integrated LED

TOTAL QUANTITY OF FIXTURES = 3

AREA SCHEDULE		
Name	No.	Area
MAIN ROOM	1	299 SF
BACK ROOM	2	153 SF
RESTROOM	3	46 SF
EXISTING RETAIL/STUDIO SPACE	5	2000 SF

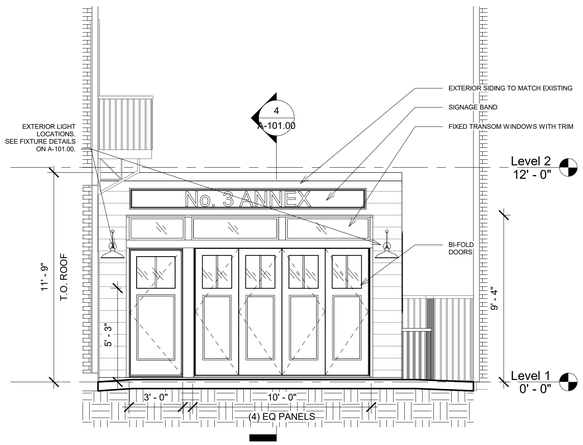


5 PROGRAM PLAN - LEVEL 1
1/8" = 1'-0"

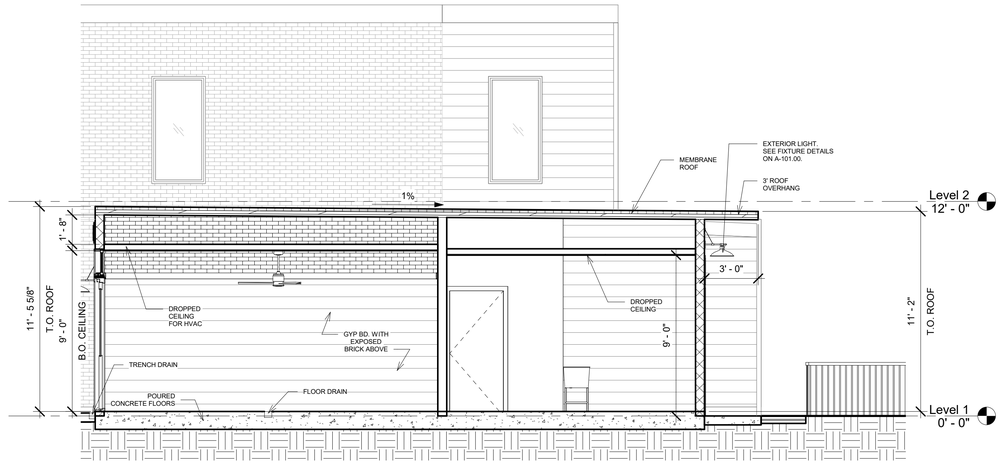


1 Level 1
1/8" = 1'-0"

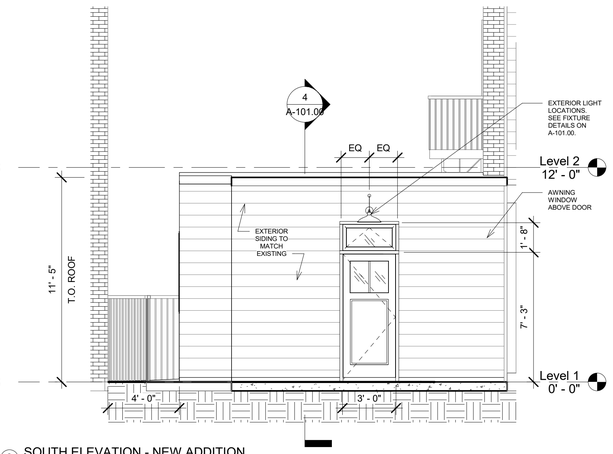
Exterior Light Fixture
1/4" = 1'-0"



2 NORTH ELEVATION - NEW ADDITION
1/4" = 1'-0"



4 CROSS SECTION - NEW ADDITION
1/4" = 1'-0"



3 SOUTH ELEVATION - NEW ADDITION
1/4" = 1'-0"

BERG + MOSS ARCHITECTS PC
473 MAIN STREET No. 1
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

No.	Date	Description
1	10.27.20	Planning Board Review
2	11.24.20	Public Hearing Review
3	12.22.20	Planning Board Review

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469 MAIN STREET

BEACON, NEW YORK 12508

KEY PLAN

PROJECT NORTH

DRAWING TITLE
WORKSHOP ADDITION

DRAWING NO.
A-101.00

SEAL & SIGNATURE

DATE: Issue Date
SCALE: As indicated
DWG BY: Author
CHK BY: Checker

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EXTERIOR FACADE COLORS
Farrow & Ball's Black Blue #95 Exterior Eggshell
HardiePlank 6-inch lap siding, smooth finish in Iron Gray
EXTERIOR SIGNAGE COLORS
California Paints Historic Color Palette in Codman Claret, eggshell finish
Farrow & Ball's Purbeck Stone #275



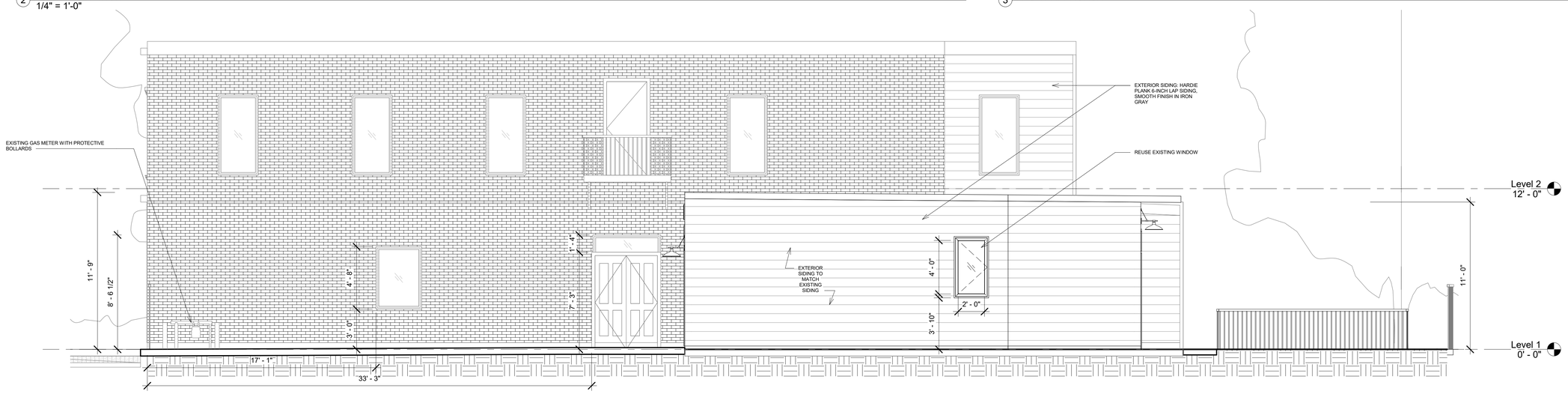
4 FRONT ELEVATION



3 FRONT APPROACH



2 NORTH ELEVATION
1/4" = 1'-0"



1 WEST ELEVATION
1/4" = 1'-0"

BERG + MOSS ARCHITECTS PC
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469 MAIN STREET

BEACON, NEW YORK 12508

KEY PLAN

PROJECT NORTH

DRAWING TITLE
ELEVATIONS

DRAWING NO.
A-201.00

SEAL & SIGNATURE

DATE:	Issue Date
SCALE:	1/4" = 1'-0"
DWG BY:	Author
CHK BY:	Checker

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John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **469 Main Street Site Plan**

I have reviewed a response letter from Berg + Moss Architects and a 3-sheet Site Plan set, all dated December 22, 2020.

Proposal

The applicant is proposing to construct a 502 square foot multi-purpose addition to an existing building in the Central Main Street (CMS) district and the Historic District and Landmark Overlay (HDLO) zone.

Comments and Recommendations

1. Any proposed sign should be referred to the Building Department, but still reviewed by the Planning Board, since the parcel is in the HDLO.

2. The applicant has addressed all my other previous comments, and I have no objection to Board consideration of an approval resolution that includes appropriate conditions.

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
Chris Berg, R.A., 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.

January 6, 2021

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

RE: Photo Book Works Studio
469 Main Street
Tax Parcel 6054-37-075738
City of Beacon

Dear Mr. Gunn:

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

- Response correspondence dated December 22, 2020, as prepared by Berg & Moss Architects.
- Plans titled "Photo Book Works Studio" with the latest revision date of December 22, 2020, as prepared by Berg & Moss Architects, consisting of 3 sheets.

The proposed project entails the addition of a multi-purpose gallery/garage space, approximately 500 square feet in size, to an existing structure located in the CMS Zone, on a 0.11-acre parcel. Based upon our review of the above documents and plans, we offer the following comments:

1. When site was previously before the Planning Board in 2016 for the original site plan, it was noted at that time that the applicant would provide an easement to the City of Beacon for area of the parking lot and curbing that encroach on the subject parcel. The applicant should inform the Planning Board as to the status of this easement to the City of Beacon. *The applicant has noted that the easement application is in progress.*

This completes our review at this time. Further comments may be forth coming 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

(845) 294-3700 • P.O. Box 687, Route 207, Goshen, N.Y. 10924 • FAX (845) 294-8609
www.lanctully.com

City of Beacon Planning Board Agenda
01/12/2021

Title:

Continue review of applications for Special Use Permit and Site Plan Approval, change from residential (rectory) to gallery, 61 Leonard Street, submitted by Beacon Historical Society (owner St. Joachim's Church)

ATTACHMENTS

61 Leonard Street Cover Letter.pdf

61 Leonard Street Site Plan.pdf

Planner Review Letter.pdf

Engineer Review Letter.pdf

473 MAIN STREET NO. 1
BEACON, NY 12508
T: 845.831.1318
E:info@bergmoss.com

December 22, 2020

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

Re: Beacon Historical Society
Tax ID 6054-30-235786 (+/-1.3 acre)
61 Leonard Street, Beacon, NY.

Dear Chairman Gunn and Planning Board Members,

On behalf of The Beacon Historical Society (BHS), Berg + Moss Architects is submitting a Site Plan Application that addresses comments by Lanc & Tully Engineering (dated 12/1/2020) and John Clarke Planning (12/4/2020) regarding the request for Special Permit. In addition, we have responded to the concerns of the engineers below. Berg + Moss comments are in *italics.*

Lanc & Tully Engineering Comments (dated 12/1/2020):

1. 'Although the site plan has been provided with a scale of 1" = 20', it should be noted that when scaling the drawing, the dimensions noted do not correlate to the scale noted. The drawing shall be provided at true scale and the dimensions noted verified.'

The scaling issue has been corrected.

2. 'Note No. 3 under the "Accessibility Parking Notes" should be revised to note that the accessible stall to have blue paint for the symbol and striping to clearly distinguish it from other parking stalls.'

The note has been updated to include language that designates blue paint as the correct paint color. Note #3 now reads: "Pavement marking colors - required accessible parking space and access aisle striping and other optional pavement markings, such as the international access symbol, shall be painted blue to clearly distinguish from other parking stalls.

3. 'The Zoning Analysis table on Sheet 1 should be revised to include another row under "Use Groups Existing on Site" which would be labeled "Use Groups Proposed on Site." The table should be further revised as to the "Parking Regulations." This section of the table should be updated to reflect the required parking for each of the existing uses on site in accordance with Section 223-26, Paragraph "F" of the Zoning Code, along with reflecting what the required parking for the existing and proposed uses on the site will be and what is actually present at the site.

Sheet 1 has been updated with a Parking Requirements table that provides the following information for the existing and proposed uses on the site: required parking by use per 223-26 legislation, the calculation used to determine the required parking by use, and the calculated required parking spaces.

John Clarke Planning Comments (dated 12/4/2020):

1. 'The City Council recently transferred the Special Permit authority in Section 223-244.7 to the Planning Board. The Special Permit may now be reviewed by the Planning Board in conjunction with Site Plan approval, so the note on the Sheet G-000.00 Zoning Analysis Table should be updated.'

The note on the Zoning Analysis Table has been updated.

2. 'The Parking Hours Analysis on Sheet A-001.00 can be used by the Board to justify a shared use deduction under Section 223-26 C(6).'

Berg+Moss Architects
BMA
473 MAIN STREET NO. 1
BEACON, NY 12508
T: 845.831.1318
E:info@bergmoss.com

In addition, to better understand parking on the site, the Parking Hours Analysis table on Sheet A-001.00 can be used in conjunction with the Parking Requirements table on Sheet G-000.00.

3. 'There are no street trees along this section of the church property. In addition to the proposed landscaping, I suggest at least two street trees near the front sidewalk along Leonard Street.'

The BHS is open to having street trees along Leonard Street, assuming they can be located in a way that doesn't conflict with the Existing Gas Connection on Lennard street and the proposed sign location. As discussed in the meeting the BHS is a non profit that does not have a budgetary line allocated for street trees.

4. 'The material for the proposed new ramp handrails and balusters should be included, consistent with the standards in Article 134, Historic Preservation, Section 134-7 B(3).'

The drawings on Sheet A-101.00 and Sheet A-102.00 have been updated with material details for the proposed ramp.

The following materials have provided as part of the Site Plan Application:

3 copies of Site Plan Set, plans and elevations.
Letter to City Administrator, dated December 22, 2020.
Copy of materials listed above on CD.

Please feel free to contact us if you have any questions or require additional information.

Sincerely,

Christopher E. Berg
Berg Moss Architects PC

BEACON HISTORICAL SOCIETY

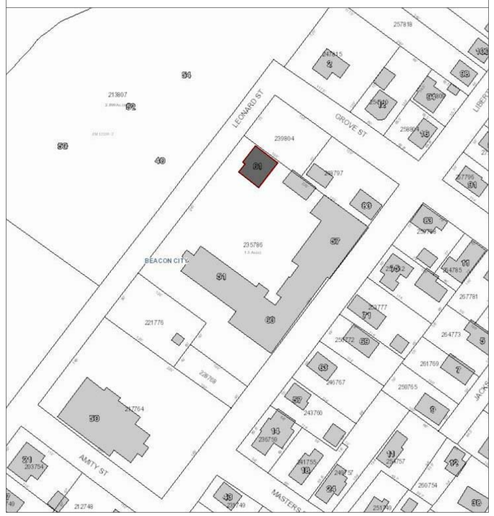
AT THE ST. JOACHIM RECTORY,
61 LEONARD ST,
BEACON, NEW YORK 12508

PLANNING BOARD REVIEW - 12.22.2020

GENERAL NOTES

LOCATION:	61 LEONARD STREET, BEACON, NY 12508
TAX MAP:	130200-6054-30-235786-0000
DEED REFERENCE:	BOOK: 0226, PAGE: 0128
OWNER OF RECORD:	ST JOACHIMS CHURCH 51 LEONARD STREET BEACON NY 12508
APPLICANT:	BEACON HISTORICAL SOCIETY 17 SOUTH AVENUE BEACON, NY 12508
ZONING DISTRICT:	R1-5: RESIDENTIAL; HISTORIC DISTRICT AND LANDMARK ZONING OVERLAY
PROPOSED USE:	HISTORICAL SOCIETY/MUSEUM
NARRATIVE:	CONVERSION OF AN EXISTING RESIDENTIAL THREE-STORY PLUS BASEMENT AND ATTIC NON-SPRINKLERED. CURRENTLY ZONED AS RESIDENTIAL TO BE CHANGED TO COMMUNITY/SOCIAL OCCUPANCY. THE PROPOSED USE AS A COMMUNAL PLACE FOR HISTORIC AND CULTURAL LEARNING INSTRUCTION FOR CHILDREN AND ADULTS.
HOURS OF OPERATION:	CURRENTLY N/A - USED AS HOUSING PROJECTED TUESDAY - SATURDAY: 10 AM TO 3 PM OCCASIONAL BOARD MEETINGS & SPECIAL EVENTS 3-5 PER MONTH, EVENINGS 7-10PM

TAX MAP







Existing Photos
1/16" = 1'-0"

ZONING INFORMATION

PROJECT DESCRIPTION:
LOCATION: 61 LEONARD STREET, BEACON, NY 12508
TAX MAP: 130200-6054-30-235786-0000

LOT AREA: 1.3 ACRES, (56,628 SF)

ZONING DISTRICT: R1-5: RESIDENTIAL; HISTORIC DISTRICT AND LANDMARK ZONING OVERLAY

EXISTING USE: SINGLE-FAMILY

PROPOSED USE: MUSEUM

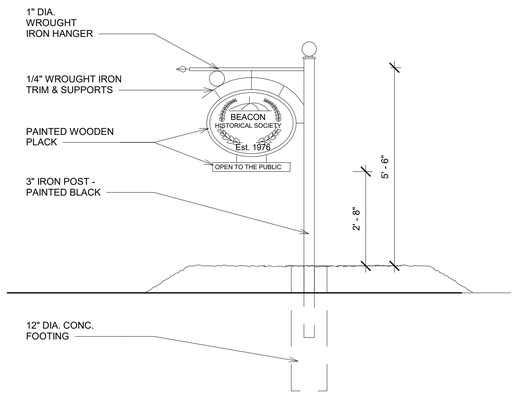
PARKING HOURS ANALYSIS - NON SIMULTANEOUS

	REQUIRED PARKING BY USE	HOURS OF OPERATION
ST JOACHIM CHURCH	82 SPACES	MONDAY - FRIDAY, 7-9AM SATURDAYS, 8-10AM & 4:30-5:30PM SUNDAYS, 7:30-3PM
ST. JOACHIM SCHOOL	22 SPACES	MONDAY - FRIDAY, 8-3PM
BEACON HISTORICAL SOCIETY	6 SPACES	THURSDAYS, 10-12PM SATURDAYS, 1-3PM SECOND SATURDAYS, 12-4PM

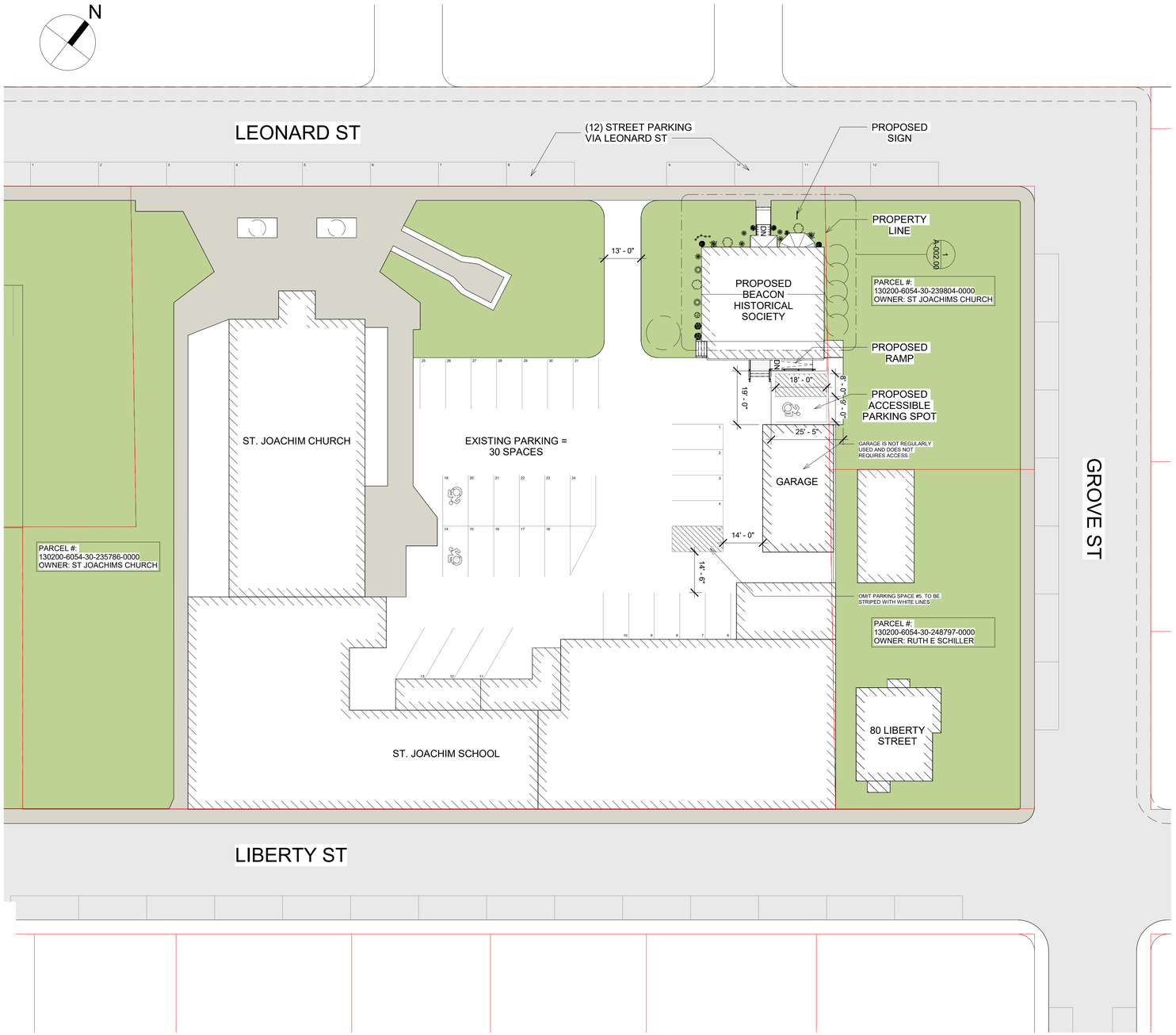
SHEET NOTES

1. ANY POSSIBLE ENCROACHMENTS BEYOND PROPERTY LINE ARE ARE NOT BEING CERTIFIED OR REVIEWED UNDER THIS APPLICATION.

2. SEE A-002.00 FOR LANDSCAPING PLAN AND PLANTING SCHEDULE.



2 Sign Detail
1/2" = 1'-0"



3 Site Plan
1" = 20'-0"

Berg+Moss Architects
BMA
BERG + MOSS ARCHITECTS PC
473 MAIN STREET No. 1
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

No.	Date	Description
1	10.27.20	Planning Board Review
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3	12.22.20	Planning Board Review

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BEACON HISTORICAL SOCIETY

61 LEONARD ST,
BEACON, NEW YORK 12508

KEY PLAN

PROJECT NORTH

DRAWING TITLE
SITE PLAN

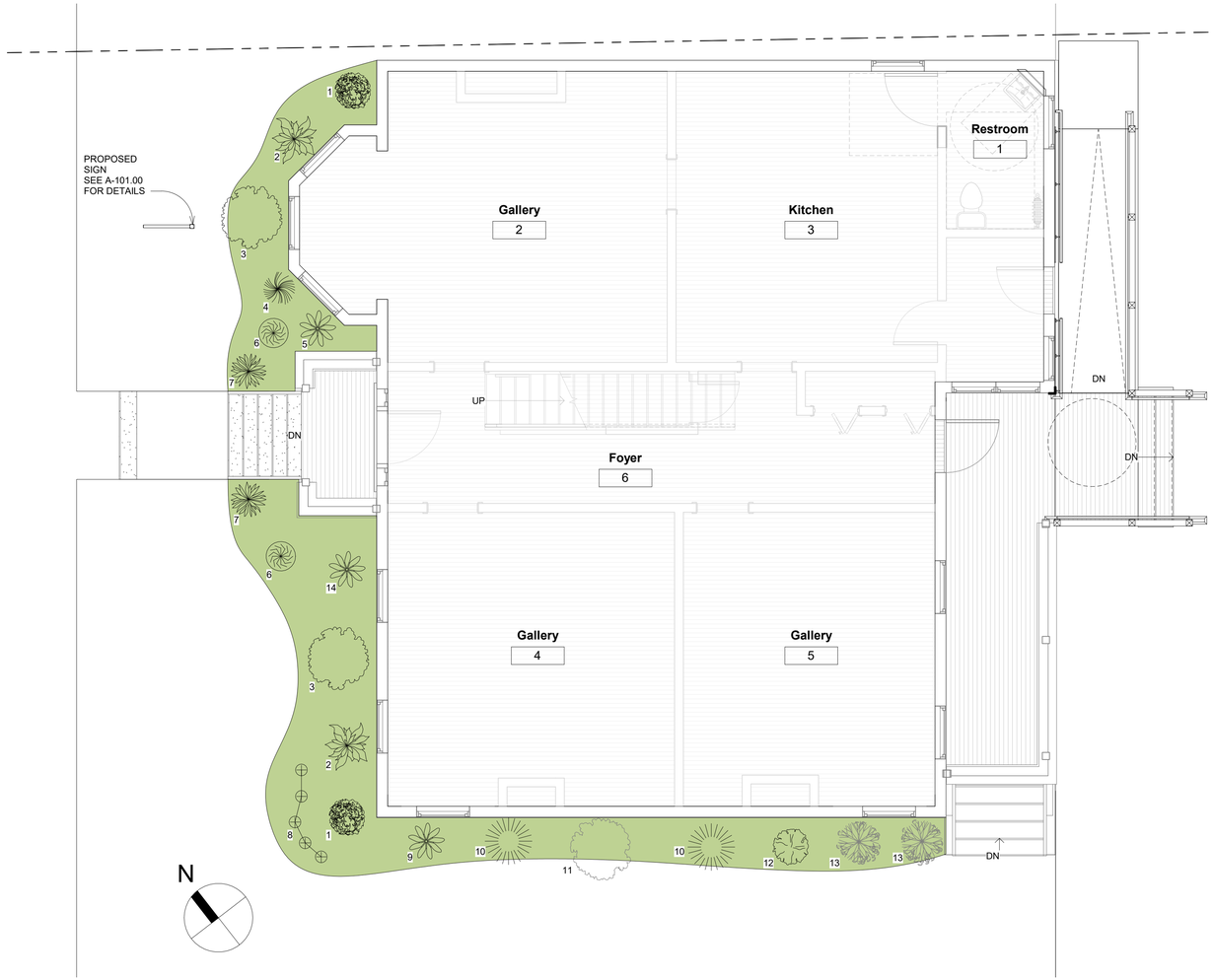
DRAWING NO.
A-001.00

SEAL & SIGNATURE

DATE: Issue Date
SCALE: As indicated
DWG BY: Author
CHK BY: Checker

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PLANTING SCHEDULE				
No.	Common Name	Scientific Name	Quantity	Comments
1	Steeds Japanese Holly	Ilex crenata 'Steeds	2	
2	Hidcote St Johnswort	Hypericum x hidcoteense	2	
3	Hybrid Maxi Rhododendron	Rhododendron maximum	2	
4	Dwarf Alberta Spruce	Picea glauca	1	
5	Black Eyed Susan	Rudbeckia hirta	1	
6	Purple Aster	Symphyotrichum patens patens	2	
7	Green Velvet Boxwood	B. sempervirens × B. microphylla var. koreana	2	
8	Variegated Liriope	Liriope Muscari Variegata	1	
9	Primrose Lilac	Syringa vulgaris	1	
10	Gold Mop Cypress	Chamaecyparis	2	
11	Rhododendron	Rhododendron ferrugineum	1	Existing
12	Traditional Azalea	Rhododendron	1	
13	Grasses	Elymus repens	2	Existing
14	Wine + Roses Wiegela	Weigela florida	1	



1 LANDSCAPE PLAN - LEVEL 1
1/4" = 1'-0"

BERG + MOSS ARCHITECTS PC
473 MAIN STREET No. 1
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

No.	Date	Description
3	12.22.20	Planning Board Review

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BEACON HISTORICAL SOCIETY
61 LEONARD ST,
BEACON, NEW YORK 12508

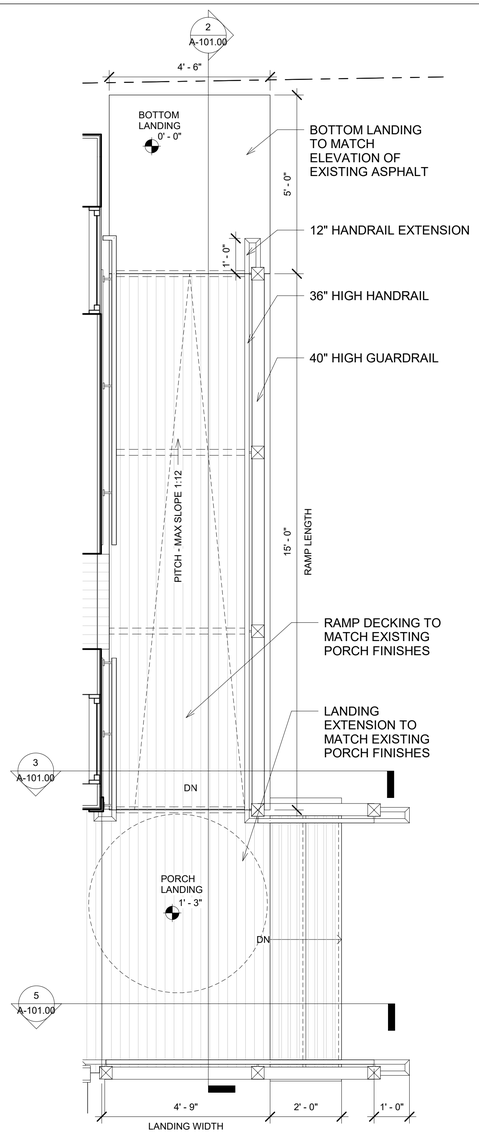
DRAWING TITLE
LANDSCAPE PLAN

DRAWING NO.
A-002.00

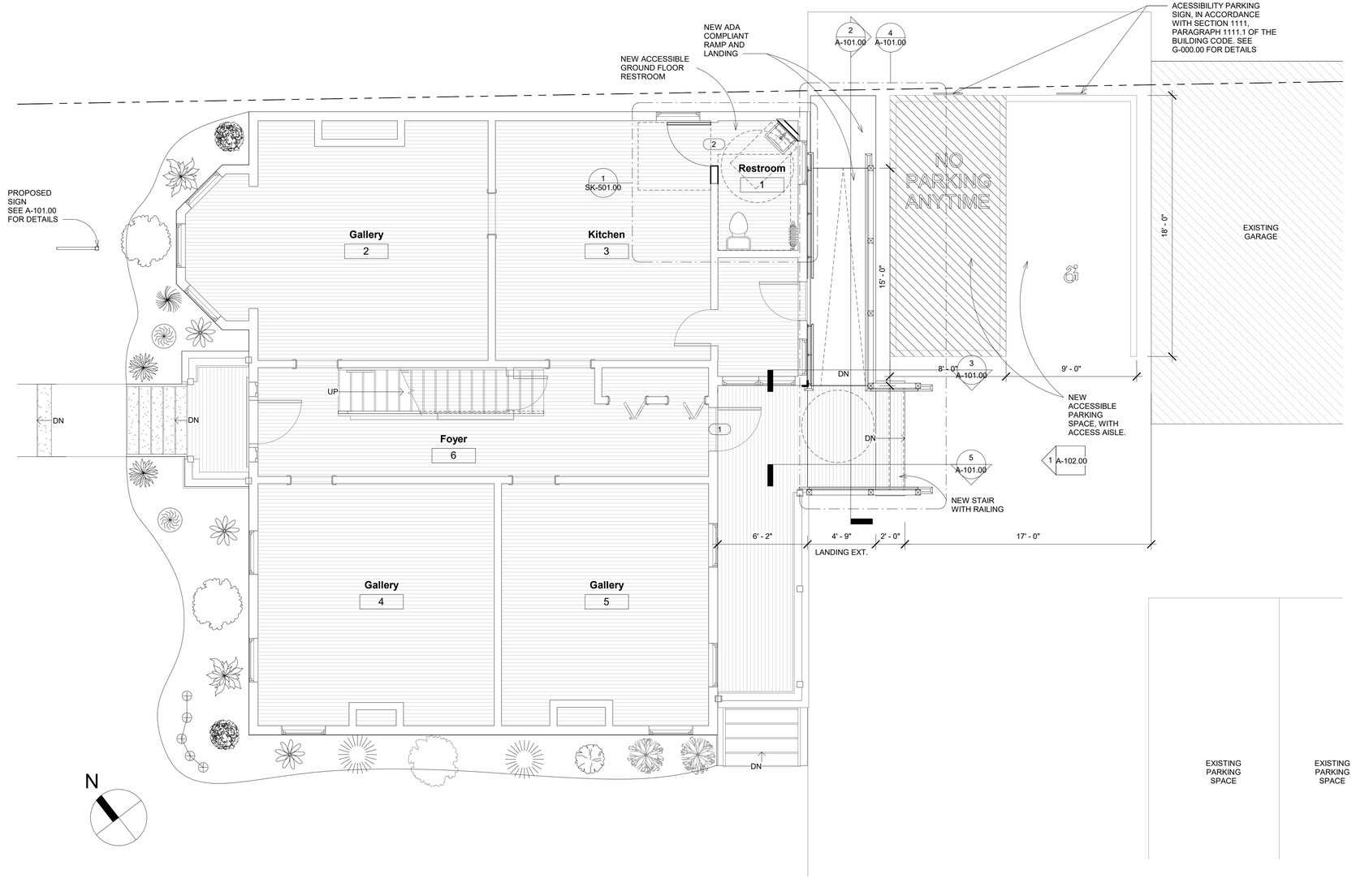
SEAL & SIGNATURE

DATE: Issue Date
SCALE: 1/4" = 1'-0"
DWG BY: Author
CHK BY: Checker

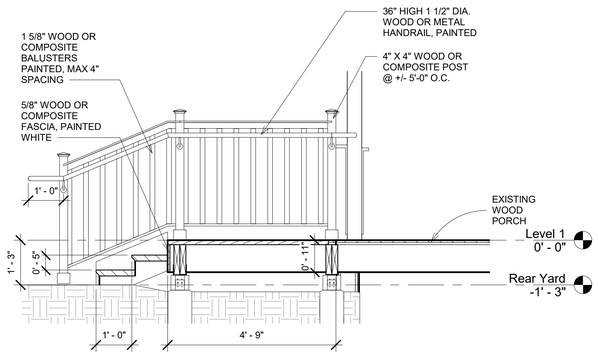
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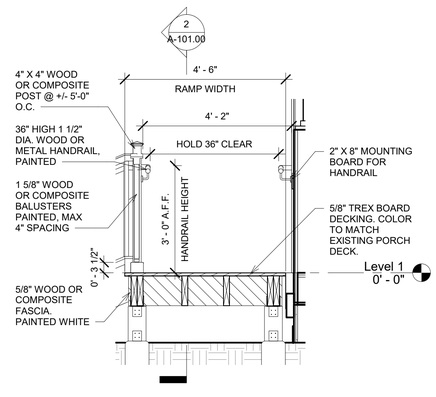
4 CONSTRUCTION PLAN - LEVEL 1 - Detail
1/2" = 1'-0"



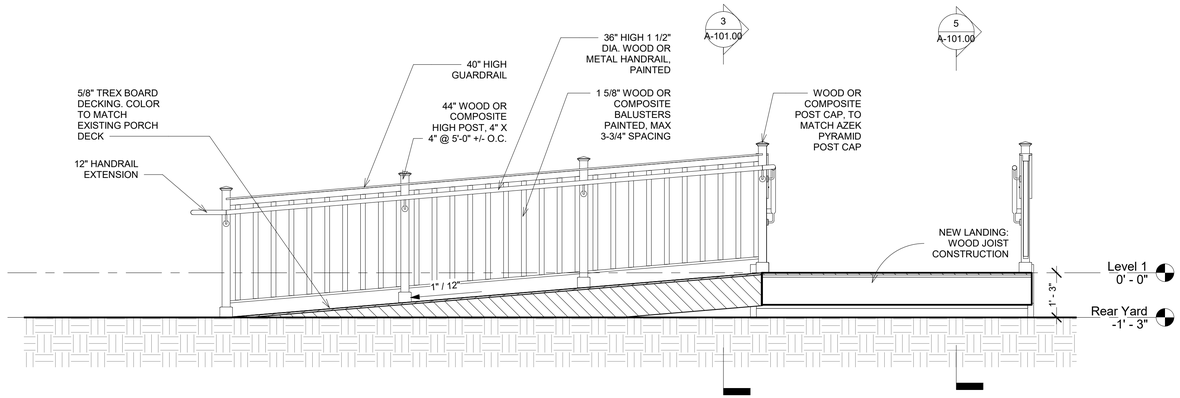
1 CONSTRUCTION PLAN - LEVEL 1
1/4" = 1'-0"



5 NEW STAIR AT BACK ENTRANCE
1/2" = 1'-0"



3 CROSS SECTION AT NEW RAMP
1/2" = 1'-0"



2 LONG SECTION AT RAMP
1/2" = 1'-0"

BERG + MOSS ARCHITECTS PC
473 MAIN STREET No. 1
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

No.	Date	Description
1	10.27.20	Planning Board Review
2	11.24.20	Public Hearing Review
3	12.22.20	Planning Board Review

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BEACON HISTORICAL SOCIETY
61 LEONARD ST,
BEACON, NEW YORK 12508

DRAWING TITLE
PROPOSED PLAN

DRAWING NO.
A-101.00

SEAL & SIGNATURE

DATE: Issue Date
SCALE: As indicated
DWG BY: Author
CHK BY: Checker

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EXTERIOR PAINT COLORS		
RAILINGS AND BAULSTERS:	BENJAMIN MOORE, HISTORICAL COLORS - WHITE, OC-151	
CIRCULAR HANDRAIL:	BENJAMIN MOORE, HISTORICAL COLORS - KENDALL CHARCOAL, HC-166	



FOR VISUALIZATIONS PURPOSES ONLY.

2 EXTERIOR BACK ENTRANCE



1 EAST ELEVATION
1/4" = 1'-0"

BERG + MOSS ARCHITECTS PC
473 MAIN STREET No. 1
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

No.	Date	Description
2	11.24.20	Public Hearing Review
3	12.22.20	Planning Board Review

THESE CAD FILES MAY NOT BE USED, DUPLICATED, MODIFIED OR CHANGED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF BERG + MOSS ARCHITECTS PC. THE USER AND ITS AGENTS WILL BE LIABLE FOR ANY UNAUTHORIZED USE, DUPLICATION, MODIFICATION OR CHANGE.

BEACON HISTORICAL SOCIETY
61 LEONARD ST,
BEACON, NEW YORK 12508

KEY PLAN
PROJECT NORTH

DRAWING TITLE
EXTERIOR DETAILS AND COLORS

DRAWING NO.
A-102.00

SEAL & SIGNATURE

DATE:	Issue Date
SCALE:	1/4" = 1'-0"
DWG BY:	Author
CHK BY:	Checker

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John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **61 Leonard Street, Beacon Historical Society Special Permit**

I have reviewed a response letter from Berg + Moss Architects and a 5-sheet Site Plan set, all dated December 22, 2020.

Proposal

The applicant is proposing to convert an existing building on a 1.3-acre church-owned parcel in the R1-5 district and Historic District and Landmark Overlay (HDLO) zone to offices and galleries for the Beacon Historical Society. The Planning Board may allow by Special Permit specialized uses of low traffic volume, normally associated with history, the arts, or cultural uses in the HDLO.

Comments and Recommendations

1. The Parking Hours Analysis on Sheet A-001 can be used by the Board to justify a shared use deduction under Section 223-26 C(6).

2. The applicant has addressed all my other previous comments, and I have no objection to Board consideration of an approval resolution that includes appropriate conditions.

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
Chris Berg, R.A., 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.

January 7, 2021

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

RE: Beacon Historical/St. Joachim
61 Leonard Street
Tax Parcel 6054-30-235786
City of Beacon

Dear Mr. Gunn:

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

- Response correspondence dated December 22, 2020, as prepared by Berg & Moss Architects.
- 5-Sheet plan set titled "Beacon Historical Society at the St. Joachim Rectory", last revised December 22, 2020, as prepared by Berg & Moss Architects.

The proposed project entails using the existing residential St. Joachim Rectory as a place of business for historic and cultural learning instruction for children and adults. The project site is located in the R1-5 Zone and is located in the Historic District and Landmark Overlay Zone. Based upon our review of the above documents and plans, we offer the following comments:

1. A "Parking Requirements" table has been added to the Cover Sheet, which outlines the required parking for the existing uses on the site, along with the proposed parking required for the Historical Society. Based upon the "Parking Hours Analysis" table on the 2nd sheet of the set, the Historical Society and the school would be operating at the same time, which would require a total of 28 spaces when both are in operation. As the site has 30 spaces available and there are 12 additional parking stalls along Leonard Street, we do not see any impact as to parking at the site while these two uses are in operation.

This completes our review at this time. Further comments may be forth coming based upon 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

(845) 294-3700 • P.O. Box 687, Route 207, Goshen, N.Y. 10924 • FAX (845) 294-8609
www.lanctully.com

City of Beacon Planning Board Agenda
01/12/2021

Title:

Continue review of application for Subdivision, one lot, 4 Liam Drive, submitted by West End Lofts II Associates

ATTACHMENTS

West End Lofts II - Liam Drive Cover Letter.pdf

West End Lofts II - Liam Drive Revised Subdivision Application.pdf

West End Lofts II - Liam Drive Preliminary Plat.pdf

West End Lofts II - Liam Drive Concept Site Plan.pdf

West End Lofts II - Liam Drive Townhomes Rendering.jpg

Planner Review Letter.pdf

Engineer Review Letter.pdf

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

December 29, 2020

City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

RE: West End Lofts II Subdivision
Beekman Street
Beacon, New York
Tax Parcel ID: 5954-26-684943

Dear Chairman Gunn and Members of the Board:

Enclosed please find three (3) copies of the following documents in support of the subject application:

- Preliminary Plat, revised December 29, 2020.
- Rendered Concept Plan for Lot 2.2, dated December 29, 2020.
- Rendering of the proposed future townhouse development.
- Revised Subdivision Application

With the new and revised materials provided with this submission, the applicant seeks to advance discussions with the Board regarding the proposed subdivision of the West End Lofts Associates II lot along Beekman Street. The provided code conforming Concept Site Plan and rendering for the proposed future townhouse development of lot 2.2 should help facilitate the dialogue.

In response to comments from John Clarke Planning and Design, received on October 9, 2020, we offer the following responses:

1. The existing contours have been added to the Preliminary Plat. The Concept Site Plan also includes some critical floor and spot elevations.
2. The proposed lot depth has been revised on the plat and on the enclosed Concept Site Plan to show conformance to the code.
3. A Concept Site Plan has been provided.
4. A LWRP consistency report will be provided with a future submission.

In response to comments received from John Russo of Lanc & Tully Engineering & Surveying, PC, dated October 6, 2020, we offer the following:

General Comments:

1. The project title on the application has been revised to match the title of the plat.
2. A Concept Site Plan has been submitted as requested.

Preliminary Subdivision Plat

1. Existing utilities have been added to the plat for parcels 2.1 and 2.2.

2. Utility easements and improvements will be modified and further detailed as the design of proposed lot 2.1 continues, but the stormwater easement shown would benefit lot 2.1, and the City Hall lot to the northeast.
3. Utility easements and improvements will be modified and further detailed as the design of proposed lot 2.1 continues, but the sewer easement shown would benefit the city as it would contain a sewer main that was dedicated to the municipality during the original West End Lofts project.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: _____
Jeffrey J. Contelmo, PE
Senior Principal Engineer

JJC/adt

Enclosures (all via email)

cc: Ken Kearney
Sean Kearney

Insite File No. 20215.100

APPLICATION FOR SUBDIVISION APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: West End Lofts Associates II

Address: 57 Rt. 6, Suite 207

Baldwin Place, NY 10505

Signature: _____

Date: 2/18/20

Phone: 845-306-7705

(For Official Use Only)

	Date	Initials
Preliminary Application Rec'd		
Application Fee:		
Public Hearing		
Preliminary Plat Approved:		
Final Plat Approved:		
Recreation Fee:		
Performance Bond:		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: Jeffery J. Contelmo, P.E.

Address: Insite Engineering, Surveying & Landscape Architectur, P.C.

3 Garrett Place, Carmel, NY 10512

Phone: 845-225-9690

Fax: 845-225-9717

Email address: jcontelmo@insite-eng.com

IDENTIFICATION OF SUBJECT PROPERTY:

Subdivision name or identifying title:

West End Lofts Associates II

Street which property abuts: Beekman Street

Current Tax Map Designation: Section 5954 Block 26 Lot(s) 684943

Property (does) (does not) connect directly into a (State) (County) highway.

Land in subdivision (is) (is not) within 500 feet of a Municipal boundary.

