



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

September 11, 2023

Mr. Christopher Carthy, Chairman  
and Members of the Planning Board  
Town of North Castle  
17 Bedford Road  
Armonk, NY 10504



RE: JMC Project 22090  
BaySpace Armonk  
100 Business Park Drive  
Town of North Castle, NY

**Response to Town Comments Resubmission**

Dear Chairman Carthy and Members of the Planning Board:

On behalf of the owner and applicant, A&R Real Estate Holdings LLC and WMG Acquisitions LLC, respectively, we are pleased to submit the following documents for your continued review of the Amended Site Plan Application for the proposed warehouse/self-storage project at the 100 Business Park Drive property:

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2. SGW Architecture & Design Drawings:

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G0-01	GIS Aerial Map	5 09/06/2023
A0-00	Plat of Survey	5 09/06/2023
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A3-01	Building Sections	5 09/06/2023

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The revisions depicted on the above noted plans reflect responses to comments outlined in the Town of North Castle Planning Department Memorandum, dated June 19, 2023 and the Town of North Castle Building Department Memorandum, dated November 16, 2022. For ease of review, we have repeated and enumerated the comments in italic print, followed by our responses:

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Comment No. 1

*The Applicant has made significant positive changes to the site plan. Specifically, the front loading area has been eliminated and relocated to the rear of the building. In addition, the Applicant has significantly reduced the size of the proposed warehouse and is now proposing a new recreation center with pickleball courts.*

Response No. 1

This comment is so noted.

Comment No. 2

*The site plan has been revised to depict a 4,612 s.f. outdoor storage area at the rear of the existing warehouse building.*

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This comment is so noted.



Comment No. 3

*The Planning Board at the November 14, 2022 meeting directed the Applicant to describe Jantile site operations.*

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Refer to the included letter prepared by Jantile for a description of site operations.

Comment No. 4

*The proposed warehouse building does not meet the 100 foot minimum front yard setback. The Applicant previously secured a 43 foot front yard variance from the Zoning Board of Appeals.*

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Comment No. 5

*The proposed project does not comply with the maximum FAR permitted on the site. Specifically, a maximum FAR of 0.3 is permitted while the proposed FAR is 0.37. The Applicant obtained a 0.08 FAR variance from the Zoning Board of Appeals on June 1, 2023.*

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This comment is so noted.

Comment No. 6

*The Byram River is located at the rear of the property. The site plan should be revised to depict the proposed amount of Town-regulated wetland buffer disturbance. A mitigation plan that is twice the size of the proposed amount of disturbance is required to be submitted.*

Response No. 6

The proposed wetland buffer disturbance area is 5,615 SF/0.128 AC, and the proposed wetland buffer mitigation planting area is 36,570 SF/0.839 AC, these areas are depicted on Drawings C-500A and C-500.

Comment No. 7

*The Planning Board previously approved the removal of 235 Town-regulated trees and the trees have been removed from the property. In addition, the Planning Board approved 38 additional trees to be removed (after the fact) on March 27, 2023.*

Response No. 7

This comment is so noted.

Comment No. 8

*The off-street parking calculations for the proposed manufacturing space should include the proposed number of employees working in that space and the number of commercial vehicles parked on the site associated with the manufacturing use.*

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There are 3 Jantile employees associated with the manufacturing use, however, these employees also work within the warehouse. There are no commercial vehicles parked on the site associated with the manufacturing use, however, there are 8 Jantile commercial vehicles that will be parked overnight in the designated loading areas.

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All commercial vehicles associated with the existing and proposed warehouse use (Jantile) shall be parked in the designated loading areas overnight, and not in the striped off-street parking spaces on-site.

Comment No. 10

*The off-street parking calculations for the proposed recreation center should identify the square footage of the recreation center that is not court space.*

Response No. 10

The proposed parking calculations have been revised to identify the amount of recreation facility square footage that excludes the area of the pickleball courts (6,777 SF), refer to Drawing C-000.

Comment No. 11

*Pursuant to Section 355-30.D(1) of the Town Code, a ten-foot-deep landscaped foundation planting shall be provided along all building walls, except at access points, in interior courts, or where waived by the Planning Board. A sidewalk not exceeding four feet in width may be located in such required foundation parking area.*

Response No. 11

A 10-foot deep landscaped foundation planting has been provided along the north, south, and west sides of the building, exclusive of access points to the building.

Comment No. 12

*The site plan calculates that 18 loading spaces are required and that 18 loading spaces are proposed. However, it appears that several loading spaces are not fully accessible.*

Response No. 12

The tenant for the existing and proposed warehouse use (Jantile) has the ability to move their vehicles as necessary to enter and exit the loading dock areas.

Comment No. 13

*The submitted elevations shall be revised to depict proposed Building Height (average grade to top of roof). Building Height can't exceed 35 feet in the PLI Zoning District.*

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Proposed "No Parking Fire Lane" signs have been added to the plans in accordance with NYS Fire Code Section D103.6, refer to Drawing C-100.

Comment No. 3

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Response No. 3

The proposed 26-foot wide aerial fire apparatus access roads are located no closer than 15 feet and no farther than 30 feet from the proposed building in accordance with NYS Fire Code Section D105.3, refer to Drawing C-100.

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Response No. 4

The building is fully sprinklered and noted on the architectural plans, refer to plans prepared by SGW Architecture & Design.

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The finished floor elevation of the proposed building is 372.00, which is 2 feet above the base flood elevation of 370.00 in accordance with the requirements of Chapter 177 of the Town of North Castle Code.

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If you have any questions or require additional information, please do not hesitate to contact our office at (914) 273-5225.

Sincerely,

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

  
Paul R. Sysak, RLA  
Project Manager

cc: Adam R. Kaufman, AICP  
John Kellard, PE  
Joseph M. Cermele, PE, CFM  
Roland Baroni, Esq.  
Anthony Scavo  
Kory Salomone, Esq.  
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Christopher Michalek

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# AMENDED SITE PLAN APPROVAL DRAWINGS

# BAYSPACE ARMONK

TAX MAP SECTION 108.03 | BLOCK 1 | LOT 51  
 WESTCHESTER COUNTY  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

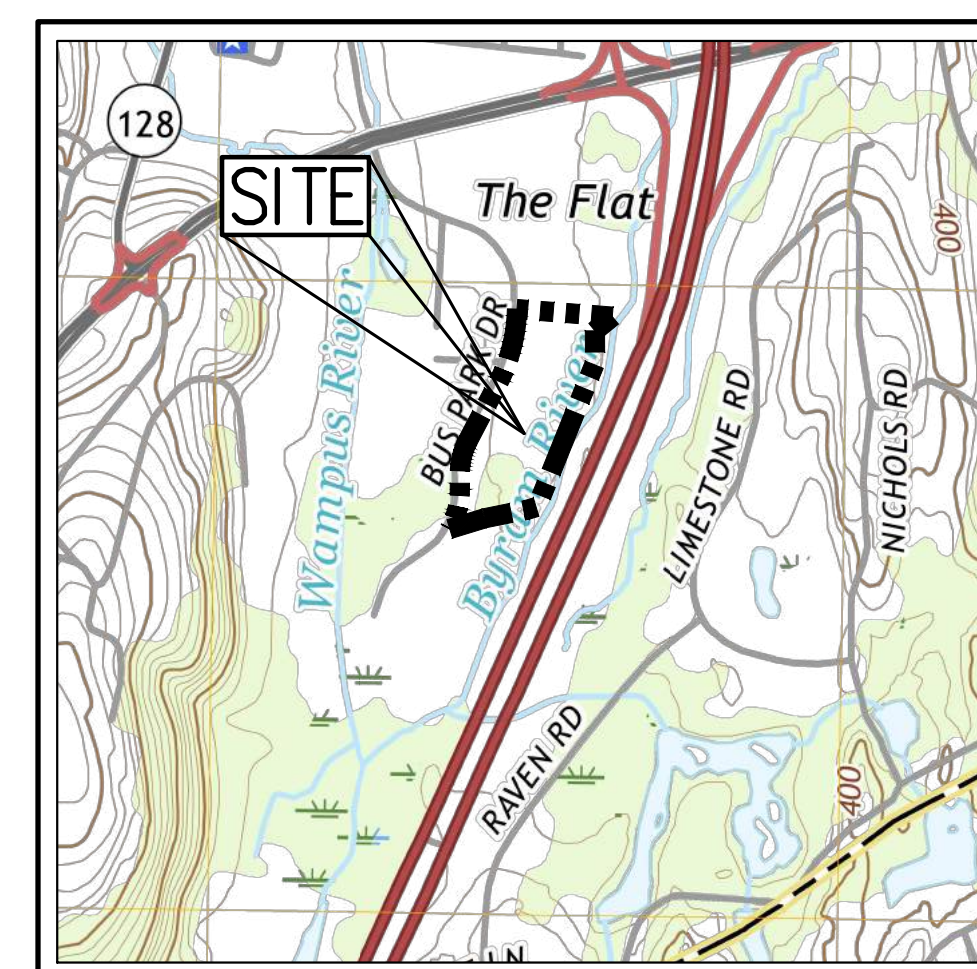
**Owner/Applicant:**  
 WMG ARMONK WAREHOUSE OWNER LLC  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431  
 (718) 702-6739

**Architect:**  
 SGW ARCHITECTURE & DESIGN  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611  
 (312) 988-7412

**Attorney:**  
 ZARIN & STEINMETZ LLP  
 81 MAIN STREET, SUITE 415  
 WHITE PLAINS, NY 10601  
 (914) 682-7800

**Wetland Consultant:**  
 ECOLOGICAL SOLUTIONS, LLC  
 1248 SOUTHFORD ROAD  
 SOUTHURBY, CT 06488  
 (203) 910-4716

**JMC Site Planner, Civil & Traffic Engineer,  
 Surveyor and Landscape Architect:**  
 120 BEDFORD ROAD  
 ARMONK, NY 10504  
 (914) 273-5225



VICINITY MAP  
 SCALE: 1"=1,000'  
 SOURCE: USGS/2018



PROJECT RENDERING  
 SCALE: N.T.S.

LOADING CALCULATION SUMMARY				
DESCRIPTION	AREA (SF)	REQUIREMENT	LOADING REQUIRED	LOADING PROVIDED
<b>EXISTING LOADING CALCULATIONS</b>				
EXISTING OFFICE	14,555	1 SPACE FOR 1ST 10,000 SF + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	1	-
EXISTING MANUFACTURING SPACE	6,238	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF IN EXCESS OF 4,000 SF	1	-
EXISTING WAREHOUSE	30,313	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF IN EXCESS OF 4,000 SF	3	-
EXISTING RECREATION FACILITY AREA: -SHARED SPACE (RESTROOM, CIRCULATION, LOBBY) -DANCE - RECREATION FACILITY -WRESTLING - RECREATION FACILITY -THE ROOM PRIVATE GYM - RECREATION FACILITY	(11,861) 1,967 3,530 4,621 1,743	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	1	-
<b>PROPOSED LOADING CALCULATIONS</b>				
PROPOSED SELF-STORAGE	80,757	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF IN EXCESS OF 4,000 SF	8	-
PROPOSED WAREHOUSE	7,353	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF IN EXCESS OF 4,000 SF	1	-
PROPOSED RECREATION FACILITY	26,827	1 SPACE FOR 1ST 4,000 SF + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	3	-
<b>TOTAL</b>	<b>177,904</b>		<b>18</b>	<b>18</b>

SUBSURFACE UTILITY LOCATIONS ARE BASED ON A COMPILATION OF FIELD EVIDENCE, AVAILABLE RECORD PLANS AND/OR UTILITY MARK-OUTS. THE LOCATION OR COMPLETENESS OF UNDERGROUND INFORMATION CANNOT BE GUARANTEED. VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION.



No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/11/2023	NC

**JMC Drawing List:**

- C-000 COVER SHEET
- C-010 OVERALL SITE EXISTING CONDITIONS MAP
- C-011 SITE EXISTING CONDITIONS MAP
- C-020 SITE DEMOLITION PLAN
- C-100A OVERALL SITE LAYOUT PLAN
- C-100 SITE LAYOUT PLAN
- C-120 FIRE APPARATUS TURNING ANALYSIS
- C-130 DRIVEWAY SIGHT DISTANCE PROFILES
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- C-300 SITE UTILITIES PLAN
- C-400 SITE EROSION & SEDIMENT CONTROL PLAN
- C-500A OVERALL SITE LANDSCAPING & WETLAND MITIGATION PLAN
- C-500 SITE LANDSCAPING & WETLAND MITIGATION PLAN
- C-600 SITE LIGHTING PLAN
- C-800 EXISTING INTERIOR LANDSCAPE AREA CALCULATIONS PLAN
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- C-906 CONSTRUCTION DETAILS

**SGW ARCHITECTURE & DESIGN Drawing List:**

- A-101 FIRST FLOOR PLAN
- A-102 SECOND FLOOR/ MEZZANINE PLAN
- A-103 THIRD FLOOR PLAN
- A-201 BUILDING ELEVATIONS

ZONING COMPLIANCE CHART				
TAX PARCEL: 108.03-1-51				
ZONE DISTRICT: PLU - PLANNED LIGHT INDUSTRY				
PROPOSED USE: WAREHOUSE/SELF-STORAGE/RECREATION FACILITY				
DESCRIPTION		REQUIREMENT	EXISTING	PROPOSED
MINIMUM LOT AREA	(S.F./ACRES)	4	490,841/11.27	490,841/11.27
NET LOT AREA <sup>(1)</sup>	(S.F./ACRES)	-	471,285/10.81	471,285/10.81
MINIMUM LOT FRONTAGE	(FEET)	300	1,215	1,215
MINIMUM LOT DEPTH	(FEET)	300	409	409
MAXIMUM BUILDING HEIGHT	(STORIES/FEET)	3/35	2/-	3/34.7
MAXIMUM BUILDING COVERAGE	(%)	30	10.29	22.04
FLOOR AREA RATIO		0.30	0.13	0.37 <sup>(2)</sup>
MINIMUM INTERIOR LANDSCAPED AREA	(%)	10	13.7	11.9
MINIMUM BUILDING SETBACKS				
FRONT YARD	(FEET)	100	100.6	68 <sup>(2)</sup>
SIDE YARD	(FEET)	50	305.3	70
REAR YARD	(FEET)	100	118	137
PARKING SPACES				
STANDARD PARKING SPACES	(SPACES)	(SEE TABLE)	148	309
ACCESSIBLE PARKING SPACES	(SPACES)	(SEE TABLE)	6	9
TOTAL PARKING SPACES	(SPACES)	(SEE TABLE)	154	318

**NOTES:**

- THE "LOT AREA" USED FOR MEASUREMENT PURPOSES IS TO BE GROSS LOT AREA. NET LOT AREA IS DEFINED AS FOLLOWS: "NET LOT AREA IS THE LOT AREA MINUS 75% OF THE AREA OF ANY WETLANDS, WATERBODIES AND WATERCOURSES BUT EXCLUDING ANY ADJACENT AREAS, AND THE AREA OF ANY STEEP SLOPES, EXCEPT THAT IN THE CASE OF ONE-FAMILY LOTS, DEDUCTION FOR STEEP SLOPES IS TO BE ONLY 50%."  
 NET LOT AREA = GROSS LOT AREA - 75% OF AREA OF WETLANDS - AREA OF STEEP SLOPES  
 NET LOT AREA = 490,840.8 S.F. - 0 S.F. - 19,556 S.F. = 471,284.8 S.F. (10.81 AC.)
- VARIANCE OBTAINED FOR FRONT YARD SETBACK FROM TOWN OF NORTH CASTLE ZONING BOARD OF APPEALS ON 04/01/2021.
- VARIANCE OBTAINED FOR FAR FROM TOWN OF NORTH CASTLE ZONING BOARD OF APPEALS ON 06/01/2023.  
 FAR CALCULATION: 179,919 S.F. GFA / 490,841 S.F. GROSS LOT AREA = 0.366 (0.37)

PARKING CALCULATION SUMMARY				
DESCRIPTION	AREA (SF)	REQUIREMENT	PARKING REQUIRED	PARKING PROVIDED
<b>EXISTING PARKING CALCULATIONS**</b>				
EXISTING OFFICE	14,555	1 SPACE / 250 SF	59	-
EXISTING MANUFACTURING SPACE	6,238	1 SPACE / EMPLOYEE ON THE LARGEST WORK SHIFT, BUT NOT FEWER THAN 1 / 375 S.F. OF GROSS FLOOR AREA + 1 FOR EACH COMMERCIAL VEHICLE PARKED ON THE LOT	17	-
EXISTING WAREHOUSE	30,313	1 SPACE / 1,200 SF + 1 SPACE FOR EACH COMMERCIAL VEHICLE PARKED ON THE SITE	26	-
EXISTING RECREATION FACILITY AREA: -SHARED SPACE (RESTROOM, CIRCULATION, LOBBY) -DANCE - RECREATION FACILITY -WRESTLING - RECREATION FACILITY -THE ROOM PRIVATE GYM - RECREATION FACILITY	(11,861) 1,967 3,530 4,621 1,743	1 SPACE / 200 SF + 3 SPACES FOR THE DANCE STUDIO EMPLOYEES AT THE LARGEST SHIFT + 2 SPACES FOR THE WRESTLING STUDIO EMPLOYEES AT THE LARGEST SHIFT + 4 SPACES FOR THE PRIVATE GYM EMPLOYEES AT THE LARGEST SHIFT	10 21 26 13	-
<b>PROPOSED PARKING CALCULATIONS</b>				
PROPOSED SELF-STORAGE	80,757	1 SPACE / 1,200 SF + 1 SPACE FOR EACH COMMERCIAL VEHICLE PARKED ON THE SITE	68	-
PROPOSED WAREHOUSE	7,353	1 SPACE / 200 SF (EXCLUDING AREA OF RACKET SPORTS COURTS) + 2 SPACES FOR THE EMPLOYEES ON THE LARGEST WORK SHIFT + 3 SPACES FOR EACH RACKET SPORTS COURT (11 COURTS)	7	-
PROPOSED RECREATION FACILITY	26,827 (7,027 EXCLUDING COURTS)	1 SPACE / 200 SF (EXCLUDING AREA OF RACKET SPORTS COURTS) + 2 SPACES FOR THE EMPLOYEES ON THE LARGEST WORK SHIFT + 3 SPACES FOR EACH RACKET SPORTS COURT (11 COURTS)	71	-
<b>TOTAL</b>	<b>177,904</b>		<b>318</b>	<b>318*</b>

\*INCLUDING 9 ADA ACCESSIBLE PARKING SPACES AND 20 LANDBANKED SPACES  
 \*\*SQUARE FOOTAGES FOR THE EXISTING BUILDINGS HAVE BEEN TAKEN FROM DRAWINGS ENTITLED "TENANT SQ. FT." AND "SECOND FLOOR SQ. FT.", PREPARED BY J GROUP DESIGNS LLC, DATED 05/08/2023.

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

DATE: \_\_\_\_\_  
 CHRISTOPHER CARRHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 DATE: \_\_\_\_\_  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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

**GENERAL CONSTRUCTION NOTES APPLY TO ALL WORK HEREIN:**

- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CALL 811 "DIG SAFELY" (1-800-962-7862) TO HAVE UNDERGROUND UTILITIES LOCATED INCLUDING ARRANGING FOR A PRIVATE MARK-OUT ON-SITE WHERE APPLICABLE. EXPLORATORY EXCAVATIONS SHALL COMPLY WITH CODE 753 REQUIREMENTS. NO WORK SHALL COMMENCE UNTIL ALL THE OPERATORS HAVE NOTIFIED THE CONTRACTOR THAT THEIR UTILITIES HAVE BEEN LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION, INsofar AS THEY MAY BE ENDANGERED BY THE CONTRACTOR'S OPERATIONS. THIS SHALL HOLD TRUE WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS. IF THEY ARE SHOWN ON THE DRAWINGS, THEIR LOCATIONS ARE NOT GUARANTEED EVEN THOUGH THE INFORMATION WAS OBTAINED FROM THE BEST AVAILABLE SOURCES, AND IN ANY EVENT, OTHER UTILITIES ON THESE PLANS MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, IMMEDIATELY REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES THAT HE DAMAGES, AND SHALL CONSTANTLY PROCEED WITH CAUTION TO PREVENT UNDE INTERRUPTION OF UTILITY SERVICE.
- CONTRACTOR SHALL HAND DIG TEST PITS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTING UTILITIES DEPTHS AND ADVISE OF ANY CONFLICTS WITH PROPOSED UTILITIES. IF CONFLICTS ARE PRESENT, THE OWNER'S FIELD REPRESENTATIVE, JMC, PLLC AND THE APPLICABLE MUNICIPALITY OR AGENCY SHALL BE NOTIFIED IN WRITING. THE EXISTING/PROPOSED UTILITIES RELOCATION SHALL BE DESIGNED BY JMC, PLLC.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL LOCAL PERMITS REQUIRED.
- ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL SAFETY CODES. APPLICABLE SAFETY CODES MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS, AND ADDITIONS THERETO, TO THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA); AND APPLICABLE SAFETY, HEALTH REGULATIONS AND BUILDING CODES FOR CONSTRUCTION IN THE STATE OF NEW YORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GUARDING AND PROTECTING ALL OPEN EXCAVATIONS IN ACCORDANCE WITH THE PROVISION OF SECTION 107-05 (SAFETY AND HEALTH REQUIREMENTS) OF THE NYS DOT STANDARD SPECIFICATIONS. IF THE CONTRACTOR PERFORMS ANY HAZARDOUS CONSTRUCTION PRACTICES, ALL OPERATIONS IN THE AFFECTED AREA SHALL BE DISCONTINUED AND IMMEDIATE ACTION SHALL BE TAKEN TO CORRECT THE SITUATION TO THE SATISFACTION OF THE APPROVAL AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE SCOPE OF WORK SHOWN HEREON AT ALL TIMES TO THE SATISFACTION OF THE OWNERS REPRESENTATIVE. RAMPING CONSTRUCTION TO PROVIDE ACCESS MAY BE CONSTRUCTED WITH SUBBASE MATERIAL EXCEPT THAT TEMPORARY ASPHALT CONCRETE SHALL BE PLACED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE PEDESTRIAN ACCESS AT ALL TIMES.
- CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING PAVEMENT TO REMAIN.
- THE TOWN OF NORTH CASTLE IS PURSUING THE OWNERSHIP OF AN EXISTING WATER SUPPLY WELL LOCATED AT 125 BUSINESS PARK DRIVE IN THE EFFORT TO TRANSFER THE WELL TO SERVE THE PUBLIC WATER SUPPLY. WELLS SERVING PUBLIC WATER SYSTEMS SHALL BE LOCATED SUCH THAT THE OWNER OF THE WATER SYSTEM POSSESSES LEGAL TITLE TO LANDS WITHIN 100' OF THE WELL AND THE OWNER CONTROLS BY OWNERSHIP, LEASE, EASEMENT OR OTHER LEGALLY ENFORCEABLE ARRANGEMENT THE LAND USE ACTIVITIES WITHIN 200' OF THE WELL. HYDROGEOLOGIC EVALUATIONS AND SOURCE WATER ASSESSMENTS SHOULD BE USED TO DETERMINE APPROPRIATE SEPARATION FROM POTENTIAL CONTAMINANT SOURCES.

NOT FOR CONSTRUCTION



JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Meyer Consulting, Inc.  
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 voice 914.273.5225 • fax 914.273.2102  
 www.jmcpllc.com

Drawn: NC Approved: DL  
 Scale: NOT TO SCALE  
 Date: 09/12/2022  
 Project No: 22090  
 2209-SE COVER COVER.dwg  
 Drawing No: C-000

Previous Editions Obsolete

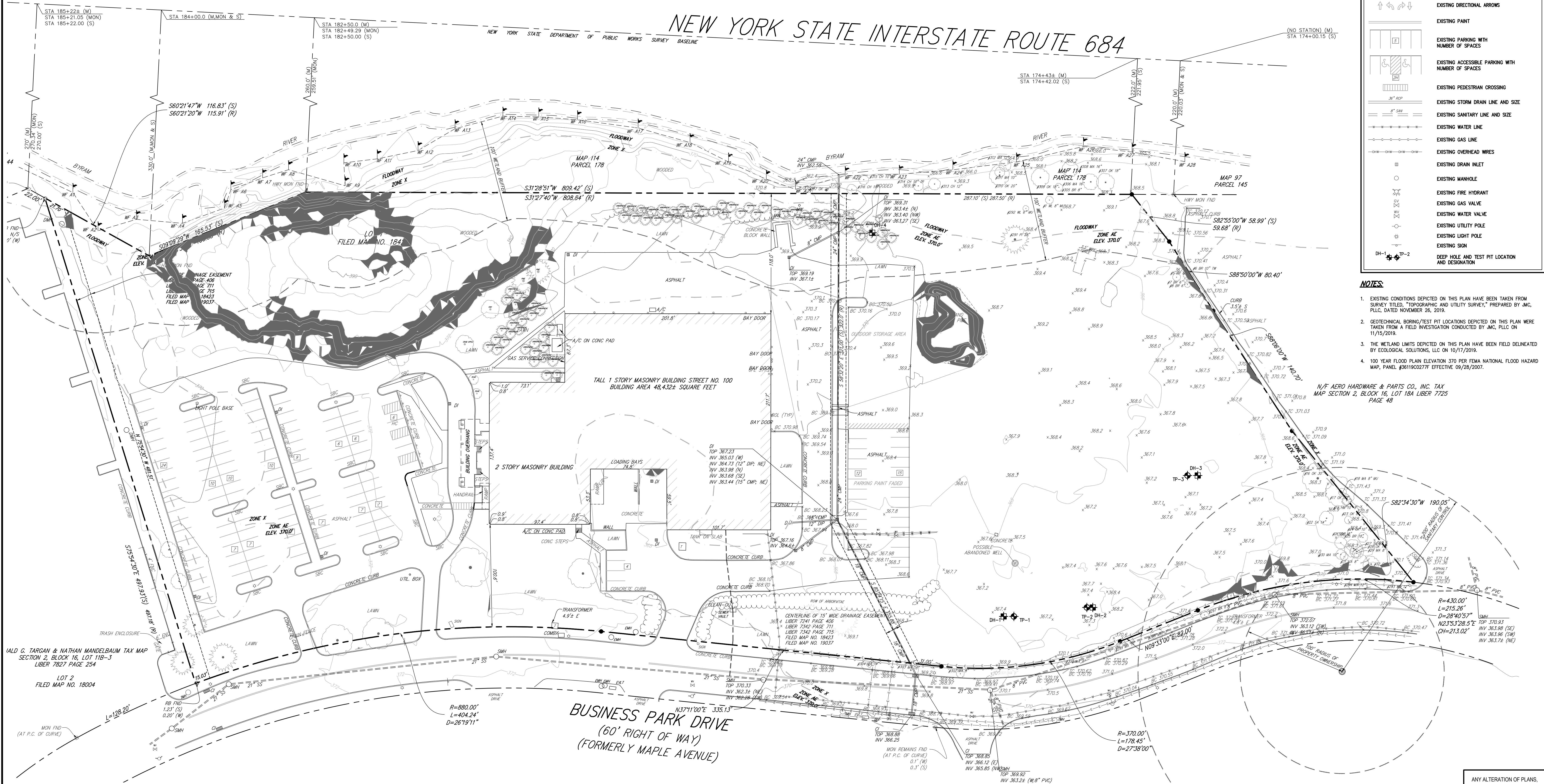


DEEP HOLE TEST SUMMARY TABLE			
TEST LOCATION	EXISTING GROUND ELEVATION	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION
DH-1/TP-1	367.40	3.5'	363.90
DH-2/TP-2	367.35	3.5'	363.85
DH-3/TP-3	367.00	5.5'	361.50
DH-4	367.00	6.5'	360.50

STEEP SLOPES TABLE				
CATEGORY	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (S.F.)	COLOR
1	25.00%	Vertical	19,556	█

LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING WETLAND LINE AND DELINEATION
	EXISTING BUILDING OVERHANG
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING GUIDE RAIL
	EXISTING FENCE
	EXISTING TREE AND DESIGNATION
	EXISTING TREE LINE
	EXISTING DIRECTIONAL ARROWS
	EXISTING PAINT
	EXISTING PARKING WITH NUMBER OF SPACES
	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
	EXISTING PEDESTRIAN CROSSING
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	DEEP HOLE AND TEST PIT LOCATION AND DESIGNATION

- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 08, 2018.
  - GEOLOGICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY JMC, PLLC ON 11/15/2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #31903277F EFFECTIVE 09/28/2007.



**NOT FOR CONSTRUCTION**

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

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS \_\_\_\_\_ DATE: \_\_\_\_\_

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

**JMC**

**OVERALL SITE EXISTING CONDITIONS MAP**

**BAYSIDE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

**WGM ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

DATE: 09/12/2022  
 PROJECT NO: 22090  
 DRAWING NO: C-010



DEEP HOLE TEST SUMMARY TABLE			
TEST LOCATION	EXISTING GROUND ELEVATION	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION
DH-1/TP-1	367.40	3.5'	363.90
DH-2/TP-2	367.35	5.5'	363.85
DH-3/TP-3	367.00	5.5'	361.50
DH-4	367.00	6.5'	360.50

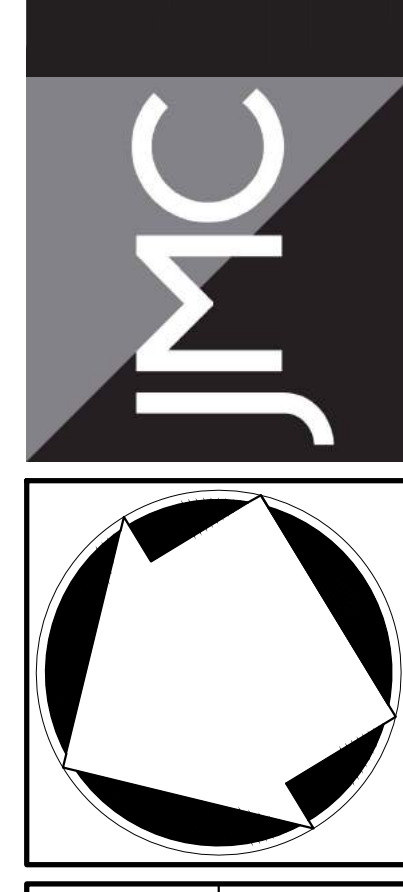
LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING WETLAND LINE AND DELINEATION
	EXISTING BUILDING OVERHANG
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING GUIDE RAIL
	EXISTING FENCE
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	EXISTING TREE LINE
	EXISTING DIRECTIONAL ARROWS
	EXISTING PAINT
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	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
	EXISTING PEDESTRIAN CROSSING
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	DEEP HOLE AND TEST PIT LOCATION AND DESIGNATION

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/11/2023	NC

OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
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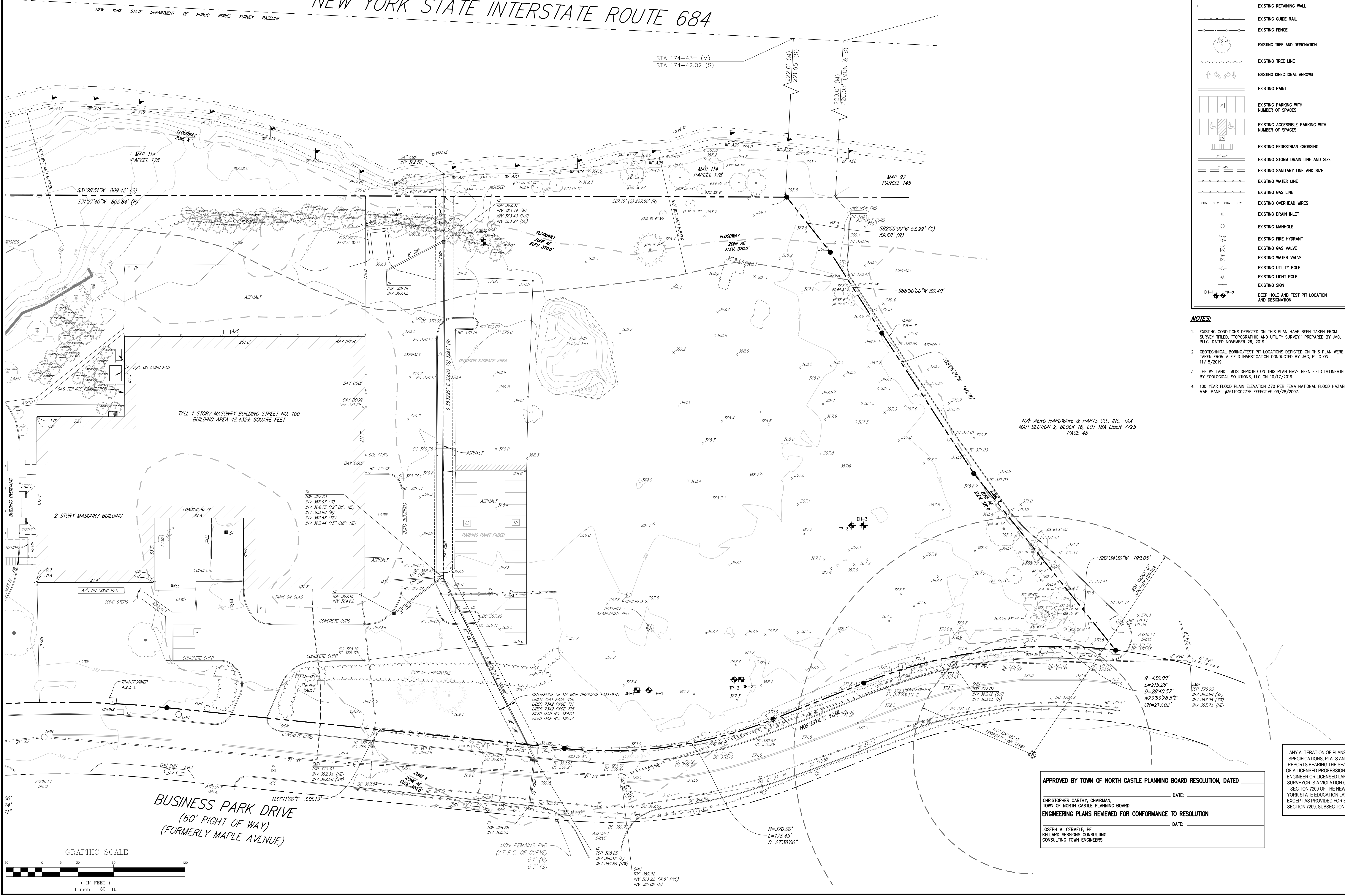


**SITE EXISTING CONDITIONS MAP**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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

Drawn	NC	Approved	DL
Scale	1" = 30'		
Date	09/12/2022		
Project No.	22090		
Drawing No.	C-011		

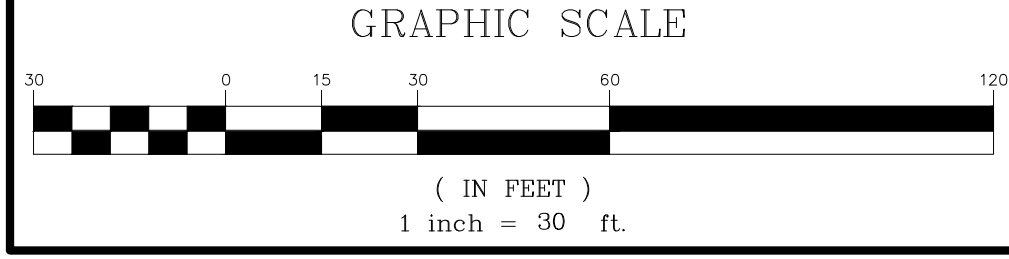
# NEW YORK STATE INTERSTATE ROUTE 684



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS  
 DATE: \_\_\_\_\_

NOT FOR CONSTRUCTION

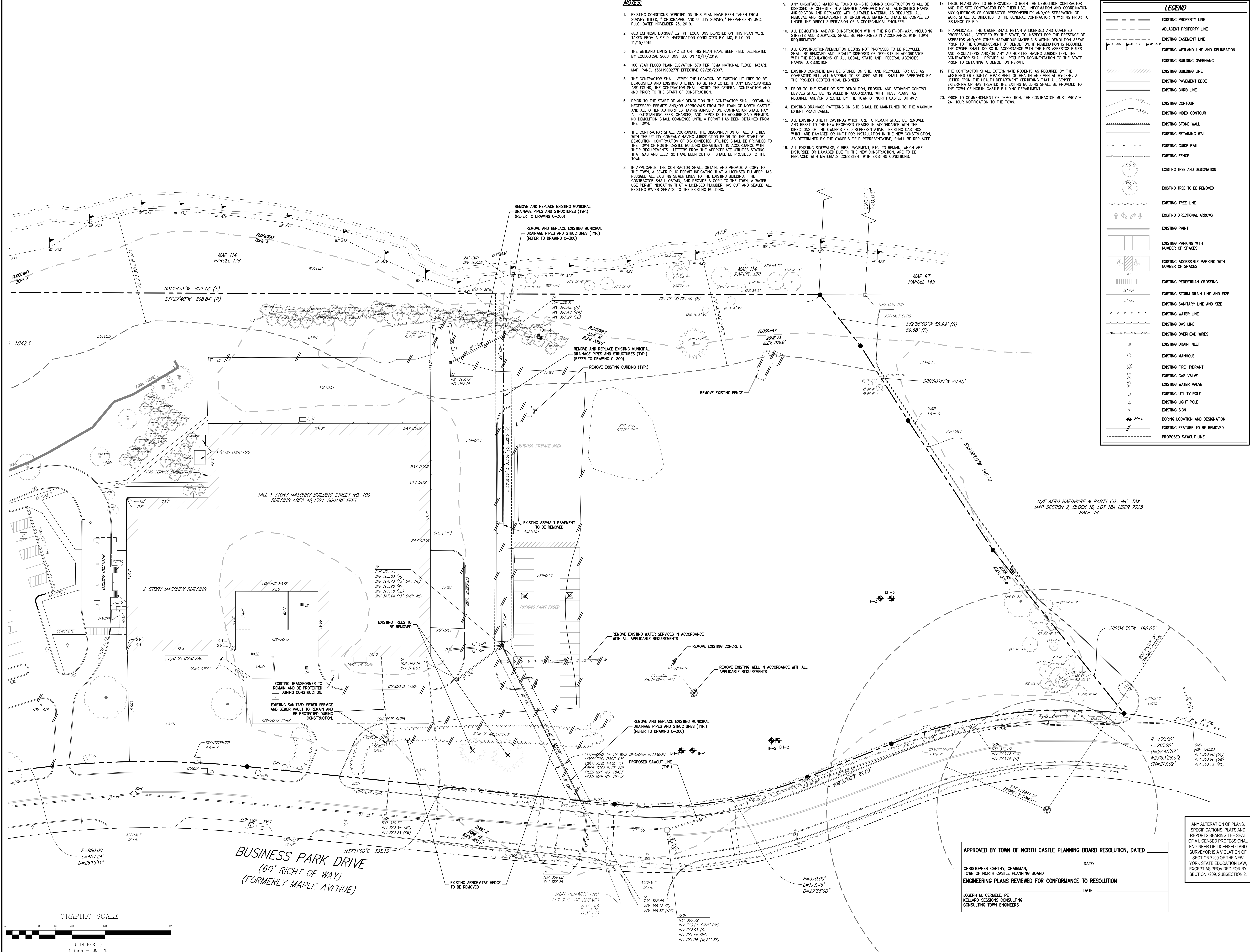
**BUSINESS PARK DRIVE**  
 (60' RIGHT OF WAY)  
 (FORMERLY MAPLE AVENUE)



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NOT FOR CONSTRUCTION



NOTES

- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 06, 2018.
- GEOLOGICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY JMC, PLLC ON 11/15/2019.
- THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
- 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #81902277F EFFECTIVE 09/28/2007.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC PRIOR TO THE START OF CONSTRUCTION.
- PRIOR TO THE START OF ANY DEMOLITION THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE TOWN OF NORTH CASTLE AND ALL OTHER AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL PAY ALL OUTSTANDING FEES, CHARGES, AND DEPOSITS TO ACQUIRE SAID PERMITS. NO DEMOLITION SHALL COMMENCE UNTIL A PERMIT HAS BEEN OBTAINED FROM THE TOWN.
- THE CONTRACTOR SHALL COORDINATE THE DISCONNECTION OF ALL UTILITIES WITH THE UTILITY COMPANY HAVING JURISDICTION PRIOR TO THE START OF DEMOLITION. CONFIRMATION OF DISCONNECTED UTILITIES SHALL BE PROVIDED TO THE TOWN OF NORTH CASTLE BUILDING DEPARTMENT IN ACCORDANCE WITH THEIR REQUIREMENTS. LETTERS FROM THE APPROPRIATE UTILITIES STATING THAT GAS AND ELECTRIC HAVE BEEN CUT OFF SHALL BE PROVIDED TO THE TOWN.
- IF APPLICABLE, THE CONTRACTOR SHALL OBTAIN AND PROVIDE A COPY TO THE TOWN, A SEWER PLUG PERMIT INDICATING THAT A LICENSED PLUMBER HAS PLUGGED ALL EXISTING SEWER LINES TO THE EXISTING BUILDING. THE CONTRACTOR SHALL OBTAIN AND PROVIDE A COPY TO THE TOWN, A WATER USE PERMIT INDICATING THAT A LICENSED PLUMBER HAS CUT AND SEALED ALL EXISTING WATER SERVICE TO THE EXISTING BUILDING.
- ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING CONSTRUCTION SHALL BE DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED. ALL REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER.
- ALL DEMOLITION AND/OR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, INCLUDING STREETS AND SIDEWALKS, SHALL BE PERFORMED IN ACCORDANCE WITH TOWN REQUIREMENTS.
- ALL CONSTRUCTION/DEMOLITION DEBRIS NOT PROPOSED TO BE RECYCLED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH THE REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AGENCIES HAVING JURISDICTION.
- EXISTING CONCRETE MAY BE STORED ON SITE AND RECYCLED FOR USE AS COMPACTED FILL. ALL MATERIAL TO BE USED AS FILL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
- PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THESE PLANS, AS REQUIRED AND/OR DIRECTED BY THE TOWN OF NORTH CASTLE OR JMC.
- EXISTING DRAINAGE PATTERNS ON SITE SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE.
- ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN SHALL BE REMOVED AND RESET TO THE NEW PROPOSED GRADES IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER'S FIELD REPRESENTATIVE. EXISTING CASTINGS WHICH ARE DAMAGED OR UNFIT FOR INSTALLATION IN THE NEW CONSTRUCTION, AS DETERMINED BY THE OWNER'S FIELD REPRESENTATIVE, SHALL BE REPLACED.
- ALL EXISTING SIDEWALKS, CURBS, PAVEMENT, ETC. TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DUE TO THE NEW CONSTRUCTION, ARE TO BE REPLACED WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
- THESE PLANS ARE TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND THE SITE CONTRACTOR FOR THEIR USE. INFORMATION AND COORDINATION ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
- IF APPLICABLE, THE OWNER SHALL RETAIN A LICENSED AND QUALIFIED PROFESSIONAL, CERTIFIED BY THE STATE, TO INSPECT FOR THE PRESENCE OF ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS WITHIN DEMOLITION AREAS PRIOR TO THE COMMENCEMENT OF DEMOLITION. IF REMEDIATION IS REQUIRED, THE OWNER SHALL DO SO IN ACCORDANCE WITH THE NYS ASBESTOS RULES AND REGULATIONS AND/OR ANY AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED DOCUMENTATION TO THE STATE PRIOR TO OBTAINING A DEMOLITION PERMIT.
- THE CONTRACTOR SHALL EXTERMINATE RODENTS AS REQUIRED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH AND MENTAL HYGIENE. A LETTER FROM THE HEALTH DEPARTMENT CERTIFYING THAT A LICENSED EXTERMINATOR HAS TREATED THE EXISTING BUILDING SHALL BE PROVIDED TO THE TOWN OF NORTH CASTLE BUILDING DEPARTMENT.
- PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR MUST PROVIDE 24-HOUR NOTIFICATION TO THE TOWN.

LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING WETLAND LINE AND DELINEATION
	EXISTING BUILDING OVERHANG
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING GUIDE RAIL
	EXISTING FENCE
	EXISTING TREE AND DESIGNATION
	EXISTING TREE TO BE REMOVED
	EXISTING TREE LINE
	EXISTING DIRECTIONAL ARROWS
	EXISTING PAINT
	EXISTING PARKING WITH NUMBER OF SPACES
	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
	EXISTING PEDESTRIAN CROSSING
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	BORING LOCATION AND DESIGNATION
	EXISTING FEATURE TO BE REMOVED
	PROPOSED SAWCUT LINE

By	NC
Date	09/11/2023
Revision	RESPONSE TO TOWN COMMENTS
No.	1.

OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
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 voice 914.273.5225 • fax 914.273.2102  
 www.jmcpllc.com



**SITE DEMOLITION & TREE REMOVAL PLAN**

**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Drawn	NC	Approved	DL
Scale	1" = 30'		
Date	09/12/2022		
Project No.	22090		
2200-SE	DEMO	EXIST	asr
Drawing No.	<b>C-020</b>		

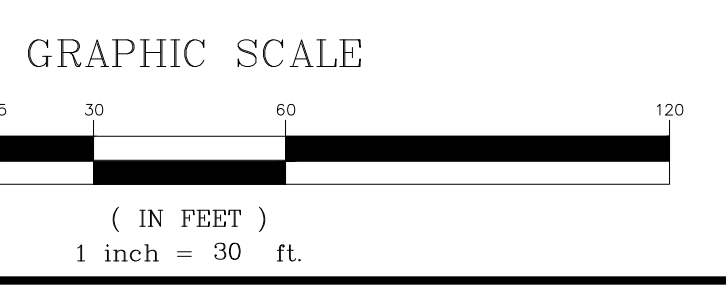
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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



**BUSINESS PARK DRIVE**  
 (60' RIGHT OF WAY)  
 (FORMERLY MAPLE AVENUE)

$R=430.00'$   
 $L=215.26'$   
 $D=2840.57'$   
 $M23.5328.5'E$   
 $CH=213.02'$

$R=370.00'$   
 $L=178.45'$   
 $D=2738.00'$

N/F AERO HARDWARE & PARTS CO., INC. TAX  
 MAP SECTION 2, BLOCK 16, LOT 18A LIBER 7725  
 PAGE 48

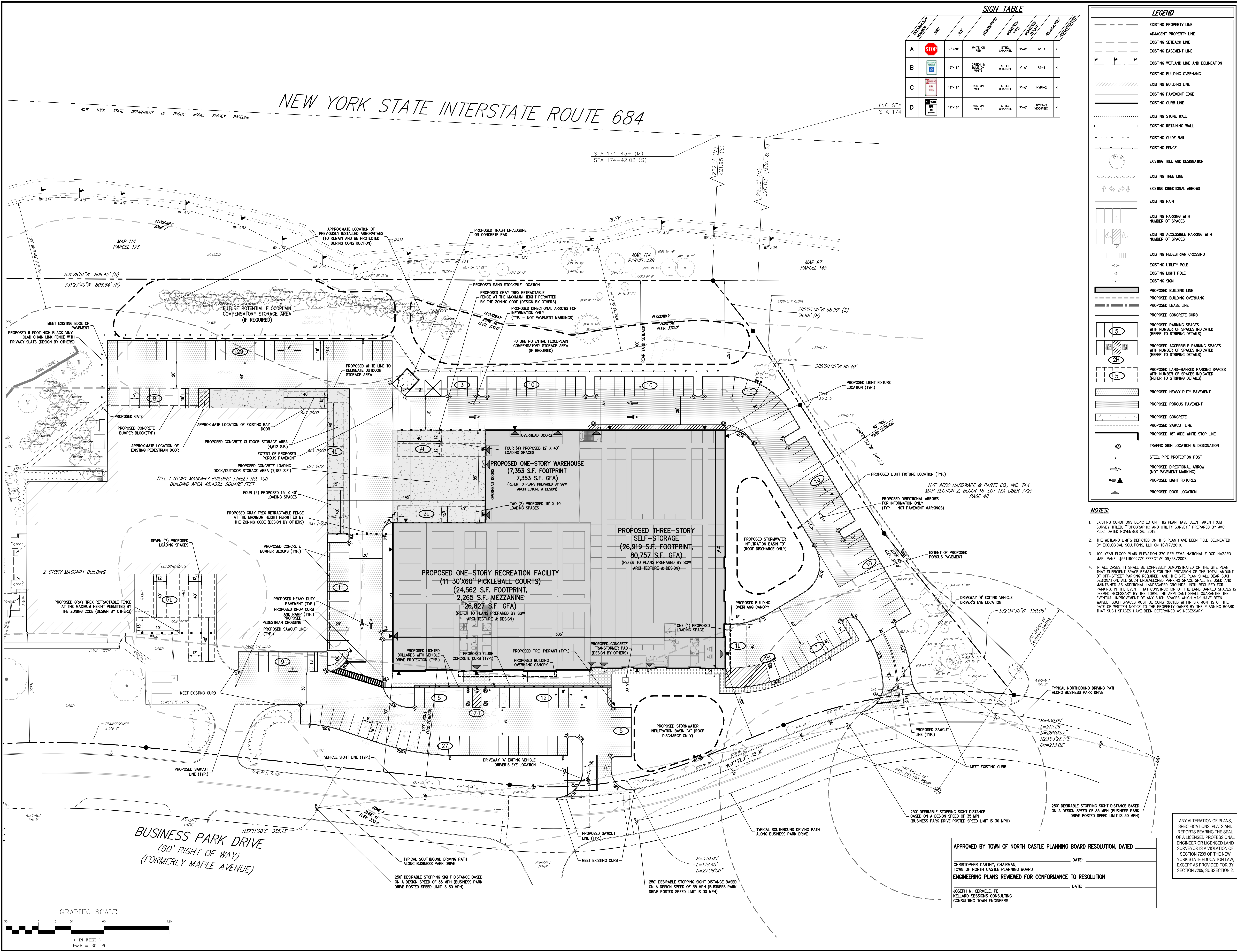
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NOT FOR CONSTRUCTION



DESCRIPTION	SYMBOL	SIZE	DESCRIPTION	MARKING TYPE	MARKING	REGULATORY	REMARKS
A	STOP	30"x30"	WHITE ON RED	STEEL CHANNEL	7'-0"	R1-1	X
B	AWAY	12"x18"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8	X
C	AWAY	12"x18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP-2	X
D	AWAY	12"x18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP-2 (MODIFIED)	X

LEGEND	
[Symbol]	EXISTING PROPERTY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING SETBACK LINE
[Symbol]	EXISTING EASEMENT LINE
[Symbol]	EXISTING WETLAND LINE AND DELINEATION
[Symbol]	EXISTING BUILDING OVERHANG
[Symbol]	EXISTING BUILDING LINE
[Symbol]	EXISTING PAVEMENT EDGE
[Symbol]	EXISTING CURB LINE
[Symbol]	EXISTING STONE WALL
[Symbol]	EXISTING RETAINING WALL
[Symbol]	EXISTING GUIDE RAIL
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING TREE AND DESIGNATION
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING DIRECTIONAL ARROWS
[Symbol]	EXISTING PAINT
[Symbol]	EXISTING PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING PEDESTRIAN CROSSING
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING SIGN
[Symbol]	PROPOSED BUILDING LINE
[Symbol]	PROPOSED BUILDING OVERHANG
[Symbol]	PROPOSED LEASE LINE
[Symbol]	PROPOSED CONCRETE CURB
[Symbol]	PROPOSED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
[Symbol]	PROPOSED ACCESSIBLE PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
[Symbol]	PROPOSED LAND-BANKED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
[Symbol]	PROPOSED HEAVY DUTY PAVEMENT
[Symbol]	PROPOSED POROUS PAVEMENT
[Symbol]	PROPOSED CONCRETE
[Symbol]	PROPOSED SAWCUT LINE
[Symbol]	PROPOSED 18" WIDE WHITE STOP LINE
[Symbol]	TRAFFIC SIGN LOCATION & DESIGNATION
[Symbol]	STEEL PIPE PROTECTION POST
[Symbol]	PROPOSED DIRECTIONAL ARROW (NOT PAVEMENT MARKING)
[Symbol]	PROPOSED LIGHT FIXTURES
[Symbol]	PROPOSED DOOR LOCATION

- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLES, "TOPOGRAPHIC AND UTILITY SURVEY", PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #811902277F EFFECTIVE 09/28/2007.
  - IN ALL CASES, IT SHALL BE EXPRESSLY DEMONSTRATED ON THE SITE PLAN THAT SUFFICIENT SPACE REMAINS FOR THE PROVISION OF THE TOTAL AMOUNT OF OFF-STREET PARKING REQUIRED, AND THE SITE PLAN SHALL BEAR SUCH DESIGNATION: ALL SUCH UNDEVELOPED PARKING SPACE SHALL BE USED AND MAINTAINED AS ADDITIONAL LANDSCAPED GROUNDS UNTIL REQUIRED FOR PARKING. IN THE EVENT THAT CONSTRUCTION OF THE LAND BANKED SPACES IS DEEMED NECESSARY BY THE TOWN, THE APPLICANT SHALL GUARANTEE THE EVENTUAL IMPROVEMENT OF ANY SUCH SPACES WHICH MAY HAVE BEEN MAINTAINED. SUCH SPACES MUST BE CONSTRUCTED WITHIN SIX MONTHS OF THE DATE OF WRITTEN NOTICE TO THE PROPERTY OWNER BY THE PLANNING BOARD THAT SUCH SPACES HAVE BEEN DETERMINED AS NECESSARY.

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH M. CERMELE, PE  
KELLARD SESSIONS CONSULTING  
CONSULTING TOWN ENGINEERS

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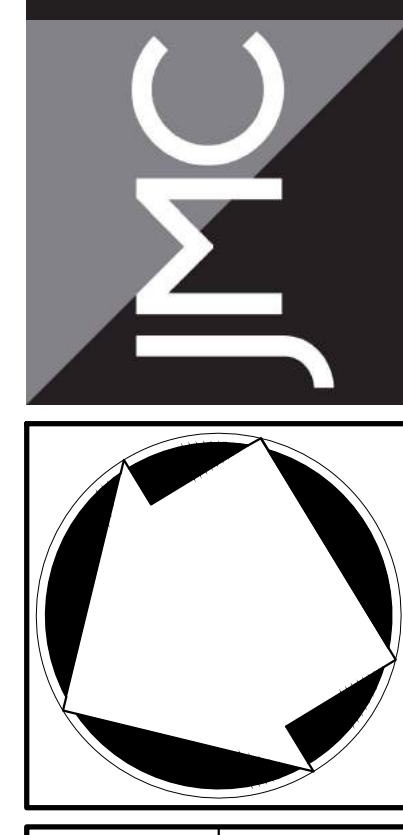
No.	Revision	Date
1.	RESPONSE TO TOWN COMMENTS	10/24/2022
2.	RESPONSE TO TOWN COMMENTS	09/11/2023

OWNER/CLIENT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
4800 NORTH FEDERAL HWY., SUITE B-200-34  
BOCA RATON, FL 33431

ARCHITECT:  
**SGW ARCHITECTURE & DESIGN**  
444 NORTH MICHIGAN AVENUE, SUITE 1850  
CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
JMC Site Development Consultants, LLC  
John Mayer Consulting, Inc.

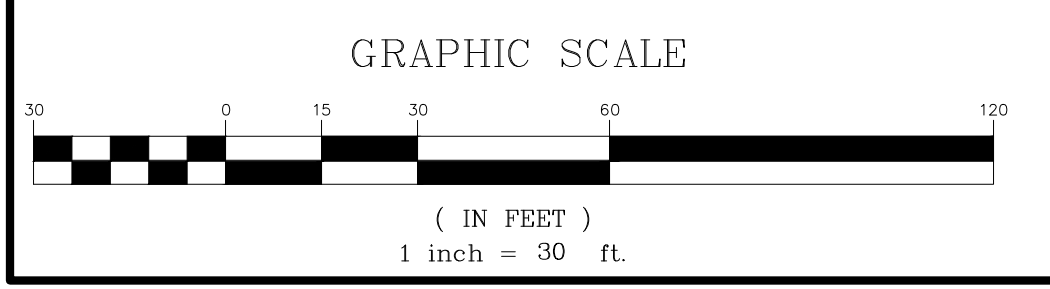
120 BEDFORD ROAD • ARMONK, NY 10504  
voice 914.273.5225 • fax 914.273.2102  
www.jmcpllc.com



**SITE LAYOUT PLAN**  
**BAYSPACE ARMONK**  
100 BUSINESS PARK DRIVE  
TOWN OF NORTH CASTLE, NEW YORK

Drawn:	NC	Approved:	DL
Scale:	1" = 30'		
Date:	09/12/2022		
Project No.:	22090		
Drawn-SE:	LAY	L_LAY	
Drawing No.:	<b>C-100</b>		

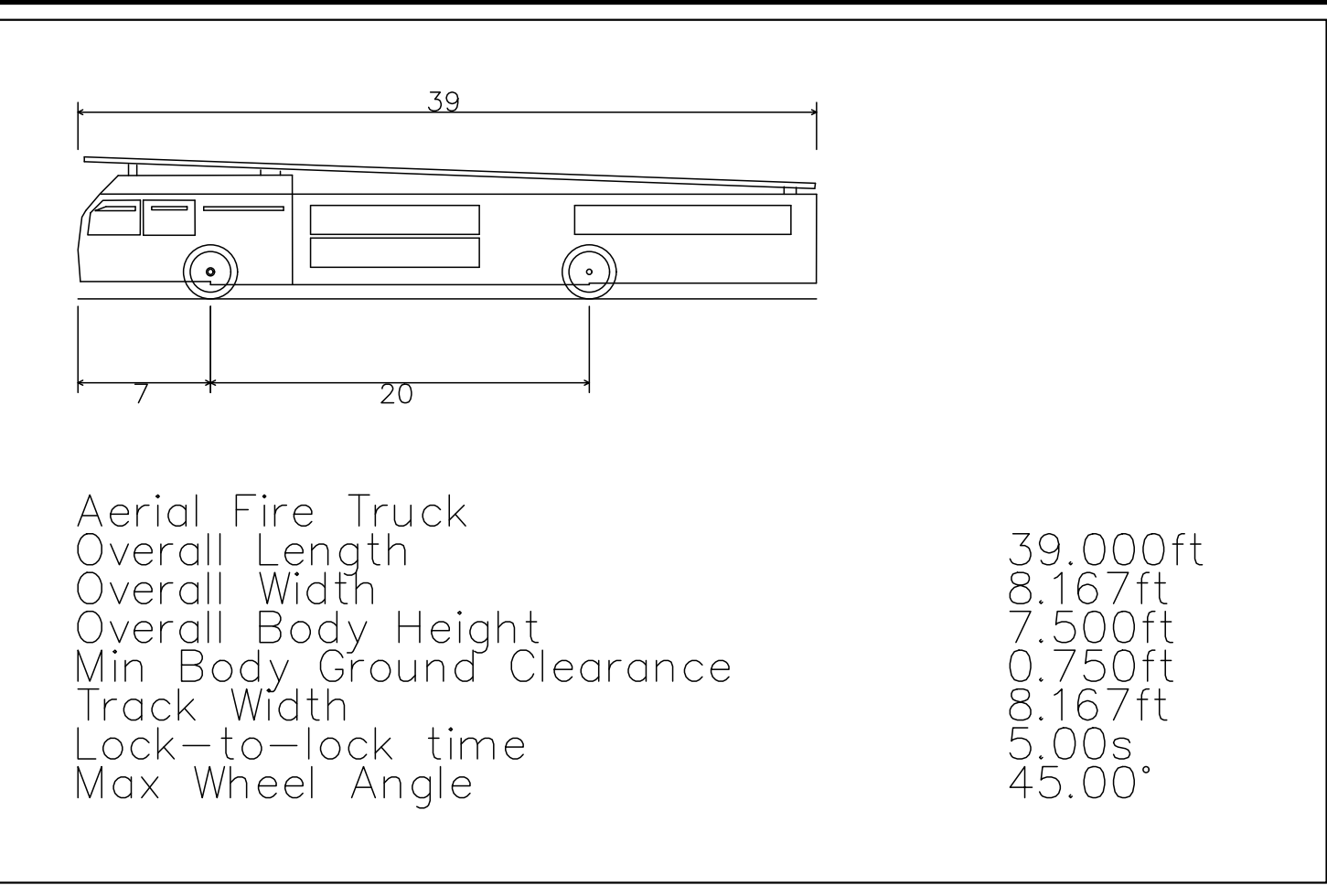
NOT FOR CONSTRUCTION



**BUSINESS PARK DRIVE**  
(60' RIGHT OF WAY)  
(FORMERLY MAPLE AVENUE)







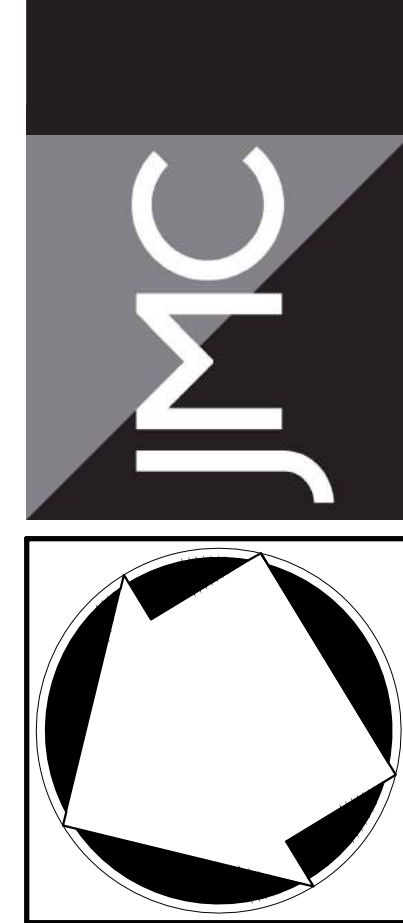
**FIRE APPARATUS PROFILE**  
 SCALE: N.T.S.

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/11/2023	NC

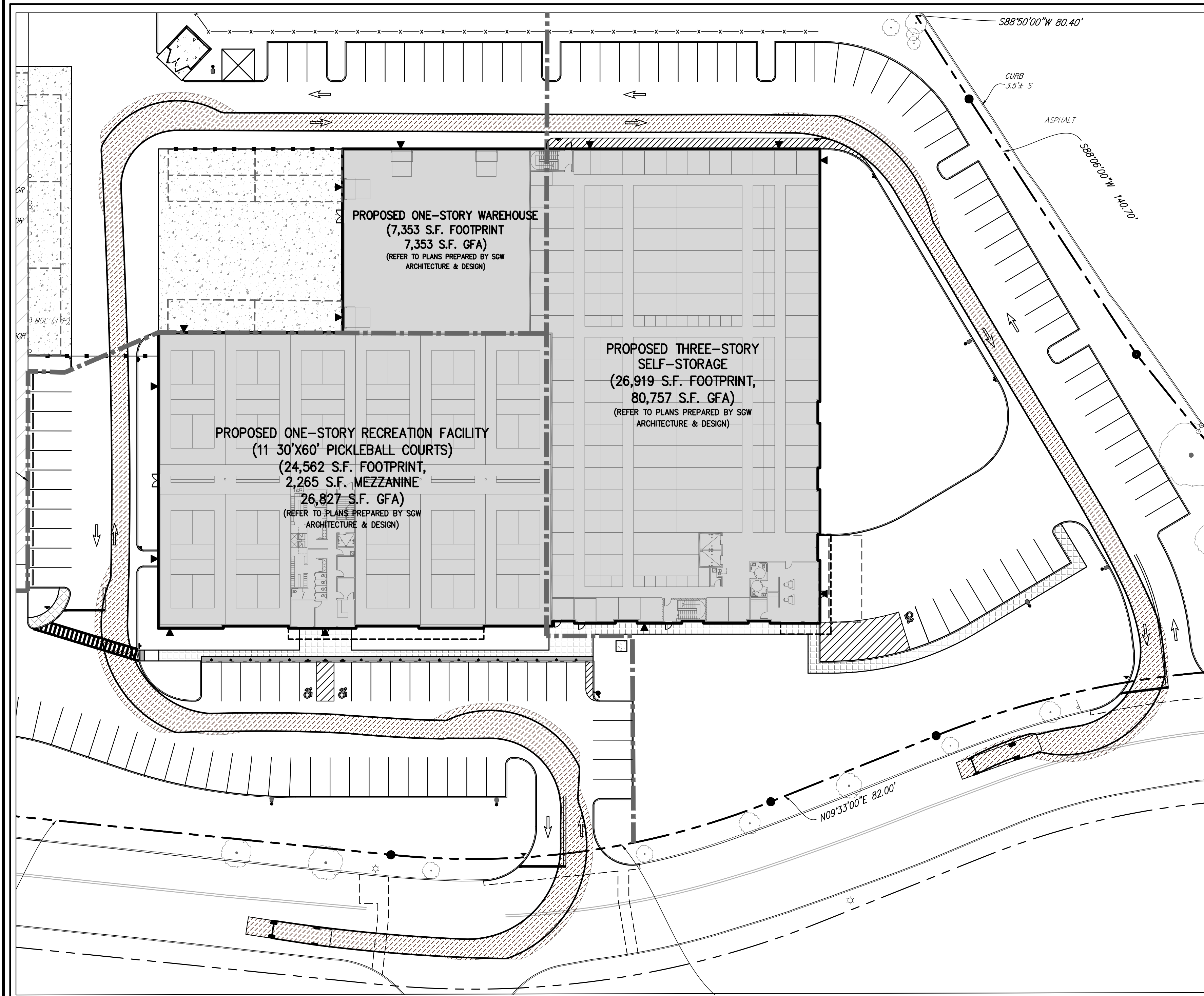
OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

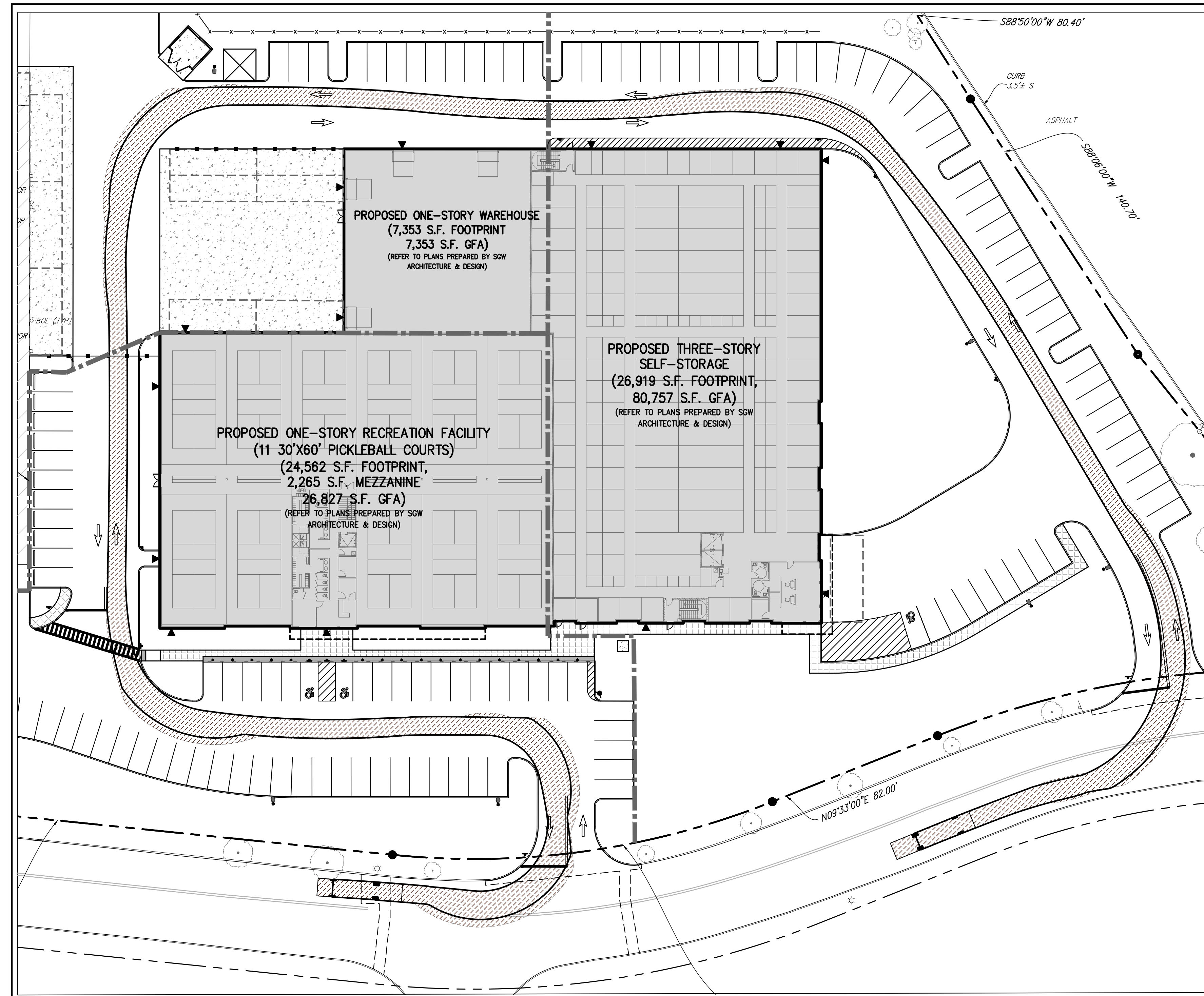
JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.5225 • fax 914.273.2102  
 www.jmcpllc.com



**FIRE APPARATUS TURNING ANALYSIS**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

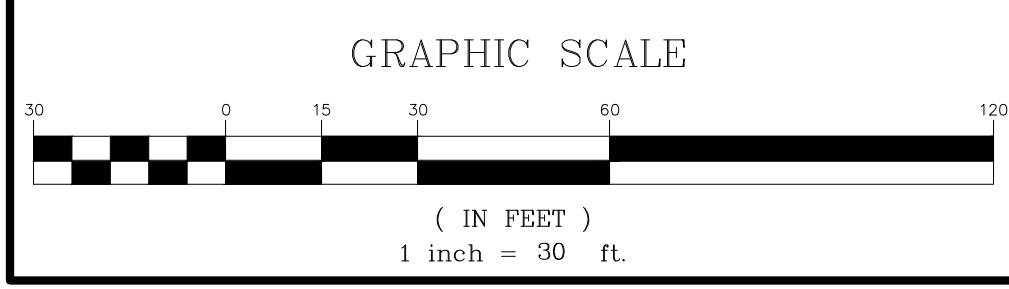


**FIRE APPARATUS CIRCULATING MOVEMENT (NORTH ENTRANCE)**



**FIRE APPARATUS CIRCULATING MOVEMENT (SOUTH ENTRANCE)**

NOT FOR CONSTRUCTION



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APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

CHRISTOPHER CARTHY, CHAIRMAN  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

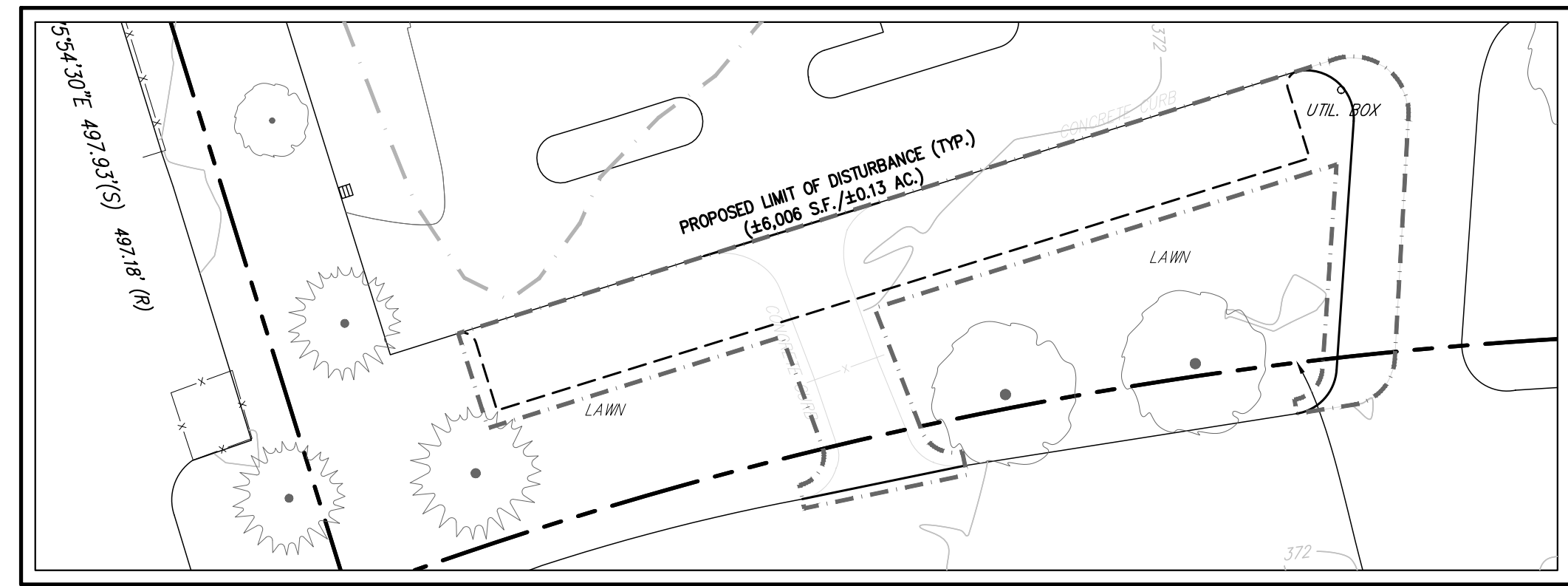
JOSEPH M. CERMELE, PE  
 KILLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

Drawn: NC Approved: DL  
 Scale: 1" = 30'  
 Date: 09/12/2022  
 Project No: 22090  
 ZONE: SE FIRE LAY: or  
 Drawing No: **C-120**

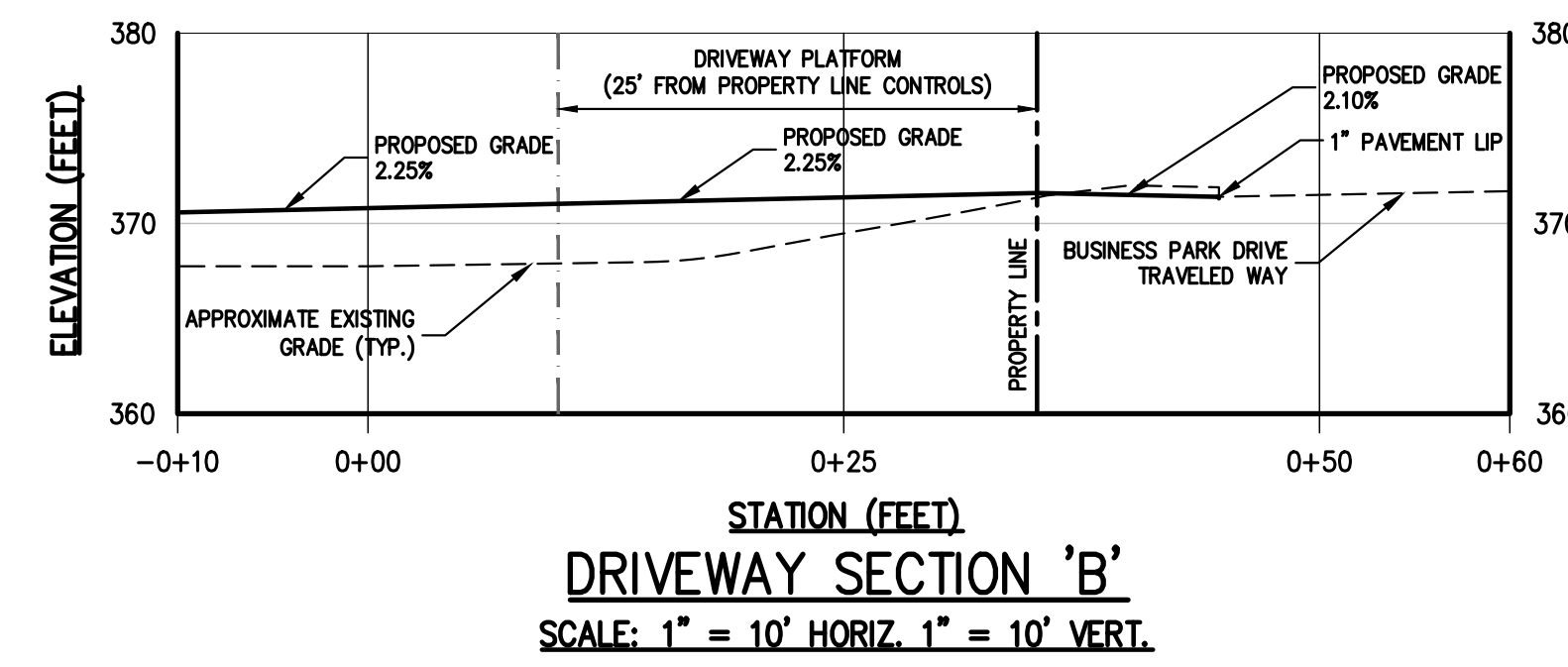
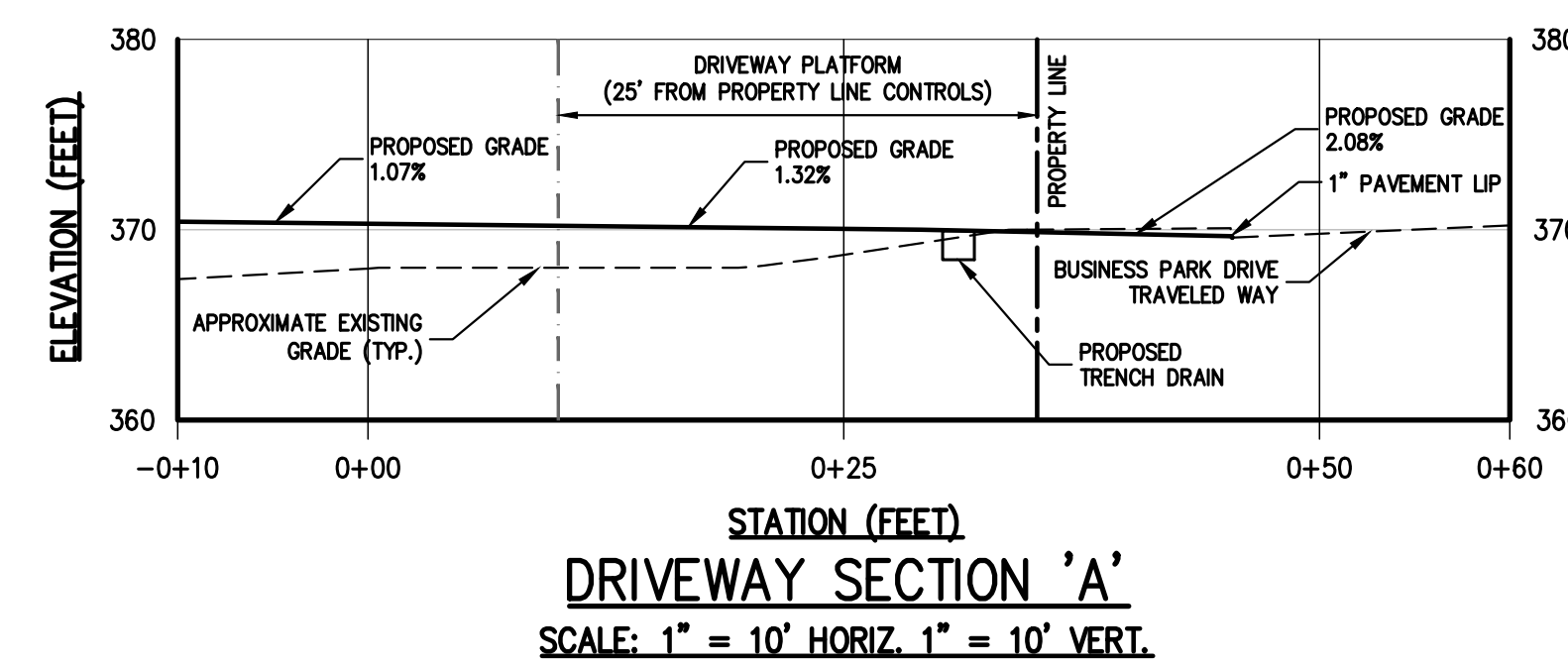








NORTH SIDE INSET



**DEEP HOLE TEST SUMMARY TABLE**

TEST LOCATION	EXISTING GROUND ELEVATION	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION
DH-1/TP-1	367.40	3.5'	363.90
DH-2/TP-2	367.35	3.5'	363.85
DH-3/TP-3	367.00	5.5'	361.50
DH-4	367.00	6.5'	360.50

**AVERAGE GRADE CALCULATION**

POINT A	POINT B	DISTANCE	AVERAGE
371.93	371.83	24.95	371.88
371.83	371.91	3.48	371.87
371.91	371.91	28.25	371.91
371.91	371.83	3.47	371.87
371.83	371.83	21.65	371.83
371.83	371.91	3.51	371.87
371.91	371.91	34.79	371.91
371.91	371.83	3.45	371.87
371.83	371.83	23.99	371.83
371.83	371.91	3.45	371.87
371.91	371.91	29.96	371.91
371.91	371.91	9.42	371.91
371.91	372.41	28.57	372.16
372.41	372.00	32.91	372.20
372.00	372.20	65.02	372.10
372.20	370.70	2.41	371.45
370.70	370.70	9.42	370.70
370.70	371.91	78.83	371.30
371.91	371.91	78.67	371.91
371.91	371.88	9.42	371.89
371.88	371.88	93.83	371.88
371.88	371.88	126.17	371.88
371.88	372.38	0.39	372.13
372.38	371.11	116.06	371.74
371.11	371.13	3.51	371.12
371.13	371.13	3.37	371.13
371.13	371.11	3.51	371.11
371.11	371.11	20.61	371.11
371.11	371.13	3.51	371.12
371.13	371.13	3.37	371.13
371.13	371.11	3.51	371.11
371.11	372.36	20.61	371.86
372.36	371.86	0.75	372.11
371.86	371.90	2.77	371.90
371.90	371.90	5.37	371.90
371.90	371.88	3.51	371.89
371.88	371.88	29.00	371.88
371.88	371.91	9.22	371.89
371.91	372.13	0.21	372.02
372.13	372.41	0.27	372.27
372.41	372.00	17.60	372.20
372.00	371.91	5.14	371.95
371.91	371.91	3.51	371.91
371.91	371.83	3.38	371.87
371.83	371.91	3.51	371.91
371.91	371.91	20.61	371.91
371.91	371.93	3.51	371.93
371.93	371.83	3.38	371.88
371.83	371.91	3.51	371.91
371.91	371.93	3.49	371.92
371.93	371.93	3.49	371.93
371.93	371.91	3.49	371.92
371.91	371.91	20.61	371.91
371.91	371.93	3.51	371.93
371.93	371.83	1.83	371.88
371.83	371.83	5.48	371.83
371.83	371.83	371.83	371.83

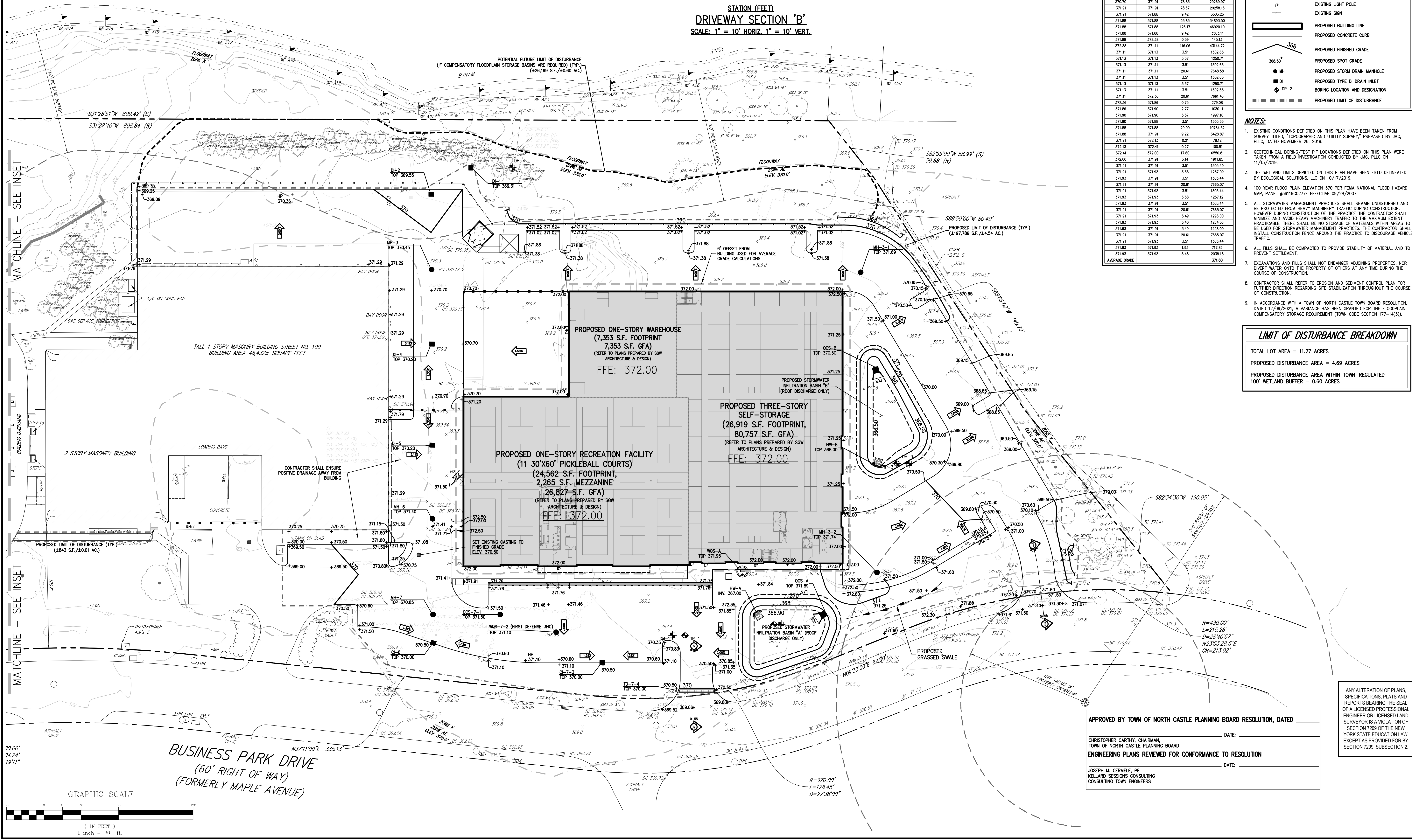
**LEGEND**

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING BUFFER
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING SPOT GRADE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED FINISHED GRADE
- PROPOSED SPOT GRADE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED TYPE DI DRAIN INLET
- BORING LOCATION AND DESIGNATION
- PROPOSED LIMIT OF DISTURBANCE

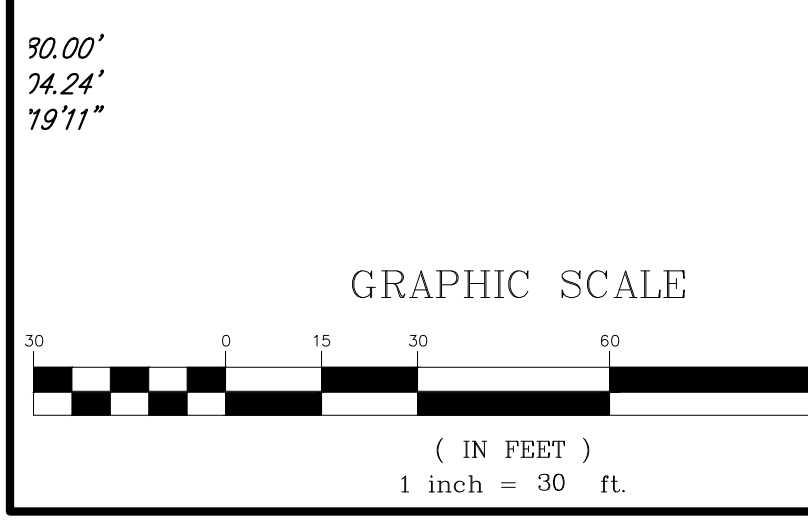
- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - GEOLOGICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY JMC, PLLC ON 11/15/2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #501180277E EFFECTIVE 08/29/2007.
  - ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
  - ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT SETTLEMENT.
  - EXCAVATIONS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTIES, NOR DIVERT WATER ONTO THE PROPERTY OF OTHERS AT ANY TIME DURING THE COURSE OF CONSTRUCTION.
  - CONTRACTOR SHALL REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR FURTHER DIRECTION REGARDING SITE STABILIZATION THROUGHOUT THE COURSE OF CONSTRUCTION.
  - IN ACCORDANCE WITH A TOWN OF NORTH CASTLE TOWN BOARD RESOLUTION, DATED 12/09/2021, A VARIANCE HAS BEEN GRANTED FOR THE FLOODPLAIN COMPENSATORY STORAGE REQUIREMENT (TOWN CODE SECTION 177-14(3)).

**LIMIT OF DISTURBANCE BREAKDOWN**

TOTAL LOT AREA = 11.27 ACRES
PROPOSED DISTURBANCE AREA = 4.69 ACRES
PROPOSED DISTURBANCE AREA WITHIN TOWN-REGULATED 100' WETLAND BUFFER = 0.60 ACRES



NOT FOR CONSTRUCTION



**BUSINESS PARK DRIVE**  
(60' RIGHT OF WAY)  
(FORMERLY MAPLE AVENUE)

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS  
 DATE: \_\_\_\_\_

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**JMC**  
 JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.5225 • fax 914.273.2192  
 www.jmcplic.com

**WMM ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

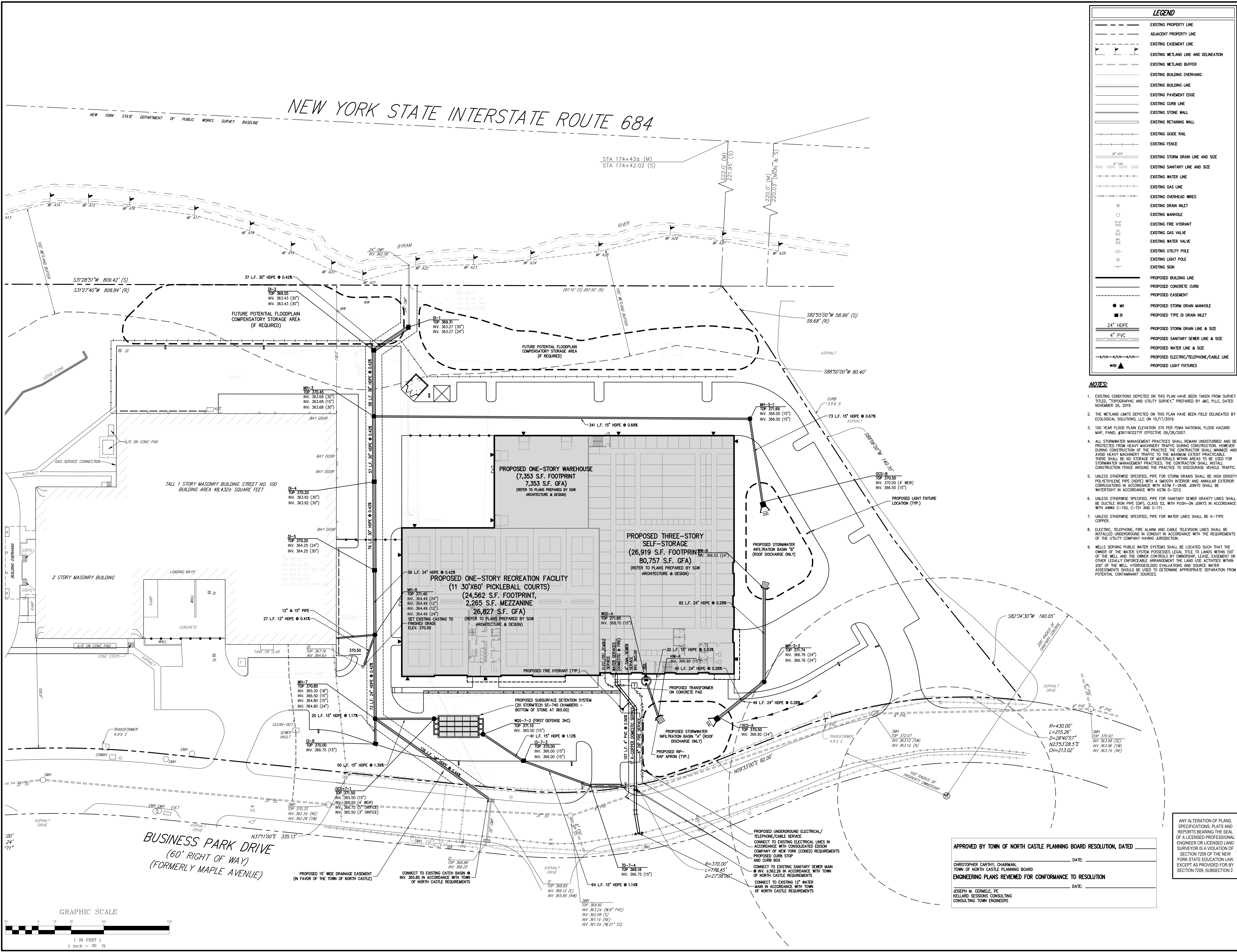
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

**SITE GRADING PLAN**  
 BAYSPACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Drawn: NC Approved: DL  
 Scale: 1" = 30'  
 Date: 09/12/2022  
 Project No: 22090  
 Drawing No: C-200



# NEW YORK STATE INTERSTATE ROUTE 684



LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING WETLAND LINE AND DELINEATION
	EXISTING WETLAND BUFFER
	EXISTING BUILDING OVERHANG
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING GUIDE RAIL
	EXISTING FENCE
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	PROPOSED BUILDING LINE
	PROPOSED CONCRETE CURB
	PROPOSED EASEMENT
	PROPOSED STORM DRAIN MANHOLE
	PROPOSED TYPE DI DRAIN INLET
	PROPOSED STORM DRAIN LINE & SIZE
	PROPOSED SANITARY SEWER LINE & SIZE
	PROPOSED WATER LINE & SIZE
	PROPOSED ELECTRIC/TELEPHONE/CABLE LINE
	PROPOSED LIGHT FIXTURES

- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED "TOPOGRAPHIC AND UTILITY SURVEY" PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #081100277E EFFECTIVE 09/28/2007.
  - ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PROJECT THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
  - UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS IN ACCORDANCE WITH ASTM F-2648. JOINTS SHALL BE WATER TIGHT IN ACCORDANCE WITH ASTM D-3212.
  - UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER GRAVITY LINES SHALL BE DUCTILE IRON PIPE (DIP), CLASS 52, WITH PUSH-ON JOINTS IN ACCORDANCE WITH AWWA C-150, C-151 AND C-111.
  - UNLESS OTHERWISE SPECIFIED, PIPE FOR WATER LINES SHALL BE K-TYPE COPPER.
  - ELECTRIC, TELEPHONE, FIRE ALARM AND CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND IN CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.
  - WELLS SERVING PUBLIC WATER SYSTEMS SHALL BE LOCATED SUCH THAT THE OWNER OF THE WATER SYSTEM POSSESSES LEGAL TITLE TO LANDS WITHIN 100' OF THE WELL AND THE OWNER CONTROLS BY CONVEYANCE, LEASE, EASEMENT OR OTHER LEGALLY ENFORCEABLE ARRANGEMENT THE LAND USE ACTIVITIES WITHIN 200' OF THE WELL. HYDROGEOLOGIC EVALUATIONS AND SOURCE WATER ASSESSMENTS SHOULD BE USED TO DETERMINE APPROPRIATE SEPARATION FROM POTENTIAL CONTAMINANT SOURCES.

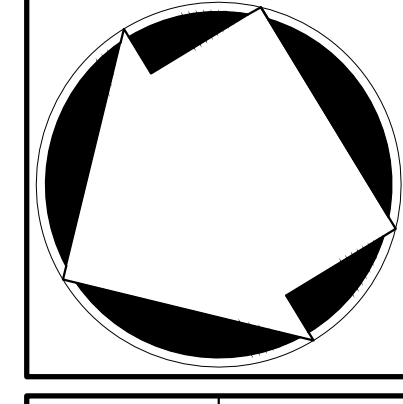
DATE: 09/17/2023  
 BY: NC  
 REVISION: RESPONSE TO TOWN COMMENTS  
 NO. 1.

OWNER/CLIENT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

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 JMC Site Development Consultants, LLC  
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120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.6225 • fax 914.273.2102  
 www.jmcpllc.com



**SITE UTILITIES PLAN**

**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

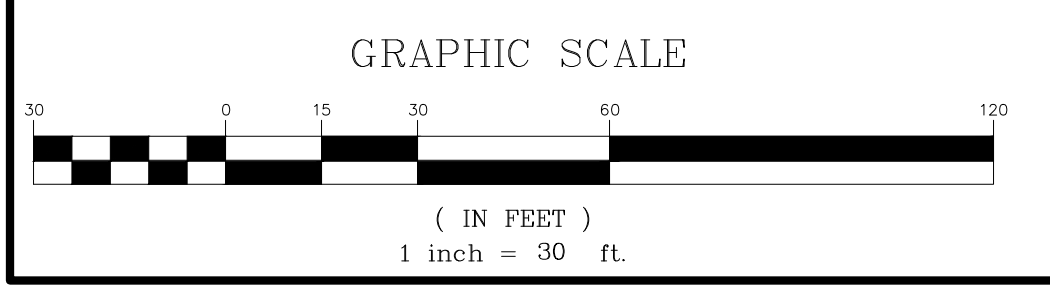
CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

Drawn: NC Approved: DL  
 Scale: 1" = 30'  
 Date: 09/12/2022  
 Project No: 22090  
 2209-SE UTIL UTILSER  
 Drawing No: C-300

NOT FOR CONSTRUCTION



**BUSINESS PARK DRIVE**  
 (60' RIGHT OF WAY)  
 (FORMERLY MAPLE AVENUE)

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH M. CERMELE, PE  
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 CONSULTING TOWN ENGINEERS



# NEW YORK STATE INTERSTATE

NEW YORK STATE DEPARTMENT OF PUBLIC WORKS SURVEY BASELINE

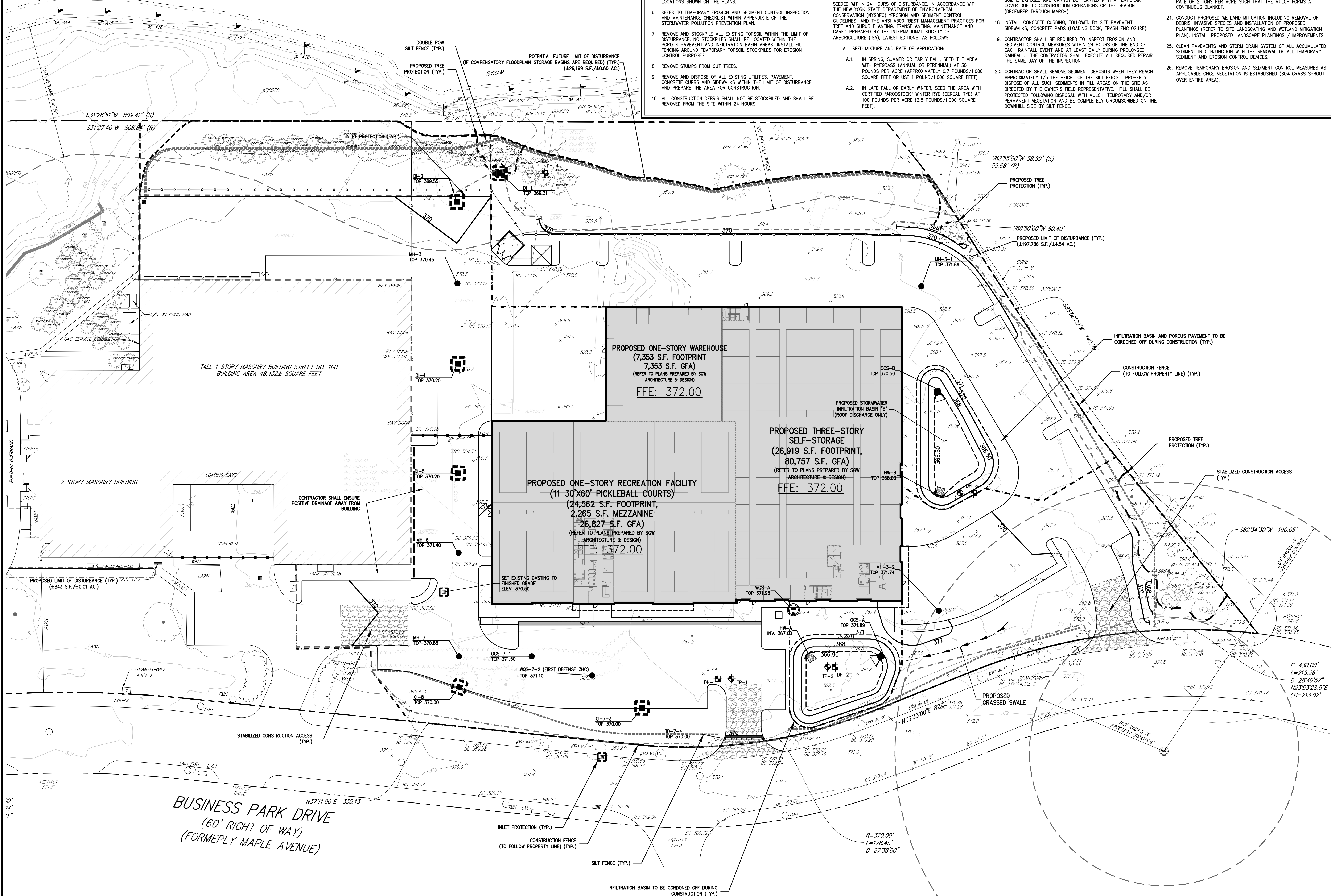
## SITE SPECIFIC EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION SEQUENCE

- STAKE OUT ALL LIMITS OF DISTURBANCE. (AREAS SHALL BE DELINEATED WITH ORANGE CONSTRUCTION FENCE).
- TAG ALL EXISTING TREES TO BE REMOVED (TREES SHALL BE DELINEATED WITH COLORED CONSTRUCTION TAPE AND INSPECTED BY THE TOWN PRIOR TO REMOVAL).
- CUT EXISTING TREES TO BE REMOVED. STUMPS SHALL REMAIN UNTIL GRUBBING AND EARTHWORK COMMENCE.
- INSTALLATION OF TEMPORARY EROSION & SEDIMENT CONTROL MEASURES (CONSTRUCTION FENCE, TREE PROTECTION, AND SILT FENCING). ENSURE INSTALLATION OF TEMPORARY CONSTRUCTION FENCING AROUND THE PROPOSED POROUS PAVEMENT AND INFILTRATION BASIN AREAS TO PREVENT HEAVY CONSTRUCTION EQUIPMENT FROM COMPACTING THE AREA.
- INSTALL STONE STABILIZED CONSTRUCTION ACCESS AT THE LOCATIONS SHOWN ON THE PLANS.
- REFER TO TEMPORARY EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE CHECKLIST WITHIN APPENDIX E OF THE STORMWATER POLLUTION PREVENTION PLAN.
- REMOVE AND STOCKPILE ALL EXISTING TOPSOIL WITHIN THE LIMIT OF DISTURBANCE. NO STOCKPILES SHALL BE LOCATED WITHIN THE POROUS PAVEMENT AND INFILTRATION BASIN AREAS. INSTALL SILT FENCING AROUND TEMPORARY TOPSOIL STOCKPILES FOR EROSION CONTROL PURPOSES.
- REMOVE STUMPS FROM CUT TREES.
- REMOVE AND DISPOSE OF ALL EXISTING UTILITIES, PAVEMENT, CONCRETE CURBS AND SIDEWALKS WITHIN THE LIMIT OF DISTURBANCE AND PREPARE THE AREA FOR CONSTRUCTION.
- ALL CONSTRUCTION DEBRIS SHALL NOT BE STOCKPILED AND SHALL BE REMOVED FROM THE SITE WITHIN 24 HOURS.
- INSTALL NEW TOWN OWNED STORM DRAINAGE LINE FROM EXISTING CATCH BASIN WITHIN BUSINESS PARK DRIVE TO DI-1 (SEE UTILITIES PLAN).
- INFILTRATION BASINS SHALL BE GRADED, CONSTRUCTED (STRUCTURES, PILES, ETC.), AND STABILIZED (SOIL GERMINATION) PRIOR TO THE CONNECTION OF ROOF DRAIN LEADERS.
- BEGIN BUILDING AND ROADWAY / PARKING LOT (INCLUDING POROUS PAVEMENT) CONSTRUCTION. PROCEED WITH GRADING OF THE AREA UNDER ACTIVE CONSTRUCTION.
- ALL EXPOSED SLOPES AND GRADING AREAS THAT WILL NOT BE FURTHER DISTURBED WITHIN 14 CALENDAR DAYS (7 DAYS FOR CONSTRUCTION SITES THAT EITHER DIRECTLY DISCHARGE TO ONE OF THE 3000' SEDIMENTS LISTED IN APPENDIX E OF THE GENERAL PERMIT OR ARE LOCATED WITHIN ONE OF THE WATERSHEDS LISTED IN APPENDIX C OF THE GENERAL PERMIT), SHALL BE TEMPORARILY SEEDED WITHIN 24 HOURS OF DISTURBANCE, IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) EROSION AND SEDIMENT CONTROL GUIDELINES AND THE ANSI A300 BEST MANAGEMENT PRACTICES FOR TREE AND SHRUB PLANTING, TRANSPLANTING, MAINTENANCE AND CARE, PREPARED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), LATEST EDITIONS, AS FOLLOWS:
  - SEED MIXTURE AND RATE OF APPLICATION:
    - IN SPRING, SUMMER OR EARLY FALL, SEED THE AREA WITH RYEGRASS (ANNUAL OR PERENNIAL) AT 30 POUNDS PER ACRE (APPROXIMATELY 0.7 POUNDS/1,000 SQUARE FEET) OR USE 1 POUND/1,000 SQUARE FEET.
    - IN LATE FALL OR EARLY WINTER, SEED THE AREA WITH CERTIFIED "ARODSTOCK" WINTER RYE (CERIAL RYE) AT 100 POUNDS PER ACRE (2.5 POUNDS/1,000 SQUARE FEET).
  - APPLICATION SHALL BE UNIFORM BY MECHANICAL OR HYDROSEED METHODS.
  - MULCH ALL SEEDING AREAS WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 POUNDS/1,000 SQUARE FEET) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
- INSTALL THE REMAINDER OF THE ON-SITE STORM DRAINAGE SYSTEM CONSISTING OF CATCH BASINS, MANHOLES AND UNDERGROUND STORM PIPES ALONG WITH THE SEDIMENT AND EROSION CONTROL DEVICES ASSOCIATED WITH THE STORM DRAINAGE SYSTEM (I.E. INLET PROTECTION AND RIP RAP AS SHOWN ON THE PLANS).
- INSTALL ALL UNDERGROUND UTILITIES INCLUDING SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE/CABLE SERVICES.
- FOR DUST CONTROL PURPOSES, MOISTEN ALL EXPOSED GRADED AREAS WITH WATER AT LEAST TWICE A DAY IN THOSE AREAS WHERE SOIL IS EXPOSED AND CANNOT BE PLANTED WITH A TEMPORARY COVER DUE TO CONSTRUCTION OPERATIONS OR THE SEASON (DECEMBER THROUGH MARCH).
- INSTALL CONCRETE CURBING, FOLLOWED BY SITE PAVEMENT, SIDEWALKS, CONCRETE PADS (LOADING DOCK, TRASH ENCLOSURE).
- CONTRACTOR SHALL BE REQUIRED TO INSPECT EROSION AND SEDIMENT CONTROL MEASURES WITHIN 24 HOURS OF THE END OF EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED RAINFALL. THE CONTRACTOR SHALL EXECUTE ALL REQUIRED REPAIR THE SAME DAY OF THE INSPECTION.
- CONTRACTOR SHALL REMOVE SEDIMENT DEPOSITS WHEN THEY REACH APPROXIMATELY 1/3 THE HEIGHT OF THE SILT FENCE. IMMEDIATELY DISPOSE OF ALL SUCH SEDIMENTS IN FILL AREAS ON THE SITE AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE. FILL SHALL BE PROTECTED FOLLOWING DISPOSAL WITH MULCH, TEMPORARY AND/OR PERMANENT VEGETATION AND BE COMPLETELY CIRCUMSCRIBED ON THE DOWNHILL SIDE BY SILT FENCE.
- RAKE ALL EXPOSED AREAS PARALLEL TO THE SLOPE DURING EARTHWORK OPERATIONS.
- FINISH GRADING, REDISTRIBUTE TOPSOIL.
- FOLLOWING FINAL GRADING, SEED WITH A PERMANENT SURFACE TREATMENT (I.E. TURFGRASS, PAVEMENT, SIDEWALK OR BUILDING WITHIN SEVEN DAYS OF GRADING) OR SEED WITH A PERENNIAL RYEGRASS, ANNUAL RYEGRASS AND WINTER RYE MIXTURE. SEED ALL PILES OF SOIL IN EXPOSED SOIL AREAS THAT WILL NOT RECEIVE A PERMANENT SURFACE TREATMENT. SEEDING OF AT LEAST BOX PERENNIAL VEGETATIVE COVER WILL BE USED TO PRODUCE A PERMANENT UNIFORM EROSION RESISTANT SURFACE. AREAS SHALL BE HYDROSEED WITH (A) PERENNIAL RYEGRASS AT A RATE OF 40 LBS PER ACRE (1.0 LB PER 1000 SQUARE FEET), (B) CERTIFIED "ARODSTOCK" WINTER RYE (CERIAL RYE) @ 100 LB PER ACRE (2.5 LB/1000 S.F.) TO BE USED IN THE MONTHS OF OCTOBER AND NOVEMBER. THE SEEDING AREAS WILL BE MULCHED WITH STRAW AT A RATE OF 2 TONS PER ACRE SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
- CONDUCT PROPOSED WETLAND MITIGATION INCLUDING REMOVAL OF DEBRIS, INVASIVE SPECIES AND INSTALLATION OF PROPOSED PLANTINGS (REFER TO SITE LANDSCAPING AND WETLAND MITIGATION PLAN). INSTALL PROPOSED LANDSCAPE PLANTINGS / IMPROVEMENTS.
- CLEAN PAVEMENTS AND STORM DRAIN SYSTEM OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE REMOVAL OF ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES.
- REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS APPLICABLE ONCE VEGETATION IS ESTABLISHED (80% GRASS SPROUT OVER ENTIRE AREA).

LEGEND	
	PROPOSED INLET PROTECTION
	PROPOSED CONSTRUCTION FENCE
	PROPOSED SILT FENCE
	PROPOSED BARE EROSION CHECKS
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED TREE PROTECTION

### NOTES

- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, P.L.L.C., DATED NOVEMBER 26, 2019.
- THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
- 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #819102277F EFFECTIVE 09/28/2007.
- THIS PLAN IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL INFORMATION ONLY.
- PRIOR TO BEGINNING ANY CLEARING, GRUBBING OR EXCAVATION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE PLANS AND SPECIFICATIONS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE PLAN.
- THE CONTRACTOR SHALL INSPECT AND MAINTAIN ON-SITE EROSION AND SEDIMENT CONTROL MEASURES ON A DAILY BASIS. ALL COLLECTED SEDIMENT WITHIN SEDIMENT BARRIERS SHALL BE REMOVED PERIODICALLY AS REQUIRED TO MAINTAIN THE FUNCTION OF THE SEDIMENT BARRIERS. ALL SEDIMENT COLLECTED SHALL BE REUSED ON-SITE WITHIN STABILIZED AREAS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL INSPECT DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A WEEKLY BASIS. AFTER EACH RAINFALL EVENT, AND AS MAY BE REQUIRED OR DIRECTED BY ALL APPLICABLE APPROVALS AND PERMITS, THE CONTRACTOR SHALL IMMEDIATELY PROVIDE A WRITTEN REPORT ON FINDINGS OF SEDIMENT IN DOWNSTREAM AREAS TO ALL AUTHORITIES HAVING JURISDICTION AND MAKE REPAIRS AS REQUIRED OR DIRECTED.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED/WARRANTED BY FIELD CONDITIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE, JMC, AND/OR ANY AUTHORITY HAVING JURISDICTION.
- STOCKPILES OF CONSTRUCTION MATERIAL SHALL BE PLACED ON-SITE IN THE AREA DESIGNATED ON THIS PLAN OR AS APPROVED BY THE OWNER'S REPRESENTATIVE. STOCKPILED EXCAVATED MATERIAL SHALL HAVE TWO ROWS OF SILT FENCE LOCATED AROUND ITS PERIMETER. ALL STOCKPILED MATERIAL SHALL BE MAINTAINED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE ON PEDESTRIAN AND/OR VEHICULAR TRAFFIC CIRCULATION ROUTES.
- DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCES AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
- ALL EXPOSED SLOPES AND GRADED/DISTURBED AREAS THAT WILL NOT BE FURTHER DISTURBED WITHIN 14 CALENDAR DAYS (7 DAYS FOR CONSTRUCTION SITES THAT EITHER DIRECTLY DISCHARGE TO ONE OF THE 3000' SEDIMENTS LISTED IN APPENDIX E OF THE GENERAL PERMIT OR ARE LOCATED WITHIN ONE OF THE WATERSHEDS LISTED IN APPENDIX C OF THE GENERAL PERMIT), SHALL BE TEMPORARILY SEEDED WITHIN 24 HOURS OF DISTURBANCE, IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) EROSION AND SEDIMENT CONTROL GUIDELINES AND THE ANSI A300 BEST MANAGEMENT PRACTICES FOR TREE AND SHRUB PLANTING, TRANSPLANTING, MAINTENANCE AND CARE, PREPARED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), LATEST EDITIONS, AS FOLLOWS:
  - SEED MIXTURE AND RATE OF APPLICATION:
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  - MULCH ALL SEEDING AREAS WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 POUNDS PER 1,000 SQUARE FEET) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
  - ALL SEEDING AREAS SHALL BE FERTILIZED, RESEED, AND MULCHED AS NECESSARY TO MAINTAIN VEGETATION, DENSE VEGETATIVE COVER.
  - TEMPORARY SEED MIXTURES SHALL NOT BE PLACED ON AREAS WHERE FINAL GRADE HAS BEEN ESTABLISHED AND TOPSOIL HAS BEEN PLACED UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.

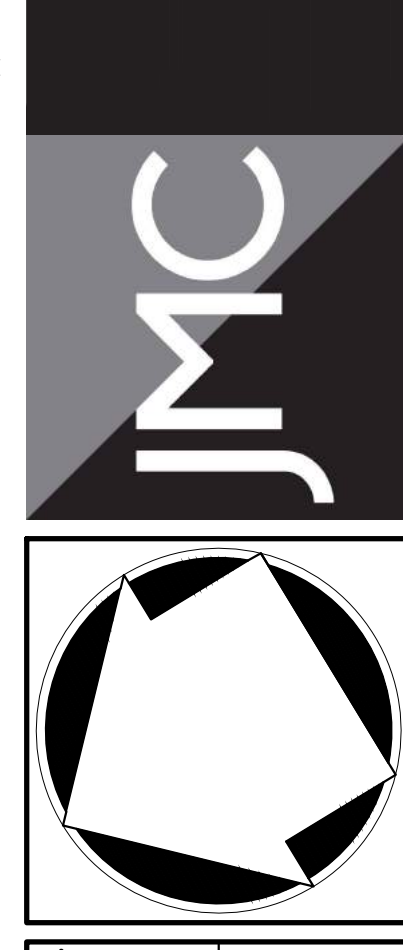


OWNER/CLIENT  
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 444 NORTH MICHIGAN AVENUE, SUITE 1850  
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**SITE EROSION & SEDIMENT CONTROL PLAN**  
 BAYSPACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
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**NOT FOR CONSTRUCTION**

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

Drawn:	NC	Approved:	DL
Scale:	1" = 30'	Date:	09/12/2022
Project No.:	22090	Project Name:	
Drawing No.:	C-400	Sheet:	SE



PLANT SCHEDULE POTENTIAL FUTURE WETLAND BUFFER MITIGATION					
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AR3	12	Acer Rubrum / Red Sunset / Red Maple	3" - 3 1/2" Cal.	B & B	
ACN2	12	Amelanchier Canadensis / Shadblow Serviceberry	3" - 3 1/2" Cal.	B & B	
QP2	9	Quercus Palustris / Pin Oak	3" - 3 1/2" Cal.	B & B	
DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR RES	20	Cornus sericea / Red Twig Dogwood	3" - 4" HT.	#5 Cont	
IW2	24	Ilex verticillata / Winterberry	3" - 4" HT.	#5 Cont	
VH	19	Vaccinium corymbosum / Highbush Blueberry	3" - 4" HT.	#5 Cont	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
NWDM	24,604 sf	Northeast Wetland Diversity Mix / Restoration Mix	seed		See Mix Detail on this Sheet

PLANT SCHEDULE TREE REMOVAL MITIGATION					
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
PIC ABI	18	Picea abies / Norway Spruce	8" - 10" HT.	B & B	
PIC OMO	13	Picea omorika / Serbian Spruce	8" - 10" HT.	B & B	
PIC BLU	6	Picea pungens glauca / Colorado Blue Spruce	8" - 10" HT.	B & B	
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AS	1	Acer Saccharum / Green Mountain / Sugar Maple	3" - 3 1/2" Cal.	B & B	

PLANT SCHEDULE CURRENTLY PROPOSED LANDSCAPING					
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
PIC ABI	14	Picea abies / Norway Spruce	8" - 10" HT.	B & B	
PIC OMO	8	Picea omorika / Serbian Spruce	8" - 10" HT.	B & B	
PIC BLU	6	Picea pungens glauca / Colorado Blue Spruce	8" - 10" HT.	B & B	
TI	52	Thuja x 'Green Giant' / Green Giant Arborvitae	8" - 10" HT.	B & B	
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AS	13	Acer Saccharum / Green Mountain / Sugar Maple	3" - 3 1/2" Cal.	B & B	
ACN	10	Amelanchier Canadensis / Shadblow Serviceberry	3" - 3 1/2" Cal.	B & B	
BNT	3	Betula Nigra / Heritage / Heritage River Birch	3" - 3 1/2" Cal.	B & B	
QP2	10	Quercus Palustris / Pin Oak	3" - 3 1/2" Cal.	B & B	
PERENNIALS & GRASSES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
CK3	20	Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass	5 gal	CONT.	
PA2	13	Pennisetum alopecuroides / Fountain Grass	5 gal	CONT.	
DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR FL2	3	Cornus sericea 'Flaviramea' / Yellow Twig Dogwood	5 gal		
VD	6	Viburnum dentatum 'Arrowwood' / Arrowwood Viburnum	5 gal		
EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
JSS	12	Juniperus virginiana Taylor / Taylor Juniper	5" - 6" HT	B & B	
SHRUB AREAS	QTY	BOTANICAL / COMMON NAME	CONT.	ROOT COND.	REMARKS
JP2	46	Juniperus davurica 'Parsonii' / Parson's Juniper	24" - 30" SPR	Cont.	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
HM-1	3,303 sf	NYSDEC Stormwater Basin Mix #1 / Lowest Zone	seed		See Mix Detail on this Sheet
HM-3	5,678 sf	NYSDEC Stormwater Basin Mix #3 / Highest Zone	seed		See Mix Detail on this Sheet
WFS	36,570 sf	Wildlife Food & Shelter Mix / Restoration Mix	seed		See Mix Detail on this Sheet

**LEGEND**

- PROPOSED DECIDUOUS/SHADE TREE
- PROPOSED FLOWERING/ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUBS/PERENNIALS
- PROPOSED EDGE OF PLANTING BED
- PROPOSED SHRUB MASSING
- PROPOSED GRAVEL STRIP

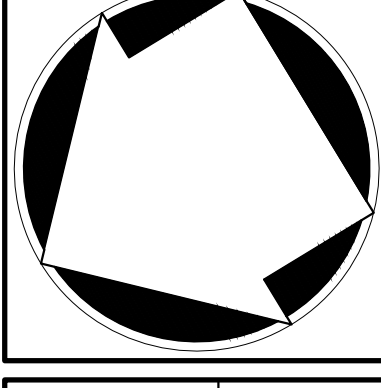
- NOTES:**
- ALL PLANT MATERIAL SPECIFIED ON THE DRAWINGS SHALL BE FIRST QUALITY NURSERY GROWN STOCK, CENTERED TRUE TO THEIR GENUS, SPECIES AND VARIETY, ALL OF WHICH SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY AMERICANHORT (ANSI Z60.1), LATEST EDITION.
  - ALL AREAS OF THE SITE NOT OCCUPIED BY BUILDING, PLANTMENT, OR OTHER IMPERVIOUS SURFACE, AND NOT SPECIFIED AS BEING PLANTED WITH TREES, SHRUBS OR GROUND COVER, SHALL BE LAWN.
  - ALL MULCH TO BE PLACED IN PLANTING BEDS SHALL BE CLEAN, NON-DYED, TONIC FREE, ORGANIC MATERIAL, CONSISTING OF SHREDED HARDWOOD, ROOT MULCH SHREDED CEDAR, OR BARK CHIPS, AS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT. THE PLACEMENT THICKNESS OF THE MULCH SHALL BE 3" AND/OR AS DIRECTED IN THE PLANTING DETAILS.
  - PLANT MATERIAL SUBSTITUTIONS SHALL NOT BE PERMITTED WITHOUT THE PROJECT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.
  - ALL LANDSCAPE PLANTINGS SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION THROUGHOUT THE DURATION OF THE PROJECT. ANY PLANTING NOT SO MAINTAINED SHALL BE REPLACED WITH NEW PLANT(S) AT THE BEGINNING OF THE NEXT, IMMEDIATELY FOLLOWING PLANTING SEASON.
  - ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
  - ALL PLANT MATERIAL STOCK SHALL BE WELL-BRANCHED AND WELL-FORMED, SOUND, UNBROKEN, HEALTHY, FREE FROM DISEASE, SUN-SCALE, WINDBURN, ABRASION, AND HARMFUL INSECTS OR INSECT EGGS, AND SHALL HAVE HEALTHY, NORMAL UNBROKEN ROOT SYSTEMS. DECIDUOUS TREES AND SHRUBS SHALL BE SYMMETRICALLY DEVELOPED, OF UNIFORM HABIT OF GROWTH, WITH STRAIGHT TRUNKS OR STEMS, AND FREE FROM OBJECTIONABLE DISTORTIONS. EVERGREEN TREES AND SHRUBS SHALL HAVE WELL-DEVELOPED SYMMETRICAL TOPS WITH TYPICAL SPREAD OF BRANCHES FOR EACH PARTICULAR SPECIES OR VARIETY. ONLY VINES AND GROUND COVER PLANTS WELL ESTABLISHED IN REMOVAL CONTAINERS, INTERNAL CONTAINERS, OR FORMED HOMOGENEOUS SOIL SECTIONS SHALL BE USED.
  - PLANTS SHALL BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SOURCES OF ALL PLANT MATERIAL SHALL BE DISCLOSED TO PROJECT LANDSCAPE ARCHITECT AND OWNER PRIOR TO DELIVERY.
  - ALL PLANT MATERIAL SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN STOCK, AS SPECIFIED IN THE PLANT LIST. BAREROOT STOCK OF ANY KIND IS UNACCEPTABLE UNLESS SPECIFIED.
  - ALL LAWN AREAS (SOD OR SEED) SHALL RECEIVE A MINIMUM 6" THICK LAYER OF SCREENED TOPSOIL PRIOR TO INSTALLATION OF SOD OR SEED, UNLESS OTHERWISE SPECIFIED. TOPSOIL SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
  - SOIL WITHIN ALL PLANTING BEDS SHALL BE PREPARED AS DIRECTED IN THE PLANTING DETAILS AND PROJECT SPECIFICATIONS PRIOR TO INSTALLATION OF PLANT MATERIALS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN GOOD HEALTH UNTIL THE PROJECT LANDSCAPE ARCHITECT HAS PROVIDED WRITTEN ACCEPTANCE THAT THE PLANTINGS ARE COMPLETE AND IN CONFORMANCE WITH THE PLANS. THE CONTRACTOR SHALL GUARANTEE THE SURVIVAL OF THE PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY THE PROJECT LANDSCAPE ARCHITECT, UNLESS OTHERWISE AGREED TO WITH THE OWNER.
  - ALL AREAS DISTURBED OR DAMAGED DURING THE COURSE OF THE CONTRACTOR'S WORK SHALL BE REPAIRED OR RESTORED TO ORIGINAL OR CONSTRUCTED CONDITION AT NO ADDITIONAL COST TO OWNER.
  - FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL BY PROJECT LANDSCAPE ARCHITECT. PROJECT LANDSCAPE ARCHITECT MAY ADJUST SPACING AND LOCATION IN FIELD PRIOR TO OR AFTER PLANTING.
  - CONTRACTOR SHALL IMMEDIATELY REPORT ANY UNSATISFACTORY SITE CONDITIONS TO THE OWNER IN WRITING. CONTRACTOR SHALL RECEIVE NO ADDITIONAL PAYMENT FOR ADDITIONAL WORK ASSOCIATED WITH THE UNSATISFACTORY CONDITIONS IF NOT PROPERLY REPORTED AND WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER.
  - ALL TREE AND SHRUB PLANTINGS INSTALLED ADJACENT TO PARKING AREAS SHALL BE SETBACK A MINIMUM OF 24" FROM EDGE OF THE PLANT TO EDGE OF PARKING AREA.
  - ALL PLANTINGS ADJACENT TO LAWN AREAS SHALL HAVE A 6" DEEP VERTICAL CUT EDGE ALONG THE OUTSIDE OF THE PLANTING BED.

No.	Date	By
1.	05/25/2023	PD
2.	06/07/2023	NC
3.	09/11/2023	NC

OWNER/CLIENT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.473.5225 • fax 914.473.2102  
 www.jmcpllc.com

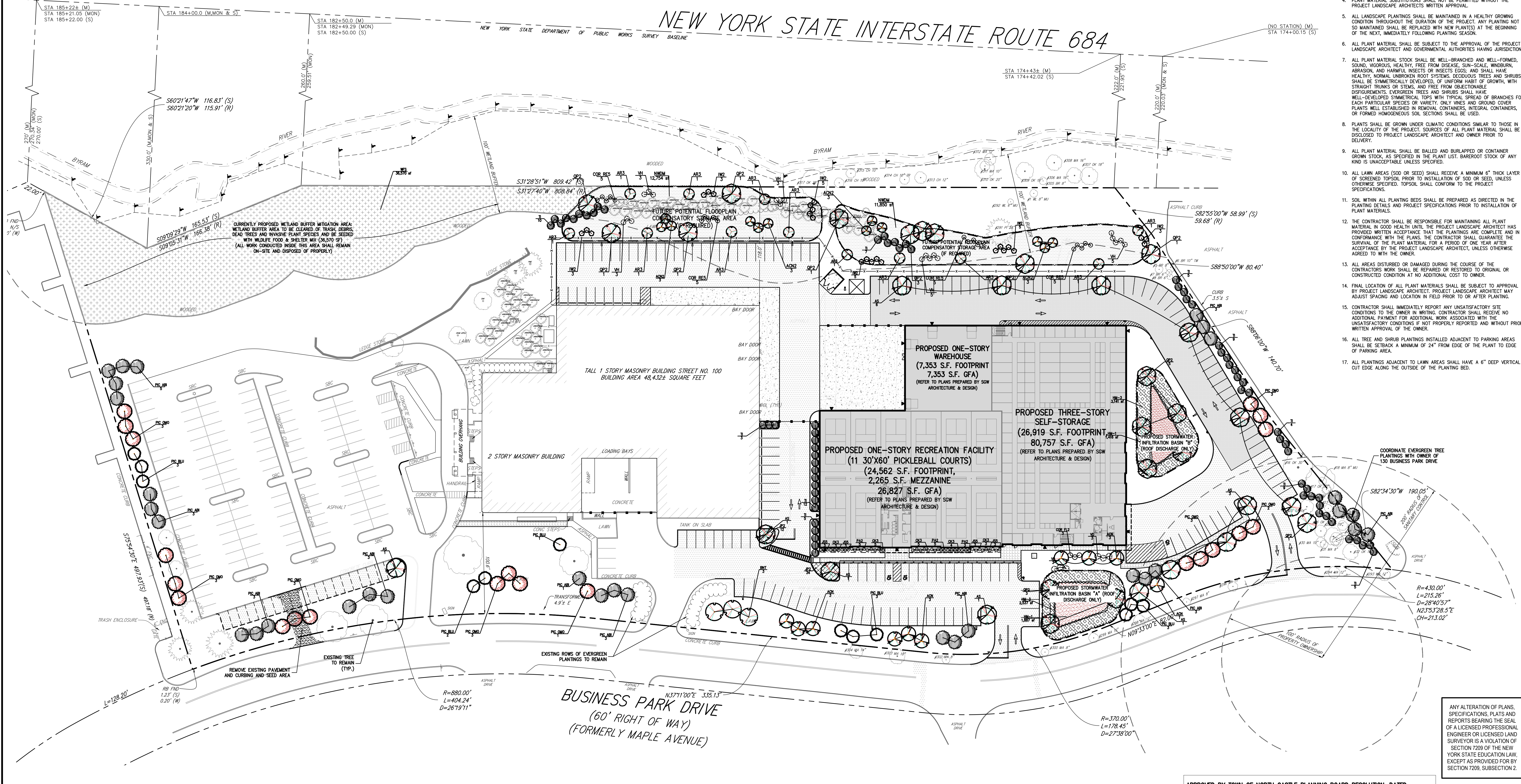


**OVERALL SITE LANDSCAPING & WETLAND MITIGATION PLAN**  
 BAYSPACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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

Drawn:	NC	Approved:	DL
Scale:	1" = 40'		
Date:	09/12/2022		
Project No.:	22090		
Drawing No.:	LAND-01	LAND-02	LAND-03
<b>C-500A</b>			

# NEW YORK STATE INTERSTATE ROUTE 684



**NOT FOR CONSTRUCTION**

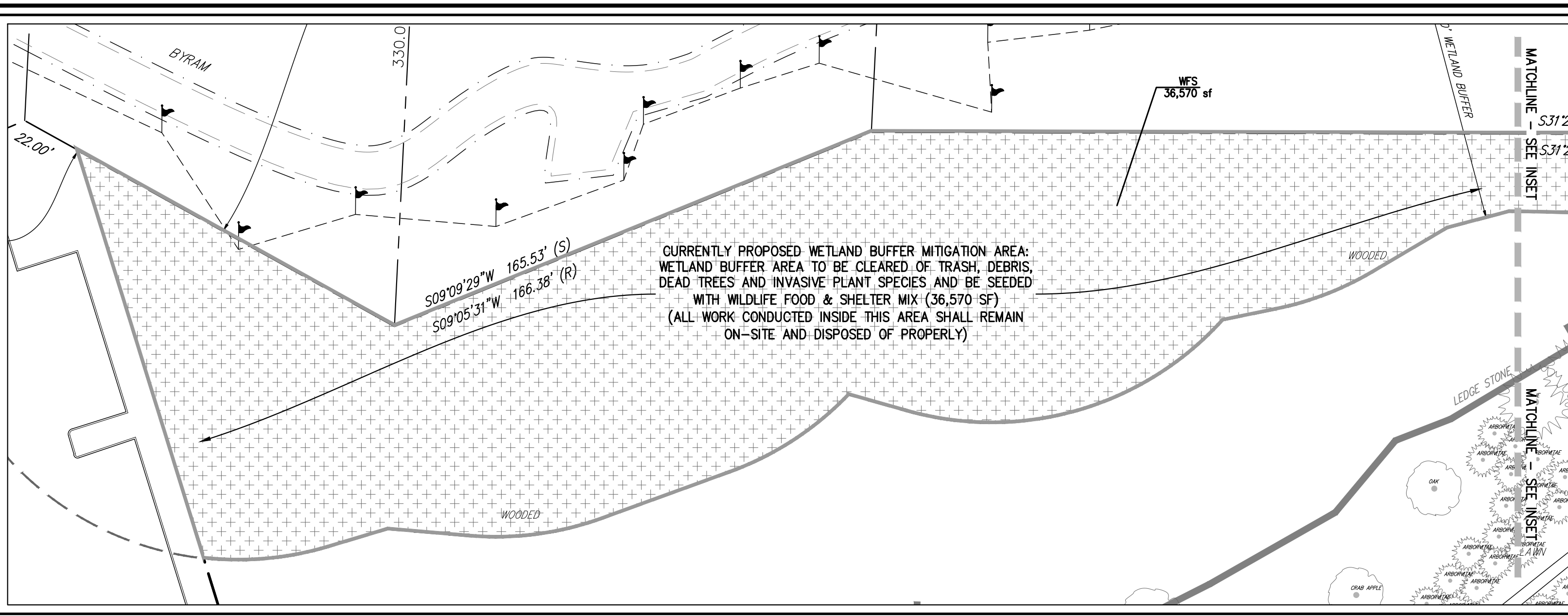
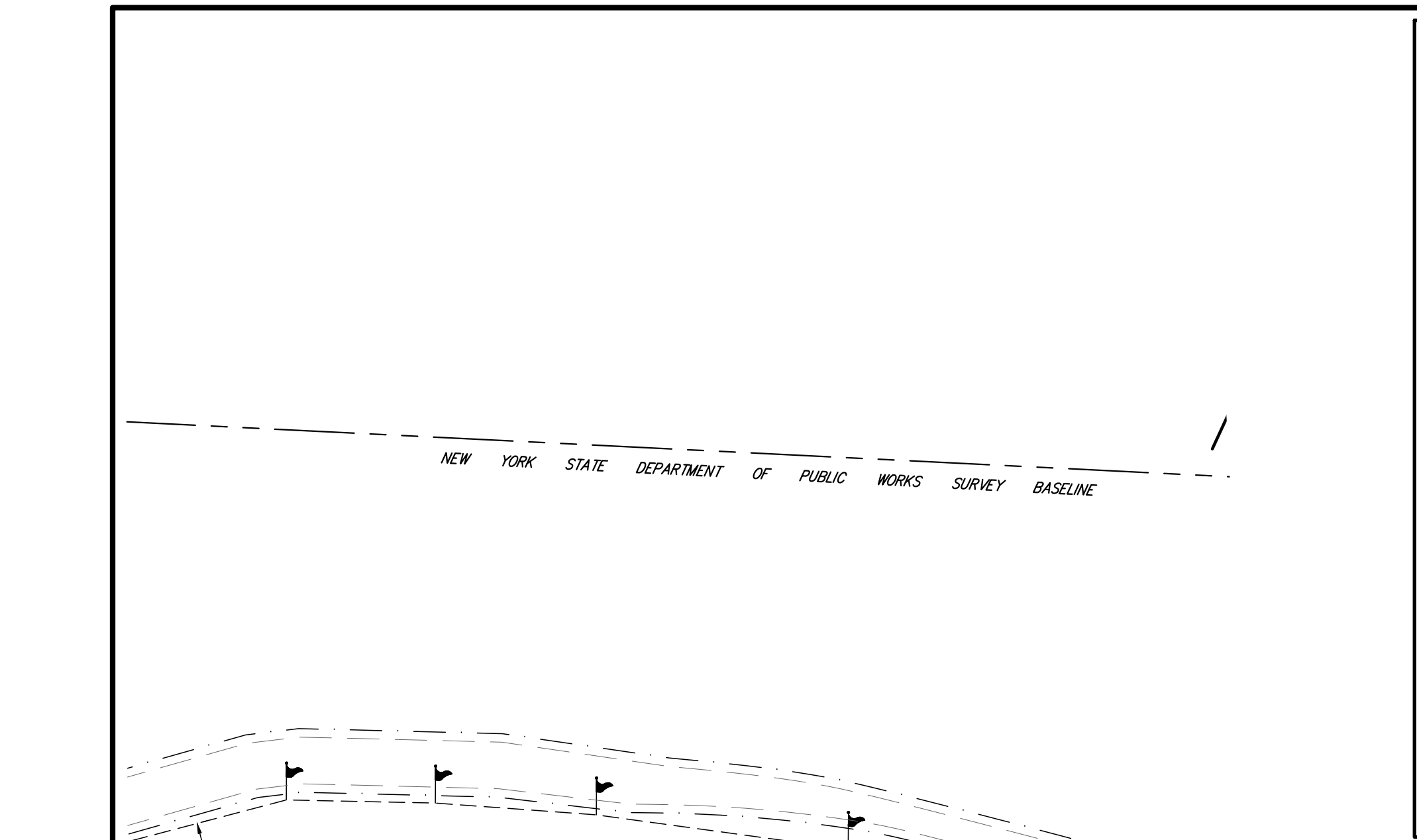
GRAPHIC SCALE  
 1 inch = 40 ft.

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

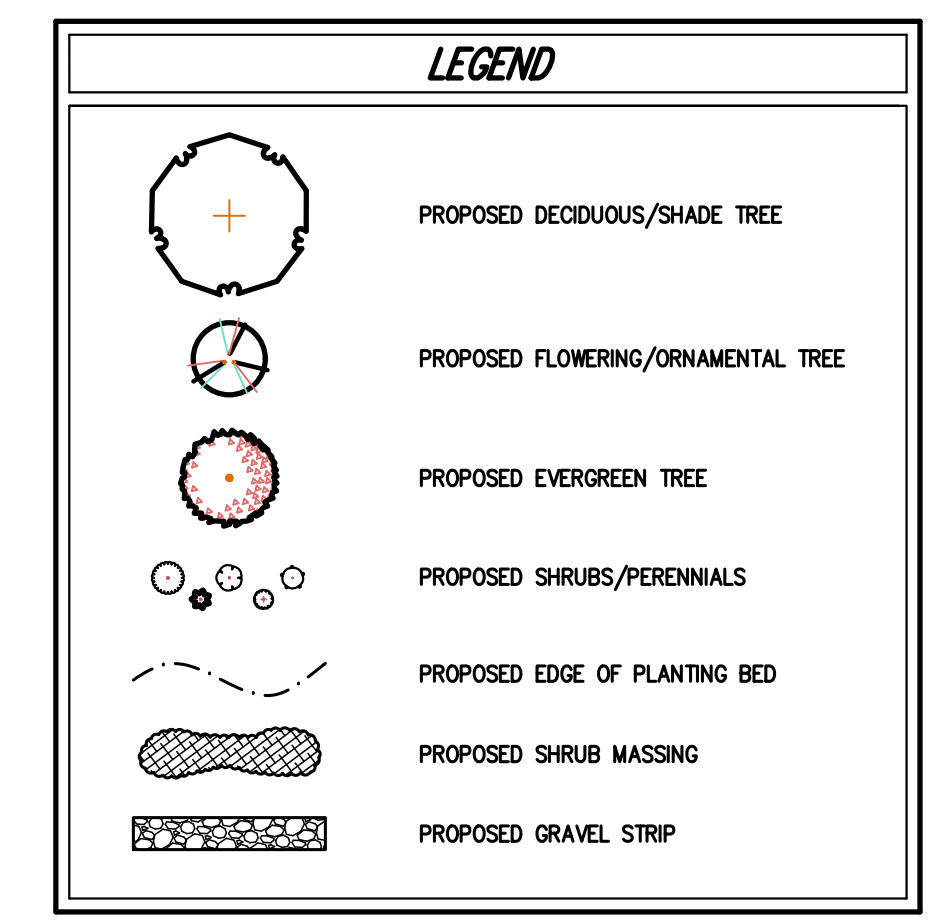
CHRISTOPHER CARRHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS





- ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
- ALL PLANT MATERIAL STOCK SHALL BE WELL-BRANCHED AND WELL-FORMED, SOUND, VIGOROUS, HEALTHY, FREE FROM DISEASE, SUN-SCALE, WINDBURN, ABRASION, AND HARMFUL INSECTS OR INSECT EGGS, AND SHALL HAVE HEALTHY, NORMAL UNBROKEN ROOT SYSTEMS. DECIDUOUS TREES AND SHRUBS SHALL BE SYMMETRICALLY DEVELOPED, OF UNIFORM HABIT OF GROWTH, WITH STRAIGHT TRUNKS OR STEMS, AND FREE FROM OBSCURABLE DEFECTS. EVERGREEN TREES AND SHRUBS SHALL BE WELL-DEVELOPED SYMMETRIC TOPS WITH TYPICAL SPREAD OF BRANCHES FOR EACH PARTICULAR SPECIES OR VARIETY. ONLY LIVE AND SOUND COVER PLANTS WELL ESTABLISHED IN REMOVAL CONTAINERS, INTEGRAL CONTAINERS, OR FORMED HOMOGENEOUS SOIL SECTIONS SHALL BE USED.
- PLANTS SHALL BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SOURCES OF ALL PLANT MATERIAL SHALL BE DISCLOSED TO PROJECT LANDSCAPE ARCHITECT AND OWNER PRIOR TO DELIVERY.
- ALL PLANT MATERIAL SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN STOCK, AS SPECIFIED IN THE PLANT LIST. BARE-ROOT STOCK OF ANY KIND IS UNACCEPTABLE UNLESS SPECIFIED.
- ALL LAWN AREAS (SOD OR SEED) SHALL RECEIVE A MINIMUM 6" THICK LAYER OF SCREENED TOPSOIL PRIOR TO INSTALLATION OF SOD OR SEED, UNLESS OTHERWISE SPECIFIED. TOPSOIL SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
- SOIL WITHIN ALL PLANTING BEDS SHALL BE PREPARED AS DIRECTED IN THE PLANTING DETAILS AND PROJECT SPECIFICATIONS PRIOR TO INSTALLATION OF PLANT MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN GOOD HEALTH UNTIL THE PROJECT LANDSCAPE ARCHITECT HAS PROVIDED WRITTEN ACCEPTANCE THAT THE PLANTINGS ARE COMPLETE AND IN CONFORMANCE WITH THE PLANS. THE CONTRACTOR SHALL GUARANTEE THE SURVIVAL OF THE PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY THE PROJECT LANDSCAPE ARCHITECT, UNLESS OTHERWISE AGREED TO WITH THE OWNER.
- ALL AREAS DISTURBED OR DAMAGED DURING THE COURSE OF THE CONTRACTORS WORK SHALL BE REPAIRED OR RESTORED TO ORIGINAL OR CONSTRUCTED CONDITION AT NO ADDITIONAL COST TO OWNER.
- FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL BY PROJECT LANDSCAPE ARCHITECT. PROJECT LANDSCAPE ARCHITECT MAY ADJUST SPACING AND LOCATION IN FIELD PRIOR TO OR AFTER PLANTING.
- CONTRACTOR SHALL IMMEDIATELY REPORT ANY UNSATISFACTORY SITE CONDITIONS TO THE OWNER IN WRITING. CONTRACTOR SHALL RECEIVE NO ADDITIONAL PAYMENT FOR ADDITIONAL WORK ASSOCIATED WITH THE UNSATISFACTORY CONDITIONS IF NOT PROPERLY REPORTED AND WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER.
- ALL TREE AND SHRUB PLANTINGS ADJACENT TO PARKING AREAS SHALL BE SETBACK A MINIMUM OF 24" FROM EDGE OF THE PLANT TO EDGE OF PARKING AREA.
- ALL PLANTINGS OUTSIDE TO LAWN AREAS SHALL HAVE A 6" DEEP VERTICAL CUT EDGE ALONG THE ADJACENT TO THE PLANTING BED.



- NOTES:**
- ALL PLANT MATERIAL SPECIFIED ON THE DRAWINGS SHALL BE FIRST QUALITY NURSERY GROWN STOCK, CERTIFIED TRUE TO THEIR GENUS, SPECIES AND VARIETY, ALL OF WHICH SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY AMERICANHORT (ANSI Z60.1)," LATEST EDITION.
  - ALL AREAS OF THE SITE NOT OCCUPIED BY BUILDING, PAVEMENT, OR OTHER IMPROVED SURFACE, AND NOT SPECIFIED AS BEING PLANTED WITH TREES, SHRUBS OR GRASS COVER, SHALL BE LAWN.
  - ALL MULCH TO BE PLACED IN PLANTING BEDS SHALL BE CLEAN, NON-WEED TOXIC FREE, ORGANIC MATERIAL, CONSISTING OF SHREDED HARDWOOD, ROOT MULCH SHREDED CEDAR, OR BARK CHIPS, AS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT. THE PLACEMENT THICKNESS OF THE MULCH SHALL BE 3" AND/OR AS DIRECTED IN THE PLANTING DETAILS.
  - PLANT MATERIAL SUBSTITUTIONS SHALL NOT BE PERMITTED WITHOUT THE PROJECT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.
  - ALL LANDSCAPE PLANTINGS SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION THROUGHOUT THE DURATION OF THE PROJECT. ANY PLANTING NOT SO MAINTAINED SHALL BE REPLACED WITH NEW PLANTINGS AT THE BEGINNING OF THE NEXT IMMEDIATELY FOLLOWING PLANTING SEASON.

PLANT SCHEDULE CURRENTLY PROPOSED LANDSCAPING	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
EVERGREEN TREES	14	Picea abies / Norway Spruce	8' - 10' HT.	B & B	
PIC ABI	8	Picea omorika / Serbian Spruce	8' - 10' HT.	B & B	
PIC OMO	6	Picea pungens glauca / Colorado Blue Spruce	8' - 10' HT.	B & B	
PIC BLU	2	Thuja x Green Giant / Green Giant Arborvitae	8' - 10' HT.	B & B	
TI					
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AS	13	Acer saccharum 'Green Mountain' / Sugar Maple	3" - 3 1/2" Cal.	B & B	
ACN	10	Amelanchier canadensis / Shadbowl Serviceberry	3" - 3 1/2" Cal.	B & B	
BLNT	3	Betula nigra 'Heritage' / Heritage River Birch	3" - 3 1/2" Cal.	B & B	
QP2	10	Quercus palustris / Pin Oak	3" - 3 1/2" Cal.	B & B	
PERENNIALS & GRASSES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
CK3	20	Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass	5 gal.	CONT.	
PA2	13	Pennisetum alopecuroides / Fountain Grass	5 gal.	CONT.	
DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR FL2	3	Cornus sericea 'Flammarion' / Yellow Twig Dogwood	5 gal.		
VD	6	Viburnum dentatum 'Arrowwood' / Arrowwood Viburnum	5 gal.		
EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
J55	12	Juniperus virginiana 'Taylor' / Taylor Juniper	5' - 6' HT.	B & B	
SHRUB AREAS	QTY	BOTANICAL / COMMON NAME	CONT.	ROOT COND.	REMARKS
J46	46	Juniperus davurica 'Parsoni' / Parson's Juniper	24" - 30" SPR.	Cont.	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
HM-1	3,303 sf	NYSDEC Stormwater Basin Mix #1 / Lowest Mix	seed	See Mix Detail on this Sheet	
HM-3	5,678 sf	NYSDEC Stormwater Basin Mix #3 / Highest Mix	seed	See Mix Detail on this Sheet	
WFS	36,570 sf	Wildlife Food & Shelter Mix / Restoration Mix	seed	See Mix Detail on this Sheet	

PLANT SCHEDULE POTENTIAL FUTURE WETLAND BUFFER MITIGATION	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
DECIDUOUS TREES	12	Acer rubrum 'Red Sunset' / Red Maple	3" - 3 1/2" Cal.	B & B	
Z63	12	Amelanchier canadensis / Shadbowl Serviceberry	3" - 3 1/2" Cal.	B & B	
QP2	9	Quercus palustris / Pin Oak	3" - 3 1/2" Cal.	B & B	
DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR RES	20	Cornus sericea / Red Twig Dogwood	3" - 4" HT.	#5 Cont.	
IW2	24	Ilex verticillata / Winterberry	3" - 4" HT.	#5 Cont.	
VH	19	Vaccinium corymbosum / Highbush Blueberry	3" - 4" HT.	#5 Cont.	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
NWDM	24,604 sf	Northeast Wetland Diversity Mix / Restoration Mix	seed	See Mix Detail on this Sheet	

- PLANTING NOTES:**
- A. SEED MIXTURE: SUPPLEMENTAL WETLAND SEED MIX IS TO BE APPLIED TO THE FLOODPLAIN STORAGE BASINS AT 20-40 LBS/ACRE OR 1 LB PER 1,000 SF OF SEED PER ACRE AND CONSIST OF FOLLOWING:
- NORTHEAST WETLAND DIVERSITY SEED MIX**
- | % BY WT. | SPECIES                  | VARIETY                 |
|----------|--------------------------|-------------------------|
| 26.66%   | EUPATORIUM PERFOLIATUM   | BONESET                 |
| 23.80%   | VERBENA HASTATA          | BLUE VERVAIN            |
| 19.75%   | PANICUM DICHTOMIFLORUM   | SMOOTH PANIC-GRASS      |
| 8.74%    | SOLIDAGO RUPESTRIS       | WHORLED GOLDENROD       |
| 8.74%    | EUPATORIUM MACULATUM     | JOE PYE WEEED           |
| 6.65%    | ELUTHAMA GRAMINIFOLIA    | GRASS LEAF GOLDENROD    |
| 4.80%    | POLYGONUM PENNSYLVANICUM | PENNSYLVANIAN SMARTWEED |
| 2.80%    | ASTER NOVAE-ANGLIAE      | NEW ENGLAND ASTER       |
| 0.75%    | NOCTURNAL BISMANS        | NOCTURNAL BISMANS' TICK |
| 0.21%    | ASCLEPIAS INCARNATA      | SWAMP MILKWEED          |
| 0.12%    | VERISCOLOR               | BLUE FLAG               |
- B. HM-1 NYSDEC STORMWATER BASIN MIX #1 [HERBACIOUS] (20-40 LBS/ACRE OR 1 LB PER 1,000 SF)
- | % BY WT. | SPECIES                  | VARIETY                 |
|----------|--------------------------|-------------------------|
| 26.66%   | EUPATORIUM PERFOLIATUM   | BONESET                 |
| 23.80%   | VERBENA HASTATA          | BLUE VERVAIN            |
| 19.75%   | PANICUM DICHTOMIFLORUM   | SMOOTH PANIC-GRASS      |
| 8.74%    | SOLIDAGO RUPESTRIS       | WHORLED GOLDENROD       |
| 8.74%    | EUPATORIUM MACULATUM     | JOE PYE WEEED           |
| 6.65%    | ELUTHAMA GRAMINIFOLIA    | GRASS LEAF GOLDENROD    |
| 4.80%    | POLYGONUM PENNSYLVANICUM | PENNSYLVANIAN SMARTWEED |
| 2.80%    | ASTER NOVAE-ANGLIAE      | NEW ENGLAND ASTER       |
| 0.75%    | NOCTURNAL BISMANS        | NOCTURNAL BISMANS' TICK |
| 0.21%    | ASCLEPIAS INCARNATA      | SWAMP MILKWEED          |
| 0.12%    | VERISCOLOR               | BLUE FLAG               |
- C. HM-3 NYSDEC STORMWATER BASIN MIX #3 [HERBACIOUS] (20-40 LBS/ACRE OR 1 LB PER 1,000 SF)
- | % BY WT. | SPECIES                  | VARIETY                 |
|----------|--------------------------|-------------------------|
| 26.66%   | EUPATORIUM PERFOLIATUM   | BONESET                 |
| 23.80%   | VERBENA HASTATA          | BLUE VERVAIN            |
| 19.75%   | PANICUM DICHTOMIFLORUM   | SMOOTH PANIC-GRASS      |
| 8.74%    | SOLIDAGO RUPESTRIS       | WHORLED GOLDENROD       |
| 8.74%    | EUPATORIUM MACULATUM     | JOE PYE WEEED           |
| 6.65%    | ELUTHAMA GRAMINIFOLIA    | GRASS LEAF GOLDENROD    |
| 4.80%    | POLYGONUM PENNSYLVANICUM | PENNSYLVANIAN SMARTWEED |
| 2.80%    | ASTER NOVAE-ANGLIAE      | NEW ENGLAND ASTER       |
| 0.75%    | NOCTURNAL BISMANS        | NOCTURNAL BISMANS' TICK |
| 0.21%    | ASCLEPIAS INCARNATA      | SWAMP MILKWEED          |
| 0.12%    | VERISCOLOR               | BLUE FLAG               |
- D. INVASIVE SPECIES INCLUDING BUT NOT LIMITED TO REED GRASS AND JAPANESE KNOWEED, OCKROWRN VINES COVERING VEGETATION TO REMAIN, DEAD TREES, TRASH AND DEBRIS WILL BE REMOVED FROM WETLAND BUFFER AREAS AS INDICATED. REFER TO WETLAND EVALUATION AND IMPACT REPORT, PREPARED BY ECOLOGICAL SOLUTIONS, LLC, LAST REVISED 05/29/2020 FOR MORE INFORMATION. ALL CLEARED AREAS WILL BE RE-SEEDING WITH "WFS-WILDLIFE FOOD & SHELTER SHRUB MIX (ERECT CONSERVATION SEEDS) OR EQUIVALENT."

DISTURBANCE SUMMARY			
CURRENTLY PROPOSED DISTURBANCE		POTENTIAL FUTURE DISTURBANCE (INCLUDING COMPENSATORY STORAGE BASINS)	
DISTURBANCE WITHIN WETLAND:	0 S.F. (0.00 AC)	DISTURBANCE WITHIN WETLAND:	0 S.F. (0.00 AC)
DISTURBANCE WITHIN BUFFER:	5,615 S.F. (0.128 AC)	DISTURBANCE WITHIN BUFFER:	26,899 S.F. (0.617 AC)
PROPOSED MITIGATION AREA WITHIN WETLAND BUFFER:	36,570 S.F. (0.839 AC)	PROPOSED MITIGATION AREA WITHIN WETLAND BUFFER:	56,418 S.F. (1.264 AC)
PROPOSED MITIGATION AREA OUTSIDE OF WETLAND BUFFER:	0 S.F. (0.000 AC)	PROPOSED MITIGATION AREA OUTSIDE OF WETLAND BUFFER:	4,001 S.F. (0.092 AC)
TOTAL MITIGATION AREA:	36,570 S.F. (0.839 AC)	TOTAL MITIGATION AREA:	62,419 S.F. (1.434 AC)
MITIGATION RATIO:	36,570 S.F. / 5,615 S.F. = 6.51	MITIGATION RATIO:	62,419 S.F. / 26,899 S.F. = 2.32

**APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED**

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

GRAPHIC SCALE  
 1 inch = 30 ft.

**COMPILE/ISSUE/DATE**  
 1. RESPONSE TO TOWN COMMENTS 10/24/2022 NC  
 2. RESPONSE TO TOWN COMMENTS 09/11/2023 NC

**REVISION**  
 1. RESPONSE TO TOWN COMMENTS 10/24/2022 NC  
 2. RESPONSE TO TOWN COMMENTS 09/11/2023 NC

**DATE**  
 10/24/2022 NC  
 09/11/2023 NC

**PROJECT NO.**  
 22090

**PROJECT NAME**  
 WMS WILDLIFE FOOD & SHELTER MIX (CRMW-138)

**DRAWING NO.**  
 C-500

**CLIENT**  
 WMS WILDLIFE FOOD & SHELTER MIX (CRMW-138)

**OWNER**  
 WMS WILDLIFE FOOD & SHELTER MIX (CRMW-138)

**DESIGNER**  
 JMC SITE DEVELOPMENT CONSULTANTS, LLC  
 BOCA RATON, FL 33431

**ARCHITECT**  
 SWW ARCHITECTURE & DESIGN  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

**ENGINEER**  
 JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.

**120 BEDFORD ROAD • ARMONK, NY 10504**  
 voice 914.273.5225 • fax 914.273.2102  
 www.jmcplic.com

**SITE LANDSCAPING & WETLAND MITIGATION PLAN**

**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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



# NEW YORK STATE INTERSTATE ROUTE 684

LEGEND	
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	PROPOSED LIGHT FIXTURES
	PROPOSED ILLUMINANCE IN FOOT-CANDLES

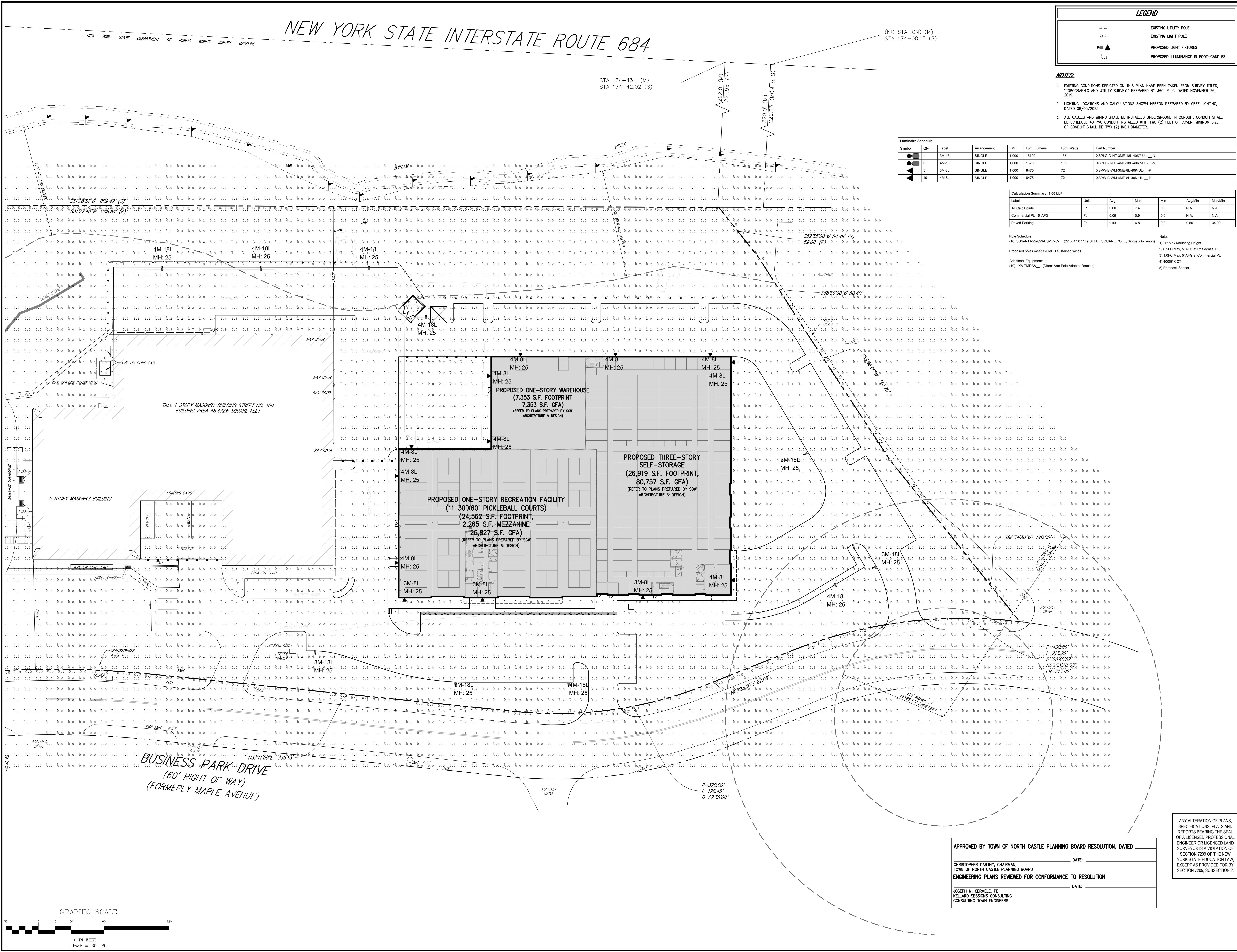
- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - LIGHTING LOCATIONS AND CALCULATIONS SHOWN HEREON PREPARED BY CREE LIGHTING, DATED 08/03/2023.
  - ALL CABLES AND WIRING SHALL BE INSTALLED UNDERGROUND IN CONDUIT. CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT INSTALLED WITH TWO (2) FEET OF COVER. MINIMUM SIZE OF CONDUIT SHALL BE TWO (2) INCH DIAMETER.

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	LMP	Lum. Lumens	Lum. Watts	Part Number
	4	3M-18L	SINGLE	1,000	18700	136	XSP1G-D-HT-3ME-18L-40K-UL__N
	6	4M-18L	SINGLE	1,000	18700	136	XSP1G-D-HT-4ME-18L-40K-UL__N
	3	3M-8L	SINGLE	1,000	8475	72	XSPW-B-WM-3ME-8L-40K-UL__P
	10	4M-8L	SINGLE	1,000	8475	72	XSPW-B-WM-4ME-8L-40K-UL__P

Calculation Summary: 1.00 LLF					
Label	Units	Avg	Max	Min	Max/Min
All Calc Points	Fc	9.60	7.4	0.0	N.A.
Commercial PL - 5' AFG	Fc	0.09	0.9	0.0	N.A.
Paved Parking	Fc	1.90	6.8	0.2	9.90

**Pole Schedule**  
 (10) SSS-4-11-22-CW-BS-10\_C\_\_ (22' X 4" X 1/2" STEEL SQUARE POLE, Single XA-Term)  
 (2) 0.5FC Max, 5' AFG at Residential PL  
 (3) 1.0FC Max, 5' AFG at Commercial PL  
 (4) 4000K CCT  
 (5) Photocell Sensor

**Notes:**  
 1) 25' Max Mounting Height  
 2) 0.5FC Max, 5' AFG at Residential PL  
 3) 1.0FC Max, 5' AFG at Commercial PL  
 4) 4000K CCT  
 5) Photocell Sensor



No.	1.	RESPONSE TO TOWN COMMENTS
Date	09/11/2023	NC
Revision		

**OWNER/CLIENT:**  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

**ARCHITECT:**  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

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 120 BEDFORD ROAD - ARMONK, NY 10504  
 voice 914.273.5225 • fax 914.273.2102  
 www.jmcpllc.com



**SITE LIGHTING PLAN**  
**BAYSPACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Drawn:	NC	Approved:	DL
Scale:	1" = 30'		
Date:	09/12/2022		
Project No:	22090		
Drawn-SE:	LIGHT	LIGHT-AR	
Drawing No:	<b>C-600</b>		

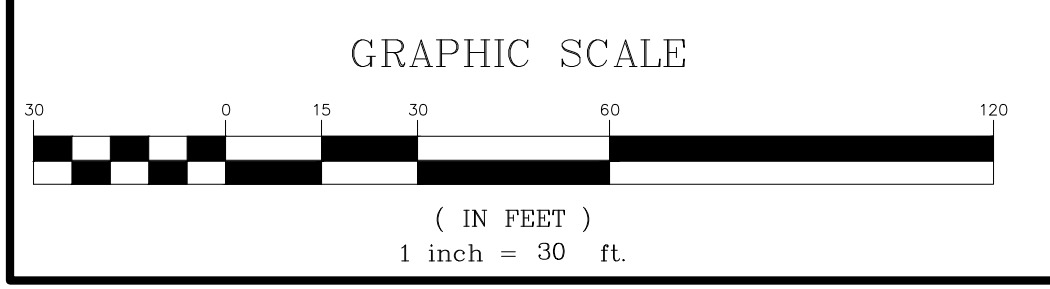
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION


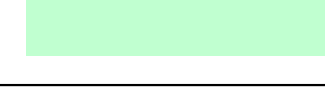
JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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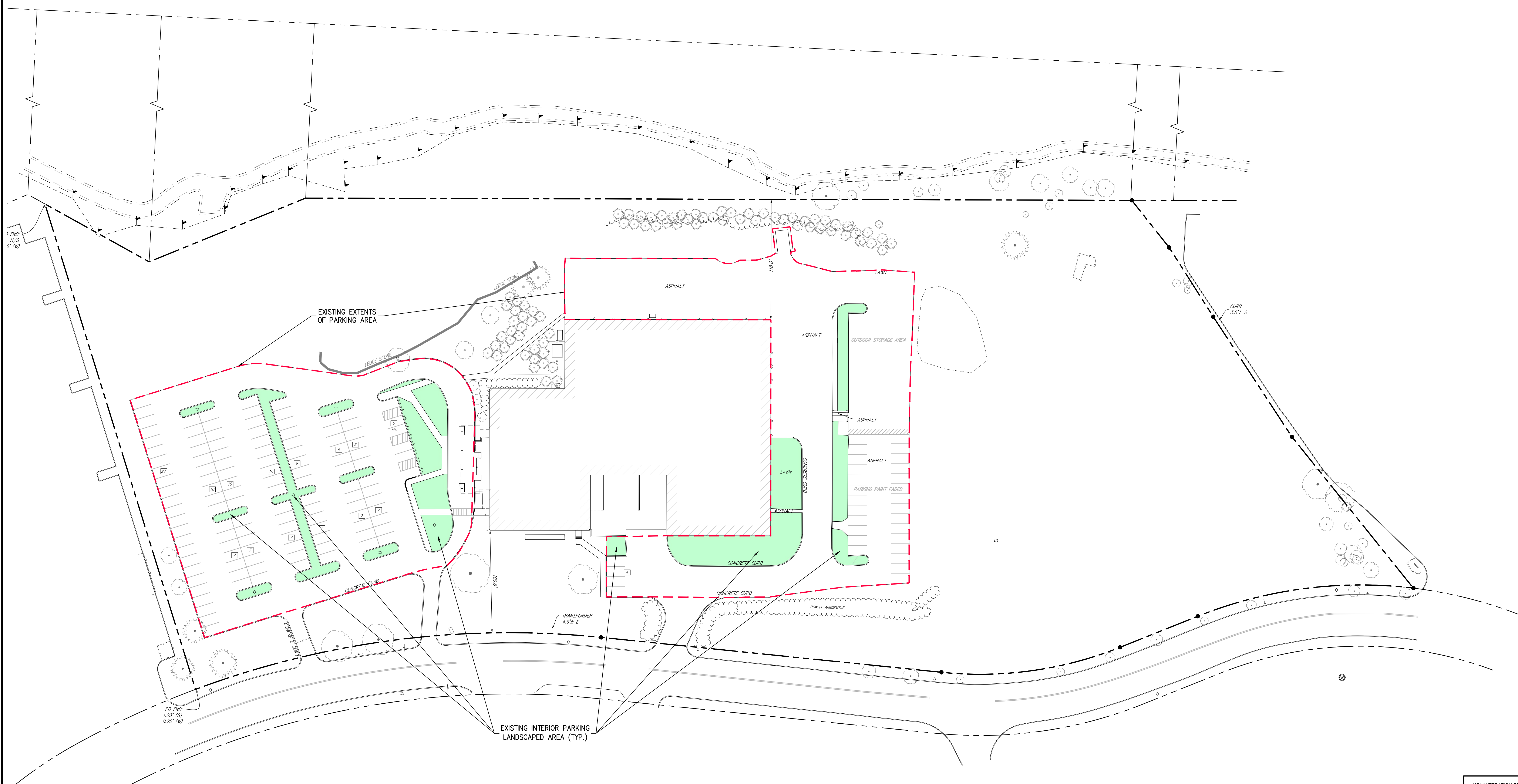
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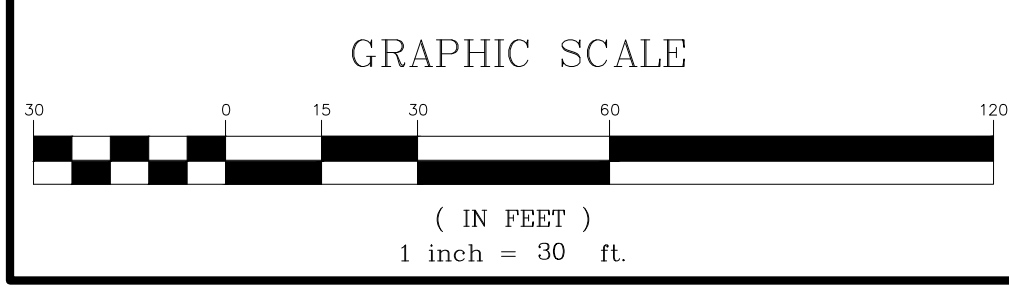


LEGEND	
	EXISTING PARKING AREA (132,926± S.F.)
	EXISTING INTERIOR PARKING LANDSCAPED AREA (18,235± S.F.)

**EXISTING INTERIOR PARKING LANDSCAPED AREA CALCULATION:**  
 TOTAL EXISTING INTERIOR PARKING LANDSCAPED AREA → 18,235 S.F. X 100 = ±13.7%  
 TOTAL EXISTING PARKING AREA → 132,926 S.F.



NOT FOR CONSTRUCTION



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CARTHAY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION DATE: \_\_\_\_\_  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

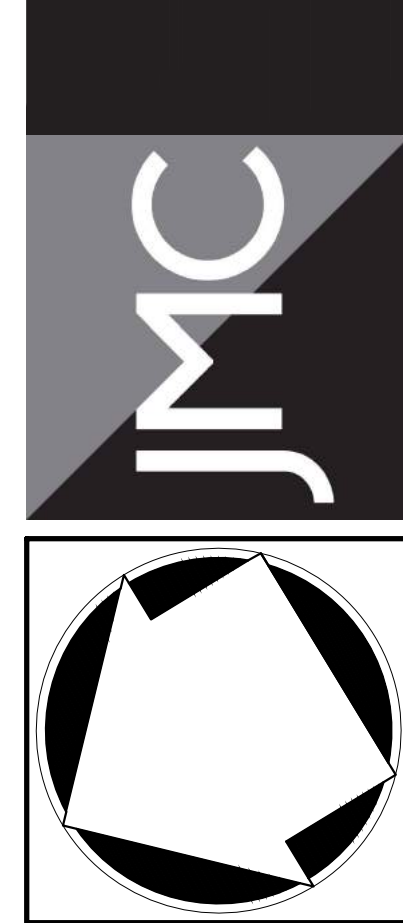
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No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/17/2023	NC

OWNER/CLIENT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

JMC Planning, Engineering, Landscape  
 Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.6225 • fax 914.273.2102  
 www.jmcpllc.com



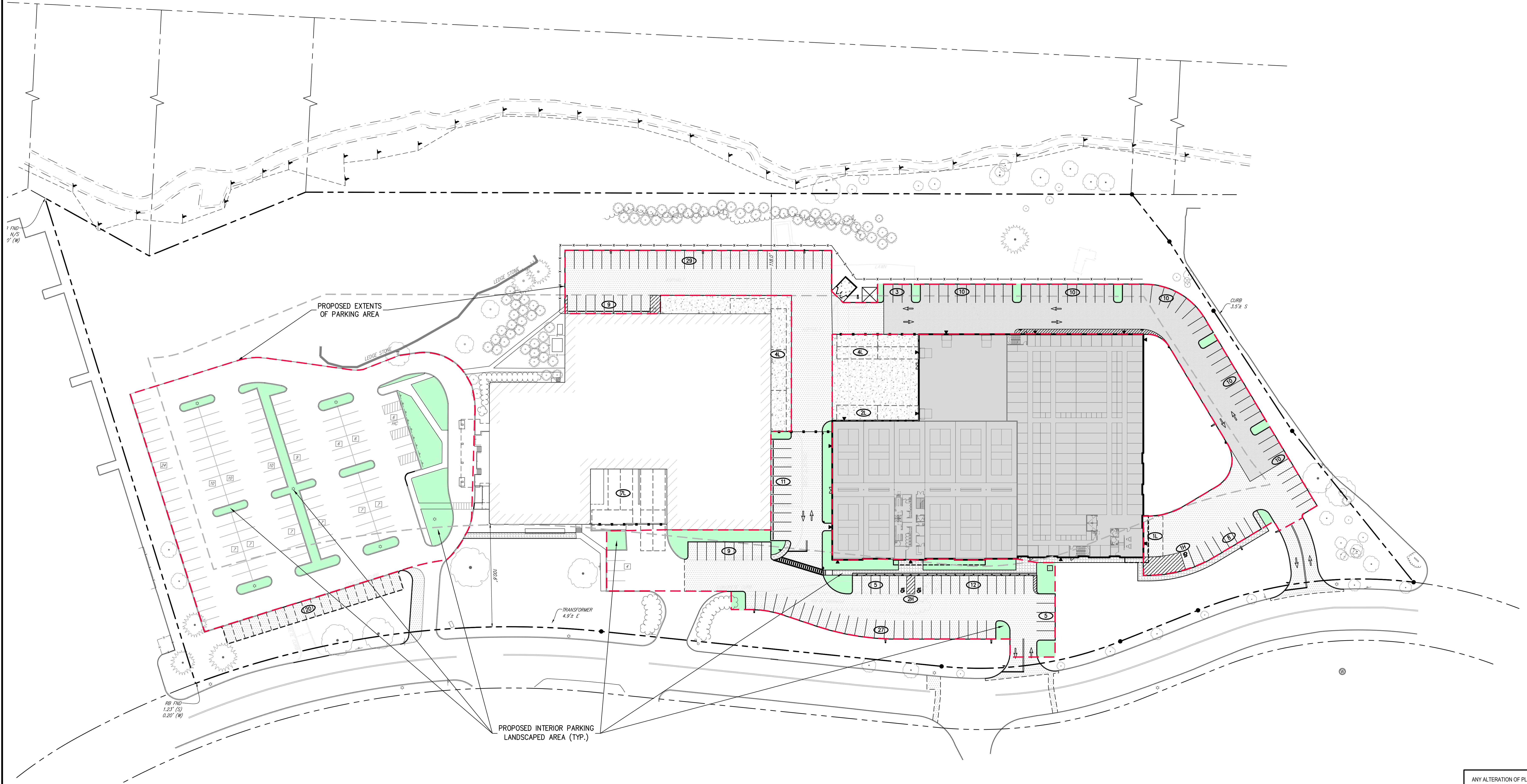
**EXISTING INTERIOR LANDSCAPED AREA CALCULATIONS PLAN**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Client:	NC	Approved:	DL
Scale:	1" = 40'		
Date:	09/12/2022		
Project No:	22090		
Drawing No:	2209-SE	EX LS AREA	LS AREA CALC.
<b>C-800</b>			



NOT FOR CONSTRUCTION

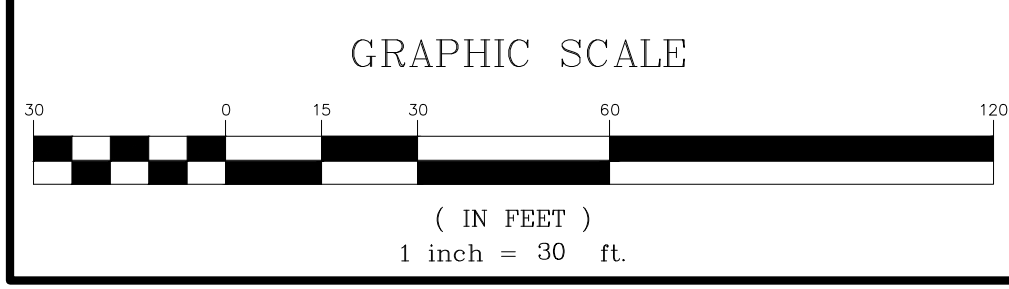
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**LEGEND**

	PROPOSED PARKING AREA (158,596± S.F.)
	PROPOSED INTERIOR PARKING LANDSCAPED AREA (16,105± S.F.)

**PROPOSED INTERIOR PARKING LANDSCAPED AREA CALCULATION:**  
 TOTAL PROPOSED INTERIOR PARKING LANDSCAPED AREA → 16,105 S.F. X 100 = ±10.15%  
 TOTAL PROPOSED PARKING AREA → 158,596 S.F.



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CARTHAY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION DATE: \_\_\_\_\_  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	10/24/2022	NC

OWNER/CLIENT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

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 voice 914.273.5225 • fax 914.273.2102  
 www.jmcpilc.com



**PROPOSED INTERIOR LANDSCAPED AREA CALCULATIONS PLAN**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Client:	NC	Approved:	DL
Scale:	1" = 40'		
Date:	09/12/2022		
Project No:	22090		
ZONE-SE	PROP LS AREA	EXIST LOR	
Drawing No:	<b>C-810</b>		



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

Date	09/17/2023	NC
Revision		
No.	1.	RESPONSE TO TOWN COMMENTS

OWNER/CLIENT  
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 4800 NORTH FEDERAL HWY., SUITE B-200-34  
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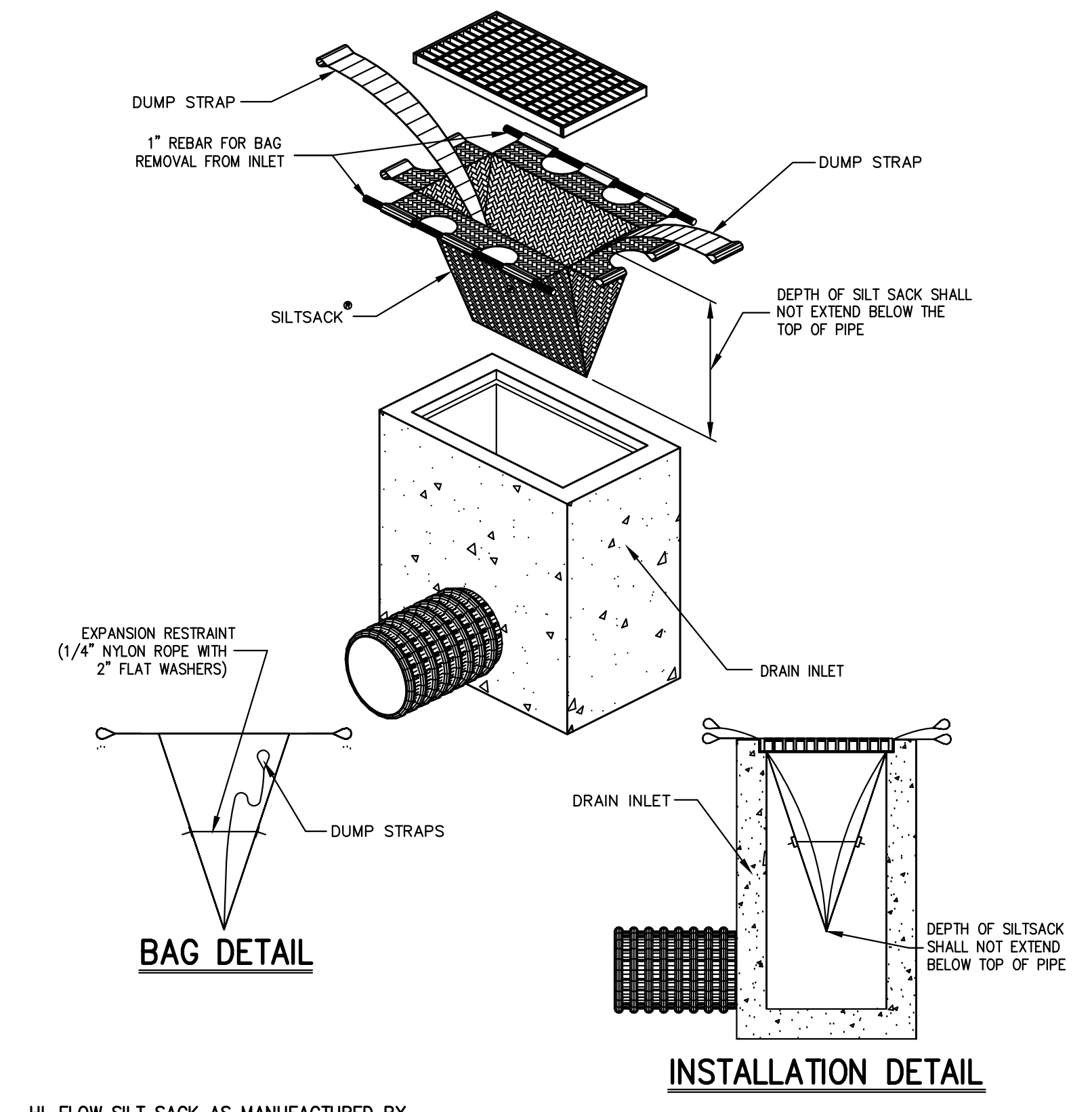
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**JMC**

CONSTRUCTION DETAILS  
**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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Drawn	NC	Approved	DL
Scale	NOT TO SCALE		
Date	09/12/2022		
Project No.	22090		
Sheet No.	DET-1		
Drawing No.	C-900		

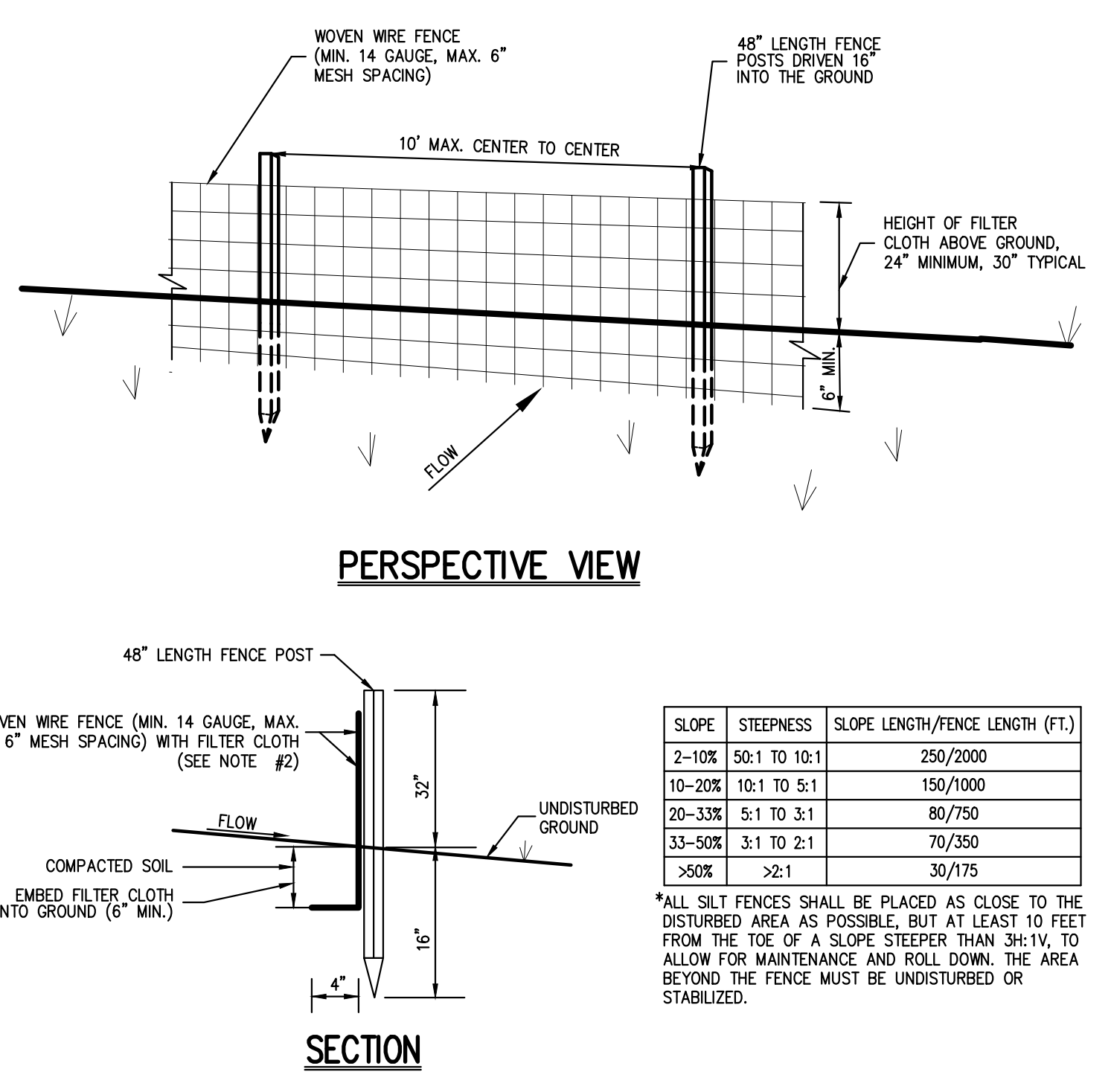


HI-FLOW SILT SACK AS MANUFACTURED BY ACI ENVIRONMENTAL OR APPROVED EQUAL<sup>®</sup>

(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLIN BURST	ASTM D-3786	420 PSF
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPEARANT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMEABILITY	ASTM D-4491	1.5 SEC -1

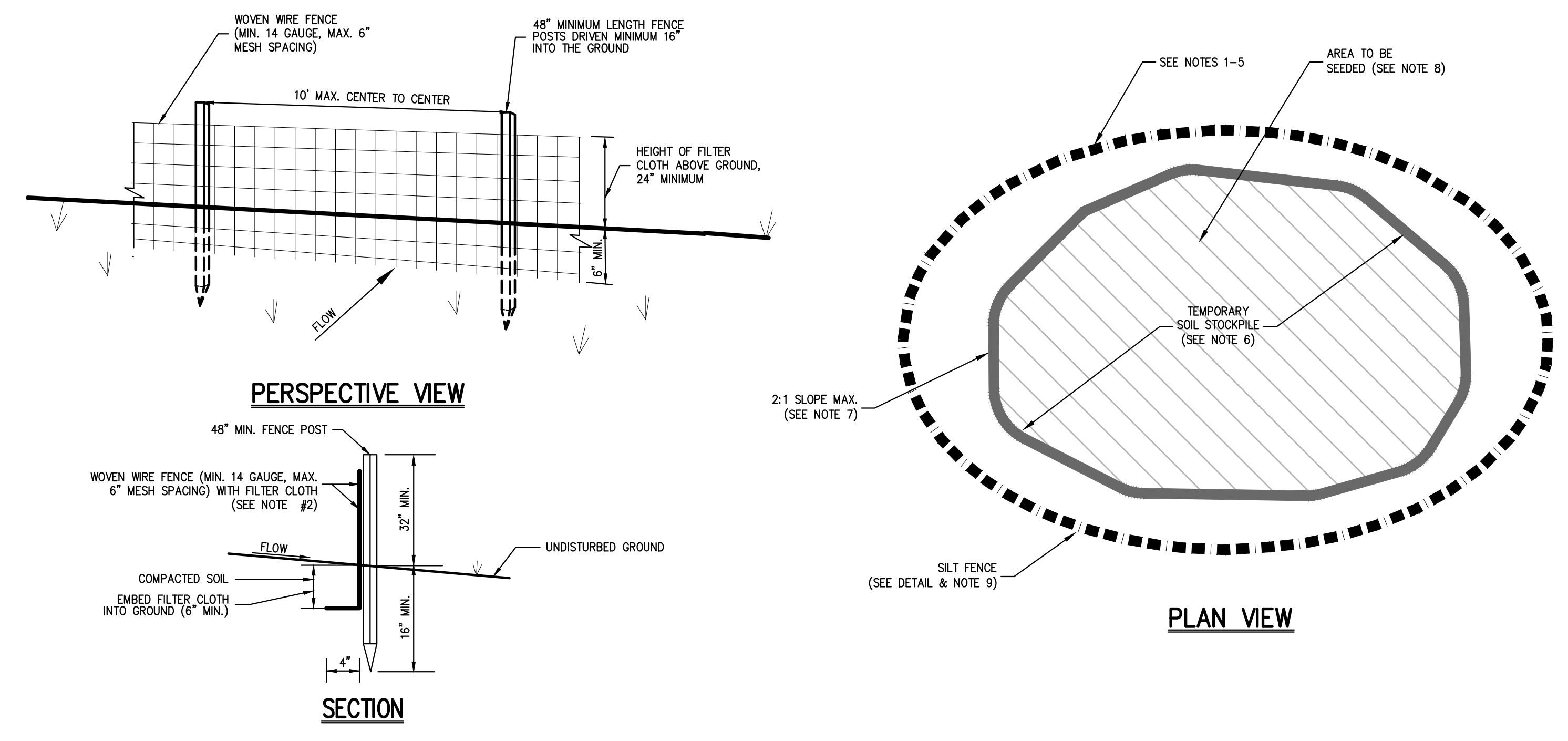
NOTE:  
 CURB INLETS SHALL BE TYPE B WITH CURB DEFLECTOR.



SLOPE	STEEPNESS	SLOPE LENGTH/FENCE LENGTH (FT.)
2-10%	50:1 TO 10:1	250/2000
10-20%	10:1 TO 5:1	150/1000
20-33%	5:1 TO 3:1	80/750
33-50%	3:1 TO 2:1	70/250
>50%	>2:1	30/75

\*ALL SILT FENCES SHALL BE PLACED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE, BUT AT LEAST 10 FEET FROM THE TOE OF A SLOPE STEEPER THAN 3H:1V, TO ALLOW FOR MAINTENANCE AND ROLL DOWN THE AREA BEYOND THE FENCE MUST BE UNDISTURBED OR STABILIZED.

- NOTES:
- WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL, EITHER T OR U TYPE OR HARDWOOD.
  - FILTER CLOTH SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
  - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA THIN, OR APPROVED EQUAL.
  - PREFABRICATED UNITS SHALL BE GEOTAB, ENVROFENCE, OR APPROVED EQUAL.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



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  - PREFABRICATED UNITS SHALL BE GEOTAB, ENVROFENCE, OR APPROVED EQUAL.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
  - THE AREA CHOSEN FOR ALL TEMPORARY SOIL STOCKPILES SHALL BE DRY AND STABLE.
  - ALL STOCKPILED SOIL SHALL NOT CONTAIN SLOPES GREATER THAN 2:1.
  - UPON COMPLETION OF SOIL STOCKPILES, EACH PILE SHALL BE SEEDED WITHIN 24 HOURS. PERENNIAL OR ANNUAL RYEGRASS SHALL BE PLANTED DURING SPRING, SUMMER OR EARLY FALL. WINTER RYE (CEREAL RYE) SHALL BE PLANTED DURING LATE FALL OR EARLY WINTER.
  - ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED AROUND THE PERIMETER.

**SILT FENCE**

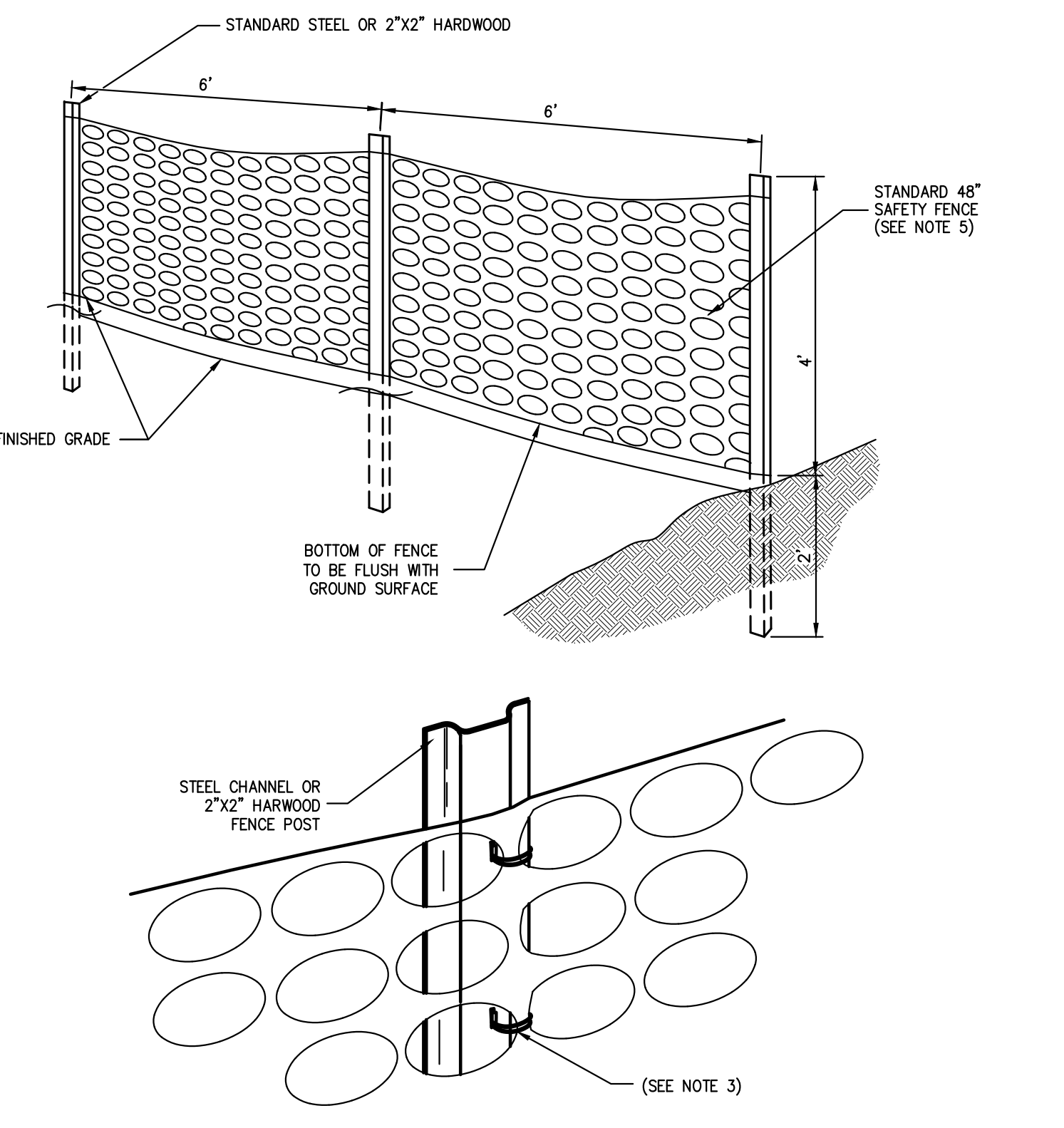
1

**TEMPORARY SOIL STOCKPILE WITH SILT FENCE**

2

**SILT SACK**

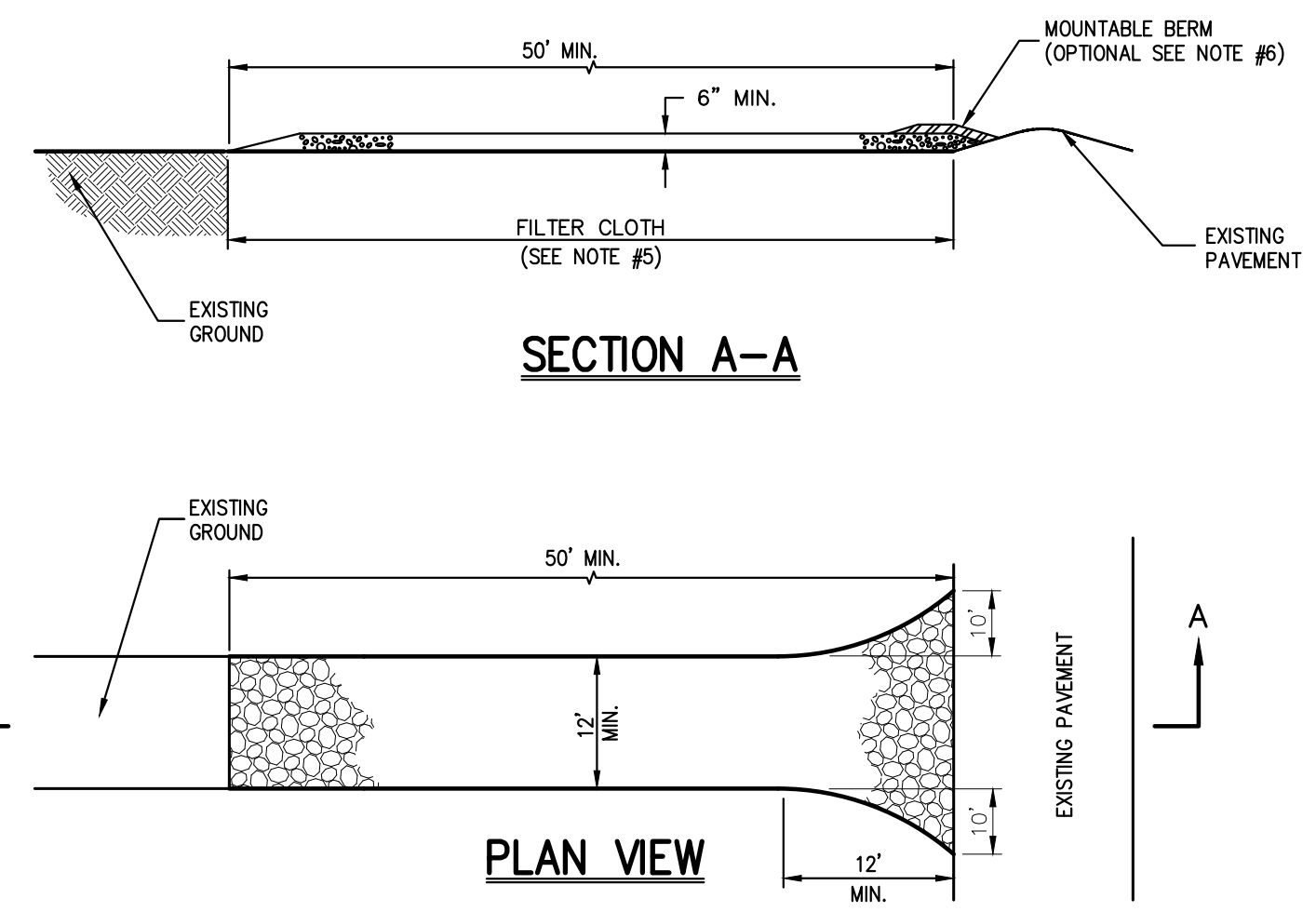
3



- NOTES:
- SPACE SUPPORT FENCE POSTS AT 6 FOOT INTERVALS.
  - DRIVE SUPPORT POSTS 2 FEET INTO GROUND.
  - FIRMLY FASTEN FENCE MATERIAL IN PLACE BY WRING TO FENCE POST WHILE MAINTAINING TENSION ACROSS FULL HEIGHT OF FENCE. WRING SHALL BE DONE IN A MANNER THAT WILL PREVENT SAGGING OF FENCE MATERIAL.
  - PROVIDE PERIODIC INSPECTION AND MAINTENANCE OF FENCE INCLUDING REPAIRS AS NECESSARY AND REQUIRED.
  - PLASTIC FENCE SHALL BE INTERNATIONAL ORANGE COLOR, AS MANUFACTURED BY ADRI ENTERPRISES, INC. OR APPROVED EQUAL.
  - REMOVE CONSTRUCTION FENCE AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.

**CONSTRUCTION FENCE**

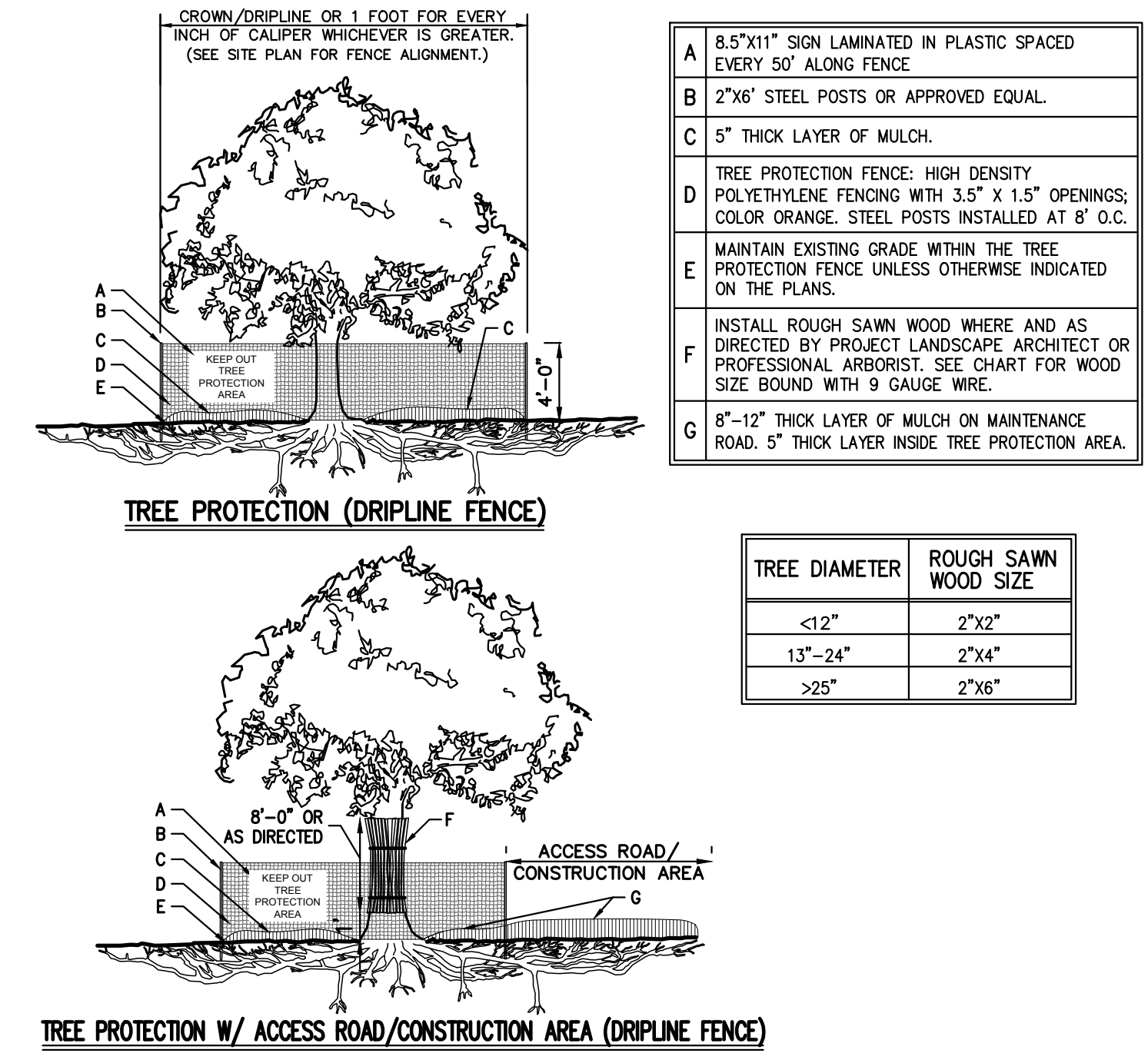
4



- NOTES:
- STONE SIZE - USE 1" TO 4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
  - LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
  - THICKNESS - NOT LESS THAN SIX (6) INCHES.
  - 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.
  - FILTER CLOTH TO BE PLACED OVER THE ENTIRE WIDTH AND LENGTH OF AREA PRIOR TO PLACING OF STONE.
  - 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.
  - 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 TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
  - WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
  - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

**STABILIZED CONSTRUCTION ENTRANCE**

5



LETTER	DESCRIPTION
A	3.5\"/>
B	2\"/>
C	5\"/>
D	TREE PROTECTION FENCE: HIGH DENSITY POLYETHYLENE FENCING WITH 3.5\"/>
E	MAINTAIN EXISTING GRADE WITHIN THE TREE PROTECTION FENCE UNLESS OTHERWISE INDICATED ON THE PLANS.
F	INSTALL ROUGH SAWN WOOD WHERE AND AS DIRECTED BY PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SEE CHART FOR WOOD SIZE BOUND WITH 9 GAUGE WIRE.
G	8\"/>

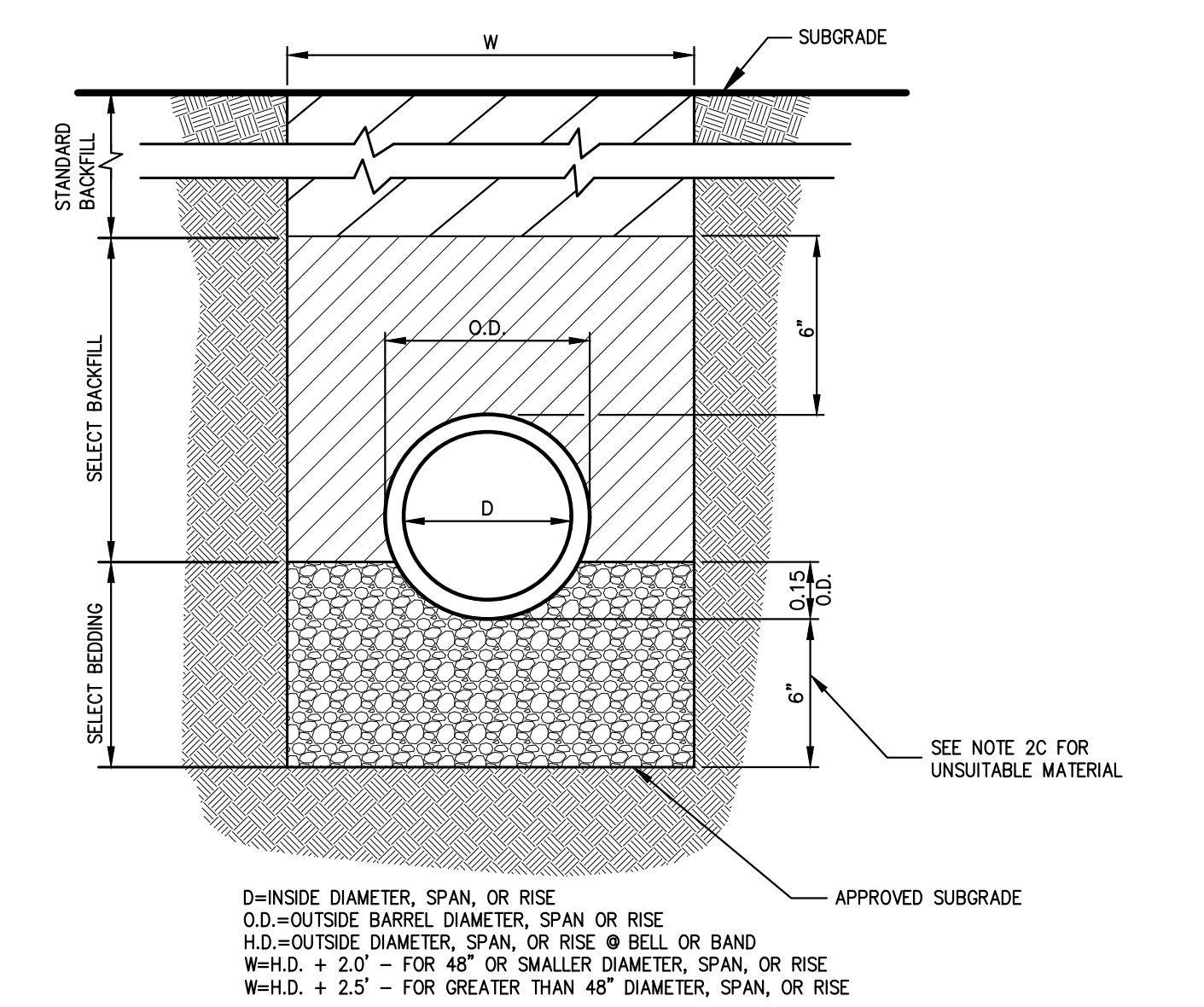
  

TREE DIAMETER	ROUGH SAWN WOOD SIZE
<12"	2\"/>
13\"-24"	2\"/>
>25"	2\"/>

- NOTES:
- SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
  - IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
  - NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
  - NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
  - SEE SITE PLANS FOR IDENTIFICATIONS/LOCATIONS OF INDIVIDUAL TREES TO BE PROTECTED.
  - ALL EXCAVATION WITHIN THE CROWN/DRIPLINE OF ANY TREE SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SPECIAL MEASURES, SUCH AS THE USE OF AN AIR SPADE MAY BE REQUIRED.
  - THE CONTRACTOR MAY PROPOSE THE USE OF ENGINEERED MATTING OR OTHER ENGINEERED PRODUCTS IN LIEU OF MULCH, WHICH SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION.

**TREE PROTECTION**

6



- NOTES:
- FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE:
    - EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH.
    - 3/4\"/>
  - TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES:
    - FOR ALL CORRUGATED POLYETHYLENE DRAIN PIPE (CPDP) AND PVC PIPE AND CONDUIT INSTALLATION.
    - WHEN ROCK OR HARDPAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
    - WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN BOTTOM OF TRENCH. IN SUCH CASE DEPTH OF UNDERGROUTING SHALL BE AS DIRECTED BY THE ENGINEER WITH 4\"/>
  - FOR ALL TRENCH EXCAVATION IN FILL AREAS, ALL EMBANKMENTS SHALL BE CONSTRUCTED TO A MINIMUM OF 2 FEET ABOVE THE OUTSIDE TOP (AT THE BELL) OF THE PIPE PRIOR TO BEGINNING ANY TRENCH EXCAVATION.
  - BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES, UNLESS OTHERWISE SPECIFIED BACKFILL SHALL BE COMPACTED TO NOT LESS THAN (92%) MAXIMUM MODIFIED DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.

**TYPE II TRENCH**

7

NOT FOR CONSTRUCTION



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE, KELLARD SESSIONS CONSULTING CONSULTING TOWN ENGINEERS

Date	09/17/2023	NC
Revision	1. RESPONSE TO TOWN COMMENTS	

OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
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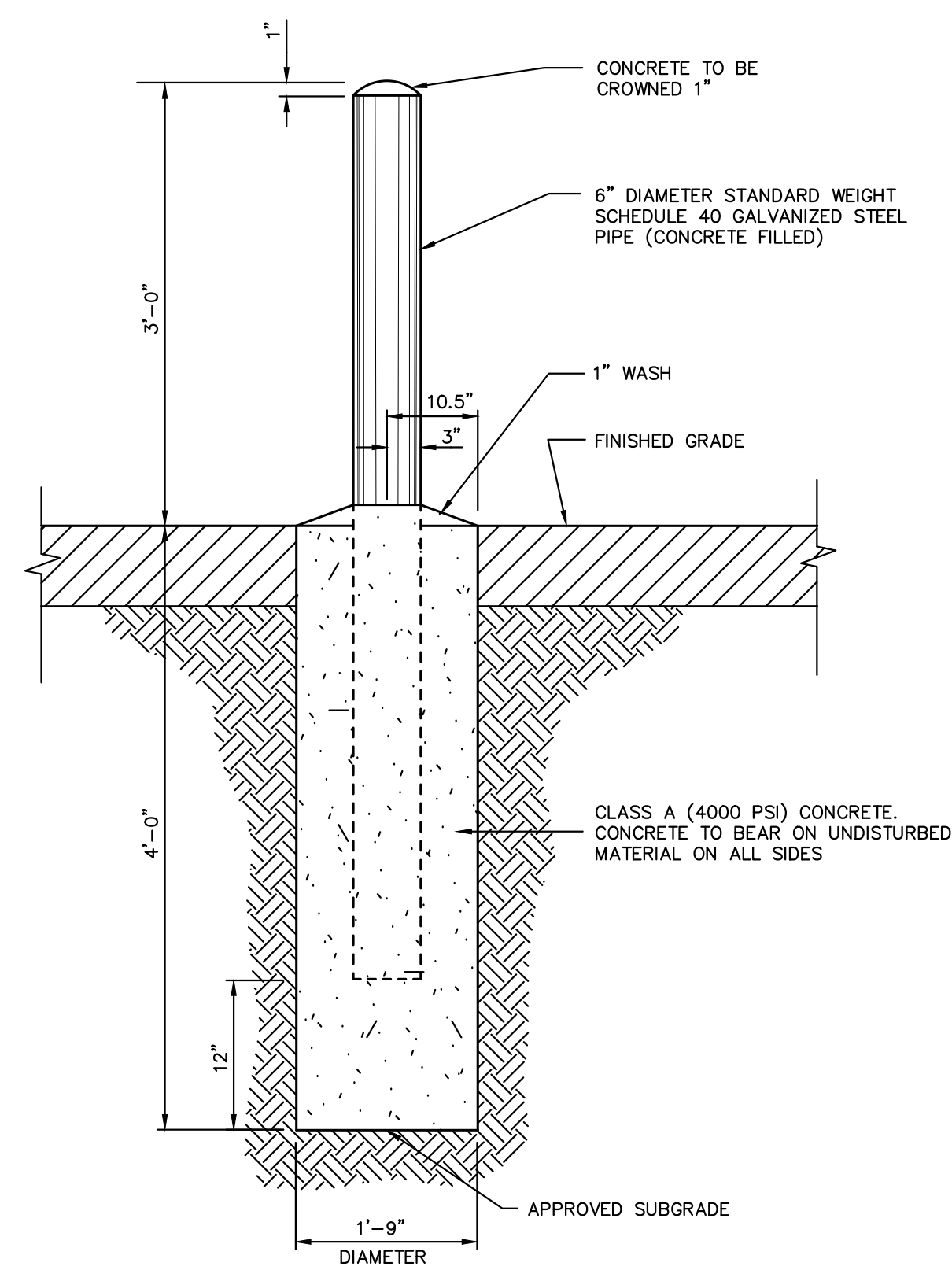
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**JMC**

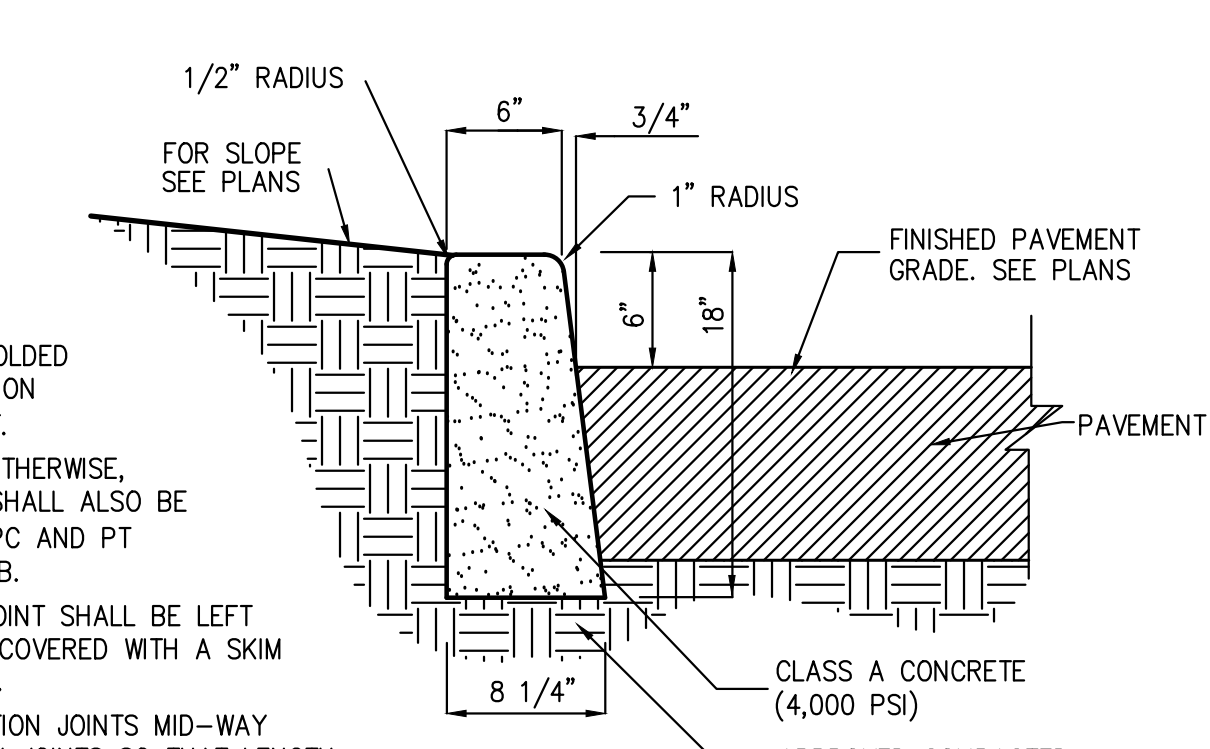
CONSTRUCTION DETAILS  
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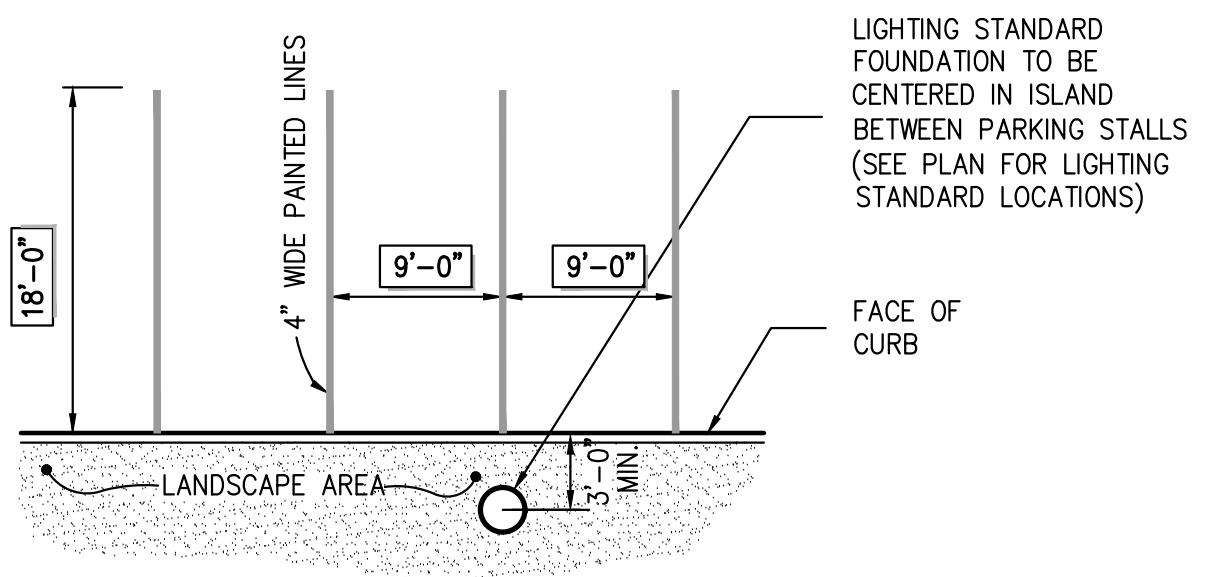
Drawn	NC	Approval	DL
Scale	NOT TO SCALE		
Date	09/12/2022		
Project No.	22090		
2000-DENOTES	DET-2		
Drawing No.	C-901		



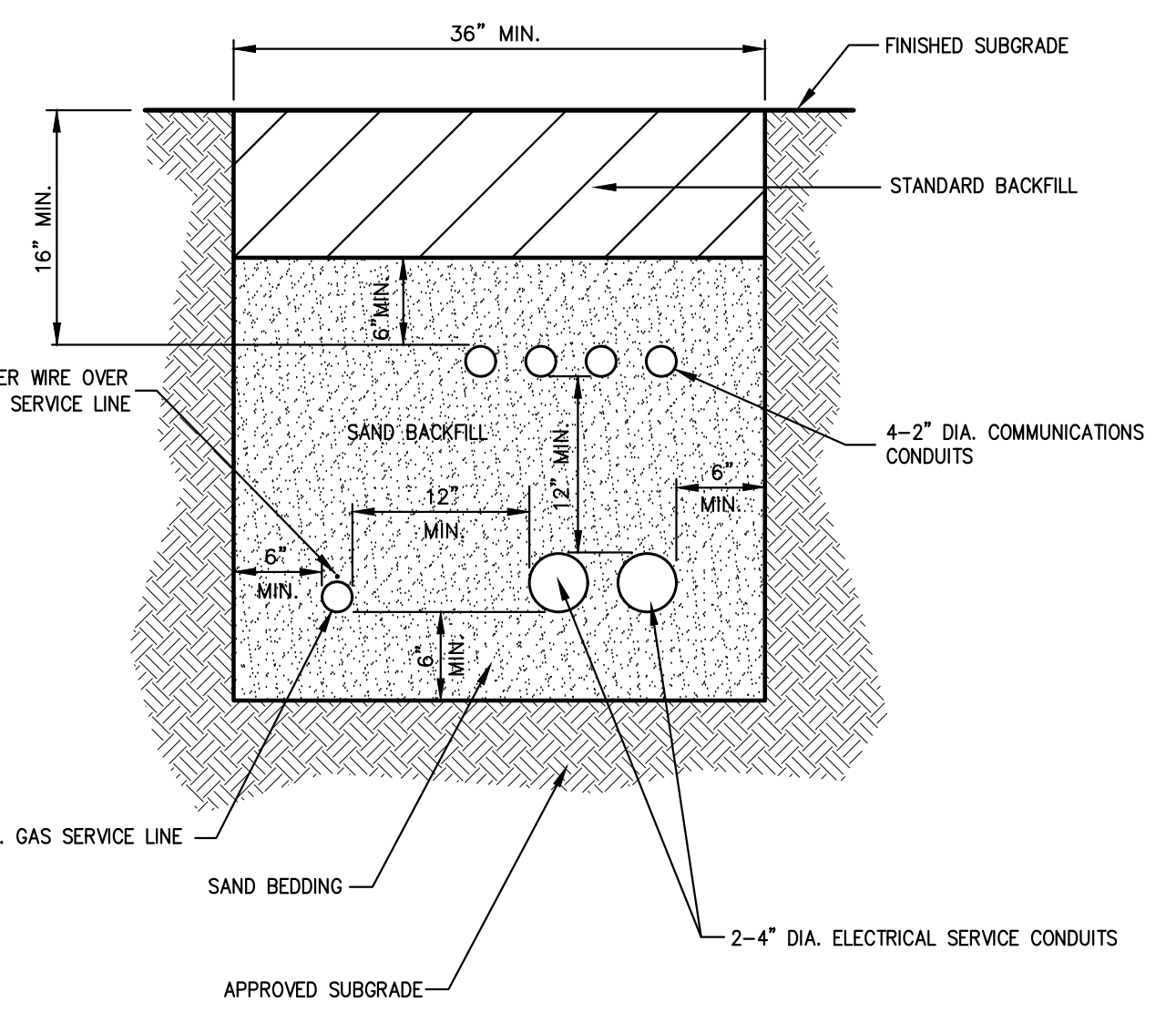
- NOTES:
- WHEN PROTECTION POSTS ARE TO BE USED FOR PROTECTION OF HANDICAP PARKING SIGNS OR OTHER TRAFFIC SIGNS, SIGN SUPPORTING POSTS SHALL BE EMBEDDED A MINIMUM OF THREE (3) FEET INTO THE CONCRETE.
  - POST FOR HANDICAP PARKING STALLS SHALL BE PAINTED BLUE AS FOLLOWS:
    - SOLVENT CLEAN TO REMOVE OIL, GREASE AND OTHER CONTAMINANTS.
    - APPLY METAL PRIMER FOR GALVANIZED SURFACES.
    - APPLY TWO (2) FINISH COATS OF APPROVED EXTERIOR PAINT FOR METAL SURFACES.



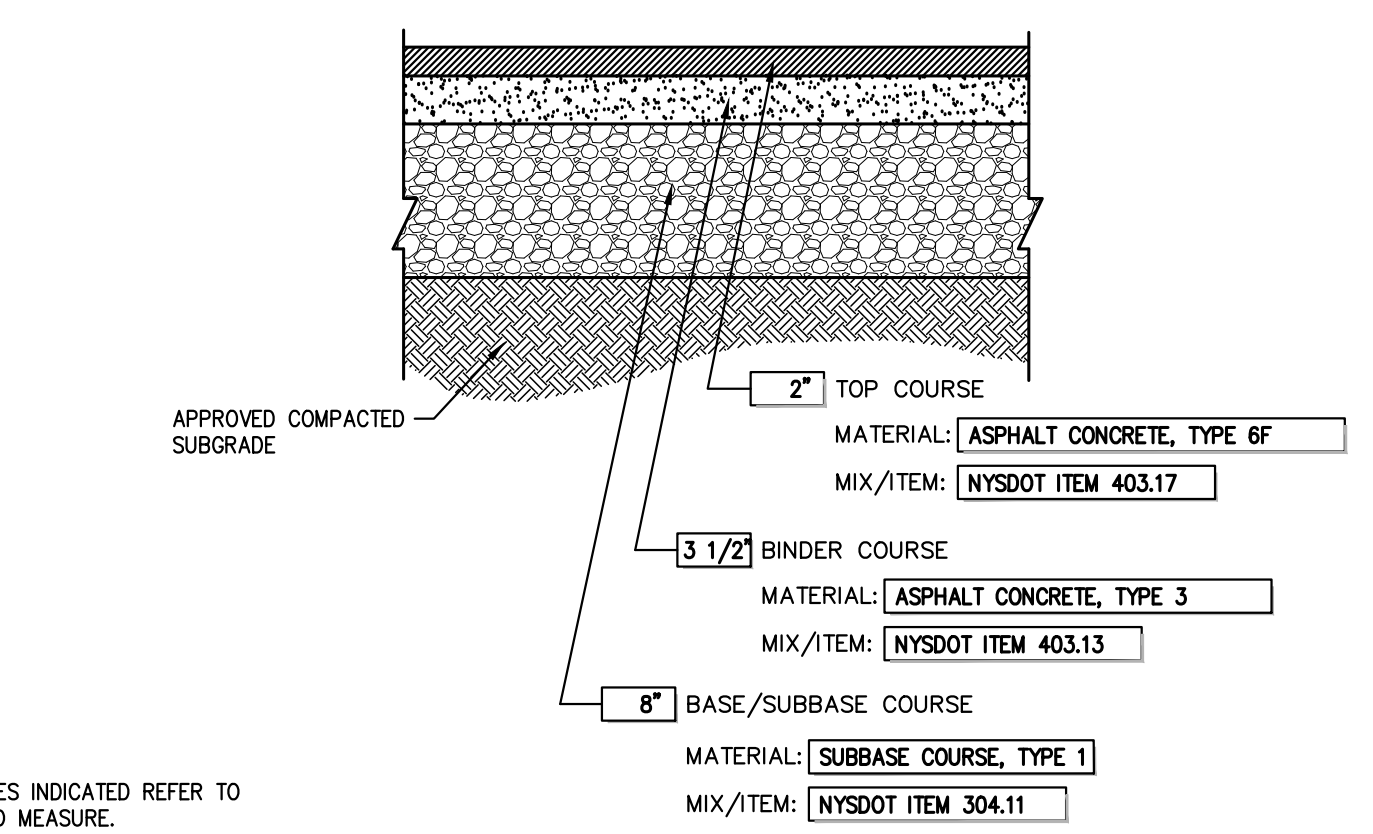
- NOTES:
- INSTALL 1/2" PREMOULDED BITUMINOUS EXPANSION JOINT EVERY 20 FEET.
  - UNLESS DIRECTED OTHERWISE, EXPANSION JOINTS SHALL ALSO BE INSTALLED AT THE PC AND PT OF ALL RADIUS CURB.
  - EACH EXPANSION JOINT SHALL BE LEFT EXPOSED AND NOT COVERED WITH A SKIM COAT OF CONCRETE.
  - INSTALL CONSTRUCTION JOINTS MID-WAY BETWEEN EXPANSION JOINTS SO THAT LENGTH OF CURB SEGMENTS WILL BE TEN (10) FEET.
  - LENGTH OF CURB SEGMENTS AT CLOSURES MAY BE VARIED BUT SHALL NOT BE LESS THAN FOUR (4) FEET.
  - WHEN INSTALLED ADJACENT TO SIDEWALK OR CONCRETE PAVEMENT, MATCH EXPANSION JOINTS.



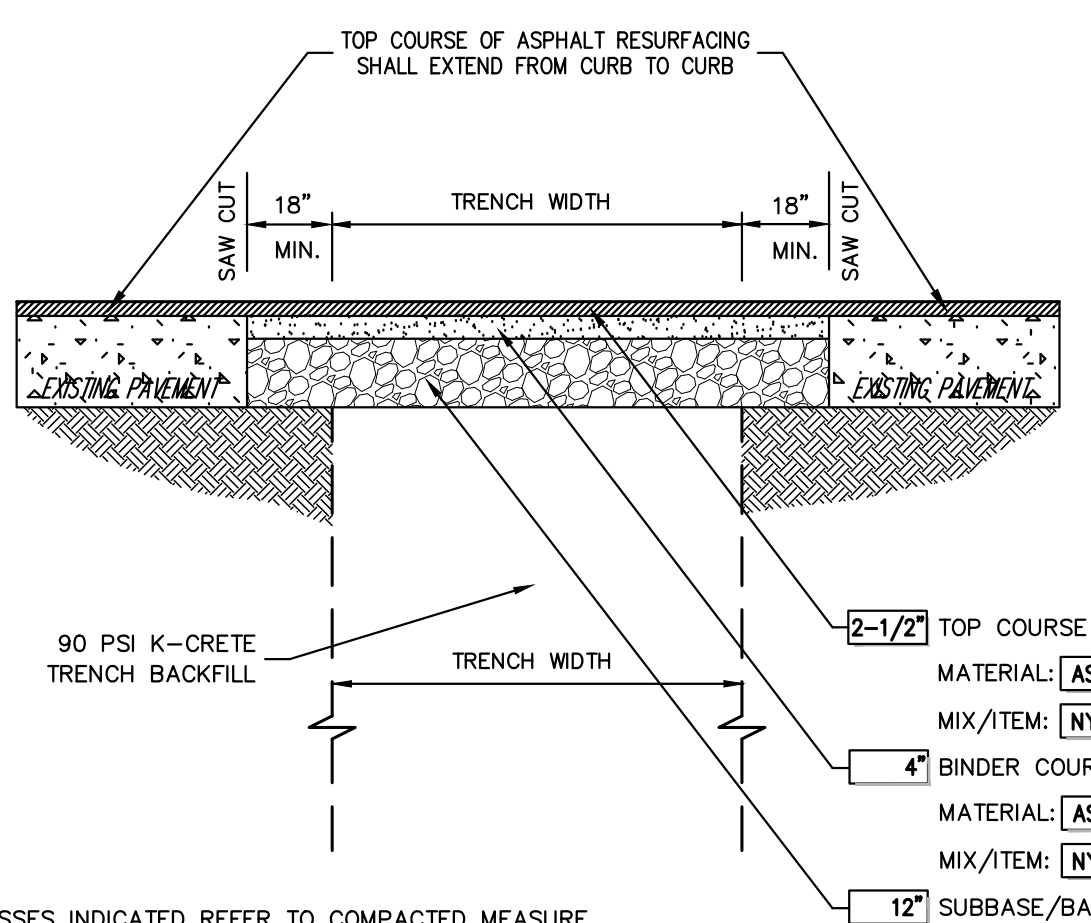
- NOTE
- COLOR OF PAINT SHALL BE WHITE



- NOTES:
- UTILITIES TO BE INSTALLED IN ACCORDANCE WITH THE REGULATIONS AND REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.
  - BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES. UNLESS OTHERWISE SPECIFIED BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% MAXIMUM MOISTURE DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.
  - CONTRACTOR SHALL STAKE THE PROPOSED SERVICE LINES AND CONDUITS PRIOR TO BACKFILLING TO ENSURE SERVICES DO NOT MOVE WITHIN TRENCH.



