

P0595-015
June 16, 2023

Mr. Peter Britz, Director of Planning and Sustainability
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: **Amended Site Review Permit Application
Proposed Fidelitone Facility – 100 New Hampshire Avenue**

Dear Peter:

On behalf of Aviation Avenue Group, LLC, we are pleased to submit the following amended information to support a request from the Planning Board for a recommendation of approval to the Pease Development Authority (PDA) for an Amended Site Plan Review Permit for the above referenced project:

- One (1) copy of the PDA Application for Site Review, dated June 16, 2023;
- One (1) copy of the Owner Authorization, dated October 25, 2022;
- One (1) full size & one (1) half size copy of the Site Plan Set, last revised June 16, 2023;
- One (1) copy of the Truck Turning Exhibit, last revised June 16, 2023;
- One (1) copy of the Drainage Analysis, last revised June 16, 2023;
- One (1) copy of the Trip Generation Memorandum, dated June 16, 2023;

On April 20, 2023, the Planning Board recommended approval to the PDA for an advanced manufacturing facility at 100 New Hampshire Avenue. The project is seeking amendments to the previously approved Site Plan for the applicant's prospective tenant, Fidelitone, which is a supply chain management company. The amended project consists of the construction of Fidelitone's facility, a proposed ±101,200 SF footprint that includes ±4,700 SF of office space and associated site improvements the consist of parking, loading docks, improvements to Rochester Avenue, pedestrian sidewalks, underground utilities, stormwater management, lighting and landscaping.

On June 15, 2023, the PDA Board granted concept approval for Fidelitone's facility. Thus, we respectfully request to be placed on the Technical Advisory Committee (TAC) meeting agenda for the July 5, 2023, meeting. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,
TIGHE & BOND, INC.



Patrick M. Crimmins, PE
Vice President



Neil A. Hansen, PE
Project Manager

Copy: Aviation Avenue Group, LLC (via email)
Pease Development Authority



Application for Site Review

For PDA Use Only			
Date Submitted: _____	Municipal Review: _____	Fee: _____	
Application Complete: _____	Date Forwarded: _____	Paid: _____	Check #: _____

Applicant Information

Applicant: Aviation Avenue Group, LLC	Agent: Tighe & Bond
Address: 210 Commerce Way, Suite 300, Portsmouth, NH	Address: 177 Corporate Drive Portsmouth, NH
Business Phone: 603-430-4000	Business Phone: 603-433-8818
Mobile Phone: _____	Mobile Phone: _____
Fax: 603-430-8940	Fax: _____

Site Information


Portsmouth Tax Map: 308	Lot #: 1	Zone: Pease Industrial (PI)
Site Address / Location : 80 Rochester Ave (100 New Hampshire Ave)		
Site Address / Location :		Area of On-site Wetlands:

Activity Information

Change of Use: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Existing Use: <u>Vacant</u>
Proposed Use: <u>Manufacturing</u>	
Description of Project: The proposed project is for the construction of a ±101,200 SF Fidelitone facility including ±4,700 SF of office space, parking areas, loading dock areas, minor realignment of a portion of Rochester Avenue, and associated site improvements consisting of underground utilities, landscaping, lighting, and a stormwater management system.	
<p><i>All above information shall be shown on a site plan submitted with this application. Provide 3 full size hard copies and one PDF copy of all application materials as well as one half-size set of drawings to PDA. Applicant shall supply additional copies as may be required by applicable municipality. Refer to Chapter 400 of PDA land Use Controls for additional information.</i></p>	

Certification

I hereby certify under the penalties of perjury that the foregoing information and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I hereby apply for Site Review and acknowledge I will comply with all regulations and any conditions established by the Review Committee(s) and PDA Board in the development and construction of this project.



 Signature of Applicant

 Date

 Date

 Printed Name

AUTHORIZATION
100 New Hampshire Avenue
Map 308, Lot 1

The undersigned owner of the above referenced property hereby authorizes representatives of Bosen & Associates, PLLC, and Tighe & Bond to represent the company's interests before the Portsmouth land use boards and to submit any and all applications and materials related thereto on its behalf.

Date: October 25, 2022

Aviation Avenue Group, LLC

By: 

Name: JOHN STEBBINS

Title:

MANAGING MEMBER

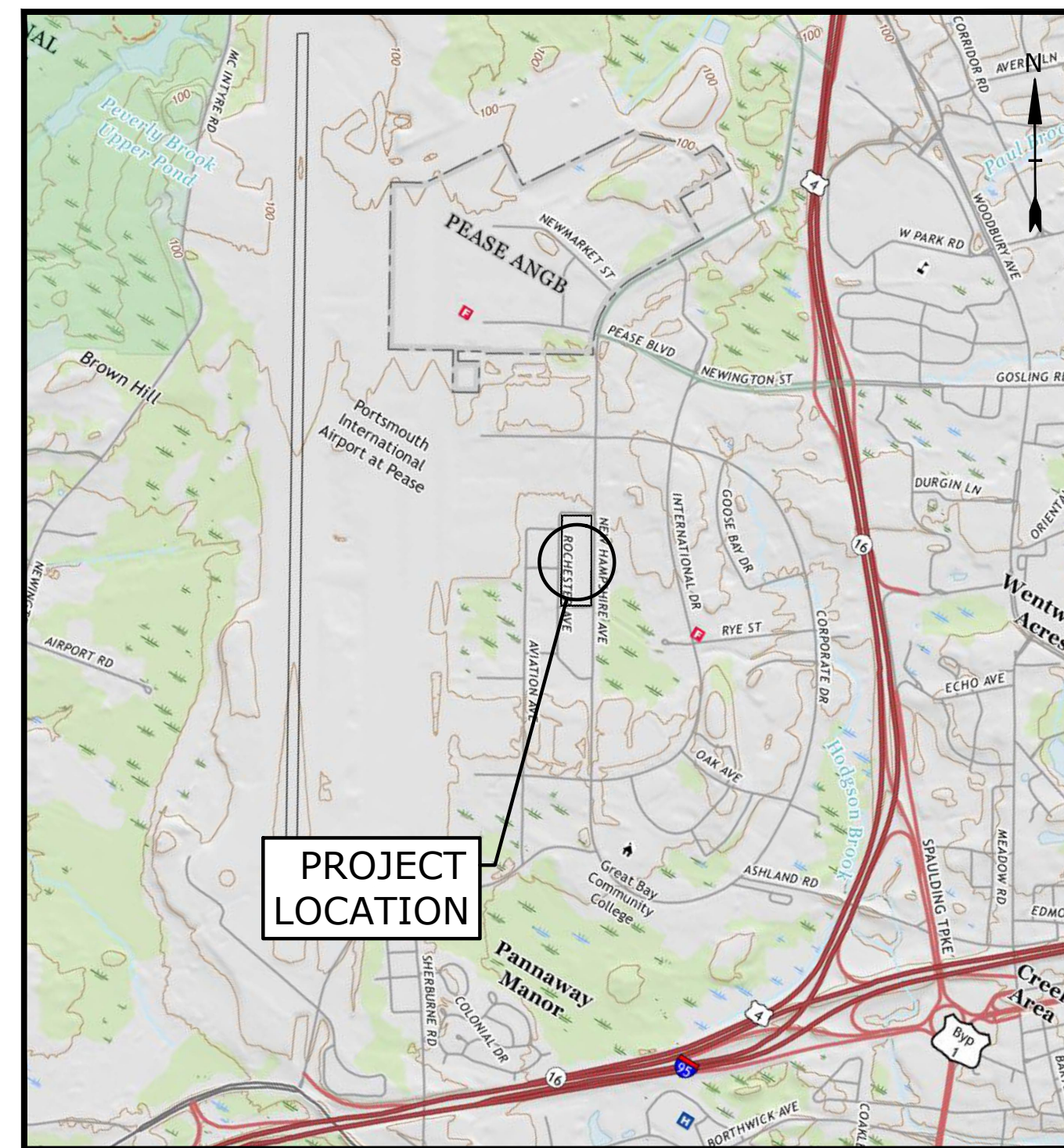
PROPOSED FIDELITONE FACILITY

100 NEW HAMPSHIRE AVENUE PORTSMOUTH, NEW HAMPSHIRE PERMIT DRAWINGS

DECEMBER 10, 2022

LAST REVISED: JUNE 16, 2023

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	06/16/2023
1 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
2 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
7 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
8 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
C-101	OVERALL EXISTING CONDITIONS / DEMOLITION PLAN	06/16/2023
C-101.1	EXISTING CONDITIONS / DEMOLITION PLAN	06/16/2023
C-101.2	EXISTING CONDITIONS / DEMOLITION PLAN	06/16/2023
C-102	OVERALL SITE PLAN	06/16/2023
C-102.1	SITE PLAN	06/16/2023
C-102.2	SITE PLAN	06/16/2023
C-103	OVERALL GRADING, DRAINAGE & EROSION CONTROL PLAN	06/16/2023
C-103.1	GRADING, DRAINAGE & EROSION CONTROL PLAN	06/16/2023
C-103.2	GRADING, DRAINAGE & EROSION CONTROL PLAN	06/16/2023
C-104	UTILITY PLAN	06/16/2023
C-105	OVERALL LANDSCAPE PLAN	06/16/2023
C-105.1	LANDSCAPE PLAN	06/16/2023
C-105.2	LANDSCAPE PLAN	06/16/2023
C-501	EROSION CONTROL NOTES & DETAILS SHEET	06/16/2023
C-502	DETAILS SHEET	06/16/2023
C-503	DETAILS SHEET	06/16/2023
C-504	DETAILS SHEET	06/16/2023
C-505	DETAILS SHEET	06/16/2023
C-506	DETAILS SHEET	06/16/2023
A1.03	PROPOSED EXTERIOR ELEVATIONS	06/16/2023
C-701	PHOTOMETRICS PLAN	06/16/2023



LOCATION MAP
SCALE: 1" = 2,000'

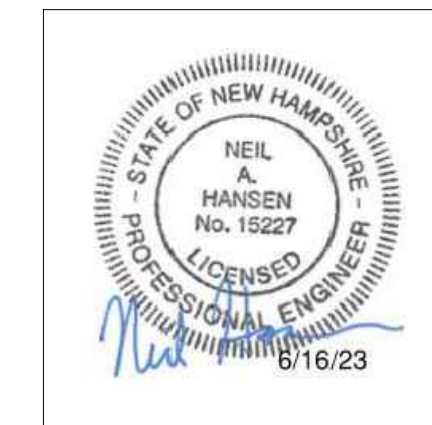
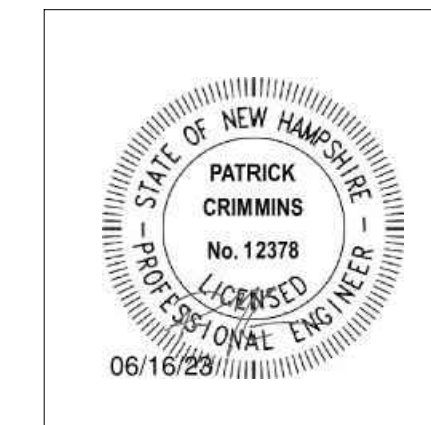
WILDLIFE PROTECTION NOTES:

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NHB23-0148, PROPOSED ADVANCED MANUFACTURING FACILITY, WILDLIFE SPECIES OBSERVATION.
- PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION AS FEASIBLE.
- IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04.
- THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

PREPARED BY:

Tighe & Bond

177 Corporate Drive
Portsmouth New Hampshire, 03801
603.433.8818



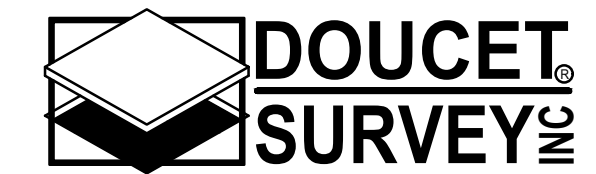
LESSOR:

Pease Development Authority
55 International Drive
Portsmouth, NH 03801
603.433.6088

APPLICANT:

Aviation Avenue Group, LLC
210 Commerce Way, Suite 300
Portsmouth New Hampshire, 03801
603.427.5500

SURVEY CONSULTANT:



Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
<http://www.doucetsurvey.com>



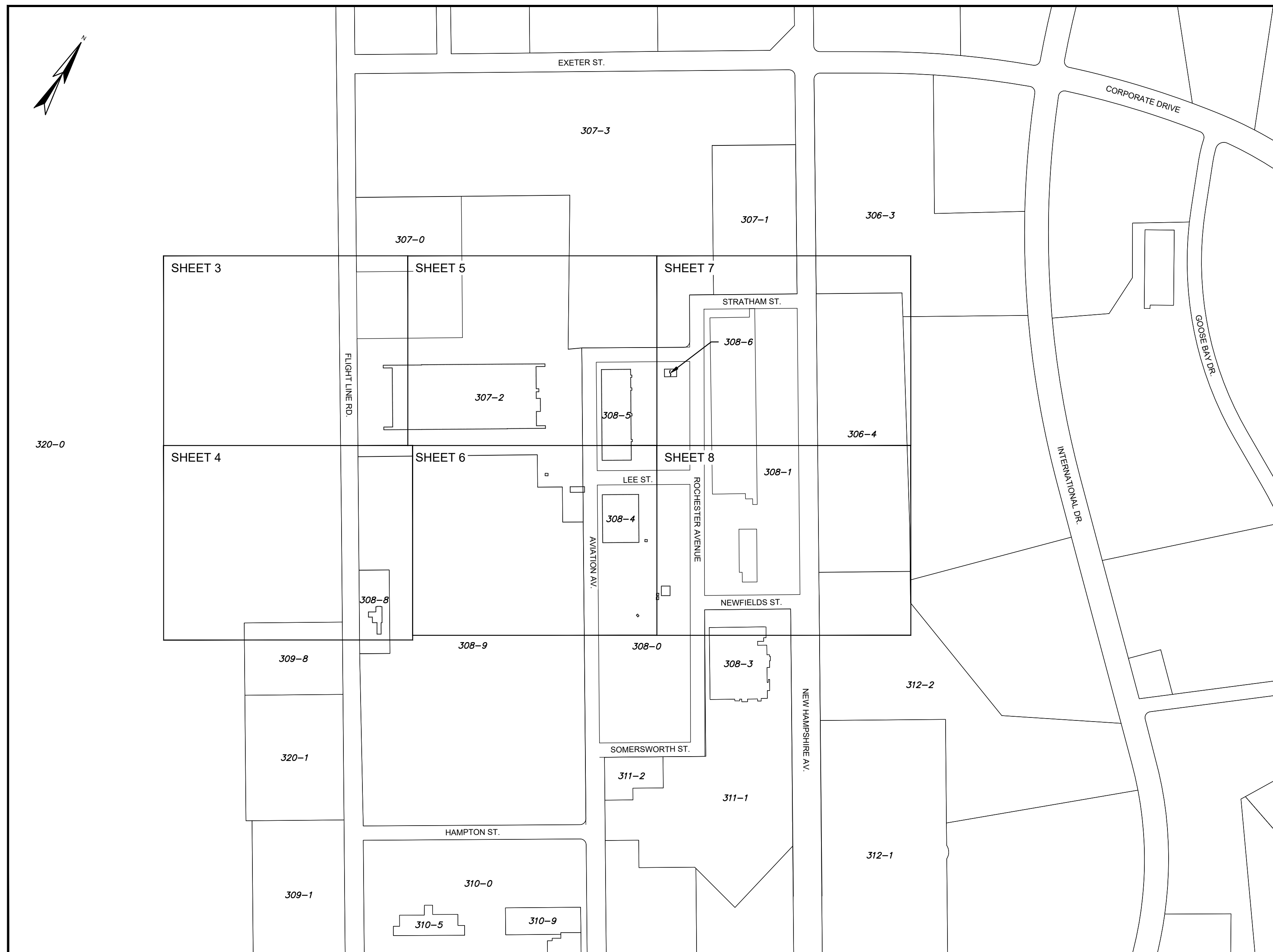
NOTES:

- REFERENCE: PEASE HANGAR 227 AREA (ENCOMPASSING PARTS OF NEW HAMPSHIRE AVE, AVIATION AVE, STRATHAM ST, ROCHESTER AVE, NEWFIELD ST, LEE STREET, & FLIGHTLINE ROAD IN PORTSMOUTH, NH) D.S.I. PROJECT NO. 7239
- OWNER OF RECORD: PEASE DEVELOPMENT AUTHORITY (ALL BUT ONE PARCEL) 55 INTERNATIONAL DRIVE PORTSMOUTH NH 03801

NEW ENGLAND TELEGRAPH & TELEPHONE (MAP 308 LOT 6 ONLY) NKA FAIRPOINT COMMUNICATIONS 770 ELM STREET MANCHESTER, NH 03101
- FIELD SURVEY PERFORMED BY DOUCET SURVEY LLC STAFF DURING JANUARY & FEBRUARY 2022 USING A TRIMBLE S7 TOTAL STATION AND A TRIMBLE R10 SURVEY GRADE GPS WITH A TRIMBLE TSC3 DATA COLLECTOR AND A SOKKIA B21 AUTO LEVEL. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.
- HORIZONTAL DATUM BASED ON NAD83(2011) NEW HAMPSHIRE STATE PLANE COORDINATE ZONE (2800) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK INCLUDING OBSERVATIONS ON PRIMARY AIRPORT CONTROL STATION PSM C AND PSM D.
- VERTICAL DATUM IS BASED PRIMARY AIRPORT CONTROL STATION PSM C (NAVD88 ELEVATION = 78.70 AS PUBLISHED BY NATIONAL GEODETIC SURVEY).
- JURISDICTIONAL WETLANDS DELINEATED BY TIGHE & BOND DURING DECEMBER 2021 IN ACCORDING TO THE:
 - US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JANUARY, 1987).
 - REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION (2012).
 - NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). U.S. FISH AND WILDLIFE SERVICE (2013).
 - CODE OF ADMINISTRATIVE RULES. WETLANDS BOARD, STATE OF NEW HAMPSHIRE (CURRENT).
 - FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.0, 2016 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEHSTC (MAY 2017).
- PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.
- UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVED PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE.
- THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING; THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC. SEVERAL STRUCTURES SHOWN HEREON WERE INACCESSIBLE FOR INVERT MEASUREMENTS DUE TO WINTER CONDITIONS.
- DUE TO THE COMPLEXITY OF RESEARCHING ROAD RECORDS AS A RESULT OF INCOMPLETE, UNORGANIZED, INCONCLUSIVE, OBLITERATED, OR LOST DOCUMENTS, THERE IS AN INHERENT UNCERTAINTY INVOLVED WHEN ATTEMPTING TO DETERMINE THE LOCATION AND WIDTH OF A ROADWAY RIGHT OF WAY. THE EXTENT OF (THE ROAD(S)) AS DEPICTED HEREON IS/ARE BASED ON RESEARCH CONDUCTED AT THE PEASE DEVELOPMENT AUTHORITY (PDA), NHDOT, PORTSMOUTH ENGINEERING DEPARTMENT, AND ROCKINGHAM COUNTY REGISTRY OF DEEDS. AN OFFICIAL AT PDA ADVISED DOUCET SURVEY THAT THEY HAVE PREVIOUSLY SEARCHED AND BELIEVE THAT THERE WERE NEVER ANY LAYOUT PLANS DEVELOPED FOR THE RIGHT-OF-WAYS AT PEASE. ROAD LAYOUTS FOR THE STREETS SHOWN HEREON WERE ALSO NOT FOUND AT NHDOT PROJECT VIEWER OR AT THE PORTSMOUTH CITY ENGINEERING OFFICES.
- ALL UNDERGROUND UTILITIES (ELECTRIC, GAS, TEL. WATER, SEWER DRAIN SERVICES) ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.
- AERIAL TOPOGRAPHY WAS CONDUCTED BY EASTERN TOPOGRAPHICS FROM IMAGES TAKEN DURING DECEMBER 2021 WITH A PHOTO SCALE OF 40 FEET. AERIAL MAPPING CONTOURS AND OBJECTS SHOWN WITHIN OBSCURED AREAS ARE APPROXIMATE AND SHOULD BE VERIFIED BEFORE USE FOR DESIGN & CONSTRUCTION PURPOSES.
- THIS FIELD SURVEY WAS PERFORMED IN WINTER CONDITIONS WITH SNOW AND ICE COVER ON THE GROUND. A SITE CHECK IS RECOMMENDED IN THE SPRING TO ENSURE THE COMPLETENESS/ACCURACY OF THE INFORMATION SHOWN HEREON.
- THIS PLAN WAS PREPARED FROM RECORD RESEARCH, OTHER MAPS, LIMITED FIELD MEASUREMENTS AND OTHER SOURCES. IT IS NOT TO BE CONSTRUED AS A PROPERTY / BOUNDARY SURVEY FOR THE COMPLETE SET OF TAX MAP AND LOTS SHOWN HEREON, AND IS SUBJECT TO SUCH FACTS AS SAID SURVEYS MAY DISCLOSE. THIS PLAN DOES, HOWEVER, ILLUSTRATE THE BOUNDARIES OF THE FOLLOWING TAX MAP AND LOT NUMBERS PER THE REFERENCE PLANS INDICATED BELOW AND RECORD MONUMENTS RECOVERED BY THIS SURVEY:
 - MAP 307 LOT 1 (PER REF. PLAN 3)
 - MAP 307 LOT 2 (PER REF. PLAN 7)
 - MAP 306 LOT 4 (PER REF. PLAN 12)
- THE LOCATIONS OF THE VARIOUS RESTRICTED ZONES CALLED FOR IN REFERENCE PLANS 8, 9, 10, 12, AND 14 ARE SHOWN HEREON BASED ON COORDINATE VALUES PROVIDED IN THOSE PLANS AND/OR FEATURES SHOWN IN THOSE PLANS (E.G. MONITORING WELLS) THAT WERE LOCATED DURING THIS SURVEY.

REFERENCE PLANS:

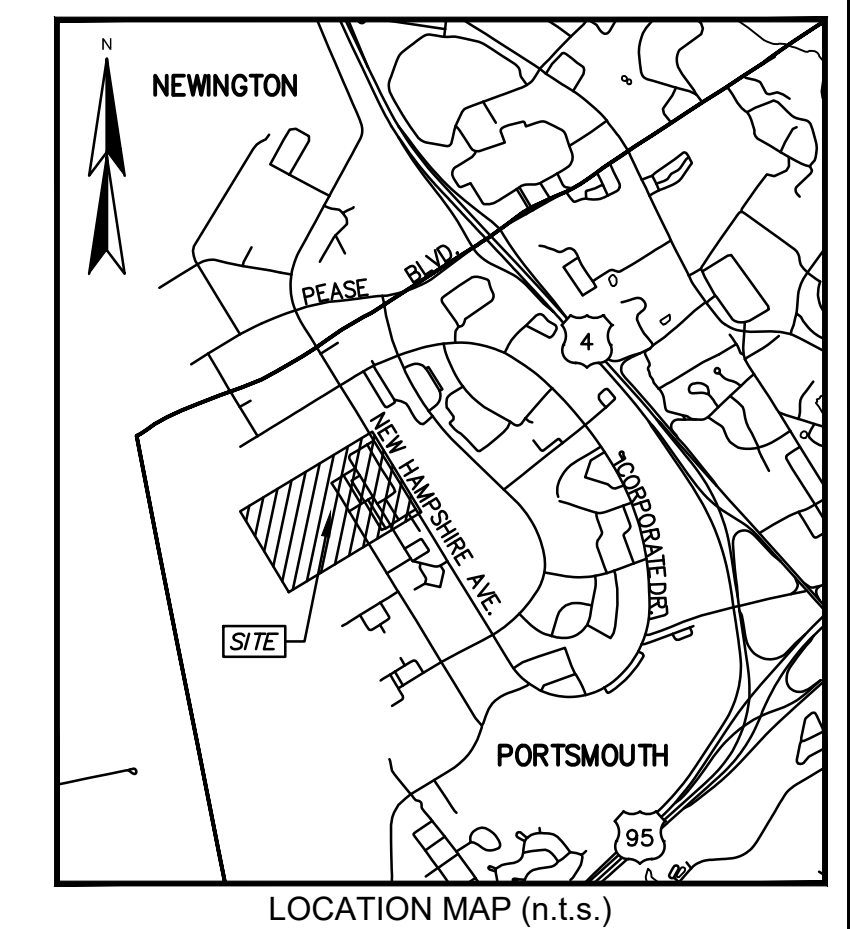
- SUBLEASE BOUNDARY PLAN FOR PEASE DEVELOPMENT AUTHORITY - BUILDINGS 115 AND 116 - 31 ROCHESTER AVENUE - PEASE INTERNATIONAL TRADEPORT - PORTSMOUTH, N.H.: DATED NOV. 6, 1995 AND LAST REVISED (REV-2) ON 03/03/97 BY RICHARD P. MILLETTE AND ASSOCIATES.
- SUBDIVISION PLAN FOR 5, 7, 19, AND 21 HAMPTON STREET - PORTSMOUTH, NH - LAND OF PEASE DEVELOPMENT AUTHORITY LEASED TO EXECUTIVE AIRDOCK, LLC (A PORTION OF TAX MAP 310, LOT 0) HAMPTON ST. & AVIATION AVE. PORTSMOUTH, NEW HAMPSHIRE DATED JULY 1, 2021 AND REVISED (REV-1) NOV 30, 2021 BY DOUCET SURVEY LLC
- ALTA/NSPS LAND TITLE SURVEY FOR CINTHESYS REAL ESTATE MANAGEMENT LLC (LESSEE) C/O THE KANE COMPANY AND PEASE DEVELOPMENT AUTHORITY (LESSOR) OF TAX MAP 307, LOT 1 - 68 NEW HAMPSHIRE AVE. PORTSMOUTH, NEW HAMPSHIRE DATED DECEMBER 21, 2021 BY DOUCET SURVEY LLC.
- APPENDIX VI MUNICIPAL SERVICES AGREEMENT BETWEEN CITY OF PORTSMOUTH - TOWN OF NEWINGTON - AND PEASE DEVELOPMENT AUTHORITY EFFECTIVE AS OF JULY 1, 1998.
- SUBDIVISION PLAN 68 NEW HAMPSHIRE AVENUE FOR LONDAMIA, INC. DATED 29-SEPT-1998 BY KIMBALL CHASE. R.C.R.D. PLAN 26777.
- SUBDIVISION PLAN - AIR CARGO FACILITY 139 FLIGHTLINE ROAD DATED 20-FEB-1998 AND REVISED (REV-1) 26-OCT-98 BY KIMBALL CHASE. R.C.R.D. PLAN 26778.
- SUBDIVISION PLAN FOR LAND TO BE LEASED TO PAN-AM 14 AVIATION AVE. PEASE INTERNATIONAL TRADEPORT PORTSMOUTH, NH LAST REVISED (REV-3) ON AUG. 26, 1999 BY EMANUEL ENGINEERING, INC. R.C.R.D. PLAN 27540.
- EXCEPTED SUBPARCEL ZONE 3 PEASE AIR FORCE BASE PORTSMOUTH AND NEWINGTON, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA DATED OCTOBER 22, 2002 AND LAST REVISED (REV-3) 10/22-03 BY TFM. R.C.R.D. PLAN 31494.
- PLAN OF GROUNDWATER MANAGEMENT ZONE - ZONE 3 - PEASE AIR FORCE BASE PORTSMOUTH AND NEWINGTON, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA DATED JUNE 4, 2002 AND LAST REVISED (REV-2) 6/27/02 BY TFM. R.C.R.D. PLAN 31503.
- PLAN OF USE RESTRICTION ZONE SITE 32 PEASE AIR FORCE BASE PORTSMOUTH, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA DATED JULY 11, 2002 AND REVISED (REV-1) 7/18/02 BY TFM. R.C.R.D. PLAN 31506.
- PLAN OF USE RESTRICTION ZONE SITE 81 PEASE AIR FORCE BASE PORTSMOUTH, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA DATED JUNE 10, 2005 BY TFM. R.C.R.D. PLAN 33301.
- PLAN OF USE RESTRICTION ZONE SITE 72 - BASE MOTOR POOL - PEASE AIR FORCE BASE PORTSMOUTH, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA DATED JUNE 10, 2005 BY TFM. R.C.R.D. PLAN 33302.
- SUBDIVISION PLAN DEPICTING PORTSMOUTH TAX MAP 306 LOT 3 DATED AUGUST 1, 2005 AND LAST REVISED (REV-2) SAME DATE AUGUST 1, 2005 BY ALTUS ENGINEERING. R.C.R.D. PLAN 33592.
- USE RESTRICTION ZONE - ZONE 3 - PEASE AIR FORCE BASE PORTSMOUTH AND NEWINGTON, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA DATED JUNE 10, 2005 AND REVISED (REV-1) JUNE 17, 2005 BY TFM. R.C.R.D. PLAN 33593.
- SUBDIVISION PLAN FOR 75 NEW HAMPSHIRE LLC - 75 NEW HAMPSHIRE AVENUE - 50 INTERNATIONAL DRIVE & 80 INTERNATIONAL DRIVE (TAX MAP 306, LOTS 1, 2, 4 & 5) PEASE INTERNATIONAL TRADEPORT ROCKINGHAM COUNTY PORTSMOUTH, NEW HAMPSHIRE DATED AUG 14, 2007 AND LAST REVISED (REV-4) 10/15/07 BY DOUCET SURVEY INC. R.C.R.D. PLAN 35260.
- PLAN FOR NEW HAMPSHIRE AIR NATIONAL GUARD PEASE BLVD, AIRLINE AVE & NEW HAMPSHIRE AVE PEASE INTERNATIONAL TRADEPORT, NEWINGTON ROCKINGHAM COUNTY, NH DATED 7-DEC-2009 AND LAST REVISED 1/21/11 BY EASTERLY SURVEYING, INC.
- PROPOSED 4 STORY OFFICE BUILDING 100 NEW HAMPSHIRE AVENUE PORTSMOUTH, NH DATED NOVEMBER 16, 2018 AND LAST REVISED 12/04/18 BY HOYLE, TANNER & ASSOCIATES.



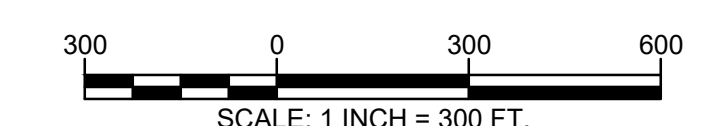
KEY MAP

LEGEND

<ul style="list-style-type: none"> --- LOT LINE - - - APPROXIMATE LOT LINE - - - APPROXIMATE ABUTTERS LOT LINE - - - EXISTING EASEMENT LINE - - - APPROXIMATE RIGHT-OF-WAY LINE o---o CHAIN LINK FENCE - - - FENCE - - - FENCE OBLSCURED OHW OVERHEAD WIRE SS SEWER LINE SD DRAIN LINE G GAS LINE W WATER LINE -100 MAJOR CONTOUR LINE -98 MINOR CONTOUR LINE -100 LIDAR MAJOR CONTOUR LINE -98 LIDAR MINOR CONTOUR LINE --- TREE LINE --- SHRUB LINE --- EDGE OF WETLAND --- EDGE OF WETLAND (PER CLIENT) --- EDGE OF WATER --- WATERCOURSE --- WETLAND AREA --- CONCRETE 	<ul style="list-style-type: none"> ○ MEDIUM LONE TREE ○ SMALL LONE TREE ○ UTILITY COVER ○ UTILITY COVER ○ FIRE HYDRANT ○ WATER GATE VALVE ○ GAS GATE VALVE ○ VENT PIPE ○ ELECTRIC BOX ○ TELEPHONE BOX ○ DRAIN ○ CATCH BASIN ○ DRAIN MANHOLE ○ FLARED END SECTION ○ MANHOLE ○ ELECTRIC MANHOLE ○ TELEPHONE MANHOLE ○ SEWER MANHOLE ○ CLEANOUT ○ FLAG POLE ○ MONITORING WELL LOCATION ○ ACCESSIBLE PARKING SPACE 	<ul style="list-style-type: none"> ▨ RIP RAP ▨ RETAINING WALL ▨ DRIVEWAY ▨ DRIVEWAY OBLSCURED ▨ ASPHALT TAXIWAY ▨ CONCRETE TAXIWAY ▨ CURB BOTTOM ▨ CURB BACK ▨ PIPELINES ○ UTILITY POLE ○ UTILITY POLE & GUY WIRE ○ UTILITY POLE W/LIGHT ○ UTILITY POLE OBLSCURED ○ LIGHT POLE ○ SIGN ○ SIGN (TWO POSTS) ○ BOUND FOUND ○ IRON PIPE/ROD FOUND ○ POST ○ POST ○ BOLLARD ○ LOCATED OBJECT 	<ul style="list-style-type: none"> ×100.0 TYP. BND. FND. L.P.F. CONG. GRAN. HDWL SDC "NP" "NT" "NTT" ACP CIP CMP RCP HDPE PVC UNK VCP TOP NM 	<ul style="list-style-type: none"> SPOT GRADE TYPICAL BOUND FOUND IRON PIPE FOUND CONCRETE HEADWALL SLOPED GRANITE CURB NO PARKING SIGN NO TRESPASSING SIGN NO THRU TRAFFIC SIGN ASBESTOS CEMENT PIPE CORRUGATED METAL PIPE REINFORCED CONCRETE PIPE HIGH DENSITY POLYETHYLENE PIPE POLYVINYL CHLORIDE PIPE UNKNOWN VITREOUS CLAY PIPE TOP OF PIPE NOT MEASURED
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LOCATION MAP (n.t.s.)