Total area of property is 1.16 ac+/-

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** copies of a subdivision plat showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

c. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

APPLICATION FEES

Site Plan	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Special Use Permit	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Subdivision	$ 750 for 2-4 lots + $100 per lot $1,000 for 5 or more lots + $300 per lot
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

* *if required by Chairman*	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)*

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: West End Lofts II Associates c/o Ken Kearney

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.
Ken Kearney, Sean Kearney, Brett Kearney, Brian Kearney

List all properties in the City of Beacon that you hold a 5% interest in:

Applicant Address: 57 Route 6, Suite 207, Baldwin Place, NY 10505

Project Address: 4 Liam Drive, Beacon, NY 12508

Project Tax Grid # 130200-5954-26-684943

Type of Application Subdivision

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, Ken Kearney, 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 X
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon X
3. ALL tax payments due to the City of Beacon are current X
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon X
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon X
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current X

Signature of Owner

Vice President

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	___	___	_____
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)	___	___	_____
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)	___	___	_____

CITY OF BEACON
PRELIMINARY SUBDIVISION PLAT
AND CONSTRUCTION PLANS SPECIFICATION FORM

Name of Application: West End Lofts Associates II

PRELIMINARY SUBDIVISION PLAT	YES	NO
The preliminary plat shall be clearly marked "Preliminary Plat", shall be drawn to a convenient scale but not less than 1" = 100', and shall contain the following information:	X	
Proposed subdivision name or identifying title, name, and address of property owner and subdivider (if other than owner), name and address of the surveyor and/or engineer preparing the plan, scale, approximate true North point, and date.	X	
The approximate location and dimensions of all property lines, the total acreage of the proposed subdivision, the location of any zoning, special district or municipal boundary lines affecting the subdivision, and the names of owners of record of properties adjoining and directly across the street from proposed subdivision.	X	
The location of all existing structures and pertinent features, including railroads, water bodies, water courses, wetlands, rock outcroppings, wooded areas, major trees, and stone walls, that may influence the design of the subdivision, plus accurate topography at a vertical contour interval of not more than two (2) feet. The topographic data shall be determined by field survey unless the Planning Board specifically waives this requirement and/or permits the substitution of topographic information obtained from other sources determined satisfactory for the particular case.	X	
The location and status of existing streets or private roads, easements and rights-of-way (if any), proposals for the layout of new streets or private roads (including widths and approximate curve radii) and any proposed easements, rights-of-way and/or reservations.	X	
The names of existing streets or private roads and proposed names for new streets or private roads.	x	
The proposed arrangement of lots, including identifying numbers and approximate area and dimensions of each.	X	
Location, size and nature of any area proposed to be reserved for park purposes.	N/A	
A site location sketch, at a scale of one inch equals 400 feet, showing the general situation within 1,000 feet of the applicant's property with respect to surrounding properties, streets and private roads.	X	
Where the preliminary plat includes only a portion of an applicant's contiguous holding, the applicant shall also indicate, on a sketch at a scale of not less than one inch equals 200 feet, the probable future street or private road system, lot arrangement and location of park and other reservations for the remaining portion of the tract. Such sketch shall be for the purpose of guiding the Planning Board in reviewing the proposed preliminary plat and shall include topographic data with a vertical contour interval of not more than five feet plus any other information determined necessary by the Planning Board.	X	
Such additional information as may be required by Chapter 195 – Subdivision of Land; Chapter 223 – Zoning; or the Planning Board.	X	

FOR OFFICE USE ONLY
Application #

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: West End Lofts II Associates

Address of Applicant: 57 Route 6, Suite 207, Baldwin Place, NY 10505

Telephone Contact Information: 845-306-7705

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.
Ken Kearney	57 Route 6, Suite 207, Baldwin Place, NY 10505	845-306-7705	11/12/2018 Bargain & Sale Deed	Dutchess County Clerk's Office
Sean Kearney	57 Route 6, Suite 207, Baldwin Place, NY 10505	845-306-7705	11/12/2018 Bargain & Sale Deed	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 Kearney being first duly sworn, according to law, deposes and says that the statements made herein are true, accurate, and complete.

(Print) Sean Kearney

(Signature) _____

FOR OFFICE USE ONLY
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
West End Lofts II Associate LLC	57 Route 6, Suite 207 Baldwin Place, NY 10505
Place where such business entity was created New York	Official Registrar's or Clerk's office where the documents and papers creating entity were filed NYS Division of Corporations & Records, Albany NY
Date such business entity or partnership was created 10/30/2018	Telephone Contact Information

IF AFFIANT IS A CORPORATION:

Name of Entity	Telephone Contact Information
West End Lofts II Associates, LLC	845-306-7705
Principal Place of Business of Entity New York	Place and Date of incorporation New York, 10/30/2018
Method of Incorporation	Official place where the documents and papers of incorporation were filed

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

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.

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

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

_____

_____

_____

SECTION I. If the applicant is a contract vendee, a duplicate original or photocopy of the full and complete contract of purchase, including all riders, modification and amendments thereto, shall be submitted with the application. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J.

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted:

Name of the Corporation West End Lofts II Associates, LLC	Telephone Contact Information 845-306-7705
Principal Business Address New York	Place and Date of Incorporation Albany, NY 10/30/2018
Method of Incorporation	Official place where the documents and papers of incorporation were filed

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**
Ken Kearney	57 Route 6, Suite 207 Baldwin Place NY 10505	845-306-7705
Sean Kearney	57 Route 6, Suite 207 Baldwin Place, NY 10505	845-306-7705

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.

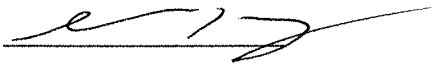
Name	**Address**

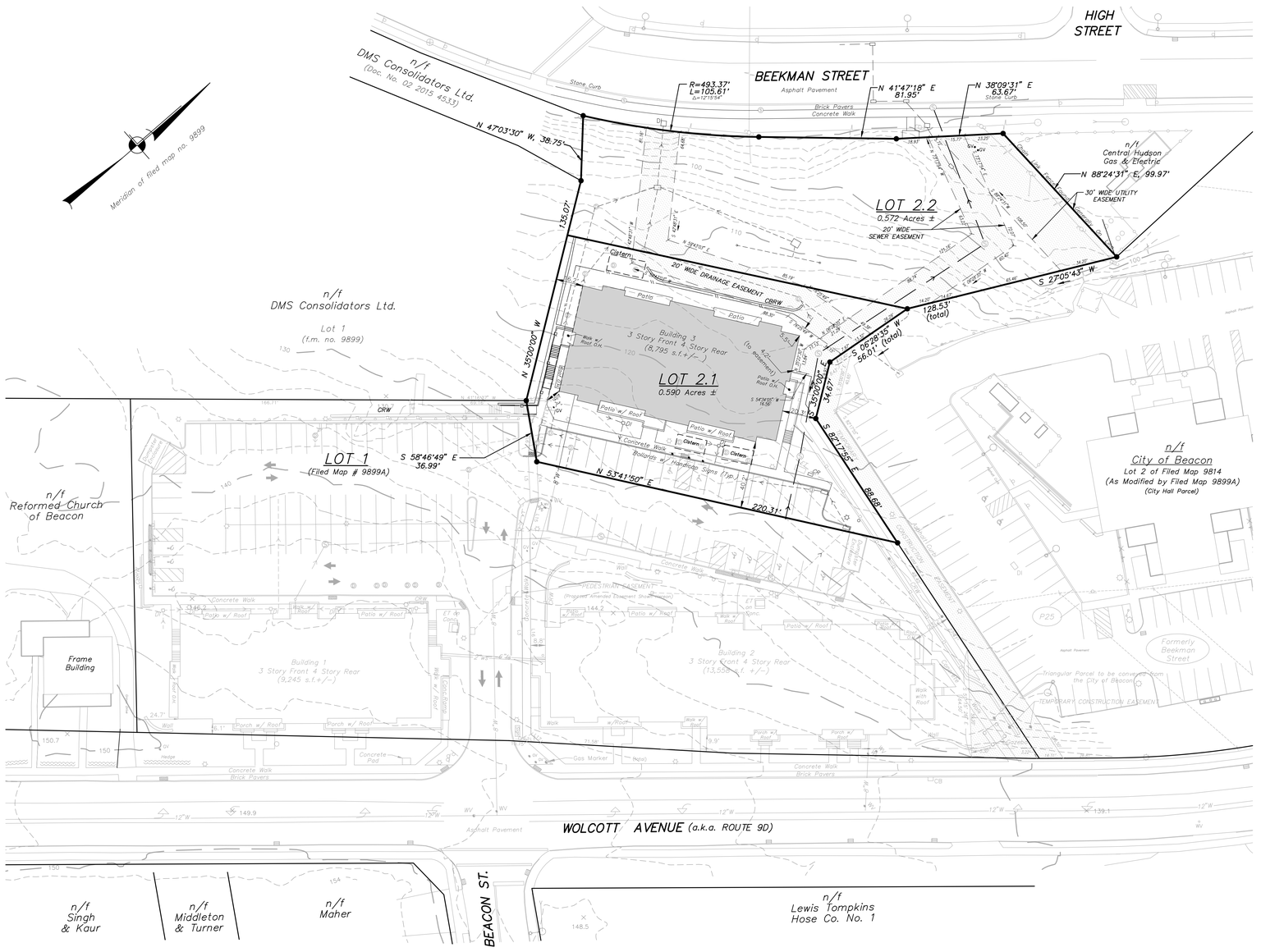
SECTION K. Have the present owners entered into a contract for the sale of all or any part of the subject property and, if in the affirmative, please provide a duplicate original or photocopy of the fully and complete contract of sale, including all riders, modifications and amendments thereto.

☐ **YES** ☒ **NO**

I, Sean Kearney being first duly sworn, according to law, deposes and says that I am (Title) Vice-President, an active and qualified member of the West End Lofts Associate, LLC, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

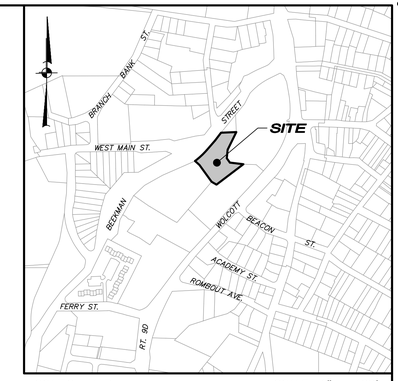
(Print) Sean Kearney

(Signature) 



LEGEND

- Existing & Proposed Realigned Property Line
- Chain Link Fence
- ADA Pad — Americans with Disabilities Act Detectable Pad
- Drainage Manhole
- Sewer Manhole
- Catch Basin
- Drain Inlet
- Lightpole
- Utility Pole (with Overhead Wires)
- Gas Valve
- Sign
- Handicap Parking Space



LOCATION MAP — SCALE: 1" = 400'±

OWNER/APPLICANT:

West End Lofts Associates II
c/o The Kearney Realty Development Group, Inc.
57 Route 6, Suite 207
Baldwin Place, New York 10505

SITE DATA:

Zone: L (LINKAGE DISTRICT)
Total Acreage1.162 AC.±
Tax Map No.: 5954-26-684943

GENERAL NOTES:

Filed Map References

1. "Final Subdivision Plat prepared for Beacon Ridge Associates, Inc." filed June 7, 1994 as map no. 9899.
   Subject Lot: 2
2. "Subdivision Plat of Parcel W prepared for Beacon Ridge Associates, Inc." filed December 6, 1993 as map no. 9814.
   Subject Lot: 2
3. "Final Plat prepared for The West End Lofts, etc." filed March 27, 2018 as map no. 9899A.

Deed References

1. Liber 1945, page 119; recorded June 10, 1994.
   Grantee: City of Beacon
   (Lot 2 Filed Map No. 9899)

SURVEY NOTES:

The survey fieldwork for Lots 1 and 2 of filed map 9899A shown hereon was completed on April 24, 2020.

Additional supplemental planimetric fieldwork for the City Hall property was performed by Insite Engineering & Landscape Architecture, P.C., completed December 21, 2017.

Underground structures, if any exist, not shown hereon, except as noted. The location of underground improvements or encroachments are not always known and often must be estimated. If any, underground improvements or encroachments are not covered by this certificate.

Walcott Avenue, a.k.a. N.Y.S. Route 9D (S.H. 85-1), and Beekman Street (as realigned) are variable width rights of way

This map may not be used in connection with a "Survey Affidavit" or similar document, statement or mechanism to obtain title insurance for any subsequent or future grantees.

Unauthorized alteration or addition to this survey is a violation of Section 7209, subdivision 2 of the New York State Education Law.

According to New York State Association of Professional Land Surveyors policy adopted January 23, 1993, the alteration of survey maps by anyone other than the original preparer is misleading, confusing and not in the general welfare and benefit of the public. Licensed Land Surveyors shall not alter survey maps, survey plans, or survey plats prepared by others.

LOT 2.1 ZONING REQUIREMENTS:

	Required/Permitted:	Proposed:
Lot Depth:	75'	136'
Front Yard Setback:	0' – 20'	40' Existing
Side Yard Setback:	0' – 30'	21'
Rear Yard Setback:	25'	25'
Building Height:	2 – 4 stories / 48' max.	3 – 4 stories
Landscaped Area:	15 % min.	32 %

LOT 2.2 ZONING REQUIREMENTS:

	Required/Permitted:	Proposed:
Lot Depth:	75'	79.9'
Front Yard Setback:	0' – 20'	TBD
Side Yard Setback:	0' – 30'	TBD
Rear Yard Setback:	25'	TBD
Building Height:	2 – 4 stories / 48' max.	TBD
Landscaped Area:	15 % min.	TBD

Curve Tabel (Beekman Street)

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	47.30'	493.37'	5°29'34"	S 44°32'05" W	47.28'
C2	20.01'	493.37'	2°19'24"	N 48°26'34" E	20.00'
C3	38.31'	493.37'	4°26'55"	N 51°49'44" E	38.30'

Line Table (Pedestrian Easement)

LINE	BEARING	DISTANCE
L1	S 44°14'19" W	8.13'
L2	S 82°10'09" W	3.41'
L3	N 49°13'08" W	124.18'
L4	N 33°07'16" W	18.24'
L5	N 51°23'09" W	26.33'
L6	N 43°02'27" W	19.72'
L7	N 28°18'23" W	5.77'
L8	S 40°47'12" W	74.50'
L9	N 48°43'23" W	8.59'
L10	N 41°16'37" E	12.35'
L11	S 35°00'00" E	10.28'
L12	S 28°18'23" E	4.82'
L13	S 43°02'27" E	18.71'
L14	S 51°23'09" E	26.77'
L15	S 33°07'16" E	18.33'
L16	S 49°13'08" E	121.21'
L17	N 82°10'09" E	7.56'

GRAPHIC SCALE
0 15 30 60
(IN FEET)
1 inch = 30 ft.

Preliminary Plat

Prepared for the

West End Lofts Associates II

Situate in the

City of Beacon
Dutchess County, New York

Date: September 29, 2020
Revised: December 29, 2020

Engineering and Land Surveying by Insite Engineering, Surveying & Landscape Architecture, P.C.			City of Beacon Endorsement	Dutchess County Health Department	Consent to File
Professional Engineer	Professional Land Surveyor	Land Surveyor's Certification			
		I hereby certify that the survey shown hereon was completed on December 21, 2017; that this map was completed March 21, 2018; and that this survey has been prepared in accordance with the existing Code of Practice for Land Surveys as adopted by the New York State Association of Professional Land Surveyors, Inc. NICHOLAS G. CHAPIS, L.S. New York State License No. 049330	Approved by Resolution of the Planning Board of the City of Beacon, New York, on the ____ day of _____ , 20__ subject to all requirements ad 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	This plan does not constitute a realty subdivision as defined by Article XI, Title II of Section 1116 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. Date:_____ Authorized Representative of the Commissioner of Health	The undersigned owners of the properties shown hereon herein certify that they are familiar with this map and its notes and its contents as stated hereon, including all conditions of approval. The owners understand their obligation to the City to comply with all conditions of subdivision approval and consent to the filing of this map in the Office of the Dutchess County Clerk. Owner: _____ Date: _____ West End Lofts Associates II

Prepared by:
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place • Carmel, New York 10512
Phone (845) 225-9690 • Fax (845) 225-9717
www.insite-eng.com

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ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

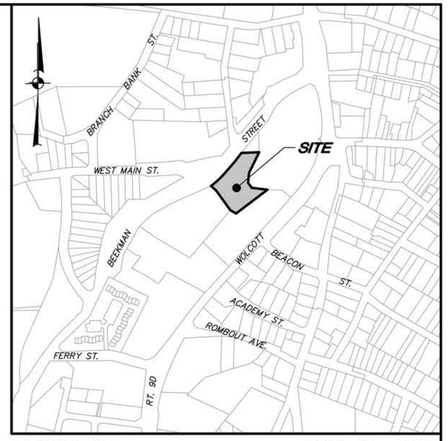
Z:\CAD\20200 Kearney Beekman St\AUX\PP\Plat\Cad's of Survey\20215_ALT1.DGS 29 Plot by 12/29/2020 9:33:51 AM -cPeyton 3.1

ZONE REQUIREMENTS
ZONE L: LINKAGE DISTRICT

	REQUIRED	PROPOSED
Front Yard Setback:	0'–20'	0'
Side Yard Setback:	0'–30'	12'
Rear Yard Setback:	25' Minimum	30'
Building Average Maximum Height:	4 Stories / 48'	< 4 Stories / 48'
Building Height Minimum:	2 Stories	> 2 Stories
Minimum Lot Depth:	75'	79.7'
Minimum Landscaped Area:	15%	36%
Parking Setbacks:		
Front:	40'	41'
Rear:	10'	10'

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING FENCE
- EXISTING UTILITY POLES WITH OVERHEAD WIRES
- EXISTING SIGN
- EXISTING POST MOUNTED LIGHT
- EXISTING LIGHT POLE
- (9) PROPOSED # OF STALLS TO BE STRIPED
- PROPOSED CONCRETE CURB
- PROPOSED RETAINING WALL



LOCATION MAP SCALE: 1" = 400'±

BEEKMAN STREET

Asphalt Pavement

Stone Curb

Brick Pavers

Concrete Walk

R=493.37'
L=105.61'
Δ=12°15'54"

N 41°47'18" E
81.95'

N 38°09'31" E
63.67'

N 88°24'31" E
99.97'

S 17°03'30" W
38.75'

135.07'

FFE 94.0

FFE 104.0

PROPOSED 3 UNIT TOWNHOUSE

PROPOSED REAR PATIO (TYP.)

PROPOSED RETAINING WALLS (6' MAX)

TW 104.0
BW 92.0

TW 93.0
BW 92.0

PROPOSED PROPERTY LINE

LOT 2.1
0.590 Acres ±

LOT 2.2
0.572 Acres ±

Patio

Patio

CBRW

Walk w/ Roof O.H.

Building 3
3 Story Front 4 Story Rear
(8,795 s.f.+/–)

128.53'
(total)

S 27°05'43" W

S 06°28'35" W
56.01' (total)

n/f
Central Hudson
Gas & Electric

n/f
City of Beacon

GRAPHIC SCALE
0 5 10 20
(IN FEET)
1 inch = 10 ft.

OWNER/APPLICANT:

West End Lofts Associates II
c/o The Kearney Realty Development Group, Inc.
57 Route 6, Suite 207
Baldwin Place, New York 10505

SITE DATA:

Zone: L (LINKAGE DISTRICT)
Total Acreage0.572 AC.±
Tax Map No.: 5954–26–684943

GENERAL NOTES:

Filed Map References

1. "Final Subdivision Plat prepared for Beacon Ridge Associates, Inc." filed June 7, 1994 as map no. 9899. Subject Lot: 2
2. "Subdivision Plat of Parcel W prepared for Beacon Ridge Associates, Inc." filed December 6, 1993 as map no. 9814. Subject Lot: 2
3. "Final Plat prepared for The West End Lofts, etc." filed March 27, 2018 as map no. 9899A.

NO.	DATE	REVISION	BY

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite-eng.com

PROJECT:
WEST END LOFTS ASSOCIATES II
BEEKMAN STREET, CITY OF BEACON, DUTCHESS COUNTY, NY

DRAWING:
CONCEPT SITE PLAN

PROJECT NUMBER	20215.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	12–29–20	DRAWN BY	E.R.A.	CP–1	1 / 1
SCALE	1" = 10'	CHECKED BY	A.D.T.		

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\LE\20215100 Kearney Beekman St\CP-1.dwg, 12/29/2020 9:07:39 AM, eagerjones, 1:1



John Clarke Planning and Design jclarkeplandesign@gmail.com
25 Beech Street, Rhinebeck NY 12572 845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **West End Lofts II Subdivision**

I reviewed a December 29, 2020 cover letter from Insite Engineering, December 29, 2020 Concept Site Plan with street view rendering, and December 29, 2020 Preliminary Plat.

Proposal

The applicant is proposing to subdivide a 1.16-acre parcel in the Linkage (L) District and within the Local Waterfront Revitalization Program (LWRP) boundary. The new 0.572-acre lot is intended for the future development of townhouses.

Comments and Recommendations

1. The Concept Plan is consistent with the purposes section and other provisions in the Linkage district. Specific comments include:
    a. There is no minimum rear setback for parking in the L district parking requirements.
    b. The back-up area of the parking lot should be 24 feet deep.
    c. The sidewalk from the parking area should be at least 4 feet wide.
    d. The streetscape section of the L district encourages the planting of street trees along the frontage every 30 - 40 feet.
    e. The new curb cut will have to be coordinated with the City and Metro-North because the driveway will eliminate a number of assigned on-street parking spaces.
    f. It would be preferable for the overhead wires along the frontage, which end at the southern boundary of the parcel, be eliminated as part of the development.
2. Since the proposal is within the City's LWRP boundary, the applicant should provide a consistency justification 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 more information, please feel free to contact me.

John Clarke, Beacon City 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
Jeffery J. Contelmo, 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 Lanc, P.E., L.S.
Arthur R. Tully, P.E.

January 7, 2021

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

RE: West End Lofts Associates II
Subdivision
Tax Parcel 5954-26-684943
City of Beacon

Dear Mr. Gunn:

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

- Correspondence from INSITE Engineering dated December 29, 2020.
- Application for Subdivision Approval.
- Plan titled "Preliminary Plat prepared for the West End Lofts Associates II", with the latest revision date of December 29, 2020, as prepared by INSITE Engineering.
- Plan titled "West End Lofts Associates II – Concept Site Plan", dated December 29, 2020, as prepared by INSITE Engineering.
- Colored rendering of street view.

Based upon our review of the above documents and plan, we offer the following comments:

General Comments:

1. A sand filter storm water system is currently located on proposed Lot 2.2 that was constructed as part of the original West End Lofts project to handle stormwater from the original West End Lofts project. The applicant should clearly show how the stormwater that is conveyed to this constructed stormwater facility will be handled in the future.

2. An existing 20-foot wide storm water easement for the City of Beacon runs through the proposed parcel and directly through last two proposed units on the south-west side of the site. Future plans shall show how this will be addressed.

3. Future plans shall show the proposed grading for the proposed project, along with top and bottom elevations along the proposed retaining walls.

4. As the neighboring parcel to the south-west had a significant amount of rock, we would recommend that soil boring or test pits be conducted across the proposed parcel to determine the depth to bedrock.

5. A parking calculation table should be provided on the plan.

6. The proposed utilities (water, sewer, gas, etc.) to service the proposed buildings should be shown on the plan along with the existing utilities within Beekman Street. Based upon the utility layout, the conceptual landscaping provided my need to be revised to ensure that trees are not planted over the utilities.

This completes our review at this time. Further comments may be forth coming 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
01/12/2021

Title:

Review application for Site Plan Approval, small cell wireless facility on new pole and one antenna, 7 Cross Street, submitted by Verizon Wireless of the East, LP (dba Verizon Wireless)

ATTACHMENTS

Cliff&Willow_CityApplication_20201209.pdf

Planner Review Letter.pdf

Engineer Review Letter.pdf

PLANNING BOARD
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

In the Matter of the Application of

VERIZON WIRELESS OF THE EAST LP
d/b/a Verizon Wireless

Installation of New Light Pole and One Antenna - 7 Cross Street
City of Beacon, Dutchess County, New York

APPLICATION FOR SMALL CELL PERMIT and STATEMENT OF INTENT

Submitted by:

Verizon Wireless
Kathy Pomponio, Real Estate Market Manager
1275 John Street, Suite 100
West Henrietta, New York 14586
(585) 321-5435

Tectonic Engineering & Surveying Consultants, P.C.
Steven Matthews, P.E.
36 British American Blvd, Suite 101
Latham, New York 12110
(518) 783-1630

Network Building + Consulting
Chris Borncamp, Site Acquisition Specialist
6095 Marshalee Drive, Suite 300
Elkridge, Maryland 21075
(315) 415-0369

Young/Sommer LLC
Scott P. Olson, Esq.
Executive Woods
Five Palisades Drive
Albany, New York 12205
(518) 438-9907

Dated: December 9, 2020

APPLICATION FOR SITE PLAN APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: Verizon Wireless of the East LP

Address: 1275 John St., Suite 100
West Henrietta, NY 14586

Signature: Scott Olson, Atty for Applicant

Date: 12/2/2020

Phone: 518-527-6813

(For Official Use Only)

	Date	Initials
Application & Fee Rec'd		
Initial Review		
Public Hearing		
Conditional Approval		
Final Approval		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: Young Sommer LLC (Scott Olson)

Address: 5 Palisades Dr.
Albany, NY 12205

Phone: 518-438-9907 Ext. 258

Fax: 518-438-9914

Email address: Solson@youngsommer.com

IDENTIFICATION OF SUBJECT PROPERTY:

Property Address: 7 Cross Street

Tax Map Designation: Section 59.54 Block 27 Lot(s) 78978

Land Area: 48 sf Zoning District(s) PB

DESCRIPTION OF PROPOSED DEVELOPMENT:

Proposed Use: Installation of small cell facility including a 49.9' wooden utility pole

Gross Non-Residential Floor Space: Existing N/A Proposed N/A

TOTAL: N/A

Dwelling Units (by type): Existing N/A Proposed N/A

TOTAL: N/A

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** paper copies of a site location sketch showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. One electronic and five (5) **folded** paper copies of the proposed site development plan, consisting of sheets, showing the required information as set forth on the back of this form and other such information as deemed necessary by the City Council or the Planning Board to determine and provide for the property enforcement of the Zoning Ordinance.

c. One electronic and five (5) **folded** paper copies of additional sketches, renderings or other information.

d. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

e. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

INFORMATION TO BE SHOWN ON SITE LOCATION SKETCH

a. Property lines, zoning district boundaries and special district boundaries affecting all adjoining streets and properties, including properties located on the opposite sides of adjoining streets.
b. Any reservations, easements or other areas of public or special use which affect the subject property.
c. Section, block and lot numbers written on the subject property and all adjoining properties, including the names of the record owners of such adjoining properties.

INFORMATION TO BE SHOWN ON THE SITE DEVELOPMENT PLAN

a. Title of development, date and revision dates if any, north point, scale, name and address of record owner of property, and of the licensed engineer, architect, landscape architect, or surveyor preparing the site plan.
b. Existing and proposed contours at a maximum vertical interval of two (2) feet.
c. Location and identification of natural features including rock outcrops, wooded areas, single trees with a caliper of six (6) or more inches measured four (4) feet above existing grade, water bodies, water courses, wetlands, soil types, etc.
d. Location and dimensions of all existing and proposed buildings, retaining walls, fences, septic fields, etc.
e. Finished floor level elevations and heights of all existing and proposed buildings.
f. Location, design, elevations, and pavement and curbing specifications, including pavement markings, of all existing and proposed sidewalks, and parking and truck loading areas, including access and egress drives thereto.
g. Existing pavement and elevations of abutting streets, and proposed modifications.
h. Location, type and design of all existing and proposed storm drainage facilities, including computation of present and estimated future runoff of the entire tributary watershed, at a maximum density permitted under existing zoning, based on a 100 year storm.
i. Location and design of all existing and proposed water supply and sewage disposal facilities.
j. Location of all existing and proposed power and telephone lines and equipment, including that located within the adjoining street right-of-way. All such lines and equipment must be installed underground.
k. Estimate of earth work, including type and quantities of material to be imported to or removed from the site.
l. Detailed landscape plan, including the type, size, and location of materials to be used.
m. Location, size, type, power, direction, shielding, and hours of operation of all existing and proposed lighting facilities.
n. Location, size, type, and design of all existing and proposed business and directional signs.
o. Written dimensions shall be used wherever possible.
p. Signature and seal of licensed professional preparing the plan shall appear on each sheet.
q. Statement of approval, in blank, as follows:

Approved by Resolution of the Beacon Planning Board
on the _____ day of _____, 20_____
subject to all conditions as stated therein

_____ _____
Chairman, City Planning Board **Date**

APPLICATION FEES

Site Plan	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Special Use Permit	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Subdivision	$ 750 for 2-4 lots + $100 per lot $1,000 for 5 or more lots + $300 per lot
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

* *if required by Chairman*	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)*

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

CITY OF BEACON
SITE PLAN SPECIFICATION FORM

Name of Application: Verizon Wireless Cliff and Willow

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:	X	
LEGAL DATA		
Name and address of the owner of record.	X	
Name and address of the applicant (if other than the owner).	X	
Name and address of person, firm or organization preparing the plan.	X	
Date, north arrow, and written and graphic scale.	X	
NATURAL FEATURES		
Existing contours with intervals of two (2) feet, referred to a datum satisfactory to the Planning Board.		X
Approximate boundaries of any areas subject to flooding or stormwater overflows.		X
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.		X
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.	X	
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.	X	
Other existing development, including fences, retaining walls, landscaping, and screening.	X	
Sufficient description or information to define precisely the boundaries of the property.	X	
The owners of all adjoining lands as shown on the latest tax records.	X	
The locations, names, and existing widths of adjacent streets and curb lines.	X	
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.	X	

PROPOSED DEVELOPMENT	YES	NO
The location, use and design of proposed buildings or structural improvements.	X	
The location and design of all uses not requiring structures, such as outdoor storage (if permitted), and off-street parking and unloading areas.	X	
Any proposed division of buildings into units of separate occupancy.		X
The location, direction, power, and time of use for any proposed outdoor lighting.	X	
The location and plans for any outdoor signs.	X	
The location, arrangement, size(s) and materials of proposed means of ingress and egress, including sidewalks, driveways, or other paved areas.	X	
Proposed screening and other landscaping including a planting plan and schedule prepared by a qualified individual or firm.	X	
The location, sizes and connection of all proposed water lines, valves, and hydrants and all storm drainage and sewer lines, culverts, drains, etc.		X
Proposed easements, deed restrictions, or covenants and a notation of any areas to be dedicated to the City.	X	
Any contemplated public improvements on or adjoining the property.		X
Any proposed new grades, indicating clearly how such grades will meet existing grades of adjacent properties or the street.		X
Elevations of all proposed principal or accessory structures.	X	
Any proposed fences or retaining walls.	X	
MISCELLANEOUS		
A location map showing the applicant's entire property and adjacent properties and streets, at a convenient scale.	X	
Erosion and sedimentation control measures.		X
A schedule indicating how the proposal complies with all pertinent zoning standards, including parking and loading requirements.	X	
An indication of proposed hours of operation.		X
If the site plan only indicates a first stage, a supplementary plan shall indicate ultimate development.		X

For all items marked "NO" above, please explain below why the required information has not been provided:

The natural features listed above (contours, flood areas, significant natural features) do not apply to this project as there are no such features on the parcel.

Proposed division of building is not applicable and therefore not shown on the plans.

Water, storm, and sewer utilities are not required for the project (unmanned facility).

We are not aware of any anticipated public improvements therefore none are shown.

Proposed new grades are not shown because the project location is on a flat portion of the parcel and no grade changes are required for this installation.

Erosion and sediment control measures are not applicable due to the very small size of the project area (48 square feet)

Proposed hours of operation are not noted (unmanned facility).

Phased development is not applicable.

Applicant/Sponsor Name: Steven Matthews, Tectonic, Engineer on behalf of Applicant

Signature: *Steven Matthews*

Date: December 7, 2020

PLANNING BOARD of the CITY of BEACON,
DUTCHESS COUNTY, NEW YORK

In the Matter of the Small Cell Permit Application of

VERIZON WIRELESS OF THE EAST LP d/b/a Verizon Wireless

Premises: 7 Cross Street
Beacon, Dutchess County, New York

STATEMENT OF INTENT and
APPLICATION FOR SMALL CELL PERMIT

I. Introduction

VERIZON WIRELESS OF THE EAST LP d/b/a Verizon Wireless ("Verizon Wireless" or the "Applicant") proposes to install a new small cell facility, inclusive of one antenna and related ground-mounted equipment on a new decorative pole designed to look like a street lamp pole in the vicinity of 7 Cross Street ("Project").

Verizon Wireless is considered a public utility under New York decisional law (*Cellular Telephone Company v. Rosenberg*, 82 N.Y.2d 364 (1993)) [Exhibit 1], and a provider of "personal wireless services" under the federal Telecommunications Act of 1996 (the "TCA") [Exhibit 2]. Verizon Wireless' equipment will be in operation twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year. Copies of the applicable Verizon Wireless FCC licenses are included herewith Exhibit 3.

In *Rosenberg*, this State's highest Court determined that the ordinary variance standard is inapplicable and a cellular telephone company applying for a variance need only show that (1) the variance is "required to render safe and adequate service," and (2) there are "compelling reasons, economic or otherwise," for needing the variance. *Cellular Telephone Company v. Rosenberg*, 82 N.Y.2d 364, 372 (1993). Verizon Wireless respectfully submits this Statement of Intent in support of its application for Small Cell Permit.

The proposed Project involves installation and operation of a new light pole on property owned by the City of Beacon. One (1) small antenna will be attached to the top of the pole. The equipment will be ground-mounted adjacent to the pole. As part of this project, Verizon Wireless will also install a decorative light fixture on behalf of the City.

II. Purpose of Communications Facility

The purpose of the Project is to provide "hotspot" coverage for its advanced 4th Generation Long Term Evolution (4G LTE) services to a relatively small area in the City of Beacon currently not served or under-served.

The proposed facility does not require a special use permit from the City Council due to the fact that:

1. The proposed tower will not exceed 50' in height;
2. The proposed tower will not be located on an existing sidewalk;
3. No equipment will be located on the pole less than fifteen feet from the ground; and
4. The proposed facility will not be located within twenty feet of an existing dwelling unit.

The Small Cell Permit application is submitted in direct response to the City's Counsel, who has advised that the proposal requires land use and zoning approval. Although we believe that the proposed site should require a Building Permit only[1], the City has advised otherwise.

The application is submitted under the assumption that a Small Cell Permit is required. The relevant materials to support such application are set forth in §223-26.4(c)(4).

III. Additional Supporting Materials

Section 223-26.4(c)(4) lists the required materials necessary to support a small cell permit application.

a. The application shall be made by the wireless telecommunications provider or its representative and shall include the following information.

   The current application is submitted by and on behalf of Verizon Wireless, a national wireless communications provider licensed by the Federal Communications Commission. Copies of Verizon Wireless' FCC licenses are attached in Exhibit 3.

b. The Applicant's name, address, telephone number are provided on the cover sheet of the Site Plans provided in Exhibit 4.

c. The name, address, telephone number and email address of all consultants acting on behalf of the Applicant are:

   Counsel: Young/Sommer LLC
   5 Palisades Drive, Suite 300
   Albany NY 12205
   518-438-9907 ext. 258 (Scott Olson)
   solson@youngsommer.com

1 As set forth above, the proposed facility as currently designed does not require a special use permit. According to § 223-26.4(c), the Planning Board is authorized to approve certain Small Cell Permit applications, including collocations on existing towers or structures or new poles located in the public right of way that do not exceed fifty feet in height. Because the proposed facility is not a collocation and is not a new tower located in the right of way, we believe that a Small Cell Permit is not required and that a Building Permit should be the only permit required.

Engineer: Tectonic Engineering & Surveying Consultants, P.C.
36 British American Blvd., Suite 101
Latham NY 12110
518-783-1630 (Steven Mathews)
smatthews@tectonicengineering.com

d. A general description of the proposed work is set forth above and illustrated in the Site Plans in Exhibit 4.

e. The location of any small cells installed or considered in the past year are provided in the Radio Frequency ("RF") analysis provided in Exhibit 5.

f. The proposed facility is an unmanned and self-operating facility that does not require frequent maintenance. Generally, facilities of this nature are visited approximately one to three times per year for inspection and any needed maintenance. Outside of such routine inspections, Verizon Wireless would visit the facility in the event of an equipment failure.

g. Although not specifically required by Section 223-26.4, enclosed as Exhibit 6 is an analysis prepared by SiteSafe, which confirms that the proposed installation is fully compliant with the existing FCC regulations.

IV. Conclusion

Approval of the Project will enable Verizon Wireless to provide an adequate and safe level of wireless telephone service to the area of the City of Beacon and surrounding environs, within the confines of applicable technological and land use limitations. Such approval will also be in the public interest, in that it will allow Verizon Wireless to comply with its statutory mandate to build out its network and provide local businesses, residents and public service entities with safe and reliable wireless communications services. Based upon the foregoing, Verizon Wireless respectfully submits that this project complies in all material respects with the Small Cell Permit requirements of the City of Beacon's Zoning Code, and any potential impact on the community created by this approval may properly be considered to be minimal and of no significant adverse effect.

If you should have any questions or require any additional information, I can be reached at (518) 438-9907, Ext. 258.

Thank you for your consideration.

Respectfully submitted,
VERIZON WIRELESS OF THE EAST LP d/b/a Verizon Wireless

Scott P. Olson, Esq.
Regional Local Counsel

Dated: December 2, 2020

1

DOCUMENTATION OF PUBLIC UTILITY STATUS
and
OVERVIEW OF ROSENBERG DECISION

In *Cellular Tel. Co. v. Rosenberg*, 82 N.Y.2d 364 (1993), the New York Court of Appeals determined that cellular telephone companies are public utilities. The Court held that proposed cellular telephone installations are to be reviewed by zoning boards pursuant to the traditional standard afforded to public utilities, rather than the standards generally required for the necessary approvals:

> It has long been held that a zoning board may not exclude a utility from a community where the utility has shown a need for its facilities. There can be no question of [the carrier's] need to erect the cell site to eliminate service gaps in its cellular telephone service area. The proposed cell site will also improve the transmission and reception of existing service. Application of our holding in *Matter of Consolidated Edison* to sitings of cellular telephone companies, such as [the applicant], permits those companies to construct structures necessary for their operation which are prohibited because of existing zoning laws and to provide the desired services to the surrounding community. . . . Moreover, the record supports the conclusion that [the applicant] sustained its burden of proving the requisite public necessity. [The applicant] established that the erection of the cell site would enable it to remedy gaps in its service area that currently prevent it from providing adequate service to its customers in the . . . area.

Rosenberg, 82 N.Y.2d at 372-74 (citing *Consolidated Edison Co. v. Hoffman*, 43 N.Y.2d 598 (1978)).

This special treatment of a public utility stems from the essential nature of its service, and the fact that a public utility transmitting facility must be located in a particular area in order to provide service. For instance, water towers, electric switching stations, water pumping stations and telephone poles must be in particular locations (including within residential districts) in order to provide the utility to a specific area:

> [Public] utility services are needed in all districts; the service can be provided only if certain facilities (for example, substations) can be located in commercial and even in residential districts. To exclude such use would result in an impairment of an essential service.

Anderson, New York Zoning Law Practice, 3d ed., p. 411 (1984) (hereafter "Anderson"). See also, *Cellular Tel. Co. v. Rosenberg*, 82 N.Y.2d 364 (1993); *Payne v. Taylor*, 178 A.D.2d 979 (4th Dep't 1991).

Accordingly, the law in New York is that a municipality may not prohibit facilities, including towers, necessary for the transmission of a public utility. In *Rosenberg*, 82 N.Y.2d at 371, the court found that "the construction of an antenna tower... to facilitate the supply of cellular telephone service is a 'public utility building' within the meaning of a zoning ordinance." See also *Long Island Lighting Co. v. Griffin*, 272 A.D. 551 (2d Dep't 1947) (a municipal corporation may not prohibit the expansion of a public utility where such expansion is necessary to the maintenance of essential services).

2

DOCUMENTATION OF PERSONAL WIRELESS SERVICE FACILITY STATUS
and
FEDERAL TELECOMMUNICATIONS ACT OF 1996

In addition to being considered a public utility under New York decisional law, Verizon Wireless is classified as a provider of "personal wireless services" under the federal Telecommunications Act of 1996 (the "TCA").

As stated in the long title of the Act, the goal of the TCA is to "promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies." *Telecommunications Act of 1996, Pub. LA. No. 104-104, 110 Stat. 56 (1996).*

The TCA mandates a process designed to achieve competitive telecommunications markets. In keeping with the central goals of the TCA, the authors specify in Section 253(a) that "[n]o State or local statute or regulation…may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service." *TCA Section 253(a), emphasis added.*

Section 332(c) of the TCA preserves the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction and modification of personal wireless service facilities, subject to several important limitations:

- the "regulation of the placement…of personal wireless service facilities by any State or local government or instrumentality thereof shall not unreasonably discriminate among providers of functionally equivalent services" (*TCA §332(c)(7)(B)(i)(I)*);

- the "regulation of the placement…of personal wireless service facilities by any State or local government or instrumentality thereof shall not prohibit or have the effect of prohibiting the provision of personal wireless services" (*TCA §332(c)(7)(B)(i)(II)*);

- Applications must be processed within a reasonable period of time, and any decision to deny a request for placement of personal wireless service facilities must be in writing and supported by substantial evidence contained in a written record (*TCA §§332(c)(7)(B)(ii) and (iii)*); and

- regulations based upon the perceived environmental effects of radio frequency emissions are prohibited, so long as the proposed personal wireless service facility complies with FCC regulations concerning such emissions (*TCA §332(c)(7)(B)(iv)*).

A reference copy of the Telecommunications Act of 1996 is included herewith.

104TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
2d Session } { 104–458

TELECOMMUNICATIONS ACT OF 1996

JANUARY 31, 1996. Ordered to be printed

Mr. BLILEY, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 652]

The committee of conference on the disagreeing votes of the two Houses on the amendments of the House to the bill (S. 652), to provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House to the text of the bill and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment, insert the following:

SECTION 1. SHORT TITLE; REFERENCES.

(a) SHORT TITLE.—This Act may be cited as the "Telecommunications Act of 1996".

(b) REFERENCES.—Except as otherwise expressly provided, whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision, the reference shall be considered to be made to a section or other provision of the Communications Act of 1934 (47 U.S.C. 151 et seq.).

SEC. 2. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

Sec. 1. Short title; references.
Sec. 2. Table of contents.
Sec. 3. Definitions.

22–327

Federal Communications Commission
Library

[redacted] *tity that has obtained an attachment to such conduit or right-of-way so that such entity may have a reasonable opportunity to add to or modify its existing attachment. Any entity that adds to or modifies its existing attachment after receiving such notification shall bear a proportionate share of the costs incurred by the owner in making such pole, duct, conduit, or right-of-way accessible.*

[redacted] *right-of-way shall not be required to bear any of the costs of rearranging or replacing its attachment, if such rearrangement or replacement is required as a result of an additional attachment or the modification of an existing attachment sought by any other entity*

SEC. 704. FACILITIES SITING; RADIO FREQUENCY EMISSION STANDARDS.

(a) NATIONAL WIRELESS TELECOMMUNICATIONS SITING POLICY.—Section 332(c) (47 U.S.C. 332(c)) is amended by adding at the end the following new paragraph:

"(7) PRESERVATION OF LOCAL ZONING AUTHORITY.—

"(A) GENERAL AUTHORITY.—Except as provided in this paragraph, nothing in this Act shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.

"(B) LIMITATIONS.—

"(i) The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof—

"(I) shall not unreasonably discriminate among providers of functionally equivalent services; and

"(II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services.

"(ii) A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request.

"(iii) Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.

"(iv) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions.

"(v) Any person adversely affected by any final action or failure to act by a State or local government or any instrumentality thereof that is inconsistent with this subparagraph may, within 30 days after such action or failure to act, commence an action in any court of competent jurisdiction. The court shall hear and decide such action on an expedited basis. Any person adversely affected by an act or failure to act by a State or local government or any instrumentality thereof that is inconsistent with clause (iv) may petition the Commission for relief.

"(C) DEFINITIONS.—For purposes of this paragraph—

"(i) the term 'personal wireless services' means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;

"(ii) the term 'personal wireless service facilities' means facilities for the provision of personal wireless services; and

"(iii) the term 'unlicensed wireless service' means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services (as defined in section 303(v)).".