- NOTES:
- THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
  - MATERIAL AND MIX/ITEM NUMBERS REFER TO:
    - NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS



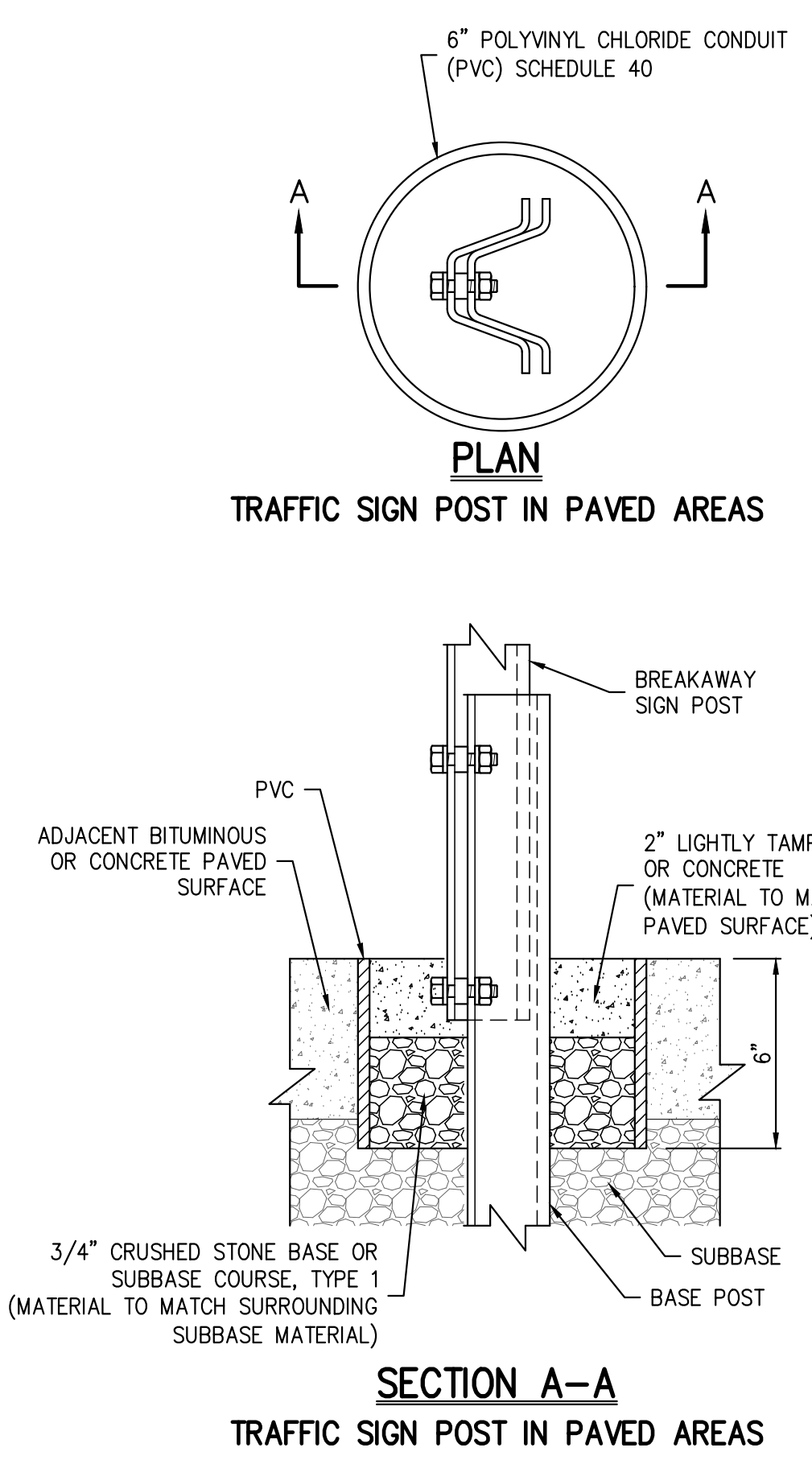
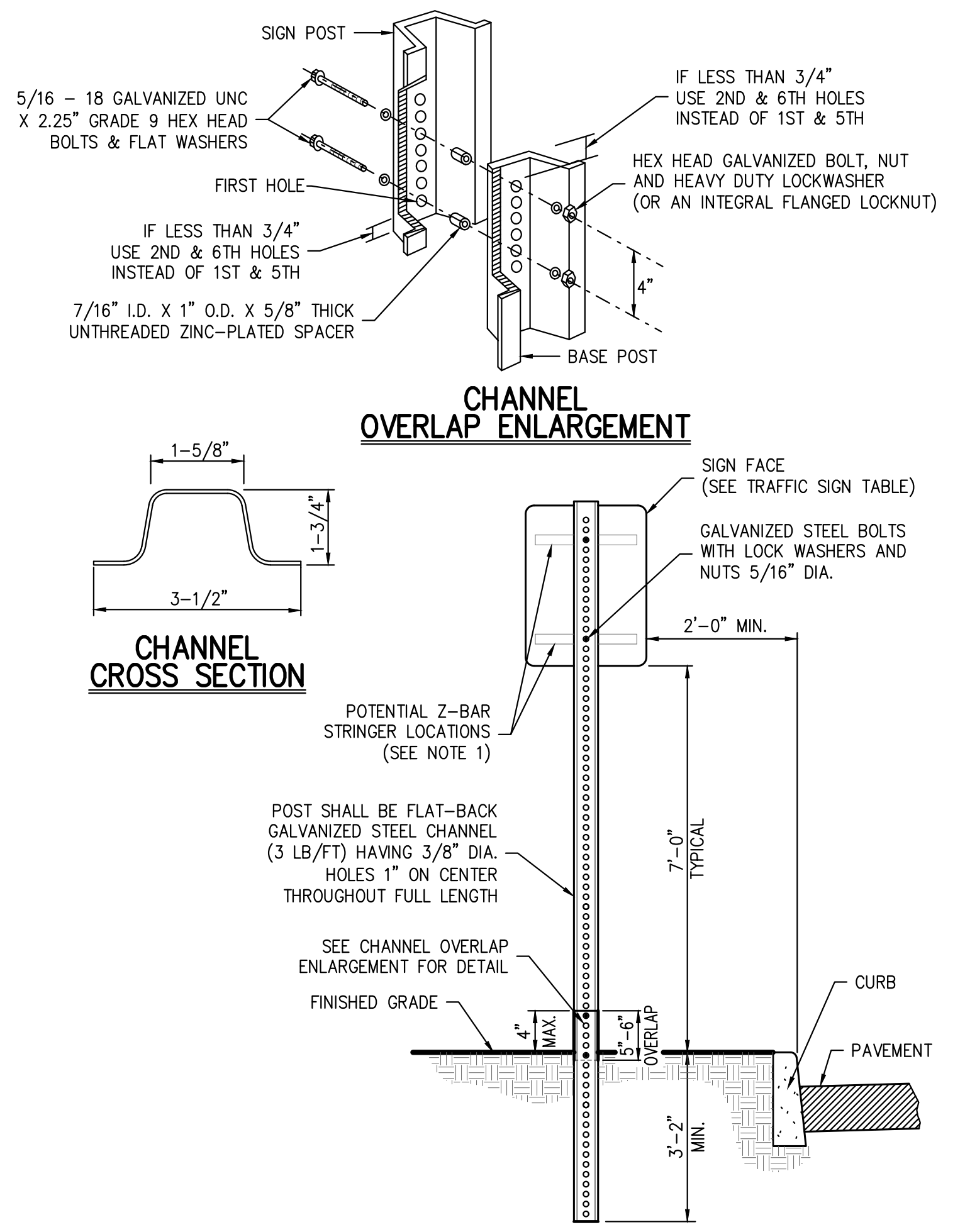
- NOTES:
- THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
  - CRACK FILL JOINTS AS REQUIRED.
  - ITEM NUMBERS REFER TO:
    - NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

UTILITY TRENCH DETAIL 8

PAVEMENT REPLACEMENT OVER TRENCH (TOWN OF NORTH CASTLE STANDARD IN RIGHT-OF-WAY) 10

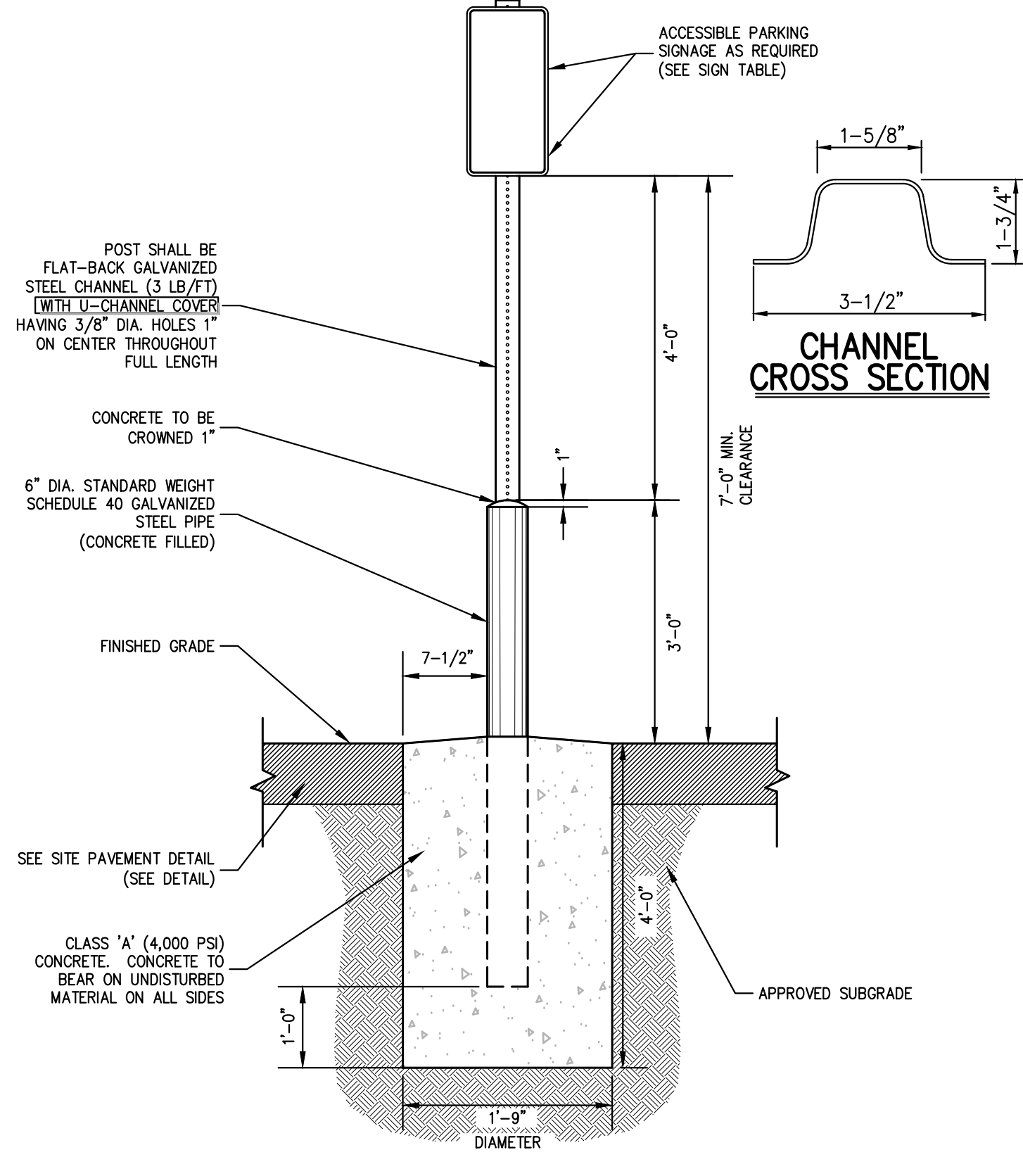
90° PARKING (SINGLE STRIPING - CURBED PERIMETER) 12

STEEL PIPE PROTECTION POST 13



- NOTE:
- WHEN BACK TO BACK SIGNS ARE DESIGNATED TO SHARE ONE POST, SIGNS SHALL BE AFFIXED TO POST USING ALUMINUM OR STAINLESS STEEL Z-BAR STRINGER.

TRAFFIC SIGN POST (BREAKAWAY STEEL CHANNEL) 14



- NOTES:
- GALVANIZED STEEL CHANNEL SHALL BE EMBEDDED A MIN. OF 3 FT. INTO THE CONCRETE
  - POSTS FOR HANDICAP PARKING STALLS AND ACCESS AISLES SHALL BE PAINTED BLUE AS FOLLOWS:
    - SOLVENT CLEAN TO REMOVE OIL, GREASE AND OTHER CONTAMINANTS.
    - APPLY METAL PRIMER FOR GALVANIZED SURFACES.
    - APPLY TWO (2) FINISH COATS OF APPROVED EXTERIOR PAINT FOR METAL SURFACES.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE PARKING SIGNS, BOLLARDS AND FOUNDATIONS WITH THE DESIGN AND INSTALLATION OF THE SITE SIDEWALKS, CURBS, PAVEMENT AND ANY OTHER SITE FEATURES SHOWN ON THE PLANS.
  - FASTEN SIGN TO POSTS WITH GALVANIZED STEEL BOLTS, LOCK WASHERS, AND NUTS (5/16" DIA.)
  - U-CHANNEL COVERS FOR POSTS SHALL BE BLUE WITH WHITE STRIPE FOR HANDICAP PARKING STALLS AND HANDICAP ACCESS AISLES.

ACCESSIBLE PARKING SIGN DETAIL 15

X

NOT FOR CONSTRUCTION



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CATHY, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

No.	1.	RESPONSE TO TOWN COMMENTS
Revision		
Date	09/17/2023	NC

CONTRACTOR  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

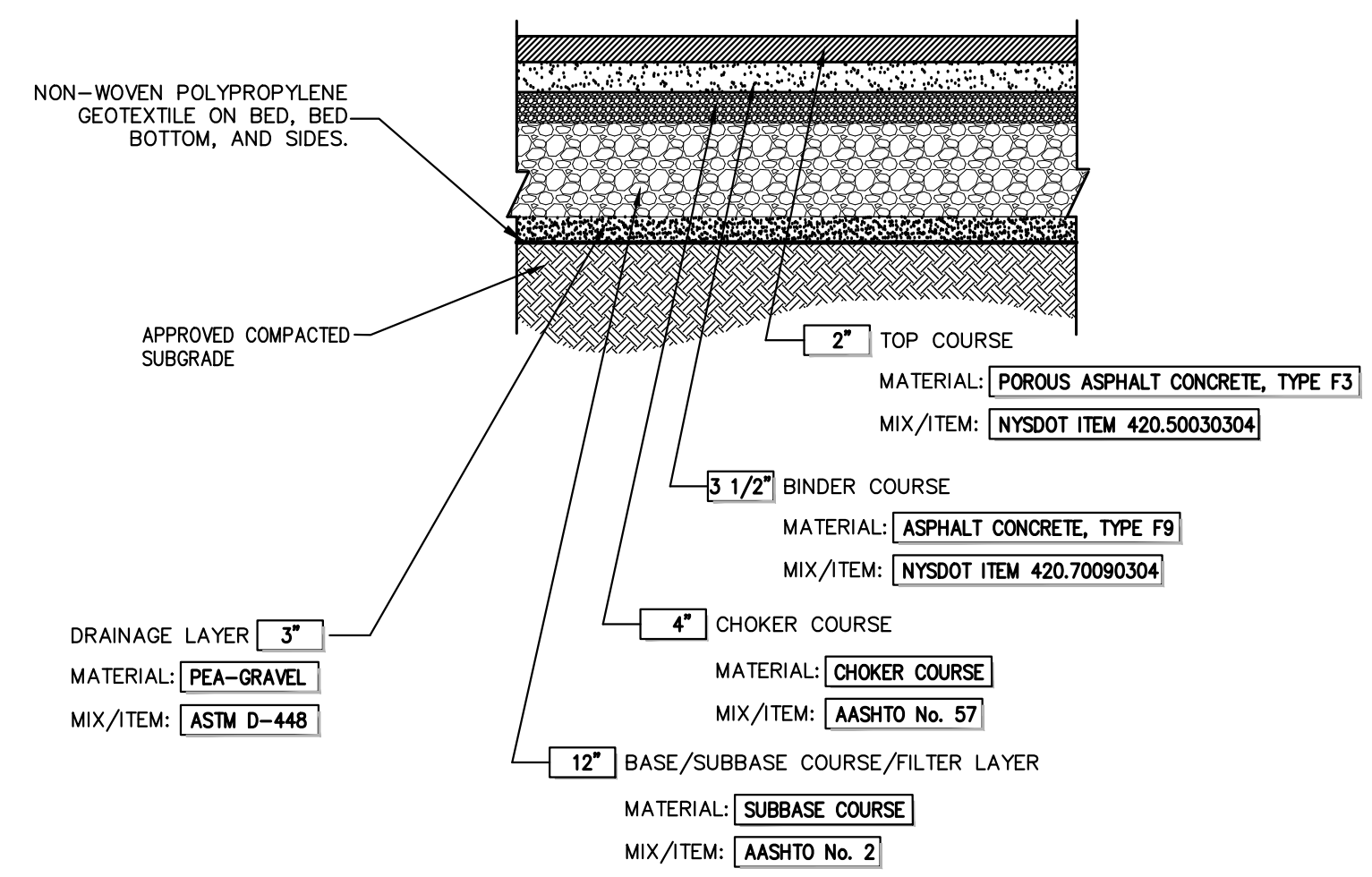
JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Meyer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.6225 • fax 914.273.2102  
 www.jmcpllc.com

**JMC**

CONSTRUCTION DETAILS  
**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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

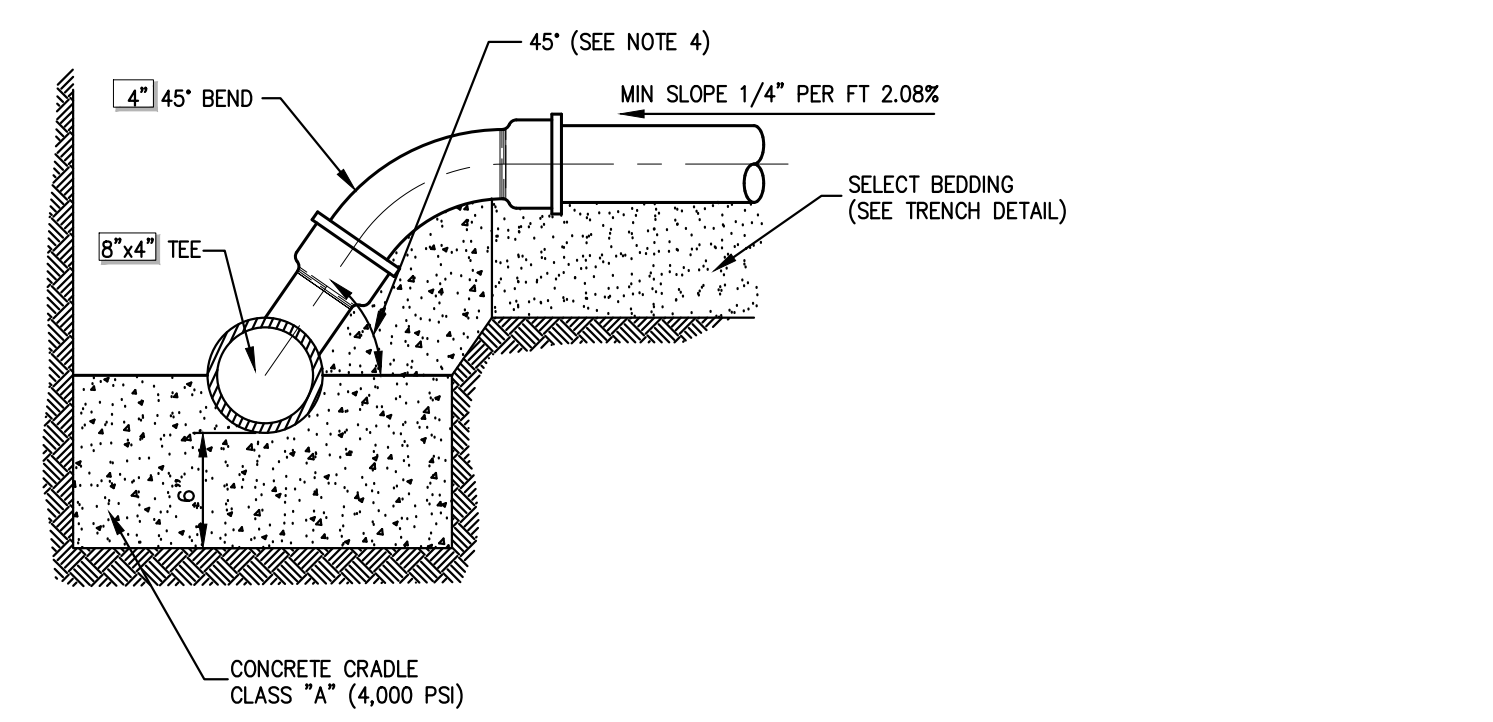
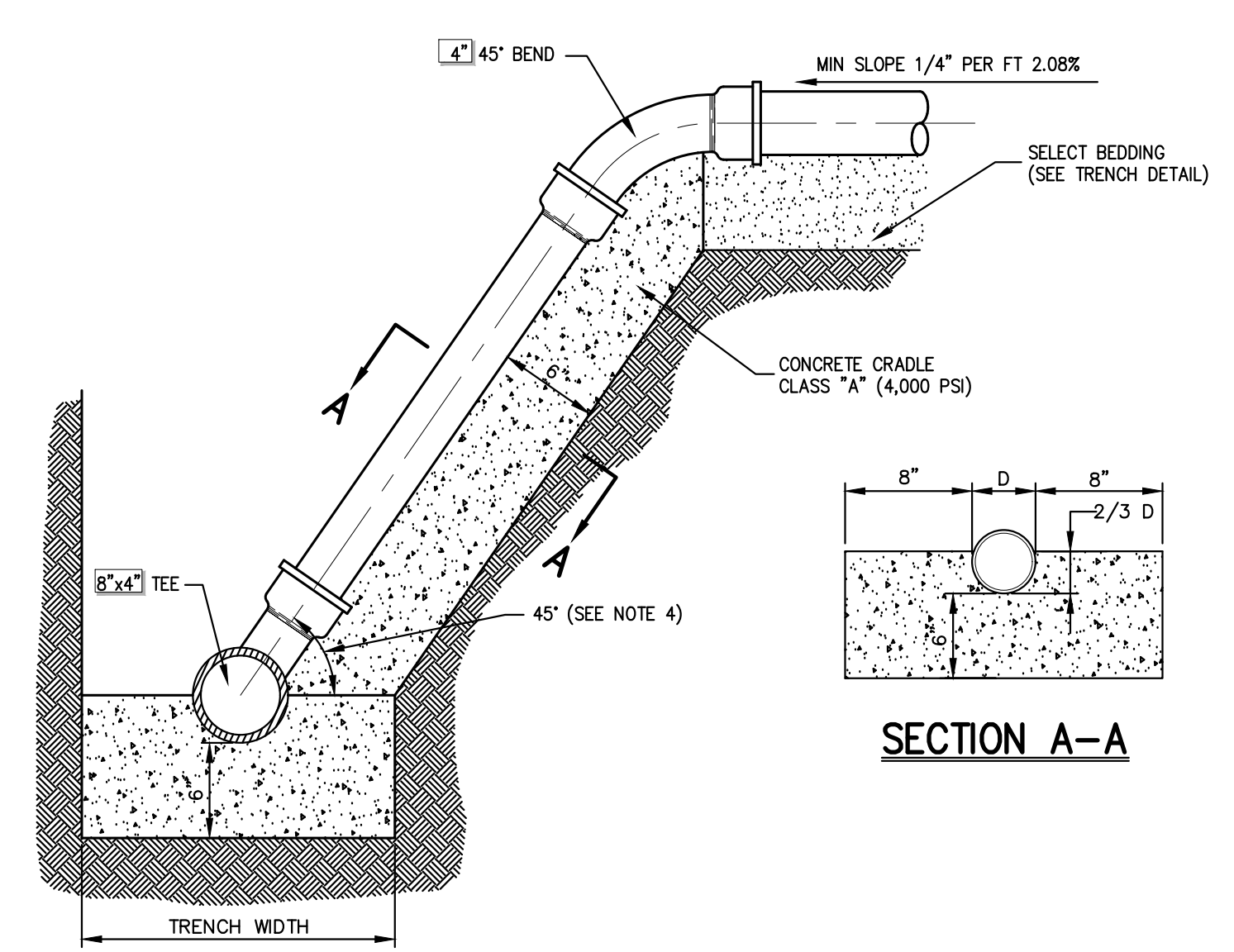
Drawn	NC	Approval	DL
Scale	NOT TO SCALE		
Date	09/12/2022		
Project No.	22090		
2000-DRAWING	DET-3		
Drawing No.	<b>C-902</b>		



- NOTES:**
- THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
  - MATERIAL AND MIX/ITEM NUMBERS REFER TO NEW YORK STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), AND AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

**POROUS ASPHALT PAVEMENT**

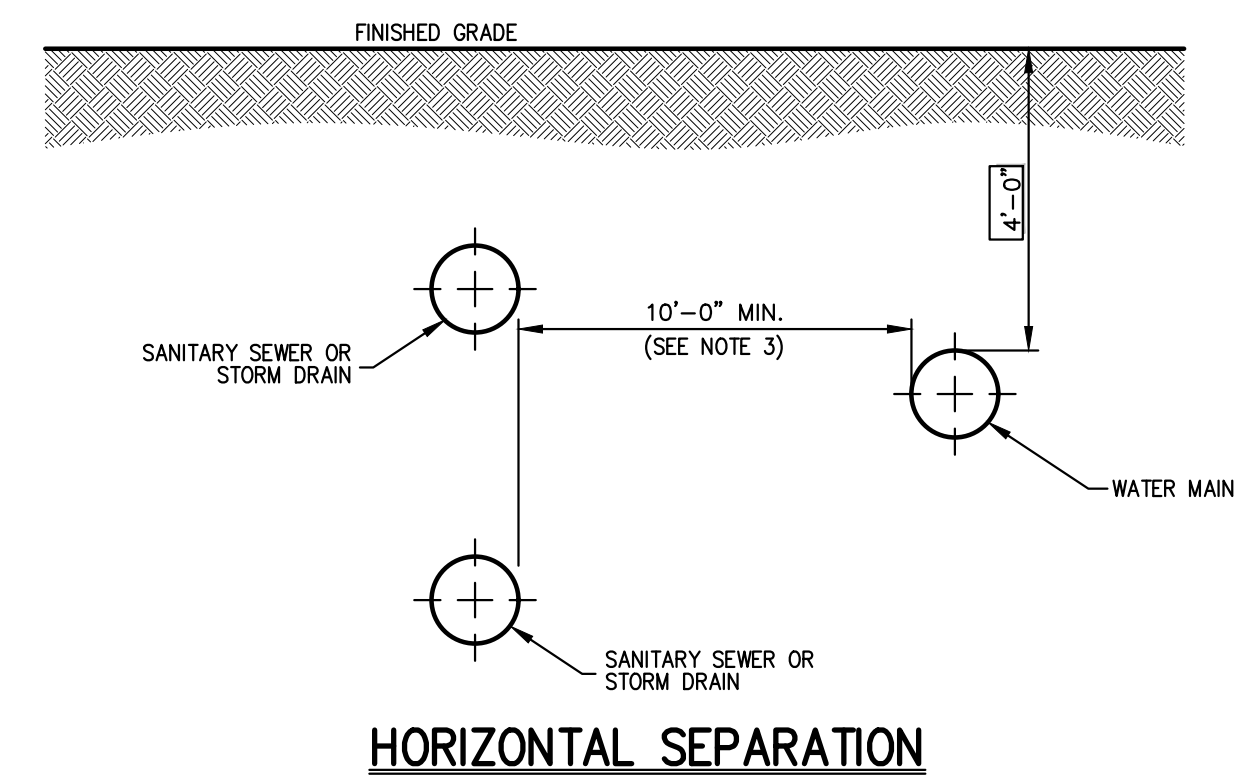
16



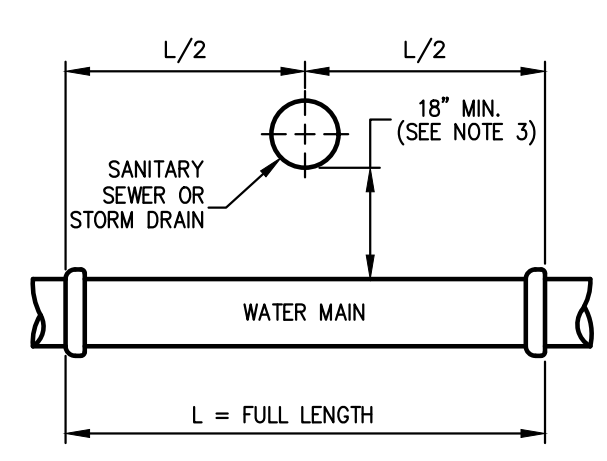
- NOTES:**
- ALL SERVICE LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
  - SERVICE LINE LOCATION, GRADE AND ALIGNMENT SHALL BE AS SHOWN ON DRAWINGS OR AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.
  - WHERE SERVICE LINES ARE TO BE DEAD-EINDED, CONTRACTOR SHALL INSTALL APPROVED WATER-TIGHT AND PRESSURE-TIGHT PLUGS.
  - IF MINIMUM COVER CANNOT BE ATTAINED WHILE MAINTAINING MINIMUM SLOPE, THE ANGLE OF CONNECTION MAY BE REDUCED TO 22.5°, IF APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND COVERING BODY WITH JURISDICTION.
  - SANITARY SEWER SERVICE LINE INCLUDING FITTINGS SHALL BE DEP. CLASS 52

**SANITARY SEWER SERVICE CONNECTION**

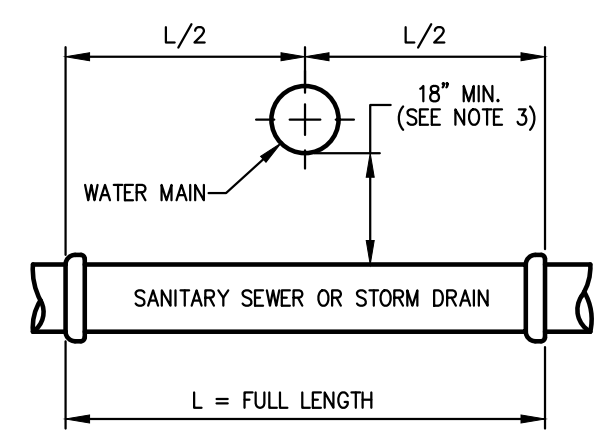
17



**HORIZONTAL SEPARATION**



**SANITARY SEWER OR STORM DRAIN OVER WATER MAIN**



**WATER MAIN OVER SANITARY SEWER OR STORM DRAIN**

**VERTICAL SEPARATION**

- NOTES:**
- NORMAL CONDITIONS:
    - WHENEVER A WATER MAIN MUST CROSS OVER OR UNDER A SANITARY SEWER OR STORM DRAIN, THE PIPES SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION BETWEEN THEM OF AT LEAST 18 INCHES, AS MEASURED FROM THE BOTTOM OF THE HIGHER PIPE TO THE CROWN OF THE LOWER PIPE.
    - FULL LENGTH OF WATER PIPE MUST BE CENTERED AT THE POINT OF CROSSING; NO JOINTS WILL BE PERMITTED AT THE POINT OF CROSSING.
  - WATER MAIN CROSSING UNDER SANITARY SEWERS:
    - VERTICAL SEPARATION OF 18 INCHES MUST BE PROVIDED.
    - ADEQUATE STRUCTURAL SUPPORT MUST BE PROVIDED FOR THE SANITARY SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING.
  - IF DURING CONSTRUCTION IT IS FOUND THAT THE REQUIRED SEPARATION OF WATER MAINS, SANITARY SEWERS, STORM SEWERS AND BUILDING SANITARY SEWERS CANNOT BE MET, THE CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL IN WRITING ADVISE JOHN MEYER CONSULTING OF THE SPECIFIC CONDITIONS ENCOUNTERED. APPROVAL OF ALTERNATIVE SEPARATION CRITERIA SHALL BE OBTAINED FROM THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH PRIOR TO INSTALLATION.

**SEPARATION OF WATER AND SANITARY SEWER/STORM DRAIN LINES**

18

**NOTES PERTAINING TO DRAIN INLETS**

- STEPS WILL NOT BE REQUIRED IN INLETS LESS THAN FOUR (4) FEET IN DEPTH. STEPS WILL BE REQUIRED IN INLETS FOUR (4) FEET OR GREATER IN DEPTH. DEPTHS FOR DRAIN INLETS SHALL BE MEASURED FROM FINISHED GRADE TO INSIDE BOTTOM OF STRUCTURE (INCLUDING SUMP AS APPLICABLE).
- WHEN STEPS ARE REQUIRED, STEPS SHALL COMPLY WITH THE SAME REQUIREMENTS OF ASTM STANDARD C-478, ARTICLE 13 ENTITLED "MANHOLE STEPS & LADDERS".
- FOR MASONRY STRUCTURES, THE FIRST COURSE OF MASONRY SHALL BE SET IN THE CONCRETE FOUNDATION BEFORE THE CONCRETE HAS SET. CONCRETE FOUNDATION SHALL BE CLASS "A" (4,000 PSI) CONCRETE, TWELVE (12) INCHES THICK AND SHALL EXTEND SIX (6) INCHES BEYOND THE OUTSIDE FACE OF THE STRUCTURE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH AND CONSTRUCT THE PROPER SIZE STRUCTURE INCLUDING THE NECESSARY OPENINGS TO ACCOMMODATE THE WORK AS SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.
- ALL NECESSARY PATCHING FOR DRAIN STRUCTURES SHALL BE ACCOMPLISHED WITH NON-SHRINKING COBALT MORTAR GROUT, APPROVED EQUAL TO Sika-SET AS MANUFACTURED BY THE Sika CHEMICAL CORP.
- FOUNDATIONS FOR PRECAST CONCRETE STRUCTURES SHALL BE SET ON A COMPACTED LAYER OF APPROVED CRUSHED STONE HAVING A MINIMUM COMPACTED THICKNESS OF EIGHT (8) INCHES.
- ALL PIPES SHALL BE CUT FLUSH WITH THE INSIDE WALL OF THE STRUCTURE.
- PROVIDE REINFORCED CONCRETE TOP SLAB FOR OVERSIZED DRAIN INLETS WITH PROPER SIZE OPENING TO ACCOMMODATE INSTALLATION OF FRAME & GRATE.
- FOR MASONRY STRUCTURES GREATER THAN TEN (10) FEET IN DEPTH, THICKNESS OF MASONRY WALLS SHALL BE INCREASED TO TWELVE (12) INCHES.
- FOR ALL STRUCTURES GREATER THAN 10 FEET IN DEPTH, STRUCTURES SHALL PROVIDE MINIMUM INSIDE DIMENSIONS OF 4 FEET X 4 FEET.

**NOTES PERTAINING TO MANHOLES**

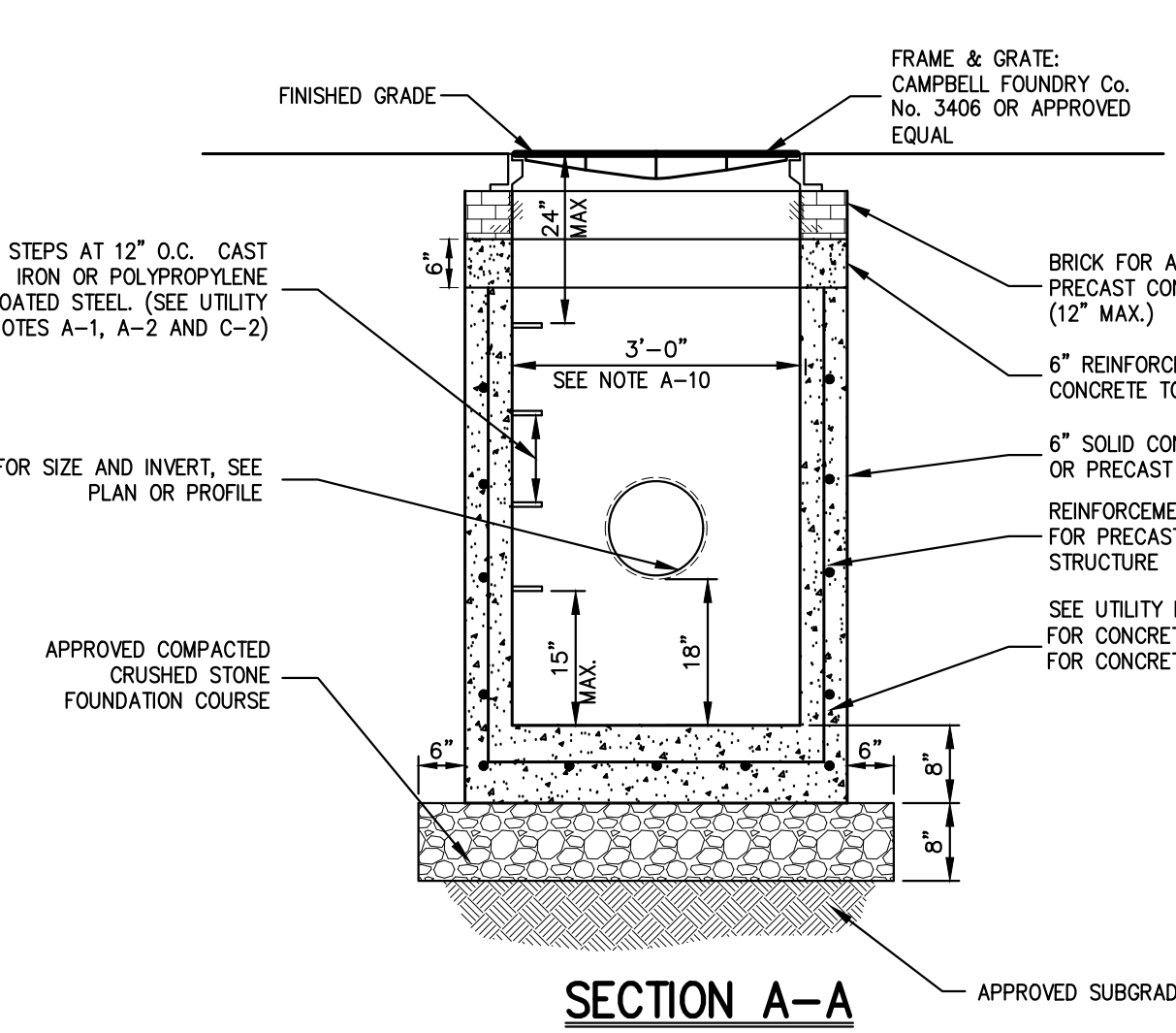
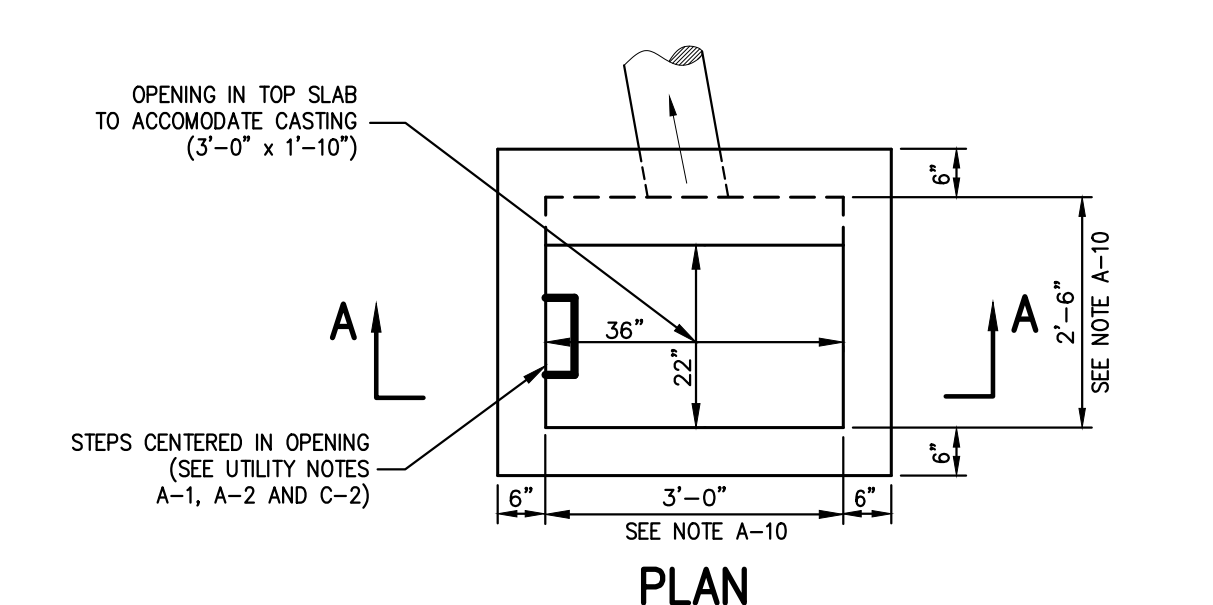
- PRECAST CONCRETE MANHOLES SHALL COMPLY WITH ASTM STANDARD C-478. MANHOLE JOINTS SHALL COMPLY WITH ASTM STANDARD C-443.
- FOR PRECAST CONCRETE MANHOLES FIVE (5) FEET OR LESS IN HEIGHT, TOP CONE SECTION SHALL BE REPLACED WITH PRECAST REINFORCED CONCRETE SLAB (6" MIN. THICKNESS) WITH OPENING OF SUFFICIENT SIZE TO ACCOMMODATE MANHOLE CASTING.
- FOR MANHOLES 10 FEET OR MORE IN DEPTH, MANHOLE DIAMETER SHALL BE FIVE (5) FEET.
- TERMINAL MANHOLE FLOORS SHALL BE SLOPED TOWARD OUTFALL PIPE.
- INVERT CHANNELS FOR PRECAST CONCRETE MANHOLES SHALL BE CONSTRUCTED OF CONCRETE.
- NOTES A-1, A-2, A-4, A-5, A-6 & A-7 UNDER "NOTES PERTAINING TO DRAIN INLETS" ABOVE SHALL APPLY TO MANHOLES.

**NOTES PERTAINING TO PRECAST CONCRETE STRUCTURES FOR STORM DRAINS, SANITARY SEWERS AND WATER LINES**

- ALL PRECAST CONCRETE STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
- STEPS SHALL BE LOCATED WITHIN STRUCTURE TO AVOID PLACEMENT OVER PIPES WHEN PRACTICABLE.

**UTILITY NOTES**

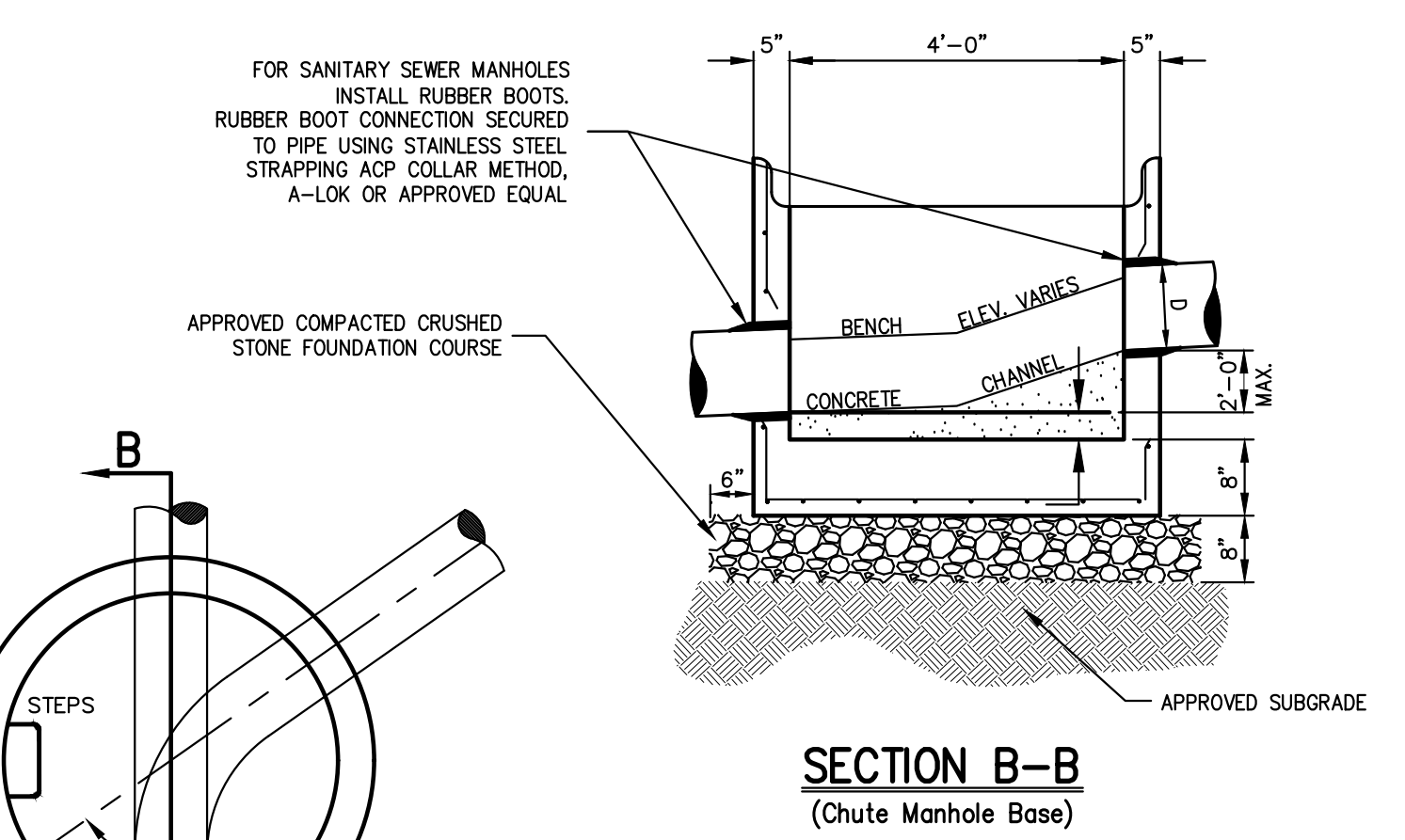
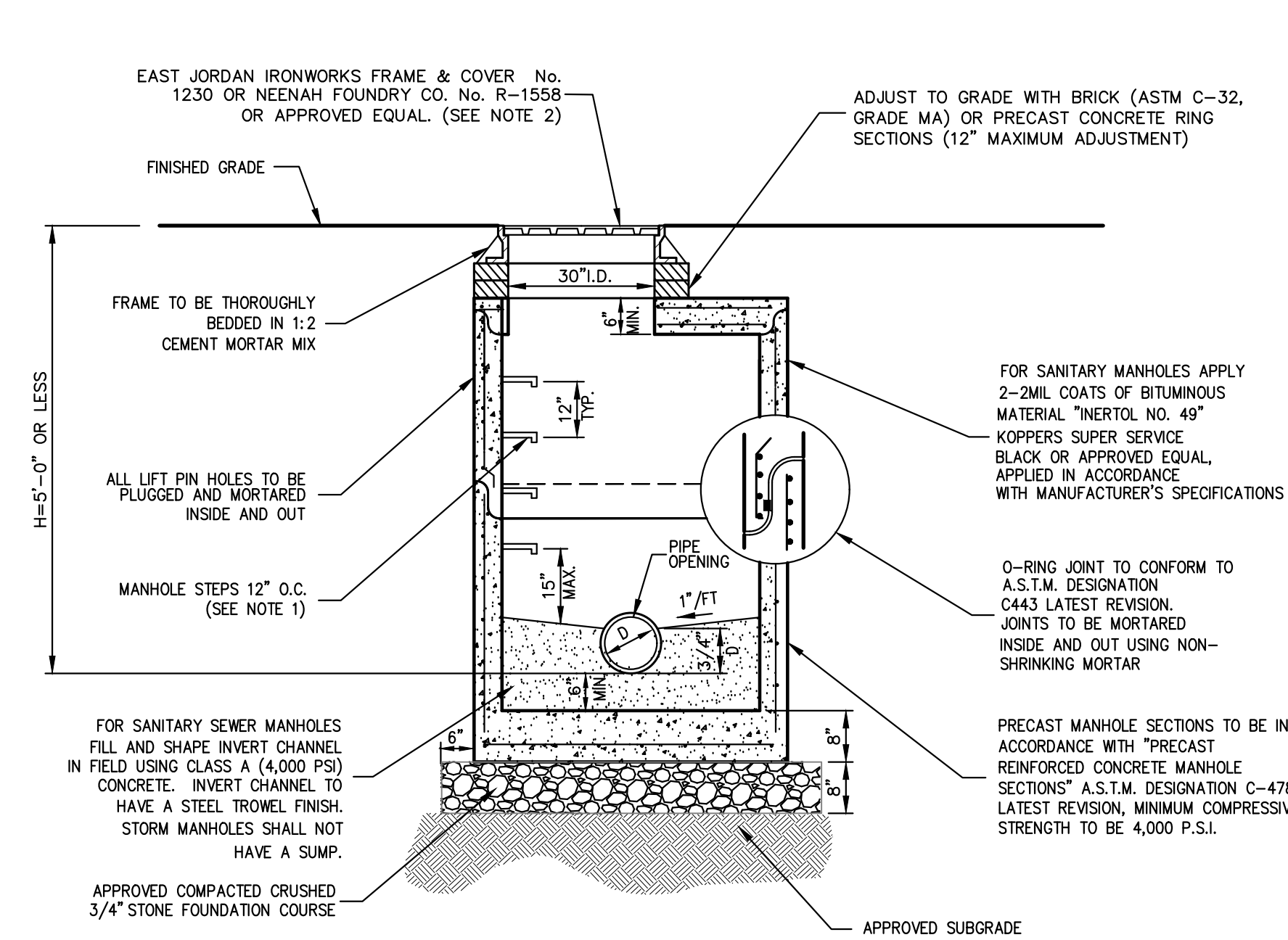
19



- NOTE**
- REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
  - SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON THIS DRAWING.

**DRAIN INLET (TYPE DI)**  
 (with sump-w/o finger underdrains)

20



- NOTES:**
- MANHOLE STEPS SHALL BE CAST IRON NENAH No. R-1981-0 OR CAMPBELL FOUNDRY No. 2588-1 OR POLYPROPYLENE COATED STEEL (SEE SPECIFICATIONS) OR APPROVED EQUAL.
  - UNLESS OTHERWISE SPECIFIED, SANITARY SEWER MANHOLES SHALL HAVE LETTERS "SEWER" AND STORM DRAIN MANHOLES SHALL HAVE LETTERS "DRAIN" CAST ON COVER. THE COVERS SHALL HAVE VENT HOLES.
  - MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
  - SEE "NOTES PERTAINING TO MANHOLES" UNDER "UTILITY NOTES" ON THIS DRAWING.

**MANHOLE (TYPE A)**  
 (H < 5'-0")

21

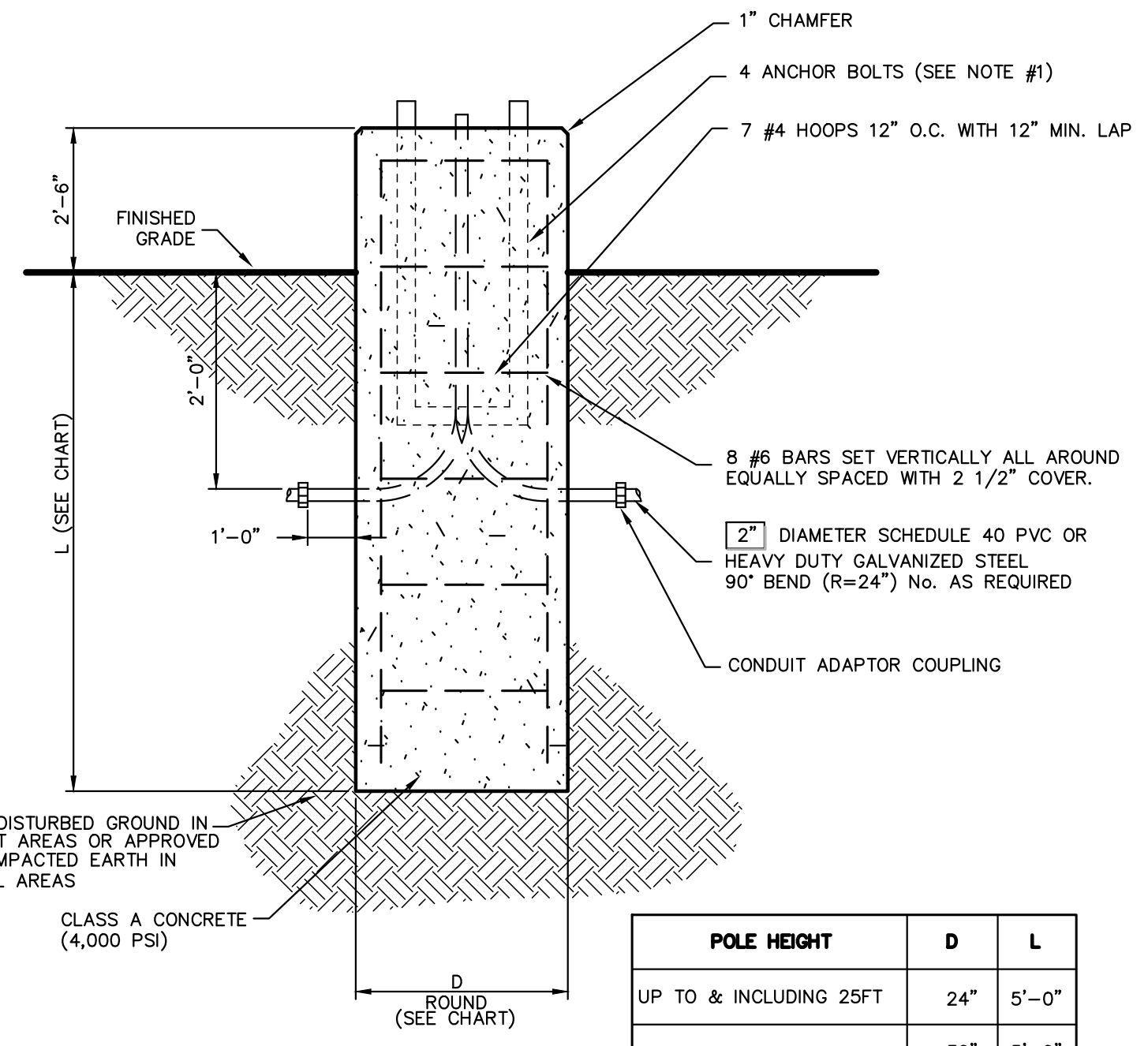
NOT FOR CONSTRUCTION



CHRISTOPHER CATHY, CHAIRMAN,  
TOWN OF NORTH CASTLE PLANNING BOARD  
ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
KELLARD SESSONS CONSULTING  
CONSULTING TOWN ENGINEERS

Date	09/17/2023
Revision	1. RESPONSE TO TOWN COMMENTS
No.	1.



POLE HEIGHT	D	L
UP TO & INCLUDING 25FT	24"	5'-0"
25FT TO & INCLUDING 30FT	30"	5'-0"
30FT TO & INCLUDING 40FT	30"	6'-6"

### SSS Series

Crown-Weld® Straight Square Steel Pole

**Product Description**  
Cree Lighting's proprietary Crown-Weld® pole base crown weld configuration was designed to minimize stress in areas most vulnerable to failure. It provides superior strength and higher wind load ratings, than poles of similar height and cross-section. Both premium pole design and extended finish combine for a 7 year limited warranty for a reduced lifetime cost of ownership.

Non-spacer square steel poles are supplied with a painted galvanized steel 2" plate base cover, four partially galvanized anchor bolts, moisture resistant tape and pole cap (except open top round). Steel pole base has drilled holes to accommodate installation. A standard 3" x 3" hand hole is located 1" above the bottom of pole base on a 4" plate. 2" poles have a 2.5" x 4" x 12" hand hole located 1" above the bottom of the base plate. A 1/2" stainless-steel weld stud with grounding lug is located inside the pole, opposite the hand hole.

Cree Lighting poles are steel that is cleaned to remove any rust, mill scale, oxides, or other unwanted particles from the pole resulting in a surface preparation that exceeds the specifications published by the SSPC-200. Iron phosphate is then applied, creating an iron oxide base with a fast or amorphous metal phosphate topcoat. This coating significantly adds to the performance of the finished coating by improving bonding and minimizing the spread of oxidation if the coating is scratched, improving corrosion resistance. Polyester powder coating is applied to a 4-mil thickness.

**CONSTRUCTION MATERIALS**

- Square, non-spacer pole of structural steel tubing (ASTM A 500 Grade B) with a minimum yield strength of 35,000 p.s.i., 1.5" x 1.5" galvanized or 44,000 p.s.i., 1.5" x 1.5" painted or formed carbon steel base plate (ASTM A 36) with a minimum yield strength of 36,000 p.s.i.
- Anchor bolts of 150A Grade 58 are 1" bars having a minimum yield strength of 58,000 p.s.i. The bolts are at least partially galvanized per ASTM A153 specifications and furnished complete with two O2 hex nuts and 2 flat washers.
- Base cover is 2.5" x 3.5" galvanized steel which connects with two 410 stainless steel screws included.
- Pole cap is painted PVC.
- GFI receptacle available. Consult factory for details.

**REGULATORY & VOLUNTARY QUALIFICATIONS**

- National Electrical Code Requirements
- UL Listed in US for electrical ground bonding
- CSA Certified in Canada for ground bonding and structural strength
- Quality Control (Consult factory for details)

**LIMITED WARRANTY**

- 7 years on pole/7 years on finish



### XSP Series

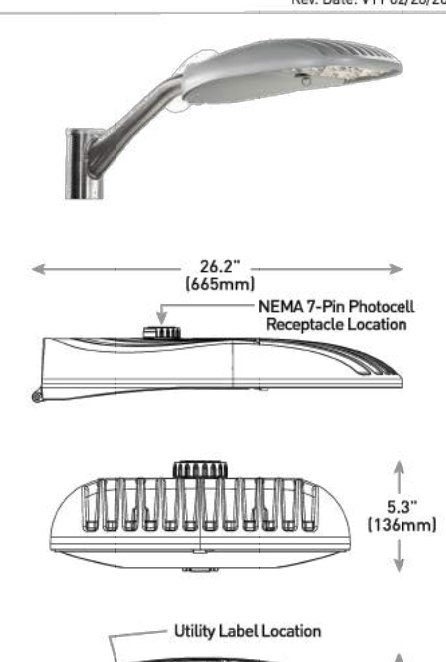
XSPLED LED Street/Area Luminaire - Large

**Product Description**  
Designed from the ground up as a totally optimized LED street and area lighting system, the XSP Series delivers incredible efficiency without sacrificing application performance. Beyond substantial energy savings and reduced maintenance, Cree Lighting achieves greater optical control with our NanoOptic® Precision Delivery Optic™ optic when compared to traditional cobra head luminaires. The XSP Series is the better alternative for traditional street and area lighting with quick payback and improved performance.

**Applications:** Multi-level freeways, express ways, major roads, parking lots, and general area spaces

**Performance Summary**

NanoOptic® Precision Delivery Optic™ optic  
Assembled in the USA by Cree Lighting from US and imported parts  
**Initial Delivered Lumens:** Up to 23,800  
**Efficacy:** Up to 141 LPW  
**CRI:** Minimum 70 CRI  
**CCT:** 3000K, 4000K, 5000K, 5700K  
**Limited Warranty:** 10 years on luminaire; 10 years on ColorStar DetailGuard™ finish up to 10 years for Signaplex® accessories; 1 year on accessories



**Ordering Information**

Source: XSPW-B-WW-DIM-UL-30K-UL-BK

Product	Version	Mounting	Optic	Lumen Package	CCT/CRI	Voltage	Color Options	Utility Label/Markings	Options
XSPW-B	W	W	W	W	W	W	W	W	W

### XSP Series

XSPW™ LED Wall Mount Luminaire featuring Cree TrueWhite™ Technology

**Product Description**  
The XSPW™ LED wall mount luminaire has a slim, low profile design intended for outdoor wall-mounted applications. The rugged lightweight aluminum housing and mounting bar are designed for installation over standard single gang J-boxes and mid ring single gang J-boxes. The luminaire allows for through-wired or corded entry from the top, bottom, side and rear. The housing design is intended specifically for LED technology including a weather-tight LED driver compartment and thermal management. Optic design features industry-leading NanoOptic® Precision Delivery Optic™ system in multiple distribution patterns.

**Applications:** General area and security lighting

**Performance Summary**

NanoOptic® Precision Delivery Optic™ optic  
Assembled in the USA by Cree Lighting from US and imported parts  
**Initial Delivered Lumens:** Up to 8,475  
**Efficacy:** Up to 141 LPW  
**CRI:** Minimum 70 CRI (3000K, 4000K & 5700K), 90 CRI (5000K)  
**CCT:** 3000K, 4000K, 5000K, 5700K  
**Limited Warranty:** 10 years on luminaire/10 years on ColorStar DetailGuard™ finish up to 5 years for Signaplex® accessories/1 year on accessories



**Ordering Information**

Source: XSPW-B-WW-DIM-UL-30K-UL-BK

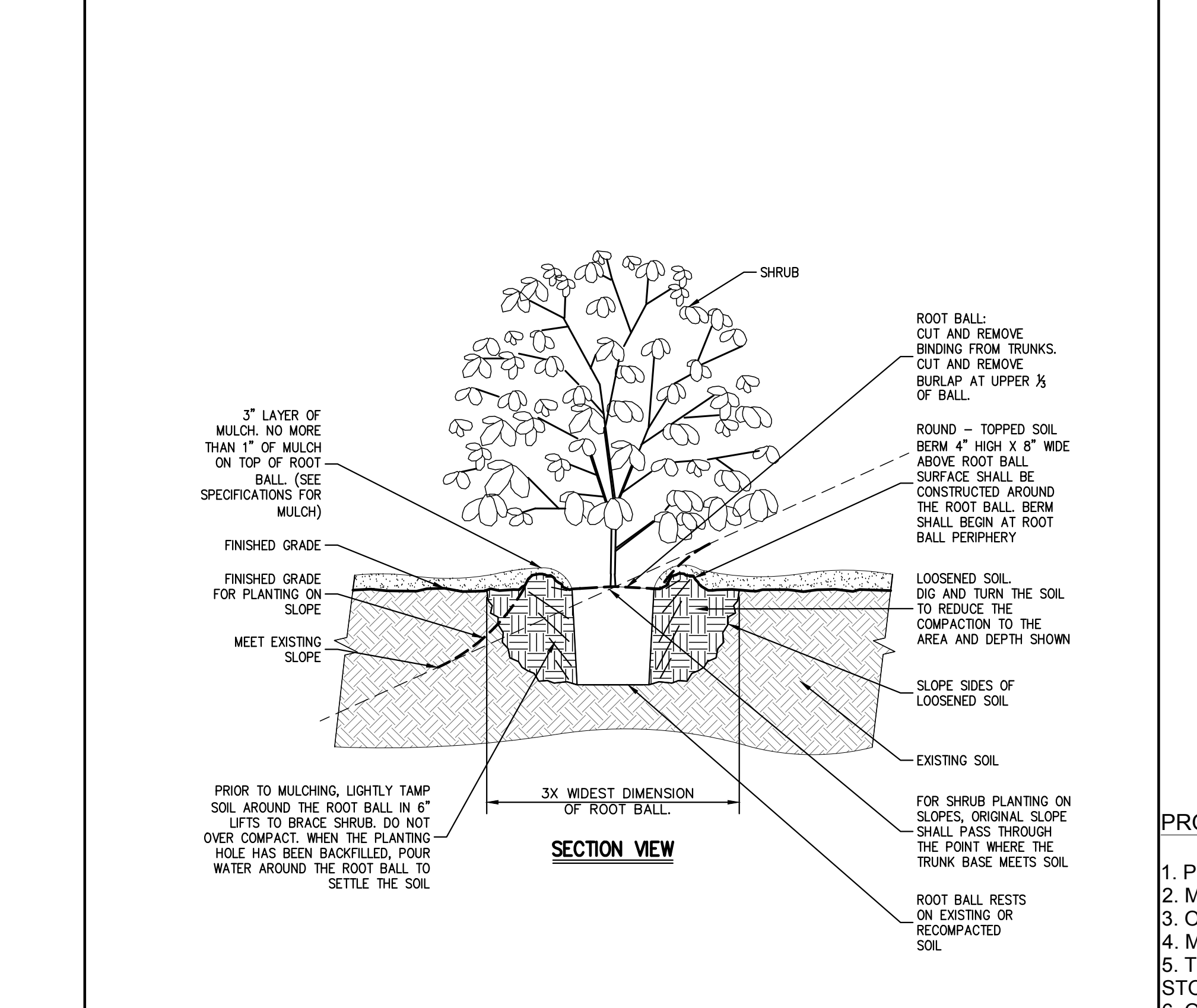
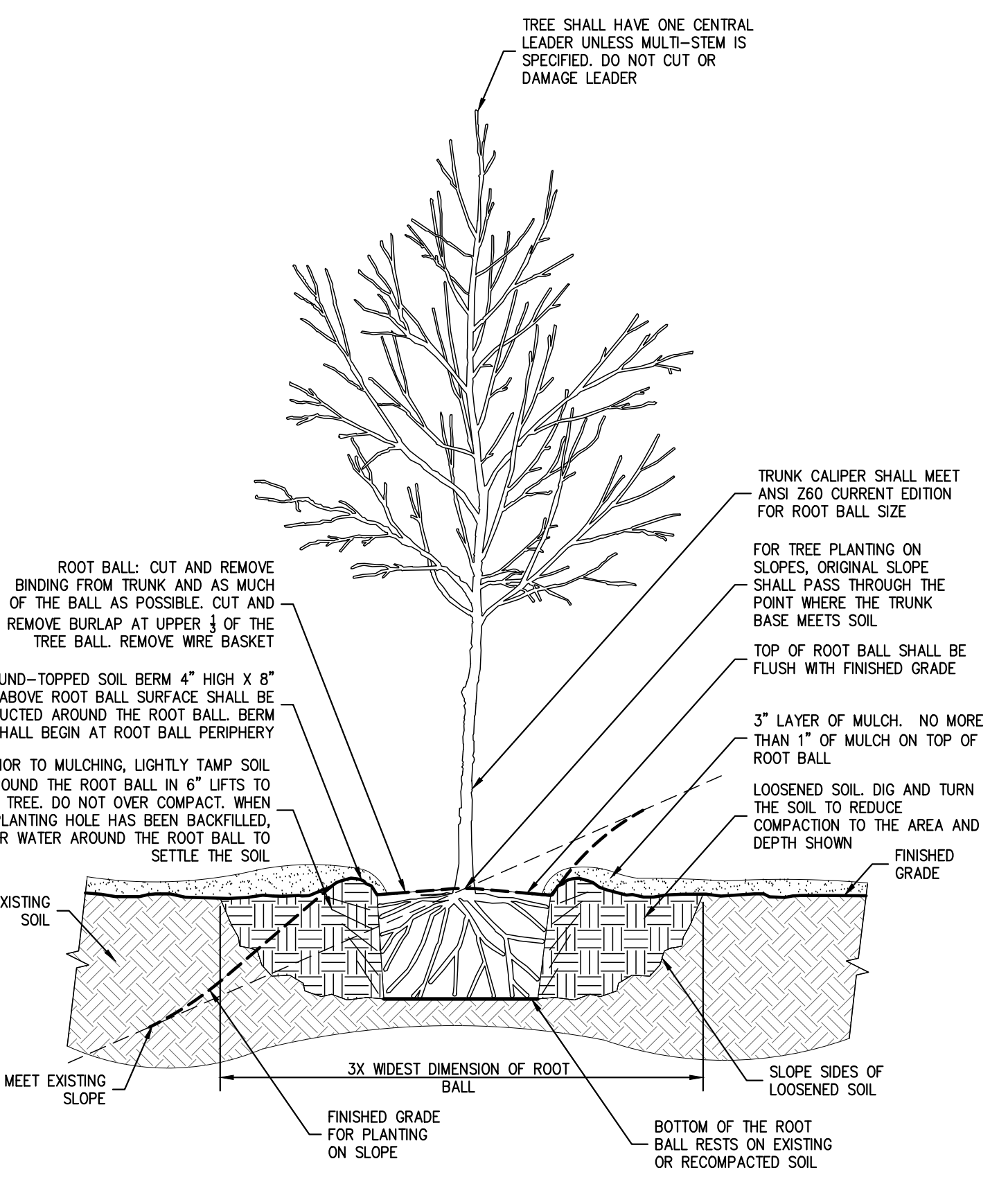
Product	Version	Mounting	Optic	Lumen Package	CCT	Voltage	Color Options	Options
XSPW-B	W	W	W	W	W	W	W	W

- NOTES:**
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSIONS (SIZE, BOLT CIRCLE, ETC.) WITH THE CONTRACTOR WHO WILL BE INSTALLING THE LIGHTING STANDARD PRIOR TO INSTALLATION OF THE FOUNDATIONS.
  - CHAMFER EXPOSED EDGES OF ALL FOUNDATIONS.
  - PROVIDE INSULATED GROUNDING BUSHING ON EXPOSED ENDS (IN BASE OF POLE) OF ALL GALVANIZED STEEL BENDS.
  - POLES AND LUMINAIRES WILL BE FURNISHED AND INSTALLED BY OTHERS.

### LIGHT FIXTURES AND POLES

### LIGHTING STANDARD FOUNDATION (ROUND)

22



- NOTES:**
- ALL PLANTING BEDS SHALL BE FREE OF WEEDS AND GRASS PRIOR TO AND FOLLOWING INSTALLATION OF PLANTS.
  - PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
  - PROPOSED PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.
  - SEE TREE STAKING DETAIL IF STAKING IS REQUIRED.

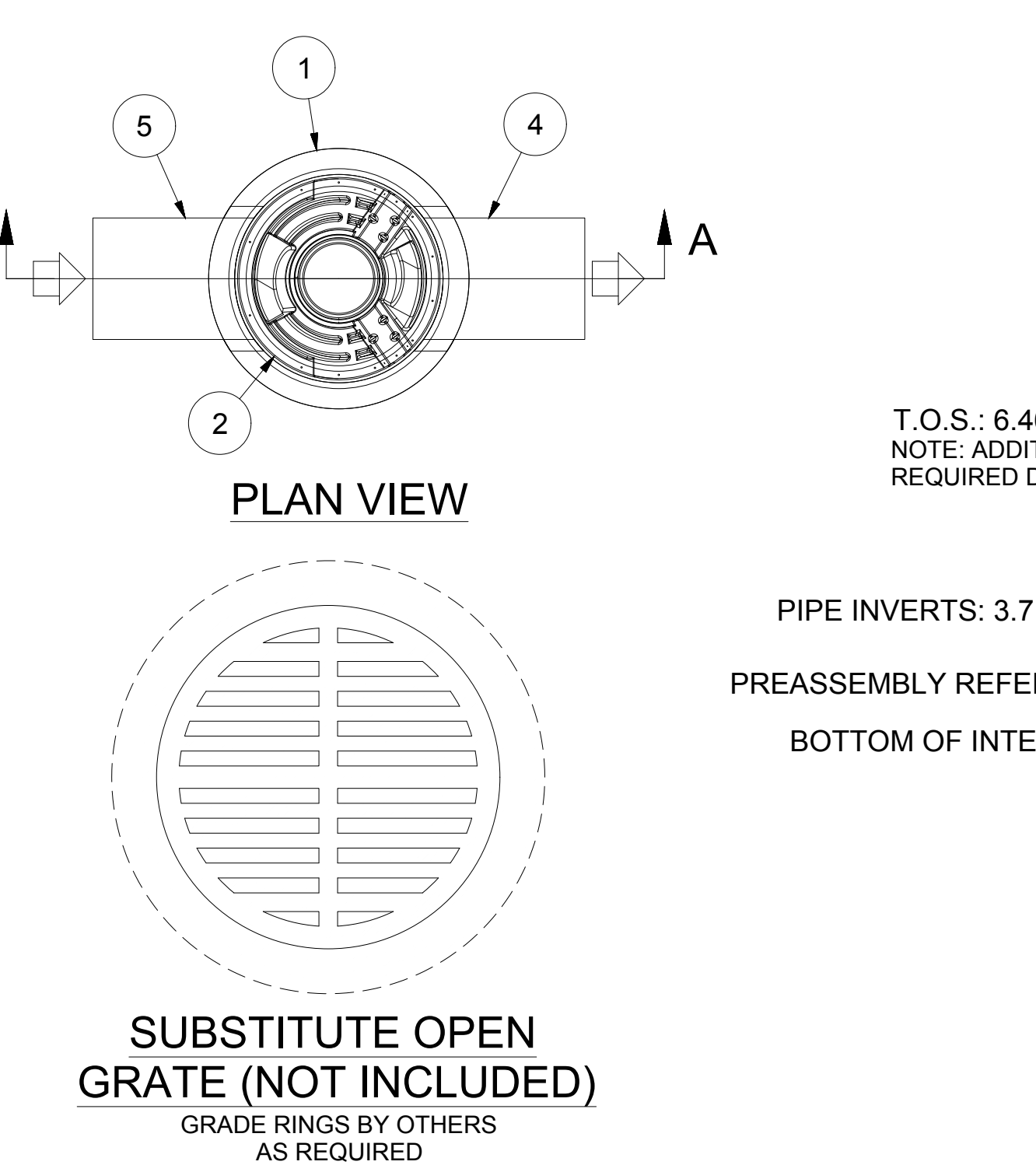
- NOTES:**
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  - PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
  - PROPOSED PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

### TREE PLANTING (DECIDUOUS AND EVERGREEN)

### SHRUB PLANTING

24

25



- PRODUCT SPECIFICATION:**
- PEAK HYDRAULIC FLOW: 15.0 cfs (424 l/s)
  - MIN SEDIMENT STORAGE CAPACITY: 0.4 cu. yd. (0.3 cu. m.)
  - OIL STORAGE CAPACITY: 125 gal. (473 liters)
  - MAXIMUM INLET/OUTLET PIPE DIAMETERS: 18 in. (450 mm)
  - THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF
  - OK 110 110 MICRON 80% TSS REMOVAL 0.84 cfs (23.7 l/s) (NUDEP TEST PROTOCOL)
  - NUDEP CERTIFIED 80% TSS REMOVAL AT 1.06 cfs (30.0 l/s)

- GENERAL NOTES:**
- General Arrangement drawings only. Contact Hydro International for site specific drawings.
  - The diameter of the inlet and outlet pipes may be no more than 18".
  - Multiple inlet pipes possible (refer to project plan).
  - Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan.s)
  - Peak flow rate and minimum height limited by available cover and pipe diameter.
  - Larger sediment storage capacity may be provided with a deeper sump depth.

**PARTS LIST**

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	36	900	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	18 (MAX)	450 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	18 (MAX)	450 (MAX)	INLET PIPE (BY OTHERS)

ANY WARRANTY GIVEN BY HYDRO INTERNATIONAL WILL APPLY ONLY TO THOSE ITEMS SUPPLIED BY IT ACCORDING TO HYDRO INTERNATIONAL. CANNOT ACCEPT ANY RESPONSIBILITY FOR ANY STRUCTURE, PLANT, OR EQUIPMENT, OR THE PERFORMANCE THERE OF DESIGNED, BUILT, MANUFACTURED, OR SUPPLIED BY ANY THIRD PARTY. HYDRO INTERNATIONAL HAS A POLICY OF CONTINUOUS DEVELOPMENT AND RESERVE THE RIGHT TO AMEND THE SPECIFICATION. HYDRO INTERNATIONAL CANNOT ACCEPT LIABILITY FOR PERFORMANCE OF ITS EQUIPMENT, OR ANY PART THEREOF, IF THE EQUIPMENT IS SUBJECT TO CONDITIONS OUTSIDE ANY DESIGN SPECIFICATION. HYDRO INTERNATIONAL CANNOT ACCEPT LIABILITY FOR PERFORMANCE WHICH IS SUPPLIED IN CONFORMANCE. IT MUST NOT BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED AND MUST NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT PRIOR PERMISSION IN WRITING FROM HYDRO INTERNATIONAL.

**COMMENTS:**

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

DATE: \_\_\_\_\_ SCALE: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

DRAWING NO.: \_\_\_\_\_ SHEET: \_\_\_\_\_ OF: \_\_\_\_\_



### FIRST DEFENSE HYDRODYNAMIC SEPARATOR (FD-3HC)

### CONSTRUCTION DETAILS

26

25

### CONSTRUCTION DETAILS

### CONSTRUCTION DETAILS

26

**WING ARMONK WAREHOUSE OWNER LLC**  
4800 NORTH FEDERAL HWY., SUITE B-200-34  
BOCA RATON, FL 33431

**SGW ARCHITECTURE & DESIGN**  
444 NORTH MICHIGAN AVENUE, SUITE 1850  
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**CONSTRUCTION DETAILS**  
BAYSFACE ARMONK  
100 BUSINESS PARK DRIVE  
TOWN OF NORTH CASTLE, NEW YORK

**Hydro International**

Scale: NOT TO SCALE  
Date: 09/12/2022  
Project No: 22090  
Drawing No: DET-4

NOT FOR CONSTRUCTION



**ABBREVIATIONS**

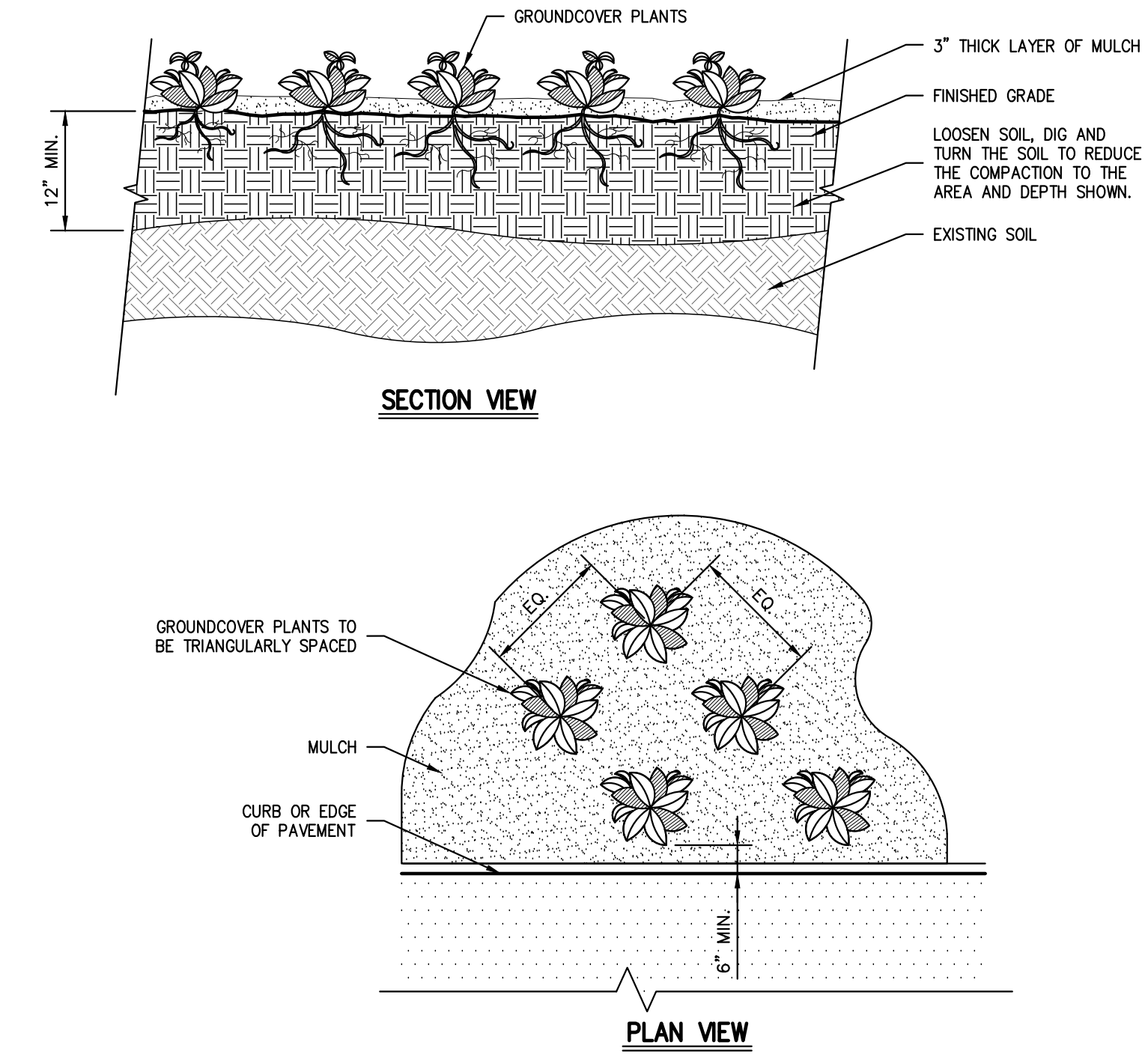
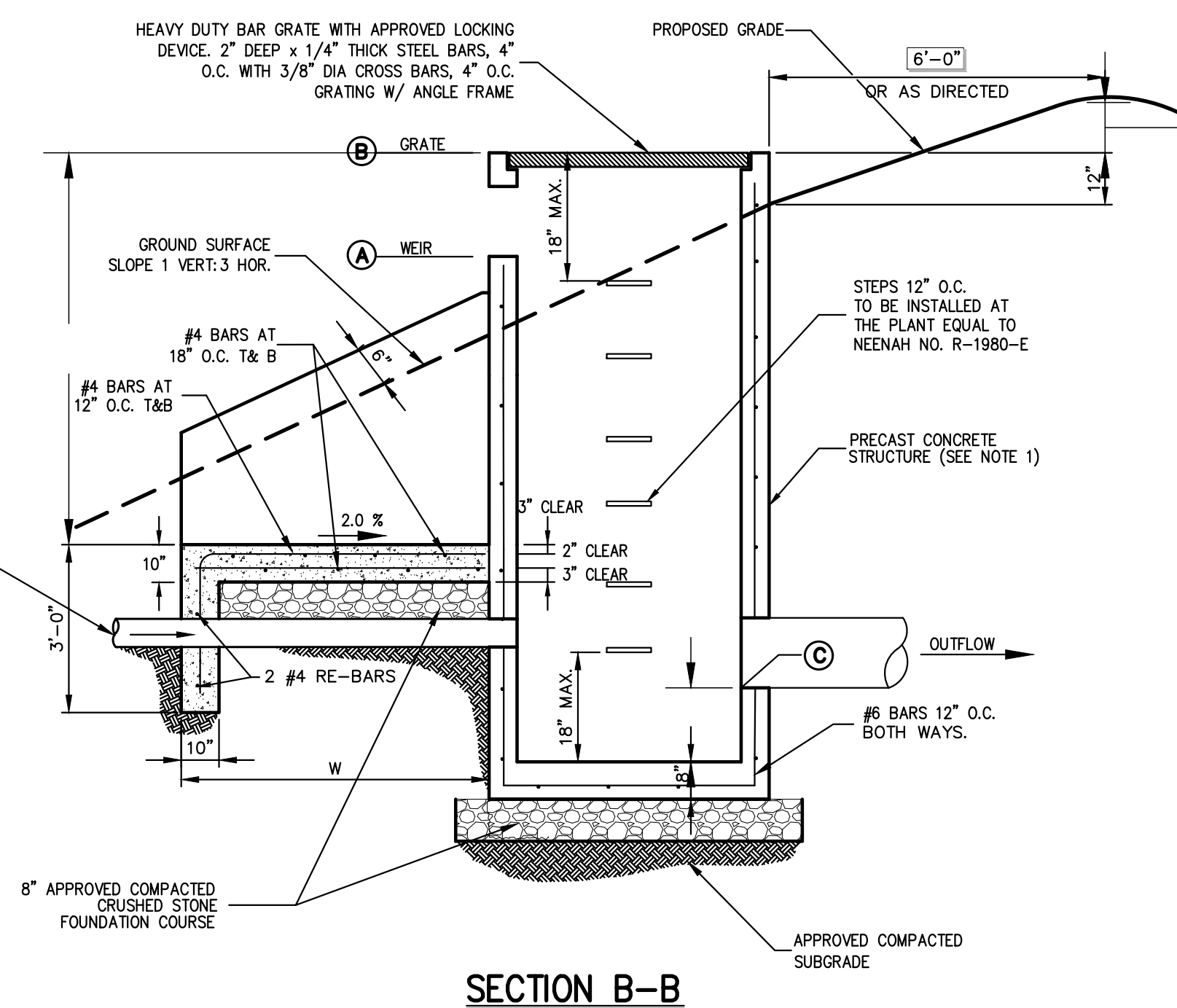
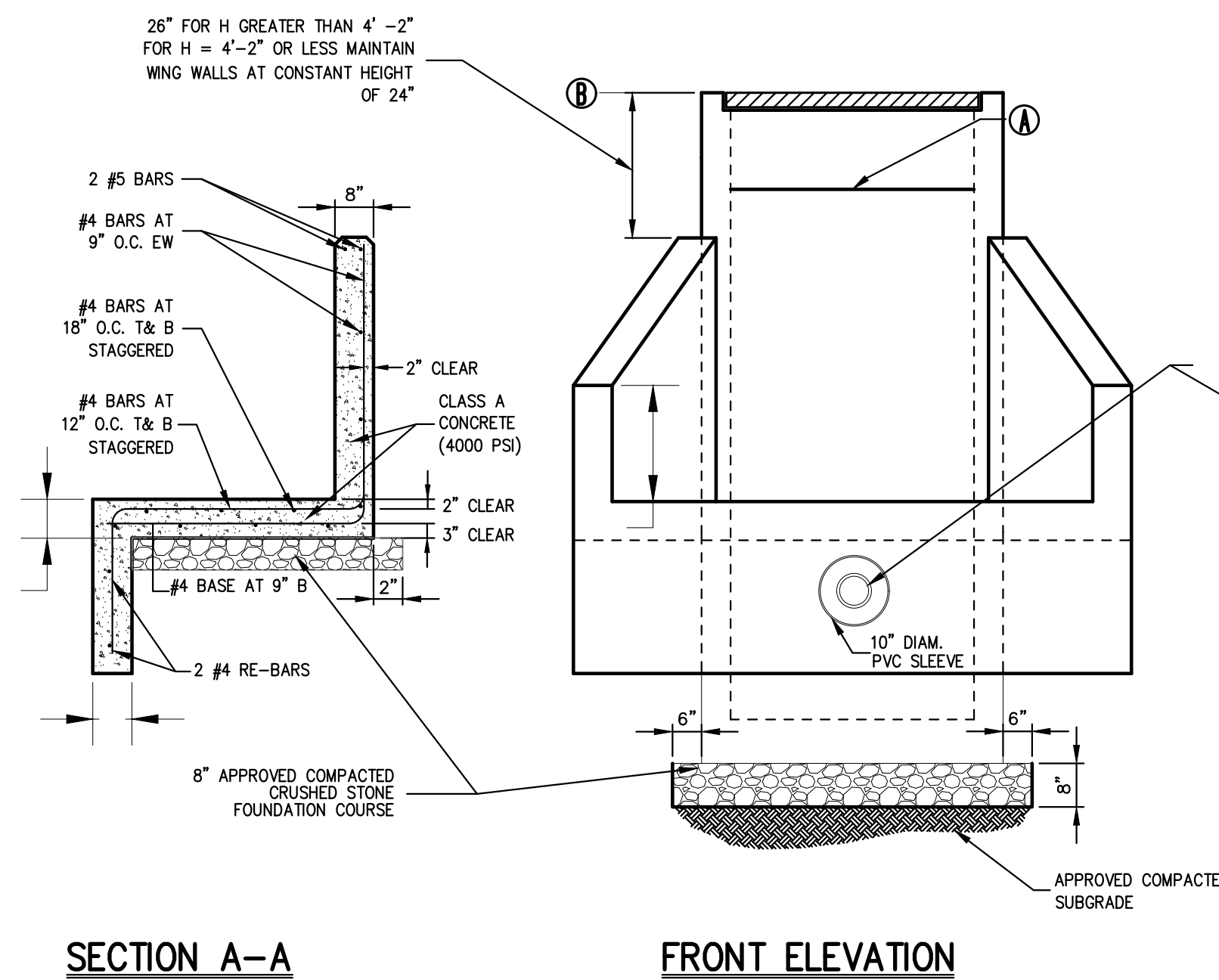
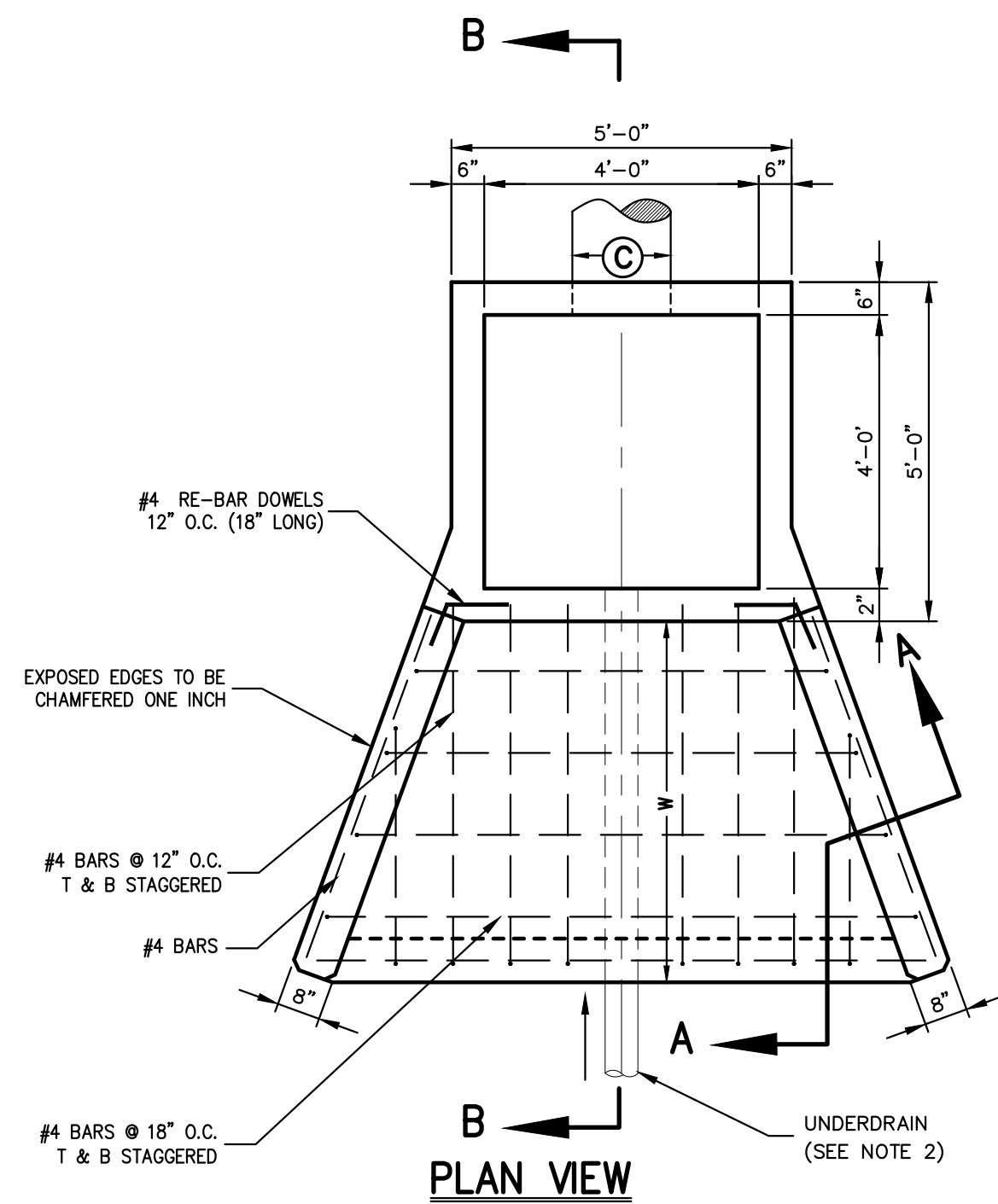
OCS OUTLET CONTROL STRUCTURE  
 ELEV. ELEVATION  
 F INFLOW  
 OF OUTFLOW  
 NA NOT APPLICABLE  
 O.C. ON CENTER  
 T&B TOP AND BOTTOM  
 EW EACH WAY

**NOTES:**

1. PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD
2. UNDERDRAINS SHALL BE INSTALLED IN BASIN A AND B.
3. SEE UTILITY NOTES A-4 TO A-7

**STRUCTURE CHART**

BASIN No.	STRUCTURE No.	PIPE/ORIFICE INVERT AND GRATE ELEVATIONS		
		WEIR (A)	GRATE (B)	PIPE OUT (C)
A	OCS-A	-	370.50	24" @ 366.90
B	OCS-B	4' @ 370.00	370.50	15" @ 366.50



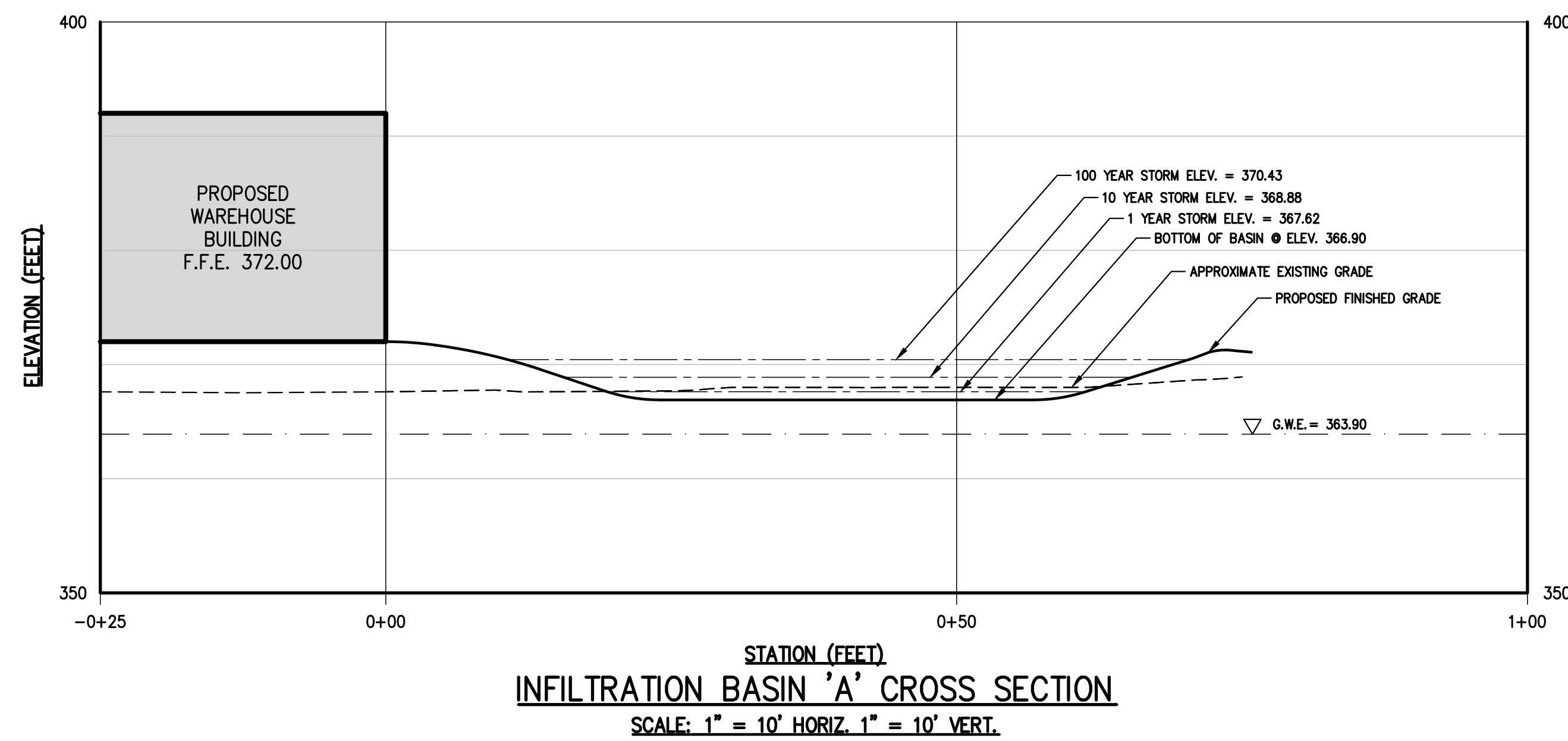
- NOTES:**
1. SEE PLANTING PLAN FOR GROUND COVER SPECIES, SIZE, AND SPACING DIMENSION.
  2. SETTLE SOIL AROUND ROOT BALL OF EACH GROUND COVER PLANT PRIOR TO MULCHING.
  3. ALL PLANTING BEDS SHALL BE FREE OF WEEDS AND GRASS PRIOR TO AND FOLLOWING INSTALLATION OF PLANTS.
  4. PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
  5. PROPOSED PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

**OUTLET CONTROL STRUCTURE**

27

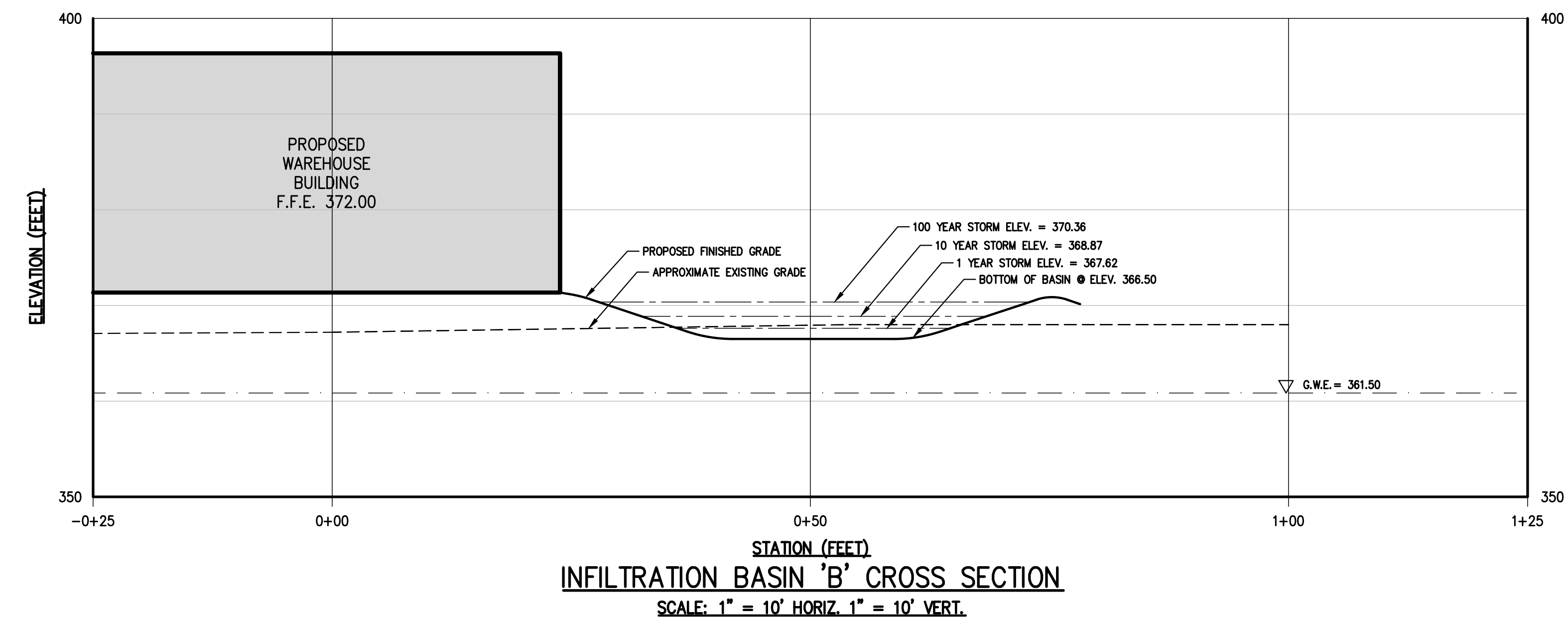
**GROUND COVER PLANTING**

28



**INFILTRATION BASIN 'A' CROSS SECTION**

29



**INFILTRATION BASIN 'B' CROSS SECTION**

30

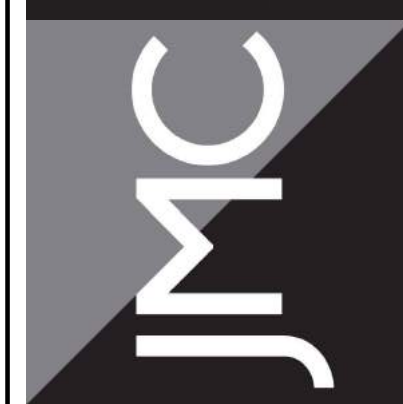
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21  
 CHRISTOPHER CARTH, CHAIRMAN, DATE: \_\_\_\_\_  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 JOSEPH M. CERMELE, PE DATE: \_\_\_\_\_  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/17/2023	NC

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 www.jmcpllc.com



**CONSTRUCTION DETAILS**  
**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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Drawn: NC Approval: DL  
 Scale: NOT TO SCALE  
 Date: 10/24/2022  
 Project No: 22090  
 ZONE/DETAIL: DET-5  
 Drawing No: C-904

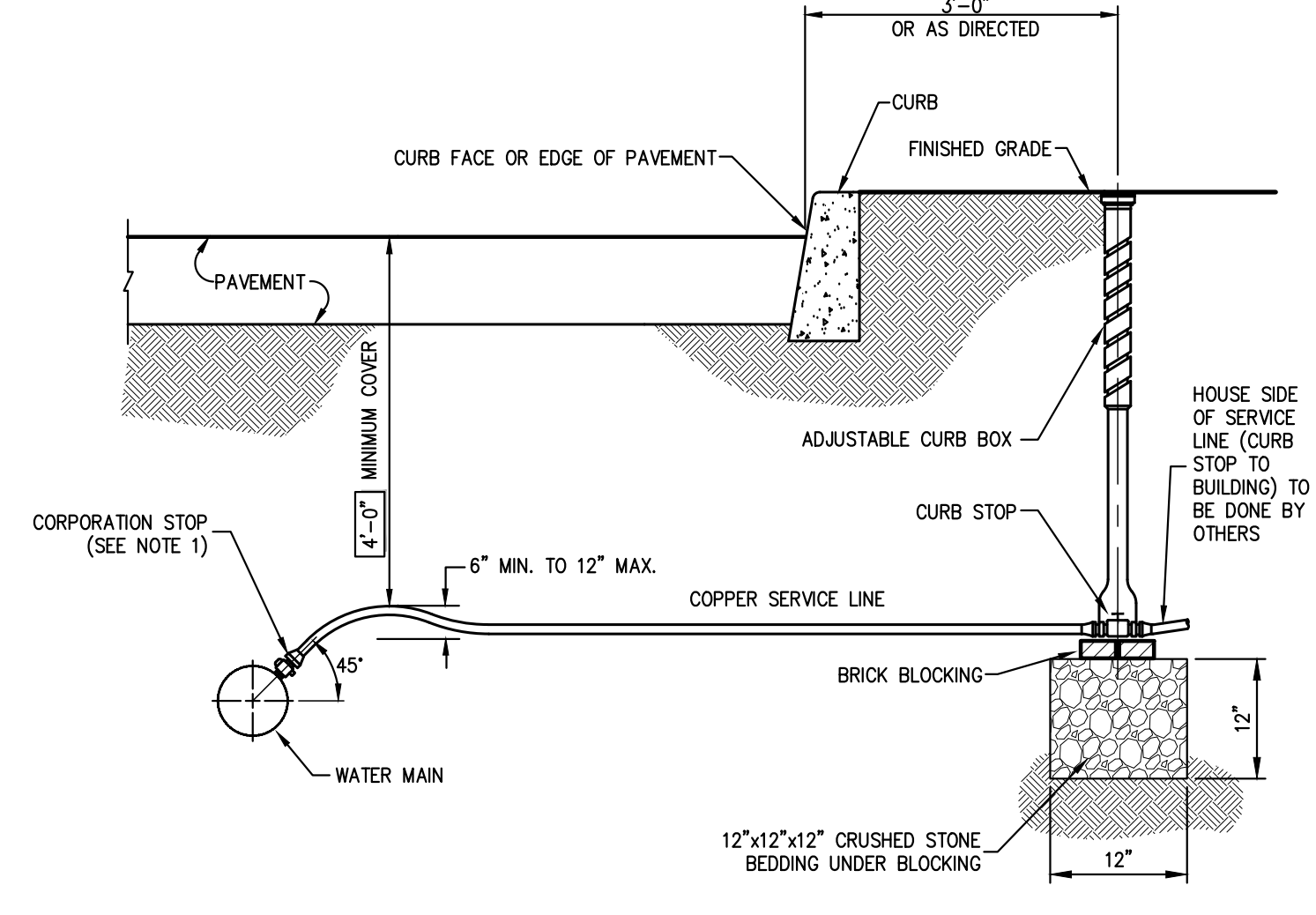
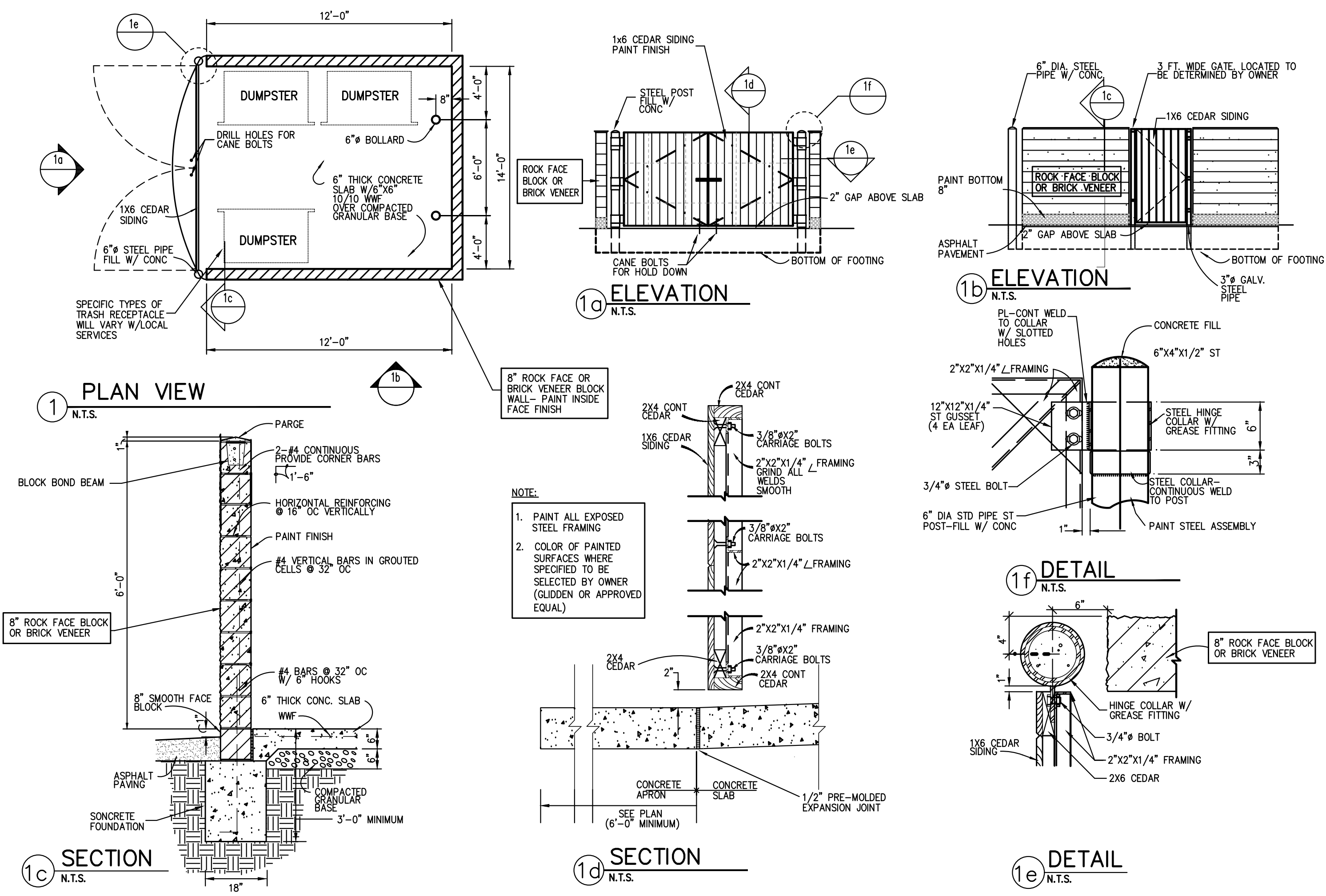
NOT FOR CONSTRUCTION



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

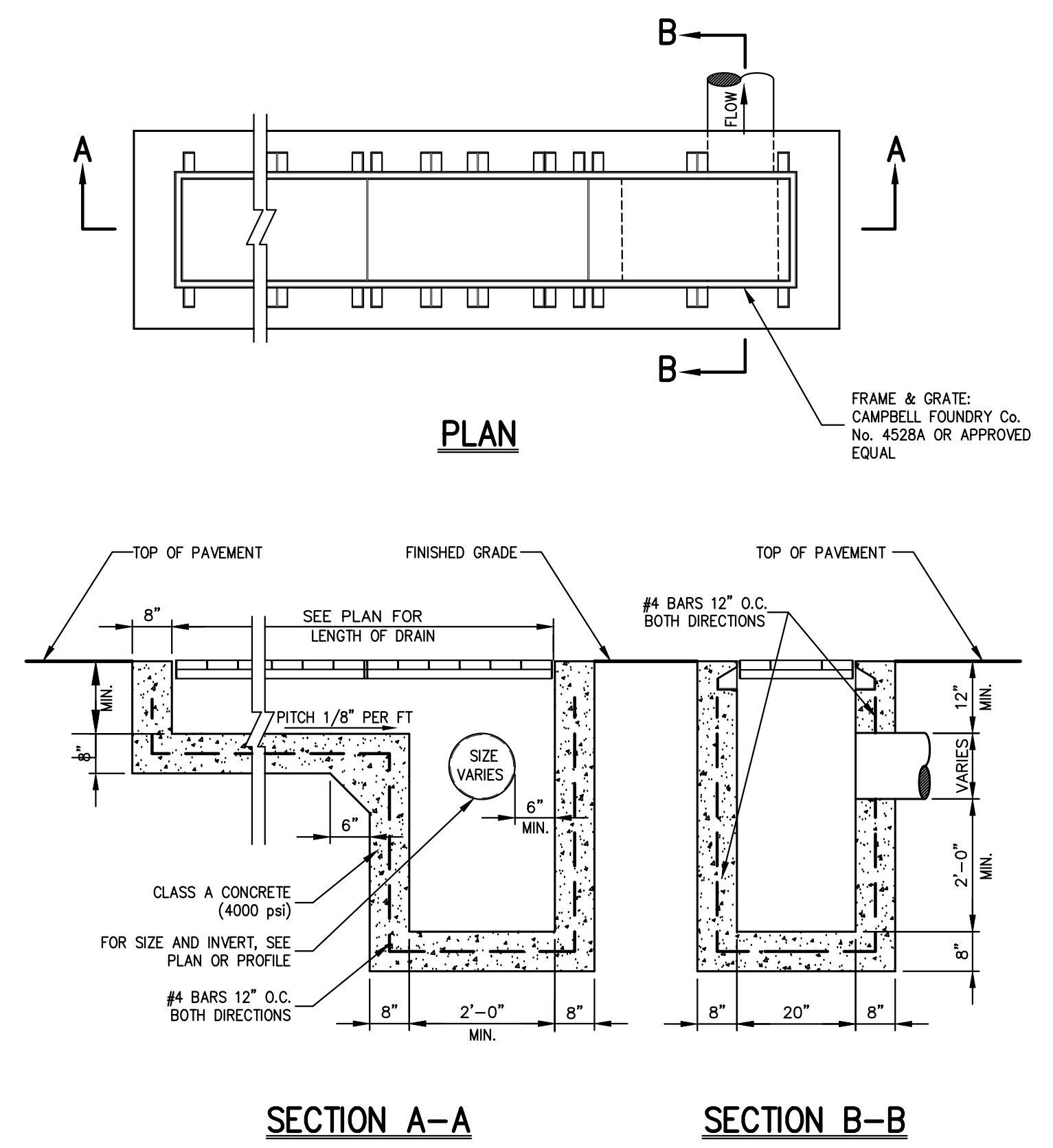
JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS



**SERVICE LINE REQUIREMENTS**

SIZE	SERVICE LINE (MATERIALS)	CORPORATION STOP	CURB STOP	CURB BOX	ENLARGED BASE
3/4"	COPPER, TYPE K	H-1500B N	H-15214 N	H-1030B	Not Applicable
1"	COPPER, TYPE K	H-15014 N	H-1030B	H-1030B	Not Applicable
1-1/2"	COPPER, TYPE K	H-15013 N	H-15214 N	H-10310	Not Applicable
2"	COPPER, TYPE K	H-15013 N	H-15214 N	H-10310	H-10349

- NOTES:**
- INSTALLATION OF 1-1/2" AND 2" CORPORATION STOPS SHALL BE MADE IN THE UPPER PIPE QUADRANT, BUT MAY BE MADE AT ANGLES LESS THAN 45° IF APPROVED BY THE OWNER'S FIELD REPRESENTATIVE.
  - SERVICE LINE SHALL HAVE NO JOINTS BETWEEN THE WATER MAIN AND CURB STOP.
  - CORPORATION STOP, CURB STOP, CURB BOX AND ENLARGED BASE FOR CURB BOX SHALL BE MUELLER COMPANY OR APPROVED EQUAL. CATALOG NUMBERS SHOWN REFER TO MUELLER COMPANY.
  - ALL SERVICE BRASS SHALL COMPLY WITH ANWA C-800. COMPONENTS IN CONTACT WITH POTABLE WATER SHALL ALSO COMPLY WITH LATEST REQUIREMENTS OF THE FEDERAL SAFE DRINKING WATER ACT.



**TRASH ENCLOSURE ON CONCRETE PAD**

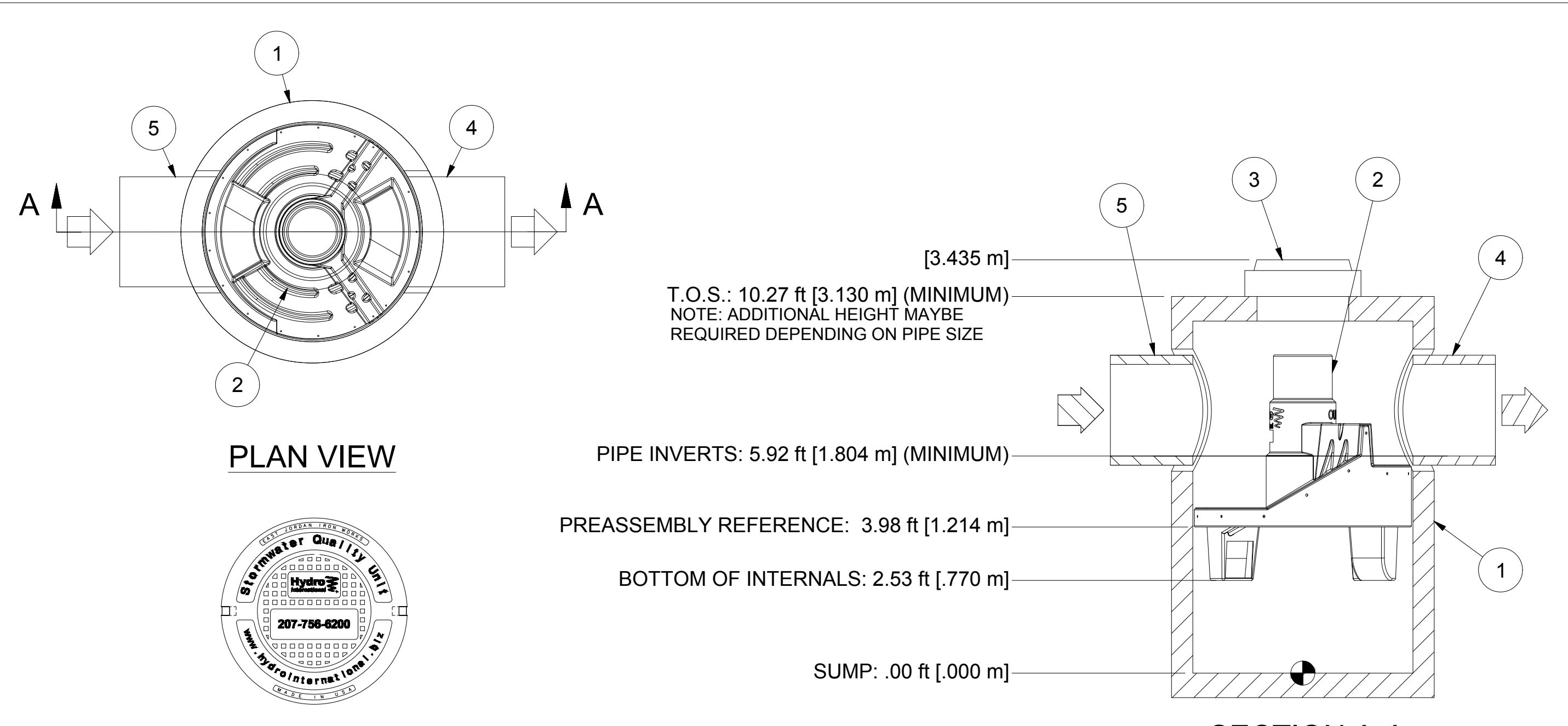
31

**WATER SERVICE CONNECTION**

32

**TRENCH DRAIN**

33



**PROJECTION**

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

DATE: 6/3/2019 SCALE: 1:40  
 DRAWN BY: MRJ CHECKED BY: APPROVED BY:  
 TITLE: 6" DIAMETER MANHOLE FIRST DEFENSE HIGH CAPACITY

**PARTS LIST**

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	72	1800	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	30 (MAX)	750 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	30 (MAX)	750 (MAX)	INLET PIPE (BY OTHERS)

- PRODUCT SPECIFICATION:**
- PEAK HYDRAULIC FLOW: 32.0 cfs (906 l/s)
  - MIN SEDIMENT STORAGE CAPACITY: 1.6 cu. yd. (1.2 cu. m.)
  - OIL STORAGE CAPACITY: 496 gal. (1878 liters)
  - MAXIMUM INLET/OUTLET PIPE DIAMETERS: 30 in. (750 mm)
  - THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF.
  - OK110 110 MICRON 80% TSS REMOVAL 3.38 cfs (95.7 l/s) (NUDEP TEST PROTOCOL)
  - NUDEP CERTIFIED 80% TSS REMOVAL AT 4.23 cfs (119.8 l/s)
- GENERAL NOTES:**
- General Arrangement drawings only. Contact Hydro International for site specific drawings.
  - The diameter of the inlet and outlet pipes may be no more than 30".
  - Multiple inlet pipes possible (refer to project plan).
  - Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan.s)
  - Peak flow rate and minimum height limited by available cover and pipe diameter.
  - Larger sediment storage capacity may be provided with a deeper sump depth.

**Hydro International**

94 Hutchins Drive  
 Portland, ME 04102  
 Tel: +1 (207) 756-6200  
 Fax: +1 (207) 756-6212  
 hydro-int.com

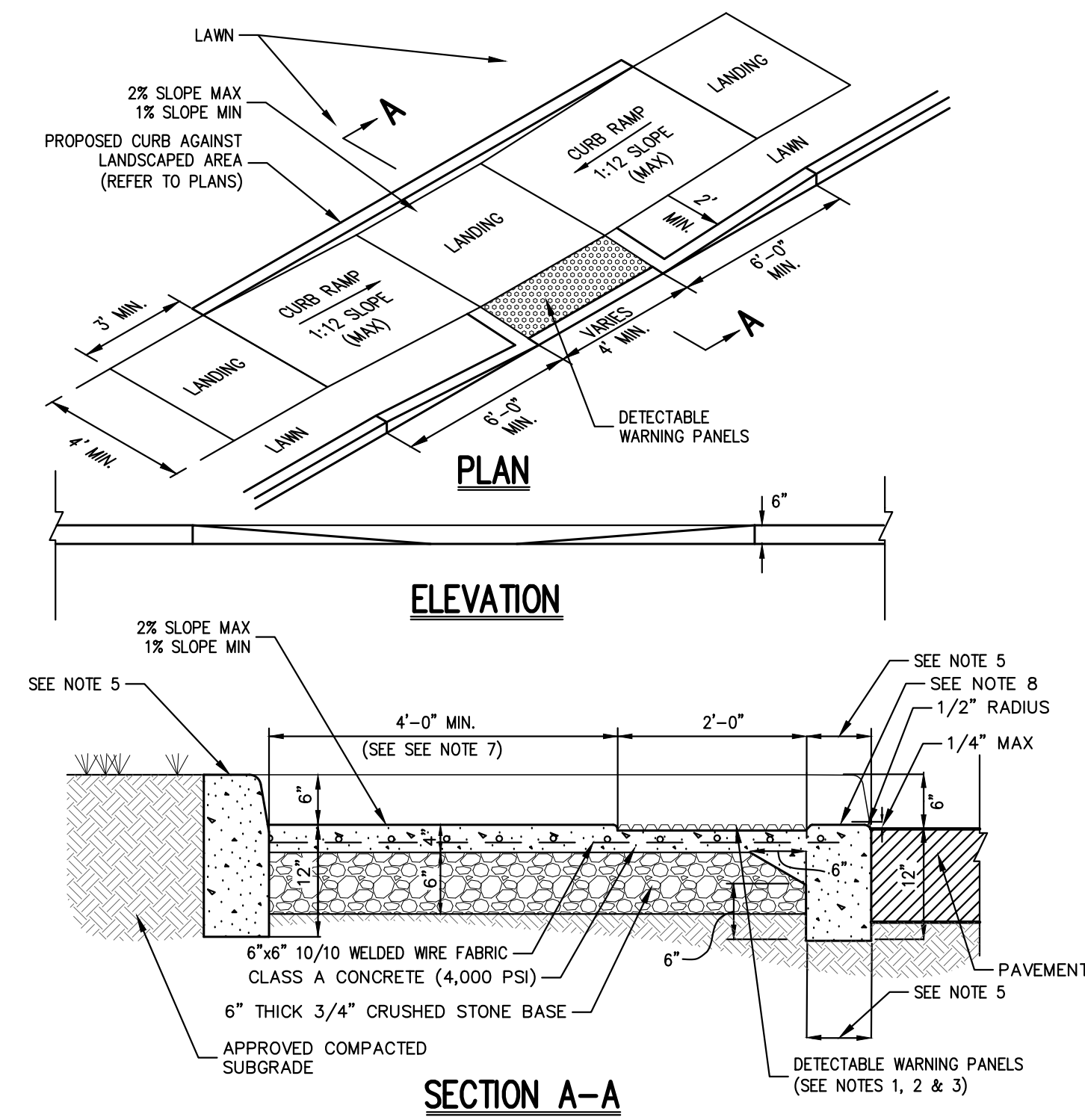
APPROX WEIGHT: N/A MATERIAL: N/A  
 NPT ASSEMBLY: 12-34567-1  
 DRAWING NO: 12-34567-FDHC GA-1  
 SHEET SIZE: 1 OF 1

**FIRST DEFENSE HYDRODYNAMIC SEPARATOR (FD-6HC)**

34

**DROP CURB & RAMP (TYPE C) WITH DETECTABLE WARNING**

35



- NOTES:**
- RAMPS SHALL HAVE CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILES AS MANUFACTURED BY ARMOR-TILE (OR APPROVED EQUAL) AND SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES.
  - DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT IN ACCORDANCE WITH SECTION 4.29.2, FEDERAL REGISTER, VOLUME 56, NO. 144, RULES AND REGULATIONS, APPENDIX A TO PART 36 - STANDARDS FOR ACCESSIBLE DESIGN (AMERICANS WITH DISABILITIES ACT), LATEST EDITION.
  - 24" WIDTH OF PANELS TO BE INSTALLED DIRECTLY BEHIND CURB AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  - A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
  - CURB TREATMENT VARIES. SEE PLANS FOR CURB TYPE AND SEE CURB DETAIL FOR DIMENSIONS.
  - RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT FLOODING.
  - WHEN LANDING OF RAMP ADJONS A DOORWAY THEN THE MINIMUM DOORWAY MANEUVERING AREA SHALL BE AT LEAST THE WIDTH OF THE DOORWAY AND SHALL HAVE A MINIMUM DEPTH OF:  
 MANUAL SWING DOORS = 60" MIN.  
 FULL POWERED AUTOMATIC SLIDING DOORS = 48" MIN.
  - CONTRACTOR TO ENSURE TOP OF CURB MATCHES SLOPE OF RAMP.

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 BOCA RATON, FL 33431

ARCHITECT: SGW ARCHITECTURE & DESIGN  
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Scale: NOT TO SCALE  
 Date: 10/24/2022  
 Project No: 22090  
 ZONE/DETAIL: DET-6  
 Drawing No: C-905

NOT FOR CONSTRUCTION



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

By	NC
Date	09/17/2023
Revision	
No.	1
Comments	RESPONSE TO TOWN COMMENTS

OWNER/APPLICANT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
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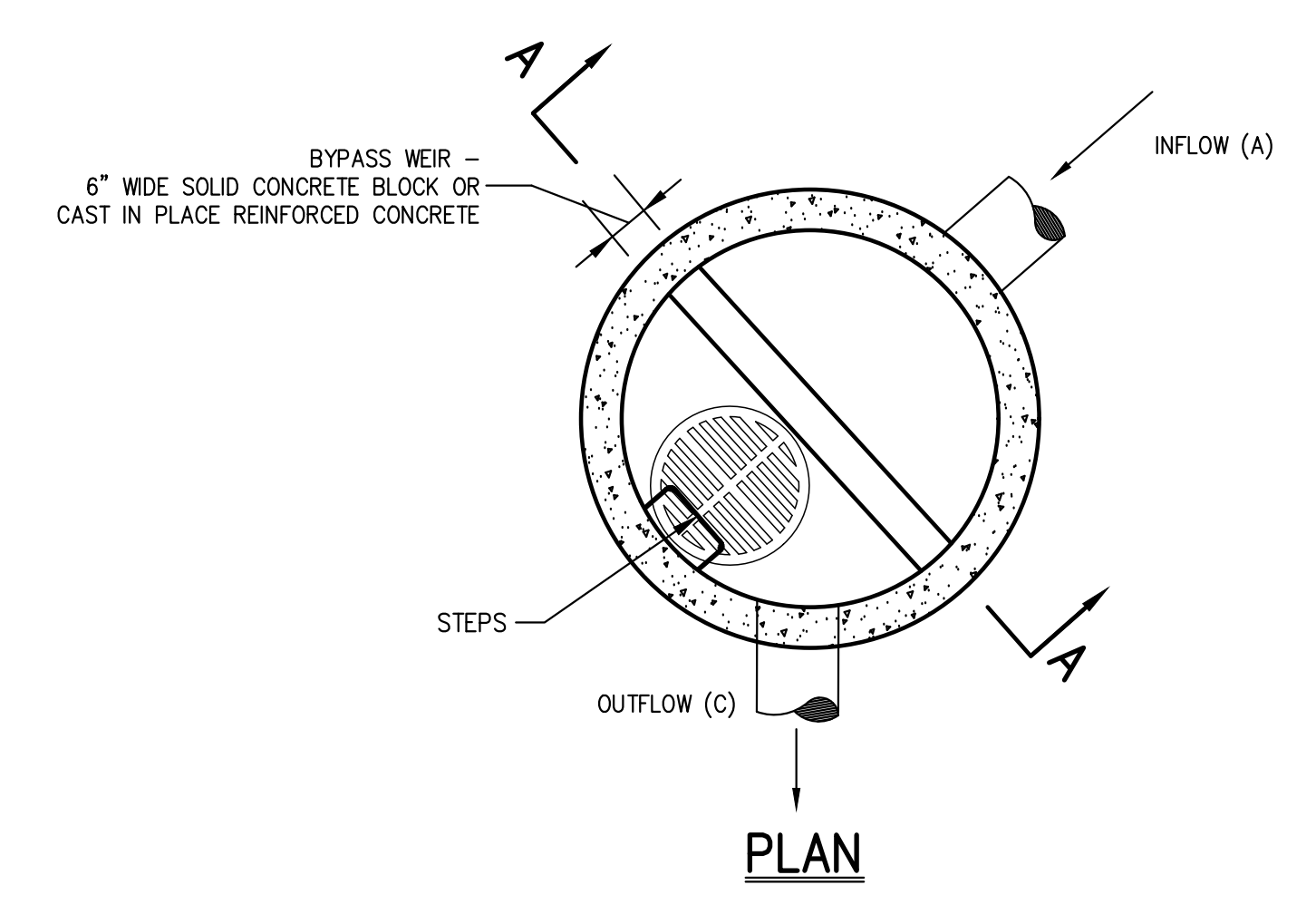
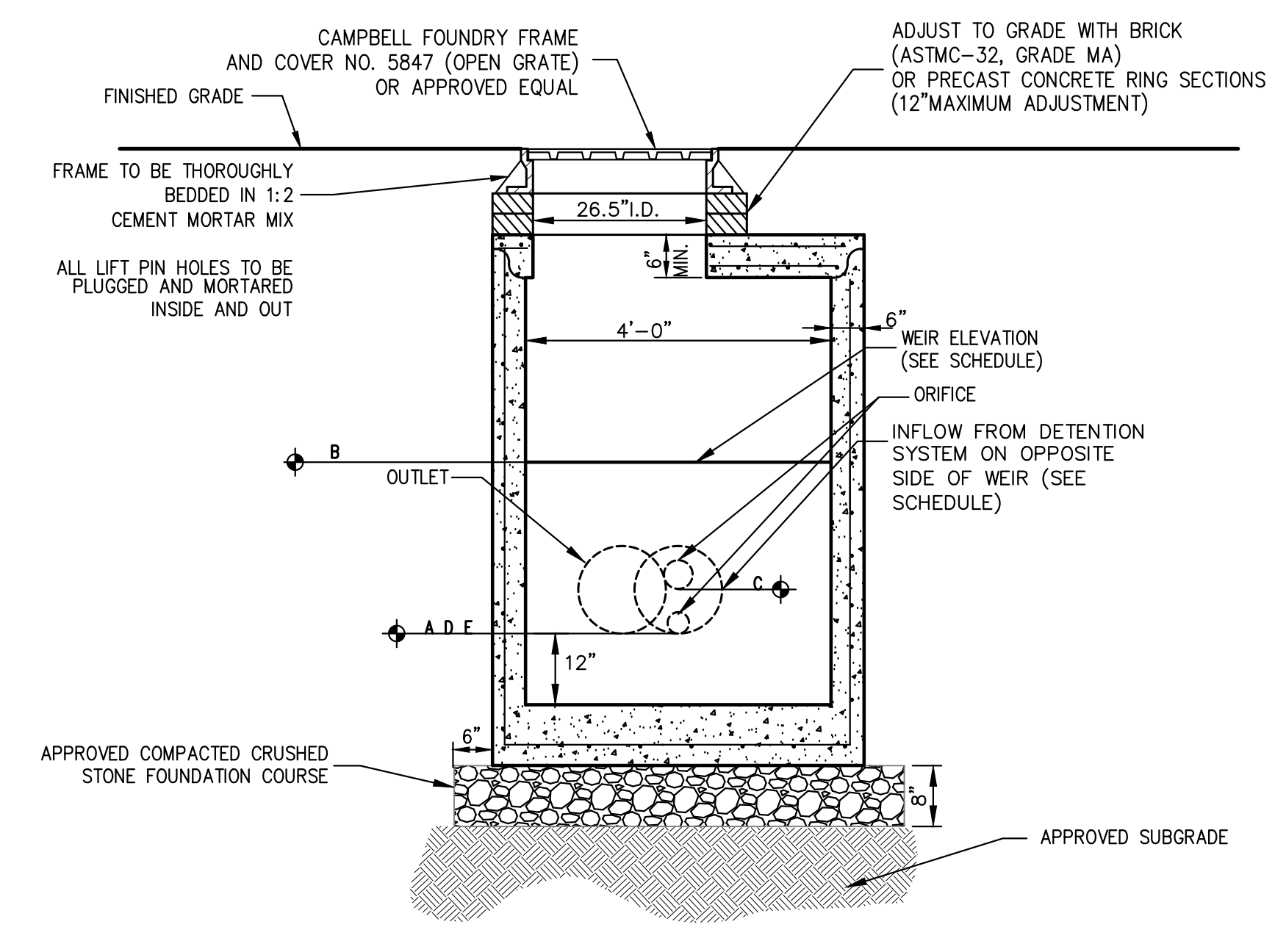


**CONSTRUCTION DETAILS**

**BAYSPACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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Drawn:	NC	Approved:	DL
Scale:	NOT TO SCALE		
Date:	10/24/2022		
Project No:	22090		
Zone-Items	DCT-7		
Drawing No:	C-906		



SECTION A-A

SCHEDULE OF INVERTS AND ELEVATIONS

STRUCTURE	SIZE	INVERT	WEIR 1		ORIFICE 1		ORIFICE 2		SIZE	INVERT
			LENGTH	ELEVATION	DIA.	ELEVATION	DIA.	ELEVATION		
OCS-7-1	12" HDPE	365.50	4'	368.00	5"	366.75	3"	365.50	15" HDPE	365.50

**NOTE**

1. REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
2. SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON THIS DRAWING.

OUTLET CONTROL STRUCTURE

36

NOT FOR CONSTRUCTION

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NEW CLIMATE CONTROLLED MIXED USE BUILDING  
 FULLY SPRINKLERED, TYPE II-B CONSTRUCTION.  
 3-STORY SELF-STORAGE FACILITY,  
 1-1/2 STORY RECREATION FACILITY AND  
 1-STORY WAREHOUSE  
 AT

100 BUSINESS PARK DRIVE  
 ARMONK, NEW YORK 10504

OWNER:  
 WMG STORAGE PARTNERS

ARCHITECT:



ARCHITECT:  
 SULLIVAN & WILSON, P.C.  
 444 N. MICHIGAN AVENUE - SUITE 1850  
 CHICAGO, IL 60611  
 TEL: (312) 988-7412  
 www.sgwarch.com

CIVIL ENGINEER:  
 JMC ENGINEERING  
 120 BEDFORD ROAD  
 ARMONK, NY 10504  
 TEL: (914) 273-5225

DEVELOPER:  
 WMG ACQUISITIONS  
 2801 SW 31ST AVENUE - SUITE 2B  
 COCONUT GROVE, FL 33133  
 TEL: (305) 416-4949

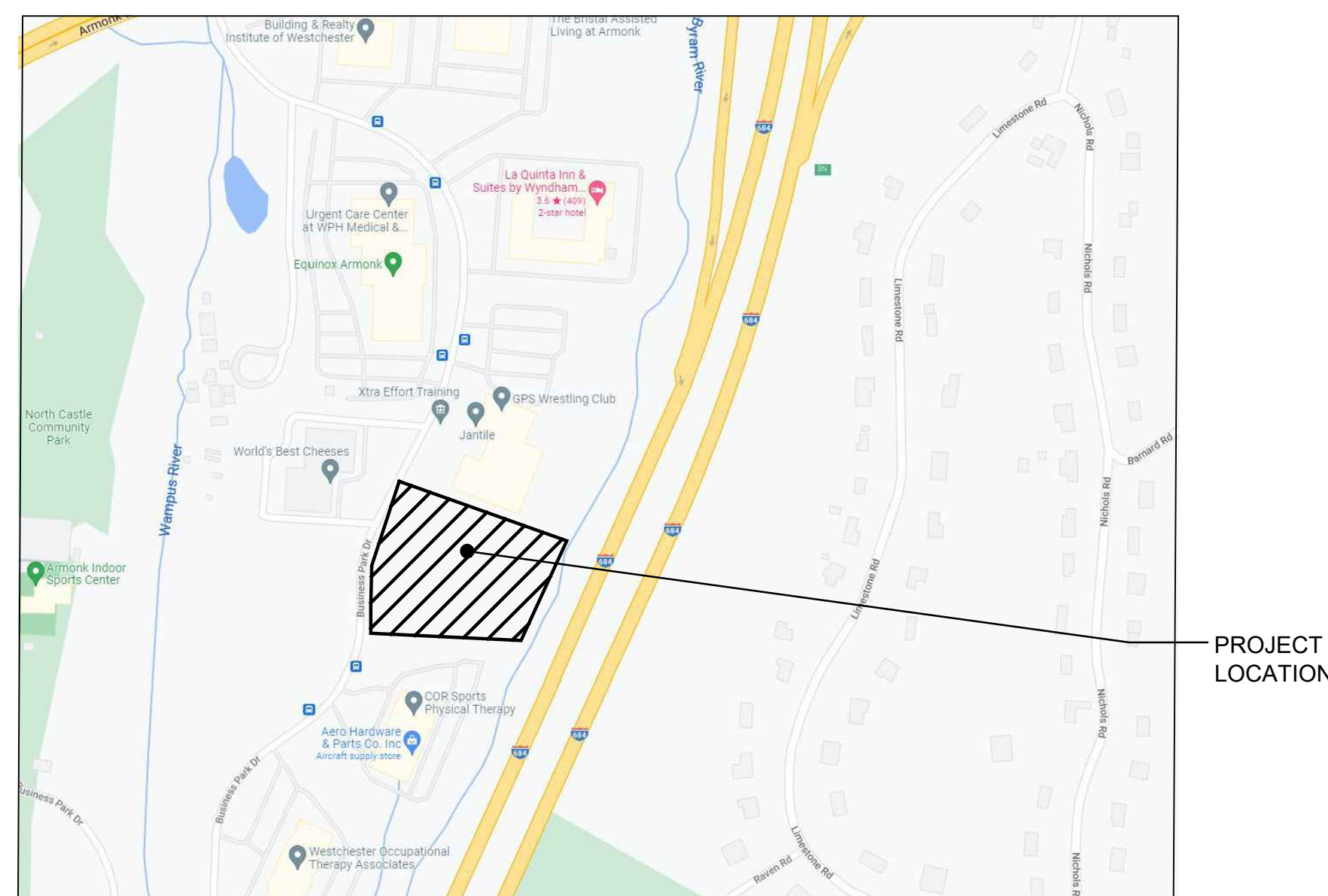
ABBREVIATIONS

ALT	ALTERNATE	ELEC	ELECTRICAL	MULL	MULLION
A/C	AIR CONDITIONING	EL	ELEVATION	NIC	NOT IN CONTRACT
AFF	ABOVE FINISHED FLOOR	EJ	EXPANSION JOINT	NTS	NOT TO SCALE
AL	ALUMINUM	EP	EPOXY PAINT	OC	ON CENTER
ARF	ABOVE RAISED FLOOR	EQ	EQUAL	OFCI	OWNER FURNISHED, CONTRACTOR TO INSTALL
ACT	ACOUSTIC TILE	EXIST	EXISTING	OPP	OPPOSITE
BD	BOARD	EXP	EXPOSED	PNT	PAINT
BLDG	BUILDING	EXT	EXTERIOR	PR	PAIR
BLKG	BLOCKING	EWC	ELECTRIC WATER COOLER	PLAM	PLASTIC LAMINATE
BO	BOTTOM OF	FEC	FIRE EXTINGUISHER CABINET	PL	PLATE
BR	BRUSHED	FHC	FIRE HOSE CABINET	QT	QUARRY TILE
BRG	BEARING	FIN	FINISH	R	RISER
CA	CLEAR ANODIZED	FD	FLOOR DRAIN	RD	RADIUS
CB	CABINET	FLR	FLOOR	RD	ROOF DRAIN
CPT	CARPET	FOM	FACE OF MASONRY TO FACE OF MASONRY	RH	RIGHT HAND
CL	CENTERLINE	FTG	FOOTING	REQD	REQUIRED
CLG	CEILING	GA	GAUGE	RO	ROUGH OPENING
CJ	CONTROL JOINT	GALV	GALVANIZED	SB	SANDBLAST
CMU	CONC. MASONRY UNIT	GYP	GYPSPUM BOARD	SC	SOLID CORE
CONC	CONCRETE	GL	GLASS	SCHED	SCHEDULE
CONT	CONTINUOUS	HDWD	HARDWOOD	SM	SHEET METAL
CI	CAST IRON	HDWR	HARDWARE	SHT	SHEET
CO	CLEAN OUT	HM	HOLLOW METAL	SIM	SIMILAR
CW	COLD WATER	HR	HOUR	SS	STAINLESS STEEL
CP	CEMENT PLASTER	HT	HEIGHT	STD	STANDARD
CT	CERAMIC TILE	HW	HOT WATER	THK	THICK
DF	DRINKING FOUNTAIN	INT	INTERIOR	T	TREAD
DIA	DIAMETER	INSUL	INSULATION	TO	TOP OF
DIM	DIMENSION	JT	JOINT	T & G	TONGUE AND GROOVE
DN	DOWN	LAM	LAMINATED	TYP	TYPICAL
DS	DOWNSPOUT	LAV	LAVATORY	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING	LH	LEFT HAND	VCT	VINYL COMPOSITION TILE
EA	EACH	MFR	MANUFACTURER	VIF	VERIFY IN FIELD
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	MO	MASONRY OPENING	WD	WOOD
		MWK	MILLWORK	WWF	WELDED WIRE FABRIC
		MTL	METAL		

LEGEND

	ROOM NAME/NUMBER TAG		CEILING ELEVATION TAG		GLASS (ELEVATION)
	FLOOR ELEVATION TAG/ MARK		CEILING MATERIAL, SEE AX-X		GLASS (SECTION)
	DRAWING REVISION TAG		CEILING PAINT, SEE AX-X		MORTAR, GROUT, THINSET OR CEMENT
	NOTE TAG		SMOKE DETECTOR		GYPSPUM BOARD
	DOOR TAG (See A5-# series dwgs)		CARBON MONOXIDE DETECTOR		METAL LATH & PLASTER
	WINDOW TAG (See A5-# series dwgs)		NEW PARTITION - SEE PLANS FOR TYPE		PLYWOOD
	WALL TYPE (See A4-# series dwgs)		EXISTING CONSTRUCTION TO BE REMOVED		QUARRY TILE OR CERAMIC TILE
	DETAIL TAG		EXISTING CONSTRUCTION TO REMAIN		RIGID INSULATION
	ELEVATION TAG		EXISTING NIC		STEEL
	INTERIOR ELEVATION TAG		ACOUSTIC TILE		TERRAZZO
	SHEET TAG		ALUMINUM		WOOD-ROUGH OR FRAMING
	EXTERIOR ELEVATION TAG		BATT INSULATION OR SOUND ATTENUATION BLANKET		ACOUSTICAL TILE CEILING
	SECTION TAG		BRICK (PLAN & SECTION)		GYPSPUM BOARD CEILING/SOFFIT
	SURFACE MOUNT FEC W/ SIGN		BRICK (ELEVATION)		RECESSED CAN LIGHT FIXTURE (SEE ELECTRICAL)
	SEMI-RECESSED FEC W/ SIGN		CONCRETE		2x2 LIGHT FIXTURE
	RECESSED FEC W/ SIGN		CONCRETE MASONRY UNIT (CMU)		PENDANT OR SURFACE MOUNTED LIGHT FIXTURE
	ELECTRICAL PANEL - SEE ELECTRICAL		EXISTING DOOR		WALL MOUNTED LIGHT FIXTURE
	FROST PROOF HOSE BIB		WIRE MESH SECURITY NET		MECHANICAL SUPPLY GRILL (SEE MECHANICAL)
	SECURITY KEYPAD		X-BRACING (SEE STRUCTURAL), APPLY FIRE RESISTIVE SPRAY AS REQUIRED		MECHANICAL RETURN GRILL (SEE MECHANICAL)

LOCATION MAP



DRAWING INDEX

DWG#	DESCRIPTION	ISSUED FOR ZONING 01/16/2023	ISSUED FOR ZONING 08/10/2023	ISSUED FOR ZONING 09/06/2023
<b>GENERAL</b>				
G0-00	TITLE SHEET & DRAWING INDEX	•	•	•
G0-01	GENERAL M&P	•	•	•
<b>CIVIL</b>				
C-100	SITE LAYOUT PLAN	•	•	•
C-500	SITE LANDSCAPING & WETLAND MITIGATION PLAN	•	•	•
<b>ARCHITECTURAL</b>				
A0-00	SURVEY	•	•	•
A0-01	SITE PLAN	•	•	•
A1-01	FIRST FLOOR PLAN	•	•	•
A1-02	SECOND FLOOR / MEZZANINE PLAN	•	•	•
A1-03	THIRD FLOOR PLAN	•	•	•
A1-04	ROOF PLAN	•	•	•
A2-01	BUILDING ELEVATIONS	•	•	•
A2-02	BUILDING PERSPECTIVE	•	•	•
A2-03	BUILDING PERSPECTIVE	•	•	•
A2-04	BUILDING PERSPECTIVE	•	•	•
A2-05	STREETSCAPE PHOTOGRAPHS	•	•	•
A3-01	BUILDING SECTIONS	•	•	•

NOT FOR CONSTRUCTION

09/06/23 - ISSUED FOR REVIEW

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 NEW YORK, NY 10016  
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 PARK DRIVE

ARMONK, NEW YORK 10504

TITLE SHEET & DRAWING INDEX

TRUE NORTH PROJECT NORTH

G0-00

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PRINCIPAL: MS YBD P.M. CM DRAWN BY: MV, AB, SD, SR



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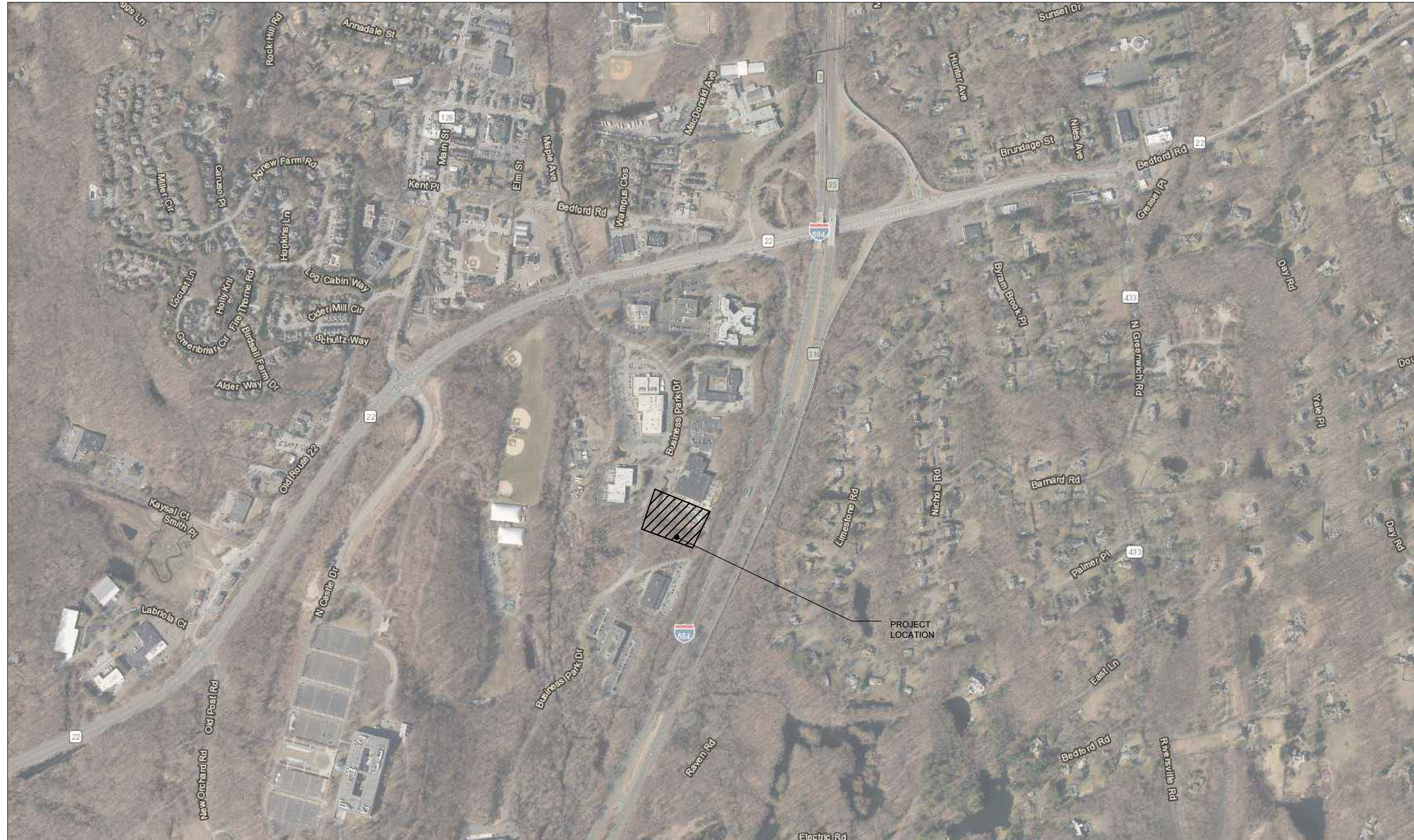
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TITLE SHEET & DRAWING INDEX

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G0-00





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09/06/23 - ISSUED FOR REVIEW

NO	DATE	ISSUE DESCRIPTION
5	9/06/23	ISSUED FOR ZONING
4	8/16/23	ISSUED FOR ZONING
3	1/16/23	ISSUED FOR ZONING
2	10/20/22	ISSUED FOR ZONING
1	09/12/22	ISSUED FOR ZONING

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QC BY: TBD DRAWN BY: MV, AB, SD, SR



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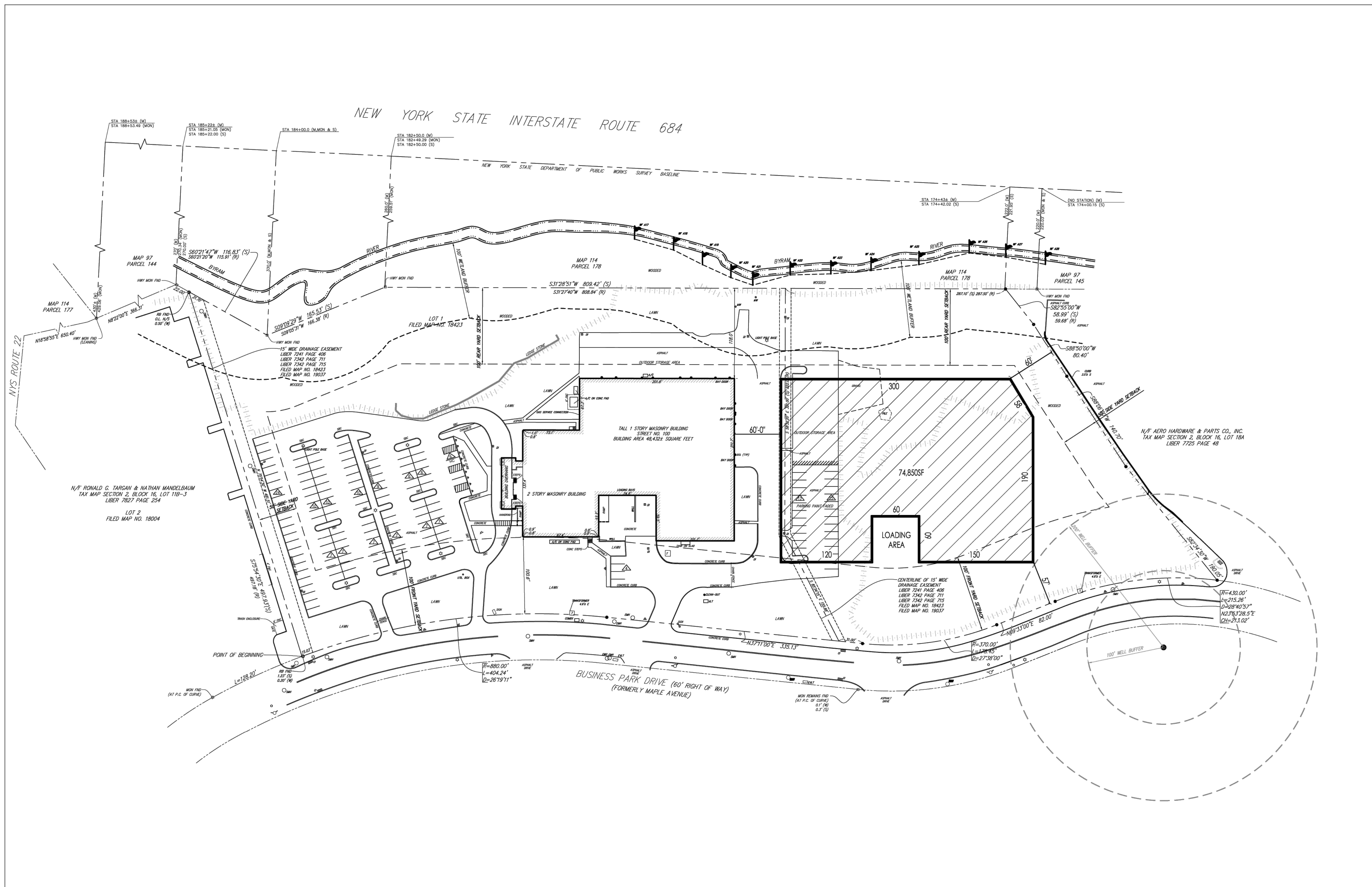
**100 BUSINESS PARK DRIVE**

ARMONK, NEW YORK 10504

GIS AERIAL MAP

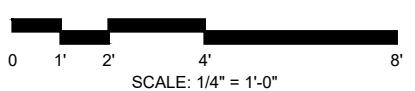
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PLAT OF SURVEY



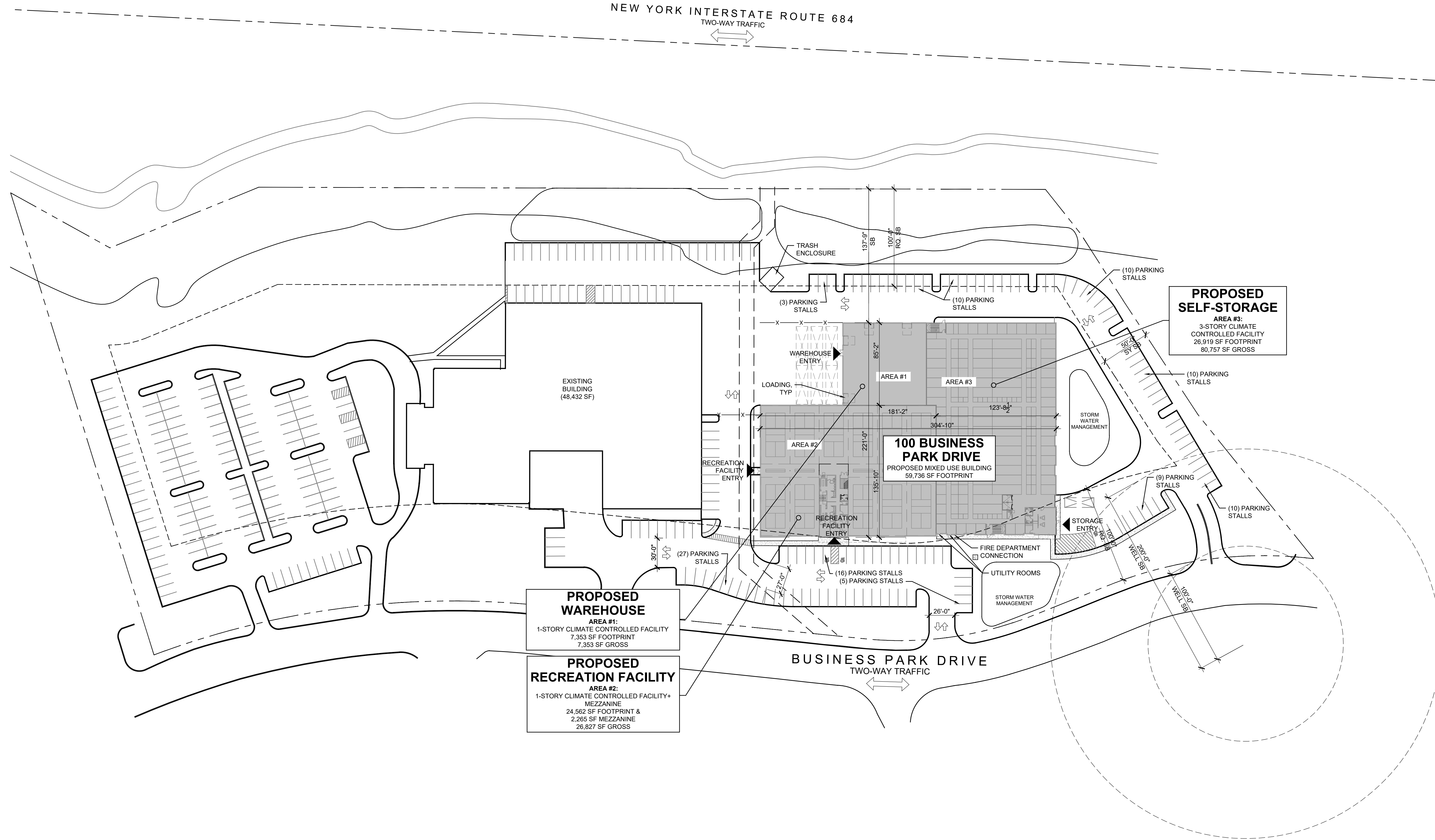
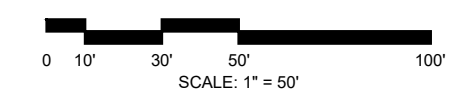
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1 SURVEY  
 SCALE: NTS

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NEW YORK INTERSTATE ROUTE 684  
TWO-WAY TRAFFIC



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SITE PLAN

 NORTH

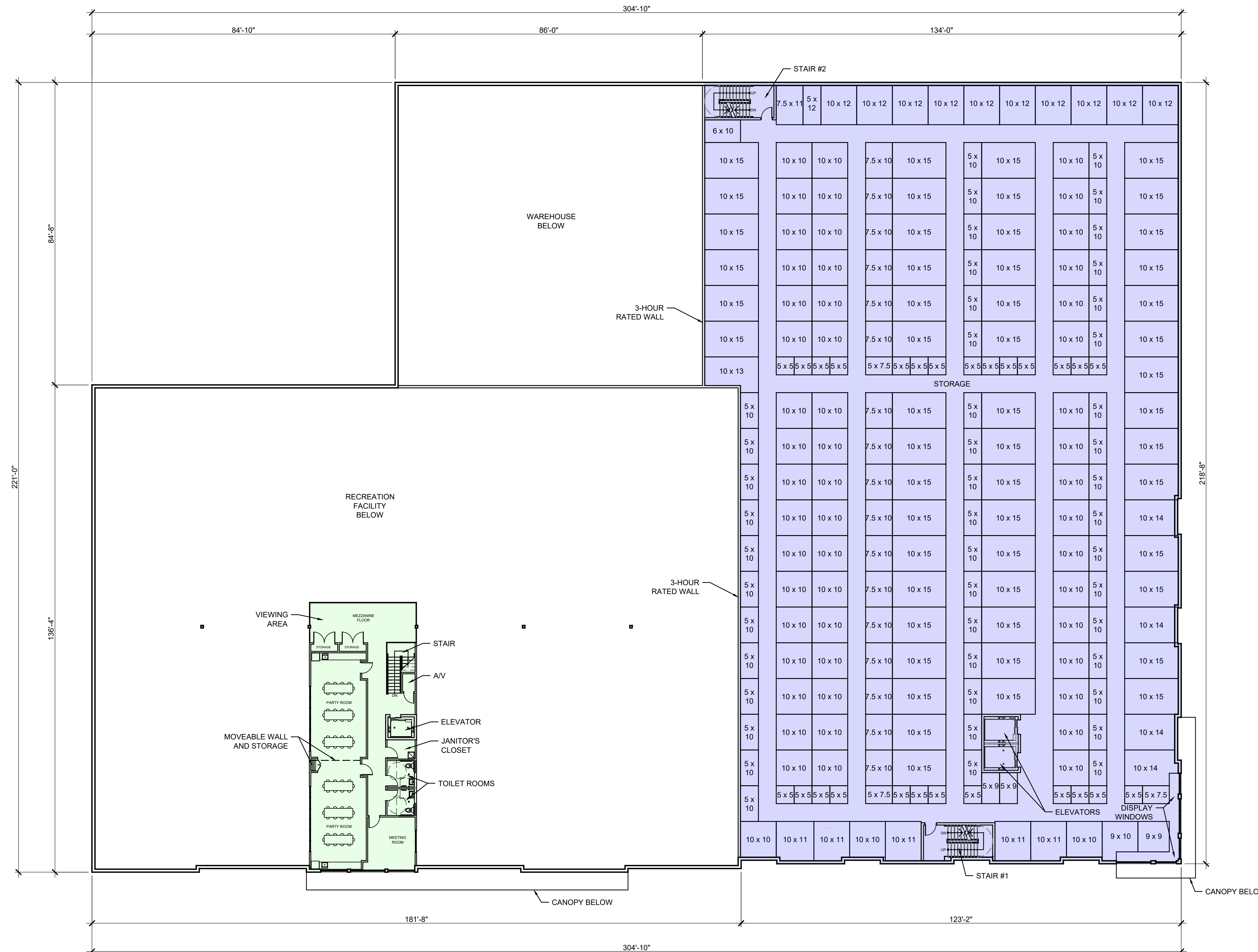
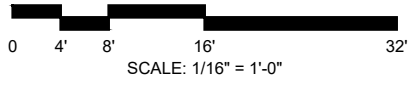
**A0-01**





**GROSS AREA LEGEND**

	RECREATION FACILITY AREA - TOTAL MEZZANINE AREA = 2,268 SF
	STORAGE AREA - TOTAL SECOND FLOOR AREA = 27,474 SF



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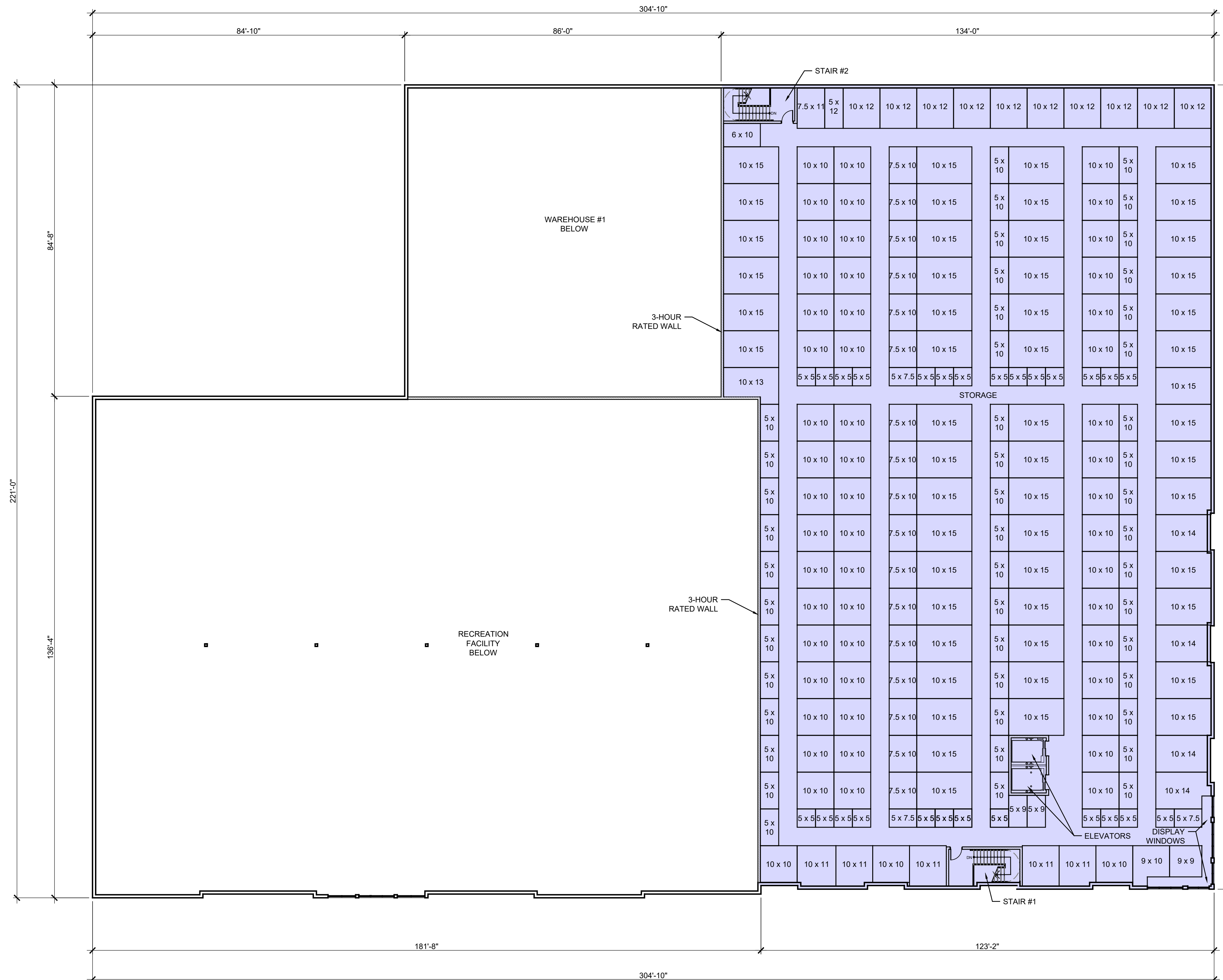
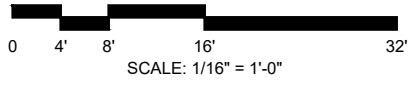
SECOND FLOOR/  
 MEZZANINE PLAN

**1** SECOND FLOOR/  
 MEZZANINE PLAN  
 SCALE: 1/16" = 1'-0"

NORTH

A1-02

GROSS AREA LEGEND  
 STORAGE AREA  
 - TOTAL THIRD FLOOR AREA = 27,474 SF



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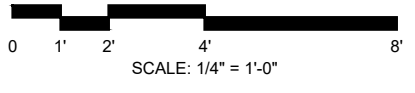
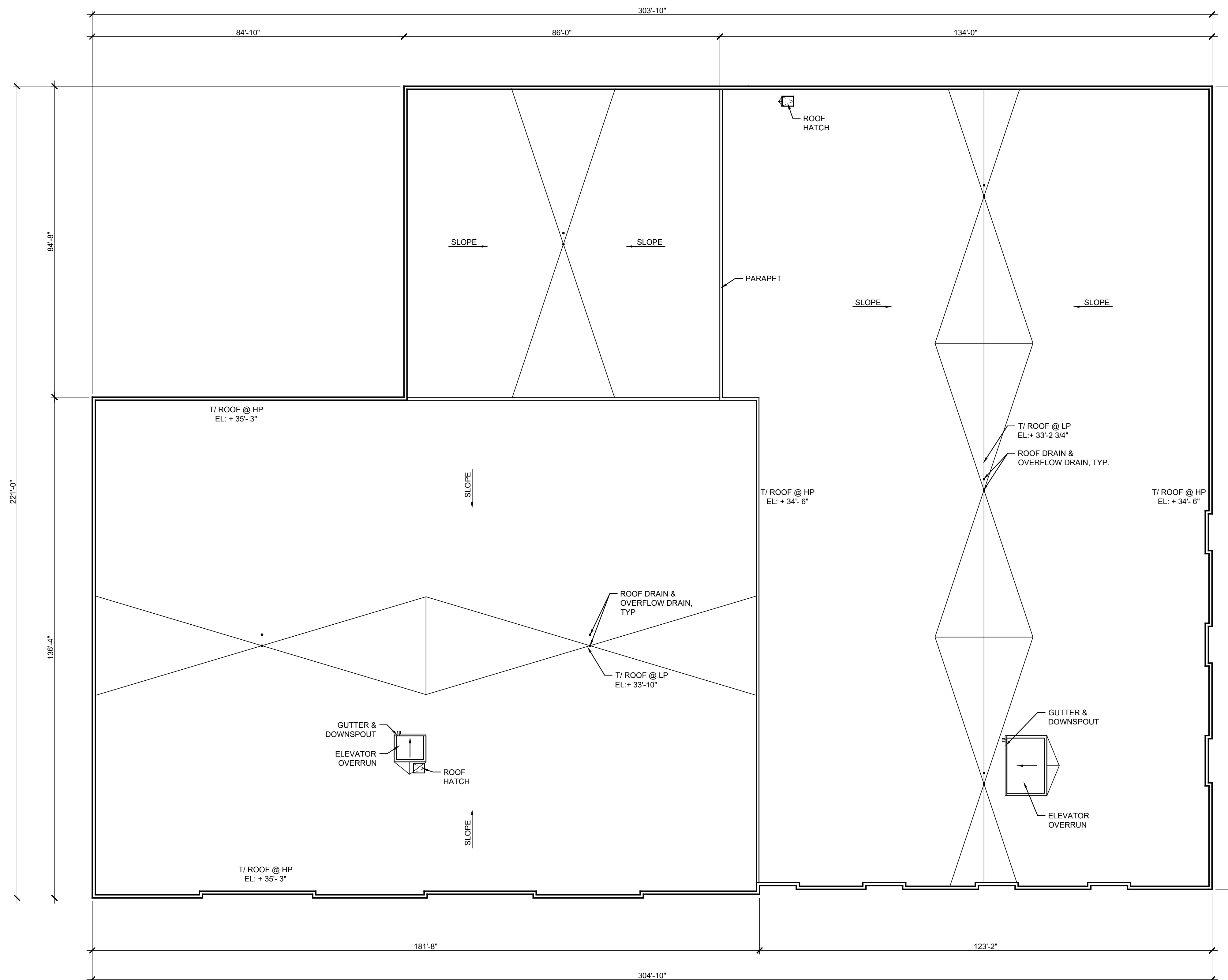
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THIRD FLOOR PLAN

**1 THIRD FLOOR PLAN**  
 SCALE: 1/16" = 1'-0"





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ROOF PLAN



A1-04

1 ROOF PLAN  
 SCALE: 1/16" = 1'-0"



SCHEDULE FOR PROPOSED BUILDING MATERIALS AND COLOR SCHEME

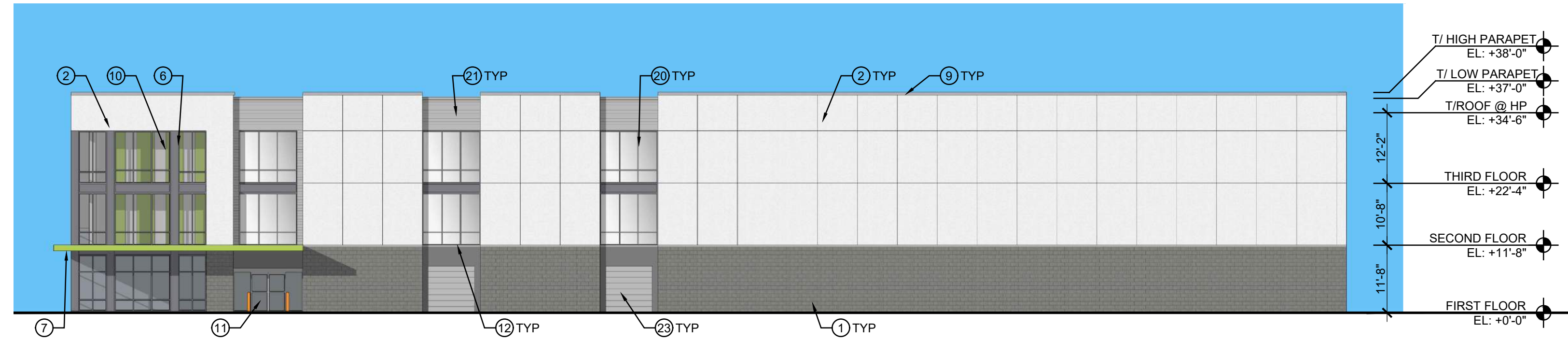
NAME	TYPE	COLOR
CANOPY	SITE BUILT	EXR WASABI, BLUE OUTREMER
WINDOWS	STOREFRONT SYSTEM	CLEAR ANODIZED
DOOR	SLIDING LOADING DOOR	CLEAR ANODIZED
EFIS	EFIS-310 FINE SAND FINISH	NEBULOUS WHITE, ARGOS, BLUE OUTREMER
MASONRY	PAINTED SPLIT FACED CMU	CITYSCAPE

KEY NOTE MATERIAL LEGEND

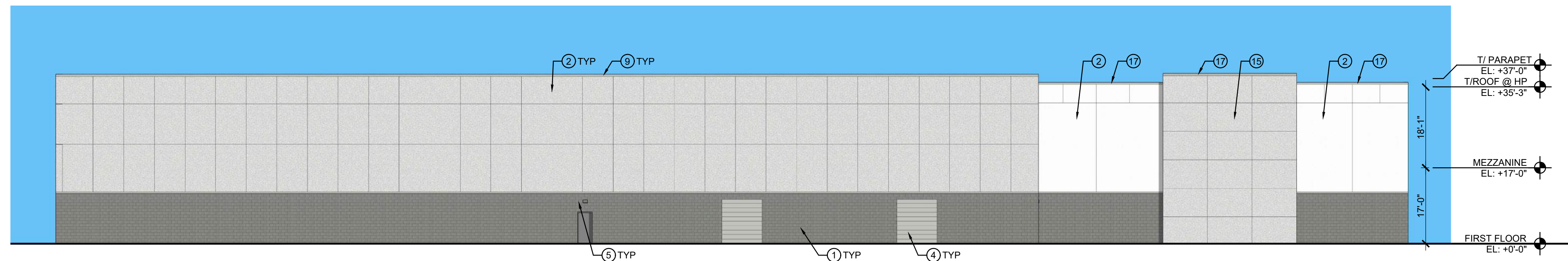
- ① PAINTED SPLIT FACED CMU FINISH - 8" x 16" - COLOR: CITYSCAPE
- ② EIFS - 310 FINE SAND FINISH - COLOR: NEBULOUS WHITE
- ③ NOT USED
- ④ OVERHEAD DOOR - COLOR: ARGOS
- ⑤ LIGHT FIXTURE
- ⑥ STOREFRONT SYSTEM - FINISH: CLEAR ANODIZED
- ⑦ CANOPY COLOR: EXR WASABI
- ⑧ STORAGE SIGNAGE - 88 SF PROVIDED, 88 SF PERMITTED
- ⑨ PRE-FINISHED ALUMINUM COPING - COLOR: ARGOS
- ⑩ BRAKE METAL SPANDREL PANEL - COLOR: CLEAR ANODIZED TO MATCH STOREFRONT
- ⑪ SLIDING LOADING DOOR - FINISH: CLEAR ANODIZED
- ⑫ EIFS - 310 FINE SAND FINISH - COLOR: ARGOS
- ⑬ RECREATION FACILITY SIGNAGE - 109 SF PERMITTED
- ⑭ EIFS - 310 FINE SAND FINISH COLOR: BLUE OUTREMER
- ⑮ EIFS - 310 FINE SAND FINISH - COLOR: PELICAN GRAY
- ⑯ SPANDREL GLASS
- ⑰ PRE-FINISHED ALUMINUM COPING - COLOR: PELICAN GRAY
- ⑱ CANOPY COLOR: CA BLUE OUTREMER ARBORITE S497
- ⑲ NOT USED
- ⑳ FAUX WINDOW
- ㉑ METAL PANEL COLOR: ARGOS
- ㉒ PRE-FINISHED ALUMINUM COPING - COLOR: CA BLUE OUTREMER ARBORITE S497
- ㉓ FAUX OVERHEAD DOOR - COLOR: ARGOS

COLOR LEGEND

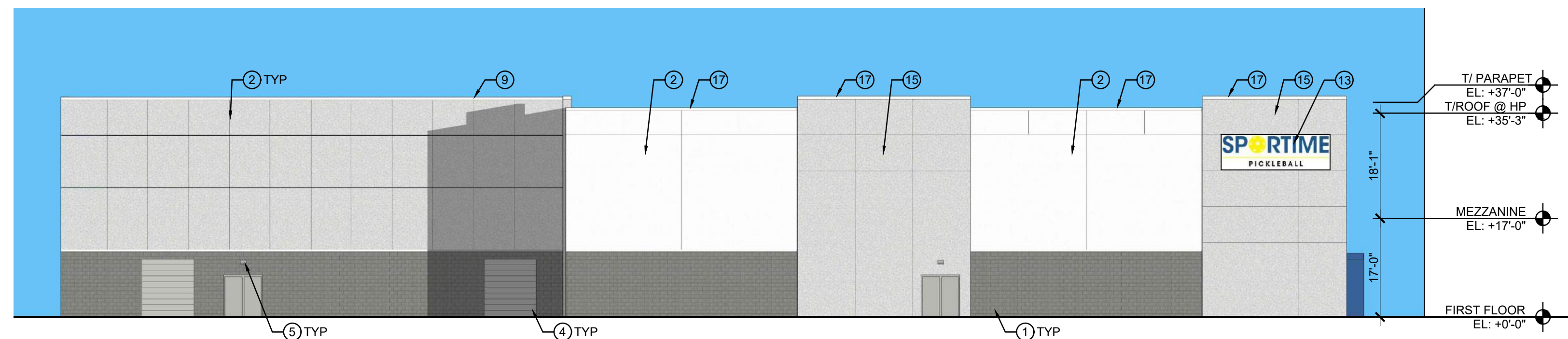
- EXR WASABI
- NEBULOUS WHITE SHERWIN WILLIAMS 7063
- ARGOS SHERWIN WILLIAMS 7065
- CITYSCAPE SHERWIN WILLIAMS 7067
- IRON ORE SHERWIN WILLIAMS 7069
- CLEAR ANODIZED FINISH
- PRO BLUE (PANTONE 29450) ARBORITE
- PELICAN GRAY BENJAMIN MOORE 1612



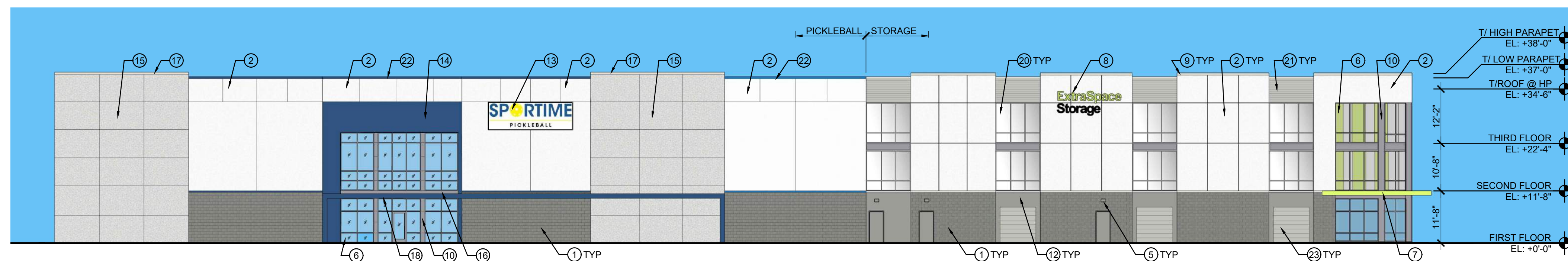
4 EAST ELEVATION  
SCALE: 1/16" = 1'-0"



3 NORTH ELEVATION  
SCALE: 1/16" = 1'-0"



2 WEST ELEVATION  
SCALE: 1/16" = 1'-0"



1 SOUTH ELEVATION  
SCALE: 1/16" = 1'-0"

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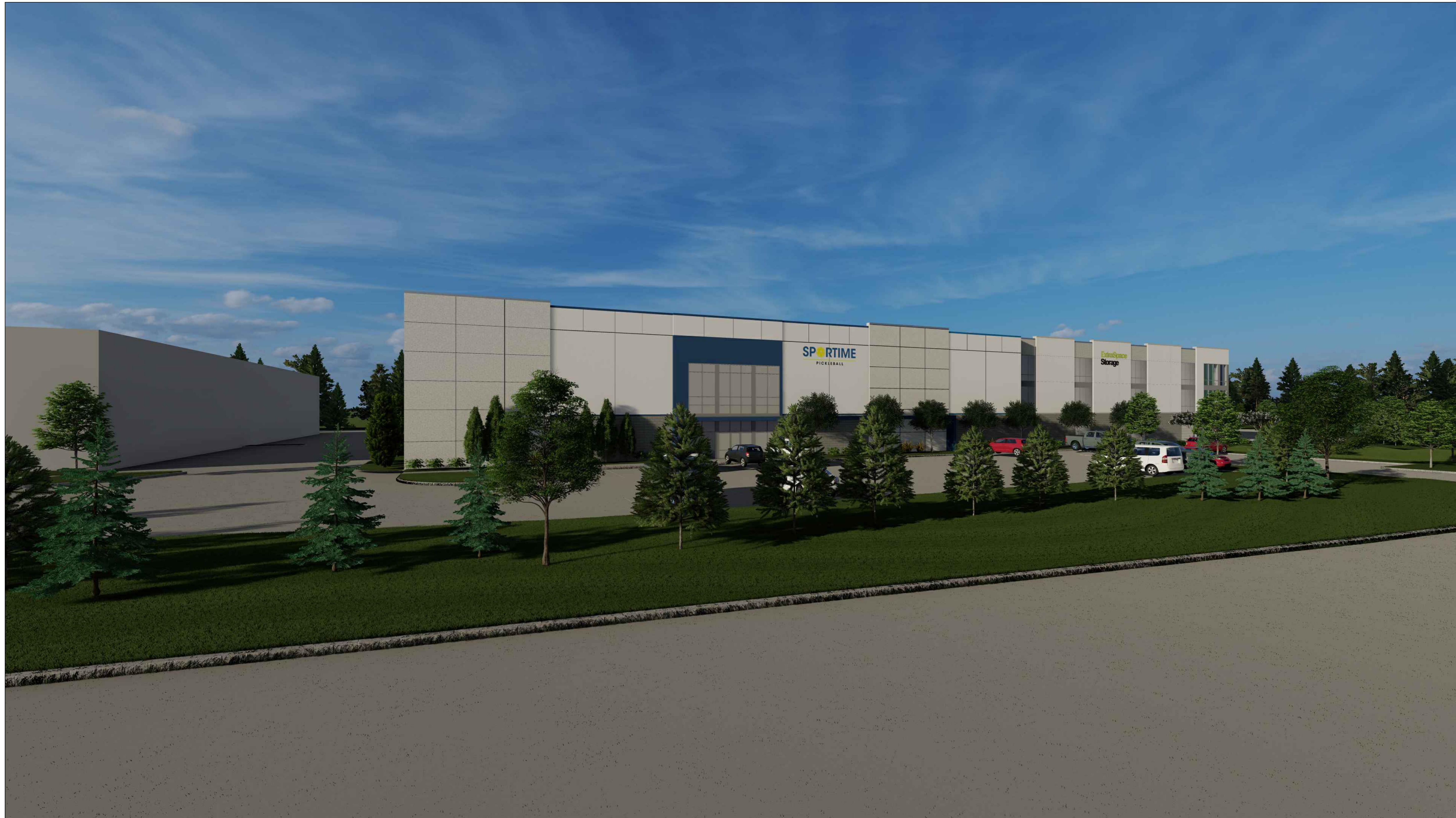
BUILDING ELEVATION

A2-01









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<small>BUILDING PERSPECTIVE</small>		
		A2-03

**1 PERSPECTIVE**  
SCALE: NTS

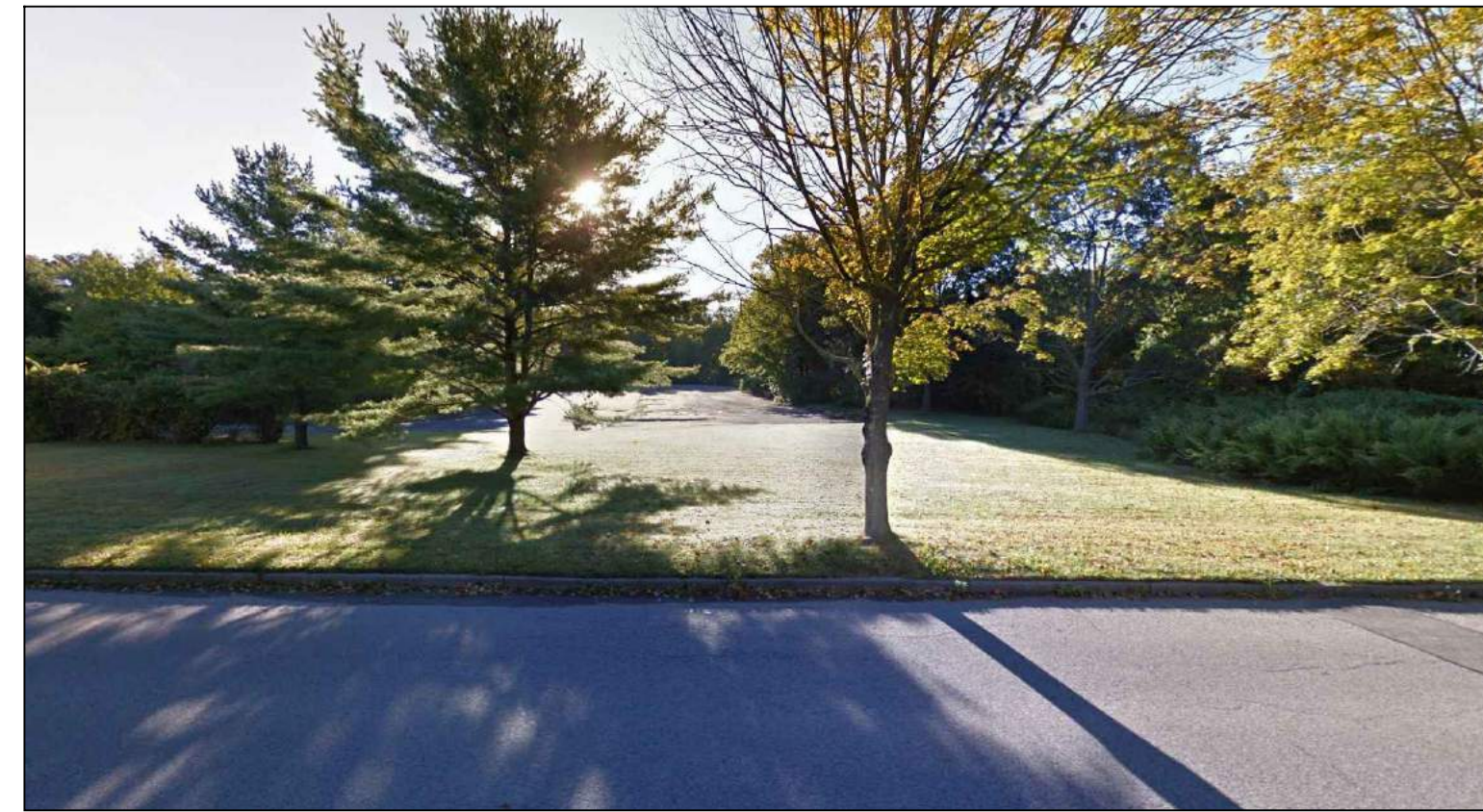








**1** ADJACENT PROPERTY  
SCALE: NTS



**2** PROPOSED PROPERTY  
SCALE: NTS



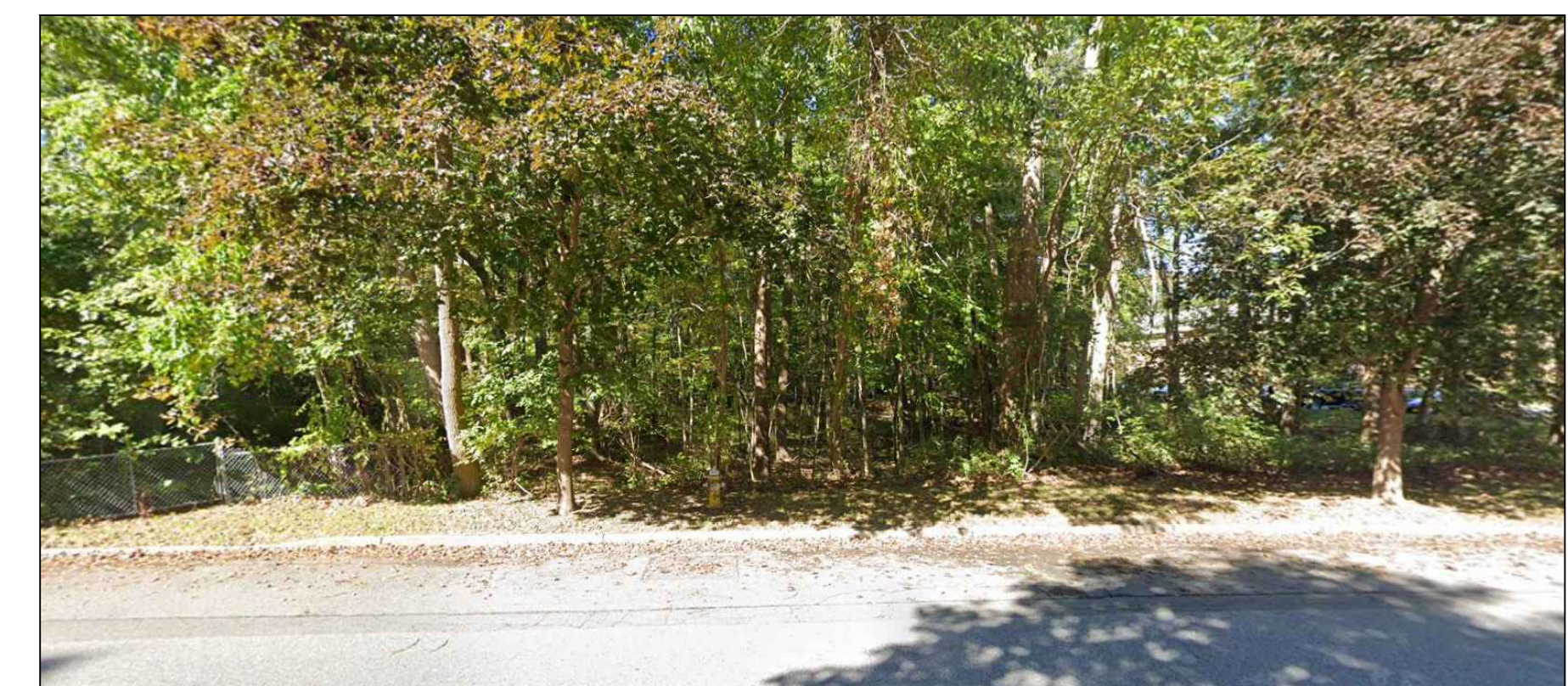
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SCALE: NTS



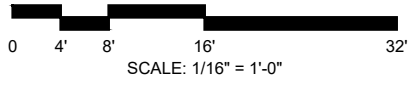
**4** ADJACENT PROPERTY (ACROSS PROPERTY)  
SCALE: NTS



**5** ADJACENT PROPERTY (ACROSS STREET)  
SCALE: NTS



**6** ADJACENT PROPERTY (ACROSS PROPERTY)  
SCALE: NTS



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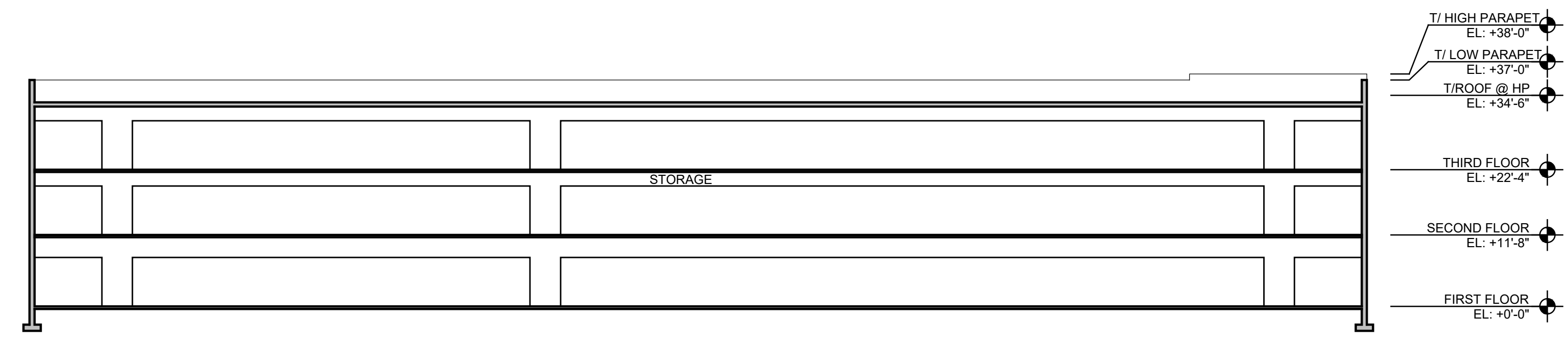
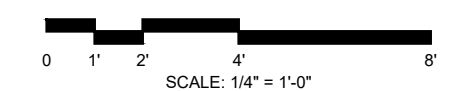
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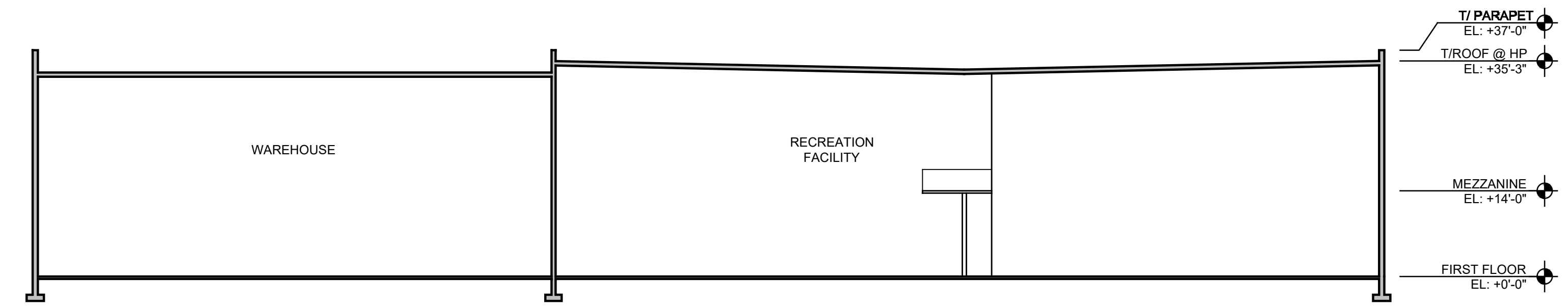
STREETSCAPE PHOTOGRAPHS



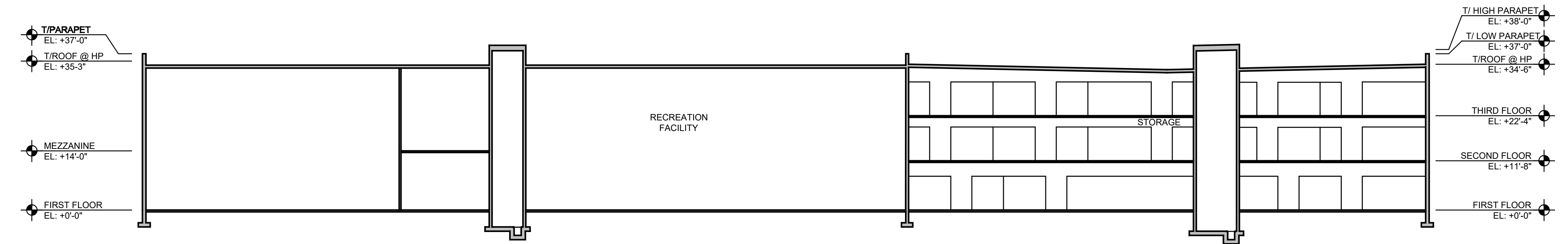
NOT FOR CONSTRUCTION



**3** NORTH - SOUTH SECTION  
SCALE: 1/16" = 1'-0"



**2** NORTH - SOUTH SECTION  
SCALE: 1/16" = 1'-0"



**1** EAST - WEST SECTION  
SCALE: 1/16" = 1'-0"

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BUILDING SECTIONS

A3-01

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# STORMWATER POLLUTION PREVENTION PLAN

---

## **BAYSPACE ARMONK** **100 BUSINESS PARK DRIVE** **TOWN OF NORTH CASTLE, NEW YORK**

*Applicant:* **WMG Acquisitions LLC**  
2801 SW 31<sup>st</sup> Avenue, Suite 2B  
Coconut Grove, FL 33133  
Contact: Mr. Anthony Scavo  
Phone: (718) 702-6739

*Prepared by:*  **JMC Planning Engineering  
Landscape Architecture &  
Land Surveying, PLLC**  
120 Bedford Road  
Armonk, NY 10504

JMC Project 22090

*Dated:* 09/11/2023



## TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
I.	INTRODUCTION .....	I
II.	STORMWATER MANAGEMENT PLANNING.....	I
III.	STUDY METHODOLOGY .....	8
IV.	EXISTING CONDITIONS .....	10
V.	PROPOSED CONDITIONS.....	12
VI.	SOIL EROSION & SEDIMENT CONTROL.....	18
VII.	CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE ....	36
VIII.	CONCLUSION .....	38

## APPENDICES

<u>FIGURES</u>	<u>DESCRIPTION</u>
I.	Site Location Map

### **APPENDIX DESCRIPTION**

A.	Hydrologic Calculations
B.	NYSDEC Stormwater Sizing Calculations
C.	Soil Testing Data
D.	Hydro International First Defense Operation and Maintenance Manual
E.	Temporary Erosion and Sediment Control Inspection and Maintenance Checklist
	Permanent Stormwater Practice Operation, Maintenance and Management Inspection Checklists
F.	Contractor's Certification
G.	Maintenance Agreement
H.	Hydraulic Calculations
I.	Drawings
	DA-1 "Existing Drainage Area Map"
	DA-2 "Proposed Drainage Area Map"



## **REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS**

### **JMC SITE PLANS**

<b><u>Dwg. No.</u></b>	<b><u>Title</u></b>	<b><u>Rev. No./Date</u></b>
C-000	“Cover Sheet”	09/11/2023
C-010	“Overall Existing Conditions Map”	09/11/2023
C-011	“Existing Conditions Map”	09/11/2023
C-020	“Site Demolition Plan”	09/11/2023
C-100	“Site Layout Plan”	09/11/2023
C-110	“Truck Turning Analyses”	09/11/2023
C-120	“Fire Apparatus Turning Analyses”	09/11/2023
C-130	“Driveway Sight Distance Profiles”	09/11/2023
C-200	“Site Grading Plan”	09/11/2023
C-300	“Site Utilities Plan”	09/11/2023
C-400	“Site Erosion & Sediment Control Plan”	09/11/2023
C-500	“Site Landscaping & Wetland Mitigation Plan”	09/11/2023
C-600	“Site Lighting Plan”	09/11/2023
C-800	“Existing Interior Landscaped Area Calculation Plan”	09/11/2023
C-810	“Proposed Interior Landscaped Area Calculation Plan”	09/11/2023
C-900	“Construction Details”	09/11/2023
C-901	“Construction Details”	09/11/2023
C-902	“Construction Details”	09/11/2023
C-903	“Construction Details”	09/11/2023
C-904	“Construction Details”	09/11/2023
C-905	“Construction Details”	09/11/2023



## **I. INTRODUCTION**

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This Stormwater Pollution Prevention Plan has been prepared for the 11.26 acre site located at 100 Business Park Drive, in the Town of North Castle, Westchester County, New York (hereinafter referred to as the "Site"). The site is bordered by the La Quinta Hotel site to the north, the 130 Business Park Drive office building to the south, the Byram River and Interstate 684 to the east, and Business Park Drive to the west. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 29, 2020.
- Chapter 267 "Stormwater Management" of the Town of North Castle Code

The project consists of the construction of a 116,108 SF building with a 59,372 SF footprint which will contain three separate uses. The southern portion of the building will be a three-story, 81,600 SF self-storage use, the northwestern portion of the building will be a single-story 26,000 SF recreational facility, and the northeastern portion of the building will be a single-story 8,000 SF warehouse. Associated improvements are proposed consisting of off-street parking, access driveways, loading areas, stormwater management facilities, landscaping, and wetland mitigation.

## **II. STORMWATER MANAGEMENT PLANNING**

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In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-20-001 for Stormwater Discharges from Construction Activities, the Stormwater Pollution Prevention Plan (SWPPP) includes stormwater management practices (SMP's) from the publication "New York State Stormwater Management Design Manual," last revised January 2015.

A Stormwater Pollution Prevention Plan has been prepared for this project because it is a construction activity that involves:



- Soil disturbances of one (1) or more acres of land.

The proposed stormwater facilities have been designed such that the quantity and quality of stormwater runoff during and after construction are not adversely altered or are enhanced when compared to pre-development conditions.

### **The Six Step Process for Stormwater Site Planning and Practice Selection**

Stormwater management using green infrastructure is summarized in the six step process described below. The six step process was adhered to when developing this SWPPP. Information is provided in this SWPPP which documents compliance with the required process as follows:

#### **Step 1: Site Planning**

Implement planning practices that protect natural resources and utilize the hydrology of the site. Strong consideration must be given to reducing impervious cover to aid in the preservation of natural resources including protecting natural areas, avoiding sensitive areas and minimizing grading and soil disturbance.

#### **Step 2: Determine Water Quality Treatment Volume (WQv)**

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **90% Rule** - According to the New York State Stormwater Design Manual, Section 4.1, the water quality volume is determined from the 90% rule. The method is based on 90% of the average annual stormwater runoff volume which must be provided due to impervious surfaces. The Water Quality Volume (denoted as the WQv) is designed to improve water quality sizing to capture and treat 90% of the average annual



stormwater runoff volume. The WQv is directly related to the amount of impervious cover created at a site. The average rainfall storm depth for 90% of storms in New York State in one year is used to calculate a volume of runoff. The rainfall depth depends on the location of the site within the state. From this depth of rainfall, the required water quality volume is calculated.

### Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

RRv is required for this project since it is a combination of both new development and redevelopment.

Green infrastructure techniques or standard SMP's with RRv capacity can potentially reduce the required WQv by incorporating combinations of green infrastructure techniques and standard SMP's within each drainage area on the site.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.
- Practices resulting in a reduction of contributing volume such as green roofs, stormwater planters, and rain gardens.

Apply a combination of green infrastructure techniques and standard SMPs with RRv capacity to provide 100% of the WQv calculated in Step 2. If the RRv calculated in this step is greater than or equal to the WQv in Step 2, the RRv requirement has been met and Step 4 can be skipped. If the RRv provided cannot meet or exceed 100% of the WQv, the project must, at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S).



The following green infrastructure techniques and practices are provided in the Design Manual:

- **Conservation of Natural Areas**
  - The entire site is developed and has been for decades. There are no undisturbed areas that could be planned to be included within a conservation easement. Therefore, there is no area to be subtracted from the contributing area for the WQv calculation.
- **Sheet flow to Riparian Buffers or Filter Strips**
  - There are no well vegetated areas on-site with acceptable slopes that lend an opportunity as a buffer and still meet the minimum contributing length of flow. This practice is not practical for this project since these items are typically used in a residential application.
- **Vegetated Swales**
  - The use of sheet flow into vegetated swales is not practicable due to limited flow lengths, and a lack of sufficient head / elevation on the site.
- **Tree Planting / Tree Pits**
  - The project includes extensive tree planting around its perimeter as part of the proposed landscaping plan. However, the new trees are not credited towards area reduction for the water quality volume.
- **Disconnection of Rooftop Runoff**
  - This practice is not practical for this project since these items are typically used in a residential application for small rooftop areas.
- **Stream Daylighting**
  - This practice is not possible for this project since there are no existing streams on the property which are currently piped / covered.
- **Rain Gardens**
  - This practice is not practical for this project since a contributing drainage area is limited to 1,000 square feet of rooftop. This practice is typically used in a residential application.
- **Green Roofs**
  - This practice is not practicable due to the design and size of the proposed warehouse building.



- **Stormwater Planters**
  - Infiltration planters are typically proposed at various locations around proposed buildings to collect and infiltrate runoff from portions of the building rooftops. Small drainage areas, less than 15,000 square feet can be collected by roof drains and discharged into stormwater planters which infiltrate stormwater prior to entering the underground storm pipes. Stormwater planters are not practicable due to the number needed in addition to the site only having small landscaped areas around the building that would be impractical for stormwater planters.
- **Rain Barrels and Cisterns**
  - Underground storage tanks installed to collect stormwater runoff to be used for irrigation purposes are impractical since the project will not have an irrigation system for the limited landscaped areas.
- **Porous Paving**
  - This practice is being utilized within the new access driveway and associated parking areas. Porous pavement can be used to provide RRv because the soil on-site is classified as hydrologic soil group B. The other paved areas of the site are not acceptable for porous pavement because they will be high traffic areas, and separation to groundwater is not feasible.
- **Standard Practices with RRv Capacity**
  - **Biofilters and Bioretention Basins** – These practices cannot be proposed because the soil within the areas that have the ability to accommodate the practices has observed groundwater elevations that are too close to the surface which would not provide the required separation from the bottom of the practice to groundwater.
  - **Infiltration Practices** – Infiltration basins are proposed to treat and retain runoff from the proposed building, which comprises the majority of the new impervious area on-site.

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.



#### Step 4: Determine the minimum RRv Required

The minimum RRv is calculated similar to the WQV. However, it is determined using only the new impervious cover and accounts for the hydrologic soil group present. In no case shall the runoff reduction achieved from the newly constructed impervious area be less than the minimum runoff reduction volume ( $RRv_{min}$ ).

#### Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Apply the standard SMP's to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques. The standard SMP's with RRv capacity must be implemented to verify that the RRv requirement has been met.

- **Infiltration Practices** – Infiltration basins are proposed to treat and retain runoff from the proposed building. This practice is located in an area where the groundwater elevation is acceptable to provide the required separation. According to Section 3.6 of the Design Manual, 90% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.

#### Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

The Channel Protection Volume (CPv), Overbank Flood Control (Qp) and Extreme Flood Control (Qf) must be met for the plan to be completed. This is accomplished by using practices such as infiltration basins, dry detention basins, etc. to meet water quantity requirements. The following standards must be met:

##### **I. Stream Channel Protection (CPv)**

Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event, remained



from runoff reduction. Reduction of runoff for meeting stream channel protection objectives, where site conditions allow, is encouraged and the volume reduction achieved through green infrastructure can be deducted from CPv. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion. Detention time may be calculated using either a center of mass method or plug flow calculation method.

## **2. Overbank Flood ( $Q_p$ ) which is the 10 year storm.**

Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate ( $Q_p$ ) to predevelopment rates.

The overbank flood control requirement ( $Q_p$ ) does not apply in certain conditions, including:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.
- A downstream analysis reveals that overbank control is not needed.

## **3. Extreme Storm ( $Q_f$ ) which is the 100 year storm.**

100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate ( $Q_f$ ) to predevelopment rates.

The 100-year storm control requirement can be waived if:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.



- Development is prohibited within the ultimate 100-year floodplain
- A downstream analysis reveals that 100-year control is not needed.
- If redevelopment results in no increase in impervious area or changes to hydrology that increase the discharge rate from the site the hundred-year criteria does not apply.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-20-001.

### **III. STUDY METHODOLOGY**

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Runoff rates were calculated based upon the standards set forth by the United States Department of Agriculture Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986. The methodology set forth in TR-55 considers a multitude of characteristics for watershed areas including soil types, soil permeability, vegetative cover, time of concentration, topography, rainfall intensity, ponding areas, etc.

The 1, 10, and 100 year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendix A for the supporting Hydrologic Calculations).

Anticipated drainage conditions were analyzed taking into account the rate of runoff which will result from the construction of buildings, parking areas and other impervious surfaces associated with the site development.

#### Base Data and Design Criteria

For the stormwater management analysis, the following base information and methodology were used:



1. The site drainage patterns and outfall facilities were reviewed by JMC personnel for the purpose of gathering background data and confirming existing mapping of the watershed areas.
2. An Existing Drainage Area Map was developed from the topographical survey. The drainage area map reflects the existing conditions within and around the project area.
3. A Proposed Drainage Area Map was developed from the proposed grading design superimposed over the topographical survey. The drainage area map reflects the proposed conditions within the project area and the existing conditions to remain in the surrounding area.
4. The United States Department of Agriculture (USDA) Web Soil Survey of the site available on its website at <http://websoilsurvey.nrcd.usda.gov>.
5. Soil Survey of Putnam and Westchester Counties, 1994.
6. The United States Department of Agriculture Natural Resources Conservation Service National Engineering Handbook, Section 4 - Hydrology", dated March 1985.
7. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.
8. United States Department of Commerce Weather Bureau Technical Release No. 40 Rainfall Frequency Atlas of the United States.

The time of concentration was calculated using the methods described in Chapter 3 of TR-55, Second Edition, June 1986. Manning's kinematics wave equation was used to determine the travel time of sheet flow. The 2-year 24 hour precipitation amount of 3.4 inches was used in the equation for all storm events. The travel time for shallow concentrated flow was computed



using Figure 3-1 and Table 3-1 of TR-55. Manning's Equation was used to determine the travel time for channel reaches.

9. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.
10. The New York State Stormwater Management Design Manual, revised January 2015.
11. New York Standards and Specifications for Erosion and Sediment Control, November 2016.
12. The storm flows for the 1, 10, and 100 year recurrence interval storms were analyzed for the total watershed areas. The Type III distribution design storm for a 24 hour duration was used and the mass rainfall for each design storm was taken from the Extreme Precipitation in New York & New England developed by the Natural Resource Conservation Service (NRCS) and the Northeast Regional Climate Center (NRCC) as follows:

24 Hour Rainfall Amounts

Design Storm Recurrence Interval	Inches of Rainfall
1 Year	2.81
10 Year	5.12
100 Year	9.15

**IV. EXISTING CONDITIONS**

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The project site is 11.26 acres, with the 7.75 acre northern portion of the site being developed and the 3.51 acre southern portion of the site being undeveloped. The currently developed portion of the site consists of a 62,782 square foot office/light industrial building with associated off-street parking and driveways. The undeveloped portion of the site consists of woods, grassed areas, and floodplain areas. After stormwater runoff exits the project site, it flows to the Byram



River directly to the east of the site. The undeveloped portions of the property flow overland to the Byram River and the developed portions of the site drain to existing conveyance systems which pipe stormwater runoff to the Byram River.

The following natural features, conservation areas, resource areas and drainage patterns of the project site have been identified and utilized to develop Drawing DA-I “Existing Drainage Area Map” which is included in Appendix I:

- Wetlands (jurisdictional, wetland of special concern)
- Waterways (major, perennial, intermittent, springs)
- Buffers (stream, wetland, forest, etc.)
- Floodplains
- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)

Based on the USDA Web soil survey, all on-site soils are moderately well drained / poorly drained and belong to hydrological groups B / D. The soil types, boundaries and drainage areas/designations are depicted on Drawing DA-I within Appendix I.

One Design Line (analysis boundary) was identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, two drainage areas were identified in existing conditions based on the existing drainage divides at the site.

The following is a description of each of the drainage areas analyzed in the existing conditions analysis:

Existing Drainage Area IA (EDA-IA) is 4.96 acres in size and is located within the center of the site. This area consists of the existing building, southern parking / outdoor storage areas, existing loading area, and lawn / wooded areas in the rear of the property. This drainage area drains



towards the existing conveyance system which pipes flows to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 88 and 10 minutes, respectively. Refer to Drawing DA-I in Appendix I.

Existing Drainage Area 1B (EDA-1B) is 3.29 acres in size and is located on the southern undeveloped portion of the site. This area consists of existing lawn and wooded areas. This drainage area drains towards the existing southern parking area, where it then enters the existing conveyance system.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 56 and 31.8 minutes, respectively. Refer to Drawing DA-I in Appendix I.

The peak rates of runoff to the design points from the drainage areas for each storm are shown in the table below:

**Table I**  
**Summary of Peak Rates of Runoff in Existing Conditions**  
**(Cubic Feet per Second)**

<b>Storm Recurrence Interval</b>	<b>DL-1</b>
1 year	7.71
10 year	17.98
100 year	38.16

## **V. PROPOSED CONDITIONS**

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The project consists of the construction of a 116,108 SF footprint mixed-use building on the 3.51 acre southern portion of the site that is currently undeveloped. Associated improvements are proposed consisting of off-street parking, access driveways, loading areas, stormwater management facilities, landscaping, and wetland mitigation.

The proposed drainage improvements include a variety of stormwater practices, such as infiltration basins, areas of porous pavement, and a hydrodynamic separator to treat areas of



redevelopment. After treatment for water quality and peak rate attenuation, stormwater discharges from the practices will drain to the existing conveyance system, which pipes flows to the existing discharge point into the Byram River. The proposed practices provide multiple opportunities for water quality enhancement and infiltration in addition to the proposed stormwater management basins.

This section describes the design and analysis of the proposed conditions used to demonstrate that the SWPPP meets the requirements of the General Permit.

## **The Six Step Process For Stormwater Site Planning and Practice Selection**

### **Step 1: Site Planning**

The following practices and site features were incorporated in the site design:

- Preserving hydrology - Maintaining drainage divides
- Wetlands and buffers – The Byram River lies immediately to the east of the project site, and the site includes 1.73 acres of wetland buffer. The project requires the disturbance of 0.79 acres of wetland buffer.
- Floodplain considerations - The site lies within the 100 year flood zone according to the National Flood Insurance Program Flood Insurance Rate Map (FIRM) No. 36119C0277F, effective date 09/28/2007.
- Forest, vegetative cover – The maximum amount of forest and vegetative cover has been maintained and/or provided.
- Topography (contour lines, existing flow paths, steep slopes, etc.) has been maintained or disturbed to the minimum extent practicable.
- Soil (hydrologic soil groups, highly erodible soils, etc.)



## Step 2: Determine Water Quality Treatment Volume (WQv)

The 90% rule was used to calculate the required Water Quality Volume. Please refer to Appendix 'B' for the required Water Quality Volume calculations.

## Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

- Porous Paving
- Infiltration Basins

## Step 4: Determine the minimum RRv Required

RRv<sub>min</sub> calculations can be found in Appendix 'B'. RRv<sub>min</sub> was met through the proposed infiltration basin and areas of porous pavement.

## Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

- **Infiltration Systems**

- Infiltration Basin (I-2)

- Description

- An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground.

- **Alternative SMP's for Redevelopment Portion of Project**

- Hydrodynamic Separator



### Description

A hydrodynamic separator will be utilized to treat the impervious areas from the redeveloped portion of the site.

## Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

- **Infiltration Systems**

### Infiltration Basin (I-2)

#### Description

An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Stormwater practices are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM).
2. Conveyance – The design conveys runoff to the designed stormwater practice in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.
3. Pretreatment – All stormwater practices provide pretreatment as required in accordance with NYSSMDM design guidelines.
4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines.



5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed stormwater practice to enhance pollutant removal and provide aesthetic enhancement to the property.
6. Maintenance – Maintenance for the environment practices has been provided and is detail the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing DA-2 "Proposed Drainage Area Map" located in Appendix I.

One Design Line (analysis boundary) was identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, four separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site.

The following is a description of each of the drainage areas analyzed in the proposed conditions analysis:

Proposed Drainage Area IA (PDA-IA) is 1.95 acres in size and is located on the southern portion of the site where development is proposed. This area consists of the proposed building, areas of lawn, and the proposed infiltration basins. This drainage area drains towards the proposed infiltration basins. Stormwater runoff that exits the proposed infiltration basins will be directed to a series of pipes that will convey the flows to the existing outfall to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 87 and 5.0 minutes, respectively.

Proposed Drainage Area IB (PDA-IB) is 0.82 acres in size and is located on the southern portion of the site where development is proposed. This area consists of the proposed access driveway which runs along the southern, loading / parking areas for the self-storage use, and the eastern sides of the proposed building. This area is comprised of areas of asphalt pavement,



lawn, and porous pavement. This drainage area will be collected and treated by porous asphalt pavement, where flows will then enter the existing conveyance system that connects to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 96 and 5.0 minutes, respectively.

Proposed Drainage Area IC (PDA-IC) is 0.79 acres in size and is located on the western side of the proposed building. This area consists of the proposed loading area and areas of lawn in the front of the proposed building. This drainage area drains towards a proposed subsurface detention system and a hydrodynamic separator which will treat the impervious areas within this drainage area. Flows will then be directed to the proposed conveyance system which leads to the existing outfall to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 93 and 5.0 minutes, respectively.

Proposed Drainage Area ID (PDA-ID) is 4.59 acres in size and is located on the center of the site. This area consists of the existing building, southern parking area, existing loading area, and compensatory storage areas, and lawn / wooded areas in the rear of the property. This drainage area drains towards the existing conveyance system which pipes flows to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 87 and 10.9 minutes, respectively.

Refer to Drawing DA-2 in Appendix I.

The peak rates of runoff to the design point of each of the analyzed drainage areas for each storm are shown on the table below:



**Table 3**  
**Summary of Proposed Peak Rates of Runoff in Proposed Conditions**  
**(Cubic Feet per Second)**

Storm Recurrence Interval	DL-1
1 year	7.65
10 year	17.89
100 year	36.12

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

**Table 4**  
**Percent Reductions in Peak Rates of Runoff (Existing vs. Proposed Conditions)**  
**(Cubic Feet per Second)**

Design Line	Storm Recurrence Frequency (Years)	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)	Percent Reduction (%)
I	1 year	7.71	7.65	0.8
	10 year	17.98	17.89	0.5
	100 year	38.16	36.12	5.3

As demonstrated in Table 4, the proposed stormwater improvements will result in significant reductions of peak rates of runoff for all storms and design points analyzed.

## **VI. SOIL EROSION & SEDIMENT CONTROL**

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction and continuing throughout its course, as outlined in the "New York State Standards and Specifications for Erosion and Sediment Control," November 2016. A continuing maintenance program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.



The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days and at least two site inspections every seven calendar days when greater than five acres of soil is disturbed at any one time.

Prior to the commencement of construction activity, the owner or operator must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed. The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the certification statement provided in Appendix F before they commence any construction activity.

### Soil Description

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

Soils are placed into four hydrologic groups: A, B, C, and D. In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by the surface conditions. Transmission rate is the rate at which water moves in the soil and is controlled by soil properties. Definitions of the classes are as follows:



- A. (Low runoff potential). The soils have a high infiltration rate even when thoroughly wetted. They chiefly consist of deep, well drained to excessively drained sands or gravels. They have a high rate of water transmission.
- B. The soils have a moderate infiltration rate when thoroughly wetted. They chiefly are moderately deep to deep, moderately well drained to well drained soils that have moderately fine to moderately coarse textures. They have a moderate rate of water transmission.
- C. The soils have a slow infiltration rate when thoroughly wetted. They chiefly have a layer that impedes downward movement of water or have moderately fine to fine texture. They have a slow rate of water transmission.
- D. (High runoff potential). The soils have a very slow infiltration rate when thoroughly wetted. They chiefly consist of clay soils that have a high swelling potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. They have a very slow rate of water transmission.

A soil's tendency to erode is also described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight," "moderate," or "SEVERE." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "SEVERE" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed.

Per the Soil Survey, the following soils listed below are present at the site. Following this list is a detailed description of each soil type found on the property:



SYM.	H.S.G.	DESCRIPTION
Ff	D	Fluvaquents-Udifuluents complex, frequently flooded
Ub	B	Udorthents, smoothed
Uf	D	Urban land

Ff, Fluvaquents-Udifuluents Complex, Frequently Flooded

This soil is very deep, well drained to very poorly drained, nearly level soils that formed in recent alluvial deposits. The parent material consists of alluvium with highly variable texture. Depth to the top of a seasonal high water table is 1.5 to 3.0 feet below the surface from November through April. Available water capacity is moderate.

Hydrologic group: D

Erosion Hazard Rating: Slight

Ub, Udorthents, Smoothed

This soil is very deep, excessively drained to moderately well drained soils that have been altered by cutting and filling. It is mainly in and adjacent to urban areas, highways, and borrow areas. It is made up of soil material in alternating layers ranging from sand to silt loam. Depth to the top of a seasonal high water table is approximately 1.5 to 4 feet. Available water capacity is moderate.

Hydrologic group: B

Erosion Hazard Rating: Not Rated

Uf, Urban Land

This soil consists of areas where at least 60 percent of the land surface is covered with buildings or other structures. The areas include parking lots, shopping centers, industrial parks, and institutional sites. Depth to the top of a seasonal high water table is greater than 6'. Available water capacity is moderate.



Hydrologic group: D

Erosion Hazard Rating: Not Rated

### On-Site Pollution Prevention

There are temporary pollution prevention measures used to control litter and construction debris on site, such as:

- Silt Fence
- Inlet Protection
- Stabilized Construction Access

There will be inlet protection provided for all storm drains and inlets with the use of curb gutter inlet protection structures and stone & block drop inlet protection, which keep silt, sediment and construction litter and debris out of the on-site stormwater drainage system.

### Temporary Control Measures

Temporary control measures and facilities will include silt fences, construction ditches, stabilized construction access, temporary seeding, mulching and sediment traps with temporary riser and anti-vortex devices.

Throughout the construction of the proposed development, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Construction ditches, if required, will be used to direct stormwater runoff to temporary sediment traps for settlement. The sediment traps will be constructed as part of this project will serve as temporary sediment basins to remove sediment and pollutants from the stormwater runoff produced during construction. Descriptions of the temporary sediment & erosion controls that will be used during the development of the site including silt fence, stabilized construction access, seeding, mulching and inlet protection are as follows:



1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.
2. Stabilized Construction Access consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 24 feet in width by 8 inches in depth.
3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 80% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.
4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.
5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using "Silt Sacks" inside the structures.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:



1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).
2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.
3. Sediment deposits shall be removed when they reach approximately  $\frac{1}{3}$  the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner's Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.
4. Rake all exposed areas parallel to the slope during earthwork operations.
5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for fourteen or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

#### Concrete Material and Equipment Management

Concrete washouts shall be used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solid for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drain pipes and cause flooding.



Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

Prefabricated concrete washout containers can be delivered to the site to provide maintenance and disposal of materials. Regular pick-ups of solid and liquid waste materials will be necessary. To prevent leaks on the job site, ensure that prefabricated washout containers are watertight. A self installed concrete washout facility can be utilized although they are much less reliable than prefabricated containers and are prone to leaks. There are many design options for the washout, but they are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Above-grade structures can also be used if they are sized and constructed correctly and are diligently maintained. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of constant use, therefore the contractor shall be sure to use quality materials and inspect the facilities on a daily basis.

Washouts must be sized to handle solids, wash water, and rainfall to prevent overflow. Concrete Washout Systems, Inc. estimates that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be at least 10 feet wide and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 12-inches of freeboard must be provided. The pit must be lined with plastic sheeting of at least 10-mil thickness without holes or tears to prevent leaching of liquids into the ground. Concrete wash water should never be placed in a pit that is connected to the storm drain system or that drains to nearby waterways.

An above-grade washout can be constructed at least 10 feet wide by 10 feet long and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 4-inches of freeboard must be provided. The washout structures can be constructed with staked straw bales or sandbags double-or triple lined with plastic sheeting of at least 10-mil thickness without holes or tears.



Concrete washout facilities shall not be located within 50 feet of storm drains, open ditches, or water bodies and should be placed in locations that allow for convenient access for concrete trucks. The contractor shall check all concrete washout facilities daily to determine if they have been filled to 75 percent capacity, which is when materials need to be removed. Both above-and below-ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Prefabricated washout containers should be inspected daily as well as to ensure the container is not leaking or nearing 75 percent capacity. Inspectors should also note whether the facilities are being used regularly. Additional signage for washouts may be needed in more convenient locations if concrete truck operators are not utilizing them.

The washout structures must be drained or covered prior to predicted rainstorms to prevent overflows. Hardened solids either whole or broken must be removed and then they may be reused onsite or hauled away for recycling.

Once materials are removed from the concrete washout, a new structure must be built or excavated, or if the previous structure is still intact, inspect it for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic be used after every cleaning because pumps and concrete removal equipment can damage the existing liner.

#### Construction Site Chemical Control

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides; fertilizers used for vegetative stabilization; petrochemicals;



construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste.

Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in applicable Federal, State and local regulations that govern their usage, handling, storage, and disposal.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.

Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage areas, and notifying neighboring property owners prior to spraying.

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity of 110 percent greater than that of the largest container;
- Clearly label all products;
- Keep tanks off the ground; and
- Keep lids securely fastened.

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.



Thinners or solvents should not be discharged into sanitary or storm systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used, and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned with degreasing solvents, which can then be reused or recycled.

#### Solid Waste Management and Portable Sanitary Management

The purpose of this management measure is to prevent the potential for solid waste such as construction debris, trash, etc. from construction sites due to improper handling and storage. Debris and litter should be removed periodically from the BMP's and surrounding areas to prevent clogging of pipes and structures. All construction material shall be stored in designated staging areas. Roll-off containers shall be placed on site and all empty containers, construction debris and litter shall be placed in the containers.

Portable sanitary units may be utilized on-site or bathrooms will be provided within construction trailers. A sanitation removal company will be hired to pump/remove any sanitary waste. In the event that portable sanitary units are used and then cleaned after being emptied, the rinse water may not be disposed of to the storm drain system. It shall be contained for later disposal if it can't be disposed of on-site. Remove paper and trash before cleaning the portable sanitary units. The portable sanitary units shall be located away from the storm drain system if possible. Provide over head cover for wash areas if possible. Maintain spill response material and equipment on site to eliminate the potential for contaminants and wash water from entering the storm drain system.

#### Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project:



1. Infiltration Basins will be used to treat the runoff volume generated from the developed area and provide improvement to water quality control. The proposed basins will provide water quality for 90% of the average annual stormwater runoff volume. The water quality volume will be retained and higher storms will be released gradually. Refer to the water quality volume calculations, in Appendix B.
2. A Hydrodynamic Separator will be used to provide treatment of the water quality flow rate from the redeveloped areas to separate sediment, debris, floatables, etc. from the runoff prior to discharge.
3. Catch Basins will be used to remove some of the coarse sand and grit sediment before entering the drainage system. Each catch basin will be constructed with an 18 inch deep sump.
4. Seeding of at least 70% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 2 tons per acre such that the mulch forms a continuous blanket.

### **Specifications for Soil Restoration**

Prior to the final stabilization of the disturbed areas, soil restoration will be required for all vegetated areas to recover the original properties and porosity of the soil. Soil Restoration Requirements are provided on Table 5 below:



**Table 5**

**Soil Restoration Requirements**

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

\* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

\*\* Per "Deep Ripping and De-compaction, DEC 2008."

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following full soil restoration steps applied:



1. Apply 3 inches of compost over subsoil.
2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

### **Specifications for Final Stabilization of Graded Areas**

Final stabilization of graded areas consists of the placement of topsoil and installation of landscaping (unless the area is to be paved, or a building is to be constructed in the location). Topsoil is to be spread as soon as grading operations are completed. Topsoil is to be placed to a minimum depth of six inches on all embankments, planting areas and seeding/sod areas. The subgrade is to be scarified to a depth of two inches to provide a bond of the topsoil with the subsoil. Topsoil is to be raked to an even surface and cleared of all debris, roots, stones and other unsatisfactory material.

Planting operations shall be conducted under favorable weather conditions as follows:

- Permanent Lawns - April 15 (provided soil is frost-free and not excessively moist) to May 15; August 15 to October 15.
- Temporary Lawn Seeding - if outside of the time periods noted above, the areas shall be seeded immediately on completion of topsoil operations with annual ryegrass (Italian rye) at a rate of six pounds per 1,000 square feet. Temporary lawn installation is permitted provided the soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

On slopes with a grade of 3 horizontal to 1 vertical or greater, and in swales, a geotextile netting or mat shall be installed for stabilization purposes as shown on the Plans. Seeded areas are to be mulched with straw or hay at an application rate of 70-90 pounds per 1,000 s.f. Straw or hay



mulch must be spread uniformly and anchored immediately after spreading to prevent wind blowing. Mulches must be inspected periodically and in particular after rainstorms to check for erosion. If erosion is observed, additional mulch must be applied. Netting shall be inspected after rainstorms for dislocation or failure; any damage shall be repaired immediately.

All denuded surfaces which will be exposed for a period of over two months or more shall be temporarily hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet ); (b) Certified "Aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to be used in the months of October and November.

Permanent turfgrass cover is to consist of a seed mixture as follows:

(a) Sunny sites

Kentucky Bluegrass	2.0-2.6 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	0.4-0.6 pounds/1000 square feet

(b) Shady sites

Kentucky Bluegrass	0.8-1.0 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	2.6-3.3 pounds/1000 square feet

All plant materials shall comply with the standards of the American Association Of Nurserymen with respect to height and caliper as described in its publication American Standard for Nursery Stock, latest edition.

**Sequence of Construction**

- I. Stake out all limits of disturbance. (areas shall be delineated with orange construction fence).



2. Tag all existing trees to be removed (trees shall be delineated with colored construction tape and inspected by the town prior to removal).
3. Cut existing trees to be removed. Stumps shall remain until grubbing and earthwork commence.
4. Installation of temporary erosion & sediment control measures (construction fence, tree protection, and silt fencing). Ensure installation of temporary construction fencing around the proposed porous pavement and infiltration basin areas to prevent heavy construction equipment from compacting the area.
5. Install stone stabilized construction accesses at the locations shown on the plans.
6. Refer to temporary erosion and sediment control inspection and maintenance checklist within appendix e of the stormwater pollution prevention plan.
7. Remove and stockpile all existing topsoil within the limit of disturbance. No stockpiles shall be located within the porous pavement and infiltration basin areas. Install silt fencing around temporary topsoil stockpiles for erosion control purposes.
8. Remove stumps from cut trees.
9. Remove and dispose of all existing utilities, pavement, concrete curbs and sidewalks within the limit of disturbance and prepare the area for construction.
10. All construction debris shall not be stockpiled and shall be removed from the site within 24 hours.
11. Install new town owned storm drainage line from existing catch basin within business park drive to DI-1 (See Utilities Plan).
12. Infiltration basins shall be graded, constructed (structures, pipes, etc.), and stabilized (80% germination) prior to the connection of roof drain leaders.



13. Begin building and roadway / parking lot (including porous pavement) construction. Proceed with rough grading of the area under active construction.
  
14. All exposed slopes and grading areas, that will not be further disturbed within 14 calendar days (7 days for construction sites that either directly discharge to one of the 303(d) segments listed in Appendix E of the General Permit or are located within one of the watersheds listed in Appendix C of the General Permit), shall be temporarily seeded within 24 hours of disturbance, in accordance with the New York State Department of Environmental Conservation (NYSDEC) “Erosion and Sediment Control Guidelines” and the ANSI A300 “best management practices for tree and shrub planting, transplanting, maintenance and care”, prepared by the International Society of Arboriculture (ISA), latest editions, as follows:
  - A. Seed mixture and rate of application:
    - A.1. In spring, summer or early fall, seed the area with ryegrass (annual or perennial) at 30 pounds per acre (approximately 0.7 pounds/1,000 square feet or use 1 pound/1,000 square feet).
    - A.2. In late fall or early winter, seed the area with certified “aroostook” winter rye (cereal rye) at 100 pounds per acre (2.5 pounds/1,000 square feet).
  - B. Application shall be uniform by mechanical or hydroseed methods.
  - C. Mulch all seeded areas with straw at a rate of 2 tons per acre (90 pounds/1,000 square feet) such that the mulch forms a continuous blanket.
  
15. Install the remainder of the on-site storm drainage system consisting of catch basins, manholes and underground storm pipes along with the sediment and erosion control devices associated with the storm drainage system (i.e. inlet protection and rip rap as shown on the plans)



16. Install all underground utilities including sanitary sewer, water, gas, electric, and telephone/cable services.
17. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).
18. Install concrete curbing, followed by site pavement, sidewalks, concrete pads (loading dock, trash enclosure).
19. Contractor shall be required to inspect erosion and sediment control measures within 24 hours of the end of each rainfall event and at least daily during prolonged rainfall. The contractor shall execute all required repair the same day of the inspection.
20. Contractor shall remove sediment deposits when they reach approximately 1/3 the height of the silt fence. Properly dispose of all such sediments in fill areas on the site as directed by the owner's field representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.
21. Rake all exposed areas parallel to the slope during earthwork operations.
22. Finish grading, redistribute topsoil.
23. Following final grading, seed with a permanent surface treatment (i.e. turfgrass, pavement, sidewalk or building within seven days of grading) or seed with a perennial ryegrass, annual ryegrass and winter rye mixture. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment. Seeding of at least 80% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. Areas shall be hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet ); (b) certified "aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to



be used in the months of October and November. The seeded areas will be mulched with straw at a rate of 2 tons per acre such that the mulch forms a continuous blanket.

24. Conduct proposed wetland mitigation including removal of debris, invasive species and installation of proposed plantings (refer to site landscaping and wetland mitigation plan).  
Install proposed landscape plantings / improvements.
25. Clean pavements and storm drain system of all accumulated sediment in conjunction with the removal of all temporary sediment and erosion control devices.
26. Remove temporary erosion and sediment control measures as applicable once vegetation is established (80% grass sprout over entire area).

## **VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE**

During the construction phase and following construction of the project, a number of maintenance measures will be taken with respect to the site maintenance. Measures to be taken included the following:

### **I. During Construction**

A comprehensive sediment and erosion control plan will be in place during the construction period. Maintenance measures for sediment and erosion controls will include:

A qualified professional acceptable to the municipality will be hired by the owner or operator to monitor the installation and maintenance of the sediment and erosion control plans. The qualified professional shall report directly to the Engineering Consultant and shall be responsible for ensuring compliance with the design of the sediment and erosion control plans.

The qualified professional so hired will inspect all sediment and erosion control measures at least every seven calendar days. In the event that there has been a variance with the design of the sediment and erosion control measures so that the ability of the measures to adequately perform



the intended function is lessened or compromised and/or the facilities are not adequately maintained, the qualified professional shall be required to report such variance to the Engineering Consultant within 48 hours and shall be empowered to order immediate repairs to the sediment and erosion control measures.

The qualified professional will also be responsible for observing the adequacy of the vegetation growth (trees, shrubs, groundcovers and turfgrasses) in newly graded areas and for ordering additional plantings in the event that the established plant materials do not adequately protect the ground surface from erosion.

## **2. Following Construction**

Site maintenance activities on the property will include:

- Grounds maintenance, including mowing of lawns;
- Planting of trees, shrubs and groundcovers; pruning of trees and shrubs;
- Application of fertilizer and herbicides;
- Maintenance of stormwater management area;

Grounds maintenance on the site will be performed by landscaping contractor.

Fertilizer is typically applied twice in the year - once in the spring and once in the fall. The application of fertilizer is usually necessary to maintain healthy lawn growth due to competition for nutrients with trees and shrubs and since the clippings are often removed. It is not recommended that fertilizer be applied during the summer. It is at this time that lawns are typically dormant.

Fertilizers come in three basic types: (1) Organic; (2) Soluble synthetic and (3) Slow release.

Organic fertilizers are derived from plant or animal waste. Since they are heavier and bulkier than other fertilizers, it is necessary to apply a much greater amount at one time. Soluble



synthetic fertilizers are predictable with determining the exact impact on a lawn. However more applications are necessary since their effect is often short term. Slow release fertilizers have a high percentage of nitrogen so quantities that need be handled at one time are smaller. Slow release fertilizers will be utilized by the project.

A complete fertilizer contains all three of the primary nutrients - nitrogen (N), phosphorus (P) and potassium in the form of potash (K). Typically, a 3-1-2 ratio of nutrients (N-P-K) is used for lawn applications.

Fertilizer shall be applied by the landscape contractor in accordance with the manufacturer's instructions. The application of fertilizer does require some skill on the part of the operator. Should there be a spill of fertilizer, the landscape contractor shall be required to scrape or vacuum it up. The area will then be watered in accordance with the manufacturer's instructions to ensure that the fertilizer becomes soluble and available to plants and does not run off.

A&R Real Estate Holdings, LLC will be responsible for the long-term operation and maintenance of the permanent stormwater management practices. The permanent stormwater management practices shall be maintained in accordance with the Maintenance Inspection Checklists provided in Appendix E.

## **VIII. CONCLUSION**

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This Stormwater Pollution Prevention Plan has been prepared to describe the project's pre and post-development stormwater management improvements and its sediment and erosion control improvements to be utilized during construction. The proposed permanent improvements and the interim improvements to be utilized during construction have been designed in accordance with the requirements of the:

- New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 29, 2020.
- Chapter 267 "Stormwater Management" of the Town of North Castle Code



The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed improvements. These measures include an infiltration basin, extensive areas of porous pavement, and a hydrodynamic separator. These improvements will also mitigate runoff volumes from the proposed improvements as runoff volumes will be slightly reduced or maintained in all the analyzed storms.

Based on the foregoing, it is our professional opinion that the proposed improvements will provide water quantity and quality enhancements which exceed the above mentioned requirements and are not anticipated to have any adverse impacts to the site or any surrounding areas.