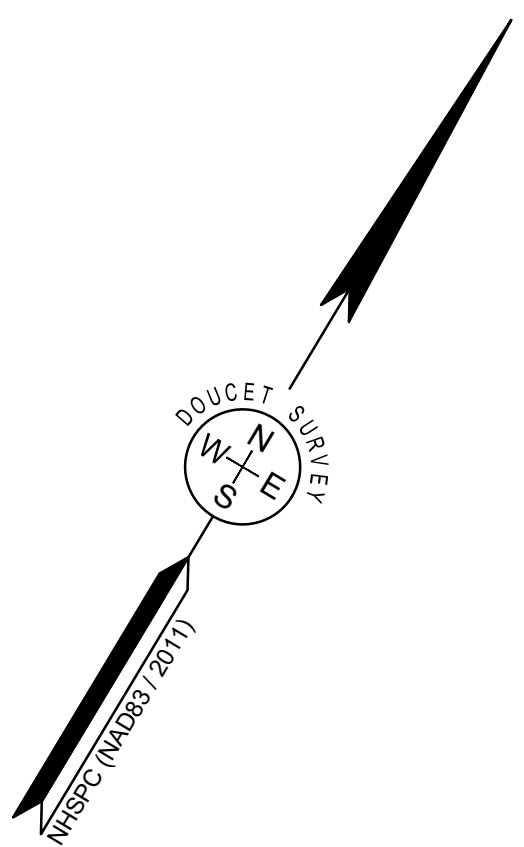
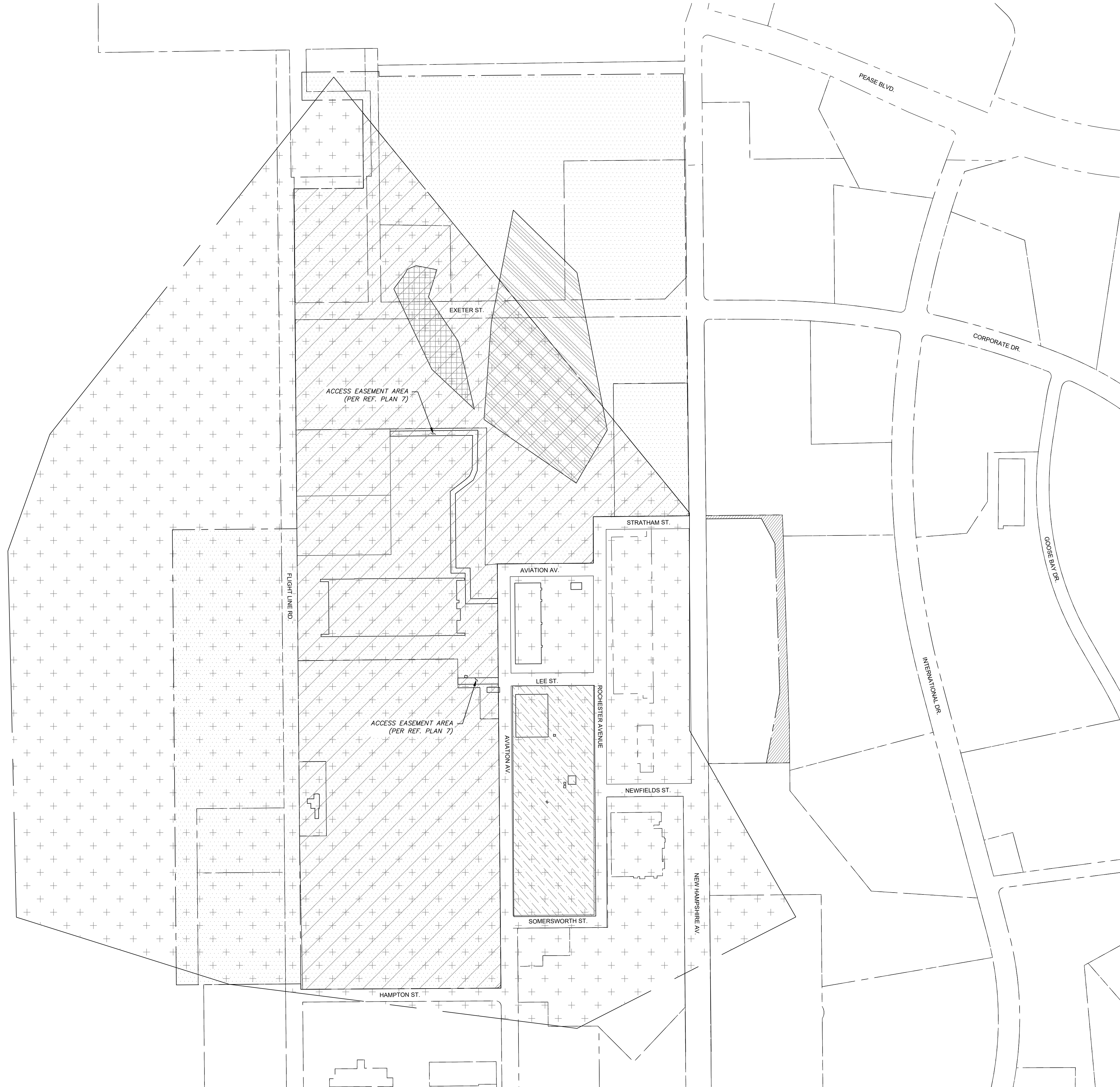
EXISTING CONDITIONS PLAN FOR TIGHE & BOND OF PEASE HANGAR 227 AREA PORTIONS OF AVIATION AVENUE, FLIGHTLINE ROAD, LEE STREET, NEWFIELDS STREET, NEW HAMPSHIRE AVENUE, ROCHESTER AVENUE AND STRATHAM STREET PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
1	09/21/22	UPDATED DMH 1925 OUTLET SIZE	W.D.C.

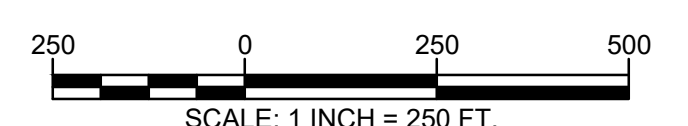
DRAWN BY:	W.D.C.	DATE:	FEBRUARY 2022
CHECKED BY:	M.J.C.	DRAWING NO.:	7239A
JOB NO.:	7239	SHEET:	1 OF 8

DOUCET SURVEY
 Serving Your Professional Surveying & Mapping Needs
 102 Kent Place, Newmarket, NH 03857 (603) 659-6560
 2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
 10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
<http://www.doucetsurvey.com>

FILE NAME: C:\Users\whitney\AppData\Local\Temp\MapInfo\7173\7133A (REV 1) 2022-09-21.dwg LAYOUT NAME: [Dwg] PLAN 03 PLOTTED: Wednesday, September 21, 2022 - 11:50am



- LEGEND**
- EXCEPTED SUBPARCEL ZONE 3 (PER REF. PLAN 8)
 - GROUNDWATER MANAGEMENT ZONE 3 (PER REF. PLAN 9)
 - USE RESTRICTION ZONE SITE 32 (PER REF. PLAN 10)
 - USE RESTRICTION ZONE SITE 81 (PER REF. PLAN 11)
 - USE RESTRICTION ZONE SITE 72 (PER REF. PLAN 12)
 - LIMIT OF DRAINAGE LICENSE RESERVED BY OWNER (PER REF. PLAN 13)
 - USE RESTRICTION ZONE SITE 3 (PER REF. PLAN 14)



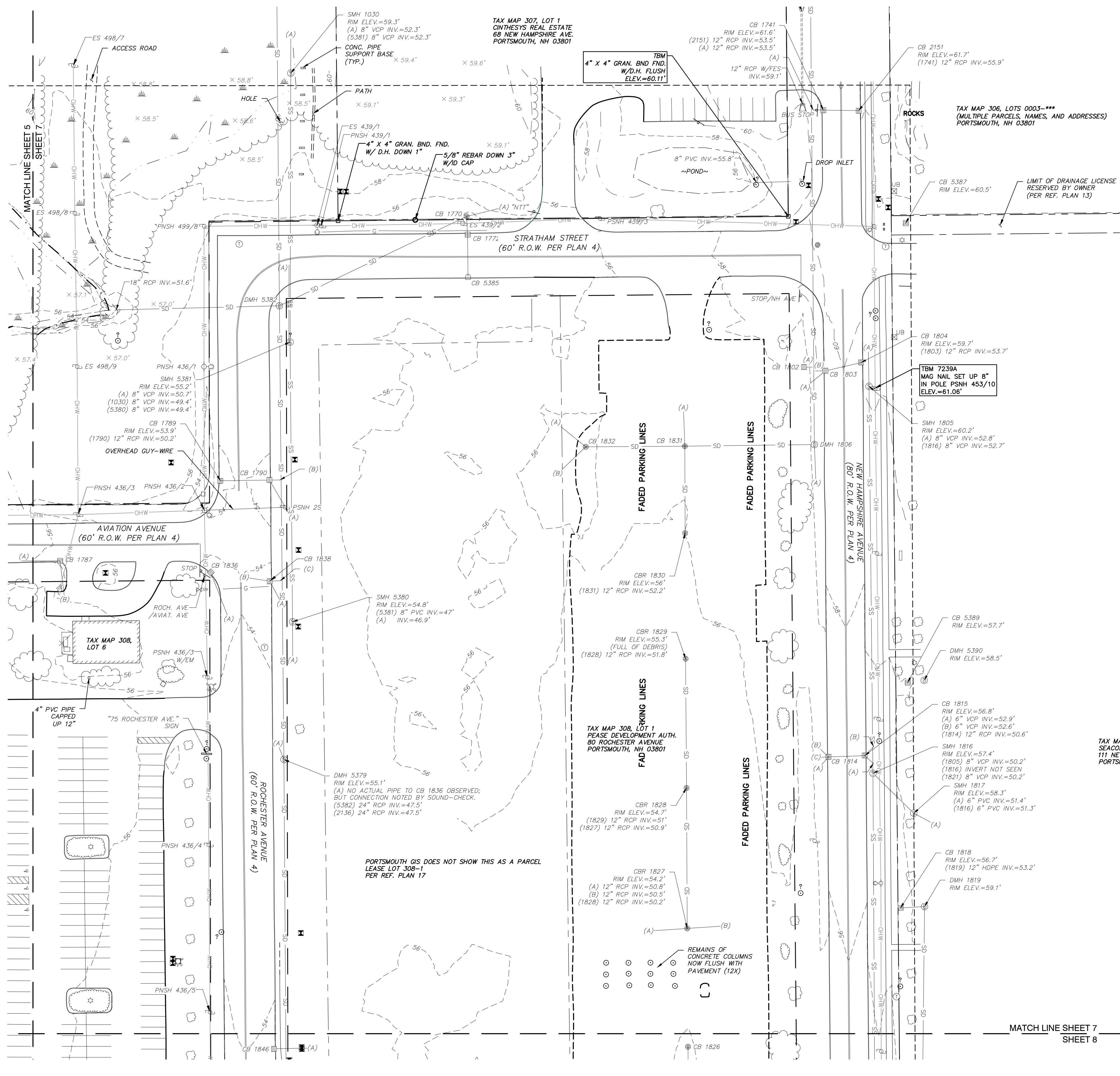
EXISTING CONDITIONS PLAN
 FOR
TIGHE & BOND
 OF
PEASE HANGAR 227 AREA
 PORTIONS OF AVIATION AVENUE,
 FLIGHTLINE ROAD, LEE STREET,
 NEWFIELDS STREET,
 NEW HAMPSHIRE AVENUE
 ROCHESTER AVENUE
 AND STRATHAM STREET
 PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	W.D.C. BY
1	09/21/22	UPDATED DMH 1925 OUTLET SIZE	W.D.C.

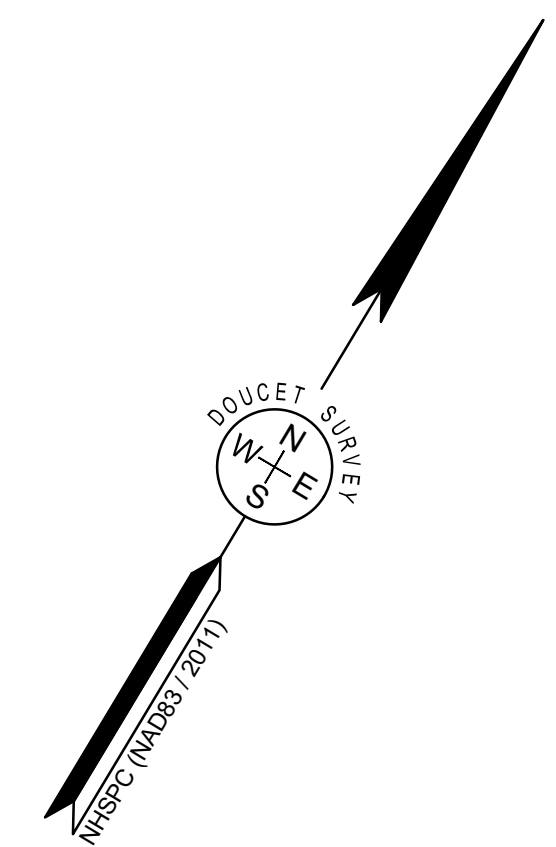
DRAWN BY:	W.D.C.	DATE:	FEBRUARY 2022
CHECKED BY:	M.J.C.	DRAWING NO.:	7239A
JOB NO.:	7239	SHEET:	2 OF 8

DOUCET SURVEY
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2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
<http://www.doucetsurvey.com>

FILE NAME: C:\Users\whitney\AppData\Local\Temp\MapInfo_71273334 (REV 1) 2022-09-21.dwg LAYOUT NAME: DTPG PLAN (7) PLOTTED: Wednesday, September 21, 2022 - 11:28am



DRAINAGE STRUCTURES	
CB 1770 RIM ELEV.=52.3' (1772) 12" RCP INV.=50.4' (A) 4" HDPE INV.=50.2' (5382) 15" RCP INV.=49.9' SUMP ELEV.=50.2'	CB 1831 RIM ELEV.=56.5' (1806) 12" RCP INV.=51.7' (1830) 12" RCP INV.=51.5' (A) 12" RCP INV.=51.5' (1832) 10" VCP INV.=51.5'
CB 1772 RIM ELEV.=54.1' (5385) 12" RCP INV.=50.5' (1770) 12" RCP INV.=50.3' DEBRIS=50.7'	CB 1832 RIM ELEV.=55' (A) 6" PVC INV.=53.1' (B) 6" PVC INV.=53' (1831) 10" VCP INV.=52.5'
CB 1787 RIM ELEV.=55.7' (A) 6" VCP INV.=51.1' NOTE: "A" DOES NOT CON. TO CB 1719 (B) 12" RCP INV.=51.0'	CB 1836 RIM ELEV.=53.6' (A) 12" RCP INV.=50.4' DEBRIS=50.4'
CB 1790 RIM ELEV.=53.8' (A) 6" UNK INV.=49.6' (1789) 12" RCP INV.=49.6' (B) 12" RCP INV.=49.6' TO REFUSAL=49.5'	CB 1838 RIM ELEV.=53.9' (A) 6" VCP INV.=49.5' (B) 18" RCP INV.=49.5' (C) 18" RCP INV.=49.4' DEBRIS=49.3'
CB 1802 RIM ELEV.=56.4' (A) 12" RCP INV.=52.5'	CB 1846 RIM ELEV.=53.8' (A) 12" RCP INV.=49.5' BROKEN BOTTOM=49.6'
CB 1803 RIM ELEV.=59.6' (A) 6" VCP INV.=55.3' (1804) 12" RCP INV.=51.1' (B) 12" RCP INV.=50.6'	DMH 5382 RIM ELEV.=55.4' (1770) 15" RCP INV.=49.1' (WETLAND INLET) 18" RCP INV.=49.0' (5383) 24" RCP INV.=48.7' (5379) 24" RCP INV.=48.7' DEBRIS=48.6'
DMH 1806 RIM ELEV.=58.5' (1831) 12" RCP INV.=50.6' (2152) 36" RCP INV.=49.0' (A) 36" RCP INV.=48.8' GIS SHOWS ONE STRUCTURE BETWEEN DMH 1806 & DMH 1925 (VERY CLOSE TO 1925) BUT IT WAS NOT FOUND BELOW SNOWBANKS.	CB 5385 RIM ELEV.=54.3' (1772) 12" RCP INV.=50.6' DEBRIS=50.7'
CB 1814 RIM ELEV.=56.8' (A) 6" VCP INV.=52' (B) 6" VCP INV.=51.9' (1815) 12" RCP INV.=49.3' (C) 12" RCP INV.=49.1'	



EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
OF
PEASE HANGAR 227 AREA
PORTIONS OF AVIATION AVENUE,
FLIGHTLINE ROAD, LEE STREET,
NEWFIELDS STREET,
NEW HAMPSHIRE AVENUE
ROCHESTER AVENUE
AND STRATHAM STREET
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	W.D.C. BY
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DRAWN BY:	W.D.C.	DATE:	FEBRUARY 2022
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JOB NO.:	7239	SHEET:	7 OF 8

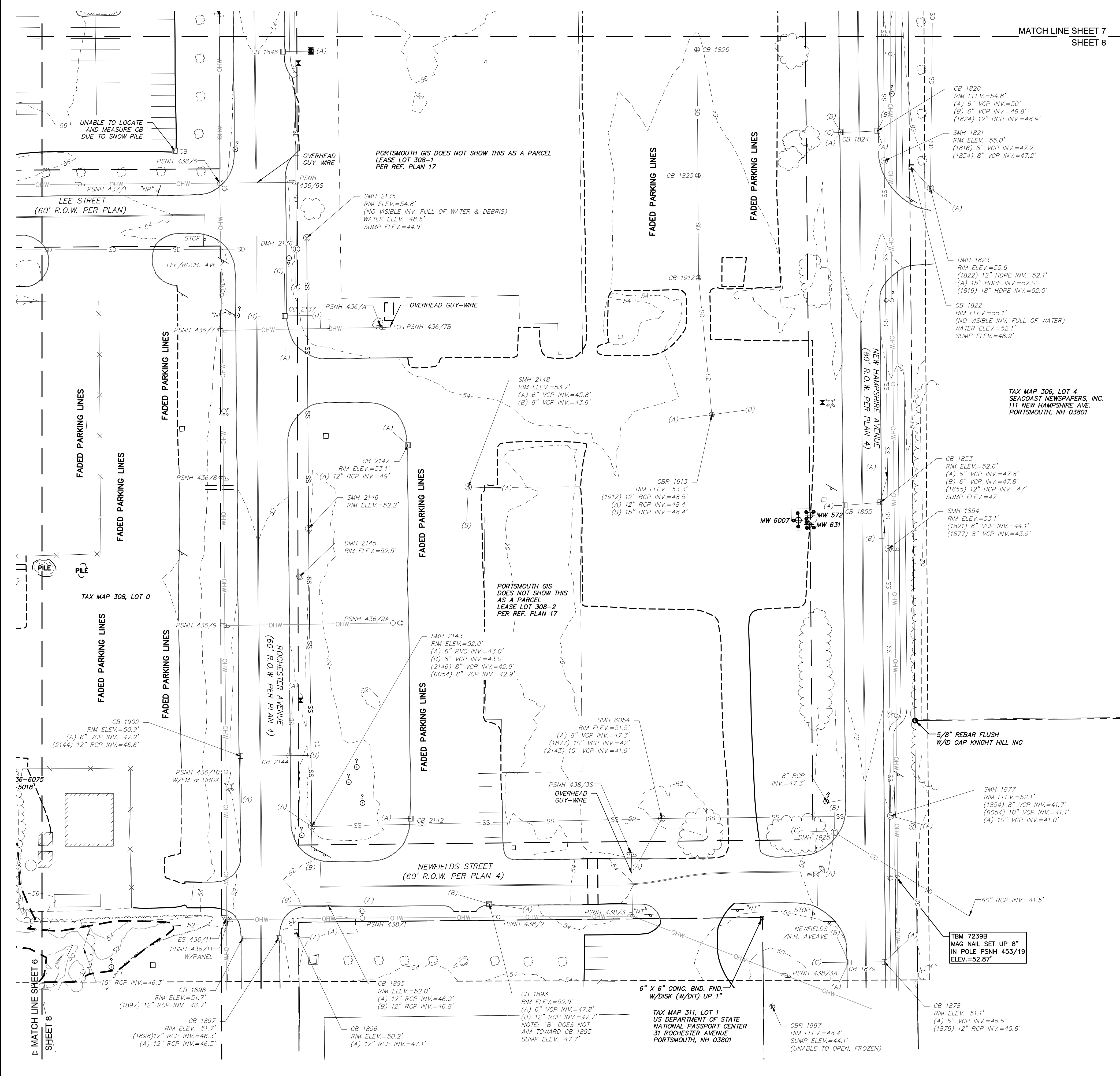
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2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-0060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
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TAX MAP 306, LOT 4
SEACOAST NEWSPAPERS, INC.
111 NEW HAMPSHIRE AVE.
PORTSMOUTH, NH 03801

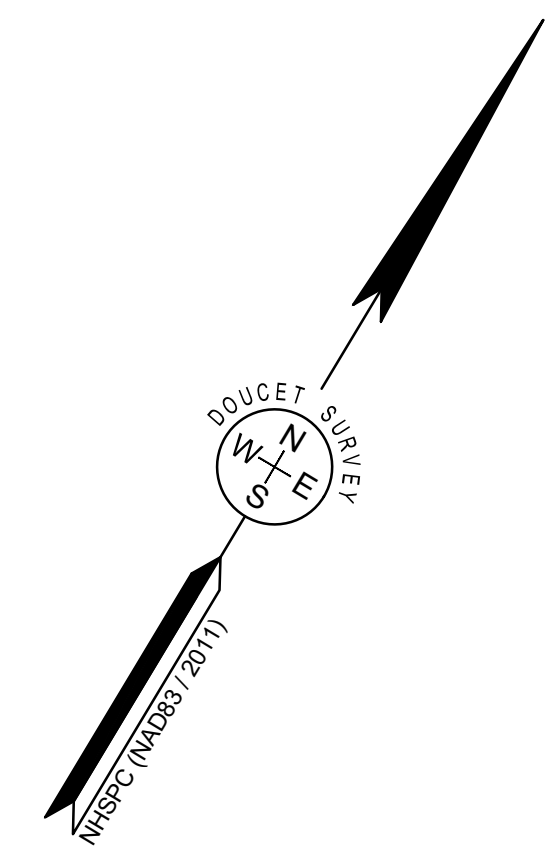
LIMIT OF DRAINAGE LICENSE
RESERVED BY OWNER
(PER REF. PLAN 13)

MATCH LINE SHEET 7
SHEET 8

FILE NAME: C:\Users\jwhay\Documents\Projects\27339A (REV 1) 2022-02-21.dwg LAYOUT NAME: 27339A (REV 1) PLOTTED: Wednesday, September 21, 2022 - 11:28am



DRAINAGE STRUCTURES	
CB 1824 RIM ELEV.=54.7' (A) 6" VCP INV.=50.2' (B) 6" VCP INV.=49.1' (1820) 12" RCP INV.=48' (C) 12" RCP INV.=48'	DMH 1925 RIM ELEV.=52.2' (A) 12" RCP RECESSED UNABLE TO MEAS. (B) 36" RCP INV.=43.7' (C) 36" RCP INV.=43.5' (OUTFALL) 60" RCP INV.=41.7'
CB 1825 RIM ELEV.=53.6' (1826) 12" RCP INV.=50.1' (1912) 12" RCP INV.=49.9'	DMH 2136 RIM ELEV.=54.2' (5379) 24" RCP INV.=47.0' (A) 42" RCP INV.=46.9' (1947) 42" RCP INV.=46.7'
CB 1826 RIM ELEV.=53.9' (1825) 12" RCP INV.=50.4' SUMP ELEV.=50.4'	CB 2137 RIM ELEV.=52.7' (A) 8" VCP INV.=48.6' (B) 12" RCP INV.=48.1' (C) 8" VCP INV.=48.1' (D) 12" RCP INV.=48.1'
CB 1846 RIM ELEV.=53.8' (A) 12" RCP INV.=49.5' BROKEN BOTTOM=49.6'	CB 2142 RIM ELEV.=52.2' (A) 12" RCP INV.=48.3'
CB 1855 RIM ELEV.=52.7' (A) 12" HDPE INV.=46.6' (1853) 12" HDPE INV.=46.5' BOTTOM OF CHANNEL=46.6'	CB 2144 RIM ELEV.=50.8' (A) 6" VCP INV.=46.3' (1902) 12" RCP INV.=46.3' (B) 12" RCP INV.=46.1'
CB 1879 RIM ELEV.=51.2' (A) 6" VCP INV.=46.3' (B) 6" VCP INV.=46.3' (1878) 12" RCP INV.=44.3' (C) 12" RCP INV.=43.9' SUMP ELEV.=44.3'	CB 1912 RIM ELEV.=53.5' (1825) 12" RCP INV.=49.3' (1913) 12" RCP INV.=49.2'



EXISTING CONDITIONS PLAN
 FOR
TIGHE & BOND
 OF
PEASE HANGAR 227 AREA
 PORTIONS OF AVIATION AVENUE,
 FLIGHTLINE ROAD, LEE STREET,
 NEWFIELDS STREET,
 NEW HAMPSHIRE AVENUE
 ROCHESTER AVENUE
 AND STRATHAM STREET
 PORTSMOUTH, NEW HAMPSHIRE

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JOB NO.:	7239	SHEET:	8 OF 8

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 10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
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TAX MAP 312, LOT 2

TAX MAP 311, LOT 1
 US DEPARTMENT OF STATE
 NATIONAL PASSPORT CENTER
 31 ROCHESTER AVENUE
 PORTSMOUTH, NH 03801

TBM 7239B
 MAG NAIL SET UP 8"
 IN POLE PSNH 453/19
 ELEV.=52.87'

UNABLE TO LOCATE
 AND MEASURE CB
 DUE TO SNOW PILE

PORTSMOUTH GIS DOES NOT SHOW THIS AS A PARCEL
 LEASE LOT 308-1
 PER REF. PLAN 17

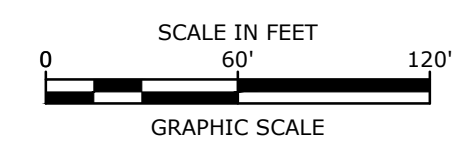
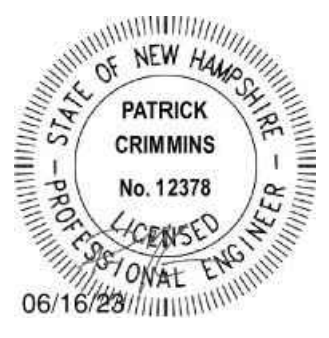
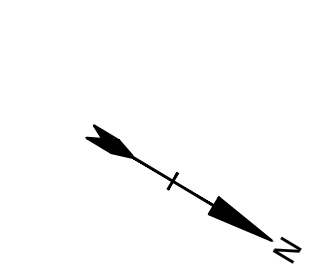
PORTSMOUTH GIS DOES NOT SHOW THIS
 AS A PARCEL
 LEASE LOT 308-2
 PER REF. PLAN 17

TAX MAP 306, LOT 4
 SEACOAST NEWSPAPERS, INC.
 111 NEW HAMPSHIRE AVE.
 PORTSMOUTH, NH 03801

LIMIT OF DRAINAGE LICENSE
 RESERVED BY OWNER
 (PER REF. PLAN 13)

MATCH LINE SHEET 6

MATCH LINE SHEET 7
SHEET 8



**Proposed
Fidelitone
Facility**

Aviation Avenue
Group, LLC

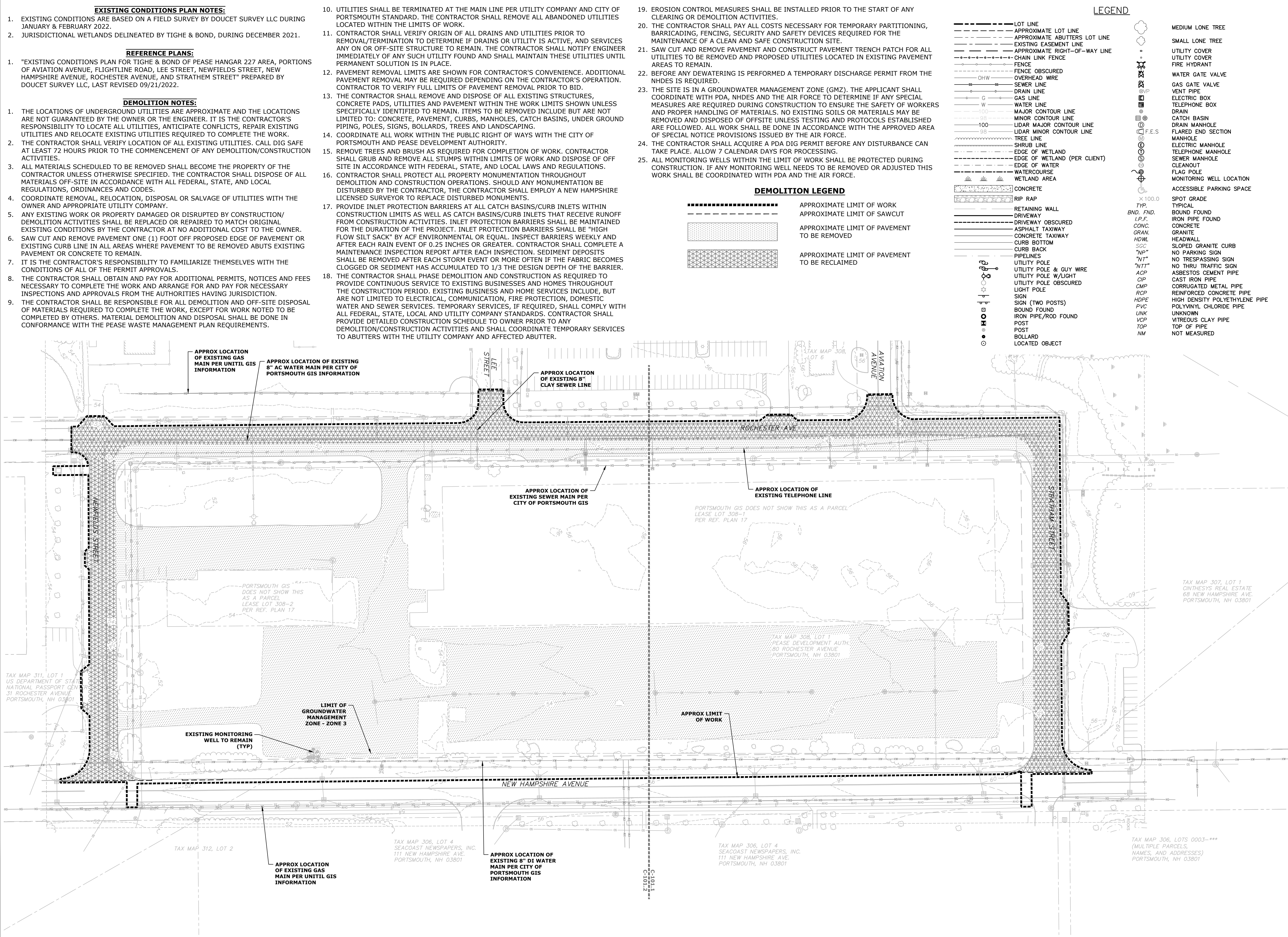
100 New Hampshire
Avenue
Portsmouth, NH

F	6/16/2023	TAC Resubmission
E	3/29/2023	Planning Board / Revised AOT Submission
D	2/23/2023	TAC Resubmission
C	2/6/2023	AoT Submission
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission
MARK	DATE	DESCRIPTION

PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

**OVERALL EXISTING
CONDITIONS / DEMOLITION
PLAN**

SCALE: AS SHOWN



EXISTING CONDITIONS PLAN NOTES:

- EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY DOUCET SURVEY LLC DURING JANUARY & FEBRUARY 2022.
- JURISDICTIONAL WETLANDS DELINEATED BY TIGHE & BOND, DURING DECEMBER 2021.

REFERENCE PLANS:

- "EXISTING CONDITIONS PLAN FOR TIGHE & BOND OF PEASE HANGAR 227 AREA, PORTIONS OF AVIATION AVENUE, FLIGHTLINE ROAD, LEE STREET, NEWFIELDS STREET, NEW HAMPSHIRE AVENUE, ROCHESTER AVENUE, AND STRATHAM STREET" PREPARED BY DOUCET SURVEY LLC, LAST REVISED 09/21/2022.

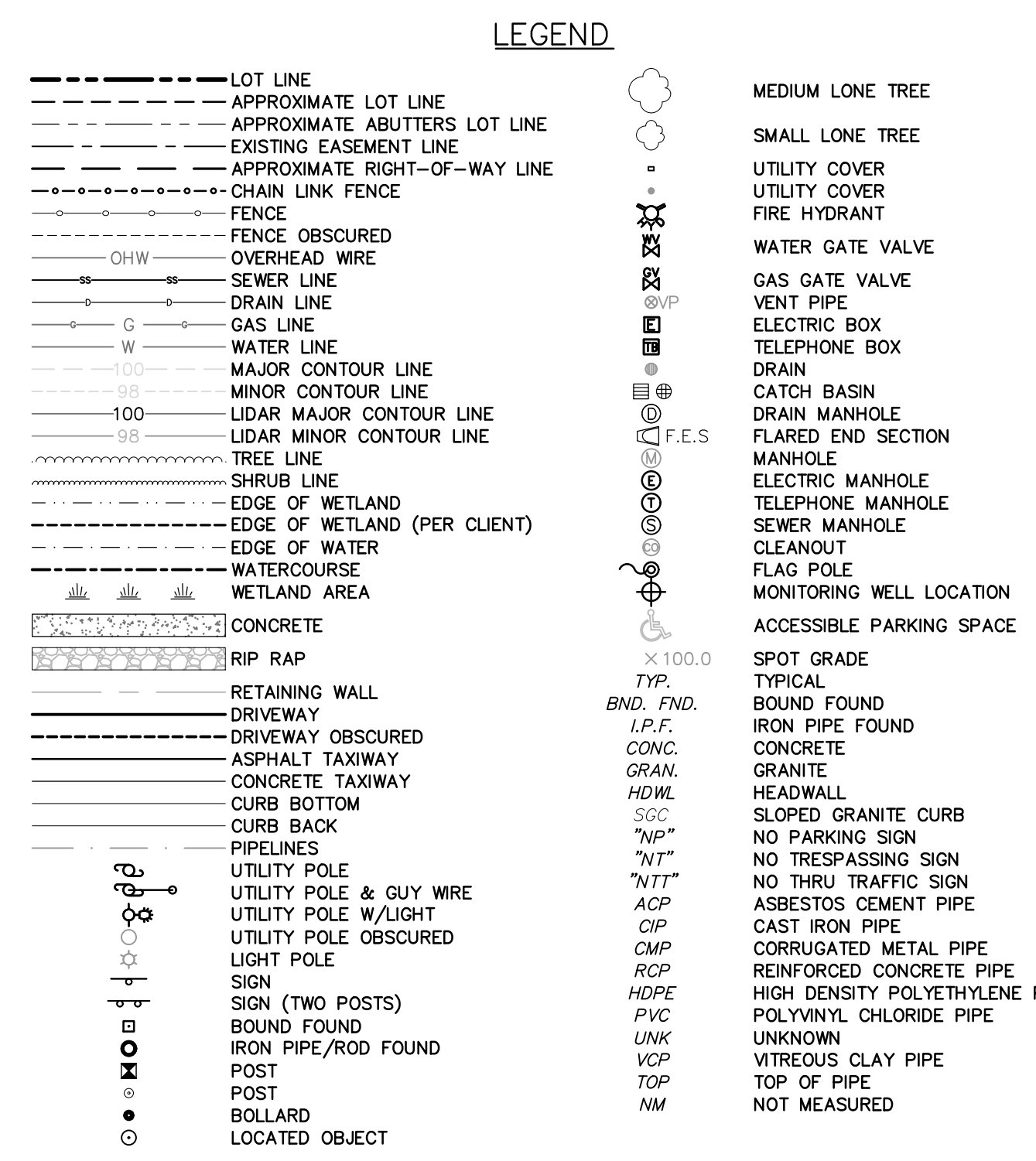
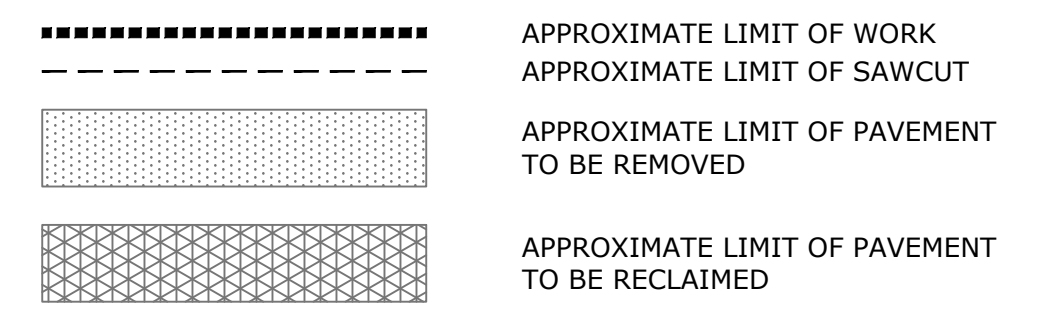
DEMOLITION NOTES:

- THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
- THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
- ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
- COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
- ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS. MATERIAL DEMOLITION AND DISPOSAL SHALL BE DONE IN CONFORMANCE WITH THE PEASE WASTE MANAGEMENT PLAN REQUIREMENTS.