(b) RADIO FREQUENCY EMISSIONS.—Within 180 days after the enactment of this Act, the Commission shall complete action in ET Docket 93–62 to prescribe and make effective rules regarding the environmental effects of radio frequency emissions.

(c) AVAILABILITY OF PROPERTY.—Within 180 days of the enactment of this Act, the President or his designee shall prescribe procedures by which Federal departments and agencies may make available on a fair, reasonable, and nondiscriminatory basis, property, rights-of-way, and easements under their control for the placement of new telecommunications services that are dependent, in whole or in part, upon the utilization of Federal spectrum rights for the transmission or reception of such services. These procedures may establish a presumption that requests for the use of property, rights-of-way, and easements by duly authorized providers should be granted absent unavoidable direct conflict with the department or agency's mission, or the current or planned use of the property, rights-of-way, and easements in question. Reasonable fees may be charged to providers of such telecommunications services for use of property, rights-of-way, and easements. The Commission shall provide technical support to States to encourage them to make property, rights-of-way, and easements under their jurisdiction available for such purposes.

[redacted]

RIERS.

Section 332(c) (47 U.S.C. 332(c)) is amended by adding at the end the following new paragraph:

"(8) MOBILE SERVICES ACCESS.—A person engaged in the provision of commercial mobile services, insofar as such person is so engaged, shall not be required to provide equal access to

portionate share of the costs incurred by the owner in making such conduit or right-of-way accessible.

Conference agreement

The conference agreement adopts the Senate provision with modifications. The conference agreement amends section 224 of the Communications Act by adding new subsection (e)(1) to allow parties to negotiate the rates, terms, and conditions for attaching to poles, ducts, conduits, and rights-of-way owned or controlled by utilities. New subsection 224(e)(2) establishes a new rate formula charged to telecommunications carriers for the non-useable space of each pole. Such rate shall be based upon the number of attaching entities. The conferees also agree to three additional provisions from the House amendment. First, subsection (g) requires utilities that engage in the provision of telecommunications services or cable services to impute to its costs of providing such service an equal amount to the pole attachment rate for which such company would be liable under section 224. Second, new subsection 224(h) requires utilities to provide written notification to attaching entities of any plans to modify or alter its poles, ducts, conduit, or rights-of-way. New subsection 224(h) also requires any attaching entity that takes advantage of such opportunity to modify its own attachments shall bear a proportionate share of the costs of such alterations. Third, new subsection 224(i) prevents a utility from imposing the cost of rearrangements to other attaching entities if done solely for the benefit of the utility.

SECTION 704—FACILITIES SITING; RADIO FREQUENCY EMISSION STANDARDS

Senate bill

No provision.

House amendment

Section 108 of the House amendment required the Commission to issue regulations within 180 days of enactment for siting of CMS. A negotiated rulemaking committee comprised of State and local governments, public safety agencies and the affected industries were to have attempted to develop a uniform policy to propose to the Commission for the siting of wireless tower sites.

The House amendment also required the Commission to complete its pending Radio Frequency (RF) emission exposure standards within 180 days of enactment. The siting of facilities could not be denied on the basis of RF emission levels for facilities that were in compliance with the Commission standard.

The House amendment also required that to the greatest extent possible the Federal government make available to use of Federal property, rights-of-way, easements and any other physical instruments in the siting of wireless telecommunications facilities.

Conference agreement

The conference agreement creates a new section 704 which prevents Commission preemption of local and State land use decisions and preserves the authority of State and local governments over

zoning and land use matters except in the limited circumstances set forth in the conference agreement. The conference agreement also provides a mechanism for judicial relief from zoning decisions that fail to comply with the provisions of this section. It is the intent of the conferees that other than under section 332(c)(7)(B)(iv) of the Communications Act of 1934 as amended by this Act and section 704 of the Telecommunications Act of 1996 the courts shall have exclusive jurisdiction over all other disputes arising under this section. Any pending Commission rulemaking concerning the preemption of local zoning authority over the placement, construction or modification of CMS facilities should be terminated.

When utilizing the term "functionally equivalent services" the conferees are referring only to personal wireless services as defined in this section that directly compete against one another. The intent of the conferees is to ensure that a State or local government does not in making a decision regarding the placement, construction and modification of facilities of personal wireless services described in this section unreasonably favor one competitor over another. The conferees also intend that the phrase "unreasonably discriminate among providers of functionally equivalent services" will provide localities with the flexibility to treat facilities that create different visual, aesthetic, or safety concerns differently to the extent permitted under generally applicable zoning requirements even if those facilities provide functionally equivalent services. For example, the conferees do not intend that if a State or local government grants a permit in a commercial district, it must also grant a permit for a competitor's 50-foot tower in a residential district.

Actions taken by State or local governments shall not prohibit or have the effect of prohibiting the placement, construction or modification of personal wireless services. It is the intent of this section that bans or policies that have the effect of banning personal wireless services or facilities not be allowed and that decisions be made on a case-by-case basis.

Under subsection (c)(7)(B)(ii), decisions are to be rendered in a reasonable period of time, taking into account the nature and scope of each request. If a request for placement of a personal wireless service facility involves a zoning variance or a public hearing or comment process, the time period for rendering a decision will be the usual period under such circumstances. It is not the intent of this provision to give preferential treatment to the personal wireless service industry in the processing of requests, or to subject their requests to any but the generally applicable time frames for zoning decision.

The phrase "substantial evidence contained in a written record" is the traditional standard used for judicial review of agency actions.

The conferees intend section 332(c)(7)(B)(iv) to prevent a State or local government or its instrumentalities from basing the regulation of the placement, construction or modification of CMS facilities directly or indirectly on the environmental effects of radio frequency emissions if those facilities comply with the Commission's regulations adopted pursuant to section 704(b) concerning such emissions.

The limitations on the role and powers of the Commission under this subparagraph relate to local land use regulations and are not intended to limit or affect the Commission's general authority over radio telecommunications, including the authority to regulate the construction, modification and operation of radio facilities.

The conferees intend that the court to which a party appeals a decision under section 332(c)(7)(B)(v) may be the Federal district court in which the facilities are located or a State court of competent jurisdiction, at the option of the party making the appeal, and that the courts act expeditiously in deciding such cases. The term "final action" of that new subparagraph means final administrative action at the State or local government level so that a party can commence action under the subparagraph rather than waiting for the exhaustion of any independent State court remedy otherwise required.

With respect to the availability of Federal property for the use of wireless telecommunications infrastructure sites under section 704(c), the conferees generally adopt the House provisions, but substitute the President or his designee for the Commission.

It should be noted that the provisions relating to telecommunications facilities are not limited to commercial mobile radio licensees, but also will include other Commission licensed wireless common carriers such as point to point microwave in the extremely high frequency portion of the electromagnetic spectrum which rely on line of sight for transmitting communication services.

SECTION 705—MOBILE SERVICE DIRECT ACCESS TO LONG DISTANCE CARRIERS

Senate bill

Subsection (b) of section 221 of the Senate bill, as passed, states that notwithstanding the MFJ or any other consent decree, no CMS provider will be required by court order or otherwise to provide long distance equal access. The Commission may only order equal access if a CMS provider is subject to the interconnection obligations of section 251 and if the Commission finds that such a requirement is in the public interest. CMS providers shall ensure that its subscribers can obtain unblocked access to the interexchange carrier of their choice through the use of interexchange carrier identification codes, except that the unblocking requirement shall not apply to mobile satellite services unless the Commission finds it is in the public interest.

House amendment

Under section 109 of the House amendment, the Commission shall require providers of two-way switched voice CMS to allow their subscribers to access the telephone toll services provider of their choice through the use of carrier identification codes. The Commission's rules will supersede the equal access, balloting and prescription requirements imposed by the MFJ and the AT&T-McCaw consent decree. The Commission may exempt carriers or classes of carriers from the requirements of this section if it is consistent with the public interest, convenience, and necessity, and the

3

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQVN679	
Radio Service AT - AWS-3 (1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
04-08-2015	02-24-2017	04-08-2027	

Market Number	Channel Block	Sub-Market Designator
BEA006	J	0

Market Name
Syracuse, NY-PA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
04-08-2021	04-08-2027		

Waivers/Conditions:
NONE

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQVN679 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY, #150 GASA5REG
ALPHARETTA, GA 30009-7630

Call Sign	File Number
WQGA903	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
11-29-2006	03-30-2016	11-29-2021	

Market Number	Channel Block	Sub-Market Designator
BEA006	B	5

Market Name
Syracuse, NY-PA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB
April 2009

Reference Copy

REFERENCE COPY
This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY, #150 GASA5REG
ALPHARETTA, GA 30009-7630

Call Sign	File Number
WQGA902	0006150136
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
11-29-2006	12-28-2013	11-29-2021	02-14-2014

Market Number	Channel Block	Sub-Market Designator
BEA005	B	5

Market Name
Albany-Schenectady-Troy, NY

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

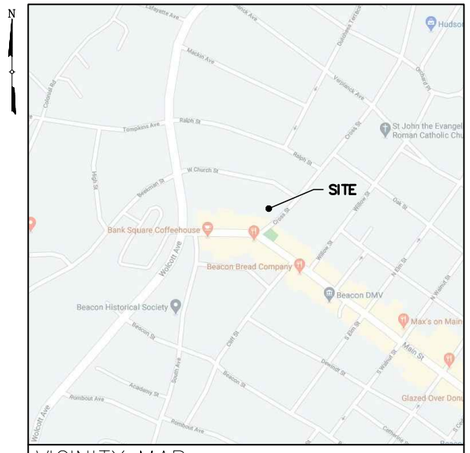
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4

VERIZON WIRELESS OF THE EAST LIMITED PARTNERSHIP, d/b/a verizon

CLIFF & WILLOW

REAL ESTATE P/N: 20161373924
LOCATION CODE: 412510



VICINITY MAP

DIRECTIONS

DIRECTIONS TO SITE: FROM NORTH GREENBUSH SWITCH FACILITY,

GET ON I-90 W FROM US-4 S AND NY-43 W. TAKE EXIT 6A TO MERGE ONTO I-787 S TOWARD ALBANY. TAKE EXIT 1 TO MERGE ONTO I-87 S. TAKE EXIT 17 TOWARD I-84/NY-300/NY-17K/SCRANTON/ NEWBURGH AND FOLLOW FOR 5.9± MILES. TAKE EXIT 41 FOR NY-9D TOWARD BEACON/WAPPINGERS FALLS. TURN RIGHT ONTO NY-9D S AND FOLLOW FOR 0.7± MILES. TURN LEFT ONTO MAIN ST AND FOLLOW FOR 489± FEET. TURN LEFT ONTO CROSS ST AND FOLLOW FOR 121± FEET. THE SITE WILL BE ON THE LEFT.

SITE ADDRESS:	7 CROSS ST BEACON, NY 12508
MUNICIPALITY:	CITY OF BEACON
COUNTY:	DUTCHESS
TAX MAP NUMBER:	130200-5954-27-787978
ZONING DISTRICT:	CMS-CENTRAL MAIN STREET
STRUCTURE COORDINATES:	41.508602° N 73.975373° W
GROUND ELEVATION:	155.5'± AMSL
PROPERTY OWNER:	CITY OF BEACON 1 MUNICIPAL PLAZA BEACON, NY 12508
APPLICANT:	VERIZON WIRELESS 1275 JOHN STREET, SUITE 100 WEST HENRIETTA, NY 14586
CONTACT PERSON:	KATHY POMPONIO
CONTACT PHONE:	(585) 321-5435

PROJECT SUMMARY

PROJECT DESCRIPTION

THE PROPOSED WORK CONSISTS OF THE INSTALLATION OF A CELLULAR ANTENNA ON A PROPOSED LIGHT POLE AND THE INSTALLATION OF EQUIPMENT AT GRADE WITHIN A PROPOSED FENCE AREA.

SHT. NO.	DESCRIPTION	REV NO	REVISION DATE
T-1	TITLE SHEET	0	12/4/20
SU-101	PARTIAL BOUNDARY SURVEY	0	08/29/19
AD-1	ADJOINERS PLAN & LIST	0	12/4/20
SB-1	SETBACK PLAN	0	12/4/20
C-1	OVERALL SITE PLAN	0	12/4/20
C-2	DETAIL SITE PLAN	0	12/4/20
C-3	POLE ELEVATION	0	12/4/20

SHEET INDEX

THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL ITEMS OF CONCERN HAVE BEEN ADDRESSED AND EACH OF THE DRAWINGS HAS BEEN REVISED AND ISSUED "FOR CONSTRUCTION".

Before You Dig, Drill Or Blast!

Dig Safely. New York

UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION

CALL US TOLL FREE 1-800-962-7962

NY industrial code rule 753 requires no less than two working days notice, but not more than ten days notice.

DIG SAFELY - NEW YORK

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED FOR 22"x34" FULL SIZE AND 11"x17" HALF SIZE. OTHER SIZED VERSIONS ARE NOT PRINTED TO THE SCALE SHOWN. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

verizon
1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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Mountainville, NY 10953
Phone: (845) 534-5959
(800) 829-8551
www.tectonicengineering.com
Project Contact Info
30 British American Blvd.
Suite 101
Latham, NY 12110
Phone: (518) 783-1630

WORK ORDER NUMBER	DRAWN BY
10272.76	GS

NO.	DATE	ISSUE
0	12/4/20	FOR ZONING

RELEASED BY	DATE

STATE OF NEW YORK
STEVEN M. MATTHEWS
LICENSED PROFESSIONAL ENGINEER
087507

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0 1
ORIGINAL SIZE IN INCHES (22x34 FORMAT)

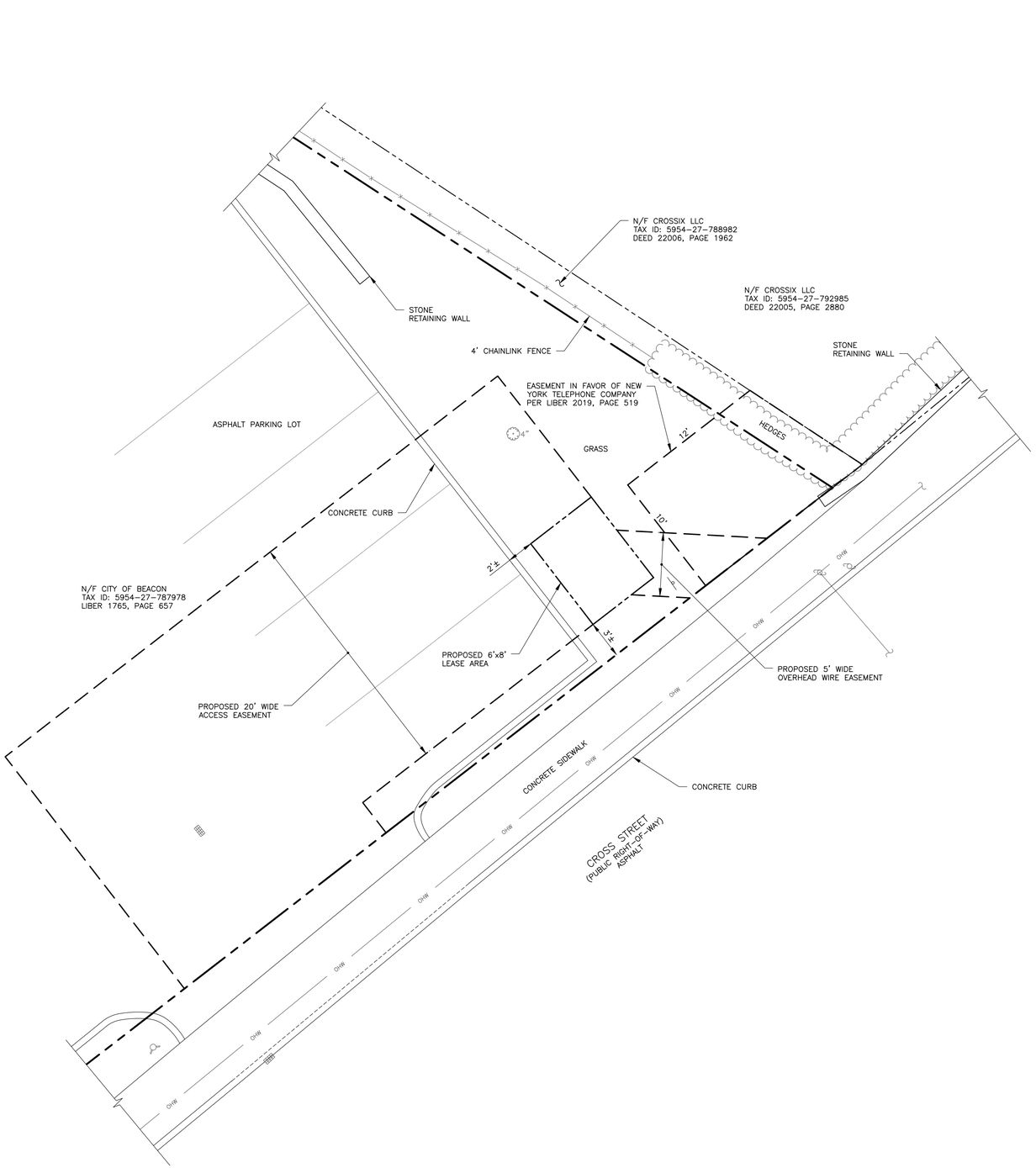
0 1
ORIGINAL SIZE IN INCHES (11x17 FORMAT)

SITE INFORMATION
CLIFF & WILLOW
RE PN: 20161373924
LC: 412510

SITE ADDRESS
7 CROSS ST
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

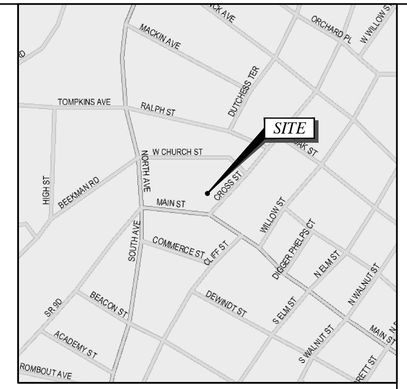
SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1



1 SU-101 PARTIAL BOUNDARY SURVEY

SCALE: 1"= 5'



LOCATION MAP

LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- LEASE LINE
- EASEMENT LINE
- CURB LINE
- CHAIN LINK FENCE
- EDGE OF CONCRETE
- PAINTED LINE
- OVERHEAD WIRES (OHW)
- BRUSH LINE
- UTILITY POLE
- CATCH BASIN
- HYDRANT
- SIGN
- TREE (4")

GENERAL NOTES

1. THIS PLAN IS BASED ON A FIELD SURVEY BY TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, PC COMPLETED ON 08/28/2019.
2. MERIDIAN AND COORDINATES REFER TO NEW YORK STATE PLANE, NAD 83, NEW YORK EAST ZONE AND ARE BASED ON GPS OBSERVATIONS.
3. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
4. REFERENCES:
   (A) DEED: BOOK 1765, PAGE 657
   (B) MAP ENTITLED: "LOT LINE RE-ALIGNMENT PREPARED FOR THE CITY OF BEACON" AS FILED IN THE DUTCHESS COUNTY CLERK'S OFFICE ON NOVEMBER 2, 2001, AS MAP #11271.
   (C) TITLE COMMITMENT PREPARED BY HILL-N-DALE ABSTRACTERS, INC AS TITLE NUMBER HN 64000, DATED JULY 25, 2019.
5. AREA OF SUBJECT PARCEL: 9,621 SQUARE FEET.
6. THIS SURVEY IS SUBJECT TO A COMPLETE AND UP TO DATE ABSTRACT OF TITLE, COVENANTS, EASEMENTS, GRANTS AND RIGHTS-OF-WAY NOT VISIBLE AND NOT REFERENCED ARE NOT SHOWN. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, PC SHALL NOT BE LIABLE FOR THE DISTURBANCE TO ANYONE'S RIGHT TO THE USE OF THE PROPERTY OR THE DISTURBANCE OF ANY UTILITIES NOT SHOWN OR REFERENCED ON THIS SURVEY PLAT.
7. UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
8. LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY BASED ON SURFACE EVIDENCE AND EXISTING PLANS. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY BEFORE DESIGNING OR CONSTRUCTING IMPROVEMENTS. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, P.C. WILL NOT BE RESPONSIBLE FOR ANY DAMAGE SUBSEQUENTLY CAUSED TO PERSONNEL, STRUCTURES, OR UTILITIES.
9. THIS SURVEY PLAT IS FOR SITE PLAN/ENGINEERING PURPOSES ONLY AND IS NOT INTENDED TO BE USED FOR THE TRANSFER OF TITLE.
10. THE SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE "X" AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR THE CITY OF BEACON, COUNTY OF DUTCHESS, STATE OF NEW YORK, COMMUNITY PANEL NO # 36027C0463E, EFFECTIVE DATE OF 05/02/2012. THIS DETERMINATION IS BASED ON SCALED MAP LOCATION AND GRAPHIC PLOTTING.
11. NOT ALL IMPROVEMENTS ON THE PARCEL BEING SURVEYED ARE SHOWN HEREON.

verizon

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WORK ORDER NUMBER	DRAWN BY
9726.16	SW

NO.	DATE	ISSUE
0	08/29/19	FOR COMMENT

RELEASED BY	DATE

STATE OF NEW YORK
DOMINICK T. SANTINI
LICENSED LAND SURVEYOR
051084

DOMINICK T. SANTINI, IV P.L.S. 51084

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0 1
ORIGINAL SIZE IN INCHES
(22x34 FORMAT)

0 1
ORIGINAL SIZE IN INCHES
(11x17 FORMAT)

SITE INFORMATION

CLIFF & WILLOW
PROJ#: 20161373924
LOC: 412510

SITE ADDRESS

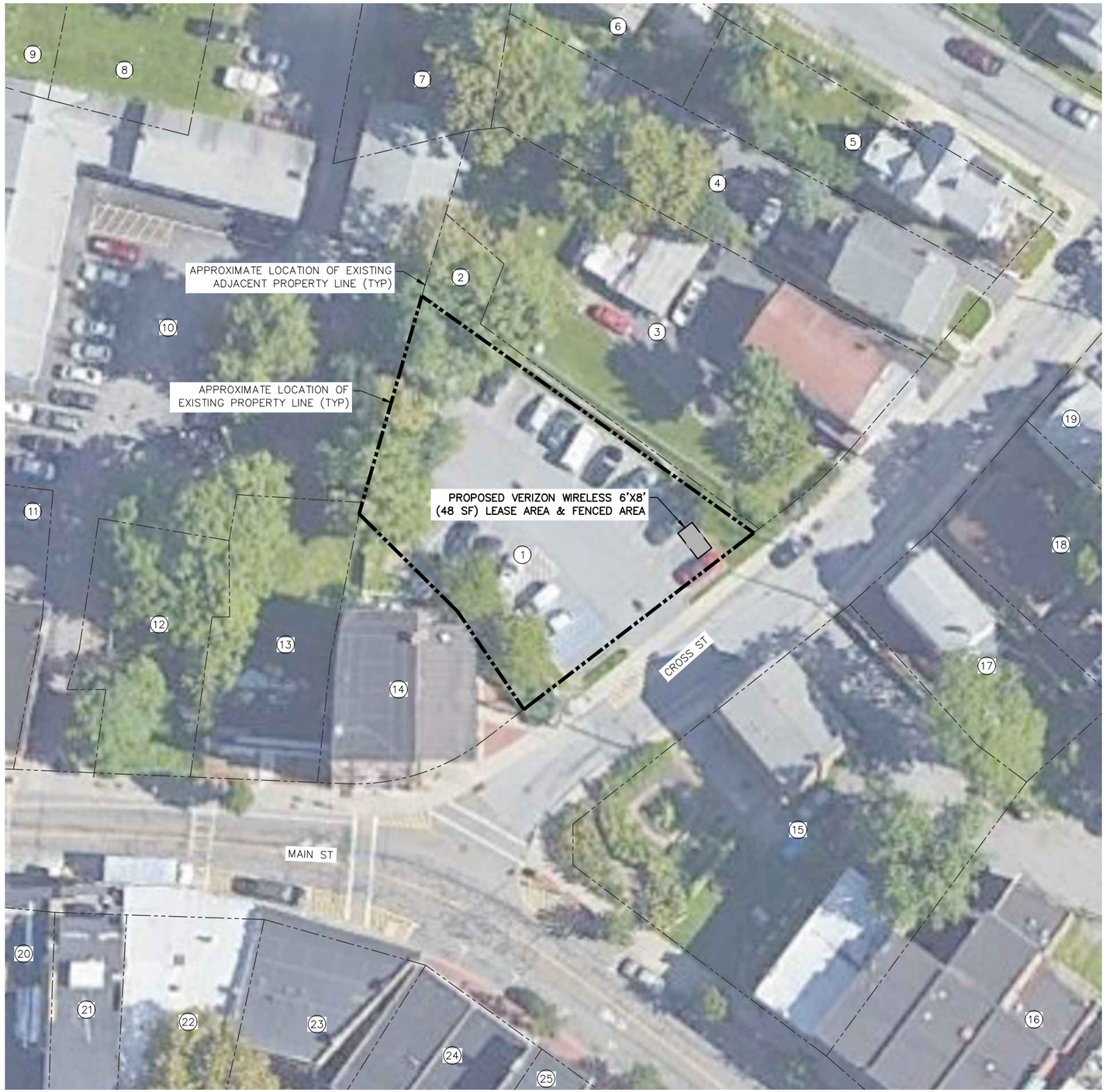
7 CROSS STREET
CITY OF BEACON
DUTCHESS COUNTY, NY

SHEET TITLE

PARTIAL BOUNDARY SURVEY

SHEET NUMBER

SU-101



NOTE:

THE PROPERTY LINES HEREON ARE APPROXIMATE BASED ON GIS DATA AND ARE FOR ORIENTATION PURPOSES ONLY. THEY DO NOT REPRESENT A PROPERTY/BOUNDARY DECISION BY A LAND SURVEYOR.

1 / AD-1 ADJOINERS PLAN
SCALE: 1" = 40' (11x17 SIZE)
1" = 20' (22x34 SIZE)

ADJOINERS LIST

#	SBL	OWNER	MAILING ADDRESS
1	130200-5954-27-787978	CITY OF BEACON	1 MUNICIPAL PLAZA BEACON, NY 12508
2	130200-5954-27-788982	CROSSIX, LLC	50 SIMMONS LN BEACON, NY 12508
3	130200-5954-27-792985	CROSSIX, LLC	50 SIMMONS LN BEACON, NY 12508
4	130200-5954-27-795990	GOULDER, JEREMY M	11 CROSS ST BEACON, NY 12508
5	130200-5954-27-798992	RIGATI, RICHARD L & BRIGATI, ETHEL JEAN	335 WOODMONT RD HOPEWELL JUNCTION, NY 12533
6	130200-5954-27-790996	TARAVELLA, LISA	25 W CHURCH ST BEACON, NY 12508
7	130200-5954-27-784996	THE LINDLEY TODD, LLC	4 CROSS ST BEACON, NY 12508
8	130200-5954-27-774997	THE LINDLEY TODD, LLC	4 CROSS ST BEACON, NY 12508
9	130200-5954-27-769998	THE LINDLEY TODD, LLC	4 CROSS ST BEACON, NY 12508
10	130200-5954-27-774986	THE LINDLEY TODD, LLC	4 CROSS ST BEACON, NY 12508
11	130200-5954-27-768976	THE LINDLEY TODD, LLC	4 CROSS ST BEACON, NY 12508
12	130200-5954-27-773975	284 MAIN STREET CORP	284 MAIN ST BEACON, NY 12508
13	130200-5954-27-777974	THE LINDLEY TODD, LLC	4 CROSS ST BEACON, NY 12508
14	130200-5954-27-781973	THE HOSE COMPANY, LLC	162 MAIN ST BEACON, NY 12508
15	130200-5954-27-799966	HUDSON TODD, LLC	4 CROSS ST BEACON, NY 12508
16	130200-5954-27-805964	7215-18TH AVENUE REALTY CORP,	PO BOX 417 SHRUB OAK NY 10588
17	130200-5954-27-802974	SANTIAGO, JOSE R & ORREGO, MYRIAM	8 CROSS ST BEACON, NY 12508
18	130200-5954-27-808975	CROSSIX, LLC	50 SIMMONS LN BEACON, NY 12508
19	130200-5954-27-811979	LASHLEY, CHARLES & LASHLEY, ALYCE	12 CROSS ST BEACON, NY 12508
20	130200-5954-27-768956	LINDLEY TODD, LLC	4 CROSS ST BEACON, NY 12508
21	130200-5954-27-771961	151 MAIN ST, LLC	PO BOX 910 BEACON, NY 12508
22	130200-5954-27-774961	MOVIL DEVELOPMENT CORP,	284 MAIN ST BEACON, NY 12508
23	130200-5954-27-778961	SIMS, BARBARA J & SIMS, BRENDA J	5 KITTERIDGE PL BEACON, NY 12508
24	130200-5954-27-782958	CHASE PROPERTY MGMT, LLC	110 ANDERSON ST BEACON, NY 12508
25	130200-5954-27-783953	MOVIL DEVELOPMENT CORP,	284 MAIN ST BEACON, NY 12508

2 / AD-1 ADJOINERS LIST
SCALE: NTS

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WEST HENRIETTA, NY 14586

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www.tectonicengineering.com
Project Contact Info
Joe Britton American Blvd.
Suite 101
Latham, NY 12110
Phone: (518) 783-1630

WORK ORDER NUMBER	DRAWN BY
10272.76	GS

NO.	DATE	ISSUE
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RELEASED BY	DATE

STATE OF NEW YORK
STEVEN M. MATTHEWS
087507
LICENSED PROFESSIONAL ENGINEER

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0 1
ORIGINAL SIZE IN INCHES (22x34 FORMAT)
0 1
ORIGINAL SIZE IN INCHES (11x17 FORMAT)

SITE INFORMATION
CLIFF & WILLOW
RE PN: 20161373924
LC: 412510

SITE ADDRESS
7 CROSS ST
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
ADJOINERS PLAN & LIST

SHEET NUMBER
AD-1



NOTE:

1. THE PROPERTY LINES HEREON ARE APPROXIMATE BASED ON GIS DATA AND ARE FOR ORIENTATION PURPOSES ONLY. THEY DO NOT REPRESENT A PROPERTY/BOUNDARY DECISION BY A LAND SURVEYOR.

1 / SB-1 SETBACK PLAN

SCALE: 1" = 20' (11x17 SIZE)
1" = 10' (22x34 SIZE)

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RE PN: 20161373924
LC: 412510

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DUTCHESS COUNTY
NY 12508

SHEET TITLE

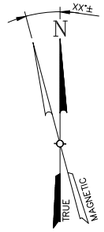
SETBACK PLAN

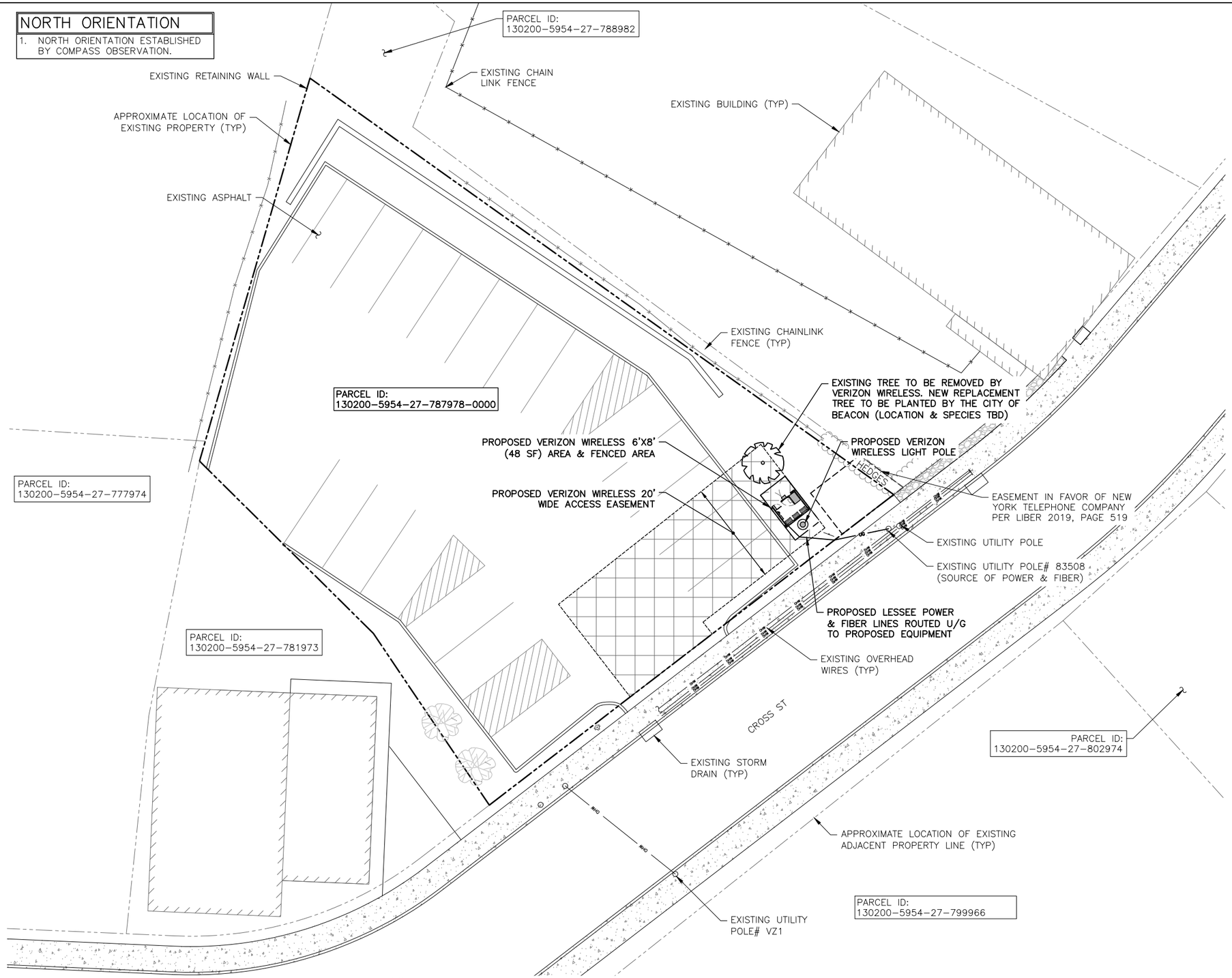
SHEET NUMBER

SB-1

NORTH ORIENTATION

1. NORTH ORIENTATION ESTABLISHED BY COMPASS OBSERVATION.





NOTE:
SITE INFORMATION BASED ON A SITE VISIT DATED 5/15/19 & SURVEY DATED 8/29/19, BOTH PERFORMED BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C.,. THE PROPERTY LINES SHOWN HEREON ARE APPROXIMATE BASED ON TAX MAPS AND ARE FOR ORIENTATION PURPOSES ONLY. THEY DO NOT REPRESENT A PROPERTY/BOUNDARY OPINION BY A LAND SURVEYOR.

1 / C-1 OVERALL SITE PLAN

SCALE: 1" = 40' (11x17 SIZE)
1" = 20' (22x34 SIZE)

verizon
1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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Project Contact Info
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Latham, NY 12110
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10272.76	GS

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STATE OF NEW YORK
STEVEN M. MATTHEWS
LICENSED PROFESSIONAL ENGINEER
087507

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(22x34 FORMAT)

0 1
ORIGINAL SIZE IN INCHES
(11x17 FORMAT)

SITE INFORMATION

CLIFF & WILLOW
RE PN: 20161373924
LC: 412510

SITE ADDRESS

7 CROSS ST
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE

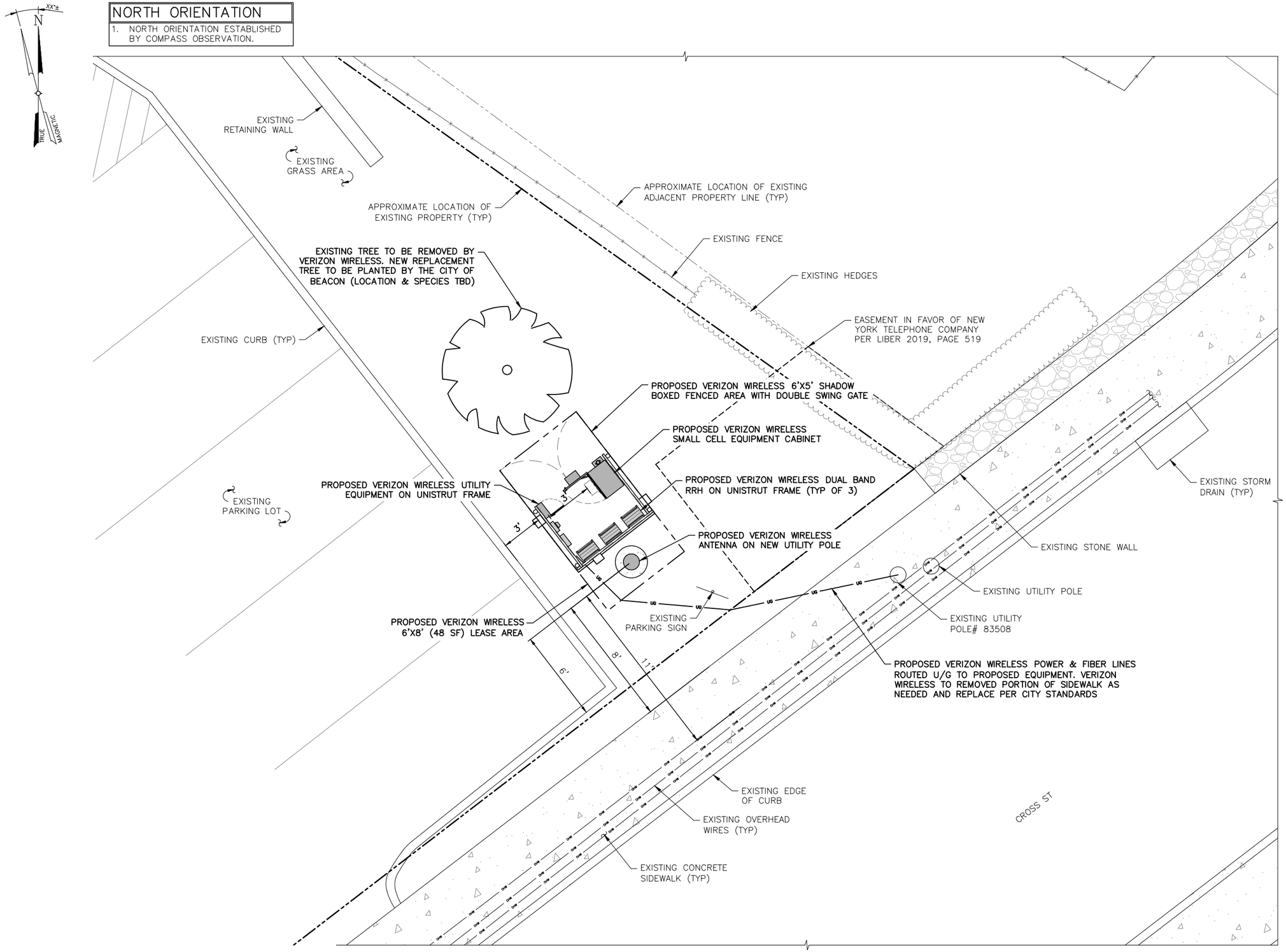
OVERALL SITE PLAN

SHEET NUMBER

C-1

NORTH ORIENTATION

1. NORTH ORIENTATION ESTABLISHED BY COMPASS OBSERVATION.



1 / C-2 DETAIL SITE PLAN

SCALE: 1" = 6' (11x17 SIZE)
1" = 3' (22x34 SIZE)

verizon

1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

Tectonic
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www.tectonicengineering.com
Project Contact Info
30 British American Blvd.
Suite 101
Latham, NY 12110
Phone: (518) 783-1630

WORK ORDER NUMBER	DRAWN BY
10272.76	GS

NO.	DATE	ISSUE
0	12/4/20	FOR ZONING

RELEASED BY	DATE

STATE OF NEW YORK
STEVEN M. MATTHEWS
LICENSED PROFESSIONAL ENGINEER
087507

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0 1
ORIGINAL SIZE IN INCHES
(22x34 FORMAT)

0 1
ORIGINAL SIZE IN INCHES
(11x17 FORMAT)

SITE INFORMATION

CLIFF & WILLOW
RE PN: 20161373924
LC: 412510

SITE ADDRESS

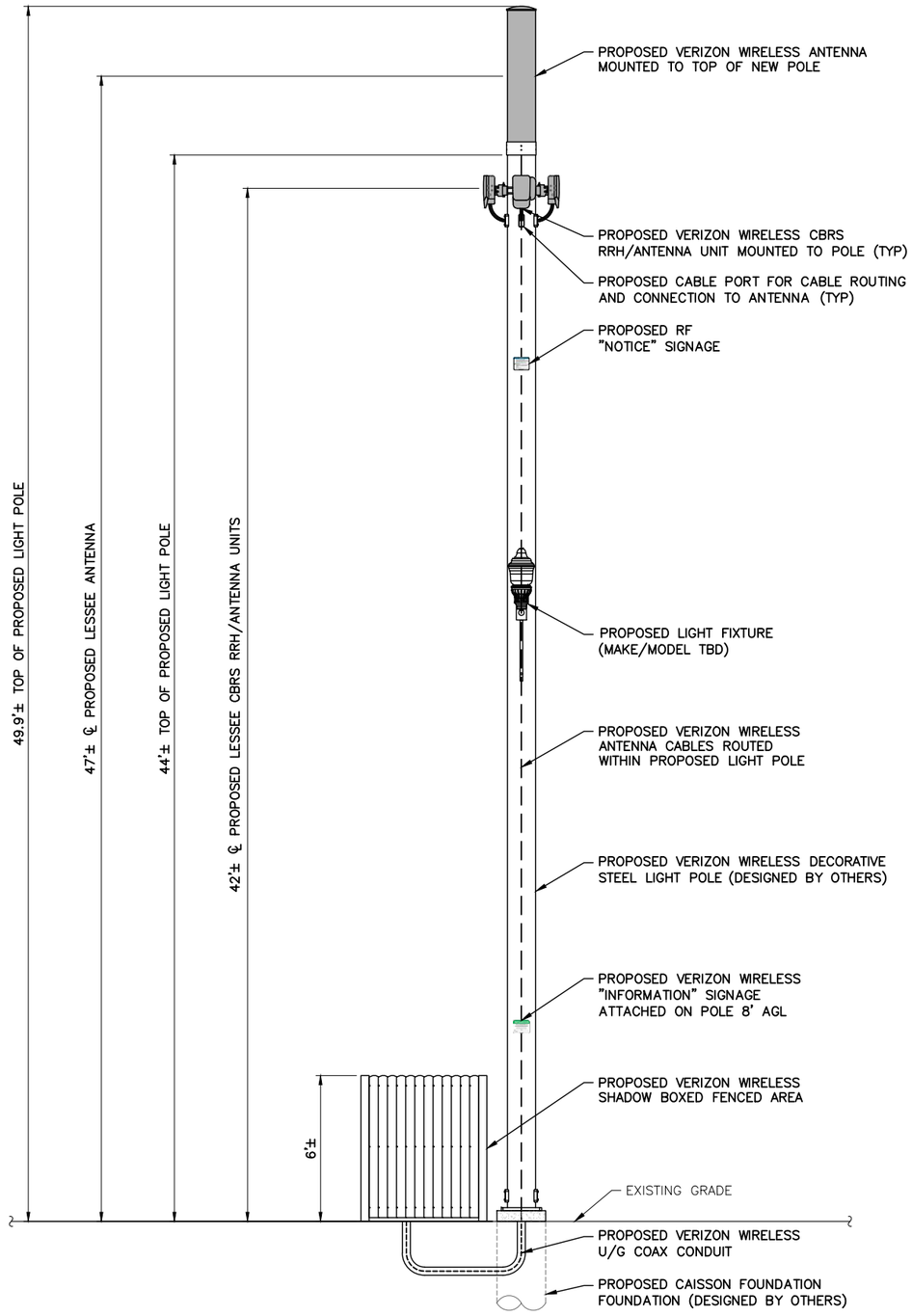
7 CROSS ST
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE

DETAIL SITE PLAN

SHEET NUMBER

C-2



1 / C-3 PROPOSED ELEVATION

SCALE: 1" = 6' (11x17 SIZE)
1" = 3' (22x34 SIZE)

verizon

1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

Tectonic
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Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.
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CLIFF & WILLOW
RE PN: 20161373924
LC: 412510

SITE ADDRESS

7 CROSS ST
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE

POLE ELEVATION

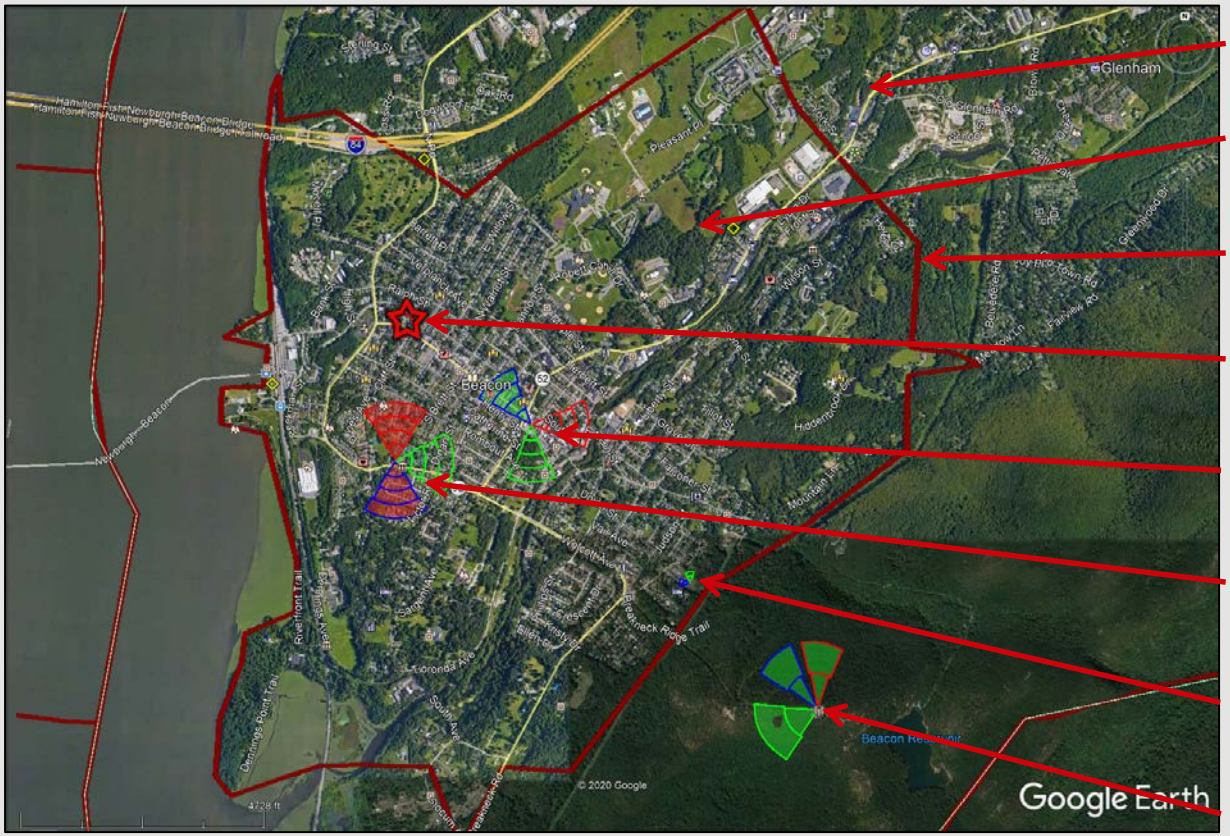
SHEET NUMBER

C-3

5

Verizon Wireless Communications Facility

Engineering Necessity Case – "Cliff and Willow"



Town of Fishkill

City of Beacon

Town/City Boundary

Project Location (Cliff and Willow)

Electric Blanket

Beacon DT

Hedgewood

Mt. Beacon

Prepared by: Michael R. Crosby

Project: The project is the installation and operation of a new pole mounted wireless telecommunications site in the City of Beacon (the "Project Facility").