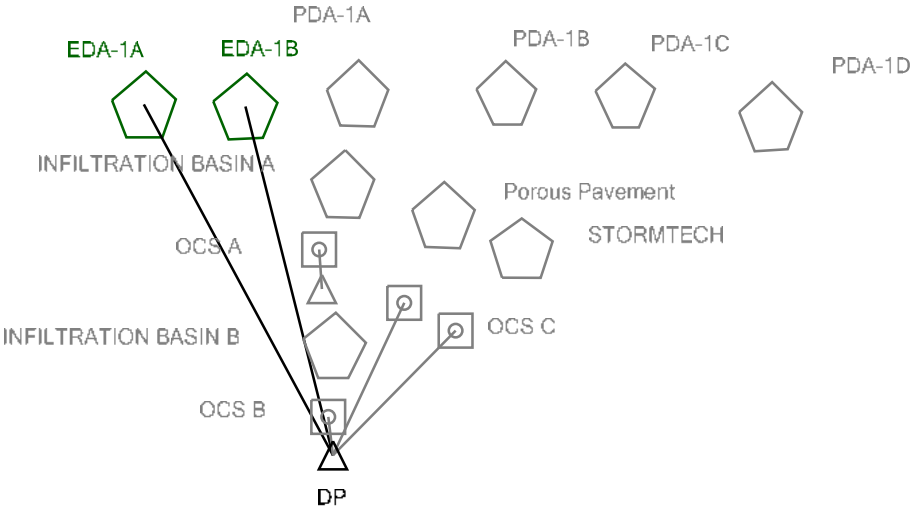


## ***APPENDIX A***

# ***HYDROLOGIC CALCULATIONS***

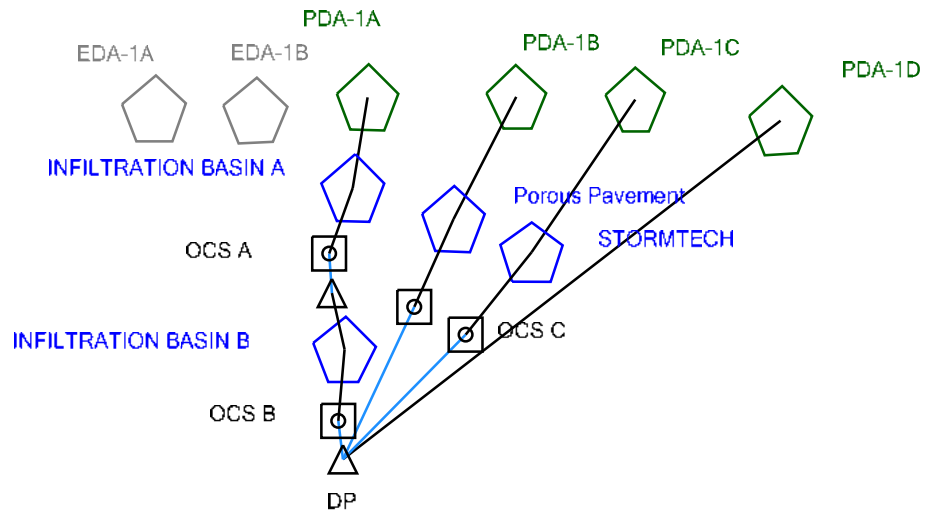


Scenario: Existing Conditions 1 Year Storm





# Scenario: Proposed Conditions 1 Year Storm





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Project Summary

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Title	BaySpace Armonk (JMC Project 22090)
Engineer	Paul J. Dumont, PE
Company	JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC
Date	8/2/2023

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Notes

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## Table of Contents

	Master Network Summary	2
1-10-100-90%	Time-Depth Curve, 1 years (Existing Conditions 1 Year Storm)	5
	Time-Depth Curve, 1 years (Proposed Conditions 1 Year Storm)	7
	Time-Depth Curve, 10 years (Existing Conditions 10 Year Storm)	9
	Time-Depth Curve, 10 years (Proposed Conditions 10 Year Storm)	11
	Time-Depth Curve, 100 years (Existing Conditions 100 Year Storm)	13
	Time-Depth Curve, 100 years (Proposed Conditions 100 Year Storm)	15
EDA-1A	Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm)	17
	Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm)	19
	Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm)	21
EDA-1B	Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm)	23
	Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm)	25
	Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm)	27
PDA-1A	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	29
	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	31
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	33
PDA-1B	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	35
	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	37
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	39
PDA-1C	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	41
	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	43
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	45
PDA-1D	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	47



## Table of Contents

	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	49
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	51
EDA-1A		
	Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm)	53
	Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm)	54
	Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm)	55
EDA-1B		
	Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm)	56
	Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm)	57
	Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm)	58
PDA-1A		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	59
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	60
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	61
PDA-1B		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	62
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	63
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	64
PDA-1C		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	65
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	66
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	67
PDA-1D		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	68
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	69
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	70
EDA-1A		
	Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm)	71
	Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm)	73
	Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm)	75
EDA-1B		

## Table of Contents

	Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm)	78
	Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm)	80
	Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm)	82
PDA-1A		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	84
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	86
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	88
PDA-1B		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	91
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	94
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	97
PDA-1C		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	100
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	102
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	105
PDA-1D		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	108
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	110
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	112
DP		
	Addition Summary, 1 years (Existing Conditions 1 Year Storm)	115
	Addition Summary, 1 years (Proposed Conditions 1 Year Storm)	116
	Addition Summary, 10 years (Existing Conditions 10 Year Storm)	117
	Addition Summary, 10 years (Proposed Conditions 10 Year Storm)	118
	Addition Summary, 100 years (Existing Conditions 100 Year Storm)	119
	Addition Summary, 100 years (Proposed Conditions 100 Year Storm)	120
INFILTRATION BASIN A		
	Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm)	121
	Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm)	122
	Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm)	123



## Table of Contents

INFILTRATION BASIN B	Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm)	124
	Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm)	125
	Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm)	126
Porous Pavement	Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm)	127
	Volume Void Adjustments, 1 years (Proposed Conditions 1 Year Storm)	128
	Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm)	129
	Volume Void Adjustments, 10 years (Proposed Conditions 10 Year Storm)	130
	Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm)	131
	Volume Void Adjustments, 100 years (Proposed Conditions 100 Year Storm)	132
STORMTECH	Storage Chamber System, 1 years (Proposed Conditions 1 Year Storm)	133
	Storage Chamber System, 10 years (Proposed Conditions 10 Year Storm)	134
	Storage Chamber System, 100 years (Proposed Conditions 100 Year Storm)	136
OCS-7-1	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	138
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	140
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	141
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	143
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	144
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	146
OCS-A	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	147
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	149
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	241
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	243
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	335
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	337
OCS-B		

## Table of Contents

	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	429
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	432
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	435
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	438
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	441
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	444
Porous Pavement		
	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	447
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	449
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	450
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	452
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	453
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	455
INFILTRATION BASIN A (IN)		
	Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm)	456
INFILTRATION BASIN A		
	Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm)	457
	Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm)	458
	Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm)	459
INFILTRATION BASIN B (IN)		
	Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm)	460
INFILTRATION BASIN B		
	Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm)	462
	Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm)	463
	Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm)	464
Porous Pavement		
	Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm)	465
	Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm)	466
	Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm)	467
Porous Pavement (OUT)		



## Table of Contents

	Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm)	468
	Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm)	469
	Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm)	470
STORMTECH		
	Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm)	471
	Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm)	472
	Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm)	473
STORMTECH (OUT)		
	Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm)	474
	Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm)	476
	Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm)	478

Subsection: Master Network Summary

**Catchments Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
EDA-1A	Existing Conditions 1 Year Storm	1	29,640.000	12.150	7.71
EDA-1A	Existing Conditions 10 Year Storm	10	67,958.000	12.150	17.11
EDA-1A	Existing Conditions 100 Year Storm	100	138,255.000	12.150	33.35
PDA-1D	Proposed Conditions 1 Year Storm	1	28,996.000	12.150	7.43
PDA-1D	Proposed Conditions 10 Year Storm	10	67,805.000	12.150	16.93
PDA-1D	Proposed Conditions 100 Year Storm	100	139,537.000	12.150	33.48
PDA-1A	Proposed Conditions 1 Year Storm	1	11,115.000	12.100	3.18
PDA-1A	Proposed Conditions 10 Year Storm	10	25,988.000	12.100	7.17
PDA-1A	Proposed Conditions 100 Year Storm	100	53,477.000	12.100	14.11
PDA-1B	Proposed Conditions 1 Year Storm	1	7,071.000	12.100	1.85
PDA-1B	Proposed Conditions 10 Year Storm	10	13,907.000	12.100	3.49
PDA-1B	Proposed Conditions 100 Year Storm	100	25,916.000	12.100	6.32
EDA-1B	Existing Conditions 1 Year Storm	1	1,983.000	12.750	0.12
EDA-1B	Existing Conditions 10 Year Storm	10	13,069.000	12.450	1.96
EDA-1B	Existing Conditions 100 Year Storm	100	44,148.000	12.400	7.62
PDA-1C	Proposed Conditions 1 Year Storm	1	2,615.000	12.100	0.73
PDA-1C	Proposed Conditions 10 Year Storm	10	5,657.000	12.100	1.51
PDA-1C	Proposed Conditions 100 Year Storm	100	11,127.000	12.100	2.85

**Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
DP	Proposed Conditions 1 Year Storm	1	31,591.000	12.150	7.65
DP	Existing Conditions 1 Year Storm	1	31,623.000	12.150	7.71
DP	Existing Conditions 10 Year Storm	10	81,027.000	12.150	17.98



Subsection: Master Network Summary

**Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
DP	Proposed Conditions 10 Year Storm	10	73,424.000	12.150	17.89
DP	Existing Conditions 100 Year Storm	100	182,403.000	12.150	38.16
DP	Proposed Conditions 100 Year Storm	100	158,810.000	12.150	36.12

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft <sup>3</sup> )
INFILTRATION BASIN A (IN)	Proposed Conditions 1 Year Storm	1	11,115.000	12.100	3.18	(N/A)	(N/A)
INFILTRATION BASIN A (OUT)	Proposed Conditions 1 Year Storm	1	3,909.000	12.200	1.87	367.62	1,742.000
INFILTRATION BASIN A (IN)	Proposed Conditions 10 Year Storm	10	25,988.000	12.100	7.17	(N/A)	(N/A)
INFILTRATION BASIN A (OUT)	Proposed Conditions 10 Year Storm	10	10,249.000	12.100	4.60	368.88	5,647.000
INFILTRATION BASIN A (IN)	Proposed Conditions 100 Year Storm	100	53,477.000	12.100	14.11	(N/A)	(N/A)
INFILTRATION BASIN A (OUT)	Proposed Conditions 100 Year Storm	100	27,087.000	12.050	6.46	370.43	11,430.000
Porous Pavement (IN)	Proposed Conditions 1 Year Storm	1	7,071.000	12.100	1.85	(N/A)	(N/A)
Porous Pavement (OUT)	Proposed Conditions 1 Year Storm	1	0.000	0.000	0.00	368.30	2,054.000
Porous Pavement (IN)	Proposed Conditions 10 Year Storm	10	13,907.000	12.100	3.49	(N/A)	(N/A)
Porous Pavement (OUT)	Proposed Conditions 10 Year Storm	10	0.000	0.000	0.00	368.52	3,923.000
Porous Pavement (IN)	Proposed Conditions 100 Year Storm	100	25,916.000	12.100	6.32	(N/A)	(N/A)

Subsection: Master Network Summary

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft <sup>3</sup> )
Porous Pavement (OUT)	Proposed Conditions 100 Year Storm	100	662.000	12.300	2.27	368.97	7,643.000
INFILTRATION BASIN B (IN)	Proposed Conditions 1 Year Storm	1	3,909.000	12.200	1.87	(N/A)	(N/A)
INFILTRATION BASIN B (OUT)	Proposed Conditions 1 Year Storm	1	0.000	0.000	0.00	367.62	1,886.000
INFILTRATION BASIN B (IN)	Proposed Conditions 10 Year Storm	10	10,249.000	12.100	4.60	(N/A)	(N/A)
INFILTRATION BASIN B (OUT)	Proposed Conditions 10 Year Storm	10	0.000	0.000	0.00	368.87	4,944.000
INFILTRATION BASIN B (IN)	Proposed Conditions 100 Year Storm	100	27,087.000	12.050	6.46	(N/A)	(N/A)
INFILTRATION BASIN B (OUT)	Proposed Conditions 100 Year Storm	100	7,553.000	12.400	2.86	370.36	9,450.000
STORMTECH (IN)	Proposed Conditions 1 Year Storm	1	2,615.000	12.100	0.73	(N/A)	(N/A)
STORMTECH (OUT)	Proposed Conditions 1 Year Storm	1	2,595.000	12.400	0.26	366.76	906.000
STORMTECH (IN)	Proposed Conditions 10 Year Storm	10	5,657.000	12.100	1.51	(N/A)	(N/A)
STORMTECH (OUT)	Proposed Conditions 10 Year Storm	10	5,619.000	12.200	0.98	367.88	1,432.000
STORMTECH (IN)	Proposed Conditions 100 Year Storm	100	11,127.000	12.100	2.85	(N/A)	(N/A)
STORMTECH (OUT)	Proposed Conditions 100 Year Storm	100	11,058.000	12.100	2.87	368.19	1,535.000



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time-Depth Curve: 1	
Label	1
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.0	0.0	0.0	0.0
1.500	0.0	0.0	0.0	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.1
3.000	0.1	0.1	0.1	0.1	0.1
3.500	0.1	0.1	0.1	0.1	0.1
4.000	0.1	0.1	0.1	0.1	0.1
4.500	0.1	0.1	0.1	0.2	0.2
5.000	0.2	0.2	0.2	0.2	0.2
5.500	0.2	0.2	0.2	0.2	0.2
6.000	0.2	0.2	0.2	0.2	0.2
6.500	0.2	0.2	0.2	0.2	0.2
7.000	0.3	0.3	0.3	0.3	0.3
7.500	0.3	0.3	0.3	0.3	0.3
8.000	0.3	0.3	0.3	0.3	0.4
8.500	0.4	0.4	0.4	0.4	0.4
9.000	0.4	0.4	0.4	0.4	0.5
9.500	0.5	0.5	0.5	0.5	0.5
10.000	0.5	0.5	0.6	0.6	0.6
10.500	0.6	0.6	0.6	0.7	0.7
11.000	0.7	0.7	0.7	0.8	0.8
11.500	0.8	0.9	1.0	1.0	1.2
12.000	1.4	1.6	1.8	1.9	1.9
12.500	2.0	2.0	2.0	2.1	2.1
13.000	2.1	2.1	2.1	2.2	2.2
13.500	2.2	2.2	2.2	2.3	2.3
14.000	2.3	2.3	2.3	2.3	2.3
14.500	2.3	2.4	2.4	2.4	2.4
15.000	2.4	2.4	2.4	2.4	2.4
15.500	2.4	2.5	2.5	2.5	2.5
16.000	2.5	2.5	2.5	2.5	2.5
16.500	2.5	2.5	2.5	2.5	2.5
17.000	2.6	2.6	2.6	2.6	2.6

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	2.6	2.6	2.6	2.6	2.6
18.000	2.6	2.6	2.6	2.6	2.6
18.500	2.6	2.6	2.6	2.6	2.6
19.000	2.7	2.7	2.7	2.7	2.7
19.500	2.7	2.7	2.7	2.7	2.7
20.000	2.7	2.7	2.7	2.7	2.7
20.500	2.7	2.7	2.7	2.7	2.7
21.000	2.7	2.7	2.7	2.7	2.7
21.500	2.7	2.7	2.7	2.7	2.8
22.000	2.8	2.8	2.8	2.8	2.8
22.500	2.8	2.8	2.8	2.8	2.8
23.000	2.8	2.8	2.8	2.8	2.8
23.500	2.8	2.8	2.8	2.8	2.8
24.000	2.8	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time-Depth Curve: 1	
Label	1
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.0	0.0	0.0	0.0
1.500	0.0	0.0	0.0	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.1
3.000	0.1	0.1	0.1	0.1	0.1
3.500	0.1	0.1	0.1	0.1	0.1
4.000	0.1	0.1	0.1	0.1	0.1
4.500	0.1	0.1	0.1	0.2	0.2
5.000	0.2	0.2	0.2	0.2	0.2
5.500	0.2	0.2	0.2	0.2	0.2
6.000	0.2	0.2	0.2	0.2	0.2
6.500	0.2	0.2	0.2	0.2	0.2
7.000	0.3	0.3	0.3	0.3	0.3
7.500	0.3	0.3	0.3	0.3	0.3
8.000	0.3	0.3	0.3	0.3	0.4
8.500	0.4	0.4	0.4	0.4	0.4
9.000	0.4	0.4	0.4	0.4	0.5
9.500	0.5	0.5	0.5	0.5	0.5
10.000	0.5	0.5	0.6	0.6	0.6
10.500	0.6	0.6	0.6	0.7	0.7
11.000	0.7	0.7	0.7	0.8	0.8
11.500	0.8	0.9	1.0	1.0	1.2
12.000	1.4	1.6	1.8	1.9	1.9
12.500	2.0	2.0	2.0	2.1	2.1
13.000	2.1	2.1	2.1	2.2	2.2
13.500	2.2	2.2	2.2	2.3	2.3
14.000	2.3	2.3	2.3	2.3	2.3
14.500	2.3	2.4	2.4	2.4	2.4
15.000	2.4	2.4	2.4	2.4	2.4
15.500	2.4	2.5	2.5	2.5	2.5
16.000	2.5	2.5	2.5	2.5	2.5
16.500	2.5	2.5	2.5	2.5	2.5
17.000	2.6	2.6	2.6	2.6	2.6

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	2.6	2.6	2.6	2.6	2.6
18.000	2.6	2.6	2.6	2.6	2.6
18.500	2.6	2.6	2.6	2.6	2.6
19.000	2.7	2.7	2.7	2.7	2.7
19.500	2.7	2.7	2.7	2.7	2.7
20.000	2.7	2.7	2.7	2.7	2.7
20.500	2.7	2.7	2.7	2.7	2.7
21.000	2.7	2.7	2.7	2.7	2.7
21.500	2.7	2.7	2.7	2.7	2.8
22.000	2.8	2.8	2.8	2.8	2.8
22.500	2.8	2.8	2.8	2.8	2.8
23.000	2.8	2.8	2.8	2.8	2.8
23.500	2.8	2.8	2.8	2.8	2.8
24.000	2.8	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time-Depth Curve: 10	
Label	10
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.3	0.3	0.3
5.500	0.3	0.3	0.3	0.4	0.4
6.000	0.4	0.4	0.4	0.4	0.4
6.500	0.4	0.4	0.4	0.4	0.5
7.000	0.5	0.5	0.5	0.5	0.5
7.500	0.5	0.5	0.5	0.6	0.6
8.000	0.6	0.6	0.6	0.6	0.6
8.500	0.7	0.7	0.7	0.7	0.7
9.000	0.7	0.8	0.8	0.8	0.8
9.500	0.8	0.9	0.9	0.9	0.9
10.000	1.0	1.0	1.0	1.0	1.1
10.500	1.1	1.1	1.2	1.2	1.2
11.000	1.3	1.3	1.4	1.4	1.5
11.500	1.5	1.6	1.7	1.9	2.1
12.000	2.6	3.0	3.2	3.4	3.5
12.500	3.6	3.7	3.7	3.8	3.8
13.000	3.8	3.9	3.9	3.9	4.0
13.500	4.0	4.0	4.1	4.1	4.1
14.000	4.2	4.2	4.2	4.2	4.2
14.500	4.3	4.3	4.3	4.3	4.4
15.000	4.4	4.4	4.4	4.4	4.4
15.500	4.5	4.5	4.5	4.5	4.5
16.000	4.5	4.5	4.6	4.6	4.6
16.500	4.6	4.6	4.6	4.6	4.6
17.000	4.7	4.7	4.7	4.7	4.7

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	4.7	4.7	4.7	4.7	4.7
18.000	4.8	4.8	4.8	4.8	4.8
18.500	4.8	4.8	4.8	4.8	4.8
19.000	4.8	4.8	4.8	4.9	4.9
19.500	4.9	4.9	4.9	4.9	4.9
20.000	4.9	4.9	4.9	4.9	4.9
20.500	4.9	4.9	4.9	5.0	5.0
21.000	5.0	5.0	5.0	5.0	5.0
21.500	5.0	5.0	5.0	5.0	5.0
22.000	5.0	5.0	5.0	5.0	5.0
22.500	5.0	5.1	5.1	5.1	5.1
23.000	5.1	5.1	5.1	5.1	5.1
23.500	5.1	5.1	5.1	5.1	5.1
24.000	5.1	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time-Depth Curve: 10	
Label	10
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.3	0.3	0.3
5.500	0.3	0.3	0.3	0.4	0.4
6.000	0.4	0.4	0.4	0.4	0.4
6.500	0.4	0.4	0.4	0.4	0.5
7.000	0.5	0.5	0.5	0.5	0.5
7.500	0.5	0.5	0.5	0.6	0.6
8.000	0.6	0.6	0.6	0.6	0.6
8.500	0.7	0.7	0.7	0.7	0.7
9.000	0.7	0.8	0.8	0.8	0.8
9.500	0.8	0.9	0.9	0.9	0.9
10.000	1.0	1.0	1.0	1.0	1.1
10.500	1.1	1.1	1.2	1.2	1.2
11.000	1.3	1.3	1.4	1.4	1.5
11.500	1.5	1.6	1.7	1.9	2.1
12.000	2.6	3.0	3.2	3.4	3.5
12.500	3.6	3.7	3.7	3.8	3.8
13.000	3.8	3.9	3.9	3.9	4.0
13.500	4.0	4.0	4.1	4.1	4.1
14.000	4.2	4.2	4.2	4.2	4.2
14.500	4.3	4.3	4.3	4.3	4.4
15.000	4.4	4.4	4.4	4.4	4.4
15.500	4.5	4.5	4.5	4.5	4.5
16.000	4.5	4.5	4.6	4.6	4.6
16.500	4.6	4.6	4.6	4.6	4.6
17.000	4.7	4.7	4.7	4.7	4.7

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	4.7	4.7	4.7	4.7	4.7
18.000	4.8	4.8	4.8	4.8	4.8
18.500	4.8	4.8	4.8	4.8	4.8
19.000	4.8	4.8	4.8	4.9	4.9
19.500	4.9	4.9	4.9	4.9	4.9
20.000	4.9	4.9	4.9	4.9	4.9
20.500	4.9	4.9	4.9	5.0	5.0
21.000	5.0	5.0	5.0	5.0	5.0
21.500	5.0	5.0	5.0	5.0	5.0
22.000	5.0	5.0	5.0	5.0	5.0
22.500	5.0	5.1	5.1	5.1	5.1
23.000	5.1	5.1	5.1	5.1	5.1
23.500	5.1	5.1	5.1	5.1	5.1
24.000	5.1	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time-Depth Curve: 100	
Label	100
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.1	0.1	0.1	0.1
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.2	0.2	0.2
2.000	0.2	0.2	0.2	0.2	0.2
2.500	0.2	0.2	0.3	0.3	0.3
3.000	0.3	0.3	0.3	0.3	0.3
3.500	0.3	0.3	0.4	0.4	0.4
4.000	0.4	0.4	0.4	0.4	0.4
4.500	0.5	0.5	0.5	0.5	0.5
5.000	0.5	0.5	0.5	0.6	0.6
5.500	0.6	0.6	0.6	0.6	0.6
6.000	0.7	0.7	0.7	0.7	0.7
6.500	0.7	0.8	0.8	0.8	0.8
7.000	0.8	0.8	0.9	0.9	0.9
7.500	0.9	1.0	1.0	1.0	1.0
8.000	1.0	1.1	1.1	1.1	1.1
8.500	1.2	1.2	1.2	1.3	1.3
9.000	1.3	1.4	1.4	1.4	1.5
9.500	1.5	1.6	1.6	1.6	1.7
10.000	1.7	1.8	1.8	1.9	1.9
10.500	2.0	2.0	2.1	2.2	2.2
11.000	2.3	2.4	2.4	2.5	2.6
11.500	2.7	2.9	3.1	3.4	3.8
12.000	4.6	5.3	5.7	6.0	6.3
12.500	6.4	6.5	6.6	6.7	6.8
13.000	6.9	6.9	7.0	7.1	7.1
13.500	7.2	7.2	7.3	7.3	7.4
14.000	7.4	7.5	7.5	7.6	7.6
14.500	7.6	7.7	7.7	7.7	7.8
15.000	7.8	7.9	7.9	7.9	7.9
15.500	8.0	8.0	8.0	8.1	8.1
16.000	8.1	8.1	8.2	8.2	8.2
16.500	8.2	8.2	8.3	8.3	8.3
17.000	8.3	8.3	8.4	8.4	8.4

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	8.4	8.4	8.4	8.5	8.5
18.000	8.5	8.5	8.5	8.5	8.5
18.500	8.6	8.6	8.6	8.6	8.6
19.000	8.6	8.6	8.7	8.7	8.7
19.500	8.7	8.7	8.7	8.7	8.7
20.000	8.8	8.8	8.8	8.8	8.8
20.500	8.8	8.8	8.8	8.8	8.9
21.000	8.9	8.9	8.9	8.9	8.9
21.500	8.9	8.9	8.9	9.0	9.0
22.000	9.0	9.0	9.0	9.0	9.0
22.500	9.0	9.0	9.0	9.0	9.1
23.000	9.1	9.1	9.1	9.1	9.1
23.500	9.1	9.1	9.1	9.1	9.1
24.000	9.2	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time-Depth Curve: 100	
Label	100
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.1	0.1	0.1	0.1
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.2	0.2	0.2
2.000	0.2	0.2	0.2	0.2	0.2
2.500	0.2	0.2	0.3	0.3	0.3
3.000	0.3	0.3	0.3	0.3	0.3
3.500	0.3	0.3	0.4	0.4	0.4
4.000	0.4	0.4	0.4	0.4	0.4
4.500	0.5	0.5	0.5	0.5	0.5
5.000	0.5	0.5	0.5	0.6	0.6
5.500	0.6	0.6	0.6	0.6	0.6
6.000	0.7	0.7	0.7	0.7	0.7
6.500	0.7	0.8	0.8	0.8	0.8
7.000	0.8	0.8	0.9	0.9	0.9
7.500	0.9	1.0	1.0	1.0	1.0
8.000	1.0	1.1	1.1	1.1	1.1
8.500	1.2	1.2	1.2	1.3	1.3
9.000	1.3	1.4	1.4	1.4	1.5
9.500	1.5	1.6	1.6	1.6	1.7
10.000	1.7	1.8	1.8	1.9	1.9
10.500	2.0	2.0	2.1	2.2	2.2
11.000	2.3	2.4	2.4	2.5	2.6
11.500	2.7	2.9	3.1	3.4	3.8
12.000	4.6	5.3	5.7	6.0	6.3
12.500	6.4	6.5	6.6	6.7	6.8
13.000	6.9	6.9	7.0	7.1	7.1
13.500	7.2	7.2	7.3	7.3	7.4
14.000	7.4	7.5	7.5	7.6	7.6
14.500	7.6	7.7	7.7	7.7	7.8
15.000	7.8	7.9	7.9	7.9	7.9
15.500	8.0	8.0	8.0	8.1	8.1
16.000	8.1	8.1	8.2	8.2	8.2
16.500	8.2	8.2	8.3	8.3	8.3
17.000	8.3	8.3	8.4	8.4	8.4

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	8.4	8.4	8.4	8.5	8.5
18.000	8.5	8.5	8.5	8.5	8.5
18.500	8.6	8.6	8.6	8.6	8.6
19.000	8.6	8.6	8.7	8.7	8.7
19.500	8.7	8.7	8.7	8.7	8.7
20.000	8.8	8.8	8.8	8.8	8.8
20.500	8.8	8.8	8.8	8.8	8.9
21.000	8.9	8.9	8.9	8.9	8.9
21.500	8.9	8.9	8.9	9.0	9.0
22.000	9.0	9.0	9.0	9.0	9.0
22.500	9.0	9.0	9.0	9.0	9.1
23.000	9.1	9.1	9.1	9.1	9.1
23.500	9.1	9.1	9.1	9.1	9.1
24.000	9.2	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time of Concentration Calculations  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.129 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	507.00 ft
Manning's n	0.011
Slope	0.003 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	4.35 ft/s
Segment Time of Concentration	0.032 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.166 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1A  
Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

#### ==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n}$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
A<sub>q</sub>= Flow area, square feet  
W<sub>p</sub>= Wetted perimeter, feet  
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
n= Manning's n  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{0.5})$$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Where: T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %



Subsection: Time of Concentration Calculations  
 Label: EDA-1A  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.129 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	507.00 ft
Manning's n	0.011
Slope	0.003 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	4.35 ft/s
Segment Time of Concentration	0.032 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.166 hours
-----------------------------------	-------------

Subsection: Time of Concentration Calculations  
Label: EDA-1A  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

#### ==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n}$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{0.5})$$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Where: Tc= Time of concentration, hours  
n= Manning's n  
Lf= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
Sf= Slope, %



Subsection: Time of Concentration Calculations  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.129 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	507.00 ft
Manning's n	0.011
Slope	0.003 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	4.35 ft/s
Segment Time of Concentration	0.032 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.166 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1A  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

#### ==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n}$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
A<sub>q</sub>= Flow area, square feet  
W<sub>p</sub>= Wetted perimeter, feet  
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
n= Manning's n  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{0.5})$$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Where: T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %



Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

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Segment #1: TR-55 Sheet Flow

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Hydraulic Length	92.00 ft
Manning's n	0.400
Slope	0.008 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.05 ft/s
Segment Time of Concentration	0.469 hours

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Segment #2: TR-55 Shallow Concentrated Flow

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Hydraulic Length	320.00 ft
Is Paved?	False
Slope	0.008 ft/ft
Average Velocity	1.44 ft/s
Segment Time of Concentration	0.062 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.530 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{0.5})$   
  
Paved Surface:  
 $V = 20.3282 * (Sf^{0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet



Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: TR-55 Sheet Flow

---

Hydraulic Length	92.00 ft
Manning's n	0.400
Slope	0.008 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.05 ft/s
Segment Time of Concentration	0.469 hours

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---

Segment #2: TR-55 Shallow Concentrated Flow

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Hydraulic Length	320.00 ft
Is Paved?	False
Slope	0.008 ft/ft
Average Velocity	1.44 ft/s
Segment Time of Concentration	0.062 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.530 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{0.5})$   
  
Paved Surface:  
 $V = 20.3282 * (Sf^{0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet



Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

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Segment #1: TR-55 Sheet Flow

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Hydraulic Length	92.00 ft
Manning's n	0.400
Slope	0.008 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.05 ft/s
Segment Time of Concentration	0.469 hours

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Segment #2: TR-55 Shallow Concentrated Flow

---

Hydraulic Length	320.00 ft
Is Paved?	False
Slope	0.008 ft/ft
Average Velocity	1.44 ft/s
Segment Time of Concentration	0.062 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.530 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{*0.5})$   
  
Paved Surface:  
 $V = 20.3282 * (Sf^{*0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet



Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

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Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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---

Time of Concentration (Composite)

---

Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

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Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

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Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

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Segment #1: User Defined Tc	
Time of Concentration	0.083 hours

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Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

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Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.130 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	503.00 ft
Manning's n	0.013
Slope	0.002 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.047 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.181 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1D  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

#### ==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n}$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
A<sub>q</sub>= Flow area, square feet  
W<sub>p</sub>= Wetted perimeter, feet  
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
n= Manning's n  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{0.5})$$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Where: T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %



Subsection: Time of Concentration Calculations  
 Label: PDA-1D  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.130 hours
Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours
Segment #3: TR-55 Channel Flow	
Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	503.00 ft
Manning's n	0.013
Slope	0.002 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.047 hours
Time of Concentration (Composite)	
Time of Concentration (Composite)	0.181 hours

Subsection: Time of Concentration Calculations  
Label: PDA-1D  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{-0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{0.5})$

Paved Surface:  
 $V = 20.3282 * (Sf^{0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Sheet Flow**

Tc =  $(0.007 * ((n * Lf)^{0.8}) / ((P^{0.5}) * (Sf^{0.4}))$

Where: Tc= Time of concentration, hours  
n= Manning's n  
Lf= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
Sf= Slope, %

Subsection: Time of Concentration Calculations  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.130 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	503.00 ft
Manning's n	0.013
Slope	0.002 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.047 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.181 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1D  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

#### ==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{*-0.5})) / n}$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
A<sub>q</sub>= Flow area, square feet  
W<sub>p</sub>= Wetted perimeter, feet  
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
n= Manning's n  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{*0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{*0.5})$$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{*0.8}))}{((P^{*0.5}) * (S_f^{*0.4}))}$$

Where: T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %

Subsection: Runoff CN-Area  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	138,487.966	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	24,708.545	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	41,513.947	0.0	0.0	80.000
Woods - good - Soil B	55.000	7,825.884	0.0	0.0	55.000
Woods - good - Soil D	77.000	3,348.405	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	215,884.747	(N/A)	(N/A)	88.419

Subsection: Runoff CN-Area  
Label: EDA-1A  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
Label: EDA-1A  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: EDA-1B  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Pasture, grassland, or range - good - Soil B	61.000	19,262.670	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	1,637.698	0.0	0.0	80.000
Woods - good - Soil B	55.000	119,963.994	0.0	0.0	55.000
Woods - good - Soil D	77.000	2,477.730	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	143,342.092	(N/A)	(N/A)	56.472

Subsection: Runoff CN-Area  
Label: EDA-1B  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
Label: EDA-1B  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: PDA-1A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	60,315.384	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	24,484.152	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	84,799.535	(N/A)	(N/A)	87.317

Subsection: Runoff CN-Area  
Label: PDA-1A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
Label: PDA-1A  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	33,494.985	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	2,402.982	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	35,897.967	(N/A)	(N/A)	95.523

Subsection: Runoff CN-Area  
Label: PDA-1B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
Label: PDA-1B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: PDA-1C  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	13,173.348	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	3,226.530	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	174.312	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	16,574.190	(N/A)	(N/A)	90.608

Subsection: Runoff CN-Area  
Label: PDA-1C  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
Label: PDA-1C  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	135,462.547	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	35,571.246	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	38,896.838	0.0	0.0	80.000
Woods - good - Soil B	55.000	10,442.771	0.0	0.0	55.000
Woods - good - Soil D	77.000	1,100.928	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	221,474.330	(N/A)	(N/A)	86.764

Subsection: Runoff CN-Area  
Label: PDA-1D  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
Label: PDA-1D  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.166 hours
Area (User Defined)	215,884.747 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
7.400	0.00	0.00	0.00	0.00	0.01
7.650	0.01	0.01	0.01	0.01	0.01
7.900	0.02	0.02	0.02	0.02	0.02
8.150	0.03	0.03	0.03	0.03	0.04
8.400	0.04	0.04	0.04	0.05	0.05
8.650	0.05	0.06	0.06	0.06	0.07
8.900	0.07	0.08	0.08	0.08	0.09
9.150	0.09	0.10	0.10	0.11	0.11
9.400	0.12	0.12	0.13	0.13	0.14
9.650	0.14	0.15	0.16	0.16	0.17
9.900	0.17	0.18	0.19	0.19	0.20
10.150	0.21	0.22	0.22	0.23	0.24
10.400	0.25	0.26	0.28	0.29	0.30
10.650	0.31	0.32	0.33	0.35	0.36
10.900	0.37	0.38	0.40	0.41	0.43
11.150	0.46	0.49	0.52	0.56	0.59
11.400	0.63	0.68	0.72	0.79	0.92
11.650	1.10	1.38	1.71	2.09	2.49
11.900	2.94	3.66	5.06	6.50	7.47
12.150	7.71	6.84	5.69	4.81	4.18
12.400	3.63	3.12	2.62	2.18	1.81
12.650	1.54	1.38	1.27	1.20	1.13
12.900	1.08	1.03	0.97	0.93	0.89
13.150	0.85	0.83	0.81	0.80	0.78
13.400	0.77	0.76	0.74	0.73	0.72
13.650	0.70	0.69	0.68	0.66	0.65
13.900	0.64	0.62	0.61	0.60	0.59
14.150	0.58	0.57	0.56	0.55	0.55
14.400	0.54	0.54	0.53	0.52	0.52
14.650	0.51	0.50	0.50	0.49	0.48
14.900	0.48	0.47	0.46	0.46	0.45
15.150	0.44	0.44	0.43	0.42	0.42
15.400	0.41	0.40	0.40	0.39	0.38
15.650	0.38	0.37	0.36	0.36	0.35

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
15.900	0.34	0.34	0.33	0.32	0.32
16.150	0.31	0.31	0.31	0.30	0.30
16.400	0.30	0.29	0.29	0.29	0.28
16.650	0.28	0.28	0.28	0.27	0.27
16.900	0.27	0.26	0.26	0.26	0.26
17.150	0.25	0.25	0.25	0.24	0.24
17.400	0.24	0.23	0.23	0.23	0.23
17.650	0.22	0.22	0.22	0.21	0.21
17.900	0.21	0.21	0.20	0.20	0.20
18.150	0.19	0.19	0.19	0.19	0.19
18.400	0.19	0.19	0.19	0.19	0.19
18.650	0.19	0.18	0.18	0.18	0.18
18.900	0.18	0.18	0.18	0.18	0.18
19.150	0.18	0.18	0.17	0.17	0.17
19.400	0.17	0.17	0.17	0.17	0.17
19.650	0.17	0.17	0.17	0.16	0.16
19.900	0.16	0.16	0.16	0.16	0.16
20.150	0.16	0.16	0.16	0.16	0.16
20.400	0.16	0.15	0.15	0.15	0.15
20.650	0.15	0.15	0.15	0.15	0.15
20.900	0.15	0.15	0.15	0.15	0.15
21.150	0.15	0.14	0.14	0.14	0.14
21.400	0.14	0.14	0.14	0.14	0.14
21.650	0.14	0.14	0.14	0.14	0.14
21.900	0.14	0.13	0.13	0.13	0.13
22.150	0.13	0.13	0.13	0.13	0.13
22.400	0.13	0.13	0.13	0.13	0.13
22.650	0.13	0.12	0.12	0.12	0.12
22.900	0.12	0.12	0.12	0.12	0.12
23.150	0.12	0.12	0.12	0.12	0.12
23.400	0.11	0.11	0.11	0.11	0.11
23.650	0.11	0.11	0.11	0.11	0.11
23.900	0.11	0.11	0.11	(N/A)	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.166 hours
Area (User Defined)	215,884.747 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
4.850	0.00	0.00	0.00	0.00	0.01
5.100	0.01	0.01	0.01	0.01	0.02
5.350	0.02	0.02	0.02	0.02	0.03
5.600	0.03	0.03	0.03	0.04	0.04
5.850	0.04	0.04	0.04	0.05	0.05
6.100	0.05	0.05	0.06	0.06	0.06
6.350	0.07	0.07	0.07	0.07	0.08
6.600	0.08	0.09	0.09	0.09	0.10
6.850	0.10	0.10	0.11	0.11	0.12
7.100	0.12	0.13	0.13	0.13	0.14
7.350	0.14	0.15	0.15	0.16	0.16
7.600	0.17	0.17	0.18	0.18	0.19
7.850	0.19	0.20	0.20	0.21	0.22
8.100	0.22	0.23	0.24	0.25	0.25
8.350	0.26	0.27	0.28	0.29	0.30
8.600	0.31	0.32	0.33	0.34	0.35
8.850	0.37	0.38	0.39	0.40	0.41
9.100	0.42	0.44	0.45	0.46	0.47
9.350	0.49	0.50	0.51	0.52	0.54
9.600	0.55	0.57	0.58	0.59	0.61
9.850	0.62	0.64	0.65	0.66	0.68
10.100	0.70	0.72	0.74	0.76	0.79
10.350	0.81	0.84	0.86	0.89	0.92
10.600	0.94	0.97	1.00	1.03	1.06
10.850	1.08	1.11	1.14	1.17	1.21
11.100	1.25	1.31	1.39	1.47	1.56
11.350	1.65	1.75	1.85	1.95	2.11
11.600	2.44	2.91	3.59	4.37	5.27
11.850	6.19	7.20	8.78	11.88	14.95
12.100	16.84	17.11	14.99	12.34	10.34
12.350	8.91	7.68	6.58	5.51	4.57
12.600	3.79	3.21	2.86	2.64	2.48
12.850	2.35	2.23	2.12	2.01	1.91
13.100	1.82	1.76	1.71	1.67	1.64

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.350	1.61	1.58	1.55	1.52	1.50
13.600	1.47	1.44	1.41	1.38	1.36
13.850	1.33	1.30	1.27	1.24	1.22
14.100	1.19	1.17	1.15	1.14	1.12
14.350	1.11	1.10	1.08	1.07	1.06
14.600	1.04	1.03	1.02	1.00	0.99
14.850	0.98	0.96	0.95	0.94	0.92
15.100	0.91	0.89	0.88	0.87	0.85
15.350	0.84	0.83	0.81	0.80	0.79
15.600	0.77	0.76	0.74	0.73	0.72
15.850	0.70	0.69	0.68	0.66	0.65
16.100	0.64	0.63	0.62	0.61	0.61
16.350	0.60	0.59	0.59	0.58	0.58
16.600	0.57	0.56	0.56	0.55	0.55
16.850	0.54	0.53	0.53	0.52	0.52
17.100	0.51	0.51	0.50	0.49	0.49
17.350	0.48	0.47	0.47	0.46	0.46
17.600	0.45	0.44	0.44	0.43	0.43
17.850	0.42	0.41	0.41	0.40	0.40
18.100	0.39	0.39	0.39	0.38	0.38
18.350	0.38	0.38	0.38	0.37	0.37
18.600	0.37	0.37	0.37	0.36	0.36
18.850	0.36	0.36	0.36	0.36	0.35
19.100	0.35	0.35	0.35	0.35	0.35
19.350	0.34	0.34	0.34	0.34	0.34
19.600	0.33	0.33	0.33	0.33	0.33
19.850	0.33	0.32	0.32	0.32	0.32
20.100	0.32	0.31	0.31	0.31	0.31
20.350	0.31	0.31	0.31	0.31	0.30
20.600	0.30	0.30	0.30	0.30	0.30
20.850	0.30	0.29	0.29	0.29	0.29
21.100	0.29	0.29	0.29	0.29	0.28
21.350	0.28	0.28	0.28	0.28	0.28
21.600	0.28	0.27	0.27	0.27	0.27
21.850	0.27	0.27	0.27	0.26	0.26
22.100	0.26	0.26	0.26	0.26	0.26
22.350	0.25	0.25	0.25	0.25	0.25
22.600	0.25	0.25	0.25	0.24	0.24
22.850	0.24	0.24	0.24	0.24	0.24
23.100	0.23	0.23	0.23	0.23	0.23
23.350	0.23	0.23	0.23	0.22	0.22
23.600	0.22	0.22	0.22	0.22	0.22
23.850	0.21	0.21	0.21	0.21	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.166 hours
Area (User Defined)	215,884.747 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.000	0.00	0.00	0.01	0.01	0.01
3.250	0.02	0.02	0.02	0.03	0.03
3.500	0.04	0.04	0.05	0.05	0.05
3.750	0.06	0.06	0.07	0.07	0.08
4.000	0.08	0.09	0.09	0.09	0.10
4.250	0.10	0.11	0.11	0.12	0.12
4.500	0.13	0.13	0.14	0.14	0.15
4.750	0.15	0.16	0.16	0.16	0.17
5.000	0.17	0.18	0.18	0.19	0.19
5.250	0.20	0.20	0.21	0.21	0.22
5.500	0.22	0.23	0.23	0.24	0.24
5.750	0.25	0.25	0.26	0.26	0.27
6.000	0.27	0.28	0.29	0.29	0.30
6.250	0.31	0.32	0.32	0.33	0.34
6.500	0.35	0.36	0.37	0.38	0.39
6.750	0.40	0.41	0.42	0.43	0.44
7.000	0.45	0.46	0.47	0.48	0.49
7.250	0.50	0.51	0.52	0.53	0.54
7.500	0.56	0.57	0.58	0.59	0.60
7.750	0.61	0.62	0.64	0.65	0.66
8.000	0.67	0.68	0.70	0.72	0.73
8.250	0.75	0.78	0.80	0.82	0.84
8.500	0.87	0.89	0.91	0.93	0.96
8.750	0.98	1.01	1.03	1.06	1.08
9.000	1.11	1.13	1.16	1.18	1.21
9.250	1.23	1.26	1.29	1.31	1.34
9.500	1.37	1.39	1.42	1.45	1.48
9.750	1.50	1.53	1.56	1.59	1.61
10.000	1.64	1.67	1.71	1.75	1.79
10.250	1.84	1.89	1.94	1.99	2.05
10.500	2.10	2.15	2.21	2.26	2.31
10.750	2.37	2.42	2.48	2.53	2.59
11.000	2.65	2.71	2.81	2.93	3.08
11.250	3.25	3.44	3.63	3.82	4.02



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.500	4.22	4.55	5.22	6.19	7.60
11.750	9.19	10.99	12.81	14.77	17.84
12.000	23.84	29.69	33.12	33.35	29.05
12.250	23.78	19.83	17.03	14.63	12.51
12.500	10.45	8.65	7.16	6.07	5.40
12.750	4.98	4.67	4.42	4.19	3.99
13.000	3.78	3.59	3.42	3.30	3.20
13.250	3.13	3.07	3.01	2.96	2.91
13.500	2.85	2.80	2.75	2.69	2.64
13.750	2.59	2.53	2.48	2.43	2.38
14.000	2.32	2.27	2.23	2.19	2.15
14.250	2.13	2.10	2.07	2.05	2.02
14.500	2.00	1.97	1.95	1.92	1.89
14.750	1.87	1.84	1.82	1.79	1.77
15.000	1.74	1.72	1.69	1.67	1.64
15.250	1.61	1.59	1.56	1.54	1.51
15.500	1.49	1.46	1.44	1.41	1.38
15.750	1.36	1.33	1.31	1.28	1.26
16.000	1.23	1.21	1.19	1.17	1.15
16.250	1.14	1.13	1.12	1.10	1.09
16.500	1.08	1.07	1.06	1.05	1.04
16.750	1.03	1.01	1.00	0.99	0.98
17.000	0.97	0.96	0.95	0.94	0.92
17.250	0.91	0.90	0.89	0.88	0.87
17.500	0.86	0.85	0.84	0.82	0.81
17.750	0.80	0.79	0.78	0.77	0.76
18.000	0.75	0.74	0.73	0.72	0.71
18.250	0.71	0.71	0.70	0.70	0.70
18.500	0.69	0.69	0.69	0.68	0.68
18.750	0.68	0.67	0.67	0.67	0.66
19.000	0.66	0.66	0.65	0.65	0.65
19.250	0.64	0.64	0.64	0.63	0.63
19.500	0.63	0.62	0.62	0.62	0.61
19.750	0.61	0.61	0.60	0.60	0.59
20.000	0.59	0.59	0.59	0.58	0.58
20.250	0.58	0.58	0.57	0.57	0.57
20.500	0.56	0.56	0.56	0.56	0.55
20.750	0.55	0.55	0.55	0.54	0.54
21.000	0.54	0.54	0.54	0.53	0.53
21.250	0.53	0.52	0.52	0.52	0.52
21.500	0.51	0.51	0.51	0.51	0.50
21.750	0.50	0.50	0.50	0.50	0.49
22.000	0.49	0.49	0.48	0.48	0.48

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.250	0.48	0.47	0.47	0.47	0.47
22.500	0.46	0.46	0.46	0.46	0.45
22.750	0.45	0.45	0.45	0.44	0.44
23.000	0.44	0.44	0.43	0.43	0.43
23.250	0.43	0.42	0.42	0.42	0.42
23.500	0.41	0.41	0.41	0.41	0.40
23.750	0.40	0.40	0.40	0.39	0.39
24.000	0.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.530 hours
Area (User Defined)	143,342.092 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.100	0.00	0.00	0.01	0.01	0.02
12.350	0.04	0.05	0.07	0.09	0.10
12.600	0.11	0.12	0.12	0.12	0.12
12.850	0.12	0.12	0.11	0.11	0.11
13.100	0.10	0.10	0.10	0.10	0.09
13.350	0.09	0.09	0.09	0.09	0.09
13.600	0.09	0.09	0.08	0.08	0.08
13.850	0.08	0.08	0.08	0.08	0.08
14.100	0.08	0.08	0.08	0.08	0.08
14.350	0.07	0.07	0.07	0.07	0.07
14.600	0.07	0.07	0.07	0.07	0.07
14.850	0.07	0.07	0.07	0.07	0.07
15.100	0.07	0.07	0.07	0.07	0.06
15.350	0.06	0.06	0.06	0.06	0.06
15.600	0.06	0.06	0.06	0.06	0.06
15.850	0.06	0.06	0.06	0.06	0.05
16.100	0.05	0.05	0.05	0.05	0.05
16.350	0.05	0.05	0.05	0.05	0.05
16.600	0.05	0.05	0.05	0.05	0.05
16.850	0.05	0.05	0.04	0.04	0.04
17.100	0.04	0.04	0.04	0.04	0.04
17.350	0.04	0.04	0.04	0.04	0.04
17.600	0.04	0.04	0.04	0.04	0.04
17.850	0.04	0.04	0.04	0.04	0.04
18.100	0.04	0.04	0.03	0.03	0.03
18.350	0.03	0.03	0.03	0.03	0.03
18.600	0.03	0.03	0.03	0.03	0.03
18.850	0.03	0.03	0.03	0.03	0.03
19.100	0.03	0.03	0.03	0.03	0.03
19.350	0.03	0.03	0.03	0.03	0.03
19.600	0.03	0.03	0.03	0.03	0.03
19.850	0.03	0.03	0.03	0.03	0.03
20.100	0.03	0.03	0.03	0.03	0.03
20.350	0.03	0.03	0.03	0.03	0.03



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.600	0.03	0.03	0.03	0.03	0.03
20.850	0.03	0.03	0.03	0.03	0.03
21.100	0.03	0.03	0.03	0.03	0.03
21.350	0.03	0.03	0.03	0.03	0.03
21.600	0.03	0.03	0.03	0.03	0.03
21.850	0.03	0.03	0.03	0.03	0.03
22.100	0.03	0.03	0.02	0.02	0.02
22.350	0.02	0.02	0.02	0.02	0.02
22.600	0.02	0.02	0.02	0.02	0.02
22.850	0.02	0.02	0.02	0.02	0.02
23.100	0.02	0.02	0.02	0.02	0.02
23.350	0.02	0.02	0.02	0.02	0.02
23.600	0.02	0.02	0.02	0.02	0.02
23.850	0.02	0.02	0.02	0.02	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.530 hours
Area (User Defined)	143,342.092 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.600	0.00	0.00	0.00	0.01	0.02
11.850	0.05	0.09	0.15	0.26	0.41
12.100	0.62	0.87	1.15	1.42	1.66
12.350	1.81	1.91	1.96	1.94	1.87
12.600	1.77	1.65	1.53	1.40	1.28
12.850	1.17	1.07	0.98	0.90	0.84
13.100	0.78	0.73	0.69	0.65	0.62
13.350	0.59	0.57	0.55	0.53	0.52
13.600	0.50	0.49	0.48	0.47	0.46
13.850	0.45	0.44	0.43	0.42	0.42
14.100	0.41	0.40	0.39	0.39	0.38
14.350	0.38	0.37	0.37	0.36	0.36
14.600	0.35	0.35	0.34	0.34	0.34
14.850	0.33	0.33	0.33	0.32	0.32
15.100	0.31	0.31	0.31	0.30	0.30
15.350	0.30	0.29	0.29	0.28	0.28
15.600	0.28	0.27	0.27	0.26	0.26
15.850	0.26	0.25	0.25	0.24	0.24
16.100	0.24	0.23	0.23	0.22	0.22
16.350	0.22	0.21	0.21	0.21	0.21
16.600	0.20	0.20	0.20	0.20	0.20
16.850	0.19	0.19	0.19	0.19	0.19
17.100	0.18	0.18	0.18	0.18	0.18
17.350	0.18	0.17	0.17	0.17	0.17
17.600	0.17	0.16	0.16	0.16	0.16
17.850	0.16	0.15	0.15	0.15	0.15
18.100	0.15	0.14	0.14	0.14	0.14
18.350	0.14	0.14	0.14	0.13	0.13
18.600	0.13	0.13	0.13	0.13	0.13
18.850	0.13	0.13	0.13	0.13	0.13
19.100	0.13	0.13	0.13	0.13	0.12
19.350	0.12	0.12	0.12	0.12	0.12
19.600	0.12	0.12	0.12	0.12	0.12
19.850	0.12	0.12	0.12	0.12	0.12

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.100	0.12	0.12	0.11	0.11	0.11
20.350	0.11	0.11	0.11	0.11	0.11
20.600	0.11	0.11	0.11	0.11	0.11
20.850	0.11	0.11	0.11	0.11	0.11
21.100	0.11	0.11	0.11	0.10	0.10
21.350	0.10	0.10	0.10	0.10	0.10
21.600	0.10	0.10	0.10	0.10	0.10
21.850	0.10	0.10	0.10	0.10	0.10
22.100	0.10	0.10	0.10	0.10	0.10
22.350	0.10	0.09	0.09	0.09	0.09
22.600	0.09	0.09	0.09	0.09	0.09
22.850	0.09	0.09	0.09	0.09	0.09
23.100	0.09	0.09	0.09	0.09	0.09
23.350	0.09	0.09	0.08	0.08	0.08
23.600	0.08	0.08	0.08	0.08	0.08
23.850	0.08	0.08	0.08	0.08	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.530 hours
Area (User Defined)	143,342.092 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
9.800	0.00	0.00	0.00	0.01	0.01
10.050	0.01	0.02	0.02	0.03	0.04
10.300	0.04	0.05	0.06	0.07	0.08
10.550	0.09	0.10	0.11	0.13	0.14
10.800	0.15	0.16	0.18	0.19	0.21
11.050	0.23	0.24	0.26	0.28	0.30
11.300	0.33	0.36	0.39	0.42	0.46
11.550	0.50	0.55	0.62	0.72	0.84
11.800	1.00	1.22	1.51	1.87	2.39
12.050	3.07	3.87	4.81	5.73	6.55
12.300	7.21	7.51	7.62	7.53	7.21
12.550	6.77	6.27	5.74	5.21	4.71
12.800	4.23	3.82	3.45	3.13	2.85
13.050	2.62	2.42	2.25	2.10	1.97
13.300	1.86	1.76	1.68	1.61	1.55
13.550	1.49	1.45	1.40	1.37	1.33
13.800	1.30	1.27	1.24	1.22	1.19
14.050	1.17	1.15	1.12	1.10	1.08
14.300	1.06	1.04	1.03	1.01	1.00
14.550	0.98	0.97	0.96	0.95	0.93
14.800	0.92	0.91	0.90	0.89	0.88
15.050	0.87	0.86	0.85	0.83	0.82
15.300	0.81	0.80	0.79	0.78	0.77
15.550	0.76	0.74	0.73	0.72	0.71
15.800	0.70	0.69	0.68	0.66	0.65
16.050	0.64	0.63	0.62	0.61	0.60
16.300	0.59	0.58	0.57	0.56	0.55
16.550	0.55	0.54	0.54	0.53	0.52
16.800	0.52	0.51	0.51	0.50	0.50
17.050	0.49	0.49	0.48	0.48	0.47
17.300	0.47	0.46	0.46	0.45	0.44
17.550	0.44	0.43	0.43	0.42	0.42
17.800	0.41	0.41	0.40	0.40	0.39
18.050	0.39	0.38	0.38	0.37	0.37

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
18.300	0.36	0.36	0.36	0.35	0.35
18.550	0.35	0.35	0.34	0.34	0.34
18.800	0.34	0.34	0.33	0.33	0.33
19.050	0.33	0.33	0.33	0.32	0.32
19.300	0.32	0.32	0.32	0.32	0.32
19.550	0.31	0.31	0.31	0.31	0.31
19.800	0.31	0.30	0.30	0.30	0.30
20.050	0.30	0.30	0.30	0.29	0.29
20.300	0.29	0.29	0.29	0.29	0.29
20.550	0.28	0.28	0.28	0.28	0.28
20.800	0.28	0.28	0.28	0.27	0.27
21.050	0.27	0.27	0.27	0.27	0.27
21.300	0.27	0.27	0.26	0.26	0.26
21.550	0.26	0.26	0.26	0.26	0.26
21.800	0.25	0.25	0.25	0.25	0.25
22.050	0.25	0.25	0.25	0.25	0.24
22.300	0.24	0.24	0.24	0.24	0.24
22.550	0.24	0.24	0.23	0.23	0.23
22.800	0.23	0.23	0.23	0.23	0.23
23.050	0.22	0.22	0.22	0.22	0.22
23.300	0.22	0.22	0.22	0.21	0.21
23.550	0.21	0.21	0.21	0.21	0.21
23.800	0.21	0.21	0.20	0.20	0.20

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	84,799.535 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
7.800	0.00	0.00	0.00	0.00	0.00
8.050	0.00	0.00	0.01	0.01	0.01
8.300	0.01	0.01	0.01	0.01	0.01
8.550	0.01	0.01	0.02	0.02	0.02
8.800	0.02	0.02	0.02	0.02	0.03
9.050	0.03	0.03	0.03	0.03	0.03
9.300	0.04	0.04	0.04	0.04	0.04
9.550	0.05	0.05	0.05	0.05	0.05
9.800	0.06	0.06	0.06	0.06	0.06
10.050	0.07	0.07	0.07	0.08	0.08
10.300	0.08	0.09	0.09	0.10	0.10
10.550	0.10	0.11	0.11	0.12	0.12
10.800	0.13	0.13	0.14	0.14	0.15
11.050	0.15	0.16	0.17	0.19	0.20
11.300	0.22	0.23	0.25	0.26	0.28
11.550	0.33	0.40	0.52	0.65	0.80
11.800	0.95	1.12	1.31	1.92	2.70
12.050	3.01	3.18	2.68	1.96	1.66
12.300	1.47	1.29	1.12	0.94	0.75
12.550	0.63	0.53	0.49	0.46	0.44
12.800	0.42	0.40	0.38	0.37	0.35
13.050	0.33	0.32	0.31	0.31	0.30
13.300	0.30	0.29	0.29	0.28	0.28
13.550	0.27	0.27	0.26	0.26	0.25
13.800	0.25	0.24	0.24	0.23	0.23
14.050	0.22	0.22	0.22	0.21	0.21
14.300	0.21	0.21	0.20	0.20	0.20
14.550	0.20	0.19	0.19	0.19	0.19
14.800	0.18	0.18	0.18	0.18	0.17
15.050	0.17	0.17	0.17	0.16	0.16
15.300	0.16	0.16	0.15	0.15	0.15
15.550	0.15	0.14	0.14	0.14	0.14
15.800	0.13	0.13	0.13	0.13	0.12
16.050	0.12	0.12	0.12	0.12	0.12



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.300	0.11	0.11	0.11	0.11	0.11
16.550	0.11	0.11	0.11	0.11	0.10
16.800	0.10	0.10	0.10	0.10	0.10
17.050	0.10	0.10	0.10	0.09	0.09
17.300	0.09	0.09	0.09	0.09	0.09
17.550	0.09	0.09	0.08	0.08	0.08
17.800	0.08	0.08	0.08	0.08	0.08
18.050	0.08	0.07	0.07	0.07	0.07
18.300	0.07	0.07	0.07	0.07	0.07
18.550	0.07	0.07	0.07	0.07	0.07
18.800	0.07	0.07	0.07	0.07	0.07
19.050	0.07	0.07	0.07	0.07	0.07
19.300	0.07	0.07	0.07	0.07	0.06
19.550	0.06	0.06	0.06	0.06	0.06
19.800	0.06	0.06	0.06	0.06	0.06
20.050	0.06	0.06	0.06	0.06	0.06
20.300	0.06	0.06	0.06	0.06	0.06
20.550	0.06	0.06	0.06	0.06	0.06
20.800	0.06	0.06	0.06	0.06	0.06
21.050	0.06	0.06	0.06	0.06	0.06
21.300	0.05	0.05	0.05	0.05	0.05
21.550	0.05	0.05	0.05	0.05	0.05
21.800	0.05	0.05	0.05	0.05	0.05
22.050	0.05	0.05	0.05	0.05	0.05
22.300	0.05	0.05	0.05	0.05	0.05
22.550	0.05	0.05	0.05	0.05	0.05
22.800	0.05	0.05	0.05	0.05	0.05
23.050	0.05	0.05	0.05	0.05	0.04
23.300	0.04	0.04	0.04	0.04	0.04
23.550	0.04	0.04	0.04	0.04	0.04
23.800	0.04	0.04	0.04	0.04	0.04

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	84,799.535 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
5.200	0.00	0.00	0.00	0.00	0.00
5.450	0.00	0.00	0.01	0.01	0.01
5.700	0.01	0.01	0.01	0.01	0.01
5.950	0.01	0.01	0.01	0.01	0.02
6.200	0.02	0.02	0.02	0.02	0.02
6.450	0.02	0.02	0.03	0.03	0.03
6.700	0.03	0.03	0.03	0.03	0.03
6.950	0.04	0.04	0.04	0.04	0.04
7.200	0.04	0.05	0.05	0.05	0.05
7.450	0.05	0.05	0.06	0.06	0.06
7.700	0.06	0.06	0.07	0.07	0.07
7.950	0.07	0.07	0.08	0.08	0.08
8.200	0.09	0.09	0.09	0.10	0.10
8.450	0.10	0.11	0.11	0.11	0.12
8.700	0.12	0.13	0.13	0.13	0.14
8.950	0.14	0.15	0.15	0.16	0.16
9.200	0.17	0.17	0.18	0.18	0.19
9.450	0.19	0.20	0.20	0.21	0.21
9.700	0.22	0.22	0.23	0.23	0.24
9.950	0.24	0.25	0.26	0.26	0.27
10.200	0.28	0.29	0.30	0.31	0.32
10.450	0.33	0.34	0.35	0.36	0.37
10.700	0.38	0.39	0.41	0.42	0.43
10.950	0.44	0.45	0.47	0.49	0.52
11.200	0.56	0.59	0.63	0.67	0.71
11.450	0.74	0.78	0.93	1.10	1.40
11.700	1.73	2.08	2.46	2.84	3.24
11.950	4.64	6.38	6.94	7.17	5.95
12.200	4.30	3.62	3.17	2.77	2.38
12.450	1.99	1.60	1.34	1.11	1.02
12.700	0.97	0.93	0.89	0.85	0.81
12.950	0.77	0.72	0.69	0.67	0.65
13.200	0.64	0.63	0.62	0.61	0.60
13.450	0.59	0.58	0.57	0.56	0.54

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.700	0.53	0.52	0.51	0.50	0.49
13.950	0.48	0.47	0.46	0.45	0.45
14.200	0.44	0.44	0.43	0.42	0.42
14.450	0.41	0.41	0.40	0.40	0.39
14.700	0.39	0.38	0.38	0.37	0.37
14.950	0.36	0.36	0.35	0.35	0.34
15.200	0.34	0.33	0.32	0.32	0.31
15.450	0.31	0.30	0.30	0.29	0.29
15.700	0.28	0.28	0.27	0.27	0.26
15.950	0.26	0.25	0.25	0.24	0.24
16.200	0.24	0.23	0.23	0.23	0.23
16.450	0.23	0.22	0.22	0.22	0.22
16.700	0.21	0.21	0.21	0.21	0.21
16.950	0.20	0.20	0.20	0.20	0.19
17.200	0.19	0.19	0.19	0.18	0.18
17.450	0.18	0.18	0.17	0.17	0.17
17.700	0.17	0.17	0.16	0.16	0.16
17.950	0.16	0.15	0.15	0.15	0.15
18.200	0.15	0.15	0.15	0.15	0.15
18.450	0.15	0.14	0.14	0.14	0.14
18.700	0.14	0.14	0.14	0.14	0.14
18.950	0.14	0.14	0.14	0.14	0.14
19.200	0.14	0.13	0.13	0.13	0.13
19.450	0.13	0.13	0.13	0.13	0.13
19.700	0.13	0.13	0.13	0.13	0.12
19.950	0.12	0.12	0.12	0.12	0.12
20.200	0.12	0.12	0.12	0.12	0.12
20.450	0.12	0.12	0.12	0.12	0.12
20.700	0.12	0.12	0.12	0.11	0.11
20.950	0.11	0.11	0.11	0.11	0.11
21.200	0.11	0.11	0.11	0.11	0.11
21.450	0.11	0.11	0.11	0.11	0.11
21.700	0.11	0.11	0.11	0.10	0.10
21.950	0.10	0.10	0.10	0.10	0.10
22.200	0.10	0.10	0.10	0.10	0.10
22.450	0.10	0.10	0.10	0.10	0.10
22.700	0.10	0.09	0.09	0.09	0.09
22.950	0.09	0.09	0.09	0.09	0.09
23.200	0.09	0.09	0.09	0.09	0.09
23.450	0.09	0.09	0.09	0.09	0.09
23.700	0.08	0.08	0.08	0.08	0.08
23.950	0.08	0.08	(N/A)	(N/A)	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	84,799.535 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.250	0.00	0.00	0.00	0.01	0.01
3.500	0.01	0.01	0.01	0.01	0.01
3.750	0.02	0.02	0.02	0.02	0.02
4.000	0.02	0.03	0.03	0.03	0.03
4.250	0.03	0.04	0.04	0.04	0.04
4.500	0.04	0.04	0.05	0.05	0.05
4.750	0.05	0.05	0.05	0.06	0.06
5.000	0.06	0.06	0.06	0.07	0.07
5.250	0.07	0.07	0.07	0.08	0.08
5.500	0.08	0.08	0.08	0.08	0.09
5.750	0.09	0.09	0.09	0.09	0.10
6.000	0.10	0.10	0.10	0.11	0.11
6.250	0.11	0.12	0.12	0.12	0.13
6.500	0.13	0.13	0.14	0.14	0.14
6.750	0.15	0.15	0.15	0.16	0.16
7.000	0.17	0.17	0.17	0.18	0.18
7.250	0.19	0.19	0.19	0.20	0.20
7.500	0.21	0.21	0.22	0.22	0.23
7.750	0.23	0.23	0.24	0.24	0.25
8.000	0.25	0.26	0.27	0.27	0.28
8.250	0.29	0.30	0.31	0.31	0.32
8.500	0.33	0.34	0.35	0.36	0.37
8.750	0.38	0.39	0.40	0.41	0.42
9.000	0.43	0.44	0.45	0.46	0.47
9.250	0.48	0.49	0.50	0.51	0.52
9.500	0.53	0.54	0.55	0.56	0.57
9.750	0.58	0.59	0.60	0.61	0.62
10.000	0.64	0.65	0.67	0.68	0.70
10.250	0.72	0.74	0.76	0.78	0.80
10.500	0.83	0.85	0.87	0.89	0.91
10.750	0.93	0.95	0.97	1.00	1.02
11.000	1.04	1.08	1.13	1.19	1.27
11.250	1.34	1.42	1.49	1.57	1.65
11.500	1.72	2.03	2.40	3.02	3.71

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.750	4.43	5.17	5.92	6.69	9.47
12.000	12.85	13.79	14.11	11.62	8.34
12.250	6.98	6.09	5.31	4.56	3.81
12.500	3.05	2.55	2.11	1.95	1.85
12.750	1.77	1.69	1.61	1.53	1.45
13.000	1.37	1.31	1.26	1.23	1.21
13.250	1.19	1.17	1.15	1.13	1.11
13.500	1.09	1.07	1.05	1.03	1.01
13.750	0.98	0.96	0.94	0.92	0.90
14.000	0.88	0.86	0.85	0.84	0.83
14.250	0.82	0.81	0.80	0.79	0.78
14.500	0.77	0.76	0.75	0.74	0.73
14.750	0.72	0.71	0.70	0.69	0.68
15.000	0.67	0.66	0.65	0.64	0.63
15.250	0.62	0.61	0.60	0.59	0.58
15.500	0.57	0.56	0.55	0.54	0.53
15.750	0.52	0.51	0.50	0.49	0.48
16.000	0.47	0.46	0.45	0.45	0.44
16.250	0.44	0.44	0.43	0.43	0.42
16.500	0.42	0.41	0.41	0.40	0.40
16.750	0.40	0.39	0.39	0.38	0.38
17.000	0.37	0.37	0.37	0.36	0.36
17.250	0.35	0.35	0.34	0.34	0.33
17.500	0.33	0.33	0.32	0.32	0.31
17.750	0.31	0.30	0.30	0.30	0.29
18.000	0.29	0.28	0.28	0.28	0.28
18.250	0.28	0.27	0.27	0.27	0.27
18.500	0.27	0.27	0.27	0.27	0.26
18.750	0.26	0.26	0.26	0.26	0.26
19.000	0.26	0.25	0.25	0.25	0.25
19.250	0.25	0.25	0.25	0.25	0.24
19.500	0.24	0.24	0.24	0.24	0.24
19.750	0.24	0.24	0.23	0.23	0.23
20.000	0.23	0.23	0.23	0.23	0.23
20.250	0.23	0.22	0.22	0.22	0.22
20.500	0.22	0.22	0.22	0.22	0.21
20.750	0.21	0.21	0.21	0.21	0.21
21.000	0.21	0.21	0.21	0.21	0.21
21.250	0.20	0.20	0.20	0.20	0.20
21.500	0.20	0.20	0.20	0.20	0.20
21.750	0.20	0.20	0.19	0.19	0.19
22.000	0.19	0.19	0.19	0.19	0.19
22.250	0.19	0.18	0.18	0.18	0.18

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.500	0.18	0.18	0.18	0.18	0.18
22.750	0.18	0.17	0.17	0.17	0.17
23.000	0.17	0.17	0.17	0.17	0.17
23.250	0.17	0.16	0.16	0.16	0.16
23.500	0.16	0.16	0.16	0.16	0.16
23.750	0.16	0.16	0.15	0.15	0.15
24.000	0.15	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	35,897.967 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.200	0.00	0.00	0.00	0.00	0.00
3.450	0.00	0.00	0.00	0.00	0.00
3.700	0.00	0.00	0.00	0.00	0.00
3.950	0.00	0.00	0.00	0.00	0.01
4.200	0.01	0.01	0.01	0.01	0.01
4.450	0.01	0.01	0.01	0.01	0.01
4.700	0.01	0.01	0.01	0.01	0.01
4.950	0.01	0.01	0.01	0.01	0.01
5.200	0.01	0.01	0.01	0.01	0.01
5.450	0.01	0.01	0.01	0.01	0.01
5.700	0.01	0.01	0.01	0.01	0.01
5.950	0.01	0.01	0.01	0.02	0.02
6.200	0.02	0.02	0.02	0.02	0.02
6.450	0.02	0.02	0.02	0.02	0.02
6.700	0.02	0.02	0.02	0.02	0.02
6.950	0.02	0.02	0.02	0.02	0.03
7.200	0.03	0.03	0.03	0.03	0.03
7.450	0.03	0.03	0.03	0.03	0.03
7.700	0.03	0.03	0.03	0.03	0.03
7.950	0.03	0.04	0.04	0.04	0.04
8.200	0.04	0.04	0.04	0.04	0.04
8.450	0.04	0.05	0.05	0.05	0.05
8.700	0.05	0.05	0.05	0.05	0.06
8.950	0.06	0.06	0.06	0.06	0.06
9.200	0.06	0.06	0.07	0.07	0.07
9.450	0.07	0.07	0.07	0.07	0.08
9.700	0.08	0.08	0.08	0.08	0.08
9.950	0.08	0.09	0.09	0.09	0.09
10.200	0.09	0.10	0.10	0.10	0.11
10.450	0.11	0.11	0.11	0.12	0.12
10.700	0.12	0.12	0.13	0.13	0.13
10.950	0.14	0.14	0.14	0.15	0.16
11.200	0.17	0.18	0.19	0.20	0.21
11.450	0.22	0.23	0.27	0.32	0.40

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.700	0.49	0.59	0.68	0.78	0.88
11.950	1.25	1.69	1.81	1.85	1.52
12.200	1.09	0.91	0.80	0.70	0.60
12.450	0.50	0.40	0.33	0.28	0.25
12.700	0.24	0.23	0.22	0.21	0.20
12.950	0.19	0.18	0.17	0.16	0.16
13.200	0.16	0.16	0.15	0.15	0.15
13.450	0.14	0.14	0.14	0.14	0.13
13.700	0.13	0.13	0.13	0.12	0.12
13.950	0.12	0.12	0.11	0.11	0.11
14.200	0.11	0.11	0.11	0.10	0.10
14.450	0.10	0.10	0.10	0.10	0.10
14.700	0.10	0.09	0.09	0.09	0.09
14.950	0.09	0.09	0.09	0.08	0.08
15.200	0.08	0.08	0.08	0.08	0.08
15.450	0.08	0.07	0.07	0.07	0.07
15.700	0.07	0.07	0.07	0.07	0.06
15.950	0.06	0.06	0.06	0.06	0.06
16.200	0.06	0.06	0.06	0.06	0.06
16.450	0.06	0.05	0.05	0.05	0.05
16.700	0.05	0.05	0.05	0.05	0.05
16.950	0.05	0.05	0.05	0.05	0.05
17.200	0.05	0.05	0.05	0.04	0.04
17.450	0.04	0.04	0.04	0.04	0.04
17.700	0.04	0.04	0.04	0.04	0.04
17.950	0.04	0.04	0.04	0.04	0.04
18.200	0.04	0.04	0.04	0.04	0.04
18.450	0.04	0.04	0.03	0.03	0.03
18.700	0.03	0.03	0.03	0.03	0.03
18.950	0.03	0.03	0.03	0.03	0.03
19.200	0.03	0.03	0.03	0.03	0.03
19.450	0.03	0.03	0.03	0.03	0.03
19.700	0.03	0.03	0.03	0.03	0.03
19.950	0.03	0.03	0.03	0.03	0.03
20.200	0.03	0.03	0.03	0.03	0.03
20.450	0.03	0.03	0.03	0.03	0.03
20.700	0.03	0.03	0.03	0.03	0.03
20.950	0.03	0.03	0.03	0.03	0.03
21.200	0.03	0.03	0.03	0.03	0.03
21.450	0.03	0.03	0.03	0.03	0.03
21.700	0.03	0.03	0.03	0.03	0.03
21.950	0.02	0.02	0.02	0.02	0.02
22.200	0.02	0.02	0.02	0.02	0.02

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.450	0.02	0.02	0.02	0.02	0.02
22.700	0.02	0.02	0.02	0.02	0.02
22.950	0.02	0.02	0.02	0.02	0.02
23.200	0.02	0.02	0.02	0.02	0.02
23.450	0.02	0.02	0.02	0.02	0.02
23.700	0.02	0.02	0.02	0.02	0.02
23.950	0.02	0.02	(N/A)	(N/A)	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	35,897.967 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1.750	0.00	0.00	0.00	0.00	0.00
2.000	0.00	0.00	0.00	0.00	0.00
2.250	0.01	0.01	0.01	0.01	0.01
2.500	0.01	0.01	0.01	0.01	0.01
2.750	0.01	0.01	0.01	0.01	0.01
3.000	0.01	0.01	0.01	0.01	0.02
3.250	0.02	0.02	0.02	0.02	0.02
3.500	0.02	0.02	0.02	0.02	0.02
3.750	0.02	0.02	0.02	0.02	0.02
4.000	0.02	0.02	0.02	0.02	0.03
4.250	0.03	0.03	0.03	0.03	0.03
4.500	0.03	0.03	0.03	0.03	0.03
4.750	0.03	0.03	0.03	0.03	0.03
5.000	0.03	0.03	0.03	0.04	0.04
5.250	0.04	0.04	0.04	0.04	0.04
5.500	0.04	0.04	0.04	0.04	0.04
5.750	0.04	0.04	0.04	0.04	0.04
6.000	0.04	0.04	0.04	0.05	0.05
6.250	0.05	0.05	0.05	0.05	0.05
6.500	0.05	0.05	0.05	0.06	0.06
6.750	0.06	0.06	0.06	0.06	0.06
7.000	0.06	0.06	0.07	0.07	0.07
7.250	0.07	0.07	0.07	0.07	0.07
7.500	0.07	0.08	0.08	0.08	0.08
7.750	0.08	0.08	0.08	0.08	0.09
8.000	0.09	0.09	0.09	0.09	0.09
8.250	0.10	0.10	0.10	0.10	0.11
8.500	0.11	0.11	0.11	0.12	0.12
8.750	0.12	0.12	0.13	0.13	0.13
9.000	0.13	0.13	0.14	0.14	0.14
9.250	0.15	0.15	0.15	0.15	0.16
9.500	0.16	0.16	0.16	0.17	0.17
9.750	0.17	0.17	0.18	0.18	0.18
10.000	0.18	0.19	0.19	0.20	0.20

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
10.250	0.21	0.21	0.22	0.22	0.23
10.500	0.23	0.24	0.24	0.25	0.25
10.750	0.26	0.26	0.27	0.27	0.28
11.000	0.28	0.29	0.30	0.32	0.34
11.250	0.36	0.38	0.40	0.42	0.44
11.500	0.46	0.53	0.63	0.79	0.97
11.750	1.15	1.33	1.51	1.70	2.39
12.000	3.22	3.44	3.49	2.86	2.05
12.250	1.71	1.49	1.30	1.11	0.93
12.500	0.74	0.62	0.51	0.47	0.45
12.750	0.43	0.41	0.39	0.37	0.35
13.000	0.33	0.32	0.31	0.30	0.29
13.250	0.29	0.28	0.28	0.27	0.27
13.500	0.26	0.26	0.25	0.25	0.24
13.750	0.24	0.23	0.23	0.22	0.22
14.000	0.21	0.21	0.21	0.20	0.20
14.250	0.20	0.20	0.19	0.19	0.19
14.500	0.19	0.18	0.18	0.18	0.18
14.750	0.17	0.17	0.17	0.17	0.16
15.000	0.16	0.16	0.16	0.15	0.15
15.250	0.15	0.15	0.14	0.14	0.14
15.500	0.14	0.13	0.13	0.13	0.13
15.750	0.13	0.12	0.12	0.12	0.12
16.000	0.11	0.11	0.11	0.11	0.11
16.250	0.11	0.11	0.10	0.10	0.10
16.500	0.10	0.10	0.10	0.10	0.10
16.750	0.10	0.09	0.09	0.09	0.09
17.000	0.09	0.09	0.09	0.09	0.09
17.250	0.08	0.08	0.08	0.08	0.08
17.500	0.08	0.08	0.08	0.08	0.08
17.750	0.07	0.07	0.07	0.07	0.07
18.000	0.07	0.07	0.07	0.07	0.07
18.250	0.07	0.07	0.07	0.07	0.07
18.500	0.06	0.06	0.06	0.06	0.06
18.750	0.06	0.06	0.06	0.06	0.06
19.000	0.06	0.06	0.06	0.06	0.06
19.250	0.06	0.06	0.06	0.06	0.06
19.500	0.06	0.06	0.06	0.06	0.06
19.750	0.06	0.06	0.06	0.06	0.06
20.000	0.06	0.06	0.05	0.05	0.05
20.250	0.05	0.05	0.05	0.05	0.05
20.500	0.05	0.05	0.05	0.05	0.05
20.750	0.05	0.05	0.05	0.05	0.05

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.000	0.05	0.05	0.05	0.05	0.05
21.250	0.05	0.05	0.05	0.05	0.05
21.500	0.05	0.05	0.05	0.05	0.05
21.750	0.05	0.05	0.05	0.05	0.05
22.000	0.05	0.05	0.05	0.05	0.04
22.250	0.04	0.04	0.04	0.04	0.04
22.500	0.04	0.04	0.04	0.04	0.04
22.750	0.04	0.04	0.04	0.04	0.04
23.000	0.04	0.04	0.04	0.04	0.04
23.250	0.04	0.04	0.04	0.04	0.04
23.500	0.04	0.04	0.04	0.04	0.04
23.750	0.04	0.04	0.04	0.04	0.04
24.000	0.04	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	35,897.967 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1.000	0.00	0.00	0.00	0.01	0.01
1.250	0.01	0.01	0.01	0.01	0.01
1.500	0.01	0.02	0.02	0.02	0.02
1.750	0.02	0.02	0.02	0.02	0.02
2.000	0.03	0.03	0.03	0.03	0.03
2.250	0.03	0.03	0.03	0.03	0.03
2.500	0.04	0.04	0.04	0.04	0.04
2.750	0.04	0.04	0.04	0.04	0.04
3.000	0.05	0.05	0.05	0.05	0.05
3.250	0.05	0.05	0.05	0.05	0.05
3.500	0.06	0.06	0.06	0.06	0.06
3.750	0.06	0.06	0.06	0.06	0.06
4.000	0.07	0.07	0.07	0.07	0.07
4.250	0.07	0.07	0.07	0.07	0.07
4.500	0.07	0.08	0.08	0.08	0.08
4.750	0.08	0.08	0.08	0.08	0.08
5.000	0.08	0.08	0.08	0.09	0.09
5.250	0.09	0.09	0.09	0.09	0.09
5.500	0.09	0.09	0.09	0.09	0.09
5.750	0.10	0.10	0.10	0.10	0.10
6.000	0.10	0.10	0.10	0.10	0.11
6.250	0.11	0.11	0.11	0.11	0.11
6.500	0.12	0.12	0.12	0.12	0.12
6.750	0.13	0.13	0.13	0.13	0.13
7.000	0.14	0.14	0.14	0.14	0.14
7.250	0.15	0.15	0.15	0.15	0.15
7.500	0.16	0.16	0.16	0.16	0.16
7.750	0.17	0.17	0.17	0.17	0.17
8.000	0.18	0.18	0.18	0.19	0.19
8.250	0.20	0.20	0.20	0.21	0.21
8.500	0.22	0.22	0.23	0.23	0.23
8.750	0.24	0.24	0.25	0.25	0.26
9.000	0.26	0.27	0.27	0.27	0.28
9.250	0.28	0.29	0.29	0.30	0.30

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
9.500	0.31	0.31	0.32	0.32	0.32
9.750	0.33	0.33	0.34	0.34	0.35
10.000	0.35	0.36	0.36	0.37	0.38
10.250	0.39	0.40	0.41	0.42	0.43
10.500	0.44	0.45	0.46	0.46	0.47
10.750	0.48	0.49	0.50	0.51	0.52
11.000	0.53	0.55	0.57	0.60	0.63
11.250	0.67	0.70	0.74	0.77	0.81
11.500	0.84	0.99	1.16	1.45	1.78
11.750	2.10	2.44	2.77	3.10	4.36
12.000	5.86	6.23	6.32	5.18	3.70
12.250	3.09	2.69	2.34	2.01	1.67
12.500	1.34	1.12	0.93	0.85	0.81
12.750	0.77	0.74	0.70	0.67	0.63
13.000	0.60	0.57	0.55	0.54	0.53
13.250	0.52	0.51	0.50	0.49	0.48
13.500	0.47	0.47	0.46	0.45	0.44
13.750	0.43	0.42	0.41	0.40	0.39
14.000	0.38	0.38	0.37	0.36	0.36
14.250	0.36	0.35	0.35	0.34	0.34
14.500	0.33	0.33	0.33	0.32	0.32
14.750	0.31	0.31	0.30	0.30	0.29
15.000	0.29	0.29	0.28	0.28	0.27
15.250	0.27	0.26	0.26	0.26	0.25
15.500	0.25	0.24	0.24	0.23	0.23
15.750	0.22	0.22	0.22	0.21	0.21
16.000	0.20	0.20	0.20	0.19	0.19
16.250	0.19	0.19	0.19	0.18	0.18
16.500	0.18	0.18	0.18	0.18	0.17
16.750	0.17	0.17	0.17	0.17	0.16
17.000	0.16	0.16	0.16	0.16	0.15
17.250	0.15	0.15	0.15	0.15	0.14
17.500	0.14	0.14	0.14	0.14	0.14
17.750	0.13	0.13	0.13	0.13	0.13
18.000	0.12	0.12	0.12	0.12	0.12
18.250	0.12	0.12	0.12	0.12	0.12
18.500	0.12	0.12	0.12	0.11	0.11
18.750	0.11	0.11	0.11	0.11	0.11
19.000	0.11	0.11	0.11	0.11	0.11
19.250	0.11	0.11	0.11	0.11	0.11
19.500	0.10	0.10	0.10	0.10	0.10
19.750	0.10	0.10	0.10	0.10	0.10
20.000	0.10	0.10	0.10	0.10	0.10

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.250	0.10	0.10	0.10	0.10	0.10
20.500	0.09	0.09	0.09	0.09	0.09
20.750	0.09	0.09	0.09	0.09	0.09
21.000	0.09	0.09	0.09	0.09	0.09
21.250	0.09	0.09	0.09	0.09	0.09
21.500	0.09	0.09	0.09	0.09	0.08
21.750	0.08	0.08	0.08	0.08	0.08
22.000	0.08	0.08	0.08	0.08	0.08
22.250	0.08	0.08	0.08	0.08	0.08
22.500	0.08	0.08	0.08	0.08	0.08
22.750	0.08	0.08	0.07	0.07	0.07
23.000	0.07	0.07	0.07	0.07	0.07
23.250	0.07	0.07	0.07	0.07	0.07
23.500	0.07	0.07	0.07	0.07	0.07
23.750	0.07	0.07	0.07	0.07	0.07
24.000	0.07	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	16,574.190 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
6.500	0.00	0.00	0.00	0.00	0.00
6.750	0.00	0.00	0.00	0.00	0.00
7.000	0.00	0.00	0.00	0.00	0.00
7.250	0.00	0.00	0.00	0.00	0.00
7.500	0.00	0.00	0.00	0.00	0.00
7.750	0.00	0.00	0.00	0.01	0.01
8.000	0.01	0.01	0.01	0.01	0.01
8.250	0.01	0.01	0.01	0.01	0.01
8.500	0.01	0.01	0.01	0.01	0.01
8.750	0.01	0.01	0.01	0.01	0.01
9.000	0.01	0.01	0.01	0.01	0.01
9.250	0.01	0.02	0.02	0.02	0.02
9.500	0.02	0.02	0.02	0.02	0.02
9.750	0.02	0.02	0.02	0.02	0.02
10.000	0.02	0.02	0.02	0.02	0.03
10.250	0.03	0.03	0.03	0.03	0.03
10.500	0.03	0.03	0.03	0.03	0.04
10.750	0.04	0.04	0.04	0.04	0.04
11.000	0.04	0.04	0.05	0.05	0.05
11.250	0.06	0.06	0.06	0.07	0.07
11.500	0.08	0.09	0.11	0.14	0.17
11.750	0.20	0.24	0.28	0.32	0.47
12.000	0.64	0.70	0.73	0.61	0.44
12.250	0.37	0.33	0.29	0.25	0.21
12.500	0.17	0.14	0.12	0.11	0.10
12.750	0.10	0.09	0.09	0.08	0.08
13.000	0.08	0.07	0.07	0.07	0.07
13.250	0.07	0.06	0.06	0.06	0.06
13.500	0.06	0.06	0.06	0.06	0.06
13.750	0.05	0.05	0.05	0.05	0.05
14.000	0.05	0.05	0.05	0.05	0.05
14.250	0.05	0.04	0.04	0.04	0.04
14.500	0.04	0.04	0.04	0.04	0.04
14.750	0.04	0.04	0.04	0.04	0.04

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
15.000	0.04	0.04	0.04	0.04	0.04
15.250	0.03	0.03	0.03	0.03	0.03
15.500	0.03	0.03	0.03	0.03	0.03
15.750	0.03	0.03	0.03	0.03	0.03
16.000	0.03	0.03	0.03	0.03	0.02
16.250	0.02	0.02	0.02	0.02	0.02
16.500	0.02	0.02	0.02	0.02	0.02
16.750	0.02	0.02	0.02	0.02	0.02
17.000	0.02	0.02	0.02	0.02	0.02
17.250	0.02	0.02	0.02	0.02	0.02
17.500	0.02	0.02	0.02	0.02	0.02
17.750	0.02	0.02	0.02	0.02	0.02
18.000	0.02	0.02	0.02	0.02	0.02
18.250	0.02	0.02	0.02	0.02	0.02
18.500	0.02	0.02	0.02	0.01	0.01
18.750	0.01	0.01	0.01	0.01	0.01
19.000	0.01	0.01	0.01	0.01	0.01
19.250	0.01	0.01	0.01	0.01	0.01
19.500	0.01	0.01	0.01	0.01	0.01
19.750	0.01	0.01	0.01	0.01	0.01
20.000	0.01	0.01	0.01	0.01	0.01
20.250	0.01	0.01	0.01	0.01	0.01
20.500	0.01	0.01	0.01	0.01	0.01
20.750	0.01	0.01	0.01	0.01	0.01
21.000	0.01	0.01	0.01	0.01	0.01
21.250	0.01	0.01	0.01	0.01	0.01
21.500	0.01	0.01	0.01	0.01	0.01
21.750	0.01	0.01	0.01	0.01	0.01
22.000	0.01	0.01	0.01	0.01	0.01
22.250	0.01	0.01	0.01	0.01	0.01
22.500	0.01	0.01	0.01	0.01	0.01
22.750	0.01	0.01	0.01	0.01	0.01
23.000	0.01	0.01	0.01	0.01	0.01
23.250	0.01	0.01	0.01	0.01	0.01
23.500	0.01	0.01	0.01	0.01	0.01
23.750	0.01	0.01	0.01	0.01	0.01
24.000	0.01	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	16,574.190 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
4.000	0.00	0.00	0.00	0.00	0.00
4.250	0.00	0.00	0.00	0.00	0.00
4.500	0.00	0.00	0.00	0.00	0.00
4.750	0.00	0.00	0.00	0.00	0.00
5.000	0.00	0.00	0.00	0.00	0.01
5.250	0.01	0.01	0.01	0.01	0.01
5.500	0.01	0.01	0.01	0.01	0.01
5.750	0.01	0.01	0.01	0.01	0.01
6.000	0.01	0.01	0.01	0.01	0.01
6.250	0.01	0.01	0.01	0.01	0.01
6.500	0.01	0.01	0.01	0.01	0.01
6.750	0.01	0.01	0.01	0.01	0.01
7.000	0.02	0.02	0.02	0.02	0.02
7.250	0.02	0.02	0.02	0.02	0.02
7.500	0.02	0.02	0.02	0.02	0.02
7.750	0.02	0.02	0.02	0.02	0.02
8.000	0.02	0.02	0.03	0.03	0.03
8.250	0.03	0.03	0.03	0.03	0.03
8.500	0.03	0.03	0.03	0.03	0.04
8.750	0.04	0.04	0.04	0.04	0.04
9.000	0.04	0.04	0.04	0.04	0.05
9.250	0.05	0.05	0.05	0.05	0.05
9.500	0.05	0.05	0.05	0.06	0.06
9.750	0.06	0.06	0.06	0.06	0.06
10.000	0.06	0.07	0.07	0.07	0.07
10.250	0.07	0.08	0.08	0.08	0.08
10.500	0.08	0.09	0.09	0.09	0.09
10.750	0.10	0.10	0.10	0.10	0.11
11.000	0.11	0.11	0.12	0.12	0.13
11.250	0.14	0.15	0.16	0.16	0.17
11.500	0.18	0.21	0.25	0.32	0.39
11.750	0.47	0.55	0.63	0.71	1.01
12.000	1.37	1.47	1.51	1.25	0.90
12.250	0.75	0.66	0.57	0.49	0.41



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.500	0.33	0.28	0.23	0.21	0.20
12.750	0.19	0.18	0.17	0.17	0.16
13.000	0.15	0.14	0.14	0.13	0.13
13.250	0.13	0.13	0.12	0.12	0.12
13.500	0.12	0.12	0.11	0.11	0.11
13.750	0.11	0.10	0.10	0.10	0.10
14.000	0.10	0.09	0.09	0.09	0.09
14.250	0.09	0.09	0.09	0.09	0.08
14.500	0.08	0.08	0.08	0.08	0.08
14.750	0.08	0.08	0.08	0.07	0.07
15.000	0.07	0.07	0.07	0.07	0.07
15.250	0.07	0.07	0.06	0.06	0.06
15.500	0.06	0.06	0.06	0.06	0.06
15.750	0.06	0.06	0.05	0.05	0.05
16.000	0.05	0.05	0.05	0.05	0.05
16.250	0.05	0.05	0.05	0.05	0.05
16.500	0.05	0.04	0.04	0.04	0.04
16.750	0.04	0.04	0.04	0.04	0.04
17.000	0.04	0.04	0.04	0.04	0.04
17.250	0.04	0.04	0.04	0.04	0.04
17.500	0.04	0.04	0.03	0.03	0.03
17.750	0.03	0.03	0.03	0.03	0.03
18.000	0.03	0.03	0.03	0.03	0.03
18.250	0.03	0.03	0.03	0.03	0.03
18.500	0.03	0.03	0.03	0.03	0.03
18.750	0.03	0.03	0.03	0.03	0.03
19.000	0.03	0.03	0.03	0.03	0.03
19.250	0.03	0.03	0.03	0.03	0.03
19.500	0.03	0.03	0.03	0.03	0.03
19.750	0.03	0.03	0.03	0.03	0.03
20.000	0.02	0.02	0.02	0.02	0.02
20.250	0.02	0.02	0.02	0.02	0.02
20.500	0.02	0.02	0.02	0.02	0.02
20.750	0.02	0.02	0.02	0.02	0.02
21.000	0.02	0.02	0.02	0.02	0.02
21.250	0.02	0.02	0.02	0.02	0.02
21.500	0.02	0.02	0.02	0.02	0.02
21.750	0.02	0.02	0.02	0.02	0.02
22.000	0.02	0.02	0.02	0.02	0.02
22.250	0.02	0.02	0.02	0.02	0.02
22.500	0.02	0.02	0.02	0.02	0.02
22.750	0.02	0.02	0.02	0.02	0.02
23.000	0.02	0.02	0.02	0.02	0.02

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
23.250	0.02	0.02	0.02	0.02	0.02
23.500	0.02	0.02	0.02	0.02	0.02
23.750	0.02	0.02	0.02	0.02	0.02
24.000	0.02	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	16,574.190 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
2.350	0.00	0.00	0.00	0.00	0.00
2.600	0.00	0.00	0.00	0.00	0.00
2.850	0.00	0.00	0.01	0.01	0.01
3.100	0.01	0.01	0.01	0.01	0.01
3.350	0.01	0.01	0.01	0.01	0.01
3.600	0.01	0.01	0.01	0.01	0.01
3.850	0.01	0.01	0.01	0.01	0.01
4.100	0.01	0.01	0.01	0.02	0.02
4.350	0.02	0.02	0.02	0.02	0.02
4.600	0.02	0.02	0.02	0.02	0.02
4.850	0.02	0.02	0.02	0.02	0.02
5.100	0.02	0.02	0.02	0.02	0.02
5.350	0.02	0.02	0.03	0.03	0.03
5.600	0.03	0.03	0.03	0.03	0.03
5.850	0.03	0.03	0.03	0.03	0.03
6.100	0.03	0.03	0.03	0.03	0.03
6.350	0.03	0.04	0.04	0.04	0.04
6.600	0.04	0.04	0.04	0.04	0.04
6.850	0.04	0.04	0.04	0.04	0.05
7.100	0.05	0.05	0.05	0.05	0.05
7.350	0.05	0.05	0.05	0.05	0.05
7.600	0.06	0.06	0.06	0.06	0.06
7.850	0.06	0.06	0.06	0.06	0.06
8.100	0.07	0.07	0.07	0.07	0.07
8.350	0.08	0.08	0.08	0.08	0.08
8.600	0.08	0.09	0.09	0.09	0.09
8.850	0.09	0.10	0.10	0.10	0.10
9.100	0.10	0.11	0.11	0.11	0.11
9.350	0.11	0.12	0.12	0.12	0.12
9.600	0.13	0.13	0.13	0.13	0.13
9.850	0.14	0.14	0.14	0.14	0.15
10.100	0.15	0.15	0.16	0.16	0.16
10.350	0.17	0.17	0.18	0.18	0.19
10.600	0.19	0.19	0.20	0.20	0.21

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
10.850	0.21	0.22	0.22	0.22	0.23
11.100	0.24	0.26	0.27	0.29	0.30
11.350	0.32	0.33	0.35	0.36	0.43
11.600	0.50	0.63	0.78	0.92	1.07
11.850	1.22	1.38	1.94	2.62	2.80
12.100	2.85	2.34	1.67	1.40	1.22
12.350	1.06	0.91	0.76	0.61	0.51
12.600	0.42	0.39	0.37	0.35	0.34
12.850	0.32	0.30	0.29	0.27	0.26
13.100	0.25	0.25	0.24	0.24	0.23
13.350	0.23	0.22	0.22	0.22	0.21
13.600	0.21	0.20	0.20	0.20	0.19
13.850	0.19	0.18	0.18	0.17	0.17
14.100	0.17	0.17	0.16	0.16	0.16
14.350	0.16	0.16	0.15	0.15	0.15
14.600	0.15	0.15	0.14	0.14	0.14
14.850	0.14	0.14	0.13	0.13	0.13
15.100	0.13	0.13	0.12	0.12	0.12
15.350	0.12	0.12	0.11	0.11	0.11
15.600	0.11	0.11	0.10	0.10	0.10
15.850	0.10	0.10	0.09	0.09	0.09
16.100	0.09	0.09	0.09	0.09	0.09
16.350	0.09	0.08	0.08	0.08	0.08
16.600	0.08	0.08	0.08	0.08	0.08
16.850	0.08	0.08	0.07	0.07	0.07
17.100	0.07	0.07	0.07	0.07	0.07
17.350	0.07	0.07	0.07	0.07	0.06
17.600	0.06	0.06	0.06	0.06	0.06
17.850	0.06	0.06	0.06	0.06	0.06
18.100	0.06	0.06	0.05	0.05	0.05
18.350	0.05	0.05	0.05	0.05	0.05
18.600	0.05	0.05	0.05	0.05	0.05
18.850	0.05	0.05	0.05	0.05	0.05
19.100	0.05	0.05	0.05	0.05	0.05
19.350	0.05	0.05	0.05	0.05	0.05
19.600	0.05	0.05	0.05	0.05	0.05
19.850	0.05	0.05	0.05	0.05	0.05
20.100	0.04	0.04	0.04	0.04	0.04
20.350	0.04	0.04	0.04	0.04	0.04
20.600	0.04	0.04	0.04	0.04	0.04
20.850	0.04	0.04	0.04	0.04	0.04
21.100	0.04	0.04	0.04	0.04	0.04
21.350	0.04	0.04	0.04	0.04	0.04



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.600	0.04	0.04	0.04	0.04	0.04
21.850	0.04	0.04	0.04	0.04	0.04
22.100	0.04	0.04	0.04	0.04	0.04
22.350	0.04	0.04	0.04	0.04	0.04
22.600	0.04	0.04	0.04	0.03	0.03
22.850	0.03	0.03	0.03	0.03	0.03
23.100	0.03	0.03	0.03	0.03	0.03
23.350	0.03	0.03	0.03	0.03	0.03
23.600	0.03	0.03	0.03	0.03	0.03
23.850	0.03	0.03	0.03	0.03	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.181 hours
Area (User Defined)	221,474.330 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
7.800	0.00	0.00	0.00	0.00	0.01
8.050	0.01	0.01	0.01	0.01	0.02
8.300	0.02	0.02	0.02	0.02	0.03
8.550	0.03	0.03	0.04	0.04	0.04
8.800	0.05	0.05	0.05	0.06	0.06
9.050	0.06	0.07	0.07	0.08	0.08
9.300	0.09	0.09	0.09	0.10	0.10
9.550	0.11	0.11	0.12	0.13	0.13
9.800	0.14	0.14	0.15	0.15	0.16
10.050	0.17	0.17	0.18	0.19	0.20
10.300	0.21	0.21	0.22	0.23	0.25
10.550	0.26	0.27	0.28	0.29	0.30
10.800	0.31	0.32	0.34	0.35	0.36
11.050	0.38	0.39	0.42	0.44	0.48
11.300	0.51	0.55	0.58	0.62	0.67
11.550	0.73	0.84	1.01	1.25	1.55
11.800	1.91	2.29	2.72	3.37	4.62
12.050	6.02	7.06	7.43	6.84	5.82
12.300	4.94	4.29	3.73	3.23	2.73
12.550	2.28	1.90	1.61	1.42	1.30
12.800	1.22	1.15	1.09	1.04	0.98
13.050	0.94	0.89	0.86	0.83	0.82
13.300	0.80	0.79	0.77	0.76	0.75
13.550	0.73	0.72	0.71	0.69	0.68
13.800	0.67	0.65	0.64	0.63	0.61
14.050	0.60	0.59	0.58	0.57	0.56
14.300	0.56	0.55	0.54	0.54	0.53
14.550	0.52	0.52	0.51	0.50	0.50
14.800	0.49	0.49	0.48	0.47	0.47
15.050	0.46	0.45	0.45	0.44	0.43
15.300	0.43	0.42	0.41	0.41	0.40
15.550	0.39	0.39	0.38	0.37	0.37
15.800	0.36	0.35	0.35	0.34	0.33
16.050	0.33	0.32	0.32	0.31	0.31

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.300	0.30	0.30	0.30	0.30	0.29
16.550	0.29	0.29	0.28	0.28	0.28
16.800	0.27	0.27	0.27	0.27	0.26
17.050	0.26	0.26	0.25	0.25	0.25
17.300	0.25	0.24	0.24	0.24	0.23
17.550	0.23	0.23	0.22	0.22	0.22
17.800	0.22	0.21	0.21	0.21	0.20
18.050	0.20	0.20	0.20	0.19	0.19
18.300	0.19	0.19	0.19	0.19	0.19
18.550	0.19	0.19	0.19	0.19	0.18
18.800	0.18	0.18	0.18	0.18	0.18
19.050	0.18	0.18	0.18	0.18	0.18
19.300	0.17	0.17	0.17	0.17	0.17
19.550	0.17	0.17	0.17	0.17	0.17
19.800	0.17	0.16	0.16	0.16	0.16
20.050	0.16	0.16	0.16	0.16	0.16
20.300	0.16	0.16	0.16	0.16	0.15
20.550	0.15	0.15	0.15	0.15	0.15
20.800	0.15	0.15	0.15	0.15	0.15
21.050	0.15	0.15	0.15	0.15	0.14
21.300	0.14	0.14	0.14	0.14	0.14
21.550	0.14	0.14	0.14	0.14	0.14
21.800	0.14	0.14	0.14	0.14	0.13
22.050	0.13	0.13	0.13	0.13	0.13
22.300	0.13	0.13	0.13	0.13	0.13
22.550	0.13	0.13	0.13	0.13	0.12
22.800	0.12	0.12	0.12	0.12	0.12
23.050	0.12	0.12	0.12	0.12	0.12
23.300	0.12	0.12	0.12	0.12	0.11
23.550	0.11	0.11	0.11	0.11	0.11
23.800	0.11	0.11	0.11	0.11	0.11

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.181 hours
Area (User Defined)	221,474.330 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
5.200	0.00	0.00	0.00	0.00	0.01
5.450	0.01	0.01	0.01	0.01	0.02
5.700	0.02	0.02	0.02	0.02	0.03
5.950	0.03	0.03	0.03	0.03	0.04
6.200	0.04	0.04	0.05	0.05	0.05
6.450	0.05	0.06	0.06	0.06	0.07
6.700	0.07	0.07	0.08	0.08	0.08
6.950	0.09	0.09	0.10	0.10	0.10
7.200	0.11	0.11	0.12	0.12	0.13
7.450	0.13	0.14	0.14	0.14	0.15
7.700	0.15	0.16	0.16	0.17	0.17
7.950	0.18	0.19	0.19	0.20	0.20
8.200	0.21	0.22	0.23	0.24	0.25
8.450	0.25	0.26	0.27	0.28	0.29
8.700	0.30	0.31	0.32	0.33	0.35
8.950	0.36	0.37	0.38	0.39	0.40
9.200	0.42	0.43	0.44	0.45	0.47
9.450	0.48	0.49	0.50	0.52	0.53
9.700	0.54	0.56	0.57	0.59	0.60
9.950	0.62	0.63	0.65	0.66	0.68
10.200	0.70	0.73	0.75	0.77	0.80
10.450	0.82	0.85	0.88	0.90	0.93
10.700	0.96	0.99	1.02	1.04	1.07
10.950	1.10	1.13	1.17	1.21	1.27
11.200	1.34	1.42	1.51	1.60	1.69
11.450	1.79	1.89	2.05	2.33	2.77
11.700	3.40	4.15	5.01	5.91	6.90
11.950	8.37	11.21	14.28	16.40	16.93
12.200	15.37	12.94	10.86	9.36	8.07
12.450	6.95	5.85	4.87	4.03	3.41
12.700	3.00	2.75	2.56	2.42	2.29
12.950	2.17	2.06	1.96	1.87	1.80
13.200	1.74	1.70	1.67	1.64	1.61
13.450	1.58	1.55	1.52	1.49	1.47



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.700	1.44	1.41	1.38	1.35	1.32
13.950	1.30	1.27	1.24	1.22	1.19
14.200	1.18	1.16	1.14	1.13	1.12
14.450	1.10	1.09	1.08	1.06	1.05
14.700	1.04	1.02	1.01	0.99	0.98
14.950	0.97	0.95	0.94	0.93	0.91
15.200	0.90	0.88	0.87	0.86	0.84
15.450	0.83	0.82	0.80	0.79	0.77
15.700	0.76	0.75	0.73	0.72	0.70
15.950	0.69	0.68	0.66	0.65	0.64
16.200	0.63	0.62	0.62	0.61	0.61
16.450	0.60	0.59	0.59	0.58	0.57
16.700	0.57	0.56	0.56	0.55	0.54
16.950	0.54	0.53	0.53	0.52	0.51
17.200	0.51	0.50	0.50	0.49	0.48
17.450	0.48	0.47	0.47	0.46	0.45
17.700	0.45	0.44	0.44	0.43	0.42
17.950	0.42	0.41	0.40	0.40	0.40
18.200	0.39	0.39	0.39	0.39	0.38
18.450	0.38	0.38	0.38	0.38	0.38
18.700	0.37	0.37	0.37	0.37	0.37
18.950	0.36	0.36	0.36	0.36	0.36
19.200	0.36	0.35	0.35	0.35	0.35
19.450	0.35	0.34	0.34	0.34	0.34
19.700	0.34	0.33	0.33	0.33	0.33
19.950	0.33	0.33	0.32	0.32	0.32
20.200	0.32	0.32	0.32	0.32	0.31
20.450	0.31	0.31	0.31	0.31	0.31
20.700	0.31	0.30	0.30	0.30	0.30
20.950	0.30	0.30	0.30	0.30	0.29
21.200	0.29	0.29	0.29	0.29	0.29
21.450	0.29	0.28	0.28	0.28	0.28
21.700	0.28	0.28	0.28	0.27	0.27
21.950	0.27	0.27	0.27	0.27	0.27
22.200	0.26	0.26	0.26	0.26	0.26
22.450	0.26	0.26	0.25	0.25	0.25
22.700	0.25	0.25	0.25	0.25	0.24
22.950	0.24	0.24	0.24	0.24	0.24
23.200	0.24	0.24	0.23	0.23	0.23
23.450	0.23	0.23	0.23	0.23	0.22
23.700	0.22	0.22	0.22	0.22	0.22
23.950	0.22	0.21	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.181 hours
Area (User Defined)	221,474.330 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.250	0.00	0.00	0.00	0.01	0.01
3.500	0.02	0.02	0.02	0.03	0.03
3.750	0.04	0.04	0.04	0.05	0.05
4.000	0.06	0.06	0.07	0.07	0.08
4.250	0.08	0.08	0.09	0.09	0.10
4.500	0.10	0.11	0.11	0.12	0.12
4.750	0.13	0.13	0.14	0.14	0.15
5.000	0.15	0.15	0.16	0.16	0.17
5.250	0.17	0.18	0.18	0.19	0.19
5.500	0.20	0.20	0.21	0.21	0.22
5.750	0.22	0.23	0.23	0.24	0.24
6.000	0.25	0.25	0.26	0.27	0.27
6.250	0.28	0.29	0.30	0.31	0.31
6.500	0.32	0.33	0.34	0.35	0.36
6.750	0.37	0.38	0.39	0.40	0.41
7.000	0.42	0.43	0.44	0.45	0.46
7.250	0.47	0.48	0.49	0.50	0.51
7.500	0.52	0.54	0.55	0.56	0.57
7.750	0.58	0.59	0.61	0.62	0.63
8.000	0.64	0.65	0.67	0.68	0.70
8.250	0.72	0.74	0.76	0.79	0.81
8.500	0.83	0.85	0.88	0.90	0.92
8.750	0.95	0.97	1.00	1.02	1.05
9.000	1.07	1.10	1.12	1.15	1.17
9.250	1.20	1.23	1.25	1.28	1.31
9.500	1.33	1.36	1.39	1.42	1.45
9.750	1.47	1.50	1.53	1.56	1.59
10.000	1.62	1.65	1.68	1.72	1.76
10.250	1.81	1.86	1.91	1.97	2.02
10.500	2.07	2.13	2.18	2.24	2.29
10.750	2.35	2.40	2.46	2.51	2.57
11.000	2.63	2.69	2.79	2.90	3.05
11.250	3.22	3.41	3.59	3.79	3.99
11.500	4.19	4.51	5.12	6.03	7.35

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.750	8.90	10.67	12.48	14.43	17.30
12.000	22.89	28.81	32.73	33.48	30.18
12.250	25.25	21.09	18.08	15.55	13.34
12.500	11.20	9.31	7.70	6.50	5.71
12.750	5.22	4.86	4.59	4.34	4.12
13.000	3.91	3.71	3.54	3.40	3.30
13.250	3.22	3.15	3.09	3.03	2.98
13.500	2.93	2.87	2.82	2.76	2.71
13.750	2.66	2.60	2.55	2.49	2.44
14.000	2.39	2.33	2.29	2.24	2.21
14.250	2.18	2.15	2.12	2.10	2.07
14.500	2.05	2.02	1.99	1.97	1.94
14.750	1.92	1.89	1.86	1.84	1.81
15.000	1.79	1.76	1.73	1.71	1.68
15.250	1.66	1.63	1.60	1.58	1.55
15.500	1.52	1.50	1.47	1.45	1.42
15.750	1.39	1.37	1.34	1.32	1.29
16.000	1.26	1.24	1.22	1.20	1.18
16.250	1.17	1.15	1.14	1.13	1.12
16.500	1.11	1.10	1.08	1.07	1.06
16.750	1.05	1.04	1.03	1.02	1.01
17.000	0.99	0.98	0.97	0.96	0.95
17.250	0.94	0.93	0.91	0.90	0.89
17.500	0.88	0.87	0.86	0.85	0.83
17.750	0.82	0.81	0.80	0.79	0.78
18.000	0.77	0.75	0.74	0.74	0.73
18.250	0.73	0.72	0.72	0.72	0.71
18.500	0.71	0.70	0.70	0.70	0.69
18.750	0.69	0.69	0.68	0.68	0.68
19.000	0.67	0.67	0.67	0.66	0.66
19.250	0.66	0.65	0.65	0.65	0.64
19.500	0.64	0.64	0.63	0.63	0.63
19.750	0.62	0.62	0.62	0.61	0.61
20.000	0.61	0.60	0.60	0.60	0.59
20.250	0.59	0.59	0.59	0.58	0.58
20.500	0.58	0.58	0.57	0.57	0.57
20.750	0.56	0.56	0.56	0.56	0.55
21.000	0.55	0.55	0.55	0.54	0.54
21.250	0.54	0.54	0.53	0.53	0.53
21.500	0.53	0.52	0.52	0.52	0.52
21.750	0.51	0.51	0.51	0.51	0.50
22.000	0.50	0.50	0.50	0.49	0.49
22.250	0.49	0.48	0.48	0.48	0.48

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.500	0.47	0.47	0.47	0.47	0.47
22.750	0.46	0.46	0.46	0.45	0.45
23.000	0.45	0.45	0.44	0.44	0.44
23.250	0.44	0.43	0.43	0.43	0.43
23.500	0.42	0.42	0.42	0.42	0.41
23.750	0.41	0.41	0.41	0.40	0.40
24.000	0.40	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Addition Summary  
 Label: DP  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	29,639.596	12.150	7.71
Flow (From)	EDA-1B	1,983.144	12.750	0.12
Flow (In)	DP	31,622.741	12.150	7.71

Subsection: Addition Summary  
 Label: DP  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
	Porous Pavement
	INFILTRATION BASIN B
	STORMTECH
<Catchment to Outflow Node>	PDA-1D

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)		0.000	0.000	0.00
Flow (From)		0.000	0.000	0.00
Flow (From)		2,595.176	12.400	0.26
Flow (From)	PDA-1D	28,995.718	12.150	7.43
Flow (In)	DP	31,590.894	12.150	7.65

Subsection: Addition Summary  
 Label: DP  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	67,958.090	12.150	17.11
Flow (From)	EDA-1B	13,069.387	12.450	1.96
Flow (In)	DP	81,027.477	12.150	17.98

Subsection: Addition Summary  
 Label: DP  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
	Porous Pavement
	INFILTRATION BASIN B
	STORMTECH
<Catchment to Outflow Node>	PDA-1D

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)		0.000	0.000	0.00
Flow (From)		0.000	0.000	0.00
Flow (From)		5,619.154	12.200	0.98
Flow (From)	PDA-1D	67,804.974	12.150	16.93
Flow (In)	DP	73,424.128	12.150	17.89



Subsection: Addition Summary  
Label: DP  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	138,254.510	12.150	33.35
Flow (From)	EDA-1B	44,148.422	12.400	7.62
Flow (In)	DP	182,402.932	12.150	38.16

Subsection: Addition Summary  
 Label: DP  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
	Porous Pavement INFILTRATION BASIN B STORMTECH
<Catchment to Outflow Node>	PDA-1D

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)		661.773	12.300	2.27
Flow (From)		7,553.289	12.400	2.86
Flow (From)		11,058.455	12.100	2.87
Flow (From)	PDA-1D	139,536.750	12.150	33.48
Flow (In)	DP	158,810.267	12.150	36.12

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.90	0.0	2,087.059	0.000	0.000	0.000
368.00	0.0	2,750.508	7,233.496	2,652.000	2,652.000
370.00	0.0	4,132.080	10,253.837	6,836.000	9,488.000
371.00	0.0	4,907.689	13,542.987	4,514.000	14,003.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.90	0.0	2,087.059	0.000	0.000	0.000
368.00	0.0	2,750.508	7,233.496	2,652.000	2,652.000
370.00	0.0	4,132.080	10,253.837	6,836.000	9,488.000
371.00	0.0	4,907.689	13,542.987	4,514.000	14,003.000



Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.90	0.0	2,087.059	0.000	0.000	0.000
368.00	0.0	2,750.508	7,233.496	2,652.000	2,652.000
370.00	0.0	4,132.080	10,253.837	6,836.000	9,488.000
371.00	0.0	4,907.689	13,542.987	4,514.000	14,003.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.50	0.0	1,290.220	0.000	0.000	0.000
368.00	0.0	2,127.297	5,074.225	2,537.000	2,537.000
370.00	0.0	3,469.428	8,313.433	5,542.000	8,079.000
371.00	0.0	4,225.317	11,523.509	3,841.000	11,921.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.50	0.0	1,290.220	0.000	0.000	0.000
368.00	0.0	2,127.297	5,074.225	2,537.000	2,537.000
370.00	0.0	3,469.428	8,313.433	5,542.000	8,079.000
371.00	0.0	4,225.317	11,523.509	3,841.000	11,921.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.50	0.0	1,290.220	0.000	0.000	0.000
368.00	0.0	2,127.297	5,074.225	2,537.000	2,537.000
370.00	0.0	3,469.428	8,313.433	5,542.000	8,079.000
371.00	0.0	4,225.317	11,523.509	3,841.000	11,921.000



Subsection: Elevation-Area Volume Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
368.06	0.0	21,104.000	0.000	0.000	0.000
369.06	0.0	21,104.000	63,312.000	21,104.000	8,442.000

Subsection: Volume Void Adjustments  
Label: Porous Pavement  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**Volume Complete Filled With Material  
(Adjust Volumes for Voids)**

**Void Space = 40.0 %**

Elevation (Headwater) (ft)	Volume (Total) (ft <sup>3</sup> )	Volume (Adjusted) (ft <sup>3</sup> )
368.06	0.000	0.000
369.06	21,104.000	8,441.600

Subsection: Elevation-Area Volume Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
368.06	0.0	21,104.000	0.000	0.000	0.000
369.06	0.0	21,104.000	63,312.000	21,104.000	8,442.000

Subsection: Volume Void Adjustments  
Label: Porous Pavement  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Volume Complete Filled With Material  
(Adjust Volumes for Voids)**

**Void Space = 40.0 %**

Elevation (Headwater) (ft)	Volume (Total) (ft <sup>3</sup> )	Volume (Adjusted) (ft <sup>3</sup> )
368.06	0.000	0.000
369.06	21,104.000	8,441.600



Subsection: Elevation-Area Volume Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
368.06	0.0	21,104.000	0.000	0.000	0.000
369.06	0.0	21,104.000	63,312.000	21,104.000	8,442.000

Subsection: Volume Void Adjustments  
Label: Porous Pavement  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Volume Complete Filled With Material  
(Adjust Volumes for Voids)**

**Void Space = 40.0 %**

Elevation (Headwater) (ft)	Volume (Total) (ft <sup>3</sup> )	Volume (Adjusted) (ft <sup>3</sup> )
368.06	0.000	0.000
369.06	21,104.000	8,441.600

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storage Chamber

ID	62	Created on 02/10/2010. Please check with the manufacturer for the latest data.
Label	SC-740 Chamber	Notes

Storage Chamber

Effective Length	7.12 ft	Manufacturer	StormTech
Section Length Varies?	False	Default Spacing	0.50 ft

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.08	0.31
0.17	0.31
0.25	0.31
0.33	0.30
0.42	0.30
0.50	0.30
0.58	0.29
0.67	0.29
0.75	0.28
0.83	0.28
0.92	0.27
1.00	0.27
1.08	0.26
1.17	0.25
1.25	0.25
1.33	0.24
1.42	0.23
1.50	0.22
1.58	0.21
1.67	0.20
1.75	0.19
1.83	0.18
1.92	0.17
2.00	0.15
2.08	0.13
2.17	0.11
2.25	0.09
2.33	0.04
2.42	0.02

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
2.50	0.01

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Storage Chamber

Storage Chamber Type	Incremental Volume Per Unit Length	Maximum Width	4.25 ft
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Storage Chamber (Pond)

Chamber System Invert	365.00 ft
Chamber System Rows	4
Chambers per Row	5
Chamber System Fill Void Space	40.0 %
Chamber System Row Spacing	6.0 in
Chamber System Side Fill	12.0 in
Chamber System Fill Cover Depth	6.0 in
Chamber System Fill Base Depth	6.0 in
Chamber System Fill Side Slope	0.000 H:V
Chamber System End Fill	12.0 in
Chamber System Includes Header?	False

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

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Storage Chamber

ID	62	Notes	Created on 02/10/2010. Please check with the manufacturer for the latest data.
Label	SC-740 Chamber		

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Storage Chamber



Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

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Storage Chamber

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Effective Length	7.12 ft	Manufacturer	StormTech
Section Length Varies?	False	Default Spacing	0.50 ft

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**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.08	0.31
0.17	0.31
0.25	0.31
0.33	0.30
0.42	0.30
0.50	0.30
0.58	0.29
0.67	0.29
0.75	0.28
0.83	0.28
0.92	0.27
1.00	0.27
1.08	0.26
1.17	0.25
1.25	0.25
1.33	0.24
1.42	0.23
1.50	0.22
1.58	0.21
1.67	0.20
1.75	0.19
1.83	0.18
1.92	0.17
2.00	0.15
2.08	0.13
2.17	0.11
2.25	0.09
2.33	0.04
2.42	0.02
2.50	0.01

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Storage Chamber

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Storage Chamber Type	Incremental Volume Per Unit Length	Maximum Width	4.25 ft
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Storage Chamber (Pond)

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Chamber System Invert	365.00 ft
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Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storage Chamber (Pond)

Chamber System Rows	4
Chambers per Row	5
Chamber System Fill Void Space	40.0 %
Chamber System Row Spacing	6.0 in
Chamber System Side Fill	12.0 in
Chamber System Fill Cover Depth	6.0 in
Chamber System Fill Base Depth	6.0 in
Chamber System Fill Side Slope	0.000 H:V
Chamber System End Fill	12.0 in
Chamber System Includes Header?	False

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storage Chamber

ID	62	Notes	Created on 02/10/2010. Please check with the manufacturer for the latest data.
Label	SC-740 Chamber		

Storage Chamber

Effective Length	7.12 ft	Manufacturer	StormTech
Section Length Varies?	False	Default Spacing	0.50 ft

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.08	0.31
0.17	0.31
0.25	0.31
0.33	0.30
0.42	0.30
0.50	0.30

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.58	0.29
0.67	0.29
0.75	0.28
0.83	0.28
0.92	0.27
1.00	0.27
1.08	0.26
1.17	0.25
1.25	0.25
1.33	0.24
1.42	0.23
1.50	0.22
1.58	0.21
1.67	0.20
1.75	0.19
1.83	0.18
1.92	0.17
2.00	0.15
2.08	0.13
2.17	0.11
2.25	0.09
2.33	0.04
2.42	0.02
2.50	0.01

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Storage Chamber

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Storage Chamber Type	Incremental Volume Per Unit Length	Maximum Width	4.25 ft
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Storage Chamber (Pond)

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Chamber System Invert	365.00 ft
Chamber System Rows	4
Chambers per Row	5
Chamber System Fill Void Space	40.0 %
Chamber System Row Spacing	6.0 in
Chamber System Side Fill	12.0 in
Chamber System Fill Cover Depth	6.0 in

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storage Chamber (Pond)

Chamber System Fill Base Depth	6.0 in
Chamber System Fill Side Slope	0.000 H:V
Chamber System End Fill	12.0 in
Chamber System Includes Header?	False

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations

Minimum (Headwater)	365.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	368.50 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	365.50	368.50
Orifice-Circular	Orifice - 2	Forward	TW	366.75	368.50
Rectangular Weir	Weir - 1	Forward	TW	368.00	368.50
Tailwater Settings	Tailwater			(N/A)	(N/A)



Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	365.50 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: Orifice - 2	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	366.75 ft
Orifice Diameter	5.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
365.00	0.00	(N/A)	0.00
365.50	0.00	(N/A)	0.00
366.00	0.14	(N/A)	0.00
366.50	0.22	(N/A)	0.00
366.75	0.25	(N/A)	0.00
367.00	0.40	(N/A)	0.00
367.50	0.81	(N/A)	0.00
368.00	1.03	(N/A)	0.00
368.50	5.92	(N/A)	0.00

Contributing Structures

None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2 +
Weir - 1
Orifice - 1 + Orifice - 2 +
Weir - 1

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	365.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	368.50 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	365.50	368.50
Orifice-Circular	Orifice - 2	Forward	TW	366.75	368.50
Rectangular Weir	Weir - 1	Forward	TW	368.00	368.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	365.50 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: Orifice - 2	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	366.75 ft
Orifice Diameter	5.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s



Subsection: Composite Rating Curve  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
365.00	0.00	(N/A)	0.00
365.50	0.00	(N/A)	0.00
366.00	0.14	(N/A)	0.00
366.50	0.22	(N/A)	0.00
366.75	0.25	(N/A)	0.00
367.00	0.40	(N/A)	0.00
367.50	0.81	(N/A)	0.00
368.00	1.03	(N/A)	0.00
368.50	5.92	(N/A)	0.00

Contributing Structures

None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2 +
Weir - 1
Orifice - 1 + Orifice - 2 +
Weir - 1

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	365.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	368.50 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	365.50	368.50
Orifice-Circular	Orifice - 2	Forward	TW	366.75	368.50
Rectangular Weir	Weir - 1	Forward	TW	368.00	368.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	365.50 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: Orifice - 2	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	366.75 ft
Orifice Diameter	5.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
365.00	0.00	(N/A)	0.00
365.50	0.00	(N/A)	0.00
366.00	0.14	(N/A)	0.00
366.50	0.22	(N/A)	0.00
366.75	0.25	(N/A)	0.00
367.00	0.40	(N/A)	0.00
367.50	0.81	(N/A)	0.00
368.00	1.03	(N/A)	0.00
368.50	5.92	(N/A)	0.00

Contributing Structures

None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2 +
Weir - 1
Orifice - 1 + Orifice - 2 +
Weir - 1



Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.90 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - 1	Forward + Reverse	TW	366.90	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	120.00 ft
Length (Computed Barrel)	120.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.094
T2 ratio (HW/D)	1.196
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,  
 interpolate between flows at T1 & T2...

T1 Elevation	369.09 ft	T1 Flow	15.55 ft <sup>3</sup> /s
T2 Elevation	369.29 ft	T2 Flow	17.77 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.50	0.00
367.00	0.04	366.50	0.00
367.10	0.17	366.50	0.00
367.20	0.39	366.50	0.00
367.30	0.68	366.50	0.00
367.40	1.05	366.50	0.00
367.50	1.50	366.50	0.00
367.60	2.01	366.50	0.00
367.70	2.59	366.50	0.00
367.80	3.24	366.50	0.00
367.90	3.93	366.50	0.00
368.00	4.70	366.50	0.00
368.10	5.50	366.50	0.00
368.20	6.34	366.50	0.00
368.30	7.21	366.50	0.00
368.40	8.14	366.50	0.00
368.50	9.06	366.50	0.00
368.60	10.00	366.50	0.00
368.70	10.95	366.50	0.00
368.80	11.90	366.50	0.00
368.90	12.82	366.50	0.00
369.00	13.75	366.50	0.00
369.10	14.62	366.50	0.00
369.20	15.45	366.50	0.00
369.30	16.24	366.50	0.00
369.40	16.93	366.50	0.00
369.50	17.51	366.50	0.00
369.60	18.03	366.50	0.00
369.70	18.54	366.50	0.00
369.80	19.06	366.50	0.00
369.90	19.57	366.50	0.00
370.00	20.07	366.50	0.00
370.10	20.58	366.50	0.00
370.20	21.07	366.50	0.00
370.30	21.56	366.50	0.00
370.40	22.04	366.50	0.00
370.50	22.51	366.50	0.00
370.60	22.99	366.50	0.00
370.70	23.46	366.50	0.00
370.80	23.91	366.50	0.00
370.90	24.36	366.50	0.00
371.00	24.81	366.50	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.60	0.00
367.00	0.04	366.60	0.00
367.10	0.17	366.60	0.00
367.20	0.39	366.60	0.00
367.30	0.68	366.60	0.00
367.40	1.05	366.60	0.00
367.50	1.50	366.60	0.00
367.60	2.01	366.60	0.00
367.70	2.59	366.60	0.00
367.80	3.24	366.60	0.00
367.90	3.93	366.60	0.00
368.00	4.70	366.60	0.00
368.10	5.50	366.60	0.00
368.20	6.34	366.60	0.00
368.30	7.21	366.60	0.00
368.40	8.14	366.60	0.00
368.50	9.06	366.60	0.00
368.60	10.00	366.60	0.00
368.70	10.95	366.60	0.00
368.80	11.90	366.60	0.00
368.90	12.82	366.60	0.00
369.00	13.75	366.60	0.00
369.10	14.62	366.60	0.00
369.20	15.45	366.60	0.00
369.30	16.24	366.60	0.00
369.40	16.93	366.60	0.00
369.50	17.51	366.60	0.00
369.60	18.03	366.60	0.00
369.70	18.54	366.60	0.00
369.80	19.06	366.60	0.00
369.90	19.57	366.60	0.00
370.00	20.07	366.60	0.00
370.10	20.58	366.60	0.00
370.20	21.07	366.60	0.00
370.30	21.56	366.60	0.00
370.40	22.04	366.60	0.00
370.50	22.51	366.60	0.00
370.60	22.99	366.60	0.00
370.70	23.46	366.60	0.00
370.80	23.91	366.60	0.00
370.90	24.36	366.60	0.00
371.00	24.81	366.60	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.70	0.00
367.00	0.04	366.70	0.00
367.10	0.17	366.70	0.00
367.20	0.39	366.70	0.00
367.30	0.68	366.70	0.00
367.40	1.05	366.70	0.00
367.50	1.50	366.70	0.00
367.60	2.01	366.70	0.00
367.70	2.59	366.70	0.00
367.80	3.24	366.70	0.00
367.90	3.93	366.70	0.00
368.00	4.70	366.70	0.00
368.10	5.50	366.70	0.00
368.20	6.34	366.70	0.00
368.30	7.21	366.70	0.00
368.40	8.14	366.70	0.00
368.50	9.06	366.70	0.00
368.60	10.00	366.70	0.00
368.70	10.95	366.70	0.00
368.80	11.90	366.70	0.00
368.90	12.82	366.70	0.00
369.00	13.75	366.70	0.00
369.10	14.62	366.70	0.00
369.20	15.45	366.70	0.00
369.30	16.24	366.70	0.00
369.40	16.93	366.70	0.00
369.50	17.51	366.70	0.00
369.60	18.03	366.70	0.00
369.70	18.54	366.70	0.00
369.80	19.06	366.70	0.00
369.90	19.57	366.70	0.00
370.00	20.07	366.70	0.00
370.10	20.58	366.70	0.00
370.20	21.07	366.70	0.00
370.30	21.56	366.70	0.00
370.40	22.04	366.70	0.00
370.50	22.51	366.70	0.00
370.60	22.99	366.70	0.00
370.70	23.46	366.70	0.00
370.80	23.91	366.70	0.00
370.90	24.36	366.70	0.00
371.00	24.81	366.70	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.80	0.00
367.00	0.04	366.80	0.00
367.10	0.17	366.80	0.00
367.20	0.39	366.80	0.00
367.30	0.68	366.80	0.00
367.40	1.05	366.80	0.00
367.50	1.50	366.80	0.00
367.60	2.01	366.80	0.00
367.70	2.59	366.80	0.00
367.80	3.24	366.80	0.00
367.90	3.93	366.80	0.00
368.00	4.70	366.80	0.00
368.10	5.50	366.80	0.00
368.20	6.34	366.80	0.00
368.30	7.21	366.80	0.00
368.40	8.14	366.80	0.00
368.50	9.06	366.80	0.00
368.60	10.00	366.80	0.00
368.70	10.95	366.80	0.00
368.80	11.90	366.80	0.00
368.90	12.82	366.80	0.00
369.00	13.75	366.80	0.00
369.10	14.62	366.80	0.00
369.20	15.45	366.80	0.00
369.30	16.24	366.80	0.00
369.40	16.93	366.80	0.00
369.50	17.51	366.80	0.00
369.60	18.03	366.80	0.00
369.70	18.54	366.80	0.00
369.80	19.06	366.80	0.00
369.90	19.57	366.80	0.00
370.00	20.07	366.80	0.00
370.10	20.58	366.80	0.00
370.20	21.07	366.80	0.00
370.30	21.56	366.80	0.00
370.40	22.04	366.80	0.00
370.50	22.51	366.80	0.00
370.60	22.99	366.80	0.00
370.70	23.46	366.80	0.00
370.80	23.91	366.80	0.00
370.90	24.36	366.80	0.00
371.00	24.81	366.80	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.90	0.00
367.00	0.04	366.90	0.00
367.10	0.17	366.90	0.00
367.20	0.38	366.90	0.00
367.30	0.68	366.90	0.00
367.40	1.06	366.90	0.00
367.50	1.50	366.90	0.00
367.60	2.01	366.90	0.00
367.70	2.59	366.90	0.00
367.80	3.24	366.90	0.00
367.90	3.93	366.90	0.00
368.00	4.70	366.90	0.00
368.10	5.50	366.90	0.00
368.20	6.34	366.90	0.00
368.30	7.21	366.90	0.00
368.40	8.14	366.90	0.00
368.50	9.06	366.90	0.00
368.60	10.00	366.90	0.00
368.70	10.95	366.90	0.00
368.80	11.90	366.90	0.00
368.90	12.82	366.90	0.00
369.00	13.75	366.90	0.00
369.10	14.62	366.90	0.00
369.20	15.45	366.90	0.00
369.30	16.24	366.90	0.00
369.40	16.93	366.90	0.00
369.50	17.51	366.90	0.00
369.60	18.03	366.90	0.00
369.70	18.54	366.90	0.00
369.80	19.06	366.90	0.00
369.90	19.57	366.90	0.00
370.00	20.07	366.90	0.00
370.10	20.58	366.90	0.00
370.20	21.07	366.90	0.00
370.30	21.56	366.90	0.00
370.40	22.04	366.90	0.00
370.50	22.51	366.90	0.00
370.60	22.99	366.90	0.00
370.70	23.46	366.90	0.00
370.80	23.91	366.90	0.00
370.90	24.36	366.90	0.00
371.00	24.81	366.90	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.03	367.00	0.00
367.00	0.00	367.00	0.00
367.10	0.17	367.00	0.00
367.20	0.39	367.00	0.00
367.30	0.68	367.00	0.00
367.40	1.05	367.00	0.00
367.50	1.50	367.00	0.00
367.60	2.02	367.00	0.00
367.70	2.59	367.00	0.00
367.80	3.24	367.00	0.00
367.90	3.93	367.00	0.00
368.00	4.70	367.00	0.00
368.10	5.50	367.00	0.00
368.20	6.34	367.00	0.00
368.30	7.21	367.00	0.00
368.40	8.14	367.00	0.00
368.50	9.06	367.00	0.00
368.60	10.00	367.00	0.00
368.70	10.95	367.00	0.00
368.80	11.90	367.00	0.00
368.90	12.82	367.00	0.00
369.00	13.75	367.00	0.00
369.10	14.62	367.00	0.00
369.20	15.45	367.00	0.00
369.30	16.24	367.00	0.00
369.40	16.93	367.00	0.00
369.50	17.51	367.00	0.00
369.60	18.03	367.00	0.00
369.70	18.54	367.00	0.00
369.80	19.06	367.00	0.00
369.90	19.57	367.00	0.00
370.00	20.07	367.00	0.00
370.10	20.58	367.00	0.00
370.20	21.07	367.00	0.00
370.30	21.56	367.00	0.00
370.40	22.04	367.00	0.00
370.50	22.51	367.00	0.00
370.60	22.99	367.00	0.00
370.70	23.46	367.00	0.00
370.80	23.91	367.00	0.00
370.90	24.36	367.00	0.00
371.00	24.81	367.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.14	367.10	0.00
367.00	-0.14	367.10	0.00
367.10	0.00	367.10	0.00
367.20	0.38	367.10	0.00
367.30	0.68	367.10	0.00
367.40	1.05	367.10	0.00
367.50	1.50	367.10	0.00
367.60	2.01	367.10	0.00
367.70	2.59	367.10	0.00
367.80	3.24	367.10	0.00
367.90	3.93	367.10	0.00
368.00	4.70	367.10	0.00
368.10	5.50	367.10	0.00
368.20	6.34	367.10	0.00
368.30	7.21	367.10	0.00
368.40	8.14	367.10	0.00
368.50	9.06	367.10	0.00
368.60	10.00	367.10	0.00
368.70	10.95	367.10	0.00
368.80	11.90	367.10	0.00
368.90	12.82	367.10	0.00
369.00	13.75	367.10	0.00
369.10	14.62	367.10	0.00
369.20	15.45	367.10	0.00
369.30	16.24	367.10	0.00
369.40	16.93	367.10	0.00
369.50	17.51	367.10	0.00
369.60	18.03	367.10	0.00
369.70	18.54	367.10	0.00
369.80	19.06	367.10	0.00
369.90	19.57	367.10	0.00
370.00	20.07	367.10	0.00
370.10	20.58	367.10	0.00
370.20	21.07	367.10	0.00
370.30	21.56	367.10	0.00
370.40	22.04	367.10	0.00
370.50	22.51	367.10	0.00
370.60	22.99	367.10	0.00
370.70	23.46	367.10	0.00
370.80	23.91	367.10	0.00
370.90	24.36	367.10	0.00
371.00	24.81	367.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.32	367.20	0.00
367.00	-0.32	367.20	0.00
367.10	-0.32	367.20	0.00
367.20	0.00	367.20	0.00
367.30	0.66	367.20	0.00
367.40	1.05	367.20	0.00
367.50	1.50	367.20	0.00
367.60	2.01	367.20	0.00
367.70	2.59	367.20	0.00
367.80	3.24	367.20	0.00
367.90	3.95	367.20	0.00
368.00	4.70	367.20	0.00
368.10	5.50	367.20	0.00
368.20	6.34	367.20	0.00
368.30	7.21	367.20	0.00
368.40	8.14	367.20	0.00
368.50	9.06	367.20	0.00
368.60	10.00	367.20	0.00
368.70	10.95	367.20	0.00
368.80	11.90	367.20	0.00
368.90	12.82	367.20	0.00
369.00	13.75	367.20	0.00
369.10	14.62	367.20	0.00
369.20	15.45	367.20	0.00
369.30	16.24	367.20	0.00
369.40	16.93	367.20	0.00
369.50	17.51	367.20	0.00
369.60	18.03	367.20	0.00
369.70	18.54	367.20	0.00
369.80	19.06	367.20	0.00
369.90	19.57	367.20	0.00
370.00	20.07	367.20	0.00
370.10	20.58	367.20	0.00
370.20	21.07	367.20	0.00
370.30	21.56	367.20	0.00
370.40	22.04	367.20	0.00
370.50	22.51	367.20	0.00
370.60	22.99	367.20	0.00
370.70	23.46	367.20	0.00
370.80	23.91	367.20	0.00
370.90	24.36	367.20	0.00
371.00	24.81	367.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.58	367.30	0.00
367.00	-0.58	367.30	0.00
367.10	-0.58	367.30	0.00
367.20	-0.56	367.30	0.00
367.30	0.00	367.30	0.00
367.40	0.98	367.30	0.00
367.50	1.49	367.30	0.00
367.60	2.01	367.30	0.00
367.70	2.59	367.30	0.00
367.80	3.24	367.30	0.00
367.90	3.94	367.30	0.00
368.00	4.68	367.30	0.00
368.10	5.50	367.30	0.00
368.20	6.34	367.30	0.00
368.30	7.21	367.30	0.00
368.40	8.14	367.30	0.00
368.50	9.06	367.30	0.00
368.60	10.00	367.30	0.00
368.70	10.95	367.30	0.00
368.80	11.90	367.30	0.00
368.90	12.82	367.30	0.00
369.00	13.75	367.30	0.00
369.10	14.62	367.30	0.00
369.20	15.45	367.30	0.00
369.30	16.24	367.30	0.00
369.40	16.93	367.30	0.00
369.50	17.51	367.30	0.00
369.60	18.03	367.30	0.00
369.70	18.54	367.30	0.00
369.80	19.06	367.30	0.00
369.90	19.57	367.30	0.00
370.00	20.07	367.30	0.00
370.10	20.58	367.30	0.00
370.20	21.07	367.30	0.00
370.30	21.56	367.30	0.00
370.40	22.04	367.30	0.00
370.50	22.51	367.30	0.00
370.60	22.99	367.30	0.00
370.70	23.46	367.30	0.00
370.80	23.91	367.30	0.00
370.90	24.36	367.30	0.00
371.00	24.81	367.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.90	367.40	0.00
367.00	-0.90	367.40	0.00
367.10	-0.90	367.40	0.00
367.20	-0.90	367.40	0.00
367.30	-0.83	367.40	0.00
367.40	0.00	367.40	0.00
367.50	1.33	367.40	0.00
367.60	1.97	367.40	0.00
367.70	2.58	367.40	0.00
367.80	3.24	367.40	0.00
367.90	3.94	367.40	0.00
368.00	4.69	367.40	0.00
368.10	5.50	367.40	0.00
368.20	6.34	367.40	0.00
368.30	7.21	367.40	0.00
368.40	8.14	367.40	0.00
368.50	9.06	367.40	0.00
368.60	10.00	367.40	0.00
368.70	10.95	367.40	0.00
368.80	11.90	367.40	0.00
368.90	12.82	367.40	0.00
369.00	13.75	367.40	0.00
369.10	14.62	367.40	0.00
369.20	15.45	367.40	0.00
369.30	16.24	367.40	0.00
369.40	16.93	367.40	0.00
369.50	17.51	367.40	0.00
369.60	18.03	367.40	0.00
369.70	18.54	367.40	0.00
369.80	19.06	367.40	0.00
369.90	19.57	367.40	0.00
370.00	20.07	367.40	0.00
370.10	20.58	367.40	0.00
370.20	21.07	367.40	0.00
370.30	21.56	367.40	0.00
370.40	22.04	367.40	0.00
370.50	22.51	367.40	0.00
370.60	22.99	367.40	0.00
370.70	23.46	367.40	0.00
370.80	23.91	367.40	0.00
370.90	24.36	367.40	0.00
371.00	24.81	367.40	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.29	367.50	0.00
367.00	-1.29	367.50	0.00
367.10	-1.29	367.50	0.00
367.20	-1.29	367.50	0.00
367.30	-1.29	367.50	0.00
367.40	-1.14	367.50	0.00
367.50	0.00	367.50	0.00
367.60	1.71	367.50	0.00
367.70	2.50	367.50	0.00
367.80	3.21	367.50	0.00
367.90	3.93	367.50	0.00
368.00	4.68	367.50	0.00
368.10	5.50	367.50	0.00
368.20	6.34	367.50	0.00
368.30	7.21	367.50	0.00
368.40	8.14	367.50	0.00
368.50	9.06	367.50	0.00
368.60	10.00	367.50	0.00
368.70	10.95	367.50	0.00
368.80	11.90	367.50	0.00
368.90	12.82	367.50	0.00
369.00	13.75	367.50	0.00
369.10	14.62	367.50	0.00
369.20	15.45	367.50	0.00
369.30	16.24	367.50	0.00
369.40	16.93	367.50	0.00
369.50	17.51	367.50	0.00
369.60	18.03	367.50	0.00
369.70	18.54	367.50	0.00
369.80	19.06	367.50	0.00
369.90	19.57	367.50	0.00
370.00	20.07	367.50	0.00
370.10	20.58	367.50	0.00
370.20	21.07	367.50	0.00
370.30	21.56	367.50	0.00
370.40	22.04	367.50	0.00
370.50	22.51	367.50	0.00
370.60	22.99	367.50	0.00
370.70	23.46	367.50	0.00
370.80	23.91	367.50	0.00
370.90	24.36	367.50	0.00
371.00	24.81	367.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.74	367.60	0.00
367.00	-1.74	367.60	0.00
367.10	-1.74	367.60	0.00
367.20	-1.74	367.60	0.00
367.30	-1.74	367.60	0.00
367.40	-1.73	367.60	0.00
367.50	-1.48	367.60	0.00
367.60	0.00	367.60	0.00
367.70	2.09	367.60	0.00
367.80	3.05	367.60	0.00
367.90	3.86	367.60	0.00
368.00	4.66	367.60	0.00
368.10	5.47	367.60	0.00
368.20	6.34	367.60	0.00
368.30	7.21	367.60	0.00
368.40	8.12	367.60	0.00
368.50	9.06	367.60	0.00
368.60	10.00	367.60	0.00
368.70	10.95	367.60	0.00
368.80	11.90	367.60	0.00
368.90	12.82	367.60	0.00
369.00	13.75	367.60	0.00
369.10	14.62	367.60	0.00
369.20	15.45	367.60	0.00
369.30	16.24	367.60	0.00
369.40	16.93	367.60	0.00
369.50	17.51	367.60	0.00
369.60	18.03	367.60	0.00
369.70	18.54	367.60	0.00
369.80	19.06	367.60	0.00
369.90	19.57	367.60	0.00
370.00	20.07	367.60	0.00
370.10	20.58	367.60	0.00
370.20	21.07	367.60	0.00
370.30	21.56	367.60	0.00
370.40	22.04	367.60	0.00
370.50	22.51	367.60	0.00
370.60	22.99	367.60	0.00
370.70	23.46	367.60	0.00
370.80	23.91	367.60	0.00
370.90	24.36	367.60	0.00
371.00	24.81	367.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.25	367.70	0.00
367.00	-2.25	367.70	0.00
367.10	-2.25	367.70	0.00
367.20	-2.25	367.70	0.00
367.30	-2.25	367.70	0.00
367.40	-2.25	367.70	0.00
367.50	-2.19	367.70	0.00
367.60	-1.81	367.70	0.00
367.70	0.00	367.70	0.00
367.80	2.48	367.70	0.00
367.90	3.59	367.70	0.00
368.00	4.54	367.70	0.00
368.10	5.43	367.70	0.00
368.20	6.30	367.70	0.00
368.30	7.20	367.70	0.00
368.40	8.12	367.70	0.00
368.50	9.04	367.70	0.00
368.60	9.99	367.70	0.00
368.70	10.95	367.70	0.00
368.80	11.90	367.70	0.00
368.90	12.82	367.70	0.00
369.00	13.75	367.70	0.00
369.10	14.62	367.70	0.00
369.20	15.45	367.70	0.00
369.30	16.24	367.70	0.00
369.40	16.93	367.70	0.00
369.50	17.51	367.70	0.00
369.60	18.03	367.70	0.00
369.70	18.54	367.70	0.00
369.80	19.06	367.70	0.00
369.90	19.57	367.70	0.00
370.00	20.07	367.70	0.00
370.10	20.58	367.70	0.00
370.20	21.07	367.70	0.00
370.30	21.56	367.70	0.00
370.40	22.04	367.70	0.00
370.50	22.51	367.70	0.00
370.60	22.99	367.70	0.00
370.70	23.46	367.70	0.00
370.80	23.91	367.70	0.00
370.90	24.36	367.70	0.00
371.00	24.81	367.70	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.81	367.80	0.00
367.00	-2.81	367.80	0.00
367.10	-2.81	367.80	0.00
367.20	-2.81	367.80	0.00
367.30	-2.81	367.80	0.00
367.40	-2.81	367.80	0.00
367.50	-2.81	367.80	0.00
367.60	-2.68	367.80	0.00
367.70	-2.17	367.80	0.00
367.80	0.00	367.80	0.00
367.90	2.88	367.80	0.00
368.00	4.17	367.80	0.00
368.10	5.22	367.80	0.00
368.20	6.18	367.80	0.00
368.30	7.12	367.80	0.00
368.40	8.07	367.80	0.00
368.50	9.02	367.80	0.00
368.60	9.99	367.80	0.00
368.70	10.93	367.80	0.00
368.80	11.90	367.80	0.00
368.90	12.82	367.80	0.00
369.00	13.75	367.80	0.00
369.10	14.62	367.80	0.00
369.20	15.45	367.80	0.00
369.30	16.24	367.80	0.00
369.40	16.93	367.80	0.00
369.50	17.51	367.80	0.00
369.60	18.03	367.80	0.00
369.70	18.54	367.80	0.00
369.80	19.06	367.80	0.00
369.90	19.57	367.80	0.00
370.00	20.07	367.80	0.00
370.10	20.58	367.80	0.00
370.20	21.07	367.80	0.00
370.30	21.56	367.80	0.00
370.40	22.04	367.80	0.00
370.50	22.51	367.80	0.00
370.60	22.99	367.80	0.00
370.70	23.46	367.80	0.00
370.80	23.91	367.80	0.00
370.90	24.36	367.80	0.00
371.00	24.81	367.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-3.43	367.90	0.00
367.00	-3.43	367.90	0.00
367.10	-3.43	367.90	0.00
367.20	-3.43	367.90	0.00
367.30	-3.43	367.90	0.00
367.40	-3.43	367.90	0.00
367.50	-3.43	367.90	0.00
367.60	-3.42	367.90	0.00
367.70	-3.18	367.90	0.00
367.80	-2.53	367.90	0.00
367.90	0.00	367.90	0.00
368.00	3.25	367.90	0.00
368.10	4.71	367.90	0.00
368.20	5.86	367.90	0.00
368.30	6.93	367.90	0.00
368.40	7.93	367.90	0.00
368.50	8.93	367.90	0.00
368.60	9.91	367.90	0.00
368.70	10.90	367.90	0.00
368.80	11.86	367.90	0.00
368.90	12.81	367.90	0.00
369.00	13.75	367.90	0.00
369.10	14.62	367.90	0.00
369.20	15.45	367.90	0.00
369.30	16.24	367.90	0.00
369.40	16.93	367.90	0.00
369.50	17.51	367.90	0.00
369.60	18.03	367.90	0.00
369.70	18.54	367.90	0.00
369.80	19.06	367.90	0.00
369.90	19.57	367.90	0.00
370.00	20.07	367.90	0.00
370.10	20.58	367.90	0.00
370.20	21.07	367.90	0.00
370.30	21.56	367.90	0.00
370.40	22.04	367.90	0.00
370.50	22.51	367.90	0.00
370.60	22.99	367.90	0.00
370.70	23.46	367.90	0.00
370.80	23.91	367.90	0.00
370.90	24.36	367.90	0.00
371.00	24.81	367.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.10	368.00	0.00
367.00	-4.10	368.00	0.00
367.10	-4.10	368.00	0.00
367.20	-4.10	368.00	0.00
367.30	-4.10	368.00	0.00
367.40	-4.10	368.00	0.00
367.50	-4.10	368.00	0.00
367.60	-4.10	368.00	0.00
367.70	-4.03	368.00	0.00
367.80	-3.70	368.00	0.00
367.90	-2.91	368.00	0.00
368.00	0.00	368.00	0.00
368.10	3.64	368.00	0.00
368.20	5.22	368.00	0.00
368.30	6.49	368.00	0.00
368.40	7.64	368.00	0.00
368.50	8.72	368.00	0.00
368.60	9.76	368.00	0.00
368.70	10.77	368.00	0.00
368.80	11.77	368.00	0.00
368.90	12.74	368.00	0.00
369.00	13.69	368.00	0.00
369.10	14.59	368.00	0.00
369.20	15.44	368.00	0.00
369.30	16.24	368.00	0.00
369.40	16.93	368.00	0.00
369.50	17.51	368.00	0.00
369.60	18.03	368.00	0.00
369.70	18.54	368.00	0.00
369.80	19.06	368.00	0.00
369.90	19.57	368.00	0.00
370.00	20.07	368.00	0.00
370.10	20.58	368.00	0.00
370.20	21.07	368.00	0.00
370.30	21.56	368.00	0.00
370.40	22.04	368.00	0.00
370.50	22.51	368.00	0.00
370.60	22.99	368.00	0.00
370.70	23.46	368.00	0.00
370.80	23.91	368.00	0.00
370.90	24.36	368.00	0.00
371.00	24.81	368.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.79	368.10	0.00
367.00	-4.79	368.10	0.00
367.10	-4.79	368.10	0.00
367.20	-4.79	368.10	0.00
367.30	-4.79	368.10	0.00
367.40	-4.79	368.10	0.00
367.50	-4.79	368.10	0.00
367.60	-4.79	368.10	0.00
367.70	-4.79	368.10	0.00
367.80	-4.65	368.10	0.00
367.90	-4.20	368.10	0.00
368.00	-3.24	368.10	0.00
368.10	0.00	368.10	0.00
368.20	4.00	368.10	0.00
368.30	5.70	368.10	0.00
368.40	7.09	368.10	0.00
368.50	8.33	368.10	0.00
368.60	9.45	368.10	0.00
368.70	10.54	368.10	0.00
368.80	11.57	368.10	0.00
368.90	12.58	368.10	0.00
369.00	13.55	368.10	0.00
369.10	14.48	368.10	0.00
369.20	15.35	368.10	0.00
369.30	16.16	368.10	0.00
369.40	16.88	368.10	0.00
369.50	17.48	368.10	0.00
369.60	18.01	368.10	0.00
369.70	18.54	368.10	0.00
369.80	19.06	368.10	0.00
369.90	19.57	368.10	0.00
370.00	20.07	368.10	0.00
370.10	20.58	368.10	0.00
370.20	21.07	368.10	0.00
370.30	21.56	368.10	0.00
370.40	22.04	368.10	0.00
370.50	22.51	368.10	0.00
370.60	22.99	368.10	0.00
370.70	23.46	368.10	0.00
370.80	23.91	368.10	0.00
370.90	24.36	368.10	0.00
371.00	24.81	368.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-5.53	368.20	0.00
367.00	-5.53	368.20	0.00
367.10	-5.53	368.20	0.00
367.20	-5.53	368.20	0.00
367.30	-5.53	368.20	0.00
367.40	-5.53	368.20	0.00
367.50	-5.53	368.20	0.00
367.60	-5.53	368.20	0.00
367.70	-5.53	368.20	0.00
367.80	-5.51	368.20	0.00
367.90	-5.25	368.20	0.00
368.00	-4.70	368.20	0.00
368.10	-3.60	368.20	0.00
368.20	0.00	368.20	0.00
368.30	4.28	368.20	0.00
368.40	6.17	368.20	0.00
368.50	7.63	368.20	0.00
368.60	8.93	368.20	0.00
368.70	10.11	368.20	0.00
368.80	11.23	368.20	0.00
368.90	12.29	368.20	0.00
369.00	13.29	368.20	0.00
369.10	14.25	368.20	0.00
369.20	15.14	368.20	0.00
369.30	15.96	368.20	0.00
369.40	16.69	368.20	0.00
369.50	17.28	368.20	0.00
369.60	17.85	368.20	0.00
369.70	18.41	368.20	0.00
369.80	18.96	368.20	0.00
369.90	19.50	368.20	0.00
370.00	20.03	368.20	0.00
370.10	20.55	368.20	0.00
370.20	21.06	368.20	0.00
370.30	21.55	368.20	0.00
370.40	22.04	368.20	0.00
370.50	22.52	368.20	0.00
370.60	22.99	368.20	0.00
370.70	23.46	368.20	0.00
370.80	23.91	368.20	0.00
370.90	24.36	368.20	0.00
371.00	24.81	368.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-6.29	368.30	0.00
367.00	-6.29	368.30	0.00
367.10	-6.29	368.30	0.00
367.20	-6.29	368.30	0.00
367.30	-6.29	368.30	0.00
367.40	-6.29	368.30	0.00
367.50	-6.29	368.30	0.00
367.60	-6.29	368.30	0.00
367.70	-6.29	368.30	0.00
367.80	-6.29	368.30	0.00
367.90	-6.20	368.30	0.00
368.00	-5.84	368.30	0.00
368.10	-5.17	368.30	0.00
368.20	-3.91	368.30	0.00
368.30	0.00	368.30	0.00
368.40	4.58	368.30	0.00
368.50	6.55	368.30	0.00
368.60	8.10	368.30	0.00
368.70	9.45	368.30	0.00
368.80	10.66	368.30	0.00
368.90	11.81	368.30	0.00
369.00	12.86	368.30	0.00
369.10	13.85	368.30	0.00
369.20	14.76	368.30	0.00
369.30	15.59	368.30	0.00
369.40	16.31	368.30	0.00
369.50	16.90	368.30	0.00
369.60	17.51	368.30	0.00
369.70	18.09	368.30	0.00
369.80	18.67	368.30	0.00
369.90	19.26	368.30	0.00
370.00	19.81	368.30	0.00
370.10	20.36	368.30	0.00
370.20	20.90	368.30	0.00
370.30	21.42	368.30	0.00
370.40	21.93	368.30	0.00
370.50	22.43	368.30	0.00
370.60	22.93	368.30	0.00
370.70	23.41	368.30	0.00
370.80	23.88	368.30	0.00
370.90	24.35	368.30	0.00
371.00	24.79	368.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.08	368.40	0.00
367.00	-7.08	368.40	0.00
367.10	-7.08	368.40	0.00
367.20	-7.08	368.40	0.00
367.30	-7.08	368.40	0.00
367.40	-7.08	368.40	0.00
367.50	-7.08	368.40	0.00
367.60	-7.08	368.40	0.00
367.70	-7.08	368.40	0.00
367.80	-7.08	368.40	0.00
367.90	-7.06	368.40	0.00
368.00	-6.87	368.40	0.00
368.10	-6.41	368.40	0.00
368.20	-5.63	368.40	0.00
368.30	-4.24	368.40	0.00
368.40	0.00	368.40	0.00
368.50	4.82	368.40	0.00
368.60	6.85	368.40	0.00
368.70	8.45	368.40	0.00
368.80	9.85	368.40	0.00
368.90	11.06	368.40	0.00
369.00	12.20	368.40	0.00
369.10	13.22	368.40	0.00
369.20	14.16	368.40	0.00
369.30	14.96	368.40	0.00
369.40	15.61	368.40	0.00
369.50	16.26	368.40	0.00
369.60	16.91	368.40	0.00
369.70	17.56	368.40	0.00
369.80	18.19	368.40	0.00
369.90	18.81	368.40	0.00
370.00	19.41	368.40	0.00
370.10	19.98	368.40	0.00
370.20	20.55	368.40	0.00
370.30	21.11	368.40	0.00
370.40	21.65	368.40	0.00
370.50	22.17	368.40	0.00
370.60	22.69	368.40	0.00
370.70	23.19	368.40	0.00
370.80	23.69	368.40	0.00
370.90	24.18	368.40	0.00
371.00	24.65	368.40	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.87	368.50	0.00
367.00	-7.87	368.50	0.00
367.10	-7.87	368.50	0.00
367.20	-7.87	368.50	0.00
367.30	-7.87	368.50	0.00
367.40	-7.87	368.50	0.00
367.50	-7.87	368.50	0.00
367.60	-7.87	368.50	0.00
367.70	-7.87	368.50	0.00
367.80	-7.87	368.50	0.00
367.90	-7.87	368.50	0.00
368.00	-7.80	368.50	0.00
368.10	-7.51	368.50	0.00
368.20	-6.94	368.50	0.00
368.30	-6.01	368.50	0.00
368.40	-4.48	368.50	0.00
368.50	0.00	368.50	0.00
368.60	4.94	368.50	0.00
368.70	7.00	368.50	0.00
368.80	8.64	368.50	0.00
368.90	10.00	368.50	0.00
369.00	11.18	368.50	0.00
369.10	12.21	368.50	0.00
369.20	13.03	368.50	0.00
369.30	13.74	368.50	0.00
369.40	14.58	368.50	0.00
369.50	15.36	368.50	0.00
369.60	16.12	368.50	0.00
369.70	16.84	368.50	0.00
369.80	17.53	368.50	0.00
369.90	18.18	368.50	0.00
370.00	18.82	368.50	0.00
370.10	19.44	368.50	0.00
370.20	20.04	368.50	0.00
370.30	20.62	368.50	0.00
370.40	21.18	368.50	0.00
370.50	21.74	368.50	0.00
370.60	22.27	368.50	0.00
370.70	22.79	368.50	0.00
370.80	23.30	368.50	0.00
370.90	23.80	368.50	0.00
371.00	24.30	368.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-8.65	368.60	0.00
367.00	-8.65	368.60	0.00
367.10	-8.65	368.60	0.00
367.20	-8.65	368.60	0.00
367.30	-8.65	368.60	0.00
367.40	-8.65	368.60	0.00
367.50	-8.65	368.60	0.00
367.60	-8.65	368.60	0.00
367.70	-8.65	368.60	0.00
367.80	-8.65	368.60	0.00
367.90	-8.65	368.60	0.00
368.00	-8.64	368.60	0.00
368.10	-8.48	368.60	0.00
368.20	-8.08	368.60	0.00
368.30	-7.39	368.60	0.00
368.40	-6.34	368.60	0.00
368.50	-4.63	368.60	0.00
368.60	0.00	368.60	0.00
368.70	4.95	368.60	0.00
368.80	6.98	368.60	0.00
368.90	8.53	368.60	0.00
369.00	9.82	368.60	0.00
369.10	10.89	368.60	0.00
369.20	11.90	368.60	0.00
369.30	12.85	368.60	0.00
369.40	13.74	368.60	0.00
369.50	14.58	368.60	0.00
369.60	15.36	368.60	0.00
369.70	16.12	368.60	0.00
369.80	16.83	368.60	0.00
369.90	17.52	368.60	0.00
370.00	18.19	368.60	0.00
370.10	18.83	368.60	0.00
370.20	19.44	368.60	0.00
370.30	20.03	368.60	0.00
370.40	20.62	368.60	0.00
370.50	21.18	368.60	0.00
370.60	21.73	368.60	0.00
370.70	22.27	368.60	0.00
370.80	22.79	368.60	0.00
370.90	23.31	368.60	0.00
371.00	23.80	368.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-9.42	368.70	0.00
367.00	-9.42	368.70	0.00
367.10	-9.42	368.70	0.00
367.20	-9.42	368.70	0.00
367.30	-9.42	368.70	0.00
367.40	-9.42	368.70	0.00
367.50	-9.42	368.70	0.00
367.60	-9.42	368.70	0.00
367.70	-9.42	368.70	0.00
367.80	-9.42	368.70	0.00
367.90	-9.42	368.70	0.00
368.00	-9.42	368.70	0.00
368.10	-9.35	368.70	0.00
368.20	-9.06	368.70	0.00
368.30	-8.56	368.70	0.00
368.40	-7.75	368.70	0.00
368.50	-6.56	368.70	0.00
368.60	-4.77	368.70	0.00
368.70	0.00	368.70	0.00
368.80	4.89	368.70	0.00
368.90	6.93	368.70	0.00
369.00	8.45	368.70	0.00
369.10	9.71	368.70	0.00
369.20	10.86	368.70	0.00
369.30	11.91	368.70	0.00
369.40	12.86	368.70	0.00
369.50	13.74	368.70	0.00
369.60	14.57	368.70	0.00
369.70	15.37	368.70	0.00
369.80	16.12	368.70	0.00
369.90	16.84	368.70	0.00
370.00	17.52	368.70	0.00
370.10	18.19	368.70	0.00
370.20	18.82	368.70	0.00
370.30	19.43	368.70	0.00
370.40	20.04	368.70	0.00
370.50	20.62	368.70	0.00
370.60	21.18	368.70	0.00
370.70	21.73	368.70	0.00
370.80	22.26	368.70	0.00
370.90	22.80	368.70	0.00
371.00	23.31	368.70	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.16	368.80	0.00
367.00	-10.16	368.80	0.00
367.10	-10.16	368.80	0.00
367.20	-10.16	368.80	0.00
367.30	-10.16	368.80	0.00
367.40	-10.16	368.80	0.00
367.50	-10.16	368.80	0.00
367.60	-10.16	368.80	0.00
367.70	-10.16	368.80	0.00
367.80	-10.16	368.80	0.00
367.90	-10.16	368.80	0.00
368.00	-10.16	368.80	0.00
368.10	-10.13	368.80	0.00
368.20	-9.95	368.80	0.00
368.30	-9.56	368.80	0.00
368.40	-8.94	368.80	0.00
368.50	-8.01	368.80	0.00
368.60	-6.72	368.80	0.00
368.70	-4.82	368.80	0.00
368.80	0.00	368.80	0.00
368.90	4.85	368.80	0.00
369.00	6.87	368.80	0.00
369.10	8.43	368.80	0.00
369.20	9.72	368.80	0.00
369.30	10.86	368.80	0.00
369.40	11.91	368.80	0.00
369.50	12.86	368.80	0.00
369.60	13.74	368.80	0.00
369.70	14.58	368.80	0.00
369.80	15.37	368.80	0.00
369.90	16.12	368.80	0.00
370.00	16.83	368.80	0.00
370.10	17.52	368.80	0.00
370.20	18.19	368.80	0.00
370.30	18.82	368.80	0.00
370.40	19.44	368.80	0.00
370.50	20.04	368.80	0.00
370.60	20.62	368.80	0.00
370.70	21.18	368.80	0.00
370.80	21.73	368.80	0.00
370.90	22.27	368.80	0.00
371.00	22.79	368.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.87	368.90	0.00
367.00	-10.87	368.90	0.00
367.10	-10.87	368.90	0.00
367.20	-10.87	368.90	0.00
367.30	-10.87	368.90	0.00
367.40	-10.87	368.90	0.00
367.50	-10.87	368.90	0.00
367.60	-10.87	368.90	0.00
367.70	-10.87	368.90	0.00
367.80	-10.87	368.90	0.00
367.90	-10.87	368.90	0.00
368.00	-10.87	368.90	0.00
368.10	-10.87	368.90	0.00
368.20	-10.78	368.90	0.00
368.30	-10.49	368.90	0.00
368.40	-9.99	368.90	0.00
368.50	-9.25	368.90	0.00
368.60	-8.20	368.90	0.00
368.70	-6.82	368.90	0.00
368.80	-4.86	368.90	0.00
368.90	0.00	368.90	0.00
369.00	4.87	368.90	0.00
369.10	6.86	368.90	0.00
369.20	8.42	368.90	0.00
369.30	9.73	368.90	0.00
369.40	10.87	368.90	0.00
369.50	11.91	368.90	0.00
369.60	12.86	368.90	0.00
369.70	13.74	368.90	0.00
369.80	14.58	368.90	0.00
369.90	15.37	368.90	0.00
370.00	16.12	368.90	0.00
370.10	16.84	368.90	0.00
370.20	17.52	368.90	0.00
370.30	18.18	368.90	0.00
370.40	18.82	368.90	0.00
370.50	19.44	368.90	0.00
370.60	20.04	368.90	0.00
370.70	20.61	368.90	0.00
370.80	21.18	368.90	0.00
370.90	21.74	368.90	0.00
371.00	22.27	368.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-11.58	369.00	0.00
367.00	-11.58	369.00	0.00
367.10	-11.58	369.00	0.00
367.20	-11.58	369.00	0.00
367.30	-11.58	369.00	0.00
367.40	-11.58	369.00	0.00
367.50	-11.58	369.00	0.00
367.60	-11.58	369.00	0.00
367.70	-11.58	369.00	0.00
367.80	-11.58	369.00	0.00
367.90	-11.58	369.00	0.00
368.00	-11.58	369.00	0.00
368.10	-11.58	369.00	0.00
368.20	-11.54	369.00	0.00
368.30	-11.34	369.00	0.00
368.40	-10.94	369.00	0.00
368.50	-10.32	369.00	0.00
368.60	-9.47	369.00	0.00
368.70	-8.34	369.00	0.00
368.80	-6.87	369.00	0.00
368.90	-4.86	369.00	0.00
369.00	0.00	369.00	0.00
369.10	4.84	369.00	0.00
369.20	6.88	369.00	0.00
369.30	8.41	369.00	0.00
369.40	9.72	369.00	0.00
369.50	10.86	369.00	0.00
369.60	11.90	369.00	0.00
369.70	12.85	369.00	0.00
369.80	13.74	369.00	0.00
369.90	14.58	369.00	0.00
370.00	15.37	369.00	0.00
370.10	16.12	369.00	0.00
370.20	16.84	369.00	0.00
370.30	17.52	369.00	0.00
370.40	18.18	369.00	0.00
370.50	18.82	369.00	0.00
370.60	19.43	369.00	0.00
370.70	20.04	369.00	0.00
370.80	20.62	369.00	0.00
370.90	21.18	369.00	0.00
371.00	21.73	369.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.25	369.10	0.00
367.00	-12.25	369.10	0.00
367.10	-12.25	369.10	0.00
367.20	-12.25	369.10	0.00
367.30	-12.25	369.10	0.00
367.40	-12.25	369.10	0.00
367.50	-12.25	369.10	0.00
367.60	-12.25	369.10	0.00
367.70	-12.25	369.10	0.00
367.80	-12.25	369.10	0.00
367.90	-12.25	369.10	0.00
368.00	-12.25	369.10	0.00
368.10	-12.25	369.10	0.00
368.20	-12.25	369.10	0.00
368.30	-12.12	369.10	0.00
368.40	-11.80	369.10	0.00
368.50	-11.30	369.10	0.00
368.60	-10.56	369.10	0.00
368.70	-9.61	369.10	0.00
368.80	-8.39	369.10	0.00
368.90	-6.87	369.10	0.00
369.00	-4.86	369.10	0.00
369.10	0.00	369.10	0.00
369.20	4.85	369.10	0.00
369.30	6.87	369.10	0.00
369.40	8.42	369.10	0.00
369.50	9.72	369.10	0.00
369.60	10.86	369.10	0.00
369.70	11.90	369.10	0.00
369.80	12.86	369.10	0.00
369.90	13.74	369.10	0.00
370.00	14.58	369.10	0.00
370.10	15.37	369.10	0.00
370.20	16.12	369.10	0.00
370.30	16.84	369.10	0.00
370.40	17.53	369.10	0.00
370.50	18.18	369.10	0.00
370.60	18.82	369.10	0.00
370.70	19.43	369.10	0.00
370.80	20.03	369.10	0.00
370.90	20.62	369.10	0.00
371.00	21.18	369.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.92	369.20	0.00
367.00	-12.92	369.20	0.00
367.10	-12.92	369.20	0.00
367.20	-12.92	369.20	0.00
367.30	-12.92	369.20	0.00
367.40	-12.92	369.20	0.00
367.50	-12.92	369.20	0.00
367.60	-12.92	369.20	0.00
367.70	-12.92	369.20	0.00
367.80	-12.92	369.20	0.00
367.90	-12.92	369.20	0.00
368.00	-12.92	369.20	0.00
368.10	-12.92	369.20	0.00
368.20	-12.92	369.20	0.00
368.30	-12.85	369.20	0.00
368.40	-12.61	369.20	0.00
368.50	-12.18	369.20	0.00
368.60	-11.56	369.20	0.00
368.70	-10.73	369.20	0.00
368.80	-9.70	369.20	0.00
368.90	-8.42	369.20	0.00
369.00	-6.87	369.20	0.00
369.10	-4.86	369.20	0.00
369.20	0.00	369.20	0.00
369.30	4.88	369.20	0.00
369.40	6.87	369.20	0.00
369.50	8.42	369.20	0.00
369.60	9.71	369.20	0.00
369.70	10.88	369.20	0.00
369.80	11.91	369.20	0.00
369.90	12.87	369.20	0.00
370.00	13.75	369.20	0.00
370.10	14.58	369.20	0.00
370.20	15.37	369.20	0.00
370.30	16.12	369.20	0.00
370.40	16.84	369.20	0.00
370.50	17.52	369.20	0.00
370.60	18.19	369.20	0.00
370.70	18.82	369.20	0.00
370.80	19.43	369.20	0.00
370.90	20.04	369.20	0.00
371.00	20.62	369.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-13.58	369.30	0.00
367.00	-13.58	369.30	0.00
367.10	-13.58	369.30	0.00
367.20	-13.58	369.30	0.00
367.30	-13.58	369.30	0.00
367.40	-13.58	369.30	0.00
367.50	-13.58	369.30	0.00
367.60	-13.58	369.30	0.00
367.70	-13.58	369.30	0.00
367.80	-13.58	369.30	0.00
367.90	-13.58	369.30	0.00
368.00	-13.58	369.30	0.00
368.10	-13.58	369.30	0.00
368.20	-13.58	369.30	0.00
368.30	-13.55	369.30	0.00
368.40	-13.38	369.30	0.00
368.50	-13.02	369.30	0.00
368.60	-12.48	369.30	0.00
368.70	-11.75	369.30	0.00
368.80	-10.82	369.30	0.00
368.90	-9.73	369.30	0.00
369.00	-8.42	369.30	0.00
369.10	-6.87	369.30	0.00
369.20	-4.86	369.30	0.00
369.30	0.00	369.30	0.00
369.40	4.86	369.30	0.00
369.50	6.86	369.30	0.00
369.60	8.41	369.30	0.00
369.70	9.72	369.30	0.00
369.80	10.87	369.30	0.00
369.90	11.90	369.30	0.00
370.00	12.86	369.30	0.00
370.10	13.75	369.30	0.00
370.20	14.58	369.30	0.00
370.30	15.36	369.30	0.00
370.40	16.12	369.30	0.00
370.50	16.83	369.30	0.00
370.60	17.52	369.30	0.00
370.70	18.19	369.30	0.00
370.80	18.82	369.30	0.00
370.90	19.44	369.30	0.00
371.00	20.04	369.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.22	369.40	0.00
367.00	-14.22	369.40	0.00
367.10	-14.22	369.40	0.00
367.20	-14.22	369.40	0.00
367.30	-14.22	369.40	0.00
367.40	-14.22	369.40	0.00
367.50	-14.22	369.40	0.00
367.60	-14.22	369.40	0.00
367.70	-14.22	369.40	0.00
367.80	-14.22	369.40	0.00
367.90	-14.22	369.40	0.00
368.00	-14.22	369.40	0.00
368.10	-14.22	369.40	0.00
368.20	-14.22	369.40	0.00
368.30	-14.22	369.40	0.00
368.40	-14.09	369.40	0.00
368.50	-13.80	369.40	0.00
368.60	-13.33	369.40	0.00
368.70	-12.68	369.40	0.00
368.80	-11.86	369.40	0.00
368.90	-10.87	369.40	0.00
369.00	-9.73	369.40	0.00
369.10	-8.42	369.40	0.00
369.20	-6.87	369.40	0.00
369.30	-4.86	369.40	0.00
369.40	0.00	369.40	0.00
369.50	4.88	369.40	0.00
369.60	6.86	369.40	0.00
369.70	8.43	369.40	0.00
369.80	9.72	369.40	0.00
369.90	10.87	369.40	0.00
370.00	11.90	369.40	0.00
370.10	12.86	369.40	0.00
370.20	13.74	369.40	0.00
370.30	14.58	369.40	0.00
370.40	15.37	369.40	0.00
370.50	16.12	369.40	0.00
370.60	16.83	369.40	0.00
370.70	17.51	369.40	0.00
370.80	18.19	369.40	0.00
370.90	18.82	369.40	0.00
371.00	19.44	369.40	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.84	369.50	0.00
367.00	-14.84	369.50	0.00
367.10	-14.84	369.50	0.00
367.20	-14.84	369.50	0.00
367.30	-14.84	369.50	0.00
367.40	-14.84	369.50	0.00
367.50	-14.84	369.50	0.00
367.60	-14.84	369.50	0.00
367.70	-14.84	369.50	0.00
367.80	-14.84	369.50	0.00
367.90	-14.84	369.50	0.00
368.00	-14.84	369.50	0.00
368.10	-14.84	369.50	0.00
368.20	-14.84	369.50	0.00
368.30	-14.84	369.50	0.00
368.40	-14.77	369.50	0.00
368.50	-14.53	369.50	0.00
368.60	-14.13	369.50	0.00
368.70	-13.55	369.50	0.00
368.80	-12.80	369.50	0.00
368.90	-11.90	369.50	0.00
369.00	-10.87	369.50	0.00
369.10	-9.73	369.50	0.00
369.20	-8.42	369.50	0.00
369.30	-6.87	369.50	0.00
369.40	-4.86	369.50	0.00
369.50	0.00	369.50	0.00
369.60	4.84	369.50	0.00
369.70	6.87	369.50	0.00
369.80	8.42	369.50	0.00
369.90	9.73	369.50	0.00
370.00	10.86	369.50	0.00
370.10	11.90	369.50	0.00
370.20	12.86	369.50	0.00
370.30	13.75	369.50	0.00
370.40	14.58	369.50	0.00
370.50	15.36	369.50	0.00
370.60	16.11	369.50	0.00
370.70	16.83	369.50	0.00
370.80	17.52	369.50	0.00
370.90	18.18	369.50	0.00
371.00	18.82	369.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-15.46	369.60	0.00
367.00	-15.46	369.60	0.00
367.10	-15.46	369.60	0.00
367.20	-15.46	369.60	0.00
367.30	-15.46	369.60	0.00
367.40	-15.46	369.60	0.00
367.50	-15.46	369.60	0.00
367.60	-15.46	369.60	0.00
367.70	-15.46	369.60	0.00
367.80	-15.46	369.60	0.00
367.90	-15.46	369.60	0.00
368.00	-15.46	369.60	0.00
368.10	-15.46	369.60	0.00
368.20	-15.46	369.60	0.00
368.30	-15.46	369.60	0.00
368.40	-15.43	369.60	0.00
368.50	-15.23	369.60	0.00
368.60	-14.88	369.60	0.00
368.70	-14.36	369.60	0.00
368.80	-13.69	369.60	0.00
368.90	-12.85	369.60	0.00
369.00	-11.90	369.60	0.00
369.10	-10.87	369.60	0.00
369.20	-9.73	369.60	0.00
369.30	-8.42	369.60	0.00
369.40	-6.87	369.60	0.00
369.50	-4.86	369.60	0.00
369.60	0.00	369.60	0.00
369.70	4.85	369.60	0.00
369.80	6.87	369.60	0.00
369.90	8.41	369.60	0.00
370.00	9.73	369.60	0.00
370.10	10.87	369.60	0.00
370.20	11.90	369.60	0.00
370.30	12.87	369.60	0.00
370.40	13.75	369.60	0.00
370.50	14.58	369.60	0.00
370.60	15.36	369.60	0.00
370.70	16.12	369.60	0.00
370.80	16.83	369.60	0.00
370.90	17.52	369.60	0.00
371.00	18.19	369.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.06	369.70	0.00
367.00	-16.06	369.70	0.00
367.10	-16.06	369.70	0.00
367.20	-16.06	369.70	0.00
367.30	-16.06	369.70	0.00
367.40	-16.06	369.70	0.00
367.50	-16.06	369.70	0.00
367.60	-16.06	369.70	0.00
367.70	-16.06	369.70	0.00
367.80	-16.06	369.70	0.00
367.90	-16.06	369.70	0.00
368.00	-16.06	369.70	0.00
368.10	-16.06	369.70	0.00
368.20	-16.06	369.70	0.00
368.30	-16.06	369.70	0.00
368.40	-16.05	369.70	0.00
368.50	-15.90	369.70	0.00
368.60	-15.59	369.70	0.00
368.70	-15.14	369.70	0.00
368.80	-14.52	369.70	0.00
368.90	-13.74	369.70	0.00
369.00	-12.85	369.70	0.00
369.10	-11.90	369.70	0.00
369.20	-10.87	369.70	0.00
369.30	-9.73	369.70	0.00
369.40	-8.42	369.70	0.00
369.50	-6.87	369.70	0.00
369.60	-4.86	369.70	0.00
369.70	0.00	369.70	0.00
369.80	4.85	369.70	0.00
369.90	6.87	369.70	0.00
370.00	8.41	369.70	0.00
370.10	9.73	369.70	0.00
370.20	10.87	369.70	0.00
370.30	11.91	369.70	0.00
370.40	12.86	369.70	0.00
370.50	13.75	369.70	0.00
370.60	14.58	369.70	0.00
370.70	15.37	369.70	0.00
370.80	16.12	369.70	0.00
370.90	16.84	369.70	0.00
371.00	17.52	369.70	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.64	369.80	0.00
367.00	-16.64	369.80	0.00
367.10	-16.64	369.80	0.00
367.20	-16.64	369.80	0.00
367.30	-16.64	369.80	0.00
367.40	-16.64	369.80	0.00
367.50	-16.64	369.80	0.00
367.60	-16.64	369.80	0.00
367.70	-16.64	369.80	0.00
367.80	-16.64	369.80	0.00
367.90	-16.64	369.80	0.00
368.00	-16.64	369.80	0.00
368.10	-16.64	369.80	0.00
368.20	-16.64	369.80	0.00
368.30	-16.64	369.80	0.00
368.40	-16.64	369.80	0.00
368.50	-16.55	369.80	0.00
368.60	-16.28	369.80	0.00
368.70	-15.85	369.80	0.00
368.80	-15.29	369.80	0.00
368.90	-14.58	369.80	0.00
369.00	-13.74	369.80	0.00
369.10	-12.85	369.80	0.00
369.20	-11.90	369.80	0.00
369.30	-10.87	369.80	0.00
369.40	-9.73	369.80	0.00
369.50	-8.42	369.80	0.00
369.60	-6.87	369.80	0.00
369.70	-4.86	369.80	0.00
369.80	0.00	369.80	0.00
369.90	4.87	369.80	0.00
370.00	6.88	369.80	0.00
370.10	8.42	369.80	0.00
370.20	9.73	369.80	0.00
370.30	10.86	369.80	0.00
370.40	11.90	369.80	0.00
370.50	12.86	369.80	0.00
370.60	13.75	369.80	0.00
370.70	14.58	369.80	0.00
370.80	15.37	369.80	0.00
370.90	16.11	369.80	0.00
371.00	16.84	369.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.21	369.90	0.00
367.00	-17.21	369.90	0.00
367.10	-17.21	369.90	0.00
367.20	-17.21	369.90	0.00
367.30	-17.21	369.90	0.00
367.40	-17.21	369.90	0.00
367.50	-17.21	369.90	0.00
367.60	-17.21	369.90	0.00
367.70	-17.21	369.90	0.00
367.80	-17.21	369.90	0.00
367.90	-17.21	369.90	0.00
368.00	-17.21	369.90	0.00
368.10	-17.21	369.90	0.00
368.20	-17.21	369.90	0.00
368.30	-17.21	369.90	0.00
368.40	-17.21	369.90	0.00
368.50	-17.15	369.90	0.00
368.60	-16.94	369.90	0.00
368.70	-16.57	369.90	0.00
368.80	-16.03	369.90	0.00
368.90	-15.37	369.90	0.00
369.00	-14.58	369.90	0.00
369.10	-13.74	369.90	0.00
369.20	-12.85	369.90	0.00
369.30	-11.90	369.90	0.00
369.40	-10.87	369.90	0.00
369.50	-9.73	369.90	0.00
369.60	-8.42	369.90	0.00
369.70	-6.87	369.90	0.00
369.80	-4.86	369.90	0.00
369.90	0.00	369.90	0.00
370.00	4.84	369.90	0.00
370.10	6.89	369.90	0.00
370.20	8.41	369.90	0.00
370.30	9.73	369.90	0.00
370.40	10.87	369.90	0.00
370.50	11.90	369.90	0.00
370.60	12.86	369.90	0.00
370.70	13.75	369.90	0.00
370.80	14.57	369.90	0.00
370.90	15.36	369.90	0.00
371.00	16.11	369.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.79	370.00	0.00
367.00	-17.79	370.00	0.00
367.10	-17.79	370.00	0.00
367.20	-17.79	370.00	0.00
367.30	-17.79	370.00	0.00
367.40	-17.79	370.00	0.00
367.50	-17.79	370.00	0.00
367.60	-17.79	370.00	0.00
367.70	-17.79	370.00	0.00
367.80	-17.79	370.00	0.00
367.90	-17.79	370.00	0.00
368.00	-17.79	370.00	0.00
368.10	-17.79	370.00	0.00
368.20	-17.79	370.00	0.00
368.30	-17.79	370.00	0.00
368.40	-17.79	370.00	0.00
368.50	-17.75	370.00	0.00
368.60	-17.57	370.00	0.00
368.70	-17.24	370.00	0.00
368.80	-16.75	370.00	0.00
368.90	-16.12	370.00	0.00
369.00	-15.37	370.00	0.00
369.10	-14.58	370.00	0.00
369.20	-13.74	370.00	0.00
369.30	-12.85	370.00	0.00
369.40	-11.90	370.00	0.00
369.50	-10.87	370.00	0.00
369.60	-9.73	370.00	0.00
369.70	-8.42	370.00	0.00
369.80	-6.87	370.00	0.00
369.90	-4.86	370.00	0.00
370.00	0.00	370.00	0.00
370.10	4.84	370.00	0.00
370.20	6.88	370.00	0.00
370.30	8.43	370.00	0.00
370.40	9.72	370.00	0.00
370.50	10.87	370.00	0.00
370.60	11.90	370.00	0.00
370.70	12.86	370.00	0.00
370.80	13.74	370.00	0.00
370.90	14.58	370.00	0.00
371.00	15.37	370.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.33	370.10	0.00
367.00	-18.33	370.10	0.00
367.10	-18.33	370.10	0.00
367.20	-18.33	370.10	0.00
367.30	-18.33	370.10	0.00
367.40	-18.33	370.10	0.00
367.50	-18.33	370.10	0.00
367.60	-18.33	370.10	0.00
367.70	-18.33	370.10	0.00
367.80	-18.33	370.10	0.00
367.90	-18.33	370.10	0.00
368.00	-18.33	370.10	0.00
368.10	-18.33	370.10	0.00
368.20	-18.33	370.10	0.00
368.30	-18.33	370.10	0.00
368.40	-18.33	370.10	0.00
368.50	-18.32	370.10	0.00
368.60	-18.17	370.10	0.00
368.70	-17.88	370.10	0.00
368.80	-17.43	370.10	0.00
368.90	-16.83	370.10	0.00
369.00	-16.12	370.10	0.00
369.10	-15.37	370.10	0.00
369.20	-14.58	370.10	0.00
369.30	-13.74	370.10	0.00
369.40	-12.85	370.10	0.00
369.50	-11.90	370.10	0.00
369.60	-10.87	370.10	0.00
369.70	-9.73	370.10	0.00
369.80	-8.42	370.10	0.00
369.90	-6.87	370.10	0.00
370.00	-4.86	370.10	0.00
370.10	0.00	370.10	0.00
370.20	4.88	370.10	0.00
370.30	6.86	370.10	0.00
370.40	8.41	370.10	0.00
370.50	9.71	370.10	0.00
370.60	10.87	370.10	0.00
370.70	11.91	370.10	0.00
370.80	12.86	370.10	0.00
370.90	13.74	370.10	0.00
371.00	14.58	370.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.87	370.20	0.00
367.00	-18.87	370.20	0.00
367.10	-18.87	370.20	0.00
367.20	-18.87	370.20	0.00
367.30	-18.87	370.20	0.00
367.40	-18.87	370.20	0.00
367.50	-18.87	370.20	0.00
367.60	-18.87	370.20	0.00
367.70	-18.87	370.20	0.00
367.80	-18.87	370.20	0.00
367.90	-18.87	370.20	0.00
368.00	-18.87	370.20	0.00
368.10	-18.87	370.20	0.00
368.20	-18.87	370.20	0.00
368.30	-18.87	370.20	0.00
368.40	-18.87	370.20	0.00
368.50	-18.87	370.20	0.00
368.60	-18.76	370.20	0.00
368.70	-18.50	370.20	0.00
368.80	-18.08	370.20	0.00
368.90	-17.52	370.20	0.00
369.00	-16.83	370.20	0.00
369.10	-16.12	370.20	0.00
369.20	-15.37	370.20	0.00
369.30	-14.58	370.20	0.00
369.40	-13.74	370.20	0.00
369.50	-12.85	370.20	0.00
369.60	-11.90	370.20	0.00
369.70	-10.87	370.20	0.00
369.80	-9.73	370.20	0.00
369.90	-8.42	370.20	0.00
370.00	-6.87	370.20	0.00
370.10	-4.86	370.20	0.00
370.20	0.00	370.20	0.00
370.30	4.85	370.20	0.00
370.40	6.88	370.20	0.00
370.50	8.43	370.20	0.00
370.60	9.72	370.20	0.00
370.70	10.86	370.20	0.00
370.80	11.91	370.20	0.00
370.90	12.86	370.20	0.00
371.00	13.74	370.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.42	370.30	0.00
367.00	-19.42	370.30	0.00
367.10	-19.42	370.30	0.00
367.20	-19.42	370.30	0.00
367.30	-19.42	370.30	0.00
367.40	-19.42	370.30	0.00
367.50	-19.42	370.30	0.00
367.60	-19.42	370.30	0.00
367.70	-19.42	370.30	0.00
367.80	-19.42	370.30	0.00
367.90	-19.42	370.30	0.00
368.00	-19.42	370.30	0.00
368.10	-19.42	370.30	0.00
368.20	-19.42	370.30	0.00
368.30	-19.42	370.30	0.00
368.40	-19.42	370.30	0.00
368.50	-19.42	370.30	0.00
368.60	-19.34	370.30	0.00
368.70	-19.10	370.30	0.00
368.80	-18.73	370.30	0.00
368.90	-18.18	370.30	0.00
369.00	-17.52	370.30	0.00
369.10	-16.83	370.30	0.00
369.20	-16.12	370.30	0.00
369.30	-15.37	370.30	0.00
369.40	-14.58	370.30	0.00
369.50	-13.74	370.30	0.00
369.60	-12.85	370.30	0.00
369.70	-11.90	370.30	0.00
369.80	-10.87	370.30	0.00
369.90	-9.73	370.30	0.00
370.00	-8.42	370.30	0.00
370.10	-6.87	370.30	0.00
370.20	-4.86	370.30	0.00
370.30	0.00	370.30	0.00
370.40	4.87	370.30	0.00
370.50	6.89	370.30	0.00
370.60	8.40	370.30	0.00
370.70	9.71	370.30	0.00
370.80	10.87	370.30	0.00
370.90	11.90	370.30	0.00
371.00	12.85	370.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.94	370.40	0.00
367.00	-19.94	370.40	0.00
367.10	-19.94	370.40	0.00
367.20	-19.94	370.40	0.00
367.30	-19.94	370.40	0.00
367.40	-19.94	370.40	0.00
367.50	-19.94	370.40	0.00
367.60	-19.94	370.40	0.00
367.70	-19.94	370.40	0.00
367.80	-19.94	370.40	0.00
367.90	-19.94	370.40	0.00
368.00	-19.94	370.40	0.00
368.10	-19.94	370.40	0.00
368.20	-19.94	370.40	0.00
368.30	-19.94	370.40	0.00
368.40	-19.94	370.40	0.00
368.50	-19.94	370.40	0.00
368.60	-19.88	370.40	0.00
368.70	-19.68	370.40	0.00
368.80	-19.34	370.40	0.00
368.90	-18.82	370.40	0.00
369.00	-18.18	370.40	0.00
369.10	-17.52	370.40	0.00
369.20	-16.83	370.40	0.00
369.30	-16.12	370.40	0.00
369.40	-15.37	370.40	0.00
369.50	-14.58	370.40	0.00
369.60	-13.74	370.40	0.00
369.70	-12.85	370.40	0.00
369.80	-11.90	370.40	0.00
369.90	-10.87	370.40	0.00
370.00	-9.73	370.40	0.00
370.10	-8.42	370.40	0.00
370.20	-6.87	370.40	0.00
370.30	-4.86	370.40	0.00
370.40	0.00	370.40	0.00
370.50	4.88	370.40	0.00
370.60	6.88	370.40	0.00
370.70	8.42	370.40	0.00
370.80	9.72	370.40	0.00
370.90	10.87	370.40	0.00
371.00	11.90	370.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.46	370.50	0.00
367.00	-20.46	370.50	0.00
367.10	-20.46	370.50	0.00
367.20	-20.46	370.50	0.00
367.30	-20.46	370.50	0.00
367.40	-20.46	370.50	0.00
367.50	-20.46	370.50	0.00
367.60	-20.46	370.50	0.00
367.70	-20.46	370.50	0.00
367.80	-20.46	370.50	0.00
367.90	-20.46	370.50	0.00
368.00	-20.46	370.50	0.00
368.10	-20.46	370.50	0.00
368.20	-20.46	370.50	0.00
368.30	-20.46	370.50	0.00
368.40	-20.46	370.50	0.00
368.50	-20.46	370.50	0.00
368.60	-20.43	370.50	0.00
368.70	-20.25	370.50	0.00
368.80	-19.93	370.50	0.00
368.90	-19.44	370.50	0.00
369.00	-18.82	370.50	0.00
369.10	-18.18	370.50	0.00
369.20	-17.52	370.50	0.00
369.30	-16.83	370.50	0.00
369.40	-16.12	370.50	0.00
369.50	-15.37	370.50	0.00
369.60	-14.58	370.50	0.00
369.70	-13.74	370.50	0.00
369.80	-12.85	370.50	0.00
369.90	-11.90	370.50	0.00
370.00	-10.87	370.50	0.00
370.10	-9.73	370.50	0.00
370.20	-8.42	370.50	0.00
370.30	-6.87	370.50	0.00
370.40	-4.86	370.50	0.00
370.50	0.00	370.50	0.00
370.60	4.86	370.50	0.00
370.70	6.87	370.50	0.00
370.80	8.43	370.50	0.00
370.90	9.71	370.50	0.00
371.00	10.86	370.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.96	370.60	0.00
367.00	-20.96	370.60	0.00
367.10	-20.96	370.60	0.00
367.20	-20.96	370.60	0.00
367.30	-20.96	370.60	0.00
367.40	-20.96	370.60	0.00
367.50	-20.96	370.60	0.00
367.60	-20.96	370.60	0.00
367.70	-20.96	370.60	0.00
367.80	-20.96	370.60	0.00
367.90	-20.96	370.60	0.00
368.00	-20.96	370.60	0.00
368.10	-20.96	370.60	0.00
368.20	-20.96	370.60	0.00
368.30	-20.96	370.60	0.00
368.40	-20.96	370.60	0.00
368.50	-20.96	370.60	0.00
368.60	-20.95	370.60	0.00
368.70	-20.80	370.60	0.00
368.80	-20.50	370.60	0.00
368.90	-20.04	370.60	0.00
369.00	-19.44	370.60	0.00
369.10	-18.82	370.60	0.00
369.20	-18.18	370.60	0.00
369.30	-17.52	370.60	0.00
369.40	-16.83	370.60	0.00
369.50	-16.12	370.60	0.00
369.60	-15.37	370.60	0.00
369.70	-14.58	370.60	0.00
369.80	-13.74	370.60	0.00
369.90	-12.85	370.60	0.00
370.00	-11.90	370.60	0.00
370.10	-10.87	370.60	0.00
370.20	-9.73	370.60	0.00
370.30	-8.42	370.60	0.00
370.40	-6.87	370.60	0.00
370.50	-4.86	370.60	0.00
370.60	0.00	370.60	0.00
370.70	4.88	370.60	0.00
370.80	6.87	370.60	0.00
370.90	8.43	370.60	0.00
371.00	9.73	370.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.46	370.70	0.00
367.00	-21.46	370.70	0.00
367.10	-21.46	370.70	0.00
367.20	-21.46	370.70	0.00
367.30	-21.46	370.70	0.00
367.40	-21.46	370.70	0.00
367.50	-21.46	370.70	0.00
367.60	-21.46	370.70	0.00
367.70	-21.46	370.70	0.00
367.80	-21.46	370.70	0.00
367.90	-21.46	370.70	0.00
368.00	-21.46	370.70	0.00
368.10	-21.46	370.70	0.00
368.20	-21.46	370.70	0.00
368.30	-21.46	370.70	0.00
368.40	-21.46	370.70	0.00
368.50	-21.46	370.70	0.00
368.60	-21.46	370.70	0.00
368.70	-21.33	370.70	0.00
368.80	-21.06	370.70	0.00
368.90	-20.62	370.70	0.00
369.00	-20.04	370.70	0.00
369.10	-19.44	370.70	0.00
369.20	-18.82	370.70	0.00
369.30	-18.18	370.70	0.00
369.40	-17.52	370.70	0.00
369.50	-16.83	370.70	0.00
369.60	-16.12	370.70	0.00
369.70	-15.37	370.70	0.00
369.80	-14.58	370.70	0.00
369.90	-13.74	370.70	0.00
370.00	-12.85	370.70	0.00
370.10	-11.90	370.70	0.00
370.20	-10.87	370.70	0.00
370.30	-9.73	370.70	0.00
370.40	-8.42	370.70	0.00
370.50	-6.87	370.70	0.00
370.60	-4.86	370.70	0.00
370.70	0.00	370.70	0.00
370.80	4.87	370.70	0.00
370.90	6.86	370.70	0.00
371.00	8.42	370.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.95	370.80	0.00
367.00	-21.95	370.80	0.00
367.10	-21.95	370.80	0.00
367.20	-21.95	370.80	0.00
367.30	-21.95	370.80	0.00
367.40	-21.95	370.80	0.00
367.50	-21.95	370.80	0.00
367.60	-21.95	370.80	0.00
367.70	-21.95	370.80	0.00
367.80	-21.95	370.80	0.00
367.90	-21.95	370.80	0.00
368.00	-21.95	370.80	0.00
368.10	-21.95	370.80	0.00
368.20	-21.95	370.80	0.00
368.30	-21.95	370.80	0.00
368.40	-21.95	370.80	0.00
368.50	-21.95	370.80	0.00
368.60	-21.95	370.80	0.00
368.70	-21.86	370.80	0.00
368.80	-21.61	370.80	0.00
368.90	-21.18	370.80	0.00
369.00	-20.62	370.80	0.00
369.10	-20.04	370.80	0.00
369.20	-19.44	370.80	0.00
369.30	-18.82	370.80	0.00
369.40	-18.18	370.80	0.00
369.50	-17.52	370.80	0.00
369.60	-16.83	370.80	0.00
369.70	-16.12	370.80	0.00
369.80	-15.37	370.80	0.00
369.90	-14.58	370.80	0.00
370.00	-13.74	370.80	0.00
370.10	-12.85	370.80	0.00
370.20	-11.90	370.80	0.00
370.30	-10.87	370.80	0.00
370.40	-9.73	370.80	0.00
370.50	-8.42	370.80	0.00
370.60	-6.87	370.80	0.00
370.70	-4.86	370.80	0.00
370.80	0.00	370.80	0.00
370.90	4.86	370.80	0.00
371.00	6.88	370.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.47	370.90	0.00
367.00	-22.47	370.90	0.00
367.10	-22.47	370.90	0.00
367.20	-22.47	370.90	0.00
367.30	-22.47	370.90	0.00
367.40	-22.47	370.90	0.00
367.50	-22.47	370.90	0.00
367.60	-22.47	370.90	0.00
367.70	-22.47	370.90	0.00
367.80	-22.47	370.90	0.00
367.90	-22.47	370.90	0.00
368.00	-22.47	370.90	0.00
368.10	-22.47	370.90	0.00
368.20	-22.47	370.90	0.00
368.30	-22.47	370.90	0.00
368.40	-22.47	370.90	0.00
368.50	-22.47	370.90	0.00
368.60	-22.47	370.90	0.00
368.70	-22.38	370.90	0.00
368.80	-22.14	370.90	0.00
368.90	-21.73	370.90	0.00
369.00	-21.18	370.90	0.00
369.10	-20.62	370.90	0.00
369.20	-20.04	370.90	0.00
369.30	-19.44	370.90	0.00
369.40	-18.82	370.90	0.00
369.50	-18.18	370.90	0.00
369.60	-17.52	370.90	0.00
369.70	-16.83	370.90	0.00
369.80	-16.12	370.90	0.00
369.90	-15.37	370.90	0.00
370.00	-14.58	370.90	0.00
370.10	-13.74	370.90	0.00
370.20	-12.85	370.90	0.00
370.30	-11.90	370.90	0.00
370.40	-10.87	370.90	0.00
370.50	-9.73	370.90	0.00
370.60	-8.42	370.90	0.00
370.70	-6.87	370.90	0.00
370.80	-4.86	370.90	0.00
370.90	0.00	370.90	0.00
371.00	4.86	370.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.94	371.00	0.00
367.00	-22.94	371.00	0.00
367.10	-22.94	371.00	0.00
367.20	-22.94	371.00	0.00
367.30	-22.94	371.00	0.00
367.40	-22.94	371.00	0.00
367.50	-22.94	371.00	0.00
367.60	-22.94	371.00	0.00
367.70	-22.94	371.00	0.00
367.80	-22.94	371.00	0.00
367.90	-22.94	371.00	0.00
368.00	-22.94	371.00	0.00
368.10	-22.94	371.00	0.00
368.20	-22.94	371.00	0.00
368.30	-22.94	371.00	0.00
368.40	-22.94	371.00	0.00
368.50	-22.94	371.00	0.00
368.60	-22.94	371.00	0.00
368.70	-22.88	371.00	0.00
368.80	-22.66	371.00	0.00
368.90	-22.27	371.00	0.00
369.00	-21.73	371.00	0.00
369.10	-21.18	371.00	0.00
369.20	-20.62	371.00	0.00
369.30	-20.04	371.00	0.00
369.40	-19.44	371.00	0.00
369.50	-18.82	371.00	0.00
369.60	-18.18	371.00	0.00
369.70	-17.52	371.00	0.00
369.80	-16.83	371.00	0.00
369.90	-16.12	371.00	0.00
370.00	-15.37	371.00	0.00
370.10	-14.58	371.00	0.00
370.20	-13.74	371.00	0.00
370.30	-12.85	371.00	0.00
370.40	-11.90	371.00	0.00
370.50	-10.87	371.00	0.00
370.60	-9.73	371.00	0.00
370.70	-8.42	371.00	0.00
370.80	-6.87	371.00	0.00
370.90	-4.86	371.00	0.00
371.00	0.00	371.00	0.00

Contributing Structures

Culvert - 1



Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.90 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - 1	Forward + Reverse	TW	366.90	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)



Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	120.00 ft
Length (Computed Barrel)	120.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.094
T2 ratio (HW/D)	1.196
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,  
 interpolate between flows at T1 & T2...

T1 Elevation	369.09 ft	T1 Flow	15.55 ft <sup>3</sup> /s
T2 Elevation	369.29 ft	T2 Flow	17.77 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.50	0.00
367.00	0.04	366.50	0.00
367.10	0.17	366.50	0.00
367.20	0.39	366.50	0.00
367.30	0.68	366.50	0.00
367.40	1.05	366.50	0.00
367.50	1.50	366.50	0.00
367.60	2.01	366.50	0.00
367.70	2.59	366.50	0.00
367.80	3.24	366.50	0.00
367.90	3.93	366.50	0.00
368.00	4.70	366.50	0.00
368.10	5.50	366.50	0.00
368.20	6.34	366.50	0.00
368.30	7.21	366.50	0.00
368.40	8.14	366.50	0.00
368.50	9.06	366.50	0.00
368.60	10.00	366.50	0.00
368.70	10.95	366.50	0.00
368.80	11.90	366.50	0.00
368.90	12.82	366.50	0.00
369.00	13.75	366.50	0.00
369.10	14.62	366.50	0.00
369.20	15.45	366.50	0.00
369.30	16.24	366.50	0.00
369.40	16.93	366.50	0.00
369.50	17.51	366.50	0.00
369.60	18.03	366.50	0.00
369.70	18.54	366.50	0.00
369.80	19.06	366.50	0.00
369.90	19.57	366.50	0.00
370.00	20.07	366.50	0.00
370.10	20.58	366.50	0.00
370.20	21.07	366.50	0.00
370.30	21.56	366.50	0.00
370.40	22.04	366.50	0.00
370.50	22.51	366.50	0.00
370.60	22.99	366.50	0.00
370.70	23.46	366.50	0.00
370.80	23.91	366.50	0.00
370.90	24.36	366.50	0.00
371.00	24.81	366.50	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.60	0.00
367.00	0.04	366.60	0.00
367.10	0.17	366.60	0.00
367.20	0.39	366.60	0.00
367.30	0.68	366.60	0.00
367.40	1.05	366.60	0.00
367.50	1.50	366.60	0.00
367.60	2.01	366.60	0.00
367.70	2.59	366.60	0.00
367.80	3.24	366.60	0.00
367.90	3.93	366.60	0.00
368.00	4.70	366.60	0.00
368.10	5.50	366.60	0.00
368.20	6.34	366.60	0.00
368.30	7.21	366.60	0.00
368.40	8.14	366.60	0.00
368.50	9.06	366.60	0.00
368.60	10.00	366.60	0.00
368.70	10.95	366.60	0.00
368.80	11.90	366.60	0.00
368.90	12.82	366.60	0.00
369.00	13.75	366.60	0.00
369.10	14.62	366.60	0.00
369.20	15.45	366.60	0.00
369.30	16.24	366.60	0.00
369.40	16.93	366.60	0.00
369.50	17.51	366.60	0.00
369.60	18.03	366.60	0.00
369.70	18.54	366.60	0.00
369.80	19.06	366.60	0.00
369.90	19.57	366.60	0.00
370.00	20.07	366.60	0.00
370.10	20.58	366.60	0.00
370.20	21.07	366.60	0.00
370.30	21.56	366.60	0.00
370.40	22.04	366.60	0.00
370.50	22.51	366.60	0.00
370.60	22.99	366.60	0.00
370.70	23.46	366.60	0.00
370.80	23.91	366.60	0.00
370.90	24.36	366.60	0.00
371.00	24.81	366.60	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.70	0.00
367.00	0.04	366.70	0.00
367.10	0.17	366.70	0.00
367.20	0.39	366.70	0.00
367.30	0.68	366.70	0.00
367.40	1.05	366.70	0.00
367.50	1.50	366.70	0.00
367.60	2.01	366.70	0.00
367.70	2.59	366.70	0.00
367.80	3.24	366.70	0.00
367.90	3.93	366.70	0.00
368.00	4.70	366.70	0.00
368.10	5.50	366.70	0.00
368.20	6.34	366.70	0.00
368.30	7.21	366.70	0.00
368.40	8.14	366.70	0.00
368.50	9.06	366.70	0.00
368.60	10.00	366.70	0.00
368.70	10.95	366.70	0.00
368.80	11.90	366.70	0.00
368.90	12.82	366.70	0.00
369.00	13.75	366.70	0.00
369.10	14.62	366.70	0.00
369.20	15.45	366.70	0.00
369.30	16.24	366.70	0.00
369.40	16.93	366.70	0.00
369.50	17.51	366.70	0.00
369.60	18.03	366.70	0.00
369.70	18.54	366.70	0.00
369.80	19.06	366.70	0.00
369.90	19.57	366.70	0.00
370.00	20.07	366.70	0.00
370.10	20.58	366.70	0.00
370.20	21.07	366.70	0.00
370.30	21.56	366.70	0.00
370.40	22.04	366.70	0.00
370.50	22.51	366.70	0.00
370.60	22.99	366.70	0.00
370.70	23.46	366.70	0.00
370.80	23.91	366.70	0.00
370.90	24.36	366.70	0.00
371.00	24.81	366.70	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.80	0.00
367.00	0.04	366.80	0.00
367.10	0.17	366.80	0.00
367.20	0.39	366.80	0.00
367.30	0.68	366.80	0.00
367.40	1.05	366.80	0.00
367.50	1.50	366.80	0.00
367.60	2.01	366.80	0.00
367.70	2.59	366.80	0.00
367.80	3.24	366.80	0.00
367.90	3.93	366.80	0.00
368.00	4.70	366.80	0.00
368.10	5.50	366.80	0.00
368.20	6.34	366.80	0.00
368.30	7.21	366.80	0.00
368.40	8.14	366.80	0.00
368.50	9.06	366.80	0.00
368.60	10.00	366.80	0.00
368.70	10.95	366.80	0.00
368.80	11.90	366.80	0.00
368.90	12.82	366.80	0.00
369.00	13.75	366.80	0.00
369.10	14.62	366.80	0.00
369.20	15.45	366.80	0.00
369.30	16.24	366.80	0.00
369.40	16.93	366.80	0.00
369.50	17.51	366.80	0.00
369.60	18.03	366.80	0.00
369.70	18.54	366.80	0.00
369.80	19.06	366.80	0.00
369.90	19.57	366.80	0.00
370.00	20.07	366.80	0.00
370.10	20.58	366.80	0.00
370.20	21.07	366.80	0.00
370.30	21.56	366.80	0.00
370.40	22.04	366.80	0.00
370.50	22.51	366.80	0.00
370.60	22.99	366.80	0.00
370.70	23.46	366.80	0.00
370.80	23.91	366.80	0.00
370.90	24.36	366.80	0.00
371.00	24.81	366.80	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.90	0.00
367.00	0.04	366.90	0.00
367.10	0.17	366.90	0.00
367.20	0.38	366.90	0.00
367.30	0.68	366.90	0.00
367.40	1.06	366.90	0.00
367.50	1.50	366.90	0.00
367.60	2.01	366.90	0.00
367.70	2.59	366.90	0.00
367.80	3.24	366.90	0.00
367.90	3.93	366.90	0.00
368.00	4.70	366.90	0.00
368.10	5.50	366.90	0.00
368.20	6.34	366.90	0.00
368.30	7.21	366.90	0.00
368.40	8.14	366.90	0.00
368.50	9.06	366.90	0.00
368.60	10.00	366.90	0.00
368.70	10.95	366.90	0.00
368.80	11.90	366.90	0.00
368.90	12.82	366.90	0.00
369.00	13.75	366.90	0.00
369.10	14.62	366.90	0.00
369.20	15.45	366.90	0.00
369.30	16.24	366.90	0.00
369.40	16.93	366.90	0.00
369.50	17.51	366.90	0.00
369.60	18.03	366.90	0.00
369.70	18.54	366.90	0.00
369.80	19.06	366.90	0.00
369.90	19.57	366.90	0.00
370.00	20.07	366.90	0.00
370.10	20.58	366.90	0.00
370.20	21.07	366.90	0.00
370.30	21.56	366.90	0.00
370.40	22.04	366.90	0.00
370.50	22.51	366.90	0.00
370.60	22.99	366.90	0.00
370.70	23.46	366.90	0.00
370.80	23.91	366.90	0.00
370.90	24.36	366.90	0.00
371.00	24.81	366.90	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.03	367.00	0.00
367.00	0.00	367.00	0.00
367.10	0.17	367.00	0.00
367.20	0.39	367.00	0.00
367.30	0.68	367.00	0.00
367.40	1.05	367.00	0.00
367.50	1.50	367.00	0.00
367.60	2.02	367.00	0.00
367.70	2.59	367.00	0.00
367.80	3.24	367.00	0.00
367.90	3.93	367.00	0.00
368.00	4.70	367.00	0.00
368.10	5.50	367.00	0.00
368.20	6.34	367.00	0.00
368.30	7.21	367.00	0.00
368.40	8.14	367.00	0.00
368.50	9.06	367.00	0.00
368.60	10.00	367.00	0.00
368.70	10.95	367.00	0.00
368.80	11.90	367.00	0.00
368.90	12.82	367.00	0.00
369.00	13.75	367.00	0.00
369.10	14.62	367.00	0.00
369.20	15.45	367.00	0.00
369.30	16.24	367.00	0.00
369.40	16.93	367.00	0.00
369.50	17.51	367.00	0.00
369.60	18.03	367.00	0.00
369.70	18.54	367.00	0.00
369.80	19.06	367.00	0.00
369.90	19.57	367.00	0.00
370.00	20.07	367.00	0.00
370.10	20.58	367.00	0.00
370.20	21.07	367.00	0.00
370.30	21.56	367.00	0.00
370.40	22.04	367.00	0.00
370.50	22.51	367.00	0.00
370.60	22.99	367.00	0.00
370.70	23.46	367.00	0.00
370.80	23.91	367.00	0.00
370.90	24.36	367.00	0.00
371.00	24.81	367.00	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.14	367.10	0.00
367.00	-0.14	367.10	0.00
367.10	0.00	367.10	0.00
367.20	0.38	367.10	0.00
367.30	0.68	367.10	0.00
367.40	1.05	367.10	0.00
367.50	1.50	367.10	0.00
367.60	2.01	367.10	0.00
367.70	2.59	367.10	0.00
367.80	3.24	367.10	0.00
367.90	3.93	367.10	0.00
368.00	4.70	367.10	0.00
368.10	5.50	367.10	0.00
368.20	6.34	367.10	0.00
368.30	7.21	367.10	0.00
368.40	8.14	367.10	0.00
368.50	9.06	367.10	0.00
368.60	10.00	367.10	0.00
368.70	10.95	367.10	0.00
368.80	11.90	367.10	0.00
368.90	12.82	367.10	0.00
369.00	13.75	367.10	0.00
369.10	14.62	367.10	0.00
369.20	15.45	367.10	0.00
369.30	16.24	367.10	0.00
369.40	16.93	367.10	0.00
369.50	17.51	367.10	0.00
369.60	18.03	367.10	0.00
369.70	18.54	367.10	0.00
369.80	19.06	367.10	0.00
369.90	19.57	367.10	0.00
370.00	20.07	367.10	0.00
370.10	20.58	367.10	0.00
370.20	21.07	367.10	0.00
370.30	21.56	367.10	0.00
370.40	22.04	367.10	0.00
370.50	22.51	367.10	0.00
370.60	22.99	367.10	0.00
370.70	23.46	367.10	0.00
370.80	23.91	367.10	0.00
370.90	24.36	367.10	0.00
371.00	24.81	367.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.32	367.20	0.00
367.00	-0.32	367.20	0.00
367.10	-0.32	367.20	0.00
367.20	0.00	367.20	0.00
367.30	0.66	367.20	0.00
367.40	1.05	367.20	0.00
367.50	1.50	367.20	0.00
367.60	2.01	367.20	0.00
367.70	2.59	367.20	0.00
367.80	3.24	367.20	0.00
367.90	3.95	367.20	0.00
368.00	4.70	367.20	0.00
368.10	5.50	367.20	0.00
368.20	6.34	367.20	0.00
368.30	7.21	367.20	0.00
368.40	8.14	367.20	0.00
368.50	9.06	367.20	0.00
368.60	10.00	367.20	0.00
368.70	10.95	367.20	0.00
368.80	11.90	367.20	0.00
368.90	12.82	367.20	0.00
369.00	13.75	367.20	0.00
369.10	14.62	367.20	0.00
369.20	15.45	367.20	0.00
369.30	16.24	367.20	0.00
369.40	16.93	367.20	0.00
369.50	17.51	367.20	0.00
369.60	18.03	367.20	0.00
369.70	18.54	367.20	0.00
369.80	19.06	367.20	0.00
369.90	19.57	367.20	0.00
370.00	20.07	367.20	0.00
370.10	20.58	367.20	0.00
370.20	21.07	367.20	0.00
370.30	21.56	367.20	0.00
370.40	22.04	367.20	0.00
370.50	22.51	367.20	0.00
370.60	22.99	367.20	0.00
370.70	23.46	367.20	0.00
370.80	23.91	367.20	0.00
370.90	24.36	367.20	0.00
371.00	24.81	367.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.58	367.30	0.00
367.00	-0.58	367.30	0.00
367.10	-0.58	367.30	0.00
367.20	-0.56	367.30	0.00
367.30	0.00	367.30	0.00
367.40	0.98	367.30	0.00
367.50	1.49	367.30	0.00
367.60	2.01	367.30	0.00
367.70	2.59	367.30	0.00
367.80	3.24	367.30	0.00
367.90	3.94	367.30	0.00
368.00	4.68	367.30	0.00
368.10	5.50	367.30	0.00
368.20	6.34	367.30	0.00
368.30	7.21	367.30	0.00
368.40	8.14	367.30	0.00
368.50	9.06	367.30	0.00
368.60	10.00	367.30	0.00
368.70	10.95	367.30	0.00
368.80	11.90	367.30	0.00
368.90	12.82	367.30	0.00
369.00	13.75	367.30	0.00
369.10	14.62	367.30	0.00
369.20	15.45	367.30	0.00
369.30	16.24	367.30	0.00
369.40	16.93	367.30	0.00
369.50	17.51	367.30	0.00
369.60	18.03	367.30	0.00
369.70	18.54	367.30	0.00
369.80	19.06	367.30	0.00
369.90	19.57	367.30	0.00
370.00	20.07	367.30	0.00
370.10	20.58	367.30	0.00
370.20	21.07	367.30	0.00
370.30	21.56	367.30	0.00
370.40	22.04	367.30	0.00
370.50	22.51	367.30	0.00
370.60	22.99	367.30	0.00
370.70	23.46	367.30	0.00
370.80	23.91	367.30	0.00
370.90	24.36	367.30	0.00
371.00	24.81	367.30	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.90	367.40	0.00
367.00	-0.90	367.40	0.00
367.10	-0.90	367.40	0.00
367.20	-0.90	367.40	0.00
367.30	-0.83	367.40	0.00
367.40	0.00	367.40	0.00
367.50	1.33	367.40	0.00
367.60	1.97	367.40	0.00
367.70	2.58	367.40	0.00
367.80	3.24	367.40	0.00
367.90	3.94	367.40	0.00
368.00	4.69	367.40	0.00
368.10	5.50	367.40	0.00
368.20	6.34	367.40	0.00
368.30	7.21	367.40	0.00
368.40	8.14	367.40	0.00
368.50	9.06	367.40	0.00
368.60	10.00	367.40	0.00
368.70	10.95	367.40	0.00
368.80	11.90	367.40	0.00
368.90	12.82	367.40	0.00
369.00	13.75	367.40	0.00
369.10	14.62	367.40	0.00
369.20	15.45	367.40	0.00
369.30	16.24	367.40	0.00
369.40	16.93	367.40	0.00
369.50	17.51	367.40	0.00
369.60	18.03	367.40	0.00
369.70	18.54	367.40	0.00
369.80	19.06	367.40	0.00
369.90	19.57	367.40	0.00
370.00	20.07	367.40	0.00
370.10	20.58	367.40	0.00
370.20	21.07	367.40	0.00
370.30	21.56	367.40	0.00
370.40	22.04	367.40	0.00
370.50	22.51	367.40	0.00
370.60	22.99	367.40	0.00
370.70	23.46	367.40	0.00
370.80	23.91	367.40	0.00
370.90	24.36	367.40	0.00
371.00	24.81	367.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.29	367.50	0.00
367.00	-1.29	367.50	0.00
367.10	-1.29	367.50	0.00
367.20	-1.29	367.50	0.00
367.30	-1.29	367.50	0.00
367.40	-1.14	367.50	0.00
367.50	0.00	367.50	0.00
367.60	1.71	367.50	0.00
367.70	2.50	367.50	0.00
367.80	3.21	367.50	0.00
367.90	3.93	367.50	0.00
368.00	4.68	367.50	0.00
368.10	5.50	367.50	0.00
368.20	6.34	367.50	0.00
368.30	7.21	367.50	0.00
368.40	8.14	367.50	0.00
368.50	9.06	367.50	0.00
368.60	10.00	367.50	0.00
368.70	10.95	367.50	0.00
368.80	11.90	367.50	0.00
368.90	12.82	367.50	0.00
369.00	13.75	367.50	0.00
369.10	14.62	367.50	0.00
369.20	15.45	367.50	0.00
369.30	16.24	367.50	0.00
369.40	16.93	367.50	0.00
369.50	17.51	367.50	0.00
369.60	18.03	367.50	0.00
369.70	18.54	367.50	0.00
369.80	19.06	367.50	0.00
369.90	19.57	367.50	0.00
370.00	20.07	367.50	0.00
370.10	20.58	367.50	0.00
370.20	21.07	367.50	0.00
370.30	21.56	367.50	0.00
370.40	22.04	367.50	0.00
370.50	22.51	367.50	0.00
370.60	22.99	367.50	0.00
370.70	23.46	367.50	0.00
370.80	23.91	367.50	0.00
370.90	24.36	367.50	0.00
371.00	24.81	367.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.74	367.60	0.00
367.00	-1.74	367.60	0.00
367.10	-1.74	367.60	0.00
367.20	-1.74	367.60	0.00
367.30	-1.74	367.60	0.00
367.40	-1.73	367.60	0.00
367.50	-1.48	367.60	0.00
367.60	0.00	367.60	0.00
367.70	2.09	367.60	0.00
367.80	3.05	367.60	0.00
367.90	3.86	367.60	0.00
368.00	4.66	367.60	0.00
368.10	5.47	367.60	0.00
368.20	6.34	367.60	0.00
368.30	7.21	367.60	0.00
368.40	8.12	367.60	0.00
368.50	9.06	367.60	0.00
368.60	10.00	367.60	0.00
368.70	10.95	367.60	0.00
368.80	11.90	367.60	0.00
368.90	12.82	367.60	0.00
369.00	13.75	367.60	0.00
369.10	14.62	367.60	0.00
369.20	15.45	367.60	0.00
369.30	16.24	367.60	0.00
369.40	16.93	367.60	0.00
369.50	17.51	367.60	0.00
369.60	18.03	367.60	0.00
369.70	18.54	367.60	0.00
369.80	19.06	367.60	0.00
369.90	19.57	367.60	0.00
370.00	20.07	367.60	0.00
370.10	20.58	367.60	0.00
370.20	21.07	367.60	0.00
370.30	21.56	367.60	0.00
370.40	22.04	367.60	0.00
370.50	22.51	367.60	0.00
370.60	22.99	367.60	0.00
370.70	23.46	367.60	0.00
370.80	23.91	367.60	0.00
370.90	24.36	367.60	0.00
371.00	24.81	367.60	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.25	367.70	0.00
367.00	-2.25	367.70	0.00
367.10	-2.25	367.70	0.00
367.20	-2.25	367.70	0.00
367.30	-2.25	367.70	0.00
367.40	-2.25	367.70	0.00
367.50	-2.19	367.70	0.00
367.60	-1.81	367.70	0.00
367.70	0.00	367.70	0.00
367.80	2.48	367.70	0.00
367.90	3.59	367.70	0.00
368.00	4.54	367.70	0.00
368.10	5.43	367.70	0.00
368.20	6.30	367.70	0.00
368.30	7.20	367.70	0.00
368.40	8.12	367.70	0.00
368.50	9.04	367.70	0.00
368.60	9.99	367.70	0.00
368.70	10.95	367.70	0.00
368.80	11.90	367.70	0.00
368.90	12.82	367.70	0.00
369.00	13.75	367.70	0.00
369.10	14.62	367.70	0.00
369.20	15.45	367.70	0.00
369.30	16.24	367.70	0.00
369.40	16.93	367.70	0.00
369.50	17.51	367.70	0.00
369.60	18.03	367.70	0.00
369.70	18.54	367.70	0.00
369.80	19.06	367.70	0.00
369.90	19.57	367.70	0.00
370.00	20.07	367.70	0.00
370.10	20.58	367.70	0.00
370.20	21.07	367.70	0.00
370.30	21.56	367.70	0.00
370.40	22.04	367.70	0.00
370.50	22.51	367.70	0.00
370.60	22.99	367.70	0.00
370.70	23.46	367.70	0.00
370.80	23.91	367.70	0.00
370.90	24.36	367.70	0.00
371.00	24.81	367.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.81	367.80	0.00
367.00	-2.81	367.80	0.00
367.10	-2.81	367.80	0.00
367.20	-2.81	367.80	0.00
367.30	-2.81	367.80	0.00
367.40	-2.81	367.80	0.00
367.50	-2.81	367.80	0.00
367.60	-2.68	367.80	0.00
367.70	-2.17	367.80	0.00
367.80	0.00	367.80	0.00
367.90	2.88	367.80	0.00
368.00	4.17	367.80	0.00
368.10	5.22	367.80	0.00
368.20	6.18	367.80	0.00
368.30	7.12	367.80	0.00
368.40	8.07	367.80	0.00
368.50	9.02	367.80	0.00
368.60	9.99	367.80	0.00
368.70	10.93	367.80	0.00
368.80	11.90	367.80	0.00
368.90	12.82	367.80	0.00
369.00	13.75	367.80	0.00
369.10	14.62	367.80	0.00
369.20	15.45	367.80	0.00
369.30	16.24	367.80	0.00
369.40	16.93	367.80	0.00
369.50	17.51	367.80	0.00
369.60	18.03	367.80	0.00
369.70	18.54	367.80	0.00
369.80	19.06	367.80	0.00
369.90	19.57	367.80	0.00
370.00	20.07	367.80	0.00
370.10	20.58	367.80	0.00
370.20	21.07	367.80	0.00
370.30	21.56	367.80	0.00
370.40	22.04	367.80	0.00
370.50	22.51	367.80	0.00
370.60	22.99	367.80	0.00
370.70	23.46	367.80	0.00
370.80	23.91	367.80	0.00
370.90	24.36	367.80	0.00
371.00	24.81	367.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-3.43	367.90	0.00
367.00	-3.43	367.90	0.00
367.10	-3.43	367.90	0.00
367.20	-3.43	367.90	0.00
367.30	-3.43	367.90	0.00
367.40	-3.43	367.90	0.00
367.50	-3.43	367.90	0.00
367.60	-3.42	367.90	0.00
367.70	-3.18	367.90	0.00
367.80	-2.53	367.90	0.00
367.90	0.00	367.90	0.00
368.00	3.25	367.90	0.00
368.10	4.71	367.90	0.00
368.20	5.86	367.90	0.00
368.30	6.93	367.90	0.00
368.40	7.93	367.90	0.00
368.50	8.93	367.90	0.00
368.60	9.91	367.90	0.00
368.70	10.90	367.90	0.00
368.80	11.86	367.90	0.00
368.90	12.81	367.90	0.00
369.00	13.75	367.90	0.00
369.10	14.62	367.90	0.00
369.20	15.45	367.90	0.00
369.30	16.24	367.90	0.00
369.40	16.93	367.90	0.00
369.50	17.51	367.90	0.00
369.60	18.03	367.90	0.00
369.70	18.54	367.90	0.00
369.80	19.06	367.90	0.00
369.90	19.57	367.90	0.00
370.00	20.07	367.90	0.00
370.10	20.58	367.90	0.00
370.20	21.07	367.90	0.00
370.30	21.56	367.90	0.00
370.40	22.04	367.90	0.00
370.50	22.51	367.90	0.00
370.60	22.99	367.90	0.00
370.70	23.46	367.90	0.00
370.80	23.91	367.90	0.00
370.90	24.36	367.90	0.00
371.00	24.81	367.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.10	368.00	0.00
367.00	-4.10	368.00	0.00
367.10	-4.10	368.00	0.00
367.20	-4.10	368.00	0.00
367.30	-4.10	368.00	0.00
367.40	-4.10	368.00	0.00
367.50	-4.10	368.00	0.00
367.60	-4.10	368.00	0.00
367.70	-4.03	368.00	0.00
367.80	-3.70	368.00	0.00
367.90	-2.91	368.00	0.00
368.00	0.00	368.00	0.00
368.10	3.64	368.00	0.00
368.20	5.22	368.00	0.00
368.30	6.49	368.00	0.00
368.40	7.64	368.00	0.00
368.50	8.72	368.00	0.00
368.60	9.76	368.00	0.00
368.70	10.77	368.00	0.00
368.80	11.77	368.00	0.00
368.90	12.74	368.00	0.00
369.00	13.69	368.00	0.00
369.10	14.59	368.00	0.00
369.20	15.44	368.00	0.00
369.30	16.24	368.00	0.00
369.40	16.93	368.00	0.00
369.50	17.51	368.00	0.00
369.60	18.03	368.00	0.00
369.70	18.54	368.00	0.00
369.80	19.06	368.00	0.00
369.90	19.57	368.00	0.00
370.00	20.07	368.00	0.00
370.10	20.58	368.00	0.00
370.20	21.07	368.00	0.00
370.30	21.56	368.00	0.00
370.40	22.04	368.00	0.00
370.50	22.51	368.00	0.00
370.60	22.99	368.00	0.00
370.70	23.46	368.00	0.00
370.80	23.91	368.00	0.00
370.90	24.36	368.00	0.00
371.00	24.81	368.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.79	368.10	0.00
367.00	-4.79	368.10	0.00
367.10	-4.79	368.10	0.00
367.20	-4.79	368.10	0.00
367.30	-4.79	368.10	0.00
367.40	-4.79	368.10	0.00
367.50	-4.79	368.10	0.00
367.60	-4.79	368.10	0.00
367.70	-4.79	368.10	0.00
367.80	-4.65	368.10	0.00
367.90	-4.20	368.10	0.00
368.00	-3.24	368.10	0.00
368.10	0.00	368.10	0.00
368.20	4.00	368.10	0.00
368.30	5.70	368.10	0.00
368.40	7.09	368.10	0.00
368.50	8.33	368.10	0.00
368.60	9.45	368.10	0.00
368.70	10.54	368.10	0.00
368.80	11.57	368.10	0.00
368.90	12.58	368.10	0.00
369.00	13.55	368.10	0.00
369.10	14.48	368.10	0.00
369.20	15.35	368.10	0.00
369.30	16.16	368.10	0.00
369.40	16.88	368.10	0.00
369.50	17.48	368.10	0.00
369.60	18.01	368.10	0.00
369.70	18.54	368.10	0.00
369.80	19.06	368.10	0.00
369.90	19.57	368.10	0.00
370.00	20.07	368.10	0.00
370.10	20.58	368.10	0.00
370.20	21.07	368.10	0.00
370.30	21.56	368.10	0.00
370.40	22.04	368.10	0.00
370.50	22.51	368.10	0.00
370.60	22.99	368.10	0.00
370.70	23.46	368.10	0.00
370.80	23.91	368.10	0.00
370.90	24.36	368.10	0.00
371.00	24.81	368.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-5.53	368.20	0.00
367.00	-5.53	368.20	0.00
367.10	-5.53	368.20	0.00
367.20	-5.53	368.20	0.00
367.30	-5.53	368.20	0.00
367.40	-5.53	368.20	0.00
367.50	-5.53	368.20	0.00
367.60	-5.53	368.20	0.00
367.70	-5.53	368.20	0.00
367.80	-5.51	368.20	0.00
367.90	-5.25	368.20	0.00
368.00	-4.70	368.20	0.00
368.10	-3.60	368.20	0.00
368.20	0.00	368.20	0.00
368.30	4.28	368.20	0.00
368.40	6.17	368.20	0.00
368.50	7.63	368.20	0.00
368.60	8.93	368.20	0.00
368.70	10.11	368.20	0.00
368.80	11.23	368.20	0.00
368.90	12.29	368.20	0.00
369.00	13.29	368.20	0.00
369.10	14.25	368.20	0.00
369.20	15.14	368.20	0.00
369.30	15.96	368.20	0.00
369.40	16.69	368.20	0.00
369.50	17.28	368.20	0.00
369.60	17.85	368.20	0.00
369.70	18.41	368.20	0.00
369.80	18.96	368.20	0.00
369.90	19.50	368.20	0.00
370.00	20.03	368.20	0.00
370.10	20.55	368.20	0.00
370.20	21.06	368.20	0.00
370.30	21.55	368.20	0.00
370.40	22.04	368.20	0.00
370.50	22.52	368.20	0.00
370.60	22.99	368.20	0.00
370.70	23.46	368.20	0.00
370.80	23.91	368.20	0.00
370.90	24.36	368.20	0.00
371.00	24.81	368.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-6.29	368.30	0.00
367.00	-6.29	368.30	0.00
367.10	-6.29	368.30	0.00
367.20	-6.29	368.30	0.00
367.30	-6.29	368.30	0.00
367.40	-6.29	368.30	0.00
367.50	-6.29	368.30	0.00
367.60	-6.29	368.30	0.00
367.70	-6.29	368.30	0.00
367.80	-6.29	368.30	0.00
367.90	-6.20	368.30	0.00
368.00	-5.84	368.30	0.00
368.10	-5.17	368.30	0.00
368.20	-3.91	368.30	0.00
368.30	0.00	368.30	0.00
368.40	4.58	368.30	0.00
368.50	6.55	368.30	0.00
368.60	8.10	368.30	0.00
368.70	9.45	368.30	0.00
368.80	10.66	368.30	0.00
368.90	11.81	368.30	0.00
369.00	12.86	368.30	0.00
369.10	13.85	368.30	0.00
369.20	14.76	368.30	0.00
369.30	15.59	368.30	0.00
369.40	16.31	368.30	0.00
369.50	16.90	368.30	0.00
369.60	17.51	368.30	0.00
369.70	18.09	368.30	0.00
369.80	18.67	368.30	0.00
369.90	19.26	368.30	0.00
370.00	19.81	368.30	0.00
370.10	20.36	368.30	0.00
370.20	20.90	368.30	0.00
370.30	21.42	368.30	0.00
370.40	21.93	368.30	0.00
370.50	22.43	368.30	0.00
370.60	22.93	368.30	0.00
370.70	23.41	368.30	0.00
370.80	23.88	368.30	0.00
370.90	24.35	368.30	0.00
371.00	24.79	368.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.08	368.40	0.00
367.00	-7.08	368.40	0.00
367.10	-7.08	368.40	0.00
367.20	-7.08	368.40	0.00
367.30	-7.08	368.40	0.00
367.40	-7.08	368.40	0.00
367.50	-7.08	368.40	0.00
367.60	-7.08	368.40	0.00
367.70	-7.08	368.40	0.00
367.80	-7.08	368.40	0.00
367.90	-7.06	368.40	0.00
368.00	-6.87	368.40	0.00
368.10	-6.41	368.40	0.00
368.20	-5.63	368.40	0.00
368.30	-4.24	368.40	0.00
368.40	0.00	368.40	0.00
368.50	4.82	368.40	0.00
368.60	6.85	368.40	0.00
368.70	8.45	368.40	0.00
368.80	9.85	368.40	0.00
368.90	11.06	368.40	0.00
369.00	12.20	368.40	0.00
369.10	13.22	368.40	0.00
369.20	14.16	368.40	0.00
369.30	14.96	368.40	0.00
369.40	15.61	368.40	0.00
369.50	16.26	368.40	0.00
369.60	16.91	368.40	0.00
369.70	17.56	368.40	0.00
369.80	18.19	368.40	0.00
369.90	18.81	368.40	0.00
370.00	19.41	368.40	0.00
370.10	19.98	368.40	0.00
370.20	20.55	368.40	0.00
370.30	21.11	368.40	0.00
370.40	21.65	368.40	0.00
370.50	22.17	368.40	0.00
370.60	22.69	368.40	0.00
370.70	23.19	368.40	0.00
370.80	23.69	368.40	0.00
370.90	24.18	368.40	0.00
371.00	24.65	368.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.87	368.50	0.00
367.00	-7.87	368.50	0.00
367.10	-7.87	368.50	0.00
367.20	-7.87	368.50	0.00
367.30	-7.87	368.50	0.00
367.40	-7.87	368.50	0.00
367.50	-7.87	368.50	0.00
367.60	-7.87	368.50	0.00
367.70	-7.87	368.50	0.00
367.80	-7.87	368.50	0.00
367.90	-7.87	368.50	0.00
368.00	-7.80	368.50	0.00
368.10	-7.51	368.50	0.00
368.20	-6.94	368.50	0.00
368.30	-6.01	368.50	0.00
368.40	-4.48	368.50	0.00
368.50	0.00	368.50	0.00
368.60	4.94	368.50	0.00
368.70	7.00	368.50	0.00
368.80	8.64	368.50	0.00
368.90	10.00	368.50	0.00
369.00	11.18	368.50	0.00
369.10	12.21	368.50	0.00
369.20	13.03	368.50	0.00
369.30	13.74	368.50	0.00
369.40	14.58	368.50	0.00
369.50	15.36	368.50	0.00
369.60	16.12	368.50	0.00
369.70	16.84	368.50	0.00
369.80	17.53	368.50	0.00
369.90	18.18	368.50	0.00
370.00	18.82	368.50	0.00
370.10	19.44	368.50	0.00
370.20	20.04	368.50	0.00
370.30	20.62	368.50	0.00
370.40	21.18	368.50	0.00
370.50	21.74	368.50	0.00
370.60	22.27	368.50	0.00
370.70	22.79	368.50	0.00
370.80	23.30	368.50	0.00
370.90	23.80	368.50	0.00
371.00	24.30	368.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-8.65	368.60	0.00
367.00	-8.65	368.60	0.00
367.10	-8.65	368.60	0.00
367.20	-8.65	368.60	0.00
367.30	-8.65	368.60	0.00
367.40	-8.65	368.60	0.00
367.50	-8.65	368.60	0.00
367.60	-8.65	368.60	0.00
367.70	-8.65	368.60	0.00
367.80	-8.65	368.60	0.00
367.90	-8.65	368.60	0.00
368.00	-8.64	368.60	0.00
368.10	-8.48	368.60	0.00
368.20	-8.08	368.60	0.00
368.30	-7.39	368.60	0.00
368.40	-6.34	368.60	0.00
368.50	-4.63	368.60	0.00
368.60	0.00	368.60	0.00
368.70	4.95	368.60	0.00
368.80	6.98	368.60	0.00
368.90	8.53	368.60	0.00
369.00	9.82	368.60	0.00
369.10	10.89	368.60	0.00
369.20	11.90	368.60	0.00
369.30	12.85	368.60	0.00
369.40	13.74	368.60	0.00
369.50	14.58	368.60	0.00
369.60	15.36	368.60	0.00
369.70	16.12	368.60	0.00
369.80	16.83	368.60	0.00
369.90	17.52	368.60	0.00
370.00	18.19	368.60	0.00
370.10	18.83	368.60	0.00
370.20	19.44	368.60	0.00
370.30	20.03	368.60	0.00
370.40	20.62	368.60	0.00
370.50	21.18	368.60	0.00
370.60	21.73	368.60	0.00
370.70	22.27	368.60	0.00
370.80	22.79	368.60	0.00
370.90	23.31	368.60	0.00
371.00	23.80	368.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-9.42	368.70	0.00
367.00	-9.42	368.70	0.00
367.10	-9.42	368.70	0.00
367.20	-9.42	368.70	0.00
367.30	-9.42	368.70	0.00
367.40	-9.42	368.70	0.00
367.50	-9.42	368.70	0.00
367.60	-9.42	368.70	0.00
367.70	-9.42	368.70	0.00
367.80	-9.42	368.70	0.00
367.90	-9.42	368.70	0.00
368.00	-9.42	368.70	0.00
368.10	-9.35	368.70	0.00
368.20	-9.06	368.70	0.00
368.30	-8.56	368.70	0.00
368.40	-7.75	368.70	0.00
368.50	-6.56	368.70	0.00
368.60	-4.77	368.70	0.00
368.70	0.00	368.70	0.00
368.80	4.89	368.70	0.00
368.90	6.93	368.70	0.00
369.00	8.45	368.70	0.00
369.10	9.71	368.70	0.00
369.20	10.86	368.70	0.00
369.30	11.91	368.70	0.00
369.40	12.86	368.70	0.00
369.50	13.74	368.70	0.00
369.60	14.57	368.70	0.00
369.70	15.37	368.70	0.00
369.80	16.12	368.70	0.00
369.90	16.84	368.70	0.00
370.00	17.52	368.70	0.00
370.10	18.19	368.70	0.00
370.20	18.82	368.70	0.00
370.30	19.43	368.70	0.00
370.40	20.04	368.70	0.00
370.50	20.62	368.70	0.00
370.60	21.18	368.70	0.00
370.70	21.73	368.70	0.00
370.80	22.26	368.70	0.00
370.90	22.80	368.70	0.00
371.00	23.31	368.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.16	368.80	0.00
367.00	-10.16	368.80	0.00
367.10	-10.16	368.80	0.00
367.20	-10.16	368.80	0.00
367.30	-10.16	368.80	0.00
367.40	-10.16	368.80	0.00
367.50	-10.16	368.80	0.00
367.60	-10.16	368.80	0.00
367.70	-10.16	368.80	0.00
367.80	-10.16	368.80	0.00
367.90	-10.16	368.80	0.00
368.00	-10.16	368.80	0.00
368.10	-10.13	368.80	0.00
368.20	-9.95	368.80	0.00
368.30	-9.56	368.80	0.00
368.40	-8.94	368.80	0.00
368.50	-8.01	368.80	0.00
368.60	-6.72	368.80	0.00
368.70	-4.82	368.80	0.00
368.80	0.00	368.80	0.00
368.90	4.85	368.80	0.00
369.00	6.87	368.80	0.00
369.10	8.43	368.80	0.00
369.20	9.72	368.80	0.00
369.30	10.86	368.80	0.00
369.40	11.91	368.80	0.00
369.50	12.86	368.80	0.00
369.60	13.74	368.80	0.00
369.70	14.58	368.80	0.00
369.80	15.37	368.80	0.00
369.90	16.12	368.80	0.00
370.00	16.83	368.80	0.00
370.10	17.52	368.80	0.00
370.20	18.19	368.80	0.00
370.30	18.82	368.80	0.00
370.40	19.44	368.80	0.00
370.50	20.04	368.80	0.00
370.60	20.62	368.80	0.00
370.70	21.18	368.80	0.00
370.80	21.73	368.80	0.00
370.90	22.27	368.80	0.00
371.00	22.79	368.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.87	368.90	0.00
367.00	-10.87	368.90	0.00
367.10	-10.87	368.90	0.00
367.20	-10.87	368.90	0.00
367.30	-10.87	368.90	0.00
367.40	-10.87	368.90	0.00
367.50	-10.87	368.90	0.00
367.60	-10.87	368.90	0.00
367.70	-10.87	368.90	0.00
367.80	-10.87	368.90	0.00
367.90	-10.87	368.90	0.00
368.00	-10.87	368.90	0.00
368.10	-10.87	368.90	0.00
368.20	-10.78	368.90	0.00
368.30	-10.49	368.90	0.00
368.40	-9.99	368.90	0.00
368.50	-9.25	368.90	0.00
368.60	-8.20	368.90	0.00
368.70	-6.82	368.90	0.00
368.80	-4.86	368.90	0.00
368.90	0.00	368.90	0.00
369.00	4.87	368.90	0.00
369.10	6.86	368.90	0.00
369.20	8.42	368.90	0.00
369.30	9.73	368.90	0.00
369.40	10.87	368.90	0.00
369.50	11.91	368.90	0.00
369.60	12.86	368.90	0.00
369.70	13.74	368.90	0.00
369.80	14.58	368.90	0.00
369.90	15.37	368.90	0.00
370.00	16.12	368.90	0.00
370.10	16.84	368.90	0.00
370.20	17.52	368.90	0.00
370.30	18.18	368.90	0.00
370.40	18.82	368.90	0.00
370.50	19.44	368.90	0.00
370.60	20.04	368.90	0.00
370.70	20.61	368.90	0.00
370.80	21.18	368.90	0.00
370.90	21.74	368.90	0.00
371.00	22.27	368.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-11.58	369.00	0.00
367.00	-11.58	369.00	0.00
367.10	-11.58	369.00	0.00
367.20	-11.58	369.00	0.00
367.30	-11.58	369.00	0.00
367.40	-11.58	369.00	0.00
367.50	-11.58	369.00	0.00
367.60	-11.58	369.00	0.00
367.70	-11.58	369.00	0.00
367.80	-11.58	369.00	0.00
367.90	-11.58	369.00	0.00
368.00	-11.58	369.00	0.00
368.10	-11.58	369.00	0.00
368.20	-11.54	369.00	0.00
368.30	-11.34	369.00	0.00
368.40	-10.94	369.00	0.00
368.50	-10.32	369.00	0.00
368.60	-9.47	369.00	0.00
368.70	-8.34	369.00	0.00
368.80	-6.87	369.00	0.00
368.90	-4.86	369.00	0.00
369.00	0.00	369.00	0.00
369.10	4.84	369.00	0.00
369.20	6.88	369.00	0.00
369.30	8.41	369.00	0.00
369.40	9.72	369.00	0.00
369.50	10.86	369.00	0.00
369.60	11.90	369.00	0.00
369.70	12.85	369.00	0.00
369.80	13.74	369.00	0.00
369.90	14.58	369.00	0.00
370.00	15.37	369.00	0.00
370.10	16.12	369.00	0.00
370.20	16.84	369.00	0.00
370.30	17.52	369.00	0.00
370.40	18.18	369.00	0.00
370.50	18.82	369.00	0.00
370.60	19.43	369.00	0.00
370.70	20.04	369.00	0.00
370.80	20.62	369.00	0.00
370.90	21.18	369.00	0.00
371.00	21.73	369.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.25	369.10	0.00
367.00	-12.25	369.10	0.00
367.10	-12.25	369.10	0.00
367.20	-12.25	369.10	0.00
367.30	-12.25	369.10	0.00
367.40	-12.25	369.10	0.00
367.50	-12.25	369.10	0.00
367.60	-12.25	369.10	0.00
367.70	-12.25	369.10	0.00
367.80	-12.25	369.10	0.00
367.90	-12.25	369.10	0.00
368.00	-12.25	369.10	0.00
368.10	-12.25	369.10	0.00
368.20	-12.25	369.10	0.00
368.30	-12.12	369.10	0.00
368.40	-11.80	369.10	0.00
368.50	-11.30	369.10	0.00
368.60	-10.56	369.10	0.00
368.70	-9.61	369.10	0.00
368.80	-8.39	369.10	0.00
368.90	-6.87	369.10	0.00
369.00	-4.86	369.10	0.00
369.10	0.00	369.10	0.00
369.20	4.85	369.10	0.00
369.30	6.87	369.10	0.00
369.40	8.42	369.10	0.00
369.50	9.72	369.10	0.00
369.60	10.86	369.10	0.00
369.70	11.90	369.10	0.00
369.80	12.86	369.10	0.00
369.90	13.74	369.10	0.00
370.00	14.58	369.10	0.00
370.10	15.37	369.10	0.00
370.20	16.12	369.10	0.00
370.30	16.84	369.10	0.00
370.40	17.53	369.10	0.00
370.50	18.18	369.10	0.00
370.60	18.82	369.10	0.00
370.70	19.43	369.10	0.00
370.80	20.03	369.10	0.00
370.90	20.62	369.10	0.00
371.00	21.18	369.10	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.92	369.20	0.00
367.00	-12.92	369.20	0.00
367.10	-12.92	369.20	0.00
367.20	-12.92	369.20	0.00
367.30	-12.92	369.20	0.00
367.40	-12.92	369.20	0.00
367.50	-12.92	369.20	0.00
367.60	-12.92	369.20	0.00
367.70	-12.92	369.20	0.00
367.80	-12.92	369.20	0.00
367.90	-12.92	369.20	0.00
368.00	-12.92	369.20	0.00
368.10	-12.92	369.20	0.00
368.20	-12.92	369.20	0.00
368.30	-12.85	369.20	0.00
368.40	-12.61	369.20	0.00
368.50	-12.18	369.20	0.00
368.60	-11.56	369.20	0.00
368.70	-10.73	369.20	0.00
368.80	-9.70	369.20	0.00
368.90	-8.42	369.20	0.00
369.00	-6.87	369.20	0.00
369.10	-4.86	369.20	0.00
369.20	0.00	369.20	0.00
369.30	4.88	369.20	0.00
369.40	6.87	369.20	0.00
369.50	8.42	369.20	0.00
369.60	9.71	369.20	0.00
369.70	10.88	369.20	0.00
369.80	11.91	369.20	0.00
369.90	12.87	369.20	0.00
370.00	13.75	369.20	0.00
370.10	14.58	369.20	0.00
370.20	15.37	369.20	0.00
370.30	16.12	369.20	0.00
370.40	16.84	369.20	0.00
370.50	17.52	369.20	0.00
370.60	18.19	369.20	0.00
370.70	18.82	369.20	0.00
370.80	19.43	369.20	0.00
370.90	20.04	369.20	0.00
371.00	20.62	369.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-13.58	369.30	0.00
367.00	-13.58	369.30	0.00
367.10	-13.58	369.30	0.00
367.20	-13.58	369.30	0.00
367.30	-13.58	369.30	0.00
367.40	-13.58	369.30	0.00
367.50	-13.58	369.30	0.00
367.60	-13.58	369.30	0.00
367.70	-13.58	369.30	0.00
367.80	-13.58	369.30	0.00
367.90	-13.58	369.30	0.00
368.00	-13.58	369.30	0.00
368.10	-13.58	369.30	0.00
368.20	-13.58	369.30	0.00
368.30	-13.55	369.30	0.00
368.40	-13.38	369.30	0.00
368.50	-13.02	369.30	0.00
368.60	-12.48	369.30	0.00
368.70	-11.75	369.30	0.00
368.80	-10.82	369.30	0.00
368.90	-9.73	369.30	0.00
369.00	-8.42	369.30	0.00
369.10	-6.87	369.30	0.00
369.20	-4.86	369.30	0.00
369.30	0.00	369.30	0.00
369.40	4.86	369.30	0.00
369.50	6.86	369.30	0.00
369.60	8.41	369.30	0.00
369.70	9.72	369.30	0.00
369.80	10.87	369.30	0.00
369.90	11.90	369.30	0.00
370.00	12.86	369.30	0.00
370.10	13.75	369.30	0.00
370.20	14.58	369.30	0.00
370.30	15.36	369.30	0.00
370.40	16.12	369.30	0.00
370.50	16.83	369.30	0.00
370.60	17.52	369.30	0.00
370.70	18.19	369.30	0.00
370.80	18.82	369.30	0.00
370.90	19.44	369.30	0.00
371.00	20.04	369.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.22	369.40	0.00
367.00	-14.22	369.40	0.00
367.10	-14.22	369.40	0.00
367.20	-14.22	369.40	0.00
367.30	-14.22	369.40	0.00
367.40	-14.22	369.40	0.00
367.50	-14.22	369.40	0.00
367.60	-14.22	369.40	0.00
367.70	-14.22	369.40	0.00
367.80	-14.22	369.40	0.00
367.90	-14.22	369.40	0.00
368.00	-14.22	369.40	0.00
368.10	-14.22	369.40	0.00
368.20	-14.22	369.40	0.00
368.30	-14.22	369.40	0.00
368.40	-14.09	369.40	0.00
368.50	-13.80	369.40	0.00
368.60	-13.33	369.40	0.00
368.70	-12.68	369.40	0.00
368.80	-11.86	369.40	0.00
368.90	-10.87	369.40	0.00
369.00	-9.73	369.40	0.00
369.10	-8.42	369.40	0.00
369.20	-6.87	369.40	0.00
369.30	-4.86	369.40	0.00
369.40	0.00	369.40	0.00
369.50	4.88	369.40	0.00
369.60	6.86	369.40	0.00
369.70	8.43	369.40	0.00
369.80	9.72	369.40	0.00
369.90	10.87	369.40	0.00
370.00	11.90	369.40	0.00
370.10	12.86	369.40	0.00
370.20	13.74	369.40	0.00
370.30	14.58	369.40	0.00
370.40	15.37	369.40	0.00
370.50	16.12	369.40	0.00
370.60	16.83	369.40	0.00
370.70	17.51	369.40	0.00
370.80	18.19	369.40	0.00
370.90	18.82	369.40	0.00
371.00	19.44	369.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.84	369.50	0.00
367.00	-14.84	369.50	0.00
367.10	-14.84	369.50	0.00
367.20	-14.84	369.50	0.00
367.30	-14.84	369.50	0.00
367.40	-14.84	369.50	0.00
367.50	-14.84	369.50	0.00
367.60	-14.84	369.50	0.00
367.70	-14.84	369.50	0.00
367.80	-14.84	369.50	0.00
367.90	-14.84	369.50	0.00
368.00	-14.84	369.50	0.00
368.10	-14.84	369.50	0.00
368.20	-14.84	369.50	0.00
368.30	-14.84	369.50	0.00
368.40	-14.77	369.50	0.00
368.50	-14.53	369.50	0.00
368.60	-14.13	369.50	0.00
368.70	-13.55	369.50	0.00
368.80	-12.80	369.50	0.00
368.90	-11.90	369.50	0.00
369.00	-10.87	369.50	0.00
369.10	-9.73	369.50	0.00
369.20	-8.42	369.50	0.00
369.30	-6.87	369.50	0.00
369.40	-4.86	369.50	0.00
369.50	0.00	369.50	0.00
369.60	4.84	369.50	0.00
369.70	6.87	369.50	0.00
369.80	8.42	369.50	0.00
369.90	9.73	369.50	0.00
370.00	10.86	369.50	0.00
370.10	11.90	369.50	0.00
370.20	12.86	369.50	0.00
370.30	13.75	369.50	0.00
370.40	14.58	369.50	0.00
370.50	15.36	369.50	0.00
370.60	16.11	369.50	0.00
370.70	16.83	369.50	0.00
370.80	17.52	369.50	0.00
370.90	18.18	369.50	0.00
371.00	18.82	369.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-15.46	369.60	0.00
367.00	-15.46	369.60	0.00
367.10	-15.46	369.60	0.00
367.20	-15.46	369.60	0.00
367.30	-15.46	369.60	0.00
367.40	-15.46	369.60	0.00
367.50	-15.46	369.60	0.00
367.60	-15.46	369.60	0.00
367.70	-15.46	369.60	0.00
367.80	-15.46	369.60	0.00
367.90	-15.46	369.60	0.00
368.00	-15.46	369.60	0.00
368.10	-15.46	369.60	0.00
368.20	-15.46	369.60	0.00
368.30	-15.46	369.60	0.00
368.40	-15.43	369.60	0.00
368.50	-15.23	369.60	0.00
368.60	-14.88	369.60	0.00
368.70	-14.36	369.60	0.00
368.80	-13.69	369.60	0.00
368.90	-12.85	369.60	0.00
369.00	-11.90	369.60	0.00
369.10	-10.87	369.60	0.00
369.20	-9.73	369.60	0.00
369.30	-8.42	369.60	0.00
369.40	-6.87	369.60	0.00
369.50	-4.86	369.60	0.00
369.60	0.00	369.60	0.00
369.70	4.85	369.60	0.00
369.80	6.87	369.60	0.00
369.90	8.41	369.60	0.00
370.00	9.73	369.60	0.00
370.10	10.87	369.60	0.00
370.20	11.90	369.60	0.00
370.30	12.87	369.60	0.00
370.40	13.75	369.60	0.00
370.50	14.58	369.60	0.00
370.60	15.36	369.60	0.00
370.70	16.12	369.60	0.00
370.80	16.83	369.60	0.00
370.90	17.52	369.60	0.00
371.00	18.19	369.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.06	369.70	0.00
367.00	-16.06	369.70	0.00
367.10	-16.06	369.70	0.00
367.20	-16.06	369.70	0.00
367.30	-16.06	369.70	0.00
367.40	-16.06	369.70	0.00
367.50	-16.06	369.70	0.00
367.60	-16.06	369.70	0.00
367.70	-16.06	369.70	0.00
367.80	-16.06	369.70	0.00
367.90	-16.06	369.70	0.00
368.00	-16.06	369.70	0.00
368.10	-16.06	369.70	0.00
368.20	-16.06	369.70	0.00
368.30	-16.06	369.70	0.00
368.40	-16.05	369.70	0.00
368.50	-15.90	369.70	0.00
368.60	-15.59	369.70	0.00
368.70	-15.14	369.70	0.00
368.80	-14.52	369.70	0.00
368.90	-13.74	369.70	0.00
369.00	-12.85	369.70	0.00
369.10	-11.90	369.70	0.00
369.20	-10.87	369.70	0.00
369.30	-9.73	369.70	0.00
369.40	-8.42	369.70	0.00
369.50	-6.87	369.70	0.00
369.60	-4.86	369.70	0.00
369.70	0.00	369.70	0.00
369.80	4.85	369.70	0.00
369.90	6.87	369.70	0.00
370.00	8.41	369.70	0.00
370.10	9.73	369.70	0.00
370.20	10.87	369.70	0.00
370.30	11.91	369.70	0.00
370.40	12.86	369.70	0.00
370.50	13.75	369.70	0.00
370.60	14.58	369.70	0.00
370.70	15.37	369.70	0.00
370.80	16.12	369.70	0.00
370.90	16.84	369.70	0.00
371.00	17.52	369.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.64	369.80	0.00
367.00	-16.64	369.80	0.00
367.10	-16.64	369.80	0.00
367.20	-16.64	369.80	0.00
367.30	-16.64	369.80	0.00
367.40	-16.64	369.80	0.00
367.50	-16.64	369.80	0.00
367.60	-16.64	369.80	0.00
367.70	-16.64	369.80	0.00
367.80	-16.64	369.80	0.00
367.90	-16.64	369.80	0.00
368.00	-16.64	369.80	0.00
368.10	-16.64	369.80	0.00
368.20	-16.64	369.80	0.00
368.30	-16.64	369.80	0.00
368.40	-16.64	369.80	0.00
368.50	-16.55	369.80	0.00
368.60	-16.28	369.80	0.00
368.70	-15.85	369.80	0.00
368.80	-15.29	369.80	0.00
368.90	-14.58	369.80	0.00
369.00	-13.74	369.80	0.00
369.10	-12.85	369.80	0.00
369.20	-11.90	369.80	0.00
369.30	-10.87	369.80	0.00
369.40	-9.73	369.80	0.00
369.50	-8.42	369.80	0.00
369.60	-6.87	369.80	0.00
369.70	-4.86	369.80	0.00
369.80	0.00	369.80	0.00
369.90	4.87	369.80	0.00
370.00	6.88	369.80	0.00
370.10	8.42	369.80	0.00
370.20	9.73	369.80	0.00
370.30	10.86	369.80	0.00
370.40	11.90	369.80	0.00
370.50	12.86	369.80	0.00
370.60	13.75	369.80	0.00
370.70	14.58	369.80	0.00
370.80	15.37	369.80	0.00
370.90	16.11	369.80	0.00
371.00	16.84	369.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.21	369.90	0.00
367.00	-17.21	369.90	0.00
367.10	-17.21	369.90	0.00
367.20	-17.21	369.90	0.00
367.30	-17.21	369.90	0.00
367.40	-17.21	369.90	0.00
367.50	-17.21	369.90	0.00
367.60	-17.21	369.90	0.00
367.70	-17.21	369.90	0.00
367.80	-17.21	369.90	0.00
367.90	-17.21	369.90	0.00
368.00	-17.21	369.90	0.00
368.10	-17.21	369.90	0.00
368.20	-17.21	369.90	0.00
368.30	-17.21	369.90	0.00
368.40	-17.21	369.90	0.00
368.50	-17.15	369.90	0.00
368.60	-16.94	369.90	0.00
368.70	-16.57	369.90	0.00
368.80	-16.03	369.90	0.00
368.90	-15.37	369.90	0.00
369.00	-14.58	369.90	0.00
369.10	-13.74	369.90	0.00
369.20	-12.85	369.90	0.00
369.30	-11.90	369.90	0.00
369.40	-10.87	369.90	0.00
369.50	-9.73	369.90	0.00
369.60	-8.42	369.90	0.00
369.70	-6.87	369.90	0.00
369.80	-4.86	369.90	0.00
369.90	0.00	369.90	0.00
370.00	4.84	369.90	0.00
370.10	6.89	369.90	0.00
370.20	8.41	369.90	0.00
370.30	9.73	369.90	0.00
370.40	10.87	369.90	0.00
370.50	11.90	369.90	0.00
370.60	12.86	369.90	0.00
370.70	13.75	369.90	0.00
370.80	14.57	369.90	0.00
370.90	15.36	369.90	0.00
371.00	16.11	369.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.79	370.00	0.00
367.00	-17.79	370.00	0.00
367.10	-17.79	370.00	0.00
367.20	-17.79	370.00	0.00
367.30	-17.79	370.00	0.00
367.40	-17.79	370.00	0.00
367.50	-17.79	370.00	0.00
367.60	-17.79	370.00	0.00
367.70	-17.79	370.00	0.00
367.80	-17.79	370.00	0.00
367.90	-17.79	370.00	0.00
368.00	-17.79	370.00	0.00
368.10	-17.79	370.00	0.00
368.20	-17.79	370.00	0.00
368.30	-17.79	370.00	0.00
368.40	-17.79	370.00	0.00
368.50	-17.75	370.00	0.00
368.60	-17.57	370.00	0.00
368.70	-17.24	370.00	0.00
368.80	-16.75	370.00	0.00
368.90	-16.12	370.00	0.00
369.00	-15.37	370.00	0.00
369.10	-14.58	370.00	0.00
369.20	-13.74	370.00	0.00
369.30	-12.85	370.00	0.00
369.40	-11.90	370.00	0.00
369.50	-10.87	370.00	0.00
369.60	-9.73	370.00	0.00
369.70	-8.42	370.00	0.00
369.80	-6.87	370.00	0.00
369.90	-4.86	370.00	0.00
370.00	0.00	370.00	0.00
370.10	4.84	370.00	0.00
370.20	6.88	370.00	0.00
370.30	8.43	370.00	0.00
370.40	9.72	370.00	0.00
370.50	10.87	370.00	0.00
370.60	11.90	370.00	0.00
370.70	12.86	370.00	0.00
370.80	13.74	370.00	0.00
370.90	14.58	370.00	0.00
371.00	15.37	370.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.33	370.10	0.00
367.00	-18.33	370.10	0.00
367.10	-18.33	370.10	0.00
367.20	-18.33	370.10	0.00
367.30	-18.33	370.10	0.00
367.40	-18.33	370.10	0.00
367.50	-18.33	370.10	0.00
367.60	-18.33	370.10	0.00
367.70	-18.33	370.10	0.00
367.80	-18.33	370.10	0.00
367.90	-18.33	370.10	0.00
368.00	-18.33	370.10	0.00
368.10	-18.33	370.10	0.00
368.20	-18.33	370.10	0.00
368.30	-18.33	370.10	0.00
368.40	-18.33	370.10	0.00
368.50	-18.32	370.10	0.00
368.60	-18.17	370.10	0.00
368.70	-17.88	370.10	0.00
368.80	-17.43	370.10	0.00
368.90	-16.83	370.10	0.00
369.00	-16.12	370.10	0.00
369.10	-15.37	370.10	0.00
369.20	-14.58	370.10	0.00
369.30	-13.74	370.10	0.00
369.40	-12.85	370.10	0.00
369.50	-11.90	370.10	0.00
369.60	-10.87	370.10	0.00
369.70	-9.73	370.10	0.00
369.80	-8.42	370.10	0.00
369.90	-6.87	370.10	0.00
370.00	-4.86	370.10	0.00
370.10	0.00	370.10	0.00
370.20	4.88	370.10	0.00
370.30	6.86	370.10	0.00
370.40	8.41	370.10	0.00
370.50	9.71	370.10	0.00
370.60	10.87	370.10	0.00
370.70	11.91	370.10	0.00
370.80	12.86	370.10	0.00
370.90	13.74	370.10	0.00
371.00	14.58	370.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.87	370.20	0.00
367.00	-18.87	370.20	0.00
367.10	-18.87	370.20	0.00
367.20	-18.87	370.20	0.00
367.30	-18.87	370.20	0.00
367.40	-18.87	370.20	0.00
367.50	-18.87	370.20	0.00
367.60	-18.87	370.20	0.00
367.70	-18.87	370.20	0.00
367.80	-18.87	370.20	0.00
367.90	-18.87	370.20	0.00
368.00	-18.87	370.20	0.00
368.10	-18.87	370.20	0.00
368.20	-18.87	370.20	0.00
368.30	-18.87	370.20	0.00
368.40	-18.87	370.20	0.00
368.50	-18.87	370.20	0.00
368.60	-18.76	370.20	0.00
368.70	-18.50	370.20	0.00
368.80	-18.08	370.20	0.00
368.90	-17.52	370.20	0.00
369.00	-16.83	370.20	0.00
369.10	-16.12	370.20	0.00
369.20	-15.37	370.20	0.00
369.30	-14.58	370.20	0.00
369.40	-13.74	370.20	0.00
369.50	-12.85	370.20	0.00
369.60	-11.90	370.20	0.00
369.70	-10.87	370.20	0.00
369.80	-9.73	370.20	0.00
369.90	-8.42	370.20	0.00
370.00	-6.87	370.20	0.00
370.10	-4.86	370.20	0.00
370.20	0.00	370.20	0.00
370.30	4.85	370.20	0.00
370.40	6.88	370.20	0.00
370.50	8.43	370.20	0.00
370.60	9.72	370.20	0.00
370.70	10.86	370.20	0.00
370.80	11.91	370.20	0.00
370.90	12.86	370.20	0.00
371.00	13.74	370.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.42	370.30	0.00
367.00	-19.42	370.30	0.00
367.10	-19.42	370.30	0.00
367.20	-19.42	370.30	0.00
367.30	-19.42	370.30	0.00
367.40	-19.42	370.30	0.00
367.50	-19.42	370.30	0.00
367.60	-19.42	370.30	0.00
367.70	-19.42	370.30	0.00
367.80	-19.42	370.30	0.00
367.90	-19.42	370.30	0.00
368.00	-19.42	370.30	0.00
368.10	-19.42	370.30	0.00
368.20	-19.42	370.30	0.00
368.30	-19.42	370.30	0.00
368.40	-19.42	370.30	0.00
368.50	-19.42	370.30	0.00
368.60	-19.34	370.30	0.00
368.70	-19.10	370.30	0.00
368.80	-18.73	370.30	0.00
368.90	-18.18	370.30	0.00
369.00	-17.52	370.30	0.00
369.10	-16.83	370.30	0.00
369.20	-16.12	370.30	0.00
369.30	-15.37	370.30	0.00
369.40	-14.58	370.30	0.00
369.50	-13.74	370.30	0.00
369.60	-12.85	370.30	0.00
369.70	-11.90	370.30	0.00
369.80	-10.87	370.30	0.00
369.90	-9.73	370.30	0.00
370.00	-8.42	370.30	0.00
370.10	-6.87	370.30	0.00
370.20	-4.86	370.30	0.00
370.30	0.00	370.30	0.00
370.40	4.87	370.30	0.00
370.50	6.89	370.30	0.00
370.60	8.40	370.30	0.00
370.70	9.71	370.30	0.00
370.80	10.87	370.30	0.00
370.90	11.90	370.30	0.00
371.00	12.85	370.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.94	370.40	0.00
367.00	-19.94	370.40	0.00
367.10	-19.94	370.40	0.00
367.20	-19.94	370.40	0.00
367.30	-19.94	370.40	0.00
367.40	-19.94	370.40	0.00
367.50	-19.94	370.40	0.00
367.60	-19.94	370.40	0.00
367.70	-19.94	370.40	0.00
367.80	-19.94	370.40	0.00
367.90	-19.94	370.40	0.00
368.00	-19.94	370.40	0.00
368.10	-19.94	370.40	0.00
368.20	-19.94	370.40	0.00
368.30	-19.94	370.40	0.00
368.40	-19.94	370.40	0.00
368.50	-19.94	370.40	0.00
368.60	-19.88	370.40	0.00
368.70	-19.68	370.40	0.00
368.80	-19.34	370.40	0.00
368.90	-18.82	370.40	0.00
369.00	-18.18	370.40	0.00
369.10	-17.52	370.40	0.00
369.20	-16.83	370.40	0.00
369.30	-16.12	370.40	0.00
369.40	-15.37	370.40	0.00
369.50	-14.58	370.40	0.00
369.60	-13.74	370.40	0.00
369.70	-12.85	370.40	0.00
369.80	-11.90	370.40	0.00
369.90	-10.87	370.40	0.00
370.00	-9.73	370.40	0.00
370.10	-8.42	370.40	0.00
370.20	-6.87	370.40	0.00
370.30	-4.86	370.40	0.00
370.40	0.00	370.40	0.00
370.50	4.88	370.40	0.00
370.60	6.88	370.40	0.00
370.70	8.42	370.40	0.00
370.80	9.72	370.40	0.00
370.90	10.87	370.40	0.00
371.00	11.90	370.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.46	370.50	0.00
367.00	-20.46	370.50	0.00
367.10	-20.46	370.50	0.00
367.20	-20.46	370.50	0.00
367.30	-20.46	370.50	0.00
367.40	-20.46	370.50	0.00
367.50	-20.46	370.50	0.00
367.60	-20.46	370.50	0.00
367.70	-20.46	370.50	0.00
367.80	-20.46	370.50	0.00
367.90	-20.46	370.50	0.00
368.00	-20.46	370.50	0.00
368.10	-20.46	370.50	0.00
368.20	-20.46	370.50	0.00
368.30	-20.46	370.50	0.00
368.40	-20.46	370.50	0.00
368.50	-20.46	370.50	0.00
368.60	-20.43	370.50	0.00
368.70	-20.25	370.50	0.00
368.80	-19.93	370.50	0.00
368.90	-19.44	370.50	0.00
369.00	-18.82	370.50	0.00
369.10	-18.18	370.50	0.00
369.20	-17.52	370.50	0.00
369.30	-16.83	370.50	0.00
369.40	-16.12	370.50	0.00
369.50	-15.37	370.50	0.00
369.60	-14.58	370.50	0.00
369.70	-13.74	370.50	0.00
369.80	-12.85	370.50	0.00
369.90	-11.90	370.50	0.00
370.00	-10.87	370.50	0.00
370.10	-9.73	370.50	0.00
370.20	-8.42	370.50	0.00
370.30	-6.87	370.50	0.00
370.40	-4.86	370.50	0.00
370.50	0.00	370.50	0.00
370.60	4.86	370.50	0.00
370.70	6.87	370.50	0.00
370.80	8.43	370.50	0.00
370.90	9.71	370.50	0.00
371.00	10.86	370.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.96	370.60	0.00
367.00	-20.96	370.60	0.00
367.10	-20.96	370.60	0.00
367.20	-20.96	370.60	0.00
367.30	-20.96	370.60	0.00
367.40	-20.96	370.60	0.00
367.50	-20.96	370.60	0.00
367.60	-20.96	370.60	0.00
367.70	-20.96	370.60	0.00
367.80	-20.96	370.60	0.00
367.90	-20.96	370.60	0.00
368.00	-20.96	370.60	0.00
368.10	-20.96	370.60	0.00
368.20	-20.96	370.60	0.00
368.30	-20.96	370.60	0.00
368.40	-20.96	370.60	0.00
368.50	-20.96	370.60	0.00
368.60	-20.95	370.60	0.00
368.70	-20.80	370.60	0.00
368.80	-20.50	370.60	0.00
368.90	-20.04	370.60	0.00
369.00	-19.44	370.60	0.00
369.10	-18.82	370.60	0.00
369.20	-18.18	370.60	0.00
369.30	-17.52	370.60	0.00
369.40	-16.83	370.60	0.00
369.50	-16.12	370.60	0.00
369.60	-15.37	370.60	0.00
369.70	-14.58	370.60	0.00
369.80	-13.74	370.60	0.00
369.90	-12.85	370.60	0.00
370.00	-11.90	370.60	0.00
370.10	-10.87	370.60	0.00
370.20	-9.73	370.60	0.00
370.30	-8.42	370.60	0.00
370.40	-6.87	370.60	0.00
370.50	-4.86	370.60	0.00
370.60	0.00	370.60	0.00
370.70	4.88	370.60	0.00
370.80	6.87	370.60	0.00
370.90	8.43	370.60	0.00
371.00	9.73	370.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.46	370.70	0.00
367.00	-21.46	370.70	0.00
367.10	-21.46	370.70	0.00
367.20	-21.46	370.70	0.00
367.30	-21.46	370.70	0.00
367.40	-21.46	370.70	0.00
367.50	-21.46	370.70	0.00
367.60	-21.46	370.70	0.00
367.70	-21.46	370.70	0.00
367.80	-21.46	370.70	0.00
367.90	-21.46	370.70	0.00
368.00	-21.46	370.70	0.00
368.10	-21.46	370.70	0.00
368.20	-21.46	370.70	0.00
368.30	-21.46	370.70	0.00
368.40	-21.46	370.70	0.00
368.50	-21.46	370.70	0.00
368.60	-21.46	370.70	0.00
368.70	-21.33	370.70	0.00
368.80	-21.06	370.70	0.00
368.90	-20.62	370.70	0.00
369.00	-20.04	370.70	0.00
369.10	-19.44	370.70	0.00
369.20	-18.82	370.70	0.00
369.30	-18.18	370.70	0.00
369.40	-17.52	370.70	0.00
369.50	-16.83	370.70	0.00
369.60	-16.12	370.70	0.00
369.70	-15.37	370.70	0.00
369.80	-14.58	370.70	0.00
369.90	-13.74	370.70	0.00
370.00	-12.85	370.70	0.00
370.10	-11.90	370.70	0.00
370.20	-10.87	370.70	0.00
370.30	-9.73	370.70	0.00
370.40	-8.42	370.70	0.00
370.50	-6.87	370.70	0.00
370.60	-4.86	370.70	0.00
370.70	0.00	370.70	0.00
370.80	4.87	370.70	0.00
370.90	6.86	370.70	0.00
371.00	8.42	370.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.95	370.80	0.00
367.00	-21.95	370.80	0.00
367.10	-21.95	370.80	0.00
367.20	-21.95	370.80	0.00
367.30	-21.95	370.80	0.00
367.40	-21.95	370.80	0.00
367.50	-21.95	370.80	0.00
367.60	-21.95	370.80	0.00
367.70	-21.95	370.80	0.00
367.80	-21.95	370.80	0.00
367.90	-21.95	370.80	0.00
368.00	-21.95	370.80	0.00
368.10	-21.95	370.80	0.00
368.20	-21.95	370.80	0.00
368.30	-21.95	370.80	0.00
368.40	-21.95	370.80	0.00
368.50	-21.95	370.80	0.00
368.60	-21.95	370.80	0.00
368.70	-21.86	370.80	0.00
368.80	-21.61	370.80	0.00
368.90	-21.18	370.80	0.00
369.00	-20.62	370.80	0.00
369.10	-20.04	370.80	0.00
369.20	-19.44	370.80	0.00
369.30	-18.82	370.80	0.00
369.40	-18.18	370.80	0.00
369.50	-17.52	370.80	0.00
369.60	-16.83	370.80	0.00
369.70	-16.12	370.80	0.00
369.80	-15.37	370.80	0.00
369.90	-14.58	370.80	0.00
370.00	-13.74	370.80	0.00
370.10	-12.85	370.80	0.00
370.20	-11.90	370.80	0.00
370.30	-10.87	370.80	0.00
370.40	-9.73	370.80	0.00
370.50	-8.42	370.80	0.00
370.60	-6.87	370.80	0.00
370.70	-4.86	370.80	0.00
370.80	0.00	370.80	0.00
370.90	4.86	370.80	0.00
371.00	6.88	370.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.47	370.90	0.00
367.00	-22.47	370.90	0.00
367.10	-22.47	370.90	0.00
367.20	-22.47	370.90	0.00
367.30	-22.47	370.90	0.00
367.40	-22.47	370.90	0.00
367.50	-22.47	370.90	0.00
367.60	-22.47	370.90	0.00
367.70	-22.47	370.90	0.00
367.80	-22.47	370.90	0.00
367.90	-22.47	370.90	0.00
368.00	-22.47	370.90	0.00
368.10	-22.47	370.90	0.00
368.20	-22.47	370.90	0.00
368.30	-22.47	370.90	0.00
368.40	-22.47	370.90	0.00
368.50	-22.47	370.90	0.00
368.60	-22.47	370.90	0.00
368.70	-22.38	370.90	0.00
368.80	-22.14	370.90	0.00
368.90	-21.73	370.90	0.00
369.00	-21.18	370.90	0.00
369.10	-20.62	370.90	0.00
369.20	-20.04	370.90	0.00
369.30	-19.44	370.90	0.00
369.40	-18.82	370.90	0.00
369.50	-18.18	370.90	0.00
369.60	-17.52	370.90	0.00
369.70	-16.83	370.90	0.00
369.80	-16.12	370.90	0.00
369.90	-15.37	370.90	0.00
370.00	-14.58	370.90	0.00
370.10	-13.74	370.90	0.00
370.20	-12.85	370.90	0.00
370.30	-11.90	370.90	0.00
370.40	-10.87	370.90	0.00
370.50	-9.73	370.90	0.00
370.60	-8.42	370.90	0.00
370.70	-6.87	370.90	0.00
370.80	-4.86	370.90	0.00
370.90	0.00	370.90	0.00
371.00	4.86	370.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.94	371.00	0.00
367.00	-22.94	371.00	0.00
367.10	-22.94	371.00	0.00
367.20	-22.94	371.00	0.00
367.30	-22.94	371.00	0.00
367.40	-22.94	371.00	0.00
367.50	-22.94	371.00	0.00
367.60	-22.94	371.00	0.00
367.70	-22.94	371.00	0.00
367.80	-22.94	371.00	0.00
367.90	-22.94	371.00	0.00
368.00	-22.94	371.00	0.00
368.10	-22.94	371.00	0.00
368.20	-22.94	371.00	0.00
368.30	-22.94	371.00	0.00
368.40	-22.94	371.00	0.00
368.50	-22.94	371.00	0.00
368.60	-22.94	371.00	0.00
368.70	-22.88	371.00	0.00
368.80	-22.66	371.00	0.00
368.90	-22.27	371.00	0.00
369.00	-21.73	371.00	0.00
369.10	-21.18	371.00	0.00
369.20	-20.62	371.00	0.00
369.30	-20.04	371.00	0.00
369.40	-19.44	371.00	0.00
369.50	-18.82	371.00	0.00
369.60	-18.18	371.00	0.00
369.70	-17.52	371.00	0.00
369.80	-16.83	371.00	0.00
369.90	-16.12	371.00	0.00
370.00	-15.37	371.00	0.00
370.10	-14.58	371.00	0.00
370.20	-13.74	371.00	0.00
370.30	-12.85	371.00	0.00
370.40	-11.90	371.00	0.00
370.50	-10.87	371.00	0.00
370.60	-9.73	371.00	0.00
370.70	-8.42	371.00	0.00
370.80	-6.87	371.00	0.00
370.90	-4.86	371.00	0.00
371.00	0.00	371.00	0.00

Contributing Structures

Culvert - 1



Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.90 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - 1	Forward + Reverse	TW	366.90	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	120.00 ft
Length (Computed Barrel)	120.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.094
T2 ratio (HW/D)	1.196
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,  
 interpolate between flows at T1 & T2...