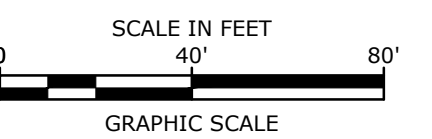
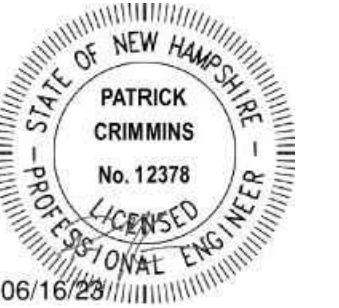
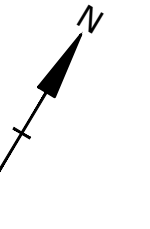
- UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY AND CITY OF PORTSMOUTH STANDARD. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
- CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
- PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, SIGNS, BOLLARDS, TREES AND LANDSCAPING.
- COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH AND PEASE DEVELOPMENT AUTHORITY.
- REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
- CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
- PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
- THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.

- EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
- THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
- SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
- BEFORE ANY DEWATERING IS PERFORMED A TEMPORARY DISCHARGE PERMIT FROM THE NHDES IS REQUIRED.
- THE SITE IS IN A GROUNDWATER MANAGEMENT ZONE (GMZ). THE APPLICANT SHALL COORDINATE WITH PDA, NHDES AND THE AIR FORCE TO DETERMINE IF ANY SPECIAL MEASURES ARE REQUIRED DURING CONSTRUCTION TO ENSURE THE SAFETY OF WORKERS AND PROPER HANDLING OF MATERIALS. NO EXISTING SOILS OR MATERIALS MAY BE REMOVED AND DISPOSED OF OFFSITE UNLESS TESTING AND PROTOCOLS ESTABLISHED ARE FOLLOWED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPROVED AREA OF SPECIAL NOTICE PROVISIONS ISSUED BY THE AIR FORCE.
- THE CONTRACTOR SHALL ACQUIRE A PDA DIG PERMIT BEFORE ANY DISTURBANCE CAN TAKE PLACE. ALLOW 7 CALENDAR DAYS FOR PROCESSING.
- ALL MONITORING WELLS WITHIN THE LIMIT OF WORK SHALL BE PROTECTED DURING CONSTRUCTION. IF ANY MONITORING WELL NEEDS TO BE REMOVED OR ADJUSTED THIS WORK SHALL BE COORDINATED WITH PDA AND THE AIR FORCE.

DEMOLITION LEGEND



Last Save Date: June 16, 2023 1:48 PM By: CML
 Plot Date: Friday, June 16, 2023 Plotted By: Craig M. Langton
 Plot File Location: E:\P0595-Pro-Gen-Drawings\Drawings\Figures\AutoCAD\Sheet\0595-015_Design.DWG Layout Tab: O-Demo



Proposed Fidelity Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

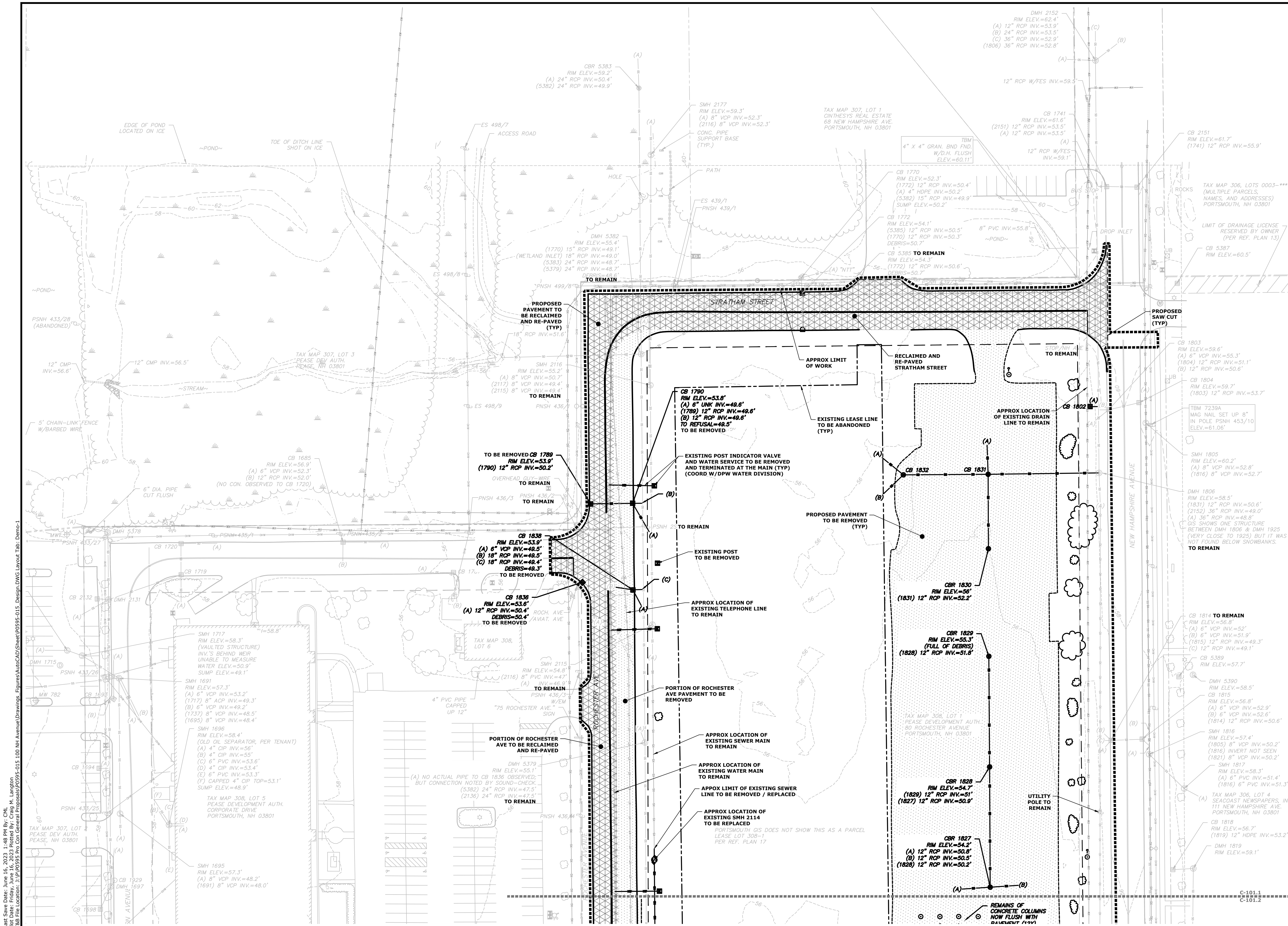
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C	2/6/2023	AoT Submission
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A	12/19/2022	TAC Submission

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CHECKED:	NAH
APPROVED:	PMC

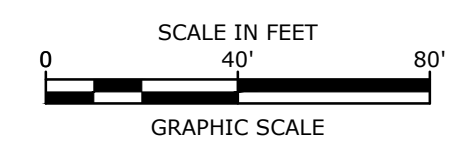
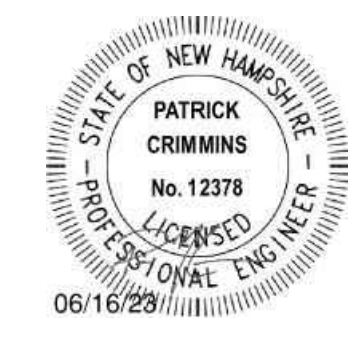
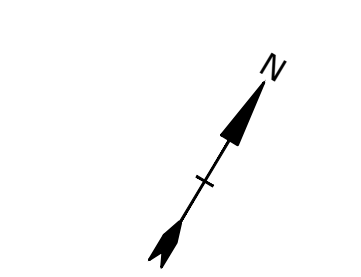
EXISTING CONDITIONS / DEMOLITION PLAN

SCALE: AS SHOWN

C-101.1



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Proposed Fidelity Facility

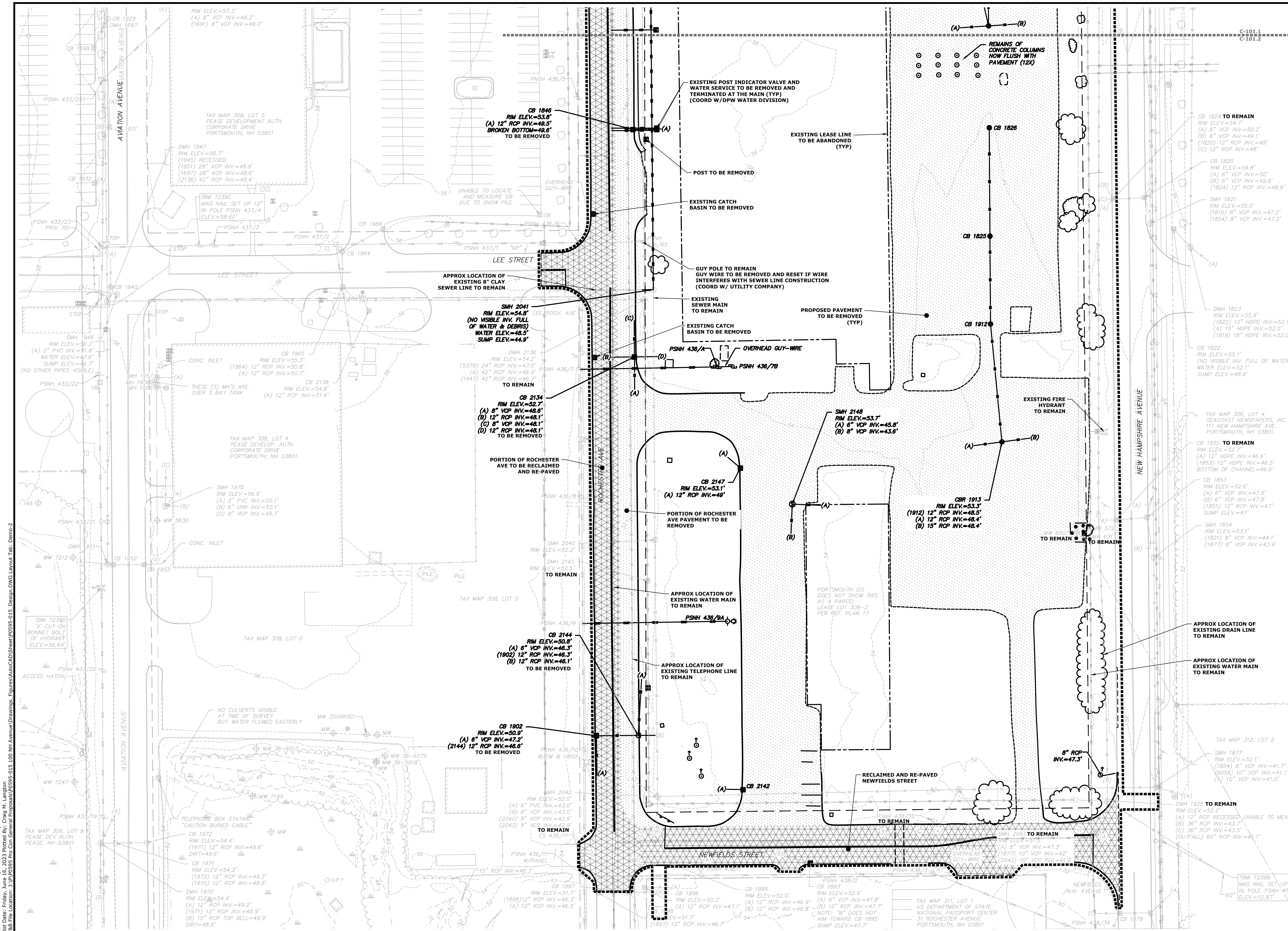
Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

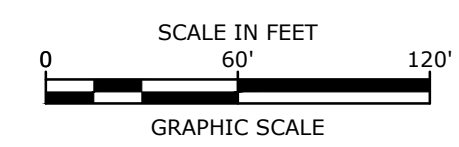
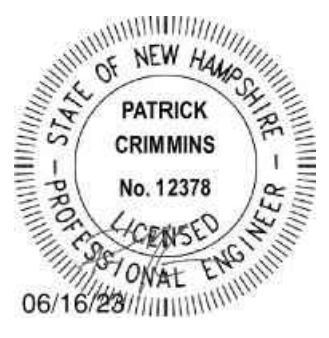
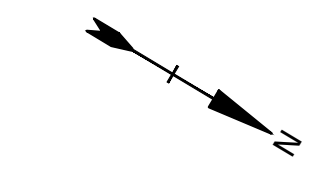
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E	3/29/2023	Planning Board / Revised AOT Submission
D	2/23/2023	TAC Resubmission
C	2/6/2023	AOT Submission
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO: P0595-015
DATE: 12/19/2022
FILE: P0595-015_DESIGN.DWG
DRAWN BY: CML
CHECKED: NAH
APPROVED: PMC

EXISTING CONDITIONS / DEMOLITION PLAN
SCALE: AS SHOWN
C-101.2



Last Save Date: June 16, 2023 1:48 PM By: CML
 Plot Date: Friday, June 16, 2023 Plotted By: Craig M. Langton
 Plot File Location: Z:\Projects\100 New Hampshire Avenue\Drawings - Figures\AutoCAD\Sheet\0595-015 - Design\DWG Layout Tab - Demos-2



- SITE NOTES:**
1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES SHALL BE THERMOPLASTIC MATERIAL. THERMOPLASTIC MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO M249. (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
 2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
 3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
 4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
 5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
 6. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
 7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
 8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
 9. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH AND PEASE DEVELOPMENT AUTHORITY.
 10. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
 11. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
 12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
 13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
 14. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
 15. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
 16. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY OR RELEASE OF BOND, THE APPLICANT SHALL SUBMIT A LETTER TO THE PEASE DEVELOPMENT AUTHORITY, SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER, STATING CONSTRUCTION HAS BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED PLANS.
 17. SUBMISSION OF A MINIMUM OF TWO 7460-1'S TO THE FAA WILL BE REQUIRED FOR THE CONSTRUCTION OF THE BUILDING AND TEMPORARY USE OF A CRANE. ALLOW A MINIMUM OF 45 DAYS FOR PROCESSING.
 18. PROPERTY MANAGER WILL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PUBLIC WALKS, DRIVES, AND AIRSIDE PAVEMENT AREAS ON-SITE. SNOW SHALL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF, WHEN NECESSARY, WHEN SNOW STORAGE AREAS HAVE REACHED CAPACITY.
 19. RETAINING WALL SHALL BE DESIGNED AND STAMPED BY A NEW HAMPSHIRE LICENSED PROFESSIONAL ENGINEER AND SHALL BE SUBMITTED TO PEASE DEVELOPMENT AUTHORITY FOR REVIEW.

SITE DATA:
 LOCATION: TAX MAP 308, LOT 1
 80 ROCHESTER AVENUE
 PORTSMOUTH, NEW HAMPSHIRE

ZONING DISTRICT: INDUSTRIAL / WAREHOUSE
 ALLOWED USE: INDUSTRIAL / WAREHOUSE

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
MINIMUM LOT AREA:	10 ACRES	±10.95 ACRES
MINIMUM STREET FRONTAGE:	200 FT	±1,200 FT
MINIMUM SETBACKS:		
• FRONT:	70 FT	51 FT ⁽¹⁾
• SIDE:	50 FT	142 FT
• REAR:	50 FT	161.6 FT
MAXIMUM BUILDING HEIGHT:	PER FAA	36 FT
MINIMUM OPEN SPACE:	25%	±54%

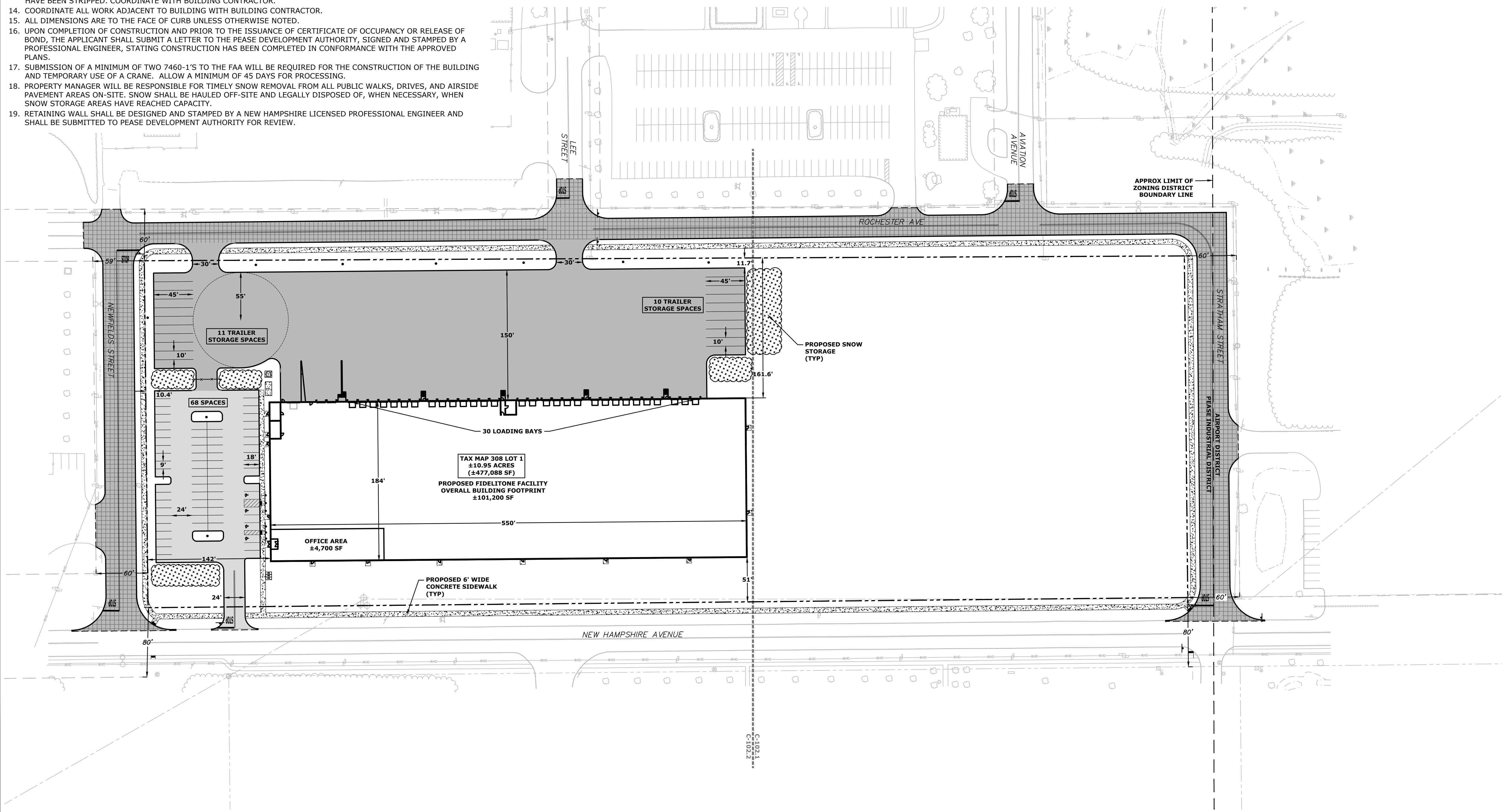
PARKING REQUIREMENTS:
 PARKING STALL LAYOUT:
 • STANDARD 90°

	REQUIRED	PROPOSED
WIDTH: 8.5' MIN		
AREA: 160 SF MIN		9' X 18' (162 SF)
DRIVE AISLE WIDTH:		
• 90° (2-WAY TRAFFIC)	24 FT	24 FT (MIN)
PARKING SPACE REQUIREMENTS:		
INDUSTRIAL:		
• 2 / 3 EMPLOYEES (LARGEST SHIFT)		
+ 1 / COMPANY-OWNED-VEHICLE		
= 60 EMPLOYEES x 2/3 EMPLOYEES		
+ 2 COMPANY-OWNED-VEHICLE =	42 SPACES	
TOTAL REQUIRED PARKING:	42 SPACES	68 SPACES ⁽¹⁾

(1) - FOUR (4) ADA SPACES PROVIDED

- LEGEND**
- PROPOSED LEASE LINE
 - [Pattern] PROPOSED CONCRETE
 - [Pattern] PROPOSED STANDARD DUTY PAVEMENT SECTION
 - [Pattern] PROPOSED HEAVY DUTY PAVEMENT SECTION
 - [Pattern] PROPOSED RECLAIM AND RE-PAVE
 - [Pattern] PROPOSED SNOW STORAGE AREA
 - APPROXIMATE LIMIT OF SAWCUT
 - PROPOSED LIGHT POLE BASE
 - EXISTING PROPOSED SIGN
 - PROPOSED BOLLARD

(1) - ON NOVEMBER 15, 2022 THE CITY OF PORTSMOUTH ZONING BOARD OF ADJUSTMENT VOTED TO RECOMMEND APPROVAL TO THE PDA BOARD FOR A VARIANCE FROM PART 304.03(C) TO ALLOW A 51 FOOT FRONT YARD WHERE 70 FEET IS REQUIRED.



Proposed Fidelity Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
 Portsmouth, NH

MARK	DATE	DESCRIPTION
F	6/16/2023	TAC Resubmission
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C	2/6/2023	AoT Submission
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

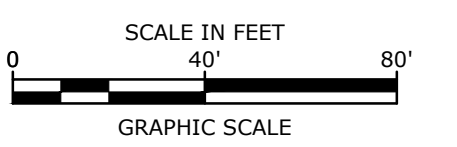
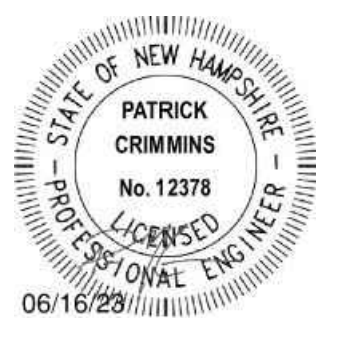
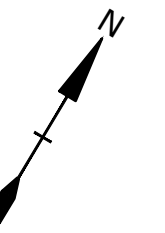
PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

Last Save Date: June 16, 2023 1:48 PM By: CML
 Plot Date: Friday, June 16, 2023 Plotted By: Craig M. Langdon
 P&E File Location: Z:\P0595 pro Con General Proposals\0595-015_100 NH Avenue\Drawings - Figures\AutoCAD\Sheet\0595-015_Design.DWG Layout Tab - O_Site



**Proposed
Fidelitone
Facility**

Aviation Avenue
Group, LLC

100 New Hampshire
Avenue
Portsmouth, NH

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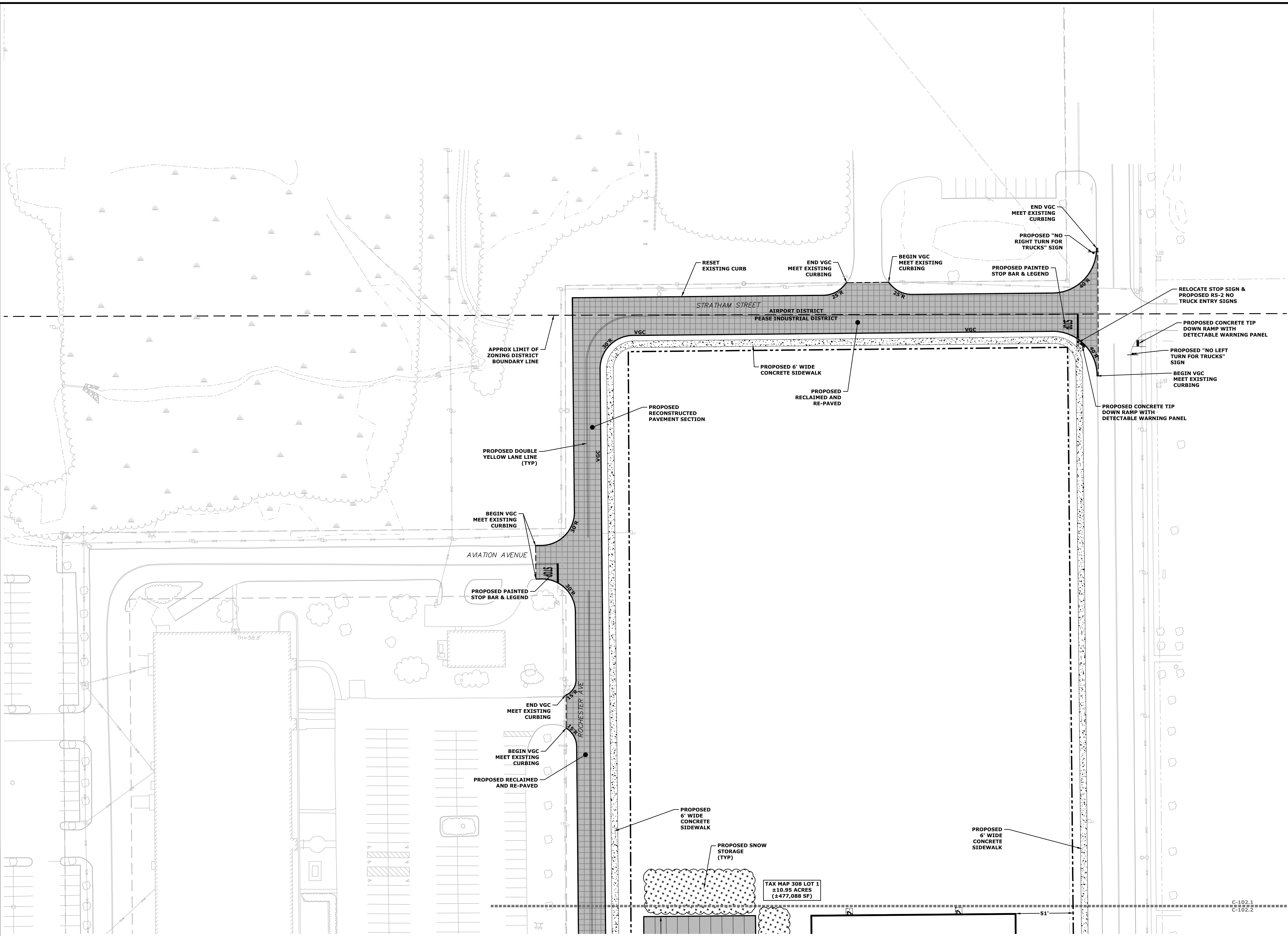
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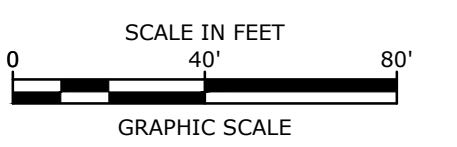
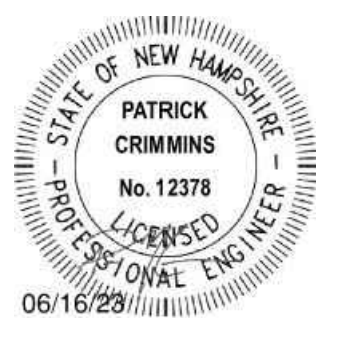
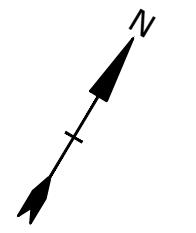
SITE PLAN

SCALE: AS SHOWN

C-102.1

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Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

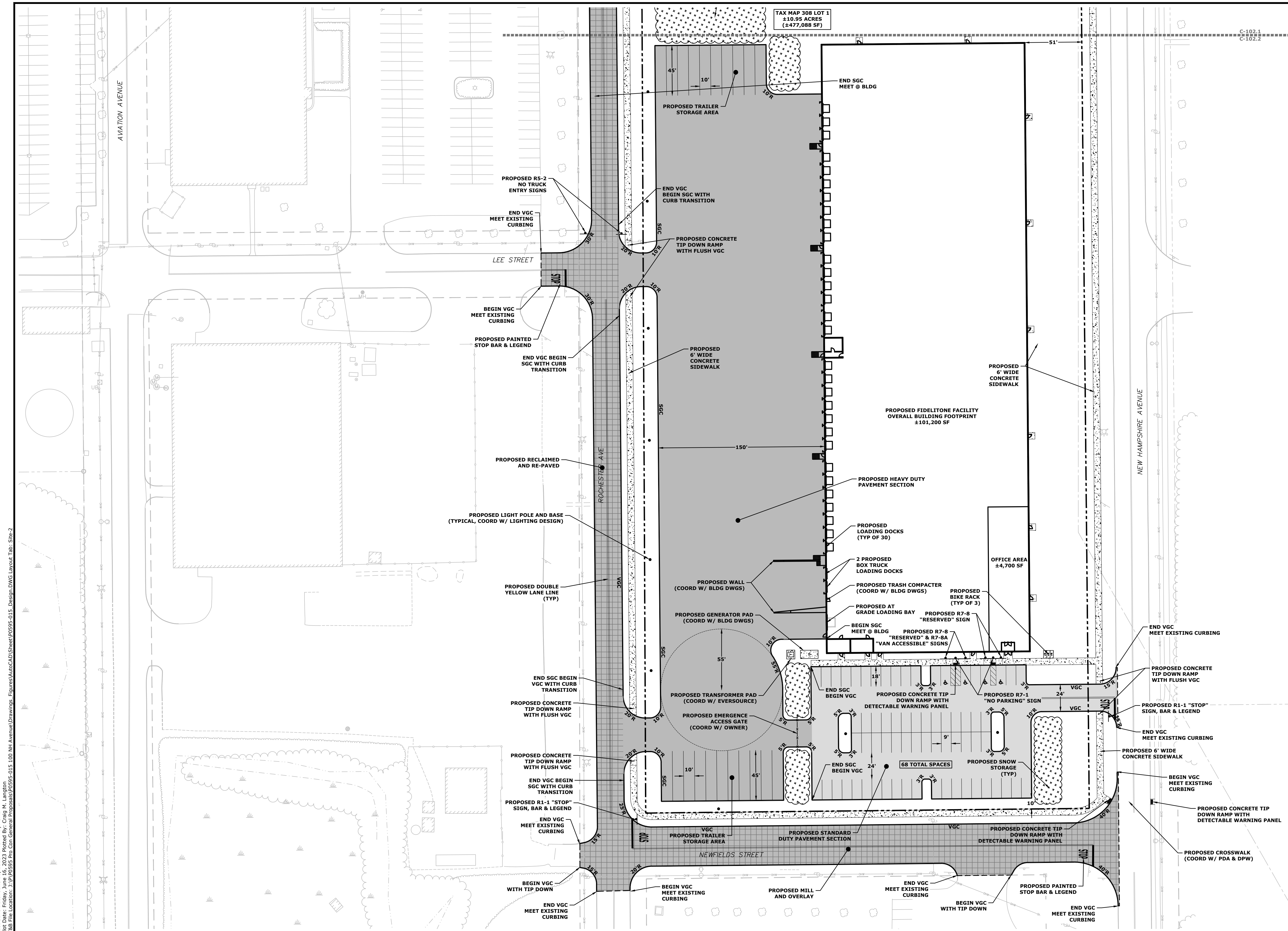
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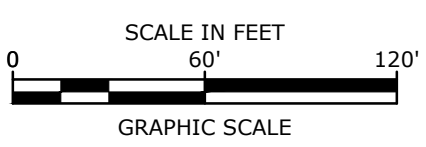
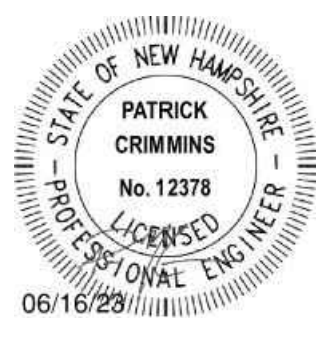
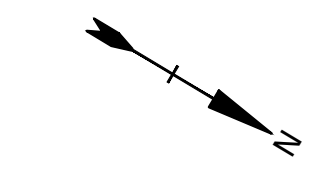
SITE PLAN

SCALE: AS SHOWN

C-102.2



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 Plot Date: Friday, June 16, 2023 Plotted By: Craig M. Langdon
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Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