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Introduction

The purpose of this subsequent analysis is to summarize and communicate the technical radio frequency (RF) information used in the justification of this new site.

Coverage and/or capacity deficiencies are the two main drivers that prompt the need for a new wireless communications facility/site. All sites provide a mixture of both capacity and coverage for the benefit of the end user.

Coverage can be defined as the existence of signal of usable strength and quality in an area, including but not limited to in-vehicles or in-buildings.

The need for improved coverage is identified by RF Engineers that are responsible for developing and maintaining the network. RF Engineers utilize both theoretical and empirical data sets (propagation maps and real world coverage measurements). Historically, coverage improvements have been the primary justification of new sites.

Capacity can be defined as the amount of traffic (voice and data) a given site can process before significant performance degradation occurs.

When traffic volume exceeds the capacity limits of a site serving a given area, network reliability and user experience degrades. Ultimately this prevents customers from making/receiving calls, applications cease functioning, internet connections time out and data speeds fail. This critical condition is more important than just a simple nuisance for some users. Degradation of network reliability and user experience can affect emergency responders and to persons in a real emergency situation can literally mean life or death.

Project Need Overview

The project area, centrally located within the City of Beacon is currently served by three sites. These sites are overloaded requiring capacity relief. Additionally the project area is impacted by the significant terrain difference between one of these serving sites relative to the project area. This excessive difference in terrain combined with distance and area morphology prevents effective capacity and coverage capability of Verizon's RF signals in this area.

The first serving site is **Beacon DT,** located the City of Beacon, is approximately one half mile south (of the project location) situated on the roof of a multi-story apartment building off Rt. 9D near South Ave. While this site provides coverage in portions of the project area, it does so from a capacity limited position (only one sector serving) making the site not capable of efficiently or effectively providing adequate coverage or capacity to the project area.

The second serving site is **Electric Blanket,** located in the City of Beacon, is approximately six tenths of a mile southeast (of the project location) situated on a rooftop tower located off Main Street near Rt. 52. While this site provides weak/variable coverage in portions of the project area, it does so from a low antenna centerline making the site not capable of nor intended to efficiently or effectively provide adequate coverage or capacity to the project area.

The third serving site is **Mt. Beacon** located in the neighboring town of Fishkill, which is approximately two miles south (of the project location) situated on a mountain top tower located off Mt. Beacon Monument Rd (near Breakneck Ridge Trail). While this site provides coverage throughout the project area, it does so from such a great difference in elevation (1,200'+ difference) that the site is not capable of efficiently or effectively providing the necessary capacity necessary. Due to the excessive difference in elevation Mt. Beacon actually degrades area performance and capacity capabilities due to excessive interference (signal to noise ratio) in and around the project area (caused by overlapping/overshooting footprint). In order to mitigate the overlapping footprint and improve interference and capacity conditions, Mt. Beacon requires deactivation as it can no longer function properly as an LTE serving site for this area. Regardless of the need to deactivate Mt. Beacon (LTE), additional capacity is currently required even with Mt. Beacon on the air.

Available (high band AWS) carriers at these sites are not capable of effectively serving/offloading the project area due to inherent propagation losses from distance, challenging terrain and in building coverage losses negatively impacting high band coverage and capacity offload capabilities. There are other Verizon sites in this general area but due to distance and terrain they also do not provide any significant overlapping coverage in the area in question that could allow for increased capacity and improved coverage from other sources.

The primary objectives for this project are to increase capacity and improve coverage throughout portions of the City of Beacon, more specifically portions of Main Street, Rt. 9D, Commerce, Dewindt, Mattie Cooper Square, W Church, Beekman, Municipal Plaza, Oak, Cross, Cliff, Ralph, Willow as well as neighboring residential and commercial areas along and near these roads. In order to offload capacity from Beacon DT, Electric Blanket and Mt. Beacon a new dominant server must be created. This new dominant coverage will effectively offload the existing overloaded sites/cells as well as provide improved coverage where significant gaps exist today.

Following the search for co-locatable structures to resolve the aforementioned challenges and finding none available, the proposed 49.9' pole located at 7 Cross Street is proposed. Verizon's antenna will utilize 47' for the ACL (Antenna Center Line) with a top of antenna height of 49.9'. This solution will provide the necessary coverage and capacity improvements needed.

Wireless LTE (Voice and Data) Growth

Wireless smart city solutions are being used to track available parking and minimize pollution and wasted time.

These same solutions are being used to track pedestrian and bike traffic to help planning and minimize accidents.

Smart, wireless connected lighting enables cities to control lighting remotely, saving energy and reducing energy costs by 20%.

4G technology is utilized to track and plan vehicle deliveries to minimize travel, maximize efficiency, and minimize carbon footprint.

4G technology is also used to monitor building power usage down to the circuit level remotely, preventing energy waste and supporting predictive maintenance on machines and equipment.

Wireless sensors placed in shipments are being used to track temperature-sensitive medications, equipment, and food. This is important for preventing the spread of food-borne diseases that kill 3,000 Americans each year.

Source: Verizon Innovation Center, February. 2018

Wireless is a critical component in schools and for today's students.

20,000 learning apps are available for iPads. 72% of iTunes top selling educational apps are designed for preschoolers and elementary students.

600+ school districts replaced text books with tablets in classrooms.

77% of parents think tablets are beneficial to kids.

74% of school administrators feel digital content increases student engagement.

70% of teens use cellphones to help with homework.

Source: CTIA's Infographics Today's Wireless Family, October, 2017



The average North American smartphone user will consume 48 GB of data per month in 2023, up from just 5.2 GB per month in 2016 and 7.1 GB per month in 2017 .[1]



Of American homes are wireless only.[2]



In North America, the average household has 13 connected devices with smartphones outnumbering tablets 6 to 1.[3]

1. Ericsson Mobility Report, November 2017
2. CDC's 2018 Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-July, 2018
3. IHS Market Connected Device Market Monitor: Q1 2016 , June 7, 2016

A wireless network is like a highway system…



US, mobile data traffic was 1.3 Exabytes per month in 2016, the equivalent of 334 million DVDs each month or 3,687 million text messages each second **according to** Cisco VNI Mobile Forecast Highlights, 2016-2021,Feb 2017

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Wireless facilities and property values.

Cell service in and around the home has emerged as a critical factor in home-buying decisions.



National studies demonstrate that most home buyers value good cell service over many other factors including the proximity of schools when purchasing a home.



More than 75% of prospective home buyers said a good cellular connection was important to them.[1]



The same study showed that 83% of Millennials (those born between 1982 and 2004) said cell service was the most important fact in purchasing a home.



90% of U.S. households use wireless service. Citizens need access to 911 and reverse 911 and wireless may be their only connection.[2]

1. RootMetrics/Money, The Surprising Thing Home Buyers Care About More than Schools, June 2, 2015
2. CTIA, June 2015



With over 80% of 9-1-1 calls now coming from cell phones…[1]

240 million

911 calls are made annually. In many areas, 80% or more are from wireless devices. [1]

1. National Emergency Number Association, Enhancing 9-1-1 Operations With Automated Abandoned Ca & Location Accuracy (Motorola Solutions) (August 23, 2018)

Explanation of Wireless Capacity

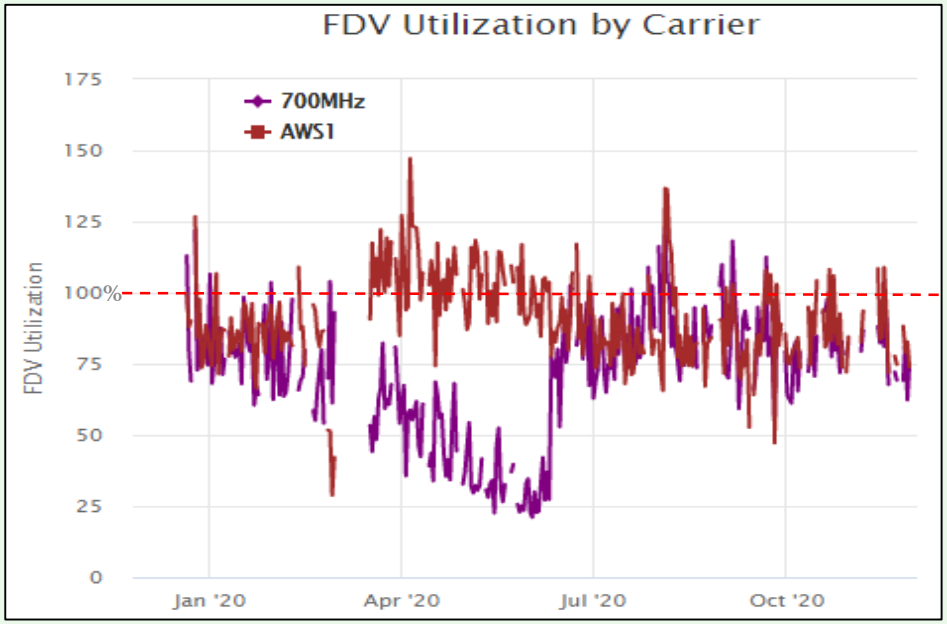


Capacity in this analysis is evaluated with up to three metrics further explained below. These metrics assist in determining actual usage for a given site as well as are used to project when a site is expected to run out of capacity (i.e. reach a point of exhaustion where it can no longer process the volume of voice and data requested by local wireless devices, thus no longer providing adequate service).

- Forward Data Volume ("**FDV**"), is a measurement of usage (data throughput) on a particular site over a given period of time.
- Average Schedule Eligible User ("**ASEU**"), is a measurement of the loading of the control channels and systems of a given site.
- Average Active Connections ("**AvgAC**") is a measurement of the number of devices actively connected to a site in any given time slot.

Verizon Wireless uses proprietary algorithms developed by a task force of engineers and computer programmers to monitor each site in the network and accurately project and identify when sites will approach their capacity limits. Using a rolling two-year window for projected exhaustion dates allows enough time, in most cases, to develop and activate a new site. It is critical that these capacity approaching sectors are identified early and the process gets started and completed in time for new solutions (sites) to be on air before network issues impact the customers.

Capacity Utilization
FDV (Beacon DT Alpha)



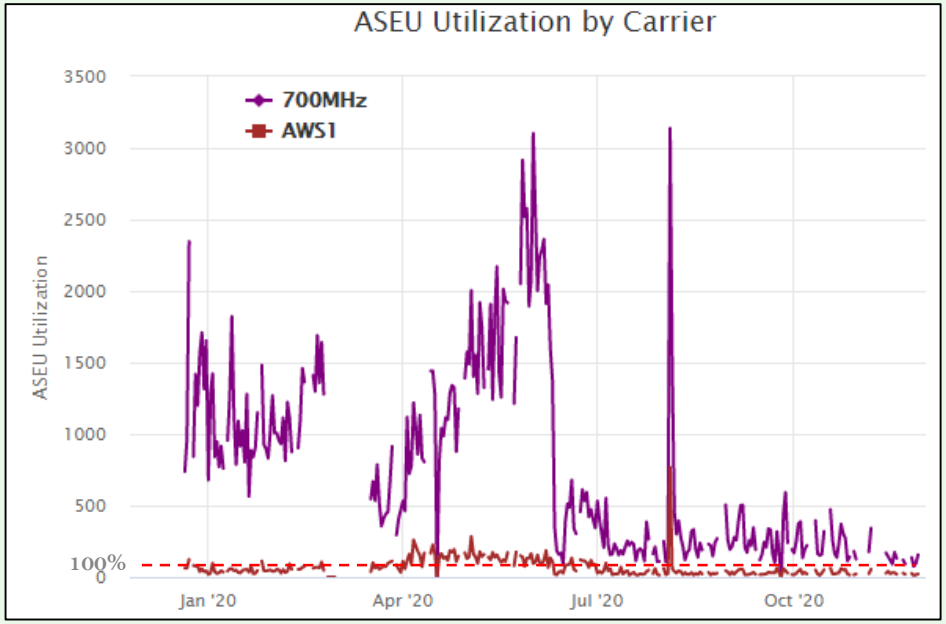
Summary: This graph shows FDV (**F**orward **D**ata **V**olume) which is a measurement of the customer data usage that this sector currently serves. As this limit is approached, data rates slow to unacceptable levels, potentially causing unreliable service for Verizon Wireless customers.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Alpha** sector of the **Beacon DT** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Beacon DT** sector shown above has exceeded its capability of supporting FDV requirements as shown by the purple and dark red lines exceeding the max utilization threshold (red dashed line). FDV is one of three metrics used in this presentation to evaluate capacity capability in this area.

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Capacity Utilization
ASEU (Beacon DT Alpha)



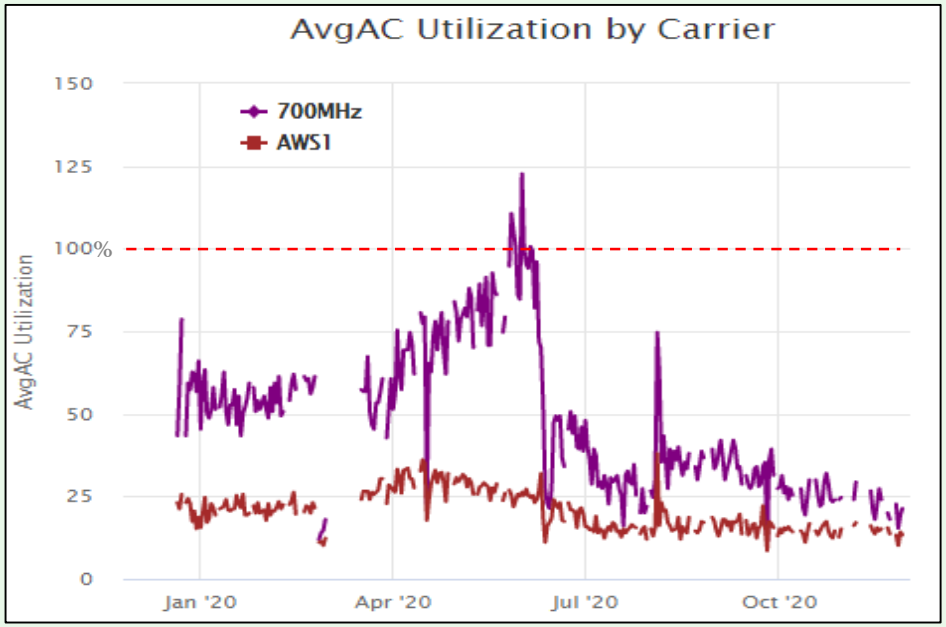
Summary: This graph shows ASEU (**A**verage **S**chedule **E**ligible **U**ser). ASEU is a measurement of the loading of the control channels and systems of a given site. The ASEU load is heavily impacted by distant users or those in poor RF conditions.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Alpha** sector of the **Beacon DT** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Beacon DT** sector cannot support the traffic demand throughout the extent of the high population density area it covers. **Beacon DT** is overloaded, as shown by the purple actual use line exceeding the red dashed exhaustion threshold. This graph also reveals the inability of the AWS carrier (dark red line visible below the red dashed line) to provide the necessary capacity offload for the low band carrier due to differences in RF propagation characteristics. The solution is network densification.

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Capacity Utilization
AvgAC (Beacon DT Alpha)



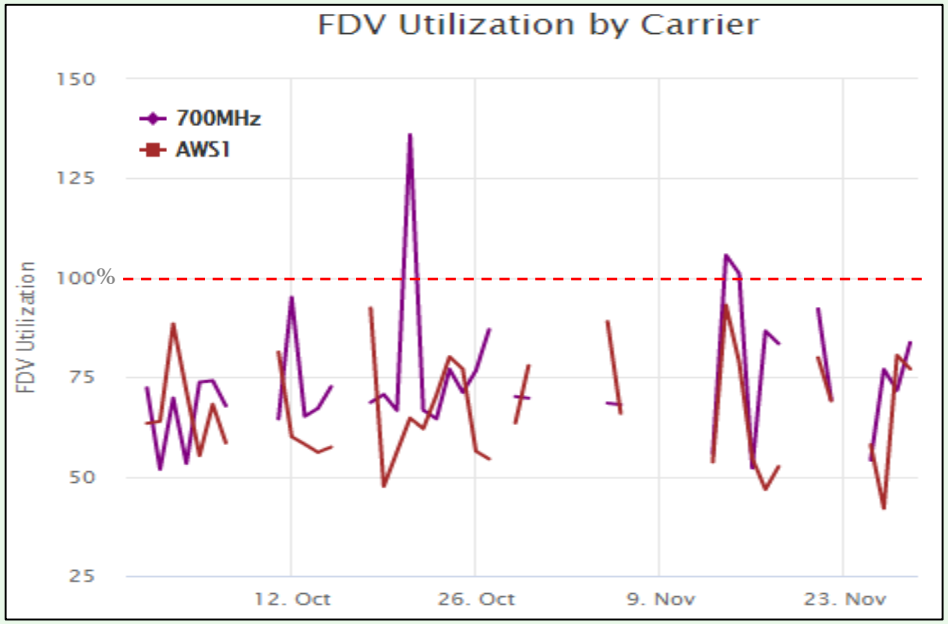
Summary: This graph shows AvgAC (**A**verage **A**ctive **C**onnections). AvgAC utilization by carrier is a measurement of max active connection capacity per sector in any given time slot. When this limit is reached, no additional devices will be able to connect to the site, resulting in connection failures and dropped calls.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Alpha** sector of the **Beacon DT** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Beacon DT** sector shown above is currently working normally thanks to ongoing capacity improvements efforts being made throughout this area. AvgAC is one of three metrics used in this presentation to evaluate capacity capability in this area.

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Capacity Utilization FDV (Electric Blanket Gamma)



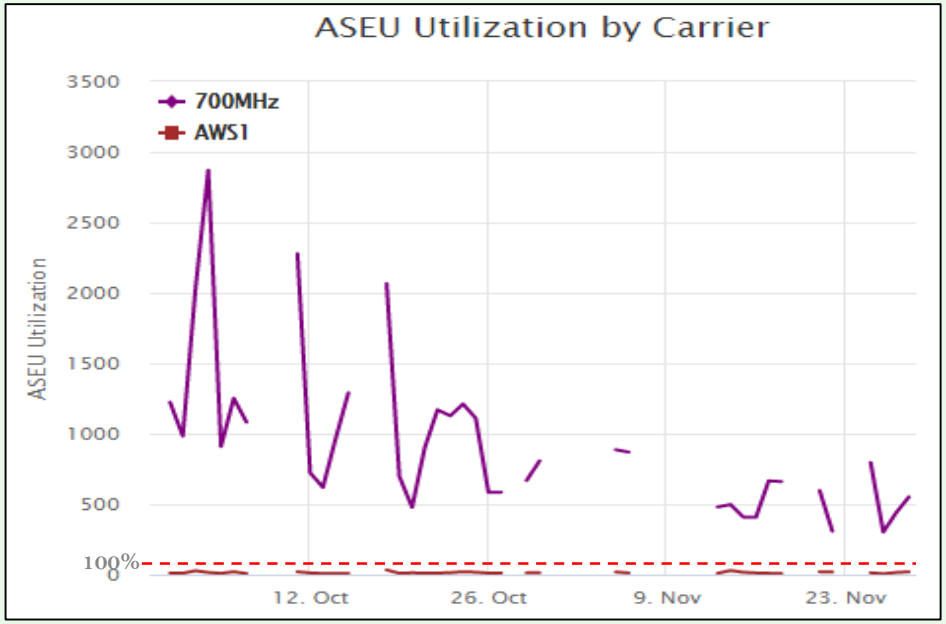
Summary: This graph shows FDV (**F**orward **D**ata **V**olume) which is a measurement of the customer data usage that this sector currently serves. As this limit is approached, data rates slow to unacceptable levels, potentially causing unreliable service for Verizon Wireless customers.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Gamma** sector of the **Electric Blanket** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Electric Blanket** sector shown above has exceeded its capability of supporting FDV requirements as shown by the purple line exceeding the max utilization threshold (red dashed line). FDV is one of three metrics used in this presentation to evaluate capacity capability in this area.

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Capacity Utilization ASEU (Electric Blanket Gamma)



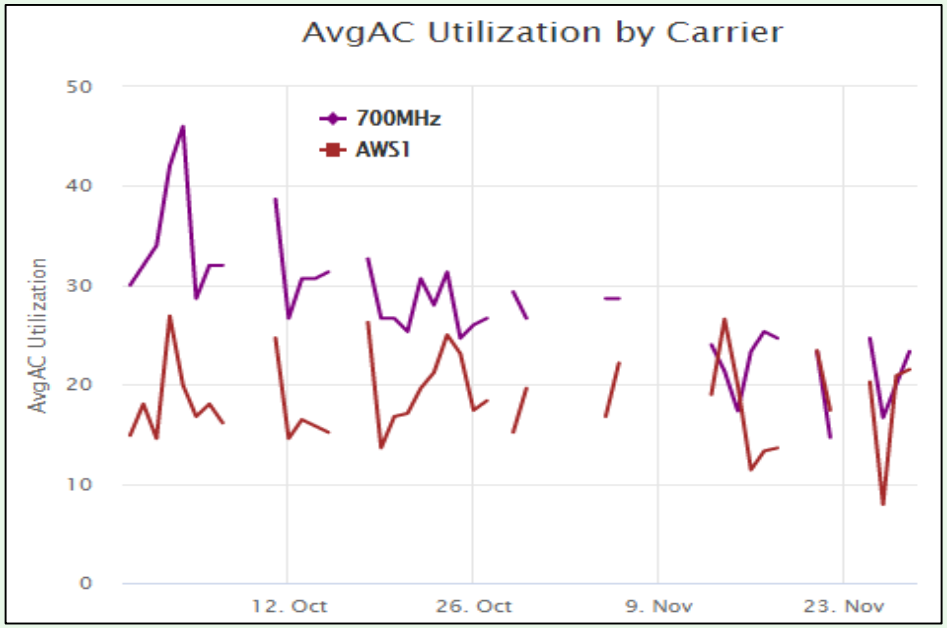
Summary: This graph shows ASEU (**A**verage **S**chedule **E**ligible **U**ser). ASEU is a measurement of the loading of the control channels and systems of a given site. The ASEU load is heavily impacted by distant users or those in poor RF conditions.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Gamma** sector of the **Electric Blanket** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Electric Blanket** sector cannot support the traffic demand throughout the extent of the extremely large geographic area it covers. **Electric Blanket Gamma** is overloaded, as shown by the purple actual use line exceeding the red dashed exhaustion threshold. This graph also reveals the inability of the AWS carrier (dark red line barely visible below the red dashed line) to provide the necessary capacity offload for the low band carrier due to differences in RF propagation characteristics. The solution is network densification.

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Capacity Utilization AvgAC (Electric Blanket Gamma)



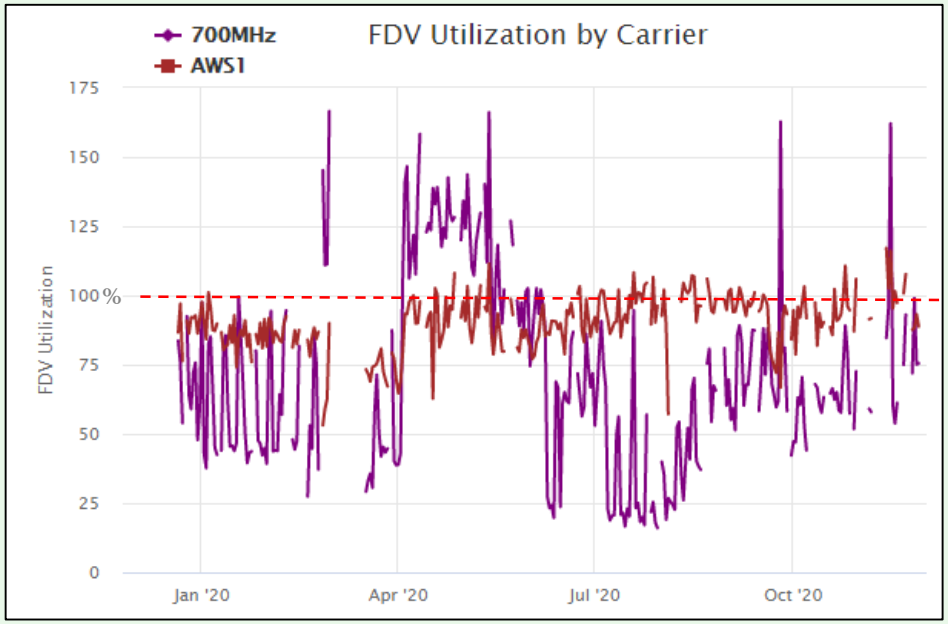
Summary: This graph shows AvgAC (**A**verage **A**ctive **C**onnections). AvgAC utilization by carrier is a measurement of max active connection capacity per sector in any given time slot. When this limit is reached, no additional devices will be able to connect to the site, resulting in connection failures and dropped calls.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Gamma** sector of the **Electric Blanket** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Electric Blanket** sector shown above is currently working normally. AvgAC is one of three metrics used in this presentation to evaluate capacity capability in this area.

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Capacity Utilization
FDV (Mt. Beacon Gamma)



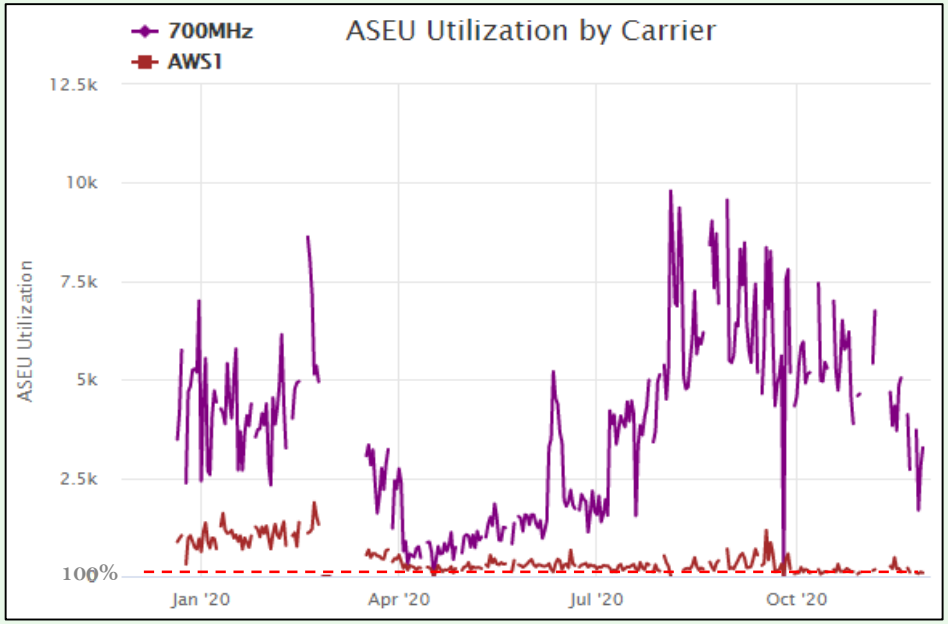
Summary: This graph shows FDV (**F**orward **D**ata **V**olume) which is a measurement of the customer data usage that this sector currently serves. As this limit is approached, data rates slow to unacceptable levels, potentially causing unreliable service for Verizon Wireless customers.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Gamma** sector of the **Mt. Beacon** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Mt. Beacon** sector shown above has exceeded its capability of supporting FDV requirements as shown by the purple and dark red lines exceeding the max utilization threshold (red dashed line). FDV is one of three metrics used in this presentation to evaluate capacity capability in this area.

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Capacity Utilization
ASEU (Mt. Beacon Gamma)



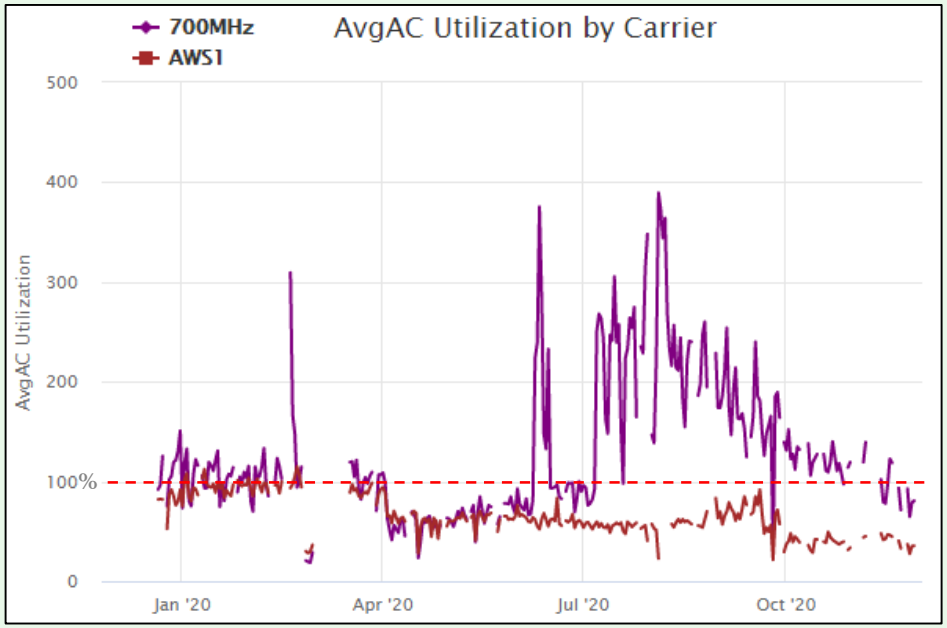
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Detail: The existing **Mt. Beacon** sector cannot support the traffic demand throughout the extent of the extremely large geographic area it covers. **Mt. Beacon Gamma** is severely overloaded, as shown by the purple actual use line exceeding the red dashed exhaustion threshold. This graph also reveals the inability of the AWS carrier (dark red line barely visible below the red dashed line) to provide the necessary capacity offload for the low band carrier due to differences in RF propagation characteristics. The solution is network densification.

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Capacity Utilization
AvgAC (Mt. Beacon Gamma)



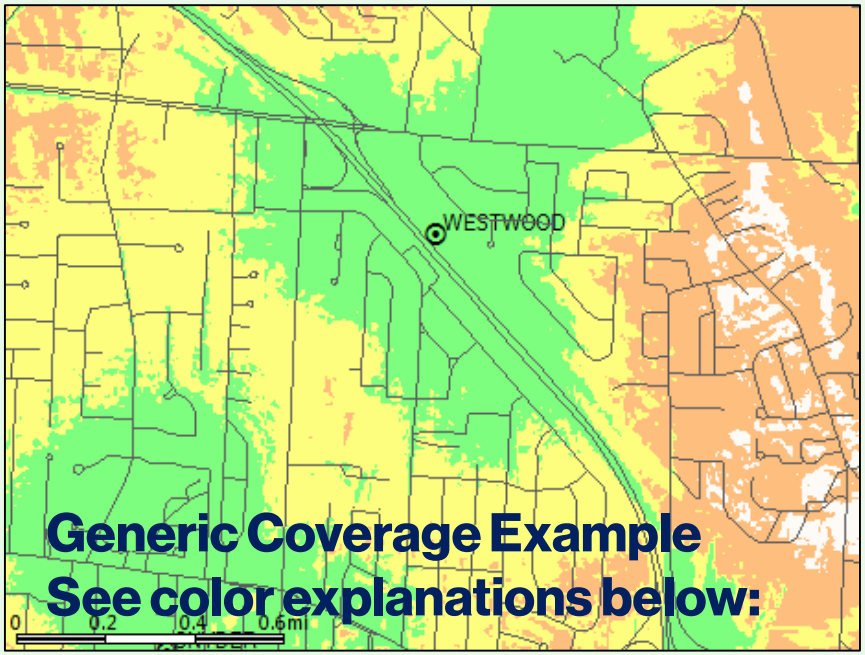
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The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Gamma** sector of the **Mt. Beacon** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **Mt. Beacon** sector shown above has exceeded its capability of supporting AvgAC requirements as shown by the purple line exceeding the max utilization threshold (red dashed line. Ongoing capacity efforts are working to help correct this issue however additional network densification is needed to both offload and displace this traffic.

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Explanation of Wireless Coverage



Coverage is best shown via coverage maps. RF engineers use computer simulation tools that take into account terrain, vegetation, building types, and site specifics to model the RF environment. This model is used to simulate the real world network and assist engineers to evaluate the impact of a proposed site (along with industry experience and other tools).

Many Verizon Wireless sites provide 3G CDMA at 850 MHz and 4G LTE at 700 MHz. As capacity requirements increase, higher frequency PCS (1900 MHz) and AWS (2100 MHz) carriers are added. In some mountaintop situations the high band AWS and PCS carriers are not effective due to excessive distance from the user population.

Coverage provided by a given site is affected by the frequencies used. Lower frequencies propagate further distances, and are less attenuated by clutter than higher frequencies. To provide similar coverage levels at higher frequencies, a denser network of sites is required (network densification).

Note the affect of clutter on the predicted coverage footprint above

**Dark Green >/= -75dBm RSRP, typically serves dense urban areas as well as areas of substantial construction (colleges, hospitals, dense multi family etc.)
Green >/= -85dBm RSRP, typically serves suburban single family residential and light commercial buildings
Yellow >/= -95dBm RSRP, typically serves most rural/suburban-residential and in car applications
Orange >/= -105dBm RSRP, rural highway coverage, subject to variable conditions including fading and seasonality gaps
White = <-105dBm RSRP, variable to no reliable coverage gap area

More detailed, site-specific coverage slides are later in the presentation
*Signal strength requirements vary as dictated by specific market conditions
** Not displayed in example map, layer not used in all site justifications

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Explanation of this Search Area



Cliff and Willow Search Area

A **Search Area** is the geographical area within which a new site is targeted to solve a coverage or capacity deficiency. Three of the factors taken into consideration when defining a search area are topography, user density, and the existing network.

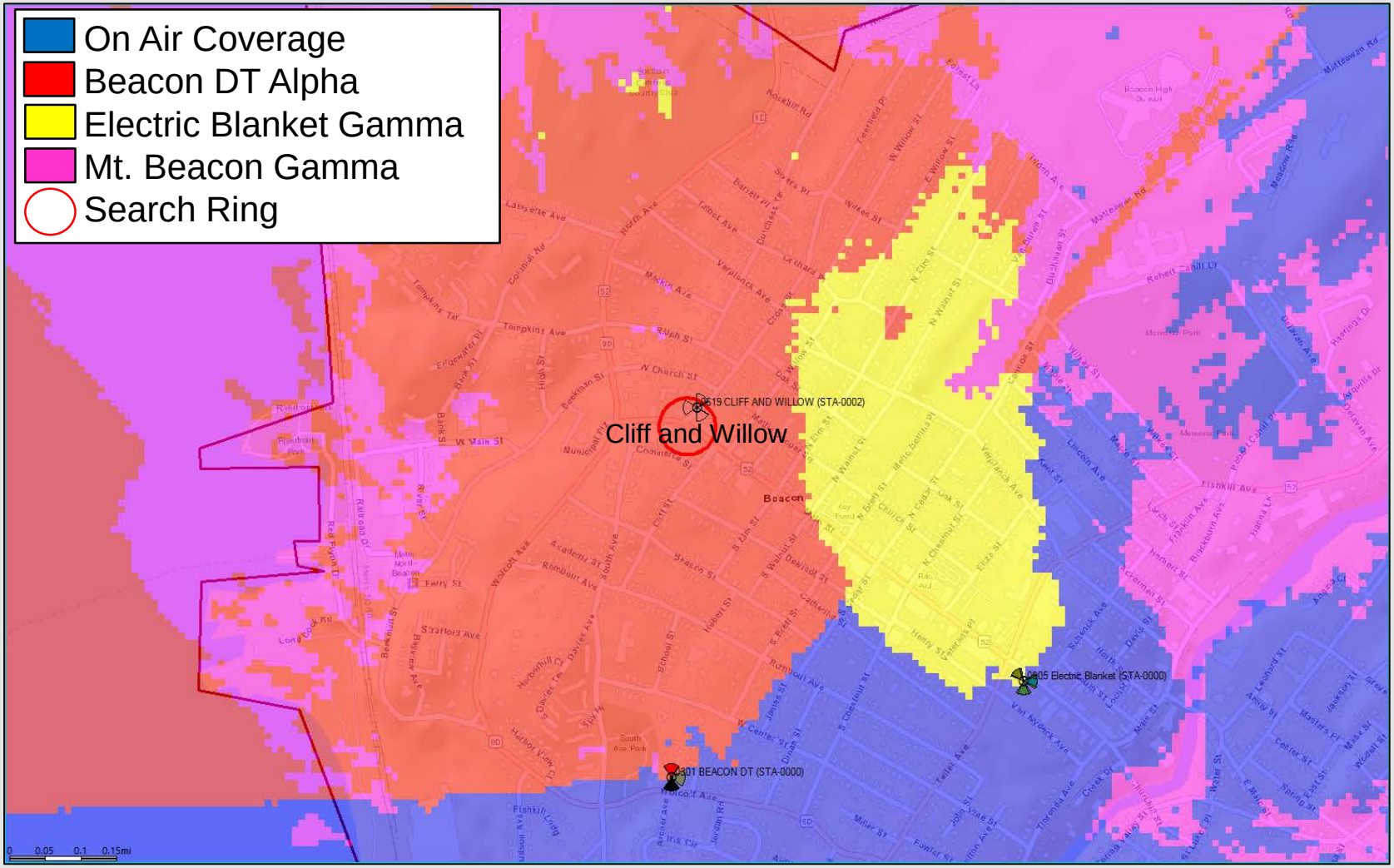
- **Topography** must be considered to minimize the obstacles between the proposed site and the target coverage area. For example, a site at the bottom of a ridge will not be able to cover the other side from a certain height.
- In general, the farther from a site the **User Population** is, the weaker the RF conditions are and the worse their experience is likely to be. These distant users also have an increased impact on the serving site's capacity. In the case of a multi sector site, centralized proximity is essential to allow users to be evenly distributed and allow efficient utilization of the site's resources.
- The existing **Network Conditions** also guide the design of a new site. Sites placed too close together create interference due to overlap and are an inefficient use of resources. Sites that are too tall or not properly integrated with existing sites cause interference and degrade service for existing users.
- Existing co-locatable structures inside the search area as well as within a reasonable distance of the search area are submitted by site acquisition and reviewed by RF Engineering. If possible, RF will make use of existing or nearby structures before proposing to build new towers.

To resolve the coverage and capacity deficiencies previously detailed, Verizon Wireless is seeking to add one new cell facility within this area to improve wireless service capacity and coverage. By offloading traffic from **Beacon DT, Electric Blanket and Mt. Beacon** with the proposed site, adequate and reliable service will be restored. The new **Cliff and Willow** site will provide dominant and dedicated signal to the identified portions of the city of **Beacon**. This helps to improve not only the **Cliff and Willow** project area but also indirectly will result with significant improvements throughout the city of Beacon.

verizon

Existing 700MHz Best Server -105dBm RSRP

Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.