T1 Elevation	369.09 ft	T1 Flow	15.55 ft <sup>3</sup> /s
T2 Elevation	369.29 ft	T2 Flow	17.77 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.50	0.00
367.00	0.04	366.50	0.00
367.10	0.17	366.50	0.00
367.20	0.39	366.50	0.00
367.30	0.68	366.50	0.00
367.40	1.05	366.50	0.00
367.50	1.50	366.50	0.00
367.60	2.01	366.50	0.00
367.70	2.59	366.50	0.00
367.80	3.24	366.50	0.00
367.90	3.93	366.50	0.00
368.00	4.70	366.50	0.00
368.10	5.50	366.50	0.00
368.20	6.34	366.50	0.00
368.30	7.21	366.50	0.00
368.40	8.14	366.50	0.00
368.50	9.06	366.50	0.00
368.60	10.00	366.50	0.00
368.70	10.95	366.50	0.00
368.80	11.90	366.50	0.00
368.90	12.82	366.50	0.00
369.00	13.75	366.50	0.00
369.10	14.62	366.50	0.00
369.20	15.45	366.50	0.00
369.30	16.24	366.50	0.00
369.40	16.93	366.50	0.00
369.50	17.51	366.50	0.00
369.60	18.03	366.50	0.00
369.70	18.54	366.50	0.00
369.80	19.06	366.50	0.00
369.90	19.57	366.50	0.00
370.00	20.07	366.50	0.00
370.10	20.58	366.50	0.00
370.20	21.07	366.50	0.00
370.30	21.56	366.50	0.00
370.40	22.04	366.50	0.00
370.50	22.51	366.50	0.00
370.60	22.99	366.50	0.00
370.70	23.46	366.50	0.00
370.80	23.91	366.50	0.00
370.90	24.36	366.50	0.00
371.00	24.81	366.50	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.60	0.00
367.00	0.04	366.60	0.00
367.10	0.17	366.60	0.00
367.20	0.39	366.60	0.00
367.30	0.68	366.60	0.00
367.40	1.05	366.60	0.00
367.50	1.50	366.60	0.00
367.60	2.01	366.60	0.00
367.70	2.59	366.60	0.00
367.80	3.24	366.60	0.00
367.90	3.93	366.60	0.00
368.00	4.70	366.60	0.00
368.10	5.50	366.60	0.00
368.20	6.34	366.60	0.00
368.30	7.21	366.60	0.00
368.40	8.14	366.60	0.00
368.50	9.06	366.60	0.00
368.60	10.00	366.60	0.00
368.70	10.95	366.60	0.00
368.80	11.90	366.60	0.00
368.90	12.82	366.60	0.00
369.00	13.75	366.60	0.00
369.10	14.62	366.60	0.00
369.20	15.45	366.60	0.00
369.30	16.24	366.60	0.00
369.40	16.93	366.60	0.00
369.50	17.51	366.60	0.00
369.60	18.03	366.60	0.00
369.70	18.54	366.60	0.00
369.80	19.06	366.60	0.00
369.90	19.57	366.60	0.00
370.00	20.07	366.60	0.00
370.10	20.58	366.60	0.00
370.20	21.07	366.60	0.00
370.30	21.56	366.60	0.00
370.40	22.04	366.60	0.00
370.50	22.51	366.60	0.00
370.60	22.99	366.60	0.00
370.70	23.46	366.60	0.00
370.80	23.91	366.60	0.00
370.90	24.36	366.60	0.00
371.00	24.81	366.60	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.70	0.00
367.00	0.04	366.70	0.00
367.10	0.17	366.70	0.00
367.20	0.39	366.70	0.00
367.30	0.68	366.70	0.00
367.40	1.05	366.70	0.00
367.50	1.50	366.70	0.00
367.60	2.01	366.70	0.00
367.70	2.59	366.70	0.00
367.80	3.24	366.70	0.00
367.90	3.93	366.70	0.00
368.00	4.70	366.70	0.00
368.10	5.50	366.70	0.00
368.20	6.34	366.70	0.00
368.30	7.21	366.70	0.00
368.40	8.14	366.70	0.00
368.50	9.06	366.70	0.00
368.60	10.00	366.70	0.00
368.70	10.95	366.70	0.00
368.80	11.90	366.70	0.00
368.90	12.82	366.70	0.00
369.00	13.75	366.70	0.00
369.10	14.62	366.70	0.00
369.20	15.45	366.70	0.00
369.30	16.24	366.70	0.00
369.40	16.93	366.70	0.00
369.50	17.51	366.70	0.00
369.60	18.03	366.70	0.00
369.70	18.54	366.70	0.00
369.80	19.06	366.70	0.00
369.90	19.57	366.70	0.00
370.00	20.07	366.70	0.00
370.10	20.58	366.70	0.00
370.20	21.07	366.70	0.00
370.30	21.56	366.70	0.00
370.40	22.04	366.70	0.00
370.50	22.51	366.70	0.00
370.60	22.99	366.70	0.00
370.70	23.46	366.70	0.00
370.80	23.91	366.70	0.00
370.90	24.36	366.70	0.00
371.00	24.81	366.70	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.80	0.00
367.00	0.04	366.80	0.00
367.10	0.17	366.80	0.00
367.20	0.39	366.80	0.00
367.30	0.68	366.80	0.00
367.40	1.05	366.80	0.00
367.50	1.50	366.80	0.00
367.60	2.01	366.80	0.00
367.70	2.59	366.80	0.00
367.80	3.24	366.80	0.00
367.90	3.93	366.80	0.00
368.00	4.70	366.80	0.00
368.10	5.50	366.80	0.00
368.20	6.34	366.80	0.00
368.30	7.21	366.80	0.00
368.40	8.14	366.80	0.00
368.50	9.06	366.80	0.00
368.60	10.00	366.80	0.00
368.70	10.95	366.80	0.00
368.80	11.90	366.80	0.00
368.90	12.82	366.80	0.00
369.00	13.75	366.80	0.00
369.10	14.62	366.80	0.00
369.20	15.45	366.80	0.00
369.30	16.24	366.80	0.00
369.40	16.93	366.80	0.00
369.50	17.51	366.80	0.00
369.60	18.03	366.80	0.00
369.70	18.54	366.80	0.00
369.80	19.06	366.80	0.00
369.90	19.57	366.80	0.00
370.00	20.07	366.80	0.00
370.10	20.58	366.80	0.00
370.20	21.07	366.80	0.00
370.30	21.56	366.80	0.00
370.40	22.04	366.80	0.00
370.50	22.51	366.80	0.00
370.60	22.99	366.80	0.00
370.70	23.46	366.80	0.00
370.80	23.91	366.80	0.00
370.90	24.36	366.80	0.00
371.00	24.81	366.80	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.90	0.00
367.00	0.04	366.90	0.00
367.10	0.17	366.90	0.00
367.20	0.38	366.90	0.00
367.30	0.68	366.90	0.00
367.40	1.06	366.90	0.00
367.50	1.50	366.90	0.00
367.60	2.01	366.90	0.00
367.70	2.59	366.90	0.00
367.80	3.24	366.90	0.00
367.90	3.93	366.90	0.00
368.00	4.70	366.90	0.00
368.10	5.50	366.90	0.00
368.20	6.34	366.90	0.00
368.30	7.21	366.90	0.00
368.40	8.14	366.90	0.00
368.50	9.06	366.90	0.00
368.60	10.00	366.90	0.00
368.70	10.95	366.90	0.00
368.80	11.90	366.90	0.00
368.90	12.82	366.90	0.00
369.00	13.75	366.90	0.00
369.10	14.62	366.90	0.00
369.20	15.45	366.90	0.00
369.30	16.24	366.90	0.00
369.40	16.93	366.90	0.00
369.50	17.51	366.90	0.00
369.60	18.03	366.90	0.00
369.70	18.54	366.90	0.00
369.80	19.06	366.90	0.00
369.90	19.57	366.90	0.00
370.00	20.07	366.90	0.00
370.10	20.58	366.90	0.00
370.20	21.07	366.90	0.00
370.30	21.56	366.90	0.00
370.40	22.04	366.90	0.00
370.50	22.51	366.90	0.00
370.60	22.99	366.90	0.00
370.70	23.46	366.90	0.00
370.80	23.91	366.90	0.00
370.90	24.36	366.90	0.00
371.00	24.81	366.90	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.03	367.00	0.00
367.00	0.00	367.00	0.00
367.10	0.17	367.00	0.00
367.20	0.39	367.00	0.00
367.30	0.68	367.00	0.00
367.40	1.05	367.00	0.00
367.50	1.50	367.00	0.00
367.60	2.02	367.00	0.00
367.70	2.59	367.00	0.00
367.80	3.24	367.00	0.00
367.90	3.93	367.00	0.00
368.00	4.70	367.00	0.00
368.10	5.50	367.00	0.00
368.20	6.34	367.00	0.00
368.30	7.21	367.00	0.00
368.40	8.14	367.00	0.00
368.50	9.06	367.00	0.00
368.60	10.00	367.00	0.00
368.70	10.95	367.00	0.00
368.80	11.90	367.00	0.00
368.90	12.82	367.00	0.00
369.00	13.75	367.00	0.00
369.10	14.62	367.00	0.00
369.20	15.45	367.00	0.00
369.30	16.24	367.00	0.00
369.40	16.93	367.00	0.00
369.50	17.51	367.00	0.00
369.60	18.03	367.00	0.00
369.70	18.54	367.00	0.00
369.80	19.06	367.00	0.00
369.90	19.57	367.00	0.00
370.00	20.07	367.00	0.00
370.10	20.58	367.00	0.00
370.20	21.07	367.00	0.00
370.30	21.56	367.00	0.00
370.40	22.04	367.00	0.00
370.50	22.51	367.00	0.00
370.60	22.99	367.00	0.00
370.70	23.46	367.00	0.00
370.80	23.91	367.00	0.00
370.90	24.36	367.00	0.00
371.00	24.81	367.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.14	367.10	0.00
367.00	-0.14	367.10	0.00
367.10	0.00	367.10	0.00
367.20	0.38	367.10	0.00
367.30	0.68	367.10	0.00
367.40	1.05	367.10	0.00
367.50	1.50	367.10	0.00
367.60	2.01	367.10	0.00
367.70	2.59	367.10	0.00
367.80	3.24	367.10	0.00
367.90	3.93	367.10	0.00
368.00	4.70	367.10	0.00
368.10	5.50	367.10	0.00
368.20	6.34	367.10	0.00
368.30	7.21	367.10	0.00
368.40	8.14	367.10	0.00
368.50	9.06	367.10	0.00
368.60	10.00	367.10	0.00
368.70	10.95	367.10	0.00
368.80	11.90	367.10	0.00
368.90	12.82	367.10	0.00
369.00	13.75	367.10	0.00
369.10	14.62	367.10	0.00
369.20	15.45	367.10	0.00
369.30	16.24	367.10	0.00
369.40	16.93	367.10	0.00
369.50	17.51	367.10	0.00
369.60	18.03	367.10	0.00
369.70	18.54	367.10	0.00
369.80	19.06	367.10	0.00
369.90	19.57	367.10	0.00
370.00	20.07	367.10	0.00
370.10	20.58	367.10	0.00
370.20	21.07	367.10	0.00
370.30	21.56	367.10	0.00
370.40	22.04	367.10	0.00
370.50	22.51	367.10	0.00
370.60	22.99	367.10	0.00
370.70	23.46	367.10	0.00
370.80	23.91	367.10	0.00
370.90	24.36	367.10	0.00
371.00	24.81	367.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.32	367.20	0.00
367.00	-0.32	367.20	0.00
367.10	-0.32	367.20	0.00
367.20	0.00	367.20	0.00
367.30	0.66	367.20	0.00
367.40	1.05	367.20	0.00
367.50	1.50	367.20	0.00
367.60	2.01	367.20	0.00
367.70	2.59	367.20	0.00
367.80	3.24	367.20	0.00
367.90	3.95	367.20	0.00
368.00	4.70	367.20	0.00
368.10	5.50	367.20	0.00
368.20	6.34	367.20	0.00
368.30	7.21	367.20	0.00
368.40	8.14	367.20	0.00
368.50	9.06	367.20	0.00
368.60	10.00	367.20	0.00
368.70	10.95	367.20	0.00
368.80	11.90	367.20	0.00
368.90	12.82	367.20	0.00
369.00	13.75	367.20	0.00
369.10	14.62	367.20	0.00
369.20	15.45	367.20	0.00
369.30	16.24	367.20	0.00
369.40	16.93	367.20	0.00
369.50	17.51	367.20	0.00
369.60	18.03	367.20	0.00
369.70	18.54	367.20	0.00
369.80	19.06	367.20	0.00
369.90	19.57	367.20	0.00
370.00	20.07	367.20	0.00
370.10	20.58	367.20	0.00
370.20	21.07	367.20	0.00
370.30	21.56	367.20	0.00
370.40	22.04	367.20	0.00
370.50	22.51	367.20	0.00
370.60	22.99	367.20	0.00
370.70	23.46	367.20	0.00
370.80	23.91	367.20	0.00
370.90	24.36	367.20	0.00
371.00	24.81	367.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.58	367.30	0.00
367.00	-0.58	367.30	0.00
367.10	-0.58	367.30	0.00
367.20	-0.56	367.30	0.00
367.30	0.00	367.30	0.00
367.40	0.98	367.30	0.00
367.50	1.49	367.30	0.00
367.60	2.01	367.30	0.00
367.70	2.59	367.30	0.00
367.80	3.24	367.30	0.00
367.90	3.94	367.30	0.00
368.00	4.68	367.30	0.00
368.10	5.50	367.30	0.00
368.20	6.34	367.30	0.00
368.30	7.21	367.30	0.00
368.40	8.14	367.30	0.00
368.50	9.06	367.30	0.00
368.60	10.00	367.30	0.00
368.70	10.95	367.30	0.00
368.80	11.90	367.30	0.00
368.90	12.82	367.30	0.00
369.00	13.75	367.30	0.00
369.10	14.62	367.30	0.00
369.20	15.45	367.30	0.00
369.30	16.24	367.30	0.00
369.40	16.93	367.30	0.00
369.50	17.51	367.30	0.00
369.60	18.03	367.30	0.00
369.70	18.54	367.30	0.00
369.80	19.06	367.30	0.00
369.90	19.57	367.30	0.00
370.00	20.07	367.30	0.00
370.10	20.58	367.30	0.00
370.20	21.07	367.30	0.00
370.30	21.56	367.30	0.00
370.40	22.04	367.30	0.00
370.50	22.51	367.30	0.00
370.60	22.99	367.30	0.00
370.70	23.46	367.30	0.00
370.80	23.91	367.30	0.00
370.90	24.36	367.30	0.00
371.00	24.81	367.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.90	367.40	0.00
367.00	-0.90	367.40	0.00
367.10	-0.90	367.40	0.00
367.20	-0.90	367.40	0.00
367.30	-0.83	367.40	0.00
367.40	0.00	367.40	0.00
367.50	1.33	367.40	0.00
367.60	1.97	367.40	0.00
367.70	2.58	367.40	0.00
367.80	3.24	367.40	0.00
367.90	3.94	367.40	0.00
368.00	4.69	367.40	0.00
368.10	5.50	367.40	0.00
368.20	6.34	367.40	0.00
368.30	7.21	367.40	0.00
368.40	8.14	367.40	0.00
368.50	9.06	367.40	0.00
368.60	10.00	367.40	0.00
368.70	10.95	367.40	0.00
368.80	11.90	367.40	0.00
368.90	12.82	367.40	0.00
369.00	13.75	367.40	0.00
369.10	14.62	367.40	0.00
369.20	15.45	367.40	0.00
369.30	16.24	367.40	0.00
369.40	16.93	367.40	0.00
369.50	17.51	367.40	0.00
369.60	18.03	367.40	0.00
369.70	18.54	367.40	0.00
369.80	19.06	367.40	0.00
369.90	19.57	367.40	0.00
370.00	20.07	367.40	0.00
370.10	20.58	367.40	0.00
370.20	21.07	367.40	0.00
370.30	21.56	367.40	0.00
370.40	22.04	367.40	0.00
370.50	22.51	367.40	0.00
370.60	22.99	367.40	0.00
370.70	23.46	367.40	0.00
370.80	23.91	367.40	0.00
370.90	24.36	367.40	0.00
371.00	24.81	367.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.29	367.50	0.00
367.00	-1.29	367.50	0.00
367.10	-1.29	367.50	0.00
367.20	-1.29	367.50	0.00
367.30	-1.29	367.50	0.00
367.40	-1.14	367.50	0.00
367.50	0.00	367.50	0.00
367.60	1.71	367.50	0.00
367.70	2.50	367.50	0.00
367.80	3.21	367.50	0.00
367.90	3.93	367.50	0.00
368.00	4.68	367.50	0.00
368.10	5.50	367.50	0.00
368.20	6.34	367.50	0.00
368.30	7.21	367.50	0.00
368.40	8.14	367.50	0.00
368.50	9.06	367.50	0.00
368.60	10.00	367.50	0.00
368.70	10.95	367.50	0.00
368.80	11.90	367.50	0.00
368.90	12.82	367.50	0.00
369.00	13.75	367.50	0.00
369.10	14.62	367.50	0.00
369.20	15.45	367.50	0.00
369.30	16.24	367.50	0.00
369.40	16.93	367.50	0.00
369.50	17.51	367.50	0.00
369.60	18.03	367.50	0.00
369.70	18.54	367.50	0.00
369.80	19.06	367.50	0.00
369.90	19.57	367.50	0.00
370.00	20.07	367.50	0.00
370.10	20.58	367.50	0.00
370.20	21.07	367.50	0.00
370.30	21.56	367.50	0.00
370.40	22.04	367.50	0.00
370.50	22.51	367.50	0.00
370.60	22.99	367.50	0.00
370.70	23.46	367.50	0.00
370.80	23.91	367.50	0.00
370.90	24.36	367.50	0.00
371.00	24.81	367.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.74	367.60	0.00
367.00	-1.74	367.60	0.00
367.10	-1.74	367.60	0.00
367.20	-1.74	367.60	0.00
367.30	-1.74	367.60	0.00
367.40	-1.73	367.60	0.00
367.50	-1.48	367.60	0.00
367.60	0.00	367.60	0.00
367.70	2.09	367.60	0.00
367.80	3.05	367.60	0.00
367.90	3.86	367.60	0.00
368.00	4.66	367.60	0.00
368.10	5.47	367.60	0.00
368.20	6.34	367.60	0.00
368.30	7.21	367.60	0.00
368.40	8.12	367.60	0.00
368.50	9.06	367.60	0.00
368.60	10.00	367.60	0.00
368.70	10.95	367.60	0.00
368.80	11.90	367.60	0.00
368.90	12.82	367.60	0.00
369.00	13.75	367.60	0.00
369.10	14.62	367.60	0.00
369.20	15.45	367.60	0.00
369.30	16.24	367.60	0.00
369.40	16.93	367.60	0.00
369.50	17.51	367.60	0.00
369.60	18.03	367.60	0.00
369.70	18.54	367.60	0.00
369.80	19.06	367.60	0.00
369.90	19.57	367.60	0.00
370.00	20.07	367.60	0.00
370.10	20.58	367.60	0.00
370.20	21.07	367.60	0.00
370.30	21.56	367.60	0.00
370.40	22.04	367.60	0.00
370.50	22.51	367.60	0.00
370.60	22.99	367.60	0.00
370.70	23.46	367.60	0.00
370.80	23.91	367.60	0.00
370.90	24.36	367.60	0.00
371.00	24.81	367.60	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.25	367.70	0.00
367.00	-2.25	367.70	0.00
367.10	-2.25	367.70	0.00
367.20	-2.25	367.70	0.00
367.30	-2.25	367.70	0.00
367.40	-2.25	367.70	0.00
367.50	-2.19	367.70	0.00
367.60	-1.81	367.70	0.00
367.70	0.00	367.70	0.00
367.80	2.48	367.70	0.00
367.90	3.59	367.70	0.00
368.00	4.54	367.70	0.00
368.10	5.43	367.70	0.00
368.20	6.30	367.70	0.00
368.30	7.20	367.70	0.00
368.40	8.12	367.70	0.00
368.50	9.04	367.70	0.00
368.60	9.99	367.70	0.00
368.70	10.95	367.70	0.00
368.80	11.90	367.70	0.00
368.90	12.82	367.70	0.00
369.00	13.75	367.70	0.00
369.10	14.62	367.70	0.00
369.20	15.45	367.70	0.00
369.30	16.24	367.70	0.00
369.40	16.93	367.70	0.00
369.50	17.51	367.70	0.00
369.60	18.03	367.70	0.00
369.70	18.54	367.70	0.00
369.80	19.06	367.70	0.00
369.90	19.57	367.70	0.00
370.00	20.07	367.70	0.00
370.10	20.58	367.70	0.00
370.20	21.07	367.70	0.00
370.30	21.56	367.70	0.00
370.40	22.04	367.70	0.00
370.50	22.51	367.70	0.00
370.60	22.99	367.70	0.00
370.70	23.46	367.70	0.00
370.80	23.91	367.70	0.00
370.90	24.36	367.70	0.00
371.00	24.81	367.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.81	367.80	0.00
367.00	-2.81	367.80	0.00
367.10	-2.81	367.80	0.00
367.20	-2.81	367.80	0.00
367.30	-2.81	367.80	0.00
367.40	-2.81	367.80	0.00
367.50	-2.81	367.80	0.00
367.60	-2.68	367.80	0.00
367.70	-2.17	367.80	0.00
367.80	0.00	367.80	0.00
367.90	2.88	367.80	0.00
368.00	4.17	367.80	0.00
368.10	5.22	367.80	0.00
368.20	6.18	367.80	0.00
368.30	7.12	367.80	0.00
368.40	8.07	367.80	0.00
368.50	9.02	367.80	0.00
368.60	9.99	367.80	0.00
368.70	10.93	367.80	0.00
368.80	11.90	367.80	0.00
368.90	12.82	367.80	0.00
369.00	13.75	367.80	0.00
369.10	14.62	367.80	0.00
369.20	15.45	367.80	0.00
369.30	16.24	367.80	0.00
369.40	16.93	367.80	0.00
369.50	17.51	367.80	0.00
369.60	18.03	367.80	0.00
369.70	18.54	367.80	0.00
369.80	19.06	367.80	0.00
369.90	19.57	367.80	0.00
370.00	20.07	367.80	0.00
370.10	20.58	367.80	0.00
370.20	21.07	367.80	0.00
370.30	21.56	367.80	0.00
370.40	22.04	367.80	0.00
370.50	22.51	367.80	0.00
370.60	22.99	367.80	0.00
370.70	23.46	367.80	0.00
370.80	23.91	367.80	0.00
370.90	24.36	367.80	0.00
371.00	24.81	367.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-3.43	367.90	0.00
367.00	-3.43	367.90	0.00
367.10	-3.43	367.90	0.00
367.20	-3.43	367.90	0.00
367.30	-3.43	367.90	0.00
367.40	-3.43	367.90	0.00
367.50	-3.43	367.90	0.00
367.60	-3.42	367.90	0.00
367.70	-3.18	367.90	0.00
367.80	-2.53	367.90	0.00
367.90	0.00	367.90	0.00
368.00	3.25	367.90	0.00
368.10	4.71	367.90	0.00
368.20	5.86	367.90	0.00
368.30	6.93	367.90	0.00
368.40	7.93	367.90	0.00
368.50	8.93	367.90	0.00
368.60	9.91	367.90	0.00
368.70	10.90	367.90	0.00
368.80	11.86	367.90	0.00
368.90	12.81	367.90	0.00
369.00	13.75	367.90	0.00
369.10	14.62	367.90	0.00
369.20	15.45	367.90	0.00
369.30	16.24	367.90	0.00
369.40	16.93	367.90	0.00
369.50	17.51	367.90	0.00
369.60	18.03	367.90	0.00
369.70	18.54	367.90	0.00
369.80	19.06	367.90	0.00
369.90	19.57	367.90	0.00
370.00	20.07	367.90	0.00
370.10	20.58	367.90	0.00
370.20	21.07	367.90	0.00
370.30	21.56	367.90	0.00
370.40	22.04	367.90	0.00
370.50	22.51	367.90	0.00
370.60	22.99	367.90	0.00
370.70	23.46	367.90	0.00
370.80	23.91	367.90	0.00
370.90	24.36	367.90	0.00
371.00	24.81	367.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.10	368.00	0.00
367.00	-4.10	368.00	0.00
367.10	-4.10	368.00	0.00
367.20	-4.10	368.00	0.00
367.30	-4.10	368.00	0.00
367.40	-4.10	368.00	0.00
367.50	-4.10	368.00	0.00
367.60	-4.10	368.00	0.00
367.70	-4.03	368.00	0.00
367.80	-3.70	368.00	0.00
367.90	-2.91	368.00	0.00
368.00	0.00	368.00	0.00
368.10	3.64	368.00	0.00
368.20	5.22	368.00	0.00
368.30	6.49	368.00	0.00
368.40	7.64	368.00	0.00
368.50	8.72	368.00	0.00
368.60	9.76	368.00	0.00
368.70	10.77	368.00	0.00
368.80	11.77	368.00	0.00
368.90	12.74	368.00	0.00
369.00	13.69	368.00	0.00
369.10	14.59	368.00	0.00
369.20	15.44	368.00	0.00
369.30	16.24	368.00	0.00
369.40	16.93	368.00	0.00
369.50	17.51	368.00	0.00
369.60	18.03	368.00	0.00
369.70	18.54	368.00	0.00
369.80	19.06	368.00	0.00
369.90	19.57	368.00	0.00
370.00	20.07	368.00	0.00
370.10	20.58	368.00	0.00
370.20	21.07	368.00	0.00
370.30	21.56	368.00	0.00
370.40	22.04	368.00	0.00
370.50	22.51	368.00	0.00
370.60	22.99	368.00	0.00
370.70	23.46	368.00	0.00
370.80	23.91	368.00	0.00
370.90	24.36	368.00	0.00
371.00	24.81	368.00	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.79	368.10	0.00
367.00	-4.79	368.10	0.00
367.10	-4.79	368.10	0.00
367.20	-4.79	368.10	0.00
367.30	-4.79	368.10	0.00
367.40	-4.79	368.10	0.00
367.50	-4.79	368.10	0.00
367.60	-4.79	368.10	0.00
367.70	-4.79	368.10	0.00
367.80	-4.65	368.10	0.00
367.90	-4.20	368.10	0.00
368.00	-3.24	368.10	0.00
368.10	0.00	368.10	0.00
368.20	4.00	368.10	0.00
368.30	5.70	368.10	0.00
368.40	7.09	368.10	0.00
368.50	8.33	368.10	0.00
368.60	9.45	368.10	0.00
368.70	10.54	368.10	0.00
368.80	11.57	368.10	0.00
368.90	12.58	368.10	0.00
369.00	13.55	368.10	0.00
369.10	14.48	368.10	0.00
369.20	15.35	368.10	0.00
369.30	16.16	368.10	0.00
369.40	16.88	368.10	0.00
369.50	17.48	368.10	0.00
369.60	18.01	368.10	0.00
369.70	18.54	368.10	0.00
369.80	19.06	368.10	0.00
369.90	19.57	368.10	0.00
370.00	20.07	368.10	0.00
370.10	20.58	368.10	0.00
370.20	21.07	368.10	0.00
370.30	21.56	368.10	0.00
370.40	22.04	368.10	0.00
370.50	22.51	368.10	0.00
370.60	22.99	368.10	0.00
370.70	23.46	368.10	0.00
370.80	23.91	368.10	0.00
370.90	24.36	368.10	0.00
371.00	24.81	368.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-5.53	368.20	0.00
367.00	-5.53	368.20	0.00
367.10	-5.53	368.20	0.00
367.20	-5.53	368.20	0.00
367.30	-5.53	368.20	0.00
367.40	-5.53	368.20	0.00
367.50	-5.53	368.20	0.00
367.60	-5.53	368.20	0.00
367.70	-5.53	368.20	0.00
367.80	-5.51	368.20	0.00
367.90	-5.25	368.20	0.00
368.00	-4.70	368.20	0.00
368.10	-3.60	368.20	0.00
368.20	0.00	368.20	0.00
368.30	4.28	368.20	0.00
368.40	6.17	368.20	0.00
368.50	7.63	368.20	0.00
368.60	8.93	368.20	0.00
368.70	10.11	368.20	0.00
368.80	11.23	368.20	0.00
368.90	12.29	368.20	0.00
369.00	13.29	368.20	0.00
369.10	14.25	368.20	0.00
369.20	15.14	368.20	0.00
369.30	15.96	368.20	0.00
369.40	16.69	368.20	0.00
369.50	17.28	368.20	0.00
369.60	17.85	368.20	0.00
369.70	18.41	368.20	0.00
369.80	18.96	368.20	0.00
369.90	19.50	368.20	0.00
370.00	20.03	368.20	0.00
370.10	20.55	368.20	0.00
370.20	21.06	368.20	0.00
370.30	21.55	368.20	0.00
370.40	22.04	368.20	0.00
370.50	22.52	368.20	0.00
370.60	22.99	368.20	0.00
370.70	23.46	368.20	0.00
370.80	23.91	368.20	0.00
370.90	24.36	368.20	0.00
371.00	24.81	368.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-6.29	368.30	0.00
367.00	-6.29	368.30	0.00
367.10	-6.29	368.30	0.00
367.20	-6.29	368.30	0.00
367.30	-6.29	368.30	0.00
367.40	-6.29	368.30	0.00
367.50	-6.29	368.30	0.00
367.60	-6.29	368.30	0.00
367.70	-6.29	368.30	0.00
367.80	-6.29	368.30	0.00
367.90	-6.20	368.30	0.00
368.00	-5.84	368.30	0.00
368.10	-5.17	368.30	0.00
368.20	-3.91	368.30	0.00
368.30	0.00	368.30	0.00
368.40	4.58	368.30	0.00
368.50	6.55	368.30	0.00
368.60	8.10	368.30	0.00
368.70	9.45	368.30	0.00
368.80	10.66	368.30	0.00
368.90	11.81	368.30	0.00
369.00	12.86	368.30	0.00
369.10	13.85	368.30	0.00
369.20	14.76	368.30	0.00
369.30	15.59	368.30	0.00
369.40	16.31	368.30	0.00
369.50	16.90	368.30	0.00
369.60	17.51	368.30	0.00
369.70	18.09	368.30	0.00
369.80	18.67	368.30	0.00
369.90	19.26	368.30	0.00
370.00	19.81	368.30	0.00
370.10	20.36	368.30	0.00
370.20	20.90	368.30	0.00
370.30	21.42	368.30	0.00
370.40	21.93	368.30	0.00
370.50	22.43	368.30	0.00
370.60	22.93	368.30	0.00
370.70	23.41	368.30	0.00
370.80	23.88	368.30	0.00
370.90	24.35	368.30	0.00
371.00	24.79	368.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.08	368.40	0.00
367.00	-7.08	368.40	0.00
367.10	-7.08	368.40	0.00
367.20	-7.08	368.40	0.00
367.30	-7.08	368.40	0.00
367.40	-7.08	368.40	0.00
367.50	-7.08	368.40	0.00
367.60	-7.08	368.40	0.00
367.70	-7.08	368.40	0.00
367.80	-7.08	368.40	0.00
367.90	-7.06	368.40	0.00
368.00	-6.87	368.40	0.00
368.10	-6.41	368.40	0.00
368.20	-5.63	368.40	0.00
368.30	-4.24	368.40	0.00
368.40	0.00	368.40	0.00
368.50	4.82	368.40	0.00
368.60	6.85	368.40	0.00
368.70	8.45	368.40	0.00
368.80	9.85	368.40	0.00
368.90	11.06	368.40	0.00
369.00	12.20	368.40	0.00
369.10	13.22	368.40	0.00
369.20	14.16	368.40	0.00
369.30	14.96	368.40	0.00
369.40	15.61	368.40	0.00
369.50	16.26	368.40	0.00
369.60	16.91	368.40	0.00
369.70	17.56	368.40	0.00
369.80	18.19	368.40	0.00
369.90	18.81	368.40	0.00
370.00	19.41	368.40	0.00
370.10	19.98	368.40	0.00
370.20	20.55	368.40	0.00
370.30	21.11	368.40	0.00
370.40	21.65	368.40	0.00
370.50	22.17	368.40	0.00
370.60	22.69	368.40	0.00
370.70	23.19	368.40	0.00
370.80	23.69	368.40	0.00
370.90	24.18	368.40	0.00
371.00	24.65	368.40	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.87	368.50	0.00
367.00	-7.87	368.50	0.00
367.10	-7.87	368.50	0.00
367.20	-7.87	368.50	0.00
367.30	-7.87	368.50	0.00
367.40	-7.87	368.50	0.00
367.50	-7.87	368.50	0.00
367.60	-7.87	368.50	0.00
367.70	-7.87	368.50	0.00
367.80	-7.87	368.50	0.00
367.90	-7.87	368.50	0.00
368.00	-7.80	368.50	0.00
368.10	-7.51	368.50	0.00
368.20	-6.94	368.50	0.00
368.30	-6.01	368.50	0.00
368.40	-4.48	368.50	0.00
368.50	0.00	368.50	0.00
368.60	4.94	368.50	0.00
368.70	7.00	368.50	0.00
368.80	8.64	368.50	0.00
368.90	10.00	368.50	0.00
369.00	11.18	368.50	0.00
369.10	12.21	368.50	0.00
369.20	13.03	368.50	0.00
369.30	13.74	368.50	0.00
369.40	14.58	368.50	0.00
369.50	15.36	368.50	0.00
369.60	16.12	368.50	0.00
369.70	16.84	368.50	0.00
369.80	17.53	368.50	0.00
369.90	18.18	368.50	0.00
370.00	18.82	368.50	0.00
370.10	19.44	368.50	0.00
370.20	20.04	368.50	0.00
370.30	20.62	368.50	0.00
370.40	21.18	368.50	0.00
370.50	21.74	368.50	0.00
370.60	22.27	368.50	0.00
370.70	22.79	368.50	0.00
370.80	23.30	368.50	0.00
370.90	23.80	368.50	0.00
371.00	24.30	368.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-8.65	368.60	0.00
367.00	-8.65	368.60	0.00
367.10	-8.65	368.60	0.00
367.20	-8.65	368.60	0.00
367.30	-8.65	368.60	0.00
367.40	-8.65	368.60	0.00
367.50	-8.65	368.60	0.00
367.60	-8.65	368.60	0.00
367.70	-8.65	368.60	0.00
367.80	-8.65	368.60	0.00
367.90	-8.65	368.60	0.00
368.00	-8.64	368.60	0.00
368.10	-8.48	368.60	0.00
368.20	-8.08	368.60	0.00
368.30	-7.39	368.60	0.00
368.40	-6.34	368.60	0.00
368.50	-4.63	368.60	0.00
368.60	0.00	368.60	0.00
368.70	4.95	368.60	0.00
368.80	6.98	368.60	0.00
368.90	8.53	368.60	0.00
369.00	9.82	368.60	0.00
369.10	10.89	368.60	0.00
369.20	11.90	368.60	0.00
369.30	12.85	368.60	0.00
369.40	13.74	368.60	0.00
369.50	14.58	368.60	0.00
369.60	15.36	368.60	0.00
369.70	16.12	368.60	0.00
369.80	16.83	368.60	0.00
369.90	17.52	368.60	0.00
370.00	18.19	368.60	0.00
370.10	18.83	368.60	0.00
370.20	19.44	368.60	0.00
370.30	20.03	368.60	0.00
370.40	20.62	368.60	0.00
370.50	21.18	368.60	0.00
370.60	21.73	368.60	0.00
370.70	22.27	368.60	0.00
370.80	22.79	368.60	0.00
370.90	23.31	368.60	0.00
371.00	23.80	368.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-9.42	368.70	0.00
367.00	-9.42	368.70	0.00
367.10	-9.42	368.70	0.00
367.20	-9.42	368.70	0.00
367.30	-9.42	368.70	0.00
367.40	-9.42	368.70	0.00
367.50	-9.42	368.70	0.00
367.60	-9.42	368.70	0.00
367.70	-9.42	368.70	0.00
367.80	-9.42	368.70	0.00
367.90	-9.42	368.70	0.00
368.00	-9.42	368.70	0.00
368.10	-9.35	368.70	0.00
368.20	-9.06	368.70	0.00
368.30	-8.56	368.70	0.00
368.40	-7.75	368.70	0.00
368.50	-6.56	368.70	0.00
368.60	-4.77	368.70	0.00
368.70	0.00	368.70	0.00
368.80	4.89	368.70	0.00
368.90	6.93	368.70	0.00
369.00	8.45	368.70	0.00
369.10	9.71	368.70	0.00
369.20	10.86	368.70	0.00
369.30	11.91	368.70	0.00
369.40	12.86	368.70	0.00
369.50	13.74	368.70	0.00
369.60	14.57	368.70	0.00
369.70	15.37	368.70	0.00
369.80	16.12	368.70	0.00
369.90	16.84	368.70	0.00
370.00	17.52	368.70	0.00
370.10	18.19	368.70	0.00
370.20	18.82	368.70	0.00
370.30	19.43	368.70	0.00
370.40	20.04	368.70	0.00
370.50	20.62	368.70	0.00
370.60	21.18	368.70	0.00
370.70	21.73	368.70	0.00
370.80	22.26	368.70	0.00
370.90	22.80	368.70	0.00
371.00	23.31	368.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.16	368.80	0.00
367.00	-10.16	368.80	0.00
367.10	-10.16	368.80	0.00
367.20	-10.16	368.80	0.00
367.30	-10.16	368.80	0.00
367.40	-10.16	368.80	0.00
367.50	-10.16	368.80	0.00
367.60	-10.16	368.80	0.00
367.70	-10.16	368.80	0.00
367.80	-10.16	368.80	0.00
367.90	-10.16	368.80	0.00
368.00	-10.16	368.80	0.00
368.10	-10.13	368.80	0.00
368.20	-9.95	368.80	0.00
368.30	-9.56	368.80	0.00
368.40	-8.94	368.80	0.00
368.50	-8.01	368.80	0.00
368.60	-6.72	368.80	0.00
368.70	-4.82	368.80	0.00
368.80	0.00	368.80	0.00
368.90	4.85	368.80	0.00
369.00	6.87	368.80	0.00
369.10	8.43	368.80	0.00
369.20	9.72	368.80	0.00
369.30	10.86	368.80	0.00
369.40	11.91	368.80	0.00
369.50	12.86	368.80	0.00
369.60	13.74	368.80	0.00
369.70	14.58	368.80	0.00
369.80	15.37	368.80	0.00
369.90	16.12	368.80	0.00
370.00	16.83	368.80	0.00
370.10	17.52	368.80	0.00
370.20	18.19	368.80	0.00
370.30	18.82	368.80	0.00
370.40	19.44	368.80	0.00
370.50	20.04	368.80	0.00
370.60	20.62	368.80	0.00
370.70	21.18	368.80	0.00
370.80	21.73	368.80	0.00
370.90	22.27	368.80	0.00
371.00	22.79	368.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.87	368.90	0.00
367.00	-10.87	368.90	0.00
367.10	-10.87	368.90	0.00
367.20	-10.87	368.90	0.00
367.30	-10.87	368.90	0.00
367.40	-10.87	368.90	0.00
367.50	-10.87	368.90	0.00
367.60	-10.87	368.90	0.00
367.70	-10.87	368.90	0.00
367.80	-10.87	368.90	0.00
367.90	-10.87	368.90	0.00
368.00	-10.87	368.90	0.00
368.10	-10.87	368.90	0.00
368.20	-10.78	368.90	0.00
368.30	-10.49	368.90	0.00
368.40	-9.99	368.90	0.00
368.50	-9.25	368.90	0.00
368.60	-8.20	368.90	0.00
368.70	-6.82	368.90	0.00
368.80	-4.86	368.90	0.00
368.90	0.00	368.90	0.00
369.00	4.87	368.90	0.00
369.10	6.86	368.90	0.00
369.20	8.42	368.90	0.00
369.30	9.73	368.90	0.00
369.40	10.87	368.90	0.00
369.50	11.91	368.90	0.00
369.60	12.86	368.90	0.00
369.70	13.74	368.90	0.00
369.80	14.58	368.90	0.00
369.90	15.37	368.90	0.00
370.00	16.12	368.90	0.00
370.10	16.84	368.90	0.00
370.20	17.52	368.90	0.00
370.30	18.18	368.90	0.00
370.40	18.82	368.90	0.00
370.50	19.44	368.90	0.00
370.60	20.04	368.90	0.00
370.70	20.61	368.90	0.00
370.80	21.18	368.90	0.00
370.90	21.74	368.90	0.00
371.00	22.27	368.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-11.58	369.00	0.00
367.00	-11.58	369.00	0.00
367.10	-11.58	369.00	0.00
367.20	-11.58	369.00	0.00
367.30	-11.58	369.00	0.00
367.40	-11.58	369.00	0.00
367.50	-11.58	369.00	0.00
367.60	-11.58	369.00	0.00
367.70	-11.58	369.00	0.00
367.80	-11.58	369.00	0.00
367.90	-11.58	369.00	0.00
368.00	-11.58	369.00	0.00
368.10	-11.58	369.00	0.00
368.20	-11.54	369.00	0.00
368.30	-11.34	369.00	0.00
368.40	-10.94	369.00	0.00
368.50	-10.32	369.00	0.00
368.60	-9.47	369.00	0.00
368.70	-8.34	369.00	0.00
368.80	-6.87	369.00	0.00
368.90	-4.86	369.00	0.00
369.00	0.00	369.00	0.00
369.10	4.84	369.00	0.00
369.20	6.88	369.00	0.00
369.30	8.41	369.00	0.00
369.40	9.72	369.00	0.00
369.50	10.86	369.00	0.00
369.60	11.90	369.00	0.00
369.70	12.85	369.00	0.00
369.80	13.74	369.00	0.00
369.90	14.58	369.00	0.00
370.00	15.37	369.00	0.00
370.10	16.12	369.00	0.00
370.20	16.84	369.00	0.00
370.30	17.52	369.00	0.00
370.40	18.18	369.00	0.00
370.50	18.82	369.00	0.00
370.60	19.43	369.00	0.00
370.70	20.04	369.00	0.00
370.80	20.62	369.00	0.00
370.90	21.18	369.00	0.00
371.00	21.73	369.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.25	369.10	0.00
367.00	-12.25	369.10	0.00
367.10	-12.25	369.10	0.00
367.20	-12.25	369.10	0.00
367.30	-12.25	369.10	0.00
367.40	-12.25	369.10	0.00
367.50	-12.25	369.10	0.00
367.60	-12.25	369.10	0.00
367.70	-12.25	369.10	0.00
367.80	-12.25	369.10	0.00
367.90	-12.25	369.10	0.00
368.00	-12.25	369.10	0.00
368.10	-12.25	369.10	0.00
368.20	-12.25	369.10	0.00
368.30	-12.12	369.10	0.00
368.40	-11.80	369.10	0.00
368.50	-11.30	369.10	0.00
368.60	-10.56	369.10	0.00
368.70	-9.61	369.10	0.00
368.80	-8.39	369.10	0.00
368.90	-6.87	369.10	0.00
369.00	-4.86	369.10	0.00
369.10	0.00	369.10	0.00
369.20	4.85	369.10	0.00
369.30	6.87	369.10	0.00
369.40	8.42	369.10	0.00
369.50	9.72	369.10	0.00
369.60	10.86	369.10	0.00
369.70	11.90	369.10	0.00
369.80	12.86	369.10	0.00
369.90	13.74	369.10	0.00
370.00	14.58	369.10	0.00
370.10	15.37	369.10	0.00
370.20	16.12	369.10	0.00
370.30	16.84	369.10	0.00
370.40	17.53	369.10	0.00
370.50	18.18	369.10	0.00
370.60	18.82	369.10	0.00
370.70	19.43	369.10	0.00
370.80	20.03	369.10	0.00
370.90	20.62	369.10	0.00
371.00	21.18	369.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.92	369.20	0.00
367.00	-12.92	369.20	0.00
367.10	-12.92	369.20	0.00
367.20	-12.92	369.20	0.00
367.30	-12.92	369.20	0.00
367.40	-12.92	369.20	0.00
367.50	-12.92	369.20	0.00
367.60	-12.92	369.20	0.00
367.70	-12.92	369.20	0.00
367.80	-12.92	369.20	0.00
367.90	-12.92	369.20	0.00
368.00	-12.92	369.20	0.00
368.10	-12.92	369.20	0.00
368.20	-12.92	369.20	0.00
368.30	-12.85	369.20	0.00
368.40	-12.61	369.20	0.00
368.50	-12.18	369.20	0.00
368.60	-11.56	369.20	0.00
368.70	-10.73	369.20	0.00
368.80	-9.70	369.20	0.00
368.90	-8.42	369.20	0.00
369.00	-6.87	369.20	0.00
369.10	-4.86	369.20	0.00
369.20	0.00	369.20	0.00
369.30	4.88	369.20	0.00
369.40	6.87	369.20	0.00
369.50	8.42	369.20	0.00
369.60	9.71	369.20	0.00
369.70	10.88	369.20	0.00
369.80	11.91	369.20	0.00
369.90	12.87	369.20	0.00
370.00	13.75	369.20	0.00
370.10	14.58	369.20	0.00
370.20	15.37	369.20	0.00
370.30	16.12	369.20	0.00
370.40	16.84	369.20	0.00
370.50	17.52	369.20	0.00
370.60	18.19	369.20	0.00
370.70	18.82	369.20	0.00
370.80	19.43	369.20	0.00
370.90	20.04	369.20	0.00
371.00	20.62	369.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-13.58	369.30	0.00
367.00	-13.58	369.30	0.00
367.10	-13.58	369.30	0.00
367.20	-13.58	369.30	0.00
367.30	-13.58	369.30	0.00
367.40	-13.58	369.30	0.00
367.50	-13.58	369.30	0.00
367.60	-13.58	369.30	0.00
367.70	-13.58	369.30	0.00
367.80	-13.58	369.30	0.00
367.90	-13.58	369.30	0.00
368.00	-13.58	369.30	0.00
368.10	-13.58	369.30	0.00
368.20	-13.58	369.30	0.00
368.30	-13.55	369.30	0.00
368.40	-13.38	369.30	0.00
368.50	-13.02	369.30	0.00
368.60	-12.48	369.30	0.00
368.70	-11.75	369.30	0.00
368.80	-10.82	369.30	0.00
368.90	-9.73	369.30	0.00
369.00	-8.42	369.30	0.00
369.10	-6.87	369.30	0.00
369.20	-4.86	369.30	0.00
369.30	0.00	369.30	0.00
369.40	4.86	369.30	0.00
369.50	6.86	369.30	0.00
369.60	8.41	369.30	0.00
369.70	9.72	369.30	0.00
369.80	10.87	369.30	0.00
369.90	11.90	369.30	0.00
370.00	12.86	369.30	0.00
370.10	13.75	369.30	0.00
370.20	14.58	369.30	0.00
370.30	15.36	369.30	0.00
370.40	16.12	369.30	0.00
370.50	16.83	369.30	0.00
370.60	17.52	369.30	0.00
370.70	18.19	369.30	0.00
370.80	18.82	369.30	0.00
370.90	19.44	369.30	0.00
371.00	20.04	369.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.22	369.40	0.00
367.00	-14.22	369.40	0.00
367.10	-14.22	369.40	0.00
367.20	-14.22	369.40	0.00
367.30	-14.22	369.40	0.00
367.40	-14.22	369.40	0.00
367.50	-14.22	369.40	0.00
367.60	-14.22	369.40	0.00
367.70	-14.22	369.40	0.00
367.80	-14.22	369.40	0.00
367.90	-14.22	369.40	0.00
368.00	-14.22	369.40	0.00
368.10	-14.22	369.40	0.00
368.20	-14.22	369.40	0.00
368.30	-14.22	369.40	0.00
368.40	-14.09	369.40	0.00
368.50	-13.80	369.40	0.00
368.60	-13.33	369.40	0.00
368.70	-12.68	369.40	0.00
368.80	-11.86	369.40	0.00
368.90	-10.87	369.40	0.00
369.00	-9.73	369.40	0.00
369.10	-8.42	369.40	0.00
369.20	-6.87	369.40	0.00
369.30	-4.86	369.40	0.00
369.40	0.00	369.40	0.00
369.50	4.88	369.40	0.00
369.60	6.86	369.40	0.00
369.70	8.43	369.40	0.00
369.80	9.72	369.40	0.00
369.90	10.87	369.40	0.00
370.00	11.90	369.40	0.00
370.10	12.86	369.40	0.00
370.20	13.74	369.40	0.00
370.30	14.58	369.40	0.00
370.40	15.37	369.40	0.00
370.50	16.12	369.40	0.00
370.60	16.83	369.40	0.00
370.70	17.51	369.40	0.00
370.80	18.19	369.40	0.00
370.90	18.82	369.40	0.00
371.00	19.44	369.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.84	369.50	0.00
367.00	-14.84	369.50	0.00
367.10	-14.84	369.50	0.00
367.20	-14.84	369.50	0.00
367.30	-14.84	369.50	0.00
367.40	-14.84	369.50	0.00
367.50	-14.84	369.50	0.00
367.60	-14.84	369.50	0.00
367.70	-14.84	369.50	0.00
367.80	-14.84	369.50	0.00
367.90	-14.84	369.50	0.00
368.00	-14.84	369.50	0.00
368.10	-14.84	369.50	0.00
368.20	-14.84	369.50	0.00
368.30	-14.84	369.50	0.00
368.40	-14.77	369.50	0.00
368.50	-14.53	369.50	0.00
368.60	-14.13	369.50	0.00
368.70	-13.55	369.50	0.00
368.80	-12.80	369.50	0.00
368.90	-11.90	369.50	0.00
369.00	-10.87	369.50	0.00
369.10	-9.73	369.50	0.00
369.20	-8.42	369.50	0.00
369.30	-6.87	369.50	0.00
369.40	-4.86	369.50	0.00
369.50	0.00	369.50	0.00
369.60	4.84	369.50	0.00
369.70	6.87	369.50	0.00
369.80	8.42	369.50	0.00
369.90	9.73	369.50	0.00
370.00	10.86	369.50	0.00
370.10	11.90	369.50	0.00
370.20	12.86	369.50	0.00
370.30	13.75	369.50	0.00
370.40	14.58	369.50	0.00
370.50	15.36	369.50	0.00
370.60	16.11	369.50	0.00
370.70	16.83	369.50	0.00
370.80	17.52	369.50	0.00
370.90	18.18	369.50	0.00
371.00	18.82	369.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-15.46	369.60	0.00
367.00	-15.46	369.60	0.00
367.10	-15.46	369.60	0.00
367.20	-15.46	369.60	0.00
367.30	-15.46	369.60	0.00
367.40	-15.46	369.60	0.00
367.50	-15.46	369.60	0.00
367.60	-15.46	369.60	0.00
367.70	-15.46	369.60	0.00
367.80	-15.46	369.60	0.00
367.90	-15.46	369.60	0.00
368.00	-15.46	369.60	0.00
368.10	-15.46	369.60	0.00
368.20	-15.46	369.60	0.00
368.30	-15.46	369.60	0.00
368.40	-15.43	369.60	0.00
368.50	-15.23	369.60	0.00
368.60	-14.88	369.60	0.00
368.70	-14.36	369.60	0.00
368.80	-13.69	369.60	0.00
368.90	-12.85	369.60	0.00
369.00	-11.90	369.60	0.00
369.10	-10.87	369.60	0.00
369.20	-9.73	369.60	0.00
369.30	-8.42	369.60	0.00
369.40	-6.87	369.60	0.00
369.50	-4.86	369.60	0.00
369.60	0.00	369.60	0.00
369.70	4.85	369.60	0.00
369.80	6.87	369.60	0.00
369.90	8.41	369.60	0.00
370.00	9.73	369.60	0.00
370.10	10.87	369.60	0.00
370.20	11.90	369.60	0.00
370.30	12.87	369.60	0.00
370.40	13.75	369.60	0.00
370.50	14.58	369.60	0.00
370.60	15.36	369.60	0.00
370.70	16.12	369.60	0.00
370.80	16.83	369.60	0.00
370.90	17.52	369.60	0.00
371.00	18.19	369.60	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.06	369.70	0.00
367.00	-16.06	369.70	0.00
367.10	-16.06	369.70	0.00
367.20	-16.06	369.70	0.00
367.30	-16.06	369.70	0.00
367.40	-16.06	369.70	0.00
367.50	-16.06	369.70	0.00
367.60	-16.06	369.70	0.00
367.70	-16.06	369.70	0.00
367.80	-16.06	369.70	0.00
367.90	-16.06	369.70	0.00
368.00	-16.06	369.70	0.00
368.10	-16.06	369.70	0.00
368.20	-16.06	369.70	0.00
368.30	-16.06	369.70	0.00
368.40	-16.05	369.70	0.00
368.50	-15.90	369.70	0.00
368.60	-15.59	369.70	0.00
368.70	-15.14	369.70	0.00
368.80	-14.52	369.70	0.00
368.90	-13.74	369.70	0.00
369.00	-12.85	369.70	0.00
369.10	-11.90	369.70	0.00
369.20	-10.87	369.70	0.00
369.30	-9.73	369.70	0.00
369.40	-8.42	369.70	0.00
369.50	-6.87	369.70	0.00
369.60	-4.86	369.70	0.00
369.70	0.00	369.70	0.00
369.80	4.85	369.70	0.00
369.90	6.87	369.70	0.00
370.00	8.41	369.70	0.00
370.10	9.73	369.70	0.00
370.20	10.87	369.70	0.00
370.30	11.91	369.70	0.00
370.40	12.86	369.70	0.00
370.50	13.75	369.70	0.00
370.60	14.58	369.70	0.00
370.70	15.37	369.70	0.00
370.80	16.12	369.70	0.00
370.90	16.84	369.70	0.00
371.00	17.52	369.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.64	369.80	0.00
367.00	-16.64	369.80	0.00
367.10	-16.64	369.80	0.00
367.20	-16.64	369.80	0.00
367.30	-16.64	369.80	0.00
367.40	-16.64	369.80	0.00
367.50	-16.64	369.80	0.00
367.60	-16.64	369.80	0.00
367.70	-16.64	369.80	0.00
367.80	-16.64	369.80	0.00
367.90	-16.64	369.80	0.00
368.00	-16.64	369.80	0.00
368.10	-16.64	369.80	0.00
368.20	-16.64	369.80	0.00
368.30	-16.64	369.80	0.00
368.40	-16.64	369.80	0.00
368.50	-16.55	369.80	0.00
368.60	-16.28	369.80	0.00
368.70	-15.85	369.80	0.00
368.80	-15.29	369.80	0.00
368.90	-14.58	369.80	0.00
369.00	-13.74	369.80	0.00
369.10	-12.85	369.80	0.00
369.20	-11.90	369.80	0.00
369.30	-10.87	369.80	0.00
369.40	-9.73	369.80	0.00
369.50	-8.42	369.80	0.00
369.60	-6.87	369.80	0.00
369.70	-4.86	369.80	0.00
369.80	0.00	369.80	0.00
369.90	4.87	369.80	0.00
370.00	6.88	369.80	0.00
370.10	8.42	369.80	0.00
370.20	9.73	369.80	0.00
370.30	10.86	369.80	0.00
370.40	11.90	369.80	0.00
370.50	12.86	369.80	0.00
370.60	13.75	369.80	0.00
370.70	14.58	369.80	0.00
370.80	15.37	369.80	0.00
370.90	16.11	369.80	0.00
371.00	16.84	369.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.21	369.90	0.00
367.00	-17.21	369.90	0.00
367.10	-17.21	369.90	0.00
367.20	-17.21	369.90	0.00
367.30	-17.21	369.90	0.00
367.40	-17.21	369.90	0.00
367.50	-17.21	369.90	0.00
367.60	-17.21	369.90	0.00
367.70	-17.21	369.90	0.00
367.80	-17.21	369.90	0.00
367.90	-17.21	369.90	0.00
368.00	-17.21	369.90	0.00
368.10	-17.21	369.90	0.00
368.20	-17.21	369.90	0.00
368.30	-17.21	369.90	0.00
368.40	-17.21	369.90	0.00
368.50	-17.15	369.90	0.00
368.60	-16.94	369.90	0.00
368.70	-16.57	369.90	0.00
368.80	-16.03	369.90	0.00
368.90	-15.37	369.90	0.00
369.00	-14.58	369.90	0.00
369.10	-13.74	369.90	0.00
369.20	-12.85	369.90	0.00
369.30	-11.90	369.90	0.00
369.40	-10.87	369.90	0.00
369.50	-9.73	369.90	0.00
369.60	-8.42	369.90	0.00
369.70	-6.87	369.90	0.00
369.80	-4.86	369.90	0.00
369.90	0.00	369.90	0.00
370.00	4.84	369.90	0.00
370.10	6.89	369.90	0.00
370.20	8.41	369.90	0.00
370.30	9.73	369.90	0.00
370.40	10.87	369.90	0.00
370.50	11.90	369.90	0.00
370.60	12.86	369.90	0.00
370.70	13.75	369.90	0.00
370.80	14.57	369.90	0.00
370.90	15.36	369.90	0.00
371.00	16.11	369.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.79	370.00	0.00
367.00	-17.79	370.00	0.00
367.10	-17.79	370.00	0.00
367.20	-17.79	370.00	0.00
367.30	-17.79	370.00	0.00
367.40	-17.79	370.00	0.00
367.50	-17.79	370.00	0.00
367.60	-17.79	370.00	0.00
367.70	-17.79	370.00	0.00
367.80	-17.79	370.00	0.00
367.90	-17.79	370.00	0.00
368.00	-17.79	370.00	0.00
368.10	-17.79	370.00	0.00
368.20	-17.79	370.00	0.00
368.30	-17.79	370.00	0.00
368.40	-17.79	370.00	0.00
368.50	-17.75	370.00	0.00
368.60	-17.57	370.00	0.00
368.70	-17.24	370.00	0.00
368.80	-16.75	370.00	0.00
368.90	-16.12	370.00	0.00
369.00	-15.37	370.00	0.00
369.10	-14.58	370.00	0.00
369.20	-13.74	370.00	0.00
369.30	-12.85	370.00	0.00
369.40	-11.90	370.00	0.00
369.50	-10.87	370.00	0.00
369.60	-9.73	370.00	0.00
369.70	-8.42	370.00	0.00
369.80	-6.87	370.00	0.00
369.90	-4.86	370.00	0.00
370.00	0.00	370.00	0.00
370.10	4.84	370.00	0.00
370.20	6.88	370.00	0.00
370.30	8.43	370.00	0.00
370.40	9.72	370.00	0.00
370.50	10.87	370.00	0.00
370.60	11.90	370.00	0.00
370.70	12.86	370.00	0.00
370.80	13.74	370.00	0.00
370.90	14.58	370.00	0.00
371.00	15.37	370.00	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.33	370.10	0.00
367.00	-18.33	370.10	0.00
367.10	-18.33	370.10	0.00
367.20	-18.33	370.10	0.00
367.30	-18.33	370.10	0.00
367.40	-18.33	370.10	0.00
367.50	-18.33	370.10	0.00
367.60	-18.33	370.10	0.00
367.70	-18.33	370.10	0.00
367.80	-18.33	370.10	0.00
367.90	-18.33	370.10	0.00
368.00	-18.33	370.10	0.00
368.10	-18.33	370.10	0.00
368.20	-18.33	370.10	0.00
368.30	-18.33	370.10	0.00
368.40	-18.33	370.10	0.00
368.50	-18.32	370.10	0.00
368.60	-18.17	370.10	0.00
368.70	-17.88	370.10	0.00
368.80	-17.43	370.10	0.00
368.90	-16.83	370.10	0.00
369.00	-16.12	370.10	0.00
369.10	-15.37	370.10	0.00
369.20	-14.58	370.10	0.00
369.30	-13.74	370.10	0.00
369.40	-12.85	370.10	0.00
369.50	-11.90	370.10	0.00
369.60	-10.87	370.10	0.00
369.70	-9.73	370.10	0.00
369.80	-8.42	370.10	0.00
369.90	-6.87	370.10	0.00
370.00	-4.86	370.10	0.00
370.10	0.00	370.10	0.00
370.20	4.88	370.10	0.00
370.30	6.86	370.10	0.00
370.40	8.41	370.10	0.00
370.50	9.71	370.10	0.00
370.60	10.87	370.10	0.00
370.70	11.91	370.10	0.00
370.80	12.86	370.10	0.00
370.90	13.74	370.10	0.00
371.00	14.58	370.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.87	370.20	0.00
367.00	-18.87	370.20	0.00
367.10	-18.87	370.20	0.00
367.20	-18.87	370.20	0.00
367.30	-18.87	370.20	0.00
367.40	-18.87	370.20	0.00
367.50	-18.87	370.20	0.00
367.60	-18.87	370.20	0.00
367.70	-18.87	370.20	0.00
367.80	-18.87	370.20	0.00
367.90	-18.87	370.20	0.00
368.00	-18.87	370.20	0.00
368.10	-18.87	370.20	0.00
368.20	-18.87	370.20	0.00
368.30	-18.87	370.20	0.00
368.40	-18.87	370.20	0.00
368.50	-18.87	370.20	0.00
368.60	-18.76	370.20	0.00
368.70	-18.50	370.20	0.00
368.80	-18.08	370.20	0.00
368.90	-17.52	370.20	0.00
369.00	-16.83	370.20	0.00
369.10	-16.12	370.20	0.00
369.20	-15.37	370.20	0.00
369.30	-14.58	370.20	0.00
369.40	-13.74	370.20	0.00
369.50	-12.85	370.20	0.00
369.60	-11.90	370.20	0.00
369.70	-10.87	370.20	0.00
369.80	-9.73	370.20	0.00
369.90	-8.42	370.20	0.00
370.00	-6.87	370.20	0.00
370.10	-4.86	370.20	0.00
370.20	0.00	370.20	0.00
370.30	4.85	370.20	0.00
370.40	6.88	370.20	0.00
370.50	8.43	370.20	0.00
370.60	9.72	370.20	0.00
370.70	10.86	370.20	0.00
370.80	11.91	370.20	0.00
370.90	12.86	370.20	0.00
371.00	13.74	370.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.42	370.30	0.00
367.00	-19.42	370.30	0.00
367.10	-19.42	370.30	0.00
367.20	-19.42	370.30	0.00
367.30	-19.42	370.30	0.00
367.40	-19.42	370.30	0.00
367.50	-19.42	370.30	0.00
367.60	-19.42	370.30	0.00
367.70	-19.42	370.30	0.00
367.80	-19.42	370.30	0.00
367.90	-19.42	370.30	0.00
368.00	-19.42	370.30	0.00
368.10	-19.42	370.30	0.00
368.20	-19.42	370.30	0.00
368.30	-19.42	370.30	0.00
368.40	-19.42	370.30	0.00
368.50	-19.42	370.30	0.00
368.60	-19.34	370.30	0.00
368.70	-19.10	370.30	0.00
368.80	-18.73	370.30	0.00
368.90	-18.18	370.30	0.00
369.00	-17.52	370.30	0.00
369.10	-16.83	370.30	0.00
369.20	-16.12	370.30	0.00
369.30	-15.37	370.30	0.00
369.40	-14.58	370.30	0.00
369.50	-13.74	370.30	0.00
369.60	-12.85	370.30	0.00
369.70	-11.90	370.30	0.00
369.80	-10.87	370.30	0.00
369.90	-9.73	370.30	0.00
370.00	-8.42	370.30	0.00
370.10	-6.87	370.30	0.00
370.20	-4.86	370.30	0.00
370.30	0.00	370.30	0.00
370.40	4.87	370.30	0.00
370.50	6.89	370.30	0.00
370.60	8.40	370.30	0.00
370.70	9.71	370.30	0.00
370.80	10.87	370.30	0.00
370.90	11.90	370.30	0.00
371.00	12.85	370.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.94	370.40	0.00
367.00	-19.94	370.40	0.00
367.10	-19.94	370.40	0.00
367.20	-19.94	370.40	0.00
367.30	-19.94	370.40	0.00
367.40	-19.94	370.40	0.00
367.50	-19.94	370.40	0.00
367.60	-19.94	370.40	0.00
367.70	-19.94	370.40	0.00
367.80	-19.94	370.40	0.00
367.90	-19.94	370.40	0.00
368.00	-19.94	370.40	0.00
368.10	-19.94	370.40	0.00
368.20	-19.94	370.40	0.00
368.30	-19.94	370.40	0.00
368.40	-19.94	370.40	0.00
368.50	-19.94	370.40	0.00
368.60	-19.88	370.40	0.00
368.70	-19.68	370.40	0.00
368.80	-19.34	370.40	0.00
368.90	-18.82	370.40	0.00
369.00	-18.18	370.40	0.00
369.10	-17.52	370.40	0.00
369.20	-16.83	370.40	0.00
369.30	-16.12	370.40	0.00
369.40	-15.37	370.40	0.00
369.50	-14.58	370.40	0.00
369.60	-13.74	370.40	0.00
369.70	-12.85	370.40	0.00
369.80	-11.90	370.40	0.00
369.90	-10.87	370.40	0.00
370.00	-9.73	370.40	0.00
370.10	-8.42	370.40	0.00
370.20	-6.87	370.40	0.00
370.30	-4.86	370.40	0.00
370.40	0.00	370.40	0.00
370.50	4.88	370.40	0.00
370.60	6.88	370.40	0.00
370.70	8.42	370.40	0.00
370.80	9.72	370.40	0.00
370.90	10.87	370.40	0.00
371.00	11.90	370.40	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.46	370.50	0.00
367.00	-20.46	370.50	0.00
367.10	-20.46	370.50	0.00
367.20	-20.46	370.50	0.00
367.30	-20.46	370.50	0.00
367.40	-20.46	370.50	0.00
367.50	-20.46	370.50	0.00
367.60	-20.46	370.50	0.00
367.70	-20.46	370.50	0.00
367.80	-20.46	370.50	0.00
367.90	-20.46	370.50	0.00
368.00	-20.46	370.50	0.00
368.10	-20.46	370.50	0.00
368.20	-20.46	370.50	0.00
368.30	-20.46	370.50	0.00
368.40	-20.46	370.50	0.00
368.50	-20.46	370.50	0.00
368.60	-20.43	370.50	0.00
368.70	-20.25	370.50	0.00
368.80	-19.93	370.50	0.00
368.90	-19.44	370.50	0.00
369.00	-18.82	370.50	0.00
369.10	-18.18	370.50	0.00
369.20	-17.52	370.50	0.00
369.30	-16.83	370.50	0.00
369.40	-16.12	370.50	0.00
369.50	-15.37	370.50	0.00
369.60	-14.58	370.50	0.00
369.70	-13.74	370.50	0.00
369.80	-12.85	370.50	0.00
369.90	-11.90	370.50	0.00
370.00	-10.87	370.50	0.00
370.10	-9.73	370.50	0.00
370.20	-8.42	370.50	0.00
370.30	-6.87	370.50	0.00
370.40	-4.86	370.50	0.00
370.50	0.00	370.50	0.00
370.60	4.86	370.50	0.00
370.70	6.87	370.50	0.00
370.80	8.43	370.50	0.00
370.90	9.71	370.50	0.00
371.00	10.86	370.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.96	370.60	0.00
367.00	-20.96	370.60	0.00
367.10	-20.96	370.60	0.00
367.20	-20.96	370.60	0.00
367.30	-20.96	370.60	0.00
367.40	-20.96	370.60	0.00
367.50	-20.96	370.60	0.00
367.60	-20.96	370.60	0.00
367.70	-20.96	370.60	0.00
367.80	-20.96	370.60	0.00
367.90	-20.96	370.60	0.00
368.00	-20.96	370.60	0.00
368.10	-20.96	370.60	0.00
368.20	-20.96	370.60	0.00
368.30	-20.96	370.60	0.00
368.40	-20.96	370.60	0.00
368.50	-20.96	370.60	0.00
368.60	-20.95	370.60	0.00
368.70	-20.80	370.60	0.00
368.80	-20.50	370.60	0.00
368.90	-20.04	370.60	0.00
369.00	-19.44	370.60	0.00
369.10	-18.82	370.60	0.00
369.20	-18.18	370.60	0.00
369.30	-17.52	370.60	0.00
369.40	-16.83	370.60	0.00
369.50	-16.12	370.60	0.00
369.60	-15.37	370.60	0.00
369.70	-14.58	370.60	0.00
369.80	-13.74	370.60	0.00
369.90	-12.85	370.60	0.00
370.00	-11.90	370.60	0.00
370.10	-10.87	370.60	0.00
370.20	-9.73	370.60	0.00
370.30	-8.42	370.60	0.00
370.40	-6.87	370.60	0.00
370.50	-4.86	370.60	0.00
370.60	0.00	370.60	0.00
370.70	4.88	370.60	0.00
370.80	6.87	370.60	0.00
370.90	8.43	370.60	0.00
371.00	9.73	370.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.46	370.70	0.00
367.00	-21.46	370.70	0.00
367.10	-21.46	370.70	0.00
367.20	-21.46	370.70	0.00
367.30	-21.46	370.70	0.00
367.40	-21.46	370.70	0.00
367.50	-21.46	370.70	0.00
367.60	-21.46	370.70	0.00
367.70	-21.46	370.70	0.00
367.80	-21.46	370.70	0.00
367.90	-21.46	370.70	0.00
368.00	-21.46	370.70	0.00
368.10	-21.46	370.70	0.00
368.20	-21.46	370.70	0.00
368.30	-21.46	370.70	0.00
368.40	-21.46	370.70	0.00
368.50	-21.46	370.70	0.00
368.60	-21.46	370.70	0.00
368.70	-21.33	370.70	0.00
368.80	-21.06	370.70	0.00
368.90	-20.62	370.70	0.00
369.00	-20.04	370.70	0.00
369.10	-19.44	370.70	0.00
369.20	-18.82	370.70	0.00
369.30	-18.18	370.70	0.00
369.40	-17.52	370.70	0.00
369.50	-16.83	370.70	0.00
369.60	-16.12	370.70	0.00
369.70	-15.37	370.70	0.00
369.80	-14.58	370.70	0.00
369.90	-13.74	370.70	0.00
370.00	-12.85	370.70	0.00
370.10	-11.90	370.70	0.00
370.20	-10.87	370.70	0.00
370.30	-9.73	370.70	0.00
370.40	-8.42	370.70	0.00
370.50	-6.87	370.70	0.00
370.60	-4.86	370.70	0.00
370.70	0.00	370.70	0.00
370.80	4.87	370.70	0.00
370.90	6.86	370.70	0.00
371.00	8.42	370.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.95	370.80	0.00
367.00	-21.95	370.80	0.00
367.10	-21.95	370.80	0.00
367.20	-21.95	370.80	0.00
367.30	-21.95	370.80	0.00
367.40	-21.95	370.80	0.00
367.50	-21.95	370.80	0.00
367.60	-21.95	370.80	0.00
367.70	-21.95	370.80	0.00
367.80	-21.95	370.80	0.00
367.90	-21.95	370.80	0.00
368.00	-21.95	370.80	0.00
368.10	-21.95	370.80	0.00
368.20	-21.95	370.80	0.00
368.30	-21.95	370.80	0.00
368.40	-21.95	370.80	0.00
368.50	-21.95	370.80	0.00
368.60	-21.95	370.80	0.00
368.70	-21.86	370.80	0.00
368.80	-21.61	370.80	0.00
368.90	-21.18	370.80	0.00
369.00	-20.62	370.80	0.00
369.10	-20.04	370.80	0.00
369.20	-19.44	370.80	0.00
369.30	-18.82	370.80	0.00
369.40	-18.18	370.80	0.00
369.50	-17.52	370.80	0.00
369.60	-16.83	370.80	0.00
369.70	-16.12	370.80	0.00
369.80	-15.37	370.80	0.00
369.90	-14.58	370.80	0.00
370.00	-13.74	370.80	0.00
370.10	-12.85	370.80	0.00
370.20	-11.90	370.80	0.00
370.30	-10.87	370.80	0.00
370.40	-9.73	370.80	0.00
370.50	-8.42	370.80	0.00
370.60	-6.87	370.80	0.00
370.70	-4.86	370.80	0.00
370.80	0.00	370.80	0.00
370.90	4.86	370.80	0.00
371.00	6.88	370.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.47	370.90	0.00
367.00	-22.47	370.90	0.00
367.10	-22.47	370.90	0.00
367.20	-22.47	370.90	0.00
367.30	-22.47	370.90	0.00
367.40	-22.47	370.90	0.00
367.50	-22.47	370.90	0.00
367.60	-22.47	370.90	0.00
367.70	-22.47	370.90	0.00
367.80	-22.47	370.90	0.00
367.90	-22.47	370.90	0.00
368.00	-22.47	370.90	0.00
368.10	-22.47	370.90	0.00
368.20	-22.47	370.90	0.00
368.30	-22.47	370.90	0.00
368.40	-22.47	370.90	0.00
368.50	-22.47	370.90	0.00
368.60	-22.47	370.90	0.00
368.70	-22.38	370.90	0.00
368.80	-22.14	370.90	0.00
368.90	-21.73	370.90	0.00
369.00	-21.18	370.90	0.00
369.10	-20.62	370.90	0.00
369.20	-20.04	370.90	0.00
369.30	-19.44	370.90	0.00
369.40	-18.82	370.90	0.00
369.50	-18.18	370.90	0.00
369.60	-17.52	370.90	0.00
369.70	-16.83	370.90	0.00
369.80	-16.12	370.90	0.00
369.90	-15.37	370.90	0.00
370.00	-14.58	370.90	0.00
370.10	-13.74	370.90	0.00
370.20	-12.85	370.90	0.00
370.30	-11.90	370.90	0.00
370.40	-10.87	370.90	0.00
370.50	-9.73	370.90	0.00
370.60	-8.42	370.90	0.00
370.70	-6.87	370.90	0.00
370.80	-4.86	370.90	0.00
370.90	0.00	370.90	0.00
371.00	4.86	370.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.94	371.00	0.00
367.00	-22.94	371.00	0.00
367.10	-22.94	371.00	0.00
367.20	-22.94	371.00	0.00
367.30	-22.94	371.00	0.00
367.40	-22.94	371.00	0.00
367.50	-22.94	371.00	0.00
367.60	-22.94	371.00	0.00
367.70	-22.94	371.00	0.00
367.80	-22.94	371.00	0.00
367.90	-22.94	371.00	0.00
368.00	-22.94	371.00	0.00
368.10	-22.94	371.00	0.00
368.20	-22.94	371.00	0.00
368.30	-22.94	371.00	0.00
368.40	-22.94	371.00	0.00
368.50	-22.94	371.00	0.00
368.60	-22.94	371.00	0.00
368.70	-22.88	371.00	0.00
368.80	-22.66	371.00	0.00
368.90	-22.27	371.00	0.00
369.00	-21.73	371.00	0.00
369.10	-21.18	371.00	0.00
369.20	-20.62	371.00	0.00
369.30	-20.04	371.00	0.00
369.40	-19.44	371.00	0.00
369.50	-18.82	371.00	0.00
369.60	-18.18	371.00	0.00
369.70	-17.52	371.00	0.00
369.80	-16.83	371.00	0.00
369.90	-16.12	371.00	0.00
370.00	-15.37	371.00	0.00
370.10	-14.58	371.00	0.00
370.20	-13.74	371.00	0.00
370.30	-12.85	371.00	0.00
370.40	-11.90	371.00	0.00
370.50	-10.87	371.00	0.00
370.60	-9.73	371.00	0.00
370.70	-8.42	371.00	0.00
370.80	-6.87	371.00	0.00
370.90	-4.86	371.00	0.00
371.00	0.00	371.00	0.00

Contributing Structures

Culvert - 1



Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	370.00	371.00
Culvert-Circular	Culvert - 1	Forward	TW	366.50	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

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Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
<hr/>	
Number of Openings	1
Elevation	370.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s

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Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
<hr/>	
Number of Barrels	1
Diameter	15.0 in
Length	146.50 ft
Length (Computed Barrel)	146.52 ft
Slope (Computed)	0.017 ft/ft

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Outlet Control Data	
<hr/>	
Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft

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Inlet Control Data	
<hr/>	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.087
T2 ratio (HW/D)	1.189
Slope Correction Factor	-0.500

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Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

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T1 Elevation	367.86 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	367.99 ft	T2 Flow	5.49 ft <sup>3</sup> /s

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Subsection: Outlet Input Data  
Label: OCS-B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s



Subsection: Composite Rating Curve  
 Label: OCS-B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.50	0.00	(N/A)	0.00
366.60	0.00	(N/A)	0.00
366.70	0.00	(N/A)	0.00
366.80	0.00	(N/A)	0.00
366.90	0.00	(N/A)	0.00
367.00	0.00	(N/A)	0.00
367.10	0.00	(N/A)	0.00
367.20	0.00	(N/A)	0.00
367.30	0.00	(N/A)	0.00
367.40	0.00	(N/A)	0.00
367.50	0.00	(N/A)	0.00
367.60	0.00	(N/A)	0.00
367.70	0.00	(N/A)	0.00
367.80	0.00	(N/A)	0.00
367.90	0.00	(N/A)	0.00
368.00	0.00	(N/A)	0.00
368.10	0.00	(N/A)	0.00
368.20	0.00	(N/A)	0.00
368.30	0.00	(N/A)	0.00
368.40	0.00	(N/A)	0.00
368.50	0.00	(N/A)	0.00
368.60	0.00	(N/A)	0.00
368.70	0.00	(N/A)	0.00
368.80	0.00	(N/A)	0.00
368.90	0.00	(N/A)	0.00
369.00	0.00	(N/A)	0.00
369.10	0.00	(N/A)	0.00
369.20	0.00	(N/A)	0.00
369.30	0.00	(N/A)	0.00
369.40	0.00	(N/A)	0.00
369.50	0.00	(N/A)	0.00
369.60	0.00	(N/A)	0.00
369.70	0.00	(N/A)	0.00
369.80	0.00	(N/A)	0.00
369.90	0.00	(N/A)	0.00
370.00	0.00	(N/A)	0.00
370.10	0.42	(N/A)	0.00
370.20	1.19	(N/A)	0.00
370.30	2.19	(N/A)	0.00
370.40	3.37	(N/A)	0.00
370.50	4.71	(N/A)	0.00
370.60	6.19	(N/A)	0.00
370.70	7.80	(N/A)	0.00
370.80	9.53	(N/A)	0.00



Subsection: Composite Rating Curve  
Label: OCS-B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

### Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	370.00	371.00
Culvert-Circular	Culvert - 1	Forward	TW	366.50	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	370.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	146.50 ft
Length (Computed Barrel)	146.52 ft
Slope (Computed)	0.017 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.087
T2 ratio (HW/D)	1.189
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.

Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	367.86 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	367.99 ft	T2 Flow	5.49 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
Label: OCS-B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.50	0.00	(N/A)	0.00
366.60	0.00	(N/A)	0.00
366.70	0.00	(N/A)	0.00
366.80	0.00	(N/A)	0.00
366.90	0.00	(N/A)	0.00
367.00	0.00	(N/A)	0.00
367.10	0.00	(N/A)	0.00
367.20	0.00	(N/A)	0.00
367.30	0.00	(N/A)	0.00
367.40	0.00	(N/A)	0.00
367.50	0.00	(N/A)	0.00
367.60	0.00	(N/A)	0.00
367.70	0.00	(N/A)	0.00
367.80	0.00	(N/A)	0.00
367.90	0.00	(N/A)	0.00
368.00	0.00	(N/A)	0.00
368.10	0.00	(N/A)	0.00
368.20	0.00	(N/A)	0.00
368.30	0.00	(N/A)	0.00
368.40	0.00	(N/A)	0.00
368.50	0.00	(N/A)	0.00
368.60	0.00	(N/A)	0.00
368.70	0.00	(N/A)	0.00
368.80	0.00	(N/A)	0.00
368.90	0.00	(N/A)	0.00
369.00	0.00	(N/A)	0.00
369.10	0.00	(N/A)	0.00
369.20	0.00	(N/A)	0.00
369.30	0.00	(N/A)	0.00
369.40	0.00	(N/A)	0.00
369.50	0.00	(N/A)	0.00
369.60	0.00	(N/A)	0.00
369.70	0.00	(N/A)	0.00
369.80	0.00	(N/A)	0.00
369.90	0.00	(N/A)	0.00
370.00	0.00	(N/A)	0.00
370.10	0.42	(N/A)	0.00
370.20	1.19	(N/A)	0.00
370.30	2.19	(N/A)	0.00
370.40	3.37	(N/A)	0.00
370.50	4.71	(N/A)	0.00
370.60	6.19	(N/A)	0.00
370.70	7.80	(N/A)	0.00
370.80	9.53	(N/A)	0.00







Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	370.00	371.00
Culvert-Circular	Culvert - 1	Forward	TW	366.50	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

---

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	370.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s

---

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	146.50 ft
Length (Computed Barrel)	146.52 ft
Slope (Computed)	0.017 ft/ft

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Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft

---

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.087
T2 ratio (HW/D)	1.189
Slope Correction Factor	-0.500

---

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

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T1 Elevation	367.86 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	367.99 ft	T2 Flow	5.49 ft <sup>3</sup> /s

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Subsection: Outlet Input Data  
Label: OCS-B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.50	0.00	(N/A)	0.00
366.60	0.00	(N/A)	0.00
366.70	0.00	(N/A)	0.00
366.80	0.00	(N/A)	0.00
366.90	0.00	(N/A)	0.00
367.00	0.00	(N/A)	0.00
367.10	0.00	(N/A)	0.00
367.20	0.00	(N/A)	0.00
367.30	0.00	(N/A)	0.00
367.40	0.00	(N/A)	0.00
367.50	0.00	(N/A)	0.00
367.60	0.00	(N/A)	0.00
367.70	0.00	(N/A)	0.00
367.80	0.00	(N/A)	0.00
367.90	0.00	(N/A)	0.00
368.00	0.00	(N/A)	0.00
368.10	0.00	(N/A)	0.00
368.20	0.00	(N/A)	0.00
368.30	0.00	(N/A)	0.00
368.40	0.00	(N/A)	0.00
368.50	0.00	(N/A)	0.00
368.60	0.00	(N/A)	0.00
368.70	0.00	(N/A)	0.00
368.80	0.00	(N/A)	0.00
368.90	0.00	(N/A)	0.00
369.00	0.00	(N/A)	0.00
369.10	0.00	(N/A)	0.00
369.20	0.00	(N/A)	0.00
369.30	0.00	(N/A)	0.00
369.40	0.00	(N/A)	0.00
369.50	0.00	(N/A)	0.00
369.60	0.00	(N/A)	0.00
369.70	0.00	(N/A)	0.00
369.80	0.00	(N/A)	0.00
369.90	0.00	(N/A)	0.00
370.00	0.00	(N/A)	0.00
370.10	0.42	(N/A)	0.00
370.20	1.19	(N/A)	0.00
370.30	2.19	(N/A)	0.00
370.40	3.37	(N/A)	0.00
370.50	4.71	(N/A)	0.00
370.60	6.19	(N/A)	0.00
370.70	7.80	(N/A)	0.00
370.80	9.53	(N/A)	0.00



Subsection: Composite Rating Curve  
Label: OCS-B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

### Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	368.06 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	369.06 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	368.96	369.06
Tailwater Settings	Tailwater			(N/A)	(N/A)



Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.96 ft
Weir Length	400.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
368.06	0.00	(N/A)	0.00
368.56	0.00	(N/A)	0.00
368.96	0.00	(N/A)	0.00
369.06	42.12	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
Weir - 1
Weir - 1

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	368.06 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	369.06 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	368.96	369.06
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.96 ft
Weir Length	400.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
368.06	0.00	(N/A)	0.00
368.56	0.00	(N/A)	0.00
368.96	0.00	(N/A)	0.00
369.06	42.12	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
Weir - 1
Weir - 1

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	368.06 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	369.06 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir Tailwater Settings	Weir - 1 Tailwater	Forward	TW	368.96 (N/A)	369.06 (N/A)

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.96 ft
Weir Length	400.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
368.06	0.00	(N/A)	0.00
368.56	0.00	(N/A)	0.00
368.96	0.00	(N/A)	0.00
369.06	42.12	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
Weir - 1
Weir - 1



Subsection: Pond Infiltration Calculations  
 Label: INFILTRATION BASIN A (IN)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Average Infiltration Rating Table**

Elevation (Water Surface) (ft)	Area (Total) (ft <sup>2</sup> )	Flow (Infiltration) (ft <sup>3</sup> /s)
366.90	2,087.1	0.00
367.00	2,143.6	0.30
367.10	2,200.9	0.31
367.20	2,258.9	0.31
367.30	2,317.7	0.32
367.40	2,377.3	0.33
367.50	2,437.6	0.34
367.60	2,498.7	0.35
367.70	2,560.5	0.36
367.80	2,623.1	0.36
367.90	2,686.4	0.37
368.00	2,750.5	0.38
368.10	2,812.9	0.39
368.20	2,876.1	0.40
368.30	2,939.9	0.41
368.40	3,004.4	0.42
368.50	3,069.6	0.43
368.60	3,135.6	0.44
368.70	3,202.2	0.44
368.80	3,269.5	0.45
368.90	3,337.5	0.46
369.00	3,406.3	0.47
369.10	3,475.7	0.48
369.20	3,545.8	0.49
369.30	3,616.7	0.50
369.40	3,688.2	0.51
369.50	3,760.4	0.52
369.60	3,833.4	0.53
369.70	3,907.0	0.54
369.80	3,981.3	0.55
369.90	4,056.3	0.56
370.00	4,132.1	0.57
370.10	4,206.6	0.58
370.20	4,281.9	0.59
370.30	4,357.8	0.61
370.40	4,434.3	0.62
370.50	4,511.6	0.63
370.60	4,589.4	0.64
370.70	4,668.0	0.65
370.80	4,747.2	0.66
370.90	4,827.1	0.67
371.00	4,907.7	0.68

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.90	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.600	367.62	1,742.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	3.18	0.000	0.00
Infiltration...	12.600	0.35	0.000	0.00
Pond Outflow...	12.200	1.87	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	11,115.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	7,172.000	Forward
Pond Outflow...	0.000	Reverse	3,909.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	11,115.000 ft <sup>3</sup>
Volume (Total Out ICPM)	11,081.000 ft <sup>3</sup>
Volume (Ending)	30.000 ft <sup>3</sup>
Elevation (Ending)	366.91 ft
Difference	4.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	6.0000 in/h

**Initial Conditions**

**Calculation Tolerances**

Elevation (Starting Water Surface Computed)	366.90	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

	Maximum Storage	
Time to Peak (hours)	Elevation (ft)	Volume (ft <sup>3</sup> )
12.900	368.88	5,647.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	7.17	0.000	0.00
Infiltration...	12.900	0.46	0.000	0.00
Pond Outflow...	12.100	4.60	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	25,988.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	15,689.000	Forward
Pond Outflow...	0.000	Reverse	10,249.000	Forward

**Mass Balance (ft<sup>3</sup>)**

Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	25,988.000 ft <sup>3</sup>
Volume (Total Out ICPM)	25,938.000 ft <sup>3</sup>
Volume (Ending)	59.000 ft <sup>3</sup>
Elevation (Ending)	366.92 ft
Difference	-10.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.90	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.450	370.43	11,430.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	14.11	0.000	0.00
Infiltration...	12.450	0.62	0.000	0.00
Pond Outflow...	12.050	6.46	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	53,477.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	26,020.000	Forward
Pond Outflow...	0.000	Reverse	27,087.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	53,477.000 ft <sup>3</sup>
Volume (Total Out ICPM)	53,107.000 ft <sup>3</sup>
Volume (Ending)	356.000 ft <sup>3</sup>
Elevation (Ending)	367.05 ft
Difference	13.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Pond Infiltration Calculations  
 Label: INFILTRATION BASIN B (IN)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Average Infiltration Rating Table**

Elevation (Water Surface) (ft)	Area (Total) (ft <sup>2</sup> )	Flow (Infiltration) (ft <sup>3</sup> /s)
366.50	1,290.2	0.00
366.60	1,339.5	0.19
366.70	1,389.8	0.19
366.80	1,441.0	0.20
366.90	1,493.1	0.21
367.00	1,546.1	0.21
367.10	1,600.1	0.22
367.20	1,654.9	0.23
367.30	1,710.8	0.24
367.40	1,767.5	0.25
367.50	1,825.1	0.25
367.60	1,883.7	0.26
367.70	1,943.2	0.27
367.80	2,003.7	0.28
367.90	2,065.0	0.29
368.00	2,127.3	0.30
368.10	2,186.6	0.30
368.20	2,246.8	0.31
368.30	2,307.8	0.32
368.40	2,369.6	0.33
368.50	2,432.2	0.34
368.60	2,495.6	0.35
368.70	2,559.9	0.36
368.80	2,625.0	0.36
368.90	2,690.8	0.37
369.00	2,757.5	0.38
369.10	2,825.1	0.39
369.20	2,893.4	0.40
369.30	2,962.5	0.41
369.40	3,032.5	0.42
369.50	3,103.3	0.43
369.60	3,174.9	0.44
369.70	3,247.3	0.45
369.80	3,320.5	0.46
369.90	3,394.6	0.47
370.00	3,469.4	0.48
370.10	3,541.7	0.49
370.20	3,614.7	0.50
370.30	3,688.4	0.51
370.40	3,762.9	0.52
370.50	3,838.1	0.53
370.60	3,914.0	0.54
370.70	3,990.7	0.55
370.80	4,068.2	0.57

Subsection: Pond Infiltration Calculations  
Label: INFILTRATION BASIN B (IN)  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**Average Infiltration Rating Table**

Elevation (Water Surface) (ft)	Area (Total) (ft <sup>2</sup> )	Flow (Infiltration) (ft <sup>3</sup> /s)
370.90	4,146.4	0.58
371.00	4,225.3	0.59

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.50	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.550	367.62	1,886.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.200	1.87	0.000	0.00
Infiltration...	12.550	0.26	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	3,909.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	3,904.000	Forward
Pond Outflow...	0.000	Reverse	0.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	3,909.000 ft <sup>3</sup>
Volume (Total Out ICPM)	3,904.000 ft <sup>3</sup>
Volume (Ending)	5.000 ft <sup>3</sup>
Elevation (Ending)	366.50 ft
Difference	0.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.50	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.850	368.87	4,944.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	4.60	0.000	0.00
Infiltration...	12.850	0.37	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	10,249.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	10,238.000	Forward
Pond Outflow...	0.000	Reverse	0.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	10,249.000 ft <sup>3</sup>
Volume (Total Out ICPM)	10,238.000 ft <sup>3</sup>
Volume (Ending)	10.000 ft <sup>3</sup>
Elevation (Ending)	366.51 ft
Difference	1.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %



Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.50	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.400	370.36	9,450.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.050	6.46	0.000	0.00
Infiltration...	12.400	0.52	0.000	0.00
Pond Outflow...	12.400	2.86	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	27,087.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	18,670.000	Forward
Pond Outflow...	0.000	Reverse	7,553.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	27,087.000 ft <sup>3</sup>
Volume (Total Out ICPM)	26,223.000 ft <sup>3</sup>
Volume (Ending)	845.000 ft <sup>3</sup>
Elevation (Ending)	367.00 ft
Difference	19.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.1 %

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	3.0000 in/h

**Initial Conditions**

Elevation (Water Surface, Initial)	368.06 ft
Volume (Initial)	0.000 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
368.06	0.00	0.000	21,104.000	0.00	0.00	0.00
368.56	0.00	4,220.800	21,104.000	1.47	1.47	48.36
368.96	0.00	7,597.440	21,104.000	1.47	1.47	85.88
369.06	42.12	8,441.600	21,104.000	1.47	43.59	137.38

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	3.0000 in/h

**Initial Conditions**

Elevation (Water Surface, Initial)	368.06 ft
Volume (Initial)	0.000 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
368.06	0.00	0.000	21,104.000	0.00	0.00	0.00
368.56	0.00	4,220.800	21,104.000	1.47	1.47	48.36
368.96	0.00	7,597.440	21,104.000	1.47	1.47	85.88
369.06	42.12	8,441.600	21,104.000	1.47	43.59	137.38

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	3.0000 in/h

**Initial Conditions**

Elevation (Water Surface, Initial)	368.06 ft
Volume (Initial)	0.000 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
368.06	0.00	0.000	21,104.000	0.00	0.00	0.00
368.56	0.00	4,220.800	21,104.000	1.47	1.47	48.36
368.96	0.00	7,597.440	21,104.000	1.47	1.47	85.88
369.06	42.12	8,441.600	21,104.000	1.47	43.59	137.38

Subsection: Pond Routed Hydrograph (total out)  
 Label: Porous Pavement (OUT)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: Porous Pavement (OUT)  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: Porous Pavement (OUT)  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	2.27 ft <sup>3</sup> /s
Time to Peak	12.300 hours
Hydrograph Volume	661.773 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.200	0.00	0.10	2.27	0.28	0.98
12.450	0.00	0.06	0.00	(N/A)	(N/A)

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: STORMTECH  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Infiltration**

Infiltration Method (Computed) No Infiltration

**Initial Conditions**

Elevation (Water Surface, Initial) 365.50 ft  
 Volume (Initial) 154.000 ft<sup>3</sup>  
 Flow (Initial Outlet) 0.00 ft<sup>3</sup>/s  
 Flow (Initial Infiltration) 0.00 ft<sup>3</sup>/s  
 Flow (Initial, Total) 0.00 ft<sup>3</sup>/s  
 Time Increment 0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
365.00	0.00	0.000	0.000	0.00	0.00	0.00
365.50	0.00	154.160	0.000	0.00	0.00	1.71
366.00	0.14	464.163	0.000	0.00	0.14	5.30
366.50	0.22	761.605	0.000	0.00	0.22	8.68
366.75	0.25	900.715	0.000	0.00	0.25	10.26
367.00	0.40	1,039.824	0.000	0.00	0.40	11.95
367.50	0.81	1,288.225	0.000	0.00	0.81	15.12
368.00	1.03	1,476.817	0.000	0.00	1.03	17.44
368.50	5.92	1,630.977	0.000	0.00	5.92	24.05



Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Infiltration**

Infiltration Method (Computed)                      No Infiltration

**Initial Conditions**

Elevation (Water Surface, Initial)                      365.50 ft  
 Volume (Initial)    154.000 ft<sup>3</sup>  
 Flow (Initial Outlet)                                        0.00 ft<sup>3</sup>/s  
 Flow (Initial Infiltration)                                0.00 ft<sup>3</sup>/s  
 Flow (Initial, Total)                                        0.00 ft<sup>3</sup>/s  
 Time Increment    0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
365.00	0.00	0.000	0.000	0.00	0.00	0.00
365.50	0.00	154.160	0.000	0.00	0.00	1.71
366.00	0.14	464.163	0.000	0.00	0.14	5.30
366.50	0.22	761.605	0.000	0.00	0.22	8.68
366.75	0.25	900.715	0.000	0.00	0.25	10.26
367.00	0.40	1,039.824	0.000	0.00	0.40	11.95
367.50	0.81	1,288.225	0.000	0.00	0.81	15.12
368.00	1.03	1,476.817	0.000	0.00	1.03	17.44
368.50	5.92	1,630.977	0.000	0.00	5.92	24.05

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Infiltration**

Infiltration Method (Computed)                      No Infiltration

**Initial Conditions**

Elevation (Water Surface, Initial)                      365.50 ft  
 Volume (Initial)                      154.000 ft<sup>3</sup>  
 Flow (Initial Outlet)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial Infiltration)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial, Total)                      0.00 ft<sup>3</sup>/s  
 Time Increment                      0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
365.00	0.00	0.000	0.000	0.00	0.00	0.00
365.50	0.00	154.160	0.000	0.00	0.00	1.71
366.00	0.14	464.163	0.000	0.00	0.14	5.30
366.50	0.22	761.605	0.000	0.00	0.22	8.68
366.75	0.25	900.715	0.000	0.00	0.25	10.26
367.00	0.40	1,039.824	0.000	0.00	0.40	11.95
367.50	0.81	1,288.225	0.000	0.00	0.81	15.12
368.00	1.03	1,476.817	0.000	0.00	1.03	17.44
368.50	5.92	1,630.977	0.000	0.00	5.92	24.05

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Peak Discharge	0.26 ft <sup>3</sup> /s
Time to Peak	12.400 hours
Hydrograph Volume	2,593.965 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
6.950	0.00	0.00	0.00	0.00	0.00
7.200	0.00	0.00	0.00	0.00	0.00
7.450	0.00	0.00	0.00	0.00	0.00
7.700	0.00	0.00	0.00	0.00	0.00
7.950	0.00	0.00	0.00	0.00	0.00
8.200	0.00	0.00	0.00	0.00	0.01
8.450	0.01	0.01	0.01	0.01	0.01
8.700	0.01	0.01	0.01	0.01	0.01
8.950	0.01	0.01	0.01	0.01	0.01
9.200	0.01	0.01	0.01	0.01	0.01
9.450	0.01	0.01	0.01	0.01	0.01
9.700	0.01	0.01	0.01	0.02	0.02
9.950	0.02	0.02	0.02	0.02	0.02
10.200	0.02	0.02	0.02	0.02	0.02
10.450	0.02	0.02	0.02	0.02	0.03
10.700	0.03	0.03	0.03	0.03	0.03
10.950	0.03	0.03	0.03	0.03	0.03
11.200	0.04	0.04	0.04	0.04	0.04
11.450	0.05	0.05	0.05	0.05	0.06
11.700	0.07	0.08	0.09	0.10	0.12
11.950	0.14	0.16	0.18	0.21	0.23
12.200	0.24	0.25	0.25	0.25	0.26
12.450	0.25	0.25	0.24	0.24	0.24
12.700	0.23	0.23	0.22	0.21	0.21
12.950	0.20	0.20	0.19	0.19	0.18
13.200	0.18	0.17	0.17	0.16	0.16
13.450	0.15	0.15	0.14	0.14	0.13
13.700	0.13	0.12	0.11	0.11	0.10
13.950	0.10	0.10	0.09	0.09	0.09
14.200	0.08	0.08	0.08	0.07	0.07
14.450	0.07	0.07	0.07	0.06	0.06
14.700	0.06	0.06	0.06	0.06	0.05
14.950	0.05	0.05	0.05	0.05	0.05
15.200	0.05	0.05	0.05	0.04	0.04
15.450	0.04	0.04	0.04	0.04	0.04
15.700	0.04	0.04	0.04	0.04	0.04
15.950	0.03	0.03	0.03	0.03	0.03
16.200	0.03	0.03	0.03	0.03	0.03
16.450	0.03	0.03	0.03	0.03	0.03

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.700	0.03	0.03	0.03	0.03	0.03
16.950	0.03	0.02	0.02	0.02	0.02
17.200	0.02	0.02	0.02	0.02	0.02
17.450	0.02	0.02	0.02	0.02	0.02
17.700	0.02	0.02	0.02	0.02	0.02
17.950	0.02	0.02	0.02	0.02	0.02
18.200	0.02	0.02	0.02	0.02	0.02
18.450	0.02	0.02	0.02	0.02	0.02
18.700	0.02	0.02	0.02	0.02	0.02
18.950	0.02	0.02	0.02	0.02	0.02
19.200	0.02	0.02	0.02	0.02	0.01
19.450	0.01	0.01	0.01	0.01	0.01
19.700	0.01	0.01	0.01	0.01	0.01
19.950	0.01	0.01	0.01	0.01	0.01
20.200	0.01	0.01	0.01	0.01	0.01
20.450	0.01	0.01	0.01	0.01	0.01
20.700	0.01	0.01	0.01	0.01	0.01
20.950	0.01	0.01	0.01	0.01	0.01
21.200	0.01	0.01	0.01	0.01	0.01
21.450	0.01	0.01	0.01	0.01	0.01
21.700	0.01	0.01	0.01	0.01	0.01
21.950	0.01	0.01	0.01	0.01	0.01
22.200	0.01	0.01	0.01	0.01	0.01
22.450	0.01	0.01	0.01	0.01	0.01
22.700	0.01	0.01	0.01	0.01	0.01
22.950	0.01	0.01	0.01	0.01	0.01
23.200	0.01	0.01	0.01	0.01	0.01
23.450	0.01	0.01	0.01	0.01	0.01
23.700	0.01	0.01	0.01	0.01	0.01
23.950	0.01	0.01	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Peak Discharge	0.98 ft <sup>3</sup> /s
Time to Peak	12.200 hours
Hydrograph Volume	5,618.189 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
4.450	0.00	0.00	0.00	0.00	0.00
4.700	0.00	0.00	0.00	0.00	0.00
4.950	0.00	0.00	0.00	0.00	0.00
5.200	0.00	0.00	0.00	0.00	0.00
5.450	0.00	0.00	0.00	0.00	0.00
5.700	0.00	0.01	0.01	0.01	0.01
5.950	0.01	0.01	0.01	0.01	0.01
6.200	0.01	0.01	0.01	0.01	0.01
6.450	0.01	0.01	0.01	0.01	0.01
6.700	0.01	0.01	0.01	0.01	0.01
6.950	0.01	0.01	0.01	0.01	0.01
7.200	0.01	0.01	0.01	0.01	0.01
7.450	0.01	0.01	0.02	0.02	0.02
7.700	0.02	0.02	0.02	0.02	0.02
7.950	0.02	0.02	0.02	0.02	0.02
8.200	0.02	0.02	0.02	0.02	0.02
8.450	0.02	0.02	0.02	0.03	0.03
8.700	0.03	0.03	0.03	0.03	0.03
8.950	0.03	0.03	0.03	0.03	0.03
9.200	0.04	0.04	0.04	0.04	0.04
9.450	0.04	0.04	0.04	0.04	0.04
9.700	0.04	0.05	0.05	0.05	0.05
9.950	0.05	0.05	0.05	0.05	0.05
10.200	0.06	0.06	0.06	0.06	0.06
10.450	0.06	0.06	0.07	0.07	0.07
10.700	0.07	0.07	0.08	0.08	0.08
10.950	0.08	0.08	0.09	0.09	0.09
11.200	0.09	0.10	0.10	0.10	0.11
11.450	0.11	0.12	0.13	0.13	0.15
11.700	0.15	0.17	0.18	0.20	0.22
11.950	0.25	0.39	0.65	0.86	0.96
12.200	0.98	0.95	0.90	0.85	0.78
12.450	0.69	0.61	0.53	0.46	0.40
12.700	0.36	0.33	0.31	0.29	0.27
12.950	0.25	0.25	0.24	0.24	0.23
13.200	0.23	0.23	0.22	0.22	0.22
13.450	0.21	0.21	0.20	0.20	0.19
13.700	0.19	0.19	0.18	0.18	0.18
13.950	0.17	0.17	0.17	0.16	0.16

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
14.200	0.16	0.15	0.15	0.15	0.14
14.450	0.14	0.14	0.13	0.13	0.12
14.700	0.12	0.12	0.11	0.11	0.11
14.950	0.10	0.10	0.10	0.10	0.10
15.200	0.09	0.09	0.09	0.09	0.09
15.450	0.08	0.08	0.08	0.08	0.08
15.700	0.08	0.07	0.07	0.07	0.07
15.950	0.07	0.07	0.07	0.06	0.06
16.200	0.06	0.06	0.06	0.06	0.06
16.450	0.06	0.06	0.05	0.05	0.05
16.700	0.05	0.05	0.05	0.05	0.05
16.950	0.05	0.05	0.05	0.05	0.05
17.200	0.05	0.05	0.04	0.04	0.04
17.450	0.04	0.04	0.04	0.04	0.04
17.700	0.04	0.04	0.04	0.04	0.04
17.950	0.04	0.04	0.04	0.04	0.04
18.200	0.04	0.03	0.03	0.03	0.03
18.450	0.03	0.03	0.03	0.03	0.03
18.700	0.03	0.03	0.03	0.03	0.03
18.950	0.03	0.03	0.03	0.03	0.03
19.200	0.03	0.03	0.03	0.03	0.03
19.450	0.03	0.03	0.03	0.03	0.03
19.700	0.03	0.03	0.03	0.03	0.03
19.950	0.03	0.03	0.03	0.03	0.03
20.200	0.03	0.03	0.03	0.03	0.03
20.450	0.03	0.03	0.03	0.03	0.03
20.700	0.02	0.02	0.02	0.02	0.02
20.950	0.02	0.02	0.02	0.02	0.02
21.200	0.02	0.02	0.02	0.02	0.02
21.450	0.02	0.02	0.02	0.02	0.02
21.700	0.02	0.02	0.02	0.02	0.02
21.950	0.02	0.02	0.02	0.02	0.02
22.200	0.02	0.02	0.02	0.02	0.02
22.450	0.02	0.02	0.02	0.02	0.02
22.700	0.02	0.02	0.02	0.02	0.02
22.950	0.02	0.02	0.02	0.02	0.02
23.200	0.02	0.02	0.02	0.02	0.02
23.450	0.02	0.02	0.02	0.02	0.02
23.700	0.02	0.02	0.02	0.02	0.02
23.950	0.02	0.02	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	2.87 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	11,057.822 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
2.700	0.00	0.00	0.00	0.00	0.00
2.950	0.00	0.00	0.00	0.00	0.00
3.200	0.00	0.00	0.00	0.00	0.00
3.450	0.01	0.01	0.01	0.01	0.01
3.700	0.01	0.01	0.01	0.01	0.01
3.950	0.01	0.01	0.01	0.01	0.01
4.200	0.01	0.01	0.01	0.01	0.01
4.450	0.01	0.01	0.01	0.01	0.01
4.700	0.01	0.01	0.02	0.02	0.02
4.950	0.02	0.02	0.02	0.02	0.02
5.200	0.02	0.02	0.02	0.02	0.02
5.450	0.02	0.02	0.02	0.02	0.02
5.700	0.02	0.02	0.02	0.02	0.02
5.950	0.02	0.02	0.03	0.03	0.03
6.200	0.03	0.03	0.03	0.03	0.03
6.450	0.03	0.03	0.03	0.03	0.03
6.700	0.03	0.03	0.03	0.03	0.03
6.950	0.04	0.04	0.04	0.04	0.04
7.200	0.04	0.04	0.04	0.04	0.04
7.450	0.04	0.04	0.05	0.05	0.05
7.700	0.05	0.05	0.05	0.05	0.05
7.950	0.05	0.05	0.05	0.05	0.06
8.200	0.06	0.06	0.06	0.06	0.06
8.450	0.06	0.06	0.07	0.07	0.07
8.700	0.07	0.07	0.07	0.07	0.08
8.950	0.08	0.08	0.08	0.08	0.09
9.200	0.09	0.09	0.09	0.09	0.09
9.450	0.10	0.10	0.10	0.10	0.10
9.700	0.11	0.11	0.11	0.11	0.11
9.950	0.12	0.12	0.12	0.12	0.12
10.200	0.13	0.13	0.13	0.14	0.14
10.450	0.14	0.14	0.15	0.15	0.15
10.700	0.15	0.15	0.16	0.16	0.16
10.950	0.16	0.17	0.17	0.17	0.18
11.200	0.18	0.18	0.19	0.19	0.20
11.450	0.21	0.21	0.22	0.23	0.24
11.700	0.30	0.39	0.55	0.70	0.84
11.950	1.00	2.69	2.71	2.87	2.46
12.200	1.79	1.42	1.26	1.08	1.02

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.450	0.99	0.93	0.85	0.77	0.67
12.700	0.60	0.54	0.49	0.45	0.41
12.950	0.39	0.37	0.35	0.33	0.32
13.200	0.31	0.29	0.28	0.28	0.27
13.450	0.26	0.25	0.25	0.25	0.25
13.700	0.24	0.24	0.24	0.24	0.24
13.950	0.24	0.23	0.23	0.23	0.23
14.200	0.22	0.22	0.22	0.22	0.21
14.450	0.21	0.21	0.21	0.20	0.20
14.700	0.20	0.20	0.19	0.19	0.19
14.950	0.19	0.18	0.18	0.18	0.18
15.200	0.17	0.17	0.17	0.17	0.17
15.450	0.16	0.16	0.16	0.16	0.15
15.700	0.15	0.15	0.15	0.15	0.14
15.950	0.14	0.13	0.13	0.13	0.13
16.200	0.12	0.12	0.12	0.11	0.11
16.450	0.11	0.11	0.11	0.10	0.10
16.700	0.10	0.10	0.10	0.09	0.09
16.950	0.09	0.09	0.09	0.09	0.09
17.200	0.09	0.08	0.08	0.08	0.08
17.450	0.08	0.08	0.08	0.08	0.08
17.700	0.07	0.07	0.07	0.07	0.07
17.950	0.07	0.07	0.07	0.07	0.07
18.200	0.06	0.06	0.06	0.06	0.06
18.450	0.06	0.06	0.06	0.06	0.06
18.700	0.06	0.06	0.06	0.06	0.06
18.950	0.06	0.06	0.06	0.05	0.05
19.200	0.05	0.05	0.05	0.05	0.05
19.450	0.05	0.05	0.05	0.05	0.05
19.700	0.05	0.05	0.05	0.05	0.05
19.950	0.05	0.05	0.05	0.05	0.05
20.200	0.05	0.05	0.05	0.05	0.05
20.450	0.05	0.05	0.05	0.05	0.05
20.700	0.05	0.05	0.04	0.04	0.04
20.950	0.04	0.04	0.04	0.04	0.04
21.200	0.04	0.04	0.04	0.04	0.04
21.450	0.04	0.04	0.04	0.04	0.04
21.700	0.04	0.04	0.04	0.04	0.04
21.950	0.04	0.04	0.04	0.04	0.04
22.200	0.04	0.04	0.04	0.04	0.04
22.450	0.04	0.04	0.04	0.04	0.04
22.700	0.04	0.04	0.04	0.04	0.04
22.950	0.04	0.04	0.04	0.04	0.04



Subsection: Pond Routed Hydrograph (total out)  
Label: STORMTECH (OUT)  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
23.200	0.04	0.04	0.03	0.03	0.03
23.450	0.03	0.03	0.03	0.03	0.03
23.700	0.03	0.03	0.03	0.03	0.03
23.950	0.03	0.03	(N/A)	(N/A)	(N/A)

# Index

1

1-10-100-90% (Time-Depth Curve, 1 years (Existing Conditions 1 Year Storm))...5, 6

1-10-100-90% (Time-Depth Curve, 1 years (Proposed Conditions 1 Year Storm))...7, 8

1-10-100-90% (Time-Depth Curve, 10 years (Existing Conditions 10 Year Storm))...9, 10

1-10-100-90% (Time-Depth Curve, 10 years (Proposed Conditions 10 Year Storm))...11, 12

1-10-100-90% (Time-Depth Curve, 100 years (Existing Conditions 100 Year Storm))...13, 14

1-10-100-90% (Time-Depth Curve, 100 years (Proposed Conditions 100 Year Storm))...15, 16

D

DP (Addition Summary, 1 years (Existing Conditions 1 Year Storm))...115

DP (Addition Summary, 1 years (Proposed Conditions 1 Year Storm))...116

DP (Addition Summary, 10 years (Existing Conditions 10 Year Storm))...117

DP (Addition Summary, 10 years (Proposed Conditions 10 Year Storm))...118

DP (Addition Summary, 100 years (Existing Conditions 100 Year Storm))...119

DP (Addition Summary, 100 years (Proposed Conditions 100 Year Storm))...120

E

EDA-1A (Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm))...53

EDA-1A (Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm))...54

EDA-1A (Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm))...55

EDA-1A (Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm))...17, 18

EDA-1A (Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm))...19, 20

EDA-1A (Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm))...21, 22

EDA-1A (Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm))...71, 72

EDA-1A (Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm))...73, 74

EDA-1A (Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm))...75, 76, 77

EDA-1B (Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm))...56

EDA-1B (Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm))...57

EDA-1B (Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm))...58

EDA-1B (Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm))...23, 24

EDA-1B (Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm))...25, 26

EDA-1B (Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm))...27, 28  
EDA-1B (Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm))...78, 79  
EDA-1B (Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm))...80, 81  
EDA-1B (Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm))...82, 83

I

INFILTRATION BASIN A (Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm))...121  
INFILTRATION BASIN A (Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm))...122  
INFILTRATION BASIN A (Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm))...123  
INFILTRATION BASIN A (IN) (Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm))...456  
INFILTRATION BASIN A (Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm))...457  
INFILTRATION BASIN A (Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm))...458  
INFILTRATION BASIN A (Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm))...459  
INFILTRATION BASIN B (Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm))...124  
INFILTRATION BASIN B (Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm))...125  
INFILTRATION BASIN B (Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm))...126  
INFILTRATION BASIN B (IN) (Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm))...460, 461  
INFILTRATION BASIN B (Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm))...462  
INFILTRATION BASIN B (Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm))...463  
INFILTRATION BASIN B (Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm))...464

M

Master Network Summary...2, 3, 4

O

OCS-7-1 (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...140  
OCS-7-1 (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...143  
OCS-7-1 (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...146  
OCS-7-1 (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...138, 139  
OCS-7-1 (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...141, 142  
OCS-7-1 (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...144, 145

OCS-A (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240

OCS-A (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334

OCS-A (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428

OCS-A (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...147, 148

OCS-A (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...241, 242

OCS-A (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...335, 336

OCS-B (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...432, 433, 434

OCS-B (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...438, 439, 440

OCS-B (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...444, 445, 446

OCS-B (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...429, 430, 431

OCS-B (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...435, 436, 437

OCS-B (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...441, 442, 443

P

PDA-1A (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...59

PDA-1A (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...60

PDA-1A (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...61

PDA-1A (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...29, 30

PDA-1A (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...31, 32

PDA-1A (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...33, 34

PDA-1A (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...84, 85

PDA-1A (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...86, 87

PDA-1A (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...88, 89, 90

PDA-1B (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...62

PDA-1B (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...63

PDA-1B (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...64

PDA-1B (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...35, 36

PDA-1B (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...37, 38

PDA-1B (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...39, 40

PDA-1B (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...91, 92, 93

PDA-1B (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...94, 95, 96

PDA-1B (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...97, 98, 99

PDA-1C (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...65

PDA-1C (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...66

PDA-1C (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...67

PDA-1C (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...41, 42

PDA-1C (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...43, 44

PDA-1C (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...45, 46

PDA-1C (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...100, 101

PDA-1C (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...102, 103, 104

PDA-1C (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...105, 106, 107

PDA-1D (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...68

PDA-1D (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...69

PDA-1D (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...70

PDA-1D (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...47, 48

PDA-1D (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...49, 50

PDA-1D (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...51, 52

PDA-1D (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...108, 109

PDA-1D (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...110, 111

PDA-1D (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...112, 113, 114

Porous Pavement (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...449

Porous Pavement (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...452  
 Porous Pavement (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...455  
 Porous Pavement (Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm))...127  
 Porous Pavement (Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm))...129  
 Porous Pavement (Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm))...131  
 Porous Pavement (Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm))...465  
 Porous Pavement (Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm))...466  
 Porous Pavement (Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm))...467  
 Porous Pavement (OUT) (Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm))...468  
 Porous Pavement (OUT) (Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm))...469  
 Porous Pavement (OUT) (Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm))...470  
 Porous Pavement (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...447, 448  
 Porous Pavement (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...450, 451  
 Porous Pavement (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...453, 454  
 Porous Pavement (Volume Void Adjustments, 1 years (Proposed Conditions 1 Year Storm))...128  
 Porous Pavement (Volume Void Adjustments, 10 years (Proposed Conditions 10 Year Storm))...130  
 Porous Pavement (Volume Void Adjustments, 100 years (Proposed Conditions 100 Year Storm))...132

S

STORMTECH (Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm))...471  
 STORMTECH (Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm))...472  
 STORMTECH (Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm))...473  
 STORMTECH (OUT) (Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm))...474, 475  
 STORMTECH (OUT) (Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm))...476, 477  
 STORMTECH (OUT) (Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm))...478, 479, 480  
 STORMTECH (Storage Chamber System, 1 years (Proposed Conditions 1 Year Storm))...133, 134  
 STORMTECH (Storage Chamber System, 10 years (Proposed Conditions 10 Year Storm))...134, 135, 136  
  
 STORMTECH (Storage Chamber System, 100 years (Proposed Conditions 100 Year Storm))...136, 137, 138

## ***APPENDIX B***

# ***NYSDEC STORMWATER SIZING CALCULATIONS***

# INFILTRATION WORKSHEET

JMC Project: **22090**

Design Point: **DL-1**

Drainage Area: **PDA-1A**

## *Infiltration Basins A and B*

### Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	1.38	Ac
Area	A	1.95	Ac
Percent Impervious	%I	71.13	%
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>v</sub>	0.69	CF
<b>TOTAL VOLUME Required</b> [ $WQ_V = (P \times R_v \times A) / 12$ ]	WQ <sub>v</sub>	<b>7,315</b>	CF

### Minimum Infiltration Basin Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ <sub>v</sub>	7,315	CF
Depth of the Basin	d <sub>b</sub>	3.50	Ft
<b>Required Bottom Area of Infiltration Basin</b> [ $A_p = WQ_v / d_b$ ]	A <sub>p</sub>	<b>2,090</b>	SF

### Proposed Infiltration Basin

DESCRIPTION	SYMBOL	VALUE	UNITS
Provided Bottom Area of Infiltration Basin	A <sub>p</sub>	3,313.62	SF
Total Area of Infiltration Basin Provided	A <sub>T</sub>	9,133.01	SF
Water Quality Volume Provided (See Hydrologic Calculations)	WQV <sub>p</sub>	11,115.00	CF

### Runoff Reduction

DESCRIPTION	SYMBOL	VALUE	UNITS
100% Runoff Reduction capacity	RR <sub>v</sub>	<b>11,115</b>	CF



# INFILTRATION WORKSHEET

JMC Project: **22090**

Design Point: **DL-1**

Drainage Area: **PDA-1B**

## Porous Pavement #1

### Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	0.77	Ac
Area	A	0.82	Ac
Percent Impervious	%I	93.31	%
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>V</sub>	0.89	CF
<b>TOTAL VOLUME Required</b> [ $WQ_V = (P \times R_V \times A) / 12$ ]	WQ <sub>V</sub>	<b>3,993</b>	CF

### Minimum Porous Pavement Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ <sub>V</sub>	3,993	CF
Porosity	n	0.40	Ft / Day
Trench Depth	d <sub>t</sub>	1.00	Ft
<b>Surface Area Required</b> [ $A_R = WQ_V / (n \times d_t)$ ]	A <sub>R</sub>	<b>9,981</b>	SF

### Proposed Porous Pavement

DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Surface Area of Porous Pavement Provided</b> [A <sub>p</sub> ]	A <sub>p</sub>	<b>21,104</b>	SF
Water Quality Volume Provided (See Hydrologic Calcs)	WQ <sub>VP</sub>	7,071	CF

### Runoff Reduction

DESCRIPTION	SYMBOL	VALUE	UNITS
100% Runoff Reduction capacity	RR <sub>V</sub>	<b>7,071</b>	CF

**PROPRIETARY PRACTICE WORKSHEET**

JMC Project: **22090**  
 Design Point: **DL-1**  
 Drainage Area: **PDA-1A**

**Continuous Deflective Separation Unit**

Rainfall Distribution Type: **III**

	A	B	C
Coefficients for the equation unit peak [R = I <sub>a</sub> / P] C <sub>0</sub>	-1.774	0.3301	2.4577
[C <sub>i</sub> = A x R <sup>2</sup> + B x R + C] C <sub>1</sub>	1.8622	-0.7397	-0.4627
C <sub>2</sub>	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	1.38	Ac
Area	A	1.95	Ac
Percent Impervious	%I	71.13	%
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>v</sub>	0.69	CF
<b>TOTAL VOLUME Required</b> [WQ <sub>v</sub> = (P x R <sub>v</sub> x A) / 12]	WQ <sub>v</sub>	<b>7,315</b>	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ <sub>v</sub>	7,315	CF
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.5	In
Time of Concentration	t <sub>c</sub>	0.0833	Hr
Runoff Volume [Q = WQ <sub>v</sub> / (A x 3630)]	Q	1.04	In
Curve Number [CN = 1000 / (10 + 5P + 10Q - 10 x (Q <sup>2</sup> + 1.25 QP) <sup>1/2</sup> )]	CN	95.28	
Curve Number	CN	95	
Initial Abstraction [I <sub>a</sub> = 200 / CN - 2]	I <sub>a</sub>	0.10	In
Ratio [R = I <sub>a</sub> / P]	R	0.07	
C <sub>0</sub> = A x R <sup>2</sup> + B x R + C	C <sub>0</sub>	2.47	
C <sub>1</sub> = A x R <sup>2</sup> + B x R + C	C <sub>1</sub>	-0.50	
C <sub>2</sub> = A x R <sup>2</sup> + B x R + C	C <sub>2</sub>	-0.18	
Unit Peak Discharge	q <sub>u</sub>	641.49	cfs/mi <sup>2</sup> /in
<b>Peak Discharge</b> [Q <sub>p</sub> = q <sub>u</sub> x A x Q / 640]	Q <sub>p</sub>	<b>2.02</b>	cfs

Proposed Device			
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Water Quality Peak Flow Provided</b>	Q <sub>p</sub>	<b>3.38</b>	cfs
<b>Water Quality Volume Provided</b> [WQ <sub>v</sub> = 640 x 3600 x Q <sub>p</sub> / q <sub>u</sub> ]	WQ <sub>v</sub>	<b>12,140</b>	CF
Model Designation		<b>Hydro International First Defense FD-6HC</b>	
Quantity		<b>1</b>	

Peak Bypass Rate			
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Peak Bypass Rate (100 Year Storm - See Hydrologic Calculations)</b>	Q <sub>p100</sub>	<b>14.11</b>	cfs
<b>Provided Bypass Rate (First Defense FD-6HC)</b>	Q <sub>bp</sub>	<b>32.00</b>	cfs

**PROPRIETARY PRACTICE WORKSHEET**

JMC Project: **22090**

Design Point: **DL-1**

Drainage Area: **PDA-1C**

**Continuous Deflective Separation Unit**

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak	$C_0$	-1.774	0.3301	2.4577
$[R = I_a / P]$	$C_1$	1.8622	-0.7397	-0.4627
$[C_i = A \times R^2 + B \times R + C]$	$C_2$	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	0.30	Ac
Area	A	0.38	Ac
Percent Impervious	%I	79.48	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	$R_v$	0.77	CF
<b>TOTAL VOLUME Required</b> $[WQ_v = (P \times R_v \times A) / 12]$	$WQ_v$	<b>1,586</b>	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	$WQ_v$	1,586	CF
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.5	In
Time of Concentration	$t_c$	0.0833	Hr
Runoff Volume $[Q = WQ_v / (A \times 3630)]$	Q	1.15	In
Curve Number $[CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25 QP)^{1/2})]$	CN	96.61	
Curve Number	CN	97	
Initial Abstraction $[I_a = 200 / CN - 2]$	$I_a$	0.07	In
Ratio $[R = I_a / P]$	R	0.05	
$C_0 = A \times R^2 + B \times R + C$	$C_0$	2.47	
$C_1 = A \times R^2 + B \times R + C$	$C_1$	-0.49	
$C_2 = A \times R^2 + B \times R + C$	$C_2$	-0.18	
Unit Peak Discharge	$q_u$	614.88	cfs/mi <sup>2</sup> /in
<b>Peak Discharge</b> $[Q_p = q_u \times A \times Q / 640]$	$Q_p$	<b>0.42</b>	cfs

Proposed Device			
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Water Quality Peak Flow Provided</b>	$Q_p$	<b>0.84</b>	cfs
<b>Water Quality Volume Provided</b> $[WQ_v = 640 \times 3600 \times Q_p / q_u]$	$WQ_v$	<b>3,148</b>	CF
Model Designation		<b>Hydro International First Defense FD-3HC</b>	
Quantity		<b>1</b>	

# RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project: **22090**  
 Design Point: **DL-1**

<b>Proposed Warehouse</b>	Drainage Area: <b>PDA-1A, PDA-1B, PDA-1C</b>
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## Total Water Quality Treatment Volume

DESCRIPTION	SYMBOL	VALUE	UNITS
Initial Water Quality Volume	WQ <sub>V</sub>	<b>13,525</b>	CF
Adjusted Water Quality Volume	WQ <sub>V</sub>	<b>0</b>	CF

## Minimum Runoff Reduction Volume

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.5	In
Total Area of <i>new</i> Impervious Cover (B Soils)	A <sub>ic</sub>	2.22	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Total Area of <i>new</i> Impervious Cover (D Soils)	A <sub>ic</sub>	0.10	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.20	
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>V</sub>	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x A <sub>ic</sub> ]	A <sub>i</sub>	0.91	Ac
<b>TOTAL VOLUME Required [RR<sub>V</sub> = (P x R<sub>V</sub> x A<sub>i</sub>) / 12]</b>	<b>RR<sub>V</sub></b>	<b>4,700</b>	CF

## Runoff Reduction Techniques (Volume)

GREEN INFRASTRUCTURE PRACTICE / SMP	SYMBOL	VALUE	UNITS
<b>Infiltration Basin</b>	RR <sub>V</sub>	<b>11,115</b>	CF
<b>Porous Pavement</b>	RR <sub>V</sub>	<b>7,071</b>	CF
<b>TOTAL</b>	RR <sub>V</sub>	<b>18,186</b>	CF

## Runoff Reduction

Is Total RR <sub>V</sub> > Adjusted WQ <sub>V</sub> ?	<b>YES</b>
Is Total RR <sub>V</sub> > Minimum RR <sub>V</sub> ?	<b>YES</b>

***APPENDIX C***

***SOIL TESTING DATA***

**DESIGN DATA SHEET - STORMWATER INFILTRATION SYSTEM**

JOB NO. 19124

Owner A&R Real Estate Holdings, LLC Address 100 Business Park Drive

Located at (Street) Business Park Drive Sec.108.03 Block 1 Lot 51  
 (Indicate nearest cross st.)

Municipality Armonk Watershed Inland Long Island Sound Basin

**SOIL INFILTRATION TEST DATA**

Presoak Date: 11/15/2019 Run Date: 11/15/2019

Hole #	CLOCK TIME				INFILTRATION			
	Run No.	Start	Stop	Elapse Time Min.	Depth From Grd	To surface water	Water Level Drop In Inches	Soil Rate In/Hr Drop
PT-1	1	1:00 PM	2:00 PM	60	30"	24"	18"	18"
	2	2:05 PM	3:05 PM	60	30"	24"	6"	6"
	3	3:05 PM	4:05 PM	60	30"	24"	6"	6"
	4							
PT-2	1	1:05 PM	2:05 PM	60	42"	24"	24"	24"
	2	2:10 PM	2:50 PM	40	42"	24"	24"	36"
	3	3:06 PM	3:46 PM	40	42"	24"	24"	36"
	4	3:46 PM	4:26 PM	40	42"	24"	24"	36"
PT-3	1	1:10 PM	2:10 PM	60	36"	24"	19"	19"
	2	2:15 PM	3:15 PM	60	36"	24"	13"	13"
	3	3:15 PM	4:15 PM	60	36"	24"	9"	9"
	4	4:16 PM	5:16 PM	60	36"	24"	7"	7"
PT-4	1							
	2							
	3							
	4							

Notes: \_\_\_\_\_ Perc test done by: RAR

- 1) Tests to be repeated at same depth until approximately equal soil rates are obtained at each infiltration test hole. All data to be submitted for review.
- 2) Depth measurements to be made from top of hole. DO NOT REPORT INCREMENTS OF LESS THAN ONE INCH.

**DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES**

DEPTH	HOLE NO.	DH-1	HOLE NO.	DH-2	HOLE NO.	DH-3	HOLE NO.	DH-4
G.L.	0"-6"	↓	0"-6"	↓	0"-6"	↓	0"-6"	↓
6"	Topsoil		Topsoil		Topsoil		Topsoil	
12"		↓		↓	6"-18"	↓		↓
18"					Light Brown Sandy Loam			
24"								
30"								
36"	6"-96"	↓	6"-72"	↓	18"-42"	↓	6"-90"	↓
42"	Light Brown Sandy Loam		Dark Sandy Loam		Dark Sandy Loam		Light Brown Sandy Loam	
48"								
60"					42"-72"			
66"					Gray Sand			
72"								
78"								
84"								
90"								
96"								

WAS GROUNDWATER ENCOUNTERED? Yes  
 INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED DH-1 @ 8', DH-2 @ 6', DH-3 @ 6', DH-4 @ 7.5'  
 INDICATE LEVEL AT WHICH WATER RISES AFTER BEING ENCOUNTERED DH-1 @ 3.5', DH-2 @ 3.5', DH-3 @ 5.5', DH-4 @ 6.5'  
 DEEP TESTS MADE BY Pecord DATE OF DEEP TESTS 11/15/2019

**DESIGN**

Soil Rate Used: \_\_\_\_\_ Min/1" Drop: \_\_\_\_\_

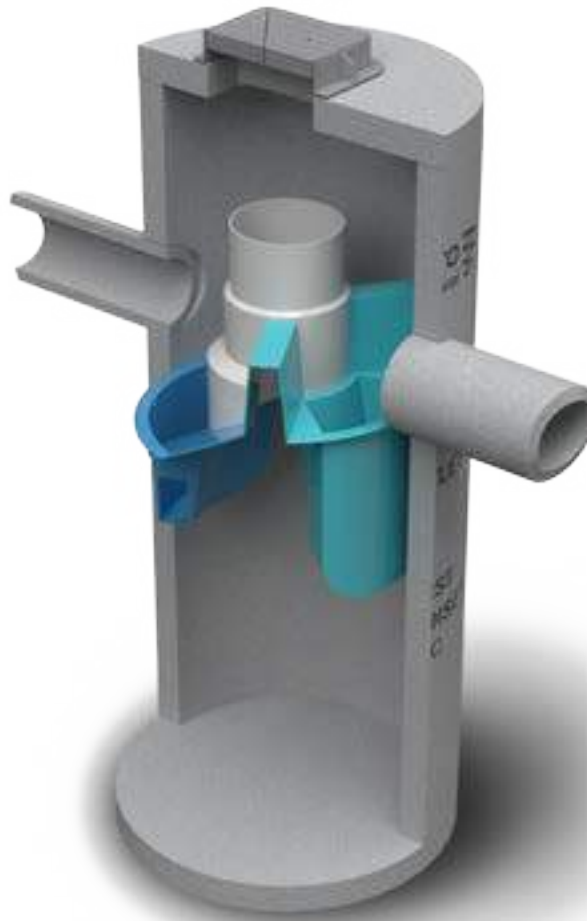
Name \_\_\_\_\_ Signature \_\_\_\_\_

Address JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC  
120 Bedford Road  
Armonk, NY 10504 SEAL

## ***APPENDIX D***

# ***HYDRO INTERNATIONAL FIRST DEFENSE OPERATION AND MAINTENANCE MANUAL***





## Operation and Maintenance Manual

**First Defense<sup>®</sup> and First Defense<sup>®</sup> High Capacity**

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Vortex Separator for Stormwater Treatment

## Table of Contents

- 3 FIRST DEFENSE® BY HYDRO INTERNATIONAL**
  - INTRODUCTION
  - OPERATION
  - POLLUTANT CAPTURE AND RETENTION
  
- 4 MODEL SIZES & CONFIGURATIONS**
  - FIRST DEFENSE® COMPONENTS
  
- 5 MAINTENANCE**
  - OVERVIEW
  - MAINTENANCE EQUIPMENT CONSIDERATIONS
  - DETERMINING YOUR MAINTENANCE SCHEDULE
  
- 6 MAINTENANCE PROCEDURES**
  - INSPECTION
  - FLOATABLES AND SEDIMENT CLEAN OUT
  
- 8 FIRST DEFENSE® INSTALLATION LOG**
  
- 9 FIRST DEFENSE® INSPECTION AND MAINTENANCE LOG**

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**DISCLAIMER:** Information and data contained in this manual is exclusively for the purpose of assisting in the operation and maintenance of Hydro International plc's First Defense®. No warranty is given nor can liability be accepted for use of this information for any other purpose. Hydro International plc has a policy of continuous product development and reserves the right to amend specifications without notice.

## HYDRO MAINTENANCE SERVICES

Hydro International has been engineering stormwater treatment systems for over 30 years. We understand the mechanics of removing pollutants from stormwater and how to keep systems running at an optimal level.

### NOBODY KNOWS OUR SYSTEMS BETTER THAN WE DO



### AVOID SERVICE NEGLIGENCE

Sanitation services providers not intimately familiar with stormwater treatment systems are at risk of the following:

- Inadvertently breaking parts or failing to clean/replace system components appropriately.
- Charging you for more frequent maintenance because they lacked the tools to service your system properly in the first place.
- Billing you for replacement parts that might have been covered under your Hydro warranty plan
- Charging for maintenance that may not yet have been required.

### LEAVE THE DIRTY WORK TO US

Trash, sediment and polluted water is stored inside treatment systems until they are removed by our team with a vactor truck. Sometimes teams must physically enter the system chambers in order to prepare the system for maintenance and install any replacement parts. Services include but are not limited to:

- Solids removal
- Removal of liquid pollutants
- Replacement media installation (when applicable)



## BETTER TOOLS, BETTER RESULTS

Not all vacor trucks are created equal. Appropriate tools and suction power are needed to service stormwater systems appropriately. Companies who don't specialize in stormwater treatment won't have the tools to properly clean systems or install new parts.



## SERVICE WARRANTY

Make sure you're not paying for service that is covered under your warranty plan. Only Hydro International's service teams can identify tune-ups that should be on us, not you.

## TREATMENT SYSTEMS SERVICED BY HYDRO:

- Stormwater filters
- Stormwater separators
- Baffle boxes
- Biofilters/biorention systems
- Storage structures
- Catch basins
- Stormwater ponds
- Permeable pavement



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# I. First Defense® by Hydro International

## Introduction

The First Defense® is an enhanced vortex separator that combines an effective and economical stormwater treatment chamber with an integral peak flow bypass. It efficiently removes total suspended solids (TSS), trash and hydrocarbons from stormwater runoff without washing out previously captured pollutants. The First Defense® is available in several model configurations (refer to *Section II. Model Sizes & Configurations*, page 4) to accommodate a wide range of pipe sizes, peak flows and depth constraints.

## Operation

The First Defense® operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The First Defense® has been designed to allow for easy and safe access for inspection, monitoring and clean-out procedures. Neither entry into the unit nor removal of the internal components is necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

## Pollutant Capture and Retention

The internal components of the First Defense® have been designed to optimize pollutant capture. Sediment is captured and retained in the base of the unit, while oil and floatables are stored on the water surface in the inner volume (Fig.1).

The pollutant storage volumes are isolated from the built-in bypass chamber to prevent washout during high-flow storm events. The sump of the First Defense® retains a standing water level between storm events. This ensures a quiescent flow regime at the onset of a storm, preventing resuspension and washout of pollutants captured during previous events.

Accessories such as oil absorbent pads are available for enhanced oil removal and storage. Due to the separation of the oil and floatable storage volume from the outlet, the potential for washout of stored pollutants between clean-outs is minimized.

## Applications

- Stormwater treatment at the point of entry into the drainage line
- Sites constrained by space, topography or drainage profiles with limited slope and depth of cover
- Retrofit installations where stormwater treatment is placed on or tied into an existing storm drain line
- Pretreatment for filters, infiltration and storage

## Advantages

- Inlet options include surface grate or multiple inlet pipes
- Integral high capacity bypass conveys large peak flows without the need for “offline” arrangements using separate junction manholes
- Proven to prevent pollutant washout at up to 500% of its treatment flow
- Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling
- Delivered to site pre-assembled and ready for installation

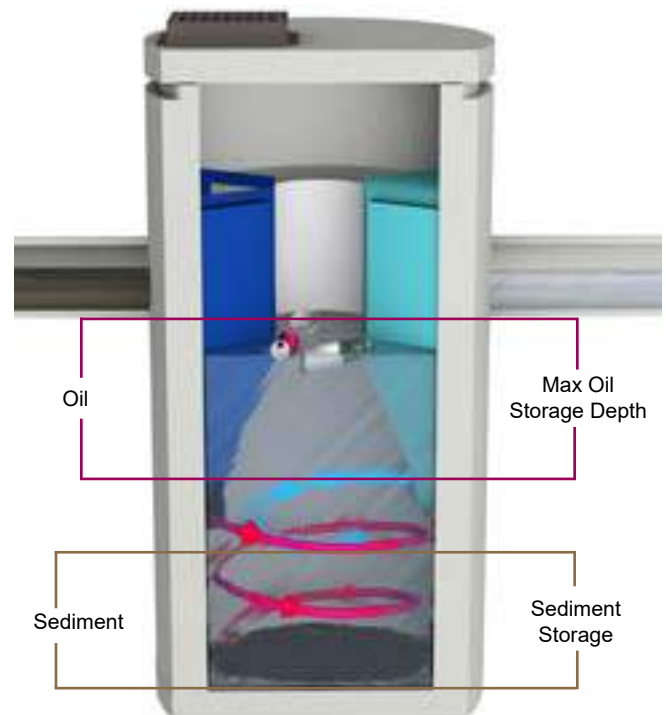


Fig.1 Pollutant storage volumes in the First Defense®.

## II. Model Sizes & Configurations

The First Defense® inlet and internal bypass arrangements are available in several model sizes and configurations. The components of the First Defense®-4HC and First Defense®-6HC have modified geometries as to allow greater design flexibility needed to accommodate various site constraints.

All First Defense® models include the internal components that are designed to remove and retain total suspended solids (TSS), gross solids, floatable trash and hydrocarbons (Fig.2a - 2b). First Defense® model parameters and design criteria are shown in Table 1.

### First Defense® Components

1. Built-In Bypass
2. Inlet Pipe
3. Inlet Chute
4. Floatables Draw-off Port
5. Outlet Pipe
6. Floatables Storage
7. Sediment Storage
8. Inlet Grate or Cover

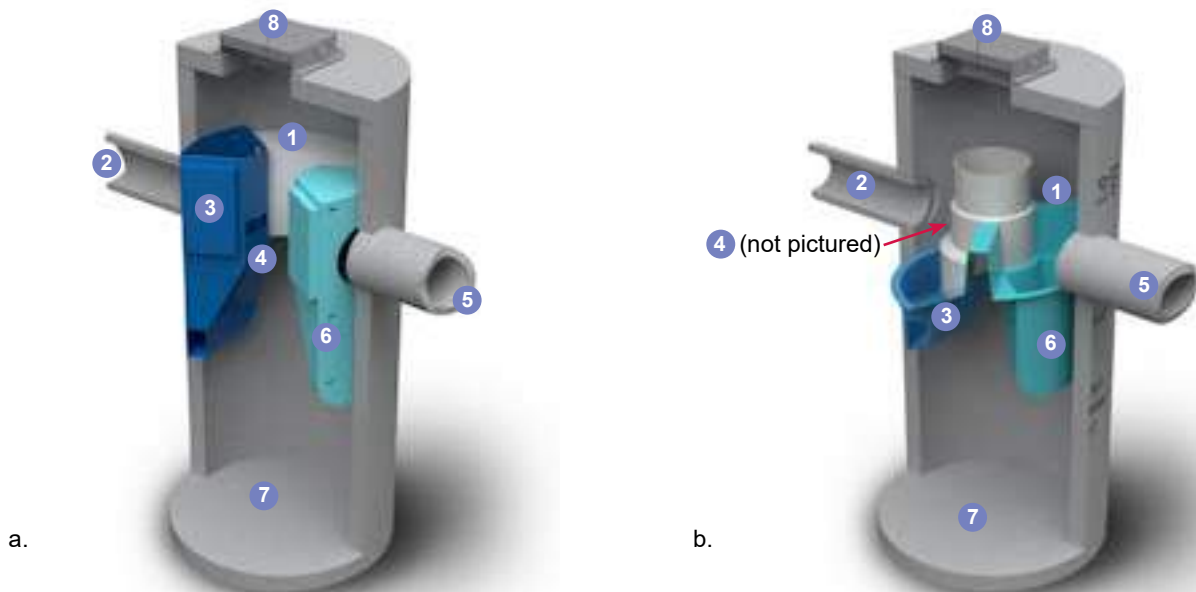


Fig.2a) First Defense®-4 and First Defense®-6; b) First Defense®-4HC and First Defense®-6HC, with higher capacity dual internal bypass and larger maximum pipe diameter.

First Defense® High Capacity Model Number	Diameter	Typical TSS Treatment Flow Rates		Peak Online Flow Rate	Maximum Pipe Diameter <sup>1</sup>	Oil Storage Capacity	Typical Sediment Storage Capacity <sup>2</sup>	Minimum Distance from Outlet Invert to Top of Rim <sup>3</sup>	Standard Distance from Outlet Invert to Sump Floor
		NJDEP Certified	106µm						
	(ft / m)	(cfs / L/s)	(cfs / L/s)	(cfs / L/s)	(in / mm)	(gal / L)	(yd <sup>3</sup> / m <sup>3</sup> )	(ft / m)	(ft / m)
FD-3HC	3 / 0.9	0.84 / 23.7	1.60 / 45.3	15 / 424	18 / 457	125 / 473	0.4 / 0.3	2.0 - 3.5 / 0.6 - 1.0	3.71 / 1.13
FD-4HC	4 / 1.2	1.50 / 42.4	1.88 / 50.9	18 / 510	24 / 600	191 / 723	0.7 / 0.5	2.3 - 3.9 / 0.7 - 1.2	4.97 / 1.5
FD-5HC	5 / 1.5	2.34 / 66.2	2.94 / 82.1	20 / 566	24 / 609	300 / 1135	1.1 / .84	2.5 - 4.5 / 0.7 - 1.3	5.19 / 1.5
FD-6HC	6 / 1.8	3.38 / 95.7	4.73 / 133.9	32 / 906	30 / 750	496 / 1,878	1.6 / 1.2	3.0 - 5.1 / 0.9 - 1.6	5.97 / 1.8
FD-8HC	8 / 2.4	6.00 / 169.9	7.52 / 212.9	50 / 1,415	48 / 1219	1120 / 4239	2.8 / 2.1	3.0 - 6.0 / 0.9 - 1.8	7.40 / 2.2

<sup>1</sup>Contact Hydro International when larger pipe sizes are required.

<sup>2</sup>Contact Hydro International when custom sediment storage capacity is required.

<sup>3</sup>Minimum distance for models depends on pipe diameter.

## III. Maintenance

### Overview

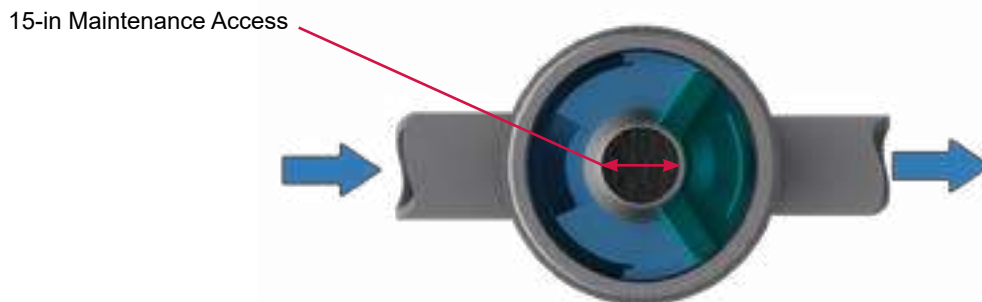
The First Defense® protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the First Defense®. The First Defense® will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the First Defense® will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

The First Defense® allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the First Defense®, nor do they require the internal components of the First Defense® to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

### Maintenance Equipment Considerations

The internal components of the First Defense®-HC have a centrally located circular shaft through which the sediment storage sump can be accessed with a sump vac hose. The open diameter of this access shaft is 15 inches in diameter (Fig.3). Therefore, the nozzle fitting of any vactor hose used for maintenance should be less than 15 inches in diameter.



*Fig.3 The central opening to the sump of the First Defense®-HC is 15 inches in diameter.*

### Determining Your Maintenance Schedule

The frequency of clean out is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge-Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil / floatables removal, for a 6-ft First Defense® typically takes less than 30 minutes and removes a combined water/oil volume of about 765 gallons.

### Inspection Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. Fig.4 shows the standing water level that should be observed.
4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the components and water surface.
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel.
6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.
7. Securely replace the grate or lid.
8. Take down safety equipment.
9. Notify Hydro International of any irregularities noted during inspection.

### Floatables and Sediment Clean Out

Floatables clean out is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables (Fig.5).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vactor hose and skimmer pole to be lowered to the base of the sump.

### Scheduling

- Floatables and sump clean out are typically conducted once a year during any season.
- Floatables and sump clean out should occur as soon as possible following a spill in the contributing drainage area.



Fig.4 Floatables are removed with a vactor hose (First Defense model FD-4, shown).

### Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vactor truck (flexible hose recommended)
- First Defense® Maintenance Log



*Floatables and sediment Clean Out Procedures*

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
4. Remove oil and floatables stored on the surface of the water with the vactor hose (Fig.5) or with the skimmer or net (not pictured).
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (page 9).
6. Once all floatables have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris off the sump floor (Fig.5).
7. Retract the vactor hose from the vessel.
8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components, blockages, or irregularly high or low water levels.
9. Securely replace the grate or lid.



*Fig.5 Sediment is removed with a vactor hose (First Defense model FD-4, shown).*

## Maintenance at a Glance

Inspection	<ul style="list-style-type: none"> <li>- Regularly during first year of installation</li> <li>- Every 6 months after the first year of installation</li> </ul>
Oil and Floatables Removal	<ul style="list-style-type: none"> <li>- Once per year, with sediment removal</li> <li>- Following a spill in the drainage area</li> </ul>
Sediment Removal	<ul style="list-style-type: none"> <li>- Once per year or as needed</li> <li>- Following a spill in the drainage area</li> </ul>

NOTE: For most clean outs the entire volume of liquid does not need to be removed from the manhole. Only remove the first few inches of oils and floatables from the water surface to reduce the total volume of liquid removed during a clean out.



## First Defense® Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:	
SITE NAME:	
SITE LOCATION:	
OWNER:	CONTRACTOR:
CONTACT NAME:	CONTACT NAME:
COMPANY NAME:	COMPANY NAME:
ADDRESS:	ADDRESS:
TELEPHONE:	TELEPHONE:
FAX:	FAX:

INSTALLATION DATE:    /    /

MODEL SIZE (CIRCLE ONE):      FD-4              FD-4HC              FD-6              FD-6HC

INLET (CIRCLE ALL THAT APPLY):    GRATED INLET (CATCH BASIN)    INLET PIPE (FLOW THROUGH)



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CALL 1 (888) 382-7808 TO SCHEDULE AN INSPECTION

## Stormwater Solutions

94 Hutchins Drive  
Portland, ME 04102

Tel: (207) 756-6200  
Fax: (207) 756-6212  
[stormwaterinquiry@hydro-int.com](mailto:stormwaterinquiry@hydro-int.com)

[www.hydro-int.com](http://www.hydro-int.com)

## ***APPENDIX E***

# ***TEMPORARY EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE CHECKLIST PERMANENT STORMWATER PRACTICE OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLISTS***

**Temporary Erosion and Sediment Control Inspection and Maintenance Checklist**

<b>Erosion and Sediment Control Measure</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Stabilized Construction Access	Daily	<ul style="list-style-type: none"> <li>• Periodic top dressing with additional aggregate as required</li> <li>• Clean sediment in public right-of-ways immediately</li> </ul>
Silt Fence	Weekly + After Each Rain	<ul style="list-style-type: none"> <li>• Remove &amp; redistribute sediment when bulges develop in the silt fence.</li> </ul>
Inlet Protection	Weekly + After Each Rain	<ul style="list-style-type: none"> <li>• Remove sediment as necessary and replace filter fabric, crushed stone etc.</li> <li>• Any broken and damaged components should be replaced.</li> <li>• Check all materials for proper anchorage and secure as necessary.</li> </ul>

**Permanent Stormwater Management Practice Inspection and Maintenance Checklist**

<b>Stormwater Management Practice</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Stormwater Management Basin	Annually + After Major Storms	<ul style="list-style-type: none"> <li>• Check adequacy of vegetation and ground cover; for evidence of embankment erosion, animal burrows, unauthorized plantings and cracking, bulging or sliding of dam, clear/properly functioning drains, seeps/leaks on downstream face, failure of slope protection or riprap. Repair/remove as necessary.</li> <li>• Confirm emergency spillway is clear of obstructions and debris.</li> <li>• Confirm all inlets and outlet structures/pipes are operating properly.</li> </ul>
Drain Inlets	Monthly	<ul style="list-style-type: none"> <li>• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary.</li> <li>• Check for sediment and debris collected within sumps and clean out as necessary.</li> </ul>
Subsurface Stormwater Management Detention Facility (Stormtech Chambers)	Annually and After Major Storms (10 Year Storm Event or Greater)	<ul style="list-style-type: none"> <li>• Check level of sediment and debris accumulated within the system.</li> <li>• Check structural integrity of the system pipes, structures, etc. for cracking, bulging or deterioration. Repair/remove as necessary.</li> <li>• Confirm all inlets and outlet structures/pipes are operating properly.</li> </ul>

**Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)**

<b>Stormwater Management Practice</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Porous Pavement	Monthly and As Needed	<ul style="list-style-type: none"> <li>• Ensure that paving area is clean of debris</li> <li>• Ensure that paving dewaterers between storms</li> <li>• Ensure that the area is clean of sediments</li> <li>• Mow upland and adjacent areas, and seed bare areas</li> </ul>
	Quarterly	<ul style="list-style-type: none"> <li>• Vacuum sweep frequently to keep surface free of sediments</li> </ul>
	Annually	<ul style="list-style-type: none"> <li>• Inspect the surface for deterioration or spalling</li> </ul>
Hydro International First Defense Hydrodynamic Separator	(See Maintenance Guidelines in Appendix D)	<ul style="list-style-type: none"> <li>• See Maintenance Guidelines Appendix D</li> </ul>



The owner/operator responsible for inspection and maintenance as outlined above:

WMG Acquisitions LLC  
Mr. Anthony Scavo  
2801 SW 31<sup>st</sup> Avenue, Suite 2B  
Coconut Grove, FL 33133  
Phone: (718) 702-6739  
Email: Anthony@MCSSProperties.com

***APPENDIX F***

***CONTRACTOR'S CERTIFICATION***



Site Planning  
 Civil Engineering  
 Landscape Architecture  
 Land Surveying  
 Transportation Engineering

Environmental Studies  
 Entitlements  
 Construction Services  
 3D Visualization  
 Laser Scanning

JMC Project 22090  
 BaySpace Armonk  
 100 Business Park Drive  
 Town of North Castle, NY

**CONTRACTOR'S CERTIFICATION**

“I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations”

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Permit Identification No.: \_\_\_\_\_

Name and Title of Trained Contractor: \_\_\_\_\_

Elements of the SWPPP Contractor is responsible for: \_\_\_\_\_

***APPENDIX G***

***MAINTENANCE AGREEMENT***

**STORMWATER CONTROL FACILITY  
MAINTENANCE AGREEMENT WITH  
THE TOWN OF NORTH CASTLE**

**THIS AGREEMENT**, entered into this \_\_\_\_ day of \_\_\_\_\_, 2021, by and between the Town of North Castle, New York (“Town”), a municipal corporation organized and existing under the laws of the State of New York with offices at 15 Bedford Road, North Castle, New York 10504 and WMG Acquisitions LLC (“Company”), a domestic limited liability company organized and existing under the laws of the State of New York with offices at 2801 SW 31<sup>st</sup> Street, Suite 2B, Coconut Grove, FL 33133;

**WHEREAS**, that the Town and the Company (collectively “Parties”), for the consideration hereinafter named, agree as follows:

**WHEREAS**, the Town and the Company wish to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Town for the project located on 100 Business Park Drive, Armonk, NY 10567 and Section Block and Lot Number 108.03-1-51 (“Project”);

**WHEREAS**, the Town and the Company desire that the storm water control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components.

**THEREFORE**, the Town and the Company agree as follows:

1. This Agreement binds the Town and the Company, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this Agreement.
2. The Company shall maintain, clean, repair, replace and continue the stormwater control measures depicted in the Maintenance Schedule provided within the approved Stormwater Pollution Prevention Plan (SWPPP) as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: infiltration basin, hydrodynamic separators, porous pavement sections, and conveyance systems.
3. The Company shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.
4. The Company shall provide for the periodic inspection of the stormwater control measures, not less than once in every five year period, to determine the condition and integrity of the measures.
5. The Company shall not authorize, undertake or permit alteration, abandonment,

modification or discontinuation of the stormwater control measures except in accordance with written approval of the Town.

6. The Company shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Town or in accordance with the recommendations of the Town Engineer.

7. This Agreement shall be recorded in the Office of the County Clerk, County of Westchester together with the deed for the common property and shall be included in the offering plan and/or prospectus in connection with the Project. The Company shall be responsible for payment of any fees in connection with the recording with the Office of the County Clerk.

8. If ever the Town determines that the Company has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake corrective action specified by the Town or by the Town Engineer, the Town shall serve on the Company the notice to cure on thirty (30) days' notice. If the Company fails to comply with the notice to cure to the discretion of the Town Engineer, the Company hereby consents to the Town undertaking such measures and steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property. In the event that the Town is required to undertake such measures as a result of the Company failing to comply with the notice to cure, the Company shall be required to deposit with the Town an escrow amount determined by the Town Engineer. Nothing in this Agreement prevents the Town from immediately undertaking such measures and steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures in the event of an emergency in the discretion of the Town Engineer and to affix the expenses thereof as a lien against the property.

9. Any and all notices required hereunder shall be addressed as follows, or to such other address as may hereafter be designated in writing by either party hereto:

To Town of North Castle:

Town Clerk  
Town Hall  
15 Bedford Road  
Armonk, New York 10504

With a copy to:

Town Consulting Engineer  
Town Hall  
15 Bedford Road  
Armonk, New York 10504

Town Attorney  
Town Hall  
15 Bedford Road  
Armonk, New York 10504

To Company:

At the address first above written

10. The Company hereby agrees to indemnify and save harmless the Town, its officers, employees, elected officials, and agents from and against all liability, loss or damage the Town may suffer, arising directly or indirectly out of the contract between the Company and the Town. The Company further agrees to provide defense for and defend any claims or causes of action of any kind or character directly or indirectly arising out of this Agreement at its sole expense and agrees to bear all other costs and expenses relating thereto.

11. This Agreement constitutes the entire Agreement between the Parties in connection with the long term maintenance and continuation of stormwater control measures approved by the Town for the Project and supersedes any and all prior agreements, whether oral or written. If one or more of the provisions in this Agreement are deemed by a Court of competent jurisdiction to be void by law, then the remaining provisions will continue in full force and effect. This Agreement may not be amended or modified except by an instrument in writing signed by all Parties. There will be no presumption against any Party (or its counsel) on the ground that such Party (or its counsel) was responsible for preparing this Agreement or any part of it.

12. Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to have been inserted herein. If any required contractual provision is not inserted, through mistake or otherwise, then upon the application of either party, this Contract shall be physically amended forthwith to make such insertion.

13. This Agreement shall be governed by and construed in accordance with the laws of the State of New York without giving effect to that State's choice of law rules. The Parties hereby submit to the exclusive jurisdiction of the Supreme Court of the State of New York, County of Westchester, in any action or proceeding arising out of or relating to this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement:

TOWN OF NORTH CASTLE

WMG Acquisitions LLC

By: \_\_\_\_\_

By: \_\_\_\_\_

Michael Schiliro, Town Supervisor

Robert Troccoli, Member

STATE OF NEW YORK )

) ss.:

COUNTY OF WESTCHESTER )

On the \_\_\_\_ day of \_\_\_\_\_ in the year 2021, before me, the undersigned, personally appeared Michael Schiliro personally known to me or proved to me on the same basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

\_\_\_\_\_  
Notary Public

Commission Expires: \_\_\_\_\_

STATE OF NEW YORK )

) ss.:

COUNTY OF WESTCHESTER )

On the \_\_\_\_ day of \_\_\_\_\_ in the year 2021 before me, the undersigned, personally appeared Anthony Scavo personally known to me or proved to me on the same basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

\_\_\_\_\_  
Notary Public

Commission Expires: \_\_\_\_\_

APPROVED AS TO FORM

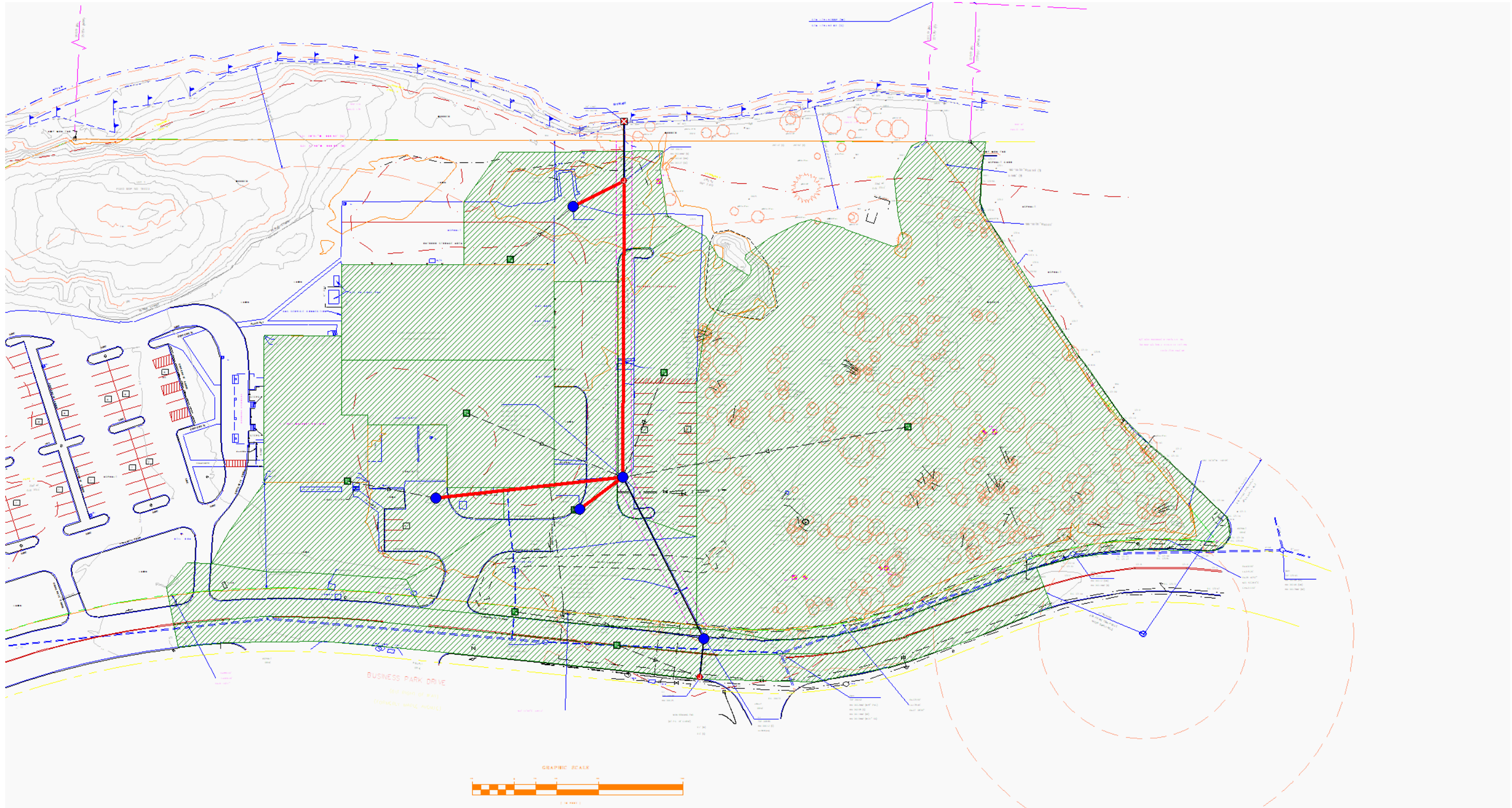
\_\_\_\_\_  
\_\_\_\_\_  
Town Attorney



## ***APPENDIX H***

# ***HYDRAULIC CALCULATIONS***

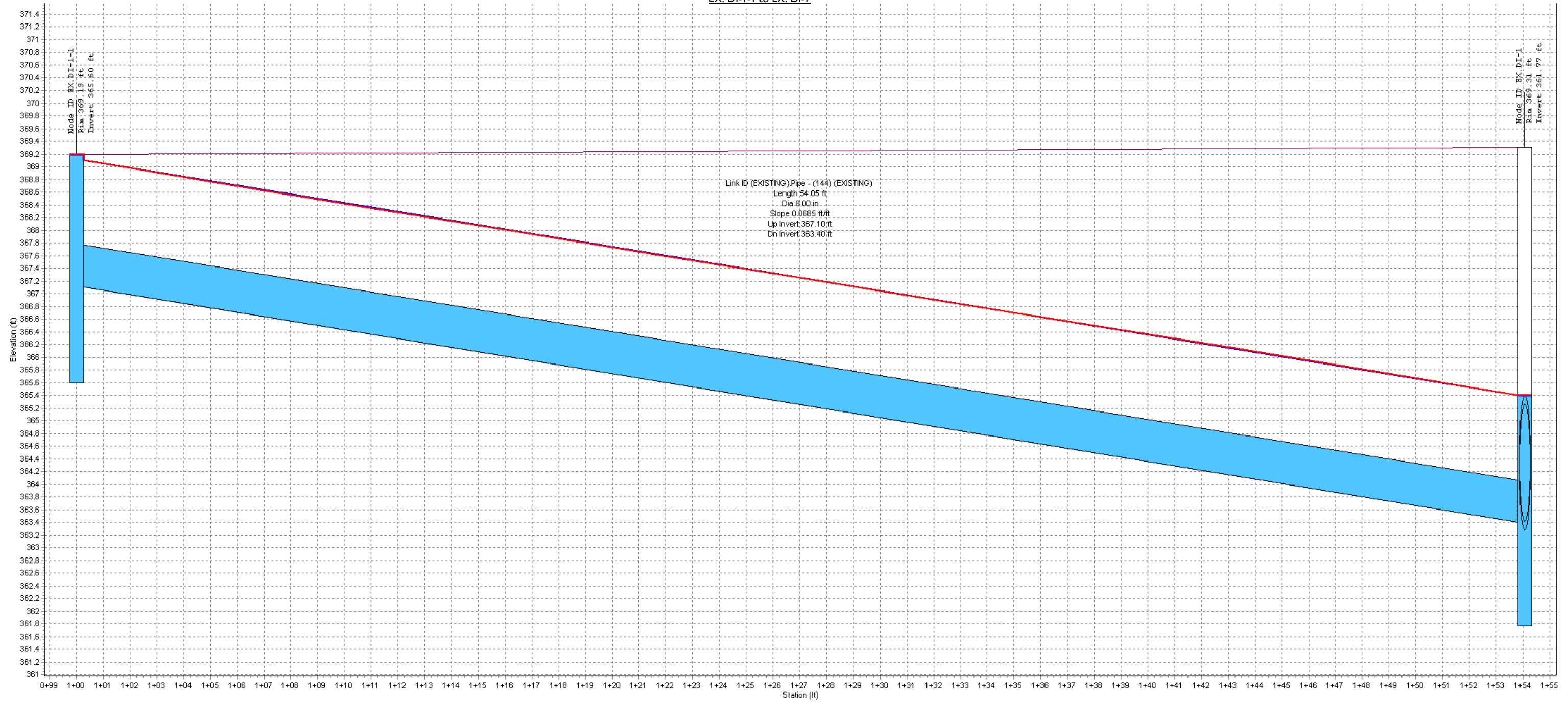
100 Business Park Drive - Hydraulic Model - Existing Conditions



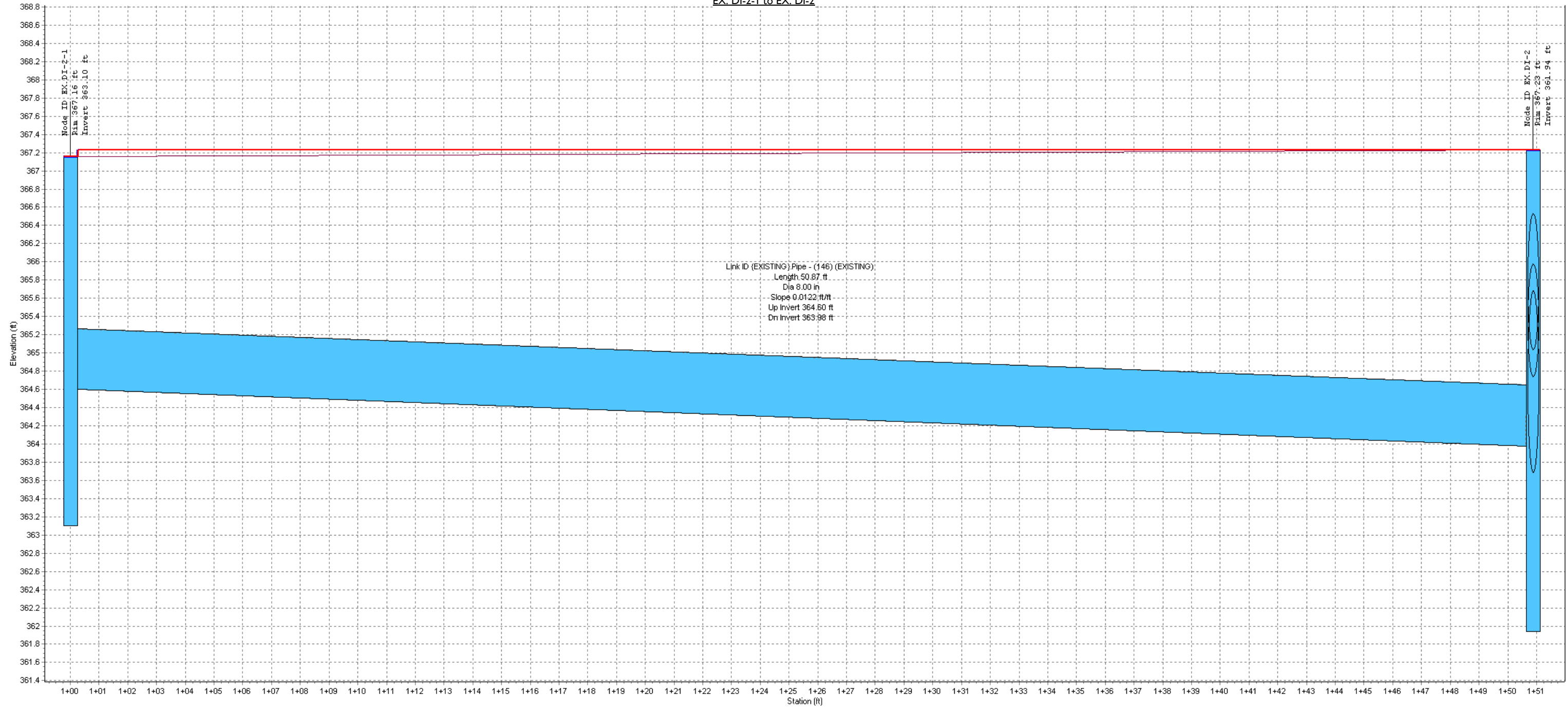
**100 Business Park Drive - Storm Pipe Capacity Calculations - Existing Conditions**  
**25 Year Storm Event**

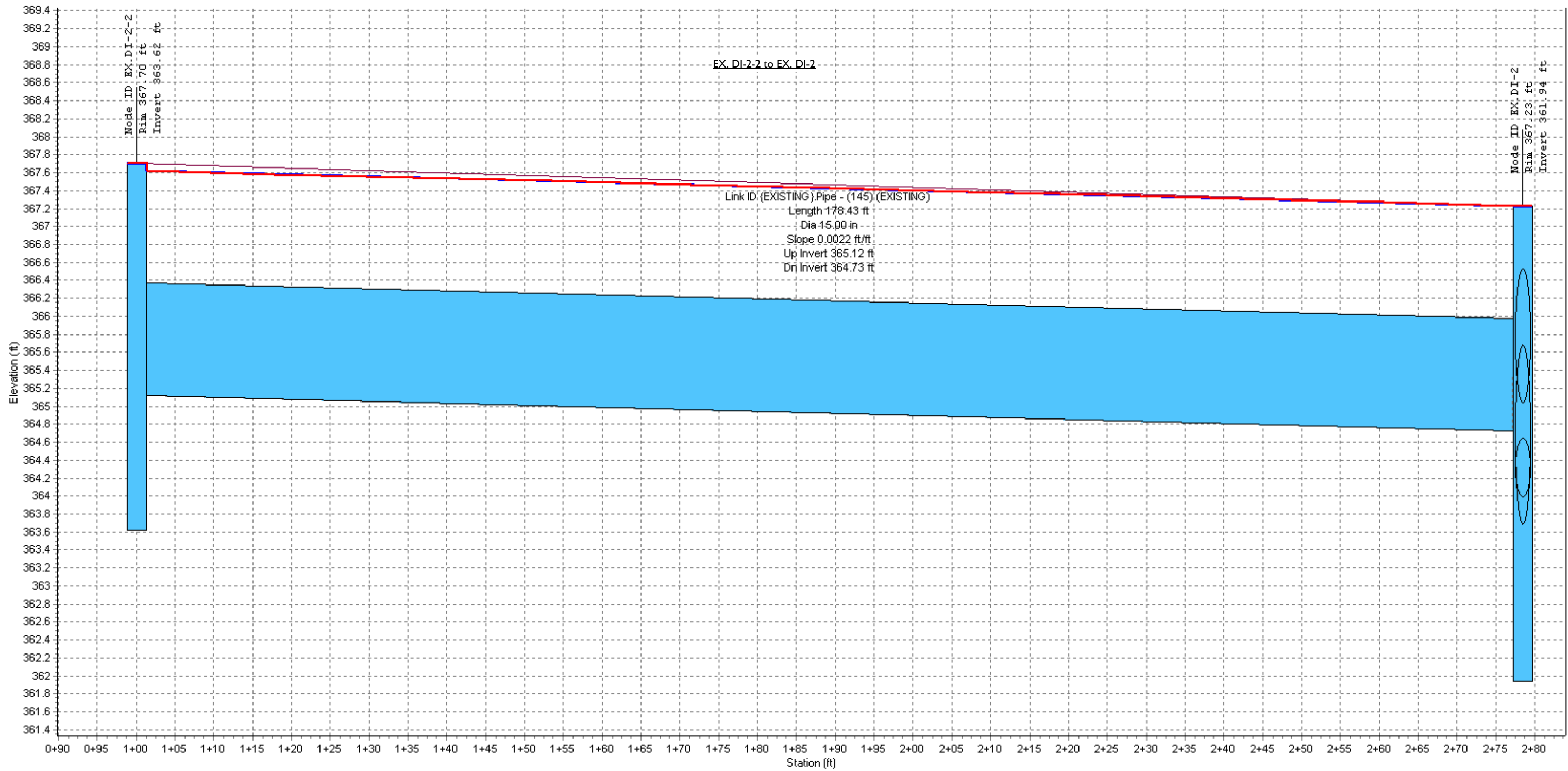
From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Max Flow Velocity (ft/sec)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Max Flow Depth (ft)
EX.DI-4	EX.DI-3	37.05	366.25	365.85	1.0800	18.000	0.0220	3.15	4.54	6.45	0.49	0.49	0.74
EX.DI-3	EX.DI-2	171.17	366.12	365.03	0.6400	18.000	0.0220	5.36	4.19	4.95	1.08	0.95	1.43
EX.DI-2	EX.DI-1	280.98	363.68	363.40	0.1000	24.000	0.0220	4.56	2.21	4.22	1.08	1.00	2.00
EX.DI-1	ByramRiver	56.91	363.27	362.58	1.2100	24.000	0.0220	6.36	4.57	14.71	0.43	0.46	0.91
EX.DI-1-1	EX.DI-1	54.05	367.10	363.40	6.8500	8.040	0.0220	2.02	9.72	1.87	1.08	1.00	0.67
EX.DI-2-2	EX.DI-2	178.43	365.12	364.73	0.2200	15.000	0.0220	1.92	3.90	1.78	1.08	1.00	1.25
EX.DI-2-1	EX.DI-2	50.87	364.60	363.98	1.2200	8.040	0.0220	0.85	5.41	0.79	1.08	1.00	0.67

EX\_DI-I-1 to EX\_DI-I



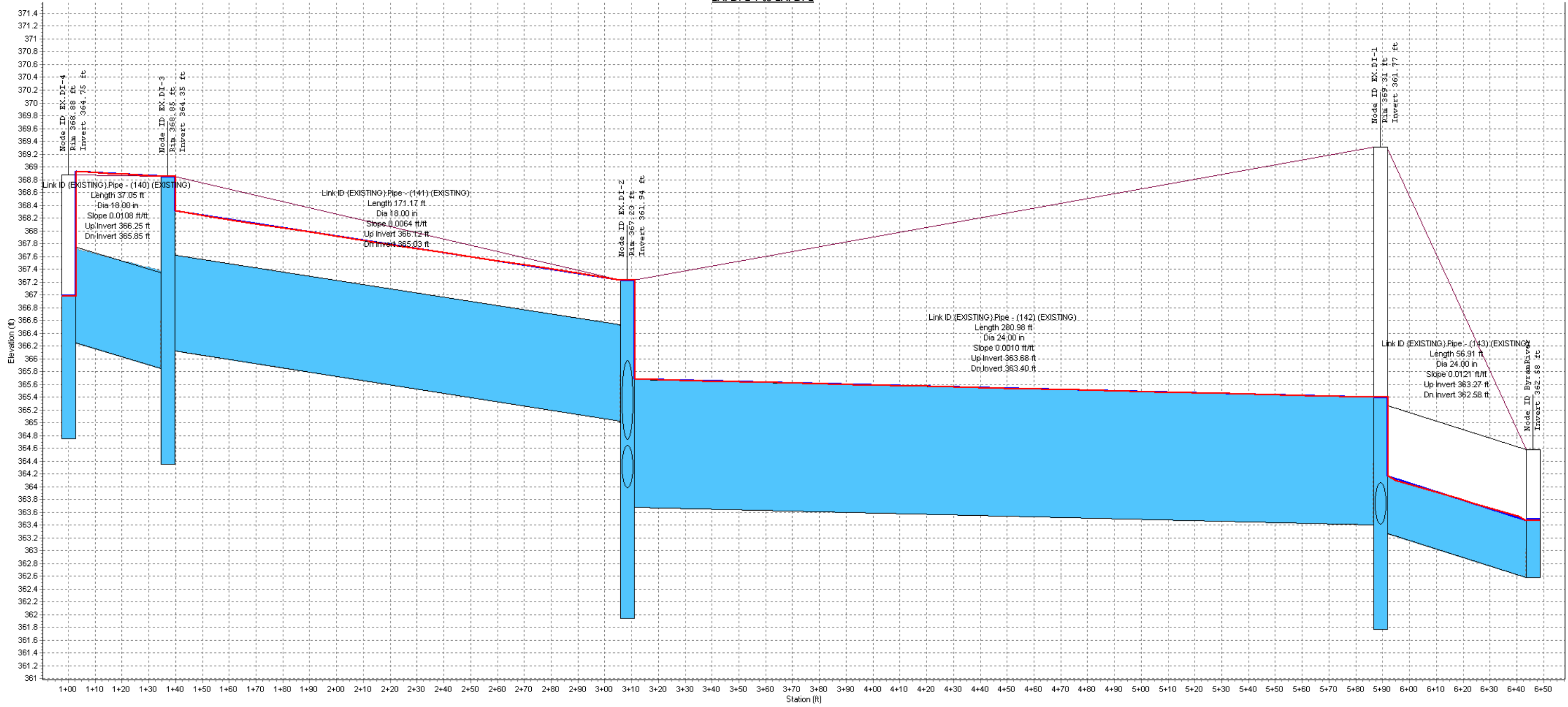
EX\_DI-2-1 to EX\_DI-2



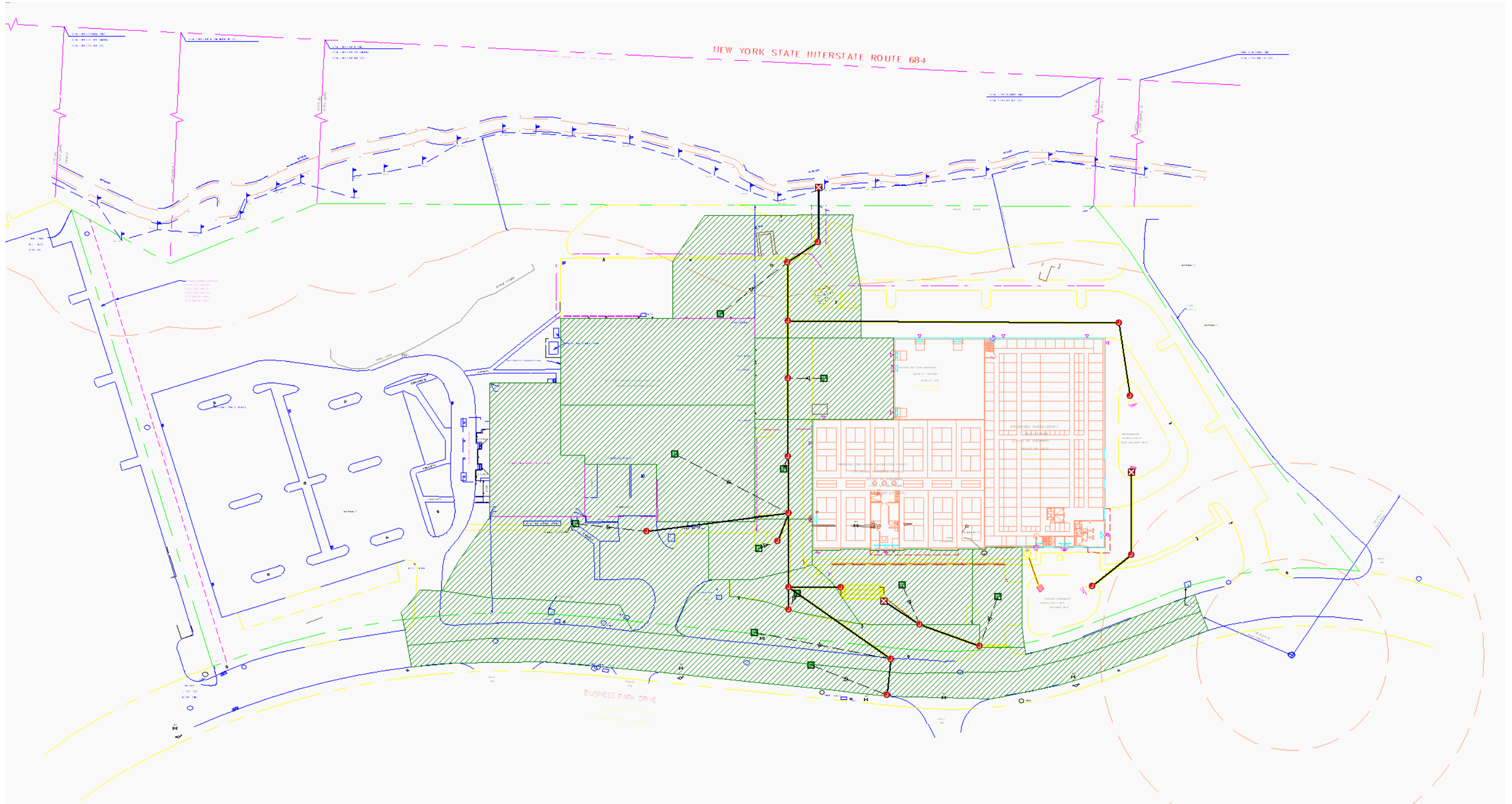




EX\_DI-2-1 to EX\_DI-2



100 Business Park Drive - Hydraulic Model - Proposed Conditions



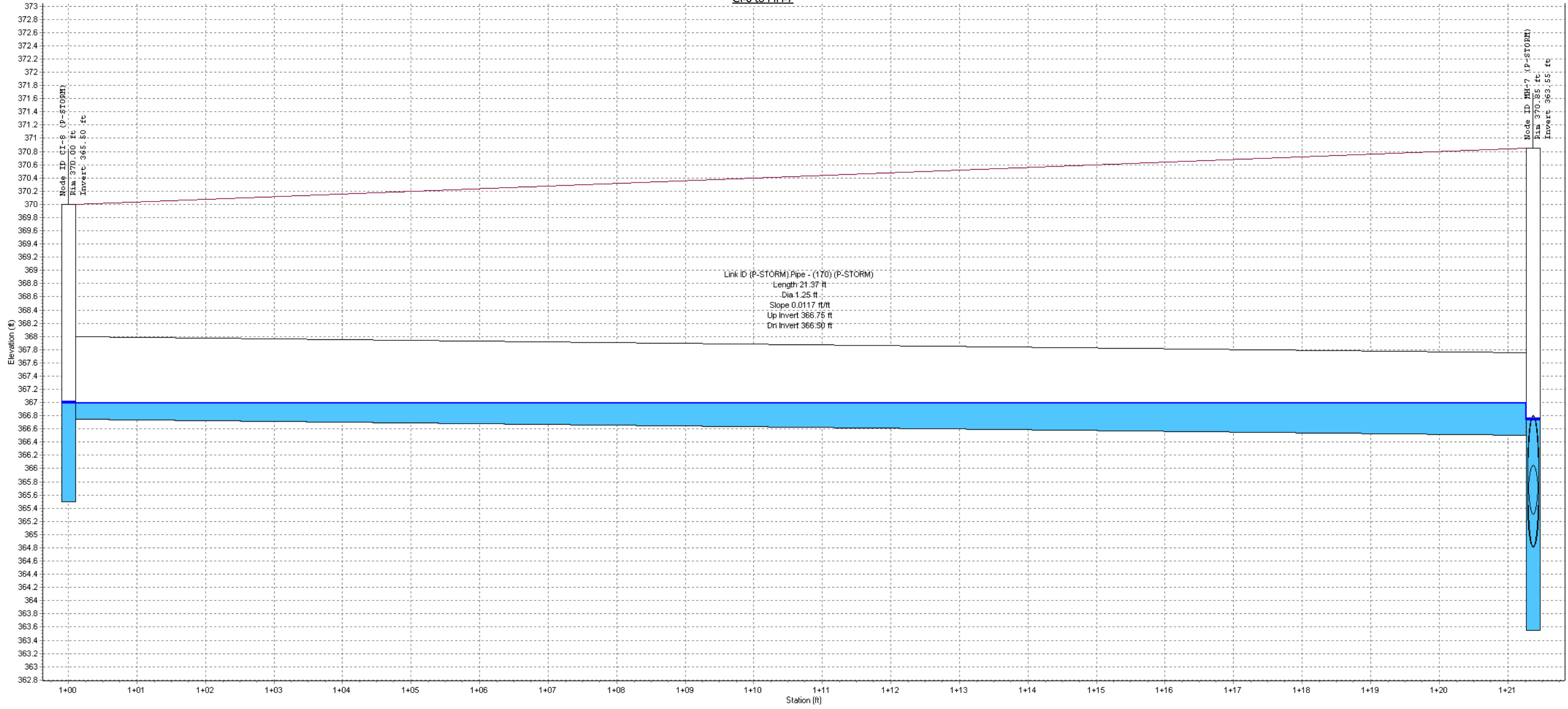


## 100 Business Park Drive - Storm Pipe Capacity Calculations - Proposed Conditions

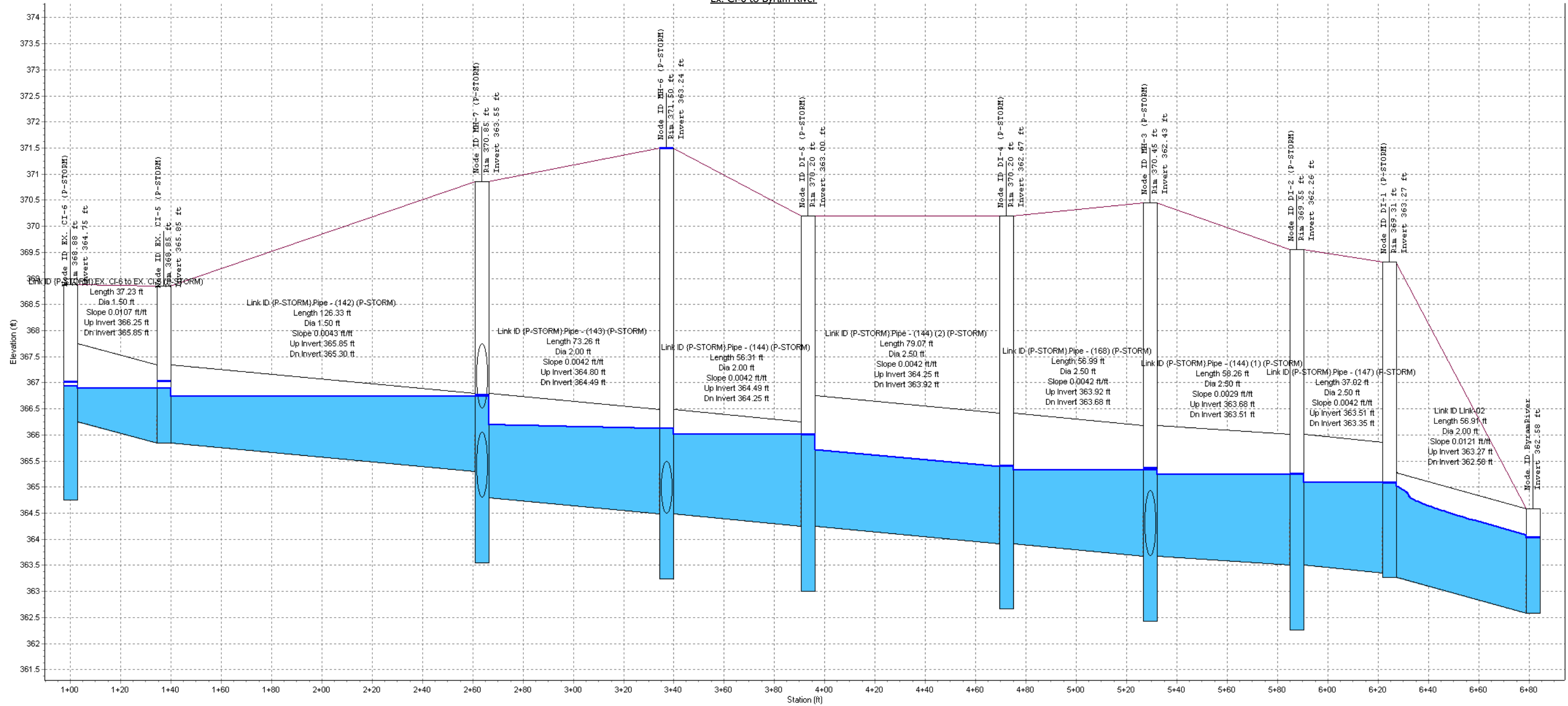
### 25 Year Storm Event

From (Inlet) Node	To (Outlet) Node	Length  (ft)	Inlet Invert Elevation  (ft)	Outlet Invert Elevation  (ft)	Average Slope  (%)	Pipe Diameter or Height  (inches)	Manning's Roughness	Peak Flow  (cfs)	Max Flow Velocity  (ft/sec)	Design Flow Capacity  (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Max Flow Depth  (ft)
EX. CI-6 (P-STORM)	EX. CI-5 (P-STORM)	37.23	366.25	365.85	1.0700	18.000	0.0220	3.24	4.61	6.43	0.50	0.50	0.75
EX. CI-5 (P-STORM)	MH-7 (P-STORM)	126.33	365.85	365.30	0.4300	18.000	0.0130	6.57	4.60	6.93	0.95	0.77	1.16
MH-7 (P-STORM)	MH-6 (P-STORM)	73.26	364.80	364.49	0.4200	24.000	0.0130	9.30	4.97	14.69	0.63	0.58	1.15
MH-3 (P-STORM)	DI-2 (P-STORM)	58.26	363.68	363.51	0.2900	30.000	0.0130	17.59	5.06	22.22	0.79	0.67	1.67
DI-5 (P-STORM)	DI-4 (P-STORM)	79.07	364.25	363.92	0.4200	30.000	0.0130	16.09	5.86	26.66	0.60	0.56	1.40
MH-6 (P-STORM)	DI-5 (P-STORM)	56.31	364.49	364.25	0.4200	24.000	0.0130	15.92	5.51	14.74	1.08	0.92	1.83
EX. CI-6-1 (P-STORM)	MH-6 (P-STORM)	27.61	364.60	364.49	0.4100	12.000	0.0130	0.89	3.36	2.27	0.39	0.44	0.44
DI-2 (P-STORM)	DI-1 (P-STORM)	37.02	363.51	363.35	0.4200	30.000	0.0130	21.99	6.05	26.46	0.83	0.70	1.74
OCS-B (P-STORM)	MH-3-1 (P-STORM)	73.36	366.50	366.00	0.6800	15.000	0.0130	0.00	0.00	5.33	0.00	0.00	0.00
EX. CI-6-2 (P-STORM)	MH-6 (P-STORM)	158.90	365.12	364.49	0.3900	12.000	0.0130	2.42	6.93	2.24	1.08	1.00	1.00
OCS-A (P-STORM)	MH-3-2 (P-STORM)	48.85	366.90	366.76	0.2900	24.000	0.0130	4.76	3.64	12.20	0.39	0.43	0.87
MH-3-2 (P-STORM)	HW-B (P-STORM)	82.03	366.76	366.52	0.2900	24.000	0.0130	4.76	3.63	12.13	0.39	0.44	0.87
MH-3-1 (P-STORM)	MH-3 (P-STORM)	341.14	366.00	363.68	0.6800	15.000	0.0130	0.00	0.00	5.33	0.00	0.00	0.00
TD-7-4 (P-STORM)	CI-7-3 (P-STORM)	64.00	366.75	366.00	1.1700	15.000	0.0130	0.66	5.04	6.99	0.09	0.21	0.26
DI-4 (P-STORM)	MH-3 (P-STORM)	56.99	363.92	363.68	0.4200	30.000	0.0130	17.67	5.92	26.67	0.66	0.59	1.48
CI-8 (P-STORM)	MH-7 (P-STORM)	21.37	366.75	366.50	1.1700	15.000	0.0130	0.67	3.93	6.99	0.10	0.21	0.26
CI-7-3 (P-STORM)	FIRST DEFENSE 3HC (	44.49	366.00	365.50	1.1200	15.000	0.0130	2.24	5.01	6.85	0.33	0.39	0.49
OCS-7-1 (P-STORM)	MH-7 (P-STORM)	50.34	365.50	364.80	1.3900	15.000	0.0130	2.14	5.33	7.62	0.28	0.36	0.45
DI-1 (P-STORM)	ByramRiver	56.91	363.27	362.58	1.2100	24.000	0.0130	21.96	8.97	24.91	0.88	0.73	1.45

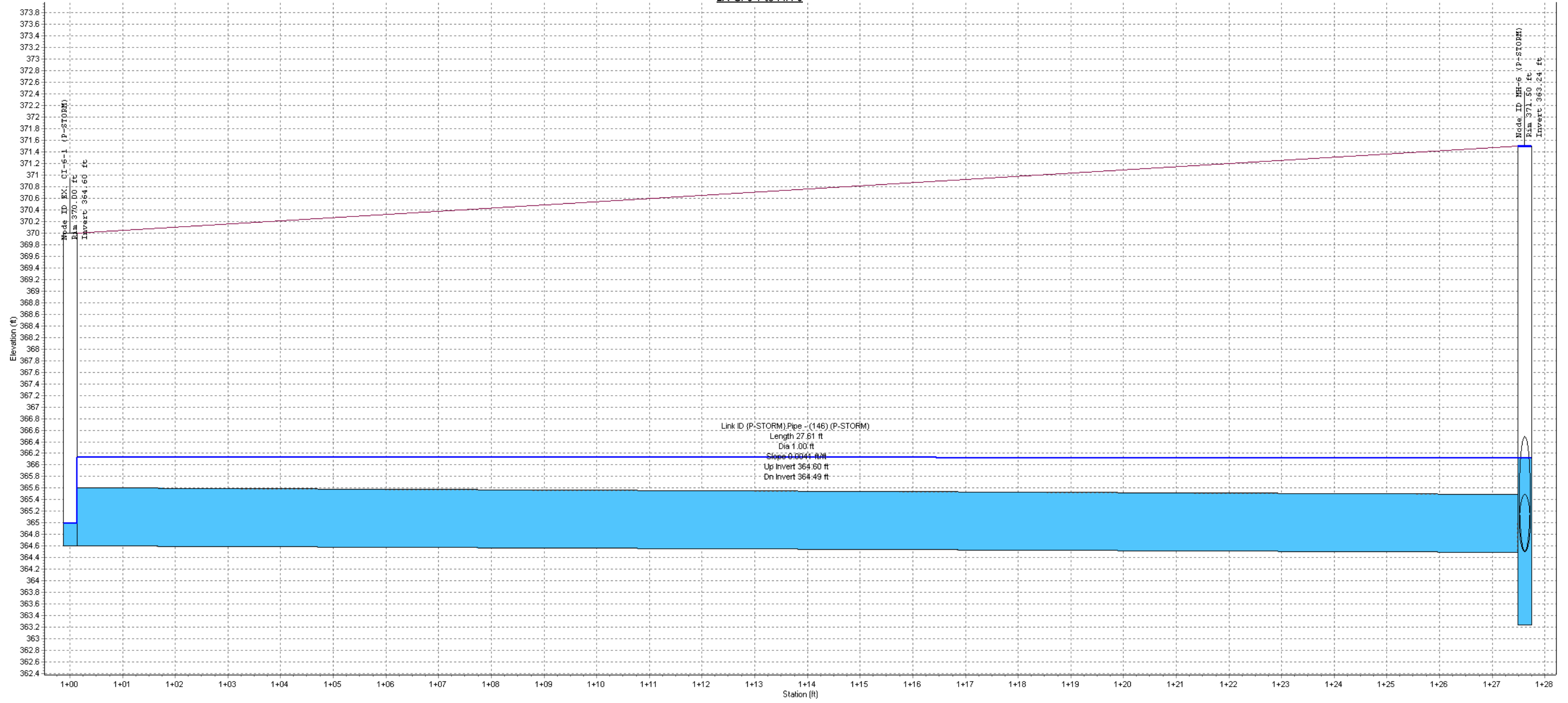
CI-8 to MH-7



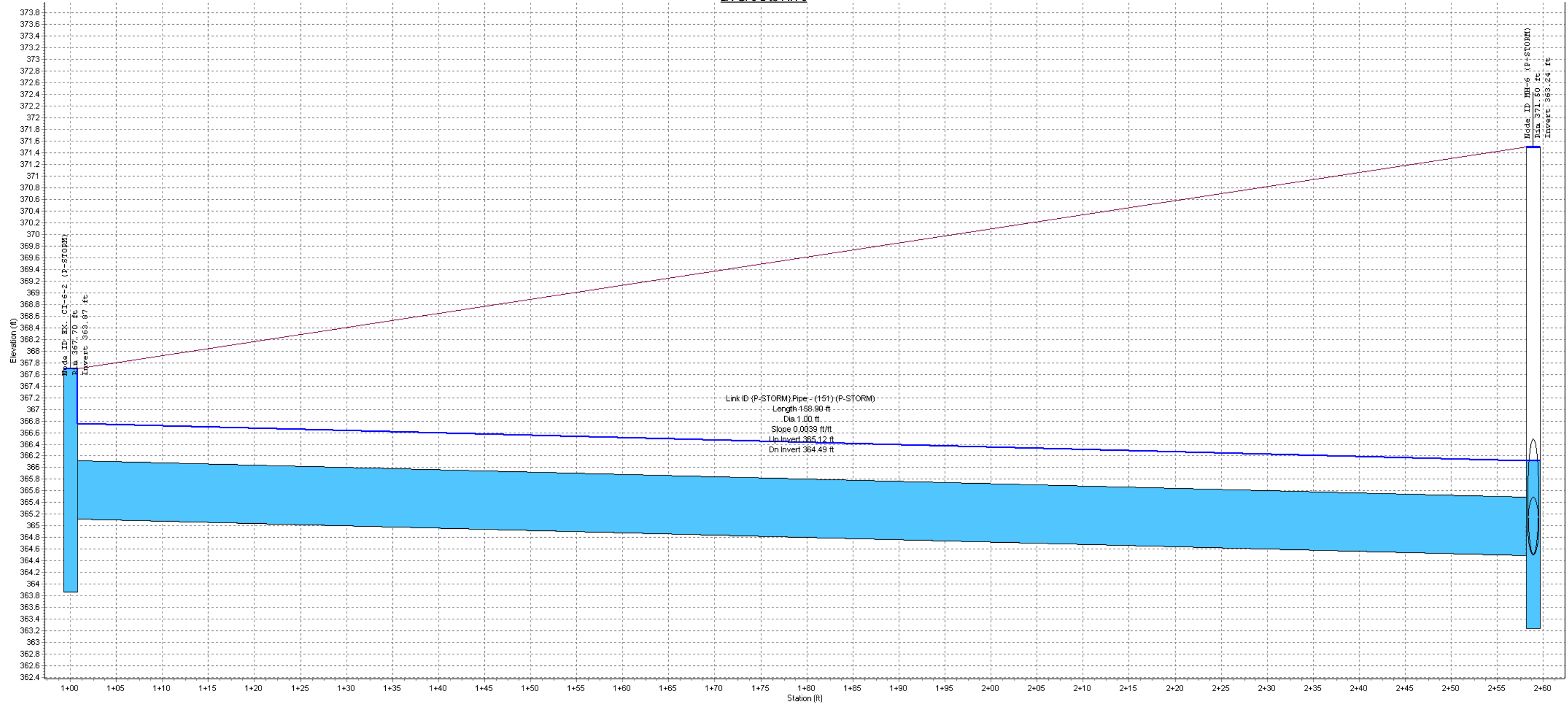
Ex. CI-6 to Byram River



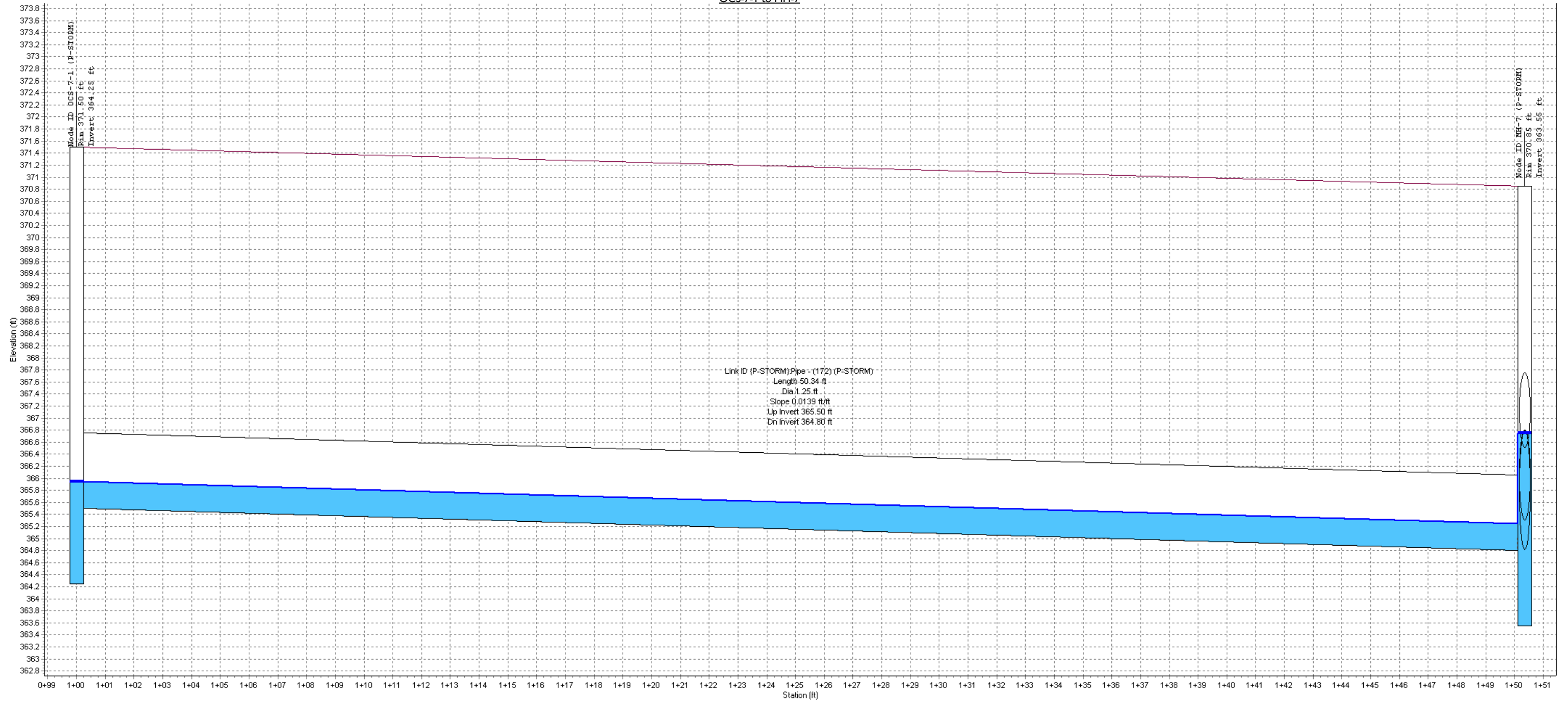
EX-CI-6-1 to MH-6



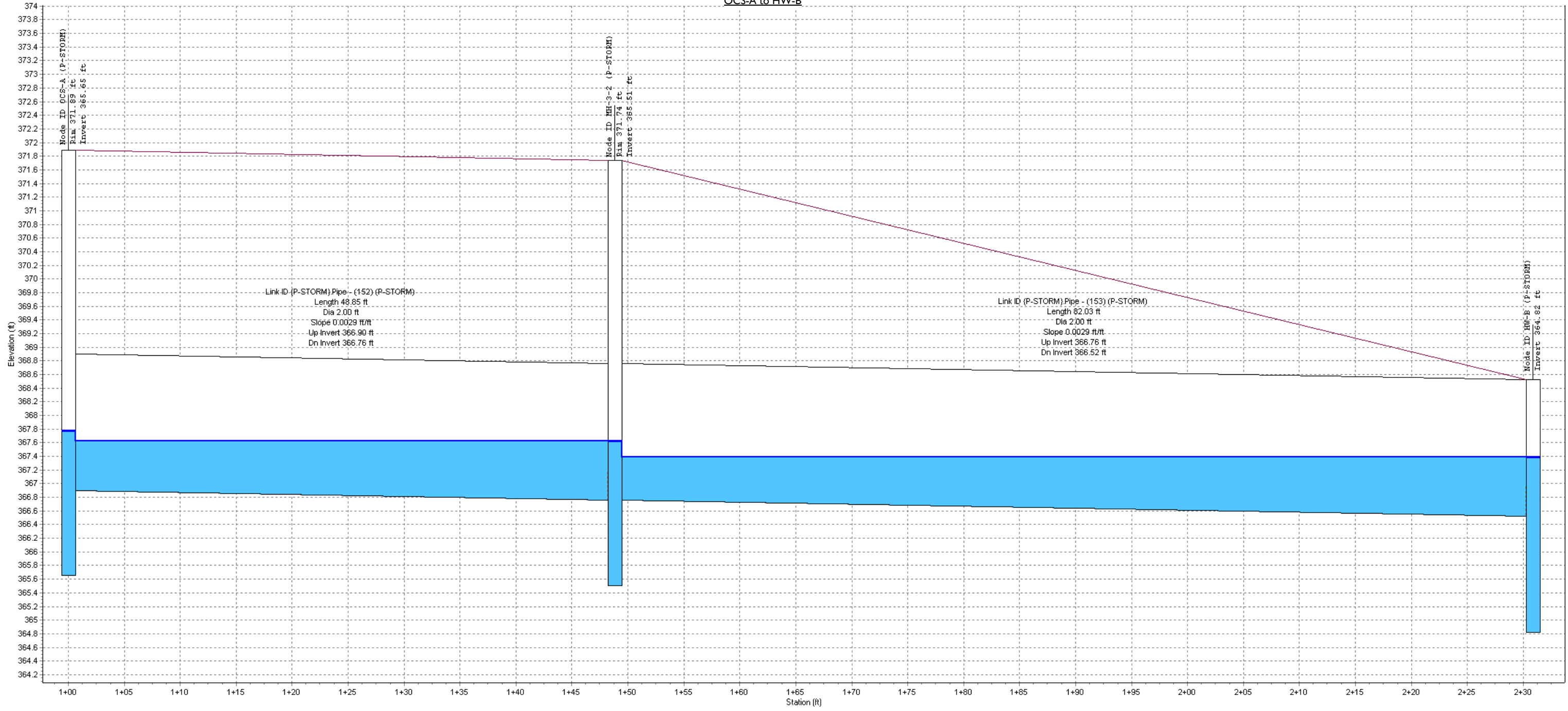
EX-CI-6-2 to MH-6



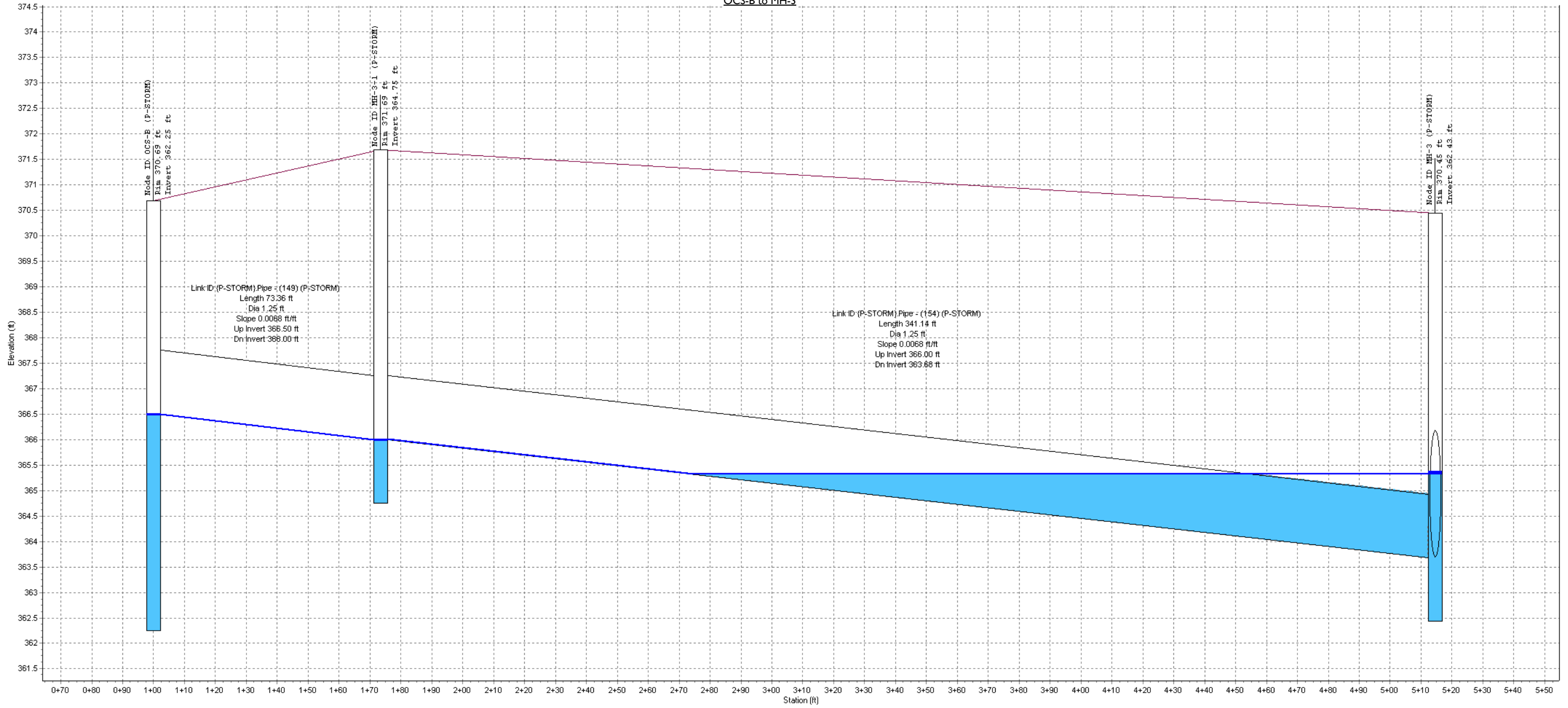
OCS-7-1 to MH-7



OCS-A to HW-B

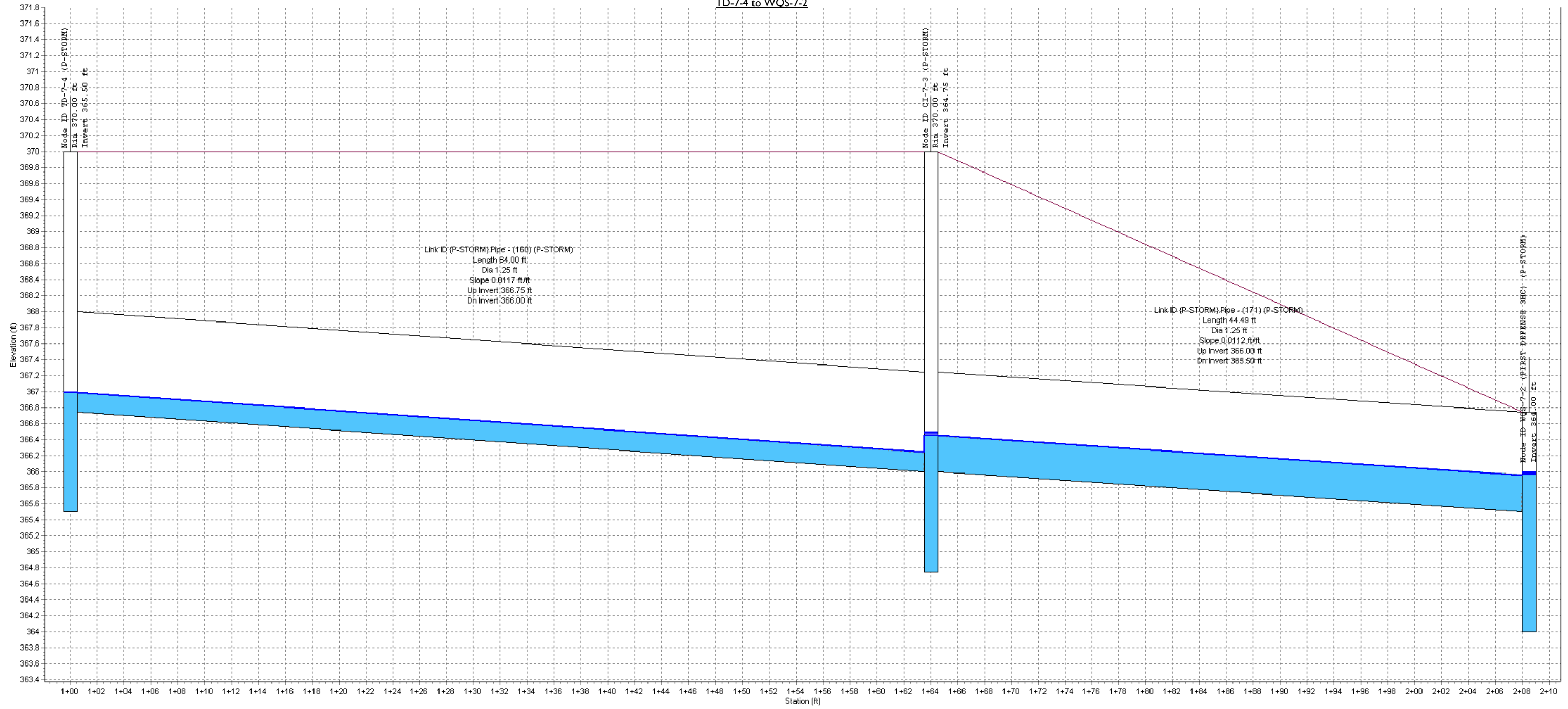


OCS-B to MH-3





TD-7-4 to WQS-7-2



***APPENDIX I***

***DRAWINGS***



# NEW YORK STATE INTERSTATE ROUTE 684

NEW YORK STATE DEPARTMENT OF PUBLIC WORKS SURVEY BASELINE

COVERAGE SUMMARY LEGEND	
[Symbol]	EXISTING IMPERVIOUS AREAS (HYDROLOGIC SOIL GROUP B)
[Symbol]	EXISTING GRASSED AREA (HYDROLOGIC SOIL GROUP B)
[Symbol]	EXISTING WOODS AREA (HYDROLOGIC SOIL GROUP B)
[Symbol]	EXISTING WOODS AREA (HYDROLOGIC SOIL GROUP D)
[Symbol]	EXISTING WOODS AREA (HYDROLOGIC SOIL GROUP E)

LEGEND	
[Symbol]	EXISTING PROPERTY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING EASEMENT LINE
[Symbol]	EXISTING WETLAND LINE AND DELINEATION
[Symbol]	EXISTING BUILDING OVERHANG
[Symbol]	EXISTING BUILDING LINE
[Symbol]	EXISTING PAVEMENT EDGE
[Symbol]	EXISTING CURB LINE
[Symbol]	EXISTING CONTOUR
[Symbol]	EXISTING INDEX CONTOUR
[Symbol]	EXISTING STONE WALL
[Symbol]	EXISTING RETAINING WALL
[Symbol]	EXISTING GUIDE RAIL
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING TREE AND DESIGNATION
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING DIRECTIONAL ARROWS
[Symbol]	EXISTING PAINT
[Symbol]	EXISTING PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING PEDESTRIAN CROSSING
[Symbol]	EXISTING STORM DRAIN LINE AND SIZE
[Symbol]	EXISTING SANITARY LINE AND SIZE
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING GAS LINE
[Symbol]	EXISTING OVERHEAD WIRES
[Symbol]	EXISTING DRAIN INLET
[Symbol]	EXISTING MANHOLE
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING GAS VALVE
[Symbol]	EXISTING WATER VALVE
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING SIGN
[Symbol]	DEEP HOLE AND TEST PIT LOCATION AND DESIGNATION
[Symbol]	EXISTING DRAINAGE DIVIDE
[Symbol]	LIMIT OF SOIL GROUPS LINE
[Symbol]	DRAINAGE DESIGN LINE
[Symbol]	TIME OF CONCENTRATION FLOW PATH
[Symbol]	SOIL DESIGNATION AND HYDROLOGIC SOIL GROUP



- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - GEOLOGICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY JMC, PLLC ON 11/15/2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.