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APPROVED:	PMC

OVERALL GRADING, DRAINAGE & EROSION CONTROL PLAN

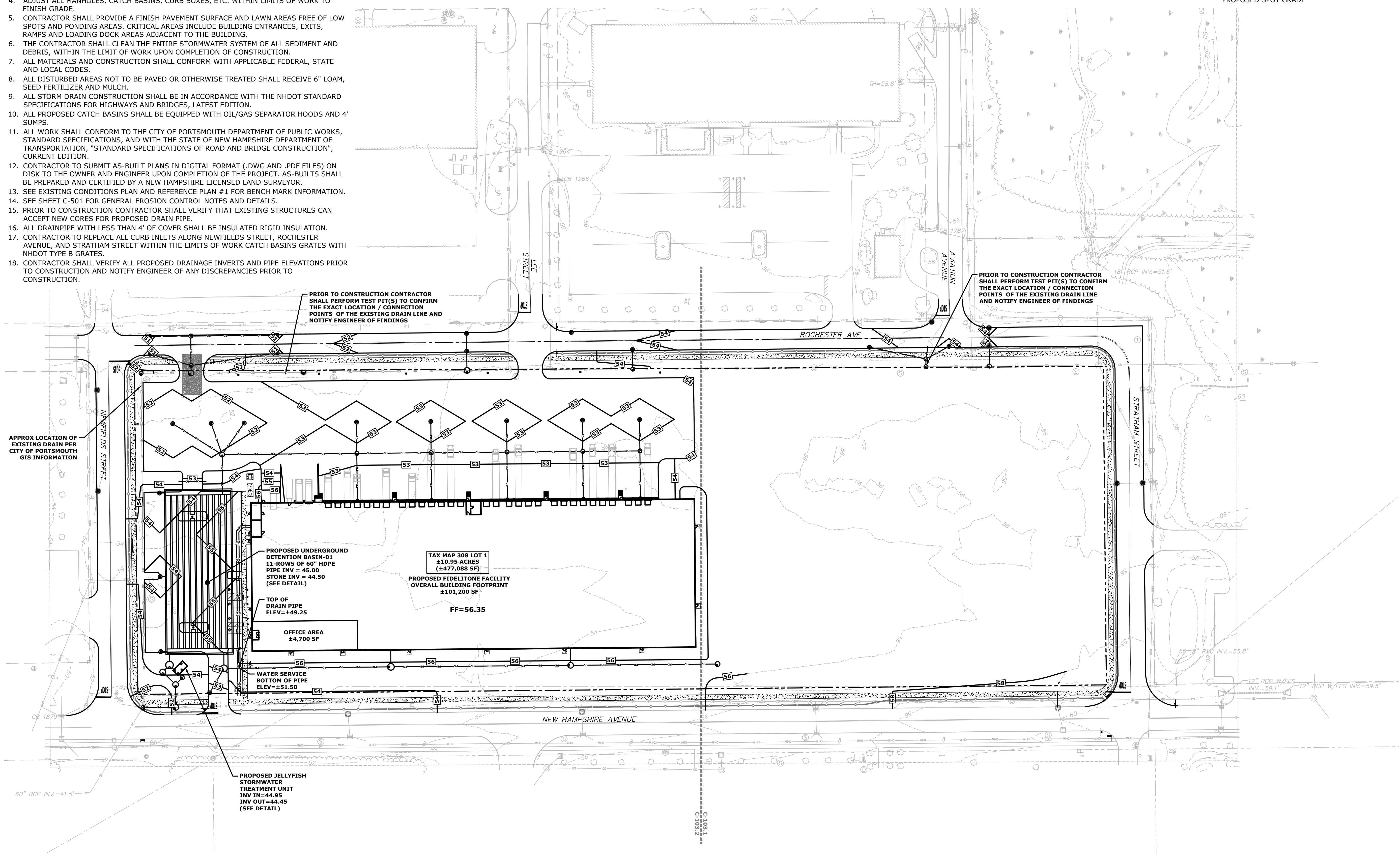
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GRADING AND DRAINAGE & EROSION CONTROL NOTES:

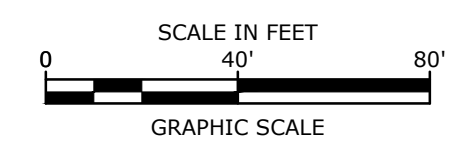
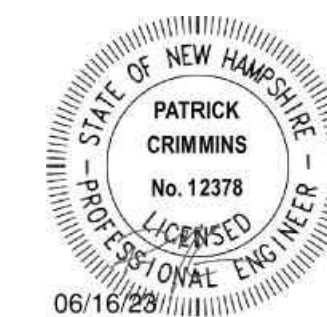
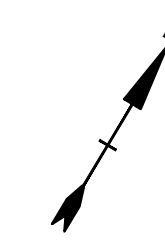
- COMPACTION REQUIREMENTS:
 - BELOW PAVED OR CONCRETE AREAS 95%
 - TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL 95%
 - BELOW LOAM AND SEED AREAS 90%
 - * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
- ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL), UNLESS OTHERWISE SPECIFIED.
- SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
- ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
- CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
- THE CONTRACTOR SHALL CLEAN THE ENTIRE STORMWATER SYSTEM OF ALL SEDIMENT AND DEBRIS, WITHIN THE LIMIT OF WORK UPON COMPLETION OF CONSTRUCTION.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
- ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
- ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
- ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
- ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS, AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
- CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
- SEE EXISTING CONDITIONS PLAN AND REFERENCE PLAN #1 FOR BENCH MARK INFORMATION.
- SEE SHEET C-501 FOR GENERAL EROSION CONTROL NOTES AND DETAILS.
- PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY THAT EXISTING STRUCTURES CAN ACCEPT NEW CORES FOR PROPOSED DRAIN PIPE.
- ALL DRAINPIPE WITH LESS THAN 4' OF COVER SHALL BE INSULATED RIGID INSULATION.
- CONTRACTOR TO REPLACE ALL CURB INLETS ALONG NEWFIELDS STREET, ROCHESTER AVENUE, AND STRATHAM STREET WITHIN THE LIMITS OF WORK CATCH BASINS GRATES WITH NHDOT TYPE B GRATES.
- CONTRACTOR SHALL VERIFY ALL PROPOSED DRAINAGE INVERTS AND PIPE ELEVATIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

LEGEND

- PROPOSED DRAIN LINE
- APPROXIMATE LOCATION OF EXISTING DRAIN PER CITY OF PORTSMOUTH GIS INFORMATION
- EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE
- PROPOSED CONTOUR LINE
- PROPOSED CATCH BASIN
- PROPOSED YARD DRAIN
- PROPOSED DRAIN MANHOLE
- APPROX EXISTING SPOT GRADE
- PROPOSED SPOT GRADE



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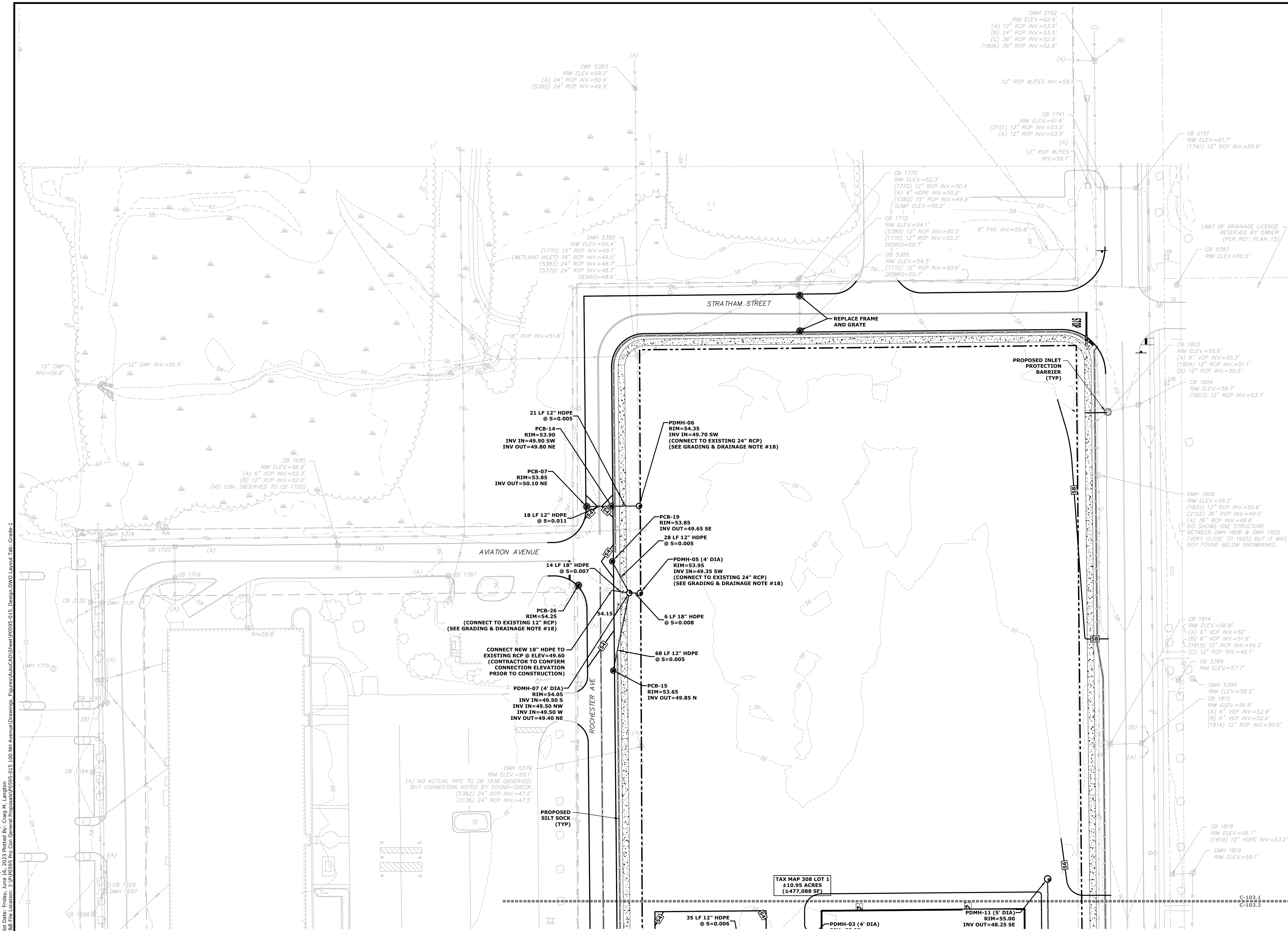
Proposed Fidelity Facility

Aviation Avenue Group, LLC

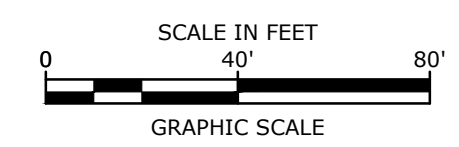
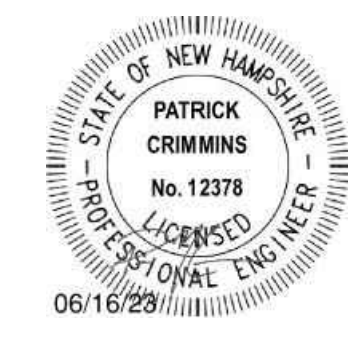
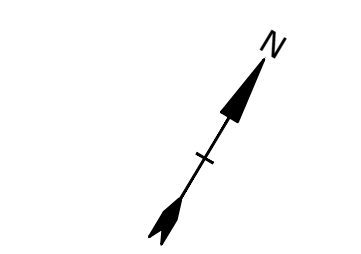
100 New Hampshire Avenue
Portsmouth, NH

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FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC
GRADING, DRAINAGE & EROSION CONTROL PLAN	
SCALE:	AS SHOWN
C-103.1	



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Proposed Fidelity Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

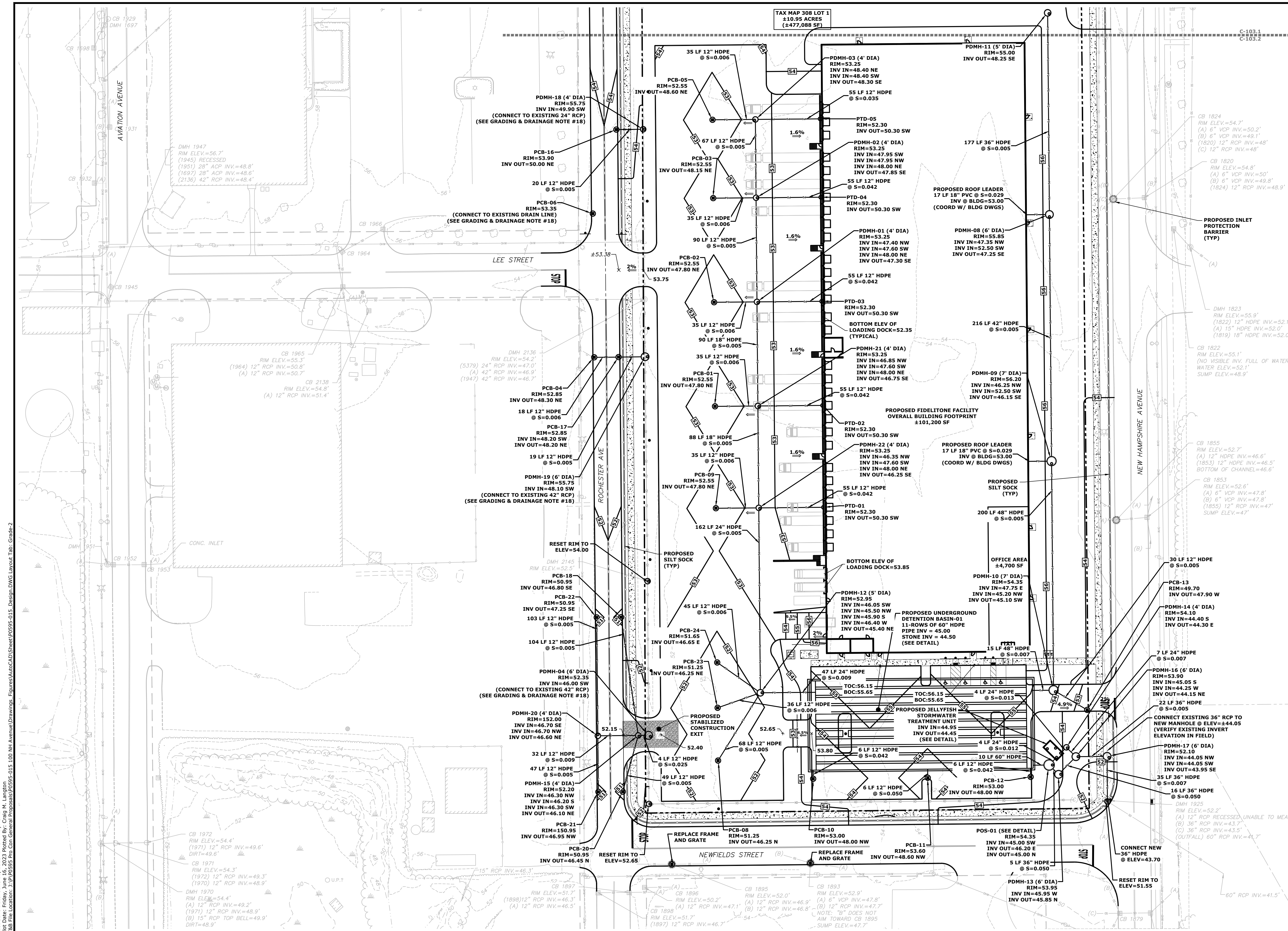
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GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.2



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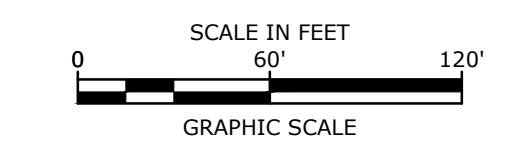
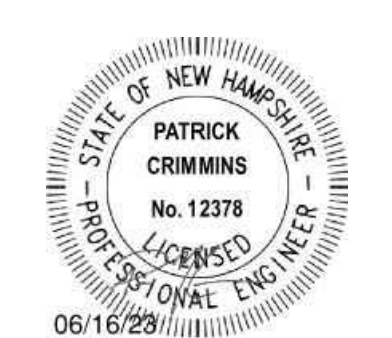
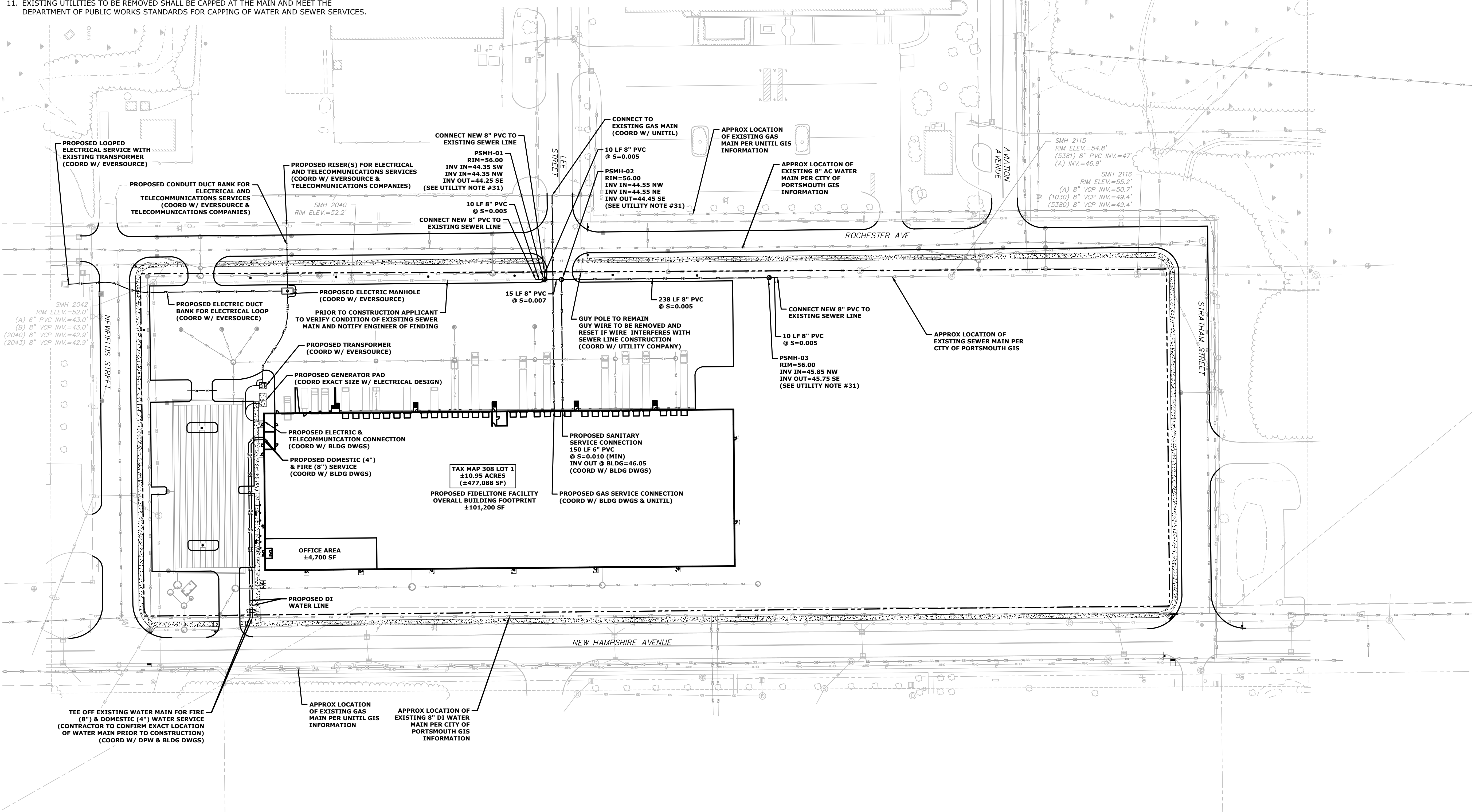
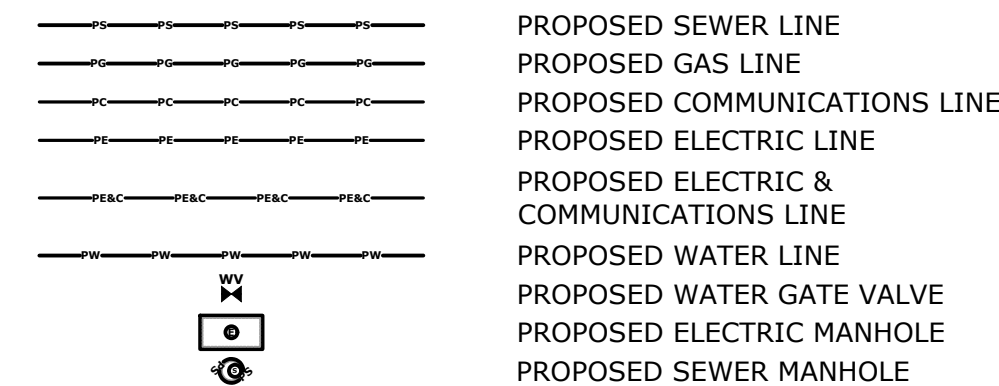
UTILITY NOTES:

- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
- COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
 - NATURAL GAS - UNITIL / NORTHERN UTILITIES
 - WATER - CITY OF PORTSMOUTH
 - SEWER - CITY OF PORTSMOUTH
 - ELECTRIC - EVERSOURCE
 - COMMUNICATIONS - FAIRPOINT COMMUNICATIONS
- SEE EXISTING CONDITIONS PLAN AND REFERENCE PLAN #1 FOR BENCHMARK INFORMATION.
- SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
- ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.
- ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT.
- ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
- COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH AND PEASE DEVELOPMENT AUTHORITY.
- CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.
- CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.
- EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.

- ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
- THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES.
- ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
- ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
- THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
- CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
- A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
- THE CONTRACTOR SHALL CONTACT "DIG-SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON SITE AT ALL TIMES.
- CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.

- SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVED AREAS TO REMAIN
- HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH / PEASE FIRE DEPARTMENT.
- COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
- ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAN 4' OF COVER IN UNPAVED AREAS SHALL BE INSULATED.
- CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
- CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
- SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER.
- CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING.
- FINAL LOCATION OF ALL WATER METER AND VALVE SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH DPW PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL PROPOSED SEWER INVERTS AND PIPE ELEVATIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

LEGEND



Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
F	6/16/2023	TAC Resubmission
E	3/29/2023	Planning Board / Revised AOT Submission
D	2/23/2023	TAC Resubmission
C	2/6/2023	AoT Submission
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PROJECT NO:	P0595-015
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DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

UTILITY PLAN

SCALE: AS SHOWN

C-104

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 Plot Date: Friday, June 16, 2023 Plotted By: Craig M. Langdon
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LANDSCAPE NOTES:

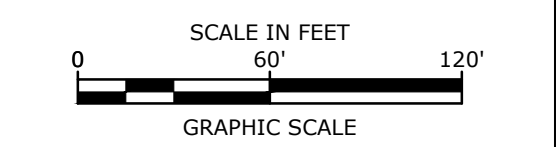
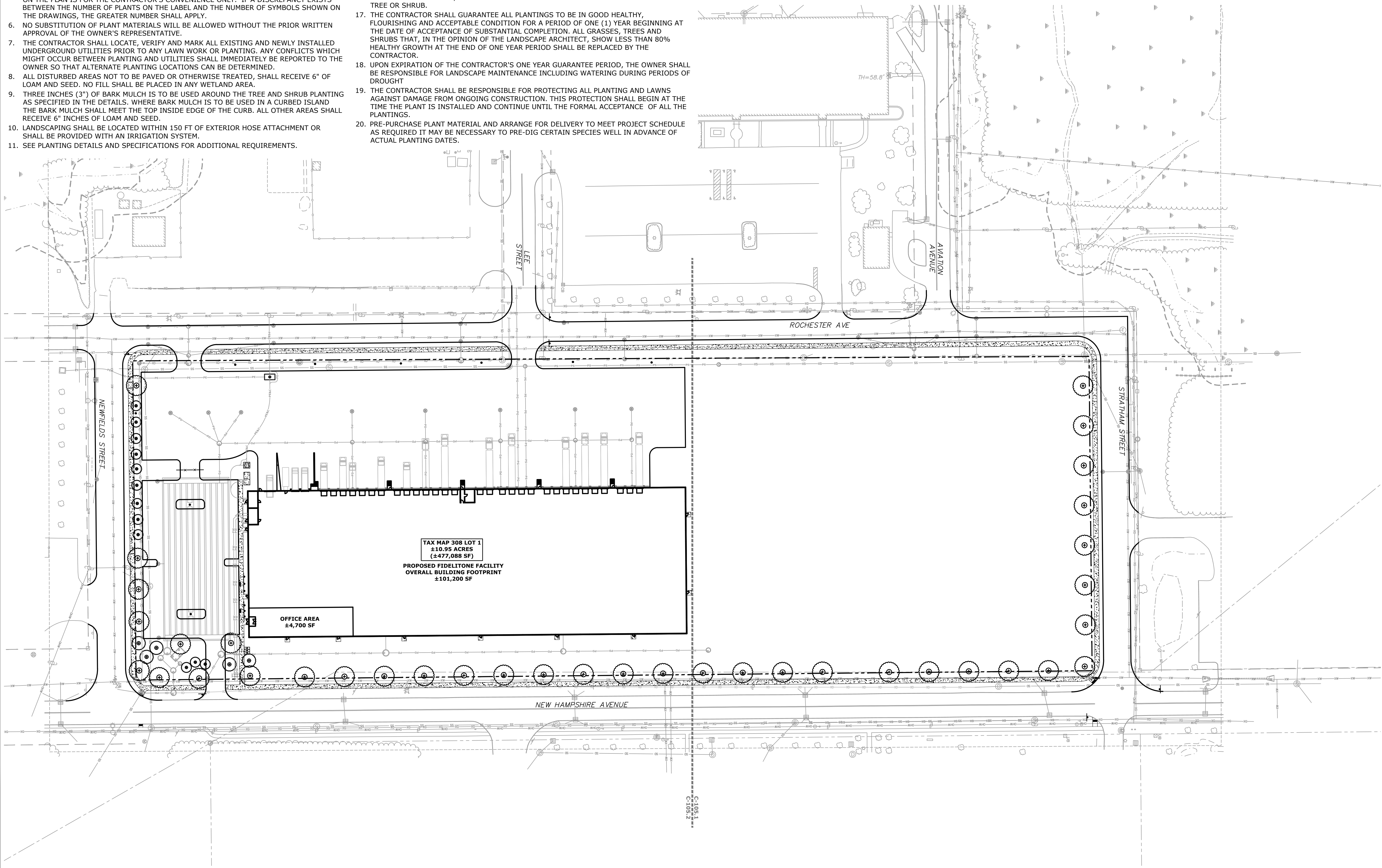
1. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS IN QUANTITIES AS SHOWN ON THIS PLAN. NO SUBSTITUTIONS WILL BE PERMITTED UNLESS APPROVED BY OWNER. ALL PLANTS SHALL BE NURSERY GROWN.
2. ALL PLANTS SHALL BE NURSERY GROWN AND PLANTS AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS, INCLUDING BUT NOT LIMITED TO SIZE, HEALTH, SHAPE, ETC., AND SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO ARRIVAL ON-SITE AND AFTER PLANTING.
3. PLANT STOCK SHALL BE GROWN WITHIN THE HARDINESS ZONES 4 THRU 7 ESTABLISHED BY THE PLANT HARDINESS ZONE MAP, MISCELLANEOUS PUBLICATIONS NO. 814, AGRICULTURAL RESEARCH SERVICE, UNITED STATES DEPARTMENT AGRICULTURE, LATEST REVISION.
4. PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE PRIOR TO DIGGING.
5. THE NUMBER OF EACH INDIVIDUAL PLANT TYPE AND SIZE PROVIDED IN THE PLANT LIST OR ON THE PLAN IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS ON THE LABEL AND THE NUMBER OF SYMBOLS SHOWN ON THE DRAWINGS, THE GREATER NUMBER SHALL APPLY.
6. NO SUBSTITUTION OF PLANT MATERIALS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL LOCATE, VERIFY AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTING AND UTILITIES SHALL IMMEDIATELY BE REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED, SHALL RECEIVE 6" OF LOAM AND SEED. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
9. THREE INCHES (3") OF BARK MULCH IS TO BE USED AROUND THE TREE AND SHRUB PLANTING AS SPECIFIED IN THE DETAILS. WHERE BARK MULCH IS TO BE USED IN A CURBED ISLAND THE BARK MULCH SHALL MEET THE TOP INSIDE EDGE OF THE CURB. ALL OTHER AREAS SHALL RECEIVE 6" INCHES OF LOAM AND SEED.
10. LANDSCAPING SHALL BE LOCATED WITHIN 150 FT OF EXTERIOR HOSE ATTACHMENT OR SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM.
11. SEE PLANTING DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

12. TREE STAKES SHALL REMAIN IN PLACE FOR NO LESS THAN 6 MONTHS AND NO MORE THAN 1 YEAR.
13. PLANTING SHALL BE COMPLETED FROM APRIL 15TH THROUGH OCTOBER 1ST. NO PLANTING DURING JULY AND AUGUST UNLESS SPECIAL PROVISIONS ARE MADE FOR DROUGHT.
14. TREES SHALL BE PRUNED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI A300 'TREES, SHRUBS AND OTHER WOOD PLANT MAINTENANCE STANDARD PRACTICES.
15. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN, IF NECESSARY DURING THE FIRST GROWING SEASON. LANDSCAPE CONTRACTOR SHALL COORDINATE WATERING SCHEDULE WITH OWNER DURING THE ONE (1) YEAR GUARANTEE PERIOD.
16. EXISTING TREES AND SHRUBS SHOWN ON THE PLAN ARE TO REMAIN UNDISTURBED. ALL EXISTING TREES AND SHRUBS SHOWN TO REMAIN ARE TO BE PROTECTED WITH A 4-FOOT SNOW FENCE PLACED AT THE DRIP LINE OF THE BRANCHES OR AT 8 FEET MINIMUM FROM THE TREE TRUNK. ANY EXISTING TREE OR SHRUB SHOWN TO REMAIN, WHICH IS REMOVED DURING CONSTRUCTION, SHALL BE REPLACED BY A TREE OF COMPARABLE SIZE AND SPECIES TREE OR SHRUB.
17. THE CONTRACTOR SHALL GUARANTEE ALL PLANTINGS TO BE IN GOOD HEALTHY, FLOURISHING AND ACCEPTABLE CONDITION FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF ACCEPTANCE OF SUBSTANTIAL COMPLETION. ALL GRASSES, TREES AND SHRUBS THAT, IN THE OPINION OF THE LANDSCAPE ARCHITECT, SHOW LESS THAN 80% HEALTHY GROWTH AT THE END OF ONE YEAR PERIOD SHALL BE REPLACED BY THE CONTRACTOR.
18. UPON EXPIRATION OF THE CONTRACTOR'S ONE YEAR GUARANTEE PERIOD, THE OWNER SHALL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE INCLUDING WATERING DURING PERIODS OF DROUGHT.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.
20. PRE-PURCHASE PLANT MATERIAL AND ARRANGE FOR DELIVERY TO MEET PROJECT SCHEDULE AS REQUIRED IT MAY BE NECESSARY TO PRE-DIG CERTAIN SPECIES WELL IN ADVANCE OF ACTUAL PLANTING DATES.