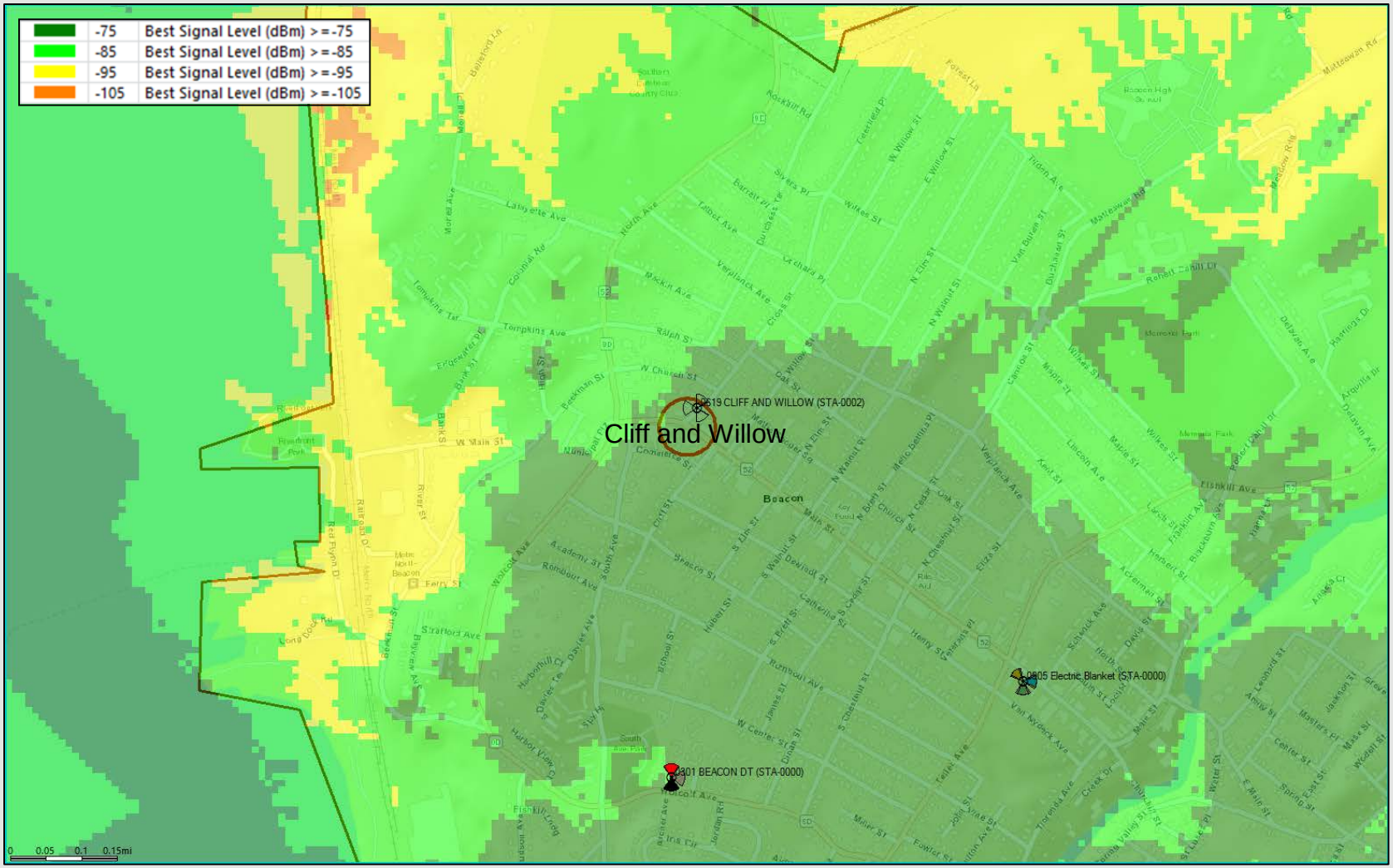


The map above represents coverage from existing sites, with the site in need of capacity offload detailed in the legend above. Blue coverage is from other on air sites.

verizon

Existing 700MHz Coverage

This coverage map shows the RF signal strength conditions in and around the Cliff and Willow site area.
Refer to slide 15 for further explanation of these color thresholds

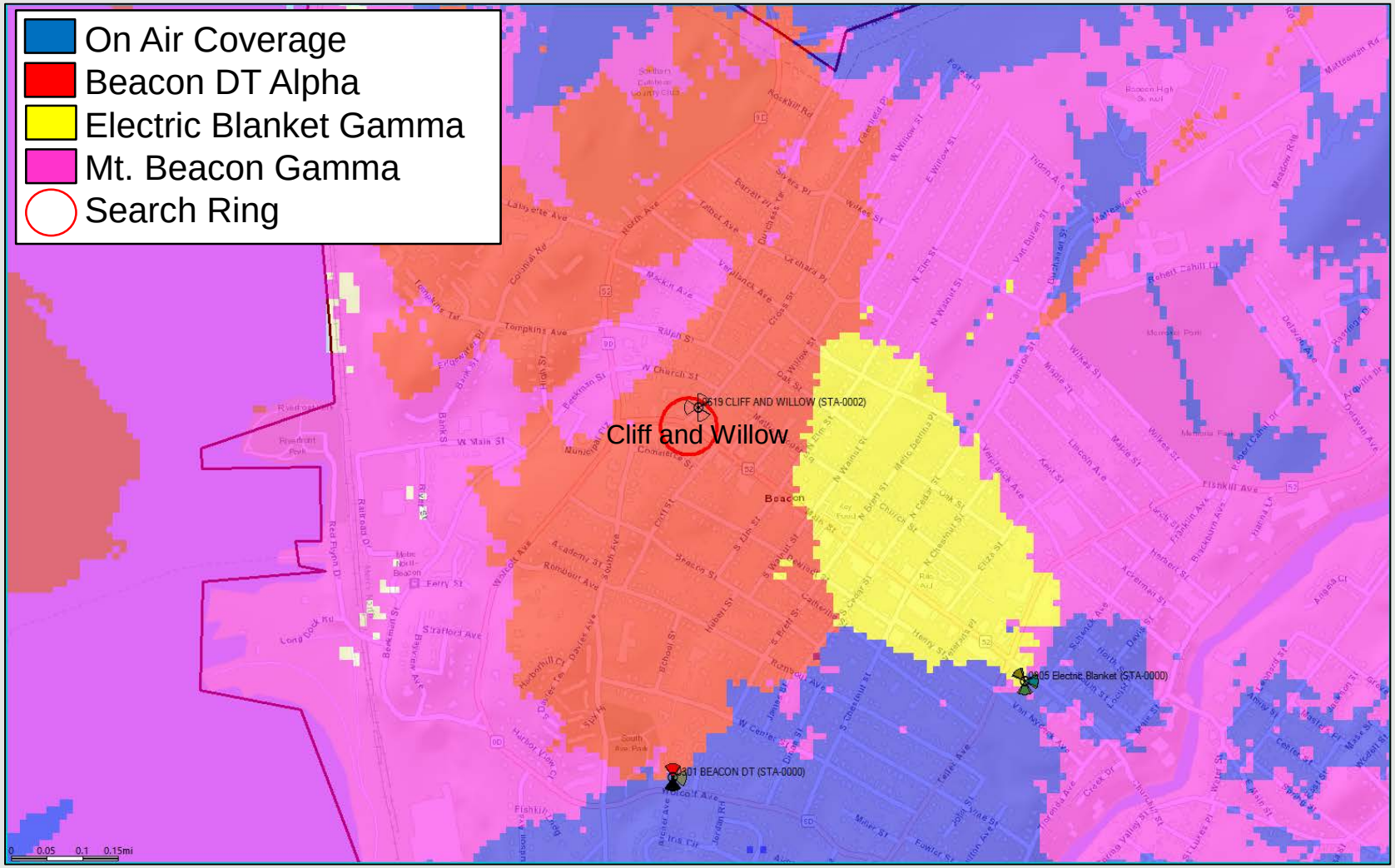


The map above represents coverage from existing sites. This 700MHz signal is overloaded as indicated in the capacity slides especially the ASEU slides on p7, 10 and 13. Additional network densification is required to resolve these conditions.

verizon

Existing 2100MHz Best Server -105dBm RSRP

Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.

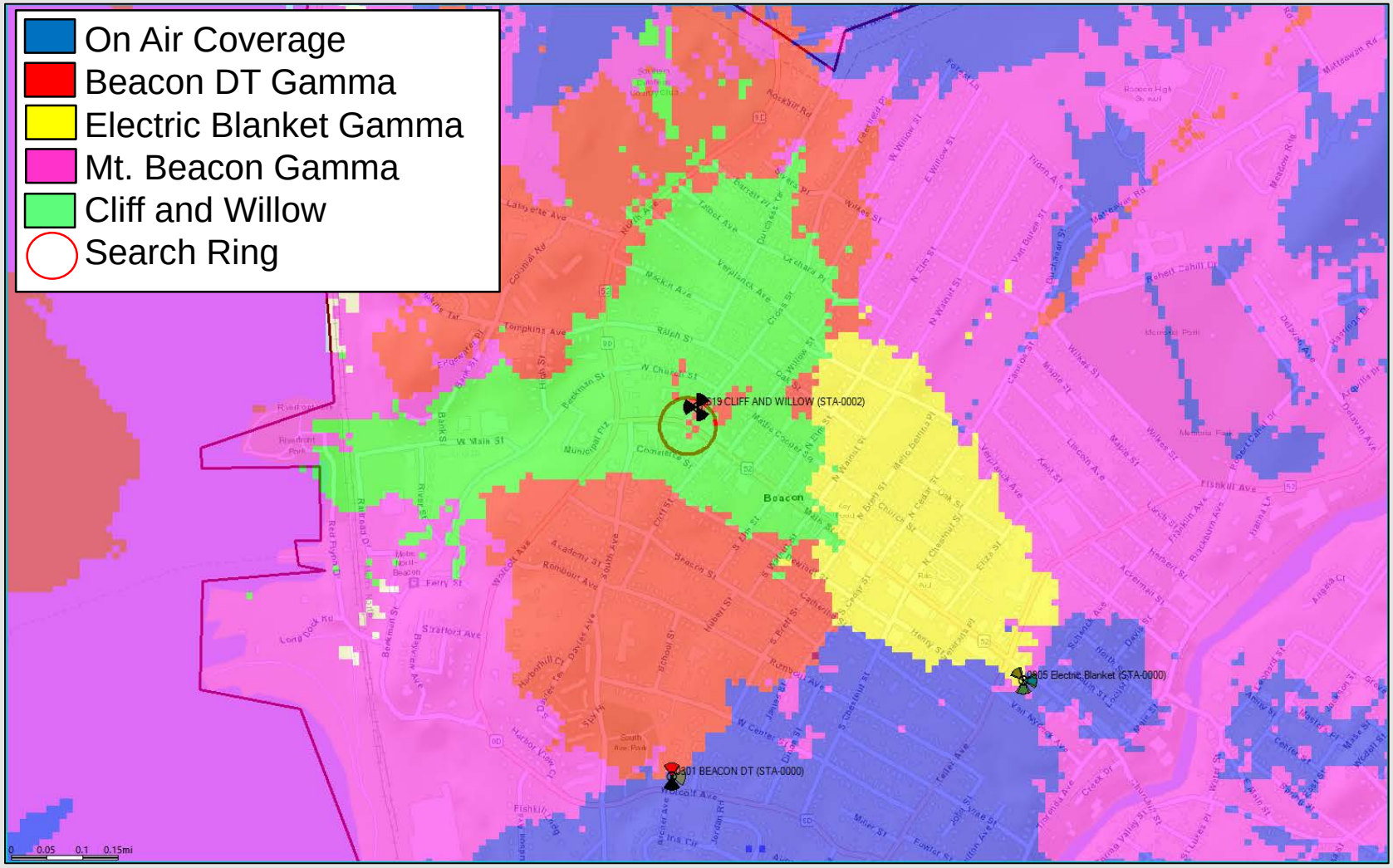


The map above represents coverage from existing sites, with the sites in need of capacity offload detailed in the legend above. Blue coverage is from other on air sites.

verizon

Proposed 2100MHz Best Server -105dBm RSRP

Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area (at 47' ACL).

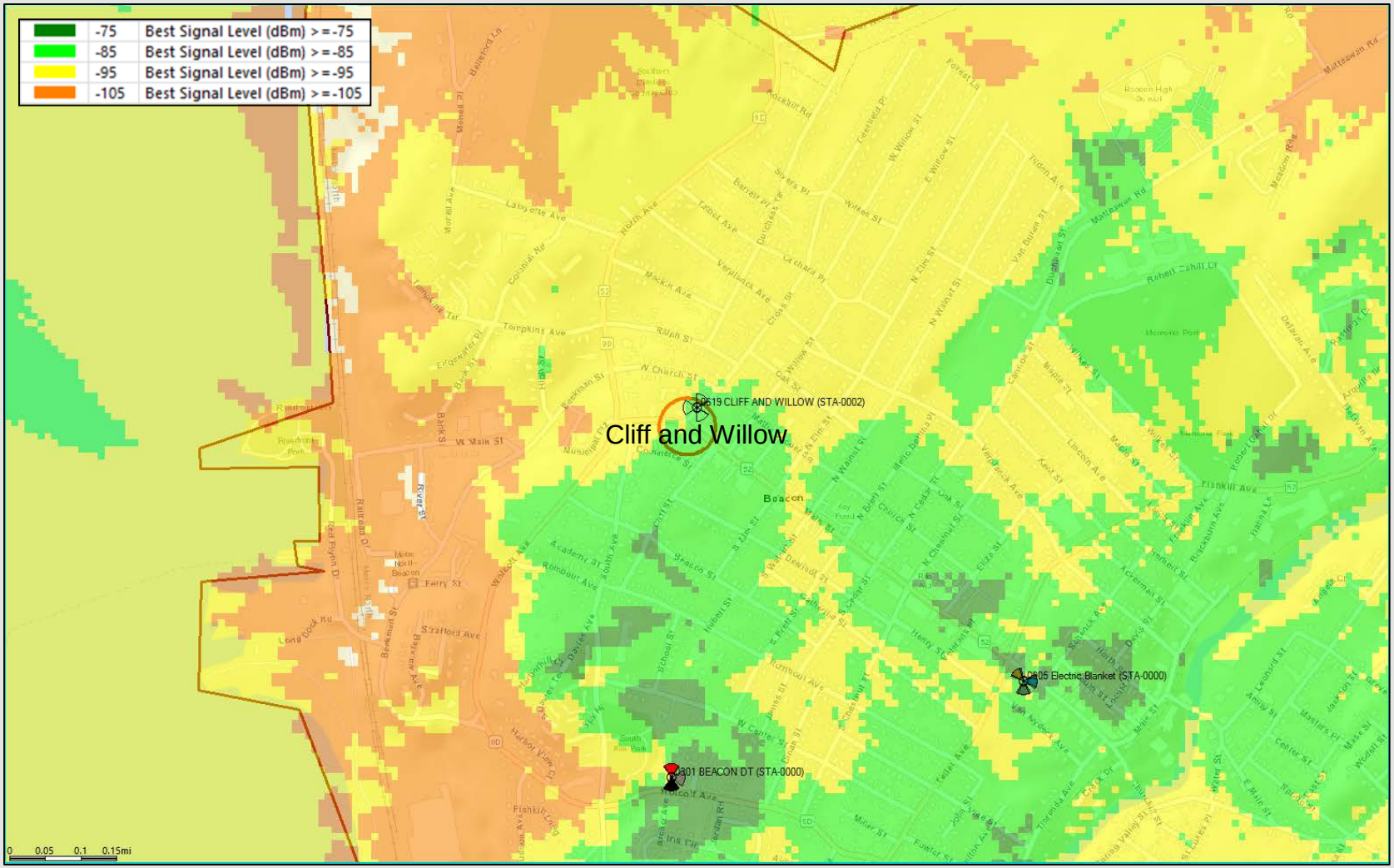


The map above adds the footprint of the proposed Pawling DT site in green. The green best server footprint provides improved coverage and capacity throughout the identified significant gap area. This will help to resolve the coverage and capacity issues impacting the Pawling alpha sector.

verizon

Existing 2100MHz Coverage

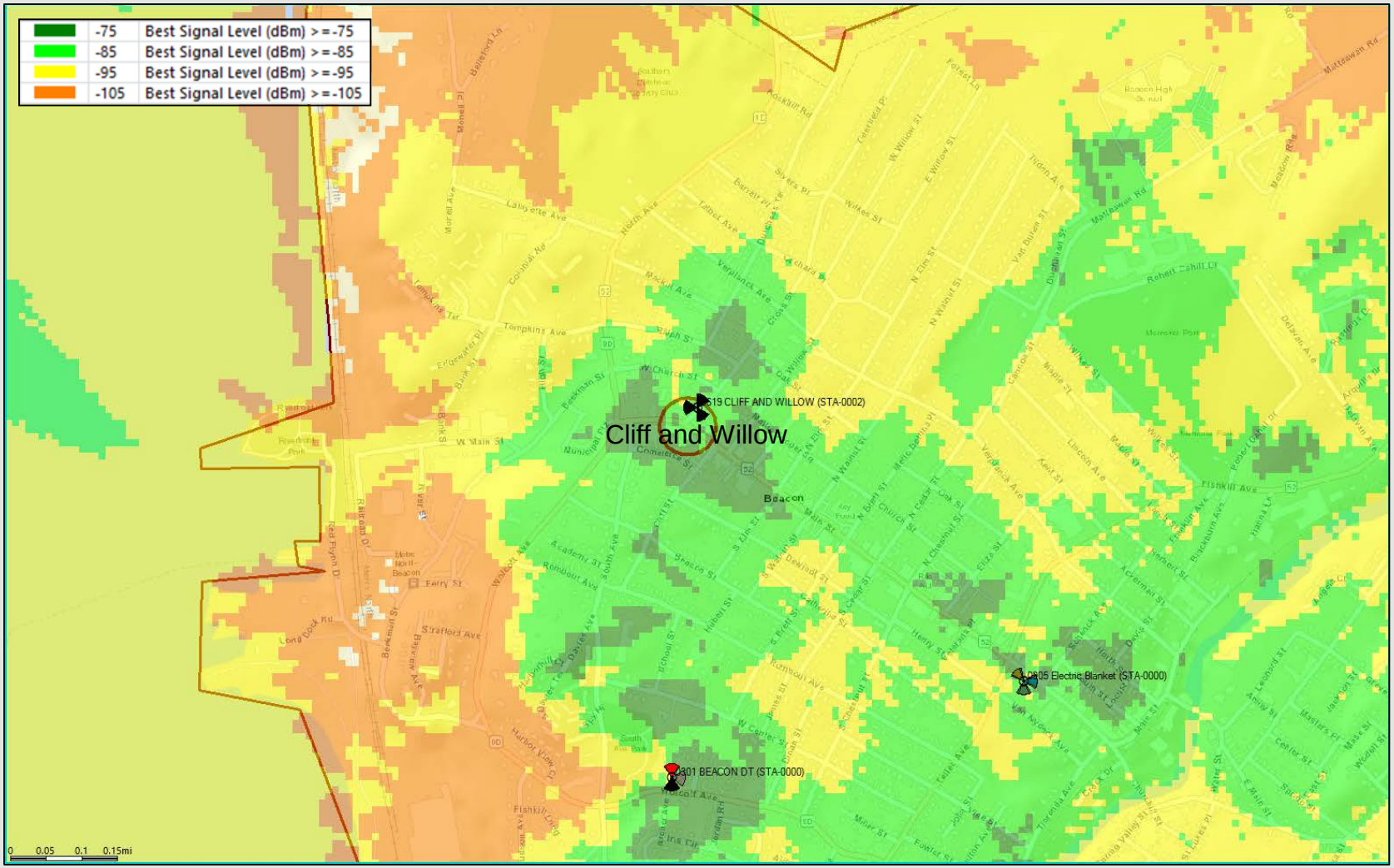
This coverage map shows the RF conditions in and around the Cliff and Willow site area.
Refer to slide 15 for further explanation of these color thresholds



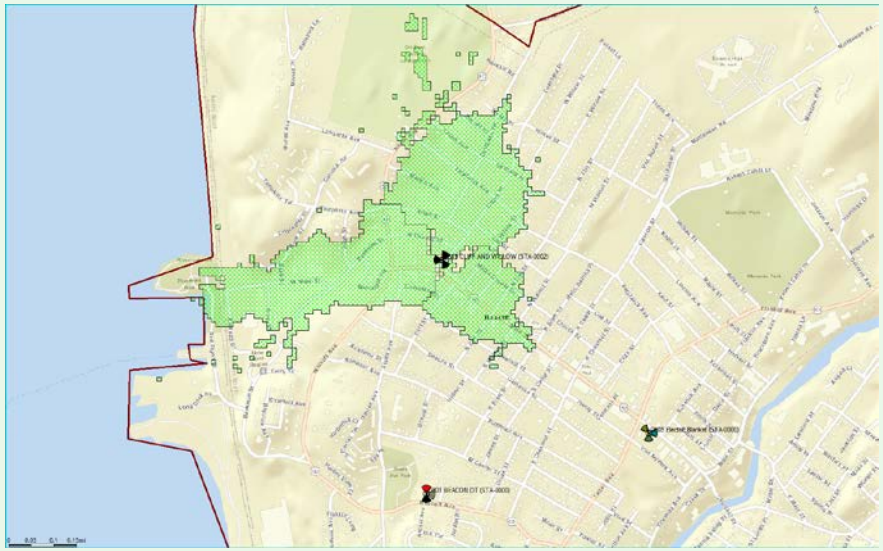
verizon

Proposed 2100MHz Coverage

This coverage map shows how improved the RF conditions will be in and around the Cliff and Willow site area (at 47' ACL).
Refer to slide 15 for further explanation of these color thresholds



RF Justification Summary



The proposed site at 47' ACL resolves the substantial and significant gaps in coverage and capacity impacting the Cliff and Willow site area. This gap is shown above: The green shaded area represents the gap in coverage and capacity that Cliff and Willow (site) will resolve.

The network was analyzed to determine whether there is sufficient **RF coverage and capacity** in the **City of Beacon**. It was determined that there are significant gaps in adequate LTE service for Verizon Wireless in the 700 and 2100MHz frequency bands. In addition to the coverage deficiencies, Verizon Wireless' network does not have sufficient capacity (low band or high band) to handle the existing and projected LTE voice and data traffic in the area near and neighboring the proposed **Cliff and Willow** facility ("targeted service improvement area"). Based on the need for additional coverage and capacity while considering the topography and specific area requiring service, any further addition of capacity to distant existing sites does not remedy Verizon's significant gap in reliable service. Therefore, the proposed facility is also needed to provide "**capacity relief**" to the existing nearby Verizon Wireless sites, allowing the proposed facility and those neighboring sites to adequately serve the existing and projected capacity demand in this area.

With the existing network configuration there are significant gaps in service which restricts Verizon Wireless customers from originating, maintaining or receiving reliable calls and network access. It is our expert opinion that the proposed height will satisfy the coverage and capacity needs of Verizon Wireless and its subscribers in this portion of the **City of Beacon** and the **Cliff and Willow** project area. The proposed location depicted herein satisfies the identified service gaps and is proposed at the minimum height necessary for adequate service.

Michael R. Crosby

Michael R. Crosby
Engineer IV – RF Design
Verizon Wireless

verizon

6

Verizon Wireless
Site Compliance Report

Site Name: CLIFF AND WILLOW MICRO
Site Address: 7 Cross Street, Munci Parking Lot
Beacon, NY 12508
City of Beacon, Dutchess County
Structure Type: Utility Pole

Report generated on: December 1, 2020
Report by: Nick Kutzke
Customer Contact: Naveen Gupta

Verizon Wireless will be compliant with the FCC Rules and Regulations in all publicly accessible areas.

Signed 01 December 2020

Site Safe, LLC
8618 Westwood Center Drive, Suite 315, Vienna, VA 22182
703.276.1100 ● 703.276.1169 fax
info@sitesafe.com ● www.sitesafe.com

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1 Executive Summary

Verizon Wireless has contracted with Site Safe, LLC (Sitesafe), an independent radiofrequency (RF) regulatory and engineering consulting firm, to determine if the proposed telecommunications facility is in compliance with the Federal Communications Commission (FCC) Rules and Regulations for RF emissions (see Appendix A of this report for further explanation of the FCC Rules and Regulations). This document and the conclusions herein are based on the information provided by representatives of Verizon Wireless which is assumed to be true and correct.

Verizon Wireless is proposing to create a new site consisting of three one-antenna sectors at the 42' level and a multi-band canister antenna at the 47.1' level on a proposed 49.9' utility pole.

The analysis evaluates the telecommunications facility with respect to the General Public maximum permissible exposure (MPE) limits ("General Public" is also referred to as "Uncontrolled Environment"; see Appendix A for further explanation of this classification). Sitesafe has taken into consideration the proposed Verizon Wireless antenna system at the subject location. No other antenna systems are currently existing or proposed at the subject location.

Based on the analysis, Sitesafe has determined that:

Verizon Wireless will comply in all publicly accessible areas with the FCC Rules and Regulations governing human exposure to RF electromagnetic fields as described in 47 CFR § 1.1307(b) and 1.1310 in accordance with the methods for evaluating compliance contained in OET Bulletin 65.

Furthermore, with the proposed Verizon Wireless antenna configuration in service, the composite exposure from this facility in all areas at ground level will be below 1% of the General Public MPE limit, or over 100 times less than the maximum allowed exposure in publicly accessible areas.

2 Analysis

In this analysis, Sitesafe has taken into consideration the proposed Verizon Wireless antenna system. No other antenna systems are currently existing or proposed. All proposed licensees are listed in the antenna inventory table in Section 3 of this report. If specific antenna and operating parameter information for the other collocated licensees was not provided, typical assumptions were made based on Sitesafe experience and/or any available information.

Using this data, software modeling was performed for all transmitting antennas located at the site. Sitesafe has assumed a 100% duty cycle and maximum radiated power. The site has been modeled with these assumptions to determine the maximum potential RF energy density. Sitesafe believes this to be a worst-case analysis based on the best available data.

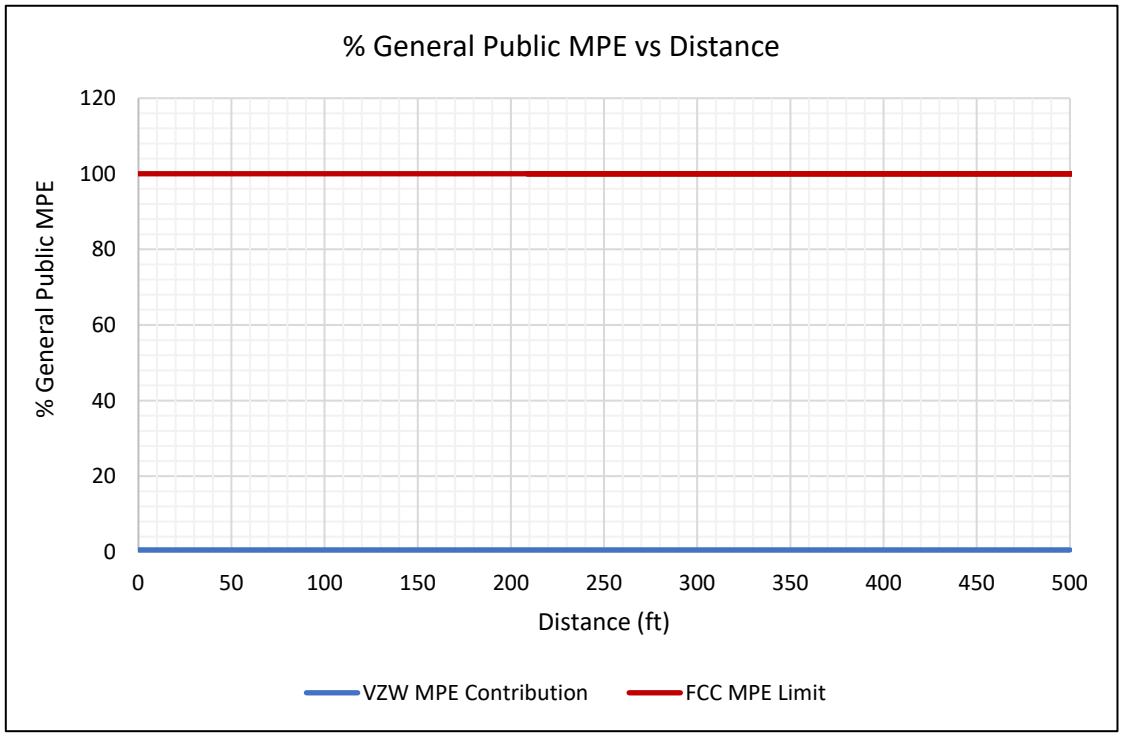
The power density calculations performed by the software tool use FCC prescribed methodologies as contained in OET Bulletin 65, which was compiled by the FCC to provide assistance in evaluating compliance with FCC guidelines for human exposure to electromagnetic fields.

As stated in Section 1, based on this analysis, the calculated ground level exposure from the Verizon Wireless antenna system alone as well as the composite exposure from all proposed licensees will be below 1% of the General Public MPE limit.

Keep in mind that the FCC did not arbitrarily establish their own standards but rather adopted the recommendations of national and international organizations such as the National Council on Radiation Protection and Measurements (NCRP), the American National Standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE). These recommendations were developed by expert scientists and engineers following extensive evaluation of the potential biological effects from RF exposure. The FCC MPE limits are based on thresholds for known adverse effects, and they were designed to provide a substantial margin of safety. There is a safety factor of 50 built into the General Public MPE limits, and the predicted Verizon Wireless exposure levels are over 100 times below these very conservative limits.

In cases where such compliance exists, the subject of electromagnetic field safety is preempted by the Telecommunications Act of 1996, which states: "No state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the (Federal Communication) Commission's regulations concerning such emissions."

Lastly, the graph below provides a visual depiction of the rather insignificant electromagnetic field exposure contribution from the Verizon Wireless antenna system at any distance from the base of the structure. This portrays how low the Verizon Wireless contribution is when compared to the General Public MPE limit.



3 Antenna Inventory

The following antenna inventory contains data provided by the customer and/or gathered by Sitesafe personnel which was used to perform the analysis:

Ant #	Operator	Antenna Make/Model	TX Freq (MHz)	Tech.	Az (Deg)	ERP (Watts)	AGL (ft)	MDT	EDT
1	VERIZON WIRELESS (Proposed)	Jma Wireless CX12TRI565 (Beam_0)	1900	LTE	30	3192.4	47.1	0	4
1	VERIZON WIRELESS (Proposed)	Jma Wireless CX12TRI565 (Beam_0)	2100	LTE	30	3500.4	47.1	0	4
1	VERIZON WIRELESS (Proposed)	Jma Wireless CX12TRI565 (Beam_1)	1900	LTE	150	3192.4	47.1	0	6
1	VERIZON WIRELESS (Proposed)	Jma Wireless CX12TRI565 (Beam_1)	2100	LTE	150	3500.4	47.1	0	6
1	VERIZON WIRELESS (Proposed)	Jma Wireless CX12TRI565 (Beam_2)	1900	LTE	270	3192.4	47.1	0	8
1	VERIZON WIRELESS (Proposed)	Jma Wireless CX12TRI565 (Beam_2)	2100	LTE	270	3500.4	47.1	0	8
2	VERIZON WIRELESS (Proposed)	Samsung XXDWMM-12.5-65-8T	3550	LTE	0	204.7	42	0	8
3	VERIZON WIRELESS (Proposed)	Samsung XXDWMM-12.5-65-8T	3550	LTE	120	204.7	42	0	8
4	VERIZON WIRELESS (Proposed)	Samsung XXDWMM-12.5-65-8T	3550	LTE	240	204.7	42	0	8

Notes: Each row with the same number in the *Ant #* column references the same physical antenna. Proposed equipment is tagged as *(Proposed)* under *Operator* or *Antenna Make and Model*. Power values provided by the client and used in the analysis may be greater than what is initially deployed. For additional modeling information, refer to Appendix B of this report.

4 Engineer Certification

The Professional engineer whose seal appears on the cover of this document herby certifies and affirms:

That I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I am an employee of Site Safe, LLC, in Vienna, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specially as they apply to the FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Nick Kutzke.

December 1, 2020

Appendix A – Technical Framework: FCC Rules and Regulations

In 1996, the FCC adopted regulations for evaluating the effects of RF emissions in 47 CFR § 1.1307(b) and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (OET Bulletin 65), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996, the FCC periodically reviews these rules and regulations as per its congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled Environment" and General Public or "Uncontrolled Environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limits.

General Public or Uncontrolled limits apply to *accessible* areas where workers or the general public may be exposed to RF electromagnetic fields.

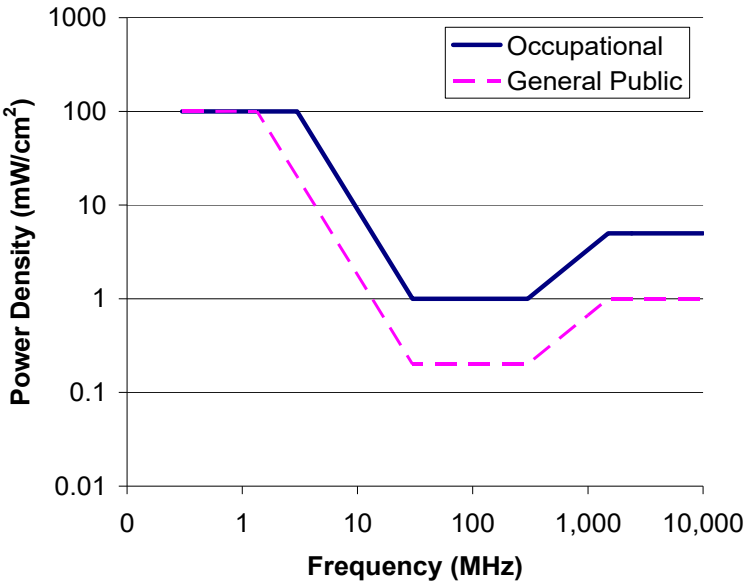
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (e.g. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage.

A site with Controlled environments is evaluated with Occupational limits. All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage, it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The MPE limits utilized in this analysis are outlined in the following diagram and table:

FCC Limits for Maximum Permissible Exposure (MPE)

Plane-wave Equivalent Power Density



Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time |E|², |H|² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time |E|², |H|² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Appendix B – Definitions

Compliance – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

Gain (of an antenna) – The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Gain may be considered for a specified polarization. Gain may be referenced to an isotropic antenna (dBi) or a half-wave dipole (dBd) antenna.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided. In the event of unknown information, Sitesafe will use its industry specific knowledge of antenna models to select a worst-case scenario antenna to model the site.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

Radio Frequency Exposure or Electromagnetic Fields – Electromagnetic waves that are propagated from antennas through space.

Appendix C – Statement of Limiting Conditions

Sitesafe will not be responsible for matters of a legal nature that affect the site or property.

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing best industry practices and due diligence. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions or information or data supplied by Verizon Wireless, the site manager, or their affiliates, subcontractors or assigns.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.

Appendix D – Additional Resources

Additional RF information is available at the following sites:
https://www.fcc.gov/general/radio-frequency-safety-0
https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety

John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **7 Cross Street, Verizon Small Cell Application**

I have reviewed the December 9, 2020 Application packet from Verizon Wireless, including a December 2, 2020 Site Plan Application, August 29, 2019 Partial Boundary Survey, November 30, 2020 Engineering Necessity Case, December 1, 2020 Site Compliance Report, and a 6-sheet Site Plan set, dated December 4, 2020.

Proposal
The applicant is proposing to install a small cell antenna on a new steel pole with accessory ground-mounted equipment. The location is on a City-owned municipal parking parcel in the Central Main Street (CMS) district.

Comments and Recommendations
The applicant has been exploring options for a small cell facility in this area, including possible rooftop locations, since at least 2017. The last application was for an antenna attached to a wood utility pole in the sidewalk on the opposite side of Cross Street. It was suggested at the time that a better location would be on the adjacent City-Owned municipal parking lot. This position is out of the Historic District and Landmark Overlay zone and away from the undeveloped lot at the corner of Main Street, which was then under consideration for a new multi-story building. The applicant has subsequently been in negotiation with the City for this proposed site. After reviewing the submitted materials, I have several comments:

1. The applicant should be prepared at the Planning Board meeting to describe its consideration of alternative locations, including area rooftops, as provided in its previous application.

2. The applicant should provide a photo-simulation of the proposed pole and antenna equipment in its surrounding context from a Main Street viewpoint, as previously shown to the City.

3. The means of connection to the nearby utility pole should be clarified, since the survey shows an overhead wire easement, but Sheet C-2 shows an underground connection to the pole.

4. The applicant should explain how the proposed light fixture on the pole is to be determined.

If you have any questions or need additional information, please feel free to email me.
John Clarke, Beacon Planning Consultant

c: David Buckley, Building Inspector
Jennifer L. Gray, Esq., City Attorney
Arthur R. Tully, P.E., City Engineer
John Russo, P.E., City Engineer
Scott P. Olson, Esq., Project Representative

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.

January 8, 2021

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

RE: Small Cell Wireless
7 Cross Street
Tax Parcel 5954-27-787978
City of Beacon

Dear Mr. Gunn:

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

- Report and exhibits entitled "Verizon Wireless of The East LP – Application for Small Cell Permit", dated December 9, 2020, as submitted by Verizon Wireless, Tectonic Engineering & Surveying, Network Building & Consulting and Young/Sommer LLC.

The applicant is proposing to construct a small cell wireless service at 7 Cross Street, which is the City of Beacon's municipal parking lot on Cross Street, just off of Main Street. Based upon our review of the above document and attached exhibits, we offer the following comments:

1. Plan Sheet C-3, of Exhibit 4, notes that the light fixture make and model are to be determined. This information should be provided to the Planning Board for their review at this time. Also, what is the proposed lumens to be admitted by the proposed lights.

2. Plan Sheet C-3, of Exhibit 4, should note the height to the proposed light fixture.

3. Plan Sheet C-3, of Exhibit 4, currently notes the top of the proposed light pole to be 49.9± feet. This should be revised to note that the top of the light pole shall be 49.9 feet maximum.

4. Plan Sheet C-3, of Exhibit 4A, notes the "Proposed Verizon Wireless Decorative Steel Light Pole (Designed By Others)". The Planning Board should be provided with information as to what the actual proposed decorative light pole will look like, as well as colors of the light pole. It should be further noted that the submitted Application for Site Plan Approval notes the use of a wooden pole, not steel.

5. There presently exists a wooden utility pole with an LED streetlight located atop that provides for street lighting along this section of Cross Street, which is located directly in front of the new pole proposed by Verizon with a light fixture. With this additional light source located in this area, will this create an over abundance of lighting in this area during night hours that could be a disturbance to the neighboring residents, or a glaring problem for the motoring public?

This completes our review at this time. Further comments may be forth coming based upon 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

City of Beacon Planning Board Agenda
01/12/2021

Title:

Review application for Subdivision, 2 residential lots, Monell Place, submitted by Allison Cross & Henry Nye

ATTACHMENTS

Monell Place Cover Letter.pdf

Monell Place Subdivision Application.pdf

Monell Place Subdivision-EAF Short Form_2020-1229.pdf

Monell Place Subdivision-Subdivision Plan 1.pdf

Monell Place Subdivision Plat.pdf

Monell Place Erosion & Sediment Control.pdf

Monell Place Construction Details.pdf

Planner Review Letter.pdf

Engineer Review Letter.pdf

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

December 29, 2020

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

Re: Monell Place 2 Lot Subdivision
Tax parcel: 5955-04-586132 (±2.91 acres)
City of Beacon, NY

Dear Chairman Gunn and Members of the Planning Board:

On behalf of the co-Applicants, Allison Cross and Henry Nye, Hudson Land Design (HLD) is pleased to present this proposal for subdivision of the above referenced parcel into two (2) residential building lots. The parcel is located on the west side of Monell Place, opposite of Lafayette Avenue, within the City's One-Family 20,000 sq.ft/dwelling (R1-20) residential zoning district (per the 7/13/2020 zoning map) and consists of approximately 2.91 acres. The parcel is also located in the Historic District and Landmark Overlay (HDLO) Zone. The lot is mostly vacant except for some concrete slab remains.

The proposed action is unlisted under 6 CRR-NY 617.4 (9) due to the parcel being located in the HDLO and substantially contiguous to a structure that is on the National Register of Historic Places; however, the proposed action does not exceed 25% of any threshold established within 617.4 (5) for a Type I action. Therefore, a short Environmental Assessment Form is provided.

The two residential lots will gain access from the west side of Monell Place with individual driveways. Each dwelling will hook up to existing water and sewer mains within Monell Place via new water and sewer service lines. The site disturbance will result in less than 1 acre (0.85 ac. total for both lots). Therefore, a Stormwater Pollution Prevention Plan (SWPPP) will not be required.

Please find the following items for your consideration of Subdivision Approval:

- Three (3) hard copies of the Subdivision Application Form along with application and escrow fees;
- Three (3) hard copies of the Preliminary Subdivision Plat sheet 1 of 1;
- Three (3) hard copies of the Subdivision Plan Set consisting of three (3) sheets;
- Three (3) hard copies of a short Environmental Assessment Form, and
- CD containing digital copies of all of the above.

Please place this item on the January 12, 2021 planning board meeting for discussion and establishment of Lead Agency. We will also be requesting scheduling of a public hearing at the following meeting if the board sees fit. Should you have any questions, please feel free to call me at 845-440-6926.

Sincerely,



Michael A. Bodendorf, P.E.
Principal

cc: Allison Cross & Henry Nye
Daniel G. Koehler, P.E. (HLD file)

APPLICATION FOR SUBDIVISION APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: ALLISON CROSS AND HENRY NYE

Address: 11 YORK STREET, BEACON NY, 12508

Signature: Allison Cross Henry Nye

Date: 12/28/2020

Phone: 845-392-1990

(For Official Use Only)

	Date	Initials
Preliminary Application Rec'd		
Application Fee:		
Public Hearing		
Preliminary Plat Approved:		
Final Plat Approved:		
Recreation Fee:		
Performance Bond:		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: MICHAEL A. BODENDORF, P.E. -HUDSON LAND DESIGN

Address: 174 MAIN STREET , BEACON NY, 12508

Phone: (845) 440-6926

Fax: (845) 440-6637

Email address: mbodendorf@hudsonlanddesign.com

IDENTIFICATION OF SUBJECT PROPERTY:

Subdivision name or identifying title:

MONELL PLACE SUBDIVISION

Street which property abuts:

Current Tax Map Designation: Section 5955 Block 04 Lot(s) 586132

Property ~~(does)~~ (does not) connect directly into a (State) (County) highway.

Land in subdivision (is) ~~(is not)~~ within 500 feet of a Municipal boundary. (TOWN OF FISHKILL)

Total area of property is 2.91 AC.

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** copies of a subdivision plat showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

c. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

APPLICATION FEES

Site Plan	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Special Use Permit	**Residential** $500 + $250 per dwelling unit **Commercial** $500 + $250 per 1,000 s.f.
Subdivision	**$ 750 for 2-4 lots + $100 per lot** $950 **$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

$2,500 ESCROW

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

* *if required by Chairman*	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)***

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: Allison Cross and Henry Nye

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.

List all properties in the City of Beacon that you hold a 5% interest in:
5955-04-586132 - Subject Parcel

Applicant Address: 11 York Street, Beacon, NY 12508

Project Address: Monell Place, Beacon, NY 12508

Project Tax Grid # 5955-04-586132

Type of Application Subdivision

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, Allison Cross & Henry Nye, 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 — X
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon — ____
3. ALL tax payments due to the City of Beacon are current — X
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon — ____
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon — ____
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current — ____

Signature of Owner

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	___	___	____
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)	___	___	____
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)	___	___	____

CITY OF BEACON
PRELIMINARY SUBDIVISION PLAT
AND CONSTRUCTION PLANS SPECIFICATION FORM

Name of Application: Monell Place Subdivision

PRELIMINARY SUBDIVISION PLAT	YES	NO
The preliminary plat shall be clearly marked "Preliminary Plat", shall be drawn to a convenient scale but not less than 1" = 100', and shall contain the following information:	X	
Proposed subdivision name or identifying title, name, and address of property owner and subdivider (if other than owner), name and address of the surveyor and/or engineer preparing the plan, scale, approximate true North point, and date.	X	
The approximate location and dimensions of all property lines, the total acreage of the proposed subdivision, the location of any zoning, special district or municipal boundary lines affecting the subdivision, and the names of owners of record of properties adjoining and directly across the street from proposed subdivision.	X	
The location of all existing structures and pertinent features, including railroads, water bodies, water courses, wetlands, rock outcroppings, wooded areas, major trees, and stone walls, that may influence the design of the subdivision, plus accurate topography at a vertical contour interval of not more than two (2) feet. The topographic data shall be determined by field survey unless the Planning Board specifically waives this requirement and/or permits the substitution of topographic information obtained from other sources determined satisfactory for the particular case.	X	
The location and status of existing streets or private roads, easements and rights-of-way (if any), proposals for the layout of new streets or private roads (including widths and approximate curve radii) and any proposed easements, rights-of-way and/or reservations.	X	
The names of existing streets or private roads and proposed names for new streets or private roads.	X	
The proposed arrangement of lots, including identifying numbers and approximate area and dimensions of each.	X	
Location, size and nature of any area proposed to be reserved for park purposes.	N/A	
A site location sketch, at a scale of one inch equals 400 feet, showing the general situation within 1,000 feet of the applicant's property with respect to surrounding properties, streets and private roads.	X	
Where the preliminary plat includes only a portion of an applicant's contiguous holding, the applicant shall also indicate, on a sketch at a scale of not less than one inch equals 200 feet, the probable future street or private road system, lot arrangement and location of park and other reservations for the remaining portion of the tract. Such sketch shall be for the purpose of guiding the Planning Board in reviewing the proposed preliminary plat and shall include topographic data with a vertical contour interval of not more than five feet plus any other information determined necessary by the Planning Board.	N/A	
Such additional information as may be required by Chapter 195 – Subdivision of Land; Chapter 223 – Zoning; or the Planning Board.	X	

PRELIMINARY CONSTRUCTION PLANS	YES	NO
The preliminary construction plans shall be drawn at the same scale as the preliminary plat and shall include the following information:		
Location and sizes of any existing water, sewer storm drainage and other utility lines and structures within and nearby the proposed subdivision.		
The proposed system for the provision of water supply and fire protection facilities, sewage disposal, stormwater drainage, and other utility services.		
Proposed street or private road profiles and cross-sections showing the approximate grade of proposed streets or private roads, the relationship of existing to proposed grades, and the proposed grades, and the proposed vertical curvature along the center line of all new streets or private roads.		
Location of all existing and proposed monuments and other subdivision improvements.		
Such additional information as may be required by this chapter, the Zoning chapter, or the Planning Board.		