No.	Revision

**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33491  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.6225 • fax 914.273.2102  
 www.jmcpllc.com



**EXISTING DRAINAGE AREA MAP**  
 BAYSAPCE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 2209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 2209, SUBSECTION 2.

Drawn:	NC	Approved:	DL
Scale:	1" = 40'	Date:	08/02/2023
Project No:	22090	Zone:	EDS

**DA-1**

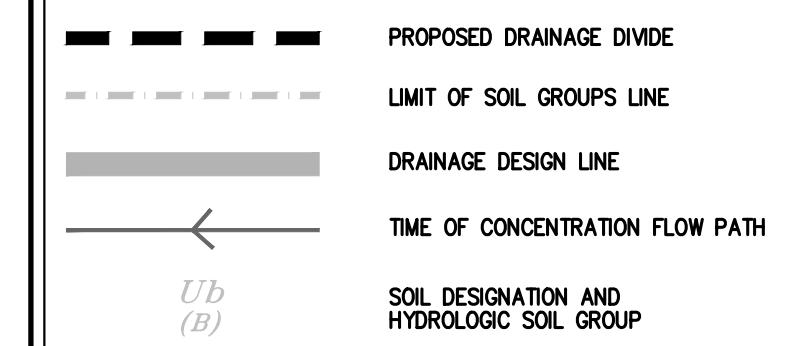
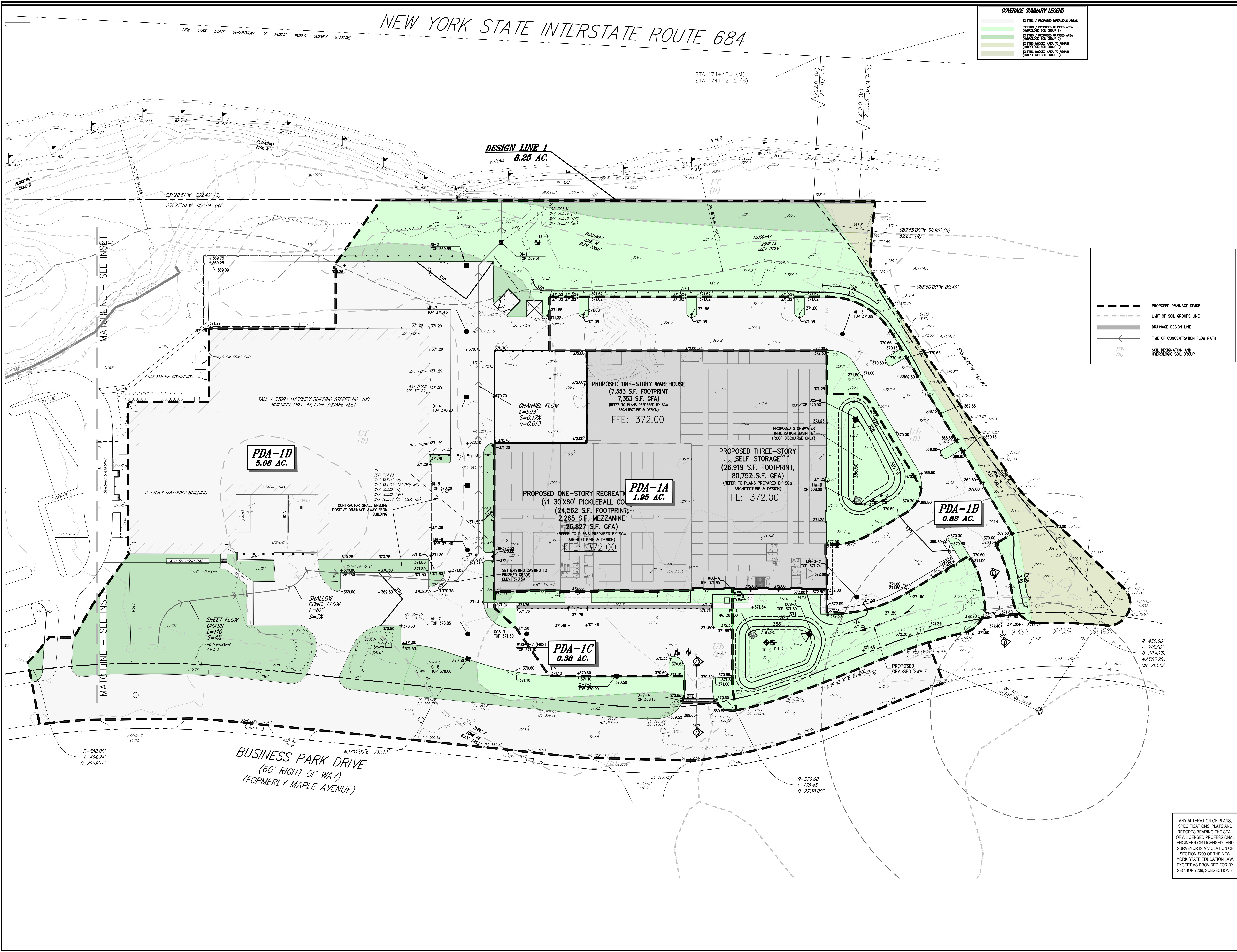
NOT FOR CONSTRUCTION



# NEW YORK STATE INTERSTATE ROUTE 684

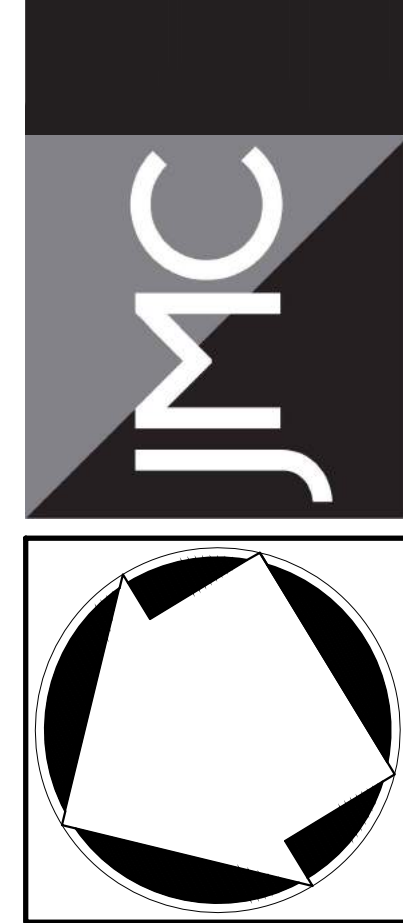
NEW YORK STATE DEPARTMENT OF PUBLIC WORKS SURVEY BASELINE

COVERAGE SUMMARY LEGEND	
[Green Swatch]	EXISTING / PROPOSED ASPHALT AREAS
[Light Green Swatch]	EXISTING / PROPOSED GRASED AREA (HYDROLOGIC SOIL GROUP B)
[Yellow-Green Swatch]	EXISTING / PROPOSED GRASED AREA (HYDROLOGIC SOIL GROUP D)
[Light Yellow Swatch]	EXISTING / PROPOSED GRASED AREA (HYDROLOGIC SOIL GROUP E)
[Lightest Green Swatch]	EXISTING / PROPOSED GRASED AREA (HYDROLOGIC SOIL GROUP F)
[White Swatch]	EXISTING / PROPOSED GRASED AREA (HYDROLOGIC SOIL GROUP G)



No.	Revision	Date	By

**WGM ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611



**PROPOSED DRAINAGE AREA MAP**  
**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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

Client:	NC	Approved:	DL
Scale:	1" = 40'	Date:	08/02/2023
Project No:	22090	Drawn By:	PJA
Drawing No:	DA-2		

NOT FOR CONSTRUCTION





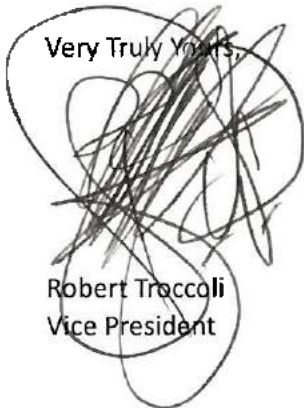
August 21, 2023

Mr. Christopher Carthy, Chairman  
and Members of the Planning Board  
Town of North Castle  
17 Bedford Road  
Armonk, NY 10504

**Jantile Operations**

Jantile is a tile contracting business that primarily works on commercial projects in New York City. The existing building acts as our corporate headquarters which includes our offices and warehouse, which we use to store the materials used on various projects. The warehouse also has a small shop, where material is cut / trimmed prior to being delivered to the job sites. All loading of deliveries occurs in the loading dock, where materials are then redistributed throughout the warehouse via forklifts. In addition, some materials are temporarily stored in the designated outdoor storage areas to allow for the organization of materials by project. After working hours, all commercial vehicles will be parked in the designated loading areas.

Very Truly Yours,



Robert Troccoli  
Vice President

100 Business Park Drive • Armonk, NY 10504 • T. 718-655-5450 • F. 718-655-5454 • [www.Jantile.com](http://www.Jantile.com)

**THE JANTILE GROUP**

**JANTILE** **JANTILE** **JANTILE**

**ZONCA**  
TERRAZZO & MOSAIC, LLC

**JANTILE**  
TERRAZZO & MOSAIC, LLC

**J GROUP**  
DESIGNS LLC

**E ELITE**  
FLOORING LLC



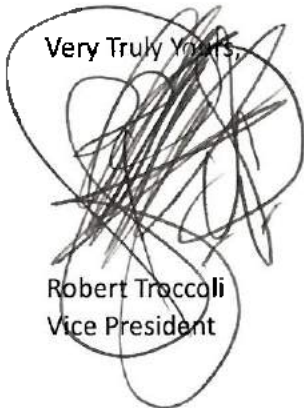
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**THE JANTILE GROUP**

**JANTILE JANTILE JANTILE**

**ZONCA**  
TERRAZZO & MOSAIC, LLC

**JANTILE**  
TERRAZZO & MOSAIC, LLC

**J GROUP DESIGNS LLC**  
ARCHITECTURE • FINISHES • MANAGEMENT

**E ELITE FLOORING LLC**



# AMENDED SITE PLAN APPROVAL DRAWINGS

# BAYSPACE ARMONK

TAX MAP SECTION 108.03 | BLOCK 1 | LOT 51  
 WESTCHESTER COUNTY  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

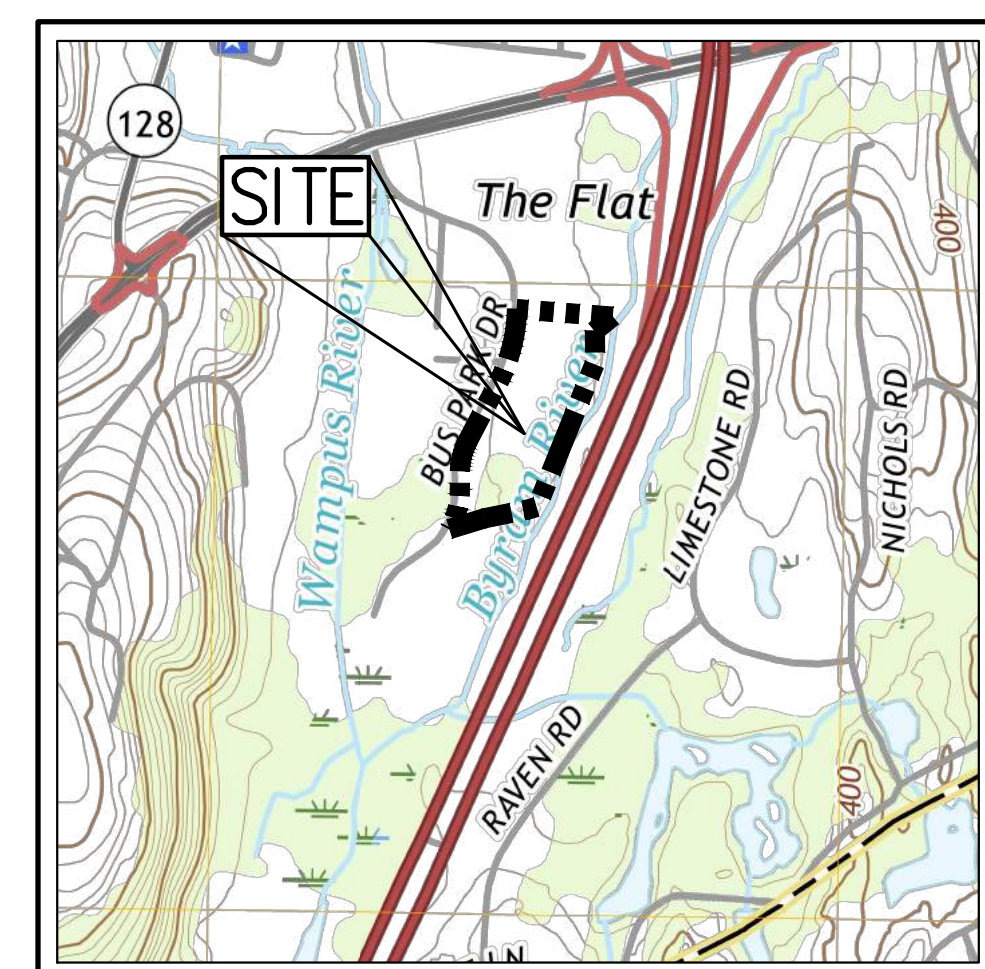
**Owner/Applicant:**  
 WMG ARMONK WAREHOUSE OWNER LLC  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431  
 (718) 702-6739

**Architect:**  
 SGW ARCHITECTURE & DESIGN  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611  
 (312) 988-7412

**Attorney:**  
 ZARIN & STEINMETZ LLP  
 81 MAIN STREET, SUITE 415  
 WHITE PLAINS, NY 10601  
 (914) 682-7800

**Wetland Consultant:**  
 ECOLOGICAL SOLUTIONS, LLC  
 1248 SOUTHFORD ROAD  
 SOUTHURBY, CT 06488  
 (203) 910-4716

**JMC Site Planner, Civil & Traffic Engineer,  
 Surveyor and Landscape Architect:**  
 120 BEDFORD ROAD  
 ARMONK, NY 10504  
 (914) 273-5225



VICINITY MAP  
 SCALE: 1"=1,000'  
 SOURCE: USGS/2018



PROJECT RENDERING  
 SCALE: N.T.S.

LOADING CALCULATION SUMMARY				
DESCRIPTION	AREA (SF)	REQUIREMENT	LOADING REQUIRED	LOADING PROVIDED
<b>EXISTING LOADING CALCULATIONS</b>				
EXISTING OFFICE	14,555	1 SPACE FOR 1ST 10,000 SF + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	1	-
EXISTING MANUFACTURING SPACE	6,238	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF IN EXCESS OF 4,000 SF	1	-
EXISTING WAREHOUSE	30,313	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF IN EXCESS OF 4,000 SF	3	-
EXISTING RECREATION FACILITY AREA: -SHARED SPACE (RESTROOM, CIRCULATION, LOBBY) -DANCE - RECREATION FACILITY -WRESTLING - RECREATION FACILITY -THE ROOM PRIVATE GYM - RECREATION FACILITY	(11,861) 1,967 3,530 4,621 1,743	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	1	-
<b>PROPOSED LOADING CALCULATIONS</b>				
PROPOSED SELF-STORAGE	80,757	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	8	-
PROPOSED WAREHOUSE	7,353	1 SPACE PER ESTABLISHMENT + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	1	-
PROPOSED RECREATION FACILITY	26,827	1 SPACE FOR 1ST 4,000 SF + 1 SPACE FOR EACH ADDITIONAL 10,000 SF	3	-
<b>TOTAL</b>	<b>177,904</b>		<b>18</b>	<b>18</b>

**JMC Drawing List:**

- C-000 COVER SHEET
- C-010 OVERALL SITE EXISTING CONDITIONS MAP
- C-011 SITE EXISTING CONDITIONS MAP
- C-020 SITE DEMOLITION PLAN
- C-100A OVERALL SITE LAYOUT PLAN
- C-100 SITE LAYOUT PLAN
- C-120 FIRE APPARATUS TURNING ANALYSIS
- C-130 DRIVEWAY SIGHT DISTANCE PROFILES
- C-200 SITE GRADING PLAN
- C-300 SITE UTILITIES PLAN
- C-400 SITE EROSION & SEDIMENT CONTROL PLAN
- C-500A OVERALL SITE LANDSCAPING & WETLAND MITIGATION PLAN
- C-500 SITE LANDSCAPING & WETLAND MITIGATION PLAN
- C-600 SITE LIGHTING PLAN
- C-800 EXISTING INTERIOR LANDSCAPE AREA CALCULATIONS PLAN
- C-810 PROPOSED INTERIOR LANDSCAPE AREA CALCULATIONS PLAN
- C-900 CONSTRUCTION DETAILS
- C-901 CONSTRUCTION DETAILS
- C-902 CONSTRUCTION DETAILS
- C-903 CONSTRUCTION DETAILS
- C-904 CONSTRUCTION DETAILS
- C-905 CONSTRUCTION DETAILS
- C-906 CONSTRUCTION DETAILS

**SGW ARCHITECTURE & DESIGN Drawing List:**

- A-101 FIRST FLOOR PLAN
- A-102 SECOND FLOOR/ MEZZANINE PLAN
- A-103 THIRD FLOOR PLAN
- A-201 BUILDING ELEVATIONS

ZONING COMPLIANCE CHART				
TAX PARCEL: 108.03-1-51				
ZONE DISTRICT: PLU - PLANNED LIGHT INDUSTRY				
PROPOSED USE: WAREHOUSE/SELF-STORAGE/RECREATION FACILITY				
DESCRIPTION	REQUIREMENT	EXISTING	PROPOSED	
MINIMUM LOT AREA (S.F./ACRES)	4	490,841/11.27	490,841/11.27	
NET LOT AREA <sup>(1)</sup> (S.F./ACRES)	-	471,285/10.81	471,285/10.81	
MINIMUM LOT FRONTAGE (FEET)	300	1,215	1,215	
MINIMUM LOT DEPTH (FEET)	300	409	409	
MAXIMUM BUILDING HEIGHT (STORIES/FEET)	3/35	2/-	3/34.7	
MAXIMUM BUILDING COVERAGE (%)	30	10.29	22.04	
FLOOR AREA RATIO	0.30	0.13	0.37 <sup>(2)</sup>	
MINIMUM INTERIOR LANDSCAPED AREA (%)	10	13.7	11.9	
<b>MINIMUM BUILDING SETBACKS</b>				
FRONT YARD (FEET)	100	100.6	68 <sup>(2)</sup>	
SIDE YARD (FEET)	50	305.3	70	
REAR YARD (FEET)	100	118	137	
<b>PARKING SPACES</b>				
STANDARD PARKING SPACES (SPACES)	(SEE TABLE)	148	309	
ACCESSIBLE PARKING SPACES (SPACES)	(SEE TABLE)	6	9	
<b>TOTAL PARKING SPACES (SPACES)</b>	<b>(SEE TABLE)</b>	<b>154</b>	<b>318</b>	

**NOTES:**

- THE "LOT AREA" USED FOR MEASUREMENT PURPOSES IS TO BE GROSS LOT AREA. NET LOT AREA IS DEFINED AS FOLLOWS: "NET LOT AREA IS THE LOT AREA MINUS 75% OF THE AREA OF ANY WETLANDS, WATERBODIES AND WATERCOURSES BUT EXCLUDING ANY ADJACENT AREAS, AND THE AREA OF ANY STEEP SLOPES, EXCEPT THAT IN THE CASE OF ONE-FAMILY LOTS, DEDUCTION FOR STEEP SLOPES IS TO BE ONLY 50%."  
 NET LOT AREA = GROSS LOT AREA - 75% OF AREA OF WETLANDS - AREA OF STEEP SLOPES  
 NET LOT AREA = 490,840.8 S.F. - 0 S.F. - 19,556 S.F. = 471,284.8 S.F. (10.81 AC.)
- VARIANCE OBTAINED FOR FRONT YARD SETBACK FROM TOWN OF NORTH CASTLE ZONING BOARD OF APPEALS ON 04/01/2021.
- VARIANCE OBTAINED FOR FAR FROM TOWN OF NORTH CASTLE ZONING BOARD OF APPEALS ON 06/01/2023.  
 FAR CALCULATION: 179,919 S.F. GFA / 490,841 S.F. GROSS LOT AREA = 0.366 (0.37)

PARKING CALCULATION SUMMARY				
DESCRIPTION	AREA (SF)	REQUIREMENT	PARKING REQUIRED	PARKING PROVIDED
<b>EXISTING PARKING CALCULATIONS**</b>				
EXISTING OFFICE	14,555	1 SPACE / 250 SF	59	-
EXISTING MANUFACTURING SPACE	6,238	1 SPACE / EMPLOYEE ON THE LARGEST WORK SHIFT, BUT NOT FEWER THAN 1 / 375 S.F. OF GROSS FLOOR AREA + 1 FOR EACH COMMERCIAL VEHICLE PARKED ON THE LOT	17	-
EXISTING WAREHOUSE	30,313	1 SPACE / 1,200 SF + 1 SPACE FOR EACH COMMERCIAL VEHICLE PARKED ON THE SITE	26	-
EXISTING RECREATION FACILITY AREA: -SHARED SPACE (RESTROOM, CIRCULATION, LOBBY) -DANCE - RECREATION FACILITY -WRESTLING - RECREATION FACILITY -THE ROOM PRIVATE GYM - RECREATION FACILITY	(11,861) 1,967 3,530 4,621 1,743	1 SPACE / 200 SF + 3 SPACES FOR THE DANCE STUDIO EMPLOYEES AT THE LARGEST SHIFT + 2 SPACES FOR THE WRESTLING STUDIO EMPLOYEES AT THE LARGEST SHIFT + 4 SPACES FOR THE PRIVATE GYM EMPLOYEES AT THE LARGEST SHIFT	10 21 26 13	-
<b>PROPOSED PARKING CALCULATIONS</b>				
PROPOSED SELF-STORAGE	80,757	1 SPACE / 1,200 SF + 1 SPACE FOR EACH COMMERCIAL VEHICLE PARKED ON THE SITE	68	-
PROPOSED WAREHOUSE	7,353	1 SPACE / 200 SF (EXCLUDING AREA OF RACKET SPORTS COURTS) + 2 SPACES FOR THE EMPLOYEES ON THE LARGEST WORK SHIFT + 3 SPACES FOR EACH RACKET SPORTS COURT (11 COURTS)	7	-
PROPOSED RECREATION FACILITY	26,827 (7,027 EXCLUDING COURTS)		71	-
<b>TOTAL</b>	<b>177,904</b>		<b>318</b>	<b>318*</b>

\*INCLUDING 9 ADA ACCESSIBLE PARKING SPACES AND 20 LANDBANKED SPACES  
 \*\*SQUARE FOOTAGES FOR THE EXISTING BUILDINGS HAVE BEEN TAKEN FROM DRAWINGS ENTITLED "TENANT SQ. FT." AND "SECOND FLOOR SQ. FT.", PREPARED BY J GROUP DESIGNS LLC, DATED 05/08/2023.

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

DATE: \_\_\_\_\_  
 CHRISTOPHER CARRHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 DATE: \_\_\_\_\_  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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

**GENERAL CONSTRUCTION NOTES APPLY TO ALL WORK HEREIN:**

- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CALL 811 "DIG SAFELY" (1-800-962-7862) TO HAVE UNDERGROUND UTILITIES LOCATED INCLUDING ARRANGING FOR A PRIVATE MARKOUT ON-SITE WHERE APPLICABLE. EXPLORATORY EXCAVATIONS SHALL COMPLY WITH CODE 753 REQUIREMENTS. NO WORK SHALL COMMENCE UNTIL ALL THE OPERATORS HAVE NOTIFIED THE CONTRACTOR THAT THEIR UTILITIES HAVE BEEN LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION, INsofar AS THEY MAY BE ENDANGERED BY THE CONTRACTOR'S OPERATIONS. THIS SHALL HOLD TRUE WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS. IF THEY ARE SHOWN ON THE DRAWINGS, THEIR LOCATIONS ARE NOT GUARANTEED EVEN THOUGH THE INFORMATION WAS OBTAINED FROM THE BEST AVAILABLE SOURCES, AND IN ANY EVENT, OTHER UTILITIES ON THESE PLANS MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, IMMEDIATELY REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES THAT HE DAMAGES, AND SHALL CONSTANTLY PROCEED WITH CAUTION TO PREVENT UNDE INTERRUPTION OF UTILITY SERVICE.
- CONTRACTOR SHALL HAND DIG TEST PITS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTING UTILITIES DEPTHS AND ADVISE OF ANY CONFLICTS WITH PROPOSED UTILITIES. IF CONFLICTS ARE PRESENT, THE OWNER'S FIELD REPRESENTATIVE, JMC, PLLC AND THE APPLICABLE MUNICIPALITY OR AGENCY SHALL BE NOTIFIED IN WRITING. THE EXISTING/PROPOSED UTILITIES RELOCATION SHALL BE DESIGNED BY JMC, PLLC.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL LOCAL PERMITS REQUIRED.
- ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL SAFETY CODES. APPLICABLE SAFETY CODES MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS, AND ADDITIONS THERETO, TO THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA); AND APPLICABLE SAFETY, HEALTH REGULATIONS AND BUILDING CODES FOR CONSTRUCTION IN THE STATE OF NEW YORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GUARDING AND PROTECTING ALL OPEN EXCAVATIONS IN ACCORDANCE WITH THE PROVISION OF SECTION 107-05 (SAFETY AND HEALTH REQUIREMENTS) OF THE NYS DOT STANDARD SPECIFICATIONS. IF THE CONTRACTOR PERFORMS ANY HAZARDOUS CONSTRUCTION PRACTICES, ALL OPERATIONS IN THE AFFECTED AREA SHALL BE DISCONTINUED AND IMMEDIATE ACTION SHALL BE TAKEN TO CORRECT THE SITUATION TO THE SATISFACTION OF THE APPROVAL AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE SCOPE OF WORK SHOWN HEREON AT ALL TIMES TO THE SATISFACTION OF THE OWNERS REPRESENTATIVE. RAMPING CONSTRUCTION TO PROVIDE ACCESS MAY BE CONSTRUCTED WITH SUBBASE MATERIAL EXCEPT THAT TEMPORARY ASPHALT CONCRETE SHALL BE PLACED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE PEDESTRIAN ACCESS AT ALL TIMES.
- CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING PAVEMENT TO REMAIN.
- THE TOWN OF NORTH CASTLE IS PURSUING THE OWNERSHIP OF AN EXISTING WATER SUPPLY WELL LOCATED AT 125 BUSINESS PARK DRIVE IN THE EFFORT TO TRANSFER THE WELL TO SERVE THE PUBLIC WATER SUPPLY. WELLS SERVING PUBLIC WATER SYSTEMS SHALL BE LOCATED SUCH THAT THE OWNER OF THE WATER SYSTEM POSSESSES LEGAL TITLE TO LANDS WITHIN 100' OF THE WELL AND THE OWNER CONTROLS BY OWNERSHIP, LEASE, EASEMENT OR OTHER LEGALLY ENFORCEABLE ARRANGEMENT THE LAND USE ACTIVITIES WITHIN 200' OF THE WELL. HYDROGEOLOGIC EVALUATIONS AND SOURCE WATER ASSESSMENTS SHOULD BE USED TO DETERMINE APPROPRIATE SEPARATION FROM POTENTIAL CONTAMINANT SOURCES.

SUBSURFACE UTILITY LOCATIONS ARE BASED ON A COMPILATION OF FIELD EVIDENCE, AVAILABLE RECORD PLANS AND/OR UTILITY MARK-OUTS. THE LOCATION OR COMPLETENESS OF UNDERGROUND INFORMATION CANNOT BE GUARANTEED. VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION.



No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/11/2023	NC



JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Meyer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.5225 • fax 914.273.2102  
 www.jmcpllc.com

Drawn: NC Approved: DL  
 Scale: NOT TO SCALE  
 Date: 09/12/2022  
 Project No: 22090  
 2209-SE COVER COVER.dwg  
 Drawing No: C-000

NOT FOR CONSTRUCTION

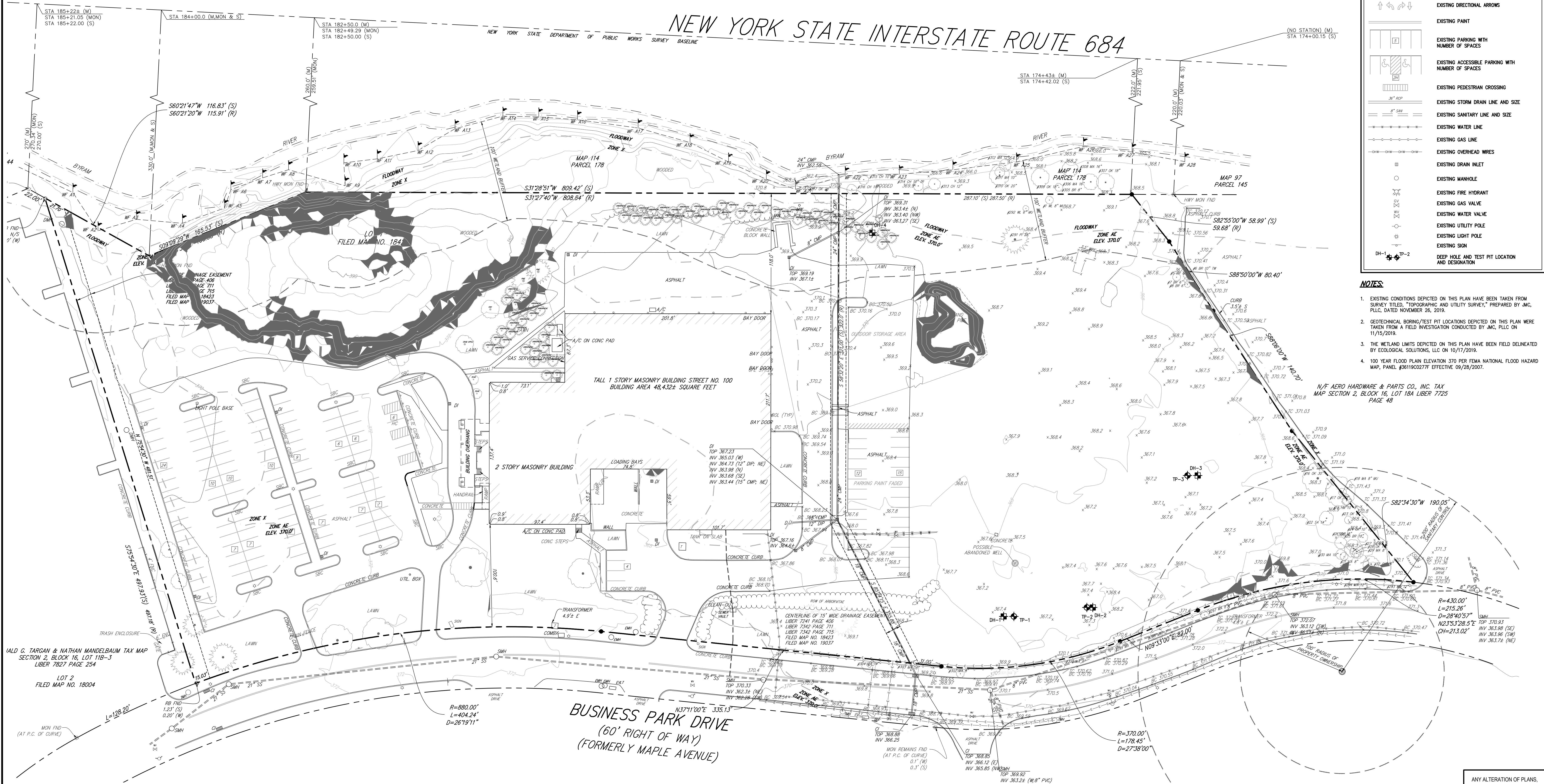


DEEP HOLE TEST SUMMARY TABLE			
TEST LOCATION	EXISTING GROUND ELEVATION	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION
DH-1/TP-1	367.40	3.5'	363.90
DH-2/TP-2	367.35	3.5'	363.85
DH-3/TP-3	367.00	5.5'	361.50
DH-4	367.00	6.5'	360.50

STEEP SLOPES TABLE				
CATEGORY	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (S.F.)	COLOR
1	25.00%	Vertical	19,556	█

LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING WETLAND LINE AND DELINEATION
	EXISTING BUILDING OVERHANG
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING GUIDE RAIL
	EXISTING FENCE
	EXISTING TREE AND DESIGNATION
	EXISTING TREE LINE
	EXISTING DIRECTIONAL ARROWS
	EXISTING PAINT
	EXISTING PARKING WITH NUMBER OF SPACES
	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
	EXISTING PEDESTRIAN CROSSING
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	DEEP HOLE AND TEST PIT LOCATION AND DESIGNATION

- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 08, 2018.
  - GEOLOGICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY JMC, PLLC ON 11/15/2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #31903277F EFFECTIVE 09/28/2007.



**NOT FOR CONSTRUCTION**

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

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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**JMC**

**OVERALL SITE EXISTING CONDITIONS MAP**

**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

**WGM ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

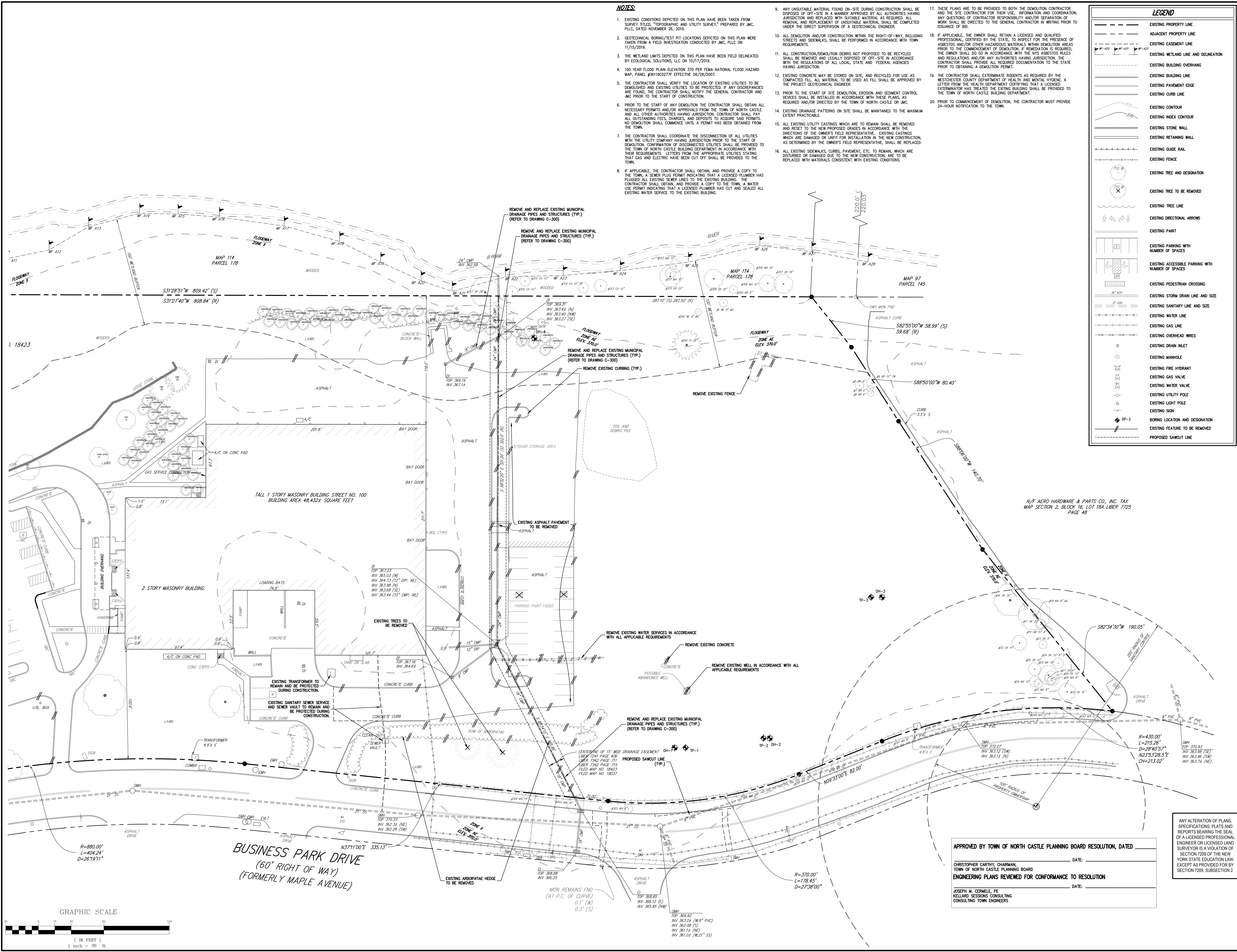
DATE: 09/12/2022  
 PROJECT NO: 22090  
 DRAWING NO: C-010







NOT FOR CONSTRUCTION



NOTES

- 1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, 'TOPOGRAPHIC AND UTILITY SURVEY,' PREPARED BY J.M.C. P.L.L.C. DATED NOVEMBER 06, 2018.
2. GEOTECHNICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY J.M.C. P.L.L.C. ON 11/15/2019.
3. THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
4. 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #81902277F EFFECTIVE 09/28/2007.
5. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND J.M.C. PRIOR TO THE START OF CONSTRUCTION.
6. PRIOR TO THE START OF ANY DEMOLITION THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE TOWN OF NORTH CASTLE AND ALL OTHER AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL PAY ALL OUTSTANDING FEES, CHARGES, AND DEPOSITS TO ACQUIRE SAID PERMITS. NO DEMOLITION SHALL COMMENCE UNTIL A PERMIT HAS BEEN OBTAINED FROM THE TOWN.
7. THE CONTRACTOR SHALL COORDINATE THE DISCONNECTION OF ALL UTILITIES WITH THE UTILITY COMPANY HAVING JURISDICTION PRIOR TO THE START OF DEMOLITION. CONFIRMATION OF DISCONNECTED UTILITIES SHALL BE PROVIDED TO THE TOWN OF NORTH CASTLE BUILDING DEPARTMENT IN ACCORDANCE WITH THEIR REQUIREMENTS. LETTERS FROM THE APPROPRIATE UTILITIES STATING THAT GAS AND ELECTRIC HAVE BEEN CUT OFF SHALL BE PROVIDED TO THE TOWN.
8. IF APPLICABLE, THE CONTRACTOR SHALL OBTAIN AND PROVIDE A COPY TO THE TOWN, A SEWER PLUG PERMIT INDICATING THAT A LICENSED PLUMBER HAS PLUGGED ALL EXISTING SEWER LINES TO THE EXISTING BUILDING. THE CONTRACTOR SHALL OBTAIN AND PROVIDE A COPY TO THE TOWN, A WATER USE PERMIT INDICATING THAT A LICENSED PLUMBER HAS CUT AND SEALED ALL EXISTING WATER SERVICE TO THE EXISTING BUILDING.
9. ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING CONSTRUCTION SHALL BE DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED. ALL REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER.
10. ALL DEMOLITION AND/OR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, INCLUDING STREETS AND SIDEWALKS, SHALL BE PERFORMED IN ACCORDANCE WITH TOWN REQUIREMENTS.
11. ALL CONSTRUCTION/DEMOLITION DEBRIS NOT PROPOSED TO BE RECYCLED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH THE REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AGENCIES HAVING JURISDICTION.
12. EXISTING CONCRETE MAY BE STORED ON SITE AND RECYCLED FOR USE AS COMPACTED FILL. ALL MATERIAL TO BE USED AS FILL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
13. PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THESE PLANS, AS REQUIRED AND/OR DIRECTED BY THE TOWN OF NORTH CASTLE OR J.M.C.
14. EXISTING DRAINAGE PATTERNS ON SITE SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE.
15. ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN SHALL BE REMOVED AND RESET TO THE NEW PROPOSED GRADES IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER'S FIELD REPRESENTATIVE. EXISTING CASTINGS WHICH ARE DAMAGED OR UNFIT FOR INSTALLATION IN THE NEW CONSTRUCTION, AS DETERMINED BY THE OWNER'S FIELD REPRESENTATIVE, SHALL BE REPLACED.
16. ALL EXISTING SIDEWALKS, CURBS, PAVEMENT, ETC. TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DUE TO THE NEW CONSTRUCTION, ARE TO BE REPLACED WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
17. THESE PLANS ARE TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND THE SITE CONTRACTOR FOR THEIR USE. INFORMATION AND COORDINATION ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
18. IF APPLICABLE, THE OWNER SHALL RETAIN A LICENSED AND QUALIFIED PROFESSIONAL, CERTIFIED BY THE STATE, TO INSPECT FOR THE PRESENCE OF ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS WITHIN DEMOLITION AREAS PRIOR TO THE COMMENCEMENT OF DEMOLITION. IF REMEDIATION IS REQUIRED, THE OWNER SHALL DO SO IN ACCORDANCE WITH THE NYS ASBESTOS RULES AND REGULATIONS AND/OR ANY AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED DOCUMENTATION TO THE STATE PRIOR TO OBTAINING A DEMOLITION PERMIT.
19. THE CONTRACTOR SHALL EXTERMINATE RODENTS AS REQUIRED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH AND MENTAL HYGIENE. A LETTER FROM THE HEALTH DEPARTMENT CERTIFYING THAT A LICENSED EXTERMINATOR HAS TREATED THE EXISTING BUILDING SHALL BE PROVIDED TO THE TOWN OF NORTH CASTLE BUILDING DEPARTMENT.
20. PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR MUST PROVIDE 24-HOUR NOTIFICATION TO THE TOWN.

LEGEND table with symbols for: EXISTING PROPERTY LINE, ADJACENT PROPERTY LINE, EXISTING EASEMENT LINE, EXISTING WETLAND LINE AND DELINEATION, EXISTING BUILDING OVERHANG, EXISTING BUILDING LINE, EXISTING PAVEMENT EDGE, EXISTING CURB LINE, EXISTING CONTOUR, EXISTING INDEX CONTOUR, EXISTING STONE WALL, EXISTING RETAINING WALL, EXISTING GUE RAIL, EXISTING FENCE, EXISTING TREE AND DESIGNATION, EXISTING TREE TO BE REMOVED, EXISTING TREE LINE, EXISTING DIRECTIONAL ARROWS, EXISTING PAINT, EXISTING PARKING WITH NUMBER OF SPACES, EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES, EXISTING PEDESTRIAN CROSSING, EXISTING STORM DRAIN LINE AND SIZE, EXISTING SANITARY LINE AND SIZE, EXISTING WATER LINE, EXISTING GAS LINE, EXISTING OVERHEAD WIRES, EXISTING DRAIN INLET, EXISTING MANHOLE, EXISTING FIRE HYDRANT, EXISTING GAS VALVE, EXISTING WATER VALVE, EXISTING UTILITY POLE, EXISTING LIGHT POLE, EXISTING SIGN, BORING LOCATION AND DESIGNATION, EXISTING FEATURE TO BE REMOVED, PROPOSED SAWCUT LINE.

Revision table with columns: No., Revision, Date, and Description. Row 1: 1, RESPONSE TO TOWN COMMENTS, 09/11/2023, NC.

OWNER/CLIENT: WMG ARMONK WAREHOUSE OWNER LLC, 4800 NORTH FEDERAL HWY., SUITE B-200-34, BOCA RATON, FL 33431. ARCHITECT: SGW ARCHITECTURE & DESIGN, 444 NORTH MICHIGAN AVENUE, SUITE 1850, CHICAGO, IL 60611.

J.M.C. Planning, Engineering, Landscape Architecture & Land Surveying, P.L.L.C. J.M.C. Site Development Consultants, LLC. John Mayer Consulting, Inc. 120 BEDFORD ROAD • ARMONK, NY 10504, voice 914.273.5225 • fax 914.273.2102, www.jmcplic.com



SITE DEMOLITION & TREE REMOVAL PLAN. BAYSIDE ARMONK, 100 BUSINESS PARK DRIVE, TOWN OF NORTH CASTLE, NEW YORK.

Approval table with columns: Drawn, NC, Approved, DL, Scale, 1" = 30', Date, 09/12/2022, Project No, 22090, Drawing No, C-020.

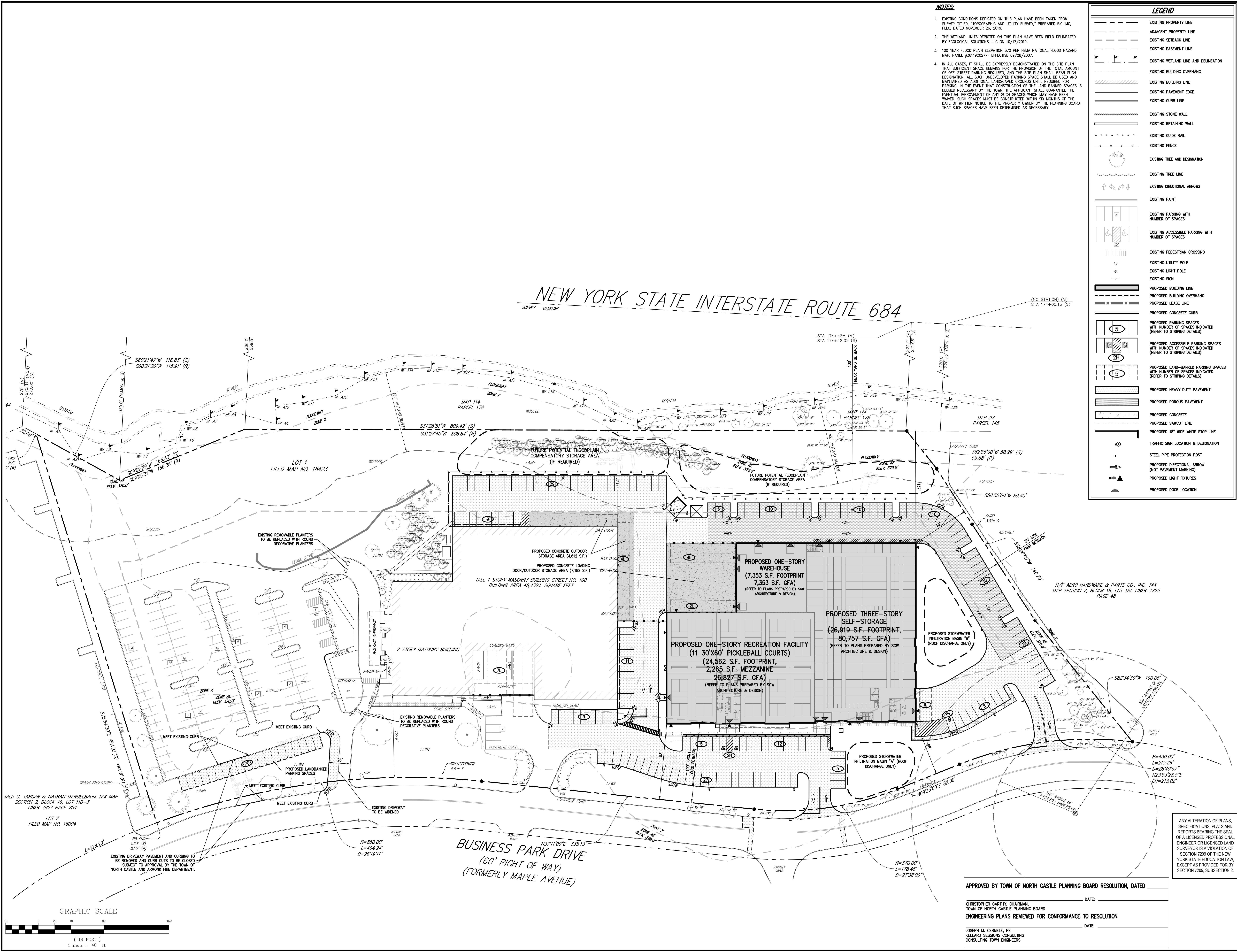
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED: CHRISTOPHER CATHY, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD. ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION. JOSEPH M. CERMELE, PE, KELLARD SESSIONS CONSULTING, CONSULTING TOWN ENGINEERS.

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 2209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 2209, SUBSECTION 2.

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NOT FOR CONSTRUCTION

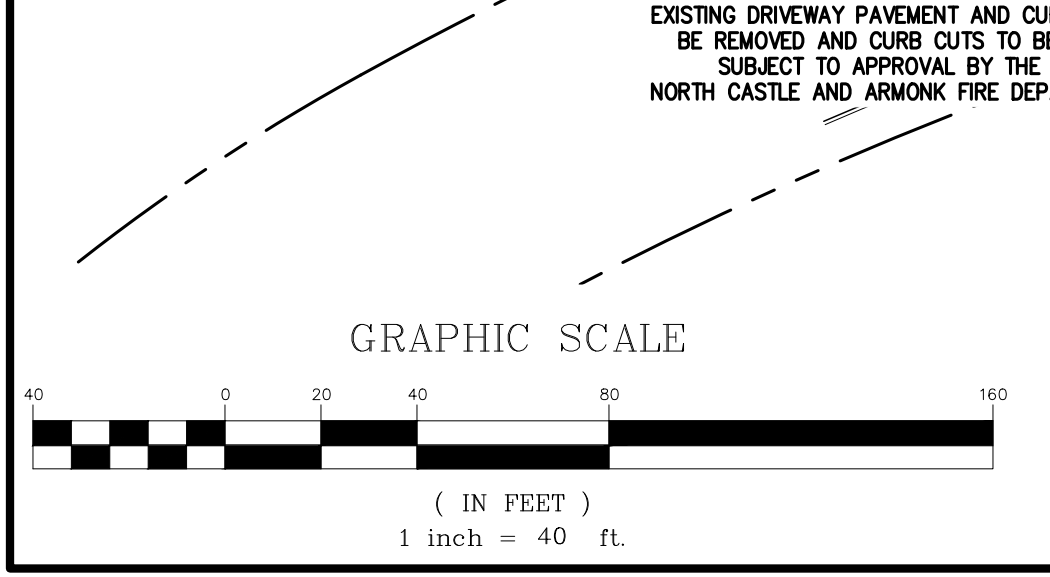


- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, P.L.L.C. DATED NOVEMBER 26, 2018.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #81190027F EFFECTIVE 09/28/2007.
  - IN ALL CASES, IT SHALL BE EXPRESSLY DEMONSTRATED ON THE SITE PLAN THAT SUFFICIENT SPACE REMAINS FOR THE PROVISION OF THE TOTAL AMOUNT OF OFF-STREET PARKING REQUIRED, AND THE SITE PLAN SHALL BEAR SUCH DESIGNATION. ALL SUCH UNDEVELOPED PARKING SPACE SHALL BE USED AND MAINTAINED AS ADDITIONAL LANDSCAPED GRASSLANDS UNLESS OTHERWISE DESIGNATED. IN THE EVENT THAT CONSTRUCTION OF THE LAND BANKED SPACES IS SEEMED NECESSARY BY THE TOWN, THE APPLICANT SHALL GUARANTEE THE EVENTUAL IMPROVEMENT OF ANY SUCH SPACES WHICH MAY HAVE BEEN WANTED. SUCH SPACES MUST BE CONSTRUCTED WITHIN SIX MONTHS OF THE DATE OF WRITTEN NOTICE TO THE PROPERTY OWNER BY THE PLANNING BOARD THAT SUCH SPACES HAVE BEEN DETERMINED AS NECESSARY.

**LEGEND**

[Symbol]	EXISTING PROPERTY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING SETBACK LINE
[Symbol]	EXISTING EASEMENT LINE
[Symbol]	EXISTING WETLAND LINE AND DELINEATION
[Symbol]	EXISTING BUILDING OVERHANG
[Symbol]	EXISTING BUILDING LINE
[Symbol]	EXISTING PAVEMENT EDGE
[Symbol]	EXISTING CURB LINE
[Symbol]	EXISTING STONE WALL
[Symbol]	EXISTING RETAINING WALL
[Symbol]	EXISTING GUIDE RAIL
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING TREE AND DESIGNATION
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING DIRECTIONAL ARROWS
[Symbol]	EXISTING PAINT
[Symbol]	EXISTING PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING PEDESTRIAN CROSSING
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING SIGN
[Symbol]	PROPOSED BUILDING LINE
[Symbol]	PROPOSED BUILDING OVERHANG
[Symbol]	PROPOSED LEASE LINE
[Symbol]	PROPOSED CONCRETE CURB
[Symbol]	PROPOSED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
[Symbol]	PROPOSED ACCESSIBLE PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
[Symbol]	PROPOSED LAND-BANKED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
[Symbol]	PROPOSED HEAVY DUTY PAVEMENT
[Symbol]	PROPOSED POROUS PAVEMENT
[Symbol]	PROPOSED CONCRETE
[Symbol]	PROPOSED SAWMUT LINE
[Symbol]	PROPOSED 18" WIDE WHITE STOP LINE
[Symbol]	TRAFFIC SIGN LOCATION & DESIGNATION
[Symbol]	STEEL PIPE PROTECTION POST (NOT PAVEMENT MARKING)
[Symbol]	PROPOSED LIGHT FIXTURES
[Symbol]	PROPOSED DOOR LOCATION

# NEW YORK STATE INTERSTATE ROUTE 684



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

DATE: 09/12/2022

CHRISTOPHER CARTH, CHAIRMAN,  
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

DATE: \_\_\_\_\_

JOSEPH M. CERMILE, PE  
KELLARD SESSIONS CONSULTING  
CONSULTING TOWN ENGINEERS

By	NC	Approved	DL
Date	10/24/2022	Scale	1" = 40'
Revision	1. RESPONSE TO TOWN COMMENTS	Date	09/12/2022
No.	2. RESPONSE TO TOWN COMMENTS	Project No.	22090
	3. GENERAL REVISIONS	Zone-SE	LAY-OV
	4. RESPONSE TO TOWN COMMENTS	Zone-NW	EXIST

OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
4800 NORTH FEDERAL HWY., SUITE B-200-34  
BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
444 NORTH MICHIGAN AVENUE, SUITE 1850  
CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
JMC Site Development Consultants, LLC  
John Mayer Consulting, Inc.

120 BEDFORD ROAD • ARMONK, NY 10504  
voice 914.273.5225 • fax 914.273.2102  
www.jmcpllc.com

**JMC**

**OVERALL SITE LAYOUT PLAN**

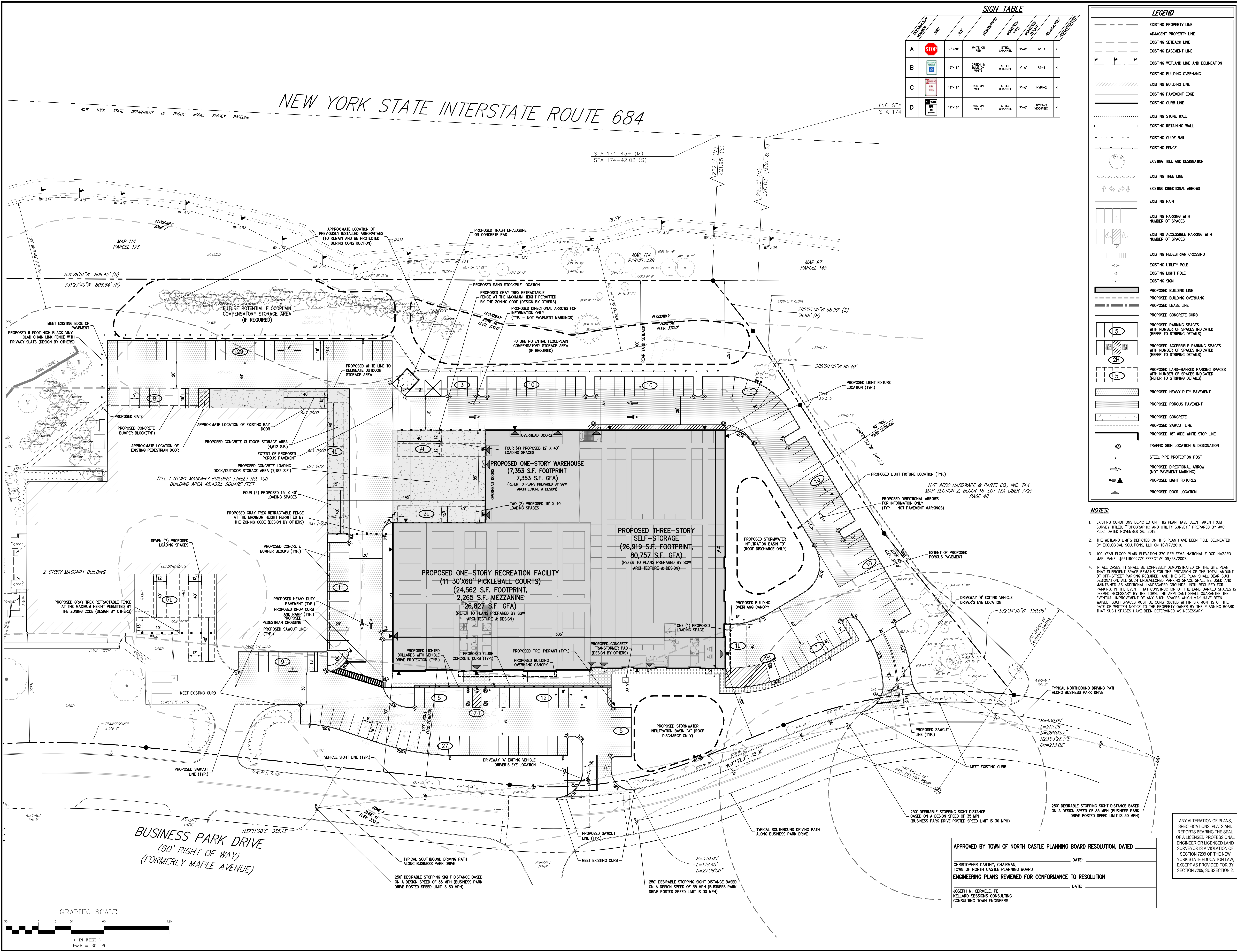
**BAYSIDE ARMONK**  
100 BUSINESS PARK DRIVE  
TOWN OF NORTH CASTLE, NEW YORK

Drawn: NC Approved: DL  
Scale: 1" = 40'  
Date: 09/12/2022  
Project No: 22090  
Zone-SE: LAY-OV EXIST  
Drawing No: **C-100A**

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION



# NEW YORK STATE INTERSTATE ROUTE 684

(NO STA STA 174

### SIGN TABLE

DESCRIPTION	SYMBOL	SIZE	DESCRIPTION	MARKING TYPE	MARKING MATERIAL	REMARKS
A	STOP	30"x30"	WHITE ON RED	STEEL CHANNEL	7'-0"	R1-1 X
B	AWAY	12"x18"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8 X
C	AWAY	12"x18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP-2 X
D	AWAY	12"x18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP-2 (MODIFIED) X

### LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SETBACK LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING TREE LINE
- EXISTING DIRECTIONAL ARROWS
- EXISTING PAINT
- EXISTING PARKING WITH NUMBER OF SPACES
- EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
- EXISTING PEDESTRIAN CROSSING
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED BUILDING OVERHANG
- PROPOSED LEASE LINE
- PROPOSED CONCRETE CURB
- PROPOSED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
- PROPOSED ACCESSIBLE PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
- PROPOSED LAND-BANKED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED POROUS PAVEMENT
- PROPOSED CONCRETE
- PROPOSED SAWCUT LINE
- PROPOSED 18" WIDE WHITE STOP LINE
- TRAFFIC SIGN LOCATION & DESIGNATION
- STEEL PIPE PROTECTION POST
- PROPOSED DIRECTIONAL ARROW (NOT PAVEMENT MARKING)
- PROPOSED LIGHT FIXTURES
- PROPOSED DOOR LOCATION

### NOTES

- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLES, "TOPOGRAPHIC AND UTILITY SURVEY", PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
- THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
- 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #811902277F EFFECTIVE 09/28/2007.
- IN ALL CASES, IT SHALL BE EXPRESSLY DEMONSTRATED ON THE SITE PLAN THAT SUFFICIENT SPACE REMAINS FOR THE PROVISION OF THE TOTAL AMOUNT OF OFF-STREET PARKING REQUIRED, AND THE SITE PLAN SHALL BEAR SUCH DESIGNATION: ALL SUCH UNDEVELOPED PARKING SPACE SHALL BE USED AND MAINTAINED AS ADDITIONAL LANDSCAPED GROUNDS UNTIL REQUIRED FOR PARKING. IN THE EVENT THAT CONSTRUCTION OF THE LAND BANKED SPACES IS DEEMED NECESSARY BY THE TOWN, THE APPLICANT SHALL GUARANTEE THE EVENTUAL IMPROVEMENT OF ANY SUCH SPACES WHICH MAY HAVE BEEN MAINTAINED. SUCH SPACES MUST BE CONSTRUCTED WITHIN SIX MONTHS OF THE DATE OF WRITTEN NOTICE TO THE PROPERTY OWNER BY THE PLANNING BOARD THAT SUCH SPACES HAVE BEEN DETERMINED AS NECESSARY.

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH M. CERMELE, PE  
KELLARD SESSIONS CONSULTING  
CONSULTING TOWN ENGINEERS

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

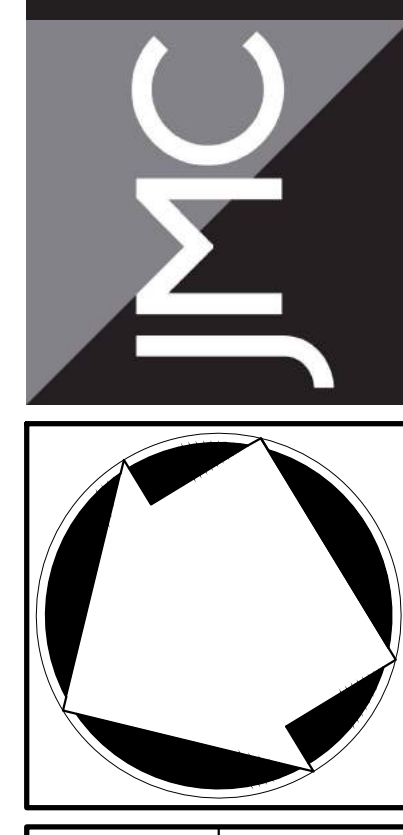
No.	Revision	Date
1.	RESPONSE TO TOWN COMMENTS	10/24/2022
2.	RESPONSE TO TOWN COMMENTS	09/11/2023

OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
4800 NORTH FEDERAL HWY., SUITE B-200-34  
BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
444 NORTH MICHIGAN AVENUE, SUITE 1850  
CHICAGO, IL 60611

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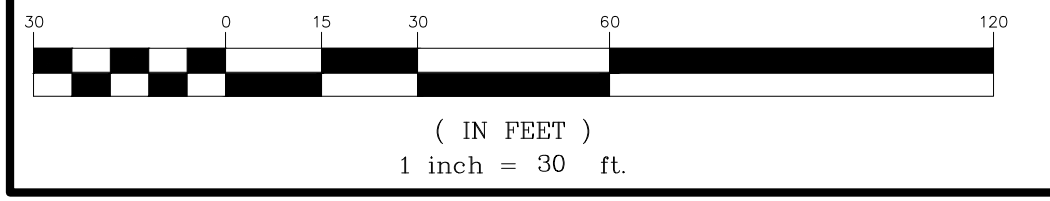
**SITE LAYOUT PLAN**  
**BAYSPACE ARMONK**  
100 BUSINESS PARK DRIVE  
TOWN OF NORTH CASTLE, NEW YORK

Drawn:	NC	Approved:	DL
Scale:	1" = 30'		
Date:	09/12/2022		
Project No.:	22090		
Drawn-SE:	LAY	L_LAY	
Drawing No.:	<b>C-100</b>		

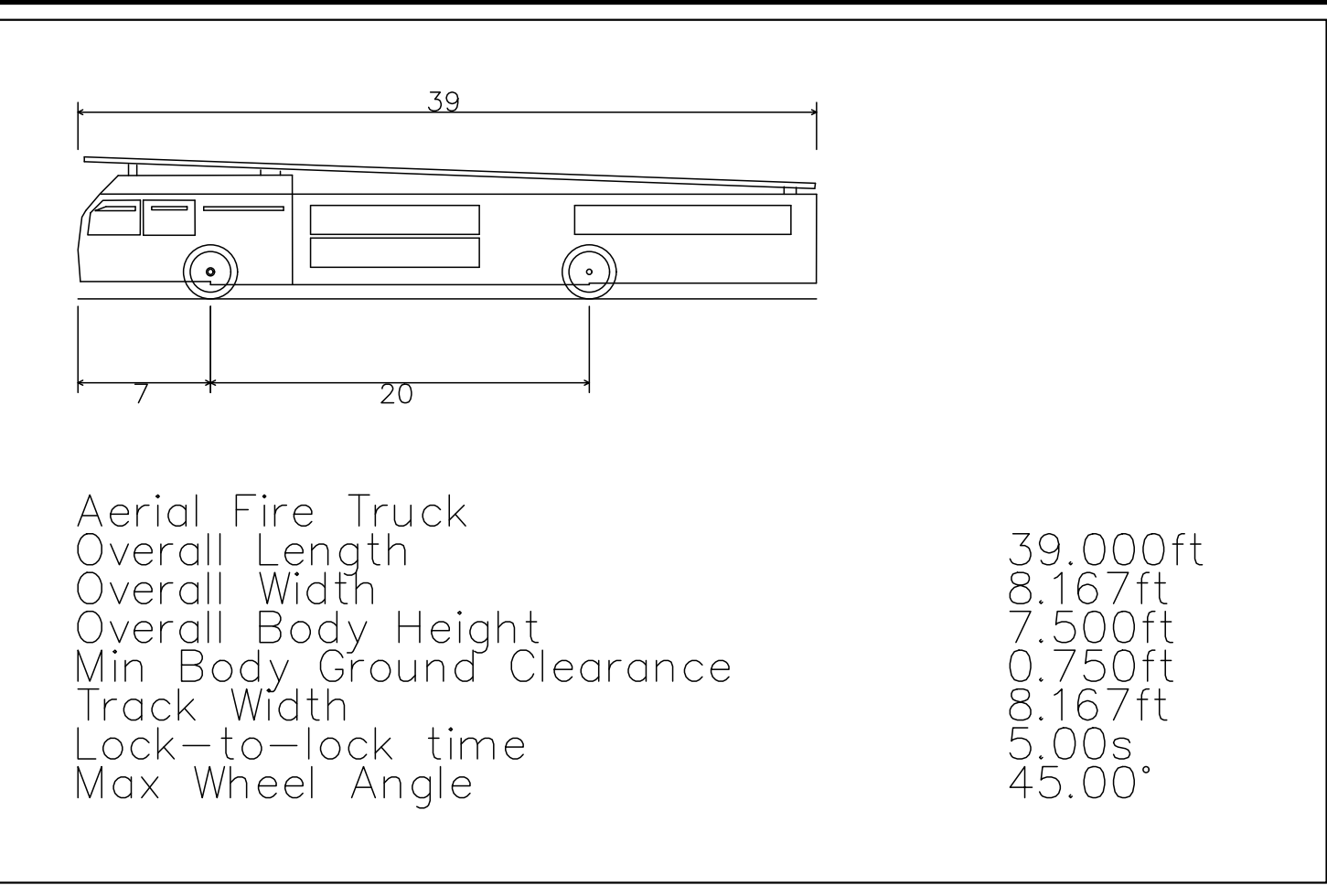
NOT FOR CONSTRUCTION

**BUSINESS PARK DRIVE**  
(60' RIGHT OF WAY)  
(FORMERLY MAPLE AVENUE)

GRAPHIC SCALE







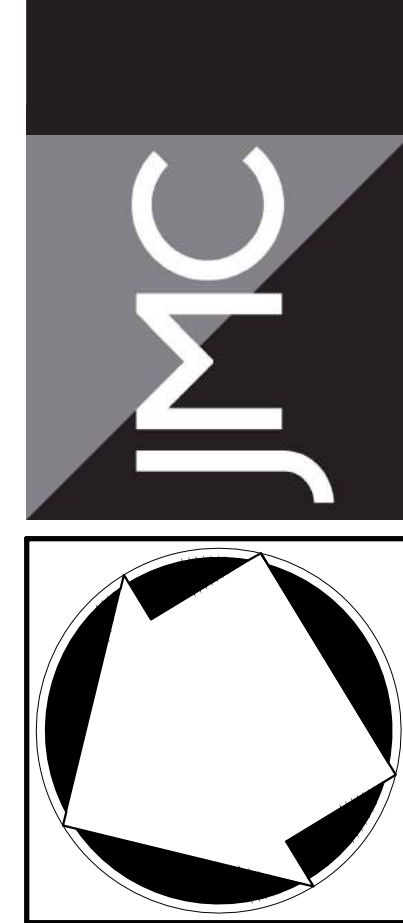
**FIRE APPARATUS PROFILE**  
 SCALE: N.T.S.

No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/11/2023	NC

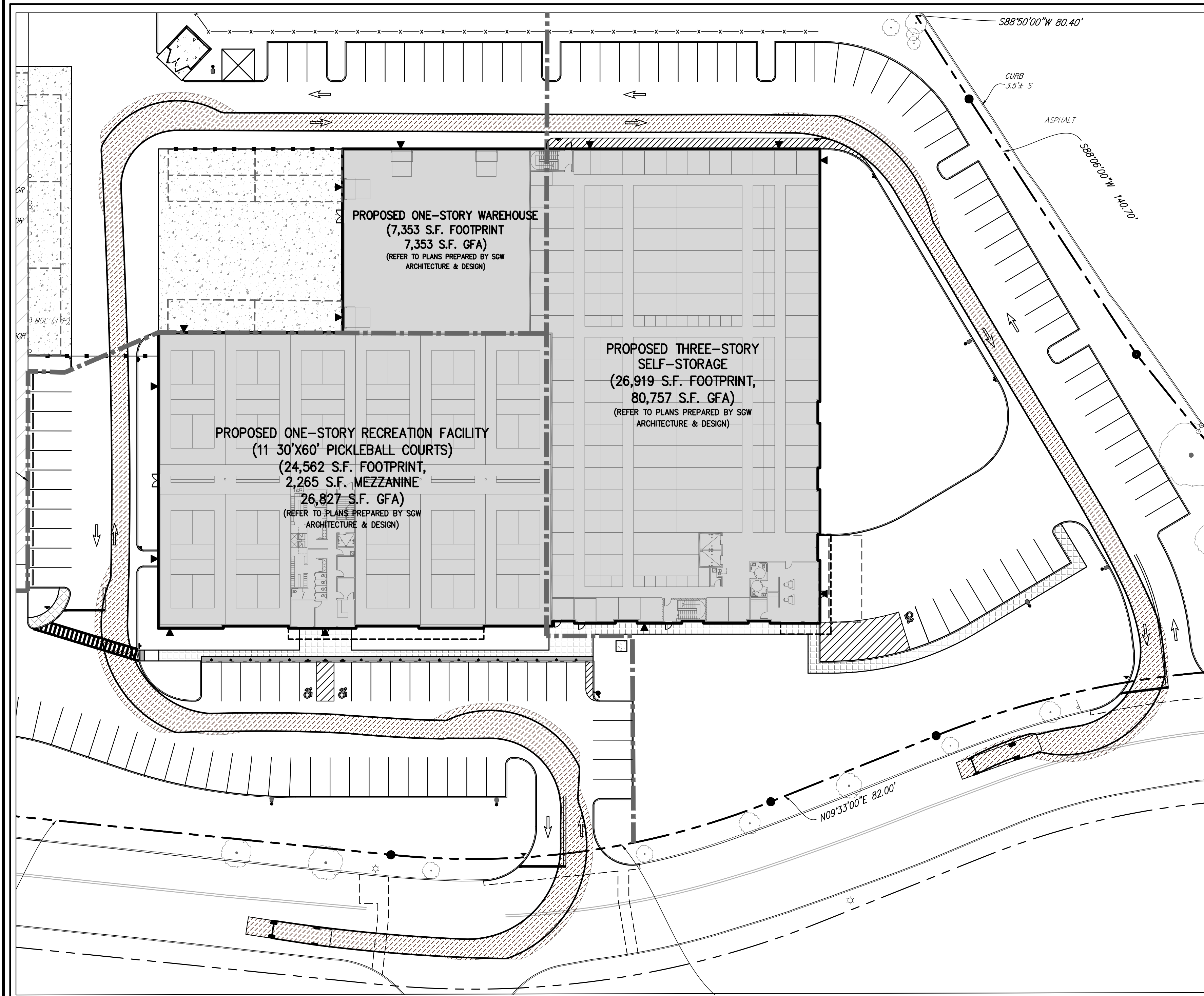
OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
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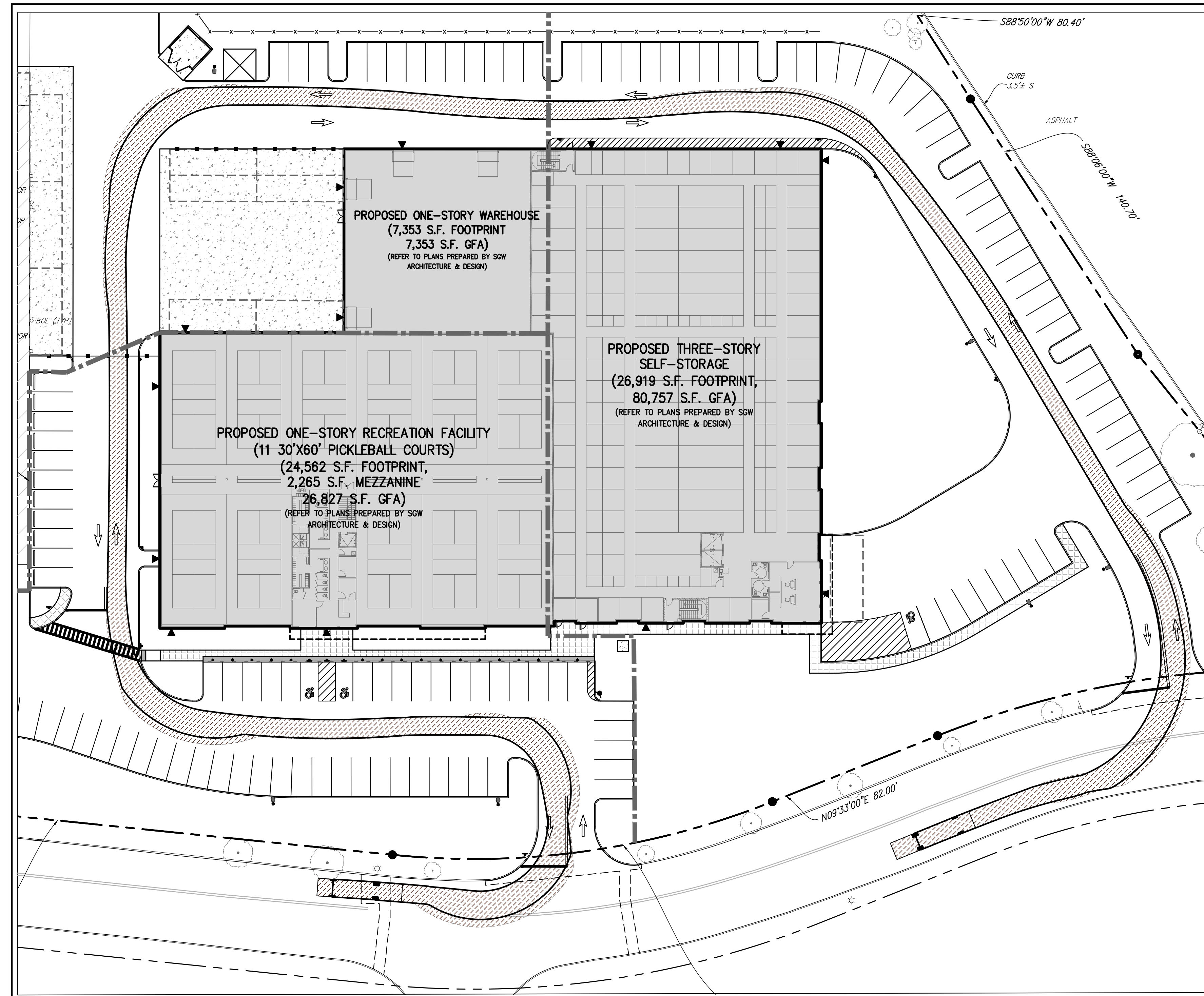
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**FIRE APPARATUS TURNING ANALYSIS**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

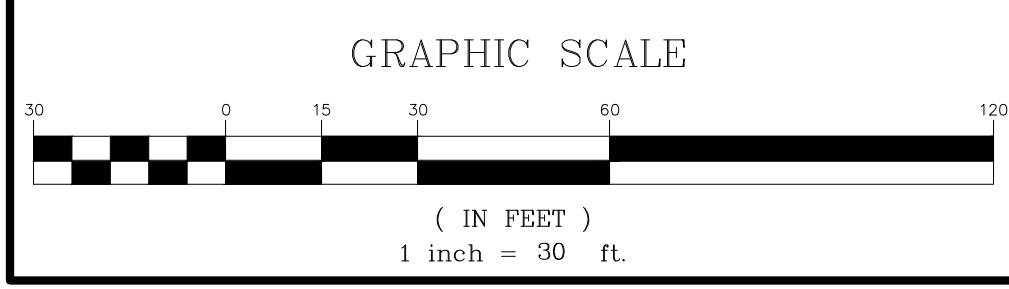


**FIRE APPARATUS CIRCULATING MOVEMENT (NORTH ENTRANCE)**



**FIRE APPARATUS CIRCULATING MOVEMENT (SOUTH ENTRANCE)**

NOT FOR CONSTRUCTION



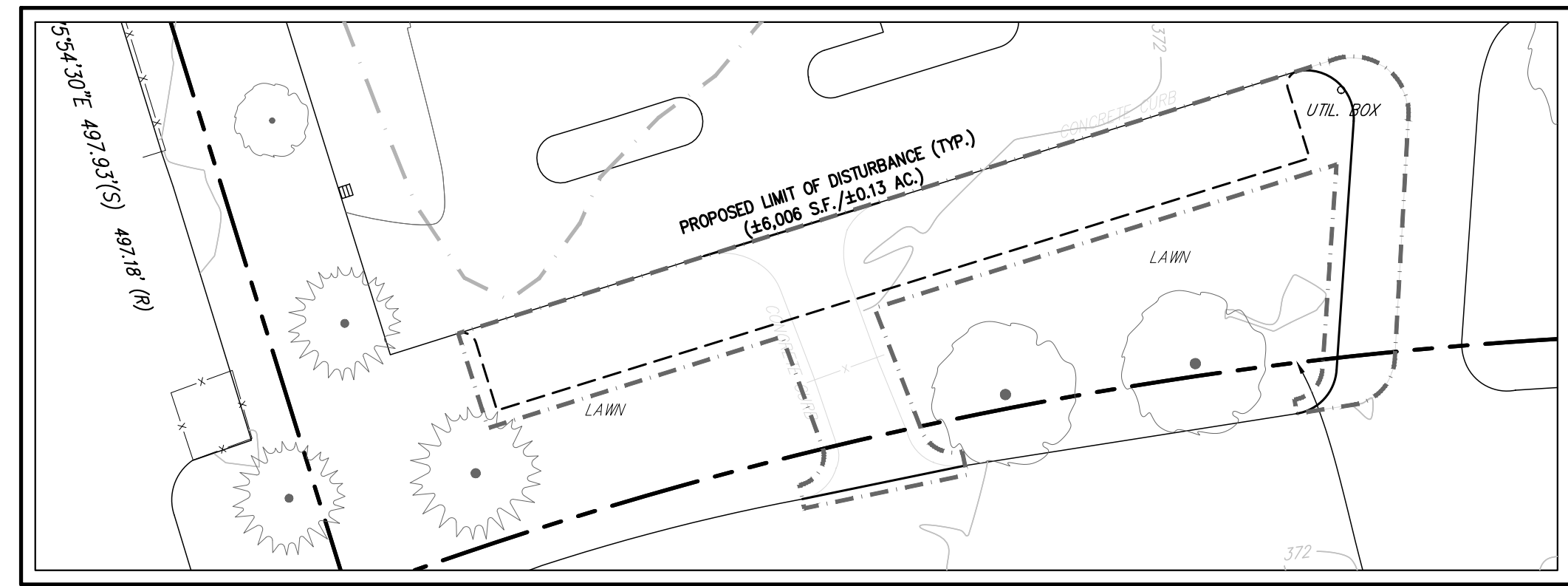
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APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED	DATE: 09/12/2022	Drawn: NC	Approved: DL
CHRISTOPHER CARTHY, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD	ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION	Scale: 1" = 30'	Date: 09/12/2022
JOSEPH M. CERMELE, PE KILLARD SESSIONS CONSULTING CONSULTING TOWN ENGINEERS	DATE:	Project No: 22090	Sheet: FIRE LAY
		Drawing No:	<b>C-120</b>

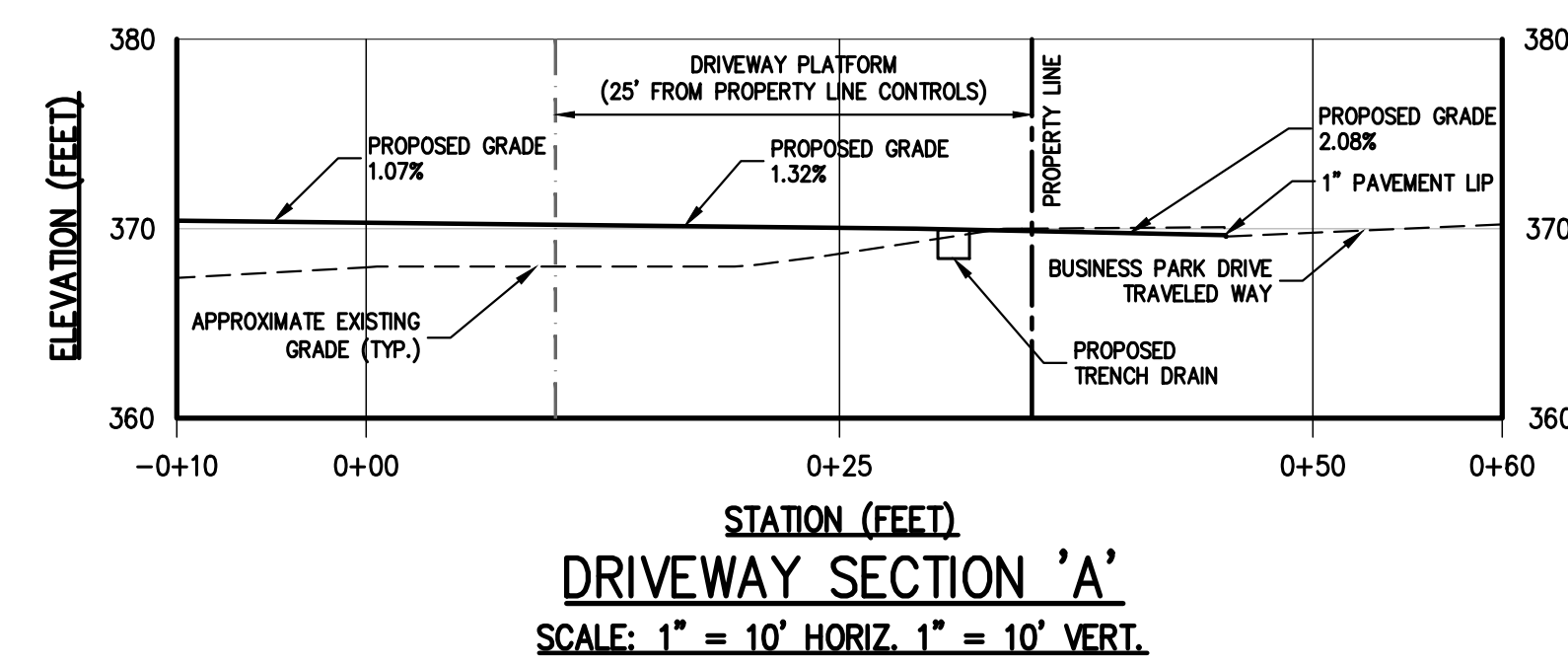




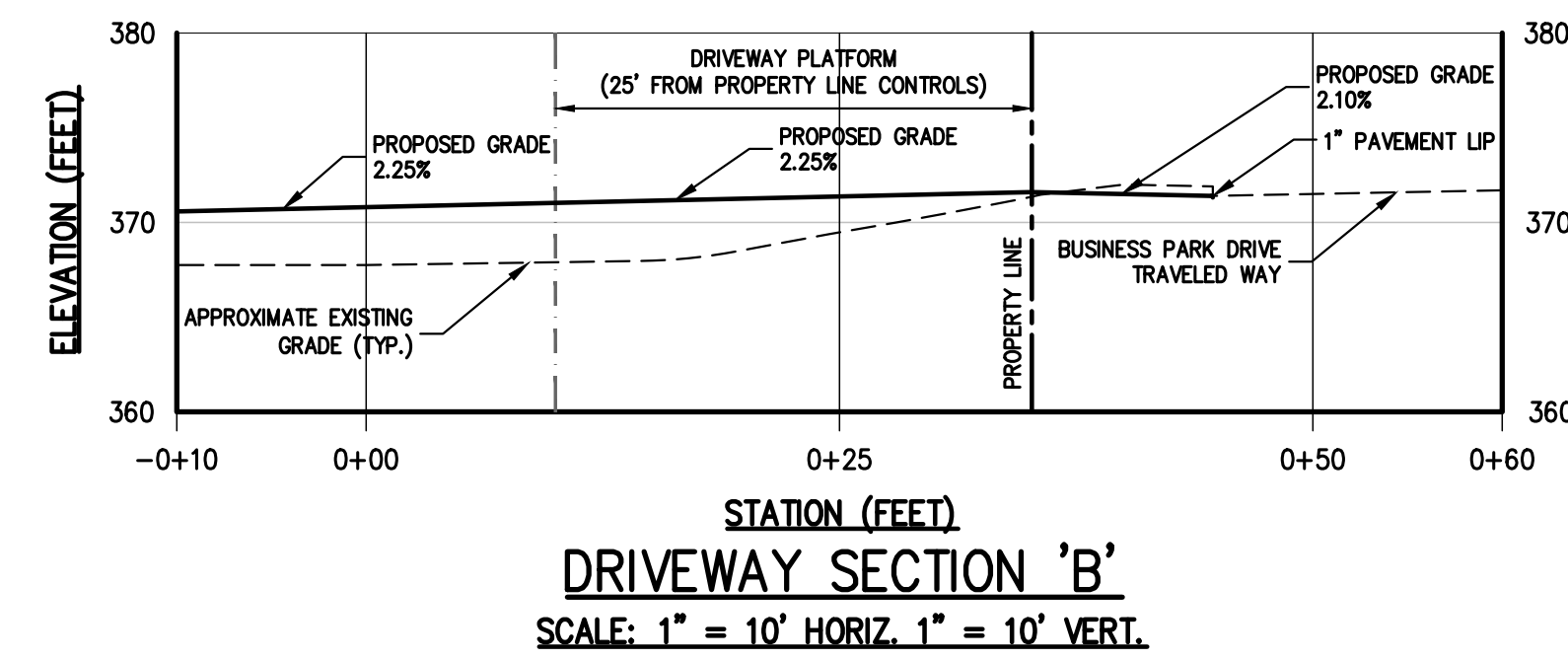




NORTH SIDE INSET



STATION (FEET)  
DRIVEWAY SECTION 'A'  
SCALE: 1" = 10' HORIZ. 1" = 10' VERT.



STATION (FEET)  
DRIVEWAY SECTION 'B'  
SCALE: 1" = 10' HORIZ. 1" = 10' VERT.

DEEP HOLE TEST SUMMARY TABLE			
TEST LOCATION	EXISTING GROUND ELEVATION	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION
DH-1/TP-1	367.40	3.5'	363.90
DH-2/TP-2	367.35	3.5'	363.85
DH-3/TP-3	367.00	5.5'	361.50
DH-4	367.00	6.5'	360.50

AVERAGE GRADE CALCULATION			
POINT A	POINT B	DISTANCE	AVERAGE
371.93	371.83	24.95	371.88
371.83	371.91	3.48	371.87
371.91	371.91	28.25	371.91
371.91	371.83	3.47	371.87
371.83	371.83	21.65	371.83
371.83	371.91	3.51	371.87
371.91	371.91	34.79	371.91
371.91	371.83	3.45	371.87
371.83	371.83	23.99	371.83
371.83	371.91	3.45	371.87
371.91	371.91	29.96	371.91
371.91	371.91	9.42	371.91
371.91	372.41	28.57	372.16
372.41	372.00	32.91	372.20
372.00	372.20	65.02	372.10
372.20	370.70	2.41	371.45
370.70	370.70	9.42	370.70
370.70	371.91	78.83	371.30
371.91	371.91	78.67	371.91
371.91	371.88	9.42	371.89
371.88	371.88	93.83	371.88
371.88	371.88	126.17	371.88
371.88	372.38	0.39	372.13
372.38	371.11	116.06	371.74
371.11	371.13	3.51	371.12
371.13	371.13	3.37	371.13
371.13	371.11	3.51	371.11
371.11	371.11	20.61	371.11
371.11	371.13	3.51	371.12
371.13	371.13	3.37	371.13
371.13	371.11	3.51	371.11
371.11	372.36	20.61	372.33
372.36	371.86	0.75	372.06
371.86	371.90	2.77	371.93
371.90	371.90	5.37	371.90
371.90	371.88	3.51	371.89
371.88	371.88	29.00	371.88
371.88	371.91	9.22	371.89
371.91	372.13	0.21	372.12
372.13	372.41	0.27	372.27
372.41	372.00	17.60	372.20
372.00	371.91	5.14	371.95
371.91	371.91	3.51	371.91
371.91	371.83	3.38	371.87
371.83	371.91	3.51	371.91
371.91	371.91	20.61	371.91
371.91	371.83	3.49	371.87
371.83	371.83	3.49	371.83
371.83	371.91	3.49	371.91
371.91	371.91	20.61	371.91
371.91	371.83	3.51	371.87
371.83	371.83	1.83	371.83
371.83	371.83	5.48	371.83
371.83	371.83	371.83	371.83

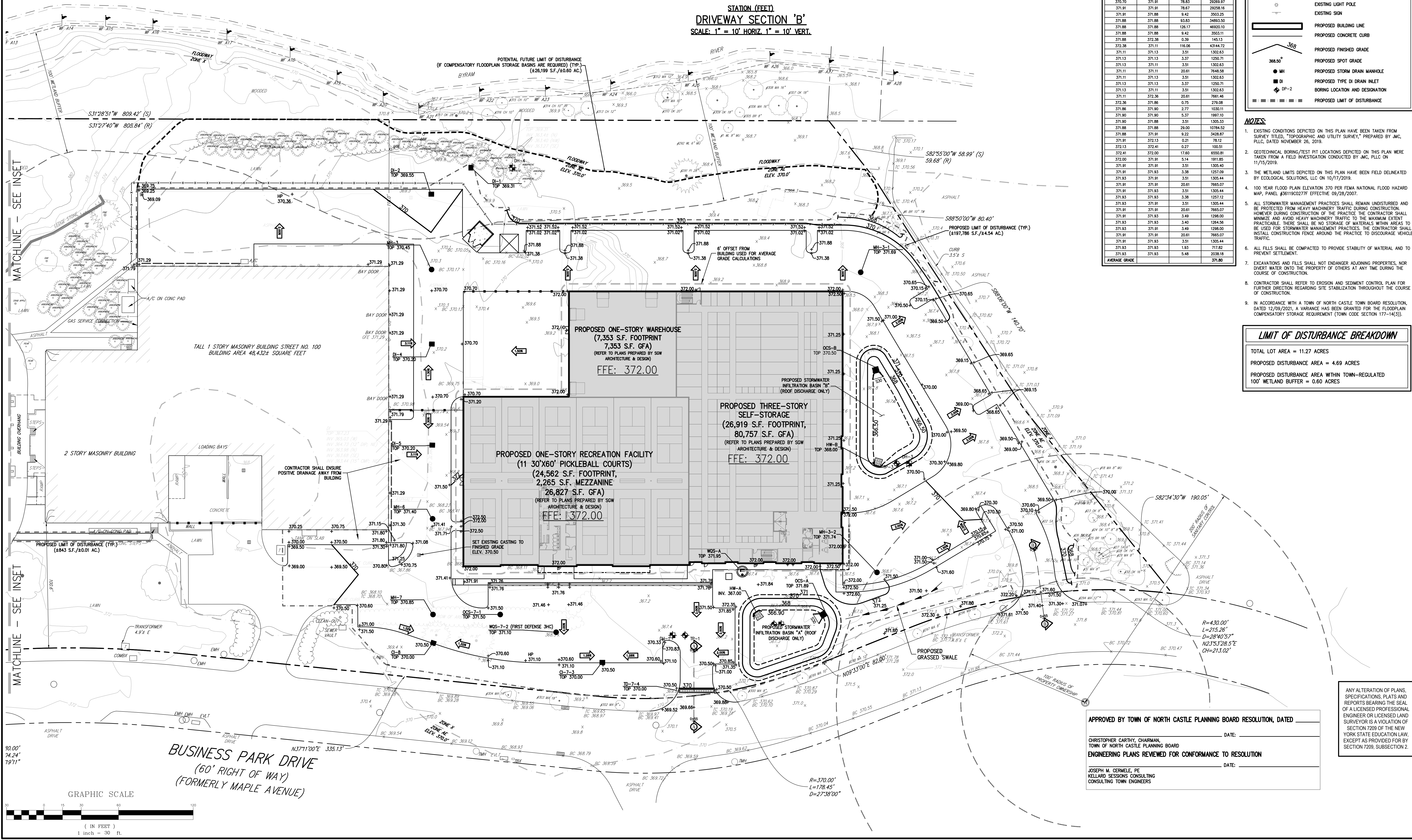
**LEGEND**

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING BUFFER
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING SPOT GRADE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED FINISHED GRADE
- PROPOSED SPOT GRADE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED TYPE DI DRAIN INLET
- BORING LOCATION AND DESIGNATION
- PROPOSED LIMIT OF DISTURBANCE

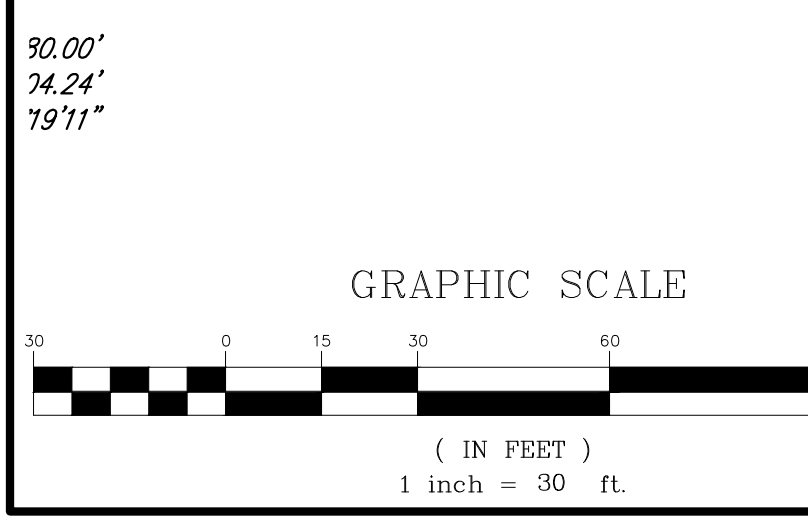
- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - GEOLOGICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY JMC, PLLC ON 11/15/2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #501180277E EFFECTIVE 08/29/2007.
  - ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
  - ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT SETTLEMENT.
  - EXCAVATIONS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTIES, NOR DIVERT WATER ONTO THE PROPERTY OF OTHERS AT ANY TIME DURING THE COURSE OF CONSTRUCTION.
  - CONTRACTOR SHALL REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR FURTHER DIRECTION REGARDING SITE STABILIZATION THROUGHOUT THE COURSE OF CONSTRUCTION.
  - IN ACCORDANCE WITH A TOWN OF NORTH CASTLE TOWN BOARD RESOLUTION, DATED 12/09/2021, A VARIANCE HAS BEEN GRANTED FOR THE FLOODPLAIN COMPENSATORY STORAGE REQUIREMENT (TOWN CODE SECTION 177-14(3)).

**LIMIT OF DISTURBANCE BREAKDOWN**

TOTAL LOT AREA = 11.27 ACRES
PROPOSED DISTURBANCE AREA = 4.69 ACRES
PROPOSED DISTURBANCE AREA WITHIN TOWN-REGULATED 100' WETLAND BUFFER = 0.60 ACRES



NOT FOR CONSTRUCTION



BUSINESS PARK DRIVE  
(60' RIGHT OF WAY)  
(FORMERLY MAPLE AVENUE)

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS  
 DATE: \_\_\_\_\_

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**JMC**  
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 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.5225 • fax 914.273.2192  
 www.jmcplic.com

**WMM ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

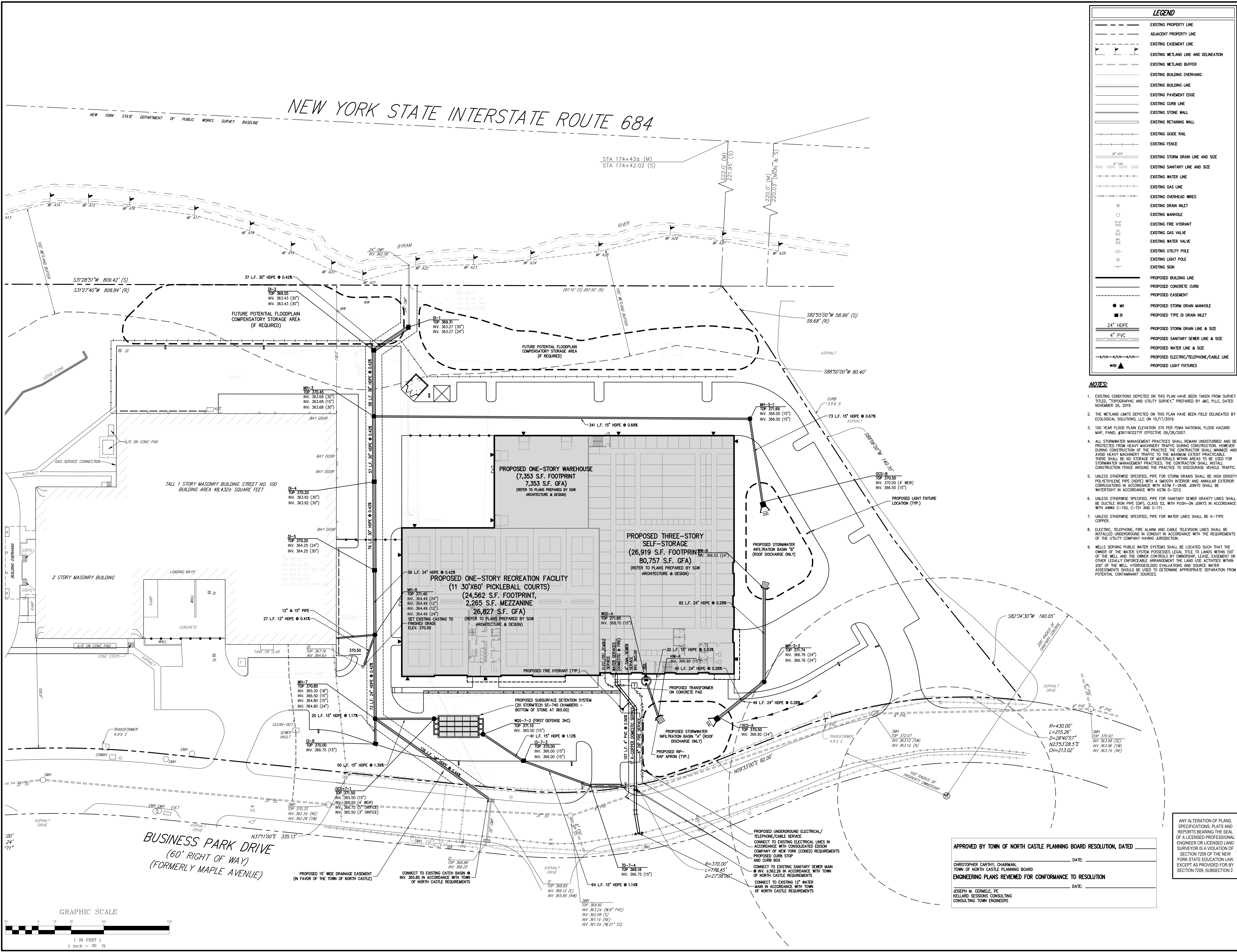
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

**SITE GRADING PLAN**  
 BAYSPACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Drawn: NC Approved: DL  
 Scale: 1" = 30'  
 Date: 09/12/2022  
 Project No: 22090  
 Drawing No: C-200



# NEW YORK STATE INTERSTATE ROUTE 684



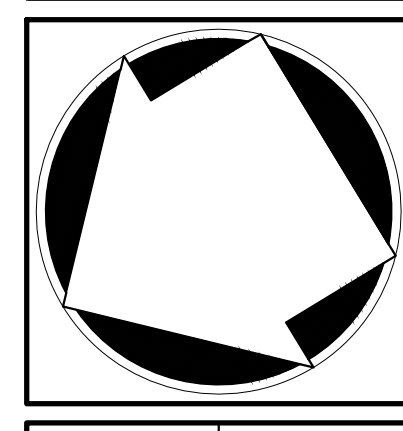
LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING WETLAND LINE AND DELINEATION
	EXISTING WETLAND BUFFER
	EXISTING BUILDING OVERHANG
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING STONE WALL
	EXISTING RETAINING WALL
	EXISTING GUIDE RAIL
	EXISTING FENCE
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRES
	EXISTING DRAIN INLET
	EXISTING MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	PROPOSED BUILDING LINE
	PROPOSED CONCRETE CURB
	PROPOSED EASEMENT
	PROPOSED STORM DRAIN MANHOLE
	PROPOSED TYPE DI DRAIN INLET
	PROPOSED STORM DRAIN LINE & SIZE
	PROPOSED SANITARY SEWER LINE & SIZE
	PROPOSED WATER LINE & SIZE
	PROPOSED ELECTRIC/TELEPHONE/CABLE LINE
	PROPOSED LIGHT FIXTURES

- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED "TOPOGRAPHIC AND UTILITY SURVEY" PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.
  - 100 YEAR FLOOD PLAIN ELEVATION 370 PER FEMA NATIONAL FLOOD HAZARD MAP, PANEL #38119C0277 EFFECTIVE 09/28/2007.
  - ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PROJECT THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
  - UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH A SMOOTH INTERIOR AND ANNUAL EXTERIOR CORRUGATIONS IN ACCORDANCE WITH ASTM F-2648. JOINTS SHALL BE WATER TIGHT IN ACCORDANCE WITH ASTM D-3212.
  - UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER GRAVITY LINES SHALL BE DUCTILE IRON PIPE (DIP), CLASS 52, WITH PUSH-ON JOINTS IN ACCORDANCE WITH AWWA C-150, C-151 AND C-111.
  - UNLESS OTHERWISE SPECIFIED, PIPE FOR WATER LINES SHALL BE K-TYPE COPPER.
  - ELECTRIC, TELEPHONE, FIRE ALARM AND CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND IN CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.
  - WELLS SERVING PUBLIC WATER SYSTEMS SHALL BE LOCATED SUCH THAT THE OWNER OF THE WATER SYSTEM POSSESSES LEGAL TITLE TO LANDS WITHIN 100' OF THE WELL AND THE OWNER CONTROLS BY CONVEYOR, LEASE, EASEMENT OR OTHER LEGALLY ENFORCEABLE ARRANGEMENT THE LAND USE ACTIVITIES WITHIN 200' OF THE WELL. HYDROGEOLOGIC EVALUATIONS AND SOURCE WATER ASSESSMENTS SHOULD BE USED TO DETERMINE APPROPRIATE SEPARATION FROM POTENTIAL CONTAMINANT SOURCES.

DATE	09/17/2023	BY	NC
REVISION	RESPONSE TO TOWN COMMENTS		
NO.	1.		

CONVEYOR/CLIENT: **WGM ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431  
 ARCHITECT: **SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

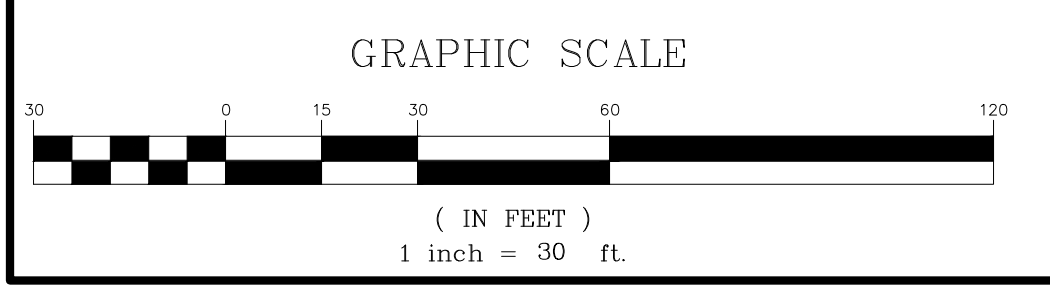
JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
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 120 BEDFORD ROAD • ARMONK, NY 10504  
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**SITE UTILITIES PLAN**  
**BAYSIDE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Drawn:	NC	Approved:	DL
Scale:	1" = 30'		
Date:	09/12/2022		
Project No:	22090		
Drawn By:	UTIL	Utilized By:	UTIL
Drawing No:	C-300		

NOT FOR CONSTRUCTION



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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







PLANT SCHEDULE POTENTIAL FUTURE WETLAND BUFFER MITIGATION					
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AR3	12	Acer Rubrum / Red Sunset / Red Maple	3" - 3 1/2" Cal.	B & B	
ACN2	12	Amelanchier Canadensis / Shadblow Serviceberry	3" - 3 1/2" Cal.	B & B	
QP2	9	Quercus Palustris / Pin Oak	3" - 3 1/2" Cal.	B & B	
DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR RES	20	Cornus sericea / Red Twig Dogwood	3" - 4" HT.	#5 Cont	
IW2	24	Ilex verticillata / Winterberry	3" - 4" HT.	#5 Cont	
VH	19	Vaccinium corymbosum / Highbush Blueberry	3" - 4" HT.	#5 Cont	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
NWDM	24,604 sf	Northeast Wetland Diversity Mix / Restoration Mix	seed		See Mix Detail on this Sheet

PLANT SCHEDULE TREE REMOVAL MITIGATION					
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
PIC ABI	18	Picea abies / Norway Spruce	8" - 10" HT.	B & B	
PIC OMO	13	Picea omorika / Serbian Spruce	8" - 10" HT.	B & B	
PIC BLU	6	Picea pungens glauca / Colorado Blue Spruce	8" - 10" HT.	B & B	
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AS	1	Acer Saccharum / Green Mountain / Sugar Maple	3" - 3 1/2" Cal.	B & B	

PLANT SCHEDULE CURRENTLY PROPOSED LANDSCAPING					
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
PIC ABI	14	Picea abies / Norway Spruce	8" - 10" HT.	B & B	
PIC OMO	8	Picea omorika / Serbian Spruce	8" - 10" HT.	B & B	
PIC BLU	6	Picea pungens glauca / Colorado Blue Spruce	8" - 10" HT.	B & B	
TI	52	Thuja x 'Green Giant' / Green Giant Arborvitae	8" - 10" HT.	B & B	
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AS	13	Acer Saccharum / Green Mountain / Sugar Maple	3" - 3 1/2" Cal.	B & B	
ACN	10	Amelanchier Canadensis / Shadblow Serviceberry	3" - 3 1/2" Cal.	B & B	
BNT	3	Betula Nigra / Heritage / Heritage River Birch	3" - 3 1/2" Cal.	B & B	
QP2	10	Quercus Palustris / Pin Oak	3" - 3 1/2" Cal.	B & B	
PERENNIALS & GRASSES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
CK3	20	Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass	5 gal	CONT.	
PA2	13	Pennisetum alopecuroides / Fountain Grass	5 gal	CONT.	
DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR FL2	3	Cornus sericea 'Flaviramea' / Yellow Twig Dogwood	5 gal		
VD	6	Viburnum dentatum 'Arrowwood' / Arrowwood Viburnum	5 gal		
EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
JSS	12	Juniperus virginiana Taylor / Taylor Juniper	5" - 6" HT	B & B	
SHRUB AREAS	QTY	BOTANICAL / COMMON NAME	CONT.	ROOT COND.	REMARKS
JP2	46	Juniperus davurica 'Parsonii' / Parson's Juniper	24" - 30" SPR	Cont.	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
HM-1	3,303 sf	NYSDEC Stormwater Basin Mix #1 / Lowest Zone	seed		See Mix Detail on this Sheet
HM-3	5,678 sf	NYSDEC Stormwater Basin Mix #3 / Highest Zone	seed		See Mix Detail on this Sheet
WFS	36,570 sf	Wildlife Food & Shelter Mix / Restoration Mix	seed		See Mix Detail on this Sheet

**LEGEND**

- PROPOSED DECIDUOUS/SHADE TREE
- PROPOSED FLOWERING/ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUBS/PERENNIALS
- PROPOSED EDGE OF PLANTING BED
- PROPOSED SHRUB MASSING
- PROPOSED GRAVEL STRIP

**NOTES:**

- ALL PLANT MATERIAL SPECIFIED ON THE DRAWINGS SHALL BE FIRST QUALITY NURSERY GROWN STOCK, CENTERED TRUE TO THEIR GENUS, SPECIES AND VARIETY, ALL OF WHICH SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY AMERICANHORT (ANSI Z60.1), LATEST EDITION.
- ALL AREAS OF THE SITE NOT OCCUPIED BY BUILDING, PAVEMENT, OR OTHER IMPERVIOUS SURFACE, AND NOT SPECIFIED AS BEING PLANTED WITH TREES, SHRUBS OR GROUND COVER, SHALL BE LAWN.
- ALL MULCH TO BE PLACED IN PLANTING BEDS SHALL BE CLEAN, NON-DYED, TONIC FREE, ORGANIC MATERIAL, CONSISTING OF SHREDED HARDWOOD, ROOT MULCH SHREDED CEDAR, OR BARK CHIPS, AS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT. THE PLACEMENT THICKNESS OF THE MULCH SHALL BE 3" AND/OR AS DIRECTED IN THE PLANTING DETAILS.
- PLANT MATERIAL SUBSTITUTIONS SHALL NOT BE PERMITTED WITHOUT THE PROJECT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.
- ALL LANDSCAPE PLANTINGS SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION THROUGHOUT THE DURATION OF THE PROJECT. ANY PLANTING NOT SO MAINTAINED SHALL BE REPLACED WITH NEW PLANT(S) AT THE BEGINNING OF THE NEXT, IMMEDIATELY FOLLOWING PLANTING SEASON.
- ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
- ALL PLANT MATERIAL STOCK SHALL BE WELL-BRANCHED AND WELL-FORMED, SOUND, UNBROKEN, HEALTHY, FREE FROM DISEASE, SUN-SCALE, WINDBURN, ABRASION, AND HARMFUL INSECTS OR INSECT EGGS, AND SHALL HAVE HEALTHY, NORMAL UNBROKEN ROOT SYSTEMS. DECIDUOUS TREES AND SHRUBS SHALL BE SYMMETRICALLY DEVELOPED, OF UNIFORM HABIT OF GROWTH, WITH STRAIGHT TRUNKS OR STEMS, AND FREE FROM OBJECTIONABLE DISTORTIONS. EVERGREEN TREES AND SHRUBS SHALL HAVE WELL-DEVELOPED SYMMETRICAL TOPS WITH TYPICAL SPREAD OF BRANCHES FOR EACH PARTICULAR SPECIES OR VARIETY. ONLY VINES AND GROUND COVER PLANTS WELL ESTABLISHED IN REMOVAL CONTAINERS, INTERNAL CONTAINERS, OR FORMED HOMOGENEOUS SOIL SECTIONS SHALL BE USED.
- PLANTS SHALL BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SOURCES OF ALL PLANT MATERIAL SHALL BE DISCLOSED TO PROJECT LANDSCAPE ARCHITECT AND OWNER PRIOR TO DELIVERY.
- ALL PLANT MATERIAL SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN STOCK, AS SPECIFIED IN THE PLANT LIST. BAREROOT STOCK OF ANY KIND IS UNACCEPTABLE UNLESS SPECIFIED.
- ALL LAWN AREAS (SOD OR SEED) SHALL RECEIVE A MINIMUM 6" THICK LAYER OF SCREENED TOPSOIL PRIOR TO INSTALLATION OF SOD OR SEED, UNLESS OTHERWISE SPECIFIED. TOPSOIL SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
- SOIL WITHIN ALL PLANTING BEDS SHALL BE PREPARED AS DIRECTED IN THE PLANTING DETAILS AND PROJECT SPECIFICATIONS PRIOR TO INSTALLATION OF PLANT MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN GOOD HEALTH UNTIL THE PROJECT LANDSCAPE ARCHITECT HAS PROVIDED WRITTEN ACCEPTANCE THAT THE PLANTINGS ARE COMPLETE AND IN CONFORMANCE WITH THE PLANS. THE CONTRACTOR SHALL GUARANTEE THE SURVIVAL OF THE PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY THE PROJECT LANDSCAPE ARCHITECT, UNLESS OTHERWISE AGREED TO WITH THE OWNER.
- ALL AREAS DISTURBED OR DAMAGED DURING THE COURSE OF THE CONTRACTOR'S WORK SHALL BE REPAIRED OR RESTORED TO ORIGINAL OR CONSTRUCTED CONDITION AT NO ADDITIONAL COST TO OWNER.
- FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL BY PROJECT LANDSCAPE ARCHITECT. PROJECT LANDSCAPE ARCHITECT MAY ADJUST SPACING AND LOCATION IN FIELD PRIOR TO OR AFTER PLANTING.
- CONTRACTOR SHALL IMMEDIATELY REPORT ANY UNSATISFACTORY SITE CONDITIONS TO THE OWNER IN WRITING. CONTRACTOR SHALL RECEIVE NO ADDITIONAL PAYMENT FOR ADDITIONAL WORK ASSOCIATED WITH THE UNSATISFACTORY CONDITIONS IF NOT PROPERLY REPORTED AND WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER.
- ALL TREE AND SHRUB PLANTINGS INSTALLED ADJACENT TO PARKING AREAS SHALL BE SETBACK A MINIMUM OF 24" FROM EDGE OF THE PLANT TO EDGE OF PARKING AREA.
- ALL PLANTINGS ADJACENT TO LAWN AREAS SHALL HAVE A 6" DEEP VERTICAL CUT EDGE ALONG THE OUTSIDE OF THE PLANTING BED.

No.	Revision	Date
1.	GENERAL REVISIONS	05/25/2023
2.	GENERAL REVISIONS	06/07/2023
3.	RESPONSE TO TOWN COMMENTS	09/11/2023

**OWNER/CLIENT:**  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

**ARCHITECT:**  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

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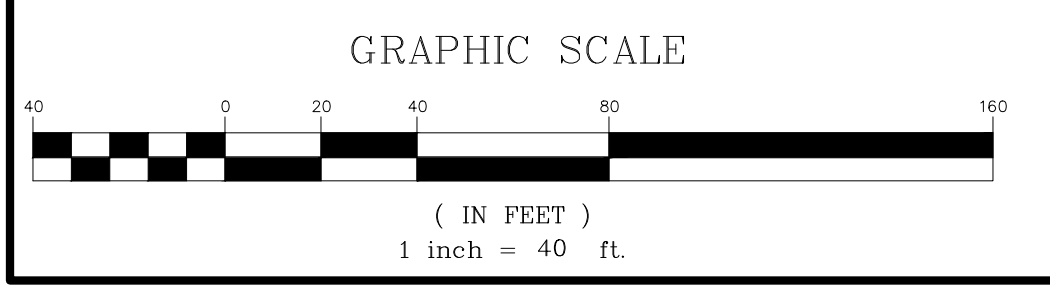
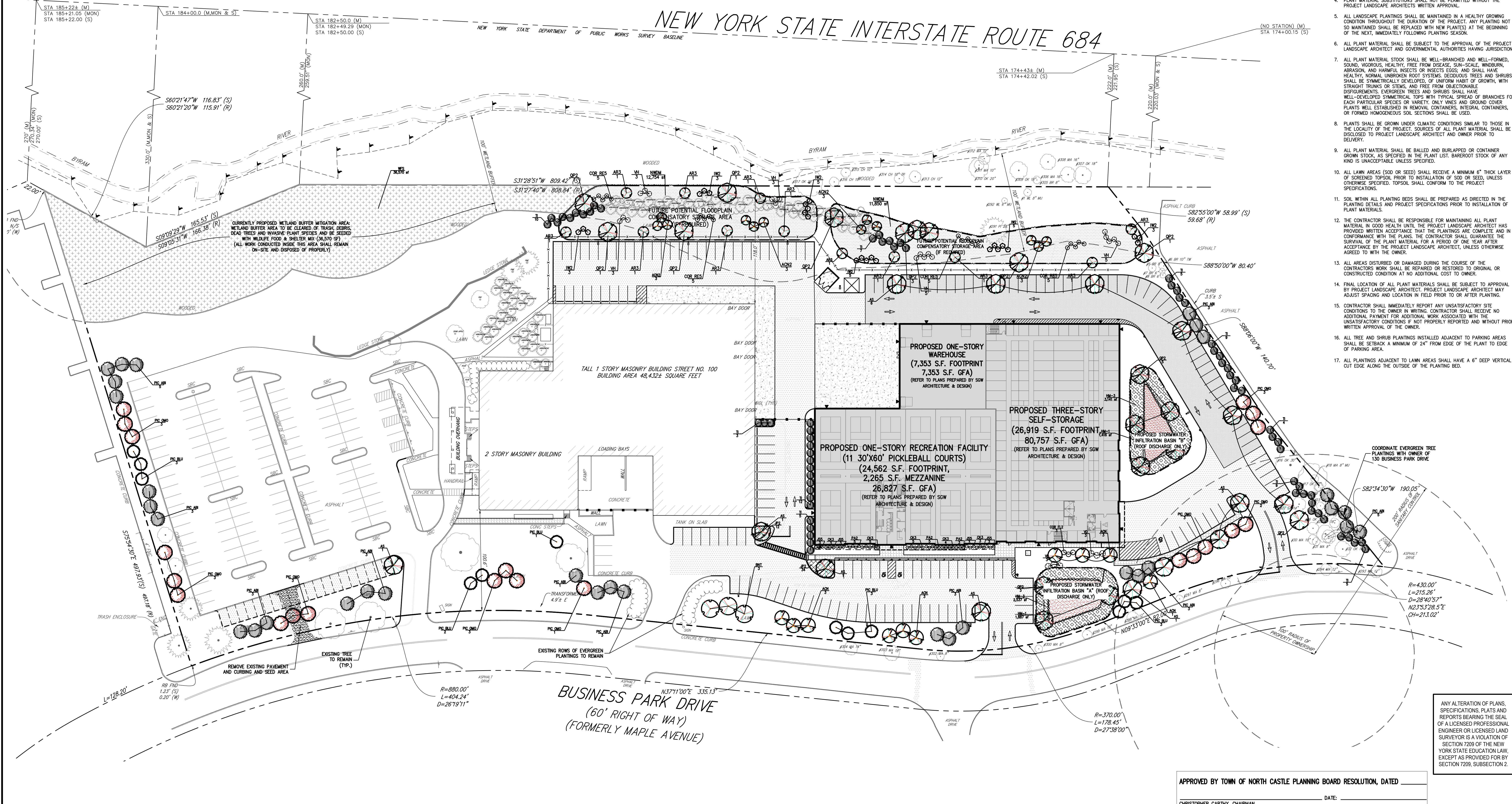


**OVERALL SITE LANDSCAPING & WETLAND MITIGATION PLAN**  
 BAYSPACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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DATE: 09/12/2022  
 Project No: 22090  
 Drawing No: C-500A

# NEW YORK STATE INTERSTATE ROUTE 684



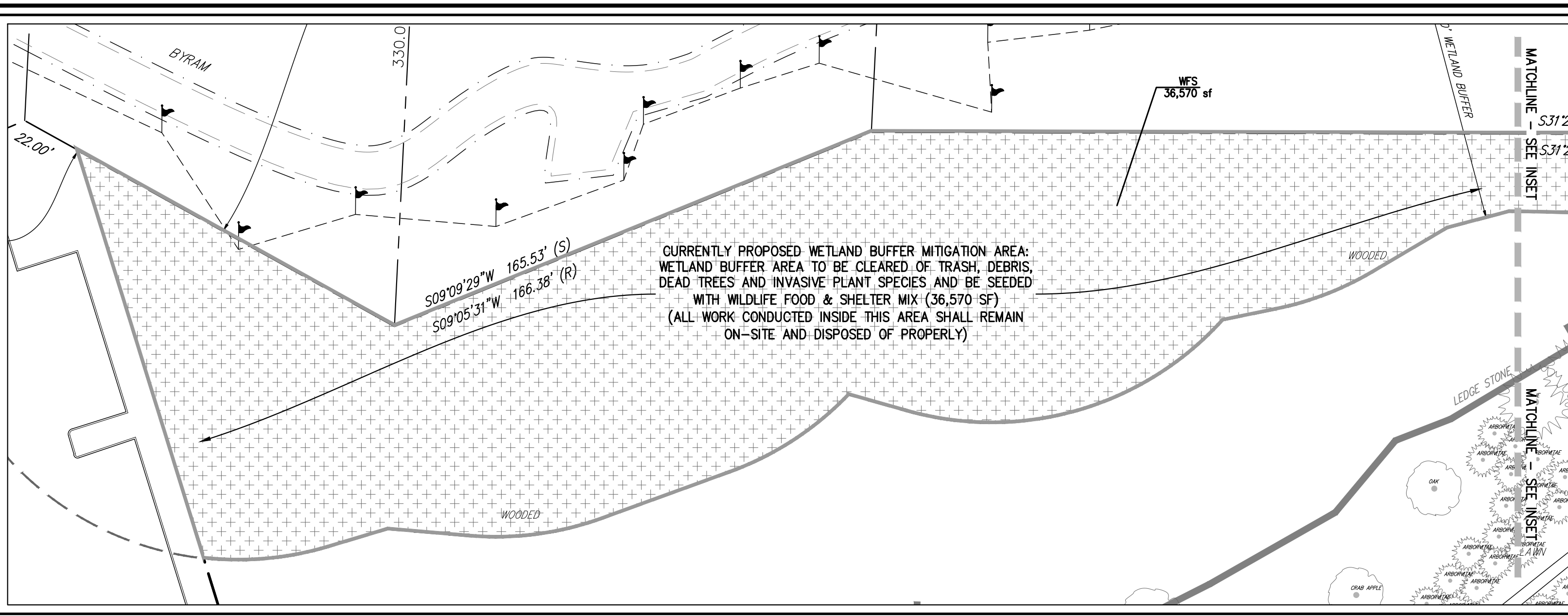
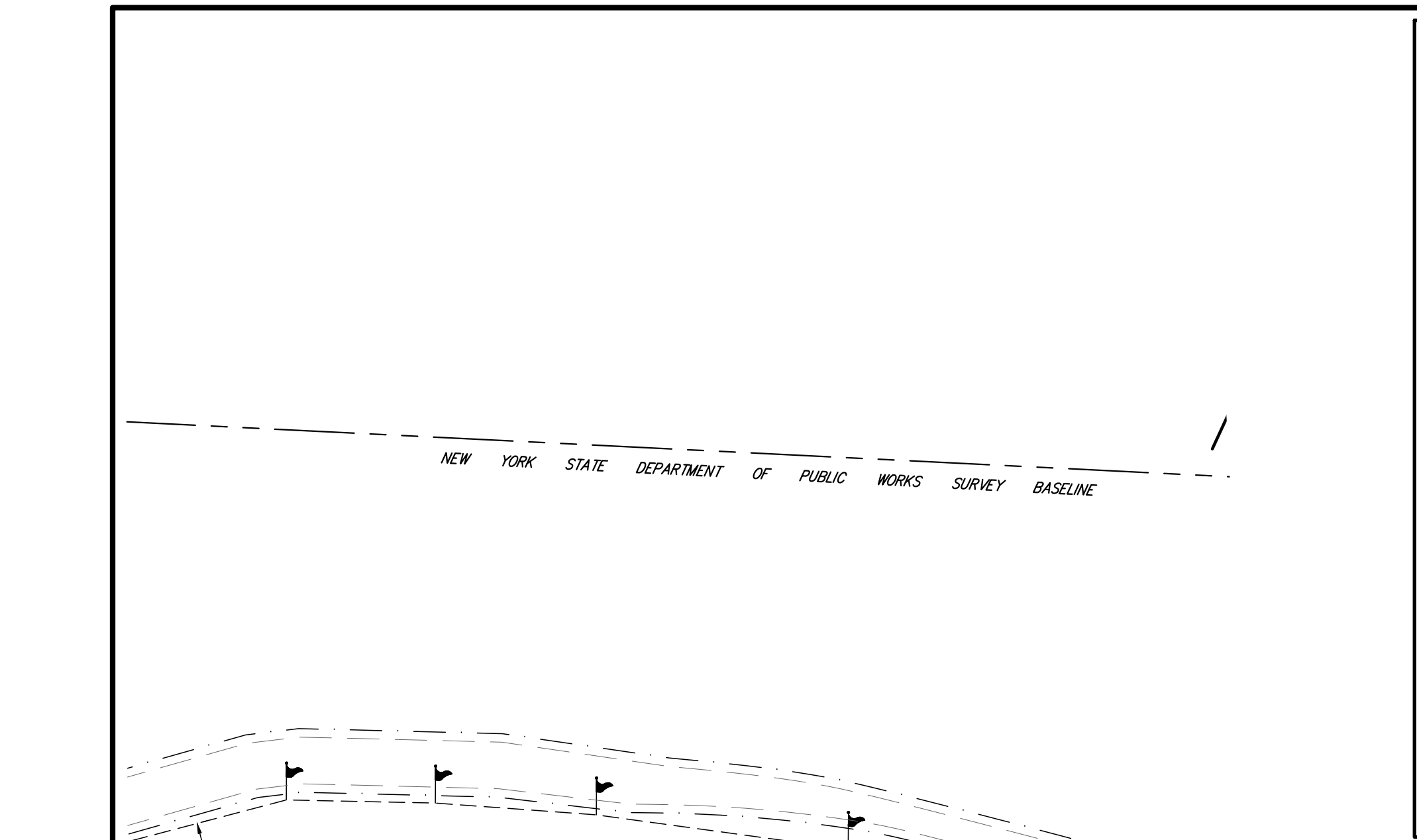
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

CHRISTOPHER CARRHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

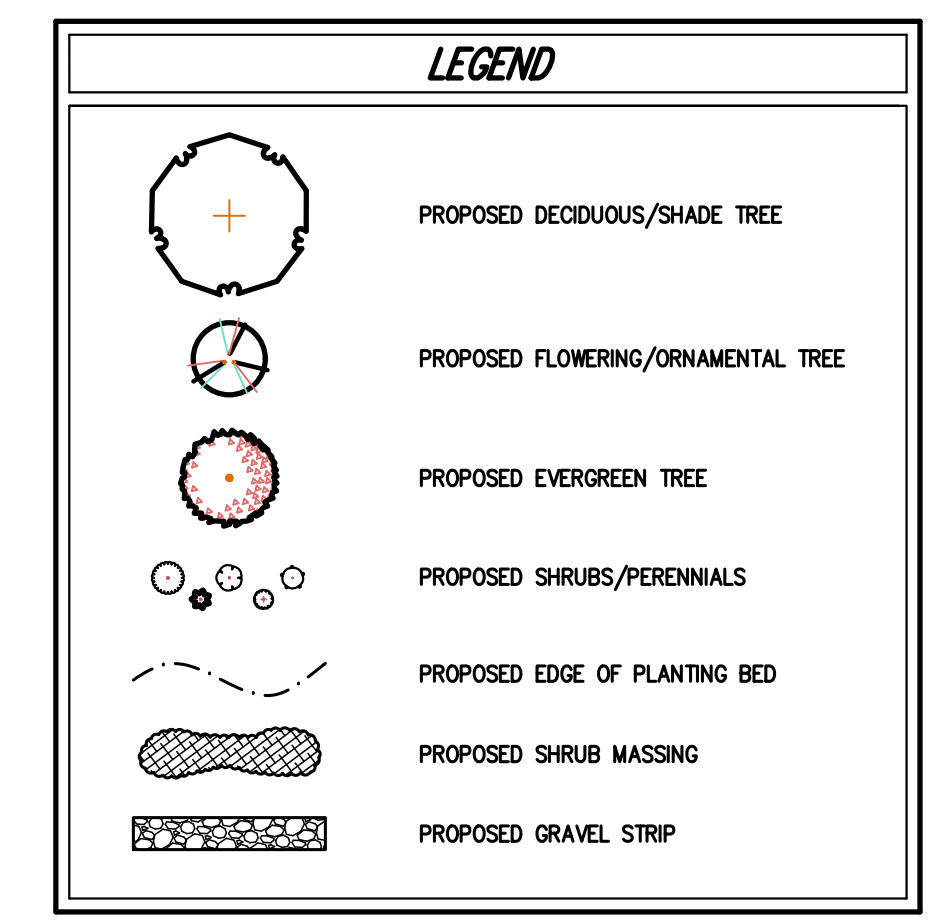
JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

NOT FOR CONSTRUCTION





- ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
- ALL PLANT MATERIAL STOCK SHALL BE WELL-BRANCHED AND WELL-FORMED, SOUND, VIGOROUS, HEALTHY, FREE FROM DISEASE, SUN-SCALE, WINDBURN, ABRASION, AND HARMFUL INSECTS OR INSECT EGGS, AND SHALL HAVE HEALTHY, NORMAL UNBROKEN ROOT SYSTEMS. DECIDUOUS TREES AND SHRUBS SHALL BE SYMMETRICALLY DEVELOPED, OF UNIFORM HABIT OF GROWTH, WITH STRAIGHT TRUNKS OR STEMS, AND FREE FROM OBSTRUCTABLE DEFORMATIONS. EVERGREEN TREES AND SHRUBS SHALL BE WELL-DEVELOPED SYMMETRICAL TOPS WITH TYPICAL SPREAD OF BRANCHES FOR EACH PARTICULAR SPECIES OR VARIETY. ONLY LINES AND GROUP COVER PLANTS WELL ESTABLISHED IN REMOVAL CONTAINERS, INTEGRAL CONTAINERS, OR FORMED HOMOGENEOUS SOIL SECTIONS SHALL BE USED.
- PLANTS SHALL BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SOURCES OF ALL PLANT MATERIAL SHALL BE DISCLOSED TO PROJECT LANDSCAPE ARCHITECT AND OWNER PRIOR TO DELIVERY.
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- CONTRACTOR SHALL IMMEDIATELY REPORT ANY UNSATISFACTORY SITE CONDITIONS TO THE OWNER IN WRITING. CONTRACTOR SHALL RECEIVE NO ADDITIONAL PAYMENT FOR ADDITIONAL WORK ASSOCIATED WITH THE UNSATISFACTORY CONDITIONS IF NOT PROPERLY REPORTED AND WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER.
- ALL TREE AND SHRUB PLANTINGS ADJACENT TO PARKING AREAS SHALL BE SETBACK A MINIMUM OF 24" FROM EDGE OF THE PLANT TO EDGE OF PARKING AREA.
- ALL PLANTINGS OUTSIDE TO LAWN AREAS SHALL HAVE A 6" DEEP VERTICAL CUT EDGE ALONG THE ADJACENT TO THE PLANTING BED.



- NOTES:**
- ALL PLANT MATERIAL SPECIFIED ON THE DRAWINGS SHALL BE FIRST QUALITY NURSERY GROWN STOCK, CERTIFIED TRUE TO THEIR GENUS, SPECIES AND VARIETY, ALL OF WHICH SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY AMERICANHORT (ANSI Z60.1)," LATEST EDITION.
  - ALL AREAS OF THE SITE NOT OCCUPIED BY BUILDING, PAVEMENT, OR OTHER IMPROVED SURFACE, AND NOT SPECIFIED AS BEING PLANTED WITH TREES, SHRUBS OR GRASS COVER, SHALL BE LAWN.
  - ALL MULCH TO BE PLACED IN PLANTING BEDS SHALL BE CLEAN, NON-WEED TOXIC FREE, ORGANIC MATERIAL, CONSISTING OF SHREDDED HARDWOOD, ROOT MULCH SHREDDED CEDAR, OR BARK CHIPS, AS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT. THE PLACEMENT THICKNESS OF THE MULCH SHALL BE 3" AND/OR AS DIRECTED IN THE PLANTING DETAILS.
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EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
PIC ABI	14	Picea abies / Norway Spruce	8' - 10' HT.	B & B	
PIC OMO	8	Picea omorika / Serbian Spruce	8' - 10' HT.	B & B	
PIC BLU	6	Picea pungens glauca / Colorado Blue Spruce	8' - 10' HT.	B & B	
TI	52	Thuja x Green Giant / Green Giant Arborvitae	8' - 10' HT.	B & B	

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
AS	13	Acer saccharum 'Green Mountain' / Sugar Maple	3' - 3 1/2' Cal.	B & B	
ACN	10	Amelanchier canadensis / Shadbowl Serviceberry	3' - 3 1/2' Cal.	B & B	
BLNT	3	Betula nigra 'Heritage' / Heritage River Birch	3' - 3 1/2' Cal.	B & B	
QP2	10	Quercus palustris / Pin Oak	3' - 3 1/2' Cal.	B & B	

PERENNIALS & GRASSES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
CK3	20	Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass	5 gal.	CONT.	
PA2	13	Pennisetum alopecuroides / Fountain Grass	5 gal.	CONT.	

DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR FL2	3	Cornus sericea 'Flamingo' / Flamingo Dogwood	5 gal.	CONT.	
VD	6	Viburnum dentatum 'Arrowwood' / Arrowwood Viburnum	5 gal.	CONT.	

EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
J55	12	Juniperus virginiana 'Taylor' / Taylor Juniper	5' - 6' HT.	B & B	

SHRUB AREAS	QTY	BOTANICAL / COMMON NAME	CONT.	ROOT COND.	REMARKS
JR2	46	Juniperus davurica 'Parsoni' / Parson's Juniper	24" - 30" SPR.	Cont.	

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
HM-1	3,303 sf	NYSDEC Stormwater Basin Mix #1 / Lowest Mix	seed	See Mix Detail on this Sheet	
HM-3	5,678 sf	NYSDEC Stormwater Basin Mix #3 / Highest Mix	seed	See Mix Detail on this Sheet	
WFS	36,570 sf	Wildlife Food & Shelter Mix / Restoration Mix	seed	See Mix Detail on this Sheet	

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
Z63	12	Acer rubrum 'Red Sunset' / Red Maple	3' - 3 1/2' Cal.	B & B	
ACN2	10	Amelanchier canadensis / Shadbowl Serviceberry	3' - 3 1/2' Cal.	B & B	
QP2	9	Quercus palustris / Pin Oak	3' - 3 1/2' Cal.	B & B	

DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
COR RES	20	Cornus sericea / Red Twig Dogwood	3' - 4' HT.	#5 Cont.	
IW2	24	Ilex verticillata / Winterberry	3' - 4' HT.	#5 Cont.	
VH	19	Vaccinium corymbosum / Highbush Blueberry	3' - 4' HT.	#5 Cont.	

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT COND.	REMARKS
NWDM	24,604 sf	Northeast Wetland Diversity Mix / Restoration Mix	seed	See Mix Detail on this Sheet	

- PLANTING NOTES:**
- A. SEED MIXTURE: SUPPLEMENTAL WETLAND SEED MIX IS TO BE APPLIED TO THE FLOODPLAIN STORAGE BASINS AT 20-40 LBS/ACRE OR 1 LB PER 1,000 SF OF SEED PER ACRE AND CONSIST OF FOLLOWING:
- NORTHEAST WETLAND DIVERSITY SEED MIX**
- | % BY WT. | SPECIES                  | VARIETY                 |
|----------|--------------------------|-------------------------|
| 26.66%   | EUPATORIUM PERFOLIATUM   | BONESET                 |
| 23.80%   | VERBENA HASTATA          | BLUE VERVAIN            |
| 19.75%   | PANICUM DICHTOMIFLORUM   | SMOOTH PANIC-GRASS      |
| 8.74%    | SOLIDAGO RUPESTRIS       | WHEATEED DOGWOOD        |
| 8.74%    | EUPATORIUM MACULATUM     | JOE PYE WEEED           |
| 6.65%    | ELUTHAMA GRAMINIFOLIA    | GRASS LEAF GOLDENROD    |
| 4.80%    | POLYGONUM PENNSYLVANICUM | PENNSYLVANIAN SMARTWEED |
| 2.80%    | ASTER NOVAE-ANGLIAE      | NEW ENGLAND ASTER       |
| 0.75%    | NOCTURNAL BISMANS        | NOCTURNAL BISMANS' TICK |
| 0.21%    | ASCLEPIAS INCARNATA      | SWAMP MILKWEED          |
| 0.12%    | VERSCOLOR                | BLUE FLAG               |
- B. HM-1 NYSDEC STORMWATER BASIN MIX #1 [HERBACIOUS] (20-40 LBS/ACRE OR 1 LB PER 1,000 SF)
- | % BY WT. | SPECIES  | VARIETY  |
|----------|--|--|
| 1.00%    | ARROW ARUM (PELTANDRA VIRGINICA)               | ARROW ARUM (PELTANDRA VIRGINICA)               |
| 1.00%    | ARROWHEAD, DUCK POTATOE (SAGGATARIA LATIFOLIA) | ARROWHEAD, DUCK POTATOE (SAGGATARIA LATIFOLIA) |
| 1.00%    | BLUE FLAG Iris (IRIS VESPICOLOR)               | BLUE FLAG Iris (IRIS VESPICOLOR)               |
| 1.00%    | BUSHY BEARDGRASS (ANDROPOGON GLOMERATUS)       | BUSHY BEARDGRASS (ANDROPOGON GLOMERATUS)       |
| 1.00%    | DUCKWEED (LEMNA SP.)                           | DUCKWEED (LEMNA SP.)                           |
| 1.00%    | HARDESTIM BULLRUSH (SCIRPUS ACUTUS)            | HARDESTIM BULLRUSH (SCIRPUS ACUTUS)            |
| 1.00%    | GIANT BURREED (SPARGANIUM EURYCARPUM)          | GIANT BURREED (SPARGANIUM EURYCARPUM)          |
| 1.00%    | LIZARD'S TAIL (SAURURUS CERNUUS)               | LIZARD'S TAIL (SAURURUS CERNUUS)               |
| 1.00%    | PICKERELWEED (PONTEDERA CORDATA)               | PICKERELWEED (PONTEDERA CORDATA)               |
| 1.00%    | SOFT-STEM BULLRUSH (SCIRPUS VALIDUS)           | SOFT-STEM BULLRUSH (SCIRPUS VALIDUS)           |
| 1.00%    | SMARTWEED (POLYGONUM SPP.)                     | SMARTWEED (POLYGONUM SPP.)                     |
| 1.00%    | SPATTER DOCK (NUPHAR LUTEUM)                   | SPATTER DOCK (NUPHAR LUTEUM)                   |
| 1.00%    | WILD RICE (ZIZANIA AQUATICA)                   | WILD RICE (ZIZANIA AQUATICA)                   |
- C. HM-3 NYSDEC STORMWATER BASIN MIX #3 [HERBACIOUS] (20-40 LBS/ACRE OR 1 LB PER 1,000 SF)
- | % BY WT. | SPECIES                                       | VARIETY                                       |
|----------|---|---|
| 1.00%    | ELYMUS RIPARIUS (RYEBARN) WLD RYE(20%)        | ELYMUS RIPARIUS (RYEBARN) WLD RYE(20%)        |
| 1.00%    | ELYMUS VIRGINICUS (VIRGINIA WLD RYE)(20%)     | ELYMUS VIRGINICUS (VIRGINIA WLD RYE)(20%)     |
| 1.00%    | POA PALUSTRIS (FOW. BLUEGRASS)(20%)           | POA PALUSTRIS (FOW. BLUEGRASS)(20%)           |
| 1.00%    | PANICUM CANADENSE (DEER TONGUE)(10%)          | PANICUM CANADENSE (DEER TONGUE)(10%)          |
| 1.00%    | PANICUM VIRGATUM (SWITCHGRASS)(10%)           | PANICUM VIRGATUM (SWITCHGRASS)(10%)           |
| 1.00%    | SENA HEBCARPA (WLD SENNA)(10%)                | SENA HEBCARPA (WLD SENNA)(10%)                |
| 1.00%    | ANDROPOGON GERARDI (BIG BLUESTEM)(2%)         | ANDROPOGON GERARDI (BIG BLUESTEM)(2%)         |
| 1.00%    | DESCHAMPSIA CAESPITOSA (TUFTED HAIRGRASS)(2%) | DESCHAMPSIA CAESPITOSA (TUFTED HAIRGRASS)(2%) |
| 1.00%    | GLYCERIA STRIATA (FOW. MANNAGRASS)(2%)        | GLYCERIA STRIATA (FOW. MANNAGRASS)(2%)        |
| 1.00%    | LOBELIA CARINALIS (CARDINAL FLOWER)(2%)       | LOBELIA CARINALIS (CARDINAL FLOWER)(2%)       |
| 1.00%    | JUNCUS EFFUSUS (SOFT RUSH)(1%)                | JUNCUS EFFUSUS (SOFT RUSH)(1%)                |
| 1.00%    | POLYGONUM SPP. (SMARTWEED)(1%)                | POLYGONUM SPP. (SMARTWEED)(1%)                |
- D. INVASIVE SPECIES INCLUDING BUT NOT LIMITED TO REED GRASS AND JAPANESE KNOWEED, OCKROWRN VINES COVERING VEGETATION TO REMAIN, DEAD TREES, TRASH AND DEBRIS WILL BE REMOVED FROM WETLAND BUFFER AREAS AS INDICATED. REFER TO WETLAND EVALUATION AND IMPACT REPORT, PREPARED BY ECOLOGICAL SOLUTIONS, LLC, LAST REVISED 05/29/2020 FOR MORE INFORMATION. ALL CLEARED AREAS WILL BE RE-SEEDDED WITH "WFS-WILDLIFE FOOD & SHELTER SHRUB MIX (ERECT CONSERVATION SEEDS) OR EQUIVALENT."

DISTURBANCE SUMMARY			
CURRENTLY PROPOSED DISTURBANCE		POTENTIAL FUTURE DISTURBANCE (INCLUDING COMPENSATORY STORAGE BASINS)	
DISTURBANCE WITHIN WETLAND:	0 S.F. (0.00 AC)	DISTURBANCE WITHIN WETLAND:	0 S.F. (0.00 AC)
DISTURBANCE WITHIN BUFFER:	5,615 S.F. (0.128 AC)	DISTURBANCE WITHIN BUFFER:	26,899 S.F. (0.617 AC)
PROPOSED MITIGATION AREA WITHIN WETLAND BUFFER:	36,570 S.F. (0.839 AC)	PROPOSED MITIGATION AREA WITHIN WETLAND BUFFER:	56,418 S.F. (1.281 AC)
PROPOSED MITIGATION AREA OUTSIDE OF WETLAND BUFFER:	0 S.F. (0.000 AC)	PROPOSED MITIGATION AREA OUTSIDE OF WETLAND BUFFER:	4,001 S.F. (0.092 AC)
TOTAL MITIGATION AREA:	36,570 S.F. (0.839 AC)	TOTAL MITIGATION AREA:	62,427 S.F. (1.434 AC)
MITIGATION RATIO:	36,570 S.F. / 5,615 S.F. = 6.51	MITIGATION RATIO:	62,427 S.F. / 26,899 S.F. = 2.32

PERVIOUS & IMPERVIOUS AREAS WITHIN WETLAND BUFFER	
EXISTING	PROPOSED
PERVIOUS AREA: 70,243 S.F.	PERVIOUS AREA: 71,149 S.F.
IMPERVIOUS AREA: 5,023 S.F.	IMPERVIOUS AREA: 4,117 S.F.

**NOT FOR CONSTRUCTION**

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH M. CERMELE, PE, KELLARD SESSIONS CONSULTING ENGINEERS

GRAPHIC SCALE: 1 inch = 30 ft.

**COMPILE/ISSUE/DATE**

No.	Revision	Date
1.	RESPONSE TO TOWN COMMENTS	10/24/2022
2.	RESPONSE TO TOWN COMMENTS	09/11/2023

**OWNER/CLIENT**

WMG ARMONK WAREHOUSE OWNER LLC  
4800 NORTH FEDERAL HWY., SUITE B-200-34  
BOCA RATON, FL 33431

**ARCHITECT**

SGW ARCHITECTURE & DESIGN  
444 NORTH MICHIGAN AVENUE, SUITE 1850  
CHICAGO, IL 60611

**LANDSCAPE ARCHITECT**

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
JMC Site Development Consultants, LLC  
John Mayer Consulting, Inc.

120 BEDFORD ROAD • ARMONK, NY 10504  
voice 914.273.5225 • fax 914.273.2102  
www.jmcpa.com

**SCALE**

1" = 30'

**PROJECT NO.** 22090

**DRAWING NO.** C-500

**DATE** 09/12/2022

**BY** NC **APPROVED** DL

**TOWN OF NORTH CASTLE, NEW YORK**

**SITE LANDSCAPING & WETLAND MITIGATION PLAN**

**BAYSACE ARMONK**  
100 BUSINESS PARK DRIVE  
TOWN OF NORTH CASTLE, NEW YORK



# NEW YORK STATE INTERSTATE ROUTE 684

LEGEND	
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	PROPOSED LIGHT FIXTURES
	PROPOSED ILLUMINANCE IN FOOT-CANDLES

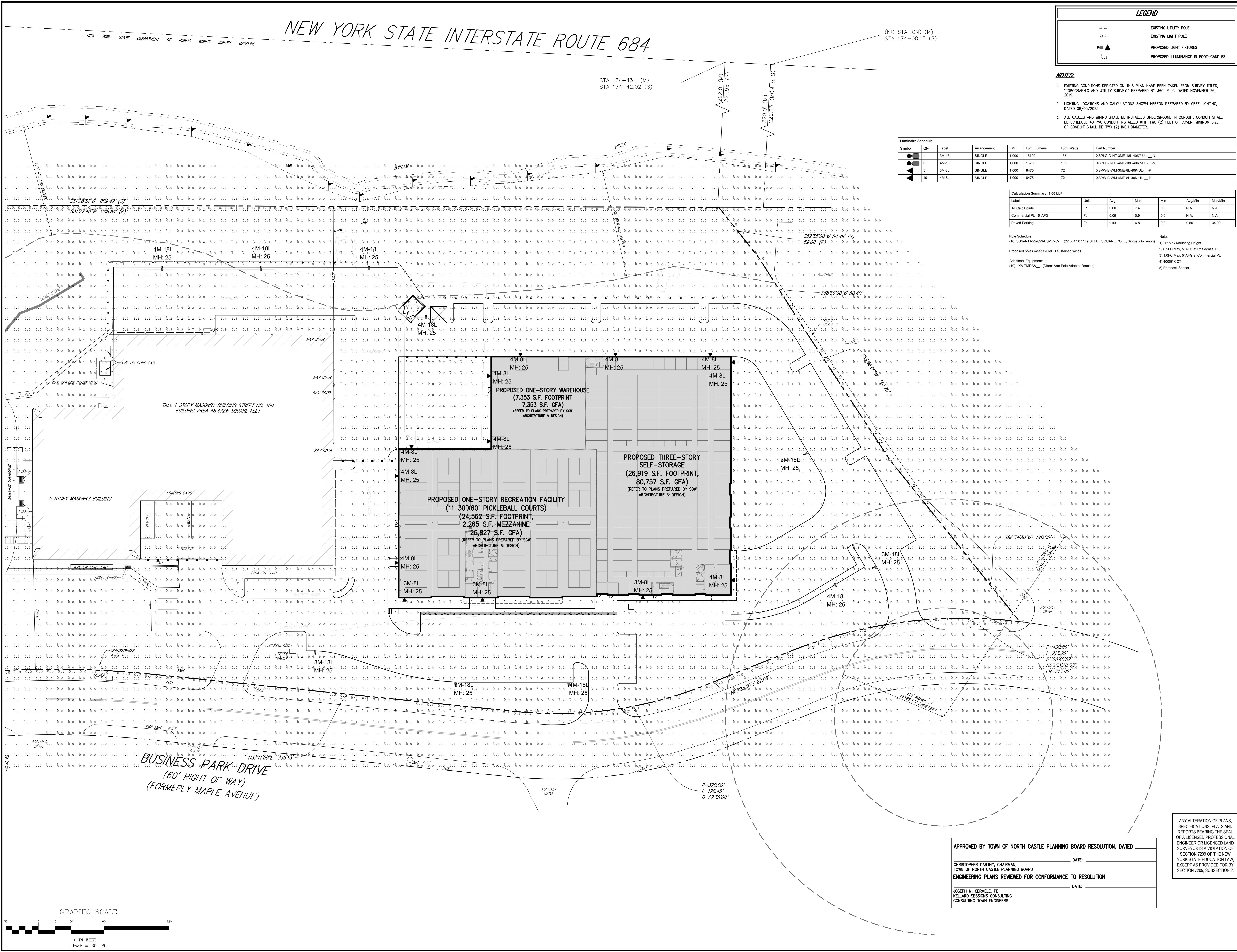
- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - LIGHTING LOCATIONS AND CALCULATIONS SHOWN HEREON PREPARED BY CREE LIGHTING, DATED 08/03/2023.
  - ALL CABLES AND WIRING SHALL BE INSTALLED UNDERGROUND IN CONDUIT. CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT INSTALLED WITH TWO (2) FEET OF COVER. MINIMUM SIZE OF CONDUIT SHALL BE TWO (2) INCH DIAMETER.

Luminaire Schedule	Qty	Label	Arrangement	LMP	Lum. Lumens	Lum. Watts	Part Number
4	4	3M-18L	SINGLE	1,000	18700	136	XSP1G-D-HT-3ME-18L-40K-UL__N
6	6	4M-18L	SINGLE	1,000	18700	136	XSP1G-D-HT-4ME-18L-40K-UL__N
3	3	3M-8L	SINGLE	1,000	8475	72	XSPW-B-WM-3ME-8L-40K-UL__P
10	10	4M-8L	SINGLE	1,000	8475	72	XSPW-B-WM-4ME-8L-40K-UL__P

Calculation Summary: 1.00 LLF					
Label	Units	Avg	Max	Min	Max/Min
All Calc Points	Fc	9.60	7.4	0.0	N.A.
Commercial PL - 5' AFG	Fc	0.09	0.9	0.0	N.A.
Paved Parking	Fc	1.90	6.8	0.2	9.90

**Pole Schedule**  
 (10) SSS-4-11-22-CW-B5-10-C\_\_ (22" X 4" X 1/8" STEEL SQUARE POLE, Single XA-Term)  
 (2) 0.5FC Max, 5' AFG at Residential PL  
 (3) 1.0FC Max, 5' AFG at Commercial PL  
 (4) 4000K CCT  
 (5) Photocell Sensor

**Notes:**  
 1) 25' Max Mounting Height  
 2) 0.5FC Max, 5' AFG at Residential PL  
 3) 1.0FC Max, 5' AFG at Commercial PL  
 4) 4000K CCT  
 5) Photocell Sensor



No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/11/2023	NC

**OWNER/CLIENT:**  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

**ARCHITECT:**  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

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 www.jmcpllc.com



**SITE LIGHTING PLAN**  
**BAYSPACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Drawn:	NC	Approved:	DL
Scale:	1" = 30'	Date:	09/12/2022
Project No:	22090	Drawn By:	NC
2000-SE	LIGHT	LIGHT	LIGHT
Drawing No:	<b>C-600</b>		

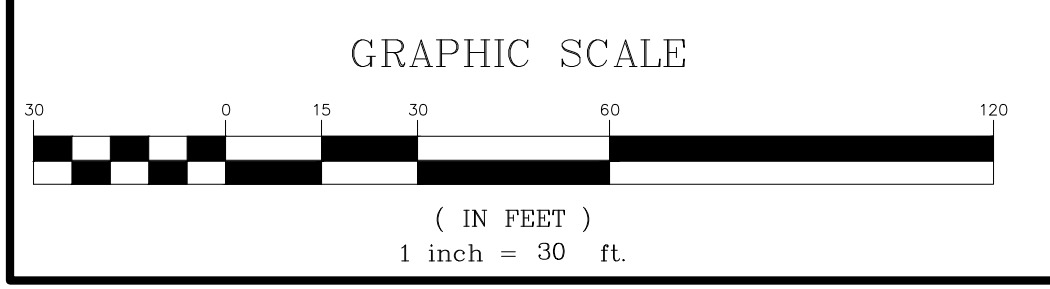
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_

CHRISTOPHER CATHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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

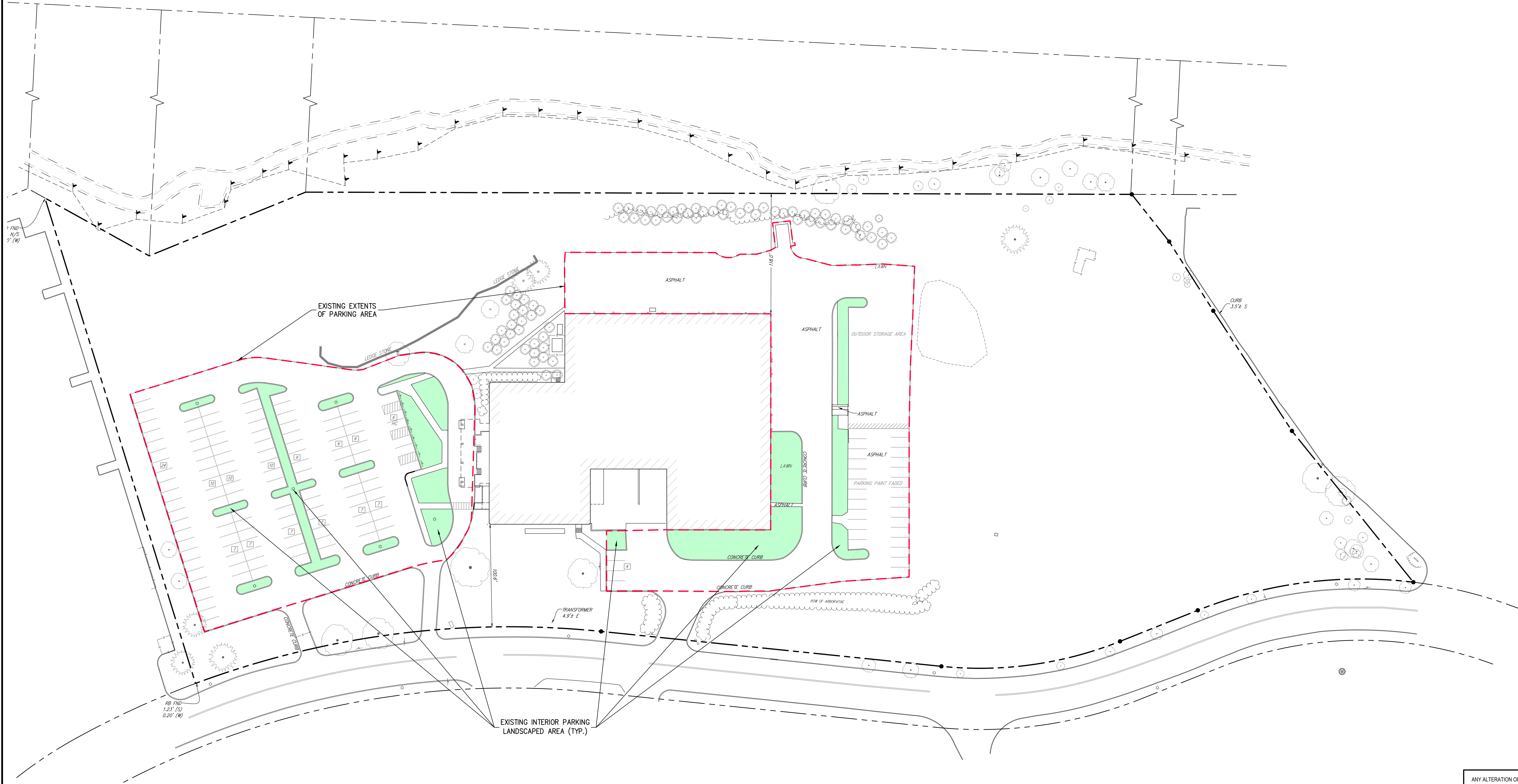
NOT FOR CONSTRUCTION





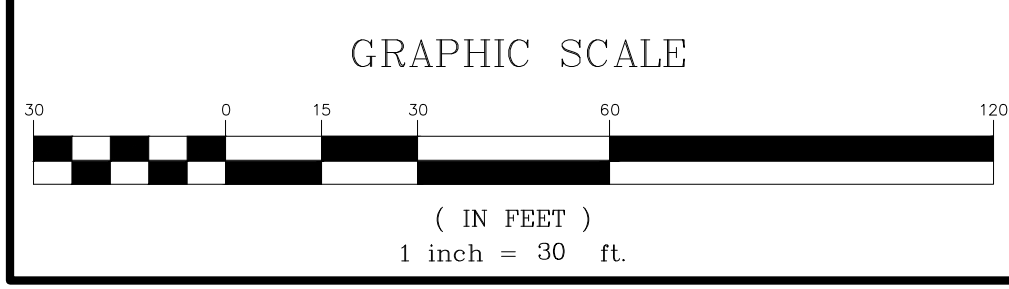
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LEGEND	
	EXISTING PARKING AREA (132,926± S.F.)
	EXISTING INTERIOR PARKING LANDSCAPED AREA (18,235± S.F.)

**EXISTING INTERIOR PARKING LANDSCAPED AREA CALCULATION:**  
 TOTAL EXISTING INTERIOR PARKING LANDSCAPED AREA → 18,235 S.F. X 100 = ±13.7%  
 TOTAL EXISTING PARKING AREA → 132,926 S.F.



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CARTHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION DATE: \_\_\_\_\_  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

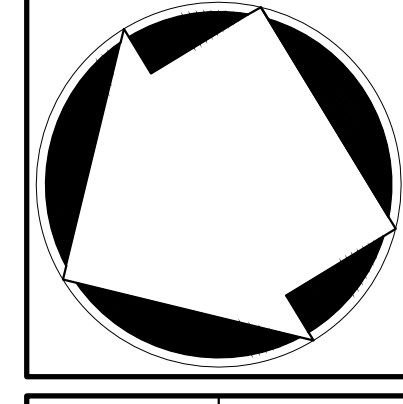
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No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	09/17/2023	NC

OWNER/CLIENT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

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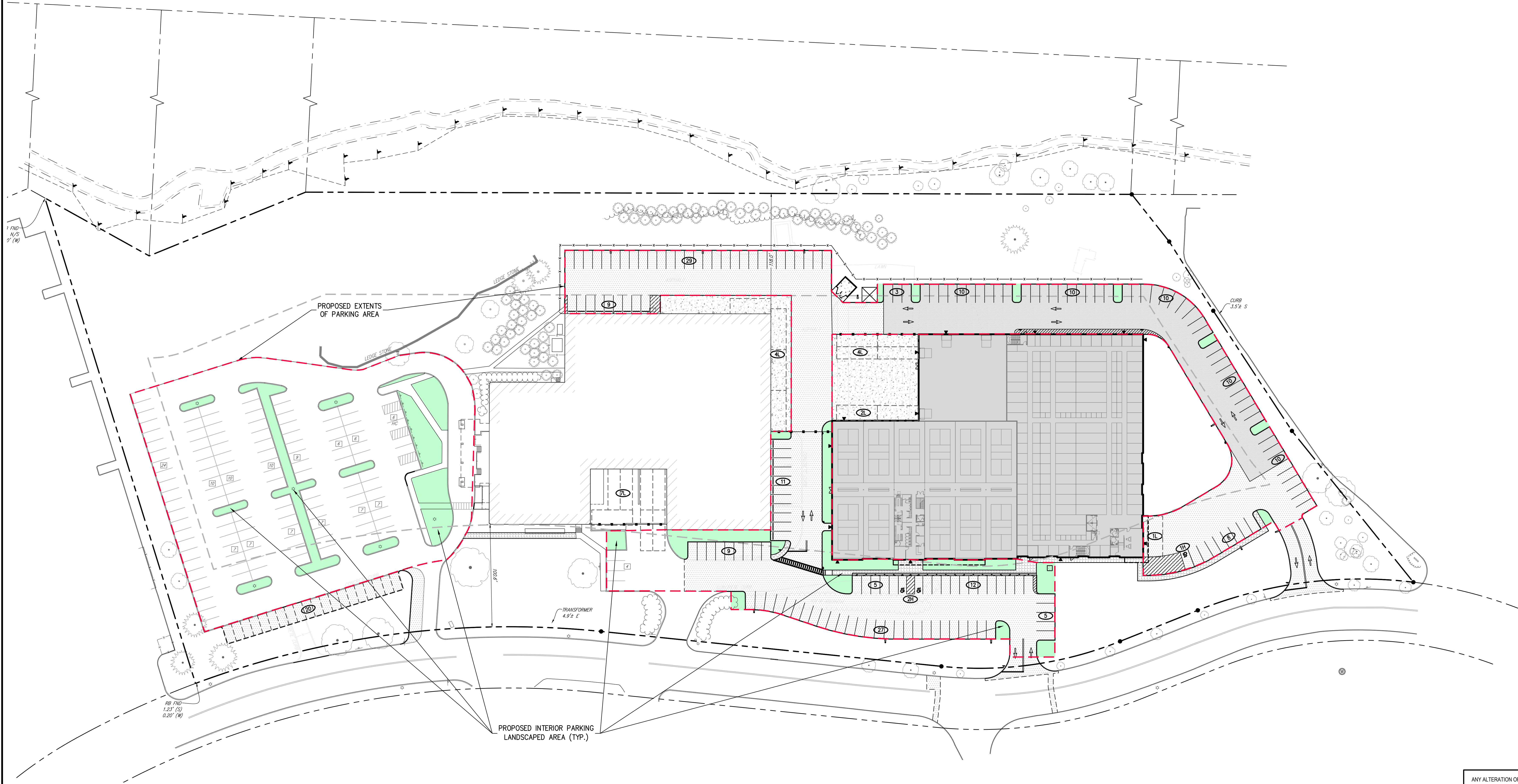
**EXISTING INTERIOR LANDSCAPED AREA CALCULATIONS PLAN**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Client:	NC	Approved:	DL
Scale:	1" = 40'		
Date:	09/12/2022		
Project No:	22090		
2209-SE	EX LS AREA	LS AREA CALC.	
Drawing No:	<b>C-800</b>		



NOT FOR CONSTRUCTION

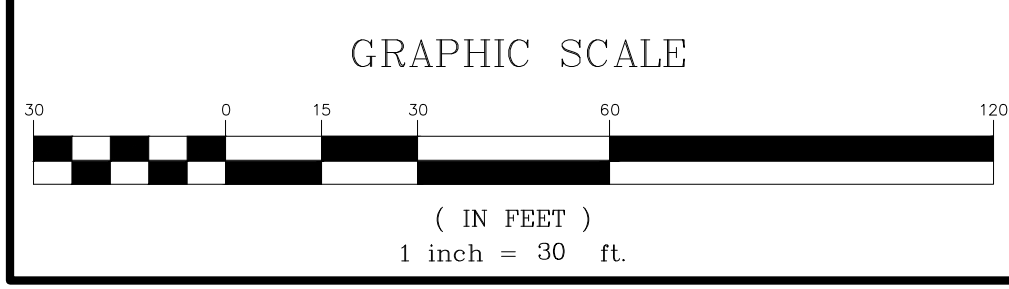
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**LEGEND**

	PROPOSED PARKING AREA (158,596± S.F.)
	PROPOSED INTERIOR PARKING LANDSCAPED AREA (16,105± S.F.)

**PROPOSED INTERIOR PARKING LANDSCAPED AREA CALCULATION:**  
 TOTAL PROPOSED INTERIOR PARKING LANDSCAPED AREA → 16,105 S.F. X 100 = ±10.15%  
 TOTAL PROPOSED PARKING AREA → 158,596 S.F.



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHRISTOPHER CARTHY, CHAIRMAN,  
 TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION  
 DATE: \_\_\_\_\_  
 JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

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No.	Revision	Date	By
1.	RESPONSE TO TOWN COMMENTS	10/24/2022	NC

OWNER/CLIENT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
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 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.5225 • fax 914.273.2102  
 www.jmcpilc.com



**PROPOSED INTERIOR LANDSCAPED AREA CALCULATIONS PLAN**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

Client:	NC	Approved:	DL
Scale:	1" = 40'		
Date:	09/12/2022		
Project No:	22090		
ZONE-SE	PROP LS AREA	EXIST LOR	
Drawing No:	<b>C-810</b>		



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

Date	09/17/2023	NC
Revision		
No.	1.	RESPONSE TO TOWN COMMENTS

OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

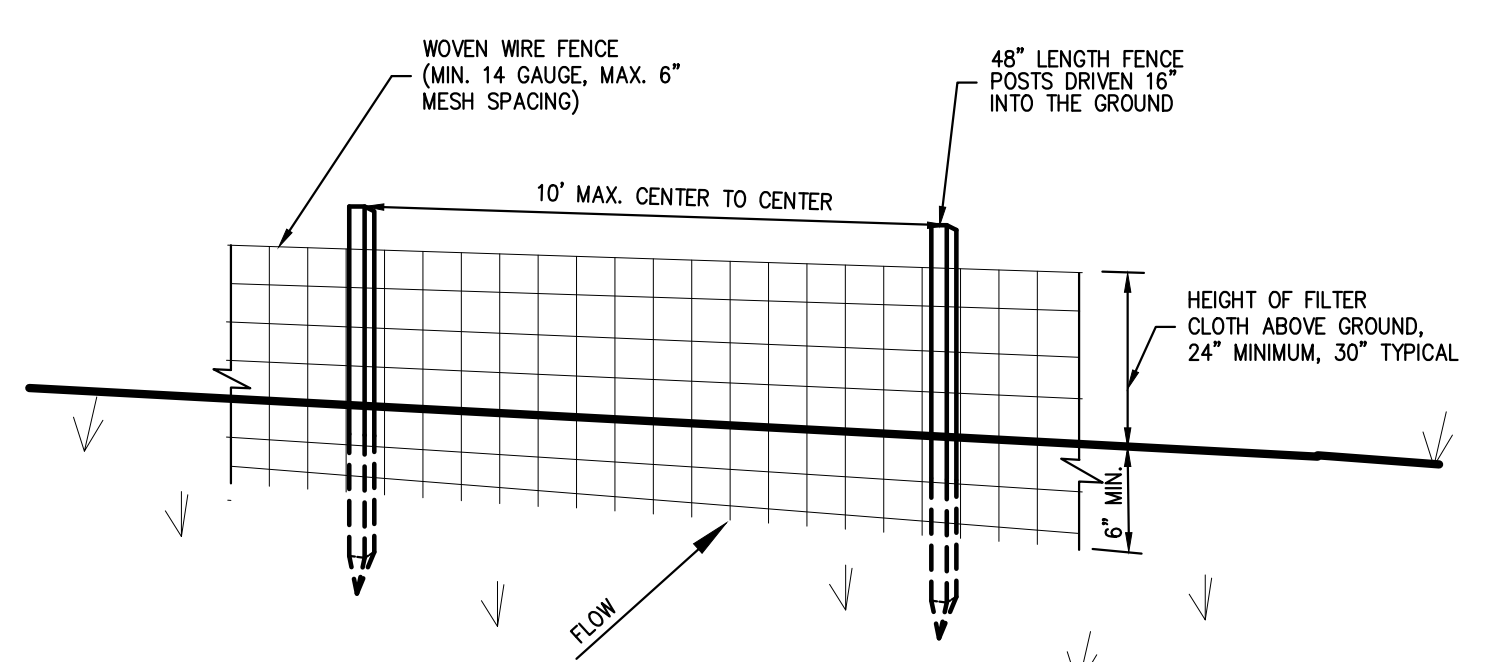
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 voice 914.273.6225 • fax 914.273.2102  
 www.jmcpic.com

**JMC**

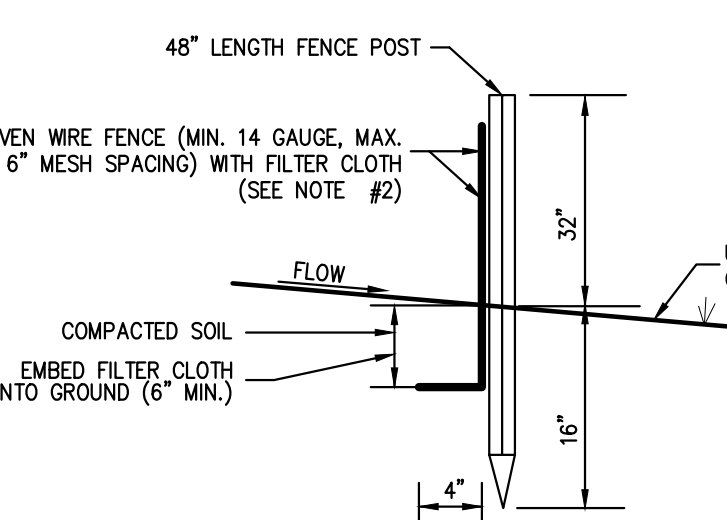
CONSTRUCTION DETAILS  
**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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Drawn	NC	Approved	DL
Scale	NOT TO SCALE		
Date	09/12/2022		
Project No.	22090		
Sheet No.	DET-1		
Drawing No.	C-900		



PERSPECTIVE VIEW



SECTION

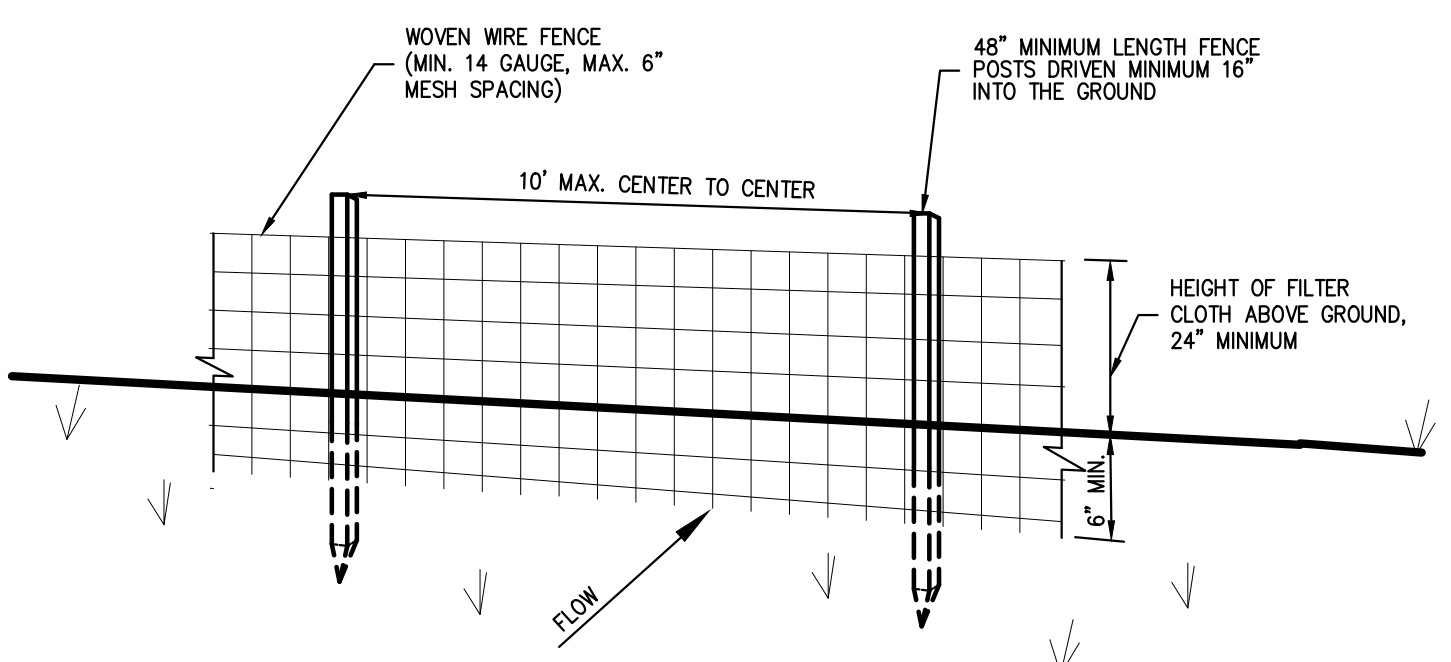
SLOPE	STEEPNESS	SLOPE LENGTH/FENCE LENGTH (FT.)
2-10%	50:1 TO 10:1	250/2000
10-20%	10:1 TO 5:1	150/1000
20-33%	5:1 TO 3:1	80/750
33-50%	3:1 TO 2:1	70/250
>50%	>2:1	30/75

\*ALL SILT FENCES SHALL BE PLACED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE, BUT AT LEAST 10 FEET FROM THE TOE OF A SLOPE STEEPER THAN 3H:1V, TO ALLOW FOR MAINTENANCE AND ROLL DOWN THE AREA BEYOND THE FENCE MUST BE UNDISTURBED OR STABILIZED.

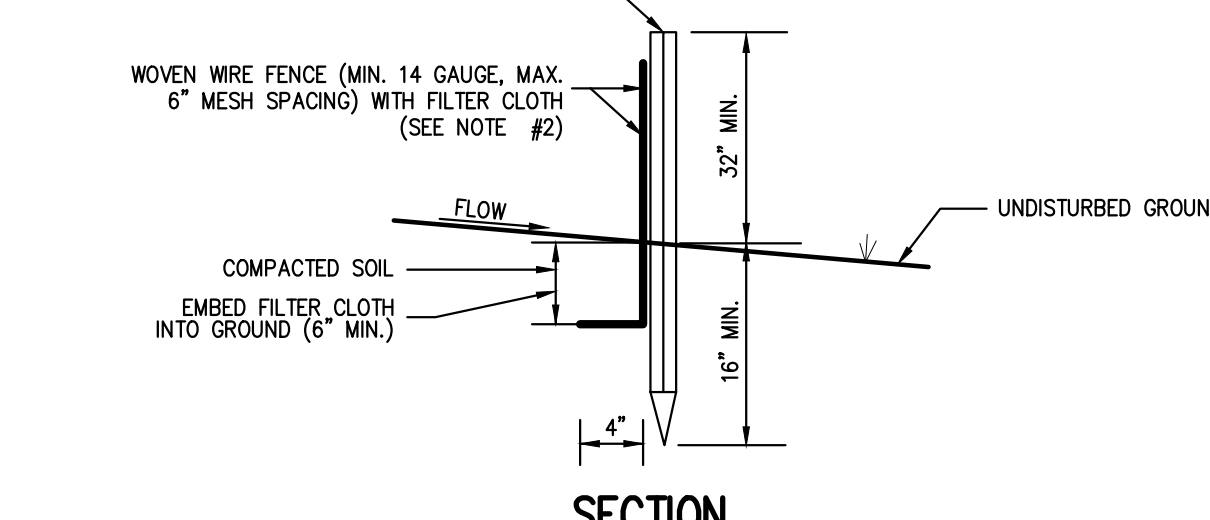
- NOTES:**
- WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL, EITHER T OR U TYPE OR HARDWOOD.
  - FILTER CLOTH SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH SPACING.
  - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA THIN, OR APPROVED EQUAL.
  - PREFABRICATED UNITS SHALL BE GEOTAB, ENVROFENCE, OR APPROVED EQUAL.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**SILT FENCE**

1



PERSPECTIVE VIEW

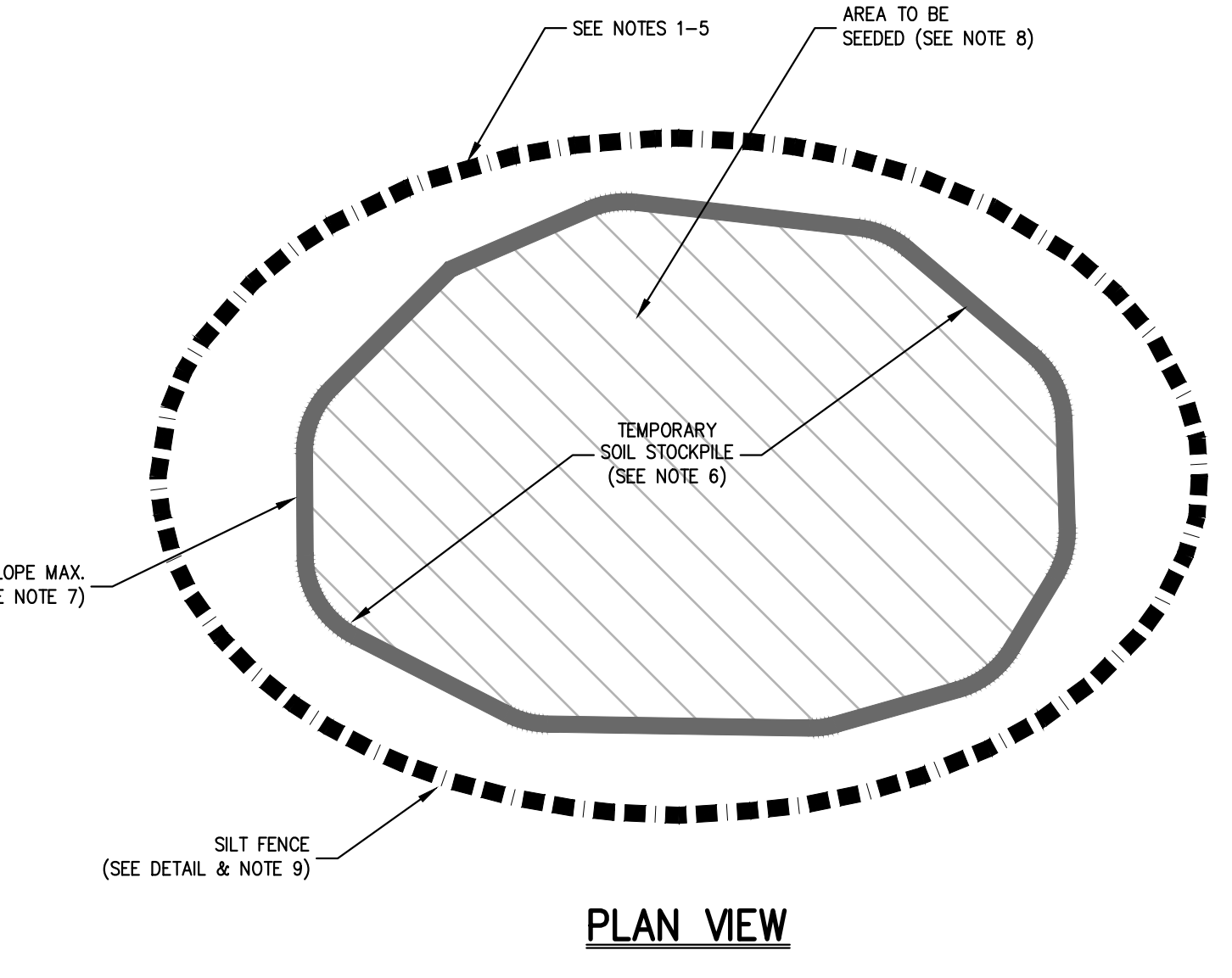


SECTION

- NOTES:**
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  - PREFABRICATED UNITS SHALL BE GEOTAB, ENVROFENCE, OR APPROVED EQUAL.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**TEMPORARY SOIL STOCKPILE WITH SILT FENCE**

2

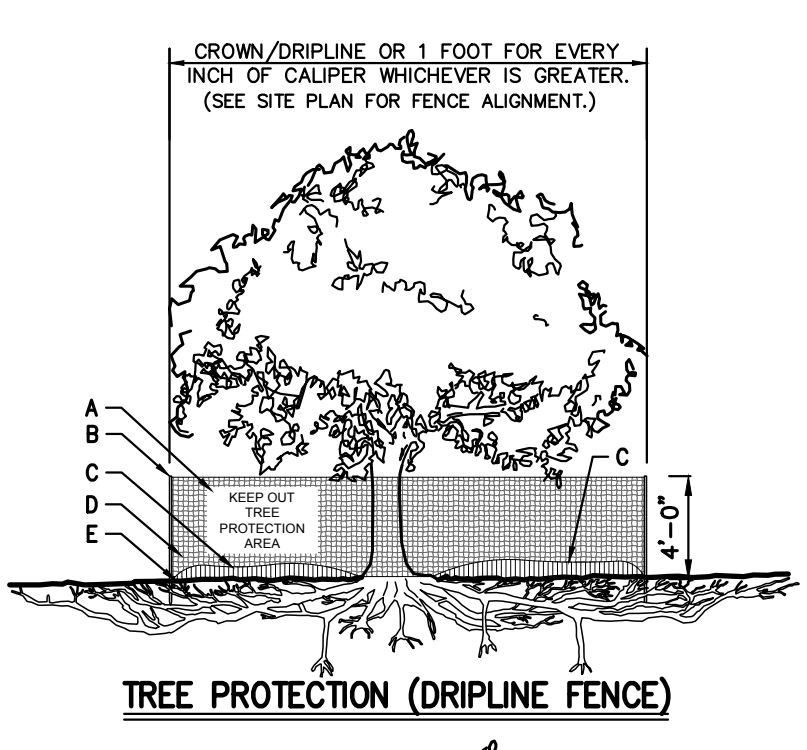


PLAN VIEW

- THE AREA CHOSEN FOR ALL TEMPORARY SOIL STOCKPILES SHALL BE DRY AND STABLE.
- ALL STOCKPILED SOIL SHALL NOT CONTAIN SLOPES GREATER THAN 2:1.
- UPON COMPLETION OF SOIL STOCKPILES, EACH PILE SHALL BE SEEDED WITHIN 24 HOURS. PERENNIAL OR ANNUAL RYEGRASS SHALL BE PLANTED DURING SPRING, SUMMER OR EARLY FALL. WINTER RYE (CEREAL RYE) SHALL BE PLANTED DURING LATE FALL OR EARLY WINTER.
- ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED AROUND THE PERIMETER.

**STABILIZED CONSTRUCTION ENTRANCE**

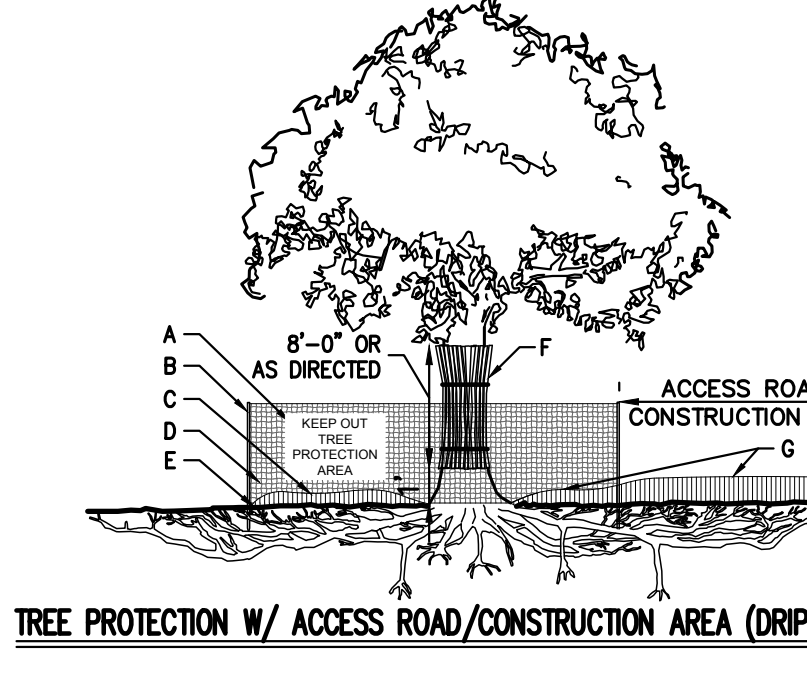
5



TREE PROTECTION (DRIPLINE FENCE)

LETTER	DESCRIPTION
A	3.5"X11" SIGN LAMINATED IN PLASTIC SPACED EVERY 50' ALONG FENCE
B	2"X6" STEEL POSTS OR APPROVED EQUAL
C	5" THICK LAYER OF MULCH
D	TREE PROTECTION FENCE: HIGH DENSITY POLYETHYLENE FENCING WITH 3.5" X 1.5" OPENINGS; COLOR ORANGE. STEEL POSTS INSTALLED AT 8' O.C.
E	MAINTAIN EXISTING GRADE WITHIN THE TREE PROTECTION FENCE UNLESS OTHERWISE INDICATED ON THE PLANS.
F	INSTALL ROUGH SAWN WOOD WHERE AND AS DIRECTED BY PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SEE CHART FOR WOOD SIZE BOUND WITH 9 GAUGE WIRE.
G	8"-12" THICK LAYER OF MULCH ON MAINTENANCE ROAD. 5" THICK LAYER INSIDE TREE PROTECTION AREA.

TREE DIAMETER	ROUGH SAWN WOOD SIZE
<12"	2"X2"
13"-24"	2"X4"
>25"	2"X6"

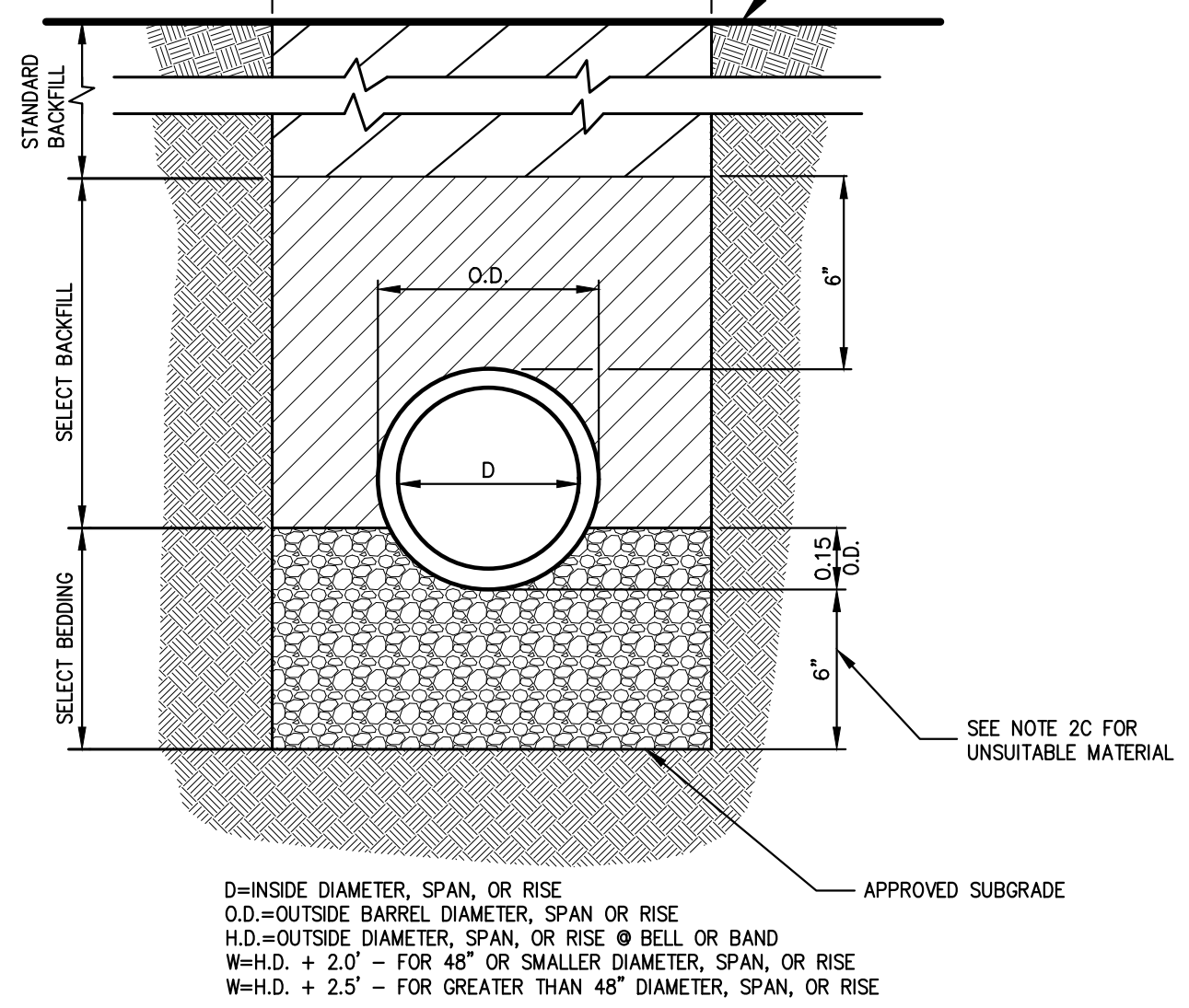


TREE PROTECTION W/ ACCESS ROAD/CONSTRUCTION AREA (DRIPLINE FENCE)

- NOTES:**
- SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
  - IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
  - NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
  - NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
  - SEE SITE PLANS FOR IDENTIFICATIONS/LOCATIONS OF INDIVIDUAL TREES TO BE PROTECTED.
  - ALL EXCAVATION WITHIN THE CROWN/DRIPLINE OF ANY TREE SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SPECIAL MEASURES, SUCH AS THE USE OF AN AIR SPADE, MAY BE REQUIRED.
  - THE CONTRACTOR MAY PROPOSE THE USE OF ENGINEERED MATTING OR OTHER ENGINEERED PRODUCTS IN LIEU OF MULCH, WHICH SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION.

**TREE PROTECTION**

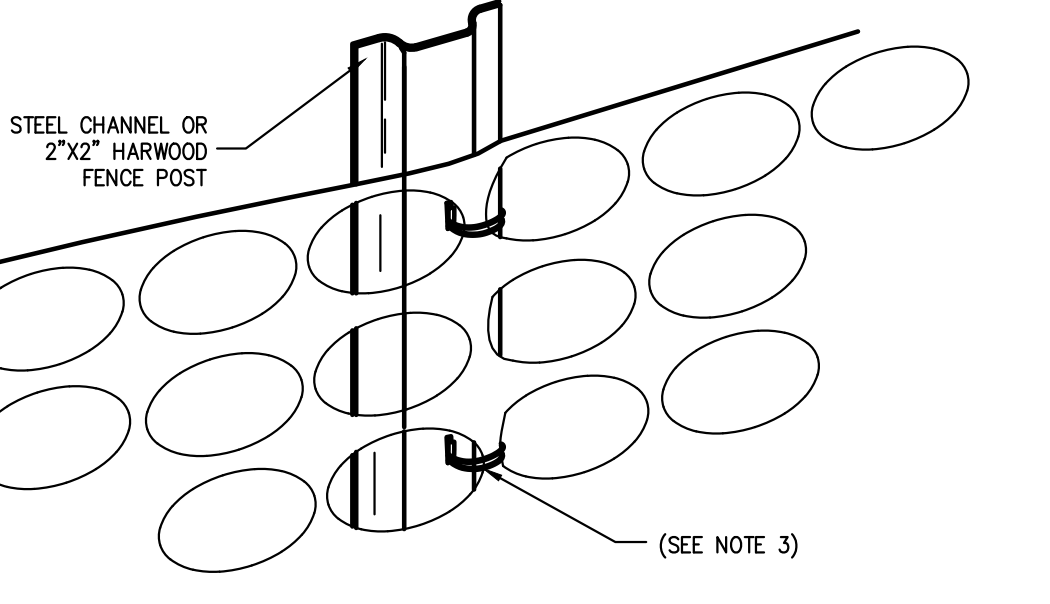
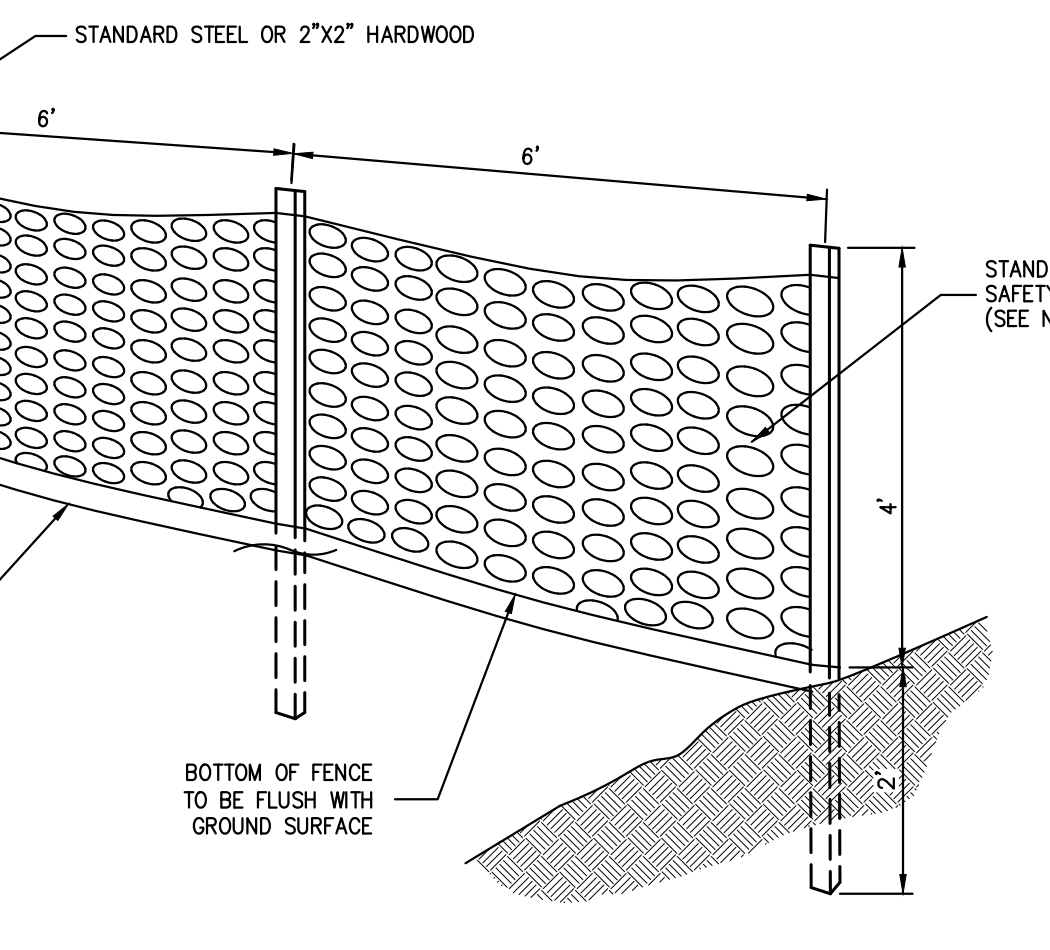
6



- NOTES:**
- FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE:
    - EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH.
    - 3/4" CRUSHED STONE IF WATER IS ENCOUNTERED IN TRENCH.
  - TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES:
    - FOR ALL CORRUGATED POLYETHYLENE DRAIN PIPE (CPDP) AND PVC PIPE AND CONDUIT INSTALLATION.
    - WHEN ROCK OR HARDPAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
    - WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN BOTTOM OF TRENCH. IN SUCH CASE DEPTH OF UNDERGROUTING SHALL BE AS DIRECTED BY THE ENGINEER WITH 6" MINIMUM.
  - FOR ALL TRENCH EXCAVATION IN FILL AREAS, ALL EMBANKMENTS SHALL BE CONSTRUCTED TO A MINIMUM OF 2 FEET ABOVE THE OUTSIDE TOP (AT THE BELL) OF THE PIPE PRIOR TO BEGINNING ANY TRENCH EXCAVATION.
  - BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES, UNLESS OTHERWISE SPECIFIED. BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 92% MAXIMUM MODIFIED DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.

**TYPE II TRENCH**

7



- NOTES:**
- SPACE SUPPORT FENCE POSTS AT 6 FOOT INTERVALS.
  - DRIVE SUPPORT POSTS 2 FEET INTO GROUND.
  - FIRMLY FASTEN FENCE MATERIAL IN PLACE BY WRING TO FENCE POST WHILE MAINTAINING TENSION ACROSS FULL HEIGHT OF FENCE. WRING SHALL BE DONE IN A MANNER THAT WILL PREVENT SAGGING OF FENCE MATERIAL.
  - PROVIDE PERIODIC INSPECTION AND MAINTENANCE OF FENCE INCLUDING REPAIRS AS NECESSARY AND REQUIRED.
  - PLASTIC FENCE SHALL BE INTERNATIONAL ORANGE COLOR, AS MANUFACTURED BY ADRI ENTERPRISES, INC. OR APPROVED EQUAL.
  - REMOVE CONSTRUCTION FENCE AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.

**CONSTRUCTION FENCE**

4

NOT FOR CONSTRUCTION



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE, KELLARD SESSIONS CONSULTING CONSULTING TOWN ENGINEERS

Date	09/17/2023	NC
Revision		
No.	1.	RESPONSE TO TOWN COMMENTS

OWNER/CLIENT  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

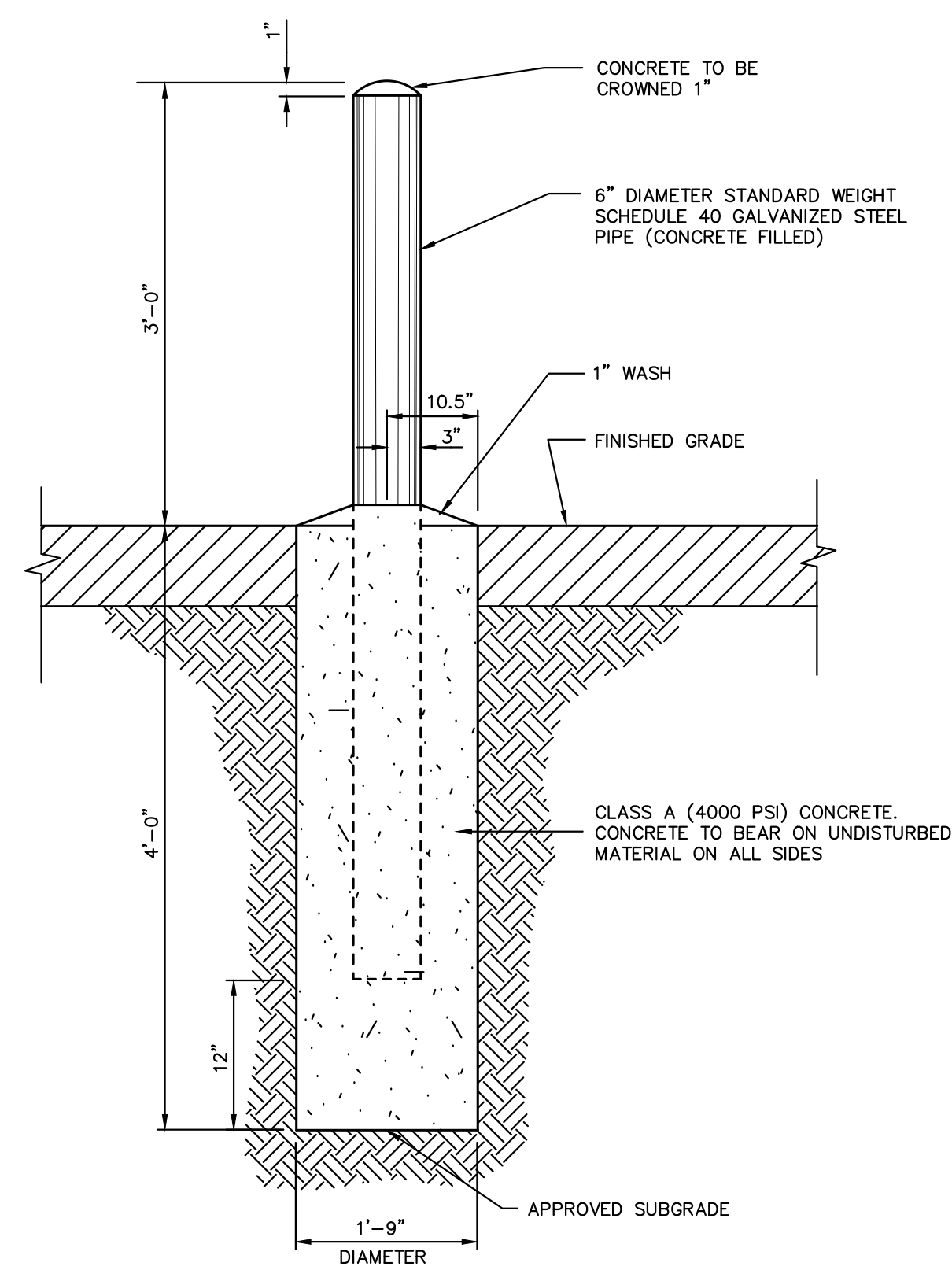
JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.6225 • fax 914.273.2102  
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**JMC**

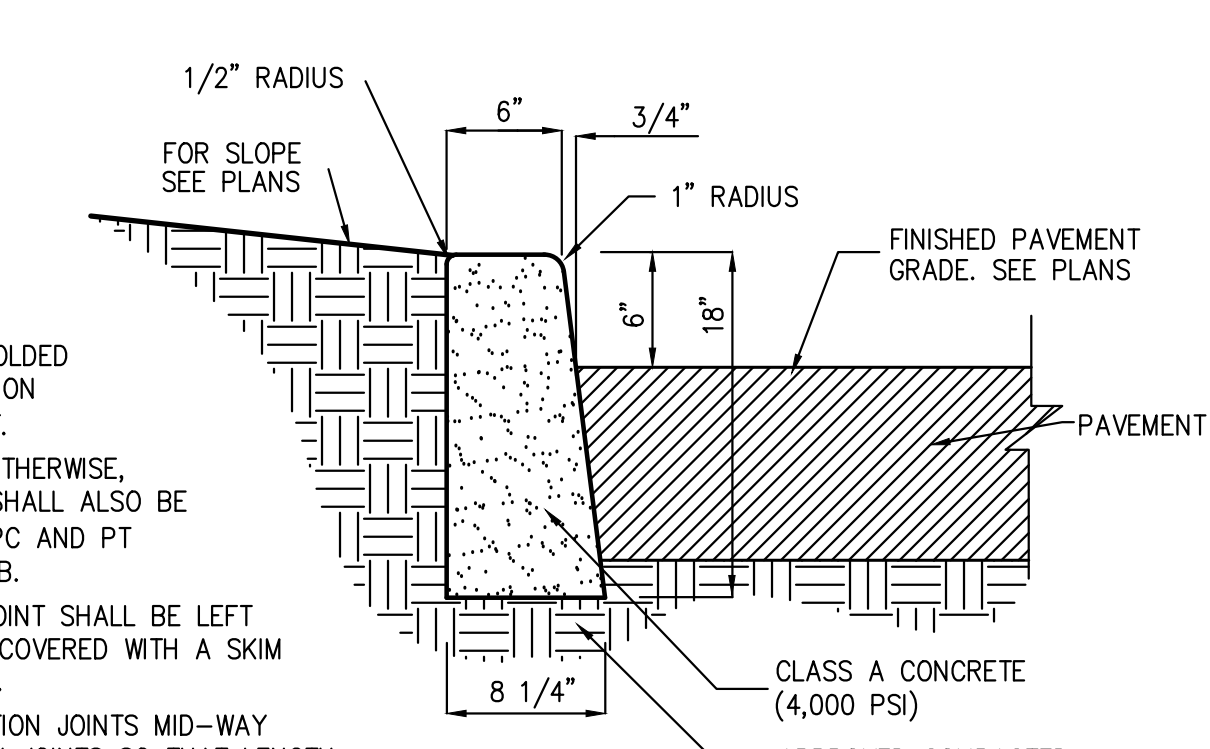
CONSTRUCTION DETAILS  
**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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

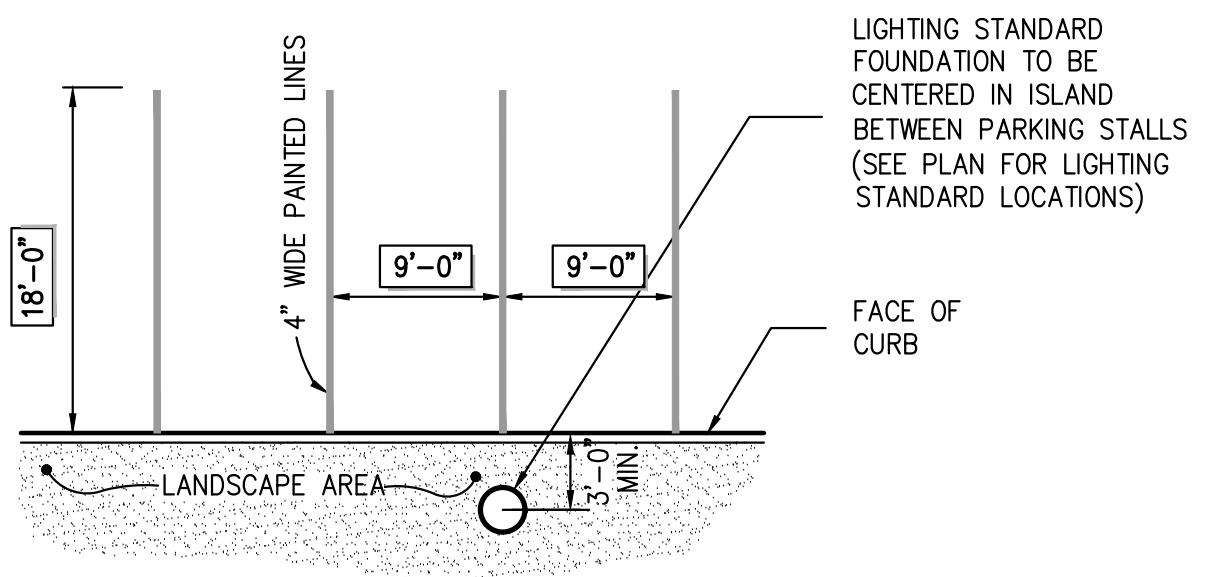
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Scale	NOT TO SCALE		
Date	09/12/2022		
Project No.	22090		
2000-DENOTES	DET-2		
Drawing No.	C-901		



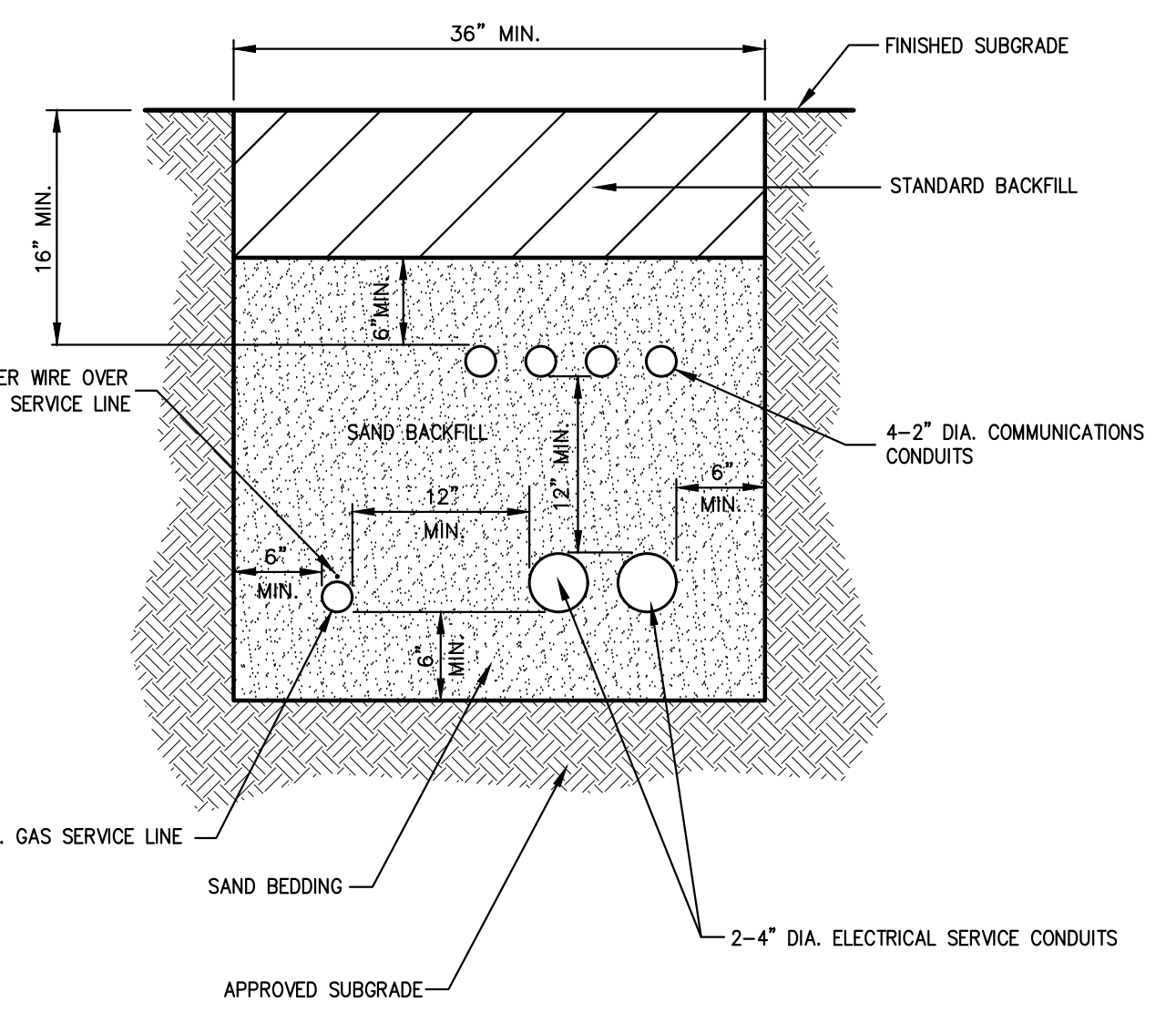
- NOTES:
- WHEN PROTECTION POSTS ARE TO BE USED FOR PROTECTION OF HANDICAP PARKING SIGNS OR OTHER TRAFFIC SIGNS, SIGN SUPPORTING POSTS SHALL BE EMBEDDED A MINIMUM OF THREE (3) FEET INTO THE CONCRETE.
  - POST FOR HANDICAP PARKING STALLS SHALL BE PAINTED BLUE AS FOLLOWS:
    - SOLVENT CLEAN TO REMOVE OIL, GREASE AND OTHER CONTAMINANTS.
    - APPLY METAL PRIMER FOR GALVANIZED SURFACES.
    - APPLY TWO (2) FINISH COATS OF APPROVED EXTERIOR PAINT FOR METAL SURFACES.



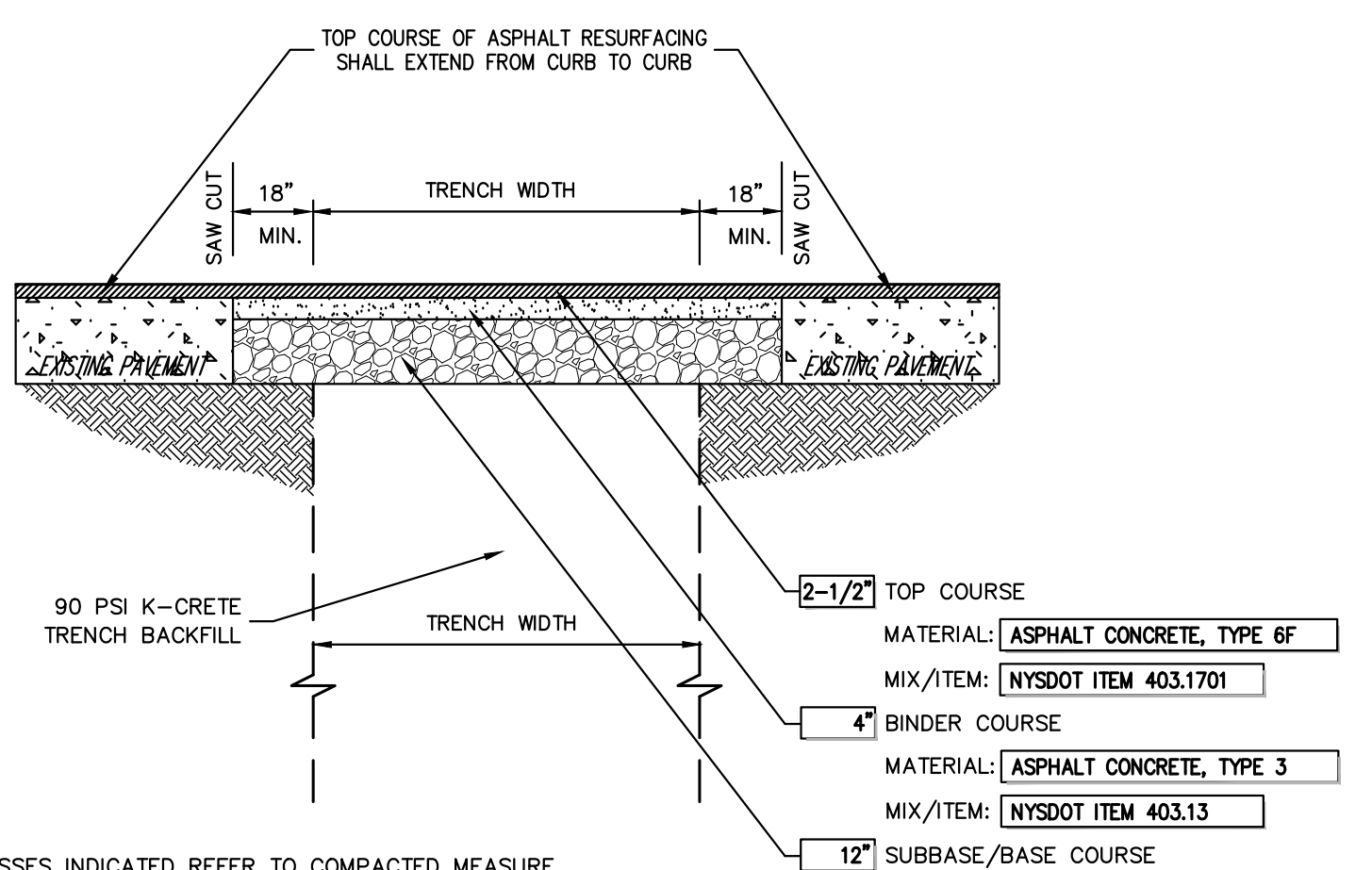
- NOTES:
- INSTALL 1/2" PREMOULDED BITUMINOUS EXPANSION JOINT EVERY 20 FEET.
  - UNLESS DIRECTED OTHERWISE, EXPANSION JOINTS SHALL ALSO BE INSTALLED AT THE PC AND PT OF ALL RADIUS CURB.
  - EACH EXPANSION JOINT SHALL BE LEFT EXPOSED AND NOT COVERED WITH A SKIM COAT OF CONCRETE.
  - INSTALL CONSTRUCTION JOINTS MID-WAY BETWEEN EXPANSION JOINTS SO THAT LENGTH OF CURB SEGMENTS WILL BE TEN (10) FEET.
  - LENGTH OF CURB SEGMENTS AT CLOSURES MAY BE VARIED BUT SHALL NOT BE LESS THAN FOUR (4) FEET.
  - WHEN INSTALLED ADJACENT TO SIDEWALK OR CONCRETE PAVEMENT, MATCH EXPANSION JOINTS.



- NOTE
- COLOR OF PAINT SHALL BE WHITE



- NOTES:
- UTILITIES TO BE INSTALLED IN ACCORDANCE WITH THE REGULATIONS AND REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.
  - BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES. UNLESS OTHERWISE SPECIFIED BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% MAXIMUM MOISTURE DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.
  - CONTRACTOR SHALL STAKE THE PROPOSED SERVICE LINES AND CONDUITS PRIOR TO BACKFILLING TO ENSURE SERVICES DO NOT MOVE WITHIN TRENCH.



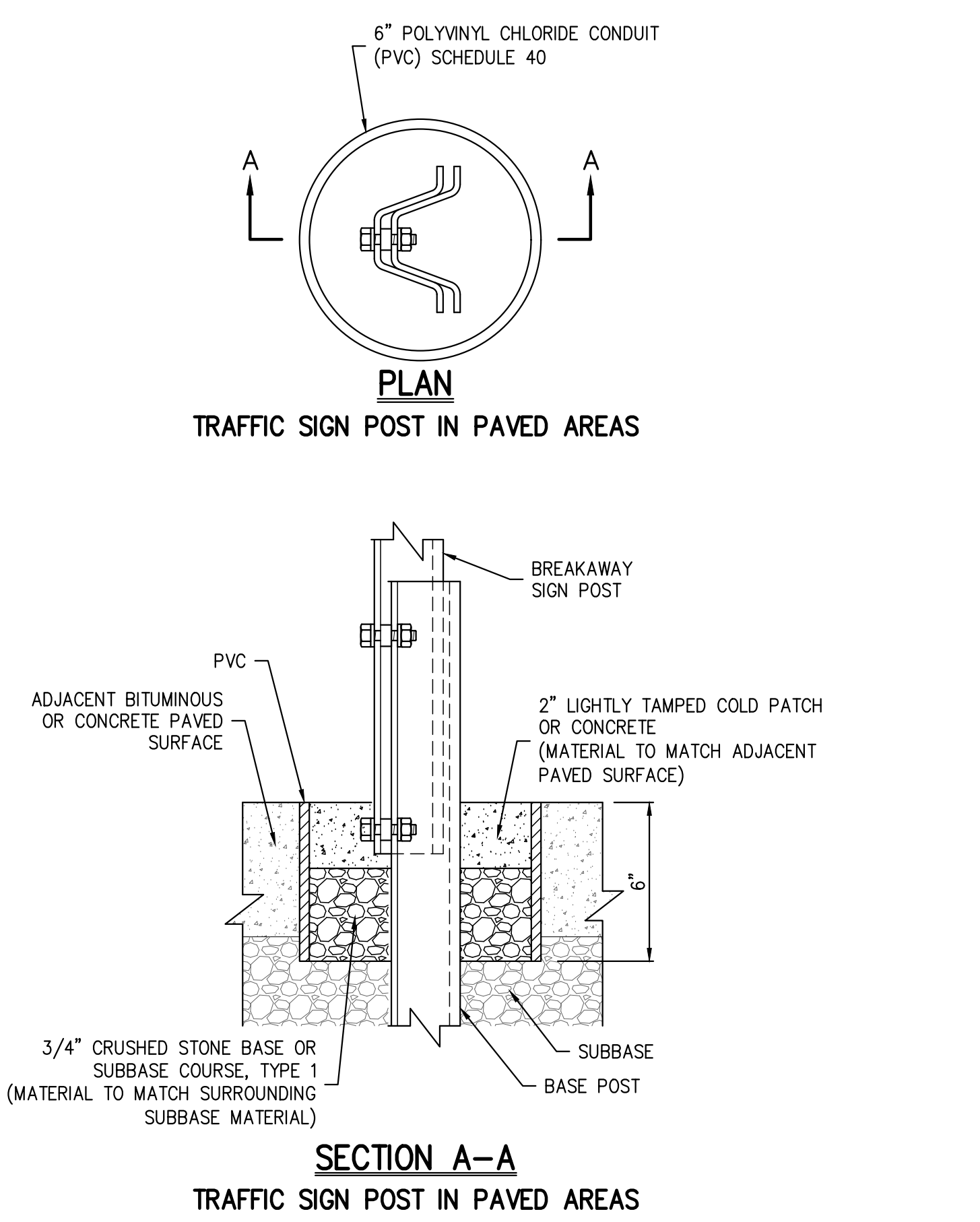
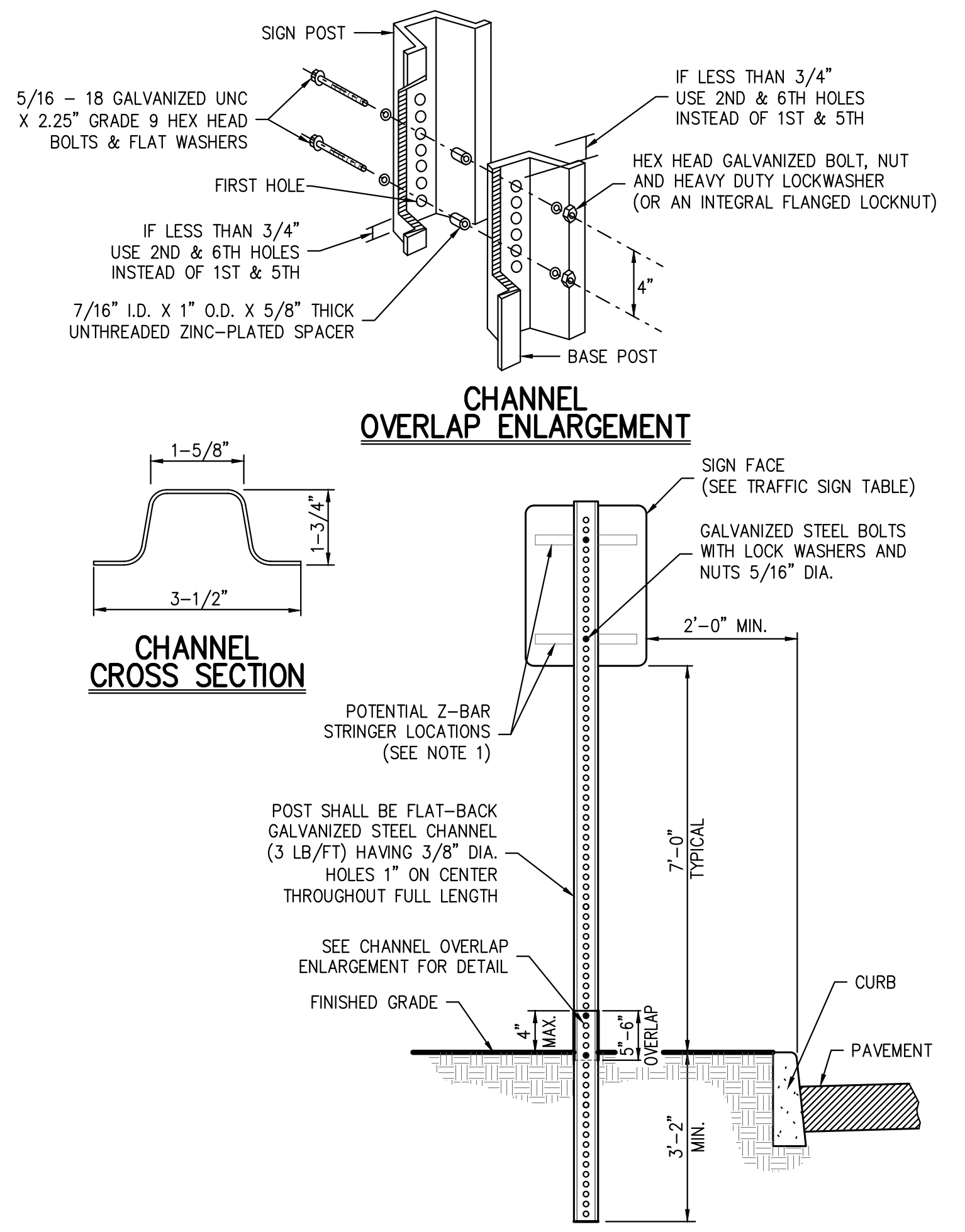
- NOTES
- THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
  - CRACK FILL JOINTS AS REQUIRED.
  - ITEM NUMBERS REFER TO:
    - NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

**UTILITY TRENCH DETAIL** 8

**PAVEMENT REPLACEMENT OVER TRENCH** 10  
 (TOWN OF NORTH CASTLE STANDARD IN RIGHT-OF-WAY)

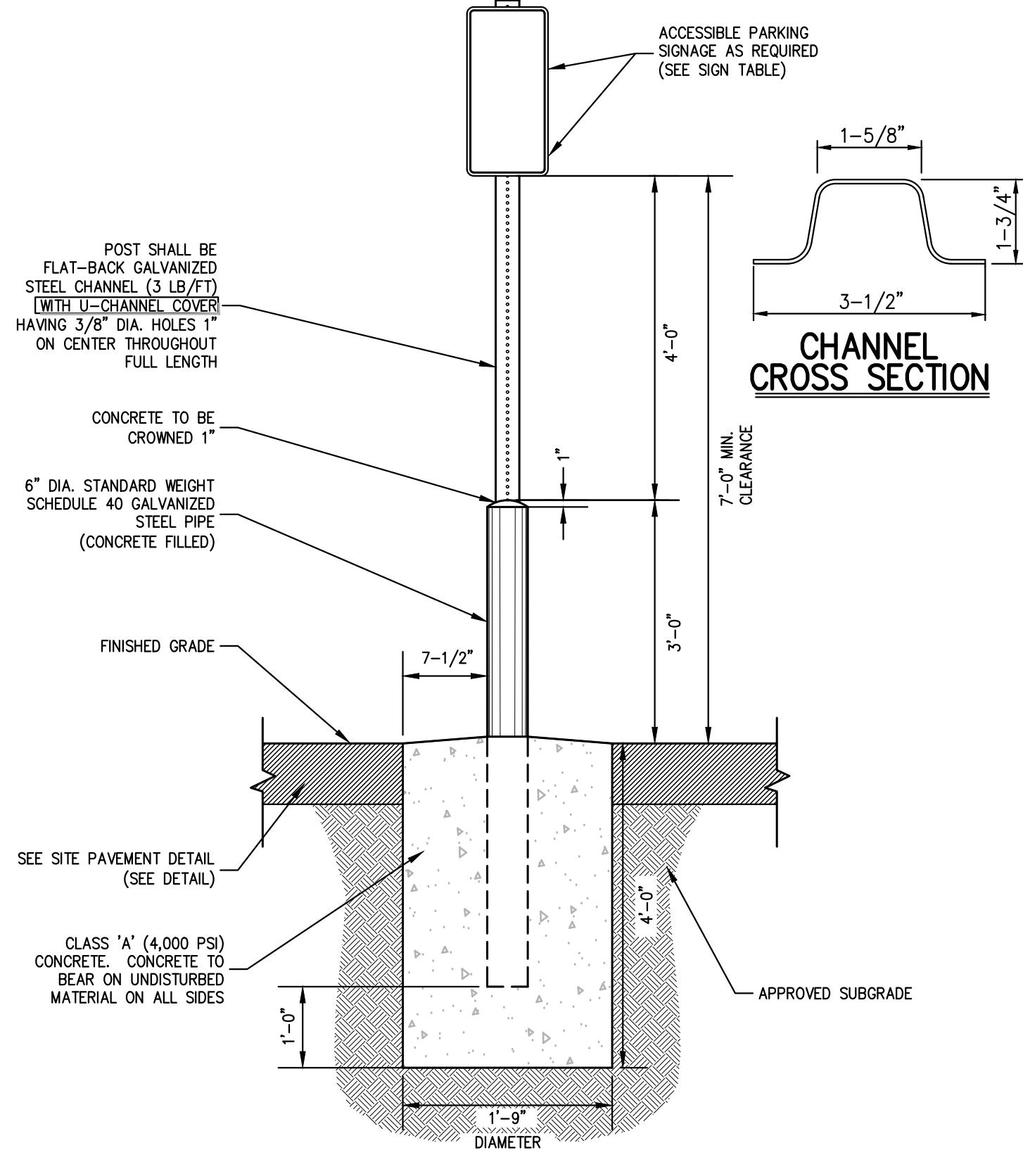
**90° PARKING** 12  
 (SINGLE STRIPING - CURBED PERIMETER)

**STEEL PIPE PROTECTION POST** 13



- NOTE:
- WHEN BACK TO BACK SIGNS ARE DESIGNATED TO SHARE ONE POST, SIGNS SHALL BE AFFIXED TO POST USING ALUMINUM OR STAINLESS STEEL Z-BAR STRINGER.