PLANT SCHEDULE	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES				
AF	ACER FREEMANII	AUTUM BLAZE MAPLE	2-1/2" - 3"	CALIPER
GD	GYMNOCLADUS DIOICUS 'ESPRESSO'	KENTUCKY COFFEE	2-1/2" - 3"	CALIPER
LT	LIRIODENDRON TULIPIFERA	TULIP TREE	2-1/2" - 3"	CALIPER
QR	QUERCUS RUBRA	RED OAK	2-1/2" - 3"	CALIPER
MS	MALUS 'SUTYZAM'	SUGAR TYME CRABAPPLE	2" - 2-1/2"	CALIPER
MP	MALUS 'PRAIRIE FIRE'	PRAIRIE FIRE CRABAPPLE	2" - 2-1/2"	CALIPER
CK	CORNUS KOUSA	KOUSA DOGWOOD	2" - 2-1/2"	CALIPER
PG	PICEA GLAUCA	WHITE SPRUCE	7' - 8' HT	
PN	CASUARINA EQUisetifolia	AUSTRALIAN PINE	7' - 8' HT	

LEGEND

- PROPOSED DECIDUOUS TREE (W/ BARK MULCH)
- PROPOSED DECIDUOUS TREE (W/O BARK MULCH)



Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

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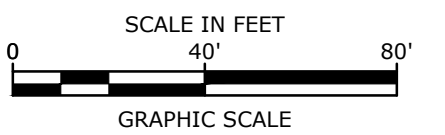
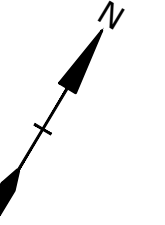
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CHECKED:	NAH
APPROVED:	PMC

OVERALL LANDSCAPE PLAN

SCALE: AS SHOWN

C-105

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**Proposed
Fidelitone
Facility**

Aviation Avenue
Group, LLC

100 New Hampshire
Avenue
Portsmouth, NH

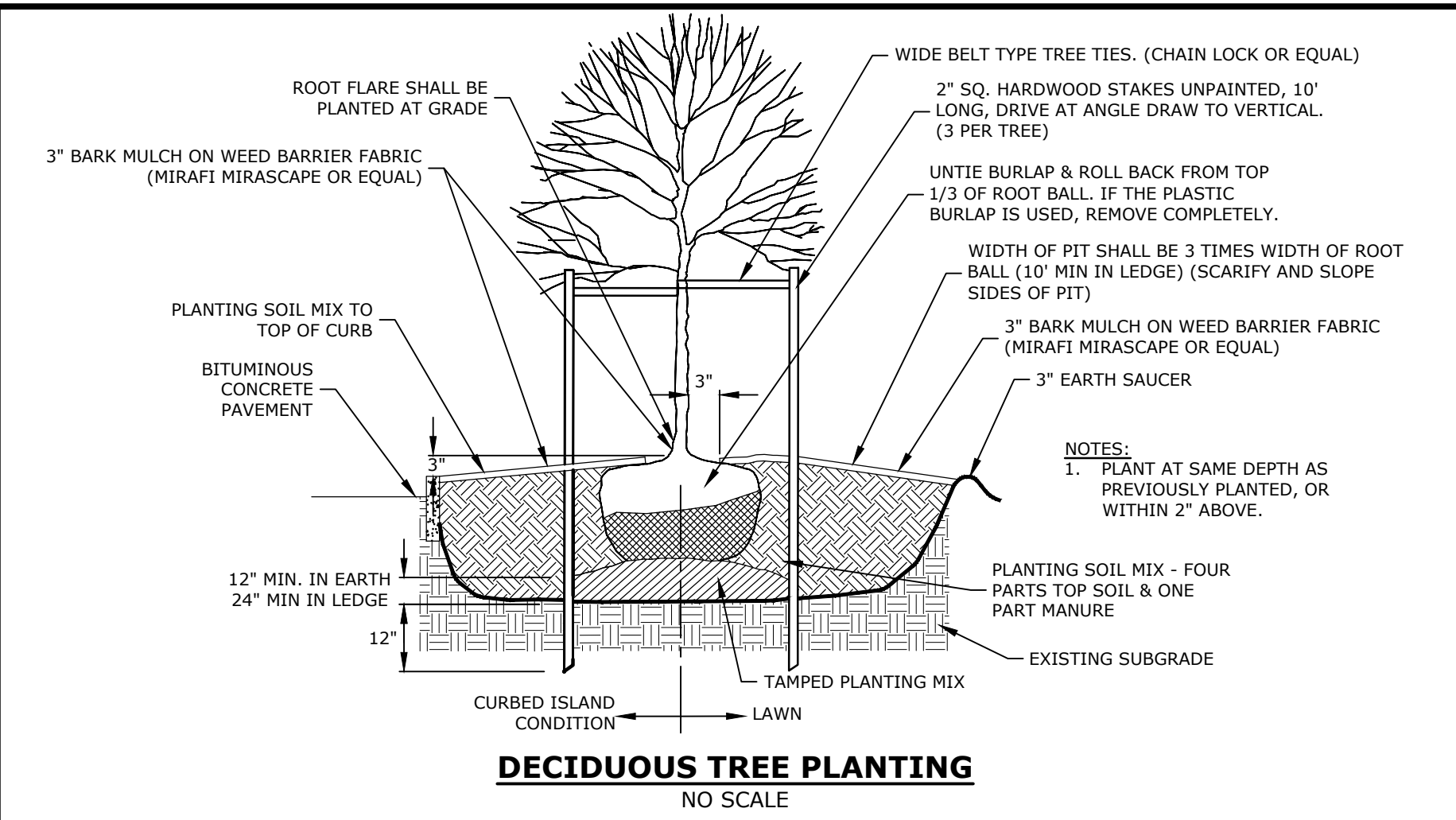
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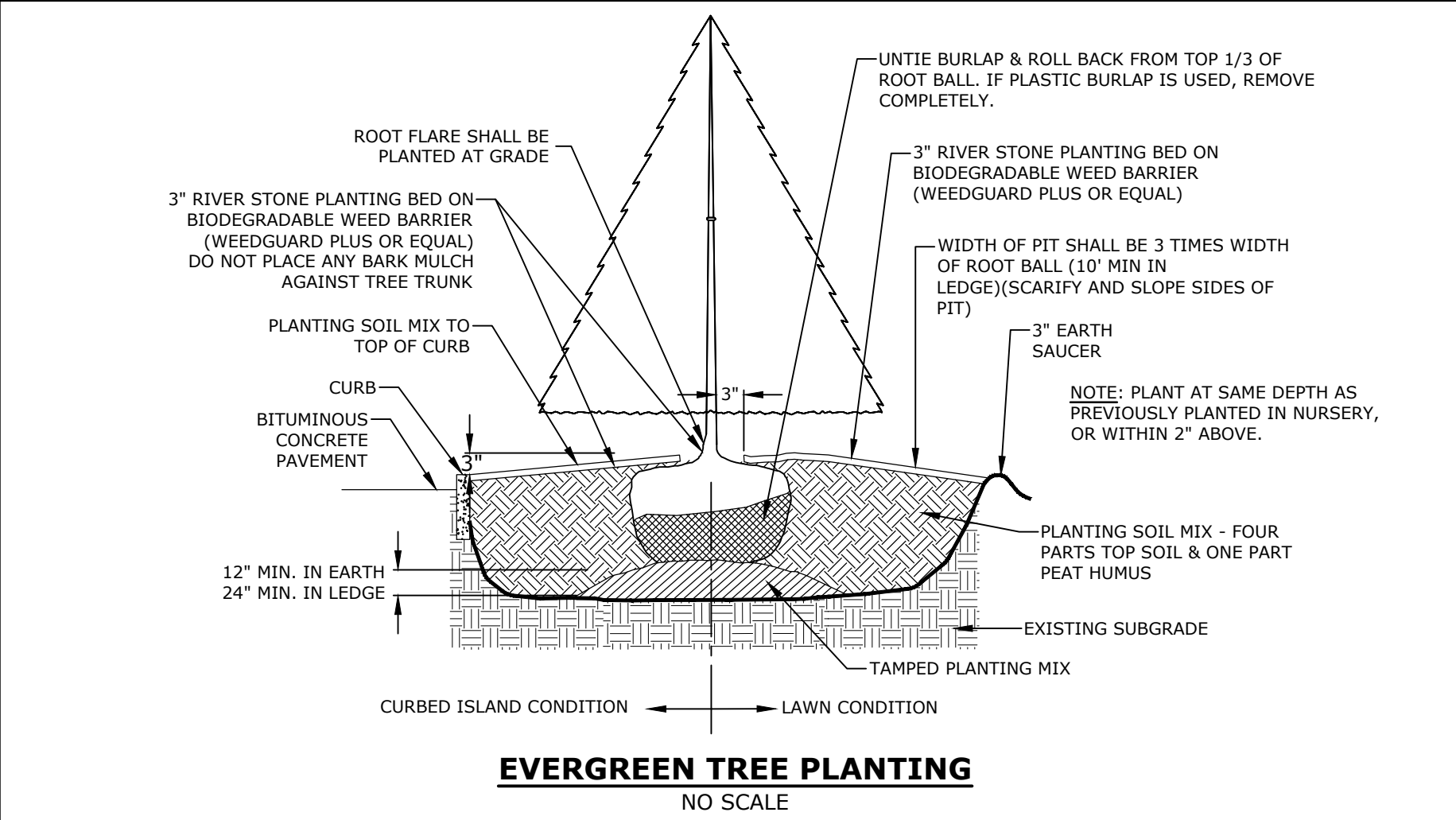
LANDSCAPE PLAN

SCALE: AS SHOWN

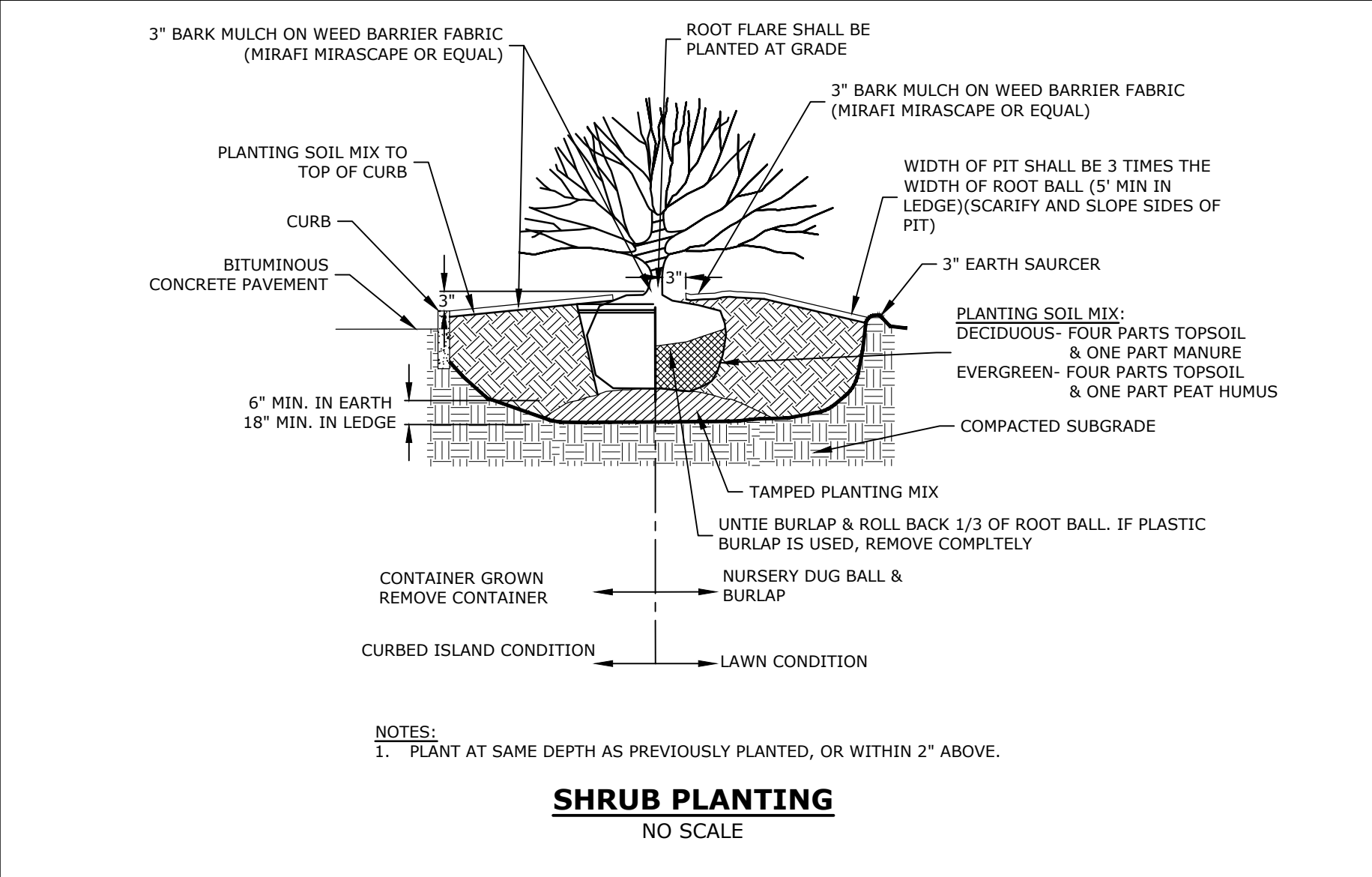
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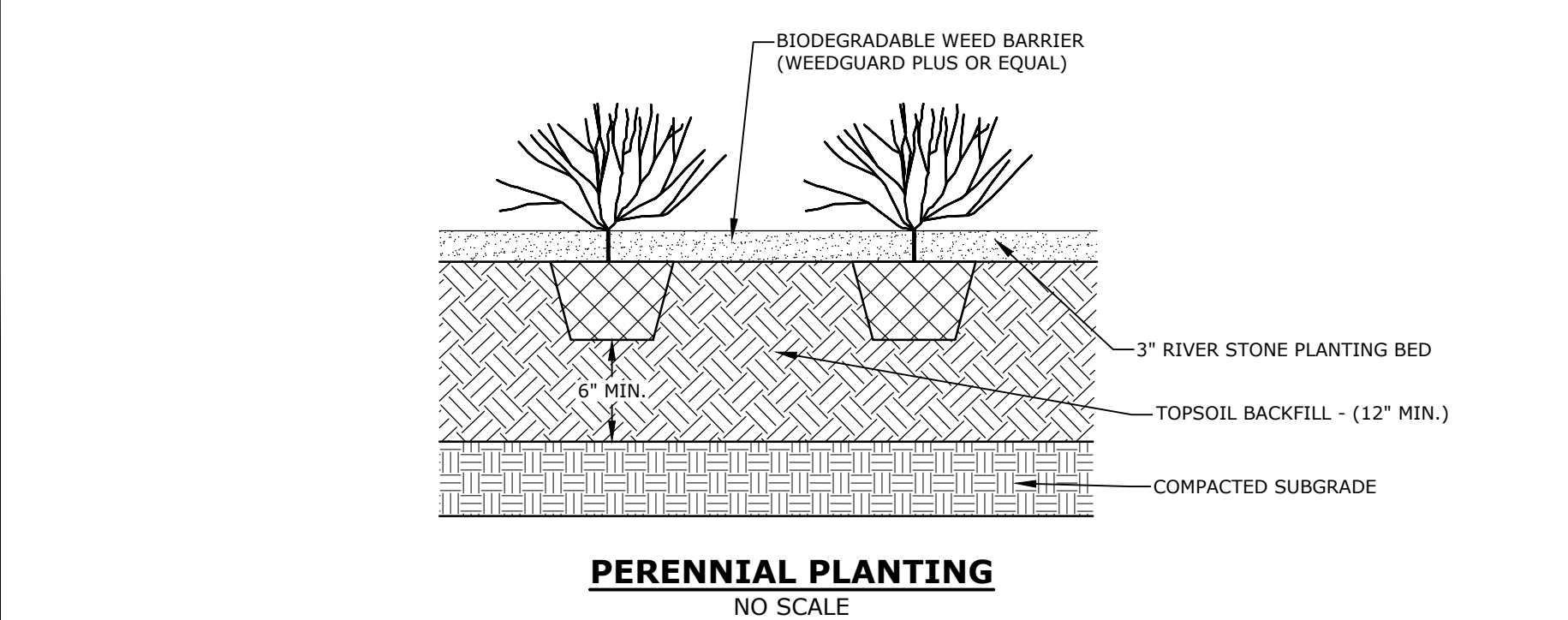
DECIDUOUS TREE PLANTING
NO SCALE



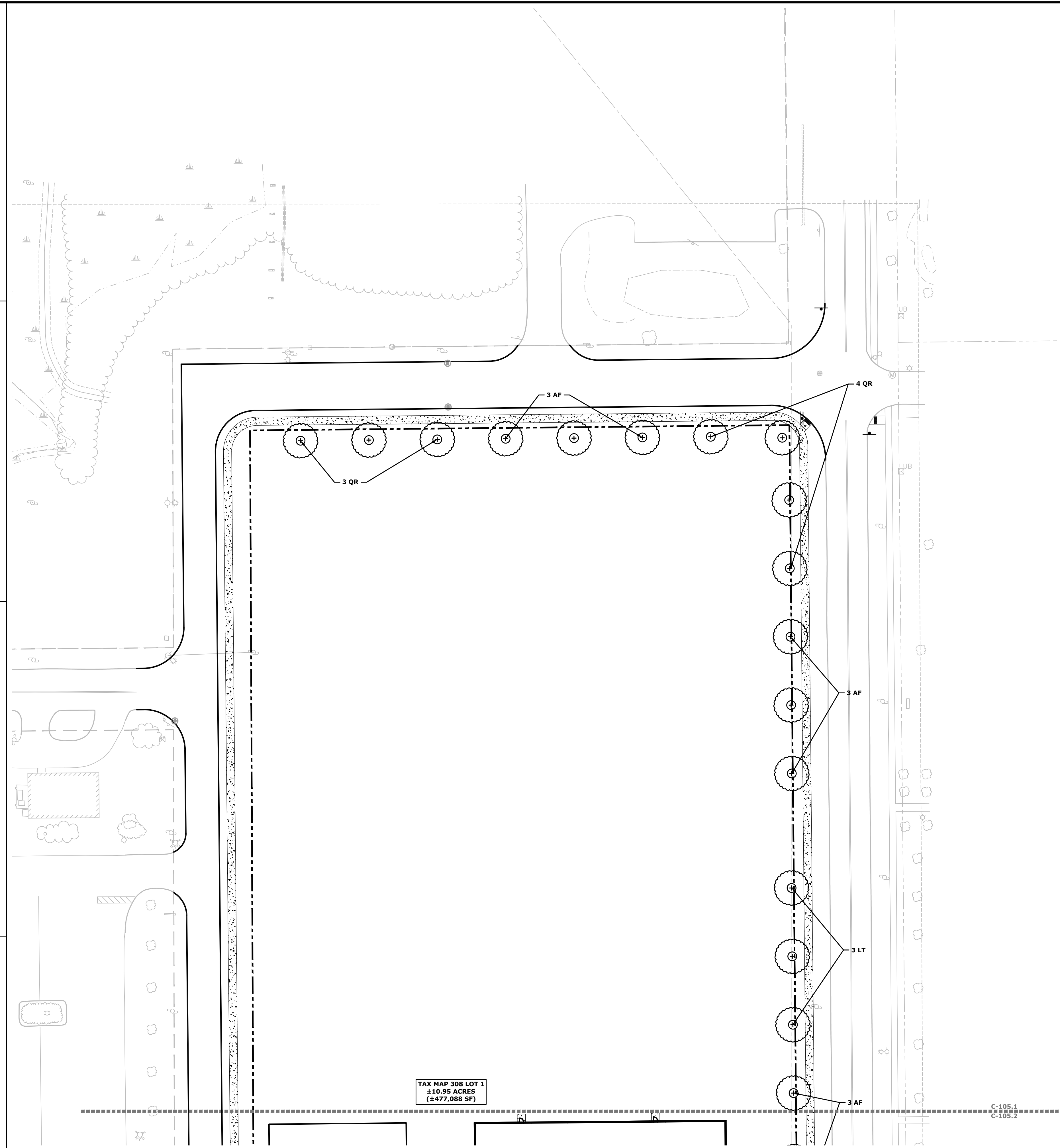
EVERGREEN TREE PLANTING
NO SCALE



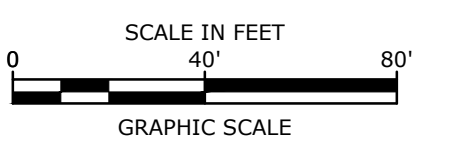
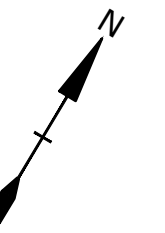
SHRUB PLANTING
NO SCALE



PERENNIAL PLANTING
NO SCALE



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Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

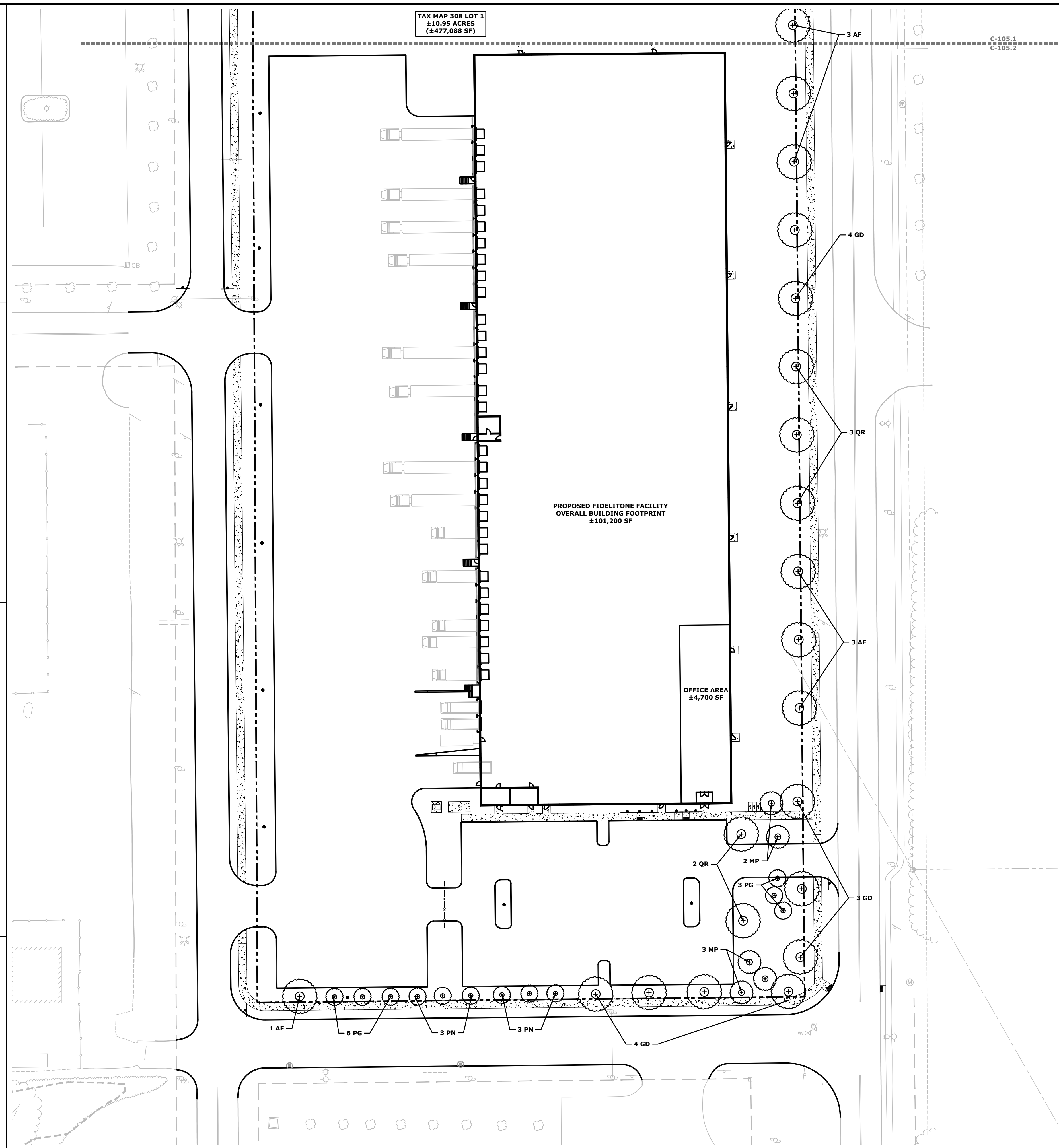
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LANDSCAPE PLAN

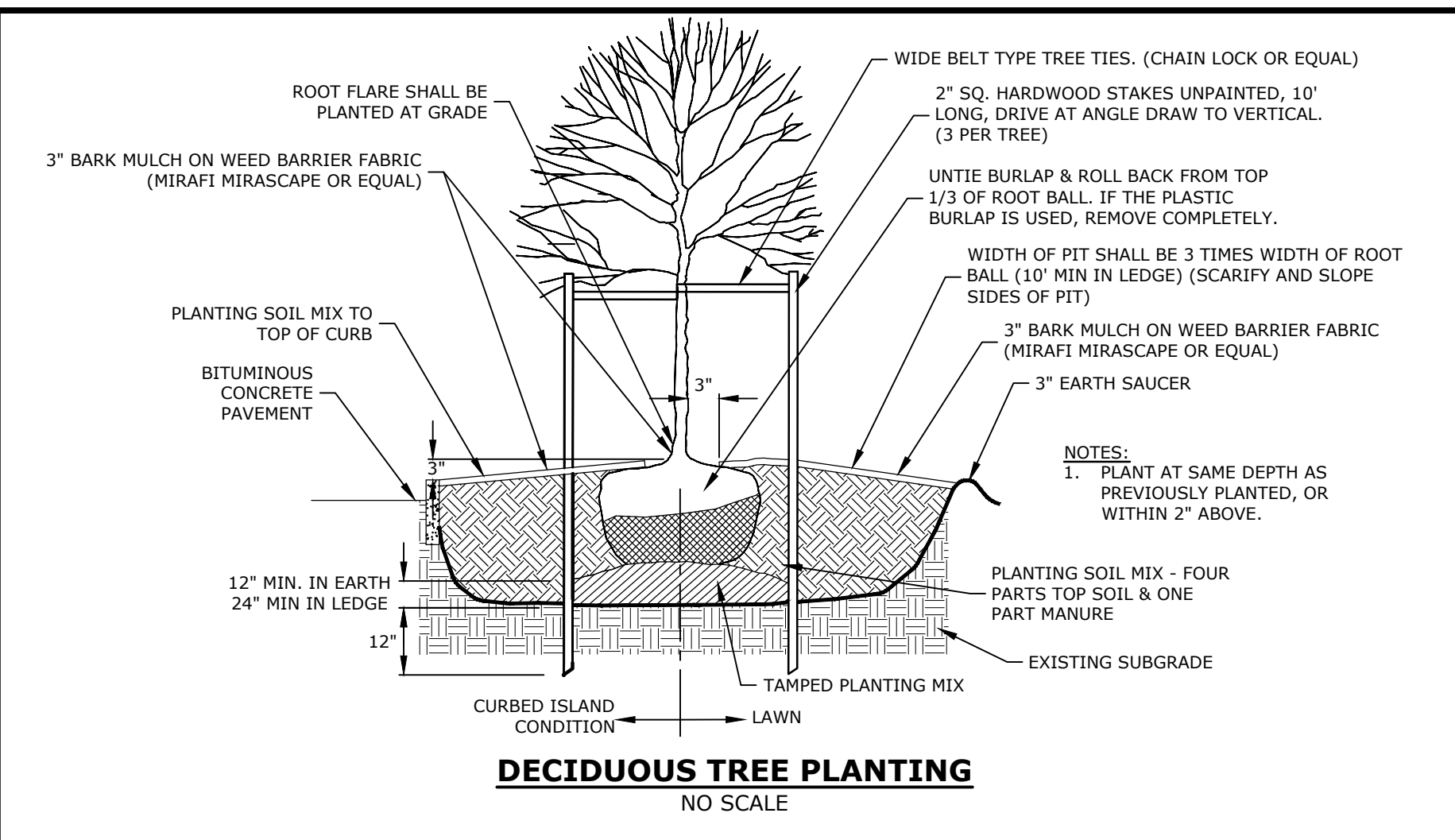
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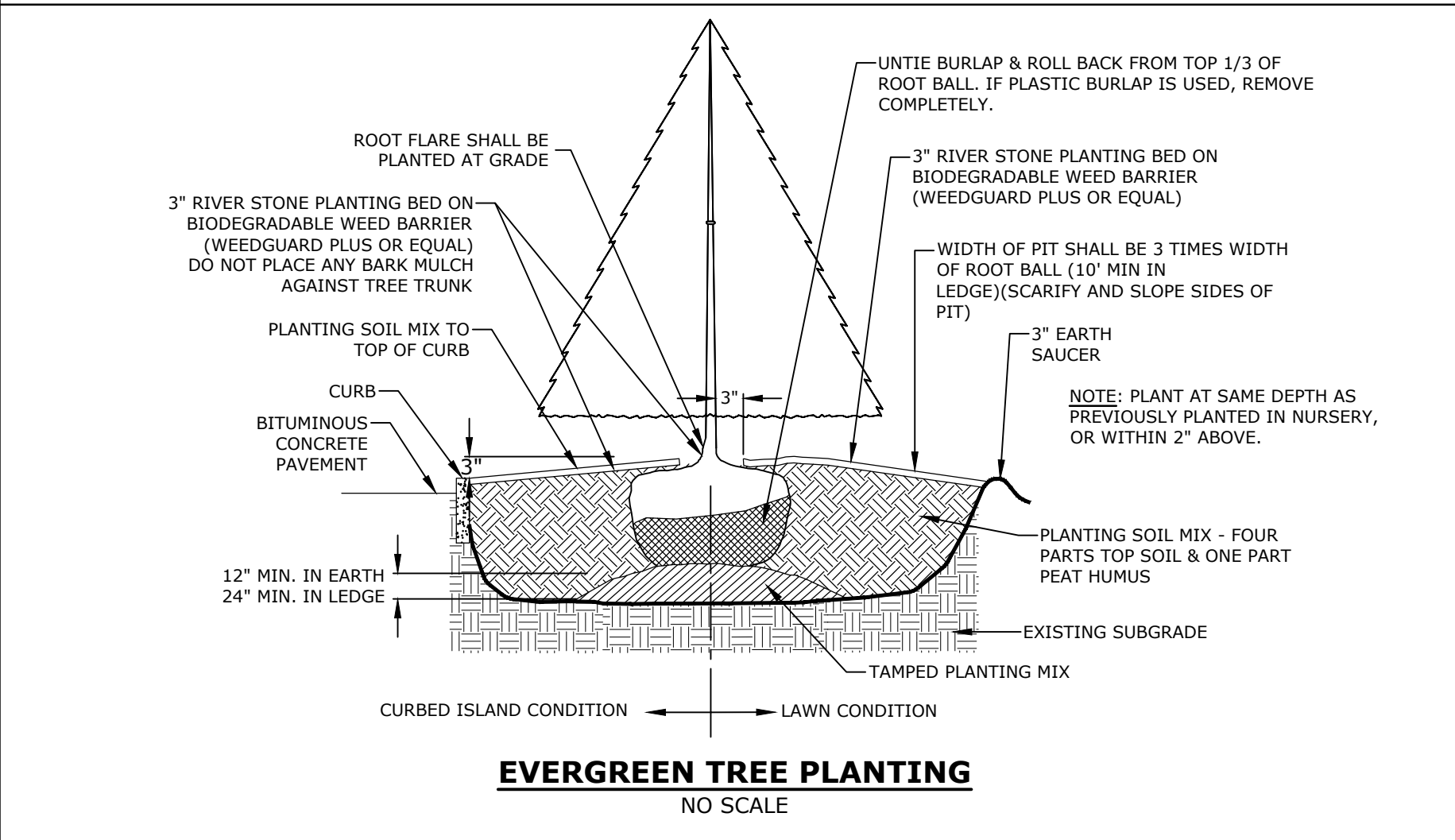


TAX MAP 308 LOT 1
±10.95 ACRES
(±477,088 SF)

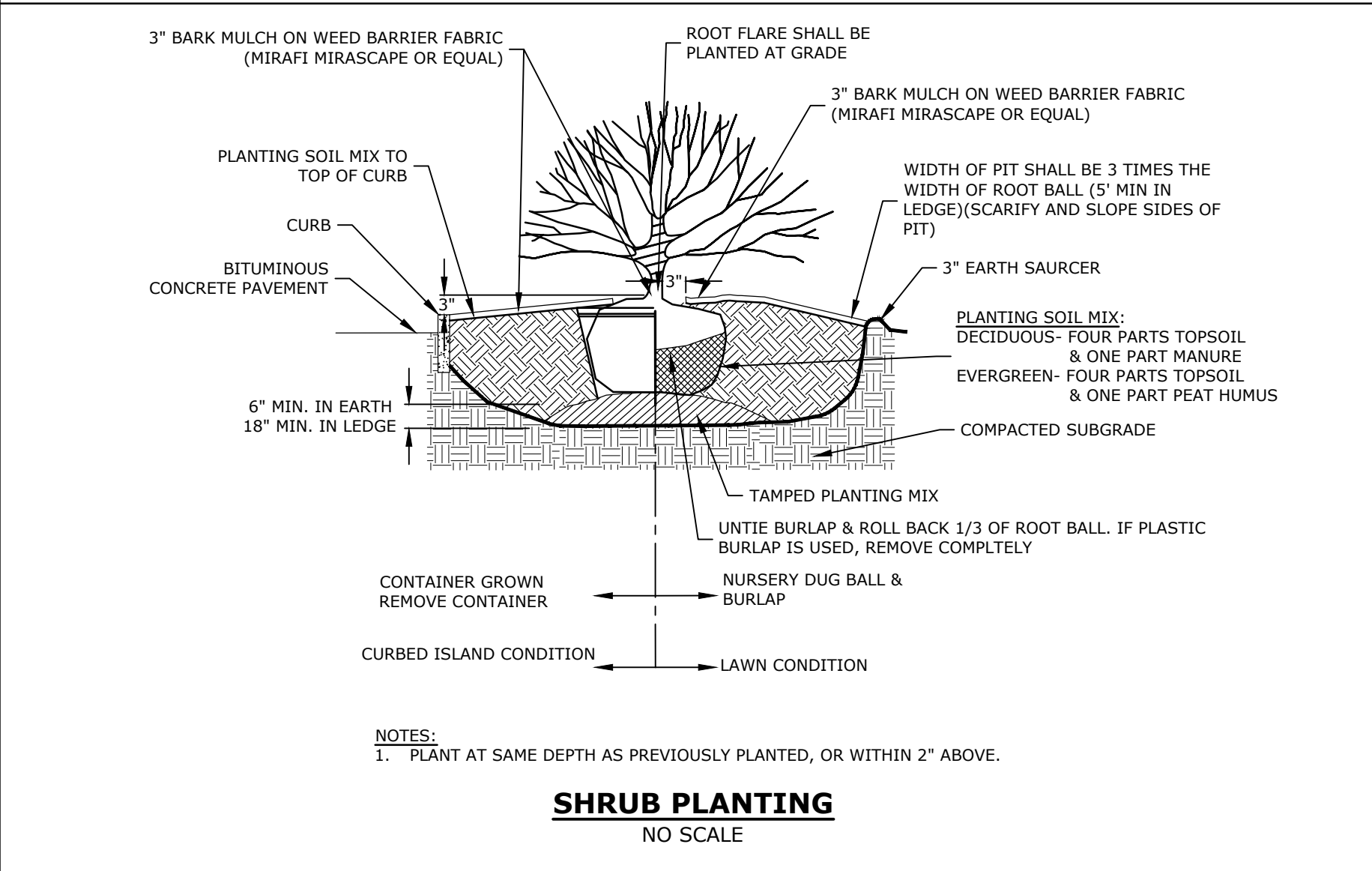
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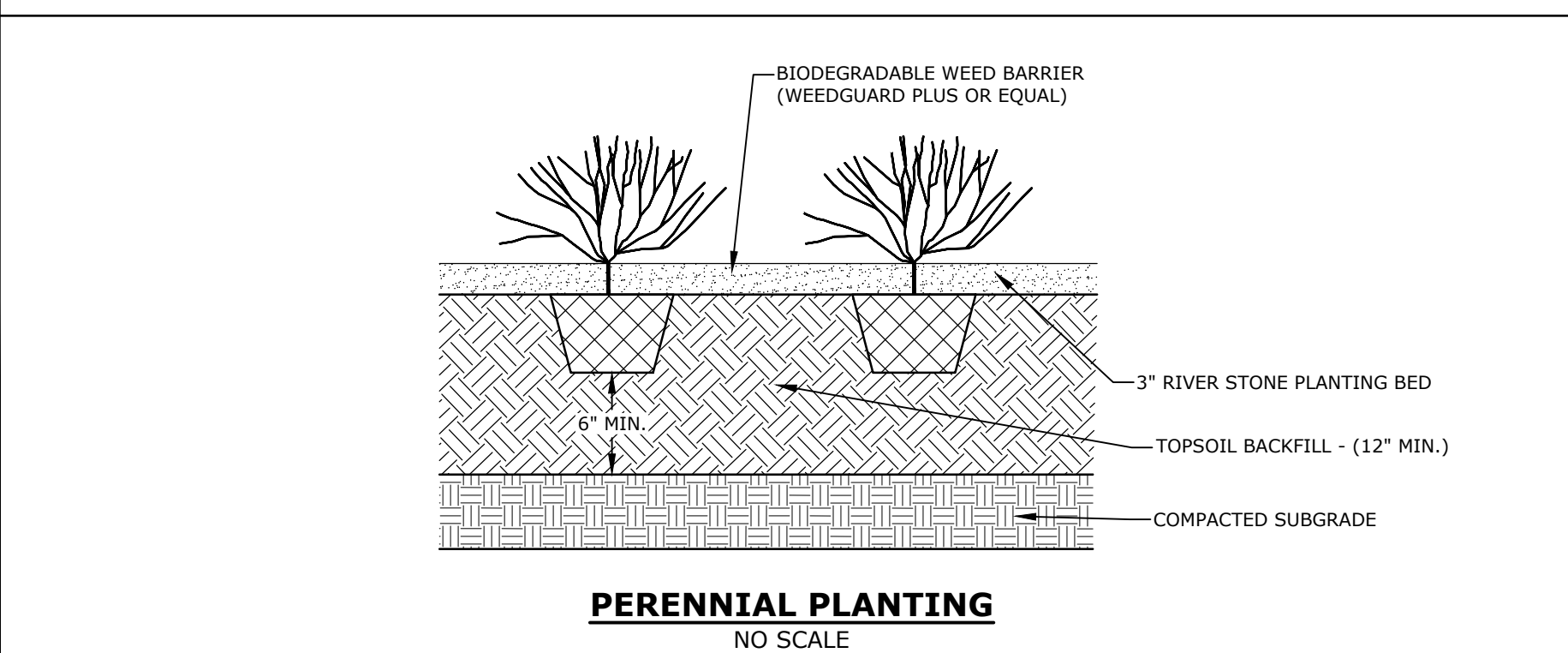
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NO SCALE