CITY OF BEACON
FINAL SUBDIVISION PLAT
AND CONSTRUCTION PLANS SPECIFICATION FORM

Name of Application: _____

FINAL SUBDIVISION PLAT	**YES**	**NO**
The final subdivision plat shall be drawn clearly and legibly on transparent tracing cloth with black waterproof ink, at a scale no smaller than one inch equals 100 feet but preferably at a scale of one inch equals 50 feet. The sheet size shall not exceed 36 inches by 48 inches. If the size of proposed subdivision required a drawing larger than this, two or more sheets may be submitted, with match lines clearly indicated, and an index map shall be prepared on the same size sheet.		
The final plat shall contain the following information:		
Proposed subdivision name or identifying title, name, and address of owner of record and of subdivider (if other than owner), certification and seal of the registered engineer or licensed land surveyor who prepared the plat, names of the owners of record of adjoining properties and of properties directly across the street or private road, graphic scale, approximate true North point, and date.		
The location and dimensions of all boundary lines of the proposed subdivision, and all existing and proposed streets, private roads, lot lines, easements and rights-of-way, with sufficient data to readily determine the location, bearing and length of all such lines and to reproduce such lines upon the ground.		
The names of all existing and proposed streets and private roads.		
The locations of all water bodies and watercourses.		
The location of all existing buildings, including identification of all buildings to be removed as a condition of plat approval.		
The total acreage included in the entire subdivision, and the identification number and acreage of all lots and land reservations within the proposed subdivision.		
Location of all existing and proposed monuments.		
A site location map, at a scale of one inch equals 400 feet, showing the location of the subject property with respect to neighboring properties, streets and private roads.		
Notations explaining any drainage, sight slope, street widening, park area or other reservations or easements, including any self-imposed restrictions or covenants.		
Endorsement of approval by the Dutchess County Health Department.		
Plan for the provisional delivery of mail, as approved by the local postmaster.		
Endorsement of the owner as follows: "Approved for filing: _____ _____" Owner Date		

FINAL SUBDIVISION PLAT *(continued)*	**YES**	**NO**
Form for endorsement by Planning Board Chairman as follows: "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.		
Such additional information as may be required by Chapter 195 – Subdivision of Land; Chapter 223 – Zoning; or the Planning Board.		
Stormwater pollution prevention plan. A stormwater pollution prevention plan consistent with the requirements of Chapter 190 and with the terms of preliminary plan approval shall be required for final subdivision plat approval. The SWPPP shall meet the performance and design criteria and standards in Chapter 190, Article II. The approved final subdivision plat shall be consistent with the provisions of Chapter 190.		

FINAL CONSTRUCTION PLANS	**YES**	**NO**
Final construction plans and profiles shall be prepared for all proposed streets, private roads and other required improvements. Plans shall be drawn at the same scale as the final plat and on the same size sheets, but not on the same sheets. The following information shall be shown:		
Plans and profiles showing the location and a typical cross-section of street and/or private road pavements including curbs and gutters, sidewalks, manholes and catch basins; the location of street or private road trees, lighting and signs; the location, size and invert elevations of existing and proposed sanitary sewers, stormwater drains and fire hydrants; the location and size of all water, gas or other underground utilities or structures; and the location and design of any other required improvements.		
Profiles showing existing and proposed elevations along the center line of all streets and private roads. Where a proposed street or private road intersects an existing street or private road, the elevation along the center line of the existing street or private road within 100 feet of intersection, shall be shown. All elevations must be referred to established U.S. Government of approved local benchmarks, where they exist within ½ mile of the boundary of the subdivision.		
The Planning Board may require, where steep slopes exist, cross-sections showing existing and proposed elevations of all new streets and private roads every 100 feet at five points on a line at right angles to the center line of the street or private road, said elevation points to be at the center line of the street or private road, each property line, and points 30 feet inside each property line.		
Location, size, elevation and other appropriate description of any existing facilities which will be connected to proposed facilities and utilities within the subdivision.		

FINAL CONSTRUCTION PLANS *(continued)*		
Where the design of the subdivision requires the regarding of land, the regarding of land, the regraded contours shall be shown along with estimates of the quantity of material to be added or removed and the proposed measures to be implemented by the subdivider to rehabilitate the disturbed area or areas.		
Title of all sheets, name, address, signature and seal of licensed engineer preparing the construction plans, the date prepared, including revisions dates if any, approximate true North point, scale, and consecutive numbering as sheet _____ of _____.		
A notation of approval, on all sheets as follows "Approved by: _____ _____ Owner Date and _____ _____ Planning Board Chairman Date"		
Such additional information as may be required by Chapter 195 – Subdivision of Land; Chapter 223 – Zoning; or the Planning Board.		

For all items marked "NO" above, please explain below why the required information has not been provided:

_____

_____

_____

_____

_____

_____

Applicant/Sponsor Name:_____

Signature:_____

Date: _____

FOR OFFICE USE ONLY
Application #

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: _____

Address of Applicant: _____

Telephone Contact Information: _____

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.

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, _____ being first duly sworn, according to law, deposes and says that the statements made herein are true, accurate, and complete.

(Print) _____

(Signature) _____

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
1 Municipal Plaza, Beacon, NY
Telephone (845) 838-5000 • http://cityofbeacon.org/

ENTITY DISCLOSURE FORM

(This form must accompany every land use application and every application for a building permit or certificate of occupancy submitted by any entity)

Disclosure of the names and addresses of all persons or entities owning any interest or controlling position of any Limited Liability Company, Partnership, Limited Partnership, Joint Venture, Corporation or other business entity (hereinafter referred to as the "Entity") filing a land-use application with the City is required pursuant to Section 223-61.4 of the City Code of the City of Beacon. If any Member of the Entity is not a natural person, then the names and addresses as well as all other information sought herein must be supplied about the non-natural person member of that Entity, including names, addresses and Formation filing documents. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity	Address of Entity
Place where such business entity was created	Official Registrar's or Clerk's office where the documents and papers creating entity were filed
Date such business entity or partnership was created	Telephone Contact Information

IF AFFIANT IS A CORPORATION:

Name of Entity	Telephone Contact Information
Principal Place of Business of Entity	Place and Date of incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

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

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.

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**

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

_____

_____

_____

SECTION I. If the applicant is a contract vendee, a duplicate original or photocopy of the full and complete contract of purchase, including all riders, modification and amendments thereto, shall be submitted with the application. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J.

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted**:**

Name of the Corporation	Telephone Contact Information
Principal Business Address	Place and Date of Incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**

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, _____ being first duly sworn, according to law, deposes and says that I am (Title) _____, an active and qualified member of the _____, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) _____

(Signature) _____

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. 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.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Name of Action or Project:
Monell Place Subdivision

Project Location (describe, and attach a location map):
Monell Place, Beacon, NY 12508

Brief Description of Proposed Action:
Subdivision of an existing 2.91 acre parcel into two parcels. Each subdivision will have a new single-family built on them as well as a driveway and parking area for the new residences.

Name of Applicant or Sponsor:	Telephone: 845-392-1990
Allison Cross and Henry Nye	E-Mail: across@visitmanitoga.org

Address:
11 York Street

City/PO:	State:	Zip Code:
Beacon	New York	12508

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: City of Beacon: Subdivision	☐	☑

3. a. Total acreage of the site of the proposed action? 2.91 acres
   b. Total acreage to be physically disturbed? 0.85 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 2.91 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☑ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other(Specify): Metro North Railroad
   ☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____ _____	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____ _____	☐	☑

	NO	YES
12. a. 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?	☐	☑
Eustatia;NR Number: 90NR00435;Status-Listed (See attachment)		
b. 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?	☐	☑

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		
There is a portion of an 0.83 acre Federal Wetland listed as PUBH on National Wetland Inventory Mapping located in the most westerly point of the property. No disturbance or alterations are proposed to this wetland. _____ _____		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☑ Wetland ☐ Urban ☑ Suburban

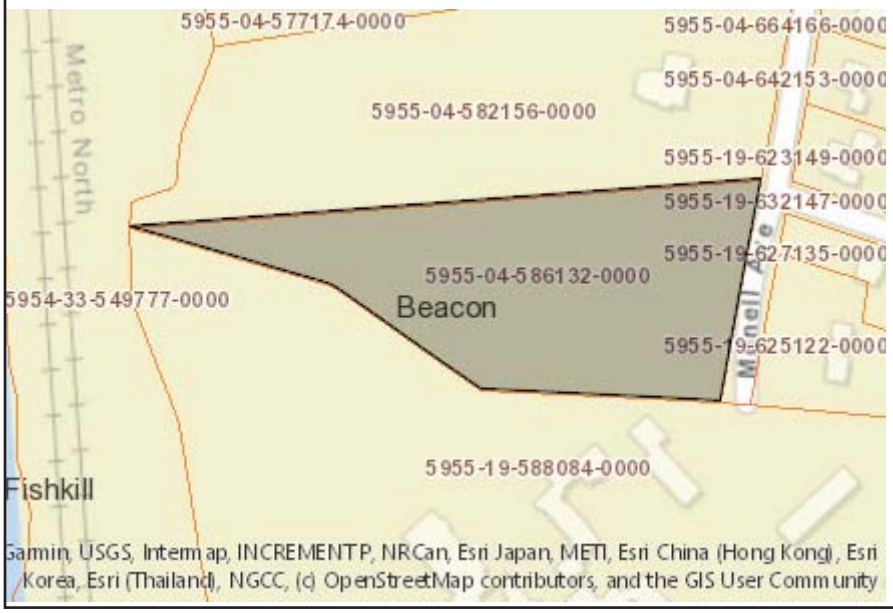
	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered? Atlantic Sturgeon, Shortnos...	☐	☑
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☐	☑
If Yes, a. Will storm water discharges flow to adjacent properties?	☐	☑
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☑
If Yes, briefly describe: Most of the site runoff currently flows toward Monell Place where it stays on the property in a natural depression and eventually infiltrates. The runoff from the driveways and garage roof will continue to go this area, while the runoff from the dwelling roofs has been directed toward the west.		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	☑	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	☑	☐
20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: Hudson River PCB Sediments; 546031; State Superfund Program ; Status-Still Active. (See attachment) CH - Beacon MGP; V00293; Voluntary Cleanup Program; Status-Completed. (See attachment)	☐	☑

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Allison Cross Date: 12/29/2020

Signature: Title:

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.



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	Yes
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Atlantic Sturgeon, Shortnose Sturgeon, Indiana Bat
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	Yes

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: Hudson River PCB Sediments
Site Code: 546031
Program: State Superfund Program
Classification: 02
EPA ID Number:

Location

DEC Region: 5
Address: Hudson River, Hudson Falls-NYC Battery
City: Zip: 12180
County: Saratoga
Latitude: 43.286475666
Longitude: -73.595363441
Site Type:
Estimated Size: 0 Acres

Site Owner(s) and Operator(s)

Current Owner Name: New York State
Current Owner(s) Address:
,ZZ,
Current Owner Name: STATE OF NEW YORK
Current Owner(s) Address:
,ZZ,
Owner(s) during disposal: STATE OF NEW YORK
Current On-Site Operator: NYS Department of Transportation
Stated Operator(s) Address: State Campus - Building 5
Albany,NY 12233

Site Document Repository

Name: US Epa
Address: 187 Wolf road
colonie,NY

Hazardous Waste Disposal Period

From: 1946 **To:** present

Site Description

Site Location: This National Priorities List site includes the nearly 200-mile stretch of the Hudson River that extends from Hudson Falls in Washington County to the Battery in New York City. The river is part of the Champlain Canal between Fort Edward and Waterford. EPA is the lead agency for the investigation and cleanup of the site. Site Features: The site includes the main stem of the Hudson River, as well as the associated flood plains, river banks, riverene fringing wetlands, and backwater areas. Current zoning / uses: The river is currently used for recreation, transportation, and as a source of water for drinking and other purposes. The river floodplain areas include all types of land uses, from passive / recreational to residential to commercial / industrial. Historical uses: The General Electric Company (GE) discharged PCBs into the river from two capacitor manufacturing plants located in Hudson Falls and Fort Edward starting sometime in 1946. Previous investigations identified 40 areas or 'hot spots' in the upper Hudson that had sediments contaminated with greater than 50 ppm of PCBs. Also included in the definition of this site are five Remnant Deposits or river sediment areas that were exposed when the level of the river was lowered when the Fort Edward Dam was removed in 1973. EPA issued a Record of Decision (ROD) for this National Priorities List site on September 25, 1984 which included: in-place containment of the Remnant Deposits; evaluation of downstream domestic water quality at Waterford, New York; and interim ¿No Action¿ as to the PCB-contaminated river sediment. The 1984 ROD indicated that both the No Action decision for the river sediments and the containment remedy for the Remnant Deposits might be reexamined by EPA in the future. The containment remedy for the Remnant Deposits was performed by GE under a 1990 Consent Decree with EPA. In addition, in 1990, NYSDEC completed the evaluation of downstream domestic water quality at Waterford, New York, which concluded that PCB concentrations were below analytical detection limits after treatment and met standards applicable to public water supplies. In December 1989, EPA announced its decision to initiate a detailed Reassessment Remedial Investigation/Feasibility Study (RI/FS) of the September 1984 decision concerning the PCB contaminated Hudson River sediments. The Reassessment culminated with EPA¿s issuance of a second ROD for the site in February 2002 which included the dredging of an estimated 2.65 million cubic yards of PCB contaminated sediments from the Upper Hudson River (between Fort Edward and Troy), which was estimated in the ROD to contain about 66,300 kilograms of total PCBs (approximately 65% of the total PCB mass estimated to be present within the Upper Hudson River). The ROD also identified further evaluation of PCB contamination in the flood plains concurrent with the design phase of the project. EPA issued a series of Orders to GE for performance of the engineering design for the project. Phase 1 dredging commenced in May 2009, and was completed in October 2009. After completion of Phase 1, EPA reviewed the environmental monitoring and operational data to determine the changes to the project standards and to project design specifications for Phase 2. The changes to the project for Phase 2 were provided to GE in December 2010. GE, in accordance with the Consent Decree for the site, opted to implement Phase 2 of the

remedy on 12/31/10. Construction work for Phase 2 of the remedial project started in 2011, and was completed in 2016. Dredging was completed in fall 2015; habitat reconstruction was completed in 2016. Facility decommissioning was performed in 2016. For more information on the Hudson River Fish advisory, copy and paste this link into a web browser: https://www.health.ny.gov/environmental/outdoors/fish/hudson_river/advisory_outreach_project/

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

polychlorinated biphenyls (PCB)
PCB aroclor 1254
cadmium
lead
PCB aroclor 1242
PCB aroclor 1016

Site Environmental Assessment

Nature and extent of contamination: Contaminants: The primary constituent of concern is PCBs, discharged from two GE capacitor plants in Hudson Falls and Fort Edward. The upstream extent of contamination is the portion of the river immediately above the Bakers Falls Dam at the GE Hudson Falls plant site. The downstream extent of contamination is the Atlantic Ocean. The commercial mixtures of PCBs discharged from the two GE plant sites changed over time; initially aroclor 1254, changing to aroclor 1242 and then to aroclor 1016. Contaminant Concentrations: PCBs have been found in excess of standards, criteria and guidance concentrations (SCGs) in sediments, surface water, biota, air, and soils at the Hudson River PCBs site. The primary sources at the plant sites have been almost completely abated through remedial work at the plant sites; as a result, the primary source of PCB to the surface water and biota of the river are the contaminated sediments in the river south of the plant sites. Prior to remediation of the Upper Hudson River from 2009 to 2016, PCB concentrations in sediment range from non-detect to greater than one percent PCB (> 10,000 parts per million). In surface water typically concentrations range from 2 nanograms per liter (ng/l or parts per trillion) to 100 ng/l, except at times of high flow when scour-driven remobilization of contaminated sediments can cause much higher concentrations in excess of 1 microgram per liter (1 ug/l or part per billion). Investigations are underway to determine the extent of floodplain impacts. To date, PCB concentrations in excess of 500 milligrams per kilogram (mg/kg or part per million) have been found in limited areas. The nature and extent of floodplain soil contamination has not yet been established. The Lower Hudson portion of the NPL site has not be fully investigated to date. Significant threat: PCB contamination in the Hudson River sediments continue to pose a significant threat to human health and/or the environment. Concentrations in PCBs in biota directly attributable to the waste disposal at the site have led the Department of Health to recommend that human consumption of biota be limited over a substantial portion of the Hudson River between Hudson Falls and the Battery in New York

City. In the upper Hudson, the fishery is catch and release only, and the NYSDOH advisory is to eat none. To see the fish consumption advisories, go to: https://www.health.ny.gov/publications/2794.pdf and https://www.health.ny.gov/environmental/outdoors/fish/hudson_river/advisory_outreach_project/ The disposal of PCB into the Hudson River has also led to significant environmental damage as defined in 6 NYCRR Part 375. This site has been included in the Federal National Priorities List (NPL).

Site Health Assessment

Consumption of fish is the major potential route of human exposure to PCBs from this site. Because of site impacts, most fish from the Hudson River downstream of Hudson Falls have elevated PCB levels. Fishing is restricted to catch and release, with a ¿eat none¿ advisory for fish consumption, from Hudson Falls to Troy. In addition, there are advisories ("eat none" or "eat no more than 1 meal per month") on consumption of several fish species caught from the Hudson River below the Troy Dam to New York Harbor. People may come into contact with contaminants present in the shallow river sediments while entering or exiting the river during recreational activities, and may also come into contact with contaminants present in floodplain soils. This direct contact route of exposure is present primarily in the upper Hudson between Hudson Falls and Troy.GE under USEPA and State oversight has taken actions at several properties along the Hudson River to address PCB contaminated floodplain soils between Hudson Falls and Troy. These actions vary from deploying signs to installing various covers and are intended to reduce exposures to PCBs in floodplain soils until a permanent remedy is developed. Additionally, a remedial investigation to address floodplain soils in the Upper Hudson River Floodplain under USEPA and State oversight is now underway.

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Document Repository

Site-related documents are available for review through the DECInfo Locator on line at DECInfoLocator

Administrative Information

Site Name: CH - Beacon MGP
Site Code: V00293
Program: Voluntary Cleanup Program
Classification: C
EPA ID Number:

Location

DEC Region: 3
Address: 416 & 418 & 420 & 422 & 424 & 426 &
City: Beacon Zip: 12508
County: Dutchess
Latitude: 41.50621157
Longitude: -73.98240676
Site Type:
Estimated Size: 4 Acres

Site Owner(s) and Operator(s)

Site Description

Site Location: The CHGE Beacon Manufactured Gas Plant (MGP) Dorel Hat property is located in a suburban area in the City of Beacon, Dutchess County, N.Y. The site is approximately 4 acres in size, and is bounded by West Main St. to the north, River St. to the east, an open field owned by the Metropolitan Transportation Authority (MTA)to the south and by Railroad Drive and the Beacon Railroad station to the west. Site Features: The main site features include: an approximately 32,000 square foot building surrounded by a grass covered area in the southern portion of the property and an asphalt paved parking lot in the northern half. Current Zoning/Uses: The site is currently used for storage and office space and is zoned commercial. The surrounding parcels are commercial and residential. The nearest residential area is comprised of townhouses located approximately 100 feet to

the east on River St. Past Uses of the Site: The 1 Main Street site is adjacent to a former MGP located on River Street, which operated from 1871 to approximately 1946. Operable Units (OU) The site was divided into 2 Operable Units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination Operable Unit 1 (OU1) consists of the MGP site itself, which has since been redeveloped for residential use. It appears that all contaminated soils were removed prior to redevelopment. No significant amounts of MGP contamination were found to remain at the former MGP site, and it was determined that no further action was required. A release letter for the Beacon MGP was issued under the VCA on January 31, 2002. Operable Unit 2 (OU2)consists of the property across the street from the MGP, known as the Dorel Hat property. The majority of MGP contaminated soil on OU2 was removed during an IRM conducted in 2007. On September 12, 2007 the Dorel Hat property was transferred to the MTA. On July 15, 2011 the MTA filed a Deed Restriction by which it is required to comply with the Department approved Site Management Plan. Site Geology/Hydrogeology: The site is underlain by unconsolidated sand and silt deposits to a depth of approximately 8 feet. Below these, a 4 foot thick clay layer lies above the slate bedrock. Groundwater on the site flows toward the Hudson River, to the west.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

other

coal tar

Site Environmental Assessment

The primary contaminant is coal tar which contains PAHs and BTEX compounds. The majority of coal tar contaminated soil was removed during an IRM conducted in 2007. Due to the presence of the Dorel Hat building, a force sewer Main and a gas line on the site, some of the coal tar contaminated soil was not removed and remains in the subsurface under the building and to the east of the building. The coal tar is located at a depth of approximately 5 to 10 feet below the ground surface. Levels of sub-slab soil vapor beneath the building exceed DOH guidance values for indoor air. A sub-slab depressurization vapor mitigation system was installed to prevent sub-slab vapor from entering the building. Groundwater on the site exceeds Groundwater Quality Standards for VOCs, SVOC's, Metals and Pesticides. The area is supplied by a public water supply.

Site Health Assessment

Measures are in place to control the potential for coming in contact with sub-surface soil and groundwater contamination remaining at the site. People are not drinking the contaminated groundwater because the site is served by a public water supply that is not affected by this

contamination. Volatile organic compounds in groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings is referred to as soil vapor intrusion. A sub slab depressurization system (systems that ventilate/remove the air beneath the building) has been installed in the on-site building to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the building. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

For more Information: E-mail Us

Return To Results

Refine This Search

HOME SUBMIT SEARCH COMMUNICATE

USN Details

02741.000008: Building - Listed

EUSTATIA
12 Monell Place, Beacon NY

Overview | Inventory Form | NR Status (6) | MCDs (1) | Children (0) | Determinations (0) | Photos (1) | Atts. (0) | Agmts. (0) | Projects (0) | Surveys (1) | Submitted (1)

Type: Building
Classification: Building
Parent USN:
Is Contributing:
Is Demolished:
Is in a Certified District:
Is a National Historic Landmark:
Is State Board Approved:
Is State Register Listed:



Eligibility: Listed
Notes:

County	MCD
Dutchess	BEACON (City)



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U.S. Fish and Wildlife Service
National Wetlands Inventory

Monell Place Subdivision



December 29, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- EXISTING SEWER SERVICE LINE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- EXISTING WATER LINE
- EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- EXISTING WATER VALVE
- EXISTING STORM WATER LINE
- EXISTING ROOF LEADER
- EXISTING CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- PROPOSED SEWER LINE
- PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED STORM WATER LINE
- PROPOSED ROOF LEADER LINE
- PROPOSED FOOTING DRAIN
- PROPOSED ROOF LEADER
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE

MAP REFERENCES:

1. "UPDATED TOPOGRAPHIC SURVEY PREPARED OF 3 MONELL PLACE" DATED NOVEMBER 5, 2020 AS PREPARED BY TOM E. CERCHIARA, LAND SURVEYOR, N.Y.S. LICENSE NO. 50732.

SITE SPECIFIC NOTES:

1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962. SPECIFIC ATTENTION SHALL BE PAID TO THE LOCATIONS OF THE GAS (IF APPLICABLE), WATER AND SEWER MAINS WITH RESPECT TO THE PROPOSED LOCATIONS FOR THE SERVICE LINES.
2. THE CONTRACTOR SHALL CONTACT THE CITY OF BEACON WATER AND SEWER DEPARTMENTS TO SCHEDULE A PRE-CONSTRUCTION MEETING TO ENSURE THAT THE ARRANGEMENTS FOR WATER SUPPLY AND SEWAGE DISPOSAL ARE COMMENCED IN ACCORDANCE WITH THE APPROVED PLANS AND AMENDMENTS THERETO AND GENERALLY ACCEPTED STANDARDS.
3. THE PROPOSED LOT SHALL BE SERVED BY THE CITY OF BEACON MUNICIPAL WATER AND SEWER SERVICES.
4. THE WATER SERVICE LINE AND METER SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BEACON WATER DEPARTMENT REQUIREMENTS.
5. THE WATER SERVICE LINE SHALL BE 1.25"ø K-COPPER.
6. THE SEWER SERVICE LINE SHALL BE 4"ø SDR 35 PVC PIPE WITH PITCH AS SHOWN ON THE PLAN (MINIMUM OF ¼" PER FOOT SHALL BE MAINTAINED).
7. A ROAD OPENING PERMIT SHALL BE REQUIRED FOR THE INSTALLATION OF THE PROPOSED WATER AND SEWER SERVICES FOR THE NEW LOT. STREET CLOSURE FOR WATER AND SEWER SERVICE CONNECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF BEACON REQUIREMENTS.
8. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. THE PROPOSED DRIVEWAY SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE.
9. ROOF LEADER CONNECTIONS TO BE MINIMUM 4"ø PVC OR HDPE @ 2.0% MIN.
10. SUMP PUMP TO BE PROVIDED FOR FOOTING DRAIN, IF NECESSARY. THE TYPE OF PUMP AND METHODS USED TO ENSURE PROPER DRAINAGE SHALL BE ACCEPTABLE TO THE CITY OF BEACON BUILDING DEPARTMENT.
11. THE DRIVEWAY SIGHT DISTANCE MEETS OR EXCEEDS COMPLIANCE WITH THE CITY OF BEACON'S 192-9(B) CODE AND THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. THE STATE UTILIZES THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) GUIDELINES FOR INTERSECTION SIGHT DISTANCES. FOR ROADS WITH A SPEED LIMIT OF 30 MPH, AASHTO DESIGN TABLES CALL FOR A SIGHT DISTANCE OF 290 FEET TO THE LEFT AND 335 FEET TO THE RIGHT. THE MEASURED SIGHT DISTANCE IS AS FOLLOWS:

LOT 1: SLSD LEFT = ±80' TO STOP SIGN @ MONELL PL NORTH. THE SLSD LEFT CONTINUES DOWN MONELL PL NORTH FOR ANOTHER 300'. THE SLSD LEFT ALONG LAFEYETTE IS 109', IT IS NOTED THAT LAFAYETTE SPEED LIMIT IS CONTROLLED BY SPEED BUMPS. SSD LEFT IS THE SAME AS SLSD LEFT.
SLSD RIGHT = ±390'
SSD RIGHT = ±370'

LOT 2: SLSD LEFT = ±220' TO INTERSECTIN WITH LAFAYETTE AND MONELL PL AND 255 TO STOP SIGN ON ON MONELL PL NORTH.
SSD LEFT = ±220' TO INTERSECTION WITH LAFAYETTE.
SLSD RIGHT = ±268' TO INTERSECTION WITH COLONIAL APARTMENTS, THERE IS A SPEED BUMP LOCATED APPROXIMATELY 59' TO THE RIGHT OF THE PROPOSED DRIVEWAY CENTERLINE.
SSD RIGHT = ±208'

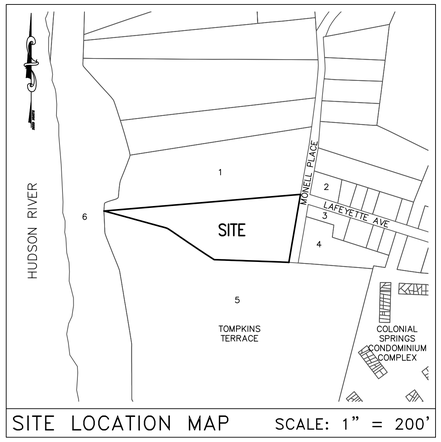
13. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL CATCH BASINS, STORM SEWER LINES, SANITARY MANHOLES, SEWER LINES, WATERLINES, AND UNDERGROUND UTILITY LINES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT. INVESTIGATIVE TEST PITS MAY BE REQUIRED TO VERIFY LOCATIONS.

UTILITY NOTES:

1. ALL WATER & SEWER CONNECTIONS SHALL COMPLY WITH CITY WATER AND SEWER DISTRICT REQUIREMENTS.
2. THE PROPOSED BUILDING SHALL BE SET AT SUCH ELEVATION TO ENSURE GRAVITY FLOW FROM THE RAW SEWER LINE TO THE POINT OF CONNECTION WITH THE EXISTING SEWER MAIN, WHILE MAINTAINING PROPER EARTH COVER ABOVE ALL PIPING.
3. NO CELLAR, ROOF, OR FOOTING DRAINS SHALL BE DISCHARGED INTO THE SANITARY SEWER SYSTEM.

GENERAL NOTES:

1. EXISTING PLANIMETRIC INFORMATION FOR THE OVERALL SITE WAS TAKEN FROM A MAP PREPARED BY JOHN J. POST JR, LS. IN NOVEMBER OF 2019.
2. THE SITE DOES NOT CONTAIN ANY WETLANDS OR FLOODPLAINS PER AVAILABLE GIS MAPPING.
3. THE PROJECT IS SERVICED BY PUBLIC WATER AND SEWER FROM THE CITY OF BEACON WATER AND SEWER DISTRICTS, RESPECTIVELY.



SITE LOCATION MAP SCALE: 1" = 200'

LIST OF PROPERTY ADJOINERS:

1.	5955-04-582156; ART FOR CHINA FOUNDATION CORP., 12 MONELL PLACE BEACON, NY 12508
2.	5955-19-623149; STELLA, JOHN & MARGERET, 11 MONELL PLACE BEACON, NY 12508
3.	5955-19-627135; SULLIVAN, JOHN & ELLEN, 51 LAFAYETTE AVENUE BEACON, NY 12508
4.	5955-19-625122; CAULFIELD, PATRICK & BRYAN, LINDSAY, 3 MONELL PLACE BEACON, NY 12508
5.	5955-19-588084; TOMPKINS TERRACE PRESERVATION LP, 1-193 TOMPKINS TERRACE BEACON, NY 12508
6.	5954-33-549777; CONRAIL, 33 RAILROAD DRIVE BEACON, NY 12508

PROJECT INFORMATION:

PARCEL OWNER:	ALLISON CROSS & HENRY NYE; 40 NORTH CROSS, BEACON, NY 12508
PROJECT ENGINEER:	HUDSON LAND DESIGN P.C., 174 MAIN STREET, BEACON NY 12508
PARCEL LOCATION:	MONELL PLACE, BEACON NY, 12508
TAX PARCEL ID:	5955-04-586132
PARCEL AREA:	±2.91-ACRES
WATER SUPPLY:	MUNICIPAL; CITY OF BEACON
SEWAGE DISPOSAL:	MUNICIPAL; CITY OF BEACON

SCHEDULE OF REGULATIONS (R1-20 ZONING DISTRICT) AND LOT CONFORMANCE TABLE:

PARAMETER	REQUIREMENT	LOT #1	LOT #2
LOT AREA:	20,000 SQUARE FEET MIN	73,625 S.F.*	51,990 S.F.*
LOT WIDTH:	125 FEET MINIMUM	127 FEET (AVG.)	125 FEET
LOT DEPTH:	125 FEET MINIMUM	818 FEET*	520 FEET*
YARD SETBACKS (RESIDENTIAL USE):			
FRONT YARD:	30 FEET MINIMUM	±117 FEET*	±71 FEET*
SIDE YARD:	20 FEET MINIMUM	±38 FEET	±22 FEET
SIDE YARD (TOTAL OF TWO):	40 FEET MINIMUM TOTAL	±82 FEET	±70 FEET
REAR YARD:	40 FEET MINIMUM	±371 FEET	±173 FEET
MAX. BUILDING HEIGHT:	MAX 35 FEET, 2.5 STORIES	<35 FEET	<35 FEET
MIN. BUILDING HEIGHT:	MIN 12 FEET, 1 STORY	>12 FEET	>12 FEET
DWELLING UNITS PER LOT:	MAX 1	1	1

* ALL MEASUREMENTS TAKEN FROM THE R.O.W. TAKING LINE

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GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962.
2. WATER, SEWER AND STORM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS. ALL OTHER UTILITIES (TELEPHONE, ELECTRIC, GAS, CABLE, ETC.) SHALL BE INCORPORATED FOLLOWING SITE PLAN APPROVAL. ALL SUCH UTILITY DESIGNS SHALL BE DEVELOPED IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANIES.
3. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, LOCATION, DEPTH AND CONDITION OF ALL UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT.
4. THE CONTRACTOR SHALL CONSTRUCT ALL IMPROVEMENTS AS SHOWN ON PLANS. ANY FIELD CONDITIONS THAT MAY RESULT IN A VARIATION FROM THE PLAN SET SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IN WRITING. VARIATIONS FROM THE PLAN WITHOUT APPROVAL FROM THE ENGINEER WILL BE CONSIDERED DEFICIENT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ON-SITE OR OFF-SITE DAMAGES TO VEGETATION OR PROPERTY CAUSED BY HIS OPERATIONS. SUCH DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS COST TO THE SATISFACTION OF THE ENGINEER, PROPERTY OWNER OR AGENCY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL SECURE THE WORK LIMITS OF THE SITE BY INSTALLATION OF CONSTRUCTION FENCING AND OTHER MEASURES, AS NECESSARY TO PREVENT NON-AUTHORIZED ENTRY.
8. THE CONTRACTOR SHALL KEEP THE SITE IN A CLEAN AND ORDERLY MANNER.
9. THE CONTRACTOR SHALL NOT INTERRUPT EXISTING ACCESS OR OPERATIONS FOR THE REMAINDER OF THE SITE.

INDIANA BAT PROTECTION NOTES:

1. TREE CLEARING SHALL BE RESTRICTED TO THE PERIOD BETWEEN OCTOBER 1 AND MARCH 31.
2. THE LIMITS OF DISTURBANCE SHALL BE DEMARCATED BY INSTALLING ORANGE CONSTRUCTION FENCE FOR THE GENERAL IMPROVEMENT AND INFRASTRUCTURE CONSTRUCTION ACTIVITIES AND FOR THE INDIVIDUAL LOT CONSTRUCTION. THESE LIMITS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. DUST CONTROL DURING CONSTRUCTION SHALL BE IMPLEMENTED. THIS INCLUDES USE OF CONSTRUCTION ENTRANCES, APPLYING LIGHT WATER, AND ESTABLISHING VEGETATION.
4. STREET LIGHTS ARE NOT PERMITTED. RESIDENTIAL LIGHTING SHALL BE DIRECTED DOWNWARD TO REDUCE IMPACTS TO BATS FORAGING FOR FOOD.

DRAWING INDEX:

SHEET 1 OF 3: SUBDIVISION PLAN (SP-1)
SHEET 2 OF 3: EROSION AND SEDIMENT CONTROL PLAN (ESC-1)
SHEET 3 OF 3: CONSTRUCTION DETAILS (CD-1)

OWNER'S CONSENT:

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

_____ _____
ALLISON CROSS DATE

SUBDIVISION PLAN

SCALE: 1" = 20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 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.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

Dig Safely. New York Call 811 before you dig

STATE OF NEW YORK MICHAEL A. BODENMAN LICENSED PROFESSIONAL ENGINEER 084466

SEAL

HUDSON LAND DESIGN

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

SUBDIVISION PLAN

MONELL PLACE SUBDIVISION

MONELL PLACE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5955-04-586132

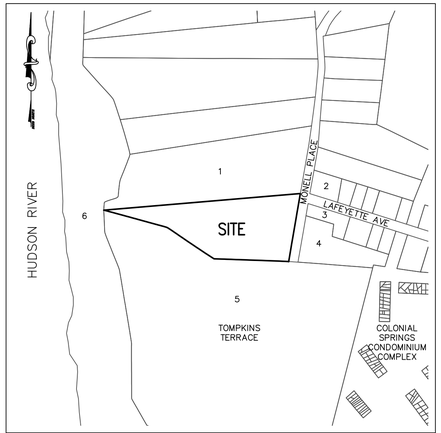
JOB #:	2020:039
DATE:	12/29/2020
SCALE:	1" = 30'
TITLE:	SP-1
SHEET:	1 OF 3

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



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- OHW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- SS EXISTING SEWER SERVICE LINE
- S EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- W EXISTING WATER LINE
- WS EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- EXISTING WATER VALVE
- ST EXISTING STORM WATER LINE
- EXISTING ROOF LEADER
- EXISTING CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE



SITE LOCATION MAP SCALE: 1" = 200'

LIST OF PROPERTY ADJOINERS:

1.	5955-04-582156; ART FOR CHINA FOUNDATION CORP., 12 MONELL PLACE BEACON, NY 12508
2.	5955-19-623149; STELLA, JOHN & MARGERET, 11 MONELL PLACE BEACON, NY 12508
3.	5955-19-627135; SULLIVAN, JOHN & ELLEN, 51 LAFAYETTE AVENUE BEACON, NY 12508
4.	5955-19-625122; CAULFIELD, PATRICK & BRYAN, LINDSAY, 3 MONELL PLACE BEACON, NY 12508
5.	5955-19-588084; TOMPKINS TERRACE PRESERVATION LP, 1-193 TOMPKINS TERRACE BEACON, NY 12508
6.	5954-33-549777; CONRAIL, 33 RAILROAD DRIVE BEACON, NY 12508

PROJECT INFORMATION:

PARCEL OWNER:	ALLISON CROSS & HENRY NYE; 40 NORTH CROSS ST., BEACON, NY 12508
PROJECT ENGINEER:	HUDSON LAND DESIGN P.C., 174 MAIN STREET, BEACON NY 12508
PARCEL LOCATION:	MONELL PLACE, BEACON NY, 12508
TAX PARCEL ID:	5955-04-586132
PARCEL AREA:	±2.91-ACRES
WATER SUPPLY:	MUNICIPAL; CITY OF BEACON
SEWAGE DISPOSAL:	MUNICIPAL; CITY OF BEACON

SCHEDULE OF REGULATIONS (R1-20 ZONING DISTRICT) AND LOT CONFORMANCE TABLE:

PARAMETER	REQUIREMENT	LOT #1	LOT #2
LOT AREA:	20,000 SQUARE FEET MIN	74,609 S.F.*	52,386 S.F.*
LOT WIDTH:	125 FEET MINIMUM	127 FEET (AVG.)	125 FEET
LOT DEPTH:	125 FEET MINIMUM	818 FEET*	520 FEET*

* ALL MEASUREMENTS ARE TAKEN FROM THE R.O.W. TAKING LINE (SEE SURVEY NOTE 13)

MAP REFERENCE:

1. "UPDATED TOPOGRAPHIC SURVEY PREPARED OF 3 MONELL PLACE" DATED NOVEMBER 5, 2020 AS PREPARED BY TEC, LAND SURVEYING, TOM CERCHIARA, L.S. N.Y.S. LICENSE NO. 50732.

TOTAL PARCEL AREA:

±126,996 S.F. OR ± 2.915 ACRES

TAX MAP REFERENCE:

CITY OF BEACON 5955-04-586132

SURVEY NOTES:

1. COPYRIGHT TEC LAND SURVEYING. ALL RIGHTS RESERVED. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND / OR COPYRIGHT HOLDER IS OBTAINED.

2. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

3. ONLY BOUNDARY SURVEY MAPS WITH THE SURVEYOR'S EMBOSSED OR RED INKED SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE SURVEYOR'S ORIGINAL WORK AND OPINION. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED INKED SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

4. CERTIFICATIONS ON THIS BOUNDARY SURVEY MAP SIGNIFY THAT THE MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC. THE CERTIFICATION IS LIMITED TO PERSONS FOR WHOM THE BOUNDARY SURVEY MAP IS PREPARED, TO THE TITLE COMPANY, TO THE GOVERNMENTAL AGENCY, AND TO THE LENDING INSTITUTION LISTED ON THIS BOUNDARY SURVEY MAP.

5. THE CERTIFICATIONS HEREIN ARE NOT TRANSFERABLE.

6. THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE NOT ALWAYS KNOWN AND OFTEN MUST BE ESTIMATED. IF ANY UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS EXIST OR ARE SHOWN, THE IMPROVEMENTS OR ENCROACHMENTS ARE NOT COVERED BY THIS CERTIFICATE.

7. SUBJECT TO THE FINDINGS OF A CURRENT TITLE SEARCH.

8. SUBJECT TO COVENANTS, EASEMENTS, RESTRICTIONS, CONDITIONS AND AGREEMENTS OF RECORD.

9. SUBJECT TO ANY RIGHT, TITLE OR INTEREST THE PUBLIC MAY HAVE FOR HIGHWAY USE.

10 VERTICAL DATUM IS NAVD88 GEOID 12A.

11. HORIZONTAL DATUM/NORTH REFERENCE IS IN NEW YORK STATE PLANE EAST NAD83.

12. ONLY TREES 18" AND UP HAVE BEEN LOCATED.

13. POSSIBLE 25' TAKING FROM CENTERLINE OF MONELL PLACE PER FILED MAP 11421.

PRELIMINARY SUBDIVISION PLAT

SCALE: 1" = 40'

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 ft.

DCDOH STANDARD NOTE:

FOR PERMISSION TO FILE

THIS PLAN DOES NOT CONSTITUTE A REALTY SUBDIVISION AS DEFINED BY ARTICLE XI, TITLE II, SECTION 1115 OF THE PUBLIC HEALTH LAW OF THE STATE OF NEW YORK, AND ARTICLE XI OF THE DUTCHESS COUNTY SANITARY CODE. PERMISSION IS HEREBY GRANTED FOR THE FILING OF THIS MAP WITH THE CLERK OF DUTCHESS COUNTY. APPROVAL FOR ARRANGEMENTS FOR WATER SUPPLY AND/OR SEWAGE DISPOSAL IS NEITHER SOUGHT NOR GRANTED.

_____ _____

AUTHORIZED REPRESENTATIVE OF THE COMMISSIONER OF HEALTH DATE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

OWNER'S CONSENT:

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

_____ _____

ALLISON CROSS DATE

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED ON NOVEMBER 5, 2020.