**TRAFFIC SIGN POST** 14  
 (BREAKAWAY STEEL CHANNEL)



- NOTES:
- GALVANIZED STEEL CHANNEL SHALL BE EMBEDDED A MIN. OF 3 FT. INTO THE CONCRETE
  - POSTS FOR HANDICAP PARKING STALLS AND ACCESS AISLES SHALL BE PAINTED BLUE AS FOLLOWS:
    - SOLVENT CLEAN TO REMOVE OIL, GREASE AND OTHER CONTAMINANTS.
    - APPLY METAL PRIMER FOR GALVANIZED SURFACES.
    - APPLY TWO (2) FINISH COATS OF APPROVED EXTERIOR PAINT FOR METAL SURFACES.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE PARKING SIGNS, BOLLARDS AND FOUNDATIONS WITH THE DESIGN AND INSTALLATION OF THE SITE SIDEWALKS, CURBS, PAVEMENT AND ANY OTHER SITE FEATURES SHOWN ON THE PLANS.
  - FASTEN SIGN TO POSTS WITH GALVANIZED STEEL BOLTS, LOCK WASHERS, AND NUTS (5/16" DIA.)
  - U-CHANNEL COVERS FOR POSTS SHALL BE BLUE WITH WHITE STRIPE FOR HANDICAP PARKING STALLS AND HANDICAP ACCESS AISLES.

**ACCESSIBLE PARKING SIGN DETAIL** 15

X

NOT FOR CONSTRUCTION



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CHRISTOPHER CATHY, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
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JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
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Revision		
Date	09/17/2023	NC

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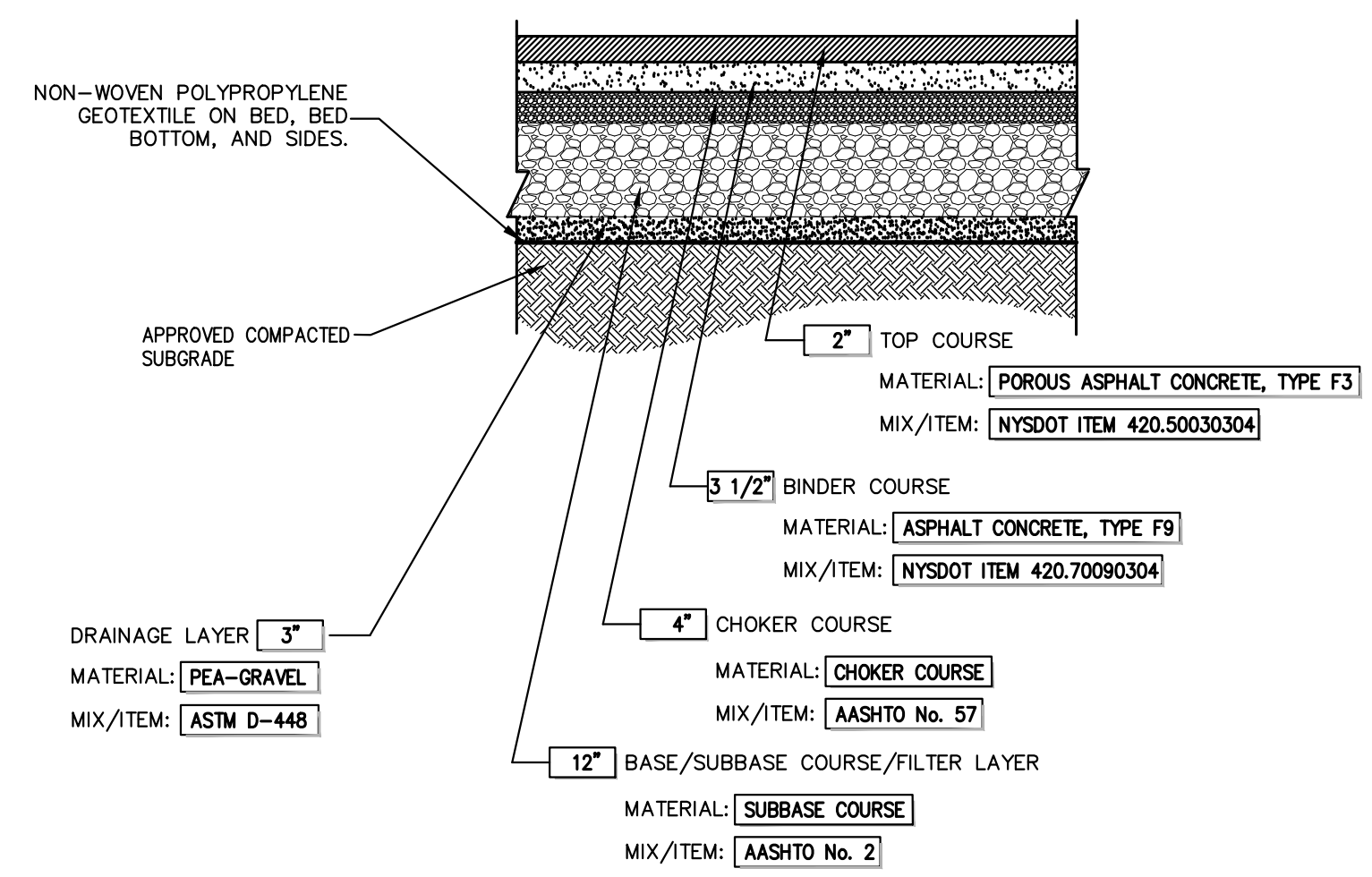
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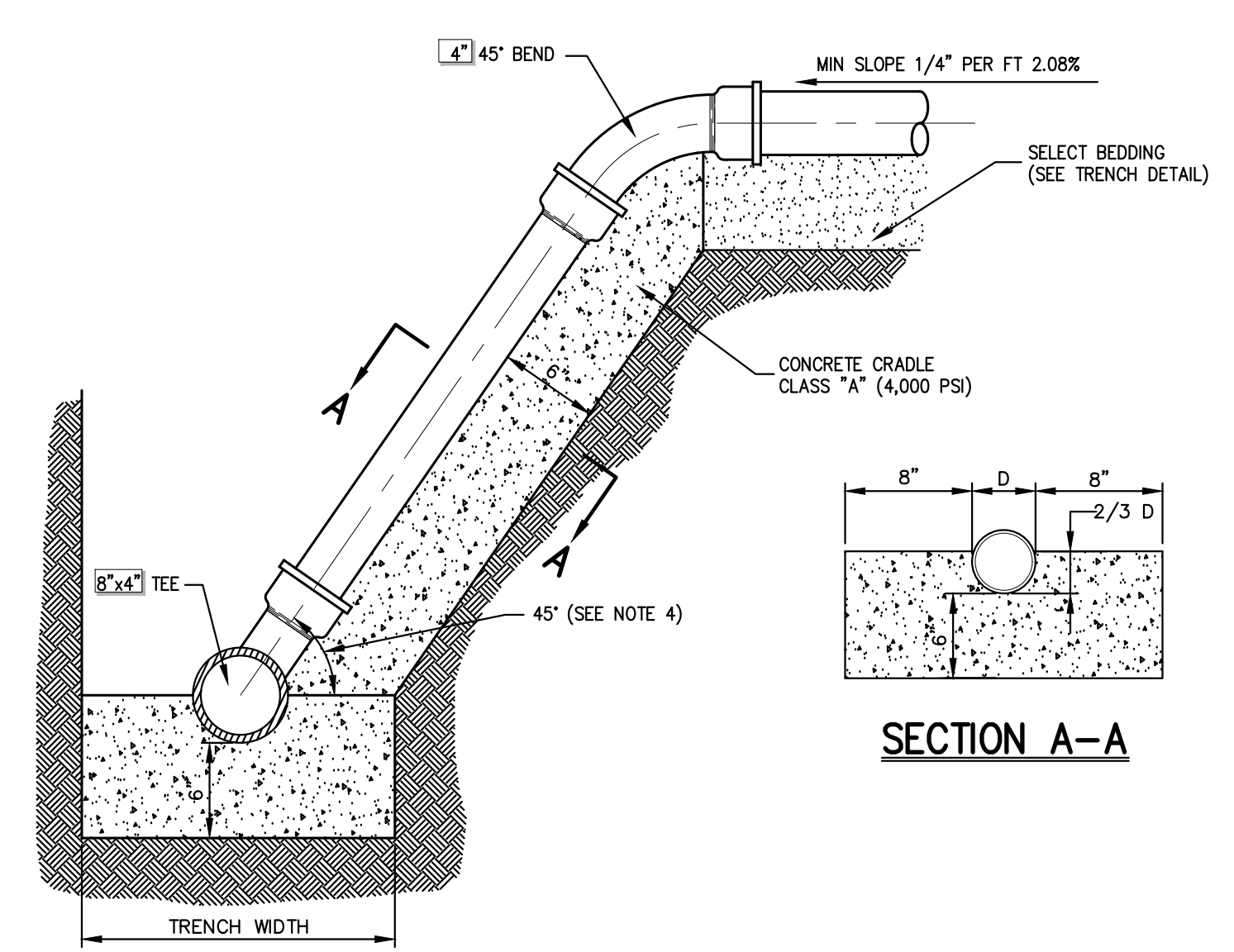
Drawn	NC	Approval	DL
Scale	NOT TO SCALE		
Date	09/12/2022		
Project No.	22090		
2000-DRAWING	DET-3		
Drawing No.	<b>C-902</b>		



- NOTES:**
- THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
  - MATERIAL AND MIX/ITEM NUMBERS REFER TO NEW YORK STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), AND AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

**POROUS ASPHALT PAVEMENT**

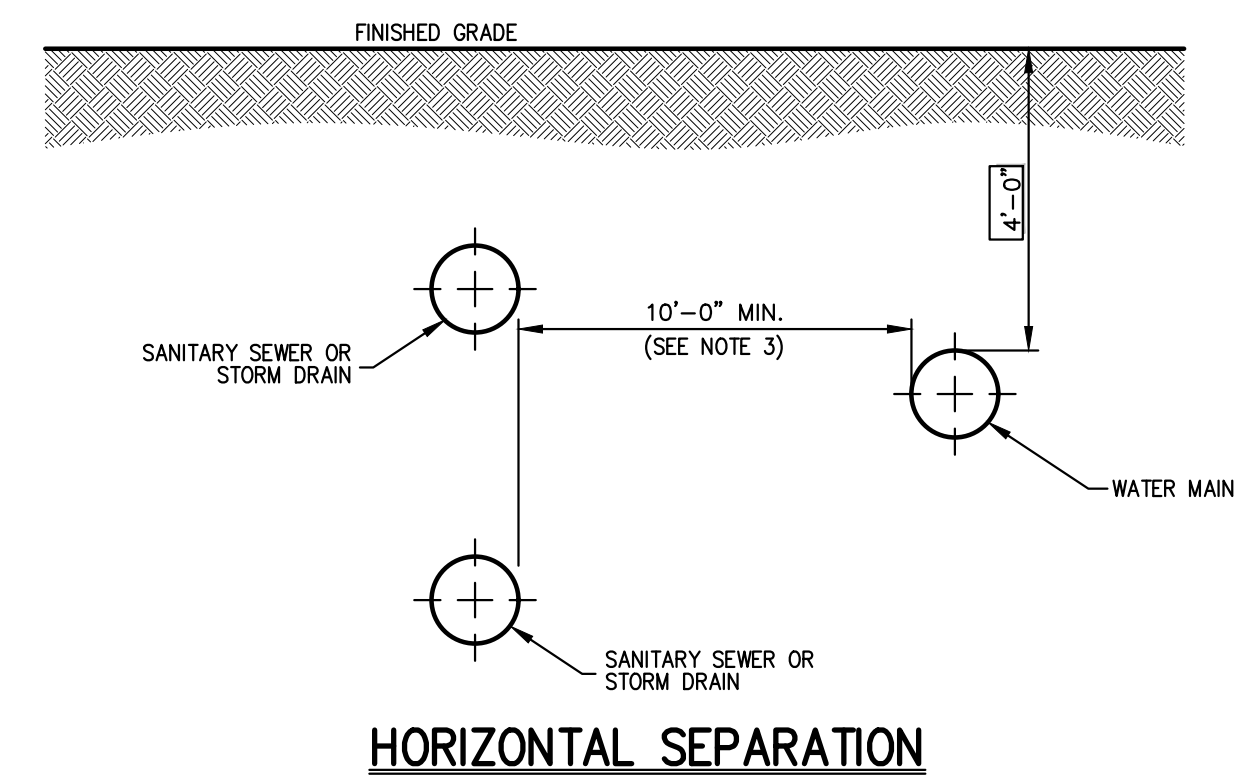
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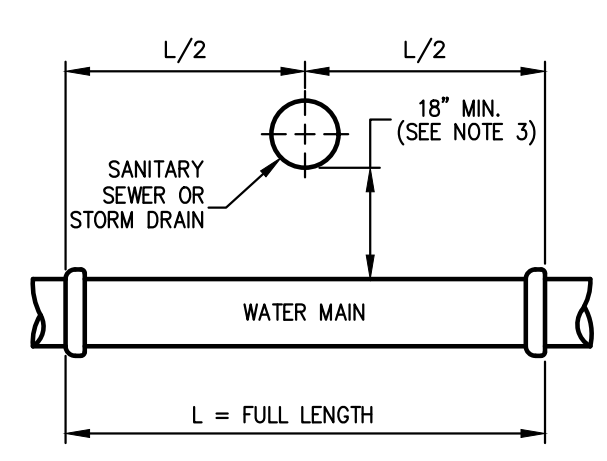
- NOTES:**
- ALL SERVICE LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER.
  - SERVICE LINE LOCATION, GRADE AND ALIGNMENT SHALL BE AS SHOWN ON DRAWINGS OR AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.
  - WHERE SERVICE LINES ARE TO BE DEAD-ENDED, CONTRACTOR SHALL INSTALL APPROVED WATER-TIGHT AND PRESSURE-TIGHT PLUGS.
  - IF MINIMUM COVER CANNOT BE ATTAINED WHILE MAINTAINING MINIMUM SLOPE, THE ANGLE OF CONNECTION MAY BE REDUCED TO 22.5°, IF APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND COVERING BODY WITH JURISDICTION.
  - SANITARY SEWER SERVICE LINE INCLUDING FITTINGS SHALL BE DEP. CLASS 52

**SANITARY SEWER SERVICE CONNECTION**

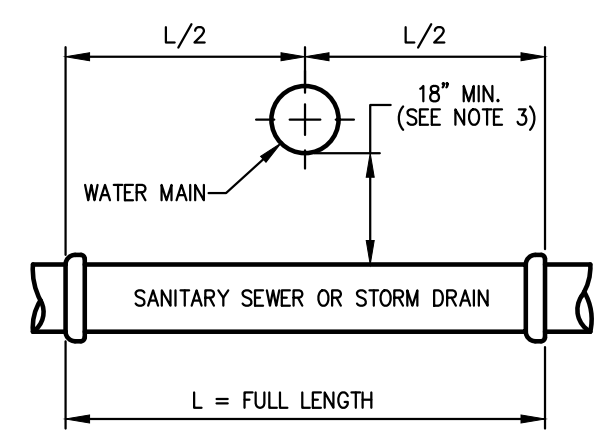
17



**HORIZONTAL SEPARATION**



**SANITARY SEWER OR STORM DRAIN OVER WATER MAIN**



**WATER MAIN OVER SANITARY SEWER OR STORM DRAIN**

**VERTICAL SEPARATION**

- NOTES:**
- NORMAL CONDITIONS:
    - WHENEVER A WATER MAIN MUST CROSS OVER OR UNDER A SANITARY SEWER OR STORM DRAIN, THE PIPES SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION BETWEEN THEM OF AT LEAST 18 INCHES, AS MEASURED FROM THE BOTTOM OF THE HIGHER PIPE TO THE CROWN OF THE LOWER PIPE.
    - FULL LENGTH OF WATER PIPE MUST BE CENTERED AT THE POINT OF CROSSING; NO JOINTS WILL BE PERMITTED AT THE POINT OF CROSSING.
  - WATER MAIN CROSSING UNDER SANITARY SEWERS:
    - VERTICAL SEPARATION OF 18 INCHES MUST BE PROVIDED.
    - ADEQUATE STRUCTURAL SUPPORT MUST BE PROVIDED FOR THE SANITARY SEWER TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING.
  - IF DURING CONSTRUCTION IT IS FOUND THAT THE REQUIRED SEPARATION OF WATER MAINS, SANITARY SEWERS, STORM SEWERS AND BUILDING SANITARY SEWERS CANNOT BE MET, THE CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL IN WRITING ADVISE JOHN MEYER CONSULTING OF THE SPECIFIC CONDITIONS ENCOUNTERED. APPROVAL OF ALTERNATIVE SEPARATION CRITERIA SHALL BE OBTAINED FROM THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH PRIOR TO INSTALLATION.

**SEPARATION OF WATER AND SANITARY SEWER/STORM DRAIN LINES**

18

**NOTES PERTAINING TO DRAIN INLETS**

- STEPS WILL NOT BE REQUIRED IN INLETS LESS THAN FOUR (4) FEET IN DEPTH. STEPS WILL BE REQUIRED IN INLETS FOUR (4) FEET OR GREATER IN DEPTH. DEPTHS FOR DRAIN INLETS SHALL BE MEASURED FROM FINISHED GRADE TO INSIDE BOTTOM OF STRUCTURE (INCLUDING SUMP AS APPLICABLE).
- WHEN STEPS ARE REQUIRED, STEPS SHALL COMPLY WITH THE SAME REQUIREMENTS OF ASTM STANDARD C-478, ARTICLE 13 ENTITLED "MANHOLE STEPS & LADDERS".
- FOR MASONRY STRUCTURES, THE FIRST COURSE OF MASONRY SHALL BE SET IN THE CONCRETE FOUNDATION BEFORE THE CONCRETE HAS SET. CONCRETE FOUNDATION SHALL BE CLASS "A" (4000 PSI) CONCRETE, TWELVE (12) INCHES THICK AND SHALL EXTEND SIX (6) INCHES BEYOND THE OUTSIDE FACE OF THE STRUCTURE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH AND CONSTRUCT THE PROPER SIZE STRUCTURE INCLUDING THE NECESSARY OPENINGS TO ACCOMMODATE THE WORK AS SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.
- ALL NECESSARY PATCHING FOR DRAIN STRUCTURES SHALL BE ACCOMPLISHED WITH NON-SHRINKING COBALT MORTAR GROUT, APPROVED EQUAL TO Sika-SET AS MANUFACTURED BY THE Sika CHEMICAL CORP.
- FOUNDATIONS FOR PRECAST CONCRETE STRUCTURES SHALL BE SET ON A COMPACTED LAYER OF APPROVED CRUSHED STONE HAVING A MINIMUM COMPACTED THICKNESS OF EIGHT (8) INCHES.
- ALL PIPES SHALL BE CUT FLUSH WITH THE INSIDE WALL OF THE STRUCTURE.
- PROVIDE REINFORCED CONCRETE TOP SLAB FOR OVERSIZED DRAIN INLETS WITH PROPER SIZE OPENING TO ACCOMMODATE INSTALLATION OF FRAME & GRATE.
- FOR MASONRY STRUCTURES GREATER THAN TEN (10) FEET IN DEPTH, THICKNESS OF MASONRY WALLS SHALL BE INCREASED TO TWELVE (12) INCHES.
- FOR ALL STRUCTURES GREATER THAN 10 FEET IN DEPTH, STRUCTURES SHALL PROVIDE MINIMUM INSIDE DIMENSIONS OF 4 FEET X 4 FEET.

**NOTES PERTAINING TO MANHOLES**

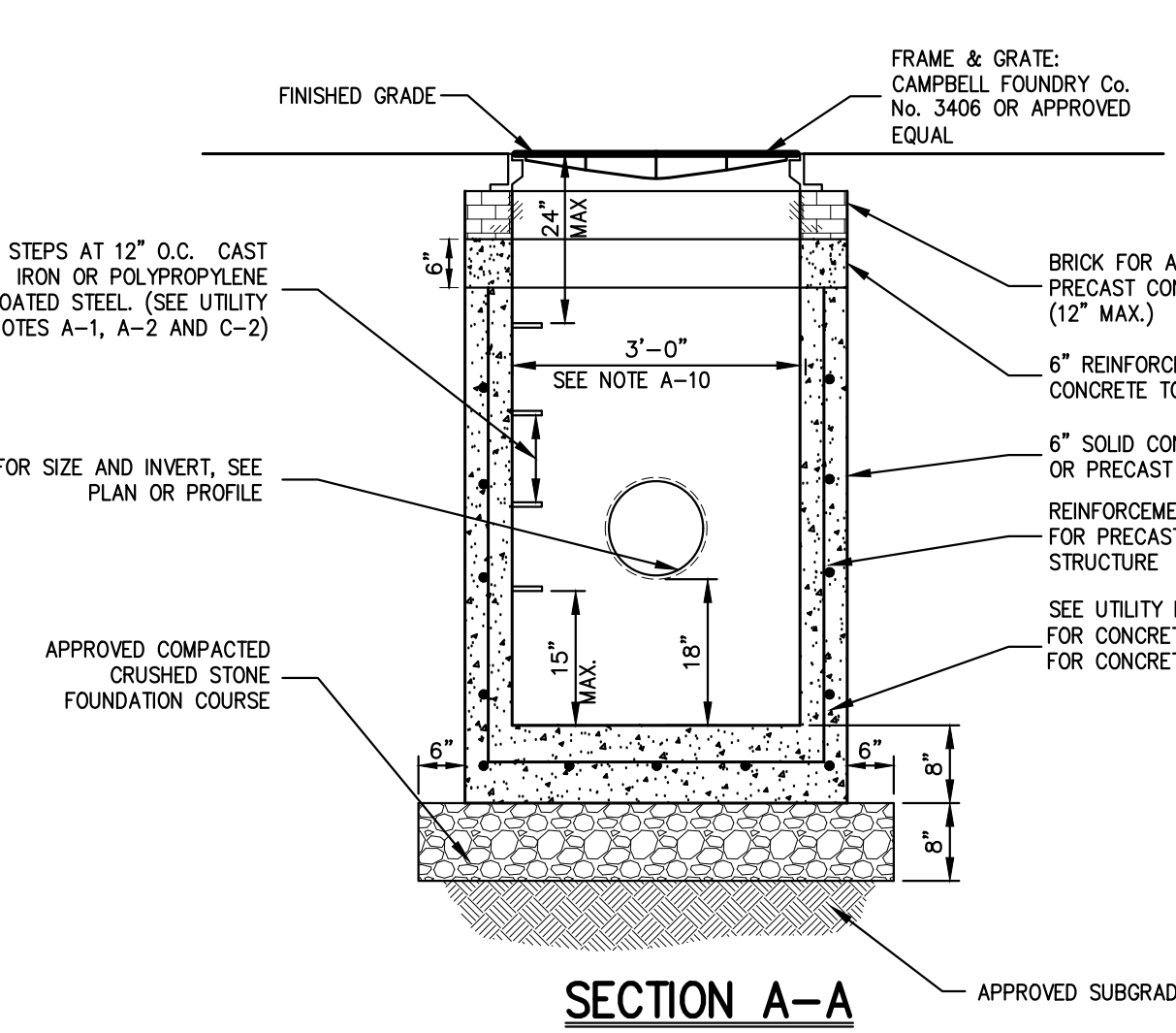
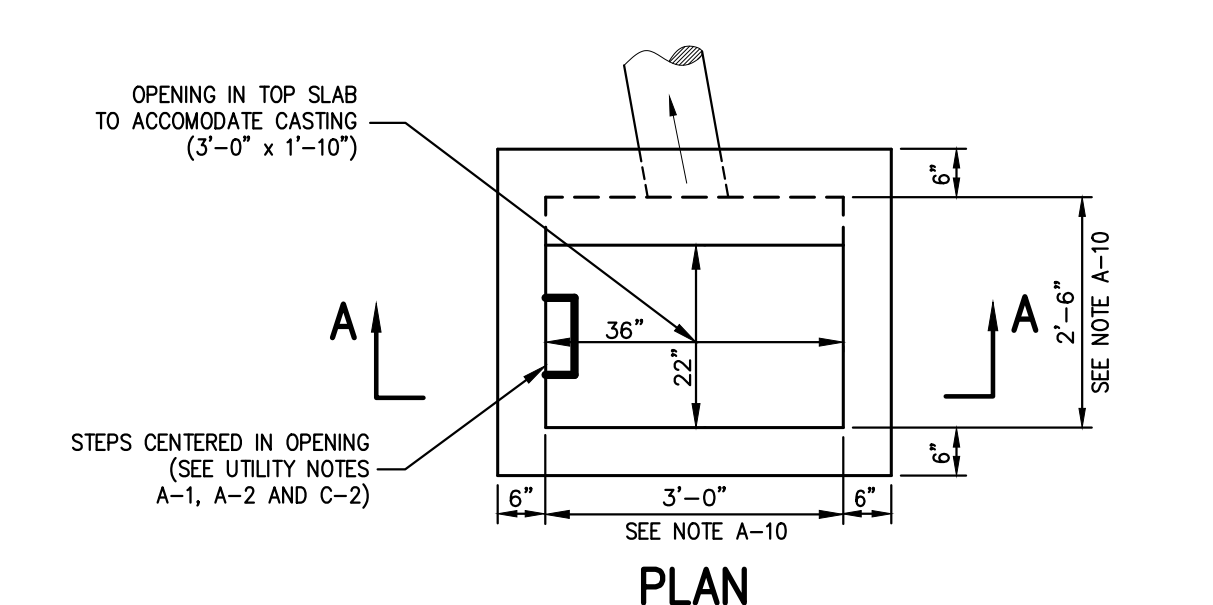
- PRECAST CONCRETE MANHOLES SHALL COMPLY WITH ASTM STANDARD C-478. MANHOLE JOINTS SHALL COMPLY WITH ASTM STANDARD C-443.
- FOR PRECAST CONCRETE MANHOLES FIVE (5) FEET OR LESS IN HEIGHT, TOP CONE SECTION SHALL BE REPLACED WITH PRECAST REINFORCED CONCRETE SLAB (6" MIN. THICKNESS) WITH OPENING OF SUFFICIENT SIZE TO ACCOMMODATE MANHOLE CASTING.
- FOR MANHOLES 10 FEET OR MORE IN DEPTH, MANHOLE DIAMETER SHALL BE FIVE (5) FEET.
- TERMINAL MANHOLE FLOORS SHALL BE SLOPED TOWARD OUTFALL PIPE.
- INVERT CHANNELS FOR PRECAST CONCRETE MANHOLES SHALL BE CONSTRUCTED OF CONCRETE.
- NOTES A-1, A-2, A-4, A-5, A-6 & A-7 UNDER "NOTES PERTAINING TO DRAIN INLETS" ABOVE SHALL APPLY TO MANHOLES.

**NOTES PERTAINING TO PRECAST CONCRETE STRUCTURES FOR STORM DRAINS, SANITARY SEWERS AND WATER LINES**

- ALL PRECAST CONCRETE STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
- STEPS SHALL BE LOCATED WITHIN STRUCTURE TO AVOID PLACEMENT OVER PIPES WHEN PRACTICABLE.

**UTILITY NOTES**

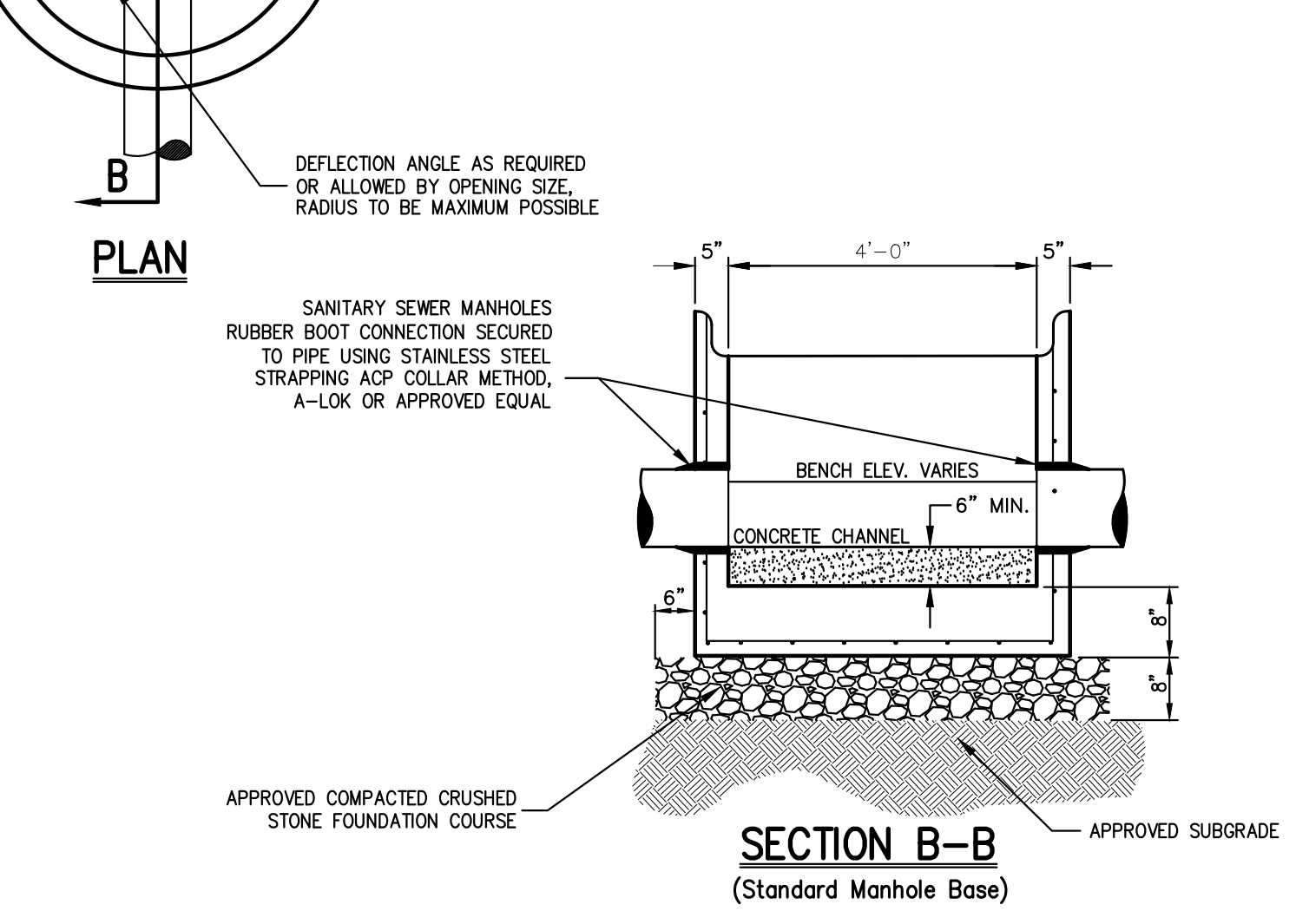
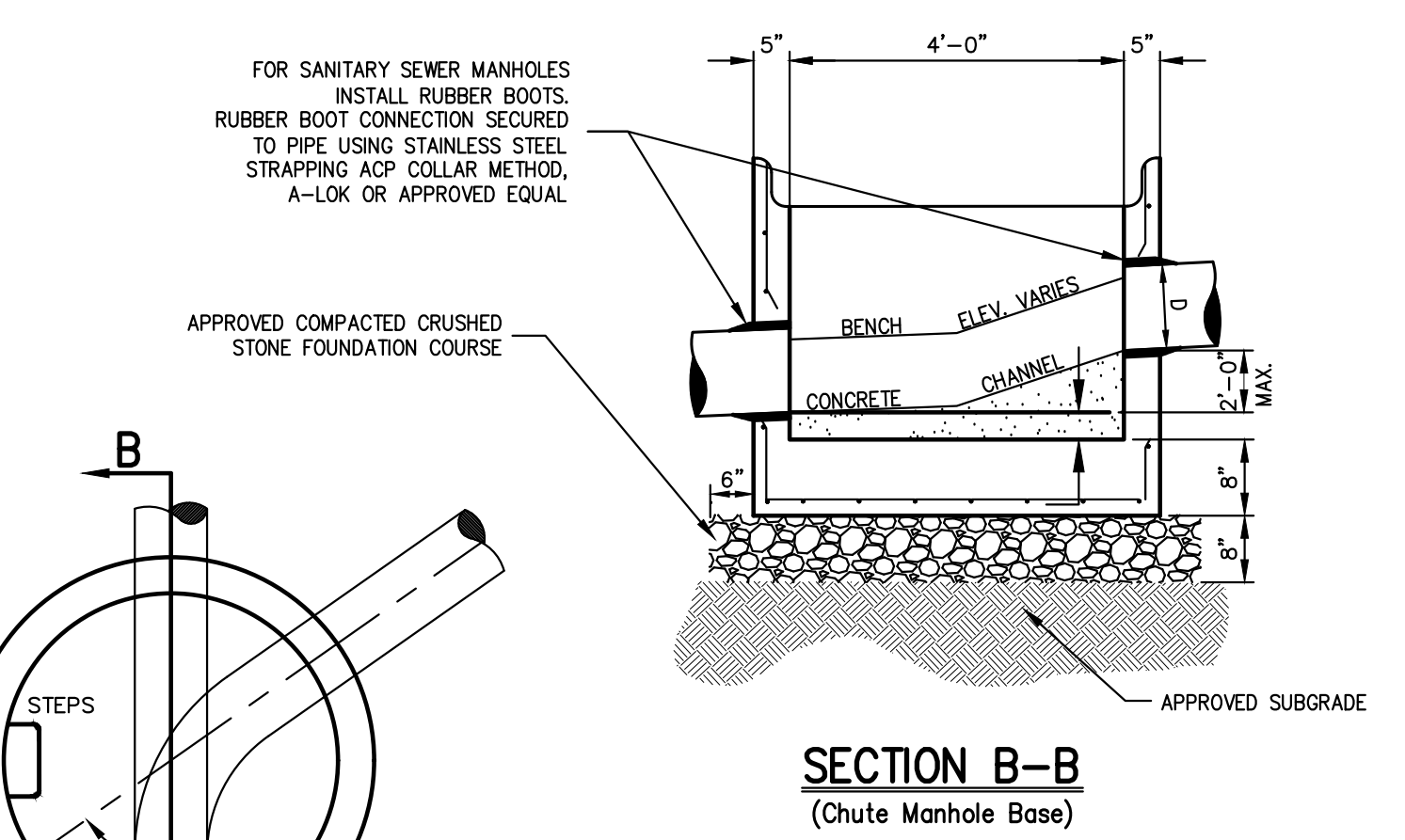
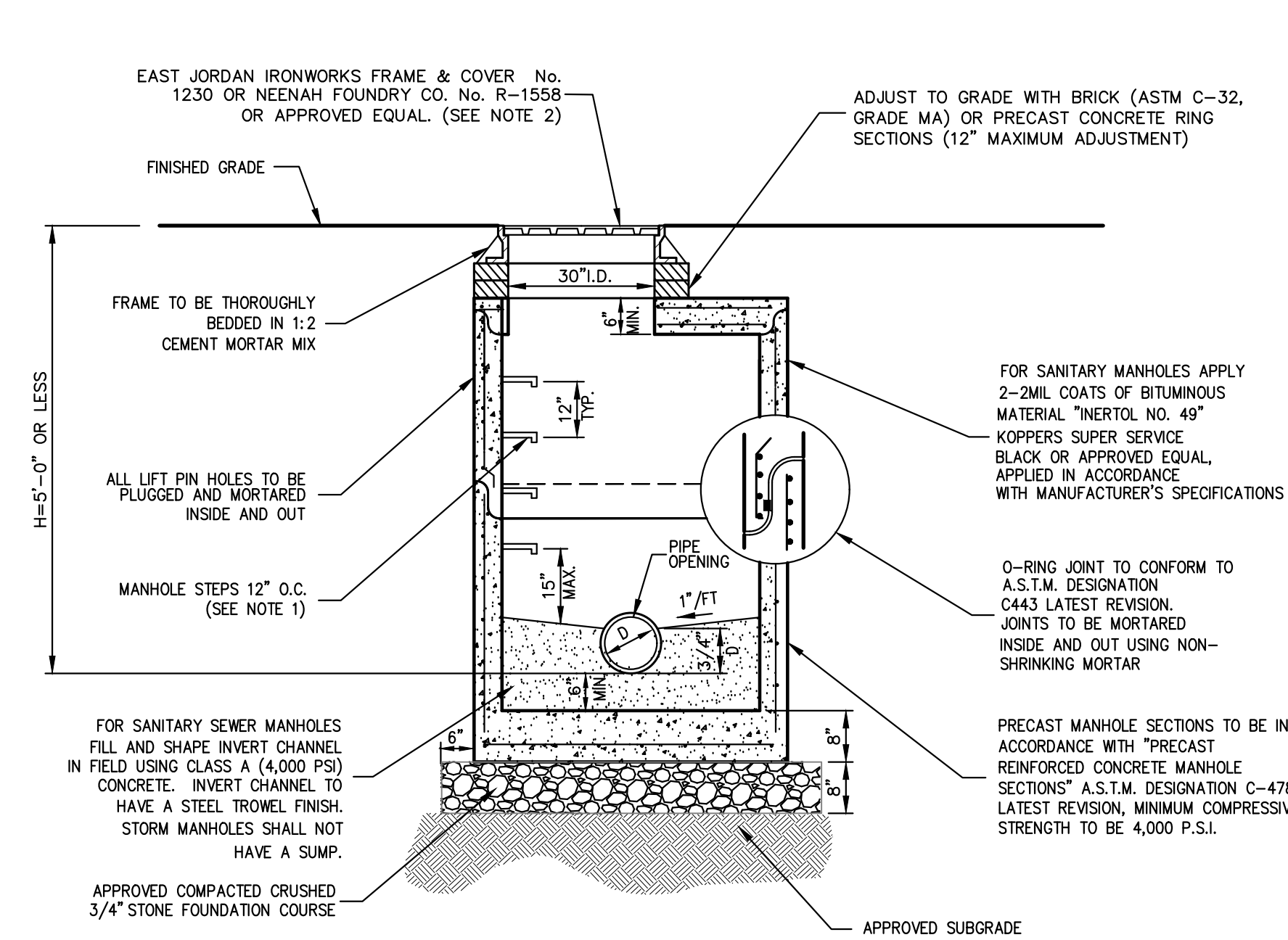
19



- NOTE**
- REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
  - SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON THIS DRAWING.

**DRAIN INLET (TYPE DI)**  
 (with sump-w/o finger underdrains)

20



- NOTES:**
- MANHOLE STEPS SHALL BE CAST IRON NENAH No. R-1981-0 OR CAMPBELL FOUNDRY No. 2588-1 OR POLYPROPYLENE COATED STEEL (SEE SPECIFICATIONS) OR APPROVED EQUAL.
  - UNLESS OTHERWISE SPECIFIED, SANITARY SEWER MANHOLES SHALL HAVE LETTERS "SEWER" AND STORM DRAIN MANHOLES SHALL HAVE LETTERS "DRAIN" CAST ON COVER. THE COVERS SHALL HAVE VENT HOLES.
  - MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
  - SEE "NOTES PERTAINING TO MANHOLES" UNDER "UTILITY NOTES" ON THIS DRAWING.

**MANHOLE (TYPE A)**  
 (H < 5'-0")

21

NOT FOR CONSTRUCTION







**ABBREVIATIONS**

OCS OUTLET CONTROL STRUCTURE  
 ELEV. ELEVATION  
 F INFLOW  
 OF OUTFLOW  
 NA NOT APPLICABLE  
 O.C. ON CENTER  
 T&B TOP AND BOTTOM  
 EW EACH WAY

**NOTES:**

1. PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD
2. UNDERDRAINS SHALL BE INSTALLED IN BASIN A AND B.
3. SEE UTILITY NOTES A-4 TO A-7

**STRUCTURE CHART**

BASIN No.	STRUCTURE No.	PIPE/ORIFICE INVERT AND GRATE ELEVATIONS		
		WEIR (A)	GRATE (B)	PIPE OUT (C)
A	OCS-A	-	370.50	24" @ 366.90
B	OCS-B	4" @ 370.00	370.50	15" @ 366.50

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

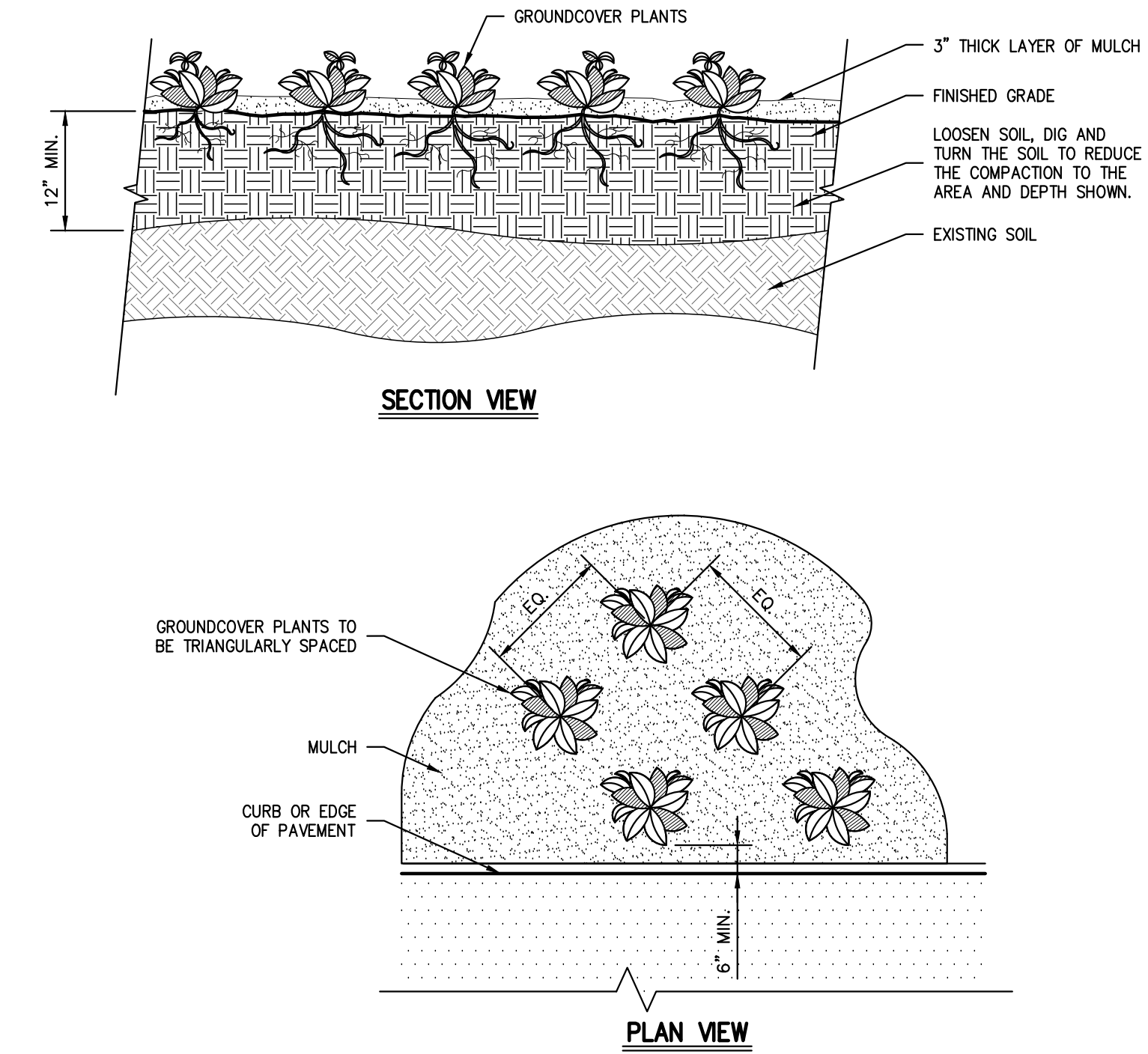
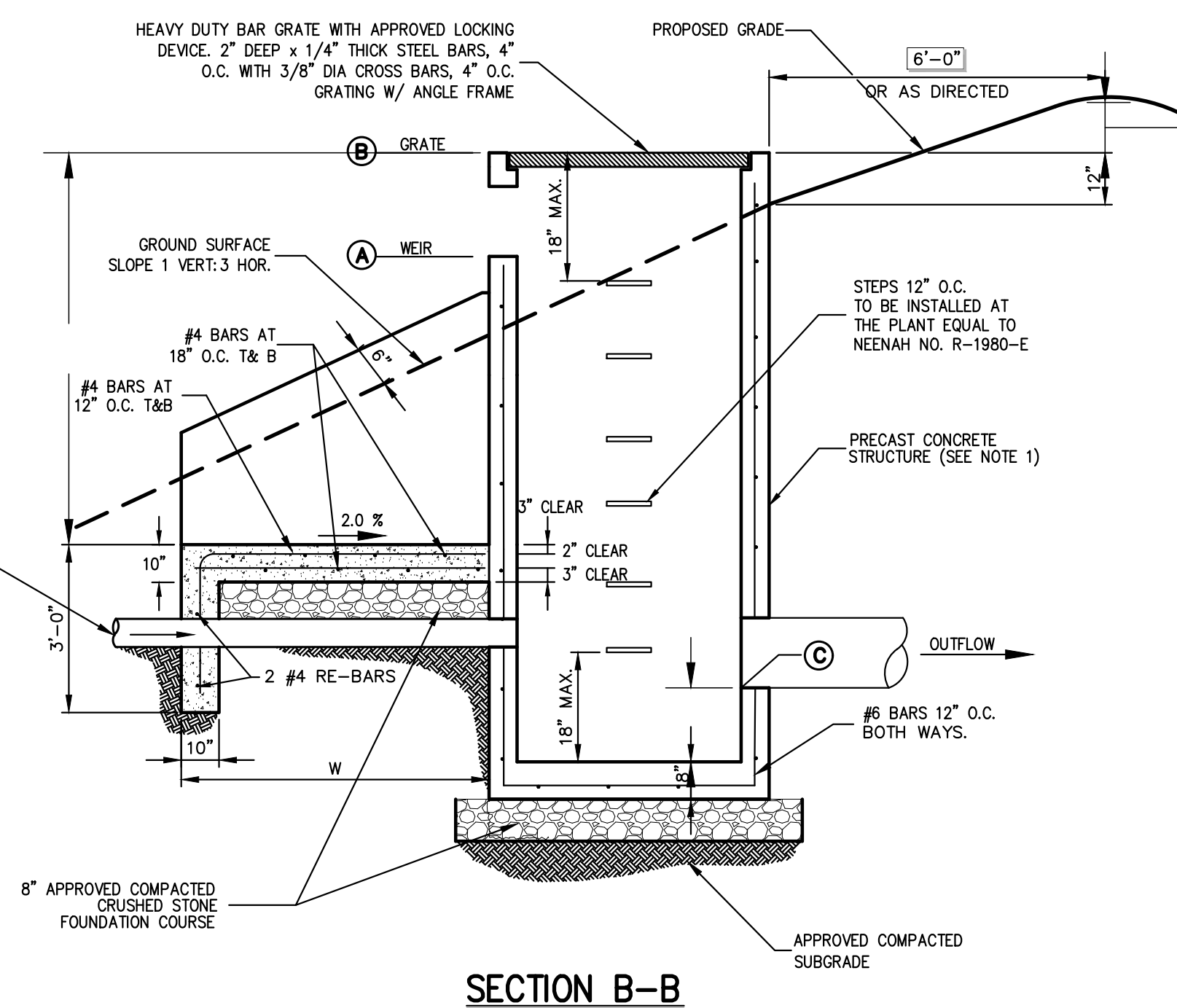
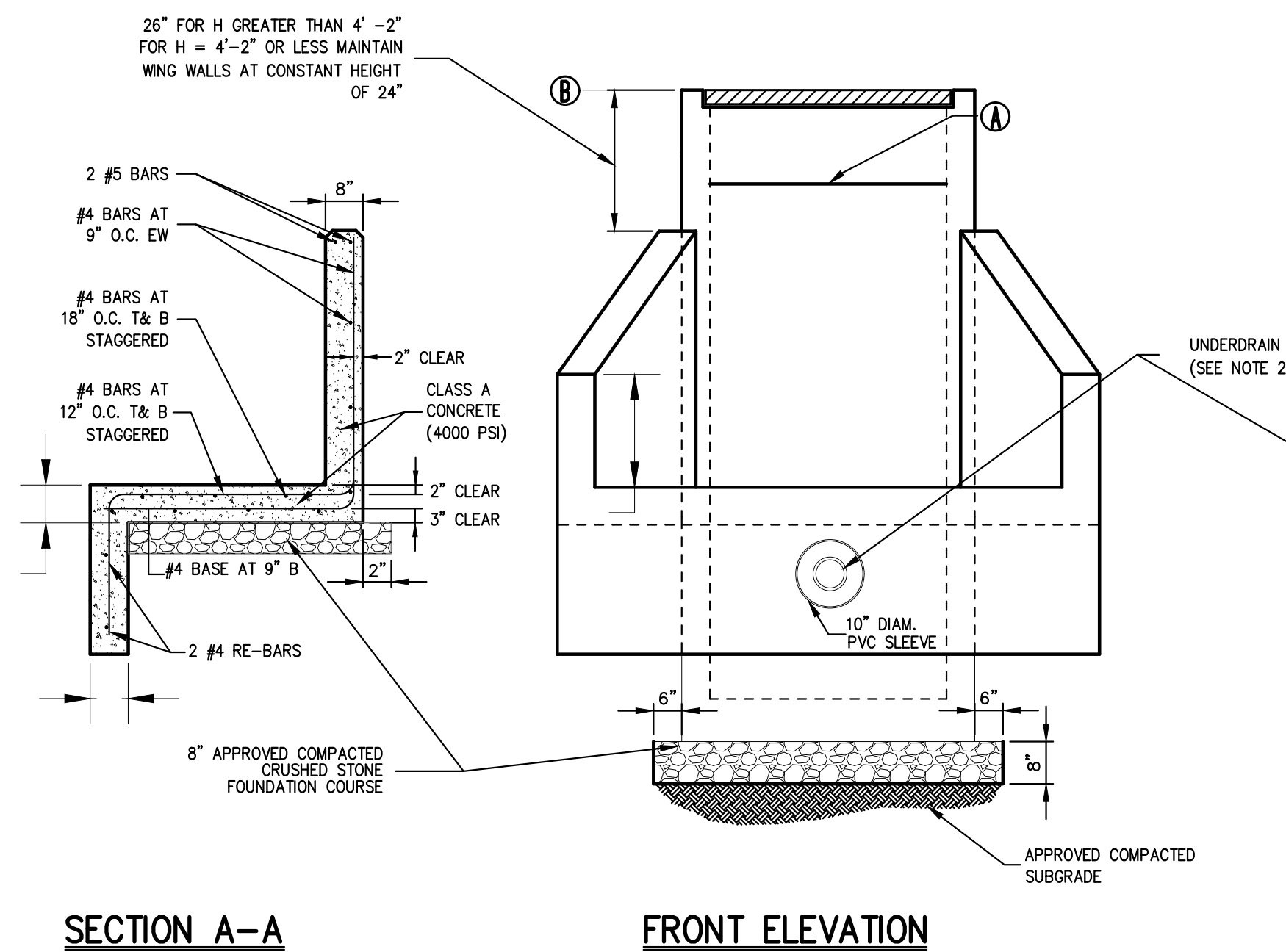
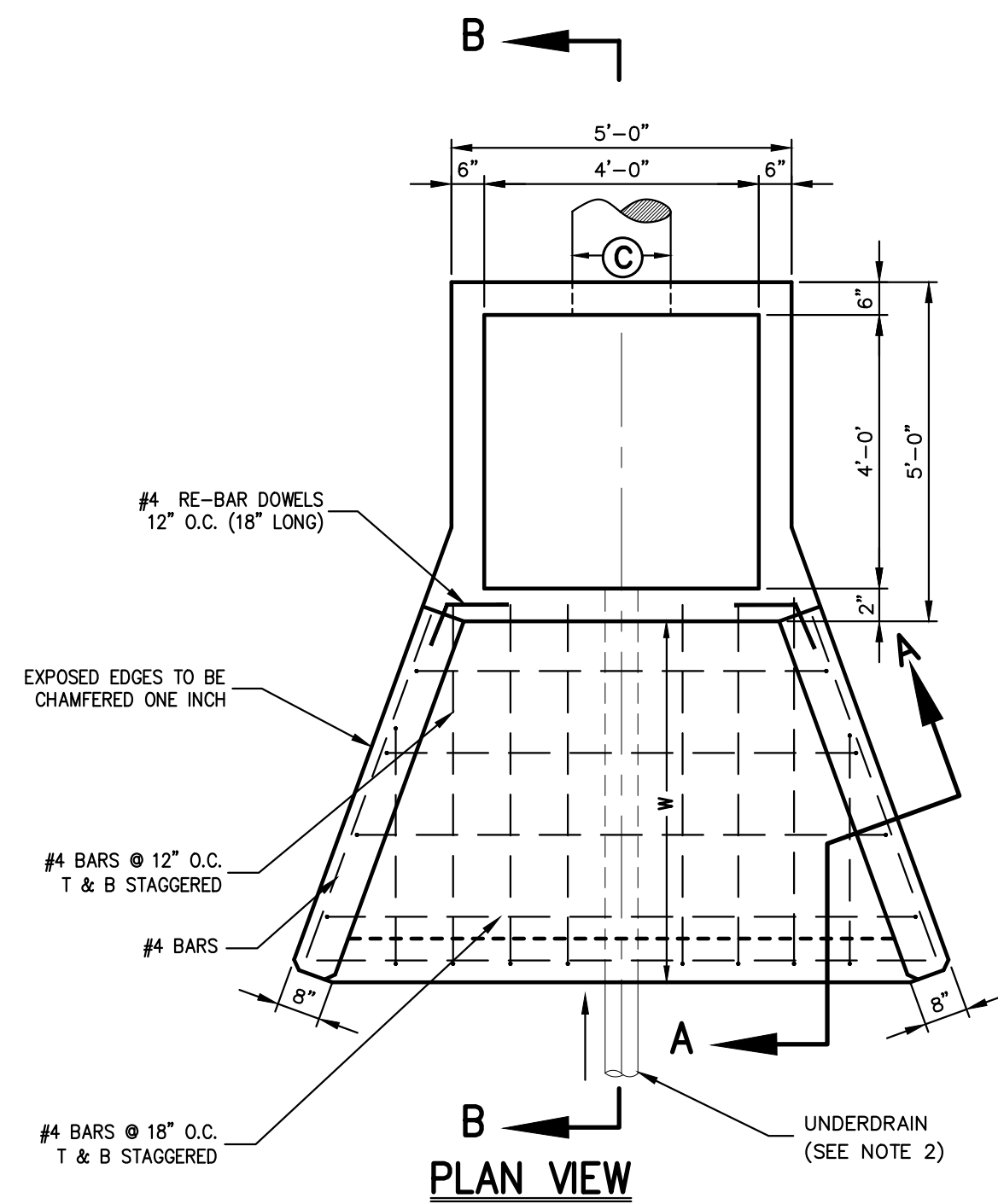
CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
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 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611



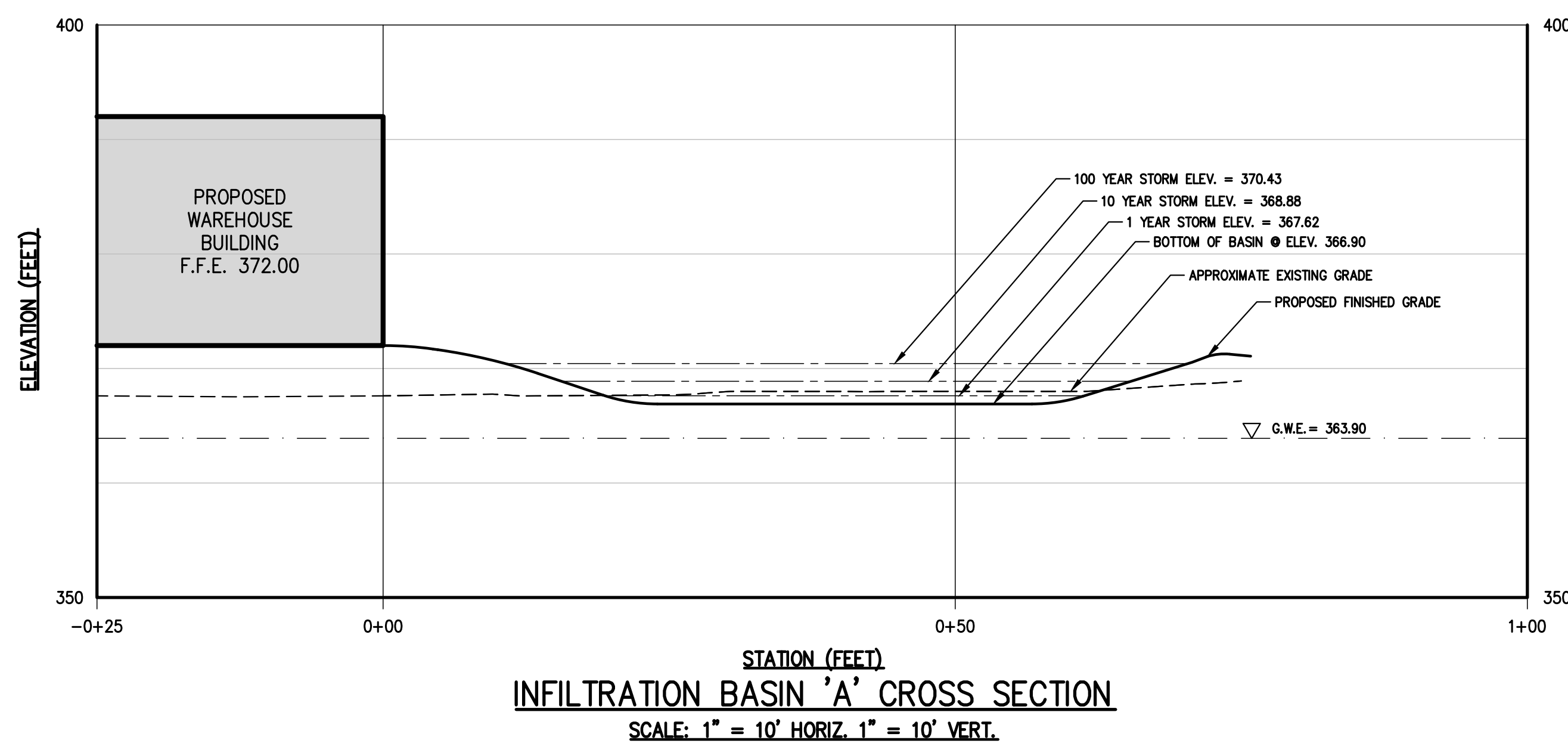
- NOTES:**
1. SEE PLANTING PLAN FOR GROUND COVER SPECIES, SIZE, AND SPACING DIMENSION.
  2. SETTLE SOIL AROUND ROOT BALL OF EACH GROUND COVER PLANT PRIOR TO MULCHING.
  3. ALL PLANTING BEDS SHALL BE FREE OF WEEDS AND GRASS PRIOR TO AND FOLLOWING INSTALLATION OF PLANTS.
  4. PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
  5. PROPOSED PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

**OUTLET CONTROL STRUCTURE**

27

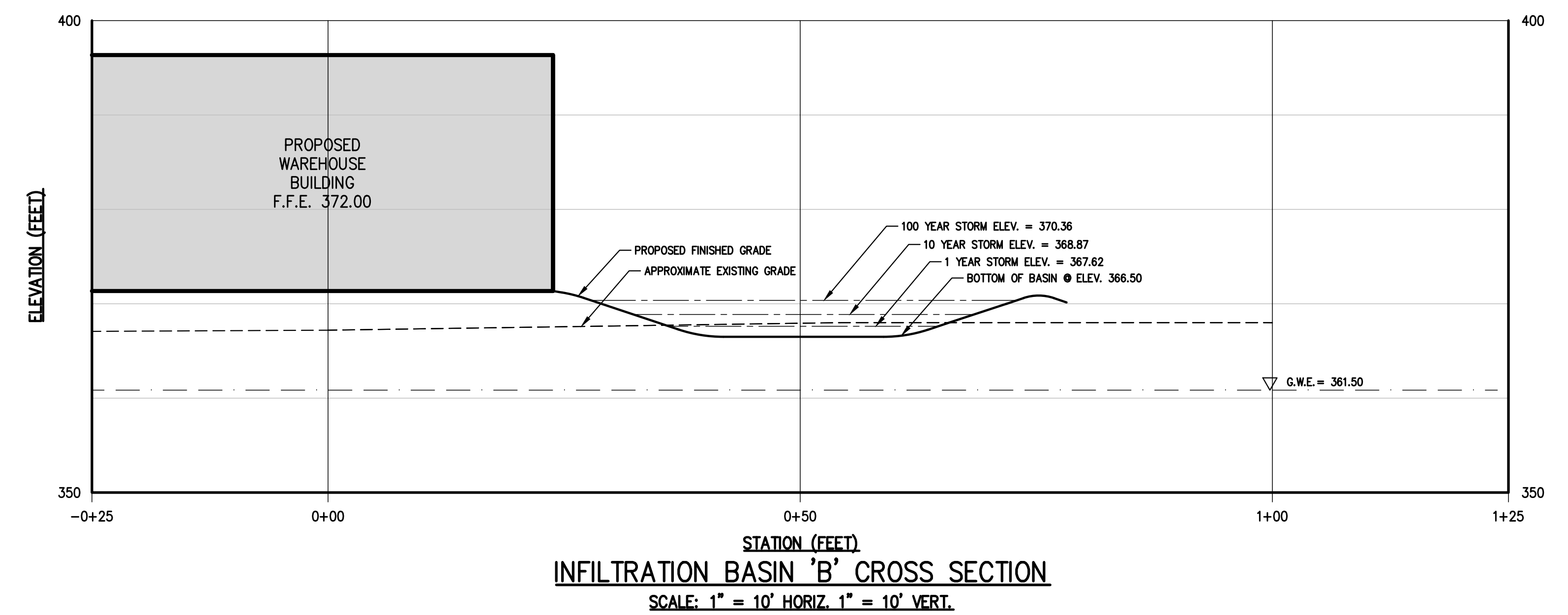
**GROUND COVER PLANTING**

28



**INFILTRATION BASIN 'A' CROSS SECTION**

29



**INFILTRATION BASIN 'B' CROSS SECTION**

30

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 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.6225 • fax 914.273.2102  
 www.jmcpllc.com



**CONSTRUCTION DETAILS**  
**BAYSACE ARMONK**  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

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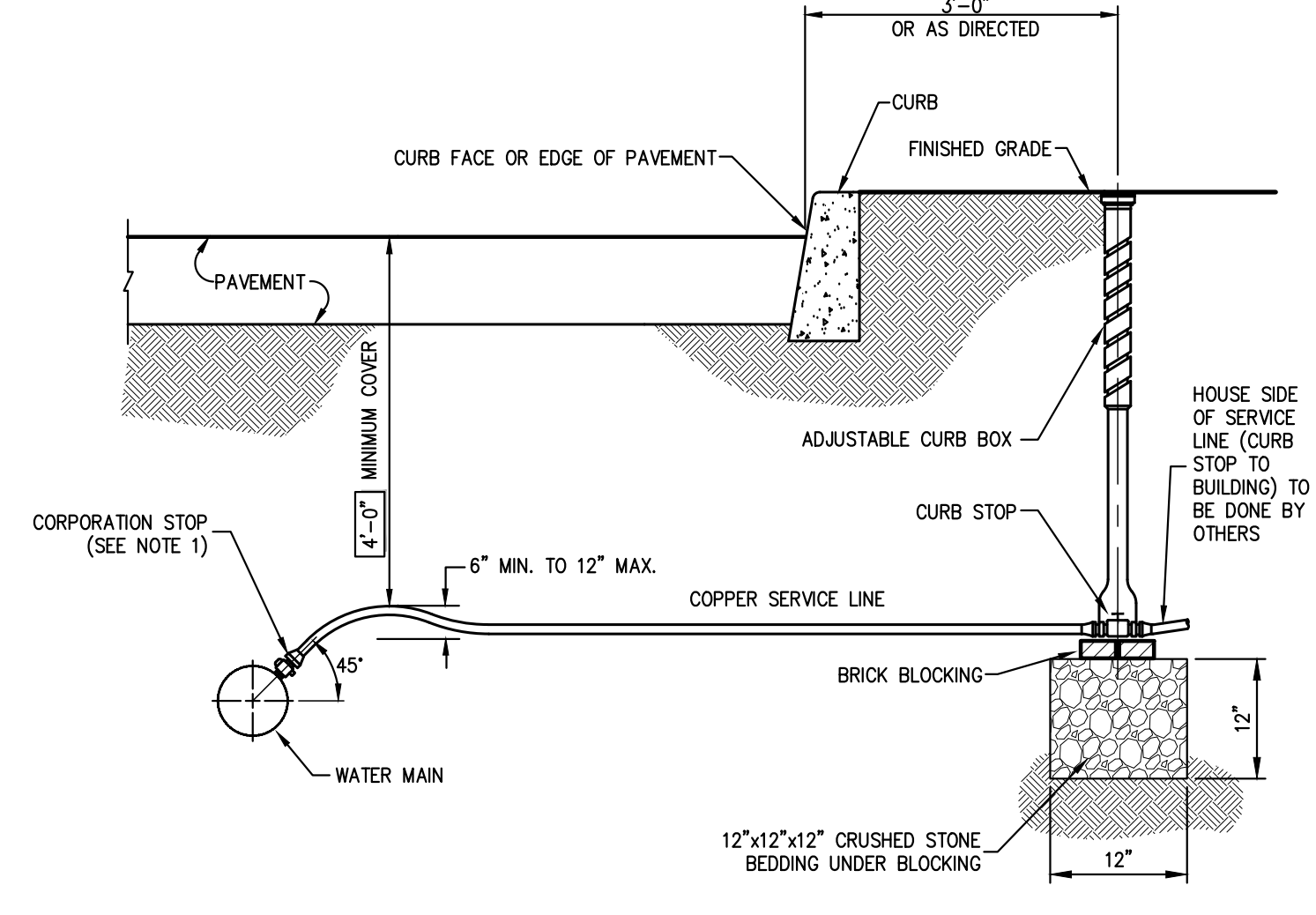
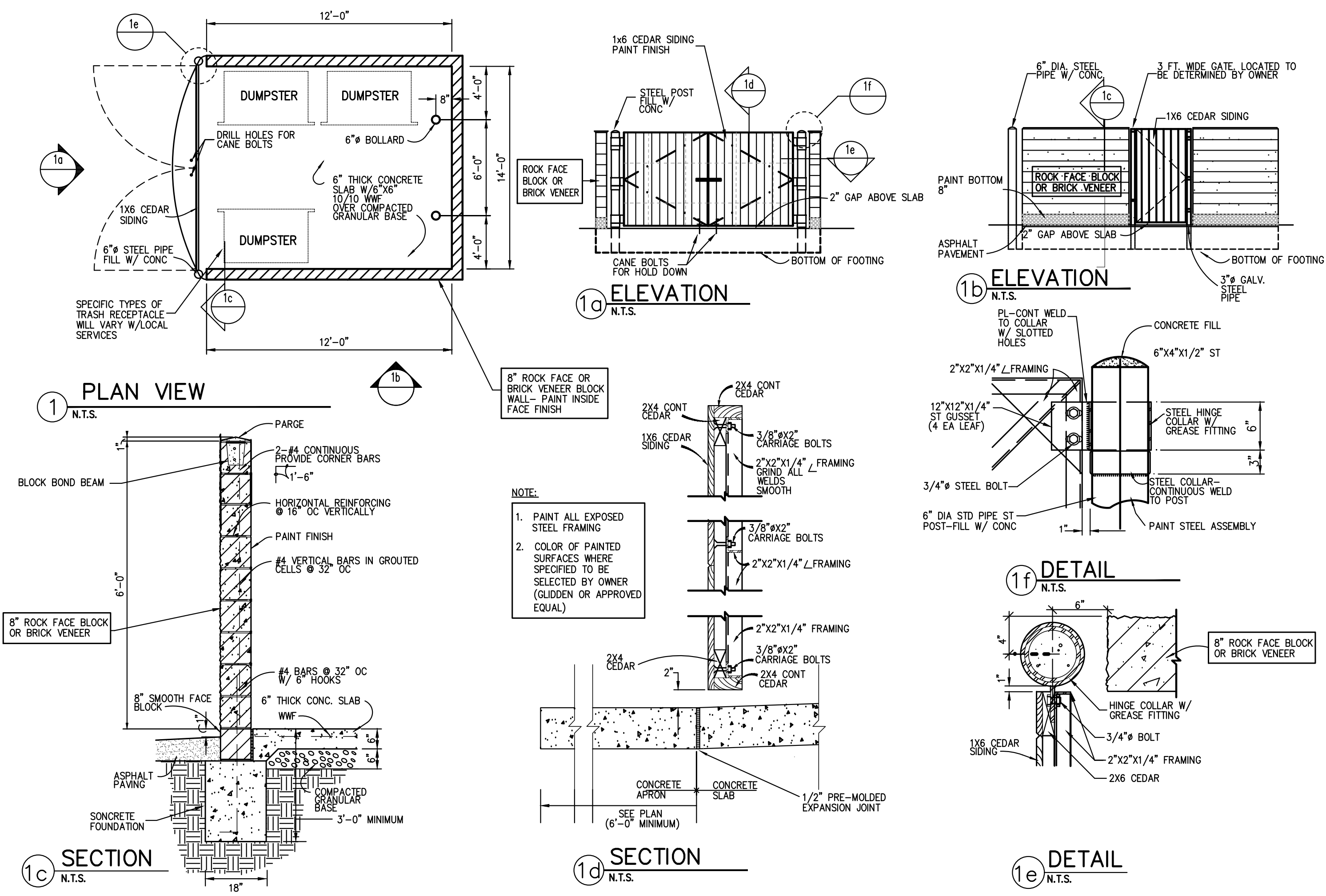
Drawn: NC Approval: DL  
 Scale: NOT TO SCALE  
 Date: 10/24/2022  
 Project No: 22090  
 ZONE/DETAIL: DET-5  
 Drawing No: C-904



APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

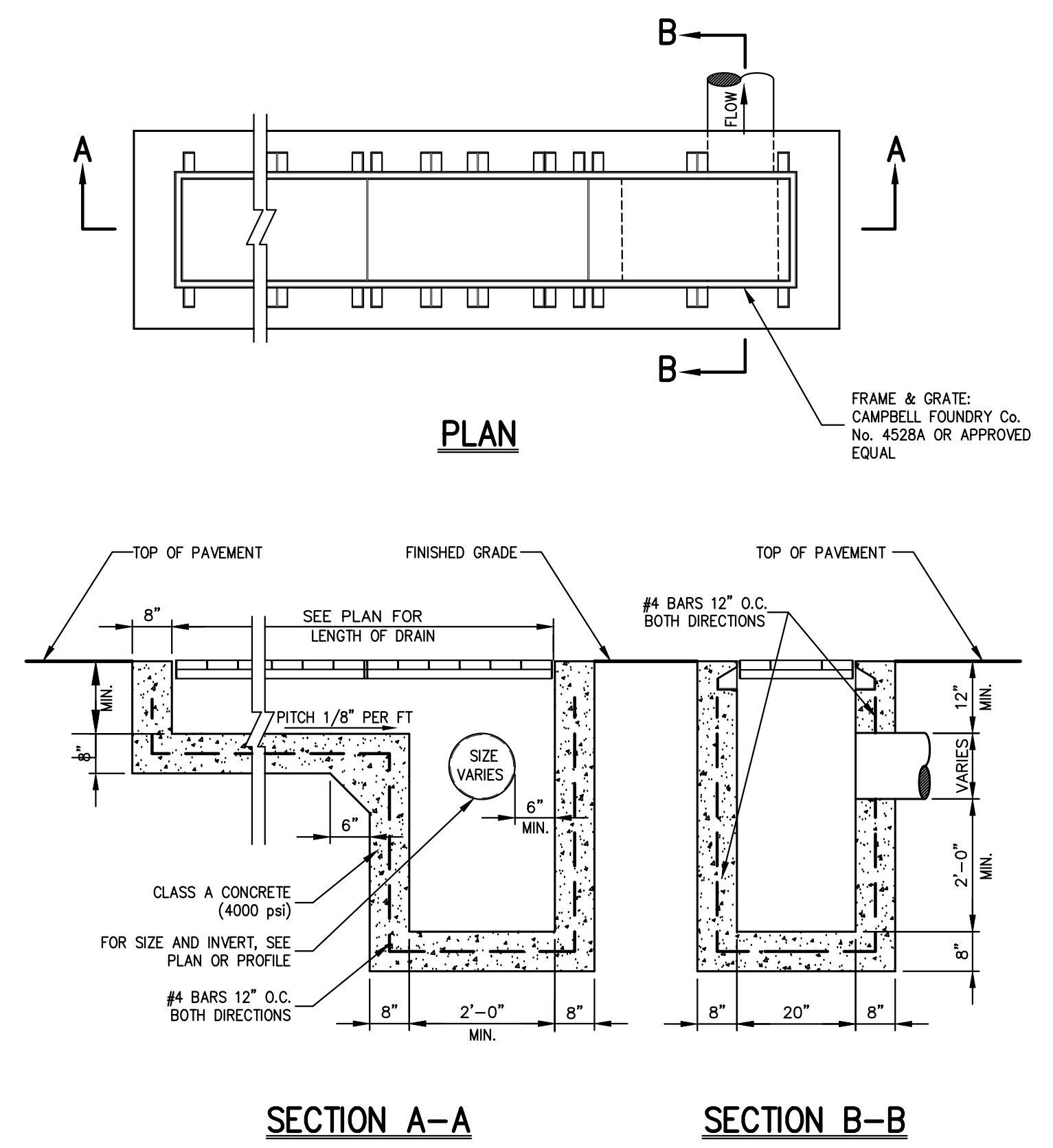
JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS



**SERVICE LINE REQUIREMENTS**

SIZE	SERVICE LINE (MATERIALS)	CORPORATION STOP	CURB STOP	CURB BOX	ENLARGED BASE
3/4"	COPPER, TYPE K	H-1500B N	H-15214 N	H-1030B	Not Applicable
1"	COPPER, TYPE K	H-15014 N	H-1030B	H-1030B	Not Applicable
1-1/2"	COPPER, TYPE K	H-15013 N	H-15214 N	H-10310	Not Applicable
2"	COPPER, TYPE K	H-15013 N	H-15214 N	H-10310	H-10349

- NOTES:**
- INSTALLATION OF 1-1/2" AND 2" CORPORATION STOPS SHALL BE MADE IN THE UPPER PIPE QUADRANT, BUT MAY BE MADE AT ANGLES LESS THAN 45° IF APPROVED BY THE OWNER'S FIELD REPRESENTATIVE.
  - SERVICE LINE SHALL HAVE NO JOINTS BETWEEN THE WATER MAIN AND CURB STOP.
  - CORPORATION STOP, CURB STOP, CURB BOX AND ENLARGED BASE FOR CURB BOX SHALL BE MUELLER COMPANY OR APPROVED EQUAL. CATALOG NUMBERS SHOWN REFER TO MUELLER COMPANY.
  - ALL SERVICE BRASS SHALL COMPLY WITH ANSWA C-800. COMPONENTS IN CONTACT WITH POTABLE WATER SHALL ALSO COMPLY WITH LATEST REQUIREMENTS OF THE FEDERAL SAFE DRINKING WATER ACT.



**TRASH ENCLOSURE ON CONCRETE PAD**

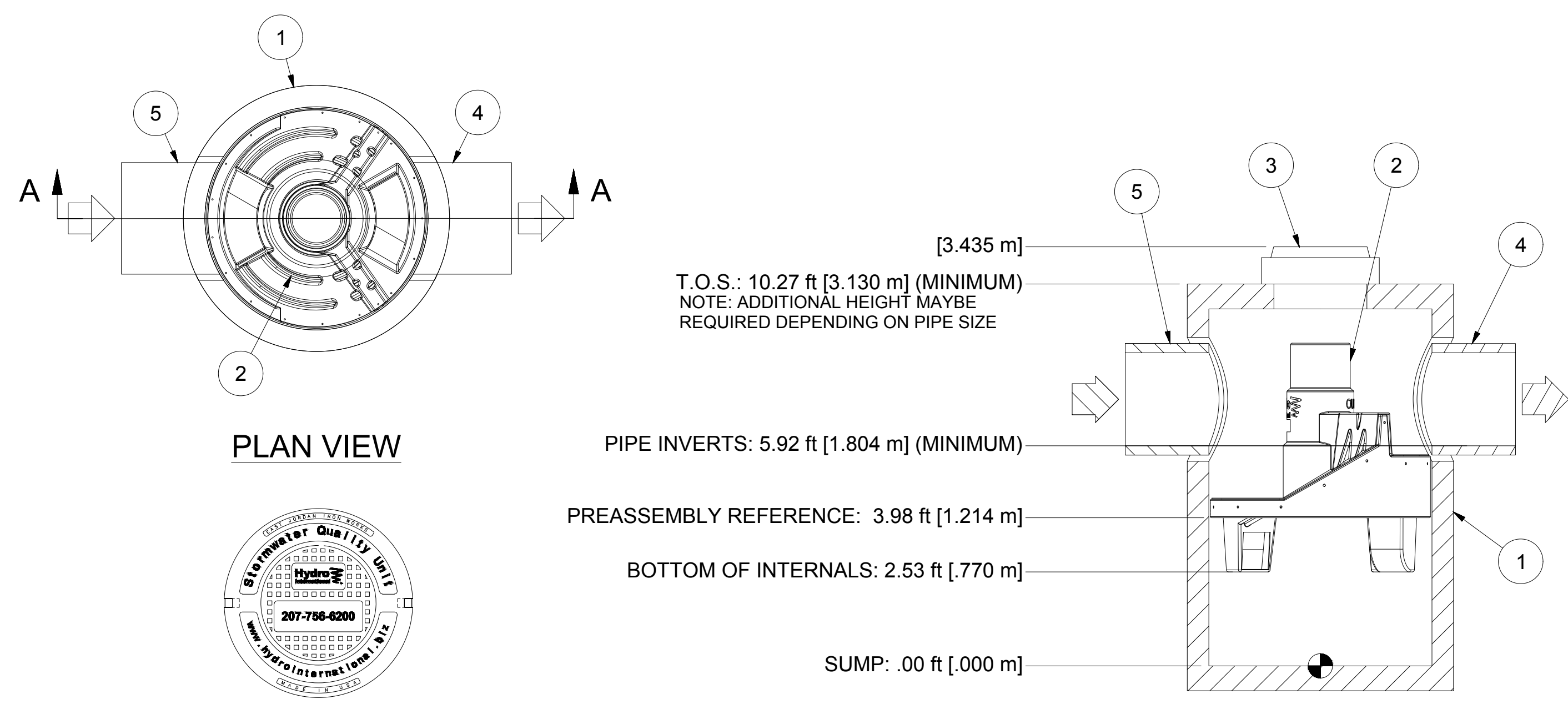
31

**WATER SERVICE CONNECTION**

32

**TRENCH DRAIN**

33



**PROJECTION**

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

DATE: 6/3/2019 SCALE: 1:40  
 DRAWN BY: MRJ CHECKED BY: APPROVED BY:  
 TITLE: 6" DIAMETER MANHOLE FIRST DEFENSE HIGH CAPACITY

**Hydro International**  
 94 Hutchins Drive  
 Portland, ME 04102  
 Tel: +1 (207) 756-6200  
 Fax: +1 (207) 756-6212  
 hydro-int.com

**PARTS LIST**

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	72	1800	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	30 (MAX)	750 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	30 (MAX)	750 (MAX)	INLET PIPE (BY OTHERS)

- PRODUCT SPECIFICATION:**
- PEAK HYDRAULIC FLOW: 32.0 cfs (906 l/s)
  - MIN SEDIMENT STORAGE CAPACITY: 1.6 cu. yd. (1.2 cu. m.)
  - OIL STORAGE CAPACITY: 496 gal. (1878 liters)
  - MAXIMUM INLET/OUTLET PIPE DIAMETERS: 30 in. (750 mm)
  - THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF.
  - OK110 110 MICRON 80% TSS REMOVAL 3.38 cfs (95.7 l/s) (NUDEP TEST PROTOCOL)
  - NUDEP CERTIFIED 80% TSS REMOVAL AT 4.23 cfs (119.8 l/s)
- GENERAL NOTES:**
- General Arrangement drawings only. Contact Hydro International for site specific drawings.
  - The diameter of the inlet and outlet pipes may be no more than 30".
  - Multiple inlet pipes possible (refer to project plan).
  - Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan.s)
  - Peak flow rate and minimum height limited by available cover and pipe diameter.
  - Larger sediment storage capacity may be provided with a deeper sump depth.

**FIRST DEFENSE HYDRODYNAMIC SEPARATOR (FD-6HC)**

34

**DROP CURB & RAMP (TYPE C) WITH DETECTABLE WARNING**

35

X

Scale: NOT TO SCALE  
 Date: 10/24/2022  
 Project No: 22090  
 Drawing No: C-905

CONSTRUCTION DETAILS  
 BAYSFACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

JMC  
 JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.473.6225 • fax 914.473.2102  
 www.jmcpilc.com

OWNER/CLIENT:  
 WMG ARMONK WAREHOUSE OWNER LLC  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
 SGW ARCHITECTURE & DESIGN  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

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APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED 5/24/21

CHRISTOPHER CARTH, CHAIRMAN, TOWN OF NORTH CASTLE PLANNING BOARD  
 ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION

JOSEPH M. CERMELE, PE  
 KELLARD SESSIONS CONSULTING  
 CONSULTING TOWN ENGINEERS

By	NC
Date	09/17/2023
Revision	
No.	1
Comments	RESPONSE TO TOWN COMMENTS

OWNER/APPLICANT:  
**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33431

ARCHITECT:  
**SCW ARCHITECTURE & DESIGN**  
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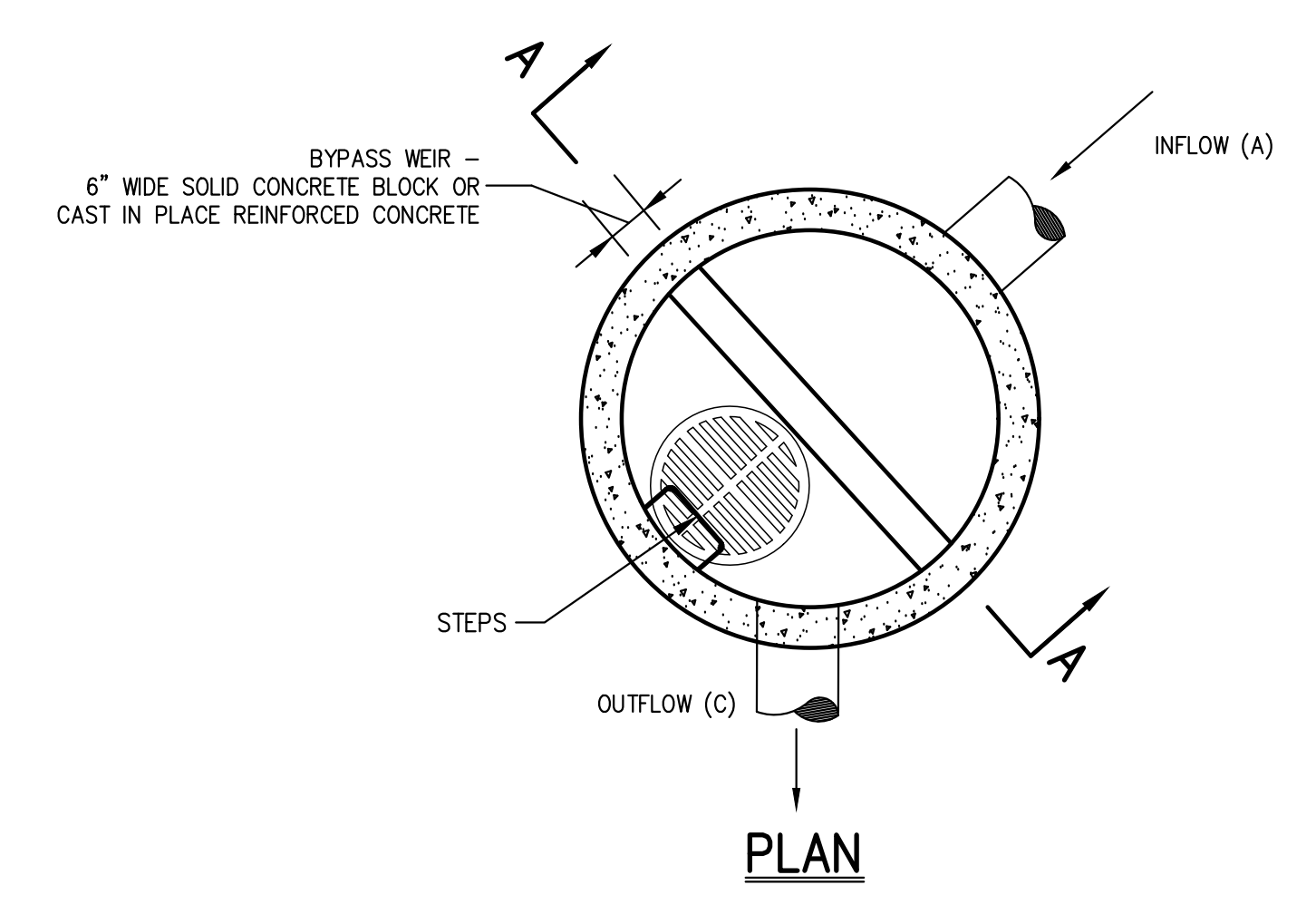
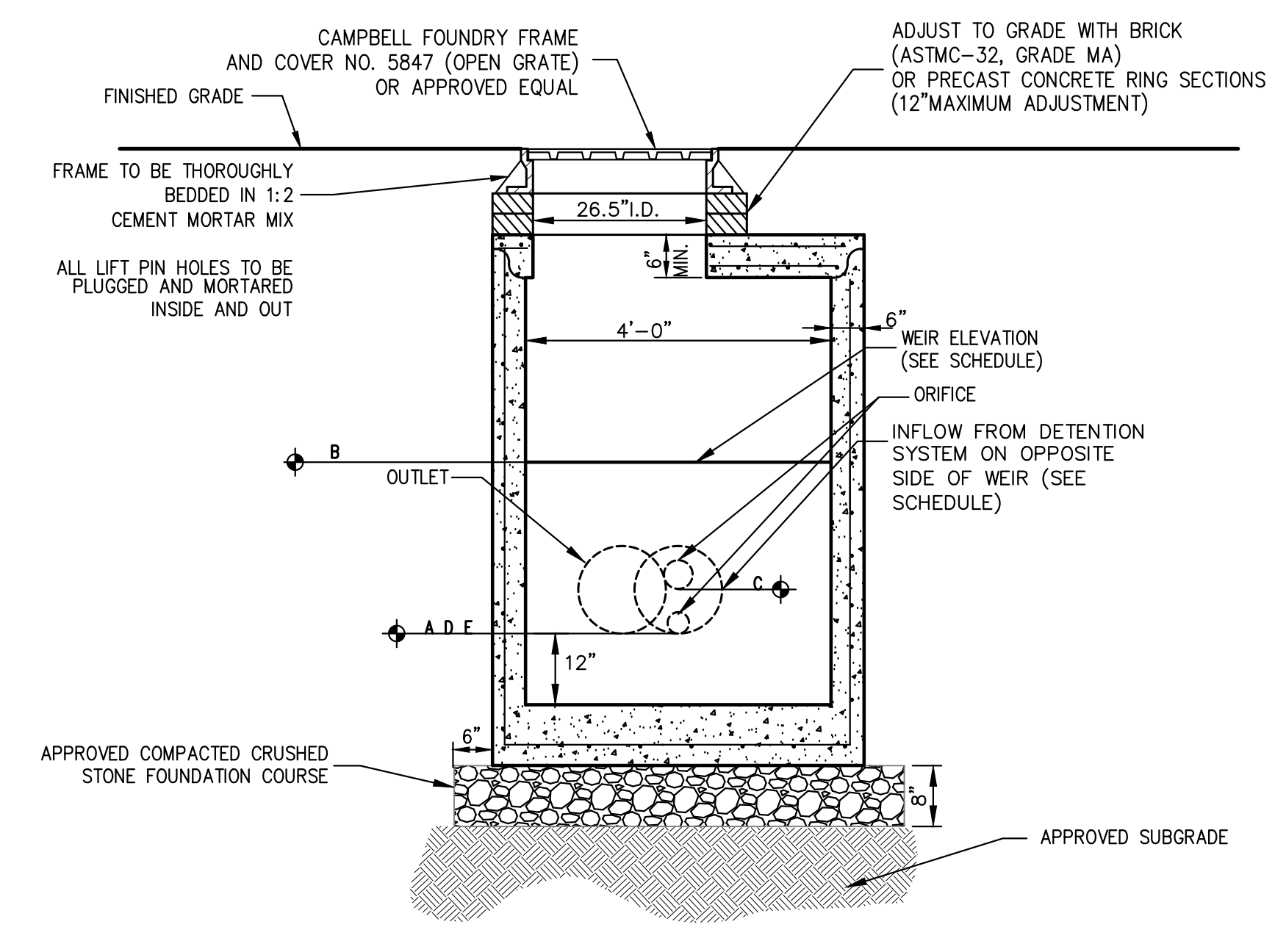


**CONSTRUCTION DETAILS**

**BAYSPACE ARMONK**  
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Drawn:	NC	Approved:	DL
Scale:	NOT TO SCALE		
Date:	10/24/2022		
Project No:	22090		
Zone-Items	DCT-7		
Drawing No:	C-906		



SECTION A-A

SCHEDULE OF INVERTS AND ELEVATIONS

STRUCTURE	A		B		C		D		E	
	SIZE	INVERT	WEIR 1 LENGTH	WEIR 1 ELEVATION	ORIFICE 1 DIA.	ORIFICE 1 ELEVATION	ORIFICE 2 DIA.	ORIFICE 2 ELEVATION	SIZE	INVERT
OCS-7-1	12" HDPE	365.50	4'	368.00	5"	366.75	3"	365.50	15" HDPE	365.50

**NOTE**

1. REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
2. SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON THIS DRAWING.

OUTLET CONTROL STRUCTURE

36

NOT FOR CONSTRUCTION

X



NEW CLIMATE CONTROLLED MIXED USE BUILDING  
 FULLY SPRINKLERED, TYPE II-B CONSTRUCTION.  
 3-STORY SELF-STORAGE FACILITY,  
 1-1/2 STORY RECREATION FACILITY AND  
 1-STORY WAREHOUSE  
 AT

100 BUSINESS PARK DRIVE  
 ARMONK, NEW YORK 10504

OWNER:  
 WMG STORAGE PARTNERS

ARCHITECT:



ARCHITECT:  
 SULLIVAN & WILSON, P.C.  
 444 N. MICHIGAN AVENUE - SUITE 1850  
 CHICAGO, IL 60611  
 TEL: (312) 988-7412  
 www.sgwarch.com

CIVIL ENGINEER:  
 JMC ENGINEERING  
 120 BEDFORD ROAD  
 ARMONK, NY 10504  
 TEL: (914) 273-5225

DEVELOPER:  
 WMG ACQUISITIONS  
 2801 SW 31ST AVENUE - SUITE 2B  
 COCONUT GROVE, FL 33133  
 TEL: (305) 416-4949

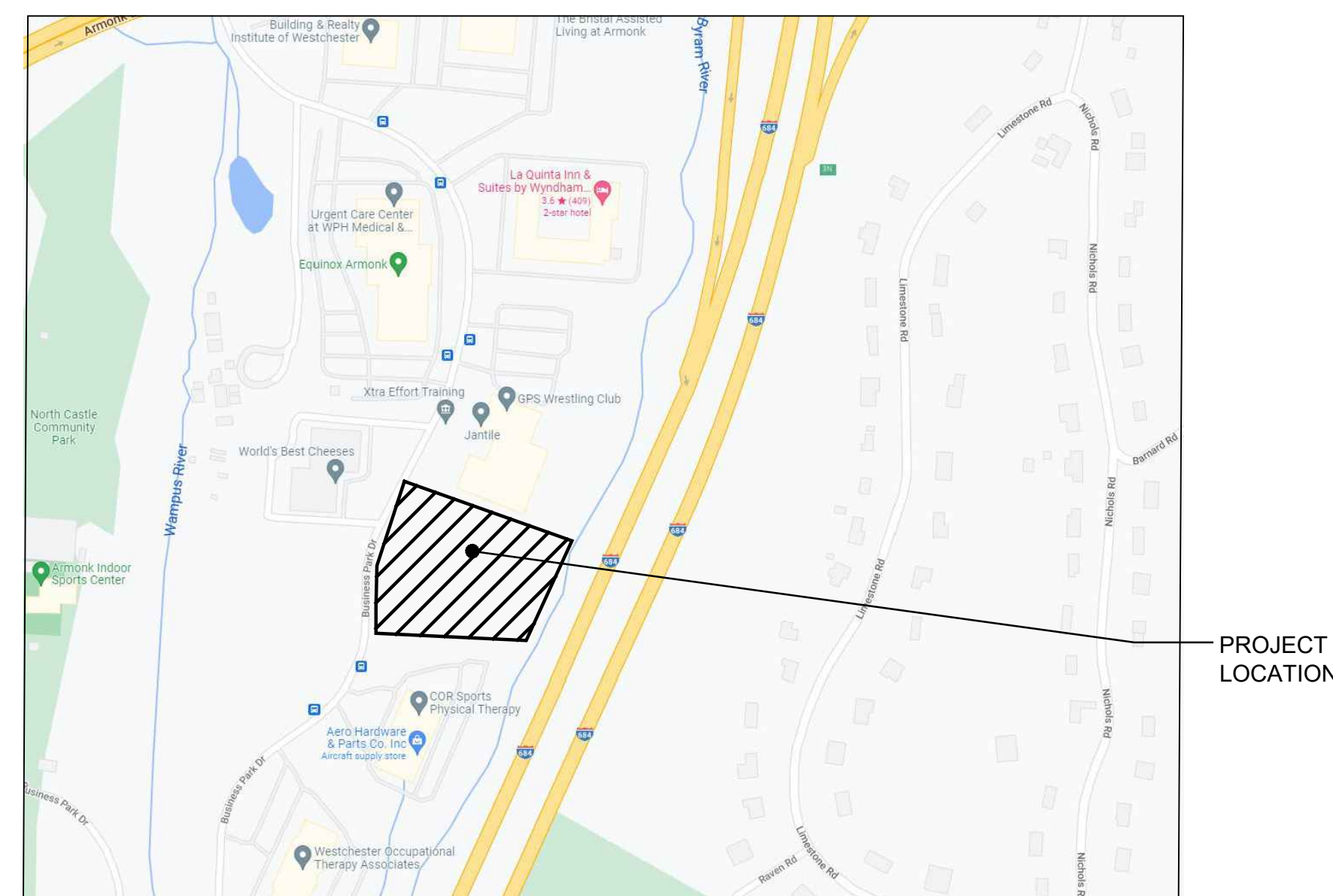
ABBREVIATIONS

ALT	ALTERNATE	ELEC	ELECTRICAL	MULL	MULLION
A/C	AIR CONDITIONING	EL	ELEVATION	NIC	NOT IN CONTRACT
AFF	ABOVE FINISHED FLOOR	EJ	EXPANSION JOINT	NTS	NOT TO SCALE
AL	ALUMINUM	EP	EPOXY PAINT	OC	ON CENTER
ARF	ABOVE RAISED FLOOR	EQ	EQUAL	OFCI	OWNER FURNISHED, CONTRACTOR TO INSTALL
ACT	ACOUSTIC TILE	EXIST	EXISTING	OPP	OPPOSITE
BD	BOARD	EXP	EXPOSED	PNT	PAINT
BLDG	BUILDING	EXT	EXTERIOR	PR	PAIR
BLKG	BLOCKING	EWC	ELECTRIC WATER COOLER	PLAM	PLASTIC LAMINATE
BO	BOTTOM OF	FEC	FIRE EXTINGUISHER CABINET	PL	PLATE
BR	BRUSHED	FHC	FIRE HOSE CABINET	QT	QUARRY TILE
BRG	BEARING	FIN	FINISH	R	RISER
CA	CLEAR ANODIZED	FD	FLOOR DRAIN	RD	RADIUS
CB	CABINET	FLR	FLOOR	RD	ROOF DRAIN
CPT	CARPET	FOM	FACE OF MASONRY TO FACE OF MASONRY	RH	RIGHT HAND
CL	CENTERLINE	FTG	FOOTING	REQD	REQUIRED
CLG	CEILING	GA	GAUGE	RO	ROUGH OPENING
CJ	CONTROL JOINT	GALV	GALVANIZED	SB	SANDBLAST
CMU	CONC. MASONRY UNIT	GYP	GYPSUM BOARD	SC	SOLID CORE
CONC	CONCRETE	GL	GLASS	SCHED	SCHEDULE
CONT	CONTINUOUS	HDWD	HARDWOOD	SM	SHEET METAL
CI	CAST IRON	HDWR	HARDWARE	SHT	SHEET
CO	CLEAN OUT	HM	HOLLOW METAL	SIM	SIMILAR
CW	COLD WATER	HR	HOUR	SS	STAINLESS STEEL
CP	CEMENT PLASTER	HT	HEIGHT	STD	STANDARD
CT	CERAMIC TILE	HW	HOT WATER	THK	THICK
DF	DRINKING FOUNTAIN	INT	INTERIOR	T	TREAD
DIA	DIAMETER	INSUL	INSULATION	TO	TOP OF
DN	DOWN	JT	JOINT	T & G	TONGUE AND GROOVE
DS	DOWNSPOUT	LAM	LAMINATED	TYP	TYPICAL
DWG	DRAWING	LAV	LAVATORY	UNO	UNLESS NOTED OTHERWISE
EA	EACH	LH	LEFT HAND	VCT	VINYL COMPOSITION TILE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	MFR	MANUFACTURER	VIF	VERIFY IN FIELD
		MO	MASONRY OPENING	WD	WOOD
		MWK	MILLWORK	WWF	WELDED WIRE FABRIC
		MTL	METAL		

LEGEND

ROOM #	ROOM NAME/NUMBER TAG	CEILING ELEVATION TAG	GLASS (ELEVATION)
FLOOR FINISH	ELEVATION TAG/ MARK	CEILING MATERIAL, SEE AX-X	GLASS (SECTION)
REVISION	DRAWING REVISION TAG	CEILING PAINT, SEE AX-X	MORTAR, GROUT, THINSET OR CEMENT
NOTE	NOTE TAG	SMOKE DETECTOR	GYPSUM BOARD
DOOR	DOOR TAG (See A5-# series dwgs)	CARBON MONOXIDE DETECTOR	METAL LATH & PLASTER
WINDOW	WINDOW TAG (See A5-# series dwgs)	NEW PARTITION - SEE PLANS FOR TYPE	PLYWOOD
WALL	WALL TYPE (See A4-# series dwgs)	EXISTING CONSTRUCTION TO BE REMOVED	QUARRY TILE OR CERAMIC TILE
DETAIL	DETAIL TAG	EXISTING CONSTRUCTION TO REMAIN	RIGID INSULATION
DWG #	DWG #	EXISTING NIC	STEEL
ELEVATION #	ELEVATION #	EXISTING CONSTRUCTION TO REMAIN	TERRAZZO
INTERIOR	INTERIOR ELEVATION TAG	ACOUSTIC TILE	WOOD STYLE
SHEET #	SHEET #	ALUMINUM	WOOD-ROUGH OR FRAMING
ELEVATION #	EXTERIOR ELEVATION TAG	BATT INSULATION OR SOUND ATTENUATION BLANKET	ACOUSTICAL TILE CEILING
SHEET #	SHEET #	BRICK (PLAN & SECTION)	GYPSUM BOARD CEILING/SOFFIT
SECTION #	SECTION TAG	BRICK (ELEVATION)	RECESSED CAN LIGHT FIXTURE (SEE ELECTRICAL)
SHEET #	SHEET #	CONCRETE	2x2' LIGHT FIXTURE
SM	SURFACE MOUNT FEC W/ SIGN	CONCRETE MASONRY UNIT (CMU)	PENDANT OR SURFACE MOUNTED LIGHT FIXTURE
SR	SEMI-RECESSED FEC W/ SIGN	EXISTING DOOR	WALL MOUNTED LIGHT FIXTURE
R	RECESSED FEC W/ SIGN	WIRE MESH SECURITY NET	Mechanical Supply Grill (SEE MECHANICAL)
EPG	ELECTRICAL PANEL - SEE ELECTRICAL	X-BRACING (SEE STRUCTURAL), APPLY FIRE RESISTIVE SPRAY AS REQUIRED	Mechanical Return Grill (SEE MECHANICAL)
FP	FROST PROOF HOSE BIB		
K	SECURITY KEYPAD		

LOCATION MAP



DRAWING INDEX

DWG#	DESCRIPTION	ISSUED FOR ZONING: 01/16/2023	ISSUED FOR ZONING: 08/10/2023	ISSUED FOR ZONING: 08/06/2023
<b>GENERAL</b>				
G0-00	TITLE SHEET & DRAWING INDEX	•	•	•
G0-01	GENERAL M&P	•	•	•
<b>CIVIL</b>				
C-100	SITE LAYOUT PLAN	•	•	•
C-500	SITE LANDSCAPING & WETLAND MITIGATION PLAN	•	•	•
<b>ARCHITECTURAL</b>				
A0-00	SURVEY	•	•	•
A0-01	SITE PLAN	•	•	•
A1-01	FIRST FLOOR PLAN	•	•	•
A1-02	SECOND FLOOR / MEZZANINE PLAN	•	•	•
A1-03	THIRD FLOOR PLAN	•	•	•
A1-04	ROOF PLAN	•	•	•
A2-01	BUILDING ELEVATIONS	•	•	•
A2-02	BUILDING PERSPECTIVE	•	•	•
A2-03	BUILDING PERSPECTIVE	•	•	•
A2-04	BUILDING PERSPECTIVE	•	•	•
A2-05	STREETScape PHOTOGRAPHS	•	•	•
A3-01	BUILDING SECTIONS	•	•	•

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09/06/23 - ISSUED FOR REVIEW

PRINCIPAL: MS  
 QC BY: YBD

P.M. CM  
 DRAWN BY: MV, AB, SD, SR

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 SGW ARCHITECTURE & DESIGN

100 BUSINESS  
 PARK DRIVE

ARMONK, NEW YORK 10504

TITLE SHEET & DRAWING INDEX

TRUE NORTH PROJECT NORTH

G0-00

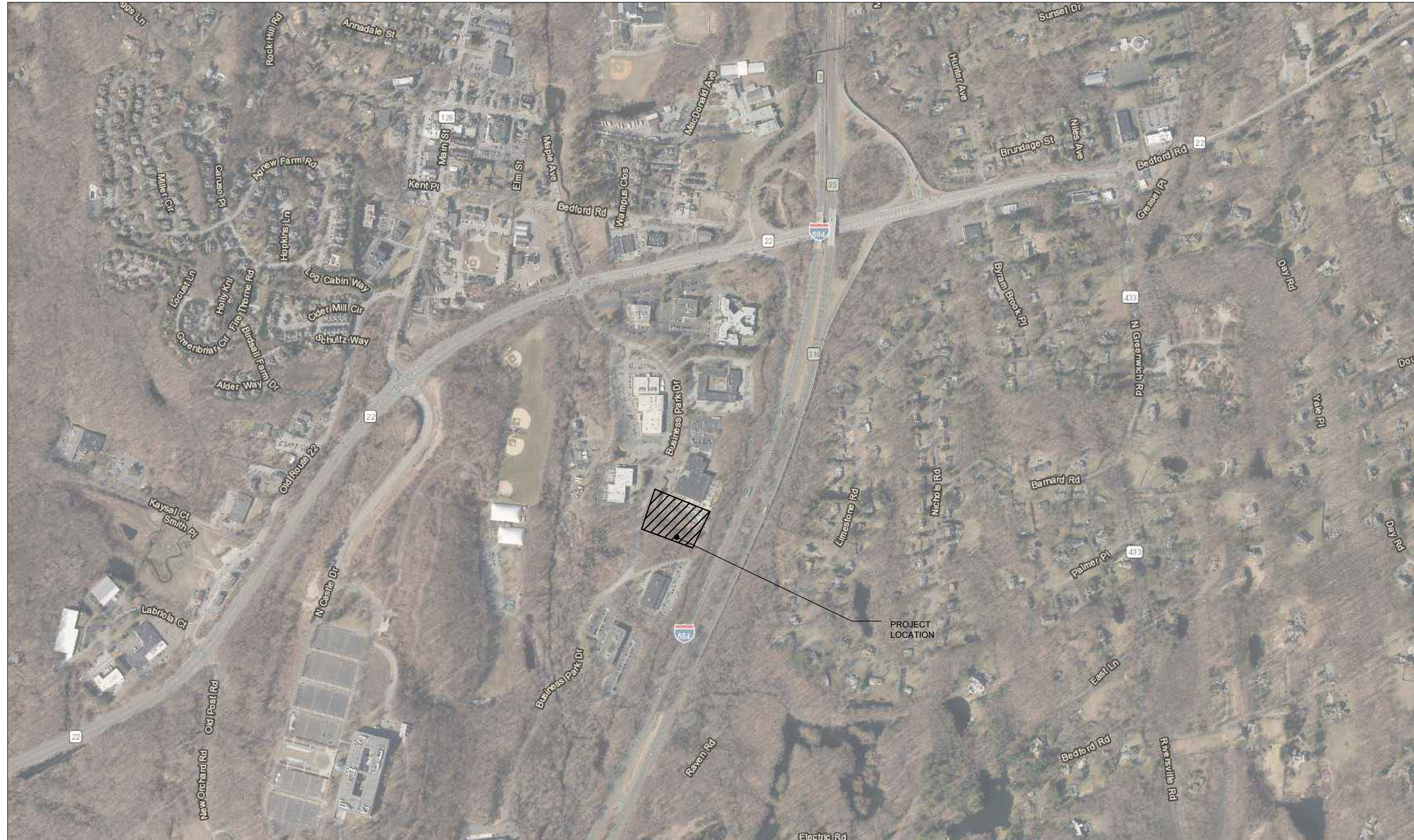
NO	DATE	ISSUE DESCRIPTION
5	9/06/23	ISSUED FOR ZONING
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2	10/20/22	ISSUED FOR ZONING
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 QC BY: TBD DRAWN BY: MV, AB, SD, SR




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**100 BUSINESS PARK DRIVE**

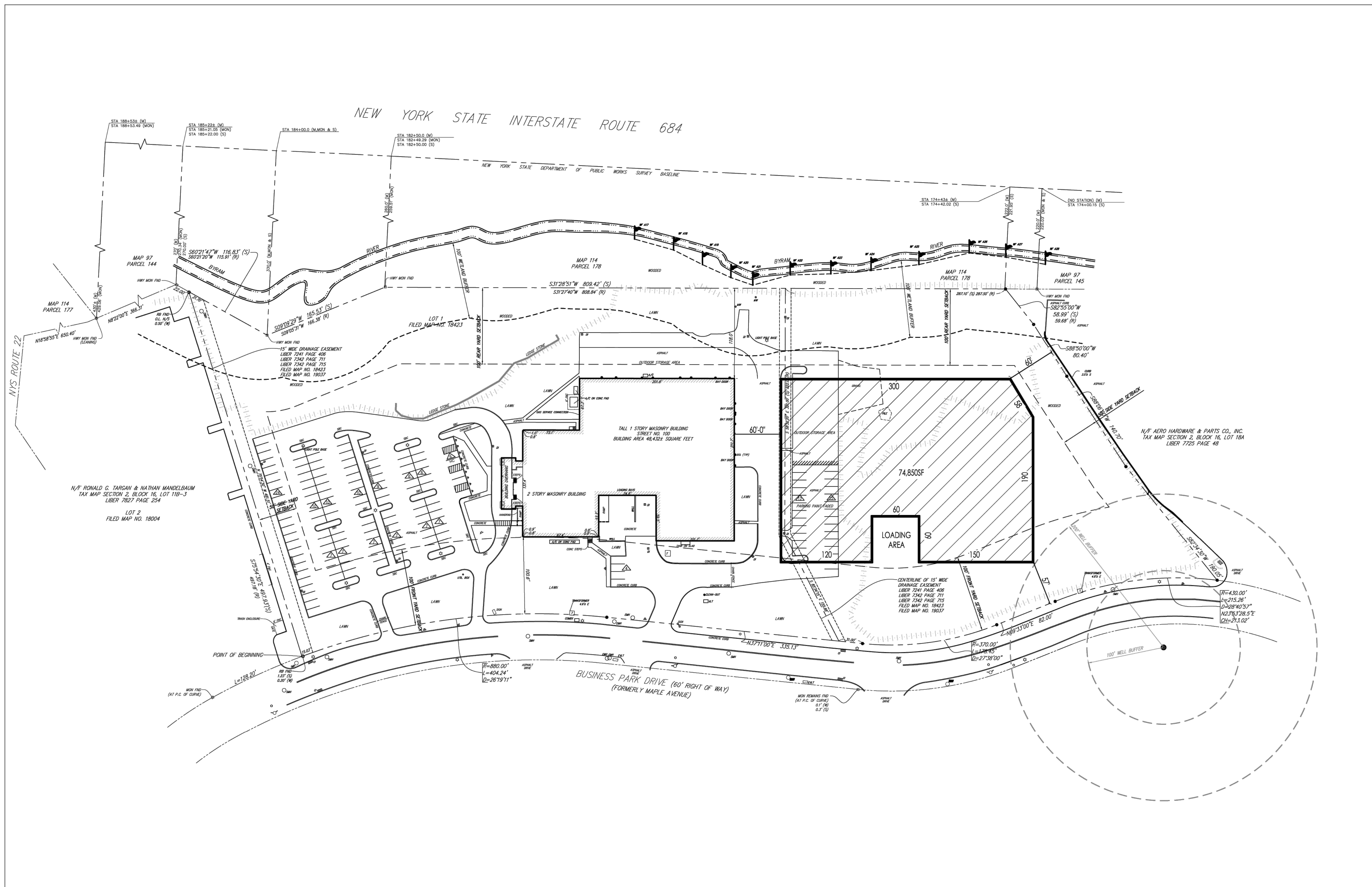
ARMONK, NEW YORK 10504

GIS AERIAL MAP

  
 NORTH

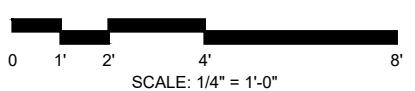
G0-01





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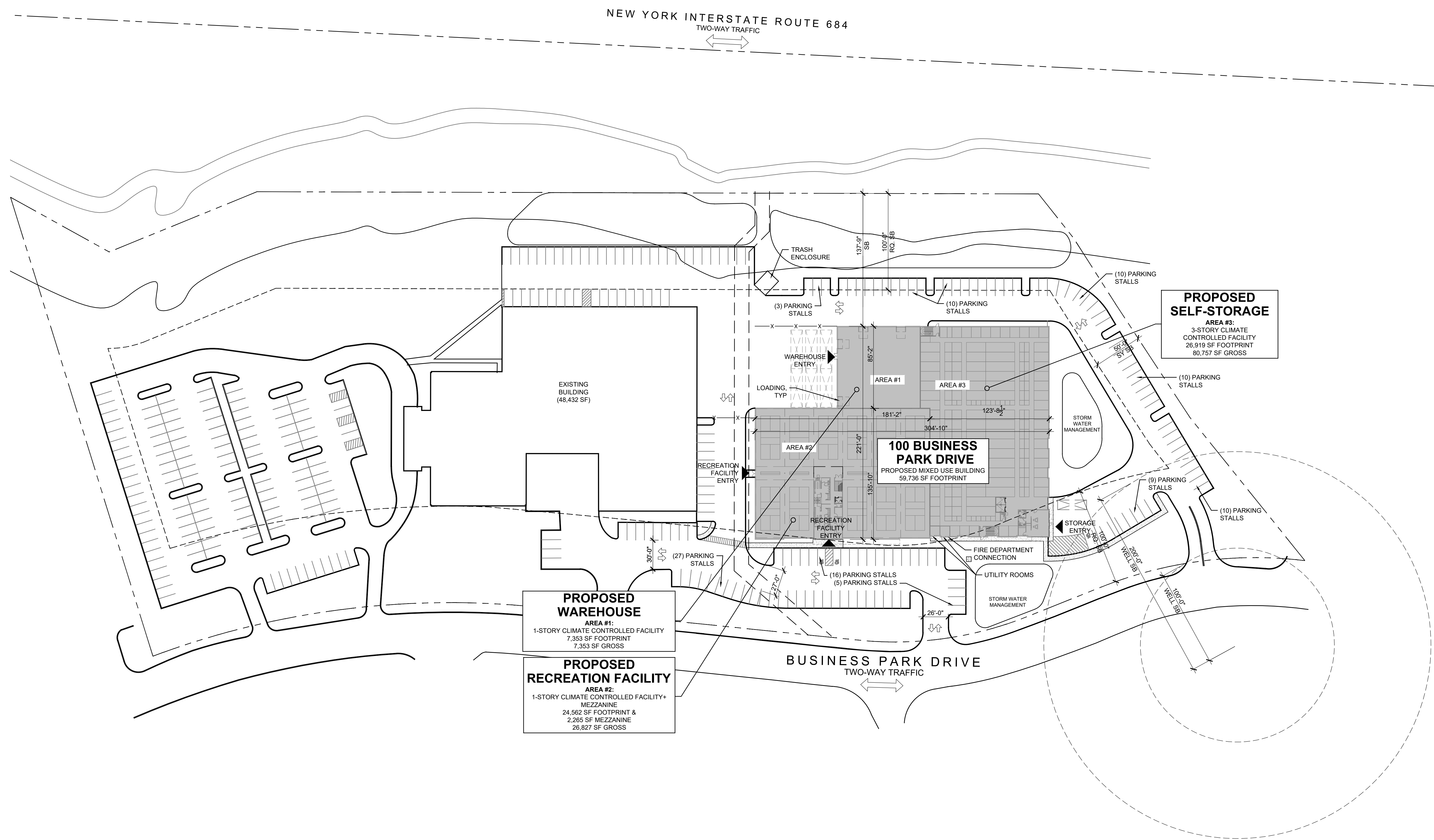
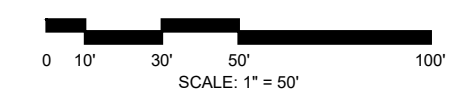
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PLAT OF SURVEY

A0-00

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NO	DATE	ISSUE DESCRIPTION
5	9/06/23	ISSUED FOR ZONING
4	8/16/23	ISSUED FOR ZONING
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2	10/20/22	ISSUED FOR ZONING
1	09/12/22	ISSUED FOR ZONING

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SITE PLAN

 NORTH

**A0-01**

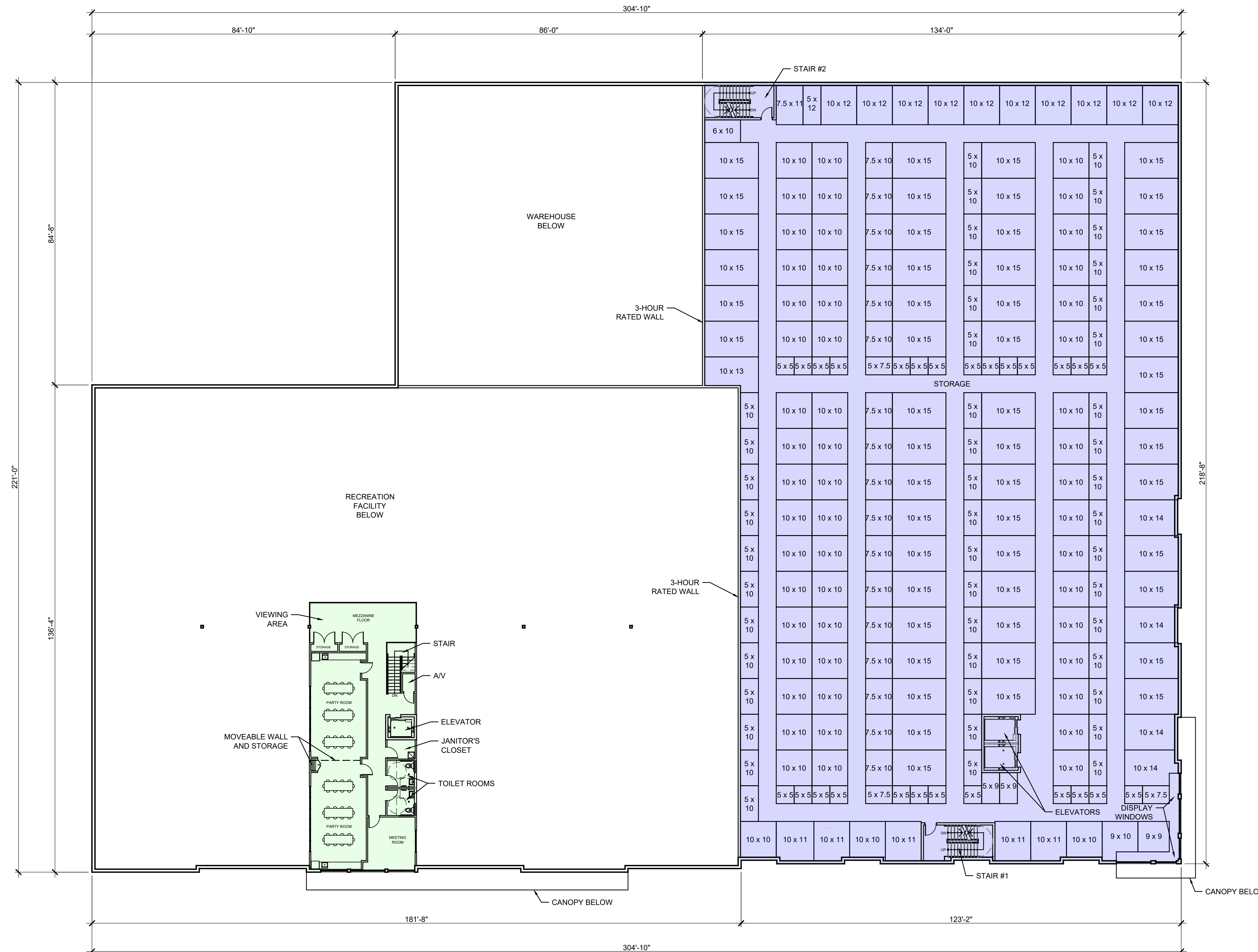
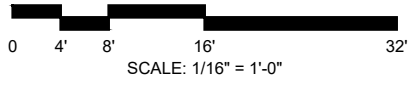
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**GROSS AREA LEGEND**

	RECREATION FACILITY AREA - TOTAL MEZZANINE AREA = 2,268 SF
	STORAGE AREA - TOTAL SECOND FLOOR AREA = 27,474 SF



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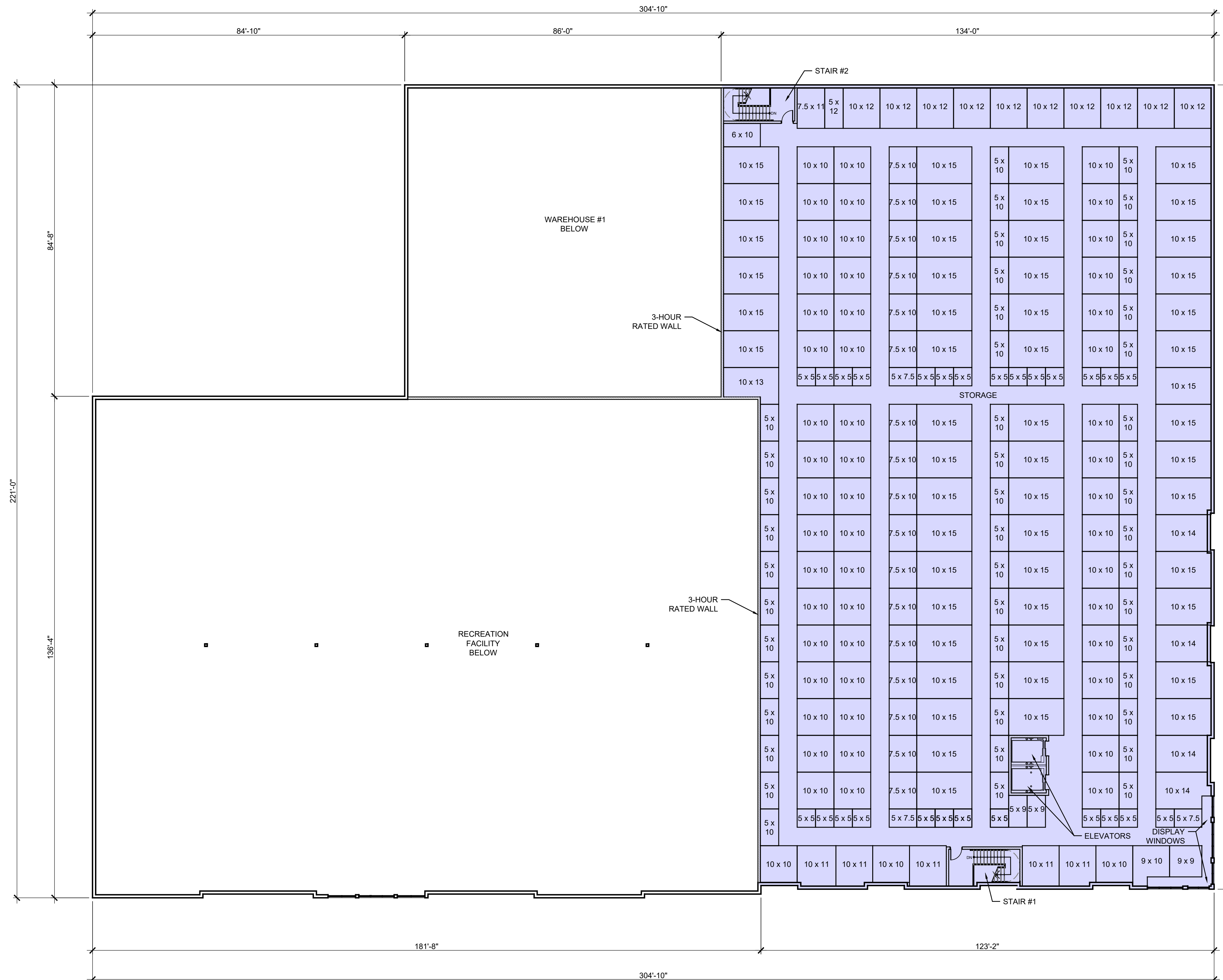
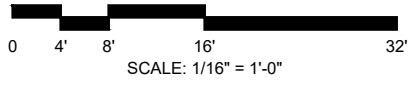
SECOND FLOOR/  
 MEZZANINE PLAN

**1** SECOND FLOOR/  
 MEZZANINE PLAN  
 SCALE: 1/16" = 1'-0"

NORTH

A1-02

GROSS AREA LEGEND  
 STORAGE AREA  
 - TOTAL THIRD FLOOR AREA = 27,474 SF



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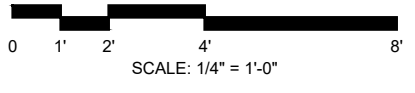
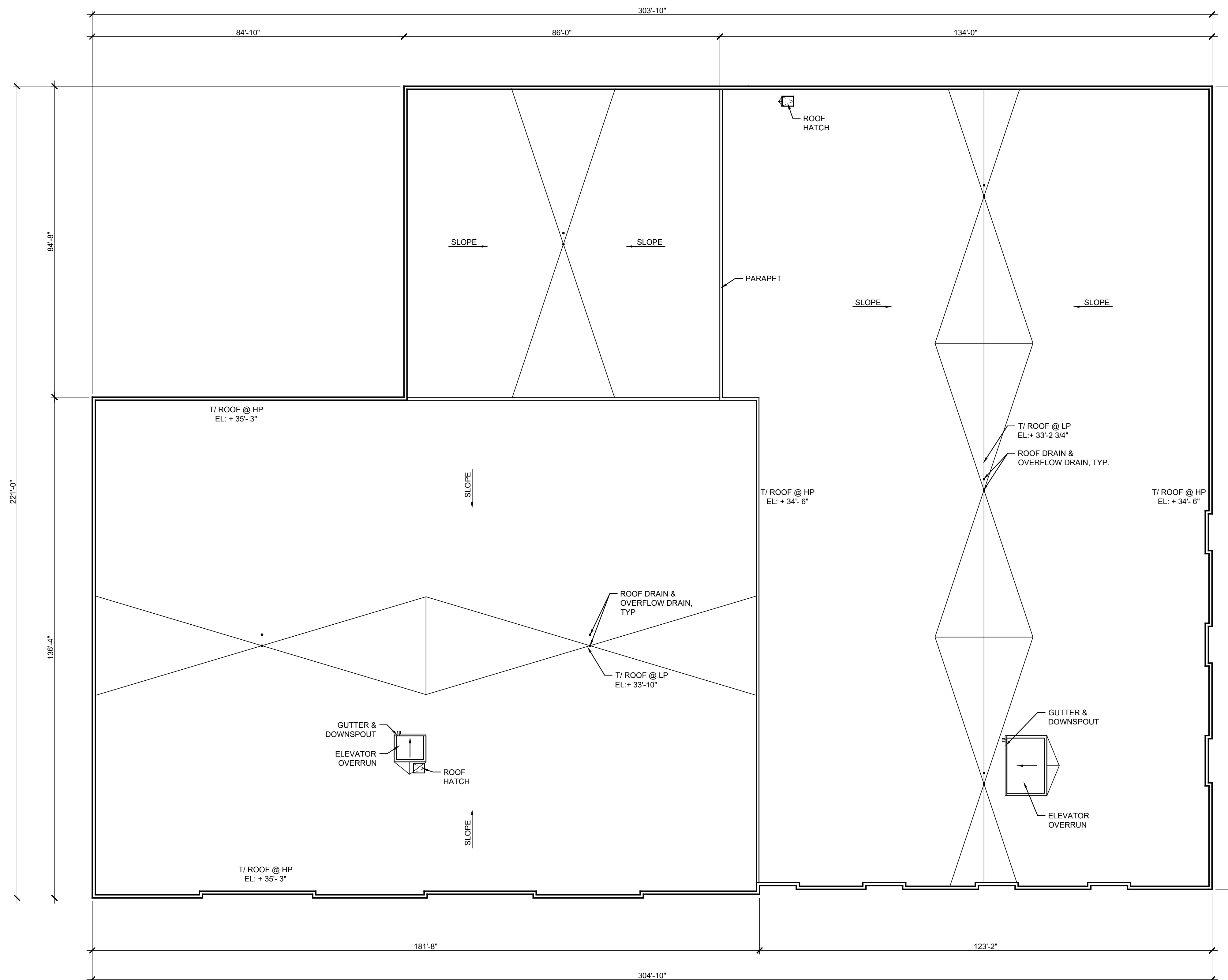
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THIRD FLOOR PLAN

**1 THIRD FLOOR PLAN**  
 SCALE: 1/16" = 1'-0"





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ROOF PLAN

**1** ROOF PLAN  
 SCALE: 1/16" = 1'-0"



A1-04



SCHEDULE FOR PROPOSED BUILDING MATERIALS AND COLOR SCHEME

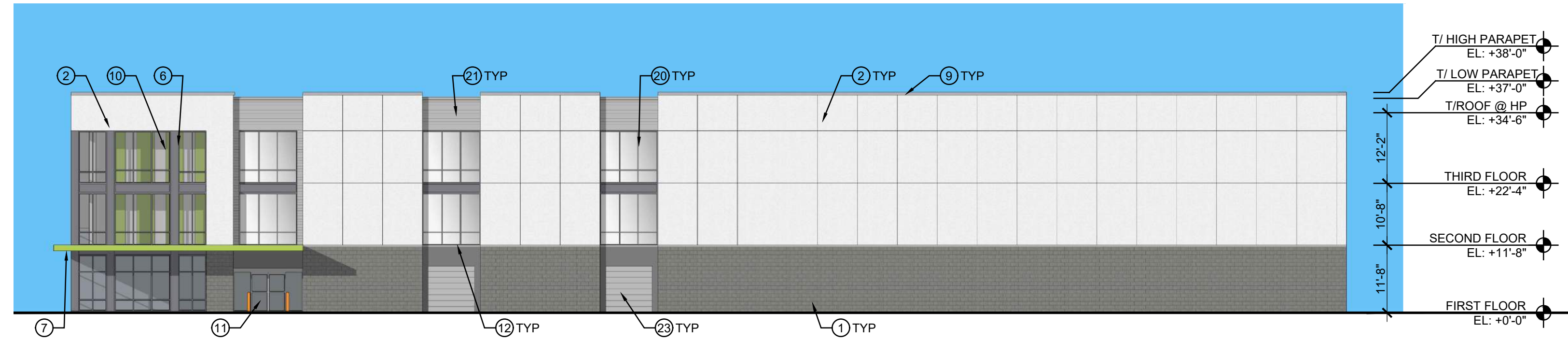
NAME	TYPE	COLOR
CANOPY	SITE BUILT	EXR WASABI, BLUE OUTREMER
WINDOWS	STOREFRONT SYSTEM	CLEAR ANODIZED
DOOR	SLIDING LOADING DOOR	CLEAR ANODIZED
EFIS	EFIS-310 FINE SAND FINISH	NEBULOUS WHITE, ARGOS, BLUE OUTREMER
MASONRY	PAINTED SPLIT FACED CMU	CITYSCAPE

KEY NOTE MATERIAL LEGEND

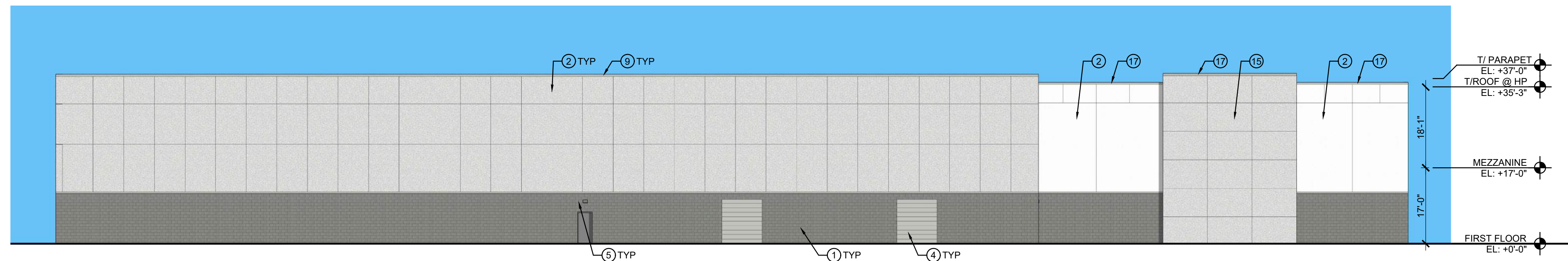
- ① PAINTED SPLIT FACED CMU FINISH - 8" x 16" - COLOR: CITYSCAPE
- ② EIFS - 310 FINE SAND FINISH - COLOR: NEBULOUS WHITE
- ③ NOT USED
- ④ OVERHEAD DOOR - COLOR: ARGOS
- ⑤ LIGHT FIXTURE
- ⑥ STOREFRONT SYSTEM - FINISH: CLEAR ANODIZED
- ⑦ CANOPY COLOR: EXR WASABI
- ⑧ STORAGE SIGNAGE - 88 SF PROVIDED, 88 SF PERMITTED
- ⑨ PRE-FINISHED ALUMINUM COPING - COLOR: ARGOS
- ⑩ BRAKE METAL SPANDREL PANEL - COLOR: CLEAR ANODIZED TO MATCH STOREFRONT
- ⑪ SLIDING LOADING DOOR - FINISH: CLEAR ANODIZED
- ⑫ EIFS - 310 FINE SAND FINISH - COLOR: ARGOS
- ⑬ RECREATION FACILITY SIGNAGE - 109 SF PERMITTED
- ⑭ EIFS - 310 FINE SAND FINISH COLOR: BLUE OUTREMER
- ⑮ EIFS - 310 FINE SAND FINISH - COLOR: PELICAN GRAY
- ⑯ SPANDREL GLASS
- ⑰ PRE-FINISHED ALUMINUM COPING - COLOR: PELICAN GRAY
- ⑱ CANOPY COLOR: CA BLUE OUTREMER ARBORITE S497
- ⑲ NOT USED
- ⑳ FAUX WINDOW
- ㉑ METAL PANEL COLOR: ARGOS
- ㉒ PRE-FINISHED ALUMINUM COPING - COLOR: CA BLUE OUTREMER ARBORITE S497
- ㉓ FAUX OVERHEAD DOOR - COLOR: ARGOS

COLOR LEGEND

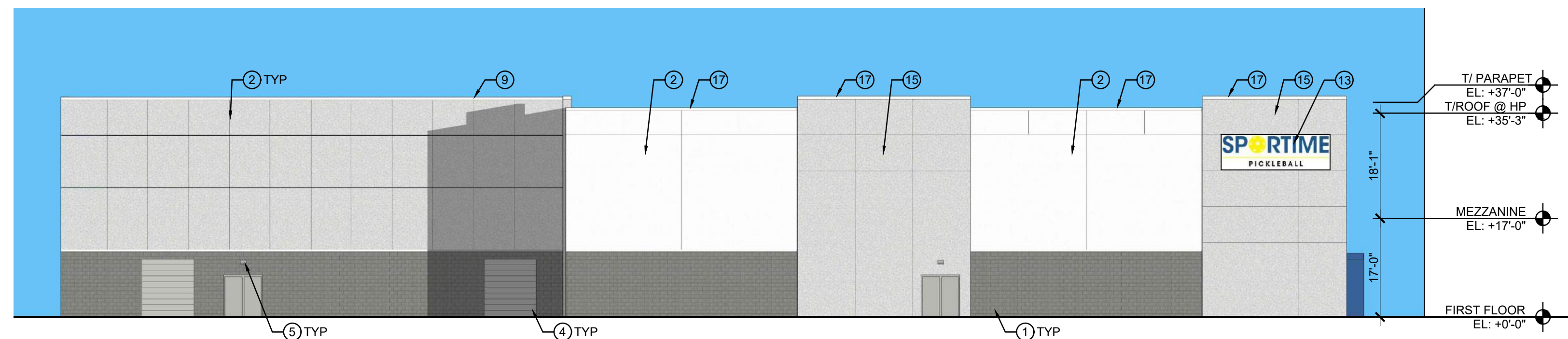
- EXR WASABI
- NEBULOUS WHITE SHERWIN WILLIAMS 7063
- ARGOS SHERWIN WILLIAMS 7065
- CITYSCAPE SHERWIN WILLIAMS 7067
- IRON ORE SHERWIN WILLIAMS 7069
- CLEAR ANODIZED FINISH
- PRO BLUE (PANTONE 29450) ARBORITE
- PELICAN GRAY BENJAMIN MOORE 1612



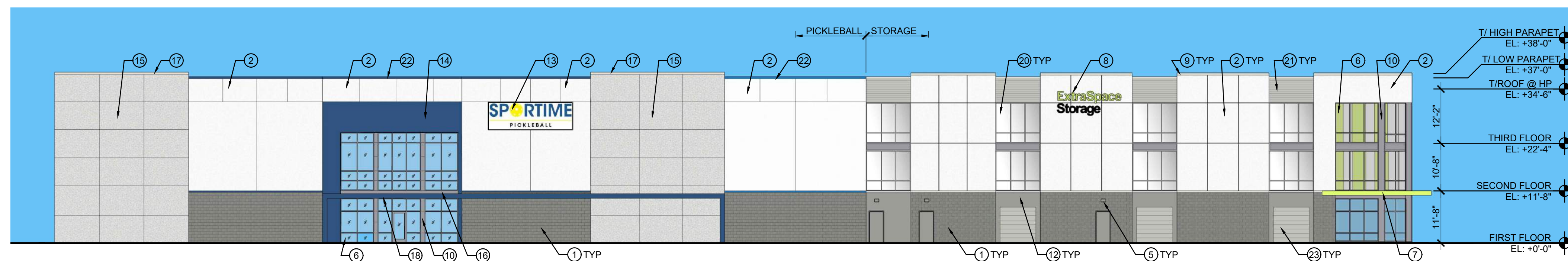
4 EAST ELEVATION  
SCALE: 1/16" = 1'-0"



3 NORTH ELEVATION  
SCALE: 1/16" = 1'-0"



2 WEST ELEVATION  
SCALE: 1/16" = 1'-0"



1 SOUTH ELEVATION  
SCALE: 1/16" = 1'-0"

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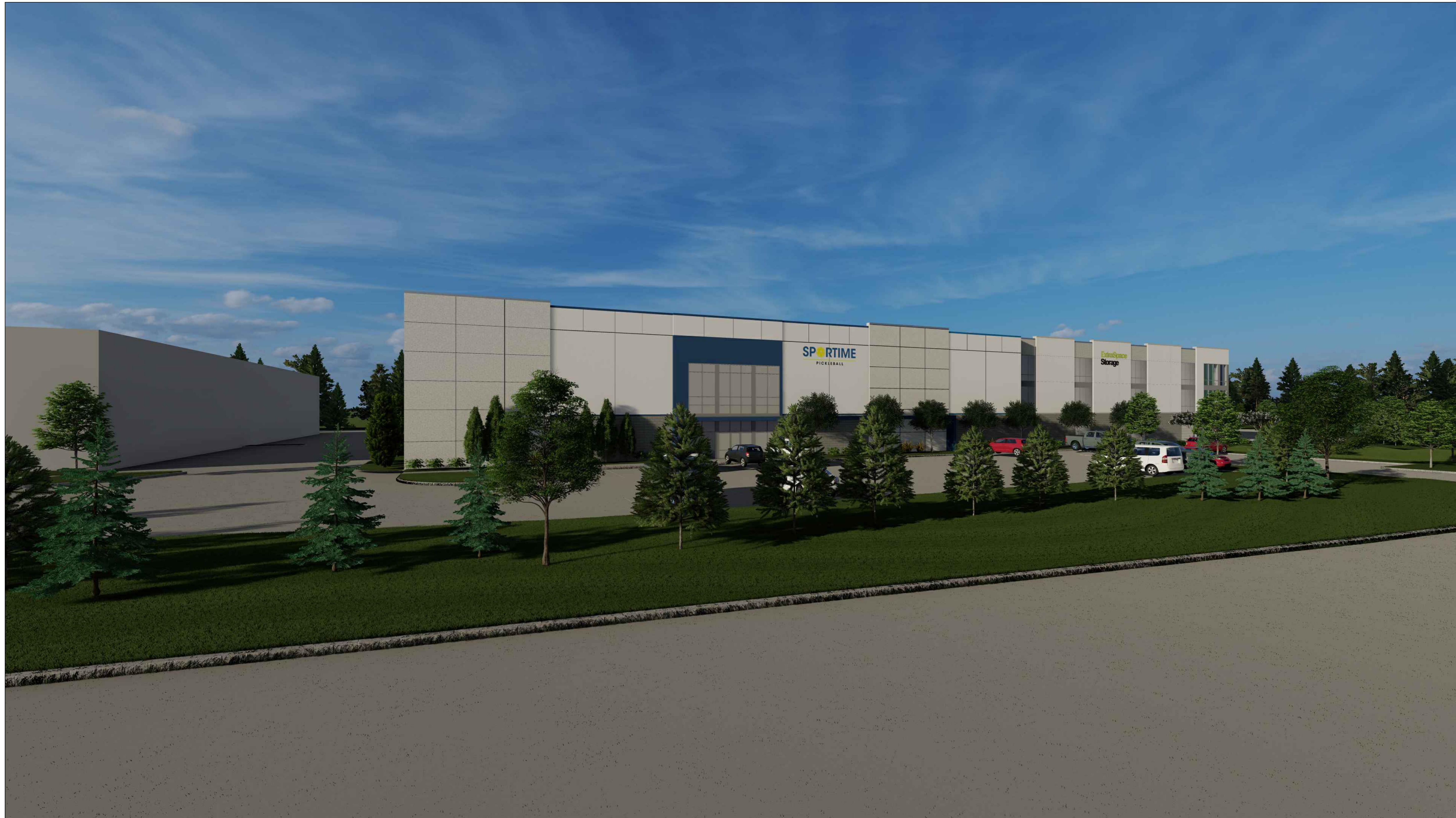
BUILDING ELEVATION

A2-01









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<small>PRINCIPAL: MS QC BY: TBD</small>		<small>P.M.: CM DRAWN BY: MV, AB, SD, SR</small>
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<small>BUILDING PERSPECTIVE</small>		
		A2-03

**1** PERSPECTIVE  
SCALE: NTS

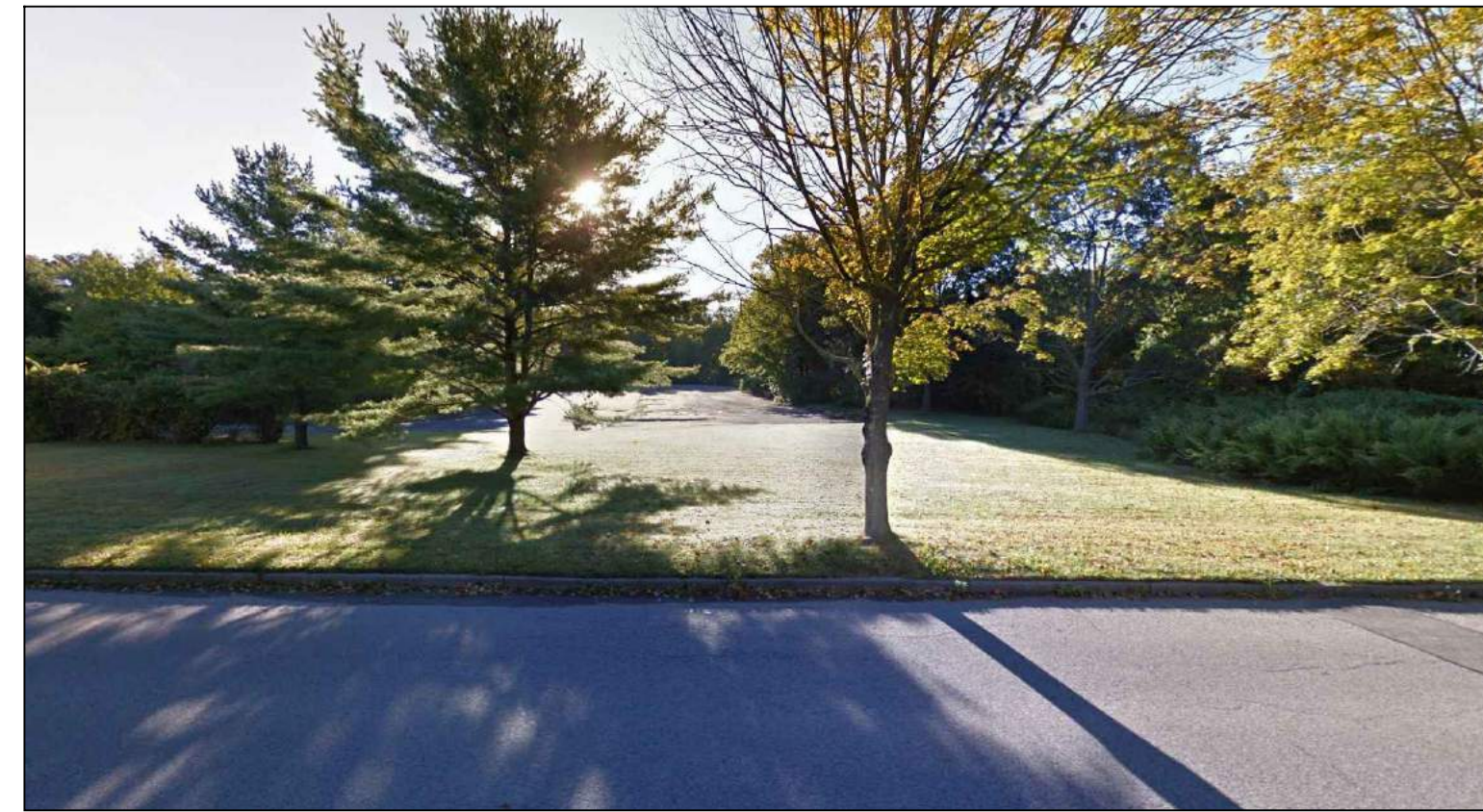








**1** ADJACENT PROPERTY  
SCALE: NTS



**2** PROPOSED PROPERTY  
SCALE: NTS



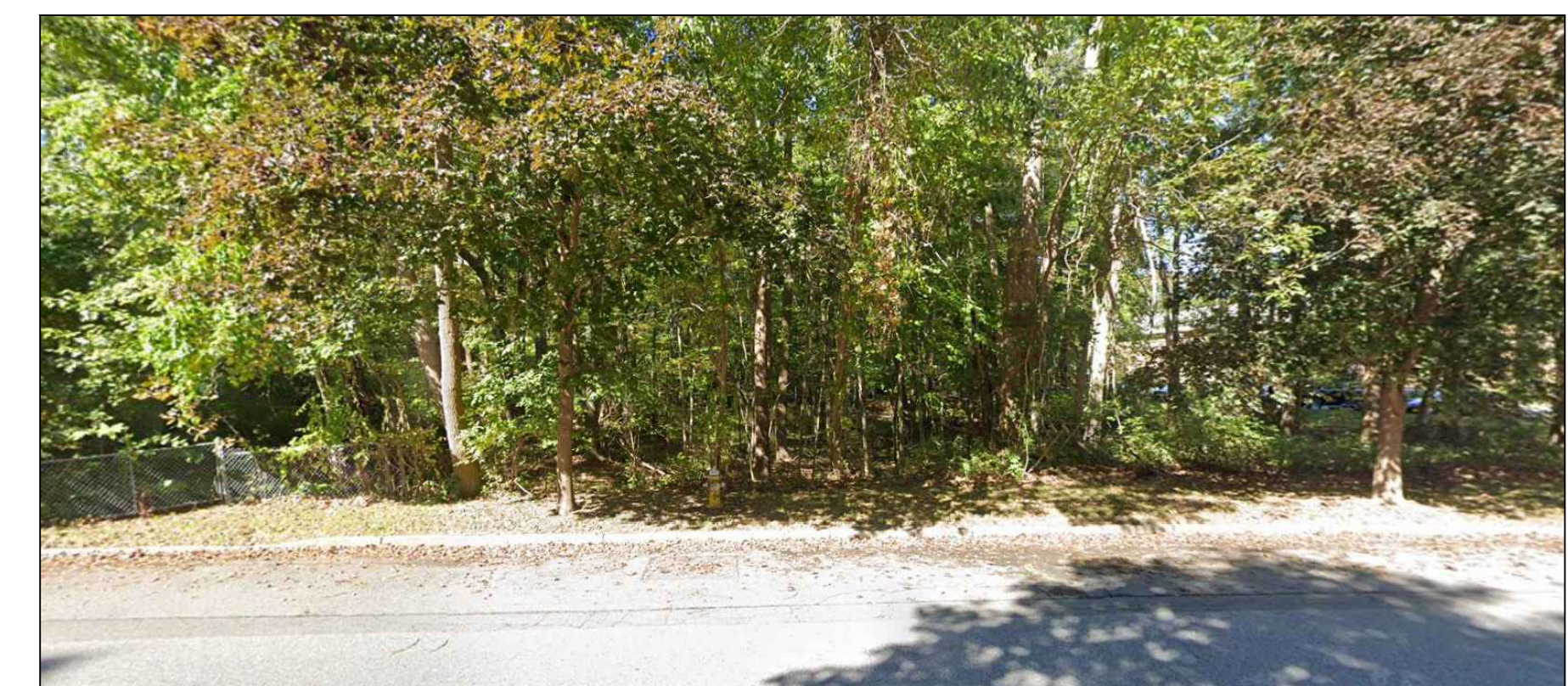
**3** ADJACENT PROPERTY  
SCALE: NTS



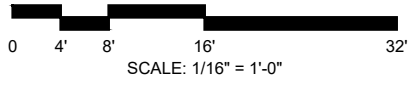
**4** ADJACENT PROPERTY (ACROSS PROPERTY)  
SCALE: NTS



**5** ADJACENT PROPERTY (ACROSS STREET)  
SCALE: NTS



**6** ADJACENT PROPERTY (ACROSS PROPERTY)  
SCALE: NTS



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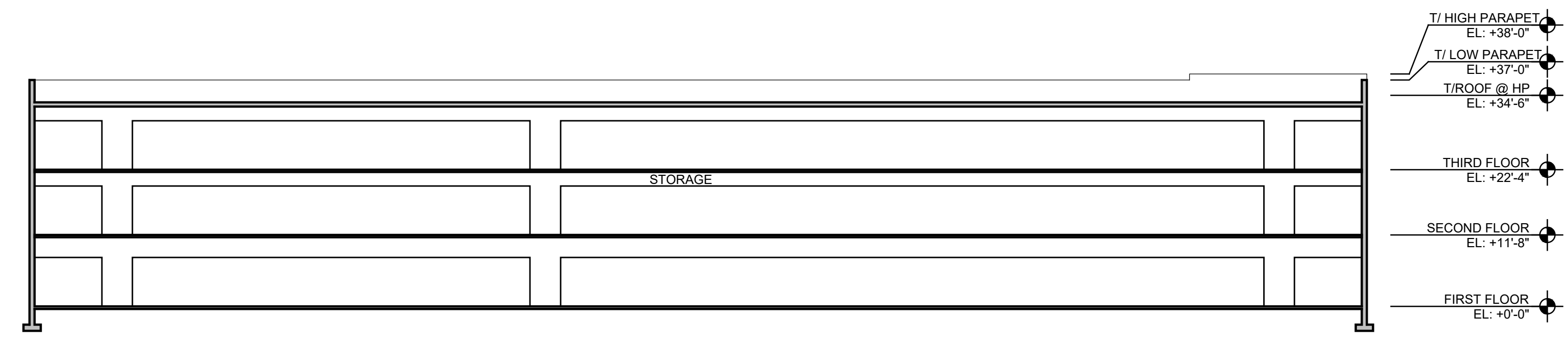
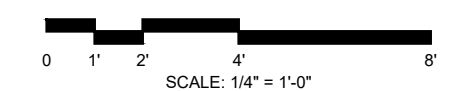
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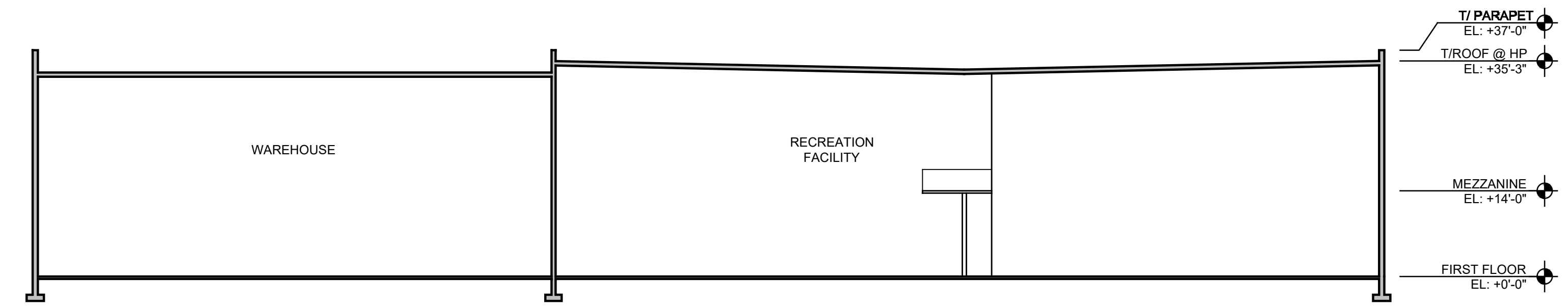
STREETSCAPE PHOTOGRAPHS



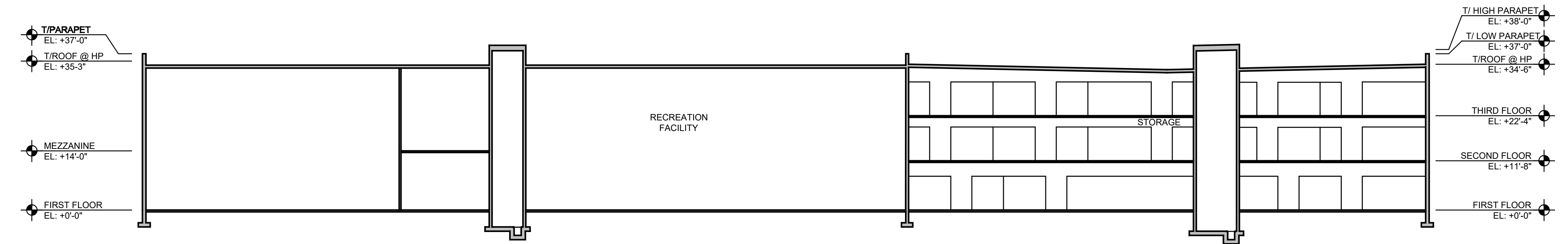
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**3** NORTH - SOUTH SECTION  
SCALE: 1/16" = 1'-0"



**2** NORTH - SOUTH SECTION  
SCALE: 1/16" = 1'-0"



**1** EAST - WEST SECTION  
SCALE: 1/16" = 1'-0"

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BUILDING SECTIONS

A3-01

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---

# STORMWATER POLLUTION PREVENTION PLAN

---

## **BAYSPACE ARMONK**

**100 BUSINESS PARK DRIVE**  
**TOWN OF NORTH CASTLE, NEW YORK**

*Applicant:* **WMG Acquisitions LLC**  
2801 SW 31<sup>st</sup> Avenue, Suite 2B  
Coconut Grove, FL 33133  
Contact: Mr. Anthony Scavo  
Phone: (718) 702-6739

*Prepared by:*  **JMC Planning Engineering  
Landscape Architecture &  
Land Surveying, PLLC**  
120 Bedford Road  
Armonk, NY 10504

JMC Project 22090

*Dated:* 09/11/2023

## TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
I.	INTRODUCTION .....	I
II.	STORMWATER MANAGEMENT PLANNING.....	I
III.	STUDY METHODOLOGY .....	8
IV.	EXISTING CONDITIONS .....	10
V.	PROPOSED CONDITIONS.....	12
VI.	SOIL EROSION & SEDIMENT CONTROL.....	18
VII.	CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE ....	36
VIII.	CONCLUSION .....	38

## APPENDICES

<u>FIGURES</u>	<u>DESCRIPTION</u>
I.	Site Location Map

### **APPENDIX DESCRIPTION**

A.	Hydrologic Calculations
B.	NYSDEC Stormwater Sizing Calculations
C.	Soil Testing Data
D.	Hydro International First Defense Operation and Maintenance Manual
E.	Temporary Erosion and Sediment Control Inspection and Maintenance Checklist Permanent Stormwater Practice Operation, Maintenance and Management Inspection Checklists
F.	Contractor's Certification
G.	Maintenance Agreement
H.	Hydraulic Calculations
I.	Drawings DA-1 "Existing Drainage Area Map" DA-2 "Proposed Drainage Area Map"

## **REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS**

### **JMC SITE PLANS**

<b><u>Dwg. No.</u></b>	<b><u>Title</u></b>	<b><u>Rev. No./Date</u></b>
C-000	“Cover Sheet”	09/11/2023
C-010	“Overall Existing Conditions Map”	09/11/2023
C-011	“Existing Conditions Map”	09/11/2023
C-020	“Site Demolition Plan”	09/11/2023
C-100	“Site Layout Plan”	09/11/2023
C-110	“Truck Turning Analyses”	09/11/2023
C-120	“Fire Apparatus Turning Analyses”	09/11/2023
C-130	“Driveway Sight Distance Profiles”	09/11/2023
C-200	“Site Grading Plan”	09/11/2023
C-300	“Site Utilities Plan”	09/11/2023
C-400	“Site Erosion & Sediment Control Plan”	09/11/2023
C-500	“Site Landscaping & Wetland Mitigation Plan”	09/11/2023
C-600	“Site Lighting Plan”	09/11/2023
C-800	“Existing Interior Landscaped Area Calculation Plan”	09/11/2023
C-810	“Proposed Interior Landscaped Area Calculation Plan”	09/11/2023
C-900	“Construction Details”	09/11/2023
C-901	“Construction Details”	09/11/2023
C-902	“Construction Details”	09/11/2023
C-903	“Construction Details”	09/11/2023
C-904	“Construction Details”	09/11/2023
C-905	“Construction Details”	09/11/2023

## **I. INTRODUCTION**

---

This Stormwater Pollution Prevention Plan has been prepared for the 11.26 acre site located at 100 Business Park Drive, in the Town of North Castle, Westchester County, New York (hereinafter referred to as the "Site"). The site is bordered by the La Quinta Hotel site to the north, the 130 Business Park Drive office building to the south, the Byram River and Interstate 684 to the east, and Business Park Drive to the west. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 29, 2020.
- Chapter 267 "Stormwater Management" of the Town of North Castle Code

The project consists of the construction of a 116,108 SF building with a 59,372 SF footprint which will contain three separate uses. The southern portion of the building will be a three-story, 81,600 SF self-storage use, the northwestern portion of the building will be a single-story 26,000 SF recreational facility, and the northeastern portion of the building will be a single-story 8,000 SF warehouse. Associated improvements are proposed consisting of off-street parking, access driveways, loading areas, stormwater management facilities, landscaping, and wetland mitigation.

## **II. STORMWATER MANAGEMENT PLANNING**

---

In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-20-001 for Stormwater Discharges from Construction Activities, the Stormwater Pollution Prevention Plan (SWPPP) includes stormwater management practices (SMP's) from the publication "New York State Stormwater Management Design Manual," last revised January 2015.

A Stormwater Pollution Prevention Plan has been prepared for this project because it is a construction activity that involves:



- Soil disturbances of one (1) or more acres of land.

The proposed stormwater facilities have been designed such that the quantity and quality of stormwater runoff during and after construction are not adversely altered or are enhanced when compared to pre-development conditions.

### **The Six Step Process for Stormwater Site Planning and Practice Selection**

Stormwater management using green infrastructure is summarized in the six step process described below. The six step process was adhered to when developing this SWPPP. Information is provided in this SWPPP which documents compliance with the required process as follows:

#### **Step 1: Site Planning**

Implement planning practices that protect natural resources and utilize the hydrology of the site. Strong consideration must be given to reducing impervious cover to aid in the preservation of natural resources including protecting natural areas, avoiding sensitive areas and minimizing grading and soil disturbance.

#### **Step 2: Determine Water Quality Treatment Volume (WQv)**

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **90% Rule** - According to the New York State Stormwater Design Manual, Section 4.1, the water quality volume is determined from the 90% rule. The method is based on 90% of the average annual stormwater runoff volume which must be provided due to impervious surfaces. The Water Quality Volume (denoted as the WQv) is designed to improve water quality sizing to capture and treat 90% of the average annual

stormwater runoff volume. The WQv is directly related to the amount of impervious cover created at a site. The average rainfall storm depth for 90% of storms in New York State in one year is used to calculate a volume of runoff. The rainfall depth depends on the location of the site within the state. From this depth of rainfall, the required water quality volume is calculated.

### Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

RRv is required for this project since it is a combination of both new development and redevelopment.

Green infrastructure techniques or standard SMP's with RRv capacity can potentially reduce the required WQv by incorporating combinations of green infrastructure techniques and standard SMP's within each drainage area on the site.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.
- Practices resulting in a reduction of contributing volume such as green roofs, stormwater planters, and rain gardens.

Apply a combination of green infrastructure techniques and standard SMPs with RRv capacity to provide 100% of the WQv calculated in Step 2. If the RRv calculated in this step is greater than or equal to the WQv in Step 2, the RRv requirement has been met and Step 4 can be skipped. If the RRv provided cannot meet or exceed 100% of the WQv, the project must, at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S).

The following green infrastructure techniques and practices are provided in the Design Manual:

- **Conservation of Natural Areas**
  - The entire site is developed and has been for decades. There are no undisturbed areas that could be planned to be included within a conservation easement. Therefore, there is no area to be subtracted from the contributing area for the WQv calculation.
- **Sheet flow to Riparian Buffers or Filter Strips**
  - There are no well vegetated areas on-site with acceptable slopes that lend an opportunity as a buffer and still meet the minimum contributing length of flow. This practice is not practical for this project since these items are typically used in a residential application.
- **Vegetated Swales**
  - The use of sheet flow into vegetated swales is not practicable due to limited flow lengths, and a lack of sufficient head / elevation on the site.
- **Tree Planting / Tree Pits**
  - The project includes extensive tree planting around its perimeter as part of the proposed landscaping plan. However, the new trees are not credited towards area reduction for the water quality volume.
- **Disconnection of Rooftop Runoff**
  - This practice is not practical for this project since these items are typically used in a residential application for small rooftop areas.
- **Stream Daylighting**
  - This practice is not possible for this project since there are no existing streams on the property which are currently piped / covered.
- **Rain Gardens**
  - This practice is not practical for this project since a contributing drainage area is limited to 1,000 square feet of rooftop. This practice is typically used in a residential application.
- **Green Roofs**
  - This practice is not practicable due to the design and size of the proposed warehouse building.

- **Stormwater Planters**
  - Infiltration planters are typically proposed at various locations around proposed buildings to collect and infiltrate runoff from portions of the building rooftops. Small drainage areas, less than 15,000 square feet can be collected by roof drains and discharged into stormwater planters which infiltrate stormwater prior to entering the underground storm pipes. Stormwater planters are not practicable due to the number needed in addition to the site only having small landscaped areas around the building that would be impractical for stormwater planters.
- **Rain Barrels and Cisterns**
  - Underground storage tanks installed to collect stormwater runoff to be used for irrigation purposes are impractical since the project will not have an irrigation system for the limited landscaped areas.
- **Porous Paving**
  - This practice is being utilized within the new access driveway and associated parking areas. Porous pavement can be used to provide RRv because the soil on-site is classified as hydrologic soil group B. The other paved areas of the site are not acceptable for porous pavement because they will be high traffic areas, and separation to groundwater is not feasible.
- **Standard Practices with RRv Capacity**
  - **Biofilters and Bioretention Basins** – These practices cannot be proposed because the soil within the areas that have the ability to accommodate the practices has observed groundwater elevations that are too close to the surface which would not provide the required separation from the bottom of the practice to groundwater.
  - **Infiltration Practices** – Infiltration basins are proposed to treat and retain runoff from the proposed building, which comprises the majority of the new impervious area on-site.

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.

#### Step 4: Determine the minimum RRv Required

The minimum RRv is calculated similar to the WQV. However, it is determined using only the new impervious cover and accounts for the hydrologic soil group present. In no case shall the runoff reduction achieved from the newly constructed impervious area be less than the minimum runoff reduction volume ( $RRv_{min}$ ).

#### Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Apply the standard SMP's to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques. The standard SMP's with RRv capacity must be implemented to verify that the RRv requirement has been met.

- **Infiltration Practices** – Infiltration basins are proposed to treat and retain runoff from the proposed building. This practice is located in an area where the groundwater elevation is acceptable to provide the required separation. According to Section 3.6 of the Design Manual, 90% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.

#### Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

The Channel Protection Volume (CPv), Overbank Flood Control (Qp) and Extreme Flood Control (Qf) must be met for the plan to be completed. This is accomplished by using practices such as infiltration basins, dry detention basins, etc. to meet water quantity requirements. The following standards must be met:

##### **I. Stream Channel Protection (CPv)**

Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event, remained



from runoff reduction. Reduction of runoff for meeting stream channel protection objectives, where site conditions allow, is encouraged and the volume reduction achieved through green infrastructure can be deducted from CPv. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion. Detention time may be calculated using either a center of mass method or plug flow calculation method.

## **2. Overbank Flood ( $Q_p$ ) which is the 10 year storm.**

Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate ( $Q_p$ ) to predevelopment rates.

The overbank flood control requirement ( $Q_p$ ) does not apply in certain conditions, including:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.
- A downstream analysis reveals that overbank control is not needed.

## **3. Extreme Storm ( $Q_f$ ) which is the 100 year storm.**

100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate ( $Q_f$ ) to predevelopment rates.

The 100-year storm control requirement can be waived if:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.

- Development is prohibited within the ultimate 100-year floodplain
- A downstream analysis reveals that 100-year control is not needed.
- If redevelopment results in no increase in impervious area or changes to hydrology that increase the discharge rate from the site the hundred-year criteria does not apply.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-20-001.

### **III. STUDY METHODOLOGY**

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Runoff rates were calculated based upon the standards set forth by the United States Department of Agriculture Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986. The methodology set forth in TR-55 considers a multitude of characteristics for watershed areas including soil types, soil permeability, vegetative cover, time of concentration, topography, rainfall intensity, ponding areas, etc.

The 1, 10, and 100 year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendix A for the supporting Hydrologic Calculations).

Anticipated drainage conditions were analyzed taking into account the rate of runoff which will result from the construction of buildings, parking areas and other impervious surfaces associated with the site development.

#### Base Data and Design Criteria

For the stormwater management analysis, the following base information and methodology were used:

1. The site drainage patterns and outfall facilities were reviewed by JMC personnel for the purpose of gathering background data and confirming existing mapping of the watershed areas.
2. An Existing Drainage Area Map was developed from the topographical survey. The drainage area map reflects the existing conditions within and around the project area.
3. A Proposed Drainage Area Map was developed from the proposed grading design superimposed over the topographical survey. The drainage area map reflects the proposed conditions within the project area and the existing conditions to remain in the surrounding area.
4. The United States Department of Agriculture (USDA) Web Soil Survey of the site available on its website at <http://websoilsurvey.nrcd.usda.gov>.
5. Soil Survey of Putnam and Westchester Counties, 1994.
6. The United States Department of Agriculture Natural Resources Conservation Service National Engineering Handbook, Section 4 - Hydrology", dated March 1985.
7. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.
8. United States Department of Commerce Weather Bureau Technical Release No. 40 Rainfall Frequency Atlas of the United States.

The time of concentration was calculated using the methods described in Chapter 3 of TR-55, Second Edition, June 1986. Manning's kinematics wave equation was used to determine the travel time of sheet flow. The 2-year 24 hour precipitation amount of 3.4 inches was used in the equation for all storm events. The travel time for shallow concentrated flow was computed

using Figure 3-1 and Table 3-1 of TR-55. Manning's Equation was used to determine the travel time for channel reaches.

9. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.
10. The New York State Stormwater Management Design Manual, revised January 2015.
11. New York Standards and Specifications for Erosion and Sediment Control, November 2016.
12. The storm flows for the 1, 10, and 100 year recurrence interval storms were analyzed for the total watershed areas. The Type III distribution design storm for a 24 hour duration was used and the mass rainfall for each design storm was taken from the Extreme Precipitation in New York & New England developed by the Natural Resource Conservation Service (NRCS) and the Northeast Regional Climate Center (NRCC) as follows:

24 Hour Rainfall Amounts

Design Storm Recurrence Interval	Inches of Rainfall
1 Year	2.81
10 Year	5.12
100 Year	9.15

**IV. EXISTING CONDITIONS**

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The project site is 11.26 acres, with the 7.75 acre northern portion of the site being developed and the 3.51 acre southern portion of the site being undeveloped. The currently developed portion of the site consists of a 62,782 square foot office/light industrial building with associated off-street parking and driveways. The undeveloped portion of the site consists of woods, grassed areas, and floodplain areas. After stormwater runoff exits the project site, it flows to the Byram

River directly to the east of the site. The undeveloped portions of the property flow overland to the Byram River and the developed portions of the site drain to existing conveyance systems which pipe stormwater runoff to the Byram River.

The following natural features, conservation areas, resource areas and drainage patterns of the project site have been identified and utilized to develop Drawing DA-I “Existing Drainage Area Map” which is included in Appendix I:

- Wetlands (jurisdictional, wetland of special concern)
- Waterways (major, perennial, intermittent, springs)
- Buffers (stream, wetland, forest, etc.)
- Floodplains
- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)

Based on the USDA Web soil survey, all on-site soils are moderately well drained / poorly drained and belong to hydrological groups B / D. The soil types, boundaries and drainage areas/designations are depicted on Drawing DA-I within Appendix I.

One Design Line (analysis boundary) was identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, two drainage areas were identified in existing conditions based on the existing drainage divides at the site.

The following is a description of each of the drainage areas analyzed in the existing conditions analysis:

Existing Drainage Area IA (EDA-IA) is 4.96 acres in size and is located within the center of the site. This area consists of the existing building, southern parking / outdoor storage areas, existing loading area, and lawn / wooded areas in the rear of the property. This drainage area drains



towards the existing conveyance system which pipes flows to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 88 and 10 minutes, respectively. Refer to Drawing DA-I in Appendix I.

Existing Drainage Area 1B (EDA-1B) is 3.29 acres in size and is located on the southern undeveloped portion of the site. This area consists of existing lawn and wooded areas. This drainage area drains towards the existing southern parking area, where it then enters the existing conveyance system.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 56 and 31.8 minutes, respectively. Refer to Drawing DA-I in Appendix I.

The peak rates of runoff to the design points from the drainage areas for each storm are shown in the table below:

**Table I**  
**Summary of Peak Rates of Runoff in Existing Conditions**  
**(Cubic Feet per Second)**

<b>Storm Recurrence Interval</b>	<b>DL-1</b>
1 year	7.71
10 year	17.98
100 year	38.16

**V. PROPOSED CONDITIONS**

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The project consists of the construction of a 116,108 SF footprint mixed-use building on the 3.51 acre southern portion of the site that is currently undeveloped. Associated improvements are proposed consisting of off-street parking, access driveways, loading areas, stormwater management facilities, landscaping, and wetland mitigation.

The proposed drainage improvements include a variety of stormwater practices, such as infiltration basins, areas of porous pavement, and a hydrodynamic separator to treat areas of

redevelopment. After treatment for water quality and peak rate attenuation, stormwater discharges from the practices will drain to the existing conveyance system, which pipes flows to the existing discharge point into the Byram River. The proposed practices provide multiple opportunities for water quality enhancement and infiltration in addition to the proposed stormwater management basins.

This section describes the design and analysis of the proposed conditions used to demonstrate that the SWPPP meets the requirements of the General Permit.

### **The Six Step Process For Stormwater Site Planning and Practice Selection**

#### **Step 1: Site Planning**

The following practices and site features were incorporated in the site design:

- Preserving hydrology - Maintaining drainage divides
- Wetlands and buffers – The Byram River lies immediately to the east of the project site, and the site includes 1.73 acres of wetland buffer. The project requires the disturbance of 0.79 acres of wetland buffer.
- Floodplain considerations - The site lies within the 100 year flood zone according to the National Flood Insurance Program Flood Insurance Rate Map (FIRM) No. 36119C0277F, effective date 09/28/2007.
- Forest, vegetative cover – The maximum amount of forest and vegetative cover has been maintained and/or provided.
- Topography (contour lines, existing flow paths, steep slopes, etc.) has been maintained or disturbed to the minimum extent practicable.
- Soil (hydrologic soil groups, highly erodible soils, etc.)

## Step 2: Determine Water Quality Treatment Volume (WQv)

The 90% rule was used to calculate the required Water Quality Volume. Please refer to Appendix 'B' for the required Water Quality Volume calculations.

## Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

- Porous Paving
- Infiltration Basins

## Step 4: Determine the minimum RRv Required

RRv<sub>min</sub> calculations can be found in Appendix 'B'. RRv<sub>min</sub> was met through the proposed infiltration basin and areas of porous pavement.

## Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

- **Infiltration Systems**

- Infiltration Basin (I-2)

- Description

- An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground.

- **Alternative SMP's for Redevelopment Portion of Project**

- Hydrodynamic Separator

### Description

A hydrodynamic separator will be utilized to treat the impervious areas from the redeveloped portion of the site.

## Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

- **Infiltration Systems**

### Infiltration Basin (I-2)

#### Description

An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Stormwater practices are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM).
2. Conveyance – The design conveys runoff to the designed stormwater practice in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.
3. Pretreatment – All stormwater practices provide pretreatment as required in accordance with NYSSMDM design guidelines.
4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines.

5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed stormwater practice to enhance pollutant removal and provide aesthetic enhancement to the property.
6. Maintenance – Maintenance for the environment practices has been provided and is detail the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing DA-2 "Proposed Drainage Area Map" located in Appendix I.

One Design Line (analysis boundary) was identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, four separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site.

The following is a description of each of the drainage areas analyzed in the proposed conditions analysis:

Proposed Drainage Area IA (PDA-IA) is 1.95 acres in size and is located on the southern portion of the site where development is proposed. This area consists of the proposed building, areas of lawn, and the proposed infiltration basins. This drainage area drains towards the proposed infiltration basins. Stormwater runoff that exits the proposed infiltration basins will be directed to a series of pipes that will convey the flows to the existing outfall to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 87 and 5.0 minutes, respectively.

Proposed Drainage Area IB (PDA-IB) is 0.82 acres in size and is located on the southern portion of the site where development is proposed. This area consists of the proposed access driveway which runs along the southern, loading / parking areas for the self-storage use, and the eastern sides of the proposed building. This area is comprised of areas of asphalt pavement,



lawn, and porous pavement. This drainage area will be collected and treated by porous asphalt pavement, where flows will then enter the existing conveyance system that connects to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 96 and 5.0 minutes, respectively.

Proposed Drainage Area IC (PDA-IC) is 0.79 acres in size and is located on the western side of the proposed building. This area consists of the proposed loading area and areas of lawn in the front of the proposed building. This drainage area drains towards a proposed subsurface detention system and a hydrodynamic separator which will treat the impervious areas within this drainage area. Flows will then be directed to the proposed conveyance system which leads to the existing outfall to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 93 and 5.0 minutes, respectively.

Proposed Drainage Area ID (PDA-ID) is 4.59 acres in size and is located on the center of the site. This area consists of the existing building, southern parking area, existing loading area, and compensatory storage areas, and lawn / wooded areas in the rear of the property. This drainage area drains towards the existing conveyance system which pipes flows to the Byram River.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 87 and 10.9 minutes, respectively.

Refer to Drawing DA-2 in Appendix I.

The peak rates of runoff to the design point of each of the analyzed drainage areas for each storm are shown on the table below:

**Table 3**  
**Summary of Proposed Peak Rates of Runoff in Proposed Conditions**  
**(Cubic Feet per Second)**

Storm Recurrence Interval	DL-1
1 year	7.65
10 year	17.89
100 year	36.12

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

**Table 4**  
**Percent Reductions in Peak Rates of Runoff (Existing vs. Proposed Conditions)**  
**(Cubic Feet per Second)**

Design Line	Storm Recurrence Frequency (Years)	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)	Percent Reduction (%)
I	1 year	7.71	7.65	0.8
	10 year	17.98	17.89	0.5
	100 year	38.16	36.12	5.3

As demonstrated in Table 4, the proposed stormwater improvements will result in significant reductions of peak rates of runoff for all storms and design points analyzed.

## **VI. SOIL EROSION & SEDIMENT CONTROL**

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction and continuing throughout its course, as outlined in the "New York State Standards and Specifications for Erosion and Sediment Control," November 2016. A continuing maintenance program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.

The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days and at least two site inspections every seven calendar days when greater than five acres of soil is disturbed at any one time.

Prior to the commencement of construction activity, the owner or operator must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed. The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the certification statement provided in Appendix F before they commence any construction activity.

### Soil Description

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

Soils are placed into four hydrologic groups: A, B, C, and D. In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by the surface conditions. Transmission rate is the rate at which water moves in the soil and is controlled by soil properties. Definitions of the classes are as follows:

- A. (Low runoff potential). The soils have a high infiltration rate even when thoroughly wetted. They chiefly consist of deep, well drained to excessively drained sands or gravels. They have a high rate of water transmission.
- B. The soils have a moderate infiltration rate when thoroughly wetted. They chiefly are moderately deep to deep, moderately well drained to well drained soils that have moderately fine to moderately coarse textures. They have a moderate rate of water transmission.
- C. The soils have a slow infiltration rate when thoroughly wetted. They chiefly have a layer that impedes downward movement of water or have moderately fine to fine texture. They have a slow rate of water transmission.
- D. (High runoff potential). The soils have a very slow infiltration rate when thoroughly wetted. They chiefly consist of clay soils that have a high swelling potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. They have a very slow rate of water transmission.

A soil's tendency to erode is also described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight," "moderate," or "SEVERE." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "SEVERE" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed.

Per the Soil Survey, the following soils listed below are present at the site. Following this list is a detailed description of each soil type found on the property:

SYM.	H.S.G.	DESCRIPTION
Ff	D	Fluvaquents-Udifuluents complex, frequently flooded
Ub	B	Udorthents, smoothed
Uf	D	Urban land

Ff, Fluvaquents-Udifuluents Complex, Frequently Flooded

This soil is very deep, well drained to very poorly drained, nearly level soils that formed in recent alluvial deposits. The parent material consists of alluvium with highly variable texture. Depth to the top of a seasonal high water table is 1.5 to 3.0 feet below the surface from November through April. Available water capacity is moderate.

Hydrologic group: D

Erosion Hazard Rating: Slight

Ub, Udorthents, Smoothed

This soil is very deep, excessively drained to moderately well drained soils that have been altered by cutting and filling. It is mainly in and adjacent to urban areas, highways, and borrow areas. It is made up of soil material in alternating layers ranging from sand to silt loam. Depth to the top of a seasonal high water table is approximately 1.5 to 4 feet. Available water capacity is moderate.

Hydrologic group: B

Erosion Hazard Rating: Not Rated

Uf, Urban Land

This soil consists of areas where at least 60 percent of the land surface is covered with buildings or other structures. The areas include parking lots, shopping centers, industrial parks, and institutional sites. Depth to the top of a seasonal high water table is greater than 6'. Available water capacity is moderate.

Hydrologic group: D

Erosion Hazard Rating: Not Rated

### On-Site Pollution Prevention

There are temporary pollution prevention measures used to control litter and construction debris on site, such as:

- Silt Fence
- Inlet Protection
- Stabilized Construction Access

There will be inlet protection provided for all storm drains and inlets with the use of curb gutter inlet protection structures and stone & block drop inlet protection, which keep silt, sediment and construction litter and debris out of the on-site stormwater drainage system.

### Temporary Control Measures

Temporary control measures and facilities will include silt fences, construction ditches, stabilized construction access, temporary seeding, mulching and sediment traps with temporary riser and anti-vortex devices.

Throughout the construction of the proposed development, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Construction ditches, if required, will be used to direct stormwater runoff to temporary sediment traps for settlement. The sediment traps will be constructed as part of this project will serve as temporary sediment basins to remove sediment and pollutants from the stormwater runoff produced during construction. Descriptions of the temporary sediment & erosion controls that will be used during the development of the site including silt fence, stabilized construction access, seeding, mulching and inlet protection are as follows:



1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.
2. Stabilized Construction Access consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 24 feet in width by 8 inches in depth.
3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 80% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.
4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.
5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using "Silt Sacks" inside the structures.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:

1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).
2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.
3. Sediment deposits shall be removed when they reach approximately  $\frac{1}{3}$  the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner's Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.
4. Rake all exposed areas parallel to the slope during earthwork operations.
5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for fourteen or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

#### Concrete Material and Equipment Management

Concrete washouts shall be used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solid for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drain pipes and cause flooding.

Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

Prefabricated concrete washout containers can be delivered to the site to provide maintenance and disposal of materials. Regular pick-ups of solid and liquid waste materials will be necessary. To prevent leaks on the job site, ensure that prefabricated washout containers are watertight. A self installed concrete washout facility can be utilized although they are much less reliable than prefabricated containers and are prone to leaks. There are many design options for the washout, but they are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Above-grade structures can also be used if they are sized and constructed correctly and are diligently maintained. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of constant use, therefore the contractor shall be sure to use quality materials and inspect the facilities on a daily basis.

Washouts must be sized to handle solids, wash water, and rainfall to prevent overflow. Concrete Washout Systems, Inc. estimates that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be at least 10 feet wide and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 12-inches of freeboard must be provided. The pit must be lined with plastic sheeting of at least 10-mil thickness without holes or tears to prevent leaching of liquids into the ground. Concrete wash water should never be placed in a pit that is connected to the storm drain system or that drains to nearby waterways.

An above-grade washout can be constructed at least 10 feet wide by 10 feet long and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 4-inches of freeboard must be provided. The washout structures can be constructed with staked straw bales or sandbags double-or triple lined with plastic sheeting of at least 10-mil thickness without holes or tears.

Concrete washout facilities shall not be located within 50 feet of storm drains, open ditches, or water bodies and should be placed in locations that allow for convenient access for concrete trucks. The contractor shall check all concrete washout facilities daily to determine if they have been filled to 75 percent capacity, which is when materials need to be removed. Both above-and below-ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Prefabricated washout containers should be inspected daily as well as to ensure the container is not leaking or nearing 75 percent capacity. Inspectors should also note whether the facilities are being used regularly. Additional signage for washouts may be needed in more convenient locations if concrete truck operators are not utilizing them.

The washout structures must be drained or covered prior to predicted rainstorms to prevent overflows. Hardened solids either whole or broken must be removed and then they may be reused onsite or hauled away for recycling.

Once materials are removed from the concrete washout, a new structure must be built or excavated, or if the previous structure is still intact, inspect it for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic be used after every cleaning because pumps and concrete removal equipment can damage the existing liner.

#### Construction Site Chemical Control

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides; fertilizers used for vegetative stabilization; petrochemicals;

construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste.

Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in applicable Federal, State and local regulations that govern their usage, handling, storage, and disposal.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.

Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage areas, and notifying neighboring property owners prior to spraying.

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity of 110 percent greater than that of the largest container;
- Clearly label all products;
- Keep tanks off the ground; and
- Keep lids securely fastened.

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.

Thinners or solvents should not be discharged into sanitary or storm systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used, and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned with degreasing solvents, which can then be reused or recycled.

#### Solid Waste Management and Portable Sanitary Management

The purpose of this management measure is to prevent the potential for solid waste such as construction debris, trash, etc. from construction sites due to improper handling and storage. Debris and litter should be removed periodically from the BMP's and surrounding areas to prevent clogging of pipes and structures. All construction material shall be stored in designated staging areas. Roll-off containers shall be placed on site and all empty containers, construction debris and litter shall be placed in the containers.

Portable sanitary units may be utilized on-site or bathrooms will be provided within construction trailers. A sanitation removal company will be hired to pump/remove any sanitary waste. In the event that portable sanitary units are used and then cleaned after being emptied, the rinse water may not be disposed of to the storm drain system. It shall be contained for later disposal if it can't be disposed of on-site. Remove paper and trash before cleaning the portable sanitary units. The portable sanitary units shall be located away from the storm drain system if possible. Provide over head cover for wash areas if possible. Maintain spill response material and equipment on site to eliminate the potential for contaminants and wash water from entering the storm drain system.

#### Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project:



1. Infiltration Basins will be used to treat the runoff volume generated from the developed area and provide improvement to water quality control. The proposed basins will provide water quality for 90% of the average annual stormwater runoff volume. The water quality volume will be retained and higher storms will be released gradually. Refer to the water quality volume calculations, in Appendix B.
2. A Hydrodynamic Separator will be used to provide treatment of the water quality flow rate from the redeveloped areas to separate sediment, debris, floatables, etc. from the runoff prior to discharge.
3. Catch Basins will be used to remove some of the coarse sand and grit sediment before entering the drainage system. Each catch basin will be constructed with an 18 inch deep sump.
4. Seeding of at least 70% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 2 tons per acre such that the mulch forms a continuous blanket.

### **Specifications for Soil Restoration**

Prior to the final stabilization of the disturbed areas, soil restoration will be required for all vegetated areas to recover the original properties and porosity of the soil. Soil Restoration Requirements are provided on Table 5 below:

**Table 5**

**Soil Restoration Requirements**

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

\* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

\*\* Per "Deep Ripping and De-compaction, DEC 2008."

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following full soil restoration steps applied:

1. Apply 3 inches of compost over subsoil.
2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

### **Specifications for Final Stabilization of Graded Areas**

Final stabilization of graded areas consists of the placement of topsoil and installation of landscaping (unless the area is to be paved, or a building is to be constructed in the location). Topsoil is to be spread as soon as grading operations are completed. Topsoil is to be placed to a minimum depth of six inches on all embankments, planting areas and seeding/sod areas. The subgrade is to be scarified to a depth of two inches to provide a bond of the topsoil with the subsoil. Topsoil is to be raked to an even surface and cleared of all debris, roots, stones and other unsatisfactory material.

Planting operations shall be conducted under favorable weather conditions as follows:

- Permanent Lawns - April 15 (provided soil is frost-free and not excessively moist) to May 15; August 15 to October 15.
- Temporary Lawn Seeding - if outside of the time periods noted above, the areas shall be seeded immediately on completion of topsoil operations with annual ryegrass (Italian rye) at a rate of six pounds per 1,000 square feet. Temporary lawn installation is permitted provided the soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

On slopes with a grade of 3 horizontal to 1 vertical or greater, and in swales, a geotextile netting or mat shall be installed for stabilization purposes as shown on the Plans. Seeded areas are to be mulched with straw or hay at an application rate of 70-90 pounds per 1,000 s.f. Straw or hay

mulch must be spread uniformly and anchored immediately after spreading to prevent wind blowing. Mulches must be inspected periodically and in particular after rainstorms to check for erosion. If erosion is observed, additional mulch must be applied. Netting shall be inspected after rainstorms for dislocation or failure; any damage shall be repaired immediately.

All denuded surfaces which will be exposed for a period of over two months or more shall be temporarily hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet ); (b) Certified "Aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to be used in the months of October and November.

Permanent turfgrass cover is to consist of a seed mixture as follows:

(a) Sunny sites

Kentucky Bluegrass	2.0-2.6 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	0.4-0.6 pounds/1000 square feet

(b) Shady sites

Kentucky Bluegrass	0.8-1.0 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	2.6-3.3 pounds/1000 square feet

All plant materials shall comply with the standards of the American Association Of Nurserymen with respect to height and caliper as described in its publication American Standard for Nursery Stock, latest edition.

**Sequence of Construction**

- I. Stake out all limits of disturbance. (areas shall be delineated with orange construction fence).

2. Tag all existing trees to be removed (trees shall be delineated with colored construction tape and inspected by the town prior to removal).
3. Cut existing trees to be removed. Stumps shall remain until grubbing and earthwork commence.
4. Installation of temporary erosion & sediment control measures (construction fence, tree protection, and silt fencing). Ensure installation of temporary construction fencing around the proposed porous pavement and infiltration basin areas to prevent heavy construction equipment from compacting the area.
5. Install stone stabilized construction accesses at the locations shown on the plans.
6. Refer to temporary erosion and sediment control inspection and maintenance checklist within appendix e of the stormwater pollution prevention plan.
7. Remove and stockpile all existing topsoil within the limit of disturbance. No stockpiles shall be located within the porous pavement and infiltration basin areas. Install silt fencing around temporary topsoil stockpiles for erosion control purposes.
8. Remove stumps from cut trees.
9. Remove and dispose of all existing utilities, pavement, concrete curbs and sidewalks within the limit of disturbance and prepare the area for construction.
10. All construction debris shall not be stockpiled and shall be removed from the site within 24 hours.
11. Install new town owned storm drainage line from existing catch basin within business park drive to DI-1 (See Utilities Plan).
12. Infiltration basins shall be graded, constructed (structures, pipes, etc.), and stabilized (80% germination) prior to the connection of roof drain leaders.

13. Begin building and roadway / parking lot (including porous pavement) construction. Proceed with rough grading of the area under active construction.
  
14. All exposed slopes and grading areas, that will not be further disturbed within 14 calendar days (7 days for construction sites that either directly discharge to one of the 303(d) segments listed in Appendix E of the General Permit or are located within one of the watersheds listed in Appendix C of the General Permit), shall be temporarily seeded within 24 hours of disturbance, in accordance with the New York State Department of Environmental Conservation (NYSDEC) “Erosion and Sediment Control Guidelines” and the ANSI A300 “best management practices for tree and shrub planting, transplanting, maintenance and care”, prepared by the International Society of Arboriculture (ISA), latest editions, as follows:
  - A. Seed mixture and rate of application:
    - A.1. In spring, summer or early fall, seed the area with ryegrass (annual or perennial) at 30 pounds per acre (approximately 0.7 pounds/1,000 square feet or use 1 pound/1,000 square feet).
    - A.2. In late fall or early winter, seed the area with certified “aroostook” winter rye (cereal rye) at 100 pounds per acre (2.5 pounds/1,000 square feet).
  - B. Application shall be uniform by mechanical or hydroseed methods.
  - C. Mulch all seeded areas with straw at a rate of 2 tons per acre (90 pounds/1,000 square feet) such that the mulch forms a continuous blanket.
  
15. Install the remainder of the on-site storm drainage system consisting of catch basins, manholes and underground storm pipes along with the sediment and erosion control devices associated with the storm drainage system (i.e. inlet protection and rip rap as shown on the plans)



16. Install all underground utilities including sanitary sewer, water, gas, electric, and telephone/cable services.
17. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).
18. Install concrete curbing, followed by site pavement, sidewalks, concrete pads (loading dock, trash enclosure).
19. Contractor shall be required to inspect erosion and sediment control measures within 24 hours of the end of each rainfall event and at least daily during prolonged rainfall. The contractor shall execute all required repair the same day of the inspection.
20. Contractor shall remove sediment deposits when they reach approximately 1/3 the height of the silt fence. Properly dispose of all such sediments in fill areas on the site as directed by the owner's field representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.
21. Rake all exposed areas parallel to the slope during earthwork operations.
22. Finish grading, redistribute topsoil.
23. Following final grading, seed with a permanent surface treatment (i.e. turfgrass, pavement, sidewalk or building within seven days of grading) or seed with a perennial ryegrass, annual ryegrass and winter rye mixture. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment. Seeding of at least 80% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. Areas shall be hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet ); (b) certified "aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to

be used in the months of October and November. The seeded areas will be mulched with straw at a rate of 2 tons per acre such that the mulch forms a continuous blanket.

24. Conduct proposed wetland mitigation including removal of debris, invasive species and installation of proposed plantings (refer to site landscaping and wetland mitigation plan).  
Install proposed landscape plantings / improvements.
25. Clean pavements and storm drain system of all accumulated sediment in conjunction with the removal of all temporary sediment and erosion control devices.
26. Remove temporary erosion and sediment control measures as applicable once vegetation is established (80% grass sprout over entire area).

## **VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE**

During the construction phase and following construction of the project, a number of maintenance measures will be taken with respect to the site maintenance. Measures to be taken included the following:

### **I. During Construction**

A comprehensive sediment and erosion control plan will be in place during the construction period. Maintenance measures for sediment and erosion controls will include:

A qualified professional acceptable to the municipality will be hired by the owner or operator to monitor the installation and maintenance of the sediment and erosion control plans. The qualified professional shall report directly to the Engineering Consultant and shall be responsible for ensuring compliance with the design of the sediment and erosion control plans.

The qualified professional so hired will inspect all sediment and erosion control measures at least every seven calendar days. In the event that there has been a variance with the design of the sediment and erosion control measures so that the ability of the measures to adequately perform

the intended function is lessened or compromised and/or the facilities are not adequately maintained, the qualified professional shall be required to report such variance to the Engineering Consultant within 48 hours and shall be empowered to order immediate repairs to the sediment and erosion control measures.

The qualified professional will also be responsible for observing the adequacy of the vegetation growth (trees, shrubs, groundcovers and turfgrasses) in newly graded areas and for ordering additional plantings in the event that the established plant materials do not adequately protect the ground surface from erosion.

## **2. Following Construction**

Site maintenance activities on the property will include:

- Grounds maintenance, including mowing of lawns;
- Planting of trees, shrubs and groundcovers; pruning of trees and shrubs;
- Application of fertilizer and herbicides;
- Maintenance of stormwater management area;

Grounds maintenance on the site will be performed by landscaping contractor.

Fertilizer is typically applied twice in the year - once in the spring and once in the fall. The application of fertilizer is usually necessary to maintain healthy lawn growth due to competition for nutrients with trees and shrubs and since the clippings are often removed. It is not recommended that fertilizer be applied during the summer. It is at this time that lawns are typically dormant.

Fertilizers come in three basic types: (1) Organic; (2) Soluble synthetic and (3) Slow release.

Organic fertilizers are derived from plant or animal waste. Since they are heavier and bulkier than other fertilizers, it is necessary to apply a much greater amount at one time. Soluble

synthetic fertilizers are predictable with determining the exact impact on a lawn. However more applications are necessary since their effect is often short term. Slow release fertilizers have a high percentage of nitrogen so quantities that need be handled at one time are smaller. Slow release fertilizers will be utilized by the project.

A complete fertilizer contains all three of the primary nutrients - nitrogen (N), phosphorus (P) and potassium in the form of potash (K). Typically, a 3-1-2 ratio of nutrients (N-P-K) is used for lawn applications.

Fertilizer shall be applied by the landscape contractor in accordance with the manufacturer's instructions. The application of fertilizer does require some skill on the part of the operator. Should there be a spill of fertilizer, the landscape contractor shall be required to scrape or vacuum it up. The area will then be watered in accordance with the manufacturer's instructions to ensure that the fertilizer becomes soluble and available to plants and does not run off.

A&R Real Estate Holdings, LLC will be responsible for the long-term operation and maintenance of the permanent stormwater management practices. The permanent stormwater management practices shall be maintained in accordance with the Maintenance Inspection Checklists provided in Appendix E.

## **VIII. CONCLUSION**

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This Stormwater Pollution Prevention Plan has been prepared to describe the project's pre and post-development stormwater management improvements and its sediment and erosion control improvements to be utilized during construction. The proposed permanent improvements and the interim improvements to be utilized during construction have been designed in accordance with the requirements of the:

- New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001, effective January 29, 2020.
- Chapter 267 "Stormwater Management" of the Town of North Castle Code

The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed improvements. These measures include an infiltration basin, extensive areas of porous pavement, and a hydrodynamic separator. These improvements will also mitigate runoff volumes from the proposed improvements as runoff volumes will be slightly reduced or maintained in all the analyzed storms.

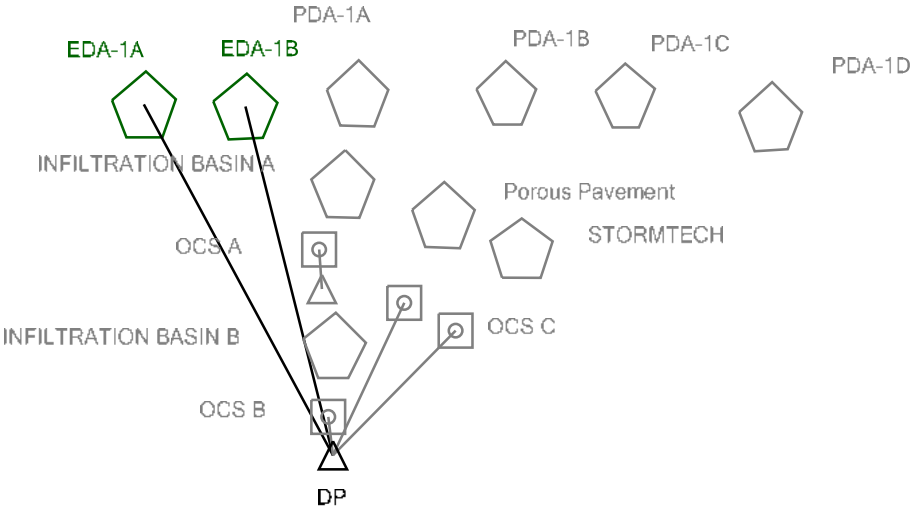
Based on the foregoing, it is our professional opinion that the proposed improvements will provide water quantity and quality enhancements which exceed the above mentioned requirements and are not anticipated to have any adverse impacts to the site or any surrounding areas.

## ***APPENDIX A***

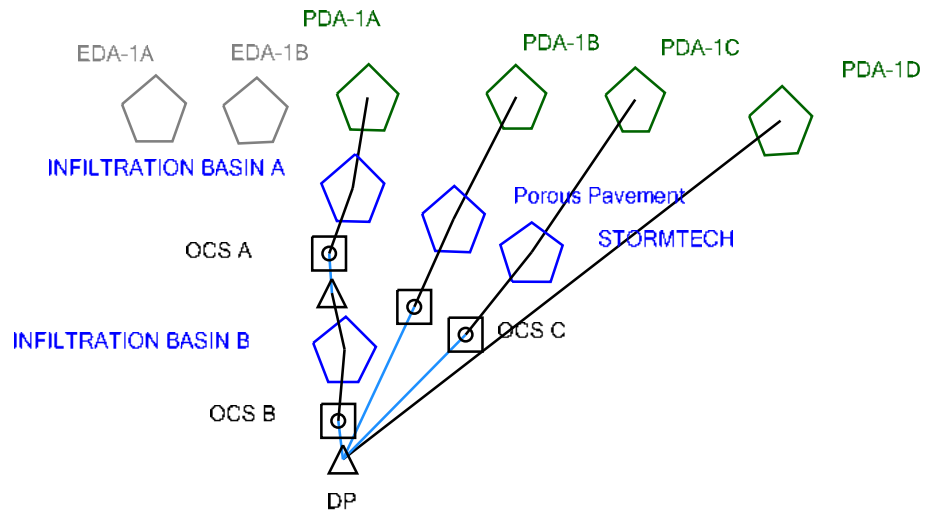
# ***HYDROLOGIC CALCULATIONS***



Scenario: Existing Conditions 1 Year Storm



# Scenario: Proposed Conditions 1 Year Storm



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Project Summary

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Title	BaySpace Armonk (JMC Project 22090)
Engineer	Paul J. Dumont, PE
Company	JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC
Date	8/2/2023

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Notes

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## Table of Contents

	Master Network Summary	2
1-10-100-90%	Time-Depth Curve, 1 years (Existing Conditions 1 Year Storm)	5
	Time-Depth Curve, 1 years (Proposed Conditions 1 Year Storm)	7
	Time-Depth Curve, 10 years (Existing Conditions 10 Year Storm)	9
	Time-Depth Curve, 10 years (Proposed Conditions 10 Year Storm)	11
	Time-Depth Curve, 100 years (Existing Conditions 100 Year Storm)	13
	Time-Depth Curve, 100 years (Proposed Conditions 100 Year Storm)	15
EDA-1A	Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm)	17
	Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm)	19
	Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm)	21
EDA-1B	Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm)	23
	Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm)	25
	Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm)	27
PDA-1A	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	29
	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	31
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	33
PDA-1B	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	35
	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	37
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	39
PDA-1C	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	41
	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	43
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	45
PDA-1D	Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm)	47

## Table of Contents

	Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm)	49
	Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm)	51
EDA-1A		
	Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm)	53
	Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm)	54
	Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm)	55
EDA-1B		
	Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm)	56
	Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm)	57
	Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm)	58
PDA-1A		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	59
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	60
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	61
PDA-1B		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	62
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	63
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	64
PDA-1C		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	65
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	66
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	67
PDA-1D		
	Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm)	68
	Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm)	69
	Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm)	70
EDA-1A		
	Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm)	71
	Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm)	73
	Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm)	75
EDA-1B		

## Table of Contents

	Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm)	78
	Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm)	80
	Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm)	82
PDA-1A		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	84
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	86
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	88
PDA-1B		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	91
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	94
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	97
PDA-1C		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	100
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	102
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	105
PDA-1D		
	Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm)	108
	Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm)	110
	Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm)	112
DP		
	Addition Summary, 1 years (Existing Conditions 1 Year Storm)	115
	Addition Summary, 1 years (Proposed Conditions 1 Year Storm)	116
	Addition Summary, 10 years (Existing Conditions 10 Year Storm)	117
	Addition Summary, 10 years (Proposed Conditions 10 Year Storm)	118
	Addition Summary, 100 years (Existing Conditions 100 Year Storm)	119
	Addition Summary, 100 years (Proposed Conditions 100 Year Storm)	120
INFILTRATION BASIN A		
	Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm)	121
	Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm)	122
	Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm)	123



## Table of Contents

INFILTRATION BASIN B	Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm)	124
	Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm)	125
	Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm)	126
Porous Pavement	Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm)	127
	Volume Void Adjustments, 1 years (Proposed Conditions 1 Year Storm)	128
	Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm)	129
	Volume Void Adjustments, 10 years (Proposed Conditions 10 Year Storm)	130
	Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm)	131
	Volume Void Adjustments, 100 years (Proposed Conditions 100 Year Storm)	132
STORMTECH	Storage Chamber System, 1 years (Proposed Conditions 1 Year Storm)	133
	Storage Chamber System, 10 years (Proposed Conditions 10 Year Storm)	134
	Storage Chamber System, 100 years (Proposed Conditions 100 Year Storm)	136
OCS-7-1	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	138
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	140
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	141
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	143
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	144
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	146
OCS-A	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	147
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	149
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	241
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	243
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	335
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	337
OCS-B		

## Table of Contents

	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	429
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	432
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	435
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	438
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	441
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	444
Porous Pavement		
	Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm)	447
	Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm)	449
	Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm)	450
	Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm)	452
	Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm)	453
	Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm)	455
INFILTRATION BASIN A (IN)		
	Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm)	456
INFILTRATION BASIN A		
	Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm)	457
	Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm)	458
	Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm)	459
INFILTRATION BASIN B (IN)		
	Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm)	460
INFILTRATION BASIN B		
	Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm)	462
	Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm)	463
	Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm)	464
Porous Pavement		
	Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm)	465
	Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm)	466
	Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm)	467
Porous Pavement (OUT)		

## Table of Contents

	Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm)	468
	Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm)	469
	Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm)	470
STORMTECH		
	Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm)	471
	Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm)	472
	Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm)	473
STORMTECH (OUT)		
	Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm)	474
	Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm)	476
	Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm)	478

Subsection: Master Network Summary

**Catchments Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
EDA-1A	Existing Conditions 1 Year Storm	1	29,640.000	12.150	7.71
EDA-1A	Existing Conditions 10 Year Storm	10	67,958.000	12.150	17.11
EDA-1A	Existing Conditions 100 Year Storm	100	138,255.000	12.150	33.35
PDA-1D	Proposed Conditions 1 Year Storm	1	28,996.000	12.150	7.43
PDA-1D	Proposed Conditions 10 Year Storm	10	67,805.000	12.150	16.93
PDA-1D	Proposed Conditions 100 Year Storm	100	139,537.000	12.150	33.48
PDA-1A	Proposed Conditions 1 Year Storm	1	11,115.000	12.100	3.18
PDA-1A	Proposed Conditions 10 Year Storm	10	25,988.000	12.100	7.17
PDA-1A	Proposed Conditions 100 Year Storm	100	53,477.000	12.100	14.11
PDA-1B	Proposed Conditions 1 Year Storm	1	7,071.000	12.100	1.85
PDA-1B	Proposed Conditions 10 Year Storm	10	13,907.000	12.100	3.49
PDA-1B	Proposed Conditions 100 Year Storm	100	25,916.000	12.100	6.32
EDA-1B	Existing Conditions 1 Year Storm	1	1,983.000	12.750	0.12
EDA-1B	Existing Conditions 10 Year Storm	10	13,069.000	12.450	1.96
EDA-1B	Existing Conditions 100 Year Storm	100	44,148.000	12.400	7.62
PDA-1C	Proposed Conditions 1 Year Storm	1	2,615.000	12.100	0.73
PDA-1C	Proposed Conditions 10 Year Storm	10	5,657.000	12.100	1.51
PDA-1C	Proposed Conditions 100 Year Storm	100	11,127.000	12.100	2.85

**Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
DP	Proposed Conditions 1 Year Storm	1	31,591.000	12.150	7.65
DP	Existing Conditions 1 Year Storm	1	31,623.000	12.150	7.71
DP	Existing Conditions 10 Year Storm	10	81,027.000	12.150	17.98

Subsection: Master Network Summary

**Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
DP	Proposed Conditions 10 Year Storm	10	73,424.000	12.150	17.89
DP	Existing Conditions 100 Year Storm	100	182,403.000	12.150	38.16
DP	Proposed Conditions 100 Year Storm	100	158,810.000	12.150	36.12

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft <sup>3</sup> )
INFILTRATION BASIN A (IN)	Proposed Conditions 1 Year Storm	1	11,115.000	12.100	3.18	(N/A)	(N/A)
INFILTRATION BASIN A (OUT)	Proposed Conditions 1 Year Storm	1	3,909.000	12.200	1.87	367.62	1,742.000
INFILTRATION BASIN A (IN)	Proposed Conditions 10 Year Storm	10	25,988.000	12.100	7.17	(N/A)	(N/A)
INFILTRATION BASIN A (OUT)	Proposed Conditions 10 Year Storm	10	10,249.000	12.100	4.60	368.88	5,647.000
INFILTRATION BASIN A (IN)	Proposed Conditions 100 Year Storm	100	53,477.000	12.100	14.11	(N/A)	(N/A)
INFILTRATION BASIN A (OUT)	Proposed Conditions 100 Year Storm	100	27,087.000	12.050	6.46	370.43	11,430.000
Porous Pavement (IN)	Proposed Conditions 1 Year Storm	1	7,071.000	12.100	1.85	(N/A)	(N/A)
Porous Pavement (OUT)	Proposed Conditions 1 Year Storm	1	0.000	0.000	0.00	368.30	2,054.000
Porous Pavement (IN)	Proposed Conditions 10 Year Storm	10	13,907.000	12.100	3.49	(N/A)	(N/A)
Porous Pavement (OUT)	Proposed Conditions 10 Year Storm	10	0.000	0.000	0.00	368.52	3,923.000
Porous Pavement (IN)	Proposed Conditions 100 Year Storm	100	25,916.000	12.100	6.32	(N/A)	(N/A)

Subsection: Master Network Summary

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft <sup>3</sup> )
Porous Pavement (OUT)	Proposed Conditions 100 Year Storm	100	662.000	12.300	2.27	368.97	7,643.000
INFILTRATION BASIN B (IN)	Proposed Conditions 1 Year Storm	1	3,909.000	12.200	1.87	(N/A)	(N/A)
INFILTRATION BASIN B (OUT)	Proposed Conditions 1 Year Storm	1	0.000	0.000	0.00	367.62	1,886.000
INFILTRATION BASIN B (IN)	Proposed Conditions 10 Year Storm	10	10,249.000	12.100	4.60	(N/A)	(N/A)
INFILTRATION BASIN B (OUT)	Proposed Conditions 10 Year Storm	10	0.000	0.000	0.00	368.87	4,944.000
INFILTRATION BASIN B (IN)	Proposed Conditions 100 Year Storm	100	27,087.000	12.050	6.46	(N/A)	(N/A)
INFILTRATION BASIN B (OUT)	Proposed Conditions 100 Year Storm	100	7,553.000	12.400	2.86	370.36	9,450.000
STORMTECH (IN)	Proposed Conditions 1 Year Storm	1	2,615.000	12.100	0.73	(N/A)	(N/A)
STORMTECH (OUT)	Proposed Conditions 1 Year Storm	1	2,595.000	12.400	0.26	366.76	906.000
STORMTECH (IN)	Proposed Conditions 10 Year Storm	10	5,657.000	12.100	1.51	(N/A)	(N/A)
STORMTECH (OUT)	Proposed Conditions 10 Year Storm	10	5,619.000	12.200	0.98	367.88	1,432.000
STORMTECH (IN)	Proposed Conditions 100 Year Storm	100	11,127.000	12.100	2.85	(N/A)	(N/A)
STORMTECH (OUT)	Proposed Conditions 100 Year Storm	100	11,058.000	12.100	2.87	368.19	1,535.000



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time-Depth Curve: 1	
Label	1
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.0	0.0	0.0	0.0
1.500	0.0	0.0	0.0	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.1
3.000	0.1	0.1	0.1	0.1	0.1
3.500	0.1	0.1	0.1	0.1	0.1
4.000	0.1	0.1	0.1	0.1	0.1
4.500	0.1	0.1	0.1	0.2	0.2
5.000	0.2	0.2	0.2	0.2	0.2
5.500	0.2	0.2	0.2	0.2	0.2
6.000	0.2	0.2	0.2	0.2	0.2
6.500	0.2	0.2	0.2	0.2	0.2
7.000	0.3	0.3	0.3	0.3	0.3
7.500	0.3	0.3	0.3	0.3	0.3
8.000	0.3	0.3	0.3	0.3	0.4
8.500	0.4	0.4	0.4	0.4	0.4
9.000	0.4	0.4	0.4	0.4	0.5
9.500	0.5	0.5	0.5	0.5	0.5
10.000	0.5	0.5	0.6	0.6	0.6
10.500	0.6	0.6	0.6	0.7	0.7
11.000	0.7	0.7	0.7	0.8	0.8
11.500	0.8	0.9	1.0	1.0	1.2
12.000	1.4	1.6	1.8	1.9	1.9
12.500	2.0	2.0	2.0	2.1	2.1
13.000	2.1	2.1	2.1	2.2	2.2
13.500	2.2	2.2	2.2	2.3	2.3
14.000	2.3	2.3	2.3	2.3	2.3
14.500	2.3	2.4	2.4	2.4	2.4
15.000	2.4	2.4	2.4	2.4	2.4
15.500	2.4	2.5	2.5	2.5	2.5
16.000	2.5	2.5	2.5	2.5	2.5
16.500	2.5	2.5	2.5	2.5	2.5
17.000	2.6	2.6	2.6	2.6	2.6

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	2.6	2.6	2.6	2.6	2.6
18.000	2.6	2.6	2.6	2.6	2.6
18.500	2.6	2.6	2.6	2.6	2.6
19.000	2.7	2.7	2.7	2.7	2.7
19.500	2.7	2.7	2.7	2.7	2.7
20.000	2.7	2.7	2.7	2.7	2.7
20.500	2.7	2.7	2.7	2.7	2.7
21.000	2.7	2.7	2.7	2.7	2.7
21.500	2.7	2.7	2.7	2.7	2.8
22.000	2.8	2.8	2.8	2.8	2.8
22.500	2.8	2.8	2.8	2.8	2.8
23.000	2.8	2.8	2.8	2.8	2.8
23.500	2.8	2.8	2.8	2.8	2.8
24.000	2.8	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time-Depth Curve: 1	
Label	1
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.0	0.0	0.0	0.0
1.500	0.0	0.0	0.0	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.1
3.000	0.1	0.1	0.1	0.1	0.1
3.500	0.1	0.1	0.1	0.1	0.1
4.000	0.1	0.1	0.1	0.1	0.1
4.500	0.1	0.1	0.1	0.2	0.2
5.000	0.2	0.2	0.2	0.2	0.2
5.500	0.2	0.2	0.2	0.2	0.2
6.000	0.2	0.2	0.2	0.2	0.2
6.500	0.2	0.2	0.2	0.2	0.2
7.000	0.3	0.3	0.3	0.3	0.3
7.500	0.3	0.3	0.3	0.3	0.3
8.000	0.3	0.3	0.3	0.3	0.4
8.500	0.4	0.4	0.4	0.4	0.4
9.000	0.4	0.4	0.4	0.4	0.5
9.500	0.5	0.5	0.5	0.5	0.5
10.000	0.5	0.5	0.6	0.6	0.6
10.500	0.6	0.6	0.6	0.7	0.7
11.000	0.7	0.7	0.7	0.8	0.8
11.500	0.8	0.9	1.0	1.0	1.2
12.000	1.4	1.6	1.8	1.9	1.9
12.500	2.0	2.0	2.0	2.1	2.1
13.000	2.1	2.1	2.1	2.2	2.2
13.500	2.2	2.2	2.2	2.3	2.3
14.000	2.3	2.3	2.3	2.3	2.3
14.500	2.3	2.4	2.4	2.4	2.4
15.000	2.4	2.4	2.4	2.4	2.4
15.500	2.4	2.5	2.5	2.5	2.5
16.000	2.5	2.5	2.5	2.5	2.5
16.500	2.5	2.5	2.5	2.5	2.5
17.000	2.6	2.6	2.6	2.6	2.6

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	2.6	2.6	2.6	2.6	2.6
18.000	2.6	2.6	2.6	2.6	2.6
18.500	2.6	2.6	2.6	2.6	2.6
19.000	2.7	2.7	2.7	2.7	2.7
19.500	2.7	2.7	2.7	2.7	2.7
20.000	2.7	2.7	2.7	2.7	2.7
20.500	2.7	2.7	2.7	2.7	2.7
21.000	2.7	2.7	2.7	2.7	2.7
21.500	2.7	2.7	2.7	2.7	2.8
22.000	2.8	2.8	2.8	2.8	2.8
22.500	2.8	2.8	2.8	2.8	2.8
23.000	2.8	2.8	2.8	2.8	2.8
23.500	2.8	2.8	2.8	2.8	2.8
24.000	2.8	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time-Depth Curve: 10	
Label	10
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.3	0.3	0.3
5.500	0.3	0.3	0.3	0.4	0.4
6.000	0.4	0.4	0.4	0.4	0.4
6.500	0.4	0.4	0.4	0.4	0.5
7.000	0.5	0.5	0.5	0.5	0.5
7.500	0.5	0.5	0.5	0.6	0.6
8.000	0.6	0.6	0.6	0.6	0.6
8.500	0.7	0.7	0.7	0.7	0.7
9.000	0.7	0.8	0.8	0.8	0.8
9.500	0.8	0.9	0.9	0.9	0.9
10.000	1.0	1.0	1.0	1.0	1.1
10.500	1.1	1.1	1.2	1.2	1.2
11.000	1.3	1.3	1.4	1.4	1.5
11.500	1.5	1.6	1.7	1.9	2.1
12.000	2.6	3.0	3.2	3.4	3.5
12.500	3.6	3.7	3.7	3.8	3.8
13.000	3.8	3.9	3.9	3.9	4.0
13.500	4.0	4.0	4.1	4.1	4.1
14.000	4.2	4.2	4.2	4.2	4.2
14.500	4.3	4.3	4.3	4.3	4.4
15.000	4.4	4.4	4.4	4.4	4.4
15.500	4.5	4.5	4.5	4.5	4.5
16.000	4.5	4.5	4.6	4.6	4.6
16.500	4.6	4.6	4.6	4.6	4.6
17.000	4.7	4.7	4.7	4.7	4.7

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	4.7	4.7	4.7	4.7	4.7
18.000	4.8	4.8	4.8	4.8	4.8
18.500	4.8	4.8	4.8	4.8	4.8
19.000	4.8	4.8	4.8	4.9	4.9
19.500	4.9	4.9	4.9	4.9	4.9
20.000	4.9	4.9	4.9	4.9	4.9
20.500	4.9	4.9	4.9	5.0	5.0
21.000	5.0	5.0	5.0	5.0	5.0
21.500	5.0	5.0	5.0	5.0	5.0
22.000	5.0	5.0	5.0	5.0	5.0
22.500	5.0	5.1	5.1	5.1	5.1
23.000	5.1	5.1	5.1	5.1	5.1
23.500	5.1	5.1	5.1	5.1	5.1
24.000	5.1	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time-Depth Curve: 10	
Label	10
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.3	0.3	0.3
5.500	0.3	0.3	0.3	0.4	0.4
6.000	0.4	0.4	0.4	0.4	0.4
6.500	0.4	0.4	0.4	0.4	0.5
7.000	0.5	0.5	0.5	0.5	0.5
7.500	0.5	0.5	0.5	0.6	0.6
8.000	0.6	0.6	0.6	0.6	0.6
8.500	0.7	0.7	0.7	0.7	0.7
9.000	0.7	0.8	0.8	0.8	0.8
9.500	0.8	0.9	0.9	0.9	0.9
10.000	1.0	1.0	1.0	1.0	1.1
10.500	1.1	1.1	1.2	1.2	1.2
11.000	1.3	1.3	1.4	1.4	1.5
11.500	1.5	1.6	1.7	1.9	2.1
12.000	2.6	3.0	3.2	3.4	3.5
12.500	3.6	3.7	3.7	3.8	3.8
13.000	3.8	3.9	3.9	3.9	4.0
13.500	4.0	4.0	4.1	4.1	4.1
14.000	4.2	4.2	4.2	4.2	4.2
14.500	4.3	4.3	4.3	4.3	4.4
15.000	4.4	4.4	4.4	4.4	4.4
15.500	4.5	4.5	4.5	4.5	4.5
16.000	4.5	4.5	4.6	4.6	4.6
16.500	4.6	4.6	4.6	4.6	4.6
17.000	4.7	4.7	4.7	4.7	4.7

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	4.7	4.7	4.7	4.7	4.7
18.000	4.8	4.8	4.8	4.8	4.8
18.500	4.8	4.8	4.8	4.8	4.8
19.000	4.8	4.8	4.8	4.9	4.9
19.500	4.9	4.9	4.9	4.9	4.9
20.000	4.9	4.9	4.9	4.9	4.9
20.500	4.9	4.9	4.9	5.0	5.0
21.000	5.0	5.0	5.0	5.0	5.0
21.500	5.0	5.0	5.0	5.0	5.0
22.000	5.0	5.0	5.0	5.0	5.0
22.500	5.0	5.1	5.1	5.1	5.1
23.000	5.1	5.1	5.1	5.1	5.1
23.500	5.1	5.1	5.1	5.1	5.1
24.000	5.1	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time-Depth Curve: 100	
Label	100
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.1	0.1	0.1	0.1
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.2	0.2	0.2
2.000	0.2	0.2	0.2	0.2	0.2
2.500	0.2	0.2	0.3	0.3	0.3
3.000	0.3	0.3	0.3	0.3	0.3
3.500	0.3	0.3	0.4	0.4	0.4
4.000	0.4	0.4	0.4	0.4	0.4
4.500	0.5	0.5	0.5	0.5	0.5
5.000	0.5	0.5	0.5	0.6	0.6
5.500	0.6	0.6	0.6	0.6	0.6
6.000	0.7	0.7	0.7	0.7	0.7
6.500	0.7	0.8	0.8	0.8	0.8
7.000	0.8	0.8	0.9	0.9	0.9
7.500	0.9	1.0	1.0	1.0	1.0
8.000	1.0	1.1	1.1	1.1	1.1
8.500	1.2	1.2	1.2	1.3	1.3
9.000	1.3	1.4	1.4	1.4	1.5
9.500	1.5	1.6	1.6	1.6	1.7
10.000	1.7	1.8	1.8	1.9	1.9
10.500	2.0	2.0	2.1	2.2	2.2
11.000	2.3	2.4	2.4	2.5	2.6
11.500	2.7	2.9	3.1	3.4	3.8
12.000	4.6	5.3	5.7	6.0	6.3
12.500	6.4	6.5	6.6	6.7	6.8
13.000	6.9	6.9	7.0	7.1	7.1
13.500	7.2	7.2	7.3	7.3	7.4
14.000	7.4	7.5	7.5	7.6	7.6
14.500	7.6	7.7	7.7	7.7	7.8
15.000	7.8	7.9	7.9	7.9	7.9
15.500	8.0	8.0	8.0	8.1	8.1
16.000	8.1	8.1	8.2	8.2	8.2
16.500	8.2	8.2	8.3	8.3	8.3
17.000	8.3	8.3	8.4	8.4	8.4

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	8.4	8.4	8.4	8.5	8.5
18.000	8.5	8.5	8.5	8.5	8.5
18.500	8.6	8.6	8.6	8.6	8.6
19.000	8.6	8.6	8.7	8.7	8.7
19.500	8.7	8.7	8.7	8.7	8.7
20.000	8.8	8.8	8.8	8.8	8.8
20.500	8.8	8.8	8.8	8.8	8.9
21.000	8.9	8.9	8.9	8.9	8.9
21.500	8.9	8.9	8.9	9.0	9.0
22.000	9.0	9.0	9.0	9.0	9.0
22.500	9.0	9.0	9.0	9.0	9.1
23.000	9.1	9.1	9.1	9.1	9.1
23.500	9.1	9.1	9.1	9.1	9.1
24.000	9.2	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time-Depth Curve: 100	
Label	100
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.1	0.1	0.1	0.1
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.2	0.2	0.2
2.000	0.2	0.2	0.2	0.2	0.2
2.500	0.2	0.2	0.3	0.3	0.3
3.000	0.3	0.3	0.3	0.3	0.3
3.500	0.3	0.3	0.4	0.4	0.4
4.000	0.4	0.4	0.4	0.4	0.4
4.500	0.5	0.5	0.5	0.5	0.5
5.000	0.5	0.5	0.5	0.6	0.6
5.500	0.6	0.6	0.6	0.6	0.6
6.000	0.7	0.7	0.7	0.7	0.7
6.500	0.7	0.8	0.8	0.8	0.8
7.000	0.8	0.8	0.9	0.9	0.9
7.500	0.9	1.0	1.0	1.0	1.0
8.000	1.0	1.1	1.1	1.1	1.1
8.500	1.2	1.2	1.2	1.3	1.3
9.000	1.3	1.4	1.4	1.4	1.5
9.500	1.5	1.6	1.6	1.6	1.7
10.000	1.7	1.8	1.8	1.9	1.9
10.500	2.0	2.0	2.1	2.2	2.2
11.000	2.3	2.4	2.4	2.5	2.6
11.500	2.7	2.9	3.1	3.4	3.8
12.000	4.6	5.3	5.7	6.0	6.3
12.500	6.4	6.5	6.6	6.7	6.8
13.000	6.9	6.9	7.0	7.1	7.1
13.500	7.2	7.2	7.3	7.3	7.4
14.000	7.4	7.5	7.5	7.6	7.6
14.500	7.6	7.7	7.7	7.7	7.8
15.000	7.8	7.9	7.9	7.9	7.9
15.500	8.0	8.0	8.0	8.1	8.1
16.000	8.1	8.1	8.2	8.2	8.2
16.500	8.2	8.2	8.3	8.3	8.3
17.000	8.3	8.3	8.4	8.4	8.4

Subsection: Time-Depth Curve  
 Label: 1-10-100-90%  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	8.4	8.4	8.4	8.5	8.5
18.000	8.5	8.5	8.5	8.5	8.5
18.500	8.6	8.6	8.6	8.6	8.6
19.000	8.6	8.6	8.7	8.7	8.7
19.500	8.7	8.7	8.7	8.7	8.7
20.000	8.8	8.8	8.8	8.8	8.8
20.500	8.8	8.8	8.8	8.8	8.9
21.000	8.9	8.9	8.9	8.9	8.9
21.500	8.9	8.9	8.9	9.0	9.0
22.000	9.0	9.0	9.0	9.0	9.0
22.500	9.0	9.0	9.0	9.0	9.1
23.000	9.1	9.1	9.1	9.1	9.1
23.500	9.1	9.1	9.1	9.1	9.1
24.000	9.2	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time of Concentration Calculations  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.129 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	507.00 ft
Manning's n	0.011
Slope	0.003 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	4.35 ft/s
Segment Time of Concentration	0.032 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.166 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1A  
Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

#### ==== SCS Channel Flow

$$T_c = \frac{(L_f / V) / 3600}{R = Q_a / W_p}$$
$$V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n$$

Where:

- R= Hydraulic radius
- A<sub>q</sub>= Flow area, square feet
- W<sub>p</sub>= Wetted perimeter, feet
- V= Velocity, ft/sec
- S<sub>f</sub>= Slope, ft/ft
- n= Manning's n
- T<sub>c</sub>= Time of concentration, hours
- L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{(L_f / V) / 3600}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{0.5})$$

Where:

- V= Velocity, ft/sec
- S<sub>f</sub>= Slope, ft/ft
- T<sub>c</sub>= Time of concentration, hours
- L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))}{T_c = \text{Time of concentration, hours}}$$

Where:

- n= Manning's n
- L<sub>f</sub>= Flow length, feet
- P= 2yr, 24hr Rain depth, inches
- S<sub>f</sub>= Slope, %

Subsection: Time of Concentration Calculations  
 Label: EDA-1A  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.129 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	507.00 ft
Manning's n	0.011
Slope	0.003 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	4.35 ft/s
Segment Time of Concentration	0.032 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.166 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1A  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

#### ==== SCS Channel Flow

$$T_c = \frac{R}{Q_a / W_p}$$
$$V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
A<sub>q</sub>= Flow area, square feet  
W<sub>p</sub>= Wetted perimeter, feet  
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
n= Manning's n  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{V}{(L_f / V) / 3600}$$

Unpaved surface:  
 $V = 16.1345 * (S_f^{0.5})$

Paved Surface:  
 $V = 20.3282 * (S_f^{0.5})$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{0.007 * ((n * L_f)^{0.8})}{((P^{0.5}) * (S_f^{0.4}))}$$

Where: T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %

Subsection: Time of Concentration Calculations  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.129 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	507.00 ft
Manning's n	0.011
Slope	0.003 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	4.35 ft/s
Segment Time of Concentration	0.032 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.166 hours
-----------------------------------	-------------

Subsection: Time of Concentration Calculations  
Label: EDA-1A  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

#### ==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n}$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
A<sub>q</sub>= Flow area, square feet  
W<sub>p</sub>= Wetted perimeter, feet  
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
n= Manning's n  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{0.5})$$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Where: T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %



Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

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Segment #1: TR-55 Sheet Flow

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Hydraulic Length	92.00 ft
Manning's n	0.400
Slope	0.008 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.05 ft/s
Segment Time of Concentration	0.469 hours

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Segment #2: TR-55 Shallow Concentrated Flow

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Hydraulic Length	320.00 ft
Is Paved?	False
Slope	0.008 ft/ft
Average Velocity	1.44 ft/s
Segment Time of Concentration	0.062 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.530 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{0.5})$   
  
Paved Surface:  
 $V = 20.3282 * (Sf^{0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet

Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: TR-55 Sheet Flow

---

Hydraulic Length	92.00 ft
Manning's n	0.400
Slope	0.008 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.05 ft/s
Segment Time of Concentration	0.469 hours

---

---

Segment #2: TR-55 Shallow Concentrated Flow

---

Hydraulic Length	320.00 ft
Is Paved?	False
Slope	0.008 ft/ft
Average Velocity	1.44 ft/s
Segment Time of Concentration	0.062 hours

---

---

Time of Concentration (Composite)

---

Time of Concentration (Composite)	0.530 hours
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---

Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{0.5})$   
  
Paved Surface:  
 $V = 20.3282 * (Sf^{0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet

Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

---

Segment #1: TR-55 Sheet Flow

---

Hydraulic Length	92.00 ft
Manning's n	0.400
Slope	0.008 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.05 ft/s
Segment Time of Concentration	0.469 hours

---

---

Segment #2: TR-55 Shallow Concentrated Flow

---

Hydraulic Length	320.00 ft
Is Paved?	False
Slope	0.008 ft/ft
Average Velocity	1.44 ft/s
Segment Time of Concentration	0.062 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.530 hours
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Subsection: Time of Concentration Calculations  
Label: EDA-1B  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{*0.5})$   
  
Paved Surface:  
 $V = 20.3282 * (Sf^{*0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet



Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

---

Segment #1: User Defined Tc	
Time of Concentration	0.083 hours

---

---

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

---

Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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---

---

Time of Concentration (Composite)

---

Time of Concentration (Composite)	0.083 hours
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---

Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

---

Segment #1: User Defined Tc	
Time of Concentration	0.083 hours

---

---

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

---

Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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---

---

Time of Concentration (Composite)

---

Time of Concentration (Composite)	0.083 hours
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---

Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: User Defined Tc	
Time of Concentration	0.083 hours

---

---

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

---

Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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---

---

Time of Concentration (Composite)

---

Time of Concentration (Composite)	0.083 hours
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---

Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
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---

Time of Concentration (Composite)

---

Time of Concentration (Composite)	0.083 hours
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---

Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Time of Concentration Results

---

Segment #1: User Defined Tc

---

Time of Concentration	0.083 hours
-----------------------	-------------

---

---

Time of Concentration (Composite)

---

Time of Concentration (Composite)	0.083 hours
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---

Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Time of Concentration Results

---

Segment #1: User Defined Tc	
Time of Concentration	0.083 hours

---

---

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

---

Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.130 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	503.00 ft
Manning's n	0.013
Slope	0.002 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.047 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.181 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1D  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

#### ==== SCS Channel Flow

$$T_c = \frac{(L_f / V) / 3600}{R = Q_a / W_p}$$
$$V = (1.49 * (R^{2/3}) * (S_f^{0.5})) / n$$

Where:

- R= Hydraulic radius
- A<sub>q</sub>= Flow area, square feet
- W<sub>p</sub>= Wetted perimeter, feet
- V= Velocity, ft/sec
- S<sub>f</sub>= Slope, ft/ft
- n= Manning's n
- T<sub>c</sub>= Time of concentration, hours
- L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{(L_f / V) / 3600}{V = 16.1345 * (S_f^{0.5})}$$

Where:

- Paved Surface:  
 $V = 20.3282 * (S_f^{0.5})$
- (L<sub>f</sub> / V) / 3600
- V= Velocity, ft/sec
- S<sub>f</sub>= Slope, ft/ft
- T<sub>c</sub>= Time of concentration, hours
- L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}) / ((P^{0.5}) * (S_f^{0.4}))}{Where:$$

T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %

Subsection: Time of Concentration Calculations  
 Label: PDA-1D  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.130 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	503.00 ft
Manning's n	0.013
Slope	0.002 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.047 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.181 hours
-----------------------------------	-------------

Subsection: Time of Concentration Calculations  
Label: PDA-1D  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{*0.5})$

Paved Surface:  
 $V = 20.3282 * (Sf^{*0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Sheet Flow**

Tc =  $(0.007 * ((n * Lf)^{*0.8}) / ((P^{*0.5}) * (Sf^{*0.4}))$

Where: Tc= Time of concentration, hours  
n= Manning's n  
Lf= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
Sf= Slope, %

Subsection: Time of Concentration Calculations  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	110.00 ft
Manning's n	0.150
Slope	0.040 ft/ft
2 Year 24 Hour Depth	3.4 in
Average Velocity	0.24 ft/s
Segment Time of Concentration	0.130 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	62.00 ft
Is Paved?	True
Slope	0.030 ft/ft
Average Velocity	3.52 ft/s
Segment Time of Concentration	0.005 hours

Segment #3: TR-55 Channel Flow

Flow Area	3.1 ft <sup>2</sup>
Hydraulic Length	503.00 ft
Manning's n	0.013
Slope	0.002 ft/ft
Wetted Perimeter	6.28 ft
Average Velocity	2.98 ft/s
Segment Time of Concentration	0.047 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.181 hours
-----------------------------------	-------------

Subsection: Time of Concentration Calculations  
Label: PDA-1D  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

#### ==== SCS Channel Flow

$$T_c = \frac{R = Q_a / W_p}{V = (1.49 * (R^{2/3}) * (S_f^{0.5})) / n}$$

Where:  $(L_f / V) / 3600$   
R= Hydraulic radius  
A<sub>q</sub>= Flow area, square feet  
W<sub>p</sub>= Wetted perimeter, feet  
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
n= Manning's n  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

$$T_c = \frac{\text{Unpaved surface:}}{V = 16.1345 * (S_f^{0.5})}$$

$$\text{Paved Surface:}$$
$$V = 20.3282 * (S_f^{0.5})$$

Where:  $(L_f / V) / 3600$   
V= Velocity, ft/sec  
S<sub>f</sub>= Slope, ft/ft  
T<sub>c</sub>= Time of concentration, hours  
L<sub>f</sub>= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Where: T<sub>c</sub>= Time of concentration, hours  
n= Manning's n  
L<sub>f</sub>= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
S<sub>f</sub>= Slope, %



Subsection: Runoff CN-Area  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	138,487.966	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	24,708.545	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	41,513.947	0.0	0.0	80.000
Woods - good - Soil B	55.000	7,825.884	0.0	0.0	55.000
Woods - good - Soil D	77.000	3,348.405	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	215,884.747	(N/A)	(N/A)	88.419

Subsection: Runoff CN-Area  
Label: EDA-1A  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
Label: EDA-1A  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: EDA-1B  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Pasture, grassland, or range - good - Soil B	61.000	19,262.670	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	1,637.698	0.0	0.0	80.000
Woods - good - Soil B	55.000	119,963.994	0.0	0.0	55.000
Woods - good - Soil D	77.000	2,477.730	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	143,342.092	(N/A)	(N/A)	56.472

Subsection: Runoff CN-Area  
Label: EDA-1B  
Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
Label: EDA-1B  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
 Label: PDA-1A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	60,315.384	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	24,484.152	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	84,799.535	(N/A)	(N/A)	87.317