EVERGREEN TREE PLANTING
NO SCALE

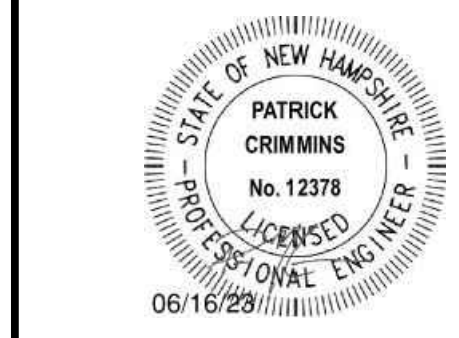


SHRUB PLANTING
NO SCALE



PERENNIAL PLANTING
NO SCALE

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Proposed Fidelitone Facility

Aviation Avenue Group, LLC

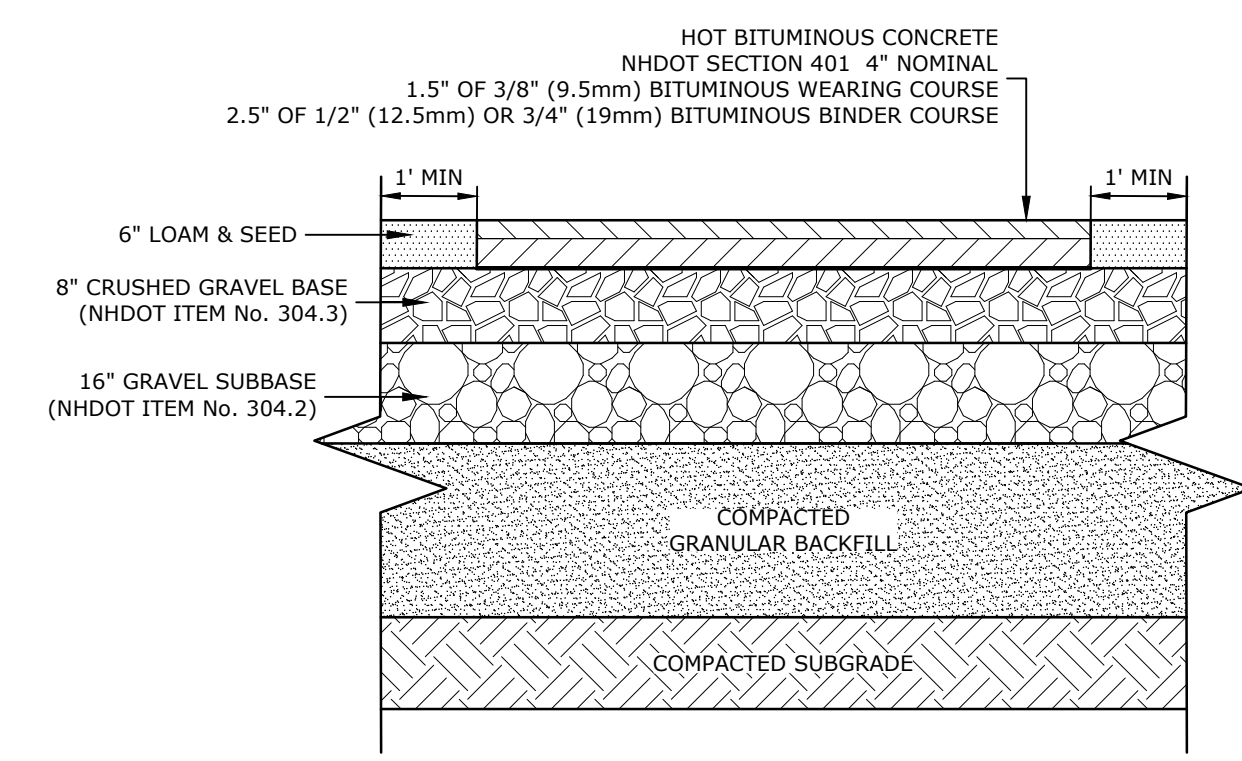
100 New Hampshire Avenue
Portsmouth, NH

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DRAWN BY:	CML	
CHECKED:	NAH	
APPROVED:	PMC	

DETAILS SHEET

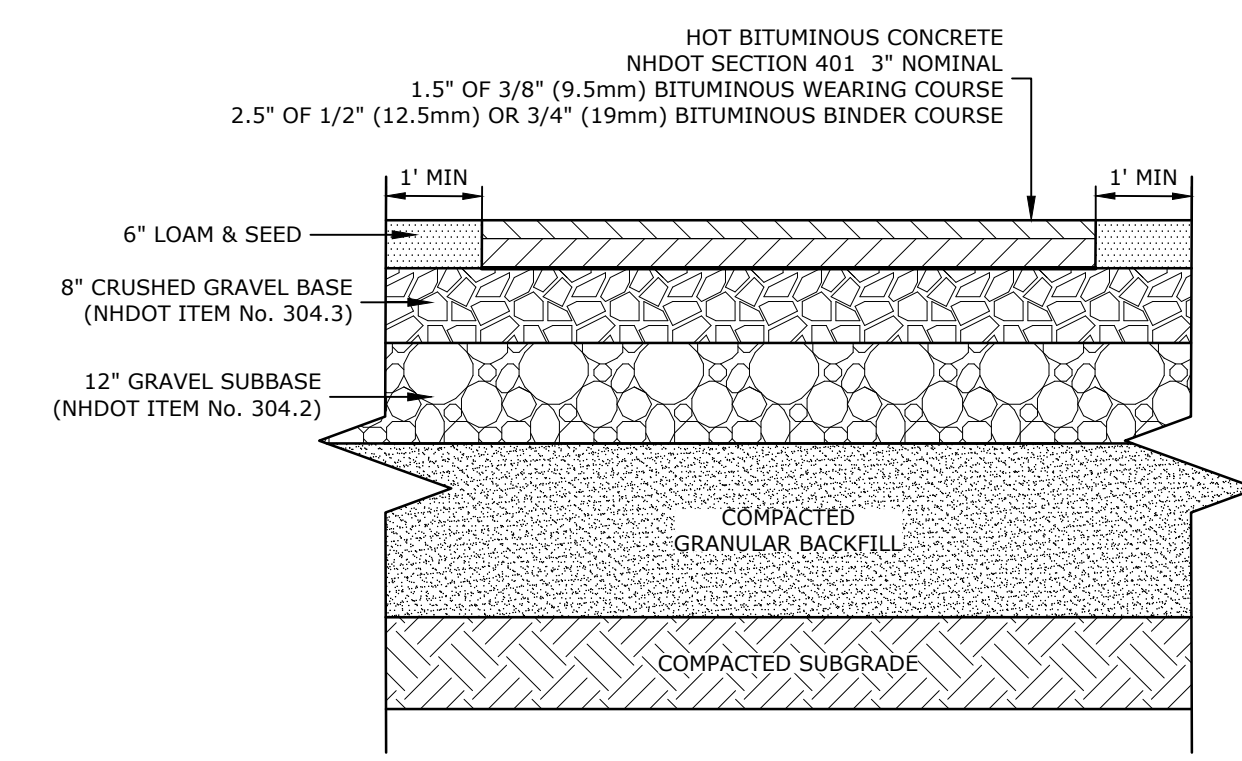
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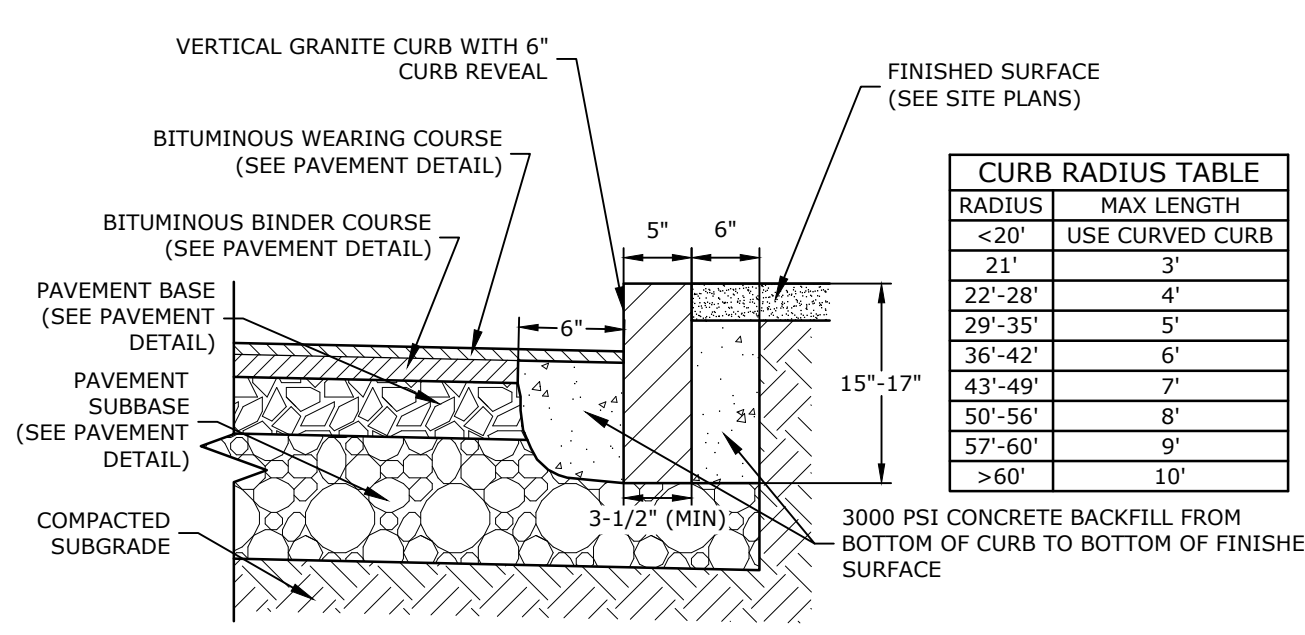
- NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
 4. FINAL PAVEMENT SECTION DESIGN SHALL BE APPROVED BY THE PROJECTS GEOTECHNICAL ENGINEER.

TYPICAL HEAVY DUTY PAVEMENT SECTION
NO SCALE



- NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
 4. FINAL PAVEMENT SECTION DESIGN SHALL BE APPROVED BY THE PROJECTS GEOTECHNICAL ENGINEER.

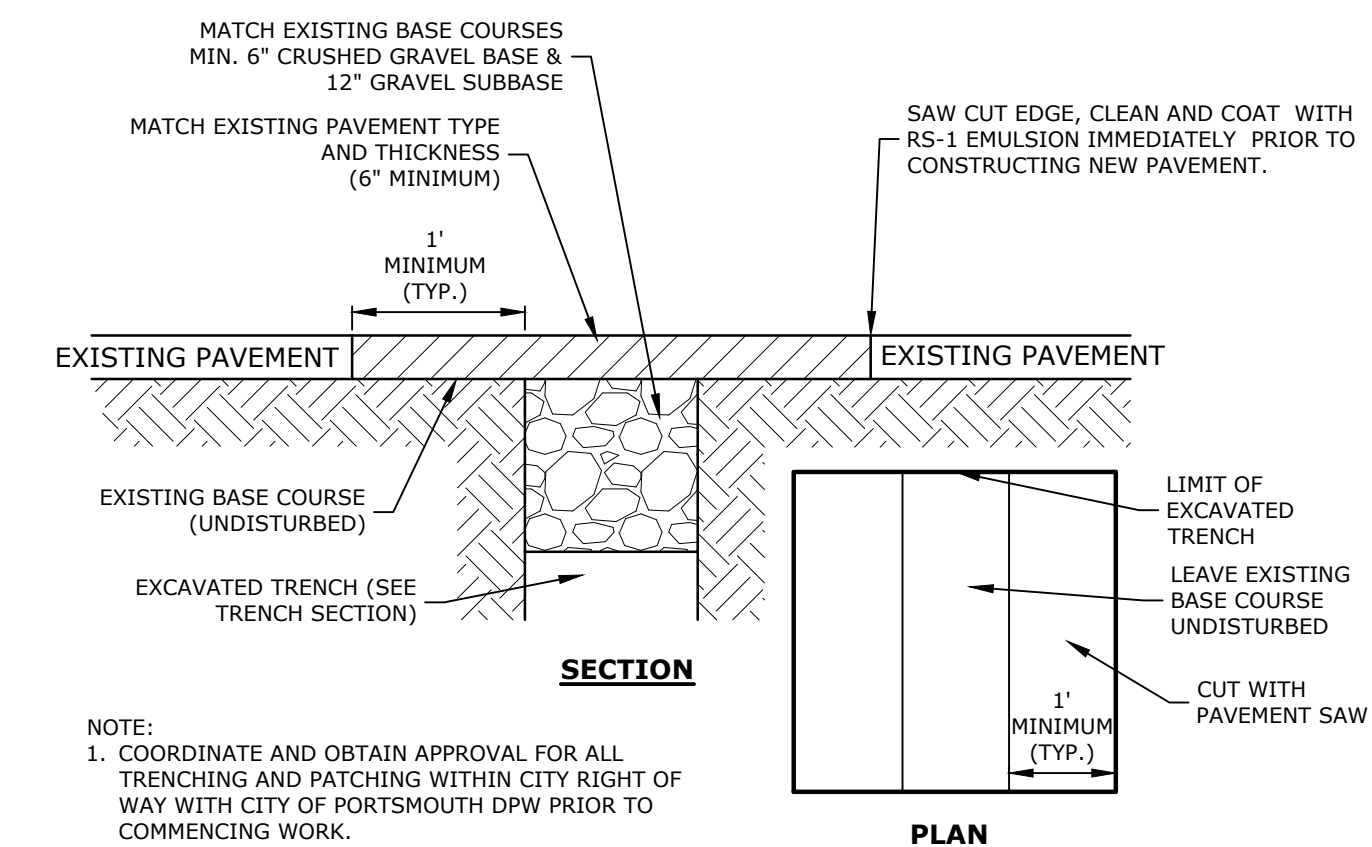
TYPICAL STANDARD DUTY PAVEMENT SECTION
NO SCALE



RADIUS	MAX LENGTH
<20'	USE CURVED CURB
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
>60'	10'

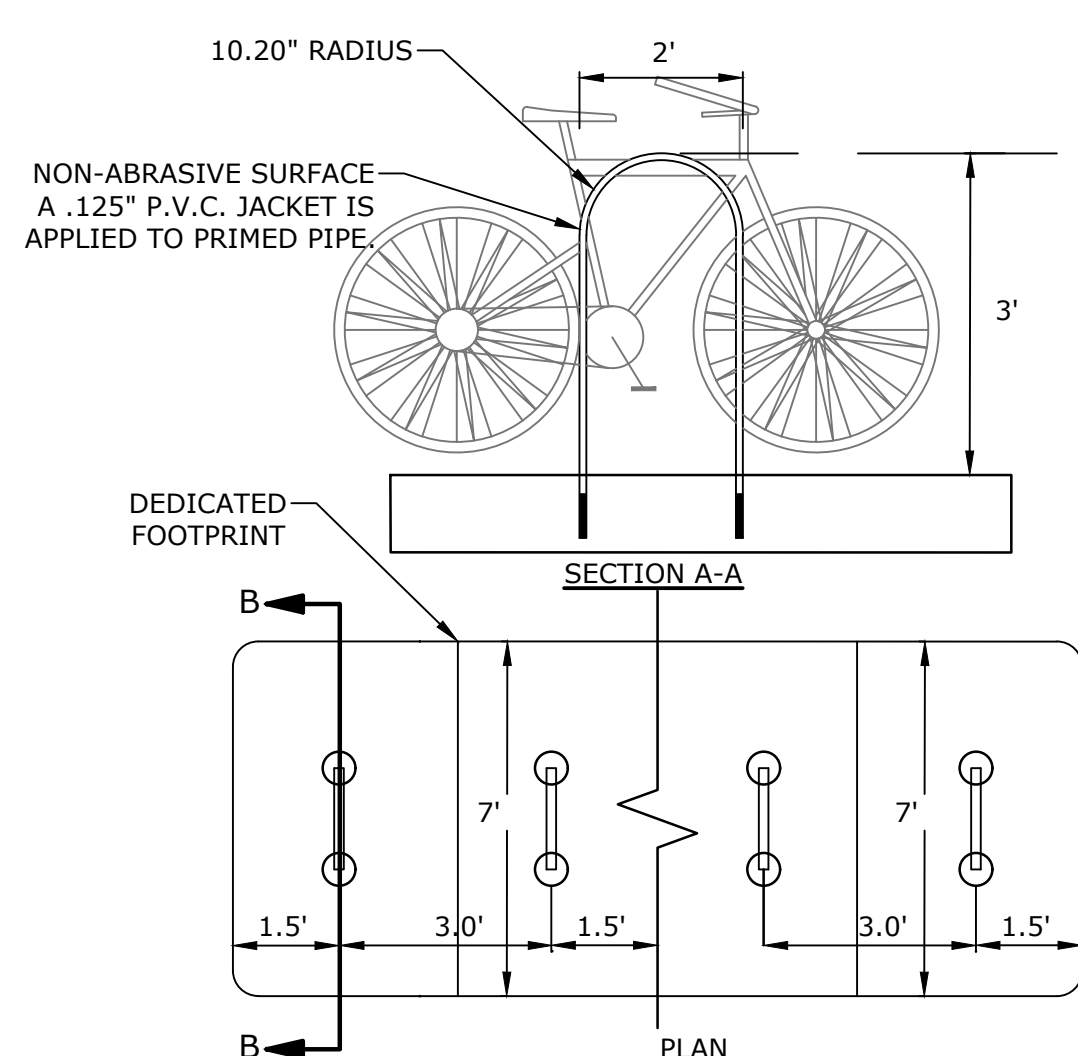
- NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
 2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
 4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
 5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
 6. ALL RADI 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
 7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

VERTICAL GRANITE CURB
NO SCALE

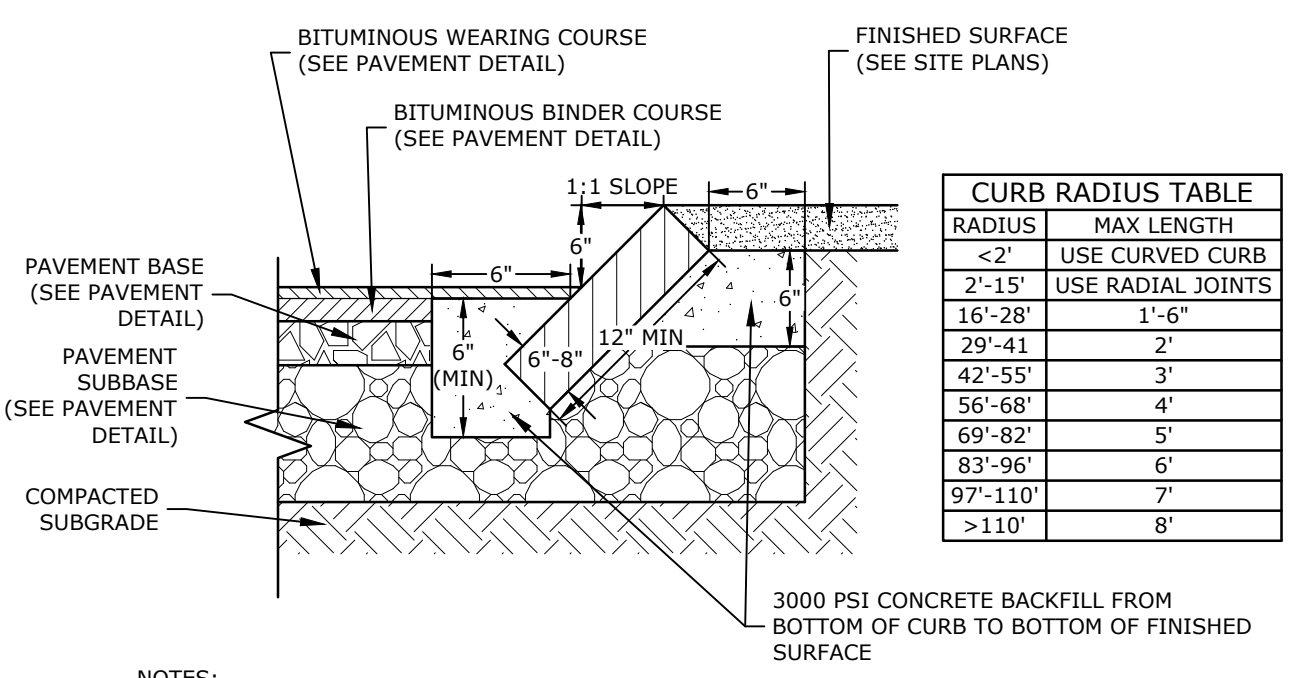


- NOTE:
1. COORDINATE AND OBTAIN APPROVAL FOR ALL TRENCHING AND PATCHING WITHIN CITY RIGHT OF WAY WITH CITY OF PORTSMOUTH DPW PRIOR TO COMMENCING WORK.

ROADWAY TRENCH PATCH
NO SCALE



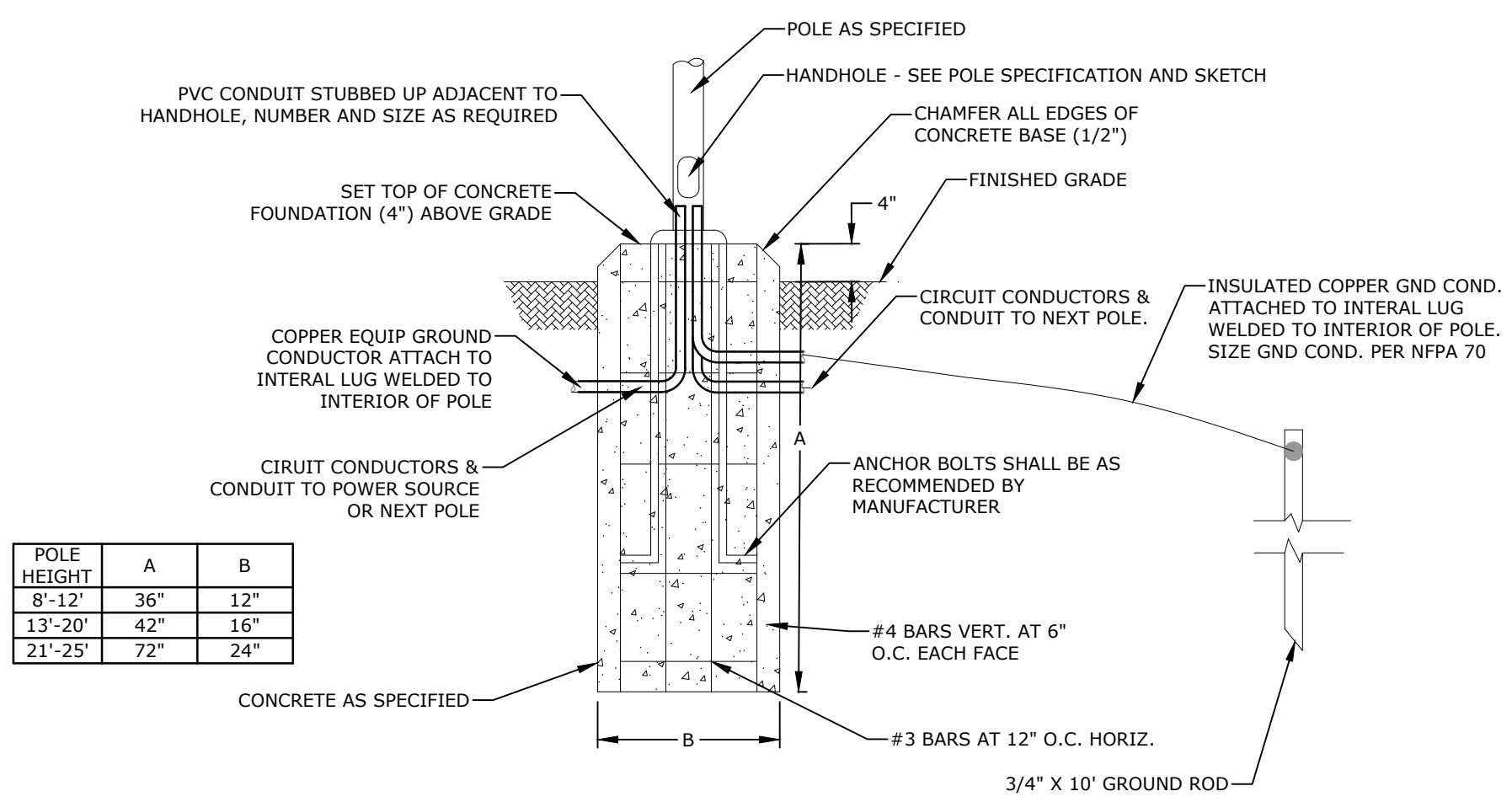
BIKE RACK
NO SCALE



RADIUS	MAX LENGTH
<2'	USE CURVED CURB
2'-15'	USE RADIAL JOINTS
16'-28'	1'-6"
29'-41'	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-96'	6'
97'-110'	7'
>110'	8'

- NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF SLOPED GRANITE CURB (SGC).
 2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 8'
 4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 18'
 5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
 6. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

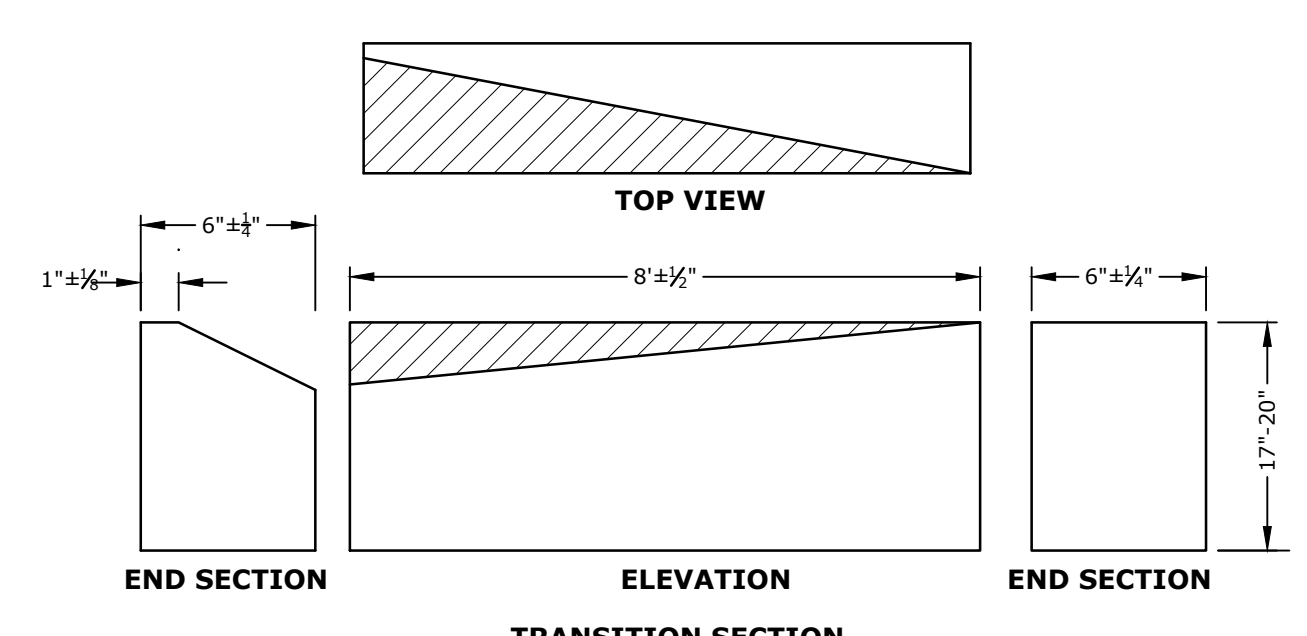
SLOPED GRANITE CURB
NO SCALE



POLE HEIGHT	A	B
8'-12'	36"	12"
13'-20'	42"	16"
21'-25'	72"	24"

- NOTES:
1. ALL LIGHT POLES, LUMINAIRES, AND WIRE TO BE FURNISHED AND INSTALLED BY THE POWER COMPANY, UNLESS OTHERWISE DIRECTED.
 2. ANCHOR BOLTS, GROUND ROD & GROUND WIRE TO BE FURNISHED BY THE POWER COMPANY AND INSTALLED BY THE CONTRACTOR, UNLESS OTHERWISE DIRECTED.
 3. BOLT CIRCLE DIAMETER SHALL BE VERIFIED WITH THE POWER COMPANY.
 4. ALL BASES SHALL BE LOCATED 10'-0" (TO CENTER) FROM FACE OF CURB OR EDGE OF PAVED SHOULDER, UNLESS OTHERWISE NOTED.
 5. REINFORCEMENT SHALL CONFORM TO SECTION 544 OF THE STANDARD SPECIFICATIONS.
 6. ANY ANCHOR BOLTS DAMAGED DURING INSTALLATION SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER.
 7. UPON INSTALLATION, ANCHOR BOLT THREADS SHALL BE CLEANED WITH A WIRE BRUSH.
 8. TERRAIN SURROUNDING BASE MUST BE GRADED AS SHOWN IN DETAIL "A" TO PREVENT IMPACTING VEHICLES FORM SNAGGING ON BASE.