BY: _____
Tom E. Cerchiara, L.L.S. N.Y. State Lic. no. 50732

Dig Safely. New York Call 811 before you dig

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

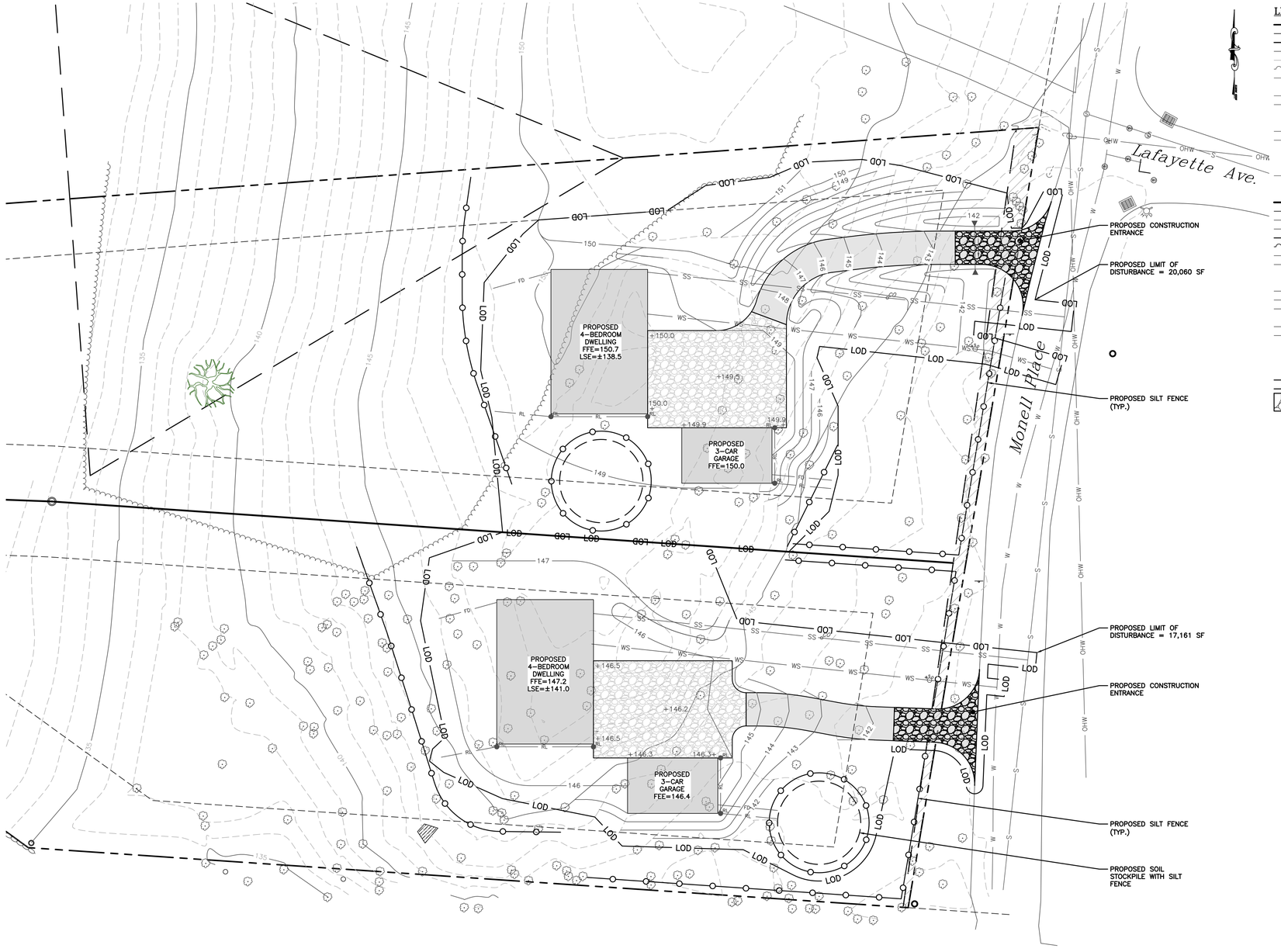
PRELIMINARY SUBDIVISION PLAT
(REVISION TO FILED MAP NO. 11421)

MONELL PLACE SUBDIVISION

MONELL PLACE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5955-04-586132

JOB #: 2020:039
DATE: 12/29/2020
SCALE: 1" = 40'
TITLE: PLAT-1
SHEET: 1 OF 1

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



LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- EXISTING SEWER SERVICE LINE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- EXISTING WATER LINE
- EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- EXISTING WATER VALVE
- EXISTING STORM WATER LINE
- EXISTING ROOF LEADER
- EXISTING CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
- PROPOSED SEWER LINE
- PROPOSED SEWER SERVICE LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEAN OUT
- PROPOSED STORM WATER LINE
- PROPOSED ROOF LEADER LINE
- PROPOSED FOOTING DRAIN
- PROPOSED ROOF LEADER
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED WELL
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED CONSTRUCTION ENTRANCE

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.
2. ALL STORMWATER MANAGEMENT STRUCTURES (E.G. CATCH BASINS) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. CATCH BASINS SHALL BE CLEANED WHEN SEDIMENT DEPTH REACHES A MAXIMUM OF ONE-HALF THE AVAILABLE SUMP DEPTH.
3. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
4. ANY PILE OF POTENTIALLY EROSIVE MATERIAL TEMPORARILY STOCKPILED ON THE SITE DURING THE CONSTRUCTION PROCESS SHALL BE LOCATED IN AN AREA AWAY FROM STORM DRAINAGE AND SHALL BE PROPERLY PROTECTED FROM EROSION BY A SURROUNDING SILT FENCE.
5. PERMANENT SEEDED AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THIS PLAN.
6. AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND WILL NOT BE REDISTURBED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE COVER WITHIN 14 DAYS.
7. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY STANDARD METHODS OF LIGHTLY WATERING ALL EXPOSED SOIL AND RAPIDLY STABILIZING THE REGRADED AREAS WITH TOPSOIL, LOAM AND/OR SEEDING.
8. THE CITY ENGINEER AND PROJECT ENGINEER SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE START OF ANY SITE WORK, AND BY SUCH NOTIFICATION, SHALL BE PROVIDED WITH THE NAME AND TELEPHONE NUMBER OF THE GENERAL CONTRACTOR RESPONSIBLE FOR SUCH WORK.
9. THE CITY AND/OR ITS REPRESENTATIVES MAY INSPECT EROSION AND SEDIMENT CONTROL PRACTICES ON THE SITE DURING CONSTRUCTION AND RECOMMEND THAT THE CONTRACTOR INSTALL ADDITIONAL EROSION CONTROL MEASURES IF DEEMED NECESSARY TO PROTECT ANY UNDISTURBED AREAS OF THE SITE. ANY SUCH REQUESTS SHALL BE MADE DIRECTLY TO THE CONTRACTOR AND QUALIFIED PROFESSIONAL AND FOLLOWED UP WITH A WRITTEN NOTIFICATION TO THE DEVELOPER. IN ADDITION, THE PROJECT ENGINEER SHALL BE CONSULTED ON ANY SPECIAL ADDITIONS OR DELETIONS OF EROSION CONTROL MEASURES WARRANTED BY CHANGING FIELD CONDITIONS.
10. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL TO FILTER WATER FOR PUMPING TO A SUITABLE LOCATION.
11. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

INSPECTION SCHEDULE & MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES

PERMANENT AND TEMPORARY VEGETATION:
INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:
INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. REGRADE PAD AS NEEDED FOR RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE AS DIRECTED BY PROJECT ENGINEER.

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

SOIL STOCKPILE:
INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCKPILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:
SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORKS. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

CONSTRUCTION SEQUENCING SCHEDULE:

(FOR STORMWATER MANAGEMENT AND EROSION/SEDIMENT CONTROL PURPOSES)

1. ROUGH GRADE AS NECESSARY TO ESTABLISH DRIVEWAY GRADE. PREPARE A STABILIZED CONSTRUCTION ENTRANCE AS SHOWN.
2. INSTALL SILT FENCE PER THE PLAN AND AS NEEDED TO PROTECT THE ADJACENT PROPERTIES.
3. CONSTRUCT THE HOUSE AND ALL ASSOCIATED UTILITY SERVICE CONNECTIONS. FINE GRADE AROUND THE HOUSE TO ESTABLISH FINISHED GRADES.
4. TOPSOIL, SEED AND MULCH THE DISTURBED AREAS TO ESTABLISH VEGETATION.
5. REMOVE THE STABILIZED CONSTRUCTION ENTRANCE AND CONSTRUCT THE DRIVEWAY TO FINAL TOP TREATMENT.
6. REMOVE SILT FENCE WHEN 80% STABILIZATION IS ACHIEVED.

EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 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.

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

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SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

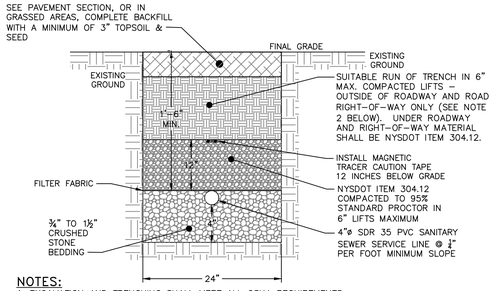
EROSION AND SEDIMENT CONTROL PLAN

MONELL PLACE SUBDIVISION

MONELL PLACE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5955-04-586132

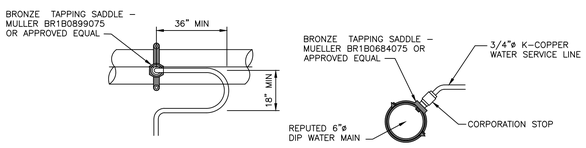
JOB #:	2020:039
DATE:	12/29/2020
SCALE:	1" = 30'
TITLE:	ESC-1
SHEET:	2 OF 3

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



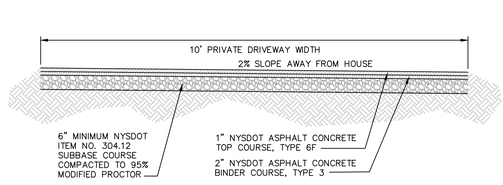
NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

SANITARY SEWER SERVICE LINE TRENCH DETAIL
NOT TO SCALE

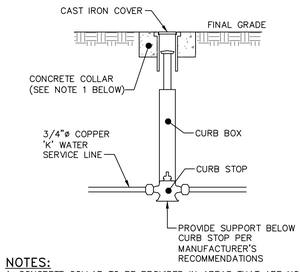


NOTES:
1. A MINIMUM 5' COVER SHALL BE PROVIDED ON THE WATER SERVICE LINE (CONDITIONED ON ACTUAL 5' MIN. WATER MAIN DEPTH).
2. CORPORATION STOP TO BE COMPRESSION TYPE BY MUELLER.
3. WATER SERVICE LINE TO HAVE A 'GOOSENECK' NEAR CORPORATION STOP.
4. CORPORATION STOP TO BE INSTALLED IN THE UPPER HALF OF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

WATER SERVICE CONNECTION DETAIL
NOT TO SCALE

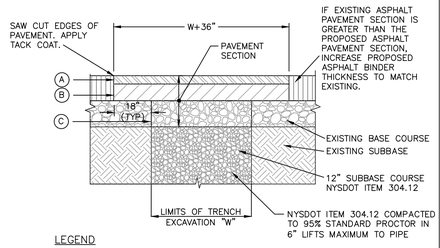


PAVED DRIVEWAY SECTION DETAIL
NOT TO SCALE



NOTES:
1. CONCRETE COLLAR TO BE PROVIDED IN AREAS THAT ARE NOT PAVED. THE COLLAR SHALL BE 6" FROM THE COVER AND SHALL EXTEND 6" BELOW FINAL GRADE.
2. CURB STOP TO BE COMPRESSION TYPE BY MUELLER.
3. AREA AROUND CURB BOX TO BE BACKFILLED WITH GRAVELLY MATERIAL.

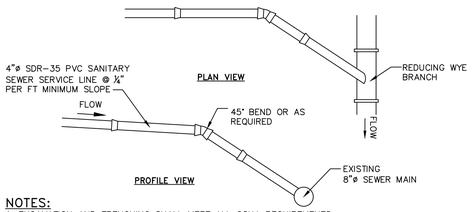
WATER SHUT–OFF VALVE DETAIL
NOT TO SCALE



LEGEND
- (A) 1.5" ASPHALT CONCRETE TOP COURSE– NYSDOT TYPE F1
- (B) 3.0" ASPHALT CONCRETE BINDER COURSE– NYSDOT TYPE F9
- (C) 3.0" ASPHALT BASE COURSE– NYSDOT TYPE F9

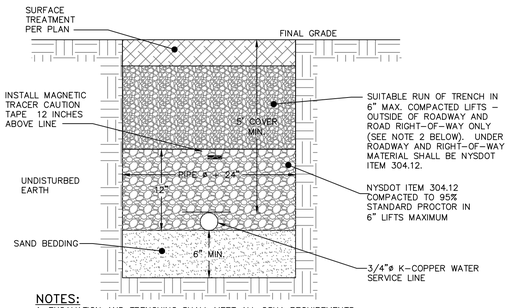
NOTES:
1. SAW CUT MIN. 18" BEYOND EXCAVATION WITH SMOOTH EDGES. 18" JOINT BETWEEN EXISTING AND NEW TOP COURSE TO BE MILLED. JOINT TO BE SEALED WITH POLYMER MODIFIED SEALER.
2. FURNISH, PLACE, AND COMPACT SUBBASE.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.

PAVEMENT RESTORATION DETAIL
NOT TO SCALE



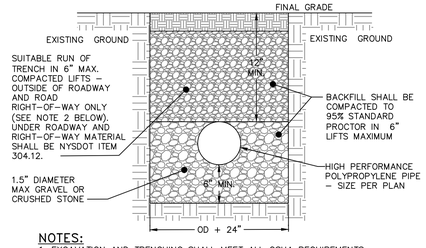
NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.
3. TAPPING SADDLE FOR CONNECTION OF THE PROPOSED SERVICE LINE TO THE EXISTING SEWER MAIN TO BE A 4" PREDCO HUB TAP SADDLE – MODEL #HTS4/E.

SANITARY SEWER SERVICE CONNECTION DETAIL
NOT TO SCALE



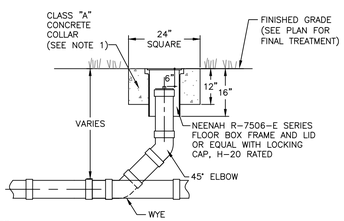
NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ENLOGATED PARTICLES, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.
3. IN AREAS WHERE 5' COVER REQUIREMENT CANNOT BE MET, THE CONTRACTOR SHALL PROVIDE PIPE INSULATION TO PREVENT FREEZING.
4. IF WATER SERVICE AND SEWER SERVICE LINE CROSSINGS ARE NEEDED, PROVIDE 18" OF VERTICAL SEPARATION

WATER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



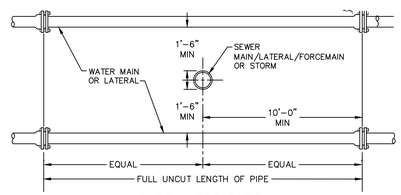
NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

STORM LINE TRENCH DETAIL
NOT TO SCALE

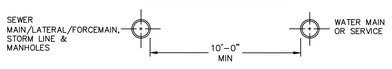


NOTES:
1. CONCRETE COLLAR TO BE PROVIDED IN AREAS THAT ARE NOT PAVED. THE COLLAR SHALL BE 6" FROM THE COVER AND SHALL EXTEND 6" BELOW FINAL GRADE.

CLEANOUT DETAIL
NOT TO SCALE



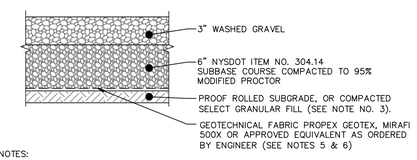
VERTICAL SEPARATION



HORIZONTAL SEPARATION

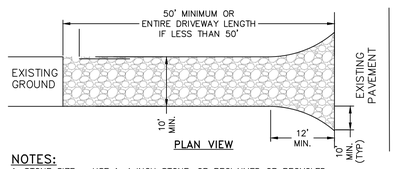
NOTE:
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DUTCHESS COUNTY DEPARTMENT OF HEALTH AND THE CITY OF BEACON. CONCRETE ENCASEMENT OF WATERLINE OR OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.

WATER LINE SEPARATION DETAIL
NOT TO SCALE



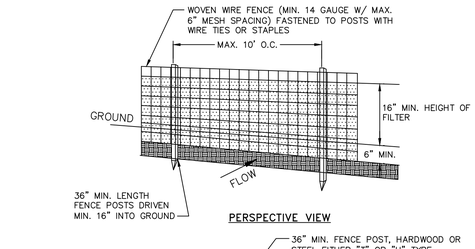
NOTES:
1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 2, 2002 OR LATEST EDITION.
2. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407–TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
3. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203–EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
4. GEOTECHNICAL FABRIC SHALL BE PROVIDED IN AREAS WHERE SUB–SOILS MAY MIGRATE INTO SUB–BASE MATERIAL AS ORDERED BY THE ENGINEER.

GRAVEL DRIVEWAY SECTION DETAIL
NOT TO SCALE



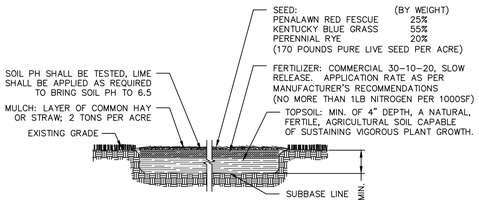
NOTES:
1. STONE SIZE – USE 1–4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THICKNESS – NOT LESS THAN SIX (6) INCHES.
3. WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.
4. GEOTEXTILE – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
7. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

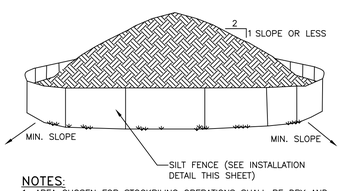


NOTES:
1. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL
NOT TO SCALE



TOPSOIL SEED, FERTILIZER AND MULCH DETAIL
NOT TO SCALE



NOTES:
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

TEMPORARY SOIL STOCKPILE DETAIL
NOT TO SCALE

DRAWN BY: CMB				CHECKED BY: MAB			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

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SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926
F: 845–440–6637

CONSTRUCTION DETAILS

MONELL PLACE SUBDIVISION

MONELL PLACE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 5955–04–586132

JOB #:	2020:039
DATE:	12/29/2020
SCALE:	NTS
TITLE:	CD–1
SHEET:	3 OF 3

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

John Clarke Planning and Design jclarkeplandesign@gmail.com
25 Beech Street, Rhinebeck NY 12572 845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: January 8, 2021
Re: **Monell Place Subdivision**

I have reviewed the December 29, 2020 cover letter from Hudson Land Design, December 28, 2020 Subdivision Application, December 29, 2020 Short EAF Part 1, December 29, 2020 Preliminary Subdivision Plat, and a 3-sheet Subdivision Plan, dated December 29, 2020.

Proposal
The applicant is proposing to subdivide a 2.91-arcre parcel into two lots for the construction of two single-family houses. The parcel is in the R1-20 zoning district, the Historic District and Landmark Overlay (HDLO) zone, and is within the City's Local Waterfront Revitalization Program (LWRP) boundary.

Comments and Recommendations

1. The mean lot widths on both tapered lots do not appear to meet the required average width of at least 125 feet. Proposed Lot 2 is 125 feet along its widest part, but has a narrow rear section. The proposed parcels should be reconfigured to satisfy the required average lot width.

2. The plans should show the size and species of any existing trees over 6 inches in diameter that may be affected by development and indicate any trees that will be removed.

3. For the Schedule of Regulations on the Subdivision Plan:

    a. The front setback for Lot 1 is measured to the proposed house, while the front setback for Lot 2 is measured to the front yard garage.

    b. The Side Yard (Total of Two) row should be removed, since there is now no longer such a requirement in the Schedule of Dimensional Regulations.

    c. The table should include a percentage for Maximum Building Coverage.

    d. A note on the table states that all measurements are taken from the right-of-way taking line, but the front yard dashed lines on the lot layouts are not consistent with the table.

4. No accessory building, like a detached garage, is permitted in the front yard, according to the Schedule of Regulations for Accessory Buildings in Residential Districts.

5. The EAF should include a narrative attachment with historic maps describing the former use of the property in relation to the adjacent Eustatia historic building to help determine whether a Phase 1 archeological investigation may be necessary.

6. The applicant should provide a description of the right-of-way taking issue and the perpetual easement on Lot 1.

7. Since the proposal is within the City's LWRP boundary, the applicant should provide a consistency justification 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
Michael Bodendorf, 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 Lane, P.E., L.S.
Arthur R. Tully, P.E.

January 7, 2021

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

RE: Monell Place – 2 Lot Subdivision
Tax No. 5955-04-586132
City of Beacon

Dear Mr. Gunn:

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

- Cover letter dated December 29, 2020, as submitted by Hudson Land Design.
- Application for Subdivision Approval.
- Short Environmental Assessment Form dated December 29, 2020.
- Plan titled "Preliminary Subdivision Plat – Monell Place Subdivision", dated December 29, 2020, as prepared by Hudson Land Design.
- Set of plans titled "Monell Place Subdivision" dated December 29, 2020 and consisting of 3 sheets as prepared by Hudson Land Design.

The proposed project entails the subdivision of a 2.91± acre parcel on Monell Place into 2 lots, with proposed Lot 1 being 1.71± acres (74,609 square feet) in size and proposed Lot 2 being 1.20± acres (52,386 square feet) in size to allow for the construction of two single-family residences. Based on our review of the above plans, we would like to offer the following comments:

Preliminary Subdivision Plat:

1. Note No. 13 under "Survey Notes" states "Possible 25-foot taking from centerline of Monell Place per Filed Map 11421. Was this taking completed, and if so, who was the land conveyed to?

2. What is the purpose of the "Perpetual Easement" located on proposed Lot 1 for, and who benefits from this easement?

Subdivision Plan (Sheet 1 of 3):

1. The sewer services for the proposed lots are shown to connect to a sewer line running along Monell Place that is not shown on the City's sewer mapping. The applicant's consultant should work with the City to determine who owns this sewer line. If it is found that this is a private line, then the applicant may need to seek approval from the private owner of the line to allow for connection to the line, along with possibly offering a portion of the line to the City of Beacon since there will be multiple services connected to this line.

2. The manhole to the south of the project should be shown and the invert elevations of the pipes in the manhole provided, to allow for verification of connection elevations and lowest sewerable elevations (LSE) at the proposed homes.

3. The storm pipe proposed under the driveway for Lot #1 is noted as being 2" diameter in size. The plan shall note what the pipe material is for this proposed pipe. Further consideration should be given to increasing the diameter of the pipe to allow for easier maintenance (cleaning) of this line in the future.

4. The "Legend" table shall be updated to include the tree symbol.

5. What is the range in size of trees shown on the plan, as so many were located?

6. The garages on both parcels show a footing drain exiting from the garage structures. If these structures are slabs on grade or just foundations with no basement, then footing drains are not necessary.

7. The proposed sewer service for Lot #1 should either be shifted to the south or north so that the service connection is not located under the existing water line.

8. If any decks, covered porches or walkways are proposed for the proposed homes, they should be shown on the plan.

9. The size of the existing water main with Monell Place shall be noted on the plan, along with the material the main is made of.

10. The plan notes the proposed water services to be 1.25" in diameter. Is there a need for the services to be this large? What is the pressure within the existing water main?

Construction Details (Sheet 3 of 3):

1. The sanitary sewer service connection detail shall be revised to note the use of a saddle since the new services will connect to and existing line. The make and model of the service connection saddle to be used shall be discussed with the City's Water and Sewer Department.

2. The water service detail and water shut-off details shall be revised to note 1.25" diameter lines as noted on Sheet 1.

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

City of Beacon Planning Board Agenda
01/12/2021

Title:

Zoning Board of Appeals - No applications submitted for the January meeting

ATTACHMENTS

City of Beacon Planning Board Agenda
01/12/2021

Title:

Consider request for two 90-day extensions of Subdivision Approval - 25 Townsend Street, submitted by AK Property Holding, LLC

ATTACHMENTS

25 Townsend Sreet Extension Request.PDF

CUDDY +FEDER LLP

445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

Taylor M. Palmer
tpalmer@cuddyfeder.com

December 23, 2020

VIA E-MAIL (egrogan@cityofbeacon.org)

Hon. John Gunn, Chairman
& Members of the Planning Board
City of Beacon
One Municipal Plaza
Beacon, New York 12508

Re: AK Property Holding, LLC – Request for Extension of Final Subdivision Approval
Property: 25 Townsend Street, Beacon, New York

Dear Chairman Gunn and Planning Board Members:

On behalf of AK Property Holding, LLC (the "Applicant"), we are writing to request an additional two (2) 90-day extensions of the July 10, 2018 Final Subdivision Approval Resolution, which was last extended by this Board on June 9, 2020. This request is timely, as 180 days (6 months) have not elapsed since the date of the last extension that was granted on June 9, 2020, which runs until December 27, 2020.

As we discussed with the Planning Board, the Applicant worked diligently with the project consultants, City Staff and the Dutchess County Department of Behavior and Community Health (the "County Health Department") in order to obtain County Health Department sign-off on the Final Subdivision Plat. At this time the Applicant advises that they are still working to satisfy the prerequisite Conditions provided in the Approval Resolution in order for the Final Subdivision Plat to be signed by the Planning Board Chairman and subsequently recorded in the Dutchess County Clerk's Office. Additionally, the Applicant advises that they continue to be in negotiations with multiple potential buyers of the Property, and the most-recent buyer fell through on the last day of due diligence after preparing the draft bond that was even reviewed by the Planning Board Attorney. The Applicant further requests that Board's consideration stemming from additional difficulties with filing of the performance guarantee due to complications arising from the COVID-19 pandemic.

Additionally, attached hereto as **Exhibit A** is a copy of the revised Offer of Dedication, inclusive of the changes prepared by the Planning Board Attorney, together with the accompanying revised draft deed, which documents have been forwarded to the Planning Board Attorney for approval under separate cover.[1]

[1] Note: We understand that there is also a pending site plan application for a townhouse development on the adjoining property (the "Beacon Views Townhouses Development"), which proposes access the Beacon Views Townhouses Development property through the 25 Townsend Subdivision. As noted therein, there has been no change of circumstances since the original approval – and if anything – there are even more unique

We respectfully request that you please place this matter on the next available Planning Board Agenda for consideration of the Applicant's request for two (2) 90-day extensions. Thank you in advance for your consideration in this matter.

Very truly yours,

Taylor M. Palmer

Enclosures
cc: Jennifer L. Gray, Esq. – Planning Board Attorney

---

circumstances now that support this linkage through the 25 Townsend Subdivision to the adjoining Beacon Views Townhouses Development property.

Exhibit A

OFFER OF DEDICATION

KNOW ALL MEN THAT **AK PROPERTY HOLDING, LLC**, a New York limited liability company having offices at 67-38 108th Street, Forest Hills, New York 11375 (the "Grantor"), for and in consideration of the sum of Ten and 00/100 ($10.00) Dollars and other good and valuable consideration, DOES HEREBY OFFER in dedication to the **CITY OF BEACON**, a municipal corporation organized and existing under the laws of the State of New York having an office at One Municipal Plaza, Beacon, New York 12508 (the "Grantee"), the following:

1. Fee simple title in and to (i) a certain area in the southwesterly portion of the lands located at 25 Townsend Street, Beacon, New York 12508 (the "Premises") shown and labeled on the Subdivision Map (as hereinafter defined) as "Proposed 50' Wide R-O-W to the City of Beacon for Future Road Extension", which area is more fully described in the Bargain and Sale Deed annexed hereto as Exhibit 1 and made a part hereof; and (ii) the proposed extension of Townsend Street which is more fully described in the Bargain and Sale Deed annexed hereto as Exhibit 1.

This Offer of Dedication is irrevocable from the date hereof and may be accepted in whole or in part by the Grantee at any time after the Subdivision Plat is filed in the Office of the Clerk of the County of Dutchess (the "Clerk's Office") by recording in the Clerk's Office either (i) a certified instrument or resolution of the City of Beacon accepting the within offer or (ii) the Deed, duly executed by Grantor or its applicable successor or assign, in either case together with such additional documents necessary to record the same in the Clerk's Office. In the event Grantee declines to accept the entire cul-de-sac, Grantee may require fee simple title of all or a portion of the remaining areas of the cul-de-sac which are not accepted by Grantee to revert to the adjacent lots. Alternatively, Grantee may require the upper area of the cul-de-sac to remain as a common access lane for Lots 5, 6, 7, 8 and 9 of the Subdivision Map, as generally depicted at Exhibit 2 annexed hereto and made a part hereof.

"Subdivision Map" as used herein means that certain subdivision map entitled "Final Subdivision Plan Prepared for 25 Townsend Street" prepared by TEC Land Surveying, dated November 2, 2018, and filed in the Clerk's Office on _____, 2020, as Filed Map No. _____.

Dated: _____, 2020

AK PROPERTY HOLDING, LLC

By:_____
Name:
Title:

ACKNOWLEDGMENTS

STATE OF NEW YORK)
) ss.:
COUNTY OF _____)

On the _____ day of _____ in the year _____ before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

OFFER OF DEDICATION

AK Property Holding, LLC

to

City of Beacon

Record & Return:
Keane & Beane, P.C.
445 Hamilton Avenue, Ste 1500
White Plains, New York 10601
Attn: Nicholas M. Ward-Willis, Esq.

Section: 6055
Block: 03
Lot(s): 383149
County: Dutchess

Exhibit 1

Deed

BARGAIN AND SALE DEED WITH COVENANT AGAINST GRANTOR'S ACTS

THIS INDENTURE, made the _____ day of _____, 2020 between **AK PROPERTY HOLDING, LLC**, a New York limited liability company, having an address at 67-38 108th Street, Forest Hills, New York 11375 (the "party of the first part") and **CITY OF BEACON,** a municipal corporation organized and existing under the laws of the State of New York, having an address at One Municipal Plaza, Beacon, New York 12508 (the "party of the second part").

W I T N E S S E T H:

That the party of the first part, in consideration of Ten ($10.00) Dollars and other valuable consideration paid by the party of the second part, does hereby grant and release unto the party of the second part, the heirs or successors and assigns of the party of the second part forever,

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the City of Beacon, County of Dutchess and State of New York being more particularly bounded and described in Schedule "A" attached hereto.

BEING and intended to be the same premises shown on that subdivision map entitled "Final Subdivision Plan Prepared for 25 Townsend Street" prepared by TEC Land Surveying, dated November 2, 2018, and filed in the Office of the Dutchess County Clerk on _____, as Filed Map No. _____.

TOGETHER with all right, title and interest, if any, of the party of the first part, in and to any streets and roads abutting the above-described premises to the center lines thereof;

TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises;

TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, the heirs or successors and assigns of the party of the second part forever.

AND the party of the first part covenants that the party of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid.

AND the party of the first part, in compliance with Section 13 of the Lien Law, covenants that the party of the first part will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires.

[*Signature page immediately follows*]

[*Signature page to Bargain and Sale Deed with Covenant Against Grantor's Acts*]

IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written.

AK PROPERTY HOLDING, LLC

By:_____
Name:
Title:

ACKNOWLEDGEMENT

STATE OF NEW YORK)
) ss.:
COUNTY OF)

On the _____ day of _____ in the year 2020 before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

RECORD AND RETURN TO;

Keane & Beane, P.C.
445 Hamilton Avenue, Suite 1500
White Plains, New York 10601
Attn: Nicholas M. Ward-Willis, Esq.

SCHEDULE A

Description of Property

50’ Right-of-Way

All that plot, piece, or parcel of land situate, lying, and being in the City of Beacon, County of Dutchess, State of New York as shown on a filed map entitled “Final Subdivision Plan Prepared for 25 Townsend Street” and filed in the Dutchess County Clerk’s office as Filed Map No _____ and bounded and described as follows: and being more particularly described as follows:

Beginning at a point being the northwest corner of Lot 10 and the northerly most corner of the HOA Lot as shown on said Filed Map_____; Thence along said HOA Lot S 22° 01' 29" W for a distance of 176.20 feet to a point; said point being located on the northerly bounds of the lands, now or formerly, of Highlands at Beacon, LLC (Doc. #02 2007 4288); thence along the same N 37° 48' 51" W for a distance of 57.88 feet to a point being the southeast corner of Lot 9 as shown on said Filed Map_____; thence along lot 9 N 22° 01' 44" E a distance of 128.50 feet to a point on the proposed road; thence along the same along a curve turning to the left having a radius of 65.50 feet, an arc length of 54.99 feet and whose long chord bears S 88° 23' 22" E for a distance of 53.39 feet to the point or Place of Beginning. Containing 7,420 Square Feet of land.

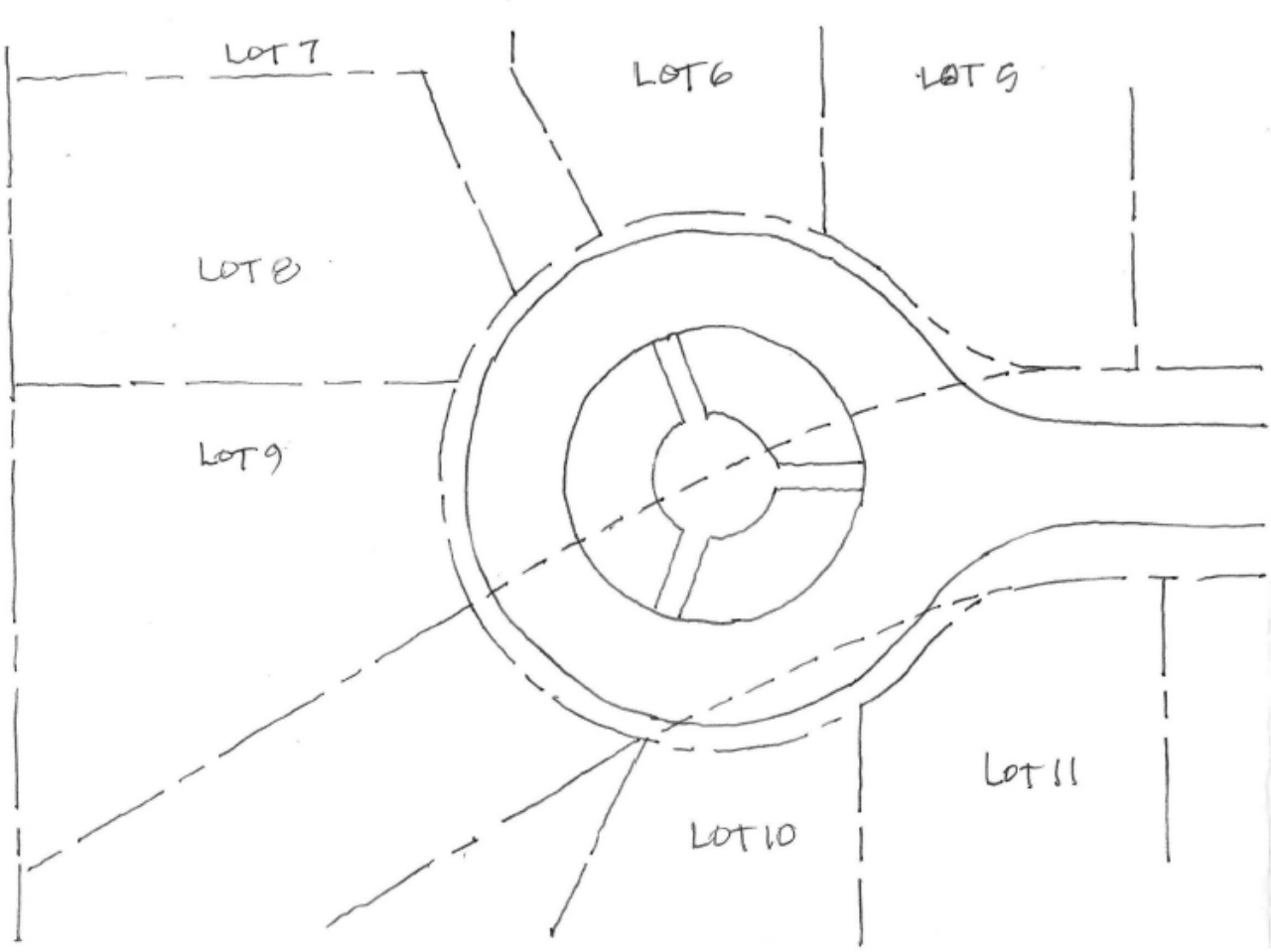
Townsend Extension - Including Cul-De-Sac

All that plot, piece, or parcel of land situate, lying, and being in the City of Beacon, County of Dutchess, State of New York as shown on a filed map entitled “Final Subdivision Plan Prepared for 25 Townsend Street” and filed in the Dutchess County Clerk’s office as Filed Map No _____ and bounded and described as follows: and being more particularly described as follows:

Beginning at a point located on the easterly bounds of the terminus of Townsend Street, said point also being the northeast corner of Lot 13 as shown on said Filed Map_____;
Thence along a curve to the left having a radius of 125.00 feet an arc length of 178.52 feet and whose long chord bears N 86° 54' 03" W for a distance of 163.73 feet. Thence, S 52° 11' 09" W for a distance of 84.28 feet to the beginning of a curve, Said curve turning to the left having a radius of 47.40 feet and an arc length of 43.00 feet to the beginning curve; Said curve turning to the right having a radius of 65.50 feet and an arc length of 318.44 feet to the beginning of a curve; Said curve turning to the left having a radius of 47.40 feet and an arc length of 41.50 feet to a point; Thence, N 52° 11' 09" E for a distance of 84.28 feet to the beginning of a curve; Said curve turning to the right having a radius of 175.00 feet, and an arc length of 219.08 feet to a point; Thence S 29° 04' 59" W a distance of 51.23 feet to the point or place of Beginning. Containing 29,419 Square Feet of land.

Exhibit 2

Portion of Cul-De-Sac



25 Townsend Cul-De-Sac: **Extend street right-of-way through lower half of circle with a half-moon access lane for lots 6-9. All lots stay the same as previously approved.**

City of Beacon Planning Board Agenda
01/12/2021

Title:

508 Main Street - Sign

ATTACHMENTS

508 Main Street Revised Mockup.jpg

508 Main Street Udated Storefront Day.jpg

508 Main Street Updated Storefront Night.jpg

Signarama
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12 Eisenhower Parkway, Roseland NJ, 07068
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NOTE: **NIGHT LOOK *ILLUMINATED***

FACES OF LETTERS WILL BE COVERED WITH BLACK PERFORATED VINYL WHICH WILL APPEAR WHITE WHEN SIGN IS LIT AT NIGHT

DAY LOOK *NOT ILLUMINATED*

LETTERS WILL BE MOUNTED TO RACEWAY (METAL-BOX) PAINTED TO MATCH BUILDING

*APPROVED:*_____ *DATE:*_____


THE SNOOKI SHOP
HV MC


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508
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WOMEN CLOTHING
& ACCESSORIES

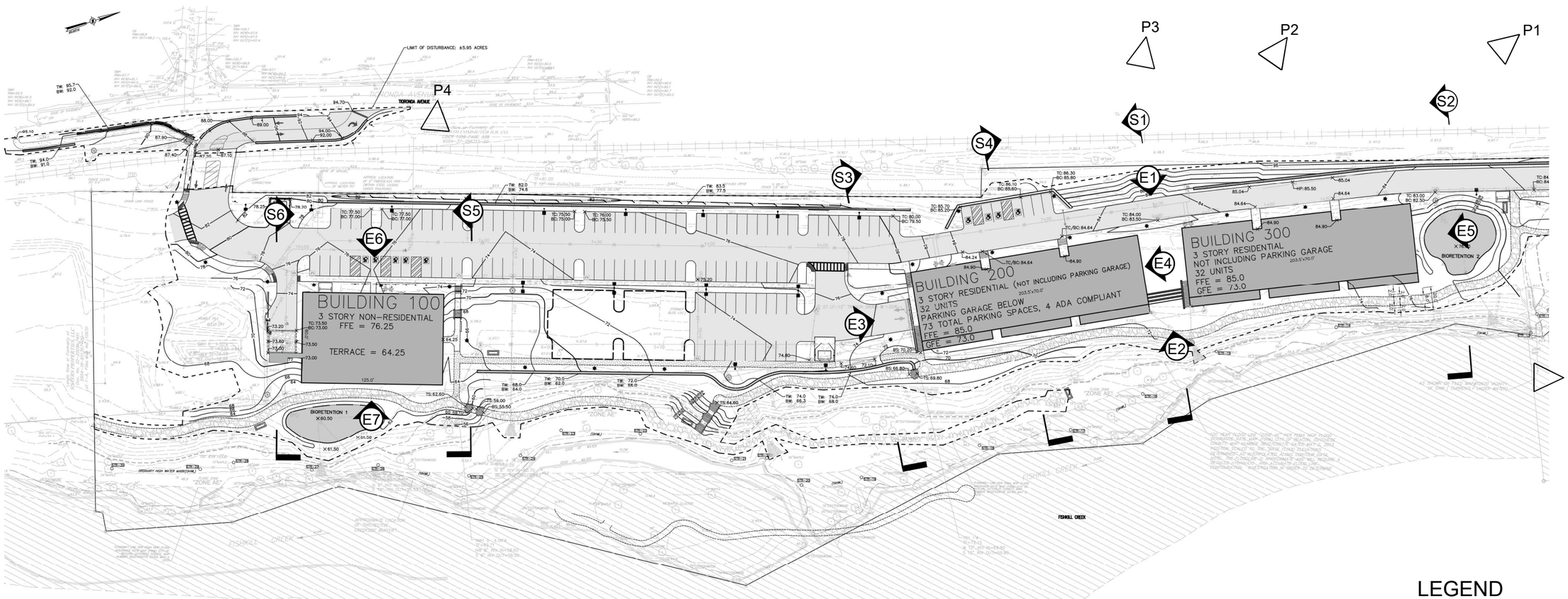
City of Beacon Planning Board Agenda
01/12/2021

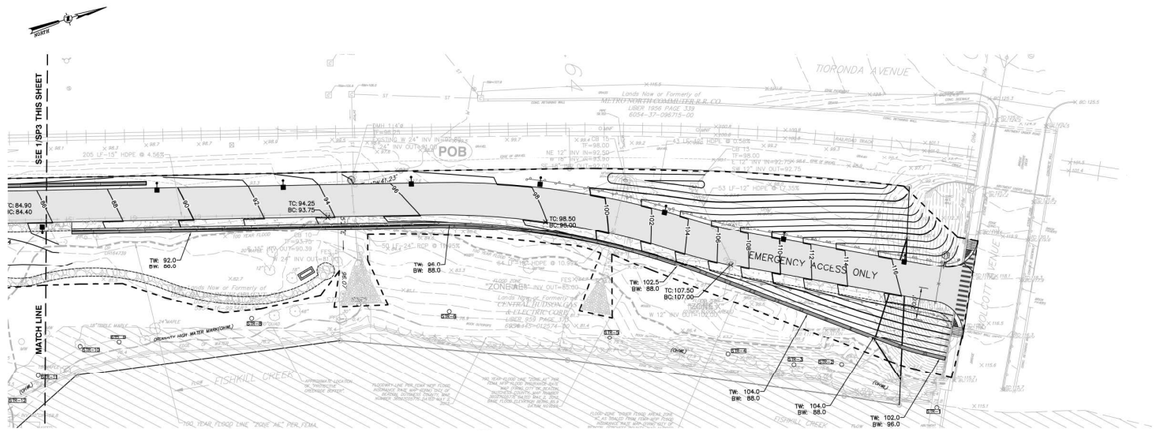
Title:

248 Tioronda Avenue - Finalize Building Elevations

ATTACHMENTS

248 Tioronda Proposed Elevations.pdf





LEGEND

- PROPOSED PROP. LINE
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- P1 PERSPECTIVE TAG
- E1 ELEVATION TAG
- S1 SECTION TAG

SCALE: NOT TO SCALE

0 50 100 200 (FT)

SITE PLAN

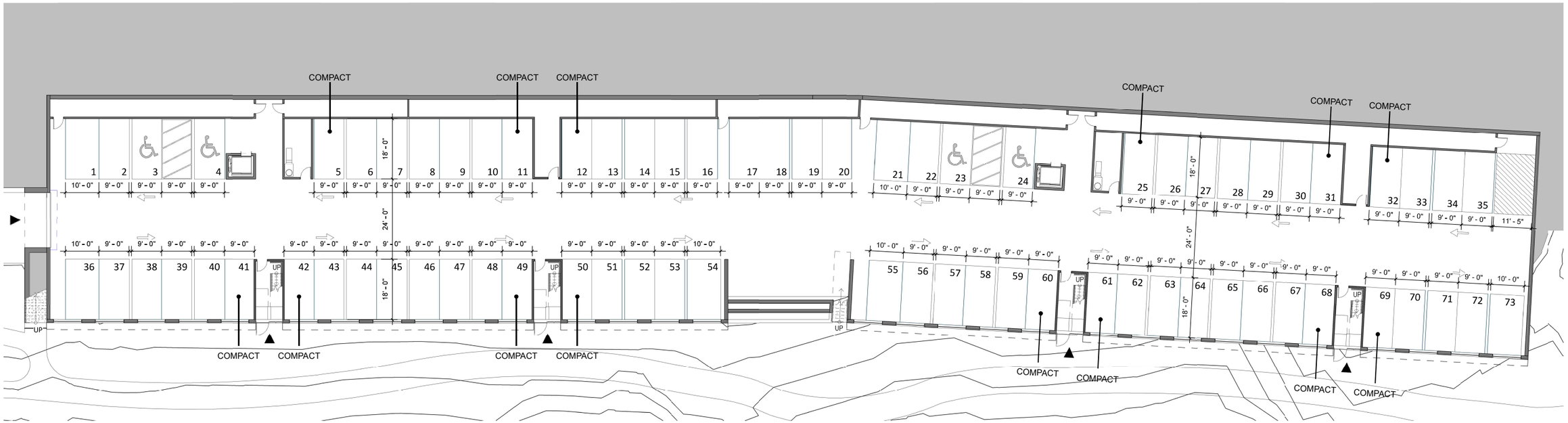
248 TIORONDA AVENUE

BEACON, NEW YORK

PROPOSED REVISIONS

DEC. 23, 2020

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NOTE: 73 PARKING SPACES TOTAL
UNDER BUILDINGS 200 & 300

SCALE: 1/32" = 1'-0"

0 8 16 32 64 (FT)