Subsection: Runoff CN-Area  
Label: PDA-1A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
Label: PDA-1A  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	33,494.985	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	2,402.982	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	35,897.967	(N/A)	(N/A)	95.523

Subsection: Runoff CN-Area  
Label: PDA-1B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
Label: PDA-1B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
 Label: PDA-1C  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	13,173.348	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	3,226.530	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	174.312	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	16,574.190	(N/A)	(N/A)	90.608

Subsection: Runoff CN-Area  
Label: PDA-1C  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
Label: PDA-1C  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	135,462.547	0.0	0.0	98.000
Pasture, grassland, or range - good - Soil B	61.000	35,571.246	0.0	0.0	61.000
Pasture, grassland, or range - good - Soil D	80.000	38,896.838	0.0	0.0	80.000
Woods - good - Soil B	55.000	10,442.771	0.0	0.0	55.000
Woods - good - Soil D	77.000	1,100.928	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	221,474.330	(N/A)	(N/A)	86.764

Subsection: Runoff CN-Area  
Label: PDA-1D  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
Label: PDA-1D  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.166 hours
Area (User Defined)	215,884.747 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
7.400	0.00	0.00	0.00	0.00	0.01
7.650	0.01	0.01	0.01	0.01	0.01
7.900	0.02	0.02	0.02	0.02	0.02
8.150	0.03	0.03	0.03	0.03	0.04
8.400	0.04	0.04	0.04	0.05	0.05
8.650	0.05	0.06	0.06	0.06	0.07
8.900	0.07	0.08	0.08	0.08	0.09
9.150	0.09	0.10	0.10	0.11	0.11
9.400	0.12	0.12	0.13	0.13	0.14
9.650	0.14	0.15	0.16	0.16	0.17
9.900	0.17	0.18	0.19	0.19	0.20
10.150	0.21	0.22	0.22	0.23	0.24
10.400	0.25	0.26	0.28	0.29	0.30
10.650	0.31	0.32	0.33	0.35	0.36
10.900	0.37	0.38	0.40	0.41	0.43
11.150	0.46	0.49	0.52	0.56	0.59
11.400	0.63	0.68	0.72	0.79	0.92
11.650	1.10	1.38	1.71	2.09	2.49
11.900	2.94	3.66	5.06	6.50	7.47
12.150	7.71	6.84	5.69	4.81	4.18
12.400	3.63	3.12	2.62	2.18	1.81
12.650	1.54	1.38	1.27	1.20	1.13
12.900	1.08	1.03	0.97	0.93	0.89
13.150	0.85	0.83	0.81	0.80	0.78
13.400	0.77	0.76	0.74	0.73	0.72
13.650	0.70	0.69	0.68	0.66	0.65
13.900	0.64	0.62	0.61	0.60	0.59
14.150	0.58	0.57	0.56	0.55	0.55
14.400	0.54	0.54	0.53	0.52	0.52
14.650	0.51	0.50	0.50	0.49	0.48
14.900	0.48	0.47	0.46	0.46	0.45
15.150	0.44	0.44	0.43	0.42	0.42
15.400	0.41	0.40	0.40	0.39	0.38
15.650	0.38	0.37	0.36	0.36	0.35

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
15.900	0.34	0.34	0.33	0.32	0.32
16.150	0.31	0.31	0.31	0.30	0.30
16.400	0.30	0.29	0.29	0.29	0.28
16.650	0.28	0.28	0.28	0.27	0.27
16.900	0.27	0.26	0.26	0.26	0.26
17.150	0.25	0.25	0.25	0.24	0.24
17.400	0.24	0.23	0.23	0.23	0.23
17.650	0.22	0.22	0.22	0.21	0.21
17.900	0.21	0.21	0.20	0.20	0.20
18.150	0.19	0.19	0.19	0.19	0.19
18.400	0.19	0.19	0.19	0.19	0.19
18.650	0.19	0.18	0.18	0.18	0.18
18.900	0.18	0.18	0.18	0.18	0.18
19.150	0.18	0.18	0.17	0.17	0.17
19.400	0.17	0.17	0.17	0.17	0.17
19.650	0.17	0.17	0.17	0.16	0.16
19.900	0.16	0.16	0.16	0.16	0.16
20.150	0.16	0.16	0.16	0.16	0.16
20.400	0.16	0.15	0.15	0.15	0.15
20.650	0.15	0.15	0.15	0.15	0.15
20.900	0.15	0.15	0.15	0.15	0.15
21.150	0.15	0.14	0.14	0.14	0.14
21.400	0.14	0.14	0.14	0.14	0.14
21.650	0.14	0.14	0.14	0.14	0.14
21.900	0.14	0.13	0.13	0.13	0.13
22.150	0.13	0.13	0.13	0.13	0.13
22.400	0.13	0.13	0.13	0.13	0.13
22.650	0.13	0.12	0.12	0.12	0.12
22.900	0.12	0.12	0.12	0.12	0.12
23.150	0.12	0.12	0.12	0.12	0.12
23.400	0.11	0.11	0.11	0.11	0.11
23.650	0.11	0.11	0.11	0.11	0.11
23.900	0.11	0.11	0.11	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.166 hours
Area (User Defined)	215,884.747 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
4.850	0.00	0.00	0.00	0.00	0.01
5.100	0.01	0.01	0.01	0.01	0.02
5.350	0.02	0.02	0.02	0.02	0.03
5.600	0.03	0.03	0.03	0.04	0.04
5.850	0.04	0.04	0.04	0.05	0.05
6.100	0.05	0.05	0.06	0.06	0.06
6.350	0.07	0.07	0.07	0.07	0.08
6.600	0.08	0.09	0.09	0.09	0.10
6.850	0.10	0.10	0.11	0.11	0.12
7.100	0.12	0.13	0.13	0.13	0.14
7.350	0.14	0.15	0.15	0.16	0.16
7.600	0.17	0.17	0.18	0.18	0.19
7.850	0.19	0.20	0.20	0.21	0.22
8.100	0.22	0.23	0.24	0.25	0.25
8.350	0.26	0.27	0.28	0.29	0.30
8.600	0.31	0.32	0.33	0.34	0.35
8.850	0.37	0.38	0.39	0.40	0.41
9.100	0.42	0.44	0.45	0.46	0.47
9.350	0.49	0.50	0.51	0.52	0.54
9.600	0.55	0.57	0.58	0.59	0.61
9.850	0.62	0.64	0.65	0.66	0.68
10.100	0.70	0.72	0.74	0.76	0.79
10.350	0.81	0.84	0.86	0.89	0.92
10.600	0.94	0.97	1.00	1.03	1.06
10.850	1.08	1.11	1.14	1.17	1.21
11.100	1.25	1.31	1.39	1.47	1.56
11.350	1.65	1.75	1.85	1.95	2.11
11.600	2.44	2.91	3.59	4.37	5.27
11.850	6.19	7.20	8.78	11.88	14.95
12.100	16.84	17.11	14.99	12.34	10.34
12.350	8.91	7.68	6.58	5.51	4.57
12.600	3.79	3.21	2.86	2.64	2.48
12.850	2.35	2.23	2.12	2.01	1.91
13.100	1.82	1.76	1.71	1.67	1.64

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.350	1.61	1.58	1.55	1.52	1.50
13.600	1.47	1.44	1.41	1.38	1.36
13.850	1.33	1.30	1.27	1.24	1.22
14.100	1.19	1.17	1.15	1.14	1.12
14.350	1.11	1.10	1.08	1.07	1.06
14.600	1.04	1.03	1.02	1.00	0.99
14.850	0.98	0.96	0.95	0.94	0.92
15.100	0.91	0.89	0.88	0.87	0.85
15.350	0.84	0.83	0.81	0.80	0.79
15.600	0.77	0.76	0.74	0.73	0.72
15.850	0.70	0.69	0.68	0.66	0.65
16.100	0.64	0.63	0.62	0.61	0.61
16.350	0.60	0.59	0.59	0.58	0.58
16.600	0.57	0.56	0.56	0.55	0.55
16.850	0.54	0.53	0.53	0.52	0.52
17.100	0.51	0.51	0.50	0.49	0.49
17.350	0.48	0.47	0.47	0.46	0.46
17.600	0.45	0.44	0.44	0.43	0.43
17.850	0.42	0.41	0.41	0.40	0.40
18.100	0.39	0.39	0.39	0.38	0.38
18.350	0.38	0.38	0.38	0.37	0.37
18.600	0.37	0.37	0.37	0.36	0.36
18.850	0.36	0.36	0.36	0.36	0.35
19.100	0.35	0.35	0.35	0.35	0.35
19.350	0.34	0.34	0.34	0.34	0.34
19.600	0.33	0.33	0.33	0.33	0.33
19.850	0.33	0.32	0.32	0.32	0.32
20.100	0.32	0.31	0.31	0.31	0.31
20.350	0.31	0.31	0.31	0.31	0.30
20.600	0.30	0.30	0.30	0.30	0.30
20.850	0.30	0.29	0.29	0.29	0.29
21.100	0.29	0.29	0.29	0.29	0.28
21.350	0.28	0.28	0.28	0.28	0.28
21.600	0.28	0.27	0.27	0.27	0.27
21.850	0.27	0.27	0.27	0.26	0.26
22.100	0.26	0.26	0.26	0.26	0.26
22.350	0.25	0.25	0.25	0.25	0.25
22.600	0.25	0.25	0.25	0.24	0.24
22.850	0.24	0.24	0.24	0.24	0.24
23.100	0.23	0.23	0.23	0.23	0.23
23.350	0.23	0.23	0.23	0.22	0.22
23.600	0.22	0.22	0.22	0.22	0.22
23.850	0.21	0.21	0.21	0.21	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.166 hours
Area (User Defined)	215,884.747 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.000	0.00	0.00	0.01	0.01	0.01
3.250	0.02	0.02	0.02	0.03	0.03
3.500	0.04	0.04	0.05	0.05	0.05
3.750	0.06	0.06	0.07	0.07	0.08
4.000	0.08	0.09	0.09	0.09	0.10
4.250	0.10	0.11	0.11	0.12	0.12
4.500	0.13	0.13	0.14	0.14	0.15
4.750	0.15	0.16	0.16	0.16	0.17
5.000	0.17	0.18	0.18	0.19	0.19
5.250	0.20	0.20	0.21	0.21	0.22
5.500	0.22	0.23	0.23	0.24	0.24
5.750	0.25	0.25	0.26	0.26	0.27
6.000	0.27	0.28	0.29	0.29	0.30
6.250	0.31	0.32	0.32	0.33	0.34
6.500	0.35	0.36	0.37	0.38	0.39
6.750	0.40	0.41	0.42	0.43	0.44
7.000	0.45	0.46	0.47	0.48	0.49
7.250	0.50	0.51	0.52	0.53	0.54
7.500	0.56	0.57	0.58	0.59	0.60
7.750	0.61	0.62	0.64	0.65	0.66
8.000	0.67	0.68	0.70	0.72	0.73
8.250	0.75	0.78	0.80	0.82	0.84
8.500	0.87	0.89	0.91	0.93	0.96
8.750	0.98	1.01	1.03	1.06	1.08
9.000	1.11	1.13	1.16	1.18	1.21
9.250	1.23	1.26	1.29	1.31	1.34
9.500	1.37	1.39	1.42	1.45	1.48
9.750	1.50	1.53	1.56	1.59	1.61
10.000	1.64	1.67	1.71	1.75	1.79
10.250	1.84	1.89	1.94	1.99	2.05
10.500	2.10	2.15	2.21	2.26	2.31
10.750	2.37	2.42	2.48	2.53	2.59
11.000	2.65	2.71	2.81	2.93	3.08
11.250	3.25	3.44	3.63	3.82	4.02

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.500	4.22	4.55	5.22	6.19	7.60
11.750	9.19	10.99	12.81	14.77	17.84
12.000	23.84	29.69	33.12	33.35	29.05
12.250	23.78	19.83	17.03	14.63	12.51
12.500	10.45	8.65	7.16	6.07	5.40
12.750	4.98	4.67	4.42	4.19	3.99
13.000	3.78	3.59	3.42	3.30	3.20
13.250	3.13	3.07	3.01	2.96	2.91
13.500	2.85	2.80	2.75	2.69	2.64
13.750	2.59	2.53	2.48	2.43	2.38
14.000	2.32	2.27	2.23	2.19	2.15
14.250	2.13	2.10	2.07	2.05	2.02
14.500	2.00	1.97	1.95	1.92	1.89
14.750	1.87	1.84	1.82	1.79	1.77
15.000	1.74	1.72	1.69	1.67	1.64
15.250	1.61	1.59	1.56	1.54	1.51
15.500	1.49	1.46	1.44	1.41	1.38
15.750	1.36	1.33	1.31	1.28	1.26
16.000	1.23	1.21	1.19	1.17	1.15
16.250	1.14	1.13	1.12	1.10	1.09
16.500	1.08	1.07	1.06	1.05	1.04
16.750	1.03	1.01	1.00	0.99	0.98
17.000	0.97	0.96	0.95	0.94	0.92
17.250	0.91	0.90	0.89	0.88	0.87
17.500	0.86	0.85	0.84	0.82	0.81
17.750	0.80	0.79	0.78	0.77	0.76
18.000	0.75	0.74	0.73	0.72	0.71
18.250	0.71	0.71	0.70	0.70	0.70
18.500	0.69	0.69	0.69	0.68	0.68
18.750	0.68	0.67	0.67	0.67	0.66
19.000	0.66	0.66	0.65	0.65	0.65
19.250	0.64	0.64	0.64	0.63	0.63
19.500	0.63	0.62	0.62	0.62	0.61
19.750	0.61	0.61	0.60	0.60	0.59
20.000	0.59	0.59	0.59	0.58	0.58
20.250	0.58	0.58	0.57	0.57	0.57
20.500	0.56	0.56	0.56	0.56	0.55
20.750	0.55	0.55	0.55	0.54	0.54
21.000	0.54	0.54	0.54	0.53	0.53
21.250	0.53	0.52	0.52	0.52	0.52
21.500	0.51	0.51	0.51	0.51	0.50
21.750	0.50	0.50	0.50	0.50	0.49
22.000	0.49	0.49	0.48	0.48	0.48



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1A  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.250	0.48	0.47	0.47	0.47	0.47
22.500	0.46	0.46	0.46	0.46	0.45
22.750	0.45	0.45	0.45	0.44	0.44
23.000	0.44	0.44	0.43	0.43	0.43
23.250	0.43	0.42	0.42	0.42	0.42
23.500	0.41	0.41	0.41	0.41	0.40
23.750	0.40	0.40	0.40	0.39	0.39
24.000	0.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.530 hours
Area (User Defined)	143,342.092 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.100	0.00	0.00	0.01	0.01	0.02
12.350	0.04	0.05	0.07	0.09	0.10
12.600	0.11	0.12	0.12	0.12	0.12
12.850	0.12	0.12	0.11	0.11	0.11
13.100	0.10	0.10	0.10	0.10	0.09
13.350	0.09	0.09	0.09	0.09	0.09
13.600	0.09	0.09	0.08	0.08	0.08
13.850	0.08	0.08	0.08	0.08	0.08
14.100	0.08	0.08	0.08	0.08	0.08
14.350	0.07	0.07	0.07	0.07	0.07
14.600	0.07	0.07	0.07	0.07	0.07
14.850	0.07	0.07	0.07	0.07	0.07
15.100	0.07	0.07	0.07	0.07	0.06
15.350	0.06	0.06	0.06	0.06	0.06
15.600	0.06	0.06	0.06	0.06	0.06
15.850	0.06	0.06	0.06	0.06	0.05
16.100	0.05	0.05	0.05	0.05	0.05
16.350	0.05	0.05	0.05	0.05	0.05
16.600	0.05	0.05	0.05	0.05	0.05
16.850	0.05	0.05	0.04	0.04	0.04
17.100	0.04	0.04	0.04	0.04	0.04
17.350	0.04	0.04	0.04	0.04	0.04
17.600	0.04	0.04	0.04	0.04	0.04
17.850	0.04	0.04	0.04	0.04	0.04
18.100	0.04	0.04	0.03	0.03	0.03
18.350	0.03	0.03	0.03	0.03	0.03
18.600	0.03	0.03	0.03	0.03	0.03
18.850	0.03	0.03	0.03	0.03	0.03
19.100	0.03	0.03	0.03	0.03	0.03
19.350	0.03	0.03	0.03	0.03	0.03
19.600	0.03	0.03	0.03	0.03	0.03
19.850	0.03	0.03	0.03	0.03	0.03
20.100	0.03	0.03	0.03	0.03	0.03
20.350	0.03	0.03	0.03	0.03	0.03

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.600	0.03	0.03	0.03	0.03	0.03
20.850	0.03	0.03	0.03	0.03	0.03
21.100	0.03	0.03	0.03	0.03	0.03
21.350	0.03	0.03	0.03	0.03	0.03
21.600	0.03	0.03	0.03	0.03	0.03
21.850	0.03	0.03	0.03	0.03	0.03
22.100	0.03	0.03	0.02	0.02	0.02
22.350	0.02	0.02	0.02	0.02	0.02
22.600	0.02	0.02	0.02	0.02	0.02
22.850	0.02	0.02	0.02	0.02	0.02
23.100	0.02	0.02	0.02	0.02	0.02
23.350	0.02	0.02	0.02	0.02	0.02
23.600	0.02	0.02	0.02	0.02	0.02
23.850	0.02	0.02	0.02	0.02	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.530 hours
Area (User Defined)	143,342.092 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.600	0.00	0.00	0.00	0.01	0.02
11.850	0.05	0.09	0.15	0.26	0.41
12.100	0.62	0.87	1.15	1.42	1.66
12.350	1.81	1.91	1.96	1.94	1.87
12.600	1.77	1.65	1.53	1.40	1.28
12.850	1.17	1.07	0.98	0.90	0.84
13.100	0.78	0.73	0.69	0.65	0.62
13.350	0.59	0.57	0.55	0.53	0.52
13.600	0.50	0.49	0.48	0.47	0.46
13.850	0.45	0.44	0.43	0.42	0.42
14.100	0.41	0.40	0.39	0.39	0.38
14.350	0.38	0.37	0.37	0.36	0.36
14.600	0.35	0.35	0.34	0.34	0.34
14.850	0.33	0.33	0.33	0.32	0.32
15.100	0.31	0.31	0.31	0.30	0.30
15.350	0.30	0.29	0.29	0.28	0.28
15.600	0.28	0.27	0.27	0.26	0.26
15.850	0.26	0.25	0.25	0.24	0.24
16.100	0.24	0.23	0.23	0.22	0.22
16.350	0.22	0.21	0.21	0.21	0.21
16.600	0.20	0.20	0.20	0.20	0.20
16.850	0.19	0.19	0.19	0.19	0.19
17.100	0.18	0.18	0.18	0.18	0.18
17.350	0.18	0.17	0.17	0.17	0.17
17.600	0.17	0.16	0.16	0.16	0.16
17.850	0.16	0.15	0.15	0.15	0.15
18.100	0.15	0.14	0.14	0.14	0.14
18.350	0.14	0.14	0.14	0.13	0.13
18.600	0.13	0.13	0.13	0.13	0.13
18.850	0.13	0.13	0.13	0.13	0.13
19.100	0.13	0.13	0.13	0.13	0.12
19.350	0.12	0.12	0.12	0.12	0.12
19.600	0.12	0.12	0.12	0.12	0.12
19.850	0.12	0.12	0.12	0.12	0.12

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.100	0.12	0.12	0.11	0.11	0.11
20.350	0.11	0.11	0.11	0.11	0.11
20.600	0.11	0.11	0.11	0.11	0.11
20.850	0.11	0.11	0.11	0.11	0.11
21.100	0.11	0.11	0.11	0.10	0.10
21.350	0.10	0.10	0.10	0.10	0.10
21.600	0.10	0.10	0.10	0.10	0.10
21.850	0.10	0.10	0.10	0.10	0.10
22.100	0.10	0.10	0.10	0.10	0.10
22.350	0.10	0.09	0.09	0.09	0.09
22.600	0.09	0.09	0.09	0.09	0.09
22.850	0.09	0.09	0.09	0.09	0.09
23.100	0.09	0.09	0.09	0.09	0.09
23.350	0.09	0.09	0.08	0.08	0.08
23.600	0.08	0.08	0.08	0.08	0.08
23.850	0.08	0.08	0.08	0.08	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.530 hours
Area (User Defined)	143,342.092 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
9.800	0.00	0.00	0.00	0.01	0.01
10.050	0.01	0.02	0.02	0.03	0.04
10.300	0.04	0.05	0.06	0.07	0.08
10.550	0.09	0.10	0.11	0.13	0.14
10.800	0.15	0.16	0.18	0.19	0.21
11.050	0.23	0.24	0.26	0.28	0.30
11.300	0.33	0.36	0.39	0.42	0.46
11.550	0.50	0.55	0.62	0.72	0.84
11.800	1.00	1.22	1.51	1.87	2.39
12.050	3.07	3.87	4.81	5.73	6.55
12.300	7.21	7.51	7.62	7.53	7.21
12.550	6.77	6.27	5.74	5.21	4.71
12.800	4.23	3.82	3.45	3.13	2.85
13.050	2.62	2.42	2.25	2.10	1.97
13.300	1.86	1.76	1.68	1.61	1.55
13.550	1.49	1.45	1.40	1.37	1.33
13.800	1.30	1.27	1.24	1.22	1.19
14.050	1.17	1.15	1.12	1.10	1.08
14.300	1.06	1.04	1.03	1.01	1.00
14.550	0.98	0.97	0.96	0.95	0.93
14.800	0.92	0.91	0.90	0.89	0.88
15.050	0.87	0.86	0.85	0.83	0.82
15.300	0.81	0.80	0.79	0.78	0.77
15.550	0.76	0.74	0.73	0.72	0.71
15.800	0.70	0.69	0.68	0.66	0.65
16.050	0.64	0.63	0.62	0.61	0.60
16.300	0.59	0.58	0.57	0.56	0.55
16.550	0.55	0.54	0.54	0.53	0.52
16.800	0.52	0.51	0.51	0.50	0.50
17.050	0.49	0.49	0.48	0.48	0.47
17.300	0.47	0.46	0.46	0.45	0.44
17.550	0.44	0.43	0.43	0.42	0.42
17.800	0.41	0.41	0.40	0.40	0.39
18.050	0.39	0.38	0.38	0.37	0.37



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: EDA-1B  
 Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
18.300	0.36	0.36	0.36	0.35	0.35
18.550	0.35	0.35	0.34	0.34	0.34
18.800	0.34	0.34	0.33	0.33	0.33
19.050	0.33	0.33	0.33	0.32	0.32
19.300	0.32	0.32	0.32	0.32	0.32
19.550	0.31	0.31	0.31	0.31	0.31
19.800	0.31	0.30	0.30	0.30	0.30
20.050	0.30	0.30	0.30	0.29	0.29
20.300	0.29	0.29	0.29	0.29	0.29
20.550	0.28	0.28	0.28	0.28	0.28
20.800	0.28	0.28	0.28	0.27	0.27
21.050	0.27	0.27	0.27	0.27	0.27
21.300	0.27	0.27	0.26	0.26	0.26
21.550	0.26	0.26	0.26	0.26	0.26
21.800	0.25	0.25	0.25	0.25	0.25
22.050	0.25	0.25	0.25	0.25	0.24
22.300	0.24	0.24	0.24	0.24	0.24
22.550	0.24	0.24	0.23	0.23	0.23
22.800	0.23	0.23	0.23	0.23	0.23
23.050	0.22	0.22	0.22	0.22	0.22
23.300	0.22	0.22	0.22	0.21	0.21
23.550	0.21	0.21	0.21	0.21	0.21
23.800	0.21	0.21	0.20	0.20	0.20

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	84,799.535 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
7.800	0.00	0.00	0.00	0.00	0.00
8.050	0.00	0.00	0.01	0.01	0.01
8.300	0.01	0.01	0.01	0.01	0.01
8.550	0.01	0.01	0.02	0.02	0.02
8.800	0.02	0.02	0.02	0.02	0.03
9.050	0.03	0.03	0.03	0.03	0.03
9.300	0.04	0.04	0.04	0.04	0.04
9.550	0.05	0.05	0.05	0.05	0.05
9.800	0.06	0.06	0.06	0.06	0.06
10.050	0.07	0.07	0.07	0.08	0.08
10.300	0.08	0.09	0.09	0.10	0.10
10.550	0.10	0.11	0.11	0.12	0.12
10.800	0.13	0.13	0.14	0.14	0.15
11.050	0.15	0.16	0.17	0.19	0.20
11.300	0.22	0.23	0.25	0.26	0.28
11.550	0.33	0.40	0.52	0.65	0.80
11.800	0.95	1.12	1.31	1.92	2.70
12.050	3.01	3.18	2.68	1.96	1.66
12.300	1.47	1.29	1.12	0.94	0.75
12.550	0.63	0.53	0.49	0.46	0.44
12.800	0.42	0.40	0.38	0.37	0.35
13.050	0.33	0.32	0.31	0.31	0.30
13.300	0.30	0.29	0.29	0.28	0.28
13.550	0.27	0.27	0.26	0.26	0.25
13.800	0.25	0.24	0.24	0.23	0.23
14.050	0.22	0.22	0.22	0.21	0.21
14.300	0.21	0.21	0.20	0.20	0.20
14.550	0.20	0.19	0.19	0.19	0.19
14.800	0.18	0.18	0.18	0.18	0.17
15.050	0.17	0.17	0.17	0.16	0.16
15.300	0.16	0.16	0.15	0.15	0.15
15.550	0.15	0.14	0.14	0.14	0.14
15.800	0.13	0.13	0.13	0.13	0.12
16.050	0.12	0.12	0.12	0.12	0.12

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.300	0.11	0.11	0.11	0.11	0.11
16.550	0.11	0.11	0.11	0.11	0.10
16.800	0.10	0.10	0.10	0.10	0.10
17.050	0.10	0.10	0.10	0.09	0.09
17.300	0.09	0.09	0.09	0.09	0.09
17.550	0.09	0.09	0.08	0.08	0.08
17.800	0.08	0.08	0.08	0.08	0.08
18.050	0.08	0.07	0.07	0.07	0.07
18.300	0.07	0.07	0.07	0.07	0.07
18.550	0.07	0.07	0.07	0.07	0.07
18.800	0.07	0.07	0.07	0.07	0.07
19.050	0.07	0.07	0.07	0.07	0.07
19.300	0.07	0.07	0.07	0.07	0.06
19.550	0.06	0.06	0.06	0.06	0.06
19.800	0.06	0.06	0.06	0.06	0.06
20.050	0.06	0.06	0.06	0.06	0.06
20.300	0.06	0.06	0.06	0.06	0.06
20.550	0.06	0.06	0.06	0.06	0.06
20.800	0.06	0.06	0.06	0.06	0.06
21.050	0.06	0.06	0.06	0.06	0.06
21.300	0.05	0.05	0.05	0.05	0.05
21.550	0.05	0.05	0.05	0.05	0.05
21.800	0.05	0.05	0.05	0.05	0.05
22.050	0.05	0.05	0.05	0.05	0.05
22.300	0.05	0.05	0.05	0.05	0.05
22.550	0.05	0.05	0.05	0.05	0.05
22.800	0.05	0.05	0.05	0.05	0.05
23.050	0.05	0.05	0.05	0.05	0.04
23.300	0.04	0.04	0.04	0.04	0.04
23.550	0.04	0.04	0.04	0.04	0.04
23.800	0.04	0.04	0.04	0.04	0.04

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	84,799.535 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
5.200	0.00	0.00	0.00	0.00	0.00
5.450	0.00	0.00	0.01	0.01	0.01
5.700	0.01	0.01	0.01	0.01	0.01
5.950	0.01	0.01	0.01	0.01	0.02
6.200	0.02	0.02	0.02	0.02	0.02
6.450	0.02	0.02	0.03	0.03	0.03
6.700	0.03	0.03	0.03	0.03	0.03
6.950	0.04	0.04	0.04	0.04	0.04
7.200	0.04	0.05	0.05	0.05	0.05
7.450	0.05	0.05	0.06	0.06	0.06
7.700	0.06	0.06	0.07	0.07	0.07
7.950	0.07	0.07	0.08	0.08	0.08
8.200	0.09	0.09	0.09	0.10	0.10
8.450	0.10	0.11	0.11	0.11	0.12
8.700	0.12	0.13	0.13	0.13	0.14
8.950	0.14	0.15	0.15	0.16	0.16
9.200	0.17	0.17	0.18	0.18	0.19
9.450	0.19	0.20	0.20	0.21	0.21
9.700	0.22	0.22	0.23	0.23	0.24
9.950	0.24	0.25	0.26	0.26	0.27
10.200	0.28	0.29	0.30	0.31	0.32
10.450	0.33	0.34	0.35	0.36	0.37
10.700	0.38	0.39	0.41	0.42	0.43
10.950	0.44	0.45	0.47	0.49	0.52
11.200	0.56	0.59	0.63	0.67	0.71
11.450	0.74	0.78	0.93	1.10	1.40
11.700	1.73	2.08	2.46	2.84	3.24
11.950	4.64	6.38	6.94	7.17	5.95
12.200	4.30	3.62	3.17	2.77	2.38
12.450	1.99	1.60	1.34	1.11	1.02
12.700	0.97	0.93	0.89	0.85	0.81
12.950	0.77	0.72	0.69	0.67	0.65
13.200	0.64	0.63	0.62	0.61	0.60
13.450	0.59	0.58	0.57	0.56	0.54

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.700	0.53	0.52	0.51	0.50	0.49
13.950	0.48	0.47	0.46	0.45	0.45
14.200	0.44	0.44	0.43	0.42	0.42
14.450	0.41	0.41	0.40	0.40	0.39
14.700	0.39	0.38	0.38	0.37	0.37
14.950	0.36	0.36	0.35	0.35	0.34
15.200	0.34	0.33	0.32	0.32	0.31
15.450	0.31	0.30	0.30	0.29	0.29
15.700	0.28	0.28	0.27	0.27	0.26
15.950	0.26	0.25	0.25	0.24	0.24
16.200	0.24	0.23	0.23	0.23	0.23
16.450	0.23	0.22	0.22	0.22	0.22
16.700	0.21	0.21	0.21	0.21	0.21
16.950	0.20	0.20	0.20	0.20	0.19
17.200	0.19	0.19	0.19	0.18	0.18
17.450	0.18	0.18	0.17	0.17	0.17
17.700	0.17	0.17	0.16	0.16	0.16
17.950	0.16	0.15	0.15	0.15	0.15
18.200	0.15	0.15	0.15	0.15	0.15
18.450	0.15	0.14	0.14	0.14	0.14
18.700	0.14	0.14	0.14	0.14	0.14
18.950	0.14	0.14	0.14	0.14	0.14
19.200	0.14	0.13	0.13	0.13	0.13
19.450	0.13	0.13	0.13	0.13	0.13
19.700	0.13	0.13	0.13	0.13	0.12
19.950	0.12	0.12	0.12	0.12	0.12
20.200	0.12	0.12	0.12	0.12	0.12
20.450	0.12	0.12	0.12	0.12	0.12
20.700	0.12	0.12	0.12	0.11	0.11
20.950	0.11	0.11	0.11	0.11	0.11
21.200	0.11	0.11	0.11	0.11	0.11
21.450	0.11	0.11	0.11	0.11	0.11
21.700	0.11	0.11	0.11	0.10	0.10
21.950	0.10	0.10	0.10	0.10	0.10
22.200	0.10	0.10	0.10	0.10	0.10
22.450	0.10	0.10	0.10	0.10	0.10
22.700	0.10	0.09	0.09	0.09	0.09
22.950	0.09	0.09	0.09	0.09	0.09
23.200	0.09	0.09	0.09	0.09	0.09
23.450	0.09	0.09	0.09	0.09	0.09
23.700	0.08	0.08	0.08	0.08	0.08
23.950	0.08	0.08	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	84,799.535 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.250	0.00	0.00	0.00	0.01	0.01
3.500	0.01	0.01	0.01	0.01	0.01
3.750	0.02	0.02	0.02	0.02	0.02
4.000	0.02	0.03	0.03	0.03	0.03
4.250	0.03	0.04	0.04	0.04	0.04
4.500	0.04	0.04	0.05	0.05	0.05
4.750	0.05	0.05	0.05	0.06	0.06
5.000	0.06	0.06	0.06	0.07	0.07
5.250	0.07	0.07	0.07	0.08	0.08
5.500	0.08	0.08	0.08	0.08	0.09
5.750	0.09	0.09	0.09	0.09	0.10
6.000	0.10	0.10	0.10	0.11	0.11
6.250	0.11	0.12	0.12	0.12	0.13
6.500	0.13	0.13	0.14	0.14	0.14
6.750	0.15	0.15	0.15	0.16	0.16
7.000	0.17	0.17	0.17	0.18	0.18
7.250	0.19	0.19	0.19	0.20	0.20
7.500	0.21	0.21	0.22	0.22	0.23
7.750	0.23	0.23	0.24	0.24	0.25
8.000	0.25	0.26	0.27	0.27	0.28
8.250	0.29	0.30	0.31	0.31	0.32
8.500	0.33	0.34	0.35	0.36	0.37
8.750	0.38	0.39	0.40	0.41	0.42
9.000	0.43	0.44	0.45	0.46	0.47
9.250	0.48	0.49	0.50	0.51	0.52
9.500	0.53	0.54	0.55	0.56	0.57
9.750	0.58	0.59	0.60	0.61	0.62
10.000	0.64	0.65	0.67	0.68	0.70
10.250	0.72	0.74	0.76	0.78	0.80
10.500	0.83	0.85	0.87	0.89	0.91
10.750	0.93	0.95	0.97	1.00	1.02
11.000	1.04	1.08	1.13	1.19	1.27
11.250	1.34	1.42	1.49	1.57	1.65
11.500	1.72	2.03	2.40	3.02	3.71



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.750	4.43	5.17	5.92	6.69	9.47
12.000	12.85	13.79	14.11	11.62	8.34
12.250	6.98	6.09	5.31	4.56	3.81
12.500	3.05	2.55	2.11	1.95	1.85
12.750	1.77	1.69	1.61	1.53	1.45
13.000	1.37	1.31	1.26	1.23	1.21
13.250	1.19	1.17	1.15	1.13	1.11
13.500	1.09	1.07	1.05	1.03	1.01
13.750	0.98	0.96	0.94	0.92	0.90
14.000	0.88	0.86	0.85	0.84	0.83
14.250	0.82	0.81	0.80	0.79	0.78
14.500	0.77	0.76	0.75	0.74	0.73
14.750	0.72	0.71	0.70	0.69	0.68
15.000	0.67	0.66	0.65	0.64	0.63
15.250	0.62	0.61	0.60	0.59	0.58
15.500	0.57	0.56	0.55	0.54	0.53
15.750	0.52	0.51	0.50	0.49	0.48
16.000	0.47	0.46	0.45	0.45	0.44
16.250	0.44	0.44	0.43	0.43	0.42
16.500	0.42	0.41	0.41	0.40	0.40
16.750	0.40	0.39	0.39	0.38	0.38
17.000	0.37	0.37	0.37	0.36	0.36
17.250	0.35	0.35	0.34	0.34	0.33
17.500	0.33	0.33	0.32	0.32	0.31
17.750	0.31	0.30	0.30	0.30	0.29
18.000	0.29	0.28	0.28	0.28	0.28
18.250	0.28	0.27	0.27	0.27	0.27
18.500	0.27	0.27	0.27	0.27	0.26
18.750	0.26	0.26	0.26	0.26	0.26
19.000	0.26	0.25	0.25	0.25	0.25
19.250	0.25	0.25	0.25	0.25	0.24
19.500	0.24	0.24	0.24	0.24	0.24
19.750	0.24	0.24	0.23	0.23	0.23
20.000	0.23	0.23	0.23	0.23	0.23
20.250	0.23	0.22	0.22	0.22	0.22
20.500	0.22	0.22	0.22	0.22	0.21
20.750	0.21	0.21	0.21	0.21	0.21
21.000	0.21	0.21	0.21	0.21	0.21
21.250	0.20	0.20	0.20	0.20	0.20
21.500	0.20	0.20	0.20	0.20	0.20
21.750	0.20	0.20	0.19	0.19	0.19
22.000	0.19	0.19	0.19	0.19	0.19
22.250	0.19	0.18	0.18	0.18	0.18

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.500	0.18	0.18	0.18	0.18	0.18
22.750	0.18	0.17	0.17	0.17	0.17
23.000	0.17	0.17	0.17	0.17	0.17
23.250	0.17	0.16	0.16	0.16	0.16
23.500	0.16	0.16	0.16	0.16	0.16
23.750	0.16	0.16	0.15	0.15	0.15
24.000	0.15	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	35,897.967 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.200	0.00	0.00	0.00	0.00	0.00
3.450	0.00	0.00	0.00	0.00	0.00
3.700	0.00	0.00	0.00	0.00	0.00
3.950	0.00	0.00	0.00	0.00	0.01
4.200	0.01	0.01	0.01	0.01	0.01
4.450	0.01	0.01	0.01	0.01	0.01
4.700	0.01	0.01	0.01	0.01	0.01
4.950	0.01	0.01	0.01	0.01	0.01
5.200	0.01	0.01	0.01	0.01	0.01
5.450	0.01	0.01	0.01	0.01	0.01
5.700	0.01	0.01	0.01	0.01	0.01
5.950	0.01	0.01	0.01	0.02	0.02
6.200	0.02	0.02	0.02	0.02	0.02
6.450	0.02	0.02	0.02	0.02	0.02
6.700	0.02	0.02	0.02	0.02	0.02
6.950	0.02	0.02	0.02	0.02	0.03
7.200	0.03	0.03	0.03	0.03	0.03
7.450	0.03	0.03	0.03	0.03	0.03
7.700	0.03	0.03	0.03	0.03	0.03
7.950	0.03	0.04	0.04	0.04	0.04
8.200	0.04	0.04	0.04	0.04	0.04
8.450	0.04	0.05	0.05	0.05	0.05
8.700	0.05	0.05	0.05	0.05	0.06
8.950	0.06	0.06	0.06	0.06	0.06
9.200	0.06	0.06	0.07	0.07	0.07
9.450	0.07	0.07	0.07	0.07	0.08
9.700	0.08	0.08	0.08	0.08	0.08
9.950	0.08	0.09	0.09	0.09	0.09
10.200	0.09	0.10	0.10	0.10	0.11
10.450	0.11	0.11	0.11	0.12	0.12
10.700	0.12	0.12	0.13	0.13	0.13
10.950	0.14	0.14	0.14	0.15	0.16
11.200	0.17	0.18	0.19	0.20	0.21
11.450	0.22	0.23	0.27	0.32	0.40

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.700	0.49	0.59	0.68	0.78	0.88
11.950	1.25	1.69	1.81	1.85	1.52
12.200	1.09	0.91	0.80	0.70	0.60
12.450	0.50	0.40	0.33	0.28	0.25
12.700	0.24	0.23	0.22	0.21	0.20
12.950	0.19	0.18	0.17	0.16	0.16
13.200	0.16	0.16	0.15	0.15	0.15
13.450	0.14	0.14	0.14	0.14	0.13
13.700	0.13	0.13	0.13	0.12	0.12
13.950	0.12	0.12	0.11	0.11	0.11
14.200	0.11	0.11	0.11	0.10	0.10
14.450	0.10	0.10	0.10	0.10	0.10
14.700	0.10	0.09	0.09	0.09	0.09
14.950	0.09	0.09	0.09	0.08	0.08
15.200	0.08	0.08	0.08	0.08	0.08
15.450	0.08	0.07	0.07	0.07	0.07
15.700	0.07	0.07	0.07	0.07	0.06
15.950	0.06	0.06	0.06	0.06	0.06
16.200	0.06	0.06	0.06	0.06	0.06
16.450	0.06	0.05	0.05	0.05	0.05
16.700	0.05	0.05	0.05	0.05	0.05
16.950	0.05	0.05	0.05	0.05	0.05
17.200	0.05	0.05	0.05	0.04	0.04
17.450	0.04	0.04	0.04	0.04	0.04
17.700	0.04	0.04	0.04	0.04	0.04
17.950	0.04	0.04	0.04	0.04	0.04
18.200	0.04	0.04	0.04	0.04	0.04
18.450	0.04	0.04	0.03	0.03	0.03
18.700	0.03	0.03	0.03	0.03	0.03
18.950	0.03	0.03	0.03	0.03	0.03
19.200	0.03	0.03	0.03	0.03	0.03
19.450	0.03	0.03	0.03	0.03	0.03
19.700	0.03	0.03	0.03	0.03	0.03
19.950	0.03	0.03	0.03	0.03	0.03
20.200	0.03	0.03	0.03	0.03	0.03
20.450	0.03	0.03	0.03	0.03	0.03
20.700	0.03	0.03	0.03	0.03	0.03
20.950	0.03	0.03	0.03	0.03	0.03
21.200	0.03	0.03	0.03	0.03	0.03
21.450	0.03	0.03	0.03	0.03	0.03
21.700	0.03	0.03	0.03	0.03	0.03
21.950	0.02	0.02	0.02	0.02	0.02
22.200	0.02	0.02	0.02	0.02	0.02

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.450	0.02	0.02	0.02	0.02	0.02
22.700	0.02	0.02	0.02	0.02	0.02
22.950	0.02	0.02	0.02	0.02	0.02
23.200	0.02	0.02	0.02	0.02	0.02
23.450	0.02	0.02	0.02	0.02	0.02
23.700	0.02	0.02	0.02	0.02	0.02
23.950	0.02	0.02	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	35,897.967 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1.750	0.00	0.00	0.00	0.00	0.00
2.000	0.00	0.00	0.00	0.00	0.00
2.250	0.01	0.01	0.01	0.01	0.01
2.500	0.01	0.01	0.01	0.01	0.01
2.750	0.01	0.01	0.01	0.01	0.01
3.000	0.01	0.01	0.01	0.01	0.02
3.250	0.02	0.02	0.02	0.02	0.02
3.500	0.02	0.02	0.02	0.02	0.02
3.750	0.02	0.02	0.02	0.02	0.02
4.000	0.02	0.02	0.02	0.02	0.03
4.250	0.03	0.03	0.03	0.03	0.03
4.500	0.03	0.03	0.03	0.03	0.03
4.750	0.03	0.03	0.03	0.03	0.03
5.000	0.03	0.03	0.03	0.04	0.04
5.250	0.04	0.04	0.04	0.04	0.04
5.500	0.04	0.04	0.04	0.04	0.04
5.750	0.04	0.04	0.04	0.04	0.04
6.000	0.04	0.04	0.04	0.05	0.05
6.250	0.05	0.05	0.05	0.05	0.05
6.500	0.05	0.05	0.05	0.06	0.06
6.750	0.06	0.06	0.06	0.06	0.06
7.000	0.06	0.06	0.07	0.07	0.07
7.250	0.07	0.07	0.07	0.07	0.07
7.500	0.07	0.08	0.08	0.08	0.08
7.750	0.08	0.08	0.08	0.08	0.09
8.000	0.09	0.09	0.09	0.09	0.09
8.250	0.10	0.10	0.10	0.10	0.11
8.500	0.11	0.11	0.11	0.12	0.12
8.750	0.12	0.12	0.13	0.13	0.13
9.000	0.13	0.13	0.14	0.14	0.14
9.250	0.15	0.15	0.15	0.15	0.16
9.500	0.16	0.16	0.16	0.17	0.17
9.750	0.17	0.17	0.18	0.18	0.18
10.000	0.18	0.19	0.19	0.20	0.20



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
10.250	0.21	0.21	0.22	0.22	0.23
10.500	0.23	0.24	0.24	0.25	0.25
10.750	0.26	0.26	0.27	0.27	0.28
11.000	0.28	0.29	0.30	0.32	0.34
11.250	0.36	0.38	0.40	0.42	0.44
11.500	0.46	0.53	0.63	0.79	0.97
11.750	1.15	1.33	1.51	1.70	2.39
12.000	3.22	3.44	3.49	2.86	2.05
12.250	1.71	1.49	1.30	1.11	0.93
12.500	0.74	0.62	0.51	0.47	0.45
12.750	0.43	0.41	0.39	0.37	0.35
13.000	0.33	0.32	0.31	0.30	0.29
13.250	0.29	0.28	0.28	0.27	0.27
13.500	0.26	0.26	0.25	0.25	0.24
13.750	0.24	0.23	0.23	0.22	0.22
14.000	0.21	0.21	0.21	0.20	0.20
14.250	0.20	0.20	0.19	0.19	0.19
14.500	0.19	0.18	0.18	0.18	0.18
14.750	0.17	0.17	0.17	0.17	0.16
15.000	0.16	0.16	0.16	0.15	0.15
15.250	0.15	0.15	0.14	0.14	0.14
15.500	0.14	0.13	0.13	0.13	0.13
15.750	0.13	0.12	0.12	0.12	0.12
16.000	0.11	0.11	0.11	0.11	0.11
16.250	0.11	0.11	0.10	0.10	0.10
16.500	0.10	0.10	0.10	0.10	0.10
16.750	0.10	0.09	0.09	0.09	0.09
17.000	0.09	0.09	0.09	0.09	0.09
17.250	0.08	0.08	0.08	0.08	0.08
17.500	0.08	0.08	0.08	0.08	0.08
17.750	0.07	0.07	0.07	0.07	0.07
18.000	0.07	0.07	0.07	0.07	0.07
18.250	0.07	0.07	0.07	0.07	0.07
18.500	0.06	0.06	0.06	0.06	0.06
18.750	0.06	0.06	0.06	0.06	0.06
19.000	0.06	0.06	0.06	0.06	0.06
19.250	0.06	0.06	0.06	0.06	0.06
19.500	0.06	0.06	0.06	0.06	0.06
19.750	0.06	0.06	0.06	0.06	0.06
20.000	0.06	0.06	0.05	0.05	0.05
20.250	0.05	0.05	0.05	0.05	0.05
20.500	0.05	0.05	0.05	0.05	0.05
20.750	0.05	0.05	0.05	0.05	0.05

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.000	0.05	0.05	0.05	0.05	0.05
21.250	0.05	0.05	0.05	0.05	0.05
21.500	0.05	0.05	0.05	0.05	0.05
21.750	0.05	0.05	0.05	0.05	0.05
22.000	0.05	0.05	0.05	0.05	0.04
22.250	0.04	0.04	0.04	0.04	0.04
22.500	0.04	0.04	0.04	0.04	0.04
22.750	0.04	0.04	0.04	0.04	0.04
23.000	0.04	0.04	0.04	0.04	0.04
23.250	0.04	0.04	0.04	0.04	0.04
23.500	0.04	0.04	0.04	0.04	0.04
23.750	0.04	0.04	0.04	0.04	0.04
24.000	0.04	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	35,897.967 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1.000	0.00	0.00	0.00	0.01	0.01
1.250	0.01	0.01	0.01	0.01	0.01
1.500	0.01	0.02	0.02	0.02	0.02
1.750	0.02	0.02	0.02	0.02	0.02
2.000	0.03	0.03	0.03	0.03	0.03
2.250	0.03	0.03	0.03	0.03	0.03
2.500	0.04	0.04	0.04	0.04	0.04
2.750	0.04	0.04	0.04	0.04	0.04
3.000	0.05	0.05	0.05	0.05	0.05
3.250	0.05	0.05	0.05	0.05	0.05
3.500	0.06	0.06	0.06	0.06	0.06
3.750	0.06	0.06	0.06	0.06	0.06
4.000	0.07	0.07	0.07	0.07	0.07
4.250	0.07	0.07	0.07	0.07	0.07
4.500	0.07	0.08	0.08	0.08	0.08
4.750	0.08	0.08	0.08	0.08	0.08
5.000	0.08	0.08	0.08	0.09	0.09
5.250	0.09	0.09	0.09	0.09	0.09
5.500	0.09	0.09	0.09	0.09	0.09
5.750	0.10	0.10	0.10	0.10	0.10
6.000	0.10	0.10	0.10	0.10	0.11
6.250	0.11	0.11	0.11	0.11	0.11
6.500	0.12	0.12	0.12	0.12	0.12
6.750	0.13	0.13	0.13	0.13	0.13
7.000	0.14	0.14	0.14	0.14	0.14
7.250	0.15	0.15	0.15	0.15	0.15
7.500	0.16	0.16	0.16	0.16	0.16
7.750	0.17	0.17	0.17	0.17	0.17
8.000	0.18	0.18	0.18	0.19	0.19
8.250	0.20	0.20	0.20	0.21	0.21
8.500	0.22	0.22	0.23	0.23	0.23
8.750	0.24	0.24	0.25	0.25	0.26
9.000	0.26	0.27	0.27	0.27	0.28
9.250	0.28	0.29	0.29	0.30	0.30

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
9.500	0.31	0.31	0.32	0.32	0.32
9.750	0.33	0.33	0.34	0.34	0.35
10.000	0.35	0.36	0.36	0.37	0.38
10.250	0.39	0.40	0.41	0.42	0.43
10.500	0.44	0.45	0.46	0.46	0.47
10.750	0.48	0.49	0.50	0.51	0.52
11.000	0.53	0.55	0.57	0.60	0.63
11.250	0.67	0.70	0.74	0.77	0.81
11.500	0.84	0.99	1.16	1.45	1.78
11.750	2.10	2.44	2.77	3.10	4.36
12.000	5.86	6.23	6.32	5.18	3.70
12.250	3.09	2.69	2.34	2.01	1.67
12.500	1.34	1.12	0.93	0.85	0.81
12.750	0.77	0.74	0.70	0.67	0.63
13.000	0.60	0.57	0.55	0.54	0.53
13.250	0.52	0.51	0.50	0.49	0.48
13.500	0.47	0.47	0.46	0.45	0.44
13.750	0.43	0.42	0.41	0.40	0.39
14.000	0.38	0.38	0.37	0.36	0.36
14.250	0.36	0.35	0.35	0.34	0.34
14.500	0.33	0.33	0.33	0.32	0.32
14.750	0.31	0.31	0.30	0.30	0.29
15.000	0.29	0.29	0.28	0.28	0.27
15.250	0.27	0.26	0.26	0.26	0.25
15.500	0.25	0.24	0.24	0.23	0.23
15.750	0.22	0.22	0.22	0.21	0.21
16.000	0.20	0.20	0.20	0.19	0.19
16.250	0.19	0.19	0.19	0.18	0.18
16.500	0.18	0.18	0.18	0.18	0.17
16.750	0.17	0.17	0.17	0.17	0.16
17.000	0.16	0.16	0.16	0.16	0.15
17.250	0.15	0.15	0.15	0.15	0.14
17.500	0.14	0.14	0.14	0.14	0.14
17.750	0.13	0.13	0.13	0.13	0.13
18.000	0.12	0.12	0.12	0.12	0.12
18.250	0.12	0.12	0.12	0.12	0.12
18.500	0.12	0.12	0.12	0.11	0.11
18.750	0.11	0.11	0.11	0.11	0.11
19.000	0.11	0.11	0.11	0.11	0.11
19.250	0.11	0.11	0.11	0.11	0.11
19.500	0.10	0.10	0.10	0.10	0.10
19.750	0.10	0.10	0.10	0.10	0.10
20.000	0.10	0.10	0.10	0.10	0.10

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.250	0.10	0.10	0.10	0.10	0.10
20.500	0.09	0.09	0.09	0.09	0.09
20.750	0.09	0.09	0.09	0.09	0.09
21.000	0.09	0.09	0.09	0.09	0.09
21.250	0.09	0.09	0.09	0.09	0.09
21.500	0.09	0.09	0.09	0.09	0.08
21.750	0.08	0.08	0.08	0.08	0.08
22.000	0.08	0.08	0.08	0.08	0.08
22.250	0.08	0.08	0.08	0.08	0.08
22.500	0.08	0.08	0.08	0.08	0.08
22.750	0.08	0.08	0.07	0.07	0.07
23.000	0.07	0.07	0.07	0.07	0.07
23.250	0.07	0.07	0.07	0.07	0.07
23.500	0.07	0.07	0.07	0.07	0.07
23.750	0.07	0.07	0.07	0.07	0.07
24.000	0.07	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	16,574.190 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
6.500	0.00	0.00	0.00	0.00	0.00
6.750	0.00	0.00	0.00	0.00	0.00
7.000	0.00	0.00	0.00	0.00	0.00
7.250	0.00	0.00	0.00	0.00	0.00
7.500	0.00	0.00	0.00	0.00	0.00
7.750	0.00	0.00	0.00	0.01	0.01
8.000	0.01	0.01	0.01	0.01	0.01
8.250	0.01	0.01	0.01	0.01	0.01
8.500	0.01	0.01	0.01	0.01	0.01
8.750	0.01	0.01	0.01	0.01	0.01
9.000	0.01	0.01	0.01	0.01	0.01
9.250	0.01	0.02	0.02	0.02	0.02
9.500	0.02	0.02	0.02	0.02	0.02
9.750	0.02	0.02	0.02	0.02	0.02
10.000	0.02	0.02	0.02	0.02	0.03
10.250	0.03	0.03	0.03	0.03	0.03
10.500	0.03	0.03	0.03	0.03	0.04
10.750	0.04	0.04	0.04	0.04	0.04
11.000	0.04	0.04	0.05	0.05	0.05
11.250	0.06	0.06	0.06	0.07	0.07
11.500	0.08	0.09	0.11	0.14	0.17
11.750	0.20	0.24	0.28	0.32	0.47
12.000	0.64	0.70	0.73	0.61	0.44
12.250	0.37	0.33	0.29	0.25	0.21
12.500	0.17	0.14	0.12	0.11	0.10
12.750	0.10	0.09	0.09	0.08	0.08
13.000	0.08	0.07	0.07	0.07	0.07
13.250	0.07	0.06	0.06	0.06	0.06
13.500	0.06	0.06	0.06	0.06	0.06
13.750	0.05	0.05	0.05	0.05	0.05
14.000	0.05	0.05	0.05	0.05	0.05
14.250	0.05	0.04	0.04	0.04	0.04
14.500	0.04	0.04	0.04	0.04	0.04
14.750	0.04	0.04	0.04	0.04	0.04



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
15.000	0.04	0.04	0.04	0.04	0.04
15.250	0.03	0.03	0.03	0.03	0.03
15.500	0.03	0.03	0.03	0.03	0.03
15.750	0.03	0.03	0.03	0.03	0.03
16.000	0.03	0.03	0.03	0.03	0.02
16.250	0.02	0.02	0.02	0.02	0.02
16.500	0.02	0.02	0.02	0.02	0.02
16.750	0.02	0.02	0.02	0.02	0.02
17.000	0.02	0.02	0.02	0.02	0.02
17.250	0.02	0.02	0.02	0.02	0.02
17.500	0.02	0.02	0.02	0.02	0.02
17.750	0.02	0.02	0.02	0.02	0.02
18.000	0.02	0.02	0.02	0.02	0.02
18.250	0.02	0.02	0.02	0.02	0.02
18.500	0.02	0.02	0.02	0.01	0.01
18.750	0.01	0.01	0.01	0.01	0.01
19.000	0.01	0.01	0.01	0.01	0.01
19.250	0.01	0.01	0.01	0.01	0.01
19.500	0.01	0.01	0.01	0.01	0.01
19.750	0.01	0.01	0.01	0.01	0.01
20.000	0.01	0.01	0.01	0.01	0.01
20.250	0.01	0.01	0.01	0.01	0.01
20.500	0.01	0.01	0.01	0.01	0.01
20.750	0.01	0.01	0.01	0.01	0.01
21.000	0.01	0.01	0.01	0.01	0.01
21.250	0.01	0.01	0.01	0.01	0.01
21.500	0.01	0.01	0.01	0.01	0.01
21.750	0.01	0.01	0.01	0.01	0.01
22.000	0.01	0.01	0.01	0.01	0.01
22.250	0.01	0.01	0.01	0.01	0.01
22.500	0.01	0.01	0.01	0.01	0.01
22.750	0.01	0.01	0.01	0.01	0.01
23.000	0.01	0.01	0.01	0.01	0.01
23.250	0.01	0.01	0.01	0.01	0.01
23.500	0.01	0.01	0.01	0.01	0.01
23.750	0.01	0.01	0.01	0.01	0.01
24.000	0.01	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	16,574.190 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
4.000	0.00	0.00	0.00	0.00	0.00
4.250	0.00	0.00	0.00	0.00	0.00
4.500	0.00	0.00	0.00	0.00	0.00
4.750	0.00	0.00	0.00	0.00	0.00
5.000	0.00	0.00	0.00	0.00	0.01
5.250	0.01	0.01	0.01	0.01	0.01
5.500	0.01	0.01	0.01	0.01	0.01
5.750	0.01	0.01	0.01	0.01	0.01
6.000	0.01	0.01	0.01	0.01	0.01
6.250	0.01	0.01	0.01	0.01	0.01
6.500	0.01	0.01	0.01	0.01	0.01
6.750	0.01	0.01	0.01	0.01	0.01
7.000	0.02	0.02	0.02	0.02	0.02
7.250	0.02	0.02	0.02	0.02	0.02
7.500	0.02	0.02	0.02	0.02	0.02
7.750	0.02	0.02	0.02	0.02	0.02
8.000	0.02	0.02	0.03	0.03	0.03
8.250	0.03	0.03	0.03	0.03	0.03
8.500	0.03	0.03	0.03	0.03	0.04
8.750	0.04	0.04	0.04	0.04	0.04
9.000	0.04	0.04	0.04	0.04	0.05
9.250	0.05	0.05	0.05	0.05	0.05
9.500	0.05	0.05	0.05	0.06	0.06
9.750	0.06	0.06	0.06	0.06	0.06
10.000	0.06	0.07	0.07	0.07	0.07
10.250	0.07	0.08	0.08	0.08	0.08
10.500	0.08	0.09	0.09	0.09	0.09
10.750	0.10	0.10	0.10	0.10	0.11
11.000	0.11	0.11	0.12	0.12	0.13
11.250	0.14	0.15	0.16	0.16	0.17
11.500	0.18	0.21	0.25	0.32	0.39
11.750	0.47	0.55	0.63	0.71	1.01
12.000	1.37	1.47	1.51	1.25	0.90
12.250	0.75	0.66	0.57	0.49	0.41

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.500	0.33	0.28	0.23	0.21	0.20
12.750	0.19	0.18	0.17	0.17	0.16
13.000	0.15	0.14	0.14	0.13	0.13
13.250	0.13	0.13	0.12	0.12	0.12
13.500	0.12	0.12	0.11	0.11	0.11
13.750	0.11	0.10	0.10	0.10	0.10
14.000	0.10	0.09	0.09	0.09	0.09
14.250	0.09	0.09	0.09	0.09	0.08
14.500	0.08	0.08	0.08	0.08	0.08
14.750	0.08	0.08	0.08	0.07	0.07
15.000	0.07	0.07	0.07	0.07	0.07
15.250	0.07	0.07	0.06	0.06	0.06
15.500	0.06	0.06	0.06	0.06	0.06
15.750	0.06	0.06	0.05	0.05	0.05
16.000	0.05	0.05	0.05	0.05	0.05
16.250	0.05	0.05	0.05	0.05	0.05
16.500	0.05	0.04	0.04	0.04	0.04
16.750	0.04	0.04	0.04	0.04	0.04
17.000	0.04	0.04	0.04	0.04	0.04
17.250	0.04	0.04	0.04	0.04	0.04
17.500	0.04	0.04	0.03	0.03	0.03
17.750	0.03	0.03	0.03	0.03	0.03
18.000	0.03	0.03	0.03	0.03	0.03
18.250	0.03	0.03	0.03	0.03	0.03
18.500	0.03	0.03	0.03	0.03	0.03
18.750	0.03	0.03	0.03	0.03	0.03
19.000	0.03	0.03	0.03	0.03	0.03
19.250	0.03	0.03	0.03	0.03	0.03
19.500	0.03	0.03	0.03	0.03	0.03
19.750	0.03	0.03	0.03	0.03	0.03
20.000	0.02	0.02	0.02	0.02	0.02
20.250	0.02	0.02	0.02	0.02	0.02
20.500	0.02	0.02	0.02	0.02	0.02
20.750	0.02	0.02	0.02	0.02	0.02
21.000	0.02	0.02	0.02	0.02	0.02
21.250	0.02	0.02	0.02	0.02	0.02
21.500	0.02	0.02	0.02	0.02	0.02
21.750	0.02	0.02	0.02	0.02	0.02
22.000	0.02	0.02	0.02	0.02	0.02
22.250	0.02	0.02	0.02	0.02	0.02
22.500	0.02	0.02	0.02	0.02	0.02
22.750	0.02	0.02	0.02	0.02	0.02
23.000	0.02	0.02	0.02	0.02	0.02

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
23.250	0.02	0.02	0.02	0.02	0.02
23.500	0.02	0.02	0.02	0.02	0.02
23.750	0.02	0.02	0.02	0.02	0.02
24.000	0.02	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	16,574.190 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
2.350	0.00	0.00	0.00	0.00	0.00
2.600	0.00	0.00	0.00	0.00	0.00
2.850	0.00	0.00	0.01	0.01	0.01
3.100	0.01	0.01	0.01	0.01	0.01
3.350	0.01	0.01	0.01	0.01	0.01
3.600	0.01	0.01	0.01	0.01	0.01
3.850	0.01	0.01	0.01	0.01	0.01
4.100	0.01	0.01	0.01	0.02	0.02
4.350	0.02	0.02	0.02	0.02	0.02
4.600	0.02	0.02	0.02	0.02	0.02
4.850	0.02	0.02	0.02	0.02	0.02
5.100	0.02	0.02	0.02	0.02	0.02
5.350	0.02	0.02	0.03	0.03	0.03
5.600	0.03	0.03	0.03	0.03	0.03
5.850	0.03	0.03	0.03	0.03	0.03
6.100	0.03	0.03	0.03	0.03	0.03
6.350	0.03	0.04	0.04	0.04	0.04
6.600	0.04	0.04	0.04	0.04	0.04
6.850	0.04	0.04	0.04	0.04	0.05
7.100	0.05	0.05	0.05	0.05	0.05
7.350	0.05	0.05	0.05	0.05	0.05
7.600	0.06	0.06	0.06	0.06	0.06
7.850	0.06	0.06	0.06	0.06	0.06
8.100	0.07	0.07	0.07	0.07	0.07
8.350	0.08	0.08	0.08	0.08	0.08
8.600	0.08	0.09	0.09	0.09	0.09
8.850	0.09	0.10	0.10	0.10	0.10
9.100	0.10	0.11	0.11	0.11	0.11
9.350	0.11	0.12	0.12	0.12	0.12
9.600	0.13	0.13	0.13	0.13	0.13
9.850	0.14	0.14	0.14	0.14	0.15
10.100	0.15	0.15	0.16	0.16	0.16
10.350	0.17	0.17	0.18	0.18	0.19
10.600	0.19	0.19	0.20	0.20	0.21

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
10.850	0.21	0.22	0.22	0.22	0.23
11.100	0.24	0.26	0.27	0.29	0.30
11.350	0.32	0.33	0.35	0.36	0.43
11.600	0.50	0.63	0.78	0.92	1.07
11.850	1.22	1.38	1.94	2.62	2.80
12.100	2.85	2.34	1.67	1.40	1.22
12.350	1.06	0.91	0.76	0.61	0.51
12.600	0.42	0.39	0.37	0.35	0.34
12.850	0.32	0.30	0.29	0.27	0.26
13.100	0.25	0.25	0.24	0.24	0.23
13.350	0.23	0.22	0.22	0.22	0.21
13.600	0.21	0.20	0.20	0.20	0.19
13.850	0.19	0.18	0.18	0.17	0.17
14.100	0.17	0.17	0.16	0.16	0.16
14.350	0.16	0.16	0.15	0.15	0.15
14.600	0.15	0.15	0.14	0.14	0.14
14.850	0.14	0.14	0.13	0.13	0.13
15.100	0.13	0.13	0.12	0.12	0.12
15.350	0.12	0.12	0.11	0.11	0.11
15.600	0.11	0.11	0.10	0.10	0.10
15.850	0.10	0.10	0.09	0.09	0.09
16.100	0.09	0.09	0.09	0.09	0.09
16.350	0.09	0.08	0.08	0.08	0.08
16.600	0.08	0.08	0.08	0.08	0.08
16.850	0.08	0.08	0.07	0.07	0.07
17.100	0.07	0.07	0.07	0.07	0.07
17.350	0.07	0.07	0.07	0.07	0.06
17.600	0.06	0.06	0.06	0.06	0.06
17.850	0.06	0.06	0.06	0.06	0.06
18.100	0.06	0.06	0.05	0.05	0.05
18.350	0.05	0.05	0.05	0.05	0.05
18.600	0.05	0.05	0.05	0.05	0.05
18.850	0.05	0.05	0.05	0.05	0.05
19.100	0.05	0.05	0.05	0.05	0.05
19.350	0.05	0.05	0.05	0.05	0.05
19.600	0.05	0.05	0.05	0.05	0.05
19.850	0.05	0.05	0.05	0.05	0.05
20.100	0.04	0.04	0.04	0.04	0.04
20.350	0.04	0.04	0.04	0.04	0.04
20.600	0.04	0.04	0.04	0.04	0.04
20.850	0.04	0.04	0.04	0.04	0.04
21.100	0.04	0.04	0.04	0.04	0.04
21.350	0.04	0.04	0.04	0.04	0.04



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1C  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.600	0.04	0.04	0.04	0.04	0.04
21.850	0.04	0.04	0.04	0.04	0.04
22.100	0.04	0.04	0.04	0.04	0.04
22.350	0.04	0.04	0.04	0.04	0.04
22.600	0.04	0.04	0.04	0.03	0.03
22.850	0.03	0.03	0.03	0.03	0.03
23.100	0.03	0.03	0.03	0.03	0.03
23.350	0.03	0.03	0.03	0.03	0.03
23.600	0.03	0.03	0.03	0.03	0.03
23.850	0.03	0.03	0.03	0.03	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storm Event	1
Return Event	1 years
Duration	24.000 hours
Depth	2.8 in
Time of Concentration (Composite)	0.181 hours
Area (User Defined)	221,474.330 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
7.800	0.00	0.00	0.00	0.00	0.01
8.050	0.01	0.01	0.01	0.01	0.02
8.300	0.02	0.02	0.02	0.02	0.03
8.550	0.03	0.03	0.04	0.04	0.04
8.800	0.05	0.05	0.05	0.06	0.06
9.050	0.06	0.07	0.07	0.08	0.08
9.300	0.09	0.09	0.09	0.10	0.10
9.550	0.11	0.11	0.12	0.13	0.13
9.800	0.14	0.14	0.15	0.15	0.16
10.050	0.17	0.17	0.18	0.19	0.20
10.300	0.21	0.21	0.22	0.23	0.25
10.550	0.26	0.27	0.28	0.29	0.30
10.800	0.31	0.32	0.34	0.35	0.36
11.050	0.38	0.39	0.42	0.44	0.48
11.300	0.51	0.55	0.58	0.62	0.67
11.550	0.73	0.84	1.01	1.25	1.55
11.800	1.91	2.29	2.72	3.37	4.62
12.050	6.02	7.06	7.43	6.84	5.82
12.300	4.94	4.29	3.73	3.23	2.73
12.550	2.28	1.90	1.61	1.42	1.30
12.800	1.22	1.15	1.09	1.04	0.98
13.050	0.94	0.89	0.86	0.83	0.82
13.300	0.80	0.79	0.77	0.76	0.75
13.550	0.73	0.72	0.71	0.69	0.68
13.800	0.67	0.65	0.64	0.63	0.61
14.050	0.60	0.59	0.58	0.57	0.56
14.300	0.56	0.55	0.54	0.54	0.53
14.550	0.52	0.52	0.51	0.50	0.50
14.800	0.49	0.49	0.48	0.47	0.47
15.050	0.46	0.45	0.45	0.44	0.43
15.300	0.43	0.42	0.41	0.41	0.40
15.550	0.39	0.39	0.38	0.37	0.37
15.800	0.36	0.35	0.35	0.34	0.33
16.050	0.33	0.32	0.32	0.31	0.31

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.300	0.30	0.30	0.30	0.30	0.29
16.550	0.29	0.29	0.28	0.28	0.28
16.800	0.27	0.27	0.27	0.27	0.26
17.050	0.26	0.26	0.25	0.25	0.25
17.300	0.25	0.24	0.24	0.24	0.23
17.550	0.23	0.23	0.22	0.22	0.22
17.800	0.22	0.21	0.21	0.21	0.20
18.050	0.20	0.20	0.20	0.19	0.19
18.300	0.19	0.19	0.19	0.19	0.19
18.550	0.19	0.19	0.19	0.19	0.18
18.800	0.18	0.18	0.18	0.18	0.18
19.050	0.18	0.18	0.18	0.18	0.18
19.300	0.17	0.17	0.17	0.17	0.17
19.550	0.17	0.17	0.17	0.17	0.17
19.800	0.17	0.16	0.16	0.16	0.16
20.050	0.16	0.16	0.16	0.16	0.16
20.300	0.16	0.16	0.16	0.16	0.15
20.550	0.15	0.15	0.15	0.15	0.15
20.800	0.15	0.15	0.15	0.15	0.15
21.050	0.15	0.15	0.15	0.15	0.14
21.300	0.14	0.14	0.14	0.14	0.14
21.550	0.14	0.14	0.14	0.14	0.14
21.800	0.14	0.14	0.14	0.14	0.13
22.050	0.13	0.13	0.13	0.13	0.13
22.300	0.13	0.13	0.13	0.13	0.13
22.550	0.13	0.13	0.13	0.13	0.12
22.800	0.12	0.12	0.12	0.12	0.12
23.050	0.12	0.12	0.12	0.12	0.12
23.300	0.12	0.12	0.12	0.12	0.11
23.550	0.11	0.11	0.11	0.11	0.11
23.800	0.11	0.11	0.11	0.11	0.11

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storm Event	10
Return Event	10 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.181 hours
Area (User Defined)	221,474.330 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
5.200	0.00	0.00	0.00	0.00	0.01
5.450	0.01	0.01	0.01	0.01	0.02
5.700	0.02	0.02	0.02	0.02	0.03
5.950	0.03	0.03	0.03	0.03	0.04
6.200	0.04	0.04	0.05	0.05	0.05
6.450	0.05	0.06	0.06	0.06	0.07
6.700	0.07	0.07	0.08	0.08	0.08
6.950	0.09	0.09	0.10	0.10	0.10
7.200	0.11	0.11	0.12	0.12	0.13
7.450	0.13	0.14	0.14	0.14	0.15
7.700	0.15	0.16	0.16	0.17	0.17
7.950	0.18	0.19	0.19	0.20	0.20
8.200	0.21	0.22	0.23	0.24	0.25
8.450	0.25	0.26	0.27	0.28	0.29
8.700	0.30	0.31	0.32	0.33	0.35
8.950	0.36	0.37	0.38	0.39	0.40
9.200	0.42	0.43	0.44	0.45	0.47
9.450	0.48	0.49	0.50	0.52	0.53
9.700	0.54	0.56	0.57	0.59	0.60
9.950	0.62	0.63	0.65	0.66	0.68
10.200	0.70	0.73	0.75	0.77	0.80
10.450	0.82	0.85	0.88	0.90	0.93
10.700	0.96	0.99	1.02	1.04	1.07
10.950	1.10	1.13	1.17	1.21	1.27
11.200	1.34	1.42	1.51	1.60	1.69
11.450	1.79	1.89	2.05	2.33	2.77
11.700	3.40	4.15	5.01	5.91	6.90
11.950	8.37	11.21	14.28	16.40	16.93
12.200	15.37	12.94	10.86	9.36	8.07
12.450	6.95	5.85	4.87	4.03	3.41
12.700	3.00	2.75	2.56	2.42	2.29
12.950	2.17	2.06	1.96	1.87	1.80
13.200	1.74	1.70	1.67	1.64	1.61
13.450	1.58	1.55	1.52	1.49	1.47

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.700	1.44	1.41	1.38	1.35	1.32
13.950	1.30	1.27	1.24	1.22	1.19
14.200	1.18	1.16	1.14	1.13	1.12
14.450	1.10	1.09	1.08	1.06	1.05
14.700	1.04	1.02	1.01	0.99	0.98
14.950	0.97	0.95	0.94	0.93	0.91
15.200	0.90	0.88	0.87	0.86	0.84
15.450	0.83	0.82	0.80	0.79	0.77
15.700	0.76	0.75	0.73	0.72	0.70
15.950	0.69	0.68	0.66	0.65	0.64
16.200	0.63	0.62	0.62	0.61	0.61
16.450	0.60	0.59	0.59	0.58	0.57
16.700	0.57	0.56	0.56	0.55	0.54
16.950	0.54	0.53	0.53	0.52	0.51
17.200	0.51	0.50	0.50	0.49	0.48
17.450	0.48	0.47	0.47	0.46	0.45
17.700	0.45	0.44	0.44	0.43	0.42
17.950	0.42	0.41	0.40	0.40	0.40
18.200	0.39	0.39	0.39	0.39	0.38
18.450	0.38	0.38	0.38	0.38	0.38
18.700	0.37	0.37	0.37	0.37	0.37
18.950	0.36	0.36	0.36	0.36	0.36
19.200	0.36	0.35	0.35	0.35	0.35
19.450	0.35	0.34	0.34	0.34	0.34
19.700	0.34	0.33	0.33	0.33	0.33
19.950	0.33	0.33	0.32	0.32	0.32
20.200	0.32	0.32	0.32	0.32	0.31
20.450	0.31	0.31	0.31	0.31	0.31
20.700	0.31	0.30	0.30	0.30	0.30
20.950	0.30	0.30	0.30	0.30	0.29
21.200	0.29	0.29	0.29	0.29	0.29
21.450	0.29	0.28	0.28	0.28	0.28
21.700	0.28	0.28	0.28	0.27	0.27
21.950	0.27	0.27	0.27	0.27	0.27
22.200	0.26	0.26	0.26	0.26	0.26
22.450	0.26	0.26	0.25	0.25	0.25
22.700	0.25	0.25	0.25	0.25	0.24
22.950	0.24	0.24	0.24	0.24	0.24
23.200	0.24	0.24	0.23	0.23	0.23
23.450	0.23	0.23	0.23	0.23	0.22
23.700	0.22	0.22	0.22	0.22	0.22
23.950	0.22	0.21	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	24.000 hours
Depth	9.2 in
Time of Concentration (Composite)	0.181 hours
Area (User Defined)	221,474.330 ft <sup>2</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.250	0.00	0.00	0.00	0.01	0.01
3.500	0.02	0.02	0.02	0.03	0.03
3.750	0.04	0.04	0.04	0.05	0.05
4.000	0.06	0.06	0.07	0.07	0.08
4.250	0.08	0.08	0.09	0.09	0.10
4.500	0.10	0.11	0.11	0.12	0.12
4.750	0.13	0.13	0.14	0.14	0.15
5.000	0.15	0.15	0.16	0.16	0.17
5.250	0.17	0.18	0.18	0.19	0.19
5.500	0.20	0.20	0.21	0.21	0.22
5.750	0.22	0.23	0.23	0.24	0.24
6.000	0.25	0.25	0.26	0.27	0.27
6.250	0.28	0.29	0.30	0.31	0.31
6.500	0.32	0.33	0.34	0.35	0.36
6.750	0.37	0.38	0.39	0.40	0.41
7.000	0.42	0.43	0.44	0.45	0.46
7.250	0.47	0.48	0.49	0.50	0.51
7.500	0.52	0.54	0.55	0.56	0.57
7.750	0.58	0.59	0.61	0.62	0.63
8.000	0.64	0.65	0.67	0.68	0.70
8.250	0.72	0.74	0.76	0.79	0.81
8.500	0.83	0.85	0.88	0.90	0.92
8.750	0.95	0.97	1.00	1.02	1.05
9.000	1.07	1.10	1.12	1.15	1.17
9.250	1.20	1.23	1.25	1.28	1.31
9.500	1.33	1.36	1.39	1.42	1.45
9.750	1.47	1.50	1.53	1.56	1.59
10.000	1.62	1.65	1.68	1.72	1.76
10.250	1.81	1.86	1.91	1.97	2.02
10.500	2.07	2.13	2.18	2.24	2.29
10.750	2.35	2.40	2.46	2.51	2.57
11.000	2.63	2.69	2.79	2.90	3.05
11.250	3.22	3.41	3.59	3.79	3.99
11.500	4.19	4.51	5.12	6.03	7.35

Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.750	8.90	10.67	12.48	14.43	17.30
12.000	22.89	28.81	32.73	33.48	30.18
12.250	25.25	21.09	18.08	15.55	13.34
12.500	11.20	9.31	7.70	6.50	5.71
12.750	5.22	4.86	4.59	4.34	4.12
13.000	3.91	3.71	3.54	3.40	3.30
13.250	3.22	3.15	3.09	3.03	2.98
13.500	2.93	2.87	2.82	2.76	2.71
13.750	2.66	2.60	2.55	2.49	2.44
14.000	2.39	2.33	2.29	2.24	2.21
14.250	2.18	2.15	2.12	2.10	2.07
14.500	2.05	2.02	1.99	1.97	1.94
14.750	1.92	1.89	1.86	1.84	1.81
15.000	1.79	1.76	1.73	1.71	1.68
15.250	1.66	1.63	1.60	1.58	1.55
15.500	1.52	1.50	1.47	1.45	1.42
15.750	1.39	1.37	1.34	1.32	1.29
16.000	1.26	1.24	1.22	1.20	1.18
16.250	1.17	1.15	1.14	1.13	1.12
16.500	1.11	1.10	1.08	1.07	1.06
16.750	1.05	1.04	1.03	1.02	1.01
17.000	0.99	0.98	0.97	0.96	0.95
17.250	0.94	0.93	0.91	0.90	0.89
17.500	0.88	0.87	0.86	0.85	0.83
17.750	0.82	0.81	0.80	0.79	0.78
18.000	0.77	0.75	0.74	0.74	0.73
18.250	0.73	0.72	0.72	0.72	0.71
18.500	0.71	0.70	0.70	0.70	0.69
18.750	0.69	0.69	0.68	0.68	0.68
19.000	0.67	0.67	0.67	0.66	0.66
19.250	0.66	0.65	0.65	0.65	0.64
19.500	0.64	0.64	0.63	0.63	0.63
19.750	0.62	0.62	0.62	0.61	0.61
20.000	0.61	0.60	0.60	0.60	0.59
20.250	0.59	0.59	0.59	0.58	0.58
20.500	0.58	0.58	0.57	0.57	0.57
20.750	0.56	0.56	0.56	0.56	0.55
21.000	0.55	0.55	0.55	0.54	0.54
21.250	0.54	0.54	0.53	0.53	0.53
21.500	0.53	0.52	0.52	0.52	0.52
21.750	0.51	0.51	0.51	0.51	0.50
22.000	0.50	0.50	0.50	0.49	0.49
22.250	0.49	0.48	0.48	0.48	0.48



Subsection: Unit Hydrograph (Hydrograph Table)  
 Label: PDA-1D  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.500	0.47	0.47	0.47	0.47	0.47
22.750	0.46	0.46	0.46	0.45	0.45
23.000	0.45	0.45	0.44	0.44	0.44
23.250	0.44	0.43	0.43	0.43	0.43
23.500	0.42	0.42	0.42	0.42	0.41
23.750	0.41	0.41	0.41	0.40	0.40
24.000	0.40	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Addition Summary  
 Label: DP  
 Scenario: Existing Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	29,639.596	12.150	7.71
Flow (From)	EDA-1B	1,983.144	12.750	0.12
Flow (In)	DP	31,622.741	12.150	7.71

Subsection: Addition Summary  
 Label: DP  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
	Porous Pavement
	INFILTRATION BASIN B
	STORMTECH
<Catchment to Outflow Node>	PDA-1D

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)		0.000	0.000	0.00
Flow (From)		0.000	0.000	0.00
Flow (From)		2,595.176	12.400	0.26
Flow (From)	PDA-1D	28,995.718	12.150	7.43
Flow (In)	DP	31,590.894	12.150	7.65

Subsection: Addition Summary  
 Label: DP  
 Scenario: Existing Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	67,958.090	12.150	17.11
Flow (From)	EDA-1B	13,069.387	12.450	1.96
Flow (In)	DP	81,027.477	12.150	17.98

Subsection: Addition Summary  
 Label: DP  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
	Porous Pavement
	INFILTRATION BASIN B
	STORMTECH
<Catchment to Outflow Node>	PDA-1D

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)		0.000	0.000	0.00
Flow (From)		0.000	0.000	0.00
Flow (From)		5,619.154	12.200	0.98
Flow (From)	PDA-1D	67,804.974	12.150	16.93
Flow (In)	DP	73,424.128	12.150	17.89

Subsection: Addition Summary  
Label: DP  
Scenario: Existing Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	138,254.510	12.150	33.35
Flow (From)	EDA-1B	44,148.422	12.400	7.62
Flow (In)	DP	182,402.932	12.150	38.16

Subsection: Addition Summary  
 Label: DP  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'DP'**

Upstream Link	Upstream Node
	Porous Pavement INFILTRATION BASIN B STORMTECH PDA-1D
<Catchment to Outflow Node>	PDA-1D

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)		661.773	12.300	2.27
Flow (From)		7,553.289	12.400	2.86
Flow (From)		11,058.455	12.100	2.87
Flow (From)	PDA-1D	139,536.750	12.150	33.48
Flow (In)	DP	158,810.267	12.150	36.12



Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.90	0.0	2,087.059	0.000	0.000	0.000
368.00	0.0	2,750.508	7,233.496	2,652.000	2,652.000
370.00	0.0	4,132.080	10,253.837	6,836.000	9,488.000
371.00	0.0	4,907.689	13,542.987	4,514.000	14,003.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.90	0.0	2,087.059	0.000	0.000	0.000
368.00	0.0	2,750.508	7,233.496	2,652.000	2,652.000
370.00	0.0	4,132.080	10,253.837	6,836.000	9,488.000
371.00	0.0	4,907.689	13,542.987	4,514.000	14,003.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.90	0.0	2,087.059	0.000	0.000	0.000
368.00	0.0	2,750.508	7,233.496	2,652.000	2,652.000
370.00	0.0	4,132.080	10,253.837	6,836.000	9,488.000
371.00	0.0	4,907.689	13,542.987	4,514.000	14,003.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.50	0.0	1,290.220	0.000	0.000	0.000
368.00	0.0	2,127.297	5,074.225	2,537.000	2,537.000
370.00	0.0	3,469.428	8,313.433	5,542.000	8,079.000
371.00	0.0	4,225.317	11,523.509	3,841.000	11,921.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.50	0.0	1,290.220	0.000	0.000	0.000
368.00	0.0	2,127.297	5,074.225	2,537.000	2,537.000
370.00	0.0	3,469.428	8,313.433	5,542.000	8,079.000
371.00	0.0	4,225.317	11,523.509	3,841.000	11,921.000

Subsection: Elevation-Area Volume Curve  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
366.50	0.0	1,290.220	0.000	0.000	0.000
368.00	0.0	2,127.297	5,074.225	2,537.000	2,537.000
370.00	0.0	3,469.428	8,313.433	5,542.000	8,079.000
371.00	0.0	4,225.317	11,523.509	3,841.000	11,921.000

Subsection: Elevation-Area Volume Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
368.06	0.0	21,104.000	0.000	0.000	0.000
369.06	0.0	21,104.000	63,312.000	21,104.000	8,442.000



Subsection: Volume Void Adjustments  
Label: Porous Pavement  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**Volume Complete Filled With Material  
(Adjust Volumes for Voids)**

**Void Space = 40.0 %**

Elevation (Headwater) (ft)	Volume (Total) (ft <sup>3</sup> )	Volume (Adjusted) (ft <sup>3</sup> )
368.06	0.000	0.000
369.06	21,104.000	8,441.600

Subsection: Elevation-Area Volume Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
368.06	0.0	21,104.000	0.000	0.000	0.000
369.06	0.0	21,104.000	63,312.000	21,104.000	8,442.000

Subsection: Volume Void Adjustments  
Label: Porous Pavement  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

**Volume Complete Filled With Material  
(Adjust Volumes for Voids)**

**Void Space = 40.0 %**

Elevation (Headwater) (ft)	Volume (Total) (ft <sup>3</sup> )	Volume (Adjusted) (ft <sup>3</sup> )
368.06	0.000	0.000
369.06	21,104.000	8,441.600

Subsection: Elevation-Area Volume Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
368.06	0.0	21,104.000	0.000	0.000	0.000
369.06	0.0	21,104.000	63,312.000	21,104.000	8,442.000

Subsection: Volume Void Adjustments  
Label: Porous Pavement  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**Volume Complete Filled With Material  
(Adjust Volumes for Voids)**

**Void Space = 40.0 %**

Elevation (Headwater) (ft)	Volume (Total) (ft <sup>3</sup> )	Volume (Adjusted) (ft <sup>3</sup> )
368.06	0.000	0.000
369.06	21,104.000	8,441.600

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Storage Chamber

ID	62	Created on 02/10/2010. Please check with the manufacturer for the latest data.
Label	SC-740 Chamber	Notes

Storage Chamber

Effective Length	7.12 ft	Manufacturer	StormTech
Section Length Varies?	False	Default Spacing	0.50 ft

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.08	0.31
0.17	0.31
0.25	0.31
0.33	0.30
0.42	0.30
0.50	0.30
0.58	0.29
0.67	0.29
0.75	0.28
0.83	0.28
0.92	0.27
1.00	0.27
1.08	0.26
1.17	0.25
1.25	0.25
1.33	0.24
1.42	0.23
1.50	0.22
1.58	0.21
1.67	0.20
1.75	0.19
1.83	0.18
1.92	0.17
2.00	0.15
2.08	0.13
2.17	0.11
2.25	0.09
2.33	0.04
2.42	0.02

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
2.50	0.01

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Storage Chamber

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Storage Chamber Type	Incremental Volume Per Unit Length	Maximum Width	4.25 ft
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Storage Chamber (Pond)

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Chamber System Invert	365.00 ft
Chamber System Rows	4
Chambers per Row	5
Chamber System Fill Void Space	40.0 %
Chamber System Row Spacing	6.0 in
Chamber System Side Fill	12.0 in
Chamber System Fill Cover Depth	6.0 in
Chamber System Fill Base Depth	6.0 in
Chamber System Fill Side Slope	0.000 H:V
Chamber System End Fill	12.0 in
Chamber System Includes Header?	False

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Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

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Storage Chamber

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ID	62	Created on 02/10/2010. Please check with the manufacturer for the latest data.
	Notes	
Label	SC-740 Chamber	

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Storage Chamber

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Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

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Storage Chamber

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Effective Length	7.12 ft	Manufacturer	StormTech
Section Length Varies?	False	Default Spacing	0.50 ft

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**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.08	0.31
0.17	0.31
0.25	0.31
0.33	0.30
0.42	0.30
0.50	0.30
0.58	0.29
0.67	0.29
0.75	0.28
0.83	0.28
0.92	0.27
1.00	0.27
1.08	0.26
1.17	0.25
1.25	0.25
1.33	0.24
1.42	0.23
1.50	0.22
1.58	0.21
1.67	0.20
1.75	0.19
1.83	0.18
1.92	0.17
2.00	0.15
2.08	0.13
2.17	0.11
2.25	0.09
2.33	0.04
2.42	0.02
2.50	0.01

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Storage Chamber

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Storage Chamber Type	Incremental Volume Per Unit Length	Maximum Width	4.25 ft
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Storage Chamber (Pond)

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Chamber System Invert	365.00 ft
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Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Storage Chamber (Pond)	
Chamber System Rows	4
Chambers per Row	5
Chamber System Fill Void Space	40.0 %
Chamber System Row Spacing	6.0 in
Chamber System Side Fill	12.0 in
Chamber System Fill Cover Depth	6.0 in
Chamber System Fill Base Depth	6.0 in
Chamber System Fill Side Slope	0.000 H:V
Chamber System End Fill	12.0 in
Chamber System Includes Header?	False

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storage Chamber		
ID	62	Created on 02/10/2010. Please check with the manufacturer for the latest data.
	Notes	
Label	SC-740 Chamber	

Storage Chamber			
Effective Length	7.12 ft	Manufacturer	StormTech
Section Length Varies?	False	Default Spacing	0.50 ft

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.08	0.31
0.17	0.31
0.25	0.31
0.33	0.30
0.42	0.30
0.50	0.30

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Depth-Incremental Volume Per Unit Length Curve**

Depth (ft)	Incremental Volume Per Unit Length (ft <sup>3</sup> /ft)
0.58	0.29
0.67	0.29
0.75	0.28
0.83	0.28
0.92	0.27
1.00	0.27
1.08	0.26
1.17	0.25
1.25	0.25
1.33	0.24
1.42	0.23
1.50	0.22
1.58	0.21
1.67	0.20
1.75	0.19
1.83	0.18
1.92	0.17
2.00	0.15
2.08	0.13
2.17	0.11
2.25	0.09
2.33	0.04
2.42	0.02
2.50	0.01

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Storage Chamber

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Storage Chamber Type	Incremental Volume Per Unit Length	Maximum Width	4.25 ft
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Storage Chamber (Pond)

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Chamber System Invert	365.00 ft
Chamber System Rows	4
Chambers per Row	5
Chamber System Fill Void Space	40.0 %
Chamber System Row Spacing	6.0 in
Chamber System Side Fill	12.0 in
Chamber System Fill Cover Depth	6.0 in

Subsection: Storage Chamber System  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Storage Chamber (Pond)

Chamber System Fill Base Depth	6.0 in
Chamber System Fill Side Slope	0.000 H:V
Chamber System End Fill	12.0 in
Chamber System Includes Header?	False

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations

Minimum (Headwater)	365.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	368.50 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	365.50	368.50
Orifice-Circular	Orifice - 2	Forward	TW	366.75	368.50
Rectangular Weir	Weir - 1	Forward	TW	368.00	368.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	365.50 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: Orifice - 2	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	366.75 ft
Orifice Diameter	5.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
365.00	0.00	(N/A)	0.00
365.50	0.00	(N/A)	0.00
366.00	0.14	(N/A)	0.00
366.50	0.22	(N/A)	0.00
366.75	0.25	(N/A)	0.00
367.00	0.40	(N/A)	0.00
367.50	0.81	(N/A)	0.00
368.00	1.03	(N/A)	0.00
368.50	5.92	(N/A)	0.00

Contributing Structures

None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2 +
Weir - 1
Orifice - 1 + Orifice - 2 +
Weir - 1

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	365.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	368.50 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	365.50	368.50
Orifice-Circular	Orifice - 2	Forward	TW	366.75	368.50
Rectangular Weir	Weir - 1	Forward	TW	368.00	368.50
Tailwater Settings	Tailwater			(N/A)	(N/A)



Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	365.50 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: Orifice - 2	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	366.75 ft
Orifice Diameter	5.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
365.00	0.00	(N/A)	0.00
365.50	0.00	(N/A)	0.00
366.00	0.14	(N/A)	0.00
366.50	0.22	(N/A)	0.00
366.75	0.25	(N/A)	0.00
367.00	0.40	(N/A)	0.00
367.50	0.81	(N/A)	0.00
368.00	1.03	(N/A)	0.00
368.50	5.92	(N/A)	0.00

Contributing Structures

None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2 +
Weir - 1
Orifice - 1 + Orifice - 2 +
Weir - 1

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	365.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	368.50 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	365.50	368.50
Orifice-Circular	Orifice - 2	Forward	TW	366.75	368.50
Rectangular Weir	Weir - 1	Forward	TW	368.00	368.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	365.50 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: Orifice - 2	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	366.75 ft
Orifice Diameter	5.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-7-1  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
365.00	0.00	(N/A)	0.00
365.50	0.00	(N/A)	0.00
366.00	0.14	(N/A)	0.00
366.50	0.22	(N/A)	0.00
366.75	0.25	(N/A)	0.00
367.00	0.40	(N/A)	0.00
367.50	0.81	(N/A)	0.00
368.00	1.03	(N/A)	0.00
368.50	5.92	(N/A)	0.00

Contributing Structures

None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2
Orifice - 1 + Orifice - 2 +
Weir - 1
Orifice - 1 + Orifice - 2 +
Weir - 1

Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.90 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - 1	Forward + Reverse	TW	366.90	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	120.00 ft
Length (Computed Barrel)	120.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.094
T2 ratio (HW/D)	1.196
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	369.09 ft	T1 Flow	15.55 ft <sup>3</sup> /s
T2 Elevation	369.29 ft	T2 Flow	17.77 ft <sup>3</sup> /s



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.50	0.00
367.00	0.04	366.50	0.00
367.10	0.17	366.50	0.00
367.20	0.39	366.50	0.00
367.30	0.68	366.50	0.00
367.40	1.05	366.50	0.00
367.50	1.50	366.50	0.00
367.60	2.01	366.50	0.00
367.70	2.59	366.50	0.00
367.80	3.24	366.50	0.00
367.90	3.93	366.50	0.00
368.00	4.70	366.50	0.00
368.10	5.50	366.50	0.00
368.20	6.34	366.50	0.00
368.30	7.21	366.50	0.00
368.40	8.14	366.50	0.00
368.50	9.06	366.50	0.00
368.60	10.00	366.50	0.00
368.70	10.95	366.50	0.00
368.80	11.90	366.50	0.00
368.90	12.82	366.50	0.00
369.00	13.75	366.50	0.00
369.10	14.62	366.50	0.00
369.20	15.45	366.50	0.00
369.30	16.24	366.50	0.00
369.40	16.93	366.50	0.00
369.50	17.51	366.50	0.00
369.60	18.03	366.50	0.00
369.70	18.54	366.50	0.00
369.80	19.06	366.50	0.00
369.90	19.57	366.50	0.00
370.00	20.07	366.50	0.00
370.10	20.58	366.50	0.00
370.20	21.07	366.50	0.00
370.30	21.56	366.50	0.00
370.40	22.04	366.50	0.00
370.50	22.51	366.50	0.00
370.60	22.99	366.50	0.00
370.70	23.46	366.50	0.00
370.80	23.91	366.50	0.00
370.90	24.36	366.50	0.00
371.00	24.81	366.50	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.60	0.00
367.00	0.04	366.60	0.00
367.10	0.17	366.60	0.00
367.20	0.39	366.60	0.00
367.30	0.68	366.60	0.00
367.40	1.05	366.60	0.00
367.50	1.50	366.60	0.00
367.60	2.01	366.60	0.00
367.70	2.59	366.60	0.00
367.80	3.24	366.60	0.00
367.90	3.93	366.60	0.00
368.00	4.70	366.60	0.00
368.10	5.50	366.60	0.00
368.20	6.34	366.60	0.00
368.30	7.21	366.60	0.00
368.40	8.14	366.60	0.00
368.50	9.06	366.60	0.00
368.60	10.00	366.60	0.00
368.70	10.95	366.60	0.00
368.80	11.90	366.60	0.00
368.90	12.82	366.60	0.00
369.00	13.75	366.60	0.00
369.10	14.62	366.60	0.00
369.20	15.45	366.60	0.00
369.30	16.24	366.60	0.00
369.40	16.93	366.60	0.00
369.50	17.51	366.60	0.00
369.60	18.03	366.60	0.00
369.70	18.54	366.60	0.00
369.80	19.06	366.60	0.00
369.90	19.57	366.60	0.00
370.00	20.07	366.60	0.00
370.10	20.58	366.60	0.00
370.20	21.07	366.60	0.00
370.30	21.56	366.60	0.00
370.40	22.04	366.60	0.00
370.50	22.51	366.60	0.00
370.60	22.99	366.60	0.00
370.70	23.46	366.60	0.00
370.80	23.91	366.60	0.00
370.90	24.36	366.60	0.00
371.00	24.81	366.60	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.70	0.00
367.00	0.04	366.70	0.00
367.10	0.17	366.70	0.00
367.20	0.39	366.70	0.00
367.30	0.68	366.70	0.00
367.40	1.05	366.70	0.00
367.50	1.50	366.70	0.00
367.60	2.01	366.70	0.00
367.70	2.59	366.70	0.00
367.80	3.24	366.70	0.00
367.90	3.93	366.70	0.00
368.00	4.70	366.70	0.00
368.10	5.50	366.70	0.00
368.20	6.34	366.70	0.00
368.30	7.21	366.70	0.00
368.40	8.14	366.70	0.00
368.50	9.06	366.70	0.00
368.60	10.00	366.70	0.00
368.70	10.95	366.70	0.00
368.80	11.90	366.70	0.00
368.90	12.82	366.70	0.00
369.00	13.75	366.70	0.00
369.10	14.62	366.70	0.00
369.20	15.45	366.70	0.00
369.30	16.24	366.70	0.00
369.40	16.93	366.70	0.00
369.50	17.51	366.70	0.00
369.60	18.03	366.70	0.00
369.70	18.54	366.70	0.00
369.80	19.06	366.70	0.00
369.90	19.57	366.70	0.00
370.00	20.07	366.70	0.00
370.10	20.58	366.70	0.00
370.20	21.07	366.70	0.00
370.30	21.56	366.70	0.00
370.40	22.04	366.70	0.00
370.50	22.51	366.70	0.00
370.60	22.99	366.70	0.00
370.70	23.46	366.70	0.00
370.80	23.91	366.70	0.00
370.90	24.36	366.70	0.00
371.00	24.81	366.70	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.80	0.00
367.00	0.04	366.80	0.00
367.10	0.17	366.80	0.00
367.20	0.39	366.80	0.00
367.30	0.68	366.80	0.00
367.40	1.05	366.80	0.00
367.50	1.50	366.80	0.00
367.60	2.01	366.80	0.00
367.70	2.59	366.80	0.00
367.80	3.24	366.80	0.00
367.90	3.93	366.80	0.00
368.00	4.70	366.80	0.00
368.10	5.50	366.80	0.00
368.20	6.34	366.80	0.00
368.30	7.21	366.80	0.00
368.40	8.14	366.80	0.00
368.50	9.06	366.80	0.00
368.60	10.00	366.80	0.00
368.70	10.95	366.80	0.00
368.80	11.90	366.80	0.00
368.90	12.82	366.80	0.00
369.00	13.75	366.80	0.00
369.10	14.62	366.80	0.00
369.20	15.45	366.80	0.00
369.30	16.24	366.80	0.00
369.40	16.93	366.80	0.00
369.50	17.51	366.80	0.00
369.60	18.03	366.80	0.00
369.70	18.54	366.80	0.00
369.80	19.06	366.80	0.00
369.90	19.57	366.80	0.00
370.00	20.07	366.80	0.00
370.10	20.58	366.80	0.00
370.20	21.07	366.80	0.00
370.30	21.56	366.80	0.00
370.40	22.04	366.80	0.00
370.50	22.51	366.80	0.00
370.60	22.99	366.80	0.00
370.70	23.46	366.80	0.00
370.80	23.91	366.80	0.00
370.90	24.36	366.80	0.00
371.00	24.81	366.80	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.90	0.00
367.00	0.04	366.90	0.00
367.10	0.17	366.90	0.00
367.20	0.38	366.90	0.00
367.30	0.68	366.90	0.00
367.40	1.06	366.90	0.00
367.50	1.50	366.90	0.00
367.60	2.01	366.90	0.00
367.70	2.59	366.90	0.00
367.80	3.24	366.90	0.00
367.90	3.93	366.90	0.00
368.00	4.70	366.90	0.00
368.10	5.50	366.90	0.00
368.20	6.34	366.90	0.00
368.30	7.21	366.90	0.00
368.40	8.14	366.90	0.00
368.50	9.06	366.90	0.00
368.60	10.00	366.90	0.00
368.70	10.95	366.90	0.00
368.80	11.90	366.90	0.00
368.90	12.82	366.90	0.00
369.00	13.75	366.90	0.00
369.10	14.62	366.90	0.00
369.20	15.45	366.90	0.00
369.30	16.24	366.90	0.00
369.40	16.93	366.90	0.00
369.50	17.51	366.90	0.00
369.60	18.03	366.90	0.00
369.70	18.54	366.90	0.00
369.80	19.06	366.90	0.00
369.90	19.57	366.90	0.00
370.00	20.07	366.90	0.00
370.10	20.58	366.90	0.00
370.20	21.07	366.90	0.00
370.30	21.56	366.90	0.00
370.40	22.04	366.90	0.00
370.50	22.51	366.90	0.00
370.60	22.99	366.90	0.00
370.70	23.46	366.90	0.00
370.80	23.91	366.90	0.00
370.90	24.36	366.90	0.00
371.00	24.81	366.90	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.03	367.00	0.00
367.00	0.00	367.00	0.00
367.10	0.17	367.00	0.00
367.20	0.39	367.00	0.00
367.30	0.68	367.00	0.00
367.40	1.05	367.00	0.00
367.50	1.50	367.00	0.00
367.60	2.02	367.00	0.00
367.70	2.59	367.00	0.00
367.80	3.24	367.00	0.00
367.90	3.93	367.00	0.00
368.00	4.70	367.00	0.00
368.10	5.50	367.00	0.00
368.20	6.34	367.00	0.00
368.30	7.21	367.00	0.00
368.40	8.14	367.00	0.00
368.50	9.06	367.00	0.00
368.60	10.00	367.00	0.00
368.70	10.95	367.00	0.00
368.80	11.90	367.00	0.00
368.90	12.82	367.00	0.00
369.00	13.75	367.00	0.00
369.10	14.62	367.00	0.00
369.20	15.45	367.00	0.00
369.30	16.24	367.00	0.00
369.40	16.93	367.00	0.00
369.50	17.51	367.00	0.00
369.60	18.03	367.00	0.00
369.70	18.54	367.00	0.00
369.80	19.06	367.00	0.00
369.90	19.57	367.00	0.00
370.00	20.07	367.00	0.00
370.10	20.58	367.00	0.00
370.20	21.07	367.00	0.00
370.30	21.56	367.00	0.00
370.40	22.04	367.00	0.00
370.50	22.51	367.00	0.00
370.60	22.99	367.00	0.00
370.70	23.46	367.00	0.00
370.80	23.91	367.00	0.00
370.90	24.36	367.00	0.00
371.00	24.81	367.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.14	367.10	0.00
367.00	-0.14	367.10	0.00
367.10	0.00	367.10	0.00
367.20	0.38	367.10	0.00
367.30	0.68	367.10	0.00
367.40	1.05	367.10	0.00
367.50	1.50	367.10	0.00
367.60	2.01	367.10	0.00
367.70	2.59	367.10	0.00
367.80	3.24	367.10	0.00
367.90	3.93	367.10	0.00
368.00	4.70	367.10	0.00
368.10	5.50	367.10	0.00
368.20	6.34	367.10	0.00
368.30	7.21	367.10	0.00
368.40	8.14	367.10	0.00
368.50	9.06	367.10	0.00
368.60	10.00	367.10	0.00
368.70	10.95	367.10	0.00
368.80	11.90	367.10	0.00
368.90	12.82	367.10	0.00
369.00	13.75	367.10	0.00
369.10	14.62	367.10	0.00
369.20	15.45	367.10	0.00
369.30	16.24	367.10	0.00
369.40	16.93	367.10	0.00
369.50	17.51	367.10	0.00
369.60	18.03	367.10	0.00
369.70	18.54	367.10	0.00
369.80	19.06	367.10	0.00
369.90	19.57	367.10	0.00
370.00	20.07	367.10	0.00
370.10	20.58	367.10	0.00
370.20	21.07	367.10	0.00
370.30	21.56	367.10	0.00
370.40	22.04	367.10	0.00
370.50	22.51	367.10	0.00
370.60	22.99	367.10	0.00
370.70	23.46	367.10	0.00
370.80	23.91	367.10	0.00
370.90	24.36	367.10	0.00
371.00	24.81	367.10	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.32	367.20	0.00
367.00	-0.32	367.20	0.00
367.10	-0.32	367.20	0.00
367.20	0.00	367.20	0.00
367.30	0.66	367.20	0.00
367.40	1.05	367.20	0.00
367.50	1.50	367.20	0.00
367.60	2.01	367.20	0.00
367.70	2.59	367.20	0.00
367.80	3.24	367.20	0.00
367.90	3.95	367.20	0.00
368.00	4.70	367.20	0.00
368.10	5.50	367.20	0.00
368.20	6.34	367.20	0.00
368.30	7.21	367.20	0.00
368.40	8.14	367.20	0.00
368.50	9.06	367.20	0.00
368.60	10.00	367.20	0.00
368.70	10.95	367.20	0.00
368.80	11.90	367.20	0.00
368.90	12.82	367.20	0.00
369.00	13.75	367.20	0.00
369.10	14.62	367.20	0.00
369.20	15.45	367.20	0.00
369.30	16.24	367.20	0.00
369.40	16.93	367.20	0.00
369.50	17.51	367.20	0.00
369.60	18.03	367.20	0.00
369.70	18.54	367.20	0.00
369.80	19.06	367.20	0.00
369.90	19.57	367.20	0.00
370.00	20.07	367.20	0.00
370.10	20.58	367.20	0.00
370.20	21.07	367.20	0.00
370.30	21.56	367.20	0.00
370.40	22.04	367.20	0.00
370.50	22.51	367.20	0.00
370.60	22.99	367.20	0.00
370.70	23.46	367.20	0.00
370.80	23.91	367.20	0.00
370.90	24.36	367.20	0.00
371.00	24.81	367.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.58	367.30	0.00
367.00	-0.58	367.30	0.00
367.10	-0.58	367.30	0.00
367.20	-0.56	367.30	0.00
367.30	0.00	367.30	0.00
367.40	0.98	367.30	0.00
367.50	1.49	367.30	0.00
367.60	2.01	367.30	0.00
367.70	2.59	367.30	0.00
367.80	3.24	367.30	0.00
367.90	3.94	367.30	0.00
368.00	4.68	367.30	0.00
368.10	5.50	367.30	0.00
368.20	6.34	367.30	0.00
368.30	7.21	367.30	0.00
368.40	8.14	367.30	0.00
368.50	9.06	367.30	0.00
368.60	10.00	367.30	0.00
368.70	10.95	367.30	0.00
368.80	11.90	367.30	0.00
368.90	12.82	367.30	0.00
369.00	13.75	367.30	0.00
369.10	14.62	367.30	0.00
369.20	15.45	367.30	0.00
369.30	16.24	367.30	0.00
369.40	16.93	367.30	0.00
369.50	17.51	367.30	0.00
369.60	18.03	367.30	0.00
369.70	18.54	367.30	0.00
369.80	19.06	367.30	0.00
369.90	19.57	367.30	0.00
370.00	20.07	367.30	0.00
370.10	20.58	367.30	0.00
370.20	21.07	367.30	0.00
370.30	21.56	367.30	0.00
370.40	22.04	367.30	0.00
370.50	22.51	367.30	0.00
370.60	22.99	367.30	0.00
370.70	23.46	367.30	0.00
370.80	23.91	367.30	0.00
370.90	24.36	367.30	0.00
371.00	24.81	367.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.90	367.40	0.00
367.00	-0.90	367.40	0.00
367.10	-0.90	367.40	0.00
367.20	-0.90	367.40	0.00
367.30	-0.83	367.40	0.00
367.40	0.00	367.40	0.00
367.50	1.33	367.40	0.00
367.60	1.97	367.40	0.00
367.70	2.58	367.40	0.00
367.80	3.24	367.40	0.00
367.90	3.94	367.40	0.00
368.00	4.69	367.40	0.00
368.10	5.50	367.40	0.00
368.20	6.34	367.40	0.00
368.30	7.21	367.40	0.00
368.40	8.14	367.40	0.00
368.50	9.06	367.40	0.00
368.60	10.00	367.40	0.00
368.70	10.95	367.40	0.00
368.80	11.90	367.40	0.00
368.90	12.82	367.40	0.00
369.00	13.75	367.40	0.00
369.10	14.62	367.40	0.00
369.20	15.45	367.40	0.00
369.30	16.24	367.40	0.00
369.40	16.93	367.40	0.00
369.50	17.51	367.40	0.00
369.60	18.03	367.40	0.00
369.70	18.54	367.40	0.00
369.80	19.06	367.40	0.00
369.90	19.57	367.40	0.00
370.00	20.07	367.40	0.00
370.10	20.58	367.40	0.00
370.20	21.07	367.40	0.00
370.30	21.56	367.40	0.00
370.40	22.04	367.40	0.00
370.50	22.51	367.40	0.00
370.60	22.99	367.40	0.00
370.70	23.46	367.40	0.00
370.80	23.91	367.40	0.00
370.90	24.36	367.40	0.00
371.00	24.81	367.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.29	367.50	0.00
367.00	-1.29	367.50	0.00
367.10	-1.29	367.50	0.00
367.20	-1.29	367.50	0.00
367.30	-1.29	367.50	0.00
367.40	-1.14	367.50	0.00
367.50	0.00	367.50	0.00
367.60	1.71	367.50	0.00
367.70	2.50	367.50	0.00
367.80	3.21	367.50	0.00
367.90	3.93	367.50	0.00
368.00	4.68	367.50	0.00
368.10	5.50	367.50	0.00
368.20	6.34	367.50	0.00
368.30	7.21	367.50	0.00
368.40	8.14	367.50	0.00
368.50	9.06	367.50	0.00
368.60	10.00	367.50	0.00
368.70	10.95	367.50	0.00
368.80	11.90	367.50	0.00
368.90	12.82	367.50	0.00
369.00	13.75	367.50	0.00
369.10	14.62	367.50	0.00
369.20	15.45	367.50	0.00
369.30	16.24	367.50	0.00
369.40	16.93	367.50	0.00
369.50	17.51	367.50	0.00
369.60	18.03	367.50	0.00
369.70	18.54	367.50	0.00
369.80	19.06	367.50	0.00
369.90	19.57	367.50	0.00
370.00	20.07	367.50	0.00
370.10	20.58	367.50	0.00
370.20	21.07	367.50	0.00
370.30	21.56	367.50	0.00
370.40	22.04	367.50	0.00
370.50	22.51	367.50	0.00
370.60	22.99	367.50	0.00
370.70	23.46	367.50	0.00
370.80	23.91	367.50	0.00
370.90	24.36	367.50	0.00
371.00	24.81	367.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.74	367.60	0.00
367.00	-1.74	367.60	0.00
367.10	-1.74	367.60	0.00
367.20	-1.74	367.60	0.00
367.30	-1.74	367.60	0.00
367.40	-1.73	367.60	0.00
367.50	-1.48	367.60	0.00
367.60	0.00	367.60	0.00
367.70	2.09	367.60	0.00
367.80	3.05	367.60	0.00
367.90	3.86	367.60	0.00
368.00	4.66	367.60	0.00
368.10	5.47	367.60	0.00
368.20	6.34	367.60	0.00
368.30	7.21	367.60	0.00
368.40	8.12	367.60	0.00
368.50	9.06	367.60	0.00
368.60	10.00	367.60	0.00
368.70	10.95	367.60	0.00
368.80	11.90	367.60	0.00
368.90	12.82	367.60	0.00
369.00	13.75	367.60	0.00
369.10	14.62	367.60	0.00
369.20	15.45	367.60	0.00
369.30	16.24	367.60	0.00
369.40	16.93	367.60	0.00
369.50	17.51	367.60	0.00
369.60	18.03	367.60	0.00
369.70	18.54	367.60	0.00
369.80	19.06	367.60	0.00
369.90	19.57	367.60	0.00
370.00	20.07	367.60	0.00
370.10	20.58	367.60	0.00
370.20	21.07	367.60	0.00
370.30	21.56	367.60	0.00
370.40	22.04	367.60	0.00
370.50	22.51	367.60	0.00
370.60	22.99	367.60	0.00
370.70	23.46	367.60	0.00
370.80	23.91	367.60	0.00
370.90	24.36	367.60	0.00
371.00	24.81	367.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.25	367.70	0.00
367.00	-2.25	367.70	0.00
367.10	-2.25	367.70	0.00
367.20	-2.25	367.70	0.00
367.30	-2.25	367.70	0.00
367.40	-2.25	367.70	0.00
367.50	-2.19	367.70	0.00
367.60	-1.81	367.70	0.00
367.70	0.00	367.70	0.00
367.80	2.48	367.70	0.00
367.90	3.59	367.70	0.00
368.00	4.54	367.70	0.00
368.10	5.43	367.70	0.00
368.20	6.30	367.70	0.00
368.30	7.20	367.70	0.00
368.40	8.12	367.70	0.00
368.50	9.04	367.70	0.00
368.60	9.99	367.70	0.00
368.70	10.95	367.70	0.00
368.80	11.90	367.70	0.00
368.90	12.82	367.70	0.00
369.00	13.75	367.70	0.00
369.10	14.62	367.70	0.00
369.20	15.45	367.70	0.00
369.30	16.24	367.70	0.00
369.40	16.93	367.70	0.00
369.50	17.51	367.70	0.00
369.60	18.03	367.70	0.00
369.70	18.54	367.70	0.00
369.80	19.06	367.70	0.00
369.90	19.57	367.70	0.00
370.00	20.07	367.70	0.00
370.10	20.58	367.70	0.00
370.20	21.07	367.70	0.00
370.30	21.56	367.70	0.00
370.40	22.04	367.70	0.00
370.50	22.51	367.70	0.00
370.60	22.99	367.70	0.00
370.70	23.46	367.70	0.00
370.80	23.91	367.70	0.00
370.90	24.36	367.70	0.00
371.00	24.81	367.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.81	367.80	0.00
367.00	-2.81	367.80	0.00
367.10	-2.81	367.80	0.00
367.20	-2.81	367.80	0.00
367.30	-2.81	367.80	0.00
367.40	-2.81	367.80	0.00
367.50	-2.81	367.80	0.00
367.60	-2.68	367.80	0.00
367.70	-2.17	367.80	0.00
367.80	0.00	367.80	0.00
367.90	2.88	367.80	0.00
368.00	4.17	367.80	0.00
368.10	5.22	367.80	0.00
368.20	6.18	367.80	0.00
368.30	7.12	367.80	0.00
368.40	8.07	367.80	0.00
368.50	9.02	367.80	0.00
368.60	9.99	367.80	0.00
368.70	10.93	367.80	0.00
368.80	11.90	367.80	0.00
368.90	12.82	367.80	0.00
369.00	13.75	367.80	0.00
369.10	14.62	367.80	0.00
369.20	15.45	367.80	0.00
369.30	16.24	367.80	0.00
369.40	16.93	367.80	0.00
369.50	17.51	367.80	0.00
369.60	18.03	367.80	0.00
369.70	18.54	367.80	0.00
369.80	19.06	367.80	0.00
369.90	19.57	367.80	0.00
370.00	20.07	367.80	0.00
370.10	20.58	367.80	0.00
370.20	21.07	367.80	0.00
370.30	21.56	367.80	0.00
370.40	22.04	367.80	0.00
370.50	22.51	367.80	0.00
370.60	22.99	367.80	0.00
370.70	23.46	367.80	0.00
370.80	23.91	367.80	0.00
370.90	24.36	367.80	0.00
371.00	24.81	367.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-3.43	367.90	0.00
367.00	-3.43	367.90	0.00
367.10	-3.43	367.90	0.00
367.20	-3.43	367.90	0.00
367.30	-3.43	367.90	0.00
367.40	-3.43	367.90	0.00
367.50	-3.43	367.90	0.00
367.60	-3.42	367.90	0.00
367.70	-3.18	367.90	0.00
367.80	-2.53	367.90	0.00
367.90	0.00	367.90	0.00
368.00	3.25	367.90	0.00
368.10	4.71	367.90	0.00
368.20	5.86	367.90	0.00
368.30	6.93	367.90	0.00
368.40	7.93	367.90	0.00
368.50	8.93	367.90	0.00
368.60	9.91	367.90	0.00
368.70	10.90	367.90	0.00
368.80	11.86	367.90	0.00
368.90	12.81	367.90	0.00
369.00	13.75	367.90	0.00
369.10	14.62	367.90	0.00
369.20	15.45	367.90	0.00
369.30	16.24	367.90	0.00
369.40	16.93	367.90	0.00
369.50	17.51	367.90	0.00
369.60	18.03	367.90	0.00
369.70	18.54	367.90	0.00
369.80	19.06	367.90	0.00
369.90	19.57	367.90	0.00
370.00	20.07	367.90	0.00
370.10	20.58	367.90	0.00
370.20	21.07	367.90	0.00
370.30	21.56	367.90	0.00
370.40	22.04	367.90	0.00
370.50	22.51	367.90	0.00
370.60	22.99	367.90	0.00
370.70	23.46	367.90	0.00
370.80	23.91	367.90	0.00
370.90	24.36	367.90	0.00
371.00	24.81	367.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.10	368.00	0.00
367.00	-4.10	368.00	0.00
367.10	-4.10	368.00	0.00
367.20	-4.10	368.00	0.00
367.30	-4.10	368.00	0.00
367.40	-4.10	368.00	0.00
367.50	-4.10	368.00	0.00
367.60	-4.10	368.00	0.00
367.70	-4.03	368.00	0.00
367.80	-3.70	368.00	0.00
367.90	-2.91	368.00	0.00
368.00	0.00	368.00	0.00
368.10	3.64	368.00	0.00
368.20	5.22	368.00	0.00
368.30	6.49	368.00	0.00
368.40	7.64	368.00	0.00
368.50	8.72	368.00	0.00
368.60	9.76	368.00	0.00
368.70	10.77	368.00	0.00
368.80	11.77	368.00	0.00
368.90	12.74	368.00	0.00
369.00	13.69	368.00	0.00
369.10	14.59	368.00	0.00
369.20	15.44	368.00	0.00
369.30	16.24	368.00	0.00
369.40	16.93	368.00	0.00
369.50	17.51	368.00	0.00
369.60	18.03	368.00	0.00
369.70	18.54	368.00	0.00
369.80	19.06	368.00	0.00
369.90	19.57	368.00	0.00
370.00	20.07	368.00	0.00
370.10	20.58	368.00	0.00
370.20	21.07	368.00	0.00
370.30	21.56	368.00	0.00
370.40	22.04	368.00	0.00
370.50	22.51	368.00	0.00
370.60	22.99	368.00	0.00
370.70	23.46	368.00	0.00
370.80	23.91	368.00	0.00
370.90	24.36	368.00	0.00
371.00	24.81	368.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.79	368.10	0.00
367.00	-4.79	368.10	0.00
367.10	-4.79	368.10	0.00
367.20	-4.79	368.10	0.00
367.30	-4.79	368.10	0.00
367.40	-4.79	368.10	0.00
367.50	-4.79	368.10	0.00
367.60	-4.79	368.10	0.00
367.70	-4.79	368.10	0.00
367.80	-4.65	368.10	0.00
367.90	-4.20	368.10	0.00
368.00	-3.24	368.10	0.00
368.10	0.00	368.10	0.00
368.20	4.00	368.10	0.00
368.30	5.70	368.10	0.00
368.40	7.09	368.10	0.00
368.50	8.33	368.10	0.00
368.60	9.45	368.10	0.00
368.70	10.54	368.10	0.00
368.80	11.57	368.10	0.00
368.90	12.58	368.10	0.00
369.00	13.55	368.10	0.00
369.10	14.48	368.10	0.00
369.20	15.35	368.10	0.00
369.30	16.16	368.10	0.00
369.40	16.88	368.10	0.00
369.50	17.48	368.10	0.00
369.60	18.01	368.10	0.00
369.70	18.54	368.10	0.00
369.80	19.06	368.10	0.00
369.90	19.57	368.10	0.00
370.00	20.07	368.10	0.00
370.10	20.58	368.10	0.00
370.20	21.07	368.10	0.00
370.30	21.56	368.10	0.00
370.40	22.04	368.10	0.00
370.50	22.51	368.10	0.00
370.60	22.99	368.10	0.00
370.70	23.46	368.10	0.00
370.80	23.91	368.10	0.00
370.90	24.36	368.10	0.00
371.00	24.81	368.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-5.53	368.20	0.00
367.00	-5.53	368.20	0.00
367.10	-5.53	368.20	0.00
367.20	-5.53	368.20	0.00
367.30	-5.53	368.20	0.00
367.40	-5.53	368.20	0.00
367.50	-5.53	368.20	0.00
367.60	-5.53	368.20	0.00
367.70	-5.53	368.20	0.00
367.80	-5.51	368.20	0.00
367.90	-5.25	368.20	0.00
368.00	-4.70	368.20	0.00
368.10	-3.60	368.20	0.00
368.20	0.00	368.20	0.00
368.30	4.28	368.20	0.00
368.40	6.17	368.20	0.00
368.50	7.63	368.20	0.00
368.60	8.93	368.20	0.00
368.70	10.11	368.20	0.00
368.80	11.23	368.20	0.00
368.90	12.29	368.20	0.00
369.00	13.29	368.20	0.00
369.10	14.25	368.20	0.00
369.20	15.14	368.20	0.00
369.30	15.96	368.20	0.00
369.40	16.69	368.20	0.00
369.50	17.28	368.20	0.00
369.60	17.85	368.20	0.00
369.70	18.41	368.20	0.00
369.80	18.96	368.20	0.00
369.90	19.50	368.20	0.00
370.00	20.03	368.20	0.00
370.10	20.55	368.20	0.00
370.20	21.06	368.20	0.00
370.30	21.55	368.20	0.00
370.40	22.04	368.20	0.00
370.50	22.52	368.20	0.00
370.60	22.99	368.20	0.00
370.70	23.46	368.20	0.00
370.80	23.91	368.20	0.00
370.90	24.36	368.20	0.00
371.00	24.81	368.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-6.29	368.30	0.00
367.00	-6.29	368.30	0.00
367.10	-6.29	368.30	0.00
367.20	-6.29	368.30	0.00
367.30	-6.29	368.30	0.00
367.40	-6.29	368.30	0.00
367.50	-6.29	368.30	0.00
367.60	-6.29	368.30	0.00
367.70	-6.29	368.30	0.00
367.80	-6.29	368.30	0.00
367.90	-6.20	368.30	0.00
368.00	-5.84	368.30	0.00
368.10	-5.17	368.30	0.00
368.20	-3.91	368.30	0.00
368.30	0.00	368.30	0.00
368.40	4.58	368.30	0.00
368.50	6.55	368.30	0.00
368.60	8.10	368.30	0.00
368.70	9.45	368.30	0.00
368.80	10.66	368.30	0.00
368.90	11.81	368.30	0.00
369.00	12.86	368.30	0.00
369.10	13.85	368.30	0.00
369.20	14.76	368.30	0.00
369.30	15.59	368.30	0.00
369.40	16.31	368.30	0.00
369.50	16.90	368.30	0.00
369.60	17.51	368.30	0.00
369.70	18.09	368.30	0.00
369.80	18.67	368.30	0.00
369.90	19.26	368.30	0.00
370.00	19.81	368.30	0.00
370.10	20.36	368.30	0.00
370.20	20.90	368.30	0.00
370.30	21.42	368.30	0.00
370.40	21.93	368.30	0.00
370.50	22.43	368.30	0.00
370.60	22.93	368.30	0.00
370.70	23.41	368.30	0.00
370.80	23.88	368.30	0.00
370.90	24.35	368.30	0.00
371.00	24.79	368.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.08	368.40	0.00
367.00	-7.08	368.40	0.00
367.10	-7.08	368.40	0.00
367.20	-7.08	368.40	0.00
367.30	-7.08	368.40	0.00
367.40	-7.08	368.40	0.00
367.50	-7.08	368.40	0.00
367.60	-7.08	368.40	0.00
367.70	-7.08	368.40	0.00
367.80	-7.08	368.40	0.00
367.90	-7.06	368.40	0.00
368.00	-6.87	368.40	0.00
368.10	-6.41	368.40	0.00
368.20	-5.63	368.40	0.00
368.30	-4.24	368.40	0.00
368.40	0.00	368.40	0.00
368.50	4.82	368.40	0.00
368.60	6.85	368.40	0.00
368.70	8.45	368.40	0.00
368.80	9.85	368.40	0.00
368.90	11.06	368.40	0.00
369.00	12.20	368.40	0.00
369.10	13.22	368.40	0.00
369.20	14.16	368.40	0.00
369.30	14.96	368.40	0.00
369.40	15.61	368.40	0.00
369.50	16.26	368.40	0.00
369.60	16.91	368.40	0.00
369.70	17.56	368.40	0.00
369.80	18.19	368.40	0.00
369.90	18.81	368.40	0.00
370.00	19.41	368.40	0.00
370.10	19.98	368.40	0.00
370.20	20.55	368.40	0.00
370.30	21.11	368.40	0.00
370.40	21.65	368.40	0.00
370.50	22.17	368.40	0.00
370.60	22.69	368.40	0.00
370.70	23.19	368.40	0.00
370.80	23.69	368.40	0.00
370.90	24.18	368.40	0.00
371.00	24.65	368.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.87	368.50	0.00
367.00	-7.87	368.50	0.00
367.10	-7.87	368.50	0.00
367.20	-7.87	368.50	0.00
367.30	-7.87	368.50	0.00
367.40	-7.87	368.50	0.00
367.50	-7.87	368.50	0.00
367.60	-7.87	368.50	0.00
367.70	-7.87	368.50	0.00
367.80	-7.87	368.50	0.00
367.90	-7.87	368.50	0.00
368.00	-7.80	368.50	0.00
368.10	-7.51	368.50	0.00
368.20	-6.94	368.50	0.00
368.30	-6.01	368.50	0.00
368.40	-4.48	368.50	0.00
368.50	0.00	368.50	0.00
368.60	4.94	368.50	0.00
368.70	7.00	368.50	0.00
368.80	8.64	368.50	0.00
368.90	10.00	368.50	0.00
369.00	11.18	368.50	0.00
369.10	12.21	368.50	0.00
369.20	13.03	368.50	0.00
369.30	13.74	368.50	0.00
369.40	14.58	368.50	0.00
369.50	15.36	368.50	0.00
369.60	16.12	368.50	0.00
369.70	16.84	368.50	0.00
369.80	17.53	368.50	0.00
369.90	18.18	368.50	0.00
370.00	18.82	368.50	0.00
370.10	19.44	368.50	0.00
370.20	20.04	368.50	0.00
370.30	20.62	368.50	0.00
370.40	21.18	368.50	0.00
370.50	21.74	368.50	0.00
370.60	22.27	368.50	0.00
370.70	22.79	368.50	0.00
370.80	23.30	368.50	0.00
370.90	23.80	368.50	0.00
371.00	24.30	368.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-8.65	368.60	0.00
367.00	-8.65	368.60	0.00
367.10	-8.65	368.60	0.00
367.20	-8.65	368.60	0.00
367.30	-8.65	368.60	0.00
367.40	-8.65	368.60	0.00
367.50	-8.65	368.60	0.00
367.60	-8.65	368.60	0.00
367.70	-8.65	368.60	0.00
367.80	-8.65	368.60	0.00
367.90	-8.65	368.60	0.00
368.00	-8.64	368.60	0.00
368.10	-8.48	368.60	0.00
368.20	-8.08	368.60	0.00
368.30	-7.39	368.60	0.00
368.40	-6.34	368.60	0.00
368.50	-4.63	368.60	0.00
368.60	0.00	368.60	0.00
368.70	4.95	368.60	0.00
368.80	6.98	368.60	0.00
368.90	8.53	368.60	0.00
369.00	9.82	368.60	0.00
369.10	10.89	368.60	0.00
369.20	11.90	368.60	0.00
369.30	12.85	368.60	0.00
369.40	13.74	368.60	0.00
369.50	14.58	368.60	0.00
369.60	15.36	368.60	0.00
369.70	16.12	368.60	0.00
369.80	16.83	368.60	0.00
369.90	17.52	368.60	0.00
370.00	18.19	368.60	0.00
370.10	18.83	368.60	0.00
370.20	19.44	368.60	0.00
370.30	20.03	368.60	0.00
370.40	20.62	368.60	0.00
370.50	21.18	368.60	0.00
370.60	21.73	368.60	0.00
370.70	22.27	368.60	0.00
370.80	22.79	368.60	0.00
370.90	23.31	368.60	0.00
371.00	23.80	368.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-9.42	368.70	0.00
367.00	-9.42	368.70	0.00
367.10	-9.42	368.70	0.00
367.20	-9.42	368.70	0.00
367.30	-9.42	368.70	0.00
367.40	-9.42	368.70	0.00
367.50	-9.42	368.70	0.00
367.60	-9.42	368.70	0.00
367.70	-9.42	368.70	0.00
367.80	-9.42	368.70	0.00
367.90	-9.42	368.70	0.00
368.00	-9.42	368.70	0.00
368.10	-9.35	368.70	0.00
368.20	-9.06	368.70	0.00
368.30	-8.56	368.70	0.00
368.40	-7.75	368.70	0.00
368.50	-6.56	368.70	0.00
368.60	-4.77	368.70	0.00
368.70	0.00	368.70	0.00
368.80	4.89	368.70	0.00
368.90	6.93	368.70	0.00
369.00	8.45	368.70	0.00
369.10	9.71	368.70	0.00
369.20	10.86	368.70	0.00
369.30	11.91	368.70	0.00
369.40	12.86	368.70	0.00
369.50	13.74	368.70	0.00
369.60	14.57	368.70	0.00
369.70	15.37	368.70	0.00
369.80	16.12	368.70	0.00
369.90	16.84	368.70	0.00
370.00	17.52	368.70	0.00
370.10	18.19	368.70	0.00
370.20	18.82	368.70	0.00
370.30	19.43	368.70	0.00
370.40	20.04	368.70	0.00
370.50	20.62	368.70	0.00
370.60	21.18	368.70	0.00
370.70	21.73	368.70	0.00
370.80	22.26	368.70	0.00
370.90	22.80	368.70	0.00
371.00	23.31	368.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.16	368.80	0.00
367.00	-10.16	368.80	0.00
367.10	-10.16	368.80	0.00
367.20	-10.16	368.80	0.00
367.30	-10.16	368.80	0.00
367.40	-10.16	368.80	0.00
367.50	-10.16	368.80	0.00
367.60	-10.16	368.80	0.00
367.70	-10.16	368.80	0.00
367.80	-10.16	368.80	0.00
367.90	-10.16	368.80	0.00
368.00	-10.16	368.80	0.00
368.10	-10.13	368.80	0.00
368.20	-9.95	368.80	0.00
368.30	-9.56	368.80	0.00
368.40	-8.94	368.80	0.00
368.50	-8.01	368.80	0.00
368.60	-6.72	368.80	0.00
368.70	-4.82	368.80	0.00
368.80	0.00	368.80	0.00
368.90	4.85	368.80	0.00
369.00	6.87	368.80	0.00
369.10	8.43	368.80	0.00
369.20	9.72	368.80	0.00
369.30	10.86	368.80	0.00
369.40	11.91	368.80	0.00
369.50	12.86	368.80	0.00
369.60	13.74	368.80	0.00
369.70	14.58	368.80	0.00
369.80	15.37	368.80	0.00
369.90	16.12	368.80	0.00
370.00	16.83	368.80	0.00
370.10	17.52	368.80	0.00
370.20	18.19	368.80	0.00
370.30	18.82	368.80	0.00
370.40	19.44	368.80	0.00
370.50	20.04	368.80	0.00
370.60	20.62	368.80	0.00
370.70	21.18	368.80	0.00
370.80	21.73	368.80	0.00
370.90	22.27	368.80	0.00
371.00	22.79	368.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.87	368.90	0.00
367.00	-10.87	368.90	0.00
367.10	-10.87	368.90	0.00
367.20	-10.87	368.90	0.00
367.30	-10.87	368.90	0.00
367.40	-10.87	368.90	0.00
367.50	-10.87	368.90	0.00
367.60	-10.87	368.90	0.00
367.70	-10.87	368.90	0.00
367.80	-10.87	368.90	0.00
367.90	-10.87	368.90	0.00
368.00	-10.87	368.90	0.00
368.10	-10.87	368.90	0.00
368.20	-10.78	368.90	0.00
368.30	-10.49	368.90	0.00
368.40	-9.99	368.90	0.00
368.50	-9.25	368.90	0.00
368.60	-8.20	368.90	0.00
368.70	-6.82	368.90	0.00
368.80	-4.86	368.90	0.00
368.90	0.00	368.90	0.00
369.00	4.87	368.90	0.00
369.10	6.86	368.90	0.00
369.20	8.42	368.90	0.00
369.30	9.73	368.90	0.00
369.40	10.87	368.90	0.00
369.50	11.91	368.90	0.00
369.60	12.86	368.90	0.00
369.70	13.74	368.90	0.00
369.80	14.58	368.90	0.00
369.90	15.37	368.90	0.00
370.00	16.12	368.90	0.00
370.10	16.84	368.90	0.00
370.20	17.52	368.90	0.00
370.30	18.18	368.90	0.00
370.40	18.82	368.90	0.00
370.50	19.44	368.90	0.00
370.60	20.04	368.90	0.00
370.70	20.61	368.90	0.00
370.80	21.18	368.90	0.00
370.90	21.74	368.90	0.00
371.00	22.27	368.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-11.58	369.00	0.00
367.00	-11.58	369.00	0.00
367.10	-11.58	369.00	0.00
367.20	-11.58	369.00	0.00
367.30	-11.58	369.00	0.00
367.40	-11.58	369.00	0.00
367.50	-11.58	369.00	0.00
367.60	-11.58	369.00	0.00
367.70	-11.58	369.00	0.00
367.80	-11.58	369.00	0.00
367.90	-11.58	369.00	0.00
368.00	-11.58	369.00	0.00
368.10	-11.58	369.00	0.00
368.20	-11.54	369.00	0.00
368.30	-11.34	369.00	0.00
368.40	-10.94	369.00	0.00
368.50	-10.32	369.00	0.00
368.60	-9.47	369.00	0.00
368.70	-8.34	369.00	0.00
368.80	-6.87	369.00	0.00
368.90	-4.86	369.00	0.00
369.00	0.00	369.00	0.00
369.10	4.84	369.00	0.00
369.20	6.88	369.00	0.00
369.30	8.41	369.00	0.00
369.40	9.72	369.00	0.00
369.50	10.86	369.00	0.00
369.60	11.90	369.00	0.00
369.70	12.85	369.00	0.00
369.80	13.74	369.00	0.00
369.90	14.58	369.00	0.00
370.00	15.37	369.00	0.00
370.10	16.12	369.00	0.00
370.20	16.84	369.00	0.00
370.30	17.52	369.00	0.00
370.40	18.18	369.00	0.00
370.50	18.82	369.00	0.00
370.60	19.43	369.00	0.00
370.70	20.04	369.00	0.00
370.80	20.62	369.00	0.00
370.90	21.18	369.00	0.00
371.00	21.73	369.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.25	369.10	0.00
367.00	-12.25	369.10	0.00
367.10	-12.25	369.10	0.00
367.20	-12.25	369.10	0.00
367.30	-12.25	369.10	0.00
367.40	-12.25	369.10	0.00
367.50	-12.25	369.10	0.00
367.60	-12.25	369.10	0.00
367.70	-12.25	369.10	0.00
367.80	-12.25	369.10	0.00
367.90	-12.25	369.10	0.00
368.00	-12.25	369.10	0.00
368.10	-12.25	369.10	0.00
368.20	-12.25	369.10	0.00
368.30	-12.12	369.10	0.00
368.40	-11.80	369.10	0.00
368.50	-11.30	369.10	0.00
368.60	-10.56	369.10	0.00
368.70	-9.61	369.10	0.00
368.80	-8.39	369.10	0.00
368.90	-6.87	369.10	0.00
369.00	-4.86	369.10	0.00
369.10	0.00	369.10	0.00
369.20	4.85	369.10	0.00
369.30	6.87	369.10	0.00
369.40	8.42	369.10	0.00
369.50	9.72	369.10	0.00
369.60	10.86	369.10	0.00
369.70	11.90	369.10	0.00
369.80	12.86	369.10	0.00
369.90	13.74	369.10	0.00
370.00	14.58	369.10	0.00
370.10	15.37	369.10	0.00
370.20	16.12	369.10	0.00
370.30	16.84	369.10	0.00
370.40	17.53	369.10	0.00
370.50	18.18	369.10	0.00
370.60	18.82	369.10	0.00
370.70	19.43	369.10	0.00
370.80	20.03	369.10	0.00
370.90	20.62	369.10	0.00
371.00	21.18	369.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.92	369.20	0.00
367.00	-12.92	369.20	0.00
367.10	-12.92	369.20	0.00
367.20	-12.92	369.20	0.00
367.30	-12.92	369.20	0.00
367.40	-12.92	369.20	0.00
367.50	-12.92	369.20	0.00
367.60	-12.92	369.20	0.00
367.70	-12.92	369.20	0.00
367.80	-12.92	369.20	0.00
367.90	-12.92	369.20	0.00
368.00	-12.92	369.20	0.00
368.10	-12.92	369.20	0.00
368.20	-12.92	369.20	0.00
368.30	-12.85	369.20	0.00
368.40	-12.61	369.20	0.00
368.50	-12.18	369.20	0.00
368.60	-11.56	369.20	0.00
368.70	-10.73	369.20	0.00
368.80	-9.70	369.20	0.00
368.90	-8.42	369.20	0.00
369.00	-6.87	369.20	0.00
369.10	-4.86	369.20	0.00
369.20	0.00	369.20	0.00
369.30	4.88	369.20	0.00
369.40	6.87	369.20	0.00
369.50	8.42	369.20	0.00
369.60	9.71	369.20	0.00
369.70	10.88	369.20	0.00
369.80	11.91	369.20	0.00
369.90	12.87	369.20	0.00
370.00	13.75	369.20	0.00
370.10	14.58	369.20	0.00
370.20	15.37	369.20	0.00
370.30	16.12	369.20	0.00
370.40	16.84	369.20	0.00
370.50	17.52	369.20	0.00
370.60	18.19	369.20	0.00
370.70	18.82	369.20	0.00
370.80	19.43	369.20	0.00
370.90	20.04	369.20	0.00
371.00	20.62	369.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-13.58	369.30	0.00
367.00	-13.58	369.30	0.00
367.10	-13.58	369.30	0.00
367.20	-13.58	369.30	0.00
367.30	-13.58	369.30	0.00
367.40	-13.58	369.30	0.00
367.50	-13.58	369.30	0.00
367.60	-13.58	369.30	0.00
367.70	-13.58	369.30	0.00
367.80	-13.58	369.30	0.00
367.90	-13.58	369.30	0.00
368.00	-13.58	369.30	0.00
368.10	-13.58	369.30	0.00
368.20	-13.58	369.30	0.00
368.30	-13.55	369.30	0.00
368.40	-13.38	369.30	0.00
368.50	-13.02	369.30	0.00
368.60	-12.48	369.30	0.00
368.70	-11.75	369.30	0.00
368.80	-10.82	369.30	0.00
368.90	-9.73	369.30	0.00
369.00	-8.42	369.30	0.00
369.10	-6.87	369.30	0.00
369.20	-4.86	369.30	0.00
369.30	0.00	369.30	0.00
369.40	4.86	369.30	0.00
369.50	6.86	369.30	0.00
369.60	8.41	369.30	0.00
369.70	9.72	369.30	0.00
369.80	10.87	369.30	0.00
369.90	11.90	369.30	0.00
370.00	12.86	369.30	0.00
370.10	13.75	369.30	0.00
370.20	14.58	369.30	0.00
370.30	15.36	369.30	0.00
370.40	16.12	369.30	0.00
370.50	16.83	369.30	0.00
370.60	17.52	369.30	0.00
370.70	18.19	369.30	0.00
370.80	18.82	369.30	0.00
370.90	19.44	369.30	0.00
371.00	20.04	369.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.22	369.40	0.00
367.00	-14.22	369.40	0.00
367.10	-14.22	369.40	0.00
367.20	-14.22	369.40	0.00
367.30	-14.22	369.40	0.00
367.40	-14.22	369.40	0.00
367.50	-14.22	369.40	0.00
367.60	-14.22	369.40	0.00
367.70	-14.22	369.40	0.00
367.80	-14.22	369.40	0.00
367.90	-14.22	369.40	0.00
368.00	-14.22	369.40	0.00
368.10	-14.22	369.40	0.00
368.20	-14.22	369.40	0.00
368.30	-14.22	369.40	0.00
368.40	-14.09	369.40	0.00
368.50	-13.80	369.40	0.00
368.60	-13.33	369.40	0.00
368.70	-12.68	369.40	0.00
368.80	-11.86	369.40	0.00
368.90	-10.87	369.40	0.00
369.00	-9.73	369.40	0.00
369.10	-8.42	369.40	0.00
369.20	-6.87	369.40	0.00
369.30	-4.86	369.40	0.00
369.40	0.00	369.40	0.00
369.50	4.88	369.40	0.00
369.60	6.86	369.40	0.00
369.70	8.43	369.40	0.00
369.80	9.72	369.40	0.00
369.90	10.87	369.40	0.00
370.00	11.90	369.40	0.00
370.10	12.86	369.40	0.00
370.20	13.74	369.40	0.00
370.30	14.58	369.40	0.00
370.40	15.37	369.40	0.00
370.50	16.12	369.40	0.00
370.60	16.83	369.40	0.00
370.70	17.51	369.40	0.00
370.80	18.19	369.40	0.00
370.90	18.82	369.40	0.00
371.00	19.44	369.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.84	369.50	0.00
367.00	-14.84	369.50	0.00
367.10	-14.84	369.50	0.00
367.20	-14.84	369.50	0.00
367.30	-14.84	369.50	0.00
367.40	-14.84	369.50	0.00
367.50	-14.84	369.50	0.00
367.60	-14.84	369.50	0.00
367.70	-14.84	369.50	0.00
367.80	-14.84	369.50	0.00
367.90	-14.84	369.50	0.00
368.00	-14.84	369.50	0.00
368.10	-14.84	369.50	0.00
368.20	-14.84	369.50	0.00
368.30	-14.84	369.50	0.00
368.40	-14.77	369.50	0.00
368.50	-14.53	369.50	0.00
368.60	-14.13	369.50	0.00
368.70	-13.55	369.50	0.00
368.80	-12.80	369.50	0.00
368.90	-11.90	369.50	0.00
369.00	-10.87	369.50	0.00
369.10	-9.73	369.50	0.00
369.20	-8.42	369.50	0.00
369.30	-6.87	369.50	0.00
369.40	-4.86	369.50	0.00
369.50	0.00	369.50	0.00
369.60	4.84	369.50	0.00
369.70	6.87	369.50	0.00
369.80	8.42	369.50	0.00
369.90	9.73	369.50	0.00
370.00	10.86	369.50	0.00
370.10	11.90	369.50	0.00
370.20	12.86	369.50	0.00
370.30	13.75	369.50	0.00
370.40	14.58	369.50	0.00
370.50	15.36	369.50	0.00
370.60	16.11	369.50	0.00
370.70	16.83	369.50	0.00
370.80	17.52	369.50	0.00
370.90	18.18	369.50	0.00
371.00	18.82	369.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-15.46	369.60	0.00
367.00	-15.46	369.60	0.00
367.10	-15.46	369.60	0.00
367.20	-15.46	369.60	0.00
367.30	-15.46	369.60	0.00
367.40	-15.46	369.60	0.00
367.50	-15.46	369.60	0.00
367.60	-15.46	369.60	0.00
367.70	-15.46	369.60	0.00
367.80	-15.46	369.60	0.00
367.90	-15.46	369.60	0.00
368.00	-15.46	369.60	0.00
368.10	-15.46	369.60	0.00
368.20	-15.46	369.60	0.00
368.30	-15.46	369.60	0.00
368.40	-15.43	369.60	0.00
368.50	-15.23	369.60	0.00
368.60	-14.88	369.60	0.00
368.70	-14.36	369.60	0.00
368.80	-13.69	369.60	0.00
368.90	-12.85	369.60	0.00
369.00	-11.90	369.60	0.00
369.10	-10.87	369.60	0.00
369.20	-9.73	369.60	0.00
369.30	-8.42	369.60	0.00
369.40	-6.87	369.60	0.00
369.50	-4.86	369.60	0.00
369.60	0.00	369.60	0.00
369.70	4.85	369.60	0.00
369.80	6.87	369.60	0.00
369.90	8.41	369.60	0.00
370.00	9.73	369.60	0.00
370.10	10.87	369.60	0.00
370.20	11.90	369.60	0.00
370.30	12.87	369.60	0.00
370.40	13.75	369.60	0.00
370.50	14.58	369.60	0.00
370.60	15.36	369.60	0.00
370.70	16.12	369.60	0.00
370.80	16.83	369.60	0.00
370.90	17.52	369.60	0.00
371.00	18.19	369.60	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.06	369.70	0.00
367.00	-16.06	369.70	0.00
367.10	-16.06	369.70	0.00
367.20	-16.06	369.70	0.00
367.30	-16.06	369.70	0.00
367.40	-16.06	369.70	0.00
367.50	-16.06	369.70	0.00
367.60	-16.06	369.70	0.00
367.70	-16.06	369.70	0.00
367.80	-16.06	369.70	0.00
367.90	-16.06	369.70	0.00
368.00	-16.06	369.70	0.00
368.10	-16.06	369.70	0.00
368.20	-16.06	369.70	0.00
368.30	-16.06	369.70	0.00
368.40	-16.05	369.70	0.00
368.50	-15.90	369.70	0.00
368.60	-15.59	369.70	0.00
368.70	-15.14	369.70	0.00
368.80	-14.52	369.70	0.00
368.90	-13.74	369.70	0.00
369.00	-12.85	369.70	0.00
369.10	-11.90	369.70	0.00
369.20	-10.87	369.70	0.00
369.30	-9.73	369.70	0.00
369.40	-8.42	369.70	0.00
369.50	-6.87	369.70	0.00
369.60	-4.86	369.70	0.00
369.70	0.00	369.70	0.00
369.80	4.85	369.70	0.00
369.90	6.87	369.70	0.00
370.00	8.41	369.70	0.00
370.10	9.73	369.70	0.00
370.20	10.87	369.70	0.00
370.30	11.91	369.70	0.00
370.40	12.86	369.70	0.00
370.50	13.75	369.70	0.00
370.60	14.58	369.70	0.00
370.70	15.37	369.70	0.00
370.80	16.12	369.70	0.00
370.90	16.84	369.70	0.00
371.00	17.52	369.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.64	369.80	0.00
367.00	-16.64	369.80	0.00
367.10	-16.64	369.80	0.00
367.20	-16.64	369.80	0.00
367.30	-16.64	369.80	0.00
367.40	-16.64	369.80	0.00
367.50	-16.64	369.80	0.00
367.60	-16.64	369.80	0.00
367.70	-16.64	369.80	0.00
367.80	-16.64	369.80	0.00
367.90	-16.64	369.80	0.00
368.00	-16.64	369.80	0.00
368.10	-16.64	369.80	0.00
368.20	-16.64	369.80	0.00
368.30	-16.64	369.80	0.00
368.40	-16.64	369.80	0.00
368.50	-16.55	369.80	0.00
368.60	-16.28	369.80	0.00
368.70	-15.85	369.80	0.00
368.80	-15.29	369.80	0.00
368.90	-14.58	369.80	0.00
369.00	-13.74	369.80	0.00
369.10	-12.85	369.80	0.00
369.20	-11.90	369.80	0.00
369.30	-10.87	369.80	0.00
369.40	-9.73	369.80	0.00
369.50	-8.42	369.80	0.00
369.60	-6.87	369.80	0.00
369.70	-4.86	369.80	0.00
369.80	0.00	369.80	0.00
369.90	4.87	369.80	0.00
370.00	6.88	369.80	0.00
370.10	8.42	369.80	0.00
370.20	9.73	369.80	0.00
370.30	10.86	369.80	0.00
370.40	11.90	369.80	0.00
370.50	12.86	369.80	0.00
370.60	13.75	369.80	0.00
370.70	14.58	369.80	0.00
370.80	15.37	369.80	0.00
370.90	16.11	369.80	0.00
371.00	16.84	369.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.21	369.90	0.00
367.00	-17.21	369.90	0.00
367.10	-17.21	369.90	0.00
367.20	-17.21	369.90	0.00
367.30	-17.21	369.90	0.00
367.40	-17.21	369.90	0.00
367.50	-17.21	369.90	0.00
367.60	-17.21	369.90	0.00
367.70	-17.21	369.90	0.00
367.80	-17.21	369.90	0.00
367.90	-17.21	369.90	0.00
368.00	-17.21	369.90	0.00
368.10	-17.21	369.90	0.00
368.20	-17.21	369.90	0.00
368.30	-17.21	369.90	0.00
368.40	-17.21	369.90	0.00
368.50	-17.15	369.90	0.00
368.60	-16.94	369.90	0.00
368.70	-16.57	369.90	0.00
368.80	-16.03	369.90	0.00
368.90	-15.37	369.90	0.00
369.00	-14.58	369.90	0.00
369.10	-13.74	369.90	0.00
369.20	-12.85	369.90	0.00
369.30	-11.90	369.90	0.00
369.40	-10.87	369.90	0.00
369.50	-9.73	369.90	0.00
369.60	-8.42	369.90	0.00
369.70	-6.87	369.90	0.00
369.80	-4.86	369.90	0.00
369.90	0.00	369.90	0.00
370.00	4.84	369.90	0.00
370.10	6.89	369.90	0.00
370.20	8.41	369.90	0.00
370.30	9.73	369.90	0.00
370.40	10.87	369.90	0.00
370.50	11.90	369.90	0.00
370.60	12.86	369.90	0.00
370.70	13.75	369.90	0.00
370.80	14.57	369.90	0.00
370.90	15.36	369.90	0.00
371.00	16.11	369.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.79	370.00	0.00
367.00	-17.79	370.00	0.00
367.10	-17.79	370.00	0.00
367.20	-17.79	370.00	0.00
367.30	-17.79	370.00	0.00
367.40	-17.79	370.00	0.00
367.50	-17.79	370.00	0.00
367.60	-17.79	370.00	0.00
367.70	-17.79	370.00	0.00
367.80	-17.79	370.00	0.00
367.90	-17.79	370.00	0.00
368.00	-17.79	370.00	0.00
368.10	-17.79	370.00	0.00
368.20	-17.79	370.00	0.00
368.30	-17.79	370.00	0.00
368.40	-17.79	370.00	0.00
368.50	-17.75	370.00	0.00
368.60	-17.57	370.00	0.00
368.70	-17.24	370.00	0.00
368.80	-16.75	370.00	0.00
368.90	-16.12	370.00	0.00
369.00	-15.37	370.00	0.00
369.10	-14.58	370.00	0.00
369.20	-13.74	370.00	0.00
369.30	-12.85	370.00	0.00
369.40	-11.90	370.00	0.00
369.50	-10.87	370.00	0.00
369.60	-9.73	370.00	0.00
369.70	-8.42	370.00	0.00
369.80	-6.87	370.00	0.00
369.90	-4.86	370.00	0.00
370.00	0.00	370.00	0.00
370.10	4.84	370.00	0.00
370.20	6.88	370.00	0.00
370.30	8.43	370.00	0.00
370.40	9.72	370.00	0.00
370.50	10.87	370.00	0.00
370.60	11.90	370.00	0.00
370.70	12.86	370.00	0.00
370.80	13.74	370.00	0.00
370.90	14.58	370.00	0.00
371.00	15.37	370.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.33	370.10	0.00
367.00	-18.33	370.10	0.00
367.10	-18.33	370.10	0.00
367.20	-18.33	370.10	0.00
367.30	-18.33	370.10	0.00
367.40	-18.33	370.10	0.00
367.50	-18.33	370.10	0.00
367.60	-18.33	370.10	0.00
367.70	-18.33	370.10	0.00
367.80	-18.33	370.10	0.00
367.90	-18.33	370.10	0.00
368.00	-18.33	370.10	0.00
368.10	-18.33	370.10	0.00
368.20	-18.33	370.10	0.00
368.30	-18.33	370.10	0.00
368.40	-18.33	370.10	0.00
368.50	-18.32	370.10	0.00
368.60	-18.17	370.10	0.00
368.70	-17.88	370.10	0.00
368.80	-17.43	370.10	0.00
368.90	-16.83	370.10	0.00
369.00	-16.12	370.10	0.00
369.10	-15.37	370.10	0.00
369.20	-14.58	370.10	0.00
369.30	-13.74	370.10	0.00
369.40	-12.85	370.10	0.00
369.50	-11.90	370.10	0.00
369.60	-10.87	370.10	0.00
369.70	-9.73	370.10	0.00
369.80	-8.42	370.10	0.00
369.90	-6.87	370.10	0.00
370.00	-4.86	370.10	0.00
370.10	0.00	370.10	0.00
370.20	4.88	370.10	0.00
370.30	6.86	370.10	0.00
370.40	8.41	370.10	0.00
370.50	9.71	370.10	0.00
370.60	10.87	370.10	0.00
370.70	11.91	370.10	0.00
370.80	12.86	370.10	0.00
370.90	13.74	370.10	0.00
371.00	14.58	370.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.87	370.20	0.00
367.00	-18.87	370.20	0.00
367.10	-18.87	370.20	0.00
367.20	-18.87	370.20	0.00
367.30	-18.87	370.20	0.00
367.40	-18.87	370.20	0.00
367.50	-18.87	370.20	0.00
367.60	-18.87	370.20	0.00
367.70	-18.87	370.20	0.00
367.80	-18.87	370.20	0.00
367.90	-18.87	370.20	0.00
368.00	-18.87	370.20	0.00
368.10	-18.87	370.20	0.00
368.20	-18.87	370.20	0.00
368.30	-18.87	370.20	0.00
368.40	-18.87	370.20	0.00
368.50	-18.87	370.20	0.00
368.60	-18.76	370.20	0.00
368.70	-18.50	370.20	0.00
368.80	-18.08	370.20	0.00
368.90	-17.52	370.20	0.00
369.00	-16.83	370.20	0.00
369.10	-16.12	370.20	0.00
369.20	-15.37	370.20	0.00
369.30	-14.58	370.20	0.00
369.40	-13.74	370.20	0.00
369.50	-12.85	370.20	0.00
369.60	-11.90	370.20	0.00
369.70	-10.87	370.20	0.00
369.80	-9.73	370.20	0.00
369.90	-8.42	370.20	0.00
370.00	-6.87	370.20	0.00
370.10	-4.86	370.20	0.00
370.20	0.00	370.20	0.00
370.30	4.85	370.20	0.00
370.40	6.88	370.20	0.00
370.50	8.43	370.20	0.00
370.60	9.72	370.20	0.00
370.70	10.86	370.20	0.00
370.80	11.91	370.20	0.00
370.90	12.86	370.20	0.00
371.00	13.74	370.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.42	370.30	0.00
367.00	-19.42	370.30	0.00
367.10	-19.42	370.30	0.00
367.20	-19.42	370.30	0.00
367.30	-19.42	370.30	0.00
367.40	-19.42	370.30	0.00
367.50	-19.42	370.30	0.00
367.60	-19.42	370.30	0.00
367.70	-19.42	370.30	0.00
367.80	-19.42	370.30	0.00
367.90	-19.42	370.30	0.00
368.00	-19.42	370.30	0.00
368.10	-19.42	370.30	0.00
368.20	-19.42	370.30	0.00
368.30	-19.42	370.30	0.00
368.40	-19.42	370.30	0.00
368.50	-19.42	370.30	0.00
368.60	-19.34	370.30	0.00
368.70	-19.10	370.30	0.00
368.80	-18.73	370.30	0.00
368.90	-18.18	370.30	0.00
369.00	-17.52	370.30	0.00
369.10	-16.83	370.30	0.00
369.20	-16.12	370.30	0.00
369.30	-15.37	370.30	0.00
369.40	-14.58	370.30	0.00
369.50	-13.74	370.30	0.00
369.60	-12.85	370.30	0.00
369.70	-11.90	370.30	0.00
369.80	-10.87	370.30	0.00
369.90	-9.73	370.30	0.00
370.00	-8.42	370.30	0.00
370.10	-6.87	370.30	0.00
370.20	-4.86	370.30	0.00
370.30	0.00	370.30	0.00
370.40	4.87	370.30	0.00
370.50	6.89	370.30	0.00
370.60	8.40	370.30	0.00
370.70	9.71	370.30	0.00
370.80	10.87	370.30	0.00
370.90	11.90	370.30	0.00
371.00	12.85	370.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.94	370.40	0.00
367.00	-19.94	370.40	0.00
367.10	-19.94	370.40	0.00
367.20	-19.94	370.40	0.00
367.30	-19.94	370.40	0.00
367.40	-19.94	370.40	0.00
367.50	-19.94	370.40	0.00
367.60	-19.94	370.40	0.00
367.70	-19.94	370.40	0.00
367.80	-19.94	370.40	0.00
367.90	-19.94	370.40	0.00
368.00	-19.94	370.40	0.00
368.10	-19.94	370.40	0.00
368.20	-19.94	370.40	0.00
368.30	-19.94	370.40	0.00
368.40	-19.94	370.40	0.00
368.50	-19.94	370.40	0.00
368.60	-19.88	370.40	0.00
368.70	-19.68	370.40	0.00
368.80	-19.34	370.40	0.00
368.90	-18.82	370.40	0.00
369.00	-18.18	370.40	0.00
369.10	-17.52	370.40	0.00
369.20	-16.83	370.40	0.00
369.30	-16.12	370.40	0.00
369.40	-15.37	370.40	0.00
369.50	-14.58	370.40	0.00
369.60	-13.74	370.40	0.00
369.70	-12.85	370.40	0.00
369.80	-11.90	370.40	0.00
369.90	-10.87	370.40	0.00
370.00	-9.73	370.40	0.00
370.10	-8.42	370.40	0.00
370.20	-6.87	370.40	0.00
370.30	-4.86	370.40	0.00
370.40	0.00	370.40	0.00
370.50	4.88	370.40	0.00
370.60	6.88	370.40	0.00
370.70	8.42	370.40	0.00
370.80	9.72	370.40	0.00
370.90	10.87	370.40	0.00
371.00	11.90	370.40	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.46	370.50	0.00
367.00	-20.46	370.50	0.00
367.10	-20.46	370.50	0.00
367.20	-20.46	370.50	0.00
367.30	-20.46	370.50	0.00
367.40	-20.46	370.50	0.00
367.50	-20.46	370.50	0.00
367.60	-20.46	370.50	0.00
367.70	-20.46	370.50	0.00
367.80	-20.46	370.50	0.00
367.90	-20.46	370.50	0.00
368.00	-20.46	370.50	0.00
368.10	-20.46	370.50	0.00
368.20	-20.46	370.50	0.00
368.30	-20.46	370.50	0.00
368.40	-20.46	370.50	0.00
368.50	-20.46	370.50	0.00
368.60	-20.43	370.50	0.00
368.70	-20.25	370.50	0.00
368.80	-19.93	370.50	0.00
368.90	-19.44	370.50	0.00
369.00	-18.82	370.50	0.00
369.10	-18.18	370.50	0.00
369.20	-17.52	370.50	0.00
369.30	-16.83	370.50	0.00
369.40	-16.12	370.50	0.00
369.50	-15.37	370.50	0.00
369.60	-14.58	370.50	0.00
369.70	-13.74	370.50	0.00
369.80	-12.85	370.50	0.00
369.90	-11.90	370.50	0.00
370.00	-10.87	370.50	0.00
370.10	-9.73	370.50	0.00
370.20	-8.42	370.50	0.00
370.30	-6.87	370.50	0.00
370.40	-4.86	370.50	0.00
370.50	0.00	370.50	0.00
370.60	4.86	370.50	0.00
370.70	6.87	370.50	0.00
370.80	8.43	370.50	0.00
370.90	9.71	370.50	0.00
371.00	10.86	370.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.96	370.60	0.00
367.00	-20.96	370.60	0.00
367.10	-20.96	370.60	0.00
367.20	-20.96	370.60	0.00
367.30	-20.96	370.60	0.00
367.40	-20.96	370.60	0.00
367.50	-20.96	370.60	0.00
367.60	-20.96	370.60	0.00
367.70	-20.96	370.60	0.00
367.80	-20.96	370.60	0.00
367.90	-20.96	370.60	0.00
368.00	-20.96	370.60	0.00
368.10	-20.96	370.60	0.00
368.20	-20.96	370.60	0.00
368.30	-20.96	370.60	0.00
368.40	-20.96	370.60	0.00
368.50	-20.96	370.60	0.00
368.60	-20.95	370.60	0.00
368.70	-20.80	370.60	0.00
368.80	-20.50	370.60	0.00
368.90	-20.04	370.60	0.00
369.00	-19.44	370.60	0.00
369.10	-18.82	370.60	0.00
369.20	-18.18	370.60	0.00
369.30	-17.52	370.60	0.00
369.40	-16.83	370.60	0.00
369.50	-16.12	370.60	0.00
369.60	-15.37	370.60	0.00
369.70	-14.58	370.60	0.00
369.80	-13.74	370.60	0.00
369.90	-12.85	370.60	0.00
370.00	-11.90	370.60	0.00
370.10	-10.87	370.60	0.00
370.20	-9.73	370.60	0.00
370.30	-8.42	370.60	0.00
370.40	-6.87	370.60	0.00
370.50	-4.86	370.60	0.00
370.60	0.00	370.60	0.00
370.70	4.88	370.60	0.00
370.80	6.87	370.60	0.00
370.90	8.43	370.60	0.00
371.00	9.73	370.60	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.46	370.70	0.00
367.00	-21.46	370.70	0.00
367.10	-21.46	370.70	0.00
367.20	-21.46	370.70	0.00
367.30	-21.46	370.70	0.00
367.40	-21.46	370.70	0.00
367.50	-21.46	370.70	0.00
367.60	-21.46	370.70	0.00
367.70	-21.46	370.70	0.00
367.80	-21.46	370.70	0.00
367.90	-21.46	370.70	0.00
368.00	-21.46	370.70	0.00
368.10	-21.46	370.70	0.00
368.20	-21.46	370.70	0.00
368.30	-21.46	370.70	0.00
368.40	-21.46	370.70	0.00
368.50	-21.46	370.70	0.00
368.60	-21.46	370.70	0.00
368.70	-21.33	370.70	0.00
368.80	-21.06	370.70	0.00
368.90	-20.62	370.70	0.00
369.00	-20.04	370.70	0.00
369.10	-19.44	370.70	0.00
369.20	-18.82	370.70	0.00
369.30	-18.18	370.70	0.00
369.40	-17.52	370.70	0.00
369.50	-16.83	370.70	0.00
369.60	-16.12	370.70	0.00
369.70	-15.37	370.70	0.00
369.80	-14.58	370.70	0.00
369.90	-13.74	370.70	0.00
370.00	-12.85	370.70	0.00
370.10	-11.90	370.70	0.00
370.20	-10.87	370.70	0.00
370.30	-9.73	370.70	0.00
370.40	-8.42	370.70	0.00
370.50	-6.87	370.70	0.00
370.60	-4.86	370.70	0.00
370.70	0.00	370.70	0.00
370.80	4.87	370.70	0.00
370.90	6.86	370.70	0.00
371.00	8.42	370.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.95	370.80	0.00
367.00	-21.95	370.80	0.00
367.10	-21.95	370.80	0.00
367.20	-21.95	370.80	0.00
367.30	-21.95	370.80	0.00
367.40	-21.95	370.80	0.00
367.50	-21.95	370.80	0.00
367.60	-21.95	370.80	0.00
367.70	-21.95	370.80	0.00
367.80	-21.95	370.80	0.00
367.90	-21.95	370.80	0.00
368.00	-21.95	370.80	0.00
368.10	-21.95	370.80	0.00
368.20	-21.95	370.80	0.00
368.30	-21.95	370.80	0.00
368.40	-21.95	370.80	0.00
368.50	-21.95	370.80	0.00
368.60	-21.95	370.80	0.00
368.70	-21.86	370.80	0.00
368.80	-21.61	370.80	0.00
368.90	-21.18	370.80	0.00
369.00	-20.62	370.80	0.00
369.10	-20.04	370.80	0.00
369.20	-19.44	370.80	0.00
369.30	-18.82	370.80	0.00
369.40	-18.18	370.80	0.00
369.50	-17.52	370.80	0.00
369.60	-16.83	370.80	0.00
369.70	-16.12	370.80	0.00
369.80	-15.37	370.80	0.00
369.90	-14.58	370.80	0.00
370.00	-13.74	370.80	0.00
370.10	-12.85	370.80	0.00
370.20	-11.90	370.80	0.00
370.30	-10.87	370.80	0.00
370.40	-9.73	370.80	0.00
370.50	-8.42	370.80	0.00
370.60	-6.87	370.80	0.00
370.70	-4.86	370.80	0.00
370.80	0.00	370.80	0.00
370.90	4.86	370.80	0.00
371.00	6.88	370.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.47	370.90	0.00
367.00	-22.47	370.90	0.00
367.10	-22.47	370.90	0.00
367.20	-22.47	370.90	0.00
367.30	-22.47	370.90	0.00
367.40	-22.47	370.90	0.00
367.50	-22.47	370.90	0.00
367.60	-22.47	370.90	0.00
367.70	-22.47	370.90	0.00
367.80	-22.47	370.90	0.00
367.90	-22.47	370.90	0.00
368.00	-22.47	370.90	0.00
368.10	-22.47	370.90	0.00
368.20	-22.47	370.90	0.00
368.30	-22.47	370.90	0.00
368.40	-22.47	370.90	0.00
368.50	-22.47	370.90	0.00
368.60	-22.47	370.90	0.00
368.70	-22.38	370.90	0.00
368.80	-22.14	370.90	0.00
368.90	-21.73	370.90	0.00
369.00	-21.18	370.90	0.00
369.10	-20.62	370.90	0.00
369.20	-20.04	370.90	0.00
369.30	-19.44	370.90	0.00
369.40	-18.82	370.90	0.00
369.50	-18.18	370.90	0.00
369.60	-17.52	370.90	0.00
369.70	-16.83	370.90	0.00
369.80	-16.12	370.90	0.00
369.90	-15.37	370.90	0.00
370.00	-14.58	370.90	0.00
370.10	-13.74	370.90	0.00
370.20	-12.85	370.90	0.00
370.30	-11.90	370.90	0.00
370.40	-10.87	370.90	0.00
370.50	-9.73	370.90	0.00
370.60	-8.42	370.90	0.00
370.70	-6.87	370.90	0.00
370.80	-4.86	370.90	0.00
370.90	0.00	370.90	0.00
371.00	4.86	370.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.94	371.00	0.00
367.00	-22.94	371.00	0.00
367.10	-22.94	371.00	0.00
367.20	-22.94	371.00	0.00
367.30	-22.94	371.00	0.00
367.40	-22.94	371.00	0.00
367.50	-22.94	371.00	0.00
367.60	-22.94	371.00	0.00
367.70	-22.94	371.00	0.00
367.80	-22.94	371.00	0.00
367.90	-22.94	371.00	0.00
368.00	-22.94	371.00	0.00
368.10	-22.94	371.00	0.00
368.20	-22.94	371.00	0.00
368.30	-22.94	371.00	0.00
368.40	-22.94	371.00	0.00
368.50	-22.94	371.00	0.00
368.60	-22.94	371.00	0.00
368.70	-22.88	371.00	0.00
368.80	-22.66	371.00	0.00
368.90	-22.27	371.00	0.00
369.00	-21.73	371.00	0.00
369.10	-21.18	371.00	0.00
369.20	-20.62	371.00	0.00
369.30	-20.04	371.00	0.00
369.40	-19.44	371.00	0.00
369.50	-18.82	371.00	0.00
369.60	-18.18	371.00	0.00
369.70	-17.52	371.00	0.00
369.80	-16.83	371.00	0.00
369.90	-16.12	371.00	0.00
370.00	-15.37	371.00	0.00
370.10	-14.58	371.00	0.00
370.20	-13.74	371.00	0.00
370.30	-12.85	371.00	0.00
370.40	-11.90	371.00	0.00
370.50	-10.87	371.00	0.00
370.60	-9.73	371.00	0.00
370.70	-8.42	371.00	0.00
370.80	-6.87	371.00	0.00
370.90	-4.86	371.00	0.00
371.00	0.00	371.00	0.00

Contributing Structures

Culvert - 1





Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.90 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - 1	Forward + Reverse	TW	366.90	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	120.00 ft
Length (Computed Barrel)	120.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.094
T2 ratio (HW/D)	1.196
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,  
 interpolate between flows at T1 & T2...

T1 Elevation	369.09 ft	T1 Flow	15.55 ft <sup>3</sup> /s
T2 Elevation	369.29 ft	T2 Flow	17.77 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.50	0.00
367.00	0.04	366.50	0.00
367.10	0.17	366.50	0.00
367.20	0.39	366.50	0.00
367.30	0.68	366.50	0.00
367.40	1.05	366.50	0.00
367.50	1.50	366.50	0.00
367.60	2.01	366.50	0.00
367.70	2.59	366.50	0.00
367.80	3.24	366.50	0.00
367.90	3.93	366.50	0.00
368.00	4.70	366.50	0.00
368.10	5.50	366.50	0.00
368.20	6.34	366.50	0.00
368.30	7.21	366.50	0.00
368.40	8.14	366.50	0.00
368.50	9.06	366.50	0.00
368.60	10.00	366.50	0.00
368.70	10.95	366.50	0.00
368.80	11.90	366.50	0.00
368.90	12.82	366.50	0.00
369.00	13.75	366.50	0.00
369.10	14.62	366.50	0.00
369.20	15.45	366.50	0.00
369.30	16.24	366.50	0.00
369.40	16.93	366.50	0.00
369.50	17.51	366.50	0.00
369.60	18.03	366.50	0.00
369.70	18.54	366.50	0.00
369.80	19.06	366.50	0.00
369.90	19.57	366.50	0.00
370.00	20.07	366.50	0.00
370.10	20.58	366.50	0.00
370.20	21.07	366.50	0.00
370.30	21.56	366.50	0.00
370.40	22.04	366.50	0.00
370.50	22.51	366.50	0.00
370.60	22.99	366.50	0.00
370.70	23.46	366.50	0.00
370.80	23.91	366.50	0.00
370.90	24.36	366.50	0.00
371.00	24.81	366.50	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.60	0.00
367.00	0.04	366.60	0.00
367.10	0.17	366.60	0.00
367.20	0.39	366.60	0.00
367.30	0.68	366.60	0.00
367.40	1.05	366.60	0.00
367.50	1.50	366.60	0.00
367.60	2.01	366.60	0.00
367.70	2.59	366.60	0.00
367.80	3.24	366.60	0.00
367.90	3.93	366.60	0.00
368.00	4.70	366.60	0.00
368.10	5.50	366.60	0.00
368.20	6.34	366.60	0.00
368.30	7.21	366.60	0.00
368.40	8.14	366.60	0.00
368.50	9.06	366.60	0.00
368.60	10.00	366.60	0.00
368.70	10.95	366.60	0.00
368.80	11.90	366.60	0.00
368.90	12.82	366.60	0.00
369.00	13.75	366.60	0.00
369.10	14.62	366.60	0.00
369.20	15.45	366.60	0.00
369.30	16.24	366.60	0.00
369.40	16.93	366.60	0.00
369.50	17.51	366.60	0.00
369.60	18.03	366.60	0.00
369.70	18.54	366.60	0.00
369.80	19.06	366.60	0.00
369.90	19.57	366.60	0.00
370.00	20.07	366.60	0.00
370.10	20.58	366.60	0.00
370.20	21.07	366.60	0.00
370.30	21.56	366.60	0.00
370.40	22.04	366.60	0.00
370.50	22.51	366.60	0.00
370.60	22.99	366.60	0.00
370.70	23.46	366.60	0.00
370.80	23.91	366.60	0.00
370.90	24.36	366.60	0.00
371.00	24.81	366.60	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.70	0.00
367.00	0.04	366.70	0.00
367.10	0.17	366.70	0.00
367.20	0.39	366.70	0.00
367.30	0.68	366.70	0.00
367.40	1.05	366.70	0.00
367.50	1.50	366.70	0.00
367.60	2.01	366.70	0.00
367.70	2.59	366.70	0.00
367.80	3.24	366.70	0.00
367.90	3.93	366.70	0.00
368.00	4.70	366.70	0.00
368.10	5.50	366.70	0.00
368.20	6.34	366.70	0.00
368.30	7.21	366.70	0.00
368.40	8.14	366.70	0.00
368.50	9.06	366.70	0.00
368.60	10.00	366.70	0.00
368.70	10.95	366.70	0.00
368.80	11.90	366.70	0.00
368.90	12.82	366.70	0.00
369.00	13.75	366.70	0.00
369.10	14.62	366.70	0.00
369.20	15.45	366.70	0.00
369.30	16.24	366.70	0.00
369.40	16.93	366.70	0.00
369.50	17.51	366.70	0.00
369.60	18.03	366.70	0.00
369.70	18.54	366.70	0.00
369.80	19.06	366.70	0.00
369.90	19.57	366.70	0.00
370.00	20.07	366.70	0.00
370.10	20.58	366.70	0.00
370.20	21.07	366.70	0.00
370.30	21.56	366.70	0.00
370.40	22.04	366.70	0.00
370.50	22.51	366.70	0.00
370.60	22.99	366.70	0.00
370.70	23.46	366.70	0.00
370.80	23.91	366.70	0.00
370.90	24.36	366.70	0.00
371.00	24.81	366.70	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.80	0.00
367.00	0.04	366.80	0.00
367.10	0.17	366.80	0.00
367.20	0.39	366.80	0.00
367.30	0.68	366.80	0.00
367.40	1.05	366.80	0.00
367.50	1.50	366.80	0.00
367.60	2.01	366.80	0.00
367.70	2.59	366.80	0.00
367.80	3.24	366.80	0.00
367.90	3.93	366.80	0.00
368.00	4.70	366.80	0.00
368.10	5.50	366.80	0.00
368.20	6.34	366.80	0.00
368.30	7.21	366.80	0.00
368.40	8.14	366.80	0.00
368.50	9.06	366.80	0.00
368.60	10.00	366.80	0.00
368.70	10.95	366.80	0.00
368.80	11.90	366.80	0.00
368.90	12.82	366.80	0.00
369.00	13.75	366.80	0.00
369.10	14.62	366.80	0.00
369.20	15.45	366.80	0.00
369.30	16.24	366.80	0.00
369.40	16.93	366.80	0.00
369.50	17.51	366.80	0.00
369.60	18.03	366.80	0.00
369.70	18.54	366.80	0.00
369.80	19.06	366.80	0.00
369.90	19.57	366.80	0.00
370.00	20.07	366.80	0.00
370.10	20.58	366.80	0.00
370.20	21.07	366.80	0.00
370.30	21.56	366.80	0.00
370.40	22.04	366.80	0.00
370.50	22.51	366.80	0.00
370.60	22.99	366.80	0.00
370.70	23.46	366.80	0.00
370.80	23.91	366.80	0.00
370.90	24.36	366.80	0.00
371.00	24.81	366.80	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.90	0.00
367.00	0.04	366.90	0.00
367.10	0.17	366.90	0.00
367.20	0.38	366.90	0.00
367.30	0.68	366.90	0.00
367.40	1.06	366.90	0.00
367.50	1.50	366.90	0.00
367.60	2.01	366.90	0.00
367.70	2.59	366.90	0.00
367.80	3.24	366.90	0.00
367.90	3.93	366.90	0.00
368.00	4.70	366.90	0.00
368.10	5.50	366.90	0.00
368.20	6.34	366.90	0.00
368.30	7.21	366.90	0.00
368.40	8.14	366.90	0.00
368.50	9.06	366.90	0.00
368.60	10.00	366.90	0.00
368.70	10.95	366.90	0.00
368.80	11.90	366.90	0.00
368.90	12.82	366.90	0.00
369.00	13.75	366.90	0.00
369.10	14.62	366.90	0.00
369.20	15.45	366.90	0.00
369.30	16.24	366.90	0.00
369.40	16.93	366.90	0.00
369.50	17.51	366.90	0.00
369.60	18.03	366.90	0.00
369.70	18.54	366.90	0.00
369.80	19.06	366.90	0.00
369.90	19.57	366.90	0.00
370.00	20.07	366.90	0.00
370.10	20.58	366.90	0.00
370.20	21.07	366.90	0.00
370.30	21.56	366.90	0.00
370.40	22.04	366.90	0.00
370.50	22.51	366.90	0.00
370.60	22.99	366.90	0.00
370.70	23.46	366.90	0.00
370.80	23.91	366.90	0.00
370.90	24.36	366.90	0.00
371.00	24.81	366.90	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.03	367.00	0.00
367.00	0.00	367.00	0.00
367.10	0.17	367.00	0.00
367.20	0.39	367.00	0.00
367.30	0.68	367.00	0.00
367.40	1.05	367.00	0.00
367.50	1.50	367.00	0.00
367.60	2.02	367.00	0.00
367.70	2.59	367.00	0.00
367.80	3.24	367.00	0.00
367.90	3.93	367.00	0.00
368.00	4.70	367.00	0.00
368.10	5.50	367.00	0.00
368.20	6.34	367.00	0.00
368.30	7.21	367.00	0.00
368.40	8.14	367.00	0.00
368.50	9.06	367.00	0.00
368.60	10.00	367.00	0.00
368.70	10.95	367.00	0.00
368.80	11.90	367.00	0.00
368.90	12.82	367.00	0.00
369.00	13.75	367.00	0.00
369.10	14.62	367.00	0.00
369.20	15.45	367.00	0.00
369.30	16.24	367.00	0.00
369.40	16.93	367.00	0.00
369.50	17.51	367.00	0.00
369.60	18.03	367.00	0.00
369.70	18.54	367.00	0.00
369.80	19.06	367.00	0.00
369.90	19.57	367.00	0.00
370.00	20.07	367.00	0.00
370.10	20.58	367.00	0.00
370.20	21.07	367.00	0.00
370.30	21.56	367.00	0.00
370.40	22.04	367.00	0.00
370.50	22.51	367.00	0.00
370.60	22.99	367.00	0.00
370.70	23.46	367.00	0.00
370.80	23.91	367.00	0.00
370.90	24.36	367.00	0.00
371.00	24.81	367.00	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.14	367.10	0.00
367.00	-0.14	367.10	0.00
367.10	0.00	367.10	0.00
367.20	0.38	367.10	0.00
367.30	0.68	367.10	0.00
367.40	1.05	367.10	0.00
367.50	1.50	367.10	0.00
367.60	2.01	367.10	0.00
367.70	2.59	367.10	0.00
367.80	3.24	367.10	0.00
367.90	3.93	367.10	0.00
368.00	4.70	367.10	0.00
368.10	5.50	367.10	0.00
368.20	6.34	367.10	0.00
368.30	7.21	367.10	0.00
368.40	8.14	367.10	0.00
368.50	9.06	367.10	0.00
368.60	10.00	367.10	0.00
368.70	10.95	367.10	0.00
368.80	11.90	367.10	0.00
368.90	12.82	367.10	0.00
369.00	13.75	367.10	0.00
369.10	14.62	367.10	0.00
369.20	15.45	367.10	0.00
369.30	16.24	367.10	0.00
369.40	16.93	367.10	0.00
369.50	17.51	367.10	0.00
369.60	18.03	367.10	0.00
369.70	18.54	367.10	0.00
369.80	19.06	367.10	0.00
369.90	19.57	367.10	0.00
370.00	20.07	367.10	0.00
370.10	20.58	367.10	0.00
370.20	21.07	367.10	0.00
370.30	21.56	367.10	0.00
370.40	22.04	367.10	0.00
370.50	22.51	367.10	0.00
370.60	22.99	367.10	0.00
370.70	23.46	367.10	0.00
370.80	23.91	367.10	0.00
370.90	24.36	367.10	0.00
371.00	24.81	367.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.32	367.20	0.00
367.00	-0.32	367.20	0.00
367.10	-0.32	367.20	0.00
367.20	0.00	367.20	0.00
367.30	0.66	367.20	0.00
367.40	1.05	367.20	0.00
367.50	1.50	367.20	0.00
367.60	2.01	367.20	0.00
367.70	2.59	367.20	0.00
367.80	3.24	367.20	0.00
367.90	3.95	367.20	0.00
368.00	4.70	367.20	0.00
368.10	5.50	367.20	0.00
368.20	6.34	367.20	0.00
368.30	7.21	367.20	0.00
368.40	8.14	367.20	0.00
368.50	9.06	367.20	0.00
368.60	10.00	367.20	0.00
368.70	10.95	367.20	0.00
368.80	11.90	367.20	0.00
368.90	12.82	367.20	0.00
369.00	13.75	367.20	0.00
369.10	14.62	367.20	0.00
369.20	15.45	367.20	0.00
369.30	16.24	367.20	0.00
369.40	16.93	367.20	0.00
369.50	17.51	367.20	0.00
369.60	18.03	367.20	0.00
369.70	18.54	367.20	0.00
369.80	19.06	367.20	0.00
369.90	19.57	367.20	0.00
370.00	20.07	367.20	0.00
370.10	20.58	367.20	0.00
370.20	21.07	367.20	0.00
370.30	21.56	367.20	0.00
370.40	22.04	367.20	0.00
370.50	22.51	367.20	0.00
370.60	22.99	367.20	0.00
370.70	23.46	367.20	0.00
370.80	23.91	367.20	0.00
370.90	24.36	367.20	0.00
371.00	24.81	367.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.58	367.30	0.00
367.00	-0.58	367.30	0.00
367.10	-0.58	367.30	0.00
367.20	-0.56	367.30	0.00
367.30	0.00	367.30	0.00
367.40	0.98	367.30	0.00
367.50	1.49	367.30	0.00
367.60	2.01	367.30	0.00
367.70	2.59	367.30	0.00
367.80	3.24	367.30	0.00
367.90	3.94	367.30	0.00
368.00	4.68	367.30	0.00
368.10	5.50	367.30	0.00
368.20	6.34	367.30	0.00
368.30	7.21	367.30	0.00
368.40	8.14	367.30	0.00
368.50	9.06	367.30	0.00
368.60	10.00	367.30	0.00
368.70	10.95	367.30	0.00
368.80	11.90	367.30	0.00
368.90	12.82	367.30	0.00
369.00	13.75	367.30	0.00
369.10	14.62	367.30	0.00
369.20	15.45	367.30	0.00
369.30	16.24	367.30	0.00
369.40	16.93	367.30	0.00
369.50	17.51	367.30	0.00
369.60	18.03	367.30	0.00
369.70	18.54	367.30	0.00
369.80	19.06	367.30	0.00
369.90	19.57	367.30	0.00
370.00	20.07	367.30	0.00
370.10	20.58	367.30	0.00
370.20	21.07	367.30	0.00
370.30	21.56	367.30	0.00
370.40	22.04	367.30	0.00
370.50	22.51	367.30	0.00
370.60	22.99	367.30	0.00
370.70	23.46	367.30	0.00
370.80	23.91	367.30	0.00
370.90	24.36	367.30	0.00
371.00	24.81	367.30	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.90	367.40	0.00
367.00	-0.90	367.40	0.00
367.10	-0.90	367.40	0.00
367.20	-0.90	367.40	0.00
367.30	-0.83	367.40	0.00
367.40	0.00	367.40	0.00
367.50	1.33	367.40	0.00
367.60	1.97	367.40	0.00
367.70	2.58	367.40	0.00
367.80	3.24	367.40	0.00
367.90	3.94	367.40	0.00
368.00	4.69	367.40	0.00
368.10	5.50	367.40	0.00
368.20	6.34	367.40	0.00
368.30	7.21	367.40	0.00
368.40	8.14	367.40	0.00
368.50	9.06	367.40	0.00
368.60	10.00	367.40	0.00
368.70	10.95	367.40	0.00
368.80	11.90	367.40	0.00
368.90	12.82	367.40	0.00
369.00	13.75	367.40	0.00
369.10	14.62	367.40	0.00
369.20	15.45	367.40	0.00
369.30	16.24	367.40	0.00
369.40	16.93	367.40	0.00
369.50	17.51	367.40	0.00
369.60	18.03	367.40	0.00
369.70	18.54	367.40	0.00
369.80	19.06	367.40	0.00
369.90	19.57	367.40	0.00
370.00	20.07	367.40	0.00
370.10	20.58	367.40	0.00
370.20	21.07	367.40	0.00
370.30	21.56	367.40	0.00
370.40	22.04	367.40	0.00
370.50	22.51	367.40	0.00
370.60	22.99	367.40	0.00
370.70	23.46	367.40	0.00
370.80	23.91	367.40	0.00
370.90	24.36	367.40	0.00
371.00	24.81	367.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.29	367.50	0.00
367.00	-1.29	367.50	0.00
367.10	-1.29	367.50	0.00
367.20	-1.29	367.50	0.00
367.30	-1.29	367.50	0.00
367.40	-1.14	367.50	0.00
367.50	0.00	367.50	0.00
367.60	1.71	367.50	0.00
367.70	2.50	367.50	0.00
367.80	3.21	367.50	0.00
367.90	3.93	367.50	0.00
368.00	4.68	367.50	0.00
368.10	5.50	367.50	0.00
368.20	6.34	367.50	0.00
368.30	7.21	367.50	0.00
368.40	8.14	367.50	0.00
368.50	9.06	367.50	0.00
368.60	10.00	367.50	0.00
368.70	10.95	367.50	0.00
368.80	11.90	367.50	0.00
368.90	12.82	367.50	0.00
369.00	13.75	367.50	0.00
369.10	14.62	367.50	0.00
369.20	15.45	367.50	0.00
369.30	16.24	367.50	0.00
369.40	16.93	367.50	0.00
369.50	17.51	367.50	0.00
369.60	18.03	367.50	0.00
369.70	18.54	367.50	0.00
369.80	19.06	367.50	0.00
369.90	19.57	367.50	0.00
370.00	20.07	367.50	0.00
370.10	20.58	367.50	0.00
370.20	21.07	367.50	0.00
370.30	21.56	367.50	0.00
370.40	22.04	367.50	0.00
370.50	22.51	367.50	0.00
370.60	22.99	367.50	0.00
370.70	23.46	367.50	0.00
370.80	23.91	367.50	0.00
370.90	24.36	367.50	0.00
371.00	24.81	367.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.74	367.60	0.00
367.00	-1.74	367.60	0.00
367.10	-1.74	367.60	0.00
367.20	-1.74	367.60	0.00
367.30	-1.74	367.60	0.00
367.40	-1.73	367.60	0.00
367.50	-1.48	367.60	0.00
367.60	0.00	367.60	0.00
367.70	2.09	367.60	0.00
367.80	3.05	367.60	0.00
367.90	3.86	367.60	0.00
368.00	4.66	367.60	0.00
368.10	5.47	367.60	0.00
368.20	6.34	367.60	0.00
368.30	7.21	367.60	0.00
368.40	8.12	367.60	0.00
368.50	9.06	367.60	0.00
368.60	10.00	367.60	0.00
368.70	10.95	367.60	0.00
368.80	11.90	367.60	0.00
368.90	12.82	367.60	0.00
369.00	13.75	367.60	0.00
369.10	14.62	367.60	0.00
369.20	15.45	367.60	0.00
369.30	16.24	367.60	0.00
369.40	16.93	367.60	0.00
369.50	17.51	367.60	0.00
369.60	18.03	367.60	0.00
369.70	18.54	367.60	0.00
369.80	19.06	367.60	0.00
369.90	19.57	367.60	0.00
370.00	20.07	367.60	0.00
370.10	20.58	367.60	0.00
370.20	21.07	367.60	0.00
370.30	21.56	367.60	0.00
370.40	22.04	367.60	0.00
370.50	22.51	367.60	0.00
370.60	22.99	367.60	0.00
370.70	23.46	367.60	0.00
370.80	23.91	367.60	0.00
370.90	24.36	367.60	0.00
371.00	24.81	367.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.25	367.70	0.00
367.00	-2.25	367.70	0.00
367.10	-2.25	367.70	0.00
367.20	-2.25	367.70	0.00
367.30	-2.25	367.70	0.00
367.40	-2.25	367.70	0.00
367.50	-2.19	367.70	0.00
367.60	-1.81	367.70	0.00
367.70	0.00	367.70	0.00
367.80	2.48	367.70	0.00
367.90	3.59	367.70	0.00
368.00	4.54	367.70	0.00
368.10	5.43	367.70	0.00
368.20	6.30	367.70	0.00
368.30	7.20	367.70	0.00
368.40	8.12	367.70	0.00
368.50	9.04	367.70	0.00
368.60	9.99	367.70	0.00
368.70	10.95	367.70	0.00
368.80	11.90	367.70	0.00
368.90	12.82	367.70	0.00
369.00	13.75	367.70	0.00
369.10	14.62	367.70	0.00
369.20	15.45	367.70	0.00
369.30	16.24	367.70	0.00
369.40	16.93	367.70	0.00
369.50	17.51	367.70	0.00
369.60	18.03	367.70	0.00
369.70	18.54	367.70	0.00
369.80	19.06	367.70	0.00
369.90	19.57	367.70	0.00
370.00	20.07	367.70	0.00
370.10	20.58	367.70	0.00
370.20	21.07	367.70	0.00
370.30	21.56	367.70	0.00
370.40	22.04	367.70	0.00
370.50	22.51	367.70	0.00
370.60	22.99	367.70	0.00
370.70	23.46	367.70	0.00
370.80	23.91	367.70	0.00
370.90	24.36	367.70	0.00
371.00	24.81	367.70	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.81	367.80	0.00
367.00	-2.81	367.80	0.00
367.10	-2.81	367.80	0.00
367.20	-2.81	367.80	0.00
367.30	-2.81	367.80	0.00
367.40	-2.81	367.80	0.00
367.50	-2.81	367.80	0.00
367.60	-2.68	367.80	0.00
367.70	-2.17	367.80	0.00
367.80	0.00	367.80	0.00
367.90	2.88	367.80	0.00
368.00	4.17	367.80	0.00
368.10	5.22	367.80	0.00
368.20	6.18	367.80	0.00
368.30	7.12	367.80	0.00
368.40	8.07	367.80	0.00
368.50	9.02	367.80	0.00
368.60	9.99	367.80	0.00
368.70	10.93	367.80	0.00
368.80	11.90	367.80	0.00
368.90	12.82	367.80	0.00
369.00	13.75	367.80	0.00
369.10	14.62	367.80	0.00
369.20	15.45	367.80	0.00
369.30	16.24	367.80	0.00
369.40	16.93	367.80	0.00
369.50	17.51	367.80	0.00
369.60	18.03	367.80	0.00
369.70	18.54	367.80	0.00
369.80	19.06	367.80	0.00
369.90	19.57	367.80	0.00
370.00	20.07	367.80	0.00
370.10	20.58	367.80	0.00
370.20	21.07	367.80	0.00
370.30	21.56	367.80	0.00
370.40	22.04	367.80	0.00
370.50	22.51	367.80	0.00
370.60	22.99	367.80	0.00
370.70	23.46	367.80	0.00
370.80	23.91	367.80	0.00
370.90	24.36	367.80	0.00
371.00	24.81	367.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-3.43	367.90	0.00
367.00	-3.43	367.90	0.00
367.10	-3.43	367.90	0.00
367.20	-3.43	367.90	0.00
367.30	-3.43	367.90	0.00
367.40	-3.43	367.90	0.00
367.50	-3.43	367.90	0.00
367.60	-3.42	367.90	0.00
367.70	-3.18	367.90	0.00
367.80	-2.53	367.90	0.00
367.90	0.00	367.90	0.00
368.00	3.25	367.90	0.00
368.10	4.71	367.90	0.00
368.20	5.86	367.90	0.00
368.30	6.93	367.90	0.00
368.40	7.93	367.90	0.00
368.50	8.93	367.90	0.00
368.60	9.91	367.90	0.00
368.70	10.90	367.90	0.00
368.80	11.86	367.90	0.00
368.90	12.81	367.90	0.00
369.00	13.75	367.90	0.00
369.10	14.62	367.90	0.00
369.20	15.45	367.90	0.00
369.30	16.24	367.90	0.00
369.40	16.93	367.90	0.00
369.50	17.51	367.90	0.00
369.60	18.03	367.90	0.00
369.70	18.54	367.90	0.00
369.80	19.06	367.90	0.00
369.90	19.57	367.90	0.00
370.00	20.07	367.90	0.00
370.10	20.58	367.90	0.00
370.20	21.07	367.90	0.00
370.30	21.56	367.90	0.00
370.40	22.04	367.90	0.00
370.50	22.51	367.90	0.00
370.60	22.99	367.90	0.00
370.70	23.46	367.90	0.00
370.80	23.91	367.90	0.00
370.90	24.36	367.90	0.00
371.00	24.81	367.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.10	368.00	0.00
367.00	-4.10	368.00	0.00
367.10	-4.10	368.00	0.00
367.20	-4.10	368.00	0.00
367.30	-4.10	368.00	0.00
367.40	-4.10	368.00	0.00
367.50	-4.10	368.00	0.00
367.60	-4.10	368.00	0.00
367.70	-4.03	368.00	0.00
367.80	-3.70	368.00	0.00
367.90	-2.91	368.00	0.00
368.00	0.00	368.00	0.00
368.10	3.64	368.00	0.00
368.20	5.22	368.00	0.00
368.30	6.49	368.00	0.00
368.40	7.64	368.00	0.00
368.50	8.72	368.00	0.00
368.60	9.76	368.00	0.00
368.70	10.77	368.00	0.00
368.80	11.77	368.00	0.00
368.90	12.74	368.00	0.00
369.00	13.69	368.00	0.00
369.10	14.59	368.00	0.00
369.20	15.44	368.00	0.00
369.30	16.24	368.00	0.00
369.40	16.93	368.00	0.00
369.50	17.51	368.00	0.00
369.60	18.03	368.00	0.00
369.70	18.54	368.00	0.00
369.80	19.06	368.00	0.00
369.90	19.57	368.00	0.00
370.00	20.07	368.00	0.00
370.10	20.58	368.00	0.00
370.20	21.07	368.00	0.00
370.30	21.56	368.00	0.00
370.40	22.04	368.00	0.00
370.50	22.51	368.00	0.00
370.60	22.99	368.00	0.00
370.70	23.46	368.00	0.00
370.80	23.91	368.00	0.00
370.90	24.36	368.00	0.00
371.00	24.81	368.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.79	368.10	0.00
367.00	-4.79	368.10	0.00
367.10	-4.79	368.10	0.00
367.20	-4.79	368.10	0.00
367.30	-4.79	368.10	0.00
367.40	-4.79	368.10	0.00
367.50	-4.79	368.10	0.00
367.60	-4.79	368.10	0.00
367.70	-4.79	368.10	0.00
367.80	-4.65	368.10	0.00
367.90	-4.20	368.10	0.00
368.00	-3.24	368.10	0.00
368.10	0.00	368.10	0.00
368.20	4.00	368.10	0.00
368.30	5.70	368.10	0.00
368.40	7.09	368.10	0.00
368.50	8.33	368.10	0.00
368.60	9.45	368.10	0.00
368.70	10.54	368.10	0.00
368.80	11.57	368.10	0.00
368.90	12.58	368.10	0.00
369.00	13.55	368.10	0.00
369.10	14.48	368.10	0.00
369.20	15.35	368.10	0.00
369.30	16.16	368.10	0.00
369.40	16.88	368.10	0.00
369.50	17.48	368.10	0.00
369.60	18.01	368.10	0.00
369.70	18.54	368.10	0.00
369.80	19.06	368.10	0.00
369.90	19.57	368.10	0.00
370.00	20.07	368.10	0.00
370.10	20.58	368.10	0.00
370.20	21.07	368.10	0.00
370.30	21.56	368.10	0.00
370.40	22.04	368.10	0.00
370.50	22.51	368.10	0.00
370.60	22.99	368.10	0.00
370.70	23.46	368.10	0.00
370.80	23.91	368.10	0.00
370.90	24.36	368.10	0.00
371.00	24.81	368.10	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-5.53	368.20	0.00
367.00	-5.53	368.20	0.00
367.10	-5.53	368.20	0.00
367.20	-5.53	368.20	0.00
367.30	-5.53	368.20	0.00
367.40	-5.53	368.20	0.00
367.50	-5.53	368.20	0.00
367.60	-5.53	368.20	0.00
367.70	-5.53	368.20	0.00
367.80	-5.51	368.20	0.00
367.90	-5.25	368.20	0.00
368.00	-4.70	368.20	0.00
368.10	-3.60	368.20	0.00
368.20	0.00	368.20	0.00
368.30	4.28	368.20	0.00
368.40	6.17	368.20	0.00
368.50	7.63	368.20	0.00
368.60	8.93	368.20	0.00
368.70	10.11	368.20	0.00
368.80	11.23	368.20	0.00
368.90	12.29	368.20	0.00
369.00	13.29	368.20	0.00
369.10	14.25	368.20	0.00
369.20	15.14	368.20	0.00
369.30	15.96	368.20	0.00
369.40	16.69	368.20	0.00
369.50	17.28	368.20	0.00
369.60	17.85	368.20	0.00
369.70	18.41	368.20	0.00
369.80	18.96	368.20	0.00
369.90	19.50	368.20	0.00
370.00	20.03	368.20	0.00
370.10	20.55	368.20	0.00
370.20	21.06	368.20	0.00
370.30	21.55	368.20	0.00
370.40	22.04	368.20	0.00
370.50	22.52	368.20	0.00
370.60	22.99	368.20	0.00
370.70	23.46	368.20	0.00
370.80	23.91	368.20	0.00
370.90	24.36	368.20	0.00
371.00	24.81	368.20	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Composite Outflow Summary

Contributing Structures

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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-6.29	368.30	0.00
367.00	-6.29	368.30	0.00
367.10	-6.29	368.30	0.00
367.20	-6.29	368.30	0.00
367.30	-6.29	368.30	0.00
367.40	-6.29	368.30	0.00
367.50	-6.29	368.30	0.00
367.60	-6.29	368.30	0.00
367.70	-6.29	368.30	0.00
367.80	-6.29	368.30	0.00
367.90	-6.20	368.30	0.00
368.00	-5.84	368.30	0.00
368.10	-5.17	368.30	0.00
368.20	-3.91	368.30	0.00
368.30	0.00	368.30	0.00
368.40	4.58	368.30	0.00
368.50	6.55	368.30	0.00
368.60	8.10	368.30	0.00
368.70	9.45	368.30	0.00
368.80	10.66	368.30	0.00
368.90	11.81	368.30	0.00
369.00	12.86	368.30	0.00
369.10	13.85	368.30	0.00
369.20	14.76	368.30	0.00
369.30	15.59	368.30	0.00
369.40	16.31	368.30	0.00
369.50	16.90	368.30	0.00
369.60	17.51	368.30	0.00
369.70	18.09	368.30	0.00
369.80	18.67	368.30	0.00
369.90	19.26	368.30	0.00
370.00	19.81	368.30	0.00
370.10	20.36	368.30	0.00
370.20	20.90	368.30	0.00
370.30	21.42	368.30	0.00
370.40	21.93	368.30	0.00
370.50	22.43	368.30	0.00
370.60	22.93	368.30	0.00
370.70	23.41	368.30	0.00
370.80	23.88	368.30	0.00
370.90	24.35	368.30	0.00
371.00	24.79	368.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.08	368.40	0.00
367.00	-7.08	368.40	0.00
367.10	-7.08	368.40	0.00
367.20	-7.08	368.40	0.00
367.30	-7.08	368.40	0.00
367.40	-7.08	368.40	0.00
367.50	-7.08	368.40	0.00
367.60	-7.08	368.40	0.00
367.70	-7.08	368.40	0.00
367.80	-7.08	368.40	0.00
367.90	-7.06	368.40	0.00
368.00	-6.87	368.40	0.00
368.10	-6.41	368.40	0.00
368.20	-5.63	368.40	0.00
368.30	-4.24	368.40	0.00
368.40	0.00	368.40	0.00
368.50	4.82	368.40	0.00
368.60	6.85	368.40	0.00
368.70	8.45	368.40	0.00
368.80	9.85	368.40	0.00
368.90	11.06	368.40	0.00
369.00	12.20	368.40	0.00
369.10	13.22	368.40	0.00
369.20	14.16	368.40	0.00
369.30	14.96	368.40	0.00
369.40	15.61	368.40	0.00
369.50	16.26	368.40	0.00
369.60	16.91	368.40	0.00
369.70	17.56	368.40	0.00
369.80	18.19	368.40	0.00
369.90	18.81	368.40	0.00
370.00	19.41	368.40	0.00
370.10	19.98	368.40	0.00
370.20	20.55	368.40	0.00
370.30	21.11	368.40	0.00
370.40	21.65	368.40	0.00
370.50	22.17	368.40	0.00
370.60	22.69	368.40	0.00
370.70	23.19	368.40	0.00
370.80	23.69	368.40	0.00
370.90	24.18	368.40	0.00
371.00	24.65	368.40	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.87	368.50	0.00
367.00	-7.87	368.50	0.00
367.10	-7.87	368.50	0.00
367.20	-7.87	368.50	0.00
367.30	-7.87	368.50	0.00
367.40	-7.87	368.50	0.00
367.50	-7.87	368.50	0.00
367.60	-7.87	368.50	0.00
367.70	-7.87	368.50	0.00
367.80	-7.87	368.50	0.00
367.90	-7.87	368.50	0.00
368.00	-7.80	368.50	0.00
368.10	-7.51	368.50	0.00
368.20	-6.94	368.50	0.00
368.30	-6.01	368.50	0.00
368.40	-4.48	368.50	0.00
368.50	0.00	368.50	0.00
368.60	4.94	368.50	0.00
368.70	7.00	368.50	0.00
368.80	8.64	368.50	0.00
368.90	10.00	368.50	0.00
369.00	11.18	368.50	0.00
369.10	12.21	368.50	0.00
369.20	13.03	368.50	0.00
369.30	13.74	368.50	0.00
369.40	14.58	368.50	0.00
369.50	15.36	368.50	0.00
369.60	16.12	368.50	0.00
369.70	16.84	368.50	0.00
369.80	17.53	368.50	0.00
369.90	18.18	368.50	0.00
370.00	18.82	368.50	0.00
370.10	19.44	368.50	0.00
370.20	20.04	368.50	0.00
370.30	20.62	368.50	0.00
370.40	21.18	368.50	0.00
370.50	21.74	368.50	0.00
370.60	22.27	368.50	0.00
370.70	22.79	368.50	0.00
370.80	23.30	368.50	0.00
370.90	23.80	368.50	0.00
371.00	24.30	368.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-8.65	368.60	0.00
367.00	-8.65	368.60	0.00
367.10	-8.65	368.60	0.00
367.20	-8.65	368.60	0.00
367.30	-8.65	368.60	0.00
367.40	-8.65	368.60	0.00
367.50	-8.65	368.60	0.00
367.60	-8.65	368.60	0.00
367.70	-8.65	368.60	0.00
367.80	-8.65	368.60	0.00
367.90	-8.65	368.60	0.00
368.00	-8.64	368.60	0.00
368.10	-8.48	368.60	0.00
368.20	-8.08	368.60	0.00
368.30	-7.39	368.60	0.00
368.40	-6.34	368.60	0.00
368.50	-4.63	368.60	0.00
368.60	0.00	368.60	0.00
368.70	4.95	368.60	0.00
368.80	6.98	368.60	0.00
368.90	8.53	368.60	0.00
369.00	9.82	368.60	0.00
369.10	10.89	368.60	0.00
369.20	11.90	368.60	0.00
369.30	12.85	368.60	0.00
369.40	13.74	368.60	0.00
369.50	14.58	368.60	0.00
369.60	15.36	368.60	0.00
369.70	16.12	368.60	0.00
369.80	16.83	368.60	0.00
369.90	17.52	368.60	0.00
370.00	18.19	368.60	0.00
370.10	18.83	368.60	0.00
370.20	19.44	368.60	0.00
370.30	20.03	368.60	0.00
370.40	20.62	368.60	0.00
370.50	21.18	368.60	0.00
370.60	21.73	368.60	0.00
370.70	22.27	368.60	0.00
370.80	22.79	368.60	0.00
370.90	23.31	368.60	0.00
371.00	23.80	368.60	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-9.42	368.70	0.00
367.00	-9.42	368.70	0.00
367.10	-9.42	368.70	0.00
367.20	-9.42	368.70	0.00
367.30	-9.42	368.70	0.00
367.40	-9.42	368.70	0.00
367.50	-9.42	368.70	0.00
367.60	-9.42	368.70	0.00
367.70	-9.42	368.70	0.00
367.80	-9.42	368.70	0.00
367.90	-9.42	368.70	0.00
368.00	-9.42	368.70	0.00
368.10	-9.35	368.70	0.00
368.20	-9.06	368.70	0.00
368.30	-8.56	368.70	0.00
368.40	-7.75	368.70	0.00
368.50	-6.56	368.70	0.00
368.60	-4.77	368.70	0.00
368.70	0.00	368.70	0.00
368.80	4.89	368.70	0.00
368.90	6.93	368.70	0.00
369.00	8.45	368.70	0.00
369.10	9.71	368.70	0.00
369.20	10.86	368.70	0.00
369.30	11.91	368.70	0.00
369.40	12.86	368.70	0.00
369.50	13.74	368.70	0.00
369.60	14.57	368.70	0.00
369.70	15.37	368.70	0.00
369.80	16.12	368.70	0.00
369.90	16.84	368.70	0.00
370.00	17.52	368.70	0.00
370.10	18.19	368.70	0.00
370.20	18.82	368.70	0.00
370.30	19.43	368.70	0.00
370.40	20.04	368.70	0.00
370.50	20.62	368.70	0.00
370.60	21.18	368.70	0.00
370.70	21.73	368.70	0.00
370.80	22.26	368.70	0.00
370.90	22.80	368.70	0.00
371.00	23.31	368.70	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.16	368.80	0.00
367.00	-10.16	368.80	0.00
367.10	-10.16	368.80	0.00
367.20	-10.16	368.80	0.00
367.30	-10.16	368.80	0.00
367.40	-10.16	368.80	0.00
367.50	-10.16	368.80	0.00
367.60	-10.16	368.80	0.00
367.70	-10.16	368.80	0.00
367.80	-10.16	368.80	0.00
367.90	-10.16	368.80	0.00
368.00	-10.16	368.80	0.00
368.10	-10.13	368.80	0.00
368.20	-9.95	368.80	0.00
368.30	-9.56	368.80	0.00
368.40	-8.94	368.80	0.00
368.50	-8.01	368.80	0.00
368.60	-6.72	368.80	0.00
368.70	-4.82	368.80	0.00
368.80	0.00	368.80	0.00
368.90	4.85	368.80	0.00
369.00	6.87	368.80	0.00
369.10	8.43	368.80	0.00
369.20	9.72	368.80	0.00
369.30	10.86	368.80	0.00
369.40	11.91	368.80	0.00
369.50	12.86	368.80	0.00
369.60	13.74	368.80	0.00
369.70	14.58	368.80	0.00
369.80	15.37	368.80	0.00
369.90	16.12	368.80	0.00
370.00	16.83	368.80	0.00
370.10	17.52	368.80	0.00
370.20	18.19	368.80	0.00
370.30	18.82	368.80	0.00
370.40	19.44	368.80	0.00
370.50	20.04	368.80	0.00
370.60	20.62	368.80	0.00
370.70	21.18	368.80	0.00
370.80	21.73	368.80	0.00
370.90	22.27	368.80	0.00
371.00	22.79	368.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.87	368.90	0.00
367.00	-10.87	368.90	0.00
367.10	-10.87	368.90	0.00
367.20	-10.87	368.90	0.00
367.30	-10.87	368.90	0.00
367.40	-10.87	368.90	0.00
367.50	-10.87	368.90	0.00
367.60	-10.87	368.90	0.00
367.70	-10.87	368.90	0.00
367.80	-10.87	368.90	0.00
367.90	-10.87	368.90	0.00
368.00	-10.87	368.90	0.00
368.10	-10.87	368.90	0.00
368.20	-10.78	368.90	0.00
368.30	-10.49	368.90	0.00
368.40	-9.99	368.90	0.00
368.50	-9.25	368.90	0.00
368.60	-8.20	368.90	0.00
368.70	-6.82	368.90	0.00
368.80	-4.86	368.90	0.00
368.90	0.00	368.90	0.00
369.00	4.87	368.90	0.00
369.10	6.86	368.90	0.00
369.20	8.42	368.90	0.00
369.30	9.73	368.90	0.00
369.40	10.87	368.90	0.00
369.50	11.91	368.90	0.00
369.60	12.86	368.90	0.00
369.70	13.74	368.90	0.00
369.80	14.58	368.90	0.00
369.90	15.37	368.90	0.00
370.00	16.12	368.90	0.00
370.10	16.84	368.90	0.00
370.20	17.52	368.90	0.00
370.30	18.18	368.90	0.00
370.40	18.82	368.90	0.00
370.50	19.44	368.90	0.00
370.60	20.04	368.90	0.00
370.70	20.61	368.90	0.00
370.80	21.18	368.90	0.00
370.90	21.74	368.90	0.00
371.00	22.27	368.90	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-11.58	369.00	0.00
367.00	-11.58	369.00	0.00
367.10	-11.58	369.00	0.00
367.20	-11.58	369.00	0.00
367.30	-11.58	369.00	0.00
367.40	-11.58	369.00	0.00
367.50	-11.58	369.00	0.00
367.60	-11.58	369.00	0.00
367.70	-11.58	369.00	0.00
367.80	-11.58	369.00	0.00
367.90	-11.58	369.00	0.00
368.00	-11.58	369.00	0.00
368.10	-11.58	369.00	0.00
368.20	-11.54	369.00	0.00
368.30	-11.34	369.00	0.00
368.40	-10.94	369.00	0.00
368.50	-10.32	369.00	0.00
368.60	-9.47	369.00	0.00
368.70	-8.34	369.00	0.00
368.80	-6.87	369.00	0.00
368.90	-4.86	369.00	0.00
369.00	0.00	369.00	0.00
369.10	4.84	369.00	0.00
369.20	6.88	369.00	0.00
369.30	8.41	369.00	0.00
369.40	9.72	369.00	0.00
369.50	10.86	369.00	0.00
369.60	11.90	369.00	0.00
369.70	12.85	369.00	0.00
369.80	13.74	369.00	0.00
369.90	14.58	369.00	0.00
370.00	15.37	369.00	0.00
370.10	16.12	369.00	0.00
370.20	16.84	369.00	0.00
370.30	17.52	369.00	0.00
370.40	18.18	369.00	0.00
370.50	18.82	369.00	0.00
370.60	19.43	369.00	0.00
370.70	20.04	369.00	0.00
370.80	20.62	369.00	0.00
370.90	21.18	369.00	0.00
371.00	21.73	369.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.25	369.10	0.00
367.00	-12.25	369.10	0.00
367.10	-12.25	369.10	0.00
367.20	-12.25	369.10	0.00
367.30	-12.25	369.10	0.00
367.40	-12.25	369.10	0.00
367.50	-12.25	369.10	0.00
367.60	-12.25	369.10	0.00
367.70	-12.25	369.10	0.00
367.80	-12.25	369.10	0.00
367.90	-12.25	369.10	0.00
368.00	-12.25	369.10	0.00
368.10	-12.25	369.10	0.00
368.20	-12.25	369.10	0.00
368.30	-12.12	369.10	0.00
368.40	-11.80	369.10	0.00
368.50	-11.30	369.10	0.00
368.60	-10.56	369.10	0.00
368.70	-9.61	369.10	0.00
368.80	-8.39	369.10	0.00
368.90	-6.87	369.10	0.00
369.00	-4.86	369.10	0.00
369.10	0.00	369.10	0.00
369.20	4.85	369.10	0.00
369.30	6.87	369.10	0.00
369.40	8.42	369.10	0.00
369.50	9.72	369.10	0.00
369.60	10.86	369.10	0.00
369.70	11.90	369.10	0.00
369.80	12.86	369.10	0.00
369.90	13.74	369.10	0.00
370.00	14.58	369.10	0.00
370.10	15.37	369.10	0.00
370.20	16.12	369.10	0.00
370.30	16.84	369.10	0.00
370.40	17.53	369.10	0.00
370.50	18.18	369.10	0.00
370.60	18.82	369.10	0.00
370.70	19.43	369.10	0.00
370.80	20.03	369.10	0.00
370.90	20.62	369.10	0.00
371.00	21.18	369.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.92	369.20	0.00
367.00	-12.92	369.20	0.00
367.10	-12.92	369.20	0.00
367.20	-12.92	369.20	0.00
367.30	-12.92	369.20	0.00
367.40	-12.92	369.20	0.00
367.50	-12.92	369.20	0.00
367.60	-12.92	369.20	0.00
367.70	-12.92	369.20	0.00
367.80	-12.92	369.20	0.00
367.90	-12.92	369.20	0.00
368.00	-12.92	369.20	0.00
368.10	-12.92	369.20	0.00
368.20	-12.92	369.20	0.00
368.30	-12.85	369.20	0.00
368.40	-12.61	369.20	0.00
368.50	-12.18	369.20	0.00
368.60	-11.56	369.20	0.00
368.70	-10.73	369.20	0.00
368.80	-9.70	369.20	0.00
368.90	-8.42	369.20	0.00
369.00	-6.87	369.20	0.00
369.10	-4.86	369.20	0.00
369.20	0.00	369.20	0.00
369.30	4.88	369.20	0.00
369.40	6.87	369.20	0.00
369.50	8.42	369.20	0.00
369.60	9.71	369.20	0.00
369.70	10.88	369.20	0.00
369.80	11.91	369.20	0.00
369.90	12.87	369.20	0.00
370.00	13.75	369.20	0.00
370.10	14.58	369.20	0.00
370.20	15.37	369.20	0.00
370.30	16.12	369.20	0.00
370.40	16.84	369.20	0.00
370.50	17.52	369.20	0.00
370.60	18.19	369.20	0.00
370.70	18.82	369.20	0.00
370.80	19.43	369.20	0.00
370.90	20.04	369.20	0.00
371.00	20.62	369.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-13.58	369.30	0.00
367.00	-13.58	369.30	0.00
367.10	-13.58	369.30	0.00
367.20	-13.58	369.30	0.00
367.30	-13.58	369.30	0.00
367.40	-13.58	369.30	0.00
367.50	-13.58	369.30	0.00
367.60	-13.58	369.30	0.00
367.70	-13.58	369.30	0.00
367.80	-13.58	369.30	0.00
367.90	-13.58	369.30	0.00
368.00	-13.58	369.30	0.00
368.10	-13.58	369.30	0.00
368.20	-13.58	369.30	0.00
368.30	-13.55	369.30	0.00
368.40	-13.38	369.30	0.00
368.50	-13.02	369.30	0.00
368.60	-12.48	369.30	0.00
368.70	-11.75	369.30	0.00
368.80	-10.82	369.30	0.00
368.90	-9.73	369.30	0.00
369.00	-8.42	369.30	0.00
369.10	-6.87	369.30	0.00
369.20	-4.86	369.30	0.00
369.30	0.00	369.30	0.00
369.40	4.86	369.30	0.00
369.50	6.86	369.30	0.00
369.60	8.41	369.30	0.00
369.70	9.72	369.30	0.00
369.80	10.87	369.30	0.00
369.90	11.90	369.30	0.00
370.00	12.86	369.30	0.00
370.10	13.75	369.30	0.00
370.20	14.58	369.30	0.00
370.30	15.36	369.30	0.00
370.40	16.12	369.30	0.00
370.50	16.83	369.30	0.00
370.60	17.52	369.30	0.00
370.70	18.19	369.30	0.00
370.80	18.82	369.30	0.00
370.90	19.44	369.30	0.00
371.00	20.04	369.30	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.22	369.40	0.00
367.00	-14.22	369.40	0.00
367.10	-14.22	369.40	0.00
367.20	-14.22	369.40	0.00
367.30	-14.22	369.40	0.00
367.40	-14.22	369.40	0.00
367.50	-14.22	369.40	0.00
367.60	-14.22	369.40	0.00
367.70	-14.22	369.40	0.00
367.80	-14.22	369.40	0.00
367.90	-14.22	369.40	0.00
368.00	-14.22	369.40	0.00
368.10	-14.22	369.40	0.00
368.20	-14.22	369.40	0.00
368.30	-14.22	369.40	0.00
368.40	-14.09	369.40	0.00
368.50	-13.80	369.40	0.00
368.60	-13.33	369.40	0.00
368.70	-12.68	369.40	0.00
368.80	-11.86	369.40	0.00
368.90	-10.87	369.40	0.00
369.00	-9.73	369.40	0.00
369.10	-8.42	369.40	0.00
369.20	-6.87	369.40	0.00
369.30	-4.86	369.40	0.00
369.40	0.00	369.40	0.00
369.50	4.88	369.40	0.00
369.60	6.86	369.40	0.00
369.70	8.43	369.40	0.00
369.80	9.72	369.40	0.00
369.90	10.87	369.40	0.00
370.00	11.90	369.40	0.00
370.10	12.86	369.40	0.00
370.20	13.74	369.40	0.00
370.30	14.58	369.40	0.00
370.40	15.37	369.40	0.00
370.50	16.12	369.40	0.00
370.60	16.83	369.40	0.00
370.70	17.51	369.40	0.00
370.80	18.19	369.40	0.00
370.90	18.82	369.40	0.00
371.00	19.44	369.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.84	369.50	0.00
367.00	-14.84	369.50	0.00
367.10	-14.84	369.50	0.00
367.20	-14.84	369.50	0.00
367.30	-14.84	369.50	0.00
367.40	-14.84	369.50	0.00
367.50	-14.84	369.50	0.00
367.60	-14.84	369.50	0.00
367.70	-14.84	369.50	0.00
367.80	-14.84	369.50	0.00
367.90	-14.84	369.50	0.00
368.00	-14.84	369.50	0.00
368.10	-14.84	369.50	0.00
368.20	-14.84	369.50	0.00
368.30	-14.84	369.50	0.00
368.40	-14.77	369.50	0.00
368.50	-14.53	369.50	0.00
368.60	-14.13	369.50	0.00
368.70	-13.55	369.50	0.00
368.80	-12.80	369.50	0.00
368.90	-11.90	369.50	0.00
369.00	-10.87	369.50	0.00
369.10	-9.73	369.50	0.00
369.20	-8.42	369.50	0.00
369.30	-6.87	369.50	0.00
369.40	-4.86	369.50	0.00
369.50	0.00	369.50	0.00
369.60	4.84	369.50	0.00
369.70	6.87	369.50	0.00
369.80	8.42	369.50	0.00
369.90	9.73	369.50	0.00
370.00	10.86	369.50	0.00
370.10	11.90	369.50	0.00
370.20	12.86	369.50	0.00
370.30	13.75	369.50	0.00
370.40	14.58	369.50	0.00
370.50	15.36	369.50	0.00
370.60	16.11	369.50	0.00
370.70	16.83	369.50	0.00
370.80	17.52	369.50	0.00
370.90	18.18	369.50	0.00
371.00	18.82	369.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-15.46	369.60	0.00
367.00	-15.46	369.60	0.00
367.10	-15.46	369.60	0.00
367.20	-15.46	369.60	0.00
367.30	-15.46	369.60	0.00
367.40	-15.46	369.60	0.00
367.50	-15.46	369.60	0.00
367.60	-15.46	369.60	0.00
367.70	-15.46	369.60	0.00
367.80	-15.46	369.60	0.00
367.90	-15.46	369.60	0.00
368.00	-15.46	369.60	0.00
368.10	-15.46	369.60	0.00
368.20	-15.46	369.60	0.00
368.30	-15.46	369.60	0.00
368.40	-15.43	369.60	0.00
368.50	-15.23	369.60	0.00
368.60	-14.88	369.60	0.00
368.70	-14.36	369.60	0.00
368.80	-13.69	369.60	0.00
368.90	-12.85	369.60	0.00
369.00	-11.90	369.60	0.00
369.10	-10.87	369.60	0.00
369.20	-9.73	369.60	0.00
369.30	-8.42	369.60	0.00
369.40	-6.87	369.60	0.00
369.50	-4.86	369.60	0.00
369.60	0.00	369.60	0.00
369.70	4.85	369.60	0.00
369.80	6.87	369.60	0.00
369.90	8.41	369.60	0.00
370.00	9.73	369.60	0.00
370.10	10.87	369.60	0.00
370.20	11.90	369.60	0.00
370.30	12.87	369.60	0.00
370.40	13.75	369.60	0.00
370.50	14.58	369.60	0.00
370.60	15.36	369.60	0.00
370.70	16.12	369.60	0.00
370.80	16.83	369.60	0.00
370.90	17.52	369.60	0.00
371.00	18.19	369.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.06	369.70	0.00
367.00	-16.06	369.70	0.00
367.10	-16.06	369.70	0.00
367.20	-16.06	369.70	0.00
367.30	-16.06	369.70	0.00
367.40	-16.06	369.70	0.00
367.50	-16.06	369.70	0.00
367.60	-16.06	369.70	0.00
367.70	-16.06	369.70	0.00
367.80	-16.06	369.70	0.00
367.90	-16.06	369.70	0.00
368.00	-16.06	369.70	0.00
368.10	-16.06	369.70	0.00
368.20	-16.06	369.70	0.00
368.30	-16.06	369.70	0.00
368.40	-16.05	369.70	0.00
368.50	-15.90	369.70	0.00
368.60	-15.59	369.70	0.00
368.70	-15.14	369.70	0.00
368.80	-14.52	369.70	0.00
368.90	-13.74	369.70	0.00
369.00	-12.85	369.70	0.00
369.10	-11.90	369.70	0.00
369.20	-10.87	369.70	0.00
369.30	-9.73	369.70	0.00
369.40	-8.42	369.70	0.00
369.50	-6.87	369.70	0.00
369.60	-4.86	369.70	0.00
369.70	0.00	369.70	0.00
369.80	4.85	369.70	0.00
369.90	6.87	369.70	0.00
370.00	8.41	369.70	0.00
370.10	9.73	369.70	0.00
370.20	10.87	369.70	0.00
370.30	11.91	369.70	0.00
370.40	12.86	369.70	0.00
370.50	13.75	369.70	0.00
370.60	14.58	369.70	0.00
370.70	15.37	369.70	0.00
370.80	16.12	369.70	0.00
370.90	16.84	369.70	0.00
371.00	17.52	369.70	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.64	369.80	0.00
367.00	-16.64	369.80	0.00
367.10	-16.64	369.80	0.00
367.20	-16.64	369.80	0.00
367.30	-16.64	369.80	0.00
367.40	-16.64	369.80	0.00
367.50	-16.64	369.80	0.00
367.60	-16.64	369.80	0.00
367.70	-16.64	369.80	0.00
367.80	-16.64	369.80	0.00
367.90	-16.64	369.80	0.00
368.00	-16.64	369.80	0.00
368.10	-16.64	369.80	0.00
368.20	-16.64	369.80	0.00
368.30	-16.64	369.80	0.00
368.40	-16.64	369.80	0.00
368.50	-16.55	369.80	0.00
368.60	-16.28	369.80	0.00
368.70	-15.85	369.80	0.00
368.80	-15.29	369.80	0.00
368.90	-14.58	369.80	0.00
369.00	-13.74	369.80	0.00
369.10	-12.85	369.80	0.00
369.20	-11.90	369.80	0.00
369.30	-10.87	369.80	0.00
369.40	-9.73	369.80	0.00
369.50	-8.42	369.80	0.00
369.60	-6.87	369.80	0.00
369.70	-4.86	369.80	0.00
369.80	0.00	369.80	0.00
369.90	4.87	369.80	0.00
370.00	6.88	369.80	0.00
370.10	8.42	369.80	0.00
370.20	9.73	369.80	0.00
370.30	10.86	369.80	0.00
370.40	11.90	369.80	0.00
370.50	12.86	369.80	0.00
370.60	13.75	369.80	0.00
370.70	14.58	369.80	0.00
370.80	15.37	369.80	0.00
370.90	16.11	369.80	0.00
371.00	16.84	369.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.21	369.90	0.00
367.00	-17.21	369.90	0.00
367.10	-17.21	369.90	0.00
367.20	-17.21	369.90	0.00
367.30	-17.21	369.90	0.00
367.40	-17.21	369.90	0.00
367.50	-17.21	369.90	0.00
367.60	-17.21	369.90	0.00
367.70	-17.21	369.90	0.00
367.80	-17.21	369.90	0.00
367.90	-17.21	369.90	0.00
368.00	-17.21	369.90	0.00
368.10	-17.21	369.90	0.00
368.20	-17.21	369.90	0.00
368.30	-17.21	369.90	0.00
368.40	-17.21	369.90	0.00
368.50	-17.15	369.90	0.00
368.60	-16.94	369.90	0.00
368.70	-16.57	369.90	0.00
368.80	-16.03	369.90	0.00
368.90	-15.37	369.90	0.00
369.00	-14.58	369.90	0.00
369.10	-13.74	369.90	0.00
369.20	-12.85	369.90	0.00
369.30	-11.90	369.90	0.00
369.40	-10.87	369.90	0.00
369.50	-9.73	369.90	0.00
369.60	-8.42	369.90	0.00
369.70	-6.87	369.90	0.00
369.80	-4.86	369.90	0.00
369.90	0.00	369.90	0.00
370.00	4.84	369.90	0.00
370.10	6.89	369.90	0.00
370.20	8.41	369.90	0.00
370.30	9.73	369.90	0.00
370.40	10.87	369.90	0.00
370.50	11.90	369.90	0.00
370.60	12.86	369.90	0.00
370.70	13.75	369.90	0.00
370.80	14.57	369.90	0.00
370.90	15.36	369.90	0.00
371.00	16.11	369.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.79	370.00	0.00
367.00	-17.79	370.00	0.00
367.10	-17.79	370.00	0.00
367.20	-17.79	370.00	0.00
367.30	-17.79	370.00	0.00
367.40	-17.79	370.00	0.00
367.50	-17.79	370.00	0.00
367.60	-17.79	370.00	0.00
367.70	-17.79	370.00	0.00
367.80	-17.79	370.00	0.00
367.90	-17.79	370.00	0.00
368.00	-17.79	370.00	0.00
368.10	-17.79	370.00	0.00
368.20	-17.79	370.00	0.00
368.30	-17.79	370.00	0.00
368.40	-17.79	370.00	0.00
368.50	-17.75	370.00	0.00
368.60	-17.57	370.00	0.00
368.70	-17.24	370.00	0.00
368.80	-16.75	370.00	0.00
368.90	-16.12	370.00	0.00
369.00	-15.37	370.00	0.00
369.10	-14.58	370.00	0.00
369.20	-13.74	370.00	0.00
369.30	-12.85	370.00	0.00
369.40	-11.90	370.00	0.00
369.50	-10.87	370.00	0.00
369.60	-9.73	370.00	0.00
369.70	-8.42	370.00	0.00
369.80	-6.87	370.00	0.00
369.90	-4.86	370.00	0.00
370.00	0.00	370.00	0.00
370.10	4.84	370.00	0.00
370.20	6.88	370.00	0.00
370.30	8.43	370.00	0.00
370.40	9.72	370.00	0.00
370.50	10.87	370.00	0.00
370.60	11.90	370.00	0.00
370.70	12.86	370.00	0.00
370.80	13.74	370.00	0.00
370.90	14.58	370.00	0.00
371.00	15.37	370.00	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.33	370.10	0.00
367.00	-18.33	370.10	0.00
367.10	-18.33	370.10	0.00
367.20	-18.33	370.10	0.00
367.30	-18.33	370.10	0.00
367.40	-18.33	370.10	0.00
367.50	-18.33	370.10	0.00
367.60	-18.33	370.10	0.00
367.70	-18.33	370.10	0.00
367.80	-18.33	370.10	0.00
367.90	-18.33	370.10	0.00
368.00	-18.33	370.10	0.00
368.10	-18.33	370.10	0.00
368.20	-18.33	370.10	0.00
368.30	-18.33	370.10	0.00
368.40	-18.33	370.10	0.00
368.50	-18.32	370.10	0.00
368.60	-18.17	370.10	0.00
368.70	-17.88	370.10	0.00
368.80	-17.43	370.10	0.00
368.90	-16.83	370.10	0.00
369.00	-16.12	370.10	0.00
369.10	-15.37	370.10	0.00
369.20	-14.58	370.10	0.00
369.30	-13.74	370.10	0.00
369.40	-12.85	370.10	0.00
369.50	-11.90	370.10	0.00
369.60	-10.87	370.10	0.00
369.70	-9.73	370.10	0.00
369.80	-8.42	370.10	0.00
369.90	-6.87	370.10	0.00
370.00	-4.86	370.10	0.00
370.10	0.00	370.10	0.00
370.20	4.88	370.10	0.00
370.30	6.86	370.10	0.00
370.40	8.41	370.10	0.00
370.50	9.71	370.10	0.00
370.60	10.87	370.10	0.00
370.70	11.91	370.10	0.00
370.80	12.86	370.10	0.00
370.90	13.74	370.10	0.00
371.00	14.58	370.10	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.87	370.20	0.00
367.00	-18.87	370.20	0.00
367.10	-18.87	370.20	0.00
367.20	-18.87	370.20	0.00
367.30	-18.87	370.20	0.00
367.40	-18.87	370.20	0.00
367.50	-18.87	370.20	0.00
367.60	-18.87	370.20	0.00
367.70	-18.87	370.20	0.00
367.80	-18.87	370.20	0.00
367.90	-18.87	370.20	0.00
368.00	-18.87	370.20	0.00
368.10	-18.87	370.20	0.00
368.20	-18.87	370.20	0.00
368.30	-18.87	370.20	0.00
368.40	-18.87	370.20	0.00
368.50	-18.87	370.20	0.00
368.60	-18.76	370.20	0.00
368.70	-18.50	370.20	0.00
368.80	-18.08	370.20	0.00
368.90	-17.52	370.20	0.00
369.00	-16.83	370.20	0.00
369.10	-16.12	370.20	0.00
369.20	-15.37	370.20	0.00
369.30	-14.58	370.20	0.00
369.40	-13.74	370.20	0.00
369.50	-12.85	370.20	0.00
369.60	-11.90	370.20	0.00
369.70	-10.87	370.20	0.00
369.80	-9.73	370.20	0.00
369.90	-8.42	370.20	0.00
370.00	-6.87	370.20	0.00
370.10	-4.86	370.20	0.00
370.20	0.00	370.20	0.00
370.30	4.85	370.20	0.00
370.40	6.88	370.20	0.00
370.50	8.43	370.20	0.00
370.60	9.72	370.20	0.00
370.70	10.86	370.20	0.00
370.80	11.91	370.20	0.00
370.90	12.86	370.20	0.00
371.00	13.74	370.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.42	370.30	0.00
367.00	-19.42	370.30	0.00
367.10	-19.42	370.30	0.00
367.20	-19.42	370.30	0.00
367.30	-19.42	370.30	0.00
367.40	-19.42	370.30	0.00
367.50	-19.42	370.30	0.00
367.60	-19.42	370.30	0.00
367.70	-19.42	370.30	0.00
367.80	-19.42	370.30	0.00
367.90	-19.42	370.30	0.00
368.00	-19.42	370.30	0.00
368.10	-19.42	370.30	0.00
368.20	-19.42	370.30	0.00
368.30	-19.42	370.30	0.00
368.40	-19.42	370.30	0.00
368.50	-19.42	370.30	0.00
368.60	-19.34	370.30	0.00
368.70	-19.10	370.30	0.00
368.80	-18.73	370.30	0.00
368.90	-18.18	370.30	0.00
369.00	-17.52	370.30	0.00
369.10	-16.83	370.30	0.00
369.20	-16.12	370.30	0.00
369.30	-15.37	370.30	0.00
369.40	-14.58	370.30	0.00
369.50	-13.74	370.30	0.00
369.60	-12.85	370.30	0.00
369.70	-11.90	370.30	0.00
369.80	-10.87	370.30	0.00
369.90	-9.73	370.30	0.00
370.00	-8.42	370.30	0.00
370.10	-6.87	370.30	0.00
370.20	-4.86	370.30	0.00
370.30	0.00	370.30	0.00
370.40	4.87	370.30	0.00
370.50	6.89	370.30	0.00
370.60	8.40	370.30	0.00
370.70	9.71	370.30	0.00
370.80	10.87	370.30	0.00
370.90	11.90	370.30	0.00
371.00	12.85	370.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.94	370.40	0.00
367.00	-19.94	370.40	0.00
367.10	-19.94	370.40	0.00
367.20	-19.94	370.40	0.00
367.30	-19.94	370.40	0.00
367.40	-19.94	370.40	0.00
367.50	-19.94	370.40	0.00
367.60	-19.94	370.40	0.00
367.70	-19.94	370.40	0.00
367.80	-19.94	370.40	0.00
367.90	-19.94	370.40	0.00
368.00	-19.94	370.40	0.00
368.10	-19.94	370.40	0.00
368.20	-19.94	370.40	0.00
368.30	-19.94	370.40	0.00
368.40	-19.94	370.40	0.00
368.50	-19.94	370.40	0.00
368.60	-19.88	370.40	0.00
368.70	-19.68	370.40	0.00
368.80	-19.34	370.40	0.00
368.90	-18.82	370.40	0.00
369.00	-18.18	370.40	0.00
369.10	-17.52	370.40	0.00
369.20	-16.83	370.40	0.00
369.30	-16.12	370.40	0.00
369.40	-15.37	370.40	0.00
369.50	-14.58	370.40	0.00
369.60	-13.74	370.40	0.00
369.70	-12.85	370.40	0.00
369.80	-11.90	370.40	0.00
369.90	-10.87	370.40	0.00
370.00	-9.73	370.40	0.00
370.10	-8.42	370.40	0.00
370.20	-6.87	370.40	0.00
370.30	-4.86	370.40	0.00
370.40	0.00	370.40	0.00
370.50	4.88	370.40	0.00
370.60	6.88	370.40	0.00
370.70	8.42	370.40	0.00
370.80	9.72	370.40	0.00
370.90	10.87	370.40	0.00
371.00	11.90	370.40	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

#### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.46	370.50	0.00
367.00	-20.46	370.50	0.00
367.10	-20.46	370.50	0.00
367.20	-20.46	370.50	0.00
367.30	-20.46	370.50	0.00
367.40	-20.46	370.50	0.00
367.50	-20.46	370.50	0.00
367.60	-20.46	370.50	0.00
367.70	-20.46	370.50	0.00
367.80	-20.46	370.50	0.00
367.90	-20.46	370.50	0.00
368.00	-20.46	370.50	0.00
368.10	-20.46	370.50	0.00
368.20	-20.46	370.50	0.00
368.30	-20.46	370.50	0.00
368.40	-20.46	370.50	0.00
368.50	-20.46	370.50	0.00
368.60	-20.43	370.50	0.00
368.70	-20.25	370.50	0.00
368.80	-19.93	370.50	0.00
368.90	-19.44	370.50	0.00
369.00	-18.82	370.50	0.00
369.10	-18.18	370.50	0.00
369.20	-17.52	370.50	0.00
369.30	-16.83	370.50	0.00
369.40	-16.12	370.50	0.00
369.50	-15.37	370.50	0.00
369.60	-14.58	370.50	0.00
369.70	-13.74	370.50	0.00
369.80	-12.85	370.50	0.00
369.90	-11.90	370.50	0.00
370.00	-10.87	370.50	0.00
370.10	-9.73	370.50	0.00
370.20	-8.42	370.50	0.00
370.30	-6.87	370.50	0.00
370.40	-4.86	370.50	0.00
370.50	0.00	370.50	0.00
370.60	4.86	370.50	0.00
370.70	6.87	370.50	0.00
370.80	8.43	370.50	0.00
370.90	9.71	370.50	0.00
371.00	10.86	370.50	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.96	370.60	0.00
367.00	-20.96	370.60	0.00
367.10	-20.96	370.60	0.00
367.20	-20.96	370.60	0.00
367.30	-20.96	370.60	0.00
367.40	-20.96	370.60	0.00
367.50	-20.96	370.60	0.00
367.60	-20.96	370.60	0.00
367.70	-20.96	370.60	0.00
367.80	-20.96	370.60	0.00
367.90	-20.96	370.60	0.00
368.00	-20.96	370.60	0.00
368.10	-20.96	370.60	0.00
368.20	-20.96	370.60	0.00
368.30	-20.96	370.60	0.00
368.40	-20.96	370.60	0.00
368.50	-20.96	370.60	0.00
368.60	-20.95	370.60	0.00
368.70	-20.80	370.60	0.00
368.80	-20.50	370.60	0.00
368.90	-20.04	370.60	0.00
369.00	-19.44	370.60	0.00
369.10	-18.82	370.60	0.00
369.20	-18.18	370.60	0.00
369.30	-17.52	370.60	0.00
369.40	-16.83	370.60	0.00
369.50	-16.12	370.60	0.00
369.60	-15.37	370.60	0.00
369.70	-14.58	370.60	0.00
369.80	-13.74	370.60	0.00
369.90	-12.85	370.60	0.00
370.00	-11.90	370.60	0.00
370.10	-10.87	370.60	0.00
370.20	-9.73	370.60	0.00
370.30	-8.42	370.60	0.00
370.40	-6.87	370.60	0.00
370.50	-4.86	370.60	0.00
370.60	0.00	370.60	0.00
370.70	4.88	370.60	0.00
370.80	6.87	370.60	0.00
370.90	8.43	370.60	0.00
371.00	9.73	370.60	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.46	370.70	0.00
367.00	-21.46	370.70	0.00
367.10	-21.46	370.70	0.00
367.20	-21.46	370.70	0.00
367.30	-21.46	370.70	0.00
367.40	-21.46	370.70	0.00
367.50	-21.46	370.70	0.00
367.60	-21.46	370.70	0.00
367.70	-21.46	370.70	0.00
367.80	-21.46	370.70	0.00
367.90	-21.46	370.70	0.00
368.00	-21.46	370.70	0.00
368.10	-21.46	370.70	0.00
368.20	-21.46	370.70	0.00
368.30	-21.46	370.70	0.00
368.40	-21.46	370.70	0.00
368.50	-21.46	370.70	0.00
368.60	-21.46	370.70	0.00
368.70	-21.33	370.70	0.00
368.80	-21.06	370.70	0.00
368.90	-20.62	370.70	0.00
369.00	-20.04	370.70	0.00
369.10	-19.44	370.70	0.00
369.20	-18.82	370.70	0.00
369.30	-18.18	370.70	0.00
369.40	-17.52	370.70	0.00
369.50	-16.83	370.70	0.00
369.60	-16.12	370.70	0.00
369.70	-15.37	370.70	0.00
369.80	-14.58	370.70	0.00
369.90	-13.74	370.70	0.00
370.00	-12.85	370.70	0.00
370.10	-11.90	370.70	0.00
370.20	-10.87	370.70	0.00
370.30	-9.73	370.70	0.00
370.40	-8.42	370.70	0.00
370.50	-6.87	370.70	0.00
370.60	-4.86	370.70	0.00
370.70	0.00	370.70	0.00
370.80	4.87	370.70	0.00
370.90	6.86	370.70	0.00
371.00	8.42	370.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.95	370.80	0.00
367.00	-21.95	370.80	0.00
367.10	-21.95	370.80	0.00
367.20	-21.95	370.80	0.00
367.30	-21.95	370.80	0.00
367.40	-21.95	370.80	0.00
367.50	-21.95	370.80	0.00
367.60	-21.95	370.80	0.00
367.70	-21.95	370.80	0.00
367.80	-21.95	370.80	0.00
367.90	-21.95	370.80	0.00
368.00	-21.95	370.80	0.00
368.10	-21.95	370.80	0.00
368.20	-21.95	370.80	0.00
368.30	-21.95	370.80	0.00
368.40	-21.95	370.80	0.00
368.50	-21.95	370.80	0.00
368.60	-21.95	370.80	0.00
368.70	-21.86	370.80	0.00
368.80	-21.61	370.80	0.00
368.90	-21.18	370.80	0.00
369.00	-20.62	370.80	0.00
369.10	-20.04	370.80	0.00
369.20	-19.44	370.80	0.00
369.30	-18.82	370.80	0.00
369.40	-18.18	370.80	0.00
369.50	-17.52	370.80	0.00
369.60	-16.83	370.80	0.00
369.70	-16.12	370.80	0.00
369.80	-15.37	370.80	0.00
369.90	-14.58	370.80	0.00
370.00	-13.74	370.80	0.00
370.10	-12.85	370.80	0.00
370.20	-11.90	370.80	0.00
370.30	-10.87	370.80	0.00
370.40	-9.73	370.80	0.00
370.50	-8.42	370.80	0.00
370.60	-6.87	370.80	0.00
370.70	-4.86	370.80	0.00
370.80	0.00	370.80	0.00
370.90	4.86	370.80	0.00
371.00	6.88	370.80	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.47	370.90	0.00
367.00	-22.47	370.90	0.00
367.10	-22.47	370.90	0.00
367.20	-22.47	370.90	0.00
367.30	-22.47	370.90	0.00
367.40	-22.47	370.90	0.00
367.50	-22.47	370.90	0.00
367.60	-22.47	370.90	0.00
367.70	-22.47	370.90	0.00
367.80	-22.47	370.90	0.00
367.90	-22.47	370.90	0.00
368.00	-22.47	370.90	0.00
368.10	-22.47	370.90	0.00
368.20	-22.47	370.90	0.00
368.30	-22.47	370.90	0.00
368.40	-22.47	370.90	0.00
368.50	-22.47	370.90	0.00
368.60	-22.47	370.90	0.00
368.70	-22.38	370.90	0.00
368.80	-22.14	370.90	0.00
368.90	-21.73	370.90	0.00
369.00	-21.18	370.90	0.00
369.10	-20.62	370.90	0.00
369.20	-20.04	370.90	0.00
369.30	-19.44	370.90	0.00
369.40	-18.82	370.90	0.00
369.50	-18.18	370.90	0.00
369.60	-17.52	370.90	0.00
369.70	-16.83	370.90	0.00
369.80	-16.12	370.90	0.00
369.90	-15.37	370.90	0.00
370.00	-14.58	370.90	0.00
370.10	-13.74	370.90	0.00
370.20	-12.85	370.90	0.00
370.30	-11.90	370.90	0.00
370.40	-10.87	370.90	0.00
370.50	-9.73	370.90	0.00
370.60	-8.42	370.90	0.00
370.70	-6.87	370.90	0.00
370.80	-4.86	370.90	0.00
370.90	0.00	370.90	0.00
371.00	4.86	370.90	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.94	371.00	0.00
367.00	-22.94	371.00	0.00
367.10	-22.94	371.00	0.00
367.20	-22.94	371.00	0.00
367.30	-22.94	371.00	0.00
367.40	-22.94	371.00	0.00
367.50	-22.94	371.00	0.00
367.60	-22.94	371.00	0.00
367.70	-22.94	371.00	0.00
367.80	-22.94	371.00	0.00
367.90	-22.94	371.00	0.00
368.00	-22.94	371.00	0.00
368.10	-22.94	371.00	0.00
368.20	-22.94	371.00	0.00
368.30	-22.94	371.00	0.00
368.40	-22.94	371.00	0.00
368.50	-22.94	371.00	0.00
368.60	-22.94	371.00	0.00
368.70	-22.88	371.00	0.00
368.80	-22.66	371.00	0.00
368.90	-22.27	371.00	0.00
369.00	-21.73	371.00	0.00
369.10	-21.18	371.00	0.00
369.20	-20.62	371.00	0.00
369.30	-20.04	371.00	0.00
369.40	-19.44	371.00	0.00
369.50	-18.82	371.00	0.00
369.60	-18.18	371.00	0.00
369.70	-17.52	371.00	0.00
369.80	-16.83	371.00	0.00
369.90	-16.12	371.00	0.00
370.00	-15.37	371.00	0.00
370.10	-14.58	371.00	0.00
370.20	-13.74	371.00	0.00
370.30	-12.85	371.00	0.00
370.40	-11.90	371.00	0.00
370.50	-10.87	371.00	0.00
370.60	-9.73	371.00	0.00
370.70	-8.42	371.00	0.00
370.80	-6.87	371.00	0.00
370.90	-4.86	371.00	0.00
371.00	0.00	371.00	0.00

Contributing Structures

Culvert - 1



Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.90 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert - 1	Forward + Reverse	TW	366.90	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	120.00 ft
Length (Computed Barrel)	120.00 ft
Slope (Computed)	0.003 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.094
T2 ratio (HW/D)	1.196
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	369.09 ft	T1 Flow	15.55 ft <sup>3</sup> /s
T2 Elevation	369.29 ft	T2 Flow	17.77 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.50	0.00
367.00	0.04	366.50	0.00
367.10	0.17	366.50	0.00
367.20	0.39	366.50	0.00
367.30	0.68	366.50	0.00
367.40	1.05	366.50	0.00
367.50	1.50	366.50	0.00
367.60	2.01	366.50	0.00
367.70	2.59	366.50	0.00
367.80	3.24	366.50	0.00
367.90	3.93	366.50	0.00
368.00	4.70	366.50	0.00
368.10	5.50	366.50	0.00
368.20	6.34	366.50	0.00
368.30	7.21	366.50	0.00
368.40	8.14	366.50	0.00
368.50	9.06	366.50	0.00
368.60	10.00	366.50	0.00
368.70	10.95	366.50	0.00
368.80	11.90	366.50	0.00
368.90	12.82	366.50	0.00
369.00	13.75	366.50	0.00
369.10	14.62	366.50	0.00
369.20	15.45	366.50	0.00
369.30	16.24	366.50	0.00
369.40	16.93	366.50	0.00
369.50	17.51	366.50	0.00
369.60	18.03	366.50	0.00
369.70	18.54	366.50	0.00
369.80	19.06	366.50	0.00
369.90	19.57	366.50	0.00
370.00	20.07	366.50	0.00
370.10	20.58	366.50	0.00
370.20	21.07	366.50	0.00
370.30	21.56	366.50	0.00
370.40	22.04	366.50	0.00
370.50	22.51	366.50	0.00
370.60	22.99	366.50	0.00
370.70	23.46	366.50	0.00
370.80	23.91	366.50	0.00
370.90	24.36	366.50	0.00
371.00	24.81	366.50	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.60	0.00
367.00	0.04	366.60	0.00
367.10	0.17	366.60	0.00
367.20	0.39	366.60	0.00
367.30	0.68	366.60	0.00
367.40	1.05	366.60	0.00
367.50	1.50	366.60	0.00
367.60	2.01	366.60	0.00
367.70	2.59	366.60	0.00
367.80	3.24	366.60	0.00
367.90	3.93	366.60	0.00
368.00	4.70	366.60	0.00
368.10	5.50	366.60	0.00
368.20	6.34	366.60	0.00
368.30	7.21	366.60	0.00
368.40	8.14	366.60	0.00
368.50	9.06	366.60	0.00
368.60	10.00	366.60	0.00
368.70	10.95	366.60	0.00
368.80	11.90	366.60	0.00
368.90	12.82	366.60	0.00
369.00	13.75	366.60	0.00
369.10	14.62	366.60	0.00
369.20	15.45	366.60	0.00
369.30	16.24	366.60	0.00
369.40	16.93	366.60	0.00
369.50	17.51	366.60	0.00
369.60	18.03	366.60	0.00
369.70	18.54	366.60	0.00
369.80	19.06	366.60	0.00
369.90	19.57	366.60	0.00
370.00	20.07	366.60	0.00
370.10	20.58	366.60	0.00
370.20	21.07	366.60	0.00
370.30	21.56	366.60	0.00
370.40	22.04	366.60	0.00
370.50	22.51	366.60	0.00
370.60	22.99	366.60	0.00
370.70	23.46	366.60	0.00
370.80	23.91	366.60	0.00
370.90	24.36	366.60	0.00
371.00	24.81	366.60	0.00

Contributing Structures

None Contributing





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.70	0.00
367.00	0.04	366.70	0.00
367.10	0.17	366.70	0.00
367.20	0.39	366.70	0.00
367.30	0.68	366.70	0.00
367.40	1.05	366.70	0.00
367.50	1.50	366.70	0.00
367.60	2.01	366.70	0.00
367.70	2.59	366.70	0.00
367.80	3.24	366.70	0.00
367.90	3.93	366.70	0.00
368.00	4.70	366.70	0.00
368.10	5.50	366.70	0.00
368.20	6.34	366.70	0.00
368.30	7.21	366.70	0.00
368.40	8.14	366.70	0.00
368.50	9.06	366.70	0.00
368.60	10.00	366.70	0.00
368.70	10.95	366.70	0.00
368.80	11.90	366.70	0.00
368.90	12.82	366.70	0.00
369.00	13.75	366.70	0.00
369.10	14.62	366.70	0.00
369.20	15.45	366.70	0.00
369.30	16.24	366.70	0.00
369.40	16.93	366.70	0.00
369.50	17.51	366.70	0.00
369.60	18.03	366.70	0.00
369.70	18.54	366.70	0.00
369.80	19.06	366.70	0.00
369.90	19.57	366.70	0.00
370.00	20.07	366.70	0.00
370.10	20.58	366.70	0.00
370.20	21.07	366.70	0.00
370.30	21.56	366.70	0.00
370.40	22.04	366.70	0.00
370.50	22.51	366.70	0.00
370.60	22.99	366.70	0.00
370.70	23.46	366.70	0.00
370.80	23.91	366.70	0.00
370.90	24.36	366.70	0.00
371.00	24.81	366.70	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.80	0.00
367.00	0.04	366.80	0.00
367.10	0.17	366.80	0.00
367.20	0.39	366.80	0.00
367.30	0.68	366.80	0.00
367.40	1.05	366.80	0.00
367.50	1.50	366.80	0.00
367.60	2.01	366.80	0.00
367.70	2.59	366.80	0.00
367.80	3.24	366.80	0.00
367.90	3.93	366.80	0.00
368.00	4.70	366.80	0.00
368.10	5.50	366.80	0.00
368.20	6.34	366.80	0.00
368.30	7.21	366.80	0.00
368.40	8.14	366.80	0.00
368.50	9.06	366.80	0.00
368.60	10.00	366.80	0.00
368.70	10.95	366.80	0.00
368.80	11.90	366.80	0.00
368.90	12.82	366.80	0.00
369.00	13.75	366.80	0.00
369.10	14.62	366.80	0.00
369.20	15.45	366.80	0.00
369.30	16.24	366.80	0.00
369.40	16.93	366.80	0.00
369.50	17.51	366.80	0.00
369.60	18.03	366.80	0.00
369.70	18.54	366.80	0.00
369.80	19.06	366.80	0.00
369.90	19.57	366.80	0.00
370.00	20.07	366.80	0.00
370.10	20.58	366.80	0.00
370.20	21.07	366.80	0.00
370.30	21.56	366.80	0.00
370.40	22.04	366.80	0.00
370.50	22.51	366.80	0.00
370.60	22.99	366.80	0.00
370.70	23.46	366.80	0.00
370.80	23.91	366.80	0.00
370.90	24.36	366.80	0.00
371.00	24.81	366.80	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	0.00	366.90	0.00
367.00	0.04	366.90	0.00
367.10	0.17	366.90	0.00
367.20	0.38	366.90	0.00
367.30	0.68	366.90	0.00
367.40	1.06	366.90	0.00
367.50	1.50	366.90	0.00
367.60	2.01	366.90	0.00
367.70	2.59	366.90	0.00
367.80	3.24	366.90	0.00
367.90	3.93	366.90	0.00
368.00	4.70	366.90	0.00
368.10	5.50	366.90	0.00
368.20	6.34	366.90	0.00
368.30	7.21	366.90	0.00
368.40	8.14	366.90	0.00
368.50	9.06	366.90	0.00
368.60	10.00	366.90	0.00
368.70	10.95	366.90	0.00
368.80	11.90	366.90	0.00
368.90	12.82	366.90	0.00
369.00	13.75	366.90	0.00
369.10	14.62	366.90	0.00
369.20	15.45	366.90	0.00
369.30	16.24	366.90	0.00
369.40	16.93	366.90	0.00
369.50	17.51	366.90	0.00
369.60	18.03	366.90	0.00
369.70	18.54	366.90	0.00
369.80	19.06	366.90	0.00
369.90	19.57	366.90	0.00
370.00	20.07	366.90	0.00
370.10	20.58	366.90	0.00
370.20	21.07	366.90	0.00
370.30	21.56	366.90	0.00
370.40	22.04	366.90	0.00
370.50	22.51	366.90	0.00
370.60	22.99	366.90	0.00
370.70	23.46	366.90	0.00
370.80	23.91	366.90	0.00
370.90	24.36	366.90	0.00
371.00	24.81	366.90	0.00

Contributing Structures

None Contributing



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.03	367.00	0.00
367.00	0.00	367.00	0.00
367.10	0.17	367.00	0.00
367.20	0.39	367.00	0.00
367.30	0.68	367.00	0.00
367.40	1.05	367.00	0.00
367.50	1.50	367.00	0.00
367.60	2.02	367.00	0.00
367.70	2.59	367.00	0.00
367.80	3.24	367.00	0.00
367.90	3.93	367.00	0.00
368.00	4.70	367.00	0.00
368.10	5.50	367.00	0.00
368.20	6.34	367.00	0.00
368.30	7.21	367.00	0.00
368.40	8.14	367.00	0.00
368.50	9.06	367.00	0.00
368.60	10.00	367.00	0.00
368.70	10.95	367.00	0.00
368.80	11.90	367.00	0.00
368.90	12.82	367.00	0.00
369.00	13.75	367.00	0.00
369.10	14.62	367.00	0.00
369.20	15.45	367.00	0.00
369.30	16.24	367.00	0.00
369.40	16.93	367.00	0.00
369.50	17.51	367.00	0.00
369.60	18.03	367.00	0.00
369.70	18.54	367.00	0.00
369.80	19.06	367.00	0.00
369.90	19.57	367.00	0.00
370.00	20.07	367.00	0.00
370.10	20.58	367.00	0.00
370.20	21.07	367.00	0.00
370.30	21.56	367.00	0.00
370.40	22.04	367.00	0.00
370.50	22.51	367.00	0.00
370.60	22.99	367.00	0.00
370.70	23.46	367.00	0.00
370.80	23.91	367.00	0.00
370.90	24.36	367.00	0.00
371.00	24.81	367.00	0.00

Contributing Structures

Culvert - 1

Subsection: Composite Rating Curve  
Label: OCS-A  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

### Composite Outflow Summary

Contributing Structures
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Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.14	367.10	0.00
367.00	-0.14	367.10	0.00
367.10	0.00	367.10	0.00
367.20	0.38	367.10	0.00
367.30	0.68	367.10	0.00
367.40	1.05	367.10	0.00
367.50	1.50	367.10	0.00
367.60	2.01	367.10	0.00
367.70	2.59	367.10	0.00
367.80	3.24	367.10	0.00
367.90	3.93	367.10	0.00
368.00	4.70	367.10	0.00
368.10	5.50	367.10	0.00
368.20	6.34	367.10	0.00
368.30	7.21	367.10	0.00
368.40	8.14	367.10	0.00
368.50	9.06	367.10	0.00
368.60	10.00	367.10	0.00
368.70	10.95	367.10	0.00
368.80	11.90	367.10	0.00
368.90	12.82	367.10	0.00
369.00	13.75	367.10	0.00
369.10	14.62	367.10	0.00
369.20	15.45	367.10	0.00
369.30	16.24	367.10	0.00
369.40	16.93	367.10	0.00
369.50	17.51	367.10	0.00
369.60	18.03	367.10	0.00
369.70	18.54	367.10	0.00
369.80	19.06	367.10	0.00
369.90	19.57	367.10	0.00
370.00	20.07	367.10	0.00
370.10	20.58	367.10	0.00
370.20	21.07	367.10	0.00
370.30	21.56	367.10	0.00
370.40	22.04	367.10	0.00
370.50	22.51	367.10	0.00
370.60	22.99	367.10	0.00
370.70	23.46	367.10	0.00
370.80	23.91	367.10	0.00
370.90	24.36	367.10	0.00
371.00	24.81	367.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.32	367.20	0.00
367.00	-0.32	367.20	0.00
367.10	-0.32	367.20	0.00
367.20	0.00	367.20	0.00
367.30	0.66	367.20	0.00
367.40	1.05	367.20	0.00
367.50	1.50	367.20	0.00
367.60	2.01	367.20	0.00
367.70	2.59	367.20	0.00
367.80	3.24	367.20	0.00
367.90	3.95	367.20	0.00
368.00	4.70	367.20	0.00
368.10	5.50	367.20	0.00
368.20	6.34	367.20	0.00
368.30	7.21	367.20	0.00
368.40	8.14	367.20	0.00
368.50	9.06	367.20	0.00
368.60	10.00	367.20	0.00
368.70	10.95	367.20	0.00
368.80	11.90	367.20	0.00
368.90	12.82	367.20	0.00
369.00	13.75	367.20	0.00
369.10	14.62	367.20	0.00
369.20	15.45	367.20	0.00
369.30	16.24	367.20	0.00
369.40	16.93	367.20	0.00
369.50	17.51	367.20	0.00
369.60	18.03	367.20	0.00
369.70	18.54	367.20	0.00
369.80	19.06	367.20	0.00
369.90	19.57	367.20	0.00
370.00	20.07	367.20	0.00
370.10	20.58	367.20	0.00
370.20	21.07	367.20	0.00
370.30	21.56	367.20	0.00
370.40	22.04	367.20	0.00
370.50	22.51	367.20	0.00
370.60	22.99	367.20	0.00
370.70	23.46	367.20	0.00
370.80	23.91	367.20	0.00
370.90	24.36	367.20	0.00
371.00	24.81	367.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.58	367.30	0.00
367.00	-0.58	367.30	0.00
367.10	-0.58	367.30	0.00
367.20	-0.56	367.30	0.00
367.30	0.00	367.30	0.00
367.40	0.98	367.30	0.00
367.50	1.49	367.30	0.00
367.60	2.01	367.30	0.00
367.70	2.59	367.30	0.00
367.80	3.24	367.30	0.00
367.90	3.94	367.30	0.00
368.00	4.68	367.30	0.00
368.10	5.50	367.30	0.00
368.20	6.34	367.30	0.00
368.30	7.21	367.30	0.00
368.40	8.14	367.30	0.00
368.50	9.06	367.30	0.00
368.60	10.00	367.30	0.00
368.70	10.95	367.30	0.00
368.80	11.90	367.30	0.00
368.90	12.82	367.30	0.00
369.00	13.75	367.30	0.00
369.10	14.62	367.30	0.00
369.20	15.45	367.30	0.00
369.30	16.24	367.30	0.00
369.40	16.93	367.30	0.00
369.50	17.51	367.30	0.00
369.60	18.03	367.30	0.00
369.70	18.54	367.30	0.00
369.80	19.06	367.30	0.00
369.90	19.57	367.30	0.00
370.00	20.07	367.30	0.00
370.10	20.58	367.30	0.00
370.20	21.07	367.30	0.00
370.30	21.56	367.30	0.00
370.40	22.04	367.30	0.00
370.50	22.51	367.30	0.00
370.60	22.99	367.30	0.00
370.70	23.46	367.30	0.00
370.80	23.91	367.30	0.00
370.90	24.36	367.30	0.00
371.00	24.81	367.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-0.90	367.40	0.00
367.00	-0.90	367.40	0.00
367.10	-0.90	367.40	0.00
367.20	-0.90	367.40	0.00
367.30	-0.83	367.40	0.00
367.40	0.00	367.40	0.00
367.50	1.33	367.40	0.00
367.60	1.97	367.40	0.00
367.70	2.58	367.40	0.00
367.80	3.24	367.40	0.00
367.90	3.94	367.40	0.00
368.00	4.69	367.40	0.00
368.10	5.50	367.40	0.00
368.20	6.34	367.40	0.00
368.30	7.21	367.40	0.00
368.40	8.14	367.40	0.00
368.50	9.06	367.40	0.00
368.60	10.00	367.40	0.00
368.70	10.95	367.40	0.00
368.80	11.90	367.40	0.00
368.90	12.82	367.40	0.00
369.00	13.75	367.40	0.00
369.10	14.62	367.40	0.00
369.20	15.45	367.40	0.00
369.30	16.24	367.40	0.00
369.40	16.93	367.40	0.00
369.50	17.51	367.40	0.00
369.60	18.03	367.40	0.00
369.70	18.54	367.40	0.00
369.80	19.06	367.40	0.00
369.90	19.57	367.40	0.00
370.00	20.07	367.40	0.00
370.10	20.58	367.40	0.00
370.20	21.07	367.40	0.00
370.30	21.56	367.40	0.00
370.40	22.04	367.40	0.00
370.50	22.51	367.40	0.00
370.60	22.99	367.40	0.00
370.70	23.46	367.40	0.00
370.80	23.91	367.40	0.00
370.90	24.36	367.40	0.00
371.00	24.81	367.40	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.29	367.50	0.00
367.00	-1.29	367.50	0.00
367.10	-1.29	367.50	0.00
367.20	-1.29	367.50	0.00
367.30	-1.29	367.50	0.00
367.40	-1.14	367.50	0.00
367.50	0.00	367.50	0.00
367.60	1.71	367.50	0.00
367.70	2.50	367.50	0.00
367.80	3.21	367.50	0.00
367.90	3.93	367.50	0.00
368.00	4.68	367.50	0.00
368.10	5.50	367.50	0.00
368.20	6.34	367.50	0.00
368.30	7.21	367.50	0.00
368.40	8.14	367.50	0.00
368.50	9.06	367.50	0.00
368.60	10.00	367.50	0.00
368.70	10.95	367.50	0.00
368.80	11.90	367.50	0.00
368.90	12.82	367.50	0.00
369.00	13.75	367.50	0.00
369.10	14.62	367.50	0.00
369.20	15.45	367.50	0.00
369.30	16.24	367.50	0.00
369.40	16.93	367.50	0.00
369.50	17.51	367.50	0.00
369.60	18.03	367.50	0.00
369.70	18.54	367.50	0.00
369.80	19.06	367.50	0.00
369.90	19.57	367.50	0.00
370.00	20.07	367.50	0.00
370.10	20.58	367.50	0.00
370.20	21.07	367.50	0.00
370.30	21.56	367.50	0.00
370.40	22.04	367.50	0.00
370.50	22.51	367.50	0.00
370.60	22.99	367.50	0.00
370.70	23.46	367.50	0.00
370.80	23.91	367.50	0.00
370.90	24.36	367.50	0.00
371.00	24.81	367.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-1.74	367.60	0.00
367.00	-1.74	367.60	0.00
367.10	-1.74	367.60	0.00
367.20	-1.74	367.60	0.00
367.30	-1.74	367.60	0.00
367.40	-1.73	367.60	0.00
367.50	-1.48	367.60	0.00
367.60	0.00	367.60	0.00
367.70	2.09	367.60	0.00
367.80	3.05	367.60	0.00
367.90	3.86	367.60	0.00
368.00	4.66	367.60	0.00
368.10	5.47	367.60	0.00
368.20	6.34	367.60	0.00
368.30	7.21	367.60	0.00
368.40	8.12	367.60	0.00
368.50	9.06	367.60	0.00
368.60	10.00	367.60	0.00
368.70	10.95	367.60	0.00
368.80	11.90	367.60	0.00
368.90	12.82	367.60	0.00
369.00	13.75	367.60	0.00
369.10	14.62	367.60	0.00
369.20	15.45	367.60	0.00
369.30	16.24	367.60	0.00
369.40	16.93	367.60	0.00
369.50	17.51	367.60	0.00
369.60	18.03	367.60	0.00
369.70	18.54	367.60	0.00
369.80	19.06	367.60	0.00
369.90	19.57	367.60	0.00
370.00	20.07	367.60	0.00
370.10	20.58	367.60	0.00
370.20	21.07	367.60	0.00
370.30	21.56	367.60	0.00
370.40	22.04	367.60	0.00
370.50	22.51	367.60	0.00
370.60	22.99	367.60	0.00
370.70	23.46	367.60	0.00
370.80	23.91	367.60	0.00
370.90	24.36	367.60	0.00
371.00	24.81	367.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.25	367.70	0.00
367.00	-2.25	367.70	0.00
367.10	-2.25	367.70	0.00
367.20	-2.25	367.70	0.00
367.30	-2.25	367.70	0.00
367.40	-2.25	367.70	0.00
367.50	-2.19	367.70	0.00
367.60	-1.81	367.70	0.00
367.70	0.00	367.70	0.00
367.80	2.48	367.70	0.00
367.90	3.59	367.70	0.00
368.00	4.54	367.70	0.00
368.10	5.43	367.70	0.00
368.20	6.30	367.70	0.00
368.30	7.20	367.70	0.00
368.40	8.12	367.70	0.00
368.50	9.04	367.70	0.00
368.60	9.99	367.70	0.00
368.70	10.95	367.70	0.00
368.80	11.90	367.70	0.00
368.90	12.82	367.70	0.00
369.00	13.75	367.70	0.00
369.10	14.62	367.70	0.00
369.20	15.45	367.70	0.00
369.30	16.24	367.70	0.00
369.40	16.93	367.70	0.00
369.50	17.51	367.70	0.00
369.60	18.03	367.70	0.00
369.70	18.54	367.70	0.00
369.80	19.06	367.70	0.00
369.90	19.57	367.70	0.00
370.00	20.07	367.70	0.00
370.10	20.58	367.70	0.00
370.20	21.07	367.70	0.00
370.30	21.56	367.70	0.00
370.40	22.04	367.70	0.00
370.50	22.51	367.70	0.00
370.60	22.99	367.70	0.00
370.70	23.46	367.70	0.00
370.80	23.91	367.70	0.00
370.90	24.36	367.70	0.00
371.00	24.81	367.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-2.81	367.80	0.00
367.00	-2.81	367.80	0.00
367.10	-2.81	367.80	0.00
367.20	-2.81	367.80	0.00
367.30	-2.81	367.80	0.00
367.40	-2.81	367.80	0.00
367.50	-2.81	367.80	0.00
367.60	-2.68	367.80	0.00
367.70	-2.17	367.80	0.00
367.80	0.00	367.80	0.00
367.90	2.88	367.80	0.00
368.00	4.17	367.80	0.00
368.10	5.22	367.80	0.00
368.20	6.18	367.80	0.00
368.30	7.12	367.80	0.00
368.40	8.07	367.80	0.00
368.50	9.02	367.80	0.00
368.60	9.99	367.80	0.00
368.70	10.93	367.80	0.00
368.80	11.90	367.80	0.00
368.90	12.82	367.80	0.00
369.00	13.75	367.80	0.00
369.10	14.62	367.80	0.00
369.20	15.45	367.80	0.00
369.30	16.24	367.80	0.00
369.40	16.93	367.80	0.00
369.50	17.51	367.80	0.00
369.60	18.03	367.80	0.00
369.70	18.54	367.80	0.00
369.80	19.06	367.80	0.00
369.90	19.57	367.80	0.00
370.00	20.07	367.80	0.00
370.10	20.58	367.80	0.00
370.20	21.07	367.80	0.00
370.30	21.56	367.80	0.00
370.40	22.04	367.80	0.00
370.50	22.51	367.80	0.00
370.60	22.99	367.80	0.00
370.70	23.46	367.80	0.00
370.80	23.91	367.80	0.00
370.90	24.36	367.80	0.00
371.00	24.81	367.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-3.43	367.90	0.00
367.00	-3.43	367.90	0.00
367.10	-3.43	367.90	0.00
367.20	-3.43	367.90	0.00
367.30	-3.43	367.90	0.00
367.40	-3.43	367.90	0.00
367.50	-3.43	367.90	0.00
367.60	-3.42	367.90	0.00
367.70	-3.18	367.90	0.00
367.80	-2.53	367.90	0.00
367.90	0.00	367.90	0.00
368.00	3.25	367.90	0.00
368.10	4.71	367.90	0.00
368.20	5.86	367.90	0.00
368.30	6.93	367.90	0.00
368.40	7.93	367.90	0.00
368.50	8.93	367.90	0.00
368.60	9.91	367.90	0.00
368.70	10.90	367.90	0.00
368.80	11.86	367.90	0.00
368.90	12.81	367.90	0.00
369.00	13.75	367.90	0.00
369.10	14.62	367.90	0.00
369.20	15.45	367.90	0.00
369.30	16.24	367.90	0.00
369.40	16.93	367.90	0.00
369.50	17.51	367.90	0.00
369.60	18.03	367.90	0.00
369.70	18.54	367.90	0.00
369.80	19.06	367.90	0.00
369.90	19.57	367.90	0.00
370.00	20.07	367.90	0.00
370.10	20.58	367.90	0.00
370.20	21.07	367.90	0.00
370.30	21.56	367.90	0.00
370.40	22.04	367.90	0.00
370.50	22.51	367.90	0.00
370.60	22.99	367.90	0.00
370.70	23.46	367.90	0.00
370.80	23.91	367.90	0.00
370.90	24.36	367.90	0.00
371.00	24.81	367.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.10	368.00	0.00
367.00	-4.10	368.00	0.00
367.10	-4.10	368.00	0.00
367.20	-4.10	368.00	0.00
367.30	-4.10	368.00	0.00
367.40	-4.10	368.00	0.00
367.50	-4.10	368.00	0.00
367.60	-4.10	368.00	0.00
367.70	-4.03	368.00	0.00
367.80	-3.70	368.00	0.00
367.90	-2.91	368.00	0.00
368.00	0.00	368.00	0.00
368.10	3.64	368.00	0.00
368.20	5.22	368.00	0.00
368.30	6.49	368.00	0.00
368.40	7.64	368.00	0.00
368.50	8.72	368.00	0.00
368.60	9.76	368.00	0.00
368.70	10.77	368.00	0.00
368.80	11.77	368.00	0.00
368.90	12.74	368.00	0.00
369.00	13.69	368.00	0.00
369.10	14.59	368.00	0.00
369.20	15.44	368.00	0.00
369.30	16.24	368.00	0.00
369.40	16.93	368.00	0.00
369.50	17.51	368.00	0.00
369.60	18.03	368.00	0.00
369.70	18.54	368.00	0.00
369.80	19.06	368.00	0.00
369.90	19.57	368.00	0.00
370.00	20.07	368.00	0.00
370.10	20.58	368.00	0.00
370.20	21.07	368.00	0.00
370.30	21.56	368.00	0.00
370.40	22.04	368.00	0.00
370.50	22.51	368.00	0.00
370.60	22.99	368.00	0.00
370.70	23.46	368.00	0.00
370.80	23.91	368.00	0.00
370.90	24.36	368.00	0.00
371.00	24.81	368.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-4.79	368.10	0.00
367.00	-4.79	368.10	0.00
367.10	-4.79	368.10	0.00
367.20	-4.79	368.10	0.00
367.30	-4.79	368.10	0.00
367.40	-4.79	368.10	0.00
367.50	-4.79	368.10	0.00
367.60	-4.79	368.10	0.00
367.70	-4.79	368.10	0.00
367.80	-4.65	368.10	0.00
367.90	-4.20	368.10	0.00
368.00	-3.24	368.10	0.00
368.10	0.00	368.10	0.00
368.20	4.00	368.10	0.00
368.30	5.70	368.10	0.00
368.40	7.09	368.10	0.00
368.50	8.33	368.10	0.00
368.60	9.45	368.10	0.00
368.70	10.54	368.10	0.00
368.80	11.57	368.10	0.00
368.90	12.58	368.10	0.00
369.00	13.55	368.10	0.00
369.10	14.48	368.10	0.00
369.20	15.35	368.10	0.00
369.30	16.16	368.10	0.00
369.40	16.88	368.10	0.00
369.50	17.48	368.10	0.00
369.60	18.01	368.10	0.00
369.70	18.54	368.10	0.00
369.80	19.06	368.10	0.00
369.90	19.57	368.10	0.00
370.00	20.07	368.10	0.00
370.10	20.58	368.10	0.00
370.20	21.07	368.10	0.00
370.30	21.56	368.10	0.00
370.40	22.04	368.10	0.00
370.50	22.51	368.10	0.00
370.60	22.99	368.10	0.00
370.70	23.46	368.10	0.00
370.80	23.91	368.10	0.00
370.90	24.36	368.10	0.00
371.00	24.81	368.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-5.53	368.20	0.00
367.00	-5.53	368.20	0.00
367.10	-5.53	368.20	0.00
367.20	-5.53	368.20	0.00
367.30	-5.53	368.20	0.00
367.40	-5.53	368.20	0.00
367.50	-5.53	368.20	0.00
367.60	-5.53	368.20	0.00
367.70	-5.53	368.20	0.00
367.80	-5.51	368.20	0.00
367.90	-5.25	368.20	0.00
368.00	-4.70	368.20	0.00
368.10	-3.60	368.20	0.00
368.20	0.00	368.20	0.00
368.30	4.28	368.20	0.00
368.40	6.17	368.20	0.00
368.50	7.63	368.20	0.00
368.60	8.93	368.20	0.00
368.70	10.11	368.20	0.00
368.80	11.23	368.20	0.00
368.90	12.29	368.20	0.00
369.00	13.29	368.20	0.00
369.10	14.25	368.20	0.00
369.20	15.14	368.20	0.00
369.30	15.96	368.20	0.00
369.40	16.69	368.20	0.00
369.50	17.28	368.20	0.00
369.60	17.85	368.20	0.00
369.70	18.41	368.20	0.00
369.80	18.96	368.20	0.00
369.90	19.50	368.20	0.00
370.00	20.03	368.20	0.00
370.10	20.55	368.20	0.00
370.20	21.06	368.20	0.00
370.30	21.55	368.20	0.00
370.40	22.04	368.20	0.00
370.50	22.52	368.20	0.00
370.60	22.99	368.20	0.00
370.70	23.46	368.20	0.00
370.80	23.91	368.20	0.00
370.90	24.36	368.20	0.00
371.00	24.81	368.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-6.29	368.30	0.00
367.00	-6.29	368.30	0.00
367.10	-6.29	368.30	0.00
367.20	-6.29	368.30	0.00
367.30	-6.29	368.30	0.00
367.40	-6.29	368.30	0.00
367.50	-6.29	368.30	0.00
367.60	-6.29	368.30	0.00
367.70	-6.29	368.30	0.00
367.80	-6.29	368.30	0.00
367.90	-6.20	368.30	0.00
368.00	-5.84	368.30	0.00
368.10	-5.17	368.30	0.00
368.20	-3.91	368.30	0.00
368.30	0.00	368.30	0.00
368.40	4.58	368.30	0.00
368.50	6.55	368.30	0.00
368.60	8.10	368.30	0.00
368.70	9.45	368.30	0.00
368.80	10.66	368.30	0.00
368.90	11.81	368.30	0.00
369.00	12.86	368.30	0.00
369.10	13.85	368.30	0.00
369.20	14.76	368.30	0.00
369.30	15.59	368.30	0.00
369.40	16.31	368.30	0.00
369.50	16.90	368.30	0.00
369.60	17.51	368.30	0.00
369.70	18.09	368.30	0.00
369.80	18.67	368.30	0.00
369.90	19.26	368.30	0.00
370.00	19.81	368.30	0.00
370.10	20.36	368.30	0.00
370.20	20.90	368.30	0.00
370.30	21.42	368.30	0.00
370.40	21.93	368.30	0.00
370.50	22.43	368.30	0.00
370.60	22.93	368.30	0.00
370.70	23.41	368.30	0.00
370.80	23.88	368.30	0.00
370.90	24.35	368.30	0.00
371.00	24.79	368.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.08	368.40	0.00
367.00	-7.08	368.40	0.00
367.10	-7.08	368.40	0.00
367.20	-7.08	368.40	0.00
367.30	-7.08	368.40	0.00
367.40	-7.08	368.40	0.00
367.50	-7.08	368.40	0.00
367.60	-7.08	368.40	0.00
367.70	-7.08	368.40	0.00
367.80	-7.08	368.40	0.00
367.90	-7.06	368.40	0.00
368.00	-6.87	368.40	0.00
368.10	-6.41	368.40	0.00
368.20	-5.63	368.40	0.00
368.30	-4.24	368.40	0.00
368.40	0.00	368.40	0.00
368.50	4.82	368.40	0.00
368.60	6.85	368.40	0.00
368.70	8.45	368.40	0.00
368.80	9.85	368.40	0.00
368.90	11.06	368.40	0.00
369.00	12.20	368.40	0.00
369.10	13.22	368.40	0.00
369.20	14.16	368.40	0.00
369.30	14.96	368.40	0.00
369.40	15.61	368.40	0.00
369.50	16.26	368.40	0.00
369.60	16.91	368.40	0.00
369.70	17.56	368.40	0.00
369.80	18.19	368.40	0.00
369.90	18.81	368.40	0.00
370.00	19.41	368.40	0.00
370.10	19.98	368.40	0.00
370.20	20.55	368.40	0.00
370.30	21.11	368.40	0.00
370.40	21.65	368.40	0.00
370.50	22.17	368.40	0.00
370.60	22.69	368.40	0.00
370.70	23.19	368.40	0.00
370.80	23.69	368.40	0.00
370.90	24.18	368.40	0.00
371.00	24.65	368.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-7.87	368.50	0.00
367.00	-7.87	368.50	0.00
367.10	-7.87	368.50	0.00
367.20	-7.87	368.50	0.00
367.30	-7.87	368.50	0.00
367.40	-7.87	368.50	0.00
367.50	-7.87	368.50	0.00
367.60	-7.87	368.50	0.00
367.70	-7.87	368.50	0.00
367.80	-7.87	368.50	0.00
367.90	-7.87	368.50	0.00
368.00	-7.80	368.50	0.00
368.10	-7.51	368.50	0.00
368.20	-6.94	368.50	0.00
368.30	-6.01	368.50	0.00
368.40	-4.48	368.50	0.00
368.50	0.00	368.50	0.00
368.60	4.94	368.50	0.00
368.70	7.00	368.50	0.00
368.80	8.64	368.50	0.00
368.90	10.00	368.50	0.00
369.00	11.18	368.50	0.00
369.10	12.21	368.50	0.00
369.20	13.03	368.50	0.00
369.30	13.74	368.50	0.00
369.40	14.58	368.50	0.00
369.50	15.36	368.50	0.00
369.60	16.12	368.50	0.00
369.70	16.84	368.50	0.00
369.80	17.53	368.50	0.00
369.90	18.18	368.50	0.00
370.00	18.82	368.50	0.00
370.10	19.44	368.50	0.00
370.20	20.04	368.50	0.00
370.30	20.62	368.50	0.00
370.40	21.18	368.50	0.00
370.50	21.74	368.50	0.00
370.60	22.27	368.50	0.00
370.70	22.79	368.50	0.00
370.80	23.30	368.50	0.00
370.90	23.80	368.50	0.00
371.00	24.30	368.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-8.65	368.60	0.00
367.00	-8.65	368.60	0.00
367.10	-8.65	368.60	0.00
367.20	-8.65	368.60	0.00
367.30	-8.65	368.60	0.00
367.40	-8.65	368.60	0.00
367.50	-8.65	368.60	0.00
367.60	-8.65	368.60	0.00
367.70	-8.65	368.60	0.00
367.80	-8.65	368.60	0.00
367.90	-8.65	368.60	0.00
368.00	-8.64	368.60	0.00
368.10	-8.48	368.60	0.00
368.20	-8.08	368.60	0.00
368.30	-7.39	368.60	0.00
368.40	-6.34	368.60	0.00
368.50	-4.63	368.60	0.00
368.60	0.00	368.60	0.00
368.70	4.95	368.60	0.00
368.80	6.98	368.60	0.00
368.90	8.53	368.60	0.00
369.00	9.82	368.60	0.00
369.10	10.89	368.60	0.00
369.20	11.90	368.60	0.00
369.30	12.85	368.60	0.00
369.40	13.74	368.60	0.00
369.50	14.58	368.60	0.00
369.60	15.36	368.60	0.00
369.70	16.12	368.60	0.00
369.80	16.83	368.60	0.00
369.90	17.52	368.60	0.00
370.00	18.19	368.60	0.00
370.10	18.83	368.60	0.00
370.20	19.44	368.60	0.00
370.30	20.03	368.60	0.00
370.40	20.62	368.60	0.00
370.50	21.18	368.60	0.00
370.60	21.73	368.60	0.00
370.70	22.27	368.60	0.00
370.80	22.79	368.60	0.00
370.90	23.31	368.60	0.00
371.00	23.80	368.60	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-9.42	368.70	0.00
367.00	-9.42	368.70	0.00
367.10	-9.42	368.70	0.00
367.20	-9.42	368.70	0.00
367.30	-9.42	368.70	0.00
367.40	-9.42	368.70	0.00
367.50	-9.42	368.70	0.00
367.60	-9.42	368.70	0.00
367.70	-9.42	368.70	0.00
367.80	-9.42	368.70	0.00
367.90	-9.42	368.70	0.00
368.00	-9.42	368.70	0.00
368.10	-9.35	368.70	0.00
368.20	-9.06	368.70	0.00
368.30	-8.56	368.70	0.00
368.40	-7.75	368.70	0.00
368.50	-6.56	368.70	0.00
368.60	-4.77	368.70	0.00
368.70	0.00	368.70	0.00
368.80	4.89	368.70	0.00
368.90	6.93	368.70	0.00
369.00	8.45	368.70	0.00
369.10	9.71	368.70	0.00
369.20	10.86	368.70	0.00
369.30	11.91	368.70	0.00
369.40	12.86	368.70	0.00
369.50	13.74	368.70	0.00
369.60	14.57	368.70	0.00
369.70	15.37	368.70	0.00
369.80	16.12	368.70	0.00
369.90	16.84	368.70	0.00
370.00	17.52	368.70	0.00
370.10	18.19	368.70	0.00
370.20	18.82	368.70	0.00
370.30	19.43	368.70	0.00
370.40	20.04	368.70	0.00
370.50	20.62	368.70	0.00
370.60	21.18	368.70	0.00
370.70	21.73	368.70	0.00
370.80	22.26	368.70	0.00
370.90	22.80	368.70	0.00
371.00	23.31	368.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.16	368.80	0.00
367.00	-10.16	368.80	0.00
367.10	-10.16	368.80	0.00
367.20	-10.16	368.80	0.00
367.30	-10.16	368.80	0.00
367.40	-10.16	368.80	0.00
367.50	-10.16	368.80	0.00
367.60	-10.16	368.80	0.00
367.70	-10.16	368.80	0.00
367.80	-10.16	368.80	0.00
367.90	-10.16	368.80	0.00
368.00	-10.16	368.80	0.00
368.10	-10.13	368.80	0.00
368.20	-9.95	368.80	0.00
368.30	-9.56	368.80	0.00
368.40	-8.94	368.80	0.00
368.50	-8.01	368.80	0.00
368.60	-6.72	368.80	0.00
368.70	-4.82	368.80	0.00
368.80	0.00	368.80	0.00
368.90	4.85	368.80	0.00
369.00	6.87	368.80	0.00
369.10	8.43	368.80	0.00
369.20	9.72	368.80	0.00
369.30	10.86	368.80	0.00
369.40	11.91	368.80	0.00
369.50	12.86	368.80	0.00
369.60	13.74	368.80	0.00
369.70	14.58	368.80	0.00
369.80	15.37	368.80	0.00
369.90	16.12	368.80	0.00
370.00	16.83	368.80	0.00
370.10	17.52	368.80	0.00
370.20	18.19	368.80	0.00
370.30	18.82	368.80	0.00
370.40	19.44	368.80	0.00
370.50	20.04	368.80	0.00
370.60	20.62	368.80	0.00
370.70	21.18	368.80	0.00
370.80	21.73	368.80	0.00
370.90	22.27	368.80	0.00
371.00	22.79	368.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-10.87	368.90	0.00
367.00	-10.87	368.90	0.00
367.10	-10.87	368.90	0.00
367.20	-10.87	368.90	0.00
367.30	-10.87	368.90	0.00
367.40	-10.87	368.90	0.00
367.50	-10.87	368.90	0.00
367.60	-10.87	368.90	0.00
367.70	-10.87	368.90	0.00
367.80	-10.87	368.90	0.00
367.90	-10.87	368.90	0.00
368.00	-10.87	368.90	0.00
368.10	-10.87	368.90	0.00
368.20	-10.78	368.90	0.00
368.30	-10.49	368.90	0.00
368.40	-9.99	368.90	0.00
368.50	-9.25	368.90	0.00
368.60	-8.20	368.90	0.00
368.70	-6.82	368.90	0.00
368.80	-4.86	368.90	0.00
368.90	0.00	368.90	0.00
369.00	4.87	368.90	0.00
369.10	6.86	368.90	0.00
369.20	8.42	368.90	0.00
369.30	9.73	368.90	0.00
369.40	10.87	368.90	0.00
369.50	11.91	368.90	0.00
369.60	12.86	368.90	0.00
369.70	13.74	368.90	0.00
369.80	14.58	368.90	0.00
369.90	15.37	368.90	0.00
370.00	16.12	368.90	0.00
370.10	16.84	368.90	0.00
370.20	17.52	368.90	0.00
370.30	18.18	368.90	0.00
370.40	18.82	368.90	0.00
370.50	19.44	368.90	0.00
370.60	20.04	368.90	0.00
370.70	20.61	368.90	0.00
370.80	21.18	368.90	0.00
370.90	21.74	368.90	0.00
371.00	22.27	368.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-11.58	369.00	0.00
367.00	-11.58	369.00	0.00
367.10	-11.58	369.00	0.00
367.20	-11.58	369.00	0.00
367.30	-11.58	369.00	0.00
367.40	-11.58	369.00	0.00
367.50	-11.58	369.00	0.00
367.60	-11.58	369.00	0.00
367.70	-11.58	369.00	0.00
367.80	-11.58	369.00	0.00
367.90	-11.58	369.00	0.00
368.00	-11.58	369.00	0.00
368.10	-11.58	369.00	0.00
368.20	-11.54	369.00	0.00
368.30	-11.34	369.00	0.00
368.40	-10.94	369.00	0.00
368.50	-10.32	369.00	0.00
368.60	-9.47	369.00	0.00
368.70	-8.34	369.00	0.00
368.80	-6.87	369.00	0.00
368.90	-4.86	369.00	0.00
369.00	0.00	369.00	0.00
369.10	4.84	369.00	0.00
369.20	6.88	369.00	0.00
369.30	8.41	369.00	0.00
369.40	9.72	369.00	0.00
369.50	10.86	369.00	0.00
369.60	11.90	369.00	0.00
369.70	12.85	369.00	0.00
369.80	13.74	369.00	0.00
369.90	14.58	369.00	0.00
370.00	15.37	369.00	0.00
370.10	16.12	369.00	0.00
370.20	16.84	369.00	0.00
370.30	17.52	369.00	0.00
370.40	18.18	369.00	0.00
370.50	18.82	369.00	0.00
370.60	19.43	369.00	0.00
370.70	20.04	369.00	0.00
370.80	20.62	369.00	0.00
370.90	21.18	369.00	0.00
371.00	21.73	369.00	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.25	369.10	0.00
367.00	-12.25	369.10	0.00
367.10	-12.25	369.10	0.00
367.20	-12.25	369.10	0.00
367.30	-12.25	369.10	0.00
367.40	-12.25	369.10	0.00
367.50	-12.25	369.10	0.00
367.60	-12.25	369.10	0.00
367.70	-12.25	369.10	0.00
367.80	-12.25	369.10	0.00
367.90	-12.25	369.10	0.00
368.00	-12.25	369.10	0.00
368.10	-12.25	369.10	0.00
368.20	-12.25	369.10	0.00
368.30	-12.12	369.10	0.00
368.40	-11.80	369.10	0.00
368.50	-11.30	369.10	0.00
368.60	-10.56	369.10	0.00
368.70	-9.61	369.10	0.00
368.80	-8.39	369.10	0.00
368.90	-6.87	369.10	0.00
369.00	-4.86	369.10	0.00
369.10	0.00	369.10	0.00
369.20	4.85	369.10	0.00
369.30	6.87	369.10	0.00
369.40	8.42	369.10	0.00
369.50	9.72	369.10	0.00
369.60	10.86	369.10	0.00
369.70	11.90	369.10	0.00
369.80	12.86	369.10	0.00
369.90	13.74	369.10	0.00
370.00	14.58	369.10	0.00
370.10	15.37	369.10	0.00
370.20	16.12	369.10	0.00
370.30	16.84	369.10	0.00
370.40	17.53	369.10	0.00
370.50	18.18	369.10	0.00
370.60	18.82	369.10	0.00
370.70	19.43	369.10	0.00
370.80	20.03	369.10	0.00
370.90	20.62	369.10	0.00
371.00	21.18	369.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-12.92	369.20	0.00
367.00	-12.92	369.20	0.00
367.10	-12.92	369.20	0.00
367.20	-12.92	369.20	0.00
367.30	-12.92	369.20	0.00
367.40	-12.92	369.20	0.00
367.50	-12.92	369.20	0.00
367.60	-12.92	369.20	0.00
367.70	-12.92	369.20	0.00
367.80	-12.92	369.20	0.00
367.90	-12.92	369.20	0.00
368.00	-12.92	369.20	0.00
368.10	-12.92	369.20	0.00
368.20	-12.92	369.20	0.00
368.30	-12.85	369.20	0.00
368.40	-12.61	369.20	0.00
368.50	-12.18	369.20	0.00
368.60	-11.56	369.20	0.00
368.70	-10.73	369.20	0.00
368.80	-9.70	369.20	0.00
368.90	-8.42	369.20	0.00
369.00	-6.87	369.20	0.00
369.10	-4.86	369.20	0.00
369.20	0.00	369.20	0.00
369.30	4.88	369.20	0.00
369.40	6.87	369.20	0.00
369.50	8.42	369.20	0.00
369.60	9.71	369.20	0.00
369.70	10.88	369.20	0.00
369.80	11.91	369.20	0.00
369.90	12.87	369.20	0.00
370.00	13.75	369.20	0.00
370.10	14.58	369.20	0.00
370.20	15.37	369.20	0.00
370.30	16.12	369.20	0.00
370.40	16.84	369.20	0.00
370.50	17.52	369.20	0.00
370.60	18.19	369.20	0.00
370.70	18.82	369.20	0.00
370.80	19.43	369.20	0.00
370.90	20.04	369.20	0.00
371.00	20.62	369.20	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-13.58	369.30	0.00
367.00	-13.58	369.30	0.00
367.10	-13.58	369.30	0.00
367.20	-13.58	369.30	0.00
367.30	-13.58	369.30	0.00
367.40	-13.58	369.30	0.00
367.50	-13.58	369.30	0.00
367.60	-13.58	369.30	0.00
367.70	-13.58	369.30	0.00
367.80	-13.58	369.30	0.00
367.90	-13.58	369.30	0.00
368.00	-13.58	369.30	0.00
368.10	-13.58	369.30	0.00
368.20	-13.58	369.30	0.00
368.30	-13.55	369.30	0.00
368.40	-13.38	369.30	0.00
368.50	-13.02	369.30	0.00
368.60	-12.48	369.30	0.00
368.70	-11.75	369.30	0.00
368.80	-10.82	369.30	0.00
368.90	-9.73	369.30	0.00
369.00	-8.42	369.30	0.00
369.10	-6.87	369.30	0.00
369.20	-4.86	369.30	0.00
369.30	0.00	369.30	0.00
369.40	4.86	369.30	0.00
369.50	6.86	369.30	0.00
369.60	8.41	369.30	0.00
369.70	9.72	369.30	0.00
369.80	10.87	369.30	0.00
369.90	11.90	369.30	0.00
370.00	12.86	369.30	0.00
370.10	13.75	369.30	0.00
370.20	14.58	369.30	0.00
370.30	15.36	369.30	0.00
370.40	16.12	369.30	0.00
370.50	16.83	369.30	0.00
370.60	17.52	369.30	0.00
370.70	18.19	369.30	0.00
370.80	18.82	369.30	0.00
370.90	19.44	369.30	0.00
371.00	20.04	369.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.22	369.40	0.00
367.00	-14.22	369.40	0.00
367.10	-14.22	369.40	0.00
367.20	-14.22	369.40	0.00
367.30	-14.22	369.40	0.00
367.40	-14.22	369.40	0.00
367.50	-14.22	369.40	0.00
367.60	-14.22	369.40	0.00
367.70	-14.22	369.40	0.00
367.80	-14.22	369.40	0.00
367.90	-14.22	369.40	0.00
368.00	-14.22	369.40	0.00
368.10	-14.22	369.40	0.00
368.20	-14.22	369.40	0.00
368.30	-14.22	369.40	0.00
368.40	-14.09	369.40	0.00
368.50	-13.80	369.40	0.00
368.60	-13.33	369.40	0.00
368.70	-12.68	369.40	0.00
368.80	-11.86	369.40	0.00
368.90	-10.87	369.40	0.00
369.00	-9.73	369.40	0.00
369.10	-8.42	369.40	0.00
369.20	-6.87	369.40	0.00
369.30	-4.86	369.40	0.00
369.40	0.00	369.40	0.00
369.50	4.88	369.40	0.00
369.60	6.86	369.40	0.00
369.70	8.43	369.40	0.00
369.80	9.72	369.40	0.00
369.90	10.87	369.40	0.00
370.00	11.90	369.40	0.00
370.10	12.86	369.40	0.00
370.20	13.74	369.40	0.00
370.30	14.58	369.40	0.00
370.40	15.37	369.40	0.00
370.50	16.12	369.40	0.00
370.60	16.83	369.40	0.00
370.70	17.51	369.40	0.00
370.80	18.19	369.40	0.00
370.90	18.82	369.40	0.00
371.00	19.44	369.40	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-14.84	369.50	0.00
367.00	-14.84	369.50	0.00
367.10	-14.84	369.50	0.00
367.20	-14.84	369.50	0.00
367.30	-14.84	369.50	0.00
367.40	-14.84	369.50	0.00
367.50	-14.84	369.50	0.00
367.60	-14.84	369.50	0.00
367.70	-14.84	369.50	0.00
367.80	-14.84	369.50	0.00
367.90	-14.84	369.50	0.00
368.00	-14.84	369.50	0.00
368.10	-14.84	369.50	0.00
368.20	-14.84	369.50	0.00
368.30	-14.84	369.50	0.00
368.40	-14.77	369.50	0.00
368.50	-14.53	369.50	0.00
368.60	-14.13	369.50	0.00
368.70	-13.55	369.50	0.00
368.80	-12.80	369.50	0.00
368.90	-11.90	369.50	0.00
369.00	-10.87	369.50	0.00
369.10	-9.73	369.50	0.00
369.20	-8.42	369.50	0.00
369.30	-6.87	369.50	0.00
369.40	-4.86	369.50	0.00
369.50	0.00	369.50	0.00
369.60	4.84	369.50	0.00
369.70	6.87	369.50	0.00
369.80	8.42	369.50	0.00
369.90	9.73	369.50	0.00
370.00	10.86	369.50	0.00
370.10	11.90	369.50	0.00
370.20	12.86	369.50	0.00
370.30	13.75	369.50	0.00
370.40	14.58	369.50	0.00
370.50	15.36	369.50	0.00
370.60	16.11	369.50	0.00
370.70	16.83	369.50	0.00
370.80	17.52	369.50	0.00
370.90	18.18	369.50	0.00
371.00	18.82	369.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-15.46	369.60	0.00
367.00	-15.46	369.60	0.00
367.10	-15.46	369.60	0.00
367.20	-15.46	369.60	0.00
367.30	-15.46	369.60	0.00
367.40	-15.46	369.60	0.00
367.50	-15.46	369.60	0.00
367.60	-15.46	369.60	0.00
367.70	-15.46	369.60	0.00
367.80	-15.46	369.60	0.00
367.90	-15.46	369.60	0.00
368.00	-15.46	369.60	0.00
368.10	-15.46	369.60	0.00
368.20	-15.46	369.60	0.00
368.30	-15.46	369.60	0.00
368.40	-15.43	369.60	0.00
368.50	-15.23	369.60	0.00
368.60	-14.88	369.60	0.00
368.70	-14.36	369.60	0.00
368.80	-13.69	369.60	0.00
368.90	-12.85	369.60	0.00
369.00	-11.90	369.60	0.00
369.10	-10.87	369.60	0.00
369.20	-9.73	369.60	0.00
369.30	-8.42	369.60	0.00
369.40	-6.87	369.60	0.00
369.50	-4.86	369.60	0.00
369.60	0.00	369.60	0.00
369.70	4.85	369.60	0.00
369.80	6.87	369.60	0.00
369.90	8.41	369.60	0.00
370.00	9.73	369.60	0.00
370.10	10.87	369.60	0.00
370.20	11.90	369.60	0.00
370.30	12.87	369.60	0.00
370.40	13.75	369.60	0.00
370.50	14.58	369.60	0.00
370.60	15.36	369.60	0.00
370.70	16.12	369.60	0.00
370.80	16.83	369.60	0.00
370.90	17.52	369.60	0.00
371.00	18.19	369.60	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.06	369.70	0.00
367.00	-16.06	369.70	0.00
367.10	-16.06	369.70	0.00
367.20	-16.06	369.70	0.00
367.30	-16.06	369.70	0.00
367.40	-16.06	369.70	0.00
367.50	-16.06	369.70	0.00
367.60	-16.06	369.70	0.00
367.70	-16.06	369.70	0.00
367.80	-16.06	369.70	0.00
367.90	-16.06	369.70	0.00
368.00	-16.06	369.70	0.00
368.10	-16.06	369.70	0.00
368.20	-16.06	369.70	0.00
368.30	-16.06	369.70	0.00
368.40	-16.05	369.70	0.00
368.50	-15.90	369.70	0.00
368.60	-15.59	369.70	0.00
368.70	-15.14	369.70	0.00
368.80	-14.52	369.70	0.00
368.90	-13.74	369.70	0.00
369.00	-12.85	369.70	0.00
369.10	-11.90	369.70	0.00
369.20	-10.87	369.70	0.00
369.30	-9.73	369.70	0.00
369.40	-8.42	369.70	0.00
369.50	-6.87	369.70	0.00
369.60	-4.86	369.70	0.00
369.70	0.00	369.70	0.00
369.80	4.85	369.70	0.00
369.90	6.87	369.70	0.00
370.00	8.41	369.70	0.00
370.10	9.73	369.70	0.00
370.20	10.87	369.70	0.00
370.30	11.91	369.70	0.00
370.40	12.86	369.70	0.00
370.50	13.75	369.70	0.00
370.60	14.58	369.70	0.00
370.70	15.37	369.70	0.00
370.80	16.12	369.70	0.00
370.90	16.84	369.70	0.00
371.00	17.52	369.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-16.64	369.80	0.00
367.00	-16.64	369.80	0.00
367.10	-16.64	369.80	0.00
367.20	-16.64	369.80	0.00
367.30	-16.64	369.80	0.00
367.40	-16.64	369.80	0.00
367.50	-16.64	369.80	0.00
367.60	-16.64	369.80	0.00
367.70	-16.64	369.80	0.00
367.80	-16.64	369.80	0.00
367.90	-16.64	369.80	0.00
368.00	-16.64	369.80	0.00
368.10	-16.64	369.80	0.00
368.20	-16.64	369.80	0.00
368.30	-16.64	369.80	0.00
368.40	-16.64	369.80	0.00
368.50	-16.55	369.80	0.00
368.60	-16.28	369.80	0.00
368.70	-15.85	369.80	0.00
368.80	-15.29	369.80	0.00
368.90	-14.58	369.80	0.00
369.00	-13.74	369.80	0.00
369.10	-12.85	369.80	0.00
369.20	-11.90	369.80	0.00
369.30	-10.87	369.80	0.00
369.40	-9.73	369.80	0.00
369.50	-8.42	369.80	0.00
369.60	-6.87	369.80	0.00
369.70	-4.86	369.80	0.00
369.80	0.00	369.80	0.00
369.90	4.87	369.80	0.00
370.00	6.88	369.80	0.00
370.10	8.42	369.80	0.00
370.20	9.73	369.80	0.00
370.30	10.86	369.80	0.00
370.40	11.90	369.80	0.00
370.50	12.86	369.80	0.00
370.60	13.75	369.80	0.00
370.70	14.58	369.80	0.00
370.80	15.37	369.80	0.00
370.90	16.11	369.80	0.00
371.00	16.84	369.80	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.21	369.90	0.00
367.00	-17.21	369.90	0.00
367.10	-17.21	369.90	0.00
367.20	-17.21	369.90	0.00
367.30	-17.21	369.90	0.00
367.40	-17.21	369.90	0.00
367.50	-17.21	369.90	0.00
367.60	-17.21	369.90	0.00
367.70	-17.21	369.90	0.00
367.80	-17.21	369.90	0.00
367.90	-17.21	369.90	0.00
368.00	-17.21	369.90	0.00
368.10	-17.21	369.90	0.00
368.20	-17.21	369.90	0.00
368.30	-17.21	369.90	0.00
368.40	-17.21	369.90	0.00
368.50	-17.15	369.90	0.00
368.60	-16.94	369.90	0.00
368.70	-16.57	369.90	0.00
368.80	-16.03	369.90	0.00
368.90	-15.37	369.90	0.00
369.00	-14.58	369.90	0.00
369.10	-13.74	369.90	0.00
369.20	-12.85	369.90	0.00
369.30	-11.90	369.90	0.00
369.40	-10.87	369.90	0.00
369.50	-9.73	369.90	0.00
369.60	-8.42	369.90	0.00
369.70	-6.87	369.90	0.00
369.80	-4.86	369.90	0.00
369.90	0.00	369.90	0.00
370.00	4.84	369.90	0.00
370.10	6.89	369.90	0.00
370.20	8.41	369.90	0.00
370.30	9.73	369.90	0.00
370.40	10.87	369.90	0.00
370.50	11.90	369.90	0.00
370.60	12.86	369.90	0.00
370.70	13.75	369.90	0.00
370.80	14.57	369.90	0.00
370.90	15.36	369.90	0.00
371.00	16.11	369.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-17.79	370.00	0.00
367.00	-17.79	370.00	0.00
367.10	-17.79	370.00	0.00
367.20	-17.79	370.00	0.00
367.30	-17.79	370.00	0.00
367.40	-17.79	370.00	0.00
367.50	-17.79	370.00	0.00
367.60	-17.79	370.00	0.00
367.70	-17.79	370.00	0.00
367.80	-17.79	370.00	0.00
367.90	-17.79	370.00	0.00
368.00	-17.79	370.00	0.00
368.10	-17.79	370.00	0.00
368.20	-17.79	370.00	0.00
368.30	-17.79	370.00	0.00
368.40	-17.79	370.00	0.00
368.50	-17.75	370.00	0.00
368.60	-17.57	370.00	0.00
368.70	-17.24	370.00	0.00
368.80	-16.75	370.00	0.00
368.90	-16.12	370.00	0.00
369.00	-15.37	370.00	0.00
369.10	-14.58	370.00	0.00
369.20	-13.74	370.00	0.00
369.30	-12.85	370.00	0.00
369.40	-11.90	370.00	0.00
369.50	-10.87	370.00	0.00
369.60	-9.73	370.00	0.00
369.70	-8.42	370.00	0.00
369.80	-6.87	370.00	0.00
369.90	-4.86	370.00	0.00
370.00	0.00	370.00	0.00
370.10	4.84	370.00	0.00
370.20	6.88	370.00	0.00
370.30	8.43	370.00	0.00
370.40	9.72	370.00	0.00
370.50	10.87	370.00	0.00
370.60	11.90	370.00	0.00
370.70	12.86	370.00	0.00
370.80	13.74	370.00	0.00
370.90	14.58	370.00	0.00
371.00	15.37	370.00	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.33	370.10	0.00
367.00	-18.33	370.10	0.00
367.10	-18.33	370.10	0.00
367.20	-18.33	370.10	0.00
367.30	-18.33	370.10	0.00
367.40	-18.33	370.10	0.00
367.50	-18.33	370.10	0.00
367.60	-18.33	370.10	0.00
367.70	-18.33	370.10	0.00
367.80	-18.33	370.10	0.00
367.90	-18.33	370.10	0.00
368.00	-18.33	370.10	0.00
368.10	-18.33	370.10	0.00
368.20	-18.33	370.10	0.00
368.30	-18.33	370.10	0.00
368.40	-18.33	370.10	0.00
368.50	-18.32	370.10	0.00
368.60	-18.17	370.10	0.00
368.70	-17.88	370.10	0.00
368.80	-17.43	370.10	0.00
368.90	-16.83	370.10	0.00
369.00	-16.12	370.10	0.00
369.10	-15.37	370.10	0.00
369.20	-14.58	370.10	0.00
369.30	-13.74	370.10	0.00
369.40	-12.85	370.10	0.00
369.50	-11.90	370.10	0.00
369.60	-10.87	370.10	0.00
369.70	-9.73	370.10	0.00
369.80	-8.42	370.10	0.00
369.90	-6.87	370.10	0.00
370.00	-4.86	370.10	0.00
370.10	0.00	370.10	0.00
370.20	4.88	370.10	0.00
370.30	6.86	370.10	0.00
370.40	8.41	370.10	0.00
370.50	9.71	370.10	0.00
370.60	10.87	370.10	0.00
370.70	11.91	370.10	0.00
370.80	12.86	370.10	0.00
370.90	13.74	370.10	0.00
371.00	14.58	370.10	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-18.87	370.20	0.00
367.00	-18.87	370.20	0.00
367.10	-18.87	370.20	0.00
367.20	-18.87	370.20	0.00
367.30	-18.87	370.20	0.00
367.40	-18.87	370.20	0.00
367.50	-18.87	370.20	0.00
367.60	-18.87	370.20	0.00
367.70	-18.87	370.20	0.00
367.80	-18.87	370.20	0.00
367.90	-18.87	370.20	0.00
368.00	-18.87	370.20	0.00
368.10	-18.87	370.20	0.00
368.20	-18.87	370.20	0.00
368.30	-18.87	370.20	0.00
368.40	-18.87	370.20	0.00
368.50	-18.87	370.20	0.00
368.60	-18.76	370.20	0.00
368.70	-18.50	370.20	0.00
368.80	-18.08	370.20	0.00
368.90	-17.52	370.20	0.00
369.00	-16.83	370.20	0.00
369.10	-16.12	370.20	0.00
369.20	-15.37	370.20	0.00
369.30	-14.58	370.20	0.00
369.40	-13.74	370.20	0.00
369.50	-12.85	370.20	0.00
369.60	-11.90	370.20	0.00
369.70	-10.87	370.20	0.00
369.80	-9.73	370.20	0.00
369.90	-8.42	370.20	0.00
370.00	-6.87	370.20	0.00
370.10	-4.86	370.20	0.00
370.20	0.00	370.20	0.00
370.30	4.85	370.20	0.00
370.40	6.88	370.20	0.00
370.50	8.43	370.20	0.00
370.60	9.72	370.20	0.00
370.70	10.86	370.20	0.00
370.80	11.91	370.20	0.00
370.90	12.86	370.20	0.00
371.00	13.74	370.20	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.42	370.30	0.00
367.00	-19.42	370.30	0.00
367.10	-19.42	370.30	0.00
367.20	-19.42	370.30	0.00
367.30	-19.42	370.30	0.00
367.40	-19.42	370.30	0.00
367.50	-19.42	370.30	0.00
367.60	-19.42	370.30	0.00
367.70	-19.42	370.30	0.00
367.80	-19.42	370.30	0.00
367.90	-19.42	370.30	0.00
368.00	-19.42	370.30	0.00
368.10	-19.42	370.30	0.00
368.20	-19.42	370.30	0.00
368.30	-19.42	370.30	0.00
368.40	-19.42	370.30	0.00
368.50	-19.42	370.30	0.00
368.60	-19.34	370.30	0.00
368.70	-19.10	370.30	0.00
368.80	-18.73	370.30	0.00
368.90	-18.18	370.30	0.00
369.00	-17.52	370.30	0.00
369.10	-16.83	370.30	0.00
369.20	-16.12	370.30	0.00
369.30	-15.37	370.30	0.00
369.40	-14.58	370.30	0.00
369.50	-13.74	370.30	0.00
369.60	-12.85	370.30	0.00
369.70	-11.90	370.30	0.00
369.80	-10.87	370.30	0.00
369.90	-9.73	370.30	0.00
370.00	-8.42	370.30	0.00
370.10	-6.87	370.30	0.00
370.20	-4.86	370.30	0.00
370.30	0.00	370.30	0.00
370.40	4.87	370.30	0.00
370.50	6.89	370.30	0.00
370.60	8.40	370.30	0.00
370.70	9.71	370.30	0.00
370.80	10.87	370.30	0.00
370.90	11.90	370.30	0.00
371.00	12.85	370.30	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-19.94	370.40	0.00
367.00	-19.94	370.40	0.00
367.10	-19.94	370.40	0.00
367.20	-19.94	370.40	0.00
367.30	-19.94	370.40	0.00
367.40	-19.94	370.40	0.00
367.50	-19.94	370.40	0.00
367.60	-19.94	370.40	0.00
367.70	-19.94	370.40	0.00
367.80	-19.94	370.40	0.00
367.90	-19.94	370.40	0.00
368.00	-19.94	370.40	0.00
368.10	-19.94	370.40	0.00
368.20	-19.94	370.40	0.00
368.30	-19.94	370.40	0.00
368.40	-19.94	370.40	0.00
368.50	-19.94	370.40	0.00
368.60	-19.88	370.40	0.00
368.70	-19.68	370.40	0.00
368.80	-19.34	370.40	0.00
368.90	-18.82	370.40	0.00
369.00	-18.18	370.40	0.00
369.10	-17.52	370.40	0.00
369.20	-16.83	370.40	0.00
369.30	-16.12	370.40	0.00
369.40	-15.37	370.40	0.00
369.50	-14.58	370.40	0.00
369.60	-13.74	370.40	0.00
369.70	-12.85	370.40	0.00
369.80	-11.90	370.40	0.00
369.90	-10.87	370.40	0.00
370.00	-9.73	370.40	0.00
370.10	-8.42	370.40	0.00
370.20	-6.87	370.40	0.00
370.30	-4.86	370.40	0.00
370.40	0.00	370.40	0.00
370.50	4.88	370.40	0.00
370.60	6.88	370.40	0.00
370.70	8.42	370.40	0.00
370.80	9.72	370.40	0.00
370.90	10.87	370.40	0.00
371.00	11.90	370.40	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.46	370.50	0.00
367.00	-20.46	370.50	0.00
367.10	-20.46	370.50	0.00
367.20	-20.46	370.50	0.00
367.30	-20.46	370.50	0.00
367.40	-20.46	370.50	0.00
367.50	-20.46	370.50	0.00
367.60	-20.46	370.50	0.00
367.70	-20.46	370.50	0.00
367.80	-20.46	370.50	0.00
367.90	-20.46	370.50	0.00
368.00	-20.46	370.50	0.00
368.10	-20.46	370.50	0.00
368.20	-20.46	370.50	0.00
368.30	-20.46	370.50	0.00
368.40	-20.46	370.50	0.00
368.50	-20.46	370.50	0.00
368.60	-20.43	370.50	0.00
368.70	-20.25	370.50	0.00
368.80	-19.93	370.50	0.00
368.90	-19.44	370.50	0.00
369.00	-18.82	370.50	0.00
369.10	-18.18	370.50	0.00
369.20	-17.52	370.50	0.00
369.30	-16.83	370.50	0.00
369.40	-16.12	370.50	0.00
369.50	-15.37	370.50	0.00
369.60	-14.58	370.50	0.00
369.70	-13.74	370.50	0.00
369.80	-12.85	370.50	0.00
369.90	-11.90	370.50	0.00
370.00	-10.87	370.50	0.00
370.10	-9.73	370.50	0.00
370.20	-8.42	370.50	0.00
370.30	-6.87	370.50	0.00
370.40	-4.86	370.50	0.00
370.50	0.00	370.50	0.00
370.60	4.86	370.50	0.00
370.70	6.87	370.50	0.00
370.80	8.43	370.50	0.00
370.90	9.71	370.50	0.00
371.00	10.86	370.50	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-20.96	370.60	0.00
367.00	-20.96	370.60	0.00
367.10	-20.96	370.60	0.00
367.20	-20.96	370.60	0.00
367.30	-20.96	370.60	0.00
367.40	-20.96	370.60	0.00
367.50	-20.96	370.60	0.00
367.60	-20.96	370.60	0.00
367.70	-20.96	370.60	0.00
367.80	-20.96	370.60	0.00
367.90	-20.96	370.60	0.00
368.00	-20.96	370.60	0.00
368.10	-20.96	370.60	0.00
368.20	-20.96	370.60	0.00
368.30	-20.96	370.60	0.00
368.40	-20.96	370.60	0.00
368.50	-20.96	370.60	0.00
368.60	-20.95	370.60	0.00
368.70	-20.80	370.60	0.00
368.80	-20.50	370.60	0.00
368.90	-20.04	370.60	0.00
369.00	-19.44	370.60	0.00
369.10	-18.82	370.60	0.00
369.20	-18.18	370.60	0.00
369.30	-17.52	370.60	0.00
369.40	-16.83	370.60	0.00
369.50	-16.12	370.60	0.00
369.60	-15.37	370.60	0.00
369.70	-14.58	370.60	0.00
369.80	-13.74	370.60	0.00
369.90	-12.85	370.60	0.00
370.00	-11.90	370.60	0.00
370.10	-10.87	370.60	0.00
370.20	-9.73	370.60	0.00
370.30	-8.42	370.60	0.00
370.40	-6.87	370.60	0.00
370.50	-4.86	370.60	0.00
370.60	0.00	370.60	0.00
370.70	4.88	370.60	0.00
370.80	6.87	370.60	0.00
370.90	8.43	370.60	0.00
371.00	9.73	370.60	0.00

Contributing Structures

Culvert - 1





Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.46	370.70	0.00
367.00	-21.46	370.70	0.00
367.10	-21.46	370.70	0.00
367.20	-21.46	370.70	0.00
367.30	-21.46	370.70	0.00
367.40	-21.46	370.70	0.00
367.50	-21.46	370.70	0.00
367.60	-21.46	370.70	0.00
367.70	-21.46	370.70	0.00
367.80	-21.46	370.70	0.00
367.90	-21.46	370.70	0.00
368.00	-21.46	370.70	0.00
368.10	-21.46	370.70	0.00
368.20	-21.46	370.70	0.00
368.30	-21.46	370.70	0.00
368.40	-21.46	370.70	0.00
368.50	-21.46	370.70	0.00
368.60	-21.46	370.70	0.00
368.70	-21.33	370.70	0.00
368.80	-21.06	370.70	0.00
368.90	-20.62	370.70	0.00
369.00	-20.04	370.70	0.00
369.10	-19.44	370.70	0.00
369.20	-18.82	370.70	0.00
369.30	-18.18	370.70	0.00
369.40	-17.52	370.70	0.00
369.50	-16.83	370.70	0.00
369.60	-16.12	370.70	0.00
369.70	-15.37	370.70	0.00
369.80	-14.58	370.70	0.00
369.90	-13.74	370.70	0.00
370.00	-12.85	370.70	0.00
370.10	-11.90	370.70	0.00
370.20	-10.87	370.70	0.00
370.30	-9.73	370.70	0.00
370.40	-8.42	370.70	0.00
370.50	-6.87	370.70	0.00
370.60	-4.86	370.70	0.00
370.70	0.00	370.70	0.00
370.80	4.87	370.70	0.00
370.90	6.86	370.70	0.00
371.00	8.42	370.70	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-21.95	370.80	0.00
367.00	-21.95	370.80	0.00
367.10	-21.95	370.80	0.00
367.20	-21.95	370.80	0.00
367.30	-21.95	370.80	0.00
367.40	-21.95	370.80	0.00
367.50	-21.95	370.80	0.00
367.60	-21.95	370.80	0.00
367.70	-21.95	370.80	0.00
367.80	-21.95	370.80	0.00
367.90	-21.95	370.80	0.00
368.00	-21.95	370.80	0.00
368.10	-21.95	370.80	0.00
368.20	-21.95	370.80	0.00
368.30	-21.95	370.80	0.00
368.40	-21.95	370.80	0.00
368.50	-21.95	370.80	0.00
368.60	-21.95	370.80	0.00
368.70	-21.86	370.80	0.00
368.80	-21.61	370.80	0.00
368.90	-21.18	370.80	0.00
369.00	-20.62	370.80	0.00
369.10	-20.04	370.80	0.00
369.20	-19.44	370.80	0.00
369.30	-18.82	370.80	0.00
369.40	-18.18	370.80	0.00
369.50	-17.52	370.80	0.00
369.60	-16.83	370.80	0.00
369.70	-16.12	370.80	0.00
369.80	-15.37	370.80	0.00
369.90	-14.58	370.80	0.00
370.00	-13.74	370.80	0.00
370.10	-12.85	370.80	0.00
370.20	-11.90	370.80	0.00
370.30	-10.87	370.80	0.00
370.40	-9.73	370.80	0.00
370.50	-8.42	370.80	0.00
370.60	-6.87	370.80	0.00
370.70	-4.86	370.80	0.00
370.80	0.00	370.80	0.00
370.90	4.86	370.80	0.00
371.00	6.88	370.80	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.47	370.90	0.00
367.00	-22.47	370.90	0.00
367.10	-22.47	370.90	0.00
367.20	-22.47	370.90	0.00
367.30	-22.47	370.90	0.00
367.40	-22.47	370.90	0.00
367.50	-22.47	370.90	0.00
367.60	-22.47	370.90	0.00
367.70	-22.47	370.90	0.00
367.80	-22.47	370.90	0.00
367.90	-22.47	370.90	0.00
368.00	-22.47	370.90	0.00
368.10	-22.47	370.90	0.00
368.20	-22.47	370.90	0.00
368.30	-22.47	370.90	0.00
368.40	-22.47	370.90	0.00
368.50	-22.47	370.90	0.00
368.60	-22.47	370.90	0.00
368.70	-22.38	370.90	0.00
368.80	-22.14	370.90	0.00
368.90	-21.73	370.90	0.00
369.00	-21.18	370.90	0.00
369.10	-20.62	370.90	0.00
369.20	-20.04	370.90	0.00
369.30	-19.44	370.90	0.00
369.40	-18.82	370.90	0.00
369.50	-18.18	370.90	0.00
369.60	-17.52	370.90	0.00
369.70	-16.83	370.90	0.00
369.80	-16.12	370.90	0.00
369.90	-15.37	370.90	0.00
370.00	-14.58	370.90	0.00
370.10	-13.74	370.90	0.00
370.20	-12.85	370.90	0.00
370.30	-11.90	370.90	0.00
370.40	-10.87	370.90	0.00
370.50	-9.73	370.90	0.00
370.60	-8.42	370.90	0.00
370.70	-6.87	370.90	0.00
370.80	-4.86	370.90	0.00
370.90	0.00	370.90	0.00
371.00	4.86	370.90	0.00

Contributing Structures

Culvert - 1



Subsection: Composite Rating Curve  
 Label: OCS-A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.90	-22.94	371.00	0.00
367.00	-22.94	371.00	0.00
367.10	-22.94	371.00	0.00
367.20	-22.94	371.00	0.00
367.30	-22.94	371.00	0.00
367.40	-22.94	371.00	0.00
367.50	-22.94	371.00	0.00
367.60	-22.94	371.00	0.00
367.70	-22.94	371.00	0.00
367.80	-22.94	371.00	0.00
367.90	-22.94	371.00	0.00
368.00	-22.94	371.00	0.00
368.10	-22.94	371.00	0.00
368.20	-22.94	371.00	0.00
368.30	-22.94	371.00	0.00
368.40	-22.94	371.00	0.00
368.50	-22.94	371.00	0.00
368.60	-22.94	371.00	0.00
368.70	-22.88	371.00	0.00
368.80	-22.66	371.00	0.00
368.90	-22.27	371.00	0.00
369.00	-21.73	371.00	0.00
369.10	-21.18	371.00	0.00
369.20	-20.62	371.00	0.00
369.30	-20.04	371.00	0.00
369.40	-19.44	371.00	0.00
369.50	-18.82	371.00	0.00
369.60	-18.18	371.00	0.00
369.70	-17.52	371.00	0.00
369.80	-16.83	371.00	0.00
369.90	-16.12	371.00	0.00
370.00	-15.37	371.00	0.00
370.10	-14.58	371.00	0.00
370.20	-13.74	371.00	0.00
370.30	-12.85	371.00	0.00
370.40	-11.90	371.00	0.00
370.50	-10.87	371.00	0.00
370.60	-9.73	371.00	0.00
370.70	-8.42	371.00	0.00
370.80	-6.87	371.00	0.00
370.90	-4.86	371.00	0.00
371.00	0.00	371.00	0.00

Contributing Structures

Culvert - 1





Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	370.00	371.00
Culvert-Circular	Culvert - 1	Forward	TW	366.50	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

---

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	370.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s

---

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	146.50 ft
Length (Computed Barrel)	146.52 ft
Slope (Computed)	0.017 ft/ft

---

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft

---

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.087
T2 ratio (HW/D)	1.189
Slope Correction Factor	-0.500

---

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

---

T1 Elevation	367.86 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	367.99 ft	T2 Flow	5.49 ft <sup>3</sup> /s

---

Subsection: Outlet Input Data  
Label: OCS-B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.50	0.00	(N/A)	0.00
366.60	0.00	(N/A)	0.00
366.70	0.00	(N/A)	0.00
366.80	0.00	(N/A)	0.00
366.90	0.00	(N/A)	0.00
367.00	0.00	(N/A)	0.00
367.10	0.00	(N/A)	0.00
367.20	0.00	(N/A)	0.00
367.30	0.00	(N/A)	0.00
367.40	0.00	(N/A)	0.00
367.50	0.00	(N/A)	0.00
367.60	0.00	(N/A)	0.00
367.70	0.00	(N/A)	0.00
367.80	0.00	(N/A)	0.00
367.90	0.00	(N/A)	0.00
368.00	0.00	(N/A)	0.00
368.10	0.00	(N/A)	0.00
368.20	0.00	(N/A)	0.00
368.30	0.00	(N/A)	0.00
368.40	0.00	(N/A)	0.00
368.50	0.00	(N/A)	0.00
368.60	0.00	(N/A)	0.00
368.70	0.00	(N/A)	0.00
368.80	0.00	(N/A)	0.00
368.90	0.00	(N/A)	0.00
369.00	0.00	(N/A)	0.00
369.10	0.00	(N/A)	0.00
369.20	0.00	(N/A)	0.00
369.30	0.00	(N/A)	0.00
369.40	0.00	(N/A)	0.00
369.50	0.00	(N/A)	0.00
369.60	0.00	(N/A)	0.00
369.70	0.00	(N/A)	0.00
369.80	0.00	(N/A)	0.00
369.90	0.00	(N/A)	0.00
370.00	0.00	(N/A)	0.00
370.10	0.42	(N/A)	0.00
370.20	1.19	(N/A)	0.00
370.30	2.19	(N/A)	0.00
370.40	3.37	(N/A)	0.00
370.50	4.71	(N/A)	0.00
370.60	6.19	(N/A)	0.00
370.70	7.80	(N/A)	0.00
370.80	9.53	(N/A)	0.00



Subsection: Composite Rating Curve  
Label: OCS-B  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

### Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	370.00	371.00
Culvert-Circular	Culvert - 1	Forward	TW	366.50	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	370.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	146.50 ft
Length (Computed Barrel)	146.52 ft
Slope (Computed)	0.017 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.087
T2 ratio (HW/D)	1.189
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.

Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	367.86 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	367.99 ft	T2 Flow	5.49 ft <sup>3</sup> /s



Subsection: Outlet Input Data  
Label: OCS-B  
Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
Storm Event: 10

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.50	0.00	(N/A)	0.00
366.60	0.00	(N/A)	0.00
366.70	0.00	(N/A)	0.00
366.80	0.00	(N/A)	0.00
366.90	0.00	(N/A)	0.00
367.00	0.00	(N/A)	0.00
367.10	0.00	(N/A)	0.00
367.20	0.00	(N/A)	0.00
367.30	0.00	(N/A)	0.00
367.40	0.00	(N/A)	0.00
367.50	0.00	(N/A)	0.00
367.60	0.00	(N/A)	0.00
367.70	0.00	(N/A)	0.00
367.80	0.00	(N/A)	0.00
367.90	0.00	(N/A)	0.00
368.00	0.00	(N/A)	0.00
368.10	0.00	(N/A)	0.00
368.20	0.00	(N/A)	0.00
368.30	0.00	(N/A)	0.00
368.40	0.00	(N/A)	0.00
368.50	0.00	(N/A)	0.00
368.60	0.00	(N/A)	0.00
368.70	0.00	(N/A)	0.00
368.80	0.00	(N/A)	0.00
368.90	0.00	(N/A)	0.00
369.00	0.00	(N/A)	0.00
369.10	0.00	(N/A)	0.00
369.20	0.00	(N/A)	0.00
369.30	0.00	(N/A)	0.00
369.40	0.00	(N/A)	0.00
369.50	0.00	(N/A)	0.00
369.60	0.00	(N/A)	0.00
369.70	0.00	(N/A)	0.00
369.80	0.00	(N/A)	0.00
369.90	0.00	(N/A)	0.00
370.00	0.00	(N/A)	0.00
370.10	0.42	(N/A)	0.00
370.20	1.19	(N/A)	0.00
370.30	2.19	(N/A)	0.00
370.40	3.37	(N/A)	0.00
370.50	4.71	(N/A)	0.00
370.60	6.19	(N/A)	0.00
370.70	7.80	(N/A)	0.00
370.80	9.53	(N/A)	0.00





Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	366.50 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	371.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	370.00	371.00
Culvert-Circular	Culvert - 1	Forward	TW	366.50	371.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: OCS-B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

---

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
<hr/>	
Number of Openings	1
Elevation	370.00 ft
Weir Length	4.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s

---

Structure ID: Culvert - 1	
Structure Type: Culvert-Circular	
<hr/>	
Number of Barrels	1
Diameter	15.0 in
Length	146.50 ft
Length (Computed Barrel)	146.52 ft
Slope (Computed)	0.017 ft/ft

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Outlet Control Data	
<hr/>	
Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft

---

Inlet Control Data	
<hr/>	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.087
T2 ratio (HW/D)	1.189
Slope Correction Factor	-0.500

---

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

---

T1 Elevation	367.86 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	367.99 ft	T2 Flow	5.49 ft <sup>3</sup> /s

---

Subsection: Outlet Input Data  
Label: OCS-B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: OCS-B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
366.50	0.00	(N/A)	0.00
366.60	0.00	(N/A)	0.00
366.70	0.00	(N/A)	0.00
366.80	0.00	(N/A)	0.00
366.90	0.00	(N/A)	0.00
367.00	0.00	(N/A)	0.00
367.10	0.00	(N/A)	0.00
367.20	0.00	(N/A)	0.00
367.30	0.00	(N/A)	0.00
367.40	0.00	(N/A)	0.00
367.50	0.00	(N/A)	0.00
367.60	0.00	(N/A)	0.00
367.70	0.00	(N/A)	0.00
367.80	0.00	(N/A)	0.00
367.90	0.00	(N/A)	0.00
368.00	0.00	(N/A)	0.00
368.10	0.00	(N/A)	0.00
368.20	0.00	(N/A)	0.00
368.30	0.00	(N/A)	0.00
368.40	0.00	(N/A)	0.00
368.50	0.00	(N/A)	0.00
368.60	0.00	(N/A)	0.00
368.70	0.00	(N/A)	0.00
368.80	0.00	(N/A)	0.00
368.90	0.00	(N/A)	0.00
369.00	0.00	(N/A)	0.00
369.10	0.00	(N/A)	0.00
369.20	0.00	(N/A)	0.00
369.30	0.00	(N/A)	0.00
369.40	0.00	(N/A)	0.00
369.50	0.00	(N/A)	0.00
369.60	0.00	(N/A)	0.00
369.70	0.00	(N/A)	0.00
369.80	0.00	(N/A)	0.00
369.90	0.00	(N/A)	0.00
370.00	0.00	(N/A)	0.00
370.10	0.42	(N/A)	0.00
370.20	1.19	(N/A)	0.00
370.30	2.19	(N/A)	0.00
370.40	3.37	(N/A)	0.00
370.50	4.71	(N/A)	0.00
370.60	6.19	(N/A)	0.00
370.70	7.80	(N/A)	0.00
370.80	9.53	(N/A)	0.00





Subsection: Composite Rating Curve  
Label: OCS-B  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

### Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
(no Q: Weir - 1,Culvert - 1)
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1
Weir - 1,Culvert - 1

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	368.06 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	369.06 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	368.96	369.06
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.96 ft
Weir Length	400.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
368.06	0.00	(N/A)	0.00
368.56	0.00	(N/A)	0.00
368.96	0.00	(N/A)	0.00
369.06	42.12	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
Weir - 1
Weir - 1

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Requested Pond Water Surface Elevations	
Minimum (Headwater)	368.06 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	369.06 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	368.96	369.06
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.96 ft
Weir Length	400.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
368.06	0.00	(N/A)	0.00
368.56	0.00	(N/A)	0.00
368.96	0.00	(N/A)	0.00
369.06	42.12	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
Weir - 1
Weir - 1



Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	368.06 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	369.06 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	368.96	369.06
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	368.96 ft
Weir Length	400.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Composite Rating Curve  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
368.06	0.00	(N/A)	0.00
368.56	0.00	(N/A)	0.00
368.96	0.00	(N/A)	0.00
369.06	42.12	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
Weir - 1
Weir - 1

Subsection: Pond Infiltration Calculations  
 Label: INFILTRATION BASIN A (IN)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Average Infiltration Rating Table**

Elevation (Water Surface) (ft)	Area (Total) (ft <sup>2</sup> )	Flow (Infiltration) (ft <sup>3</sup> /s)
366.90	2,087.1	0.00
367.00	2,143.6	0.30
367.10	2,200.9	0.31
367.20	2,258.9	0.31
367.30	2,317.7	0.32
367.40	2,377.3	0.33
367.50	2,437.6	0.34
367.60	2,498.7	0.35
367.70	2,560.5	0.36
367.80	2,623.1	0.36
367.90	2,686.4	0.37
368.00	2,750.5	0.38
368.10	2,812.9	0.39
368.20	2,876.1	0.40
368.30	2,939.9	0.41
368.40	3,004.4	0.42
368.50	3,069.6	0.43
368.60	3,135.6	0.44
368.70	3,202.2	0.44
368.80	3,269.5	0.45
368.90	3,337.5	0.46
369.00	3,406.3	0.47
369.10	3,475.7	0.48
369.20	3,545.8	0.49
369.30	3,616.7	0.50
369.40	3,688.2	0.51
369.50	3,760.4	0.52
369.60	3,833.4	0.53
369.70	3,907.0	0.54
369.80	3,981.3	0.55
369.90	4,056.3	0.56
370.00	4,132.1	0.57
370.10	4,206.6	0.58
370.20	4,281.9	0.59
370.30	4,357.8	0.61
370.40	4,434.3	0.62
370.50	4,511.6	0.63
370.60	4,589.4	0.64
370.70	4,668.0	0.65
370.80	4,747.2	0.66
370.90	4,827.1	0.67
371.00	4,907.7	0.68

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.90	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.600	367.62	1,742.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	3.18	0.000	0.00
Infiltration...	12.600	0.35	0.000	0.00
Pond Outflow...	12.200	1.87	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	11,115.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	7,172.000	Forward
Pond Outflow...	0.000	Reverse	3,909.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	11,115.000 ft <sup>3</sup>
Volume (Total Out ICPM)	11,081.000 ft <sup>3</sup>
Volume (Ending)	30.000 ft <sup>3</sup>
Elevation (Ending)	366.91 ft
Difference	4.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	6.0000 in/h

**Initial Conditions**

**Calculation Tolerances**

Elevation (Starting Water Surface Computed)	366.90	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

	Maximum Storage	
Time to Peak (hours)	Elevation (ft)	Volume (ft <sup>3</sup> )
12.900	368.88	5,647.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	7.17	0.000	0.00
Infiltration...	12.900	0.46	0.000	0.00
Pond Outflow...	12.100	4.60	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	25,988.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	15,689.000	Forward
Pond Outflow...	0.000	Reverse	10,249.000	Forward

**Mass Balance (ft<sup>3</sup>)**

Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	25,988.000 ft <sup>3</sup>
Volume (Total Out ICPM)	25,938.000 ft <sup>3</sup>
Volume (Ending)	59.000 ft <sup>3</sup>
Elevation (Ending)	366.92 ft
Difference	-10.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN A  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.90	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.450	370.43	11,430.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	14.11	0.000	0.00
Infiltration...	12.450	0.62	0.000	0.00
Pond Outflow...	12.050	6.46	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	53,477.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	26,020.000	Forward
Pond Outflow...	0.000	Reverse	27,087.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	53,477.000 ft <sup>3</sup>
Volume (Total Out ICPM)	53,107.000 ft <sup>3</sup>
Volume (Ending)	356.000 ft <sup>3</sup>
Elevation (Ending)	367.05 ft
Difference	13.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Pond Infiltration Calculations  
 Label: INFILTRATION BASIN B (IN)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Average Infiltration Rating Table**

Elevation (Water Surface) (ft)	Area (Total) (ft <sup>2</sup> )	Flow (Infiltration) (ft <sup>3</sup> /s)
366.50	1,290.2	0.00
366.60	1,339.5	0.19
366.70	1,389.8	0.19
366.80	1,441.0	0.20
366.90	1,493.1	0.21
367.00	1,546.1	0.21
367.10	1,600.1	0.22
367.20	1,654.9	0.23
367.30	1,710.8	0.24
367.40	1,767.5	0.25
367.50	1,825.1	0.25
367.60	1,883.7	0.26
367.70	1,943.2	0.27
367.80	2,003.7	0.28
367.90	2,065.0	0.29
368.00	2,127.3	0.30
368.10	2,186.6	0.30
368.20	2,246.8	0.31
368.30	2,307.8	0.32
368.40	2,369.6	0.33
368.50	2,432.2	0.34
368.60	2,495.6	0.35
368.70	2,559.9	0.36
368.80	2,625.0	0.36
368.90	2,690.8	0.37
369.00	2,757.5	0.38
369.10	2,825.1	0.39
369.20	2,893.4	0.40
369.30	2,962.5	0.41
369.40	3,032.5	0.42
369.50	3,103.3	0.43
369.60	3,174.9	0.44
369.70	3,247.3	0.45
369.80	3,320.5	0.46
369.90	3,394.6	0.47
370.00	3,469.4	0.48
370.10	3,541.7	0.49
370.20	3,614.7	0.50
370.30	3,688.4	0.51
370.40	3,762.9	0.52
370.50	3,838.1	0.53
370.60	3,914.0	0.54
370.70	3,990.7	0.55
370.80	4,068.2	0.57



Subsection: Pond Infiltration Calculations  
Label: INFILTRATION BASIN B (IN)  
Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
Storm Event: 1

**Average Infiltration Rating Table**

Elevation (Water Surface) (ft)	Area (Total) (ft <sup>2</sup> )	Flow (Infiltration) (ft <sup>3</sup> /s)
370.90	4,146.4	0.58
371.00	4,225.3	0.59

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.50	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.550	367.62	1,886.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.200	1.87	0.000	0.00
Infiltration...	12.550	0.26	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	3,909.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	3,904.000	Forward
Pond Outflow...	0.000	Reverse	0.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	3,909.000 ft <sup>3</sup>
Volume (Total Out ICPM)	3,904.000 ft <sup>3</sup>
Volume (Ending)	5.000 ft <sup>3</sup>
Elevation (Ending)	366.50 ft
Difference	0.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.50	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.850	368.87	4,944.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.100	4.60	0.000	0.00
Infiltration...	12.850	0.37	0.000	0.00
Pond Outflow...	0.000	0.00	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	10,249.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	10,238.000	Forward
Pond Outflow...	0.000	Reverse	0.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	10,249.000 ft <sup>3</sup>
Volume (Total Out ICPM)	10,238.000 ft <sup>3</sup>
Volume (Ending)	10.000 ft <sup>3</sup>
Elevation (Ending)	366.51 ft
Difference	1.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.0 %

Subsection: Interconnected Pond Routing Summary  
 Label: INFILTRATION BASIN B  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Infiltration					
Infiltration Method (Computed)	Average Infiltration Rate				
Infiltration Rate (Average)	6.0000 in/h				

Initial Conditions			Calculation Tolerances		
Elevation (Starting Water Surface Computed)	366.50	ft	Flow Tolerance (Minimum)	0.000	ft <sup>3</sup> /s
Volume (Starting)	0.000	ft <sup>3</sup>	Maximum Iterations	35	
Infiltration (Starting ICPM)	0.00	ft <sup>3</sup> /s	ICPM Time Step	0.050	hours
Outflow (Starting)	0.00	ft <sup>3</sup> /s	Output Increment	0.050	hours

Time to Peak (hours)	Maximum Storage	
	Elevation (ft)	Volume (ft <sup>3</sup> )
12.400	370.36	9,450.000

	Forward Flow Peaks		Reverse Flow Peaks	
	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Pond Inflow....	12.050	6.46	0.000	0.00
Infiltration...	12.400	0.52	0.000	0.00
Pond Outflow...	12.400	2.86	0.000	0.00

	Total Volume In		Total Volume Out	
	Volume (ft <sup>3</sup> )	Direction	Volume (ft <sup>3</sup> )	Direction
Pond Inflow....	27,087.000	Forward	0.000	Reverse
Infiltration...	0.000	Reverse	18,670.000	Forward
Pond Outflow...	0.000	Reverse	7,553.000	Forward

Mass Balance (ft <sup>3</sup> )	
Volume (Initial ICPM)	0.000 ft <sup>3</sup>
Volume (Total In ICPM)	27,087.000 ft <sup>3</sup>
Volume (Total Out ICPM)	26,223.000 ft <sup>3</sup>
Volume (Ending)	845.000 ft <sup>3</sup>
Elevation (Ending)	367.00 ft
Difference	19.000 ft <sup>3</sup>
Percent of Inflow Volume (Interconnected Pond Mass Balance)	0.1 %

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	3.0000 in/h

**Initial Conditions**

Elevation (Water Surface, Initial)	368.06 ft
Volume (Initial)	0.000 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
368.06	0.00	0.000	21,104.000	0.00	0.00	0.00
368.56	0.00	4,220.800	21,104.000	1.47	1.47	48.36
368.96	0.00	7,597.440	21,104.000	1.47	1.47	85.88
369.06	42.12	8,441.600	21,104.000	1.47	43.59	137.38

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	3.0000 in/h

**Initial Conditions**

Elevation (Water Surface, Initial)	368.06 ft
Volume (Initial)	0.000 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
368.06	0.00	0.000	21,104.000	0.00	0.00	0.00
368.56	0.00	4,220.800	21,104.000	1.47	1.47	48.36
368.96	0.00	7,597.440	21,104.000	1.47	1.47	85.88
369.06	42.12	8,441.600	21,104.000	1.47	43.59	137.38

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: Porous Pavement  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Infiltration**

Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	3.0000 in/h

**Initial Conditions**

Elevation (Water Surface, Initial)	368.06 ft
Volume (Initial)	0.000 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
368.06	0.00	0.000	21,104.000	0.00	0.00	0.00
368.56	0.00	4,220.800	21,104.000	1.47	1.47	48.36
368.96	0.00	7,597.440	21,104.000	1.47	1.47	85.88
369.06	42.12	8,441.600	21,104.000	1.47	43.59	137.38

Subsection: Pond Routed Hydrograph (total out)  
 Label: Porous Pavement (OUT)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)



Subsection: Pond Routed Hydrograph (total out)  
 Label: Porous Pavement (OUT)  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: Porous Pavement (OUT)  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	2.27 ft <sup>3</sup> /s
Time to Peak	12.300 hours
Hydrograph Volume	661.773 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.200	0.00	0.10	2.27	0.28	0.98
12.450	0.00	0.06	0.00	(N/A)	(N/A)

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: STORMTECH  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**Infiltration**

Infiltration Method (Computed)                      No Infiltration

**Initial Conditions**

Elevation (Water Surface, Initial)                      365.50 ft  
 Volume (Initial)                      154.000 ft<sup>3</sup>  
 Flow (Initial Outlet)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial Infiltration)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial, Total)                      0.00 ft<sup>3</sup>/s  
 Time Increment                      0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
365.00	0.00	0.000	0.000	0.00	0.00	0.00
365.50	0.00	154.160	0.000	0.00	0.00	1.71
366.00	0.14	464.163	0.000	0.00	0.14	5.30
366.50	0.22	761.605	0.000	0.00	0.22	8.68
366.75	0.25	900.715	0.000	0.00	0.25	10.26
367.00	0.40	1,039.824	0.000	0.00	0.40	11.95
367.50	0.81	1,288.225	0.000	0.00	0.81	15.12
368.00	1.03	1,476.817	0.000	0.00	1.03	17.44
368.50	5.92	1,630.977	0.000	0.00	5.92	24.05

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: STORMTECH  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**Infiltration**

Infiltration Method (Computed)                      No Infiltration

**Initial Conditions**

Elevation (Water Surface, Initial)                      365.50 ft  
 Volume (Initial)                      154.000 ft<sup>3</sup>  
 Flow (Initial Outlet)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial Infiltration)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial, Total)                      0.00 ft<sup>3</sup>/s  
 Time Increment                      0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
365.00	0.00	0.000	0.000	0.00	0.00	0.00
365.50	0.00	154.160	0.000	0.00	0.00	1.71
366.00	0.14	464.163	0.000	0.00	0.14	5.30
366.50	0.22	761.605	0.000	0.00	0.22	8.68
366.75	0.25	900.715	0.000	0.00	0.25	10.26
367.00	0.40	1,039.824	0.000	0.00	0.40	11.95
367.50	0.81	1,288.225	0.000	0.00	0.81	15.12
368.00	1.03	1,476.817	0.000	0.00	1.03	17.44
368.50	5.92	1,630.977	0.000	0.00	5.92	24.05

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: STORMTECH  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**Infiltration**

Infiltration Method (Computed)                      No Infiltration

**Initial Conditions**

Elevation (Water Surface, Initial)                      365.50 ft  
 Volume (Initial)                      154.000 ft<sup>3</sup>  
 Flow (Initial Outlet)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial Infiltration)                      0.00 ft<sup>3</sup>/s  
 Flow (Initial, Total)                      0.00 ft<sup>3</sup>/s  
 Time Increment                      0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
365.00	0.00	0.000	0.000	0.00	0.00	0.00
365.50	0.00	154.160	0.000	0.00	0.00	1.71
366.00	0.14	464.163	0.000	0.00	0.14	5.30
366.50	0.22	761.605	0.000	0.00	0.22	8.68
366.75	0.25	900.715	0.000	0.00	0.25	10.26
367.00	0.40	1,039.824	0.000	0.00	0.40	11.95
367.50	0.81	1,288.225	0.000	0.00	0.81	15.12
368.00	1.03	1,476.817	0.000	0.00	1.03	17.44
368.50	5.92	1,630.977	0.000	0.00	5.92	24.05

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

Peak Discharge	0.26 ft <sup>3</sup> /s
Time to Peak	12.400 hours
Hydrograph Volume	2,593.965 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
6.950	0.00	0.00	0.00	0.00	0.00
7.200	0.00	0.00	0.00	0.00	0.00
7.450	0.00	0.00	0.00	0.00	0.00
7.700	0.00	0.00	0.00	0.00	0.00
7.950	0.00	0.00	0.00	0.00	0.00
8.200	0.00	0.00	0.00	0.00	0.01
8.450	0.01	0.01	0.01	0.01	0.01
8.700	0.01	0.01	0.01	0.01	0.01
8.950	0.01	0.01	0.01	0.01	0.01
9.200	0.01	0.01	0.01	0.01	0.01
9.450	0.01	0.01	0.01	0.01	0.01
9.700	0.01	0.01	0.01	0.02	0.02
9.950	0.02	0.02	0.02	0.02	0.02
10.200	0.02	0.02	0.02	0.02	0.02
10.450	0.02	0.02	0.02	0.02	0.03
10.700	0.03	0.03	0.03	0.03	0.03
10.950	0.03	0.03	0.03	0.03	0.03
11.200	0.04	0.04	0.04	0.04	0.04
11.450	0.05	0.05	0.05	0.05	0.06
11.700	0.07	0.08	0.09	0.10	0.12
11.950	0.14	0.16	0.18	0.21	0.23
12.200	0.24	0.25	0.25	0.25	0.26
12.450	0.25	0.25	0.24	0.24	0.24
12.700	0.23	0.23	0.22	0.21	0.21
12.950	0.20	0.20	0.19	0.19	0.18
13.200	0.18	0.17	0.17	0.16	0.16
13.450	0.15	0.15	0.14	0.14	0.13
13.700	0.13	0.12	0.11	0.11	0.10
13.950	0.10	0.10	0.09	0.09	0.09
14.200	0.08	0.08	0.08	0.07	0.07
14.450	0.07	0.07	0.07	0.06	0.06
14.700	0.06	0.06	0.06	0.06	0.05
14.950	0.05	0.05	0.05	0.05	0.05
15.200	0.05	0.05	0.05	0.04	0.04
15.450	0.04	0.04	0.04	0.04	0.04
15.700	0.04	0.04	0.04	0.04	0.04
15.950	0.03	0.03	0.03	0.03	0.03
16.200	0.03	0.03	0.03	0.03	0.03
16.450	0.03	0.03	0.03	0.03	0.03

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 1 Year Storm

Return Event: 1 years  
 Storm Event: 1

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.700	0.03	0.03	0.03	0.03	0.03
16.950	0.03	0.02	0.02	0.02	0.02
17.200	0.02	0.02	0.02	0.02	0.02
17.450	0.02	0.02	0.02	0.02	0.02
17.700	0.02	0.02	0.02	0.02	0.02
17.950	0.02	0.02	0.02	0.02	0.02
18.200	0.02	0.02	0.02	0.02	0.02
18.450	0.02	0.02	0.02	0.02	0.02
18.700	0.02	0.02	0.02	0.02	0.02
18.950	0.02	0.02	0.02	0.02	0.02
19.200	0.02	0.02	0.02	0.02	0.01
19.450	0.01	0.01	0.01	0.01	0.01
19.700	0.01	0.01	0.01	0.01	0.01
19.950	0.01	0.01	0.01	0.01	0.01
20.200	0.01	0.01	0.01	0.01	0.01
20.450	0.01	0.01	0.01	0.01	0.01
20.700	0.01	0.01	0.01	0.01	0.01
20.950	0.01	0.01	0.01	0.01	0.01
21.200	0.01	0.01	0.01	0.01	0.01
21.450	0.01	0.01	0.01	0.01	0.01
21.700	0.01	0.01	0.01	0.01	0.01
21.950	0.01	0.01	0.01	0.01	0.01
22.200	0.01	0.01	0.01	0.01	0.01
22.450	0.01	0.01	0.01	0.01	0.01
22.700	0.01	0.01	0.01	0.01	0.01
22.950	0.01	0.01	0.01	0.01	0.01
23.200	0.01	0.01	0.01	0.01	0.01
23.450	0.01	0.01	0.01	0.01	0.01
23.700	0.01	0.01	0.01	0.01	0.01
23.950	0.01	0.01	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

Peak Discharge	0.98 ft <sup>3</sup> /s
Time to Peak	12.200 hours
Hydrograph Volume	5,618.189 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
4.450	0.00	0.00	0.00	0.00	0.00
4.700	0.00	0.00	0.00	0.00	0.00
4.950	0.00	0.00	0.00	0.00	0.00
5.200	0.00	0.00	0.00	0.00	0.00
5.450	0.00	0.00	0.00	0.00	0.00
5.700	0.00	0.01	0.01	0.01	0.01
5.950	0.01	0.01	0.01	0.01	0.01
6.200	0.01	0.01	0.01	0.01	0.01
6.450	0.01	0.01	0.01	0.01	0.01
6.700	0.01	0.01	0.01	0.01	0.01
6.950	0.01	0.01	0.01	0.01	0.01
7.200	0.01	0.01	0.01	0.01	0.01
7.450	0.01	0.01	0.02	0.02	0.02
7.700	0.02	0.02	0.02	0.02	0.02
7.950	0.02	0.02	0.02	0.02	0.02
8.200	0.02	0.02	0.02	0.02	0.02
8.450	0.02	0.02	0.02	0.03	0.03
8.700	0.03	0.03	0.03	0.03	0.03
8.950	0.03	0.03	0.03	0.03	0.03
9.200	0.04	0.04	0.04	0.04	0.04
9.450	0.04	0.04	0.04	0.04	0.04
9.700	0.04	0.05	0.05	0.05	0.05
9.950	0.05	0.05	0.05	0.05	0.05
10.200	0.06	0.06	0.06	0.06	0.06
10.450	0.06	0.06	0.07	0.07	0.07
10.700	0.07	0.07	0.08	0.08	0.08
10.950	0.08	0.08	0.09	0.09	0.09
11.200	0.09	0.10	0.10	0.10	0.11
11.450	0.11	0.12	0.13	0.13	0.15
11.700	0.15	0.17	0.18	0.20	0.22
11.950	0.25	0.39	0.65	0.86	0.96
12.200	0.98	0.95	0.90	0.85	0.78
12.450	0.69	0.61	0.53	0.46	0.40
12.700	0.36	0.33	0.31	0.29	0.27
12.950	0.25	0.25	0.24	0.24	0.23
13.200	0.23	0.23	0.22	0.22	0.22
13.450	0.21	0.21	0.20	0.20	0.19
13.700	0.19	0.19	0.18	0.18	0.18
13.950	0.17	0.17	0.17	0.16	0.16



Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 10 Year Storm

Return Event: 10 years  
 Storm Event: 10

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
14.200	0.16	0.15	0.15	0.15	0.14
14.450	0.14	0.14	0.13	0.13	0.12
14.700	0.12	0.12	0.11	0.11	0.11
14.950	0.10	0.10	0.10	0.10	0.10
15.200	0.09	0.09	0.09	0.09	0.09
15.450	0.08	0.08	0.08	0.08	0.08
15.700	0.08	0.07	0.07	0.07	0.07
15.950	0.07	0.07	0.07	0.06	0.06
16.200	0.06	0.06	0.06	0.06	0.06
16.450	0.06	0.06	0.05	0.05	0.05
16.700	0.05	0.05	0.05	0.05	0.05
16.950	0.05	0.05	0.05	0.05	0.05
17.200	0.05	0.05	0.04	0.04	0.04
17.450	0.04	0.04	0.04	0.04	0.04
17.700	0.04	0.04	0.04	0.04	0.04
17.950	0.04	0.04	0.04	0.04	0.04
18.200	0.04	0.03	0.03	0.03	0.03
18.450	0.03	0.03	0.03	0.03	0.03
18.700	0.03	0.03	0.03	0.03	0.03
18.950	0.03	0.03	0.03	0.03	0.03
19.200	0.03	0.03	0.03	0.03	0.03
19.450	0.03	0.03	0.03	0.03	0.03
19.700	0.03	0.03	0.03	0.03	0.03
19.950	0.03	0.03	0.03	0.03	0.03
20.200	0.03	0.03	0.03	0.03	0.03
20.450	0.03	0.03	0.03	0.03	0.03
20.700	0.02	0.02	0.02	0.02	0.02
20.950	0.02	0.02	0.02	0.02	0.02
21.200	0.02	0.02	0.02	0.02	0.02
21.450	0.02	0.02	0.02	0.02	0.02
21.700	0.02	0.02	0.02	0.02	0.02
21.950	0.02	0.02	0.02	0.02	0.02
22.200	0.02	0.02	0.02	0.02	0.02
22.450	0.02	0.02	0.02	0.02	0.02
22.700	0.02	0.02	0.02	0.02	0.02
22.950	0.02	0.02	0.02	0.02	0.02
23.200	0.02	0.02	0.02	0.02	0.02
23.450	0.02	0.02	0.02	0.02	0.02
23.700	0.02	0.02	0.02	0.02	0.02
23.950	0.02	0.02	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	2.87 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	11,057.822 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
2.700	0.00	0.00	0.00	0.00	0.00
2.950	0.00	0.00	0.00	0.00	0.00
3.200	0.00	0.00	0.00	0.00	0.00
3.450	0.01	0.01	0.01	0.01	0.01
3.700	0.01	0.01	0.01	0.01	0.01
3.950	0.01	0.01	0.01	0.01	0.01
4.200	0.01	0.01	0.01	0.01	0.01
4.450	0.01	0.01	0.01	0.01	0.01
4.700	0.01	0.01	0.02	0.02	0.02
4.950	0.02	0.02	0.02	0.02	0.02
5.200	0.02	0.02	0.02	0.02	0.02
5.450	0.02	0.02	0.02	0.02	0.02
5.700	0.02	0.02	0.02	0.02	0.02
5.950	0.02	0.02	0.03	0.03	0.03
6.200	0.03	0.03	0.03	0.03	0.03
6.450	0.03	0.03	0.03	0.03	0.03
6.700	0.03	0.03	0.03	0.03	0.03
6.950	0.04	0.04	0.04	0.04	0.04
7.200	0.04	0.04	0.04	0.04	0.04
7.450	0.04	0.04	0.05	0.05	0.05
7.700	0.05	0.05	0.05	0.05	0.05
7.950	0.05	0.05	0.05	0.05	0.06
8.200	0.06	0.06	0.06	0.06	0.06
8.450	0.06	0.06	0.07	0.07	0.07
8.700	0.07	0.07	0.07	0.07	0.08
8.950	0.08	0.08	0.08	0.08	0.09
9.200	0.09	0.09	0.09	0.09	0.09
9.450	0.10	0.10	0.10	0.10	0.10
9.700	0.11	0.11	0.11	0.11	0.11
9.950	0.12	0.12	0.12	0.12	0.12
10.200	0.13	0.13	0.13	0.14	0.14
10.450	0.14	0.14	0.15	0.15	0.15
10.700	0.15	0.15	0.16	0.16	0.16
10.950	0.16	0.17	0.17	0.17	0.18
11.200	0.18	0.18	0.19	0.19	0.20
11.450	0.21	0.21	0.22	0.23	0.24
11.700	0.30	0.39	0.55	0.70	0.84
11.950	1.00	2.69	2.71	2.87	2.46
12.200	1.79	1.42	1.26	1.08	1.02

Subsection: Pond Routed Hydrograph (total out)  
 Label: STORMTECH (OUT)  
 Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.450	0.99	0.93	0.85	0.77	0.67
12.700	0.60	0.54	0.49	0.45	0.41
12.950	0.39	0.37	0.35	0.33	0.32
13.200	0.31	0.29	0.28	0.28	0.27
13.450	0.26	0.25	0.25	0.25	0.25
13.700	0.24	0.24	0.24	0.24	0.24
13.950	0.24	0.23	0.23	0.23	0.23
14.200	0.22	0.22	0.22	0.22	0.21
14.450	0.21	0.21	0.21	0.20	0.20
14.700	0.20	0.20	0.19	0.19	0.19
14.950	0.19	0.18	0.18	0.18	0.18
15.200	0.17	0.17	0.17	0.17	0.17
15.450	0.16	0.16	0.16	0.16	0.15
15.700	0.15	0.15	0.15	0.15	0.14
15.950	0.14	0.13	0.13	0.13	0.13
16.200	0.12	0.12	0.12	0.11	0.11
16.450	0.11	0.11	0.11	0.10	0.10
16.700	0.10	0.10	0.10	0.09	0.09
16.950	0.09	0.09	0.09	0.09	0.09
17.200	0.09	0.08	0.08	0.08	0.08
17.450	0.08	0.08	0.08	0.08	0.08
17.700	0.07	0.07	0.07	0.07	0.07
17.950	0.07	0.07	0.07	0.07	0.07
18.200	0.06	0.06	0.06	0.06	0.06
18.450	0.06	0.06	0.06	0.06	0.06
18.700	0.06	0.06	0.06	0.06	0.06
18.950	0.06	0.06	0.06	0.05	0.05
19.200	0.05	0.05	0.05	0.05	0.05
19.450	0.05	0.05	0.05	0.05	0.05
19.700	0.05	0.05	0.05	0.05	0.05
19.950	0.05	0.05	0.05	0.05	0.05
20.200	0.05	0.05	0.05	0.05	0.05
20.450	0.05	0.05	0.05	0.05	0.05
20.700	0.05	0.05	0.04	0.04	0.04
20.950	0.04	0.04	0.04	0.04	0.04
21.200	0.04	0.04	0.04	0.04	0.04
21.450	0.04	0.04	0.04	0.04	0.04
21.700	0.04	0.04	0.04	0.04	0.04
21.950	0.04	0.04	0.04	0.04	0.04
22.200	0.04	0.04	0.04	0.04	0.04
22.450	0.04	0.04	0.04	0.04	0.04
22.700	0.04	0.04	0.04	0.04	0.04
22.950	0.04	0.04	0.04	0.04	0.04

Subsection: Pond Routed Hydrograph (total out)  
Label: STORMTECH (OUT)  
Scenario: Proposed Conditions 100 Year Storm

Return Event: 100 years  
Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
23.200	0.04	0.04	0.03	0.03	0.03
23.450	0.03	0.03	0.03	0.03	0.03
23.700	0.03	0.03	0.03	0.03	0.03
23.950	0.03	0.03	(N/A)	(N/A)	(N/A)

# Index

1

1-10-100-90% (Time-Depth Curve, 1 years (Existing Conditions 1 Year Storm))...5, 6

1-10-100-90% (Time-Depth Curve, 1 years (Proposed Conditions 1 Year Storm))...7, 8

1-10-100-90% (Time-Depth Curve, 10 years (Existing Conditions 10 Year Storm))...9, 10

1-10-100-90% (Time-Depth Curve, 10 years (Proposed Conditions 10 Year Storm))...11, 12

1-10-100-90% (Time-Depth Curve, 100 years (Existing Conditions 100 Year Storm))...13, 14

1-10-100-90% (Time-Depth Curve, 100 years (Proposed Conditions 100 Year Storm))...15, 16

D

DP (Addition Summary, 1 years (Existing Conditions 1 Year Storm))...115

DP (Addition Summary, 1 years (Proposed Conditions 1 Year Storm))...116

DP (Addition Summary, 10 years (Existing Conditions 10 Year Storm))...117

DP (Addition Summary, 10 years (Proposed Conditions 10 Year Storm))...118

DP (Addition Summary, 100 years (Existing Conditions 100 Year Storm))...119

DP (Addition Summary, 100 years (Proposed Conditions 100 Year Storm))...120

E

EDA-1A (Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm))...53

EDA-1A (Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm))...54

EDA-1A (Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm))...55

EDA-1A (Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm))...17, 18

EDA-1A (Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm))...19, 20

EDA-1A (Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm))...21, 22

EDA-1A (Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm))...71, 72

EDA-1A (Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm))...73, 74

EDA-1A (Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm))...75, 76, 77

EDA-1B (Runoff CN-Area, 1 years (Existing Conditions 1 Year Storm))...56

EDA-1B (Runoff CN-Area, 10 years (Existing Conditions 10 Year Storm))...57

EDA-1B (Runoff CN-Area, 100 years (Existing Conditions 100 Year Storm))...58

EDA-1B (Time of Concentration Calculations, 1 years (Existing Conditions 1 Year Storm))...23, 24

EDA-1B (Time of Concentration Calculations, 10 years (Existing Conditions 10 Year Storm))...25, 26

EDA-1B (Time of Concentration Calculations, 100 years (Existing Conditions 100 Year Storm))...27, 28  
EDA-1B (Unit Hydrograph (Hydrograph Table), 1 years (Existing Conditions 1 Year Storm))...78, 79  
EDA-1B (Unit Hydrograph (Hydrograph Table), 10 years (Existing Conditions 10 Year Storm))...80, 81  
EDA-1B (Unit Hydrograph (Hydrograph Table), 100 years (Existing Conditions 100 Year Storm))...82, 83

I

INFILTRATION BASIN A (Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm))...121  
INFILTRATION BASIN A (Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm))...122  
INFILTRATION BASIN A (Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm))...123  
INFILTRATION BASIN A (IN) (Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm))...456  
INFILTRATION BASIN A (Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm))...457  
INFILTRATION BASIN A (Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm))...458  
INFILTRATION BASIN A (Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm))...459  
INFILTRATION BASIN B (Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm))...124  
INFILTRATION BASIN B (Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm))...125  
INFILTRATION BASIN B (Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm))...126  
INFILTRATION BASIN B (IN) (Pond Infiltration Calculations, 1 years (Proposed Conditions 1 Year Storm))...460, 461  
INFILTRATION BASIN B (Interconnected Pond Routing Summary, 1 years (Proposed Conditions 1 Year Storm))...462  
INFILTRATION BASIN B (Interconnected Pond Routing Summary, 10 years (Proposed Conditions 10 Year Storm))...463  
INFILTRATION BASIN B (Interconnected Pond Routing Summary, 100 years (Proposed Conditions 100 Year Storm))...464

M

Master Network Summary...2, 3, 4

O

OCS-7-1 (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...140  
OCS-7-1 (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...143  
OCS-7-1 (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...146  
OCS-7-1 (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...138, 139  
OCS-7-1 (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...141, 142  
OCS-7-1 (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...144, 145

OCS-A (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240

OCS-A (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334

OCS-A (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428

OCS-A (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...147, 148

OCS-A (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...241, 242

OCS-A (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...335, 336

OCS-B (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...432, 433, 434

OCS-B (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...438, 439, 440

OCS-B (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...444, 445, 446

OCS-B (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...429, 430, 431

OCS-B (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...435, 436, 437

OCS-B (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...441, 442, 443

P

PDA-1A (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...59

PDA-1A (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...60

PDA-1A (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...61

PDA-1A (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...29, 30

PDA-1A (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...31, 32

PDA-1A (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...33, 34

PDA-1A (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...84, 85

PDA-1A (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...86, 87

PDA-1A (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...88, 89, 90

PDA-1B (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...62

PDA-1B (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...63

PDA-1B (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...64

PDA-1B (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...35, 36

PDA-1B (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...37, 38

PDA-1B (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...39, 40

PDA-1B (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...91, 92, 93

PDA-1B (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...94, 95, 96

PDA-1B (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...97, 98, 99

PDA-1C (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...65

PDA-1C (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...66

PDA-1C (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...67

PDA-1C (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...41, 42

PDA-1C (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...43, 44

PDA-1C (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...45, 46

PDA-1C (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...100, 101

PDA-1C (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...102, 103, 104

PDA-1C (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...105, 106, 107

PDA-1D (Runoff CN-Area, 1 years (Proposed Conditions 1 Year Storm))...68

PDA-1D (Runoff CN-Area, 10 years (Proposed Conditions 10 Year Storm))...69

PDA-1D (Runoff CN-Area, 100 years (Proposed Conditions 100 Year Storm))...70

PDA-1D (Time of Concentration Calculations, 1 years (Proposed Conditions 1 Year Storm))...47, 48

PDA-1D (Time of Concentration Calculations, 10 years (Proposed Conditions 10 Year Storm))...49, 50

PDA-1D (Time of Concentration Calculations, 100 years (Proposed Conditions 100 Year Storm))...51, 52

PDA-1D (Unit Hydrograph (Hydrograph Table), 1 years (Proposed Conditions 1 Year Storm))...108, 109

PDA-1D (Unit Hydrograph (Hydrograph Table), 10 years (Proposed Conditions 10 Year Storm))...110, 111

PDA-1D (Unit Hydrograph (Hydrograph Table), 100 years (Proposed Conditions 100 Year Storm))...112, 113, 114

Porous Pavement (Composite Rating Curve, 1 years (Proposed Conditions 1 Year Storm))...449



Porous Pavement (Composite Rating Curve, 10 years (Proposed Conditions 10 Year Storm))...452  
 Porous Pavement (Composite Rating Curve, 100 years (Proposed Conditions 100 Year Storm))...455  
 Porous Pavement (Elevation-Area Volume Curve, 1 years (Proposed Conditions 1 Year Storm))...127  
 Porous Pavement (Elevation-Area Volume Curve, 10 years (Proposed Conditions 10 Year Storm))...129  
 Porous Pavement (Elevation-Area Volume Curve, 100 years (Proposed Conditions 100 Year Storm))...131  
 Porous Pavement (Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm))...465  
 Porous Pavement (Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm))...466  
 Porous Pavement (Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm))...467  
 Porous Pavement (OUT) (Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm))...468  
 Porous Pavement (OUT) (Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm))...469  
 Porous Pavement (OUT) (Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm))...470  
 Porous Pavement (Outlet Input Data, 1 years (Proposed Conditions 1 Year Storm))...447, 448  
 Porous Pavement (Outlet Input Data, 10 years (Proposed Conditions 10 Year Storm))...450, 451  
 Porous Pavement (Outlet Input Data, 100 years (Proposed Conditions 100 Year Storm))...453, 454  
 Porous Pavement (Volume Void Adjustments, 1 years (Proposed Conditions 1 Year Storm))...128  
 Porous Pavement (Volume Void Adjustments, 10 years (Proposed Conditions 10 Year Storm))...130  
 Porous Pavement (Volume Void Adjustments, 100 years (Proposed Conditions 100 Year Storm))...132

S

STORMTECH (Elevation-Volume-Flow Table (Pond), 1 years (Proposed Conditions 1 Year Storm))...471  
 STORMTECH (Elevation-Volume-Flow Table (Pond), 10 years (Proposed Conditions 10 Year Storm))...472  
 STORMTECH (Elevation-Volume-Flow Table (Pond), 100 years (Proposed Conditions 100 Year Storm))...473  
 STORMTECH (OUT) (Pond Routed Hydrograph (total out), 1 years (Proposed Conditions 1 Year Storm))...474, 475  
 STORMTECH (OUT) (Pond Routed Hydrograph (total out), 10 years (Proposed Conditions 10 Year Storm))...476, 477  
 STORMTECH (OUT) (Pond Routed Hydrograph (total out), 100 years (Proposed Conditions 100 Year Storm))...478, 479, 480  
 STORMTECH (Storage Chamber System, 1 years (Proposed Conditions 1 Year Storm))...133, 134  
 STORMTECH (Storage Chamber System, 10 years (Proposed Conditions 10 Year Storm))...134, 135, 136  
  
 STORMTECH (Storage Chamber System, 100 years (Proposed Conditions 100 Year Storm))...136, 137, 138

## ***APPENDIX B***

# ***NYSDEC STORMWATER SIZING CALCULATIONS***

# INFILTRATION WORKSHEET

JMC Project: **22090**

Design Point: **DL-1**

Drainage Area: **PDA-1A**

## *Infiltration Basins A and B*

### Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	1.38	Ac
Area	A	1.95	Ac
Percent Impervious	%I	71.13	%
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>v</sub>	0.69	CF
<b>TOTAL VOLUME Required</b> [ $WQ_V = (P \times R_v \times A) / 12$ ]	WQ <sub>v</sub>	<b>7,315</b>	CF

### Minimum Infiltration Basin Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ <sub>v</sub>	7,315	CF
Depth of the Basin	d <sub>b</sub>	3.50	Ft
<b>Required Bottom Area of Infiltration Basin</b> [ $A_p = WQ_v / d_b$ ]	A <sub>p</sub>	<b>2,090</b>	SF

### Proposed Infiltration Basin

DESCRIPTION	SYMBOL	VALUE	UNITS
Provided Bottom Area of Infiltration Basin	A <sub>p</sub>	3,313.62	SF
Total Area of Infiltration Basin Provided	A <sub>T</sub>	9,133.01	SF
Water Quality Volume Provided (See Hydrologic Calculations)	WQV <sub>p</sub>	11,115.00	CF

### Runoff Reduction

DESCRIPTION	SYMBOL	VALUE	UNITS
100% Runoff Reduction capacity	RR <sub>v</sub>	<b>11,115</b>	CF

# INFILTRATION WORKSHEET

JMC Project: **22090**

Design Point: **DL-1**

Drainage Area: **PDA-1B**

## Porous Pavement #1

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	0.77	Ac
Area	A	0.82	Ac
Percent Impervious	%I	93.31	%
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>V</sub>	0.89	CF
<b>TOTAL VOLUME Required</b> [ $WQ_V = (P \times R_V \times A) / 12$ ]	WQ <sub>V</sub>	<b>3,993</b>	CF

Minimum Porous Pavement Area			
DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ <sub>V</sub>	3,993	CF
Porosity	n	0.40	Ft / Day
Trench Depth	d <sub>t</sub>	1.00	Ft
<b>Surface Area Required</b> [ $A_R = WQ_V / (n \times d_t)$ ]	A <sub>R</sub>	<b>9,981</b>	SF

Proposed Porous Pavement			
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Surface Area of Porous Pavement Provided</b> [A <sub>p</sub> ]	A <sub>p</sub>	<b>21,104</b>	SF
Water Quality Volume Provided (See Hydrologic Calcs)	WQ <sub>VP</sub>	7,071	CF

Runoff Reduction			
DESCRIPTION	SYMBOL	VALUE	UNITS
100% Runoff Reduction capacity	RR <sub>V</sub>	<b>7,071</b>	CF

**PROPRIETARY PRACTICE WORKSHEET**

JMC Project: **22090**  
 Design Point: **DL-1**  
 Drainage Area: **PDA-1A**

**Continuous Deflective Separation Unit**

Rainfall Distribution Type: **III**

	A	B	C
Coefficients for the equation unit peak [R = I <sub>a</sub> / P] C <sub>0</sub>	-1.774	0.3301	2.4577
[C <sub>i</sub> = A x R <sup>2</sup> + B x R + C] C <sub>1</sub>	1.8622	-0.7397	-0.4627
C <sub>2</sub>	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	1.38	Ac
Area	A	1.95	Ac
Percent Impervious	%I	71.13	%
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>V</sub>	0.69	CF
<b>TOTAL VOLUME Required</b> [WQ <sub>V</sub> = (P x R <sub>V</sub> x A) / 12]	WQ <sub>V</sub>	<b>7,315</b>	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ <sub>V</sub>	7,315	CF
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.5	In
Time of Concentration	t <sub>c</sub>	0.0833	Hr
Runoff Volume [Q = WQ <sub>V</sub> / (A x 3630)]	Q	1.04	In
Curve Number [CN = 1000 / (10 + 5P + 10Q - 10 x (Q <sup>2</sup> + 1.25 QP) <sup>1/2</sup> )]	CN	95.28	
Curve Number	CN	95	
Initial Abstraction [I <sub>a</sub> = 200 / CN - 2]	I <sub>a</sub>	0.10	In
Ratio [R = I <sub>a</sub> / P]	R	0.07	
C <sub>0</sub> = A x R <sup>2</sup> + B x R + C	C <sub>0</sub>	2.47	
C <sub>1</sub> = A x R <sup>2</sup> + B x R + C	C <sub>1</sub>	-0.50	
C <sub>2</sub> = A x R <sup>2</sup> + B x R + C	C <sub>2</sub>	-0.18	
Unit Peak Discharge	q <sub>u</sub>	641.49	cfs/mi <sup>2</sup> /in
<b>Peak Discharge</b> [Q <sub>p</sub> = q <sub>u</sub> x A x Q / 640]	Q <sub>p</sub>	<b>2.02</b>	cfs

Proposed Device			
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Water Quality Peak Flow Provided</b>	Q <sub>p</sub>	<b>3.38</b>	cfs
<b>Water Quality Volume Provided</b> [WQ <sub>V</sub> = 640 x 3600 x Q <sub>p</sub> / q <sub>u</sub> ]	WQ <sub>V</sub>	<b>12,140</b>	CF
Model Designation		<b>Hydro International First Defense FD-6HC</b>	
Quantity		<b>1</b>	

Peak Bypass Rate			
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Peak Bypass Rate (100 Year Storm - See Hydrologic Calculations)</b>	Q <sub>p100</sub>	<b>14.11</b>	cfs
<b>Provided Bypass Rate (First Defense FD-6HC)</b>	Q <sub>bp</sub>	<b>32.00</b>	cfs

**PROPRIETARY PRACTICE WORKSHEET**

JMC Project: **22090**  
 Design Point: **DL-1**  
 Drainage Area: **PDA-1C**

**Continuous Deflective Separation Unit**

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak	$C_0$	-1.774	0.3301	2.4577
$[R = I_a / P]$	$C_1$	1.8622	-0.7397	-0.4627
$[C_i = A \times R^2 + B \times R + C]$	$C_2$	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	0.30	Ac
Area	A	0.38	Ac
Percent Impervious	%I	79.48	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	$R_v$	0.77	CF
<b>TOTAL VOLUME Required</b> $[WQ_v = (P \times R_v \times A) / 12]$	$WQ_v$	<b>1,586</b>	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	$WQ_v$	1,586	CF
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.5	In
Time of Concentration	$t_c$	0.0833	Hr
Runoff Volume $[Q = WQ_v / (A \times 3630)]$	Q	1.15	In
Curve Number $[CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25 QP)^{1/2})]$	CN	96.61	
Curve Number	CN	97	
Initial Abstraction $[I_a = 200 / CN - 2]$	$I_a$	0.07	In
Ratio $[R = I_a / P]$	R	0.05	
$C_0 = A \times R^2 + B \times R + C$	$C_0$	2.47	
$C_1 = A \times R^2 + B \times R + C$	$C_1$	-0.49	
$C_2 = A \times R^2 + B \times R + C$	$C_2$	-0.18	
Unit Peak Discharge	$q_u$	614.88	cfs/mi <sup>2</sup> /in
<b>Peak Discharge</b> $[Q_p = q_u \times A \times Q / 640]$	$Q_p$	<b>0.42</b>	cfs

Proposed Device			
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Water Quality Peak Flow Provided</b>	$Q_p$	<b>0.84</b>	cfs
<b>Water Quality Volume Provided</b> $[WQ_v = 640 \times 3600 \times Q_p / q_u]$	$WQ_v$	<b>3,148</b>	CF
Model Designation		<b>Hydro International First Defense FD-3HC</b>	
Quantity		<b>1</b>	

# RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project: **22090**  
 Design Point: **DL-1**

<b>Proposed Warehouse</b>	Drainage Area: <b>PDA-1A, PDA-1B, PDA-1C</b>
---------------------------	--

## Total Water Quality Treatment Volume

DESCRIPTION	SYMBOL	VALUE	UNITS
Initial Water Quality Volume	WQ <sub>V</sub>	<b>13,525</b>	CF
Adjusted Water Quality Volume	WQ <sub>V</sub>	<b>0</b>	CF

## Minimum Runoff Reduction Volume

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.5	In
Total Area of <i>new</i> Impervious Cover (B Soils)	A <sub>ic</sub>	2.22	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Total Area of <i>new</i> Impervious Cover (D Soils)	A <sub>ic</sub>	0.10	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.20	
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>V</sub>	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x A <sub>ic</sub> ]	A <sub>i</sub>	0.91	Ac
<b>TOTAL VOLUME Required [RR<sub>V</sub> = (P x R<sub>V</sub> x A<sub>i</sub>) / 12]</b>	<b>RR<sub>V</sub></b>	<b>4,700</b>	CF

## Runoff Reduction Techniques (Volume)

GREEN INFRASTRUCTURE PRACTICE / SMP	SYMBOL	VALUE	UNITS
<b>Infiltration Basin</b>	RR <sub>V</sub>	<b>11,115</b>	CF
<b>Porous Pavement</b>	RR <sub>V</sub>	<b>7,071</b>	CF
<b>TOTAL</b>	RR <sub>V</sub>	<b>18,186</b>	CF

## Runoff Reduction

Is Total RR <sub>V</sub> > Adjusted WQ <sub>V</sub> ?	<b>YES</b>
Is Total RR <sub>V</sub> > Minimum RR <sub>V</sub> ?	<b>YES</b>

***APPENDIX C***

***SOIL TESTING DATA***



**DESIGN DATA SHEET - STORMWATER INFILTRATION SYSTEM**

JOB NO. 19124

Owner A&R Real Estate Holdings, LLC Address 100 Business Park Drive

Located at (Street) Business Park Drive Sec.108.03 Block 1 Lot 51  
 (Indicate nearest cross st.)

Municipality Armonk Watershed Inland Long Island Sound Basin

**SOIL INFILTRATION TEST DATA**

Presoak Date: 11/15/2019 Run Date: 11/15/2019

Hole #	CLOCK TIME				INFILTRATION			
	Run No.	Start	Stop	Elapse Time Min.	Depth From Grd	To surface water	Water Level Drop In Inches	Soil Rate In/Hr Drop
PT-1	1	1:00 PM	2:00 PM	60	30"	24"	18"	18"
	2	2:05 PM	3:05 PM	60	30"	24"	6"	6"
	3	3:05 PM	4:05 PM	60	30"	24"	6"	6"
	4							
PT-2	1	1:05 PM	2:05 PM	60	42"	24"	24"	24"
	2	2:10 PM	2:50 PM	40	42"	24"	24"	36"
	3	3:06 PM	3:46 PM	40	42"	24"	24"	36"
	4	3:46 PM	4:26 PM	40	42"	24"	24"	36"
PT-3	1	1:10 PM	2:10 PM	60	36"	24"	19"	19"
	2	2:15 PM	3:15 PM	60	36"	24"	13"	13"
	3	3:15 PM	4:15 PM	60	36"	24"	9"	9"
	4	4:16 PM	5:16 PM	60	36"	24"	7"	7"
PT-4	1							
	2							
	3							
	4							

Notes: \_\_\_\_\_ Perc test done by: RAR

- 1) Tests to be repeated at same depth until approximately equal soil rates are obtained at each infiltration test hole. All data to be submitted for review.
- 2) Depth measurements to be made from top of hole. DO NOT REPORT INCREMENTS OF LESS THAN ONE INCH.

**DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES**

DEPTH	HOLE NO.	DH-1	HOLE NO.	DH-2	HOLE NO.	DH-3	HOLE NO.	DH-4			
G.L.	0"-6"	↓	0"-6"	↓	0"-6"	↓	0"-6"	↓			
6"	Topsoil		Topsoil		Topsoil		Topsoil				
12"					6"-18"						
18"					Light Brown						
24"					Sandy Loam						
30"											
36"											
42"	6"-96"				6"-72"					6"-90"	
48"	Light Brown				Dark Sandy					Light Brown	
60"	Sandy Loam				Loam					Sandy Loam	
66"											
72"											
78"											
84"											
90"											
96"											

WAS GROUNDWATER ENCOUNTERED? Yes  
 INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED DH-1 @ 8', DH-2 @ 6', DH-3 @ 6', DH-4 @ 7.5'  
 INDICATE LEVEL AT WHICH WATER RISES AFTER BEING ENCOUNTERED DH-1 @ 3.5', DH-2 @ 3.5', DH-3 @ 5.5', DH-4 @ 6.5'  
 DEEP TESTS MADE BY Pecord DATE OF DEEP TESTS 11/15/2019

**DESIGN**

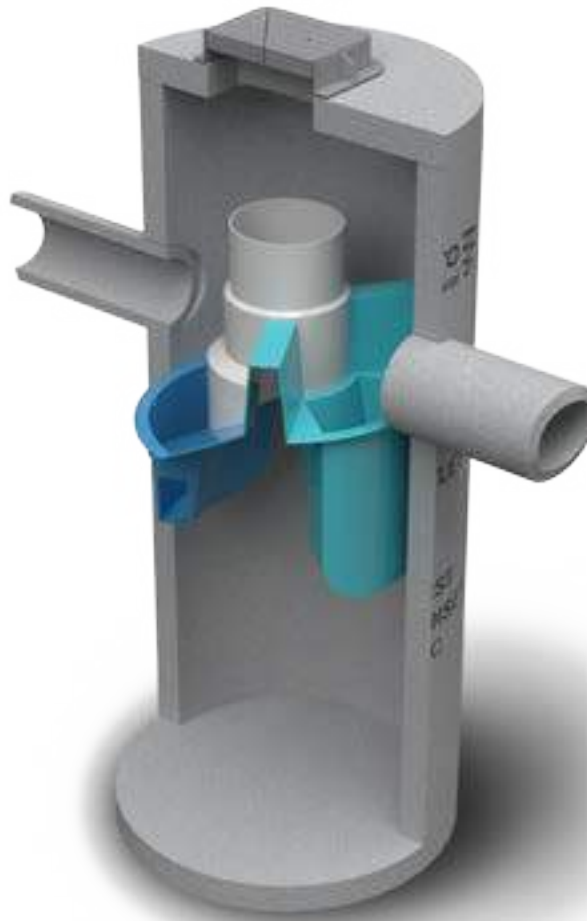
Soil Rate Used: \_\_\_\_\_ Min/1" Drop: \_\_\_\_\_

Name \_\_\_\_\_ Signature \_\_\_\_\_

Address JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC  
120 Bedford Road  
Armonk, NY 10504 SEAL

## ***APPENDIX D***

# ***HYDRO INTERNATIONAL FIRST DEFENSE OPERATION AND MAINTENANCE MANUAL***



## Operation and Maintenance Manual

**First Defense<sup>®</sup> and First Defense<sup>®</sup> High Capacity**

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Vortex Separator for Stormwater Treatment

## Table of Contents

- 3 FIRST DEFENSE® BY HYDRO INTERNATIONAL**
  - INTRODUCTION
  - OPERATION
  - POLLUTANT CAPTURE AND RETENTION
  
- 4 MODEL SIZES & CONFIGURATIONS**
  - FIRST DEFENSE® COMPONENTS
  
- 5 MAINTENANCE**
  - OVERVIEW
  - MAINTENANCE EQUIPMENT CONSIDERATIONS
  - DETERMINING YOUR MAINTENANCE SCHEDULE
  
- 6 MAINTENANCE PROCEDURES**
  - INSPECTION
  - FLOATABLES AND SEDIMENT CLEAN OUT
  
- 8 FIRST DEFENSE® INSTALLATION LOG**
  
- 9 FIRST DEFENSE® INSPECTION AND MAINTENANCE LOG**

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**DISCLAIMER:** Information and data contained in this manual is exclusively for the purpose of assisting in the operation and maintenance of Hydro International plc's First Defense®. No warranty is given nor can liability be accepted for use of this information for any other purpose. Hydro International plc has a policy of continuous product development and reserves the right to amend specifications without notice.

## HYDRO MAINTENANCE SERVICES

Hydro International has been engineering stormwater treatment systems for over 30 years. We understand the mechanics of removing pollutants from stormwater and how to keep systems running at an optimal level.

### NOBODY KNOWS OUR SYSTEMS BETTER THAN WE DO



### AVOID SERVICE NEGLIGENCE

Sanitation services providers not intimately familiar with stormwater treatment systems are at risk of the following:

- Inadvertently breaking parts or failing to clean/replace system components appropriately.
- Charging you for more frequent maintenance because they lacked the tools to service your system properly in the first place.
- Billing you for replacement parts that might have been covered under your Hydro warranty plan
- Charging for maintenance that may not yet have been required.

### LEAVE THE DIRTY WORK TO US

Trash, sediment and polluted water is stored inside treatment systems until they are removed by our team with a vactor truck. Sometimes teams must physically enter the system chambers in order to prepare the system for maintenance and install any replacement parts. Services include but are not limited to:

- Solids removal
- Removal of liquid pollutants
- Replacement media installation (when applicable)



## BETTER TOOLS, BETTER RESULTS

Not all vacor trucks are created equal. Appropriate tools and suction power are needed to service stormwater systems appropriately. Companies who don't specialize in stormwater treatment won't have the tools to properly clean systems or install new parts.



## SERVICE WARRANTY

Make sure you're not paying for service that is covered under your warranty plan. Only Hydro International's service teams can identify tune-ups that should be on us, not you.

## TREATMENT SYSTEMS SERVICED BY HYDRO:

- Stormwater filters
- Stormwater separators
- Baffle boxes
- Biofilters/biorention systems
- Storage structures
- Catch basins
- Stormwater ponds
- Permeable pavement



SAVE TIME & MONEY: CALL HYDRO FOR A QUOTE

**1 (888) 382-7808**

LEARN MORE AT [HYDRO-INT.COM/SERVICE](http://HYDRO-INT.COM/SERVICE)



# I. First Defense® by Hydro International

## Introduction

The First Defense® is an enhanced vortex separator that combines an effective and economical stormwater treatment chamber with an integral peak flow bypass. It efficiently removes total suspended solids (TSS), trash and hydrocarbons from stormwater runoff without washing out previously captured pollutants. The First Defense® is available in several model configurations (refer to *Section II. Model Sizes & Configurations*, page 4) to accommodate a wide range of pipe sizes, peak flows and depth constraints.

## Operation

The First Defense® operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The First Defense® has been designed to allow for easy and safe access for inspection, monitoring and clean-out procedures. Neither entry into the unit nor removal of the internal components is necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

## Pollutant Capture and Retention

The internal components of the First Defense® have been designed to optimize pollutant capture. Sediment is captured and retained in the base of the unit, while oil and floatables are stored on the water surface in the inner volume (Fig.1).

The pollutant storage volumes are isolated from the built-in bypass chamber to prevent washout during high-flow storm events. The sump of the First Defense® retains a standing water level between storm events. This ensures a quiescent flow regime at the onset of a storm, preventing resuspension and washout of pollutants captured during previous events.

Accessories such as oil absorbent pads are available for enhanced oil removal and storage. Due to the separation of the oil and floatable storage volume from the outlet, the potential for washout of stored pollutants between clean-outs is minimized.

## Applications

- Stormwater treatment at the point of entry into the drainage line
- Sites constrained by space, topography or drainage profiles with limited slope and depth of cover
- Retrofit installations where stormwater treatment is placed on or tied into an existing storm drain line
- Pretreatment for filters, infiltration and storage

## Advantages

- Inlet options include surface grate or multiple inlet pipes
- Integral high capacity bypass conveys large peak flows without the need for “offline” arrangements using separate junction manholes
- Proven to prevent pollutant washout at up to 500% of its treatment flow
- Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling
- Delivered to site pre-assembled and ready for installation

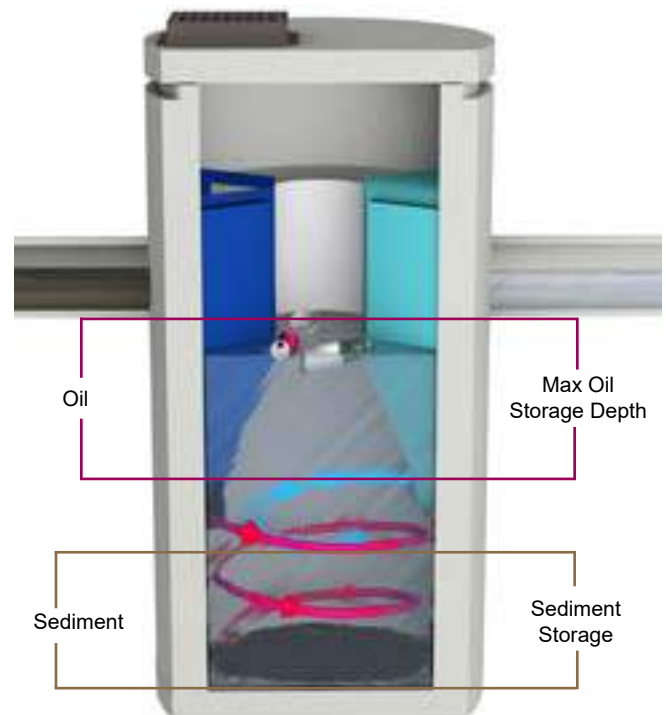


Fig.1 Pollutant storage volumes in the First Defense®.



## II. Model Sizes & Configurations

The First Defense® inlet and internal bypass arrangements are available in several model sizes and configurations. The components of the First Defense®-4HC and First Defense®-6HC have modified geometries as to allow greater design flexibility needed to accommodate various site constraints.

All First Defense® models include the internal components that are designed to remove and retain total suspended solids (TSS), gross solids, floatable trash and hydrocarbons (Fig.2a - 2b). First Defense® model parameters and design criteria are shown in Table 1.

### First Defense® Components

- 1. Built-In Bypass
- 2. Inlet Pipe
- 3. Inlet Chute
- 4. Floatables Draw-off Port
- 5. Outlet Pipe
- 6. Floatables Storage
- 7. Sediment Storage
- 8. Inlet Grate or Cover

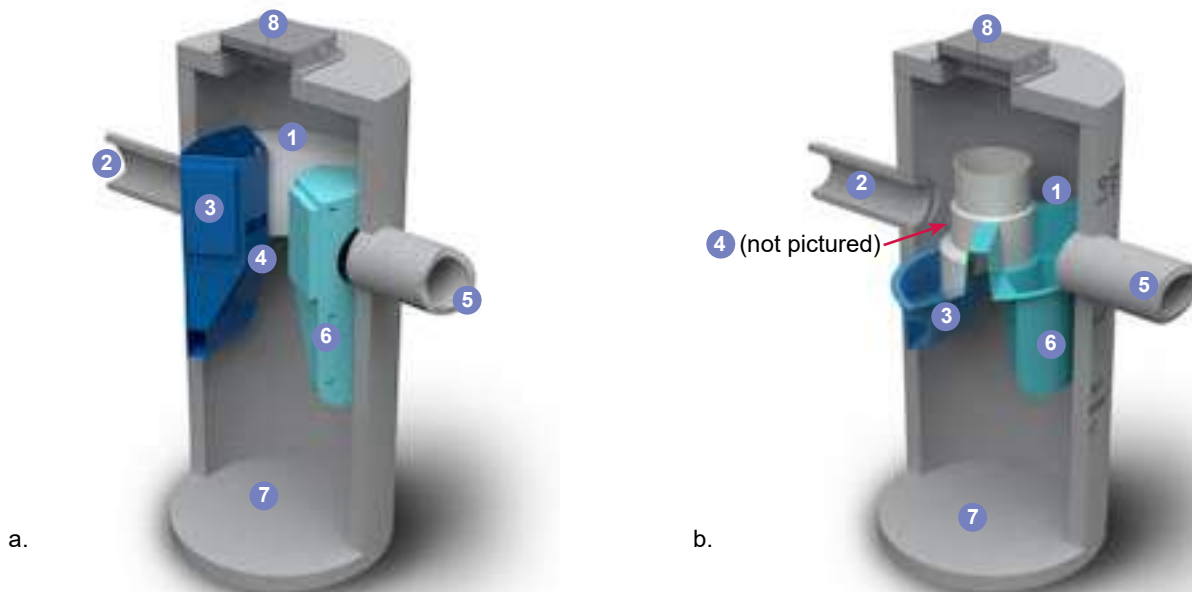


Fig.2a) First Defense®-4 and First Defense®-6; b) First Defense®-4HC and First Defense®-6HC, with higher capacity dual internal bypass and larger maximum pipe diameter.

First Defense® High Capacity Model Number	Diameter	Typical TSS Treatment Flow Rates		Peak Online Flow Rate	Maximum Pipe Diameter <sup>1</sup>	Oil Storage Capacity	Typical Sediment Storage Capacity <sup>2</sup>	Minimum Distance from Outlet Invert to Top of Rim <sup>3</sup>	Standard Distance from Outlet Invert to Sump Floor
		NJDEP Certified	106µm						
	(ft / m)	(cfs / L/s)	(cfs / L/s)	(cfs / L/s)	(in / mm)	(gal / L)	(yd <sup>3</sup> / m <sup>3</sup> )	(ft / m)	(ft / m)
FD-3HC	3 / 0.9	0.84 / 23.7	1.60 / 45.3	15 / 424	18 / 457	125 / 473	0.4 / 0.3	2.0 - 3.5 / 0.6 - 1.0	3.71 / 1.13
FD-4HC	4 / 1.2	1.50 / 42.4	1.88 / 50.9	18 / 510	24 / 600	191 / 723	0.7 / 0.5	2.3 - 3.9 / 0.7 - 1.2	4.97 / 1.5
FD-5HC	5 / 1.5	2.34 / 66.2	2.94 / 82.1	20 / 566	24 / 609	300 / 1135	1.1 / .84	2.5 - 4.5 / 0.7 - 1.3	5.19 / 1.5
FD-6HC	6 / 1.8	3.38 / 95.7	4.73 / 133.9	32 / 906	30 / 750	496 / 1,878	1.6 / 1.2	3.0 - 5.1 / 0.9 - 1.6	5.97 / 1.8
FD-8HC	8 / 2.4	6.00 / 169.9	7.52 / 212.9	50 / 1,415	48 / 1219	1120 / 4239	2.8 / 2.1	3.0 - 6.0 / 0.9 - 1.8	7.40 / 2.2

<sup>1</sup>Contact Hydro International when larger pipe sizes are required.

<sup>2</sup>Contact Hydro International when custom sediment storage capacity is required.

<sup>3</sup>Minimum distance for models depends on pipe diameter.

## III. Maintenance

### Overview

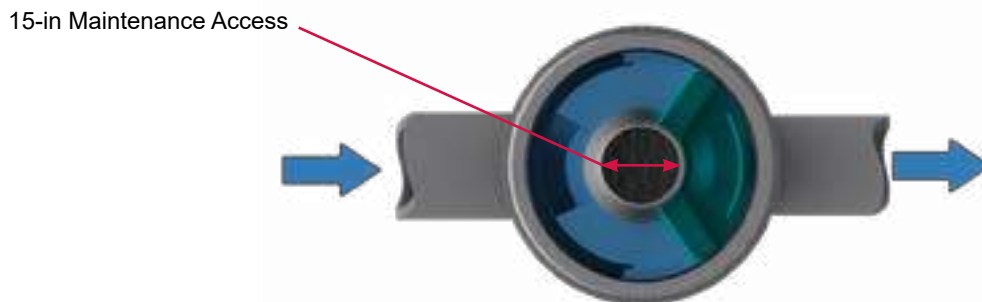
The First Defense® protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the First Defense®. The First Defense® will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the First Defense® will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

The First Defense® allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the First Defense®, nor do they require the internal components of the First Defense® to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

### Maintenance Equipment Considerations

The internal components of the First Defense®-HC have a centrally located circular shaft through which the sediment storage sump can be accessed with a sump vac hose. The open diameter of this access shaft is 15 inches in diameter (Fig.3). Therefore, the nozzle fitting of any vactor hose used for maintenance should be less than 15 inches in diameter.



*Fig.3 The central opening to the sump of the First Defense®-HC is 15 inches in diameter.*

### Determining Your Maintenance Schedule

The frequency of clean out is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge-Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil / floatables removal, for a 6-ft First Defense® typically takes less than 30 minutes and removes a combined water/oil volume of about 765 gallons.

### Inspection Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. Fig.4 shows the standing water level that should be observed.
4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the components and water surface.
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel.
6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.
7. Securely replace the grate or lid.
8. Take down safety equipment.
9. Notify Hydro International of any irregularities noted during inspection.

### Floatables and Sediment Clean Out

Floatables clean out is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables (Fig.5).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vactor hose and skimmer pole to be lowered to the base of the sump.

### Scheduling

- Floatables and sump clean out are typically conducted once a year during any season.
- Floatables and sump clean out should occur as soon as possible following a spill in the contributing drainage area.



Fig.4 Floatables are removed with a vactor hose (First Defense model FD-4, shown).

### Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vactor truck (flexible hose recommended)
- First Defense® Maintenance Log

*Floatables and sediment Clean Out Procedures*

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
4. Remove oil and floatables stored on the surface of the water with the vactor hose (Fig.5) or with the skimmer or net (not pictured).
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (page 9).
6. Once all floatables have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris off the sump floor (Fig.5).
7. Retract the vactor hose from the vessel.
8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components, blockages, or irregularly high or low water levels.
9. Securely replace the grate or lid.



*Fig.5 Sediment is removed with a vactor hose (First Defense model FD-4, shown).*

## Maintenance at a Glance

Inspection	<ul style="list-style-type: none"> <li>- Regularly during first year of installation</li> <li>- Every 6 months after the first year of installation</li> </ul>
Oil and Floatables Removal	<ul style="list-style-type: none"> <li>- Once per year, with sediment removal</li> <li>- Following a spill in the drainage area</li> </ul>
Sediment Removal	<ul style="list-style-type: none"> <li>- Once per year or as needed</li> <li>- Following a spill in the drainage area</li> </ul>

NOTE: For most clean outs the entire volume of liquid does not need to be removed from the manhole. Only remove the first few inches of oils and floatables from the water surface to reduce the total volume of liquid removed during a clean out.



## First Defense® Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:	
SITE NAME:	
SITE LOCATION:	
OWNER:	CONTRACTOR:
CONTACT NAME:	CONTACT NAME:
COMPANY NAME:	COMPANY NAME:
ADDRESS:	ADDRESS:
TELEPHONE:	TELEPHONE:
FAX:	FAX:

INSTALLATION DATE:    /    /

MODEL SIZE (CIRCLE ONE):      FD-4              FD-4HC              FD-6              FD-6HC

INLET (CIRCLE ALL THAT APPLY):    GRATED INLET (CATCH BASIN)    INLET PIPE (FLOW THROUGH)





DO IT RIGHT THE FIRST TIME

LEARN MORE AT [HYDRO-INT.COM/SERVICE](http://HYDRO-INT.COM/SERVICE)



CALL 1 (888) 382-7808 TO SCHEDULE AN INSPECTION

## Stormwater Solutions

94 Hutchins Drive  
Portland, ME 04102

Tel: (207) 756-6200  
Fax: (207) 756-6212  
[stormwaterinquiry@hydro-int.com](mailto:stormwaterinquiry@hydro-int.com)

[www.hydro-int.com](http://www.hydro-int.com)

## ***APPENDIX E***

# ***TEMPORARY EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE CHECKLIST PERMANENT STORMWATER PRACTICE OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLISTS***



**Temporary Erosion and Sediment Control Inspection and Maintenance Checklist**

<b>Erosion and Sediment Control Measure</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Stabilized Construction Access	Daily	<ul style="list-style-type: none"><li>• Periodic top dressing with additional aggregate as required</li><li>• Clean sediment in public right-of-ways immediately</li></ul>
Silt Fence	Weekly + After Each Rain	<ul style="list-style-type: none"><li>• Remove &amp; redistribute sediment when bulges develop in the silt fence.</li></ul>
Inlet Protection	Weekly + After Each Rain	<ul style="list-style-type: none"><li>• Remove sediment as necessary and replace filter fabric, crushed stone etc.</li><li>• Any broken and damaged components should be replaced.</li><li>• Check all materials for proper anchorage and secure as necessary.</li></ul>

**Permanent Stormwater Management Practice Inspection and Maintenance Checklist**

<b>Stormwater Management Practice</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Stormwater Management Basin	Annually + After Major Storms	<ul style="list-style-type: none"> <li>• Check adequacy of vegetation and ground cover; for evidence of embankment erosion, animal burrows, unauthorized plantings and cracking, bulging or sliding of dam, clear/properly functioning drains, seeps/leaks on downstream face, failure of slope protection or riprap. Repair/remove as necessary.</li> <li>• Confirm emergency spillway is clear of obstructions and debris.</li> <li>• Confirm all inlets and outlet structures/pipes are operating properly.</li> </ul>
Drain Inlets	Monthly	<ul style="list-style-type: none"> <li>• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary.</li> <li>• Check for sediment and debris collected within sumps and clean out as necessary.</li> </ul>
Subsurface Stormwater Management Detention Facility (Stormtech Chambers)	Annually and After Major Storms (10 Year Storm Event or Greater)	<ul style="list-style-type: none"> <li>• Check level of sediment and debris accumulated within the system.</li> <li>• Check structural integrity of the system pipes, structures, etc. for cracking, bulging or deterioration. Repair/remove as necessary.</li> <li>• Confirm all inlets and outlet structures/pipes are operating properly.</li> </ul>

**Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)**

<b>Stormwater Management Practice</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Porous Pavement	Monthly and As Needed	<ul style="list-style-type: none"> <li>• Ensure that paving area is clean of debris</li> <li>• Ensure that paving dewaterers between storms</li> <li>• Ensure that the area is clean of sediments</li> <li>• Mow upland and adjacent areas, and seed bare areas</li> </ul>
	Quarterly	<ul style="list-style-type: none"> <li>• Vacuum sweep frequently to keep surface free of sediments</li> </ul>
	Annually	<ul style="list-style-type: none"> <li>• Inspect the surface for deterioration or spalling</li> </ul>
Hydro International First Defense Hydrodynamic Separator	(See Maintenance Guidelines in Appendix D)	<ul style="list-style-type: none"> <li>• See Maintenance Guidelines Appendix D</li> </ul>

The owner/operator responsible for inspection and maintenance as outlined above:

WMG Acquisitions LLC  
Mr. Anthony Scavo  
2801 SW 31<sup>st</sup> Avenue, Suite 2B  
Coconut Grove, FL 33133  
Phone: (718) 702-6739  
Email: Anthony@MCSSProperties.com

***APPENDIX F***

***CONTRACTOR'S CERTIFICATION***



Site Planning  
 Civil Engineering  
 Landscape Architecture  
 Land Surveying  
 Transportation Engineering

Environmental Studies  
 Entitlements  
 Construction Services  
 3D Visualization  
 Laser Scanning

JMC Project 22090  
 BaySpace Armonk  
 100 Business Park Drive  
 Town of North Castle, NY

**CONTRACTOR'S CERTIFICATION**

“I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations”

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Permit Identification No.: \_\_\_\_\_

Name and Title of Trained Contractor: \_\_\_\_\_

Elements of the SWPPP Contractor is responsible for: \_\_\_\_\_

***APPENDIX G***

***MAINTENANCE AGREEMENT***

**STORMWATER CONTROL FACILITY  
MAINTENANCE AGREEMENT WITH  
THE TOWN OF NORTH CASTLE**

**THIS AGREEMENT**, entered into this \_\_\_\_ day of \_\_\_\_\_, 2021, by and between the Town of North Castle, New York (“Town”), a municipal corporation organized and existing under the laws of the State of New York with offices at 15 Bedford Road, North Castle, New York 10504 and WMG Acquisitions LLC (“Company”), a domestic limited liability company organized and existing under the laws of the State of New York with offices at 2801 SW 31<sup>st</sup> Street, Suite 2B, Coconut Grove, FL 33133;

**WHEREAS**, that the Town and the Company (collectively “Parties”), for the consideration hereinafter named, agree as follows:

**WHEREAS**, the Town and the Company wish to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Town for the project located on 100 Business Park Drive, Armonk, NY 10567 and Section Block and Lot Number 108.03-1-51 (“Project”);

**WHEREAS**, the Town and the Company desire that the storm water control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components.

**THEREFORE**, the Town and the Company agree as follows:

1. This Agreement binds the Town and the Company, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this Agreement.
2. The Company shall maintain, clean, repair, replace and continue the stormwater control measures depicted in the Maintenance Schedule provided within the approved Stormwater Pollution Prevention Plan (SWPPP) as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: infiltration basin, hydrodynamic separators, porous pavement sections, and conveyance systems.
3. The Company shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.
4. The Company shall provide for the periodic inspection of the stormwater control measures, not less than once in every five year period, to determine the condition and integrity of the measures.
5. The Company shall not authorize, undertake or permit alteration, abandonment,



modification or discontinuation of the stormwater control measures except in accordance with written approval of the Town.

6. The Company shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Town or in accordance with the recommendations of the Town Engineer.

7. This Agreement shall be recorded in the Office of the County Clerk, County of Westchester together with the deed for the common property and shall be included in the offering plan and/or prospectus in connection with the Project. The Company shall be responsible for payment of any fees in connection with the recording with the Office of the County Clerk.

8. If ever the Town determines that the Company has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake corrective action specified by the Town or by the Town Engineer, the Town shall serve on the Company the notice to cure on thirty (30) days' notice. If the Company fails to comply with the notice to cure to the discretion of the Town Engineer, the Company hereby consents to the Town undertaking such measures and steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property. In the event that the Town is required to undertake such measures as a result of the Company failing to comply with the notice to cure, the Company shall be required to deposit with the Town an escrow amount determined by the Town Engineer. Nothing in this Agreement prevents the Town from immediately undertaking such measures and steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures in the event of an emergency in the discretion of the Town Engineer and to affix the expenses thereof as a lien against the property.

9. Any and all notices required hereunder shall be addressed as follows, or to such other address as may hereafter be designated in writing by either party hereto:

To Town of North Castle:

Town Clerk  
Town Hall  
15 Bedford Road  
Armonk, New York 10504

With a copy to:

Town Consulting Engineer  
Town Hall  
15 Bedford Road  
Armonk, New York 10504

Town Attorney  
Town Hall  
15 Bedford Road  
Armonk, New York 10504

To Company:

At the address first above written

10. The Company hereby agrees to indemnify and save harmless the Town, its officers, employees, elected officials, and agents from and against all liability, loss or damage the Town may suffer, arising directly or indirectly out of the contract between the Company and the Town. The Company further agrees to provide defense for and defend any claims or causes of action of any kind or character directly or indirectly arising out of this Agreement at its sole expense and agrees to bear all other costs and expenses relating thereto.

11. This Agreement constitutes the entire Agreement between the Parties in connection with the long term maintenance and continuation of stormwater control measures approved by the Town for the Project and supersedes any and all prior agreements, whether oral or written. If one or more of the provisions in this Agreement are deemed by a Court of competent jurisdiction to be void by law, then the remaining provisions will continue in full force and effect. This Agreement may not be amended or modified except by an instrument in writing signed by all Parties. There will be no presumption against any Party (or its counsel) on the ground that such Party (or its counsel) was responsible for preparing this Agreement or any part of it.

12. Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to have been inserted herein. If any required contractual provision is not inserted, through mistake or otherwise, then upon the application of either party, this Contract shall be physically amended forthwith to make such insertion.

13. This Agreement shall be governed by and construed in accordance with the laws of the State of New York without giving effect to that State's choice of law rules. The Parties hereby submit to the exclusive jurisdiction of the Supreme Court of the State of New York, County of Westchester, in any action or proceeding arising out of or relating to this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement:

TOWN OF NORTH CASTLE

WMG Acquisitions LLC

By: \_\_\_\_\_

By: \_\_\_\_\_

Michael Schiliro, Town Supervisor

Robert Troccoli, Member

STATE OF NEW YORK )

) ss.:

COUNTY OF WESTCHESTER )

On the \_\_\_\_ day of \_\_\_\_\_ in the year 2021, before me, the undersigned, personally appeared Michael Schiliro personally known to me or proved to me on the same basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

\_\_\_\_\_  
Notary Public

Commission Expires: \_\_\_\_\_

STATE OF NEW YORK )

) ss.:

COUNTY OF WESTCHESTER )

On the \_\_\_\_ day of \_\_\_\_\_ in the year 2021 before me, the undersigned, personally appeared Anthony Scavo personally known to me or proved to me on the same basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

\_\_\_\_\_  
Notary Public

Commission Expires: \_\_\_\_\_

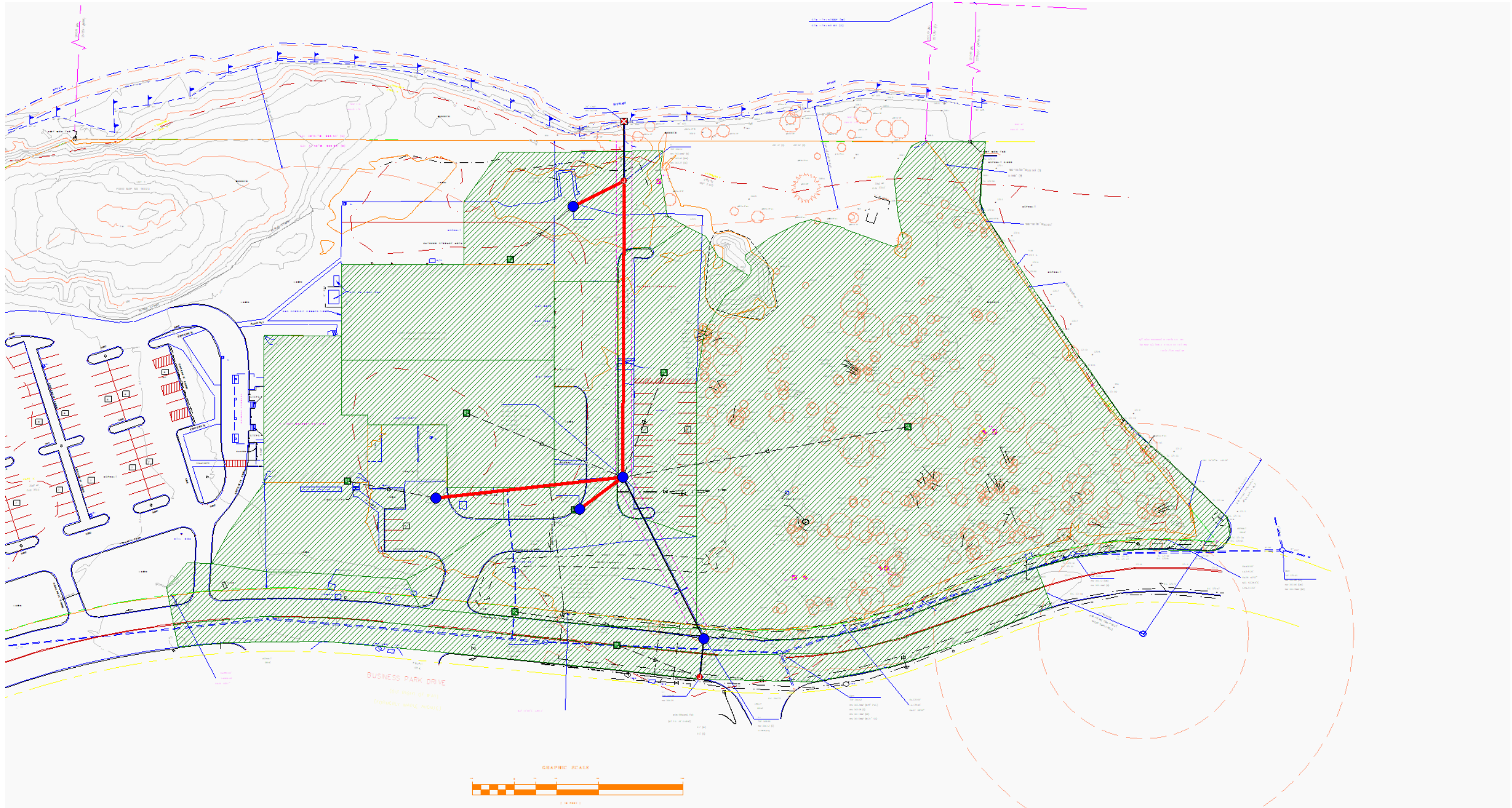
APPROVED AS TO FORM

\_\_\_\_\_  
\_\_\_\_\_  
Town Attorney

## ***APPENDIX H***

# ***HYDRAULIC CALCULATIONS***

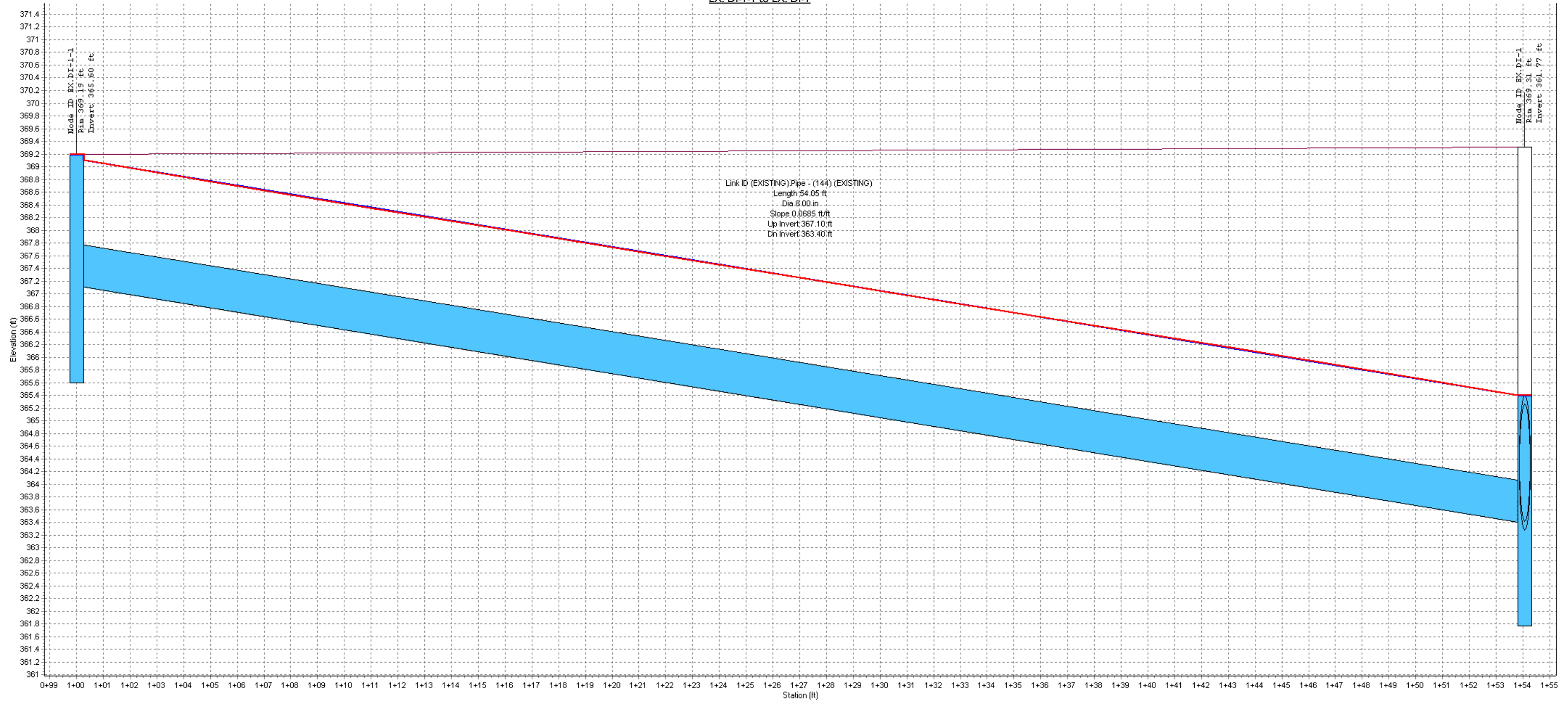
100 Business Park Drive - Hydraulic Model - Existing Conditions



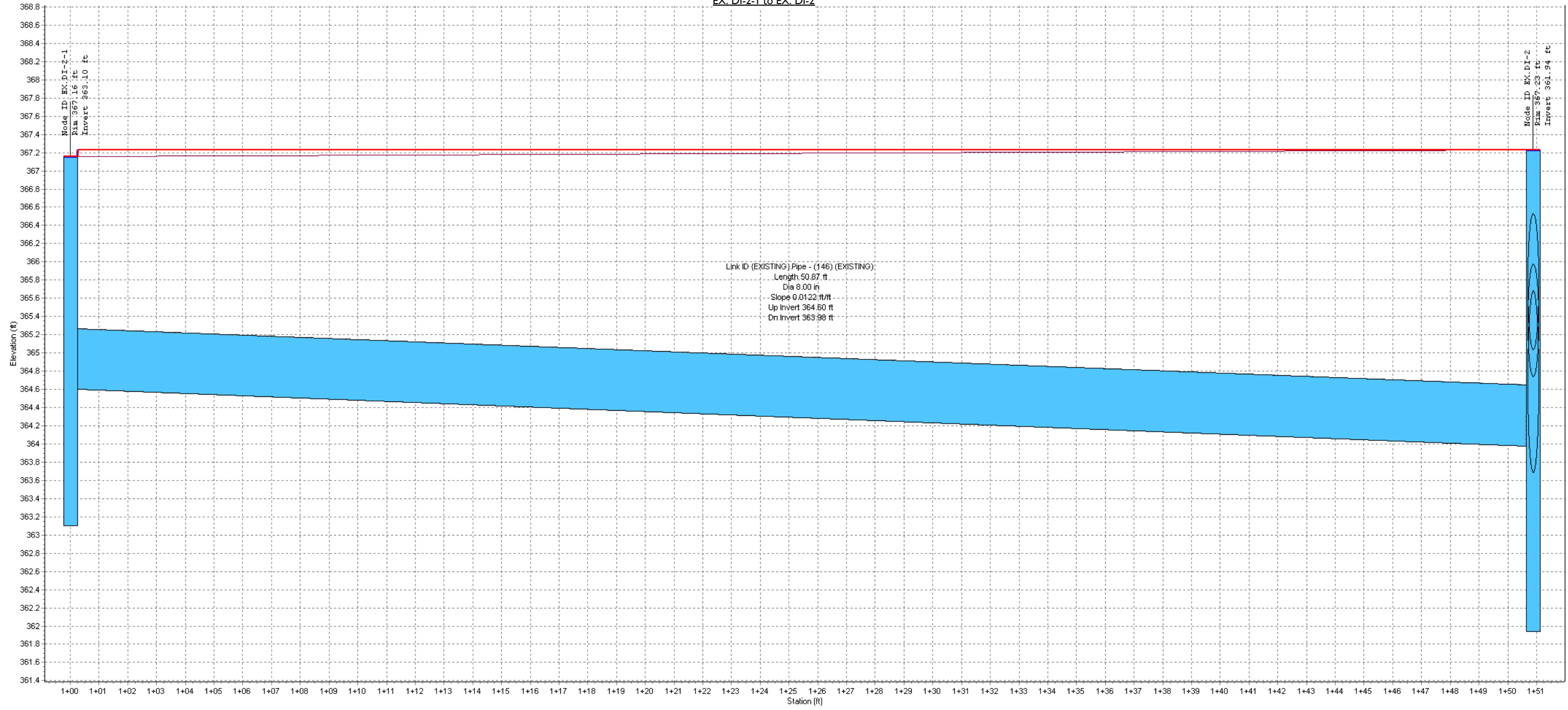
**100 Business Park Drive - Storm Pipe Capacity Calculations - Existing Conditions**  
**25 Year Storm Event**

From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Max Flow Velocity (ft/sec)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Max Flow Depth (ft)
EX.DI-4	EX.DI-3	37.05	366.25	365.85	1.0800	18.000	0.0220	3.15	4.54	6.45	0.49	0.49	0.74
EX.DI-3	EX.DI-2	171.17	366.12	365.03	0.6400	18.000	0.0220	5.36	4.19	4.95	1.08	0.95	1.43
EX.DI-2	EX.DI-1	280.98	363.68	363.40	0.1000	24.000	0.0220	4.56	2.21	4.22	1.08	1.00	2.00
EX.DI-1	ByramRiver	56.91	363.27	362.58	1.2100	24.000	0.0220	6.36	4.57	14.71	0.43	0.46	0.91
EX.DI-1-1	EX.DI-1	54.05	367.10	363.40	6.8500	8.040	0.0220	2.02	9.72	1.87	1.08	1.00	0.67
EX.DI-2-2	EX.DI-2	178.43	365.12	364.73	0.2200	15.000	0.0220	1.92	3.90	1.78	1.08	1.00	1.25
EX.DI-2-1	EX.DI-2	50.87	364.60	363.98	1.2200	8.040	0.0220	0.85	5.41	0.79	1.08	1.00	0.67

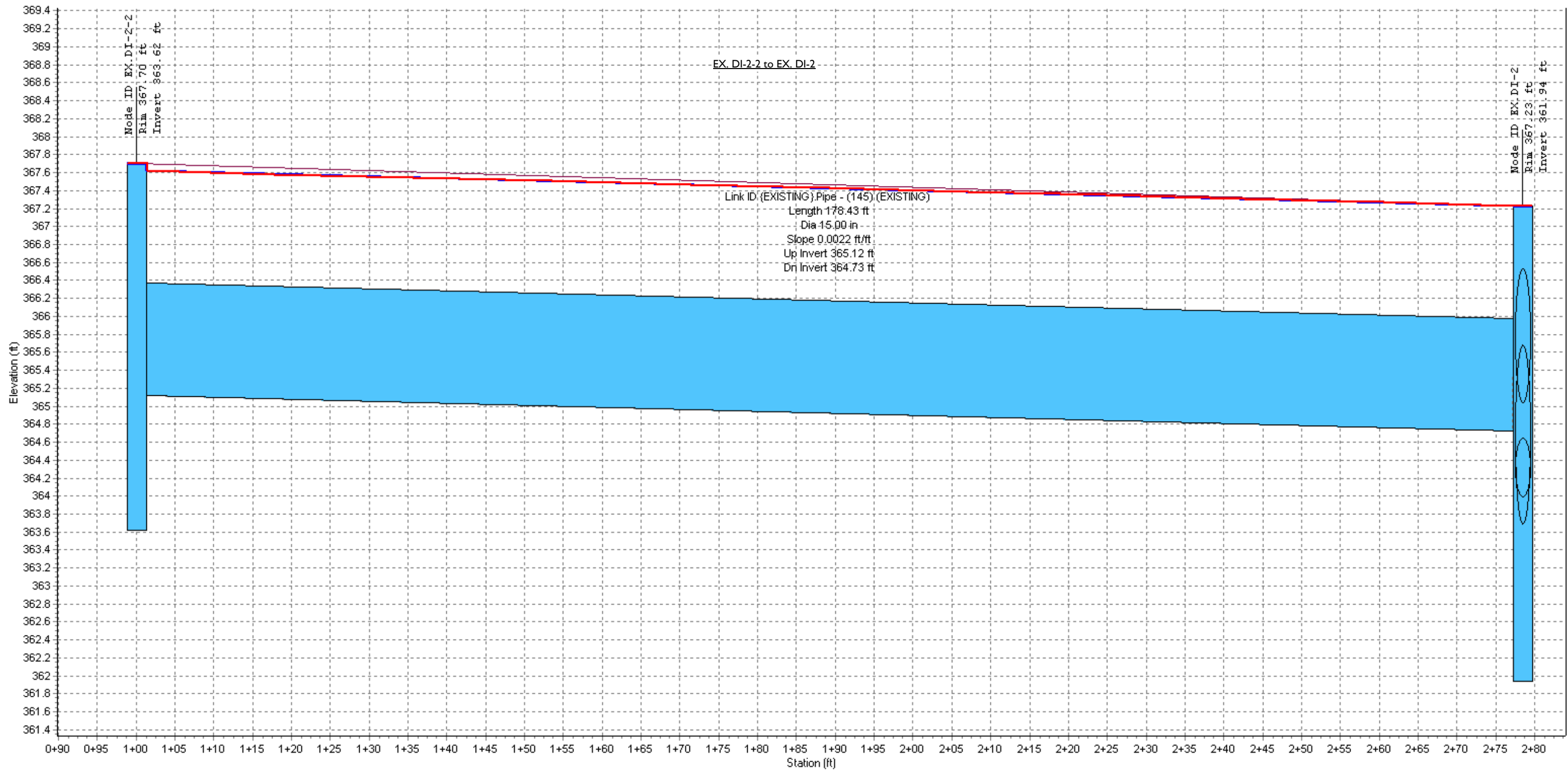
EX\_DI-I-1 to EX\_DI-I



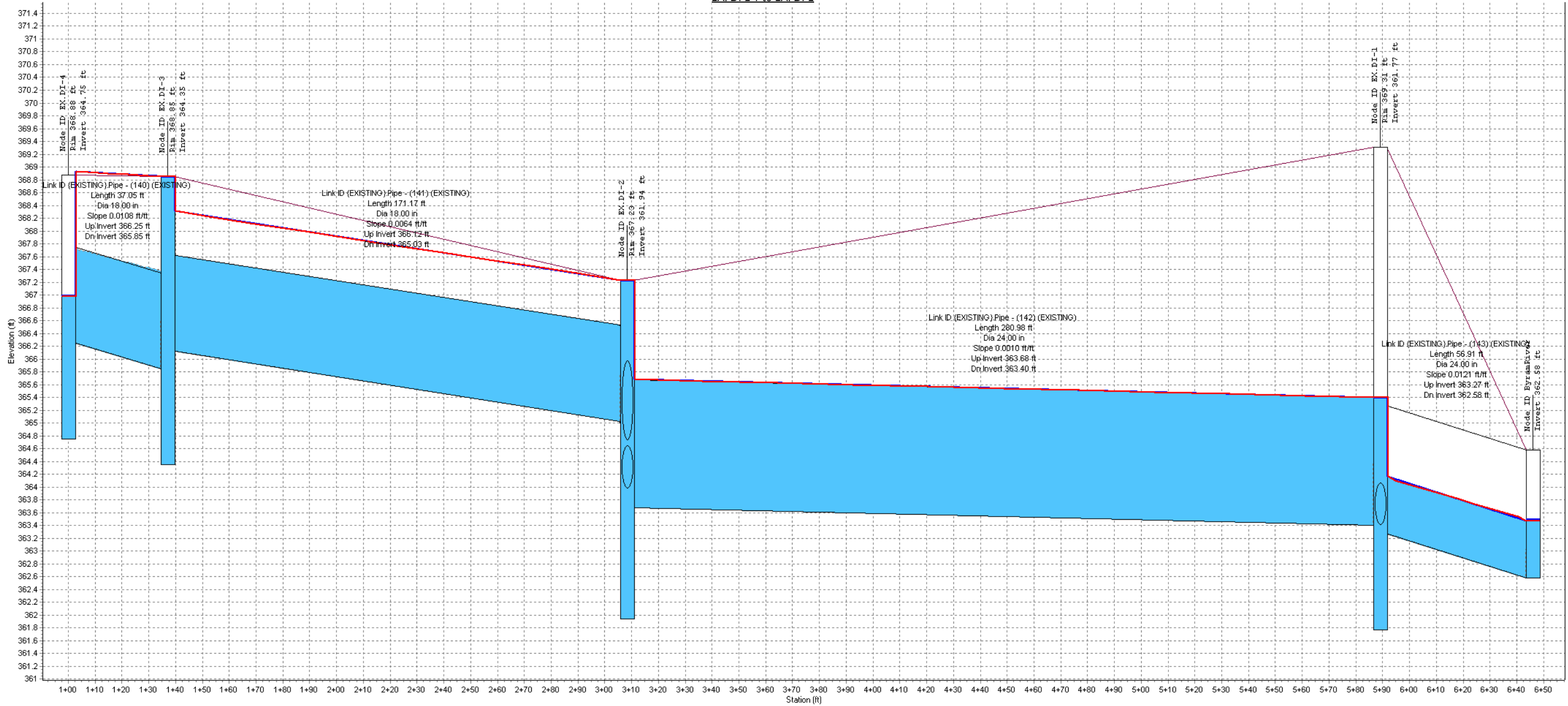
EX\_DI-2-1 to EX\_DI-2



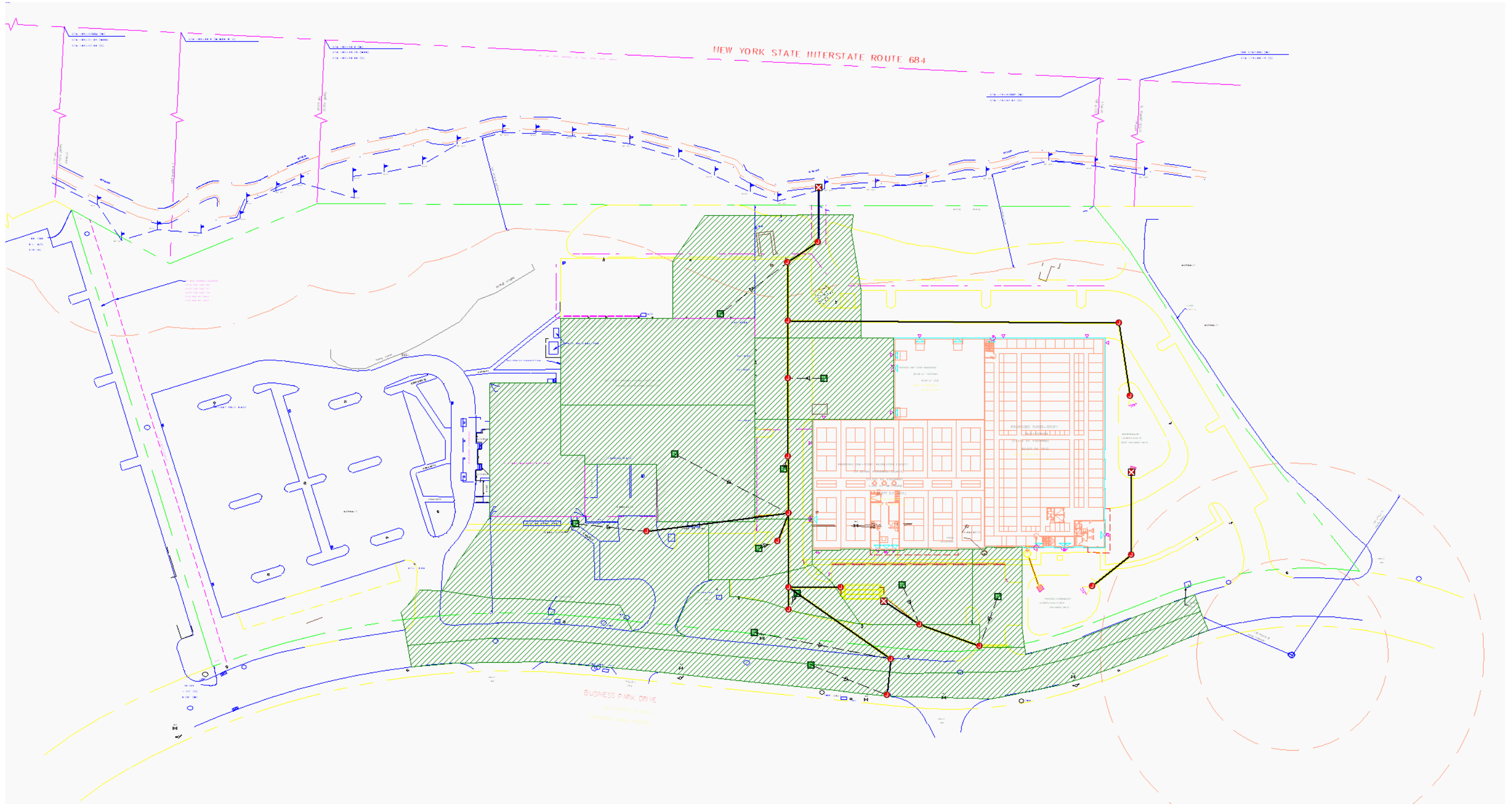




EX\_DI-2-1 to EX\_DI-2



100 Business Park Drive - Hydraulic Model - Proposed Conditions

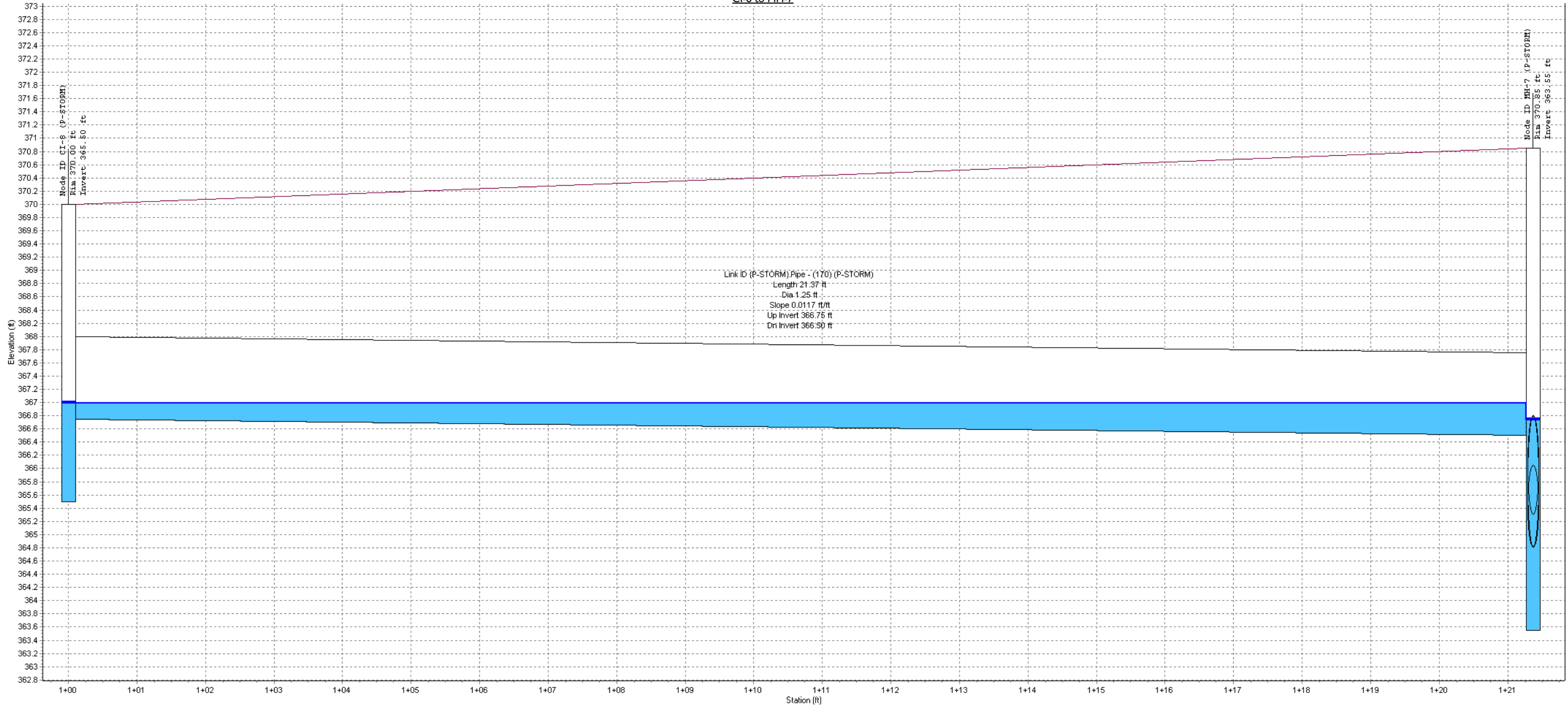


## 100 Business Park Drive - Storm Pipe Capacity Calculations - Proposed Conditions

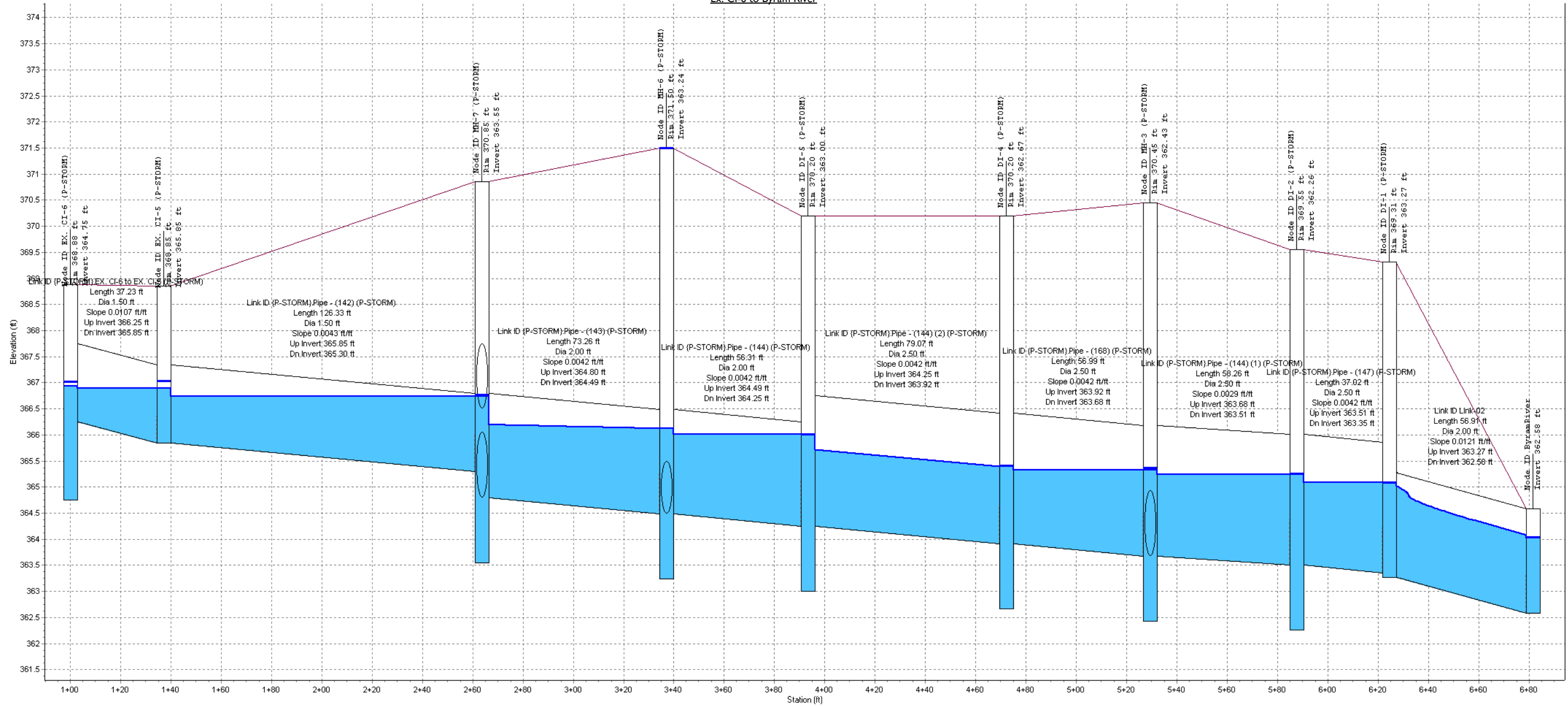
### 25 Year Storm Event

From (Inlet) Node	To (Outlet) Node	Length  (ft)	Inlet Invert Elevation  (ft)	Outlet Invert Elevation  (ft)	Average Slope  (%)	Pipe Diameter or Height  (inches)	Manning's Roughness	Peak Flow  (cfs)	Max Flow Velocity  (ft/sec)	Design Flow Capacity  (cfs)	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Max Flow Depth  (ft)
EX. CI-6 (P-STORM)	EX. CI-5 (P-STORM)	37.23	366.25	365.85	1.0700	18.000	0.0220	3.24	4.61	6.43	0.50	0.50	0.75
EX. CI-5 (P-STORM)	MH-7 (P-STORM)	126.33	365.85	365.30	0.4300	18.000	0.0130	6.57	4.60	6.93	0.95	0.77	1.16
MH-7 (P-STORM)	MH-6 (P-STORM)	73.26	364.80	364.49	0.4200	24.000	0.0130	9.30	4.97	14.69	0.63	0.58	1.15
MH-3 (P-STORM)	DI-2 (P-STORM)	58.26	363.68	363.51	0.2900	30.000	0.0130	17.59	5.06	22.22	0.79	0.67	1.67
DI-5 (P-STORM)	DI-4 (P-STORM)	79.07	364.25	363.92	0.4200	30.000	0.0130	16.09	5.86	26.66	0.60	0.56	1.40
MH-6 (P-STORM)	DI-5 (P-STORM)	56.31	364.49	364.25	0.4200	24.000	0.0130	15.92	5.51	14.74	1.08	0.92	1.83
EX. CI-6-1 (P-STORM)	MH-6 (P-STORM)	27.61	364.60	364.49	0.4100	12.000	0.0130	0.89	3.36	2.27	0.39	0.44	0.44
DI-2 (P-STORM)	DI-1 (P-STORM)	37.02	363.51	363.35	0.4200	30.000	0.0130	21.99	6.05	26.46	0.83	0.70	1.74
OCS-B (P-STORM)	MH-3-1 (P-STORM)	73.36	366.50	366.00	0.6800	15.000	0.0130	0.00	0.00	5.33	0.00	0.00	0.00
EX. CI-6-2 (P-STORM)	MH-6 (P-STORM)	158.90	365.12	364.49	0.3900	12.000	0.0130	2.42	6.93	2.24	1.08	1.00	1.00
OCS-A (P-STORM)	MH-3-2 (P-STORM)	48.85	366.90	366.76	0.2900	24.000	0.0130	4.76	3.64	12.20	0.39	0.43	0.87
MH-3-2 (P-STORM)	HW-B (P-STORM)	82.03	366.76	366.52	0.2900	24.000	0.0130	4.76	3.63	12.13	0.39	0.44	0.87
MH-3-1 (P-STORM)	MH-3 (P-STORM)	341.14	366.00	363.68	0.6800	15.000	0.0130	0.00	0.00	5.33	0.00	0.00	0.00
TD-7-4 (P-STORM)	CI-7-3 (P-STORM)	64.00	366.75	366.00	1.1700	15.000	0.0130	0.66	5.04	6.99	0.09	0.21	0.26
DI-4 (P-STORM)	MH-3 (P-STORM)	56.99	363.92	363.68	0.4200	30.000	0.0130	17.67	5.92	26.67	0.66	0.59	1.48
CI-8 (P-STORM)	MH-7 (P-STORM)	21.37	366.75	366.50	1.1700	15.000	0.0130	0.67	3.93	6.99	0.10	0.21	0.26
CI-7-3 (P-STORM)	FIRST DEFENSE 3HC (	44.49	366.00	365.50	1.1200	15.000	0.0130	2.24	5.01	6.85	0.33	0.39	0.49
OCS-7-1 (P-STORM)	MH-7 (P-STORM)	50.34	365.50	364.80	1.3900	15.000	0.0130	2.14	5.33	7.62	0.28	0.36	0.45
DI-1 (P-STORM)	ByramRiver	56.91	363.27	362.58	1.2100	24.000	0.0130	21.96	8.97	24.91	0.88	0.73	1.45

CI-8 to MH-7

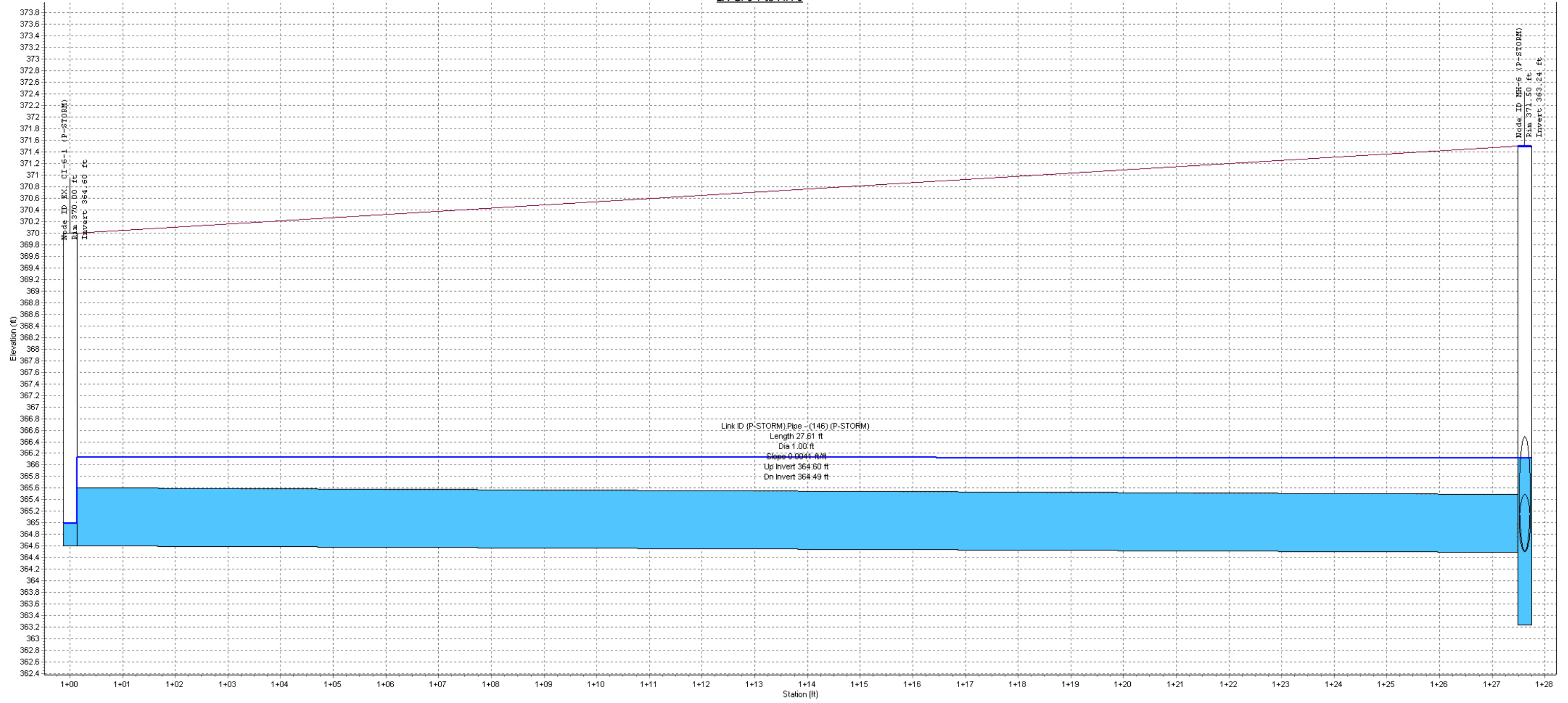


Ex. CI-6 to Byram River

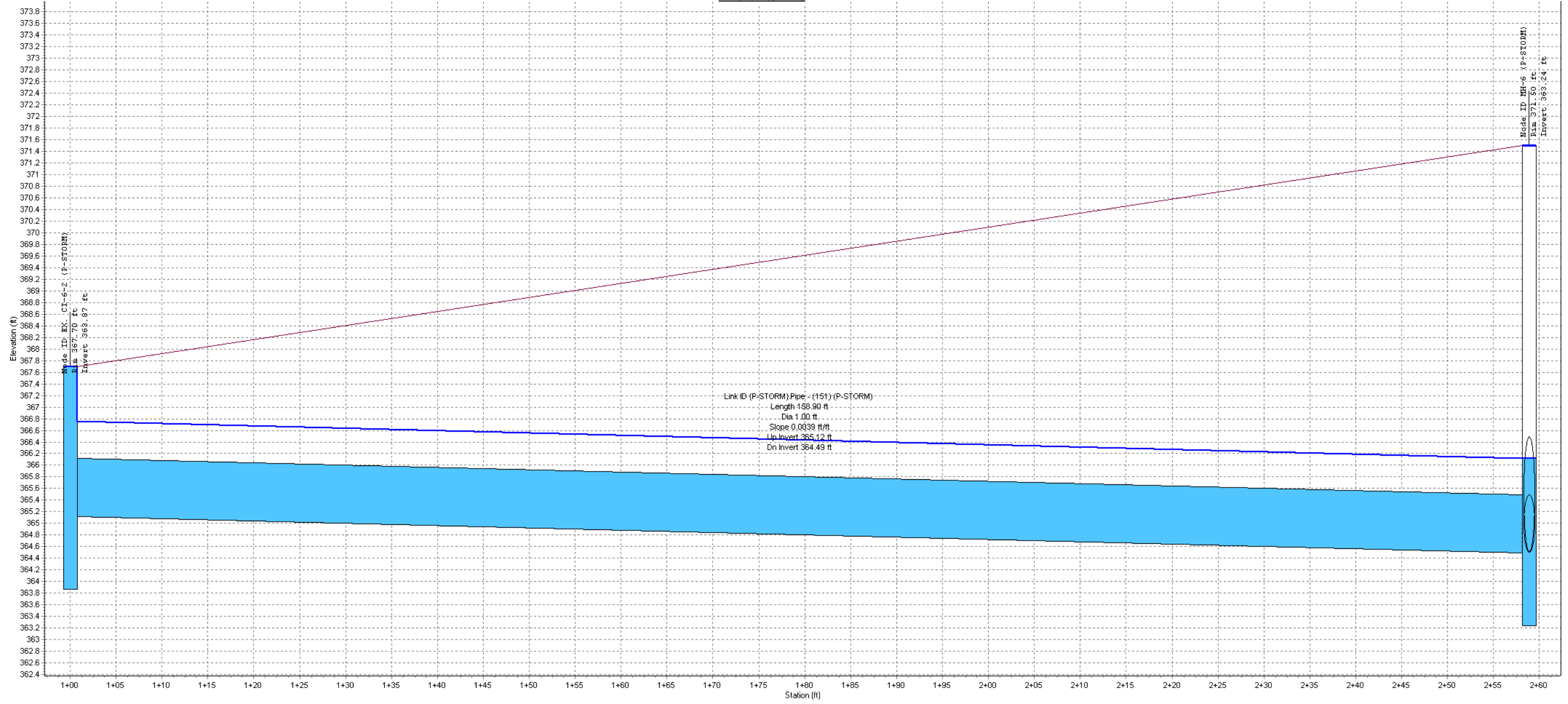




EX-CI-6-1 to MH-6

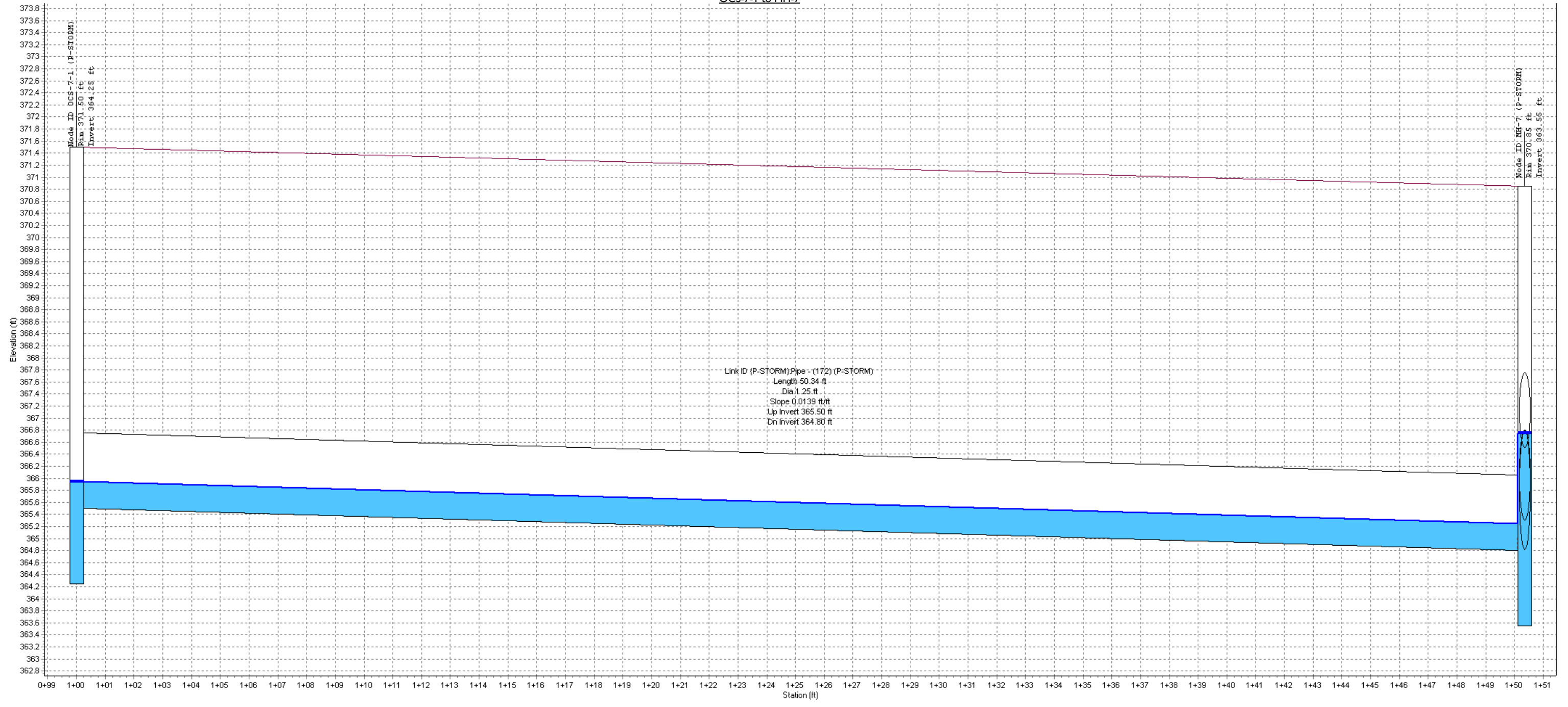


EX-CI-6-2 to MH-6

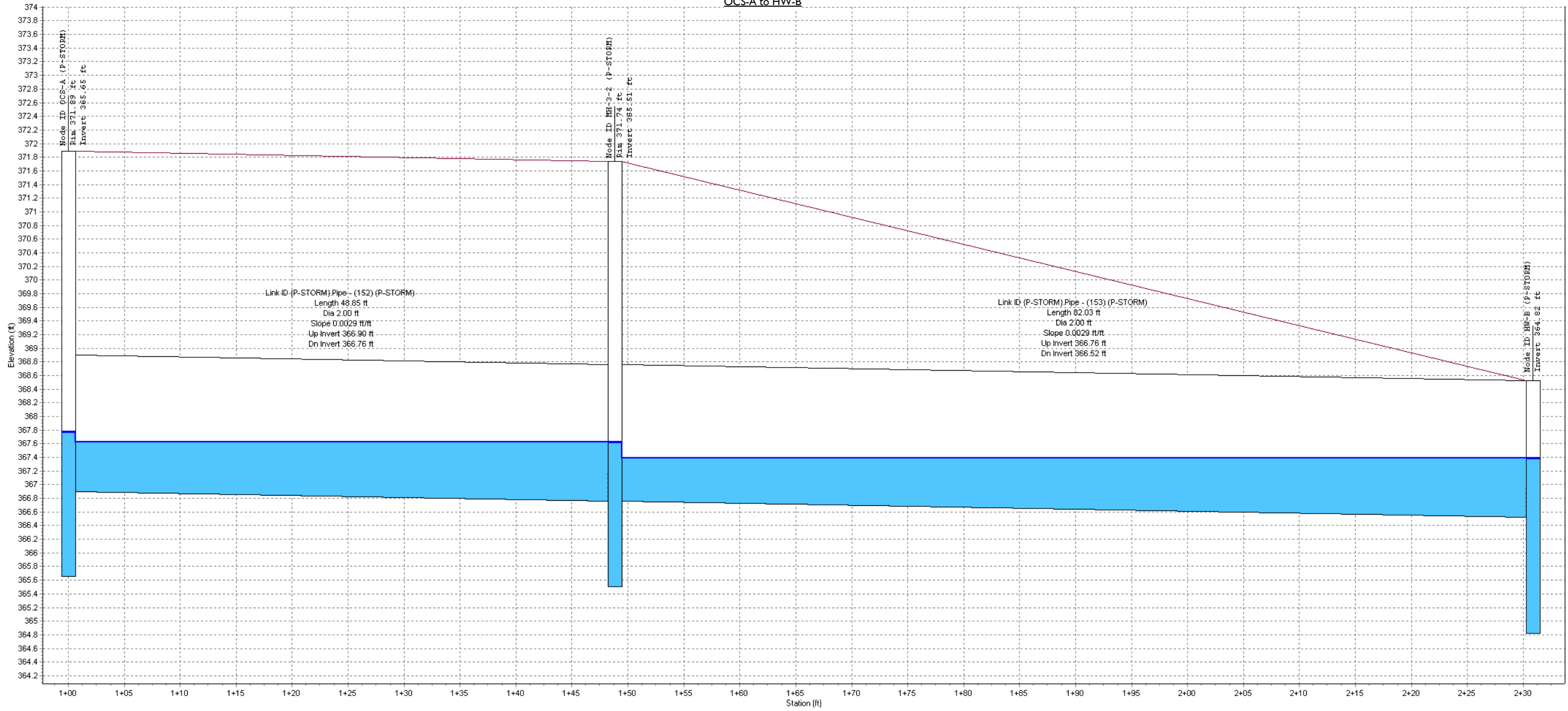




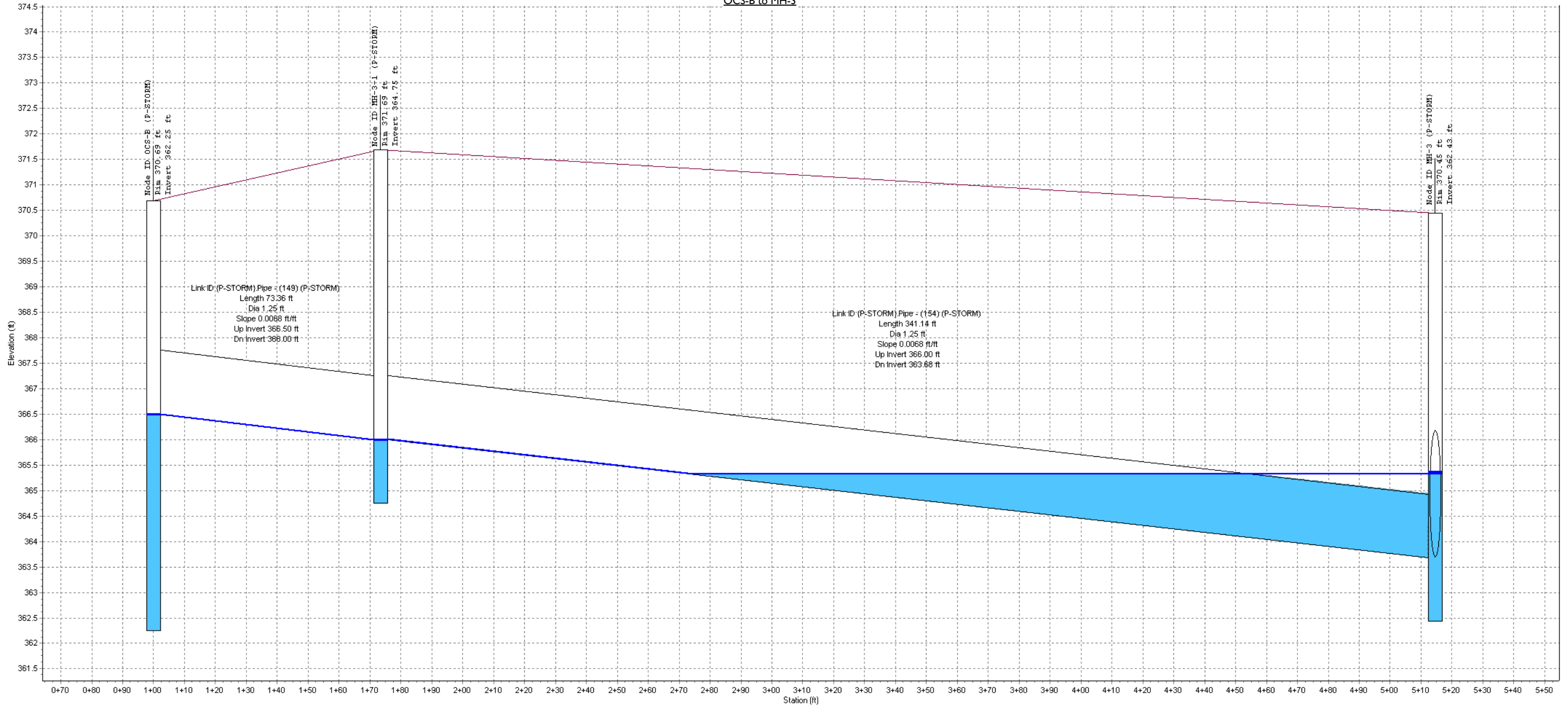
OCS-7-1 to MH-7



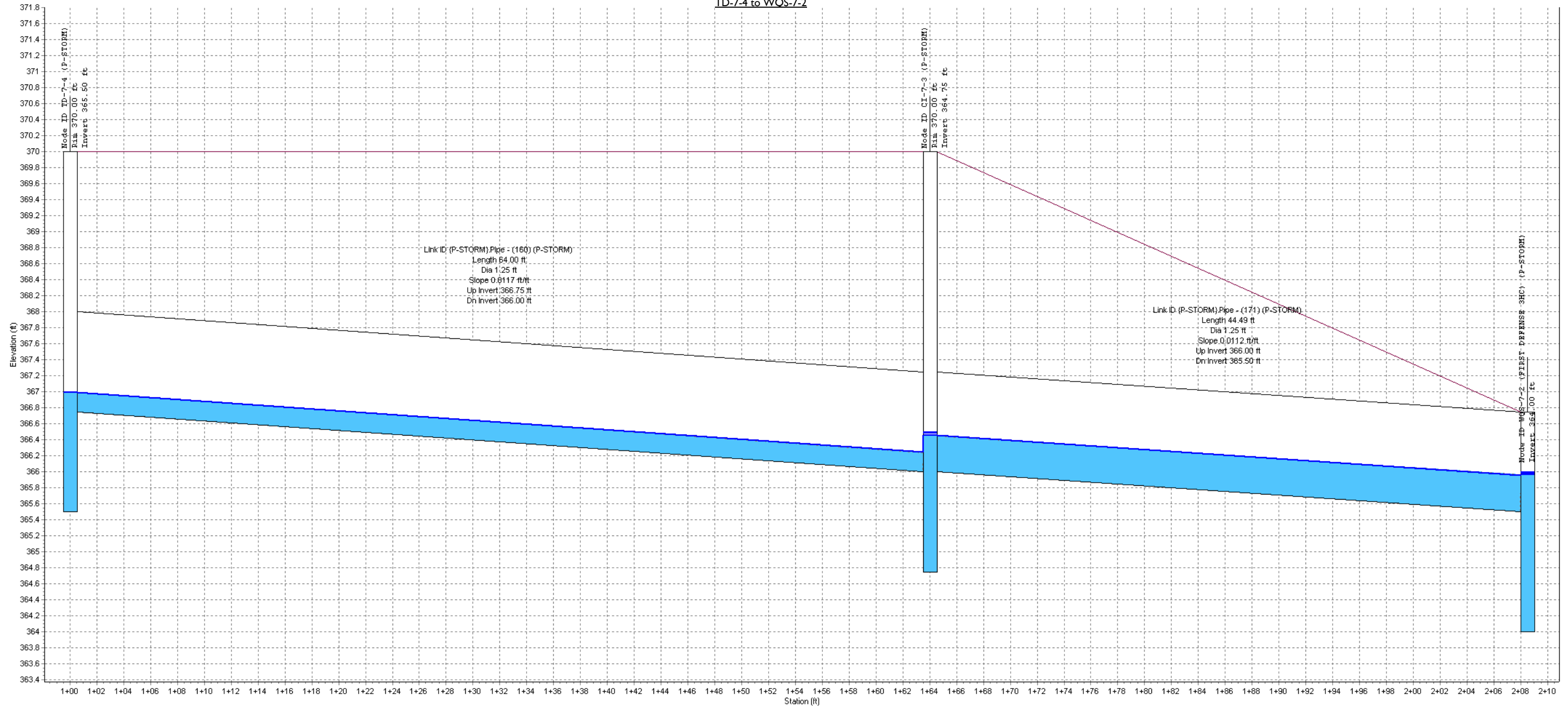
OCS-A to HW-B



OCS-B to MH-3



TD-7-4 to WQS-7-2



***APPENDIX I***

***DRAWINGS***



# NEW YORK STATE INTERSTATE ROUTE 684

NEW YORK STATE DEPARTMENT OF PUBLIC WORKS SURVEY BASELINE

COVERAGE SUMMARY LEGEND	
[Symbol]	EXISTING IMPERVIOUS AREAS (HYDROLOGIC SOIL GROUP B)
[Symbol]	EXISTING GRASSED AREA (HYDROLOGIC SOIL GROUP B)
[Symbol]	EXISTING WOODS AREA (HYDROLOGIC SOIL GROUP B)
[Symbol]	EXISTING WOODS AREA (HYDROLOGIC SOIL GROUP D)
[Symbol]	EXISTING WOODS AREA (HYDROLOGIC SOIL GROUP E)

LEGEND	
[Symbol]	EXISTING PROPERTY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING EASEMENT LINE
[Symbol]	EXISTING WETLAND LINE AND DELINEATION
[Symbol]	EXISTING BUILDING OVERHANG
[Symbol]	EXISTING BUILDING LINE
[Symbol]	EXISTING PAVEMENT EDGE
[Symbol]	EXISTING CURB LINE
[Symbol]	EXISTING CONTOUR
[Symbol]	EXISTING INDEX CONTOUR
[Symbol]	EXISTING STONE WALL
[Symbol]	EXISTING RETAINING WALL
[Symbol]	EXISTING GUIDE RAIL
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING TREE AND DESIGNATION
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING DIRECTIONAL ARROWS
[Symbol]	EXISTING PAINT
[Symbol]	EXISTING PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
[Symbol]	EXISTING PEDESTRIAN CROSSING
[Symbol]	EXISTING STORM DRAIN LINE AND SIZE
[Symbol]	EXISTING SANITARY LINE AND SIZE
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING GAS LINE
[Symbol]	EXISTING OVERHEAD WIRES
[Symbol]	EXISTING DRAIN INLET
[Symbol]	EXISTING MANHOLE
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING GAS VALVE
[Symbol]	EXISTING WATER VALVE
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING SIGN
[Symbol]	DEEP HOLE AND TEST PIT LOCATION AND DESIGNATION
[Symbol]	EXISTING DRAINAGE DIVIDE
[Symbol]	LIMIT OF SOIL GROUPS LINE
[Symbol]	DRAINAGE DESIGN LINE
[Symbol]	TIME OF CONCENTRATION FLOW PATH
[Symbol]	SOIL DESIGNATION AND HYDROLOGIC SOIL GROUP



- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC AND UTILITY SURVEY," PREPARED BY JMC, PLLC, DATED NOVEMBER 26, 2019.
  - GEOLOGICAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM A FIELD INVESTIGATION CONDUCTED BY JMC, PLLC ON 11/15/2019.
  - THE WETLAND LIMITS DEPICTED ON THIS PLAN HAVE BEEN FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC ON 10/17/2019.

No.	Revision

**WMG ARMONK WAREHOUSE OWNER LLC**  
 4800 NORTH FEDERAL HWY., SUITE B-200-34  
 BOCA RATON, FL 33491  
**SGW ARCHITECTURE & DESIGN**  
 444 NORTH MICHIGAN AVENUE, SUITE 1850  
 CHICAGO, IL 60611

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC  
 JMC Site Development Consultants, LLC  
 John Mayer Consulting, Inc.  
 120 BEDFORD ROAD • ARMONK, NY 10504  
 voice 914.273.6225 • fax 914.273.2102  
 www.jmcpllc.com



**EXISTING DRAINAGE AREA MAP**  
 BAYSACE ARMONK  
 100 BUSINESS PARK DRIVE  
 TOWN OF NORTH CASTLE, NEW YORK

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 2209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 2209, SUBSECTION 2.

Drawn:	NC	Approved:	DL
Scale:	1" = 40'	Date:	08/02/2023
Project No:	22090	Zone:	ED

**DA-1**

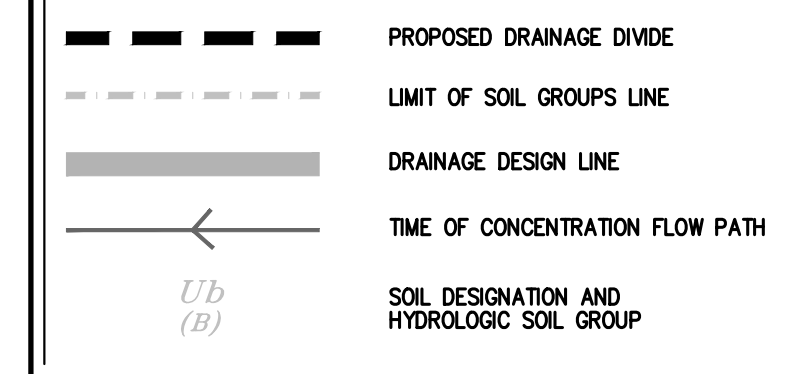
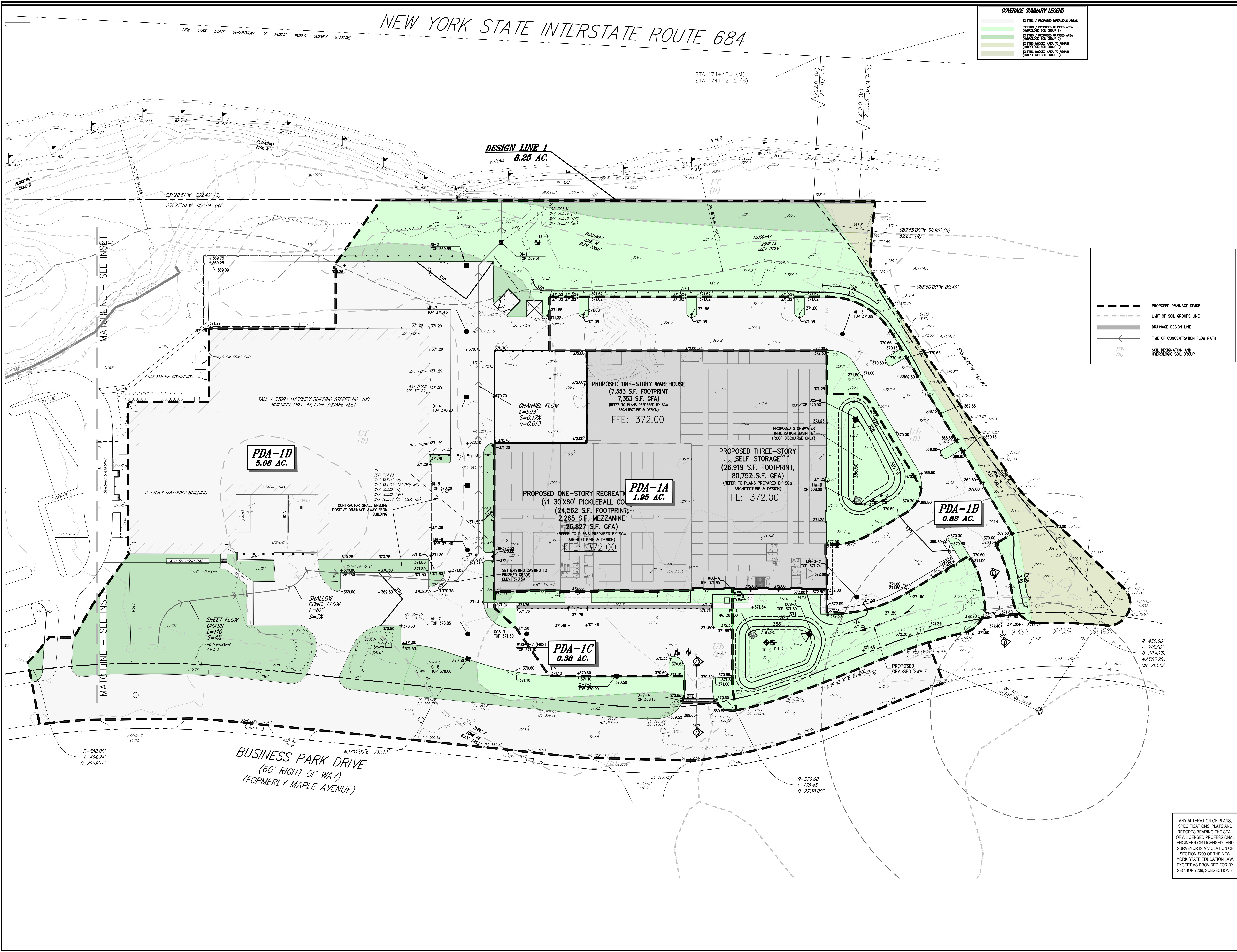
NOT FOR CONSTRUCTION



# NEW YORK STATE INTERSTATE ROUTE 684

NEW YORK STATE DEPARTMENT OF PUBLIC WORKS SURVEY BASELINE

COVERAGE SUMMARY LEGEND	
[Green Swatch]	EXISTING / PROPOSED ASPHALT AREAS
[Light Green Swatch]	EXISTING / PROPOSED GRADED AREA (HYDROLOGIC SOIL GROUP B)
[Lighter Green Swatch]	EXISTING / PROPOSED GRADED AREA (HYDROLOGIC SOIL GROUP D)
[Lightest Green Swatch]	EXISTING / PROPOSED GRADED AREA (HYDROLOGIC SOIL GROUP E)
[Dotted Swatch]	EXISTING WOODS AREA TO REMAIN (HYDROLOGIC SOIL GROUP B)
[Dotted Swatch]	EXISTING WOODS AREA TO REMAIN (HYDROLOGIC SOIL GROUP D)
[Dotted Swatch]	EXISTING WOODS AREA TO REMAIN (HYDROLOGIC SOIL GROUP E)



**PDA-1D**  
5.08 AC.

**PDA-1A**  
1.95 AC.

**PDA-1B**  
0.82 AC.

**PDA-1C**  
0.38 AC.

**BUSINESS PARK DRIVE**  
(60' RIGHT OF WAY)  
(FORMERLY MAPLE AVENUE)

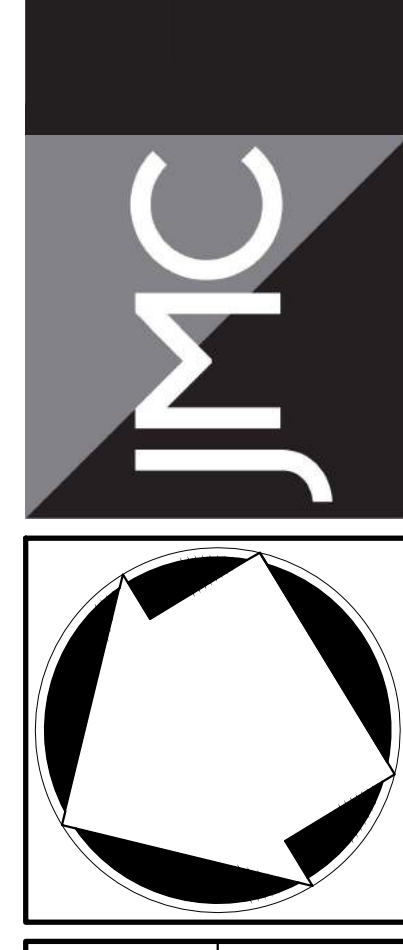
No.	Date	Revision

**WMC ARMONK WAREHOUSE OWNER LLC**  
4800 NORTH FEDERAL HWY., SUITE B-200-34  
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**PROPOSED DRAINAGE AREA MAP**

**BAYSACE ARMONK**  
100 BUSINESS PARK DRIVE  
TOWN OF NORTH CASTLE, NEW YORK

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Client:	NC	Approved:	DL
Scale:	1" = 40'	Date:	08/02/2023
Project No:	22090	Drawn By:	PJA
Drawing No:	DA-2		

NOT FOR CONSTRUCTION