TYPICAL LIGHT POLE BASE
NO SCALE

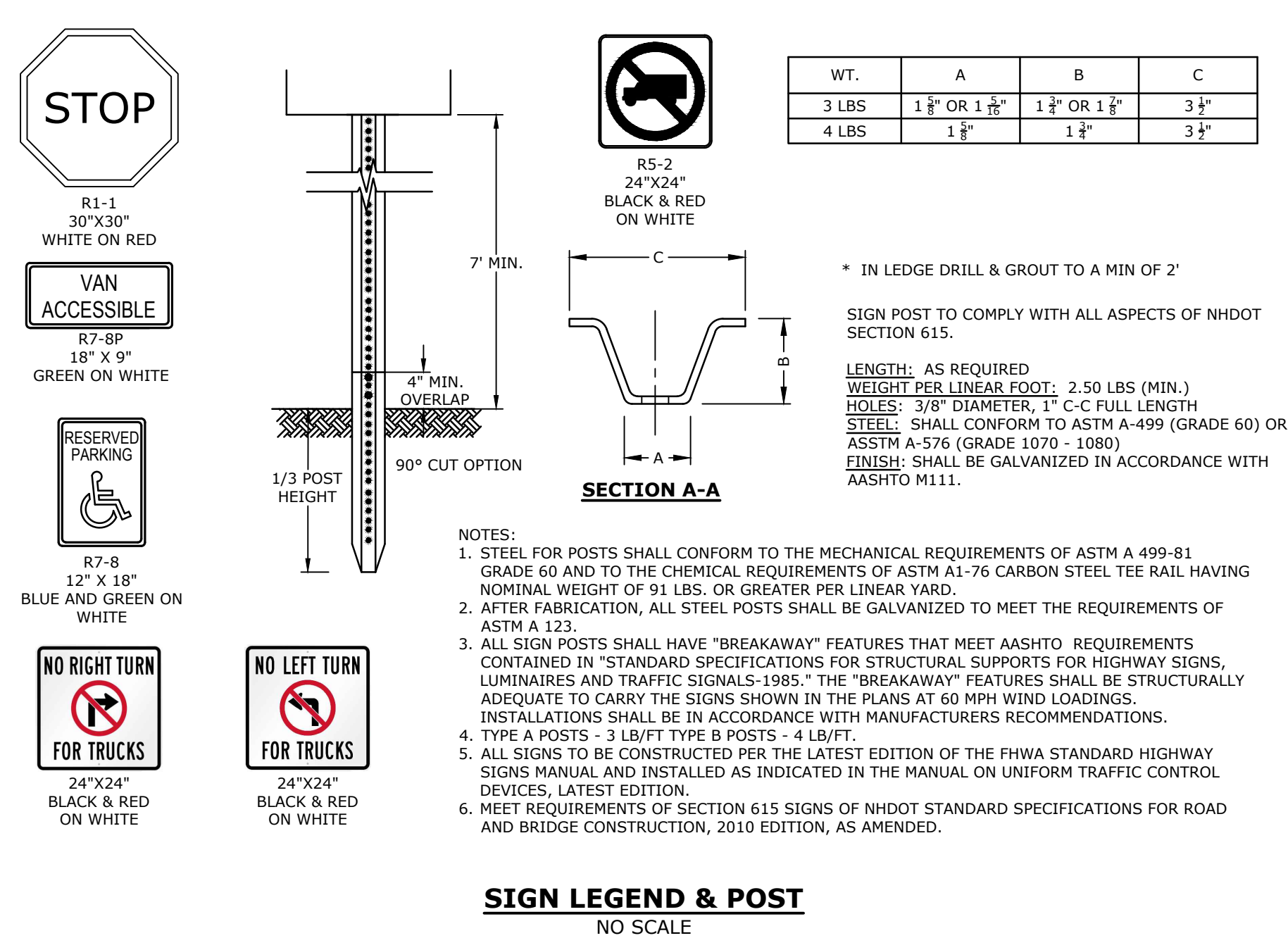
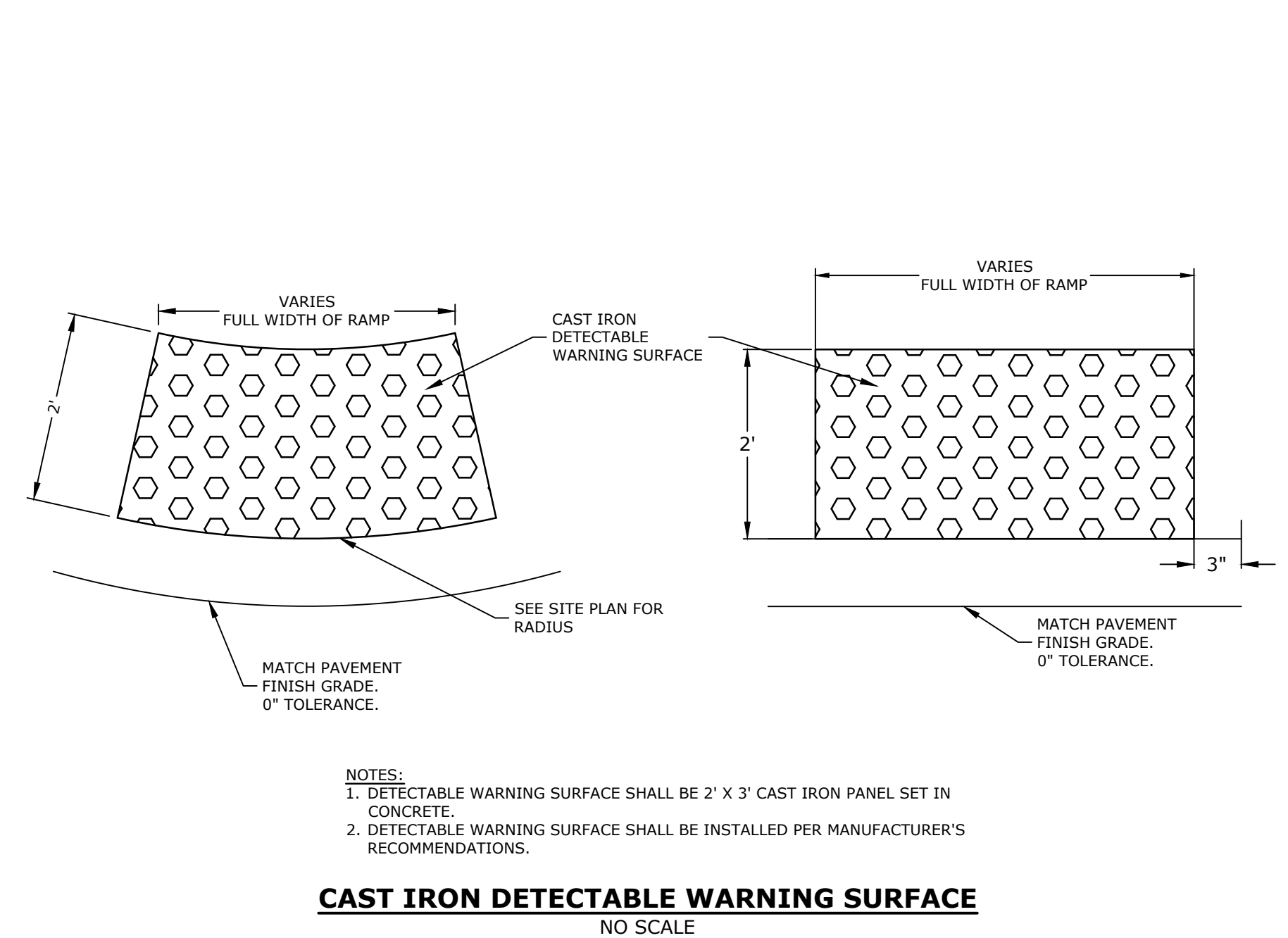
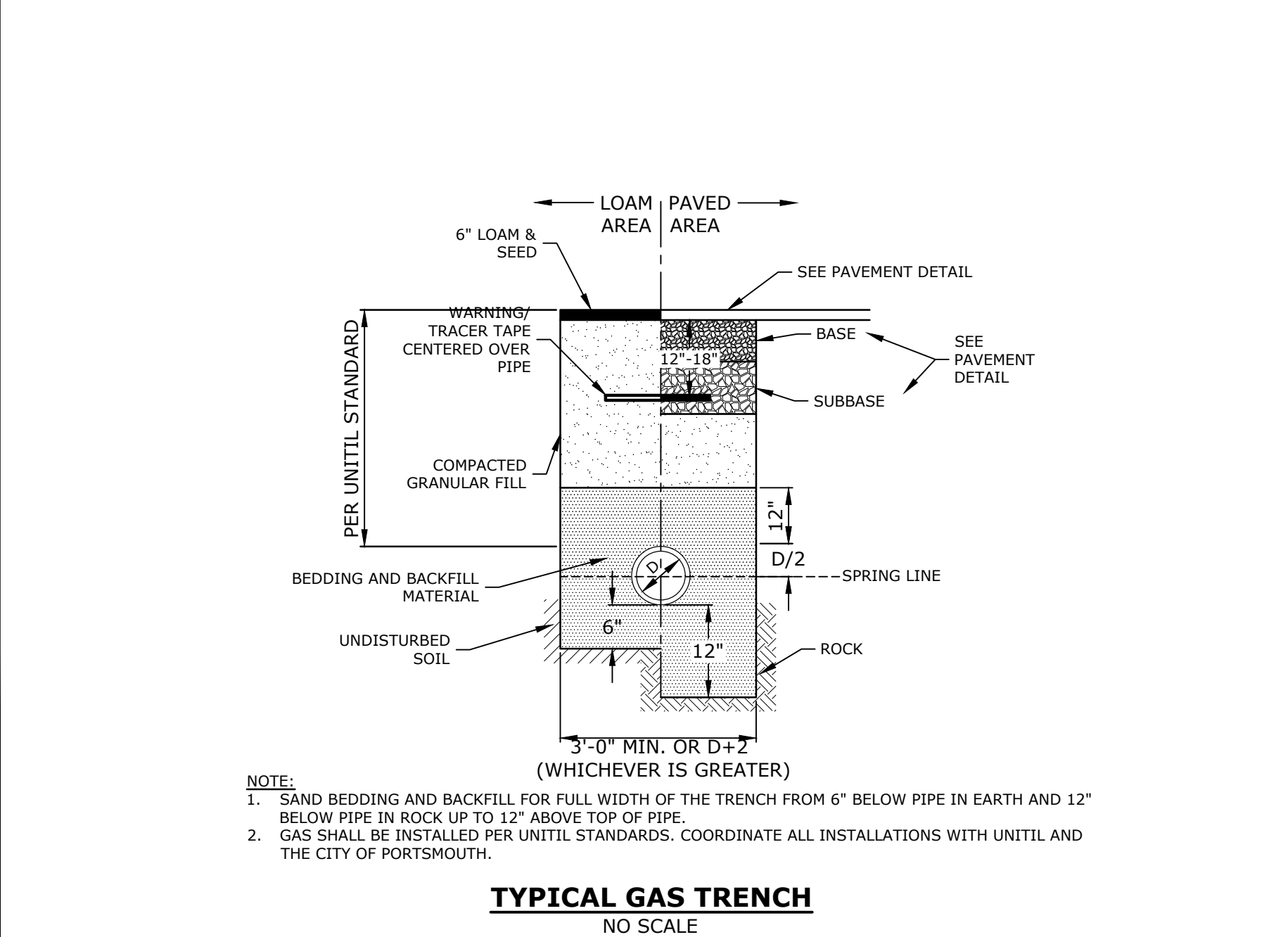
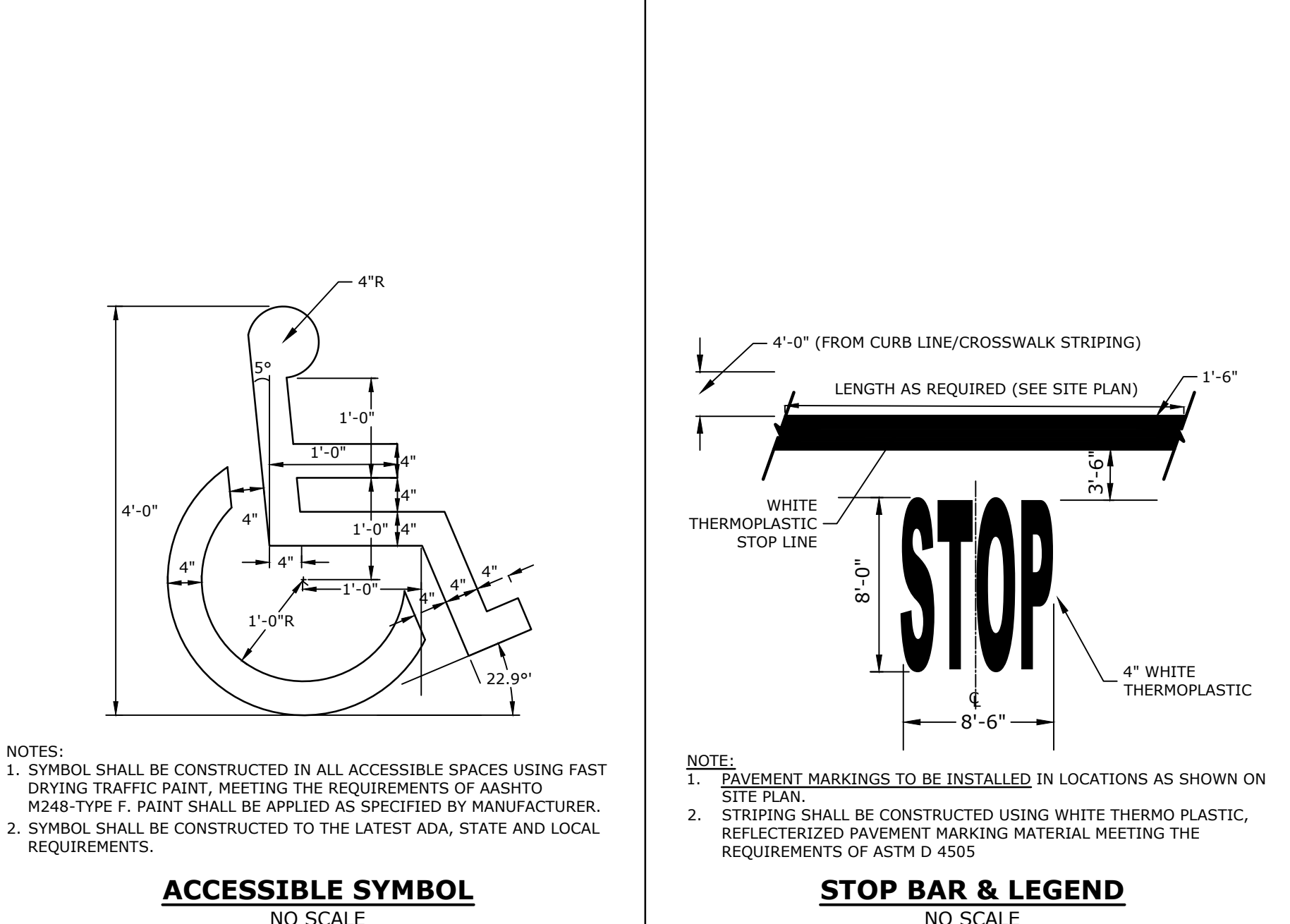
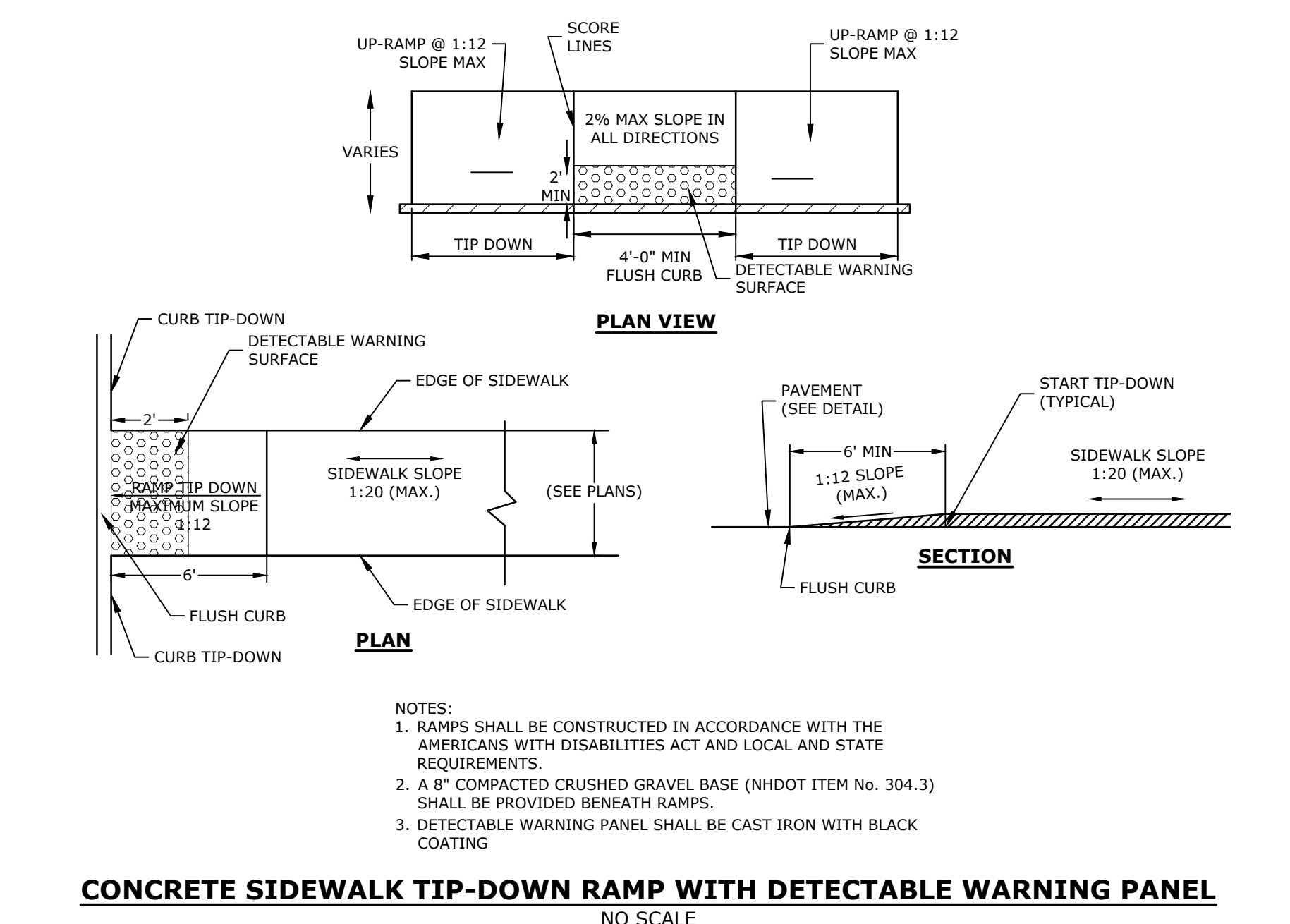
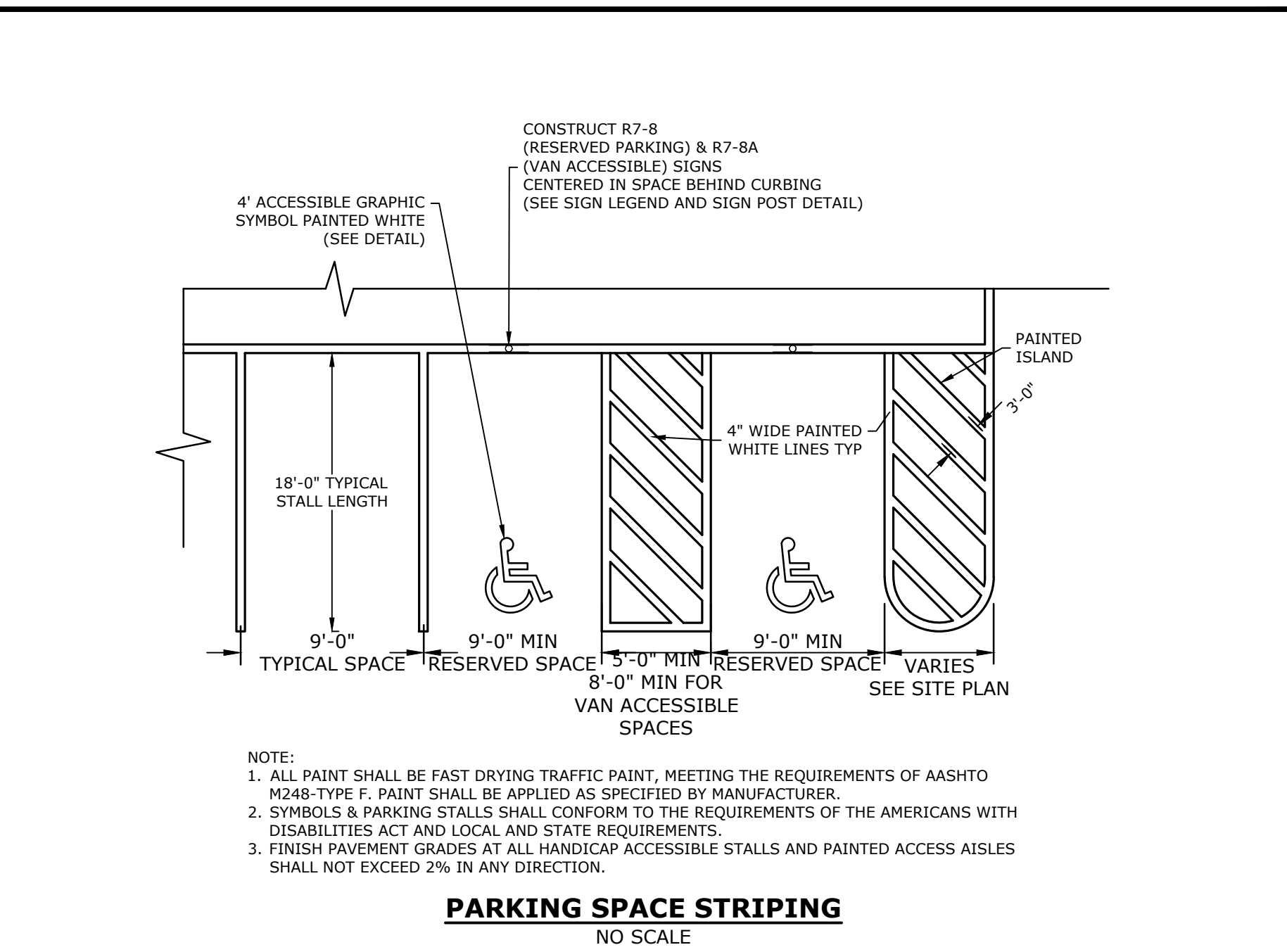
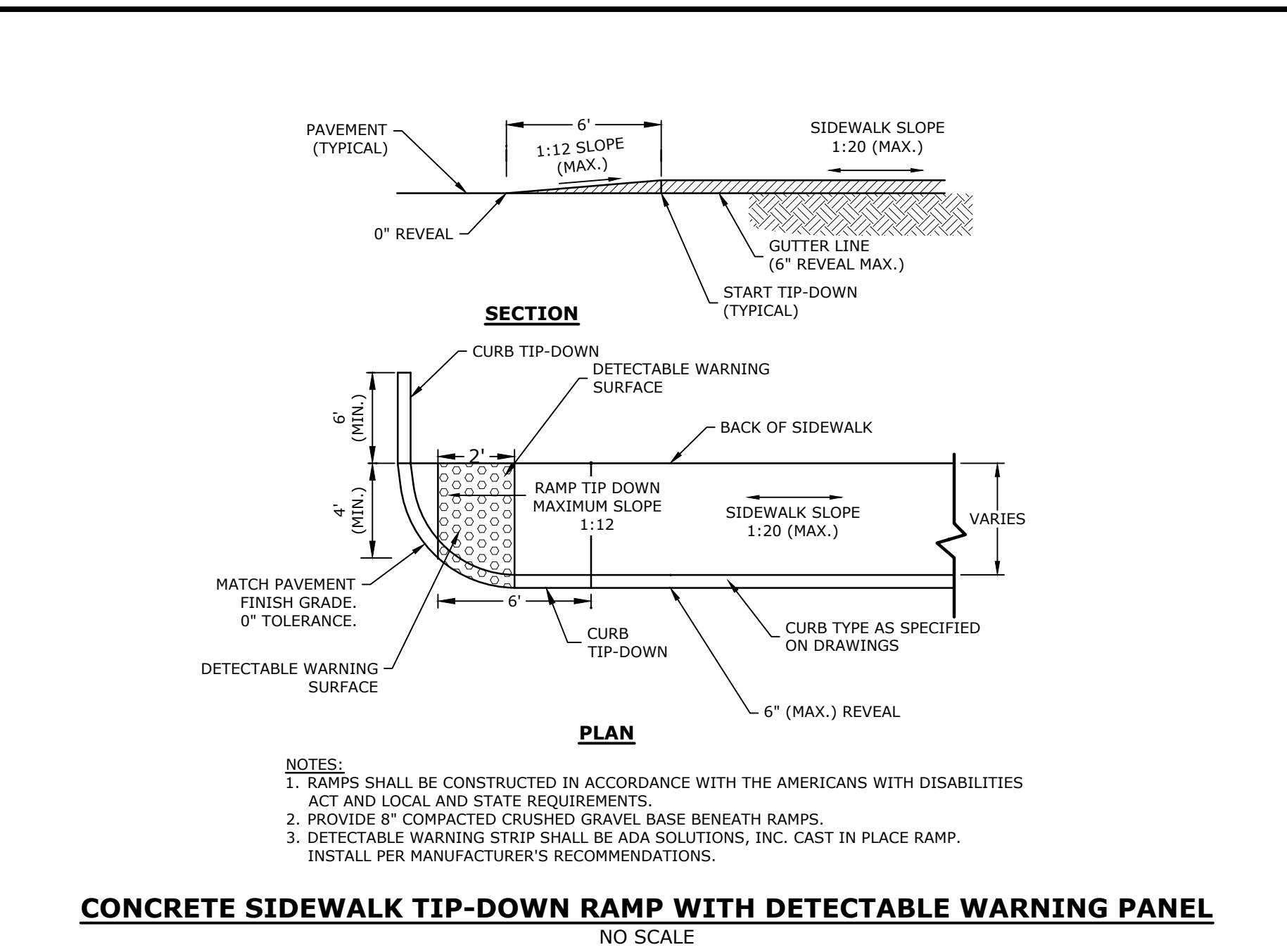
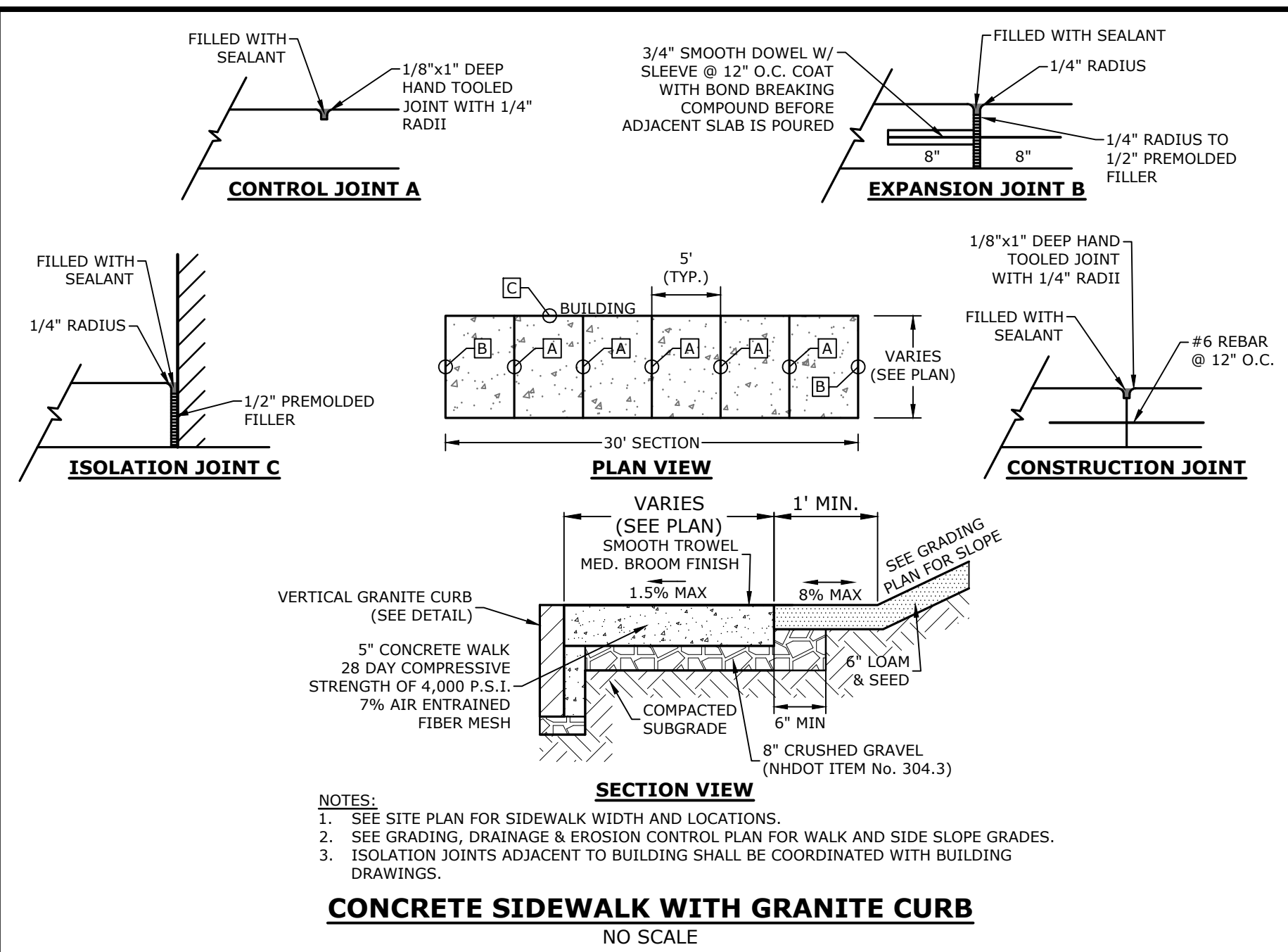
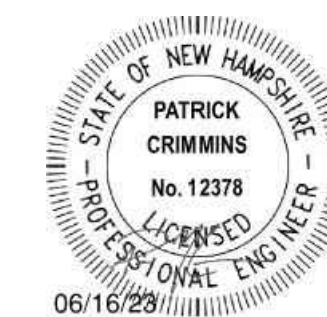


TRANSITION SECTION
GRANITE SLOPE CURB TO VERTICAL GRANITE CURB

- NOTES:
1. THE INTENT OF THIS ITEM IS TO PROVIDE A SMOOTH TRANSITION BETWEEN STRAIGHT GRANITE CURB AND SLOPE CURB WITHOUT REQUIRING FIELD CHIPPING DURING INSTALLATION. THE SLOPE CURB MAY REQUIRE ADJUSTMENTS TO MEET THE TRANSITION PIECE HEIGHT. TRANSITION SLOPE CURB TO STANDARD REVEAL AS QUICKLY AS POSSIBLE TO PROVIDE FOR THIS SMOOTH TRANSITION.

CURB TRANSITION
NO SCALE

Last Save Date: June 16, 2023 1:41 PM By: CML
 Plot Date: Friday, June 16, 2023 Plotted By: Craig M. Langton
 File Location: S:\Projects\100 New Hampshire Avenue\Drawings - Figures\AutoCAD\Sheet\0595-015_Details.DWG Layout Tab: C-502



Proposed Fidelity Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

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PROJECT NO: P0595-015
DATE: 12/19/2022
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APPROVED: PMC

DETAILS SHEET

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Last Save Date: June 16, 2023 1:41 PM By: CML
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JELLYFISH DESIGN NOTES

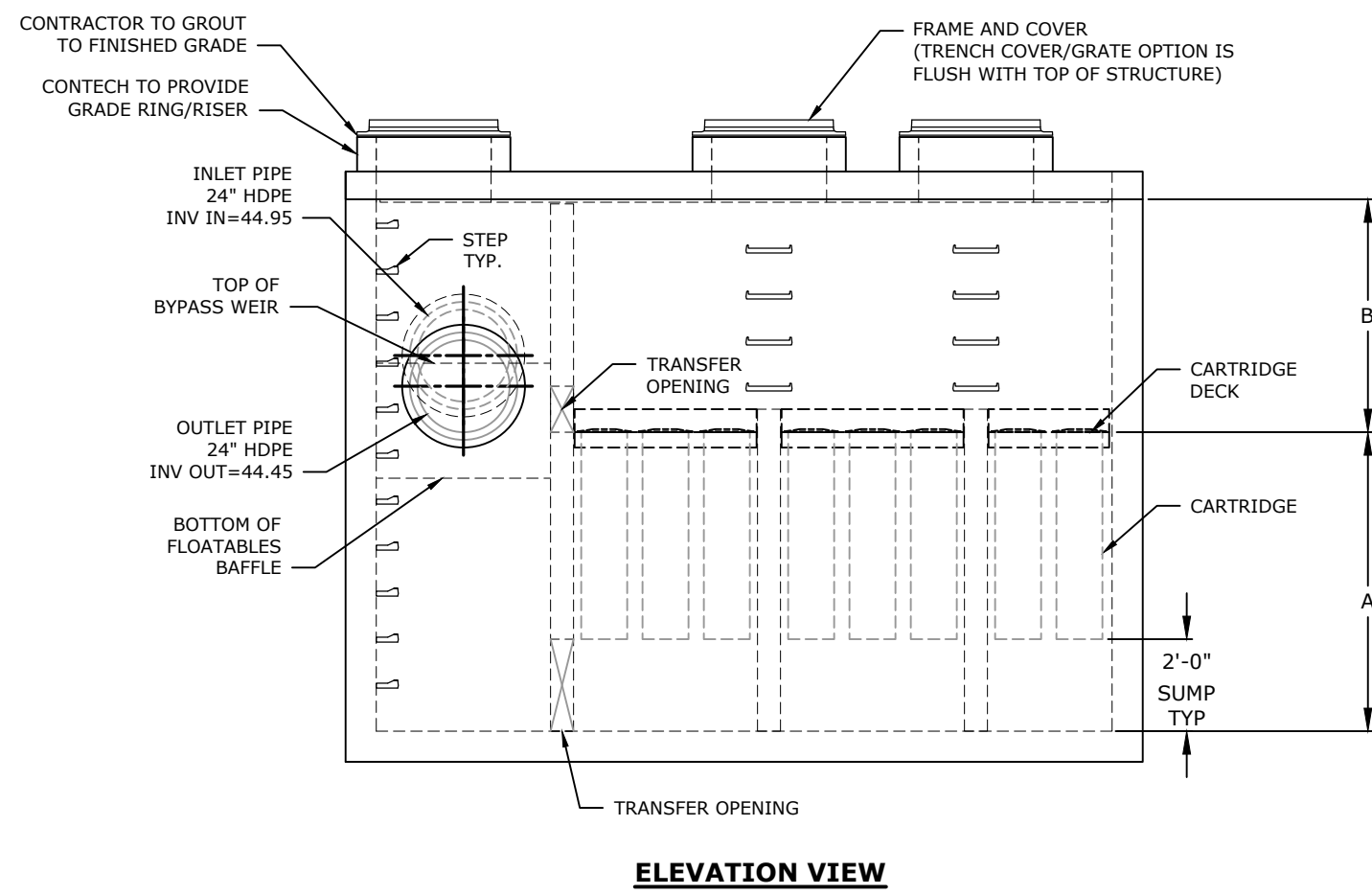
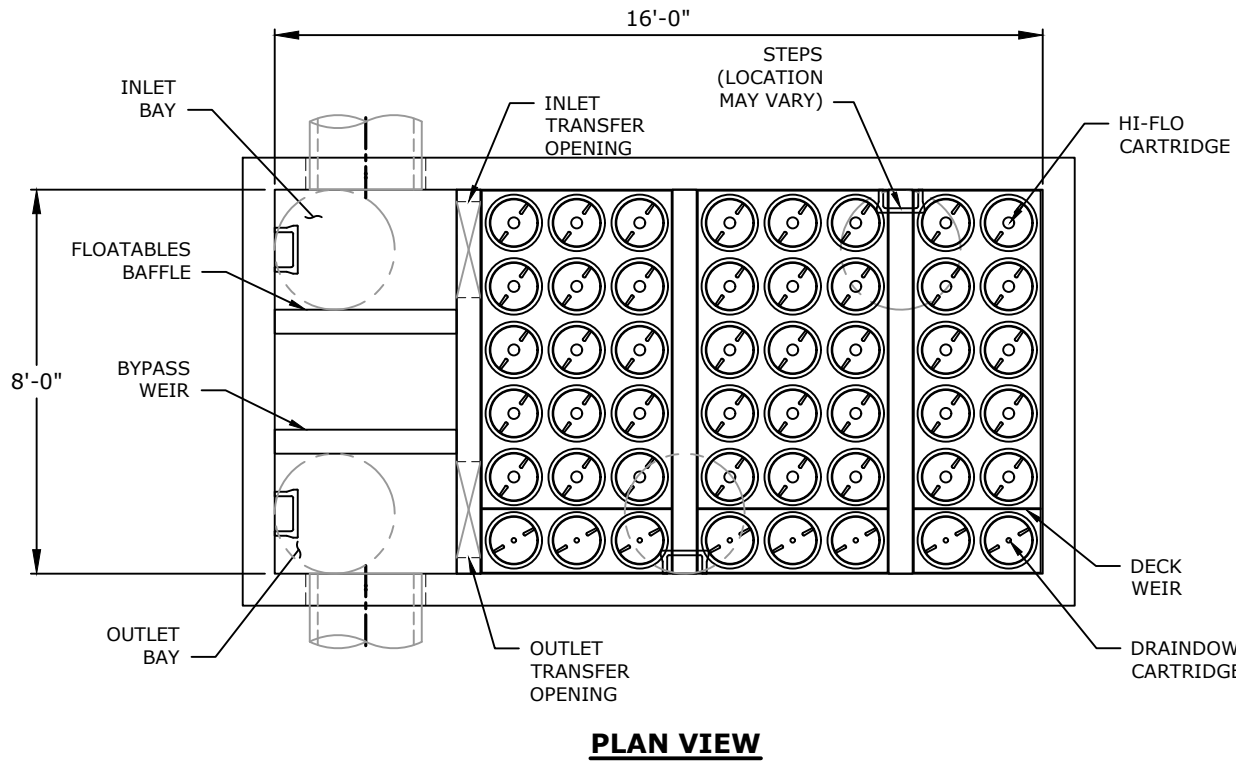
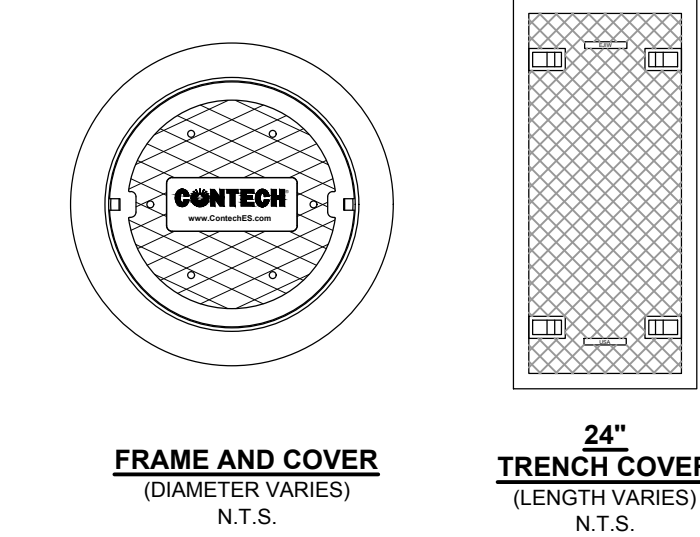
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) PER CART	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	7.84	5.88	3.92	2.16
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00