CELLAR PLAN
BUILDINGS 200 + 300

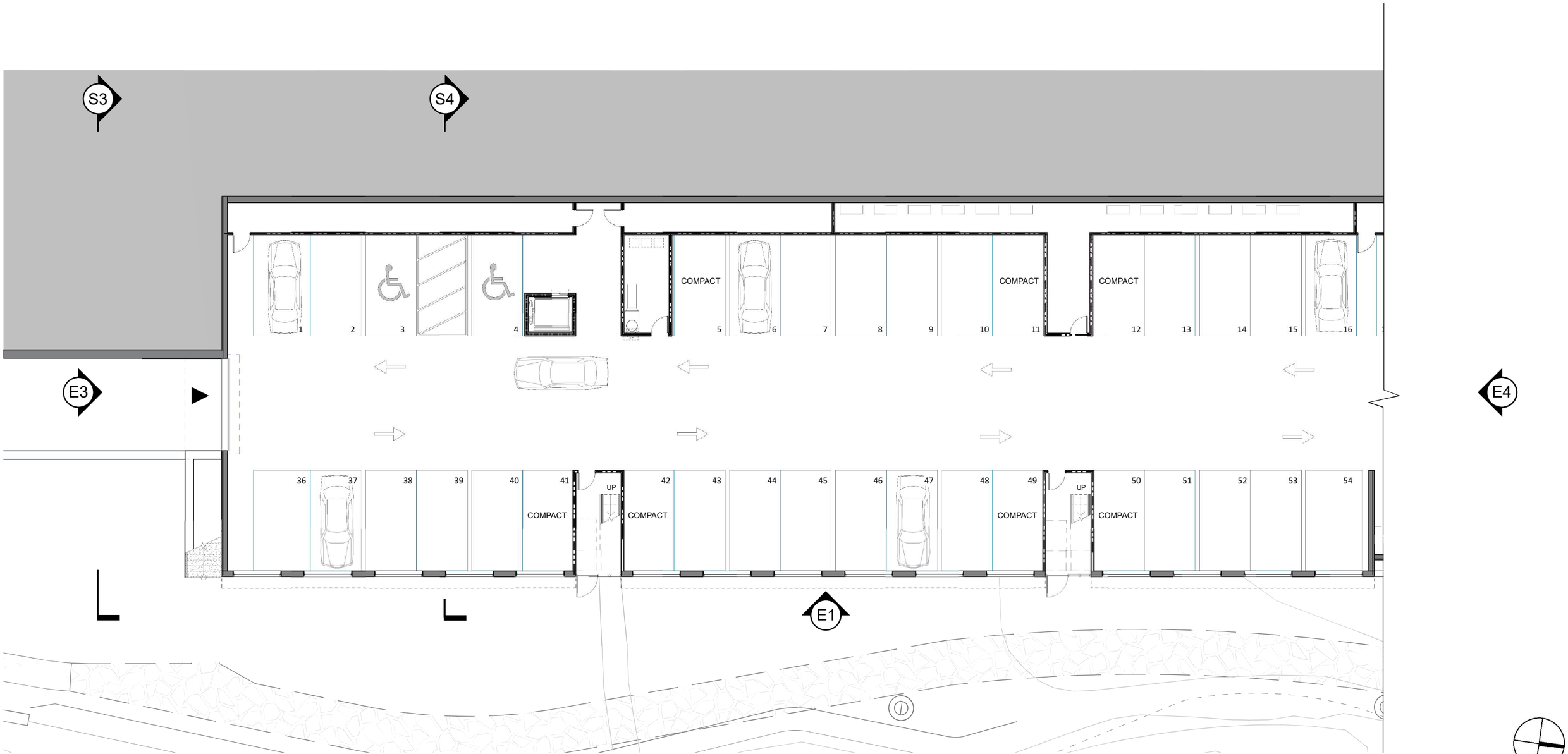
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SCALE: 1/16" = 1'-0"

0 4 8 16 32 (FT)

CELLAR PLAN
BUILDING 200

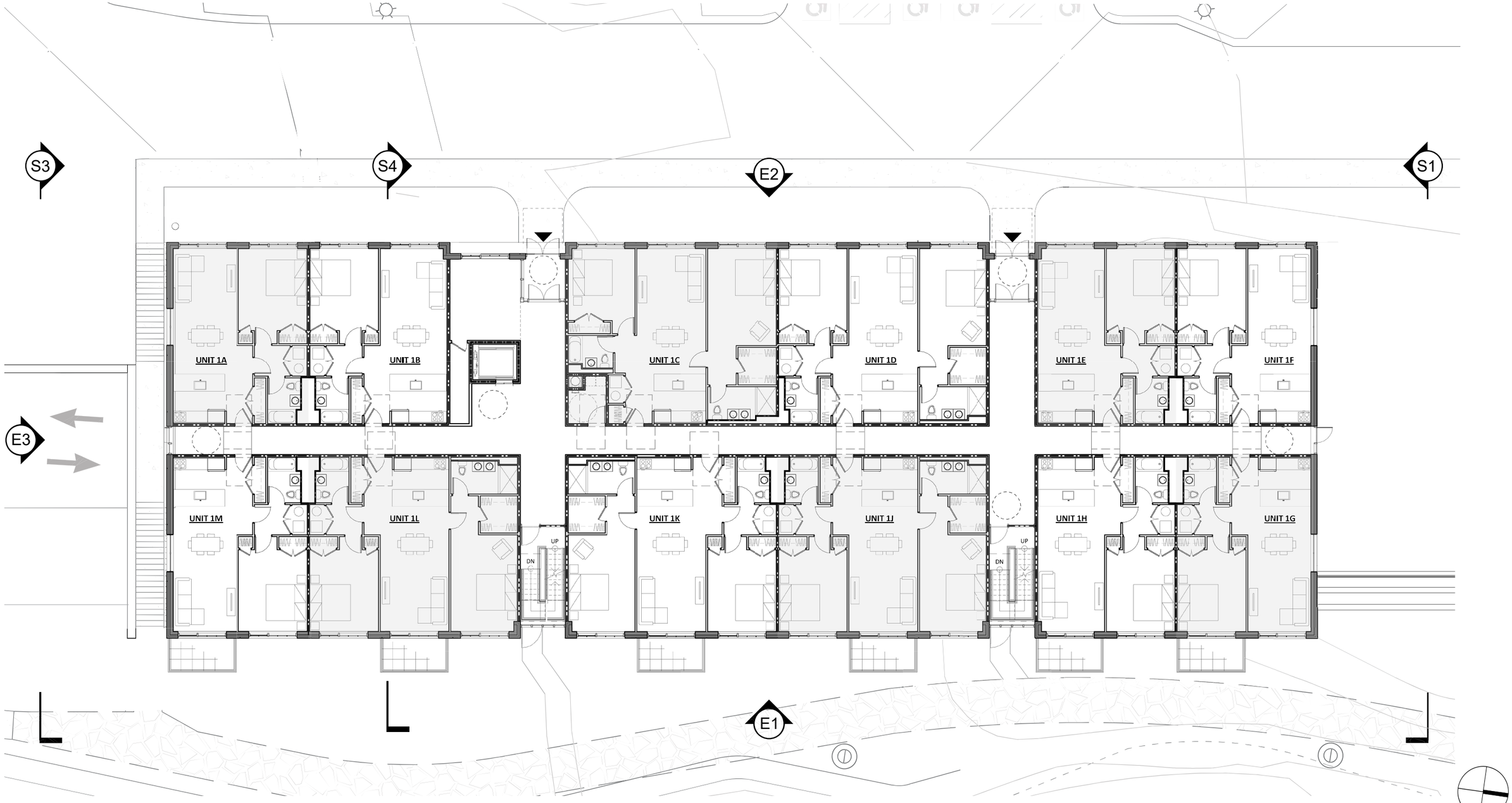
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SCALE: 1/16" = 1'-0"

0 4 8 16 32 (FT)

1ST FLOOR PLAN
BUILDING 200

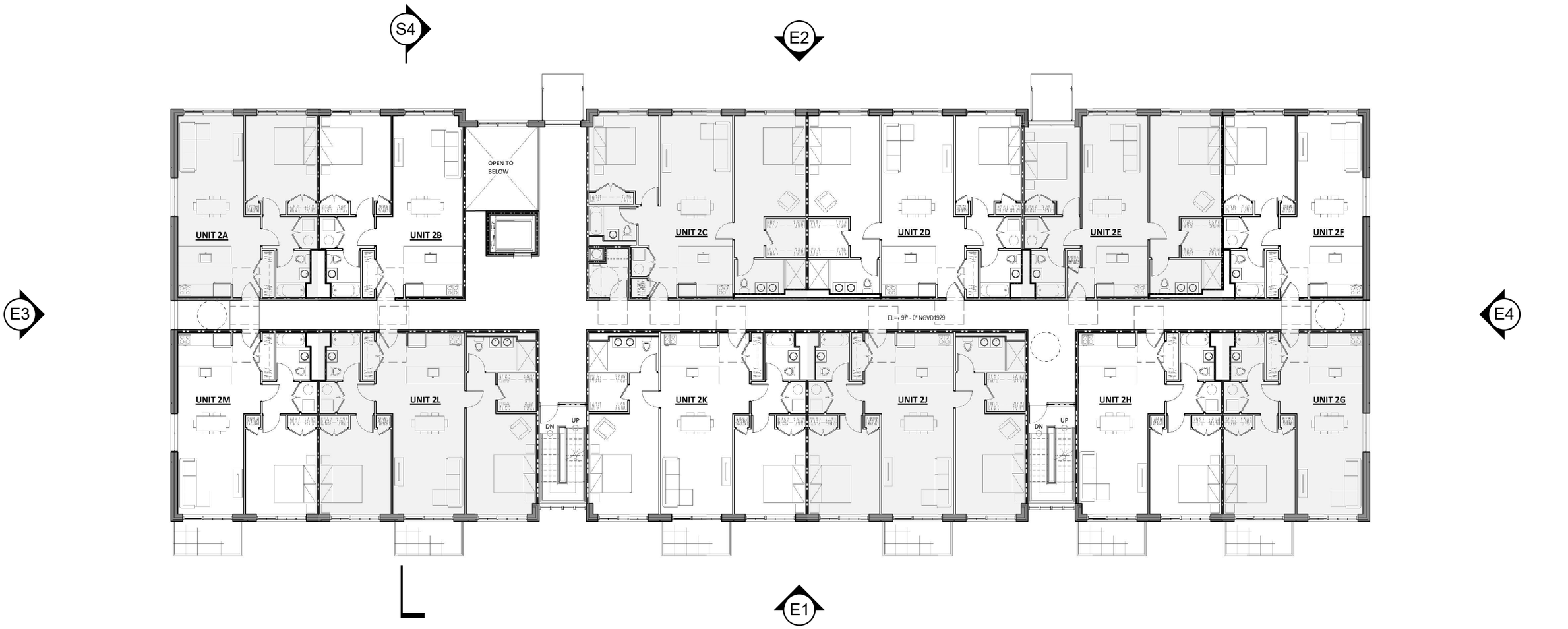
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SCALE: 1/16" = 1'-0"

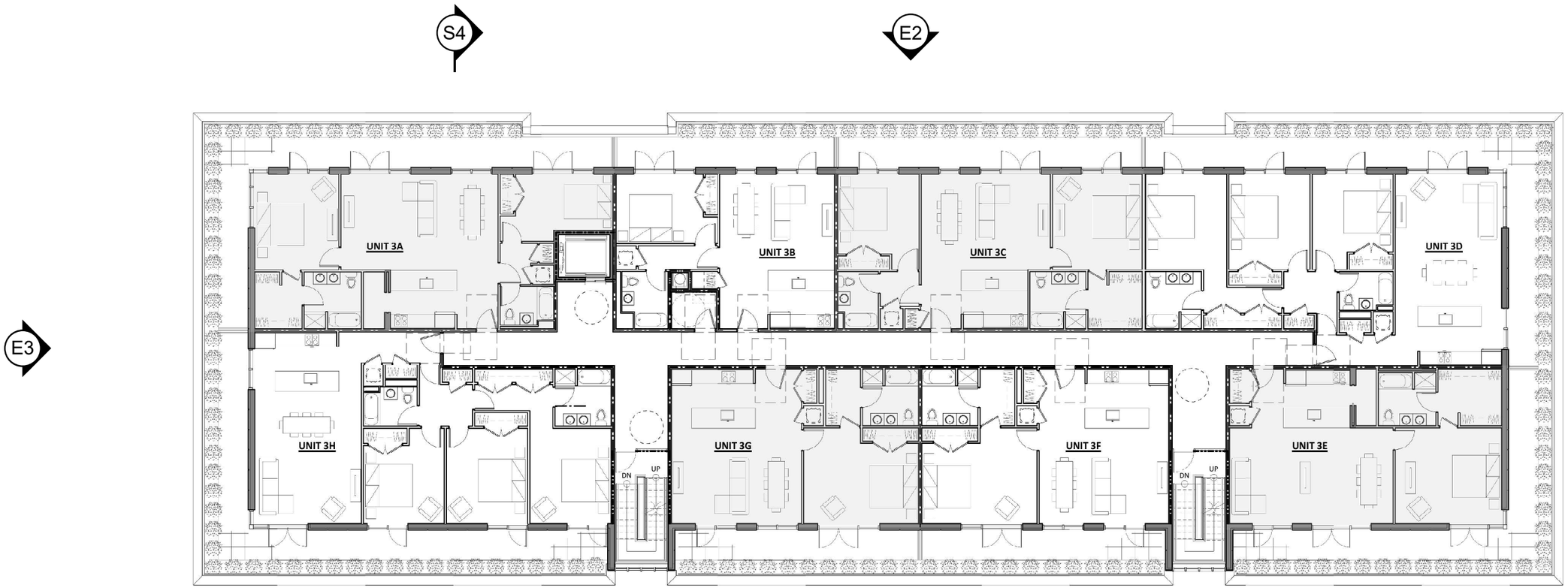
0 4 8 16 32 (FT)

2ND FLOOR PLAN
BUILDING 200

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

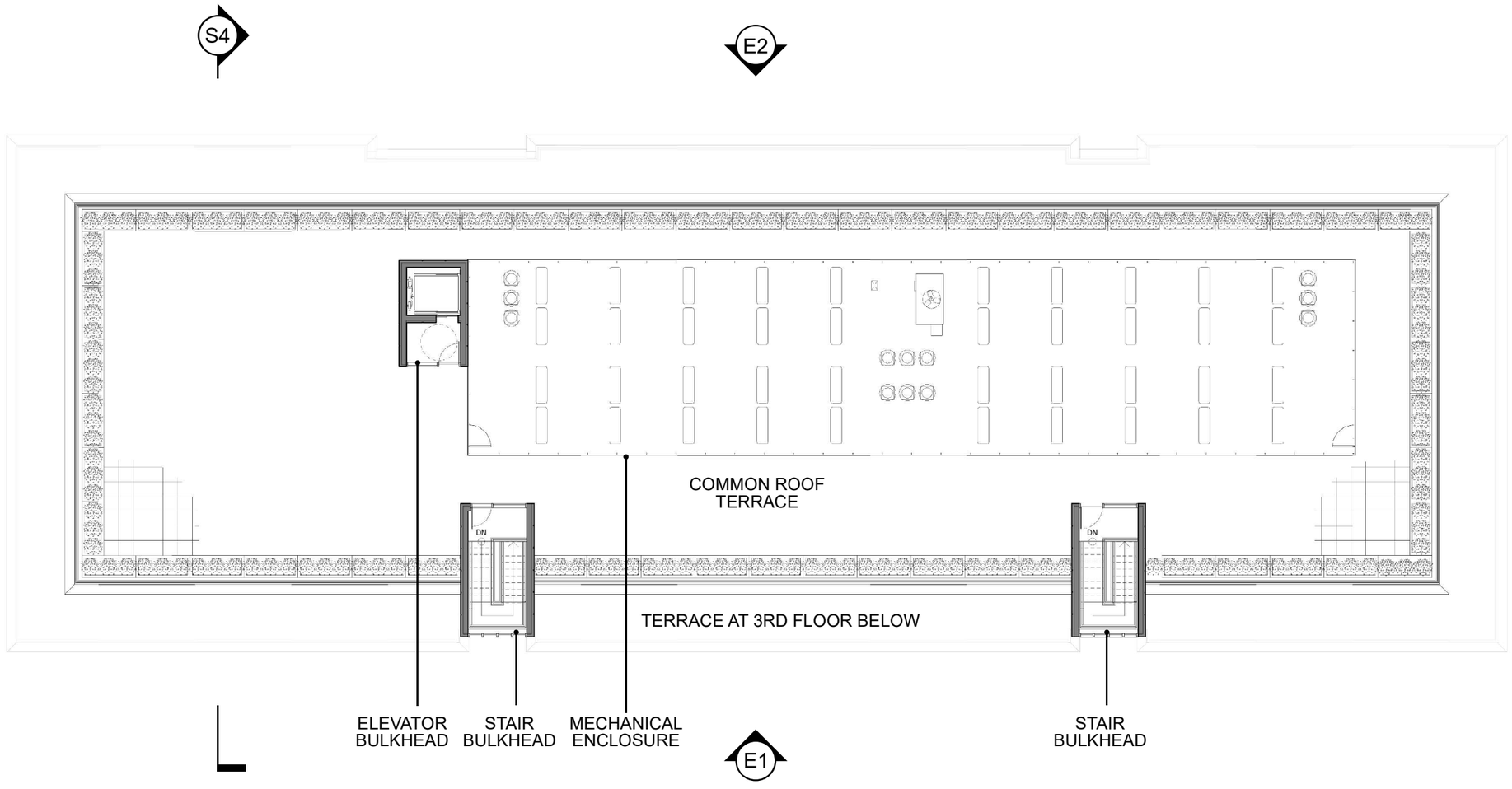
0 4 8 16 32 (FT)

3RD FLOOR PLAN
BUILDING 200

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

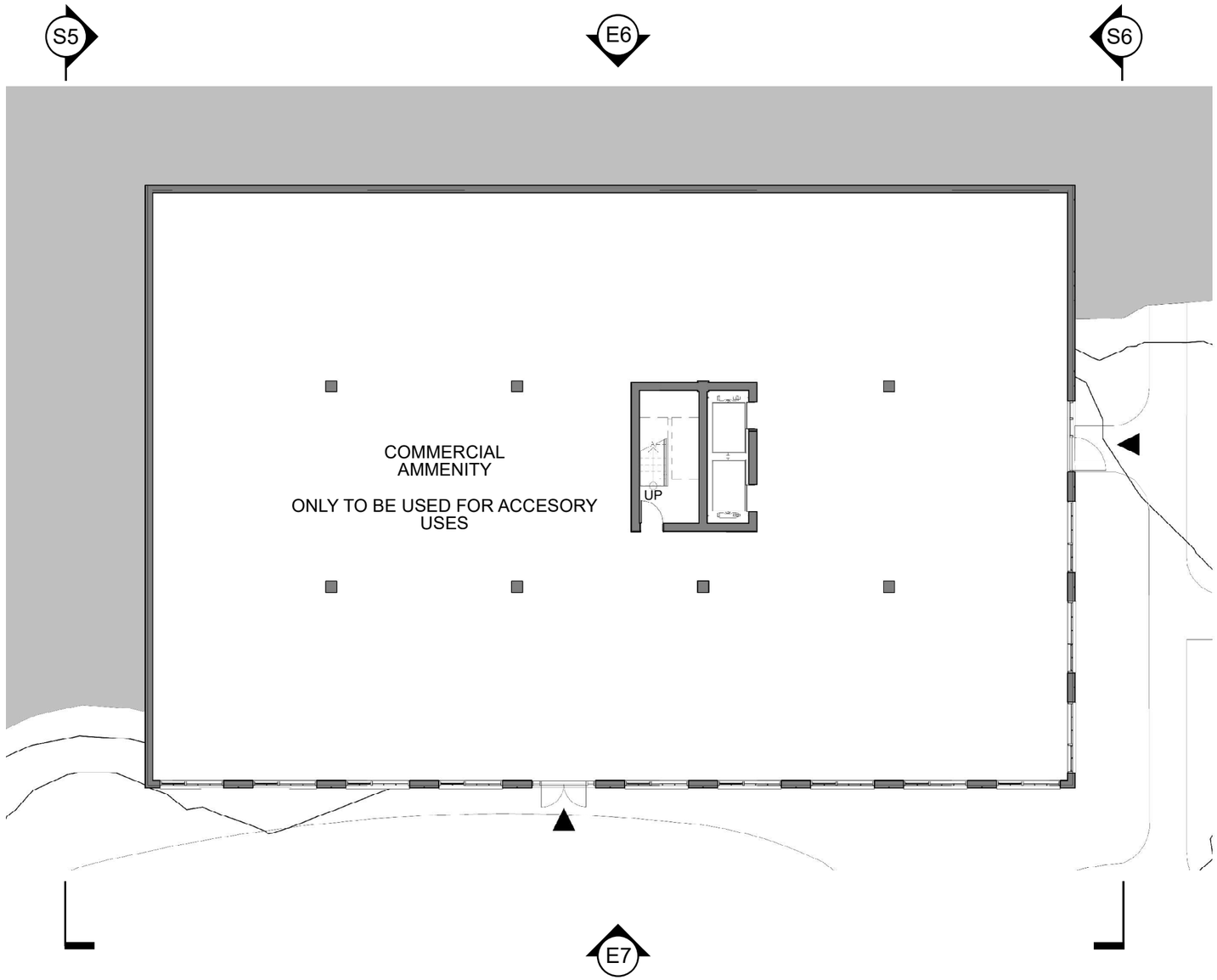
0 4 8 16 32 (FT)

ROOF PLAN
BUILDING 200

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NOTE: ACCESSORY CELLAR DEDUCTED FROM GROSS AREA PARKING REQUIREMENT PER CITY OF BEACON ZONING CODE 223-63 “FLOOR AREA” DEFINITION

SCALE: 1/16” = 1’-0”

0 4 8 16 32 (FT)

CELLAR PLAN
BUILDING 100

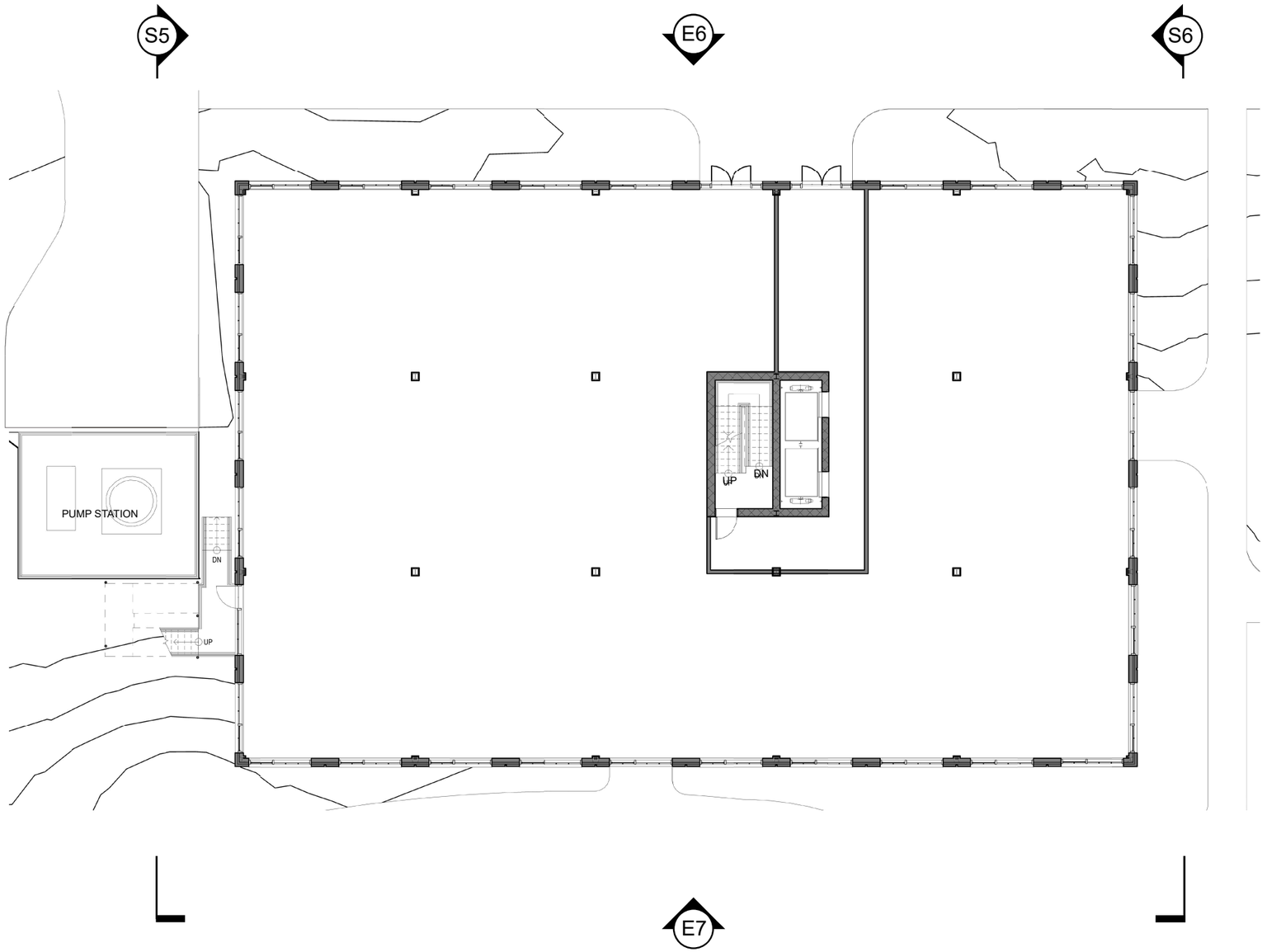
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SCALE: 1/16" = 1'-0"

0 4 8 16 32 (FT)

1ST FLOOR PLAN
BUILDING 100

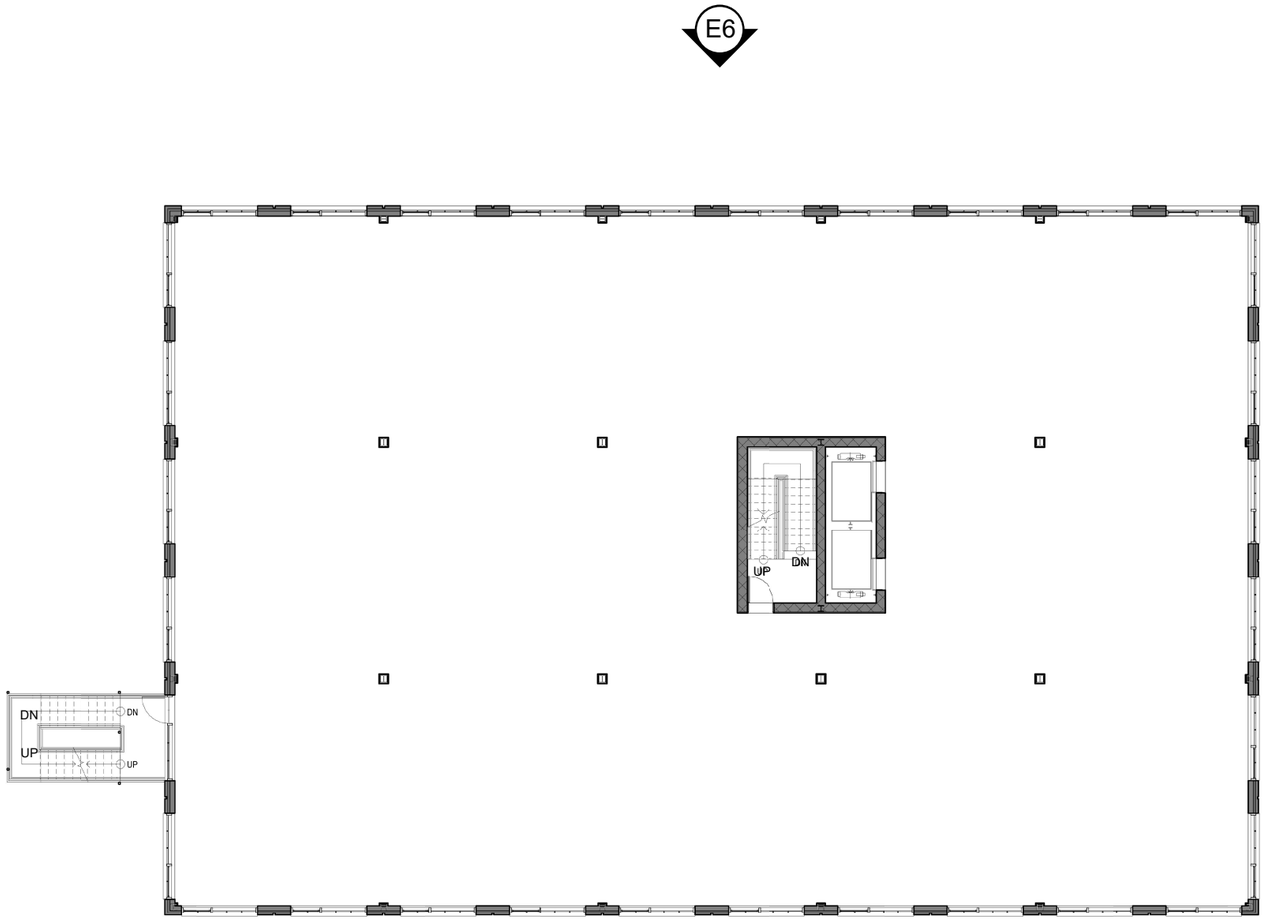
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SCALE: 1/16” = 1’-0”

0 4 8 16 32 (FT)

2ND FLOOR PLAN
BUILDING 100

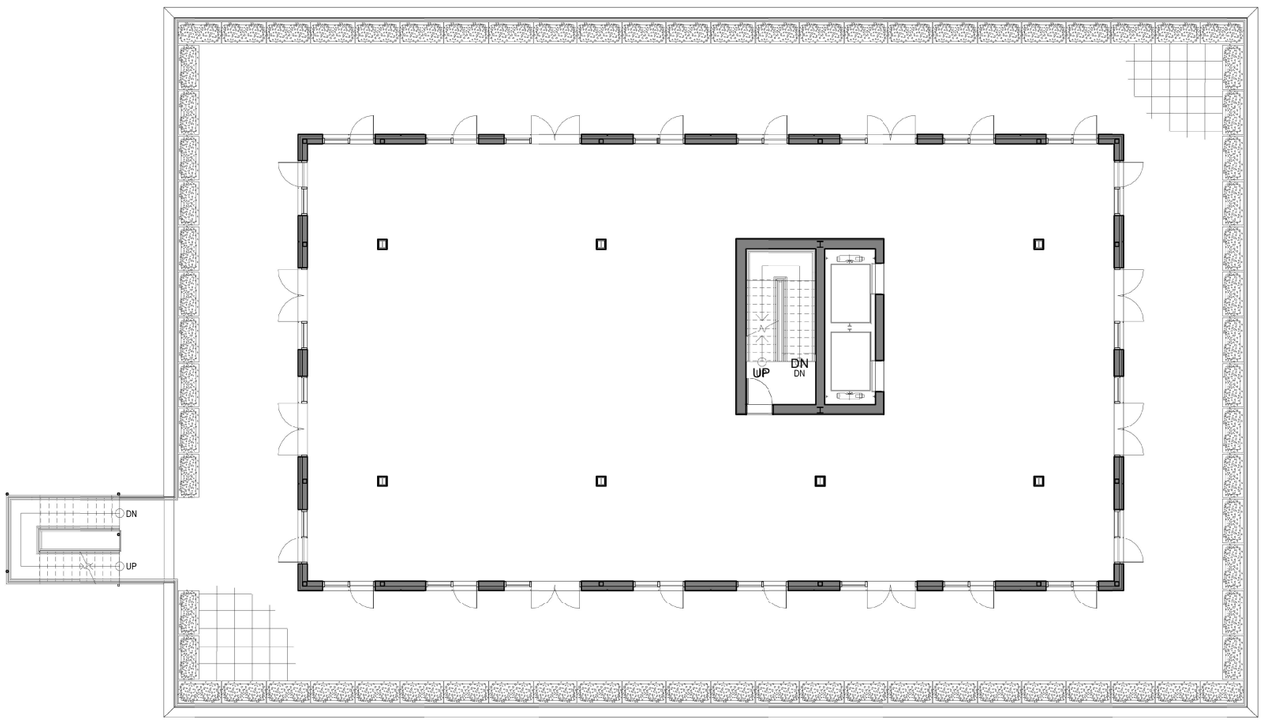
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SCALE: 1/16” = 1’-0”

0 4 8 16 32 (FT)

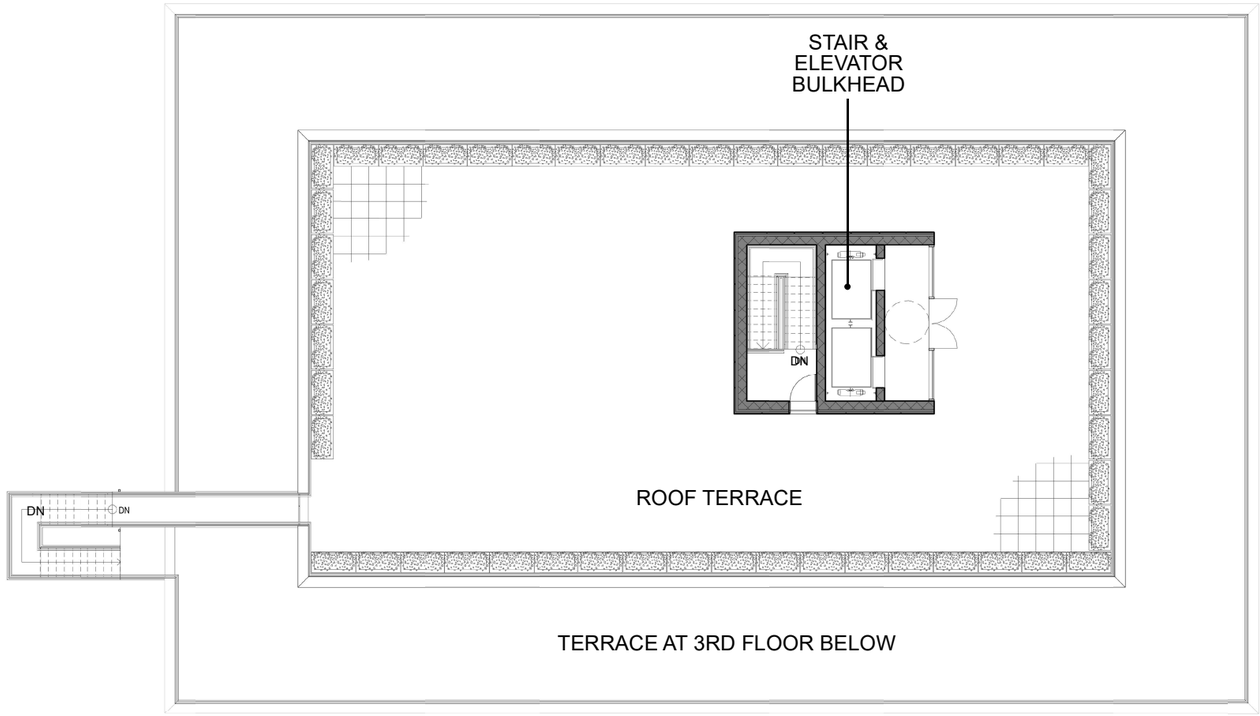
3RD FLOOR PLAN
BUILDING 100

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E6



E7

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

0 4 8 16 32 (FT)

ROOF PLAN
BUILDING 100

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SITE SECTIONS
BUILDINGS 200 + 300

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SITE SECTION 3
BLDG 200



SITE SECTION 4
BLDG 200

SCALE: NOT TO SCALE

0 4 8 16 32 (FT)

SITE SECTIONS
BUILDING 200

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ELEVATION 1
BLDG 300 WEST FACADE

BLDG 200 WEST FACADE



ELEVATION 2
BLDG 200 EAST FACADE

BLDG 300 EAST FACADE



ELEVATION 3
BLDG 200 SOUTH FACADE



ELEVATION 4
BLDG 200 NORTH FACADE



ELEVATION 5
BLDG 300 NORTH FACADE

SCALE: NOT TO SCALE

0 4 8 16 32 (FT)

COMPOSITE ELEVATIONS
BUILDINGS 200 + 300

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BLDG 300 WEST FACADE



BLDG 200 WEST FACADE

GENERAL NOTE: WINDOWS SHALL NOT BE DARK-TINTED OR MIRRORED

SCALE: 1/16” = 1’-0”

0 4 8 16 32 (FT)

ELEVATIONS
BUILDINGS 200 + 300

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BLDG 300 EAST FACADE



BLDG 200 EAST FACADE

GENERAL NOTE: WINDOWS SHALL NOT BE DARK-TINTED OR MIRRORED

SCALE: 1/16” = 1’-0”

0 4 8 16 32 (FT)

ELEVATIONS BUILDINGS 200 + 300

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BLDG 300 NORTH FACADE

BLDG 200 SOUTH FACADE

GENERAL NOTE: WINDOWS SHALL NOT BE DARK-TINTED OR MIRRORED

SCALE: 1/16” = 1’-0”

0 4 8 16 32 (FT)

ELEVATIONS
BUILDINGS 200 + 300

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SITE SECTION 5
BLDG 100 NORTH FACADE



SITE SECTION 6
BLDG 100 SOUTH FACADE

SCALE: NOT TO SCALE

0 4 8 16 32 (FT)

SITE SECTIONS
BUILDING 100

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BLDG 100 WEST FACADE



BLDG 100 EAST FACADE

GENERAL NOTE: WINDOWS SHALL NOT BE DARK-TINTED OR MIRRORED

SCALE: 1/16” = 1’-0”

0 4 8 16 32 (FT)

SCALED ELEVATIONS
BUILDING 100

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BLDG 100 SOUTH FACADE



BLDG 100 NORTH FACADE

GENERAL NOTE: WINDOWS SHALL NOT BE DARK-TINTED OR MIRRORED

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

0 4 8 16 32 (FT)

SCALED ELEVATIONS BUILDING 100

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PERSPECTIVE VIEW 1
BUILDINGS 200 + 300

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PERSPECTIVE VIEW 2
BUILDINGS 200 + 300

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PERSPECTIVE VIEW 3
BUILDINGS 200 + 300

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PERSPECTIVE VIEW 4
BUILDING 100

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PERSPECTIVE VIEW 5
BUILDINGS 200 + 300

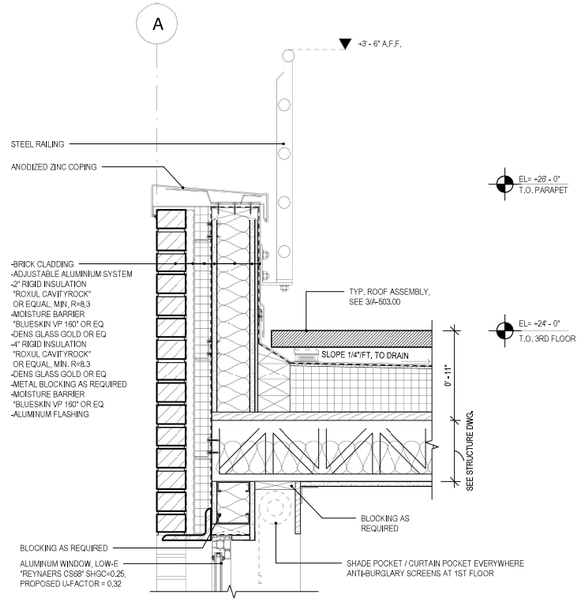
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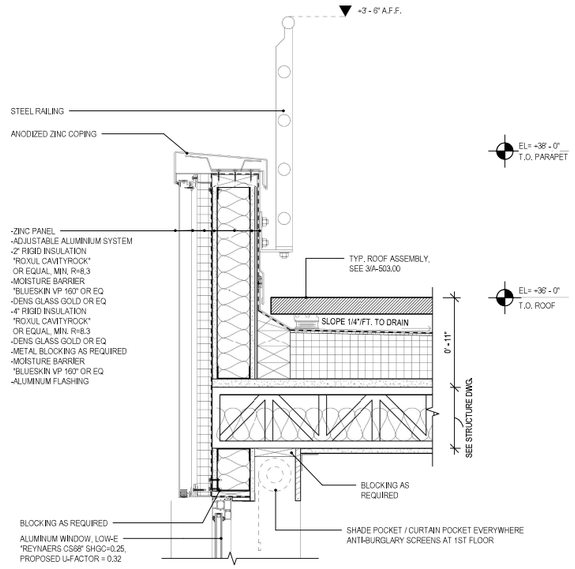
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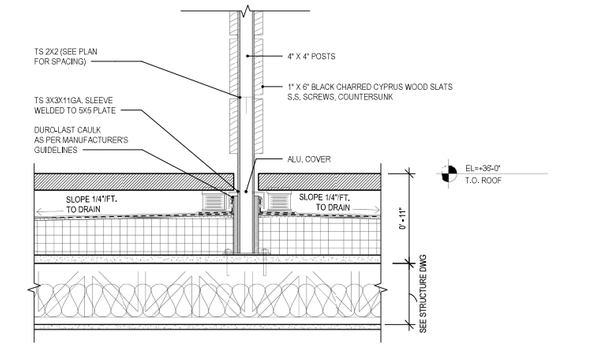
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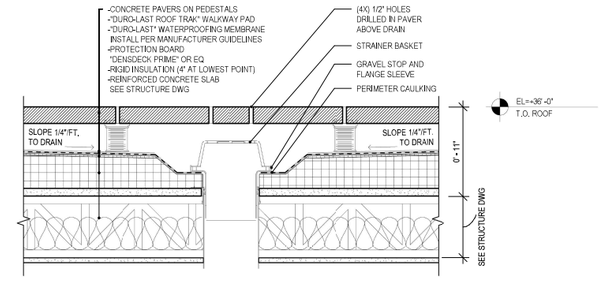
1 PARAPET DETAIL - BRICK CLADDING
1 1/2" = 1'-0"



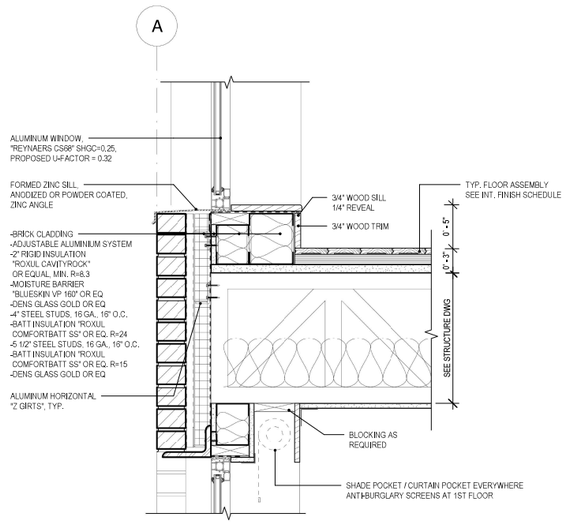
3 PARAPET DETAIL - ZINC PANEL
1 1/2" = 1'-0"



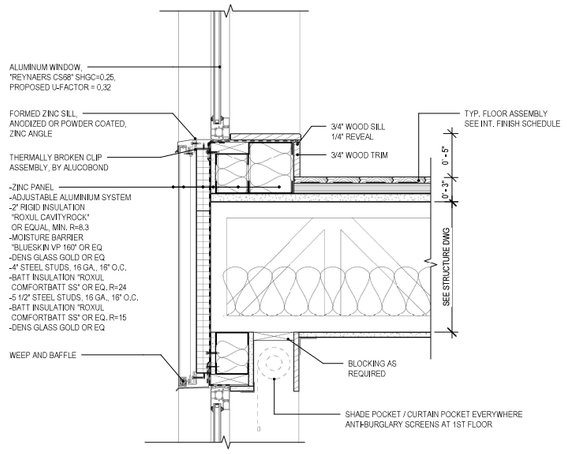
5 TYP. ENCLOSURE FENCE
1 1/2" = 1'-0"



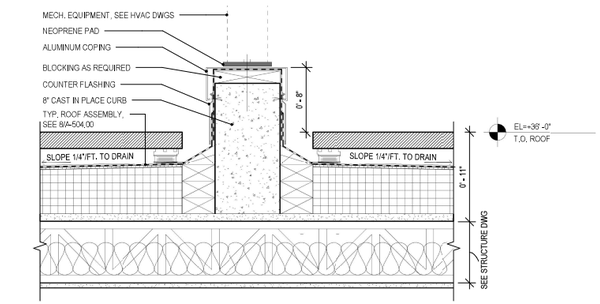
6 TYP. ROOF ASSEMBLY AND DRAIN
1 1/2" = 1'-0"



2 TYP. WINDOW SILL - BRICK CLADDING
1 1/2" = 1'-0"



4 TYP. WINDOW SILL - ZINC PANEL
1 1/2" = 1'-0"



7 EQUIPMENT CURB DETAIL
1 1/2" = 1'-0"

FENCE & RAILING DETAILS
BUILDINGS 100+ 200 + 300

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