SITE SPECIFIC DATA REQUIREMENTS

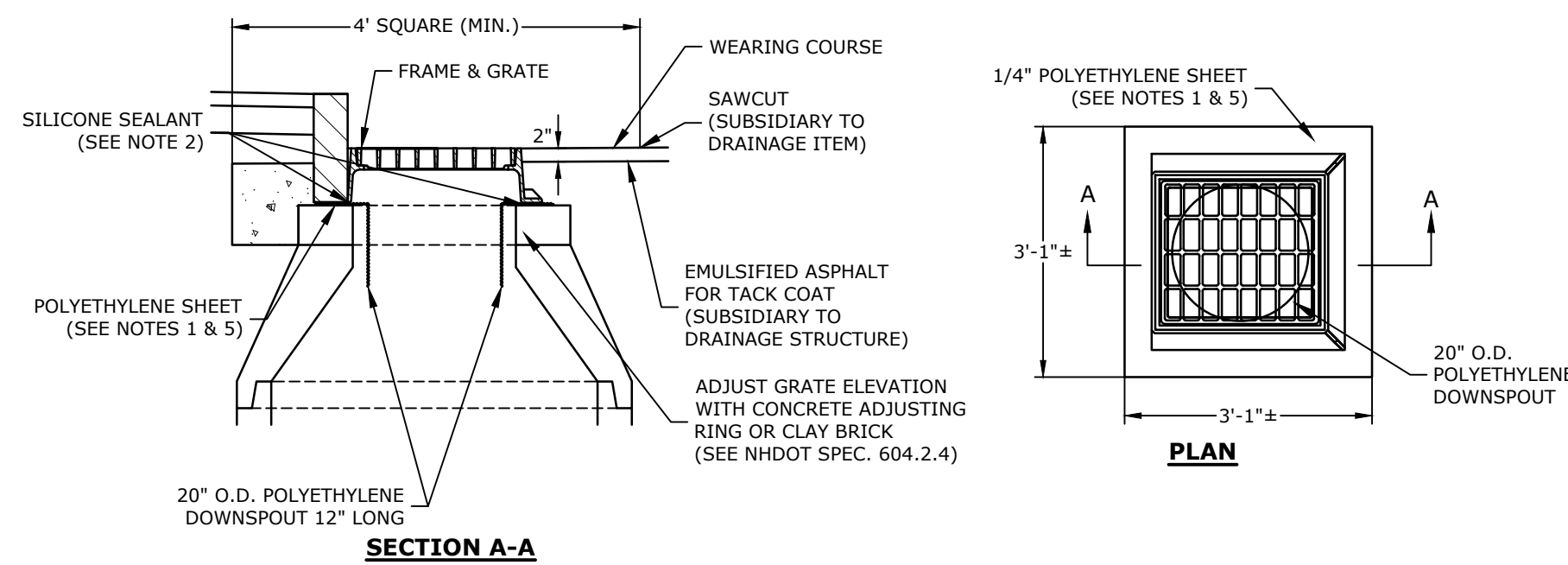
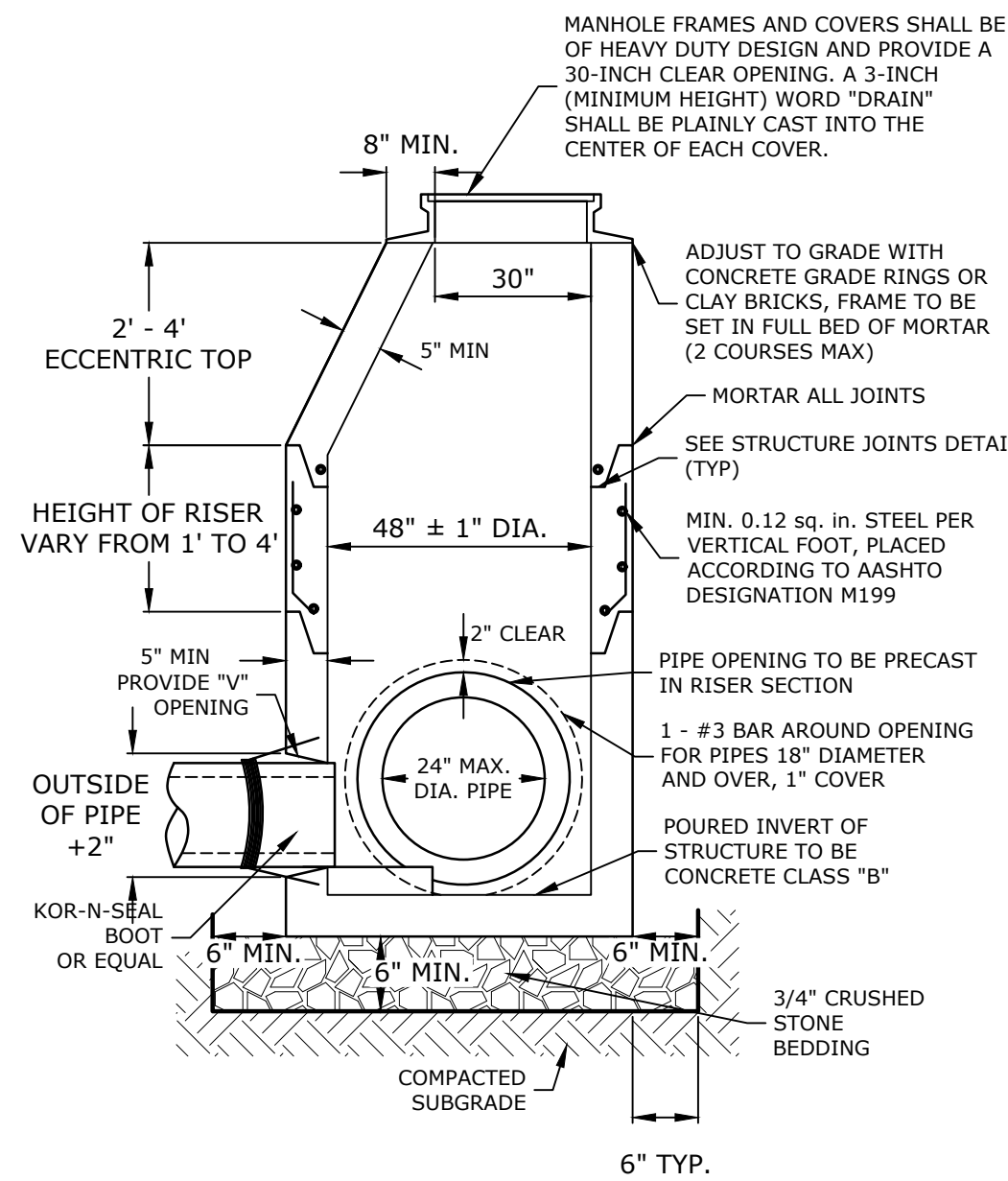
STRUCTURE ID	JFPD0816
WATER QUALITY FLOW RATE (cfs)	7.46
PEAK FLOW RATE (cfs)	22.64
RETURN PERIOD OF PEAK FLOW (yrs)	50
# OF CARTRIDGES REQUIRED (HF / DD)	(40/8)
CARTRIDGE LENGTH	54"



- GENERAL NOTES:**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.conteches.com
 - JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 - STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
 - STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
 - OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
 - THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
 - NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

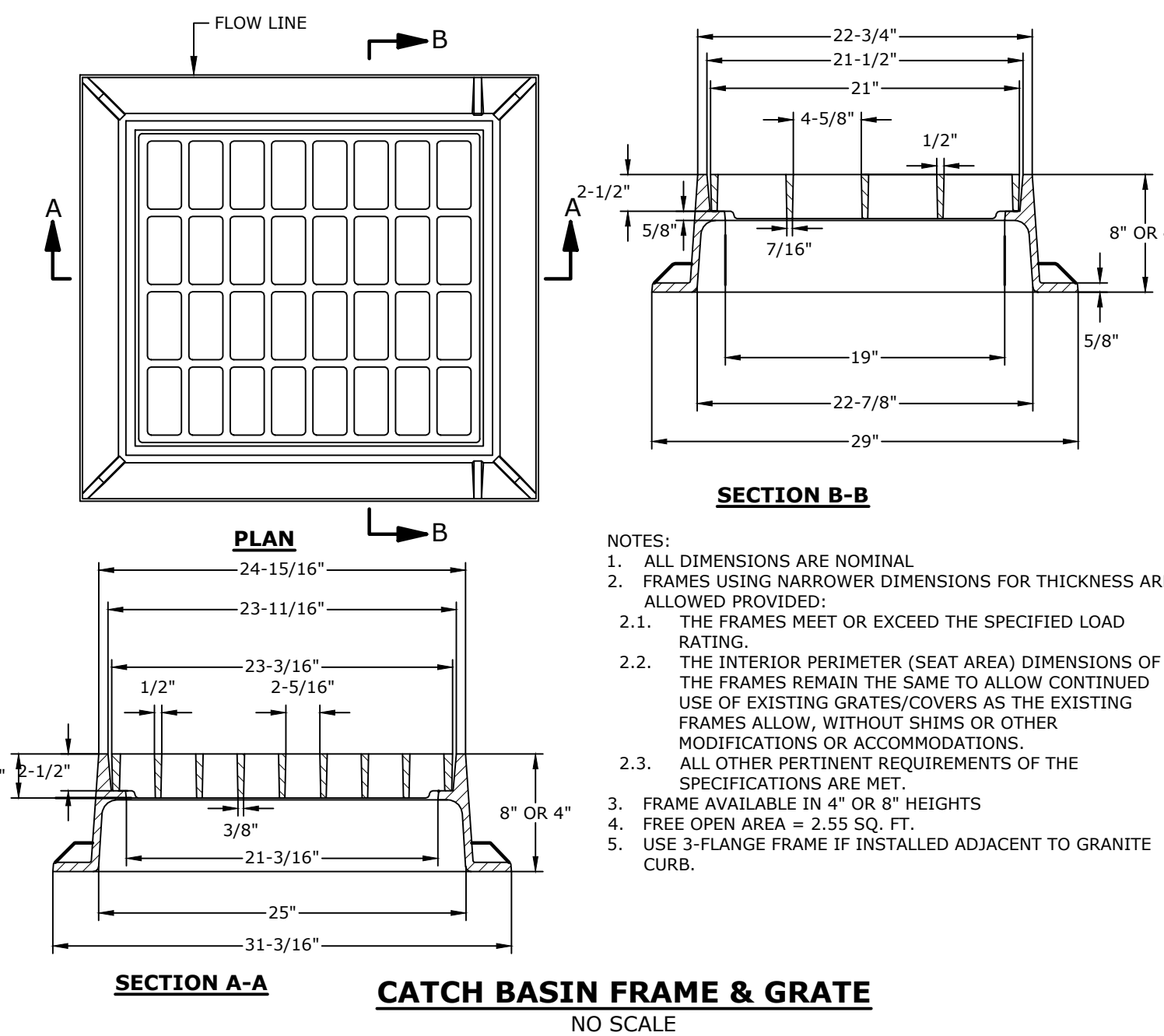
- INSTALLATION NOTES**
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
 - CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
 - CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

JELLYFISH (JFPD0816) TREATMENT UNIT
NO SCALE



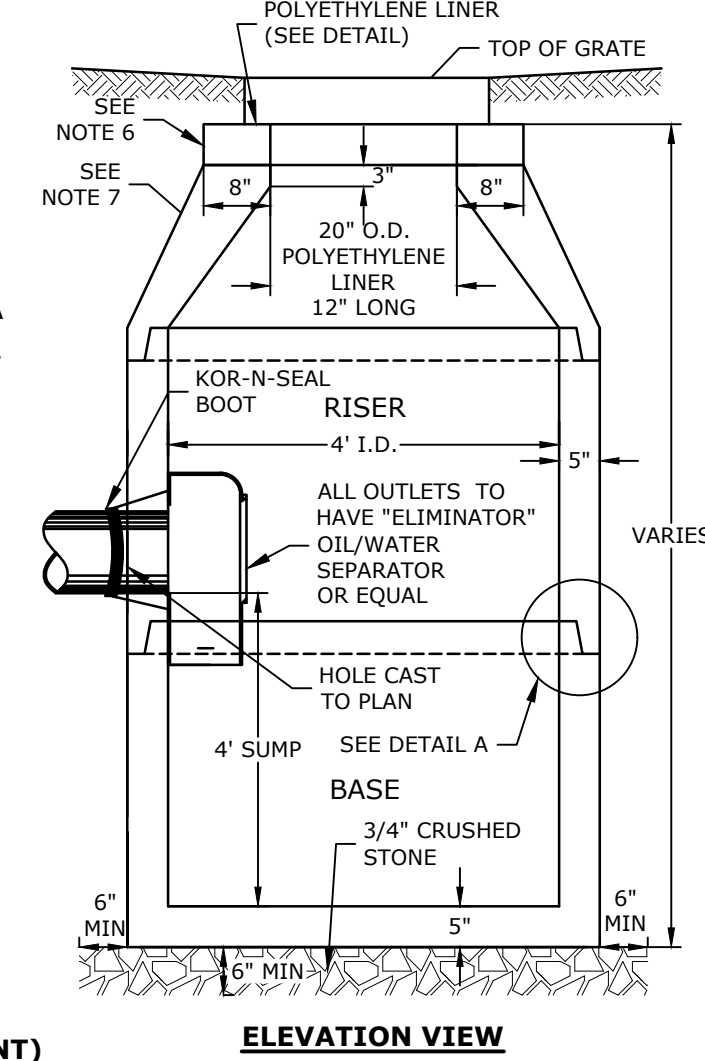
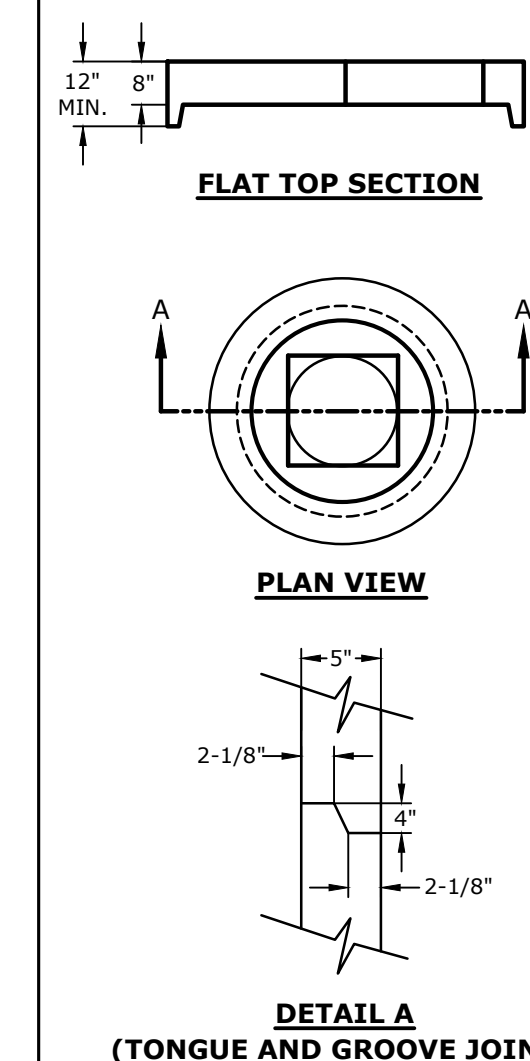
- NOTES:**
- POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
 - PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
 - PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF THE GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
 - USE ON DRAINAGE STRUCTURES 4" MIN. DIAMETER ONLY.
 - TRIM POLYETHYLENE SHEET A MAXIMUM OF 4" OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE (EXCEPT AS SHOWN WHEN USED WITH 3-FLANGE FRAME AND CURB).
 - THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 6" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.
 - PLACED ONLY IN DRAINAGE STRUCTURES IN PAVEMENT.
 - SEE NHDOT DR-04, "DI-DB, UNDERDRAIN FLUSHING BASIN AND POLYETHYLENE LINER DETAILS", FOR ADDITIONAL INFORMATION.
 - CATCHBASINS WITHIN CITY RIGHT OF WAY SHALL HAVE A POLYETHYLENE LINER.

POLYETHYLENE LINER
NO SCALE

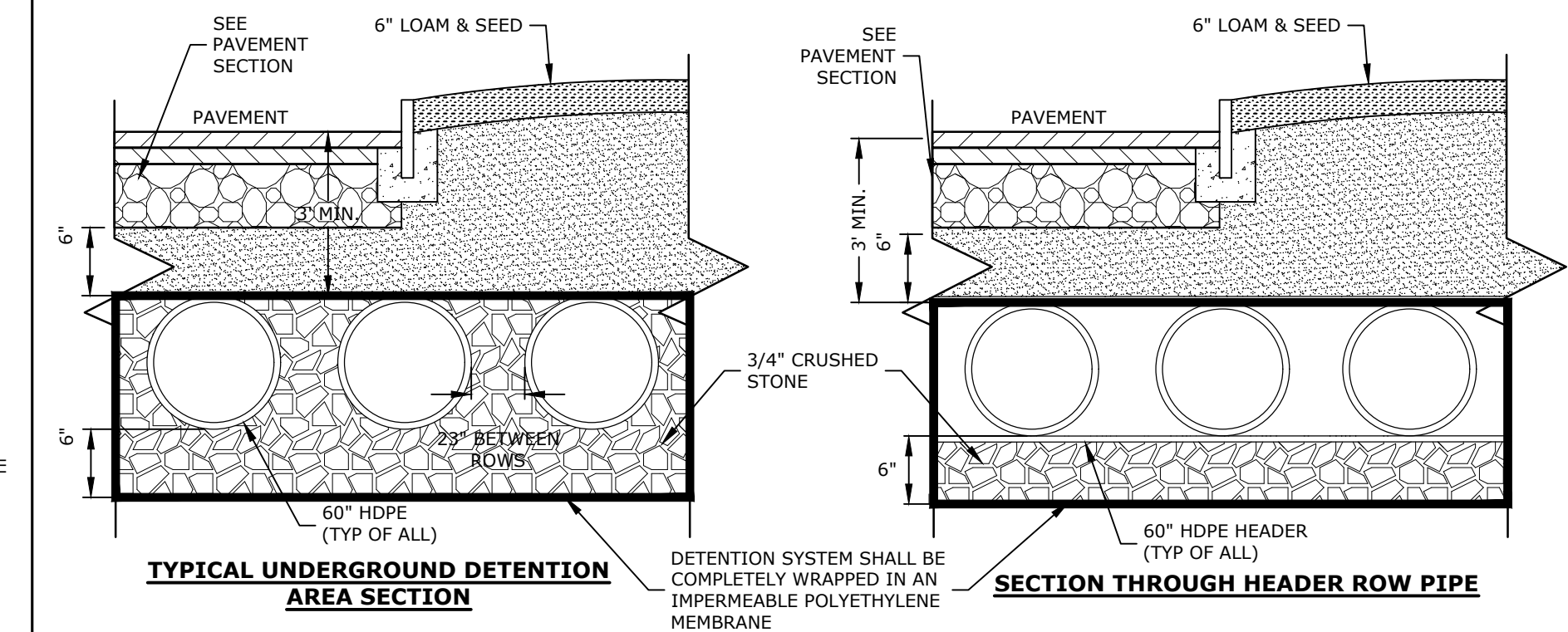


- NOTES:**
- ALL DIMENSIONS ARE NOMINAL
 - FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
 - THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
 - THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
 - ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
 - FRAME AVAILABLE IN 4" OR 8" HEIGHTS
 - FREE OPEN AREA = 2.55 SQ. FT.
 - USE 3-FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.

- NOTES:**
- ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
 - CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 - THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
 - THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
 - CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
 - THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
 - PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
 - OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
 - PRECAST SECTIONS WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.



- NOTES:**
- ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 PSI).
 - CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 - THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
 - RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
 - THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
 - FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
 - CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
 - PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
 - OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
 - PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
 - THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
 - "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

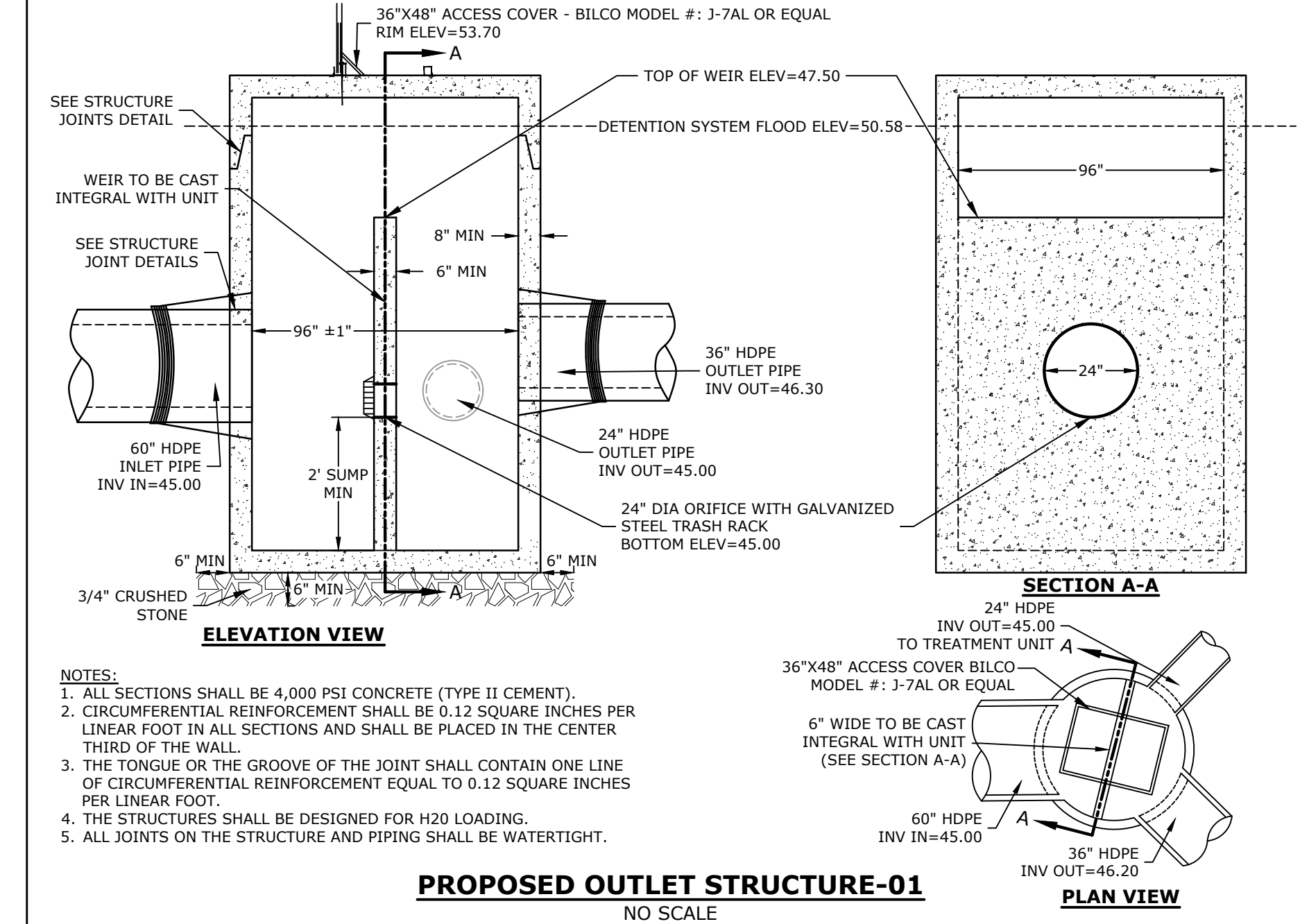


FIELD ELEVATIONS

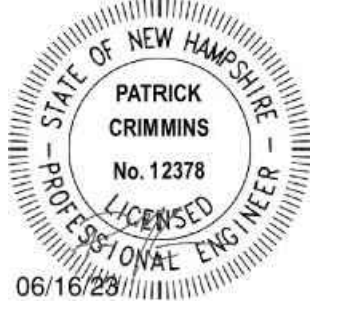
	TOP OF STONE ELEV	TOP OF PIPE ELEV	BOTTOM OF PIPE ELEV	BOTTOM OF STONE ELEV
PUD-01	50.50'	50.50'	45.00'	44.50'

- NOTES:**
- UNDERGROUND DETENTION SYSTEM TO BE 60" HDPE PIPE DESIGNED FOR H-20 LOADING. CONTRACTOR TO SUBMIT PIPE SPECIFICATIONS AND FINAL MANUFACTURER'S DESIGN TO ENGINEER FOR APPROVAL.
 - MANUFACTURER TO SUBMIT PLANS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
 - THE DESIGN ENGINEER SHALL PROVIDE SUFFICIENT INSPECTION TO CERTIFY THAT THE SYSTEM HAS BEEN INSTALLED PER THE APPROVED DESIGN PLAN.

UNDERGROUND DETENTION SYSTEM
NO SCALE



- NOTES:**
- ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
 - CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 - THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
 - THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
 - ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.



Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

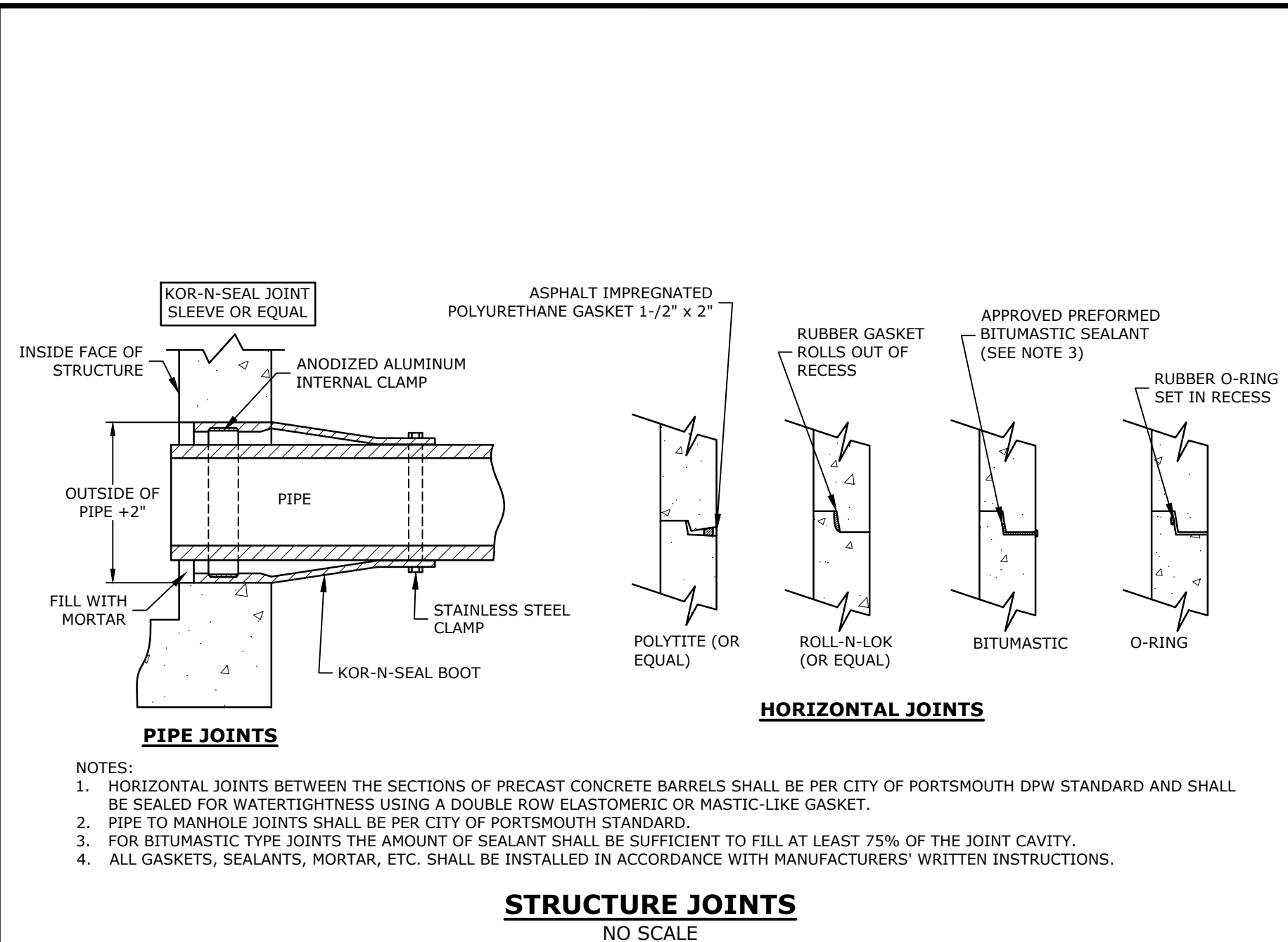
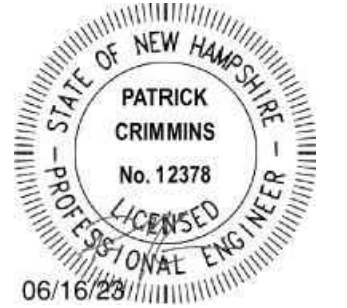
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DRAWN BY: CML
CHECKED BY: NAH
APPROVED BY: PMC

DETAILS SHEET

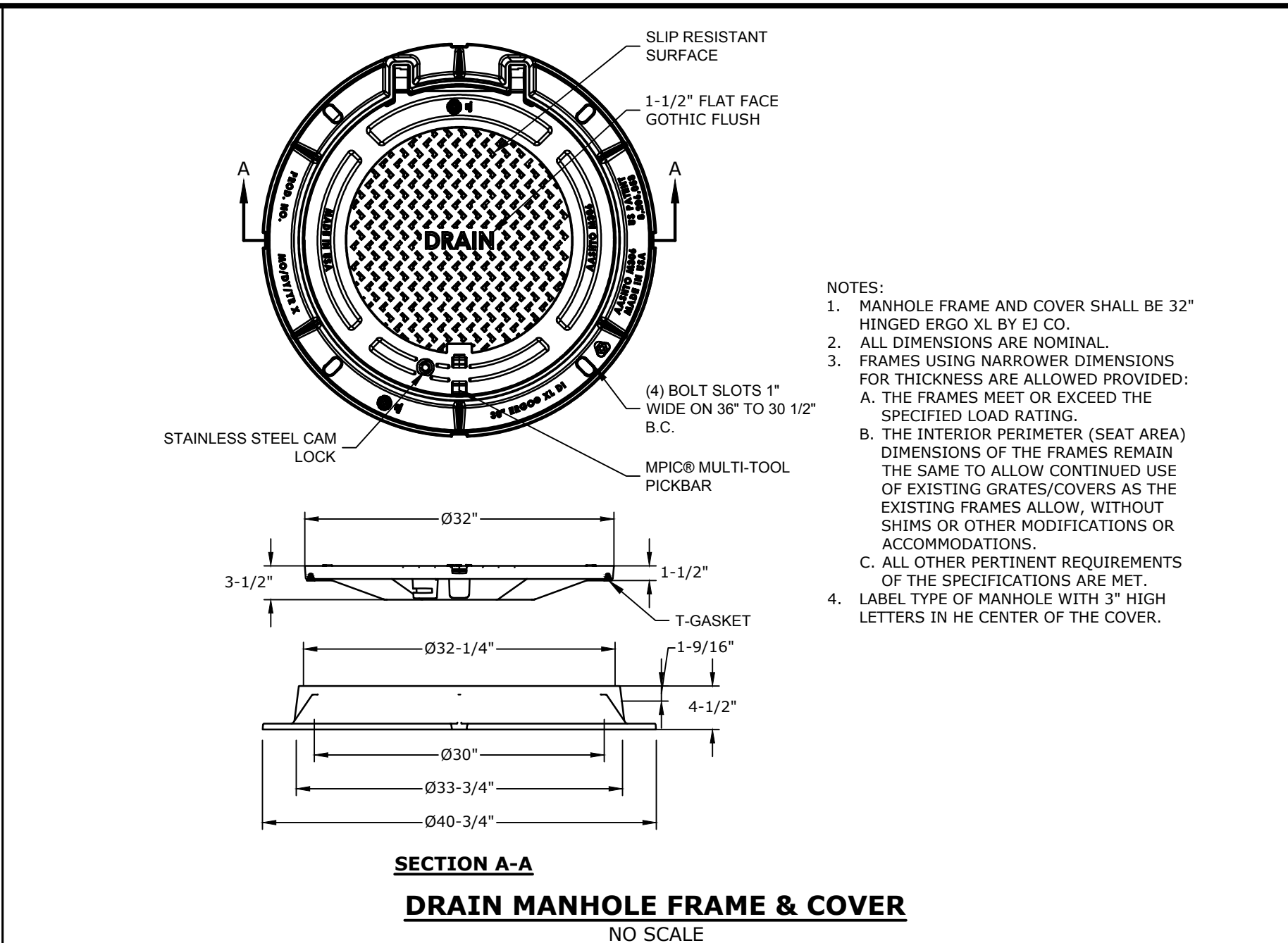
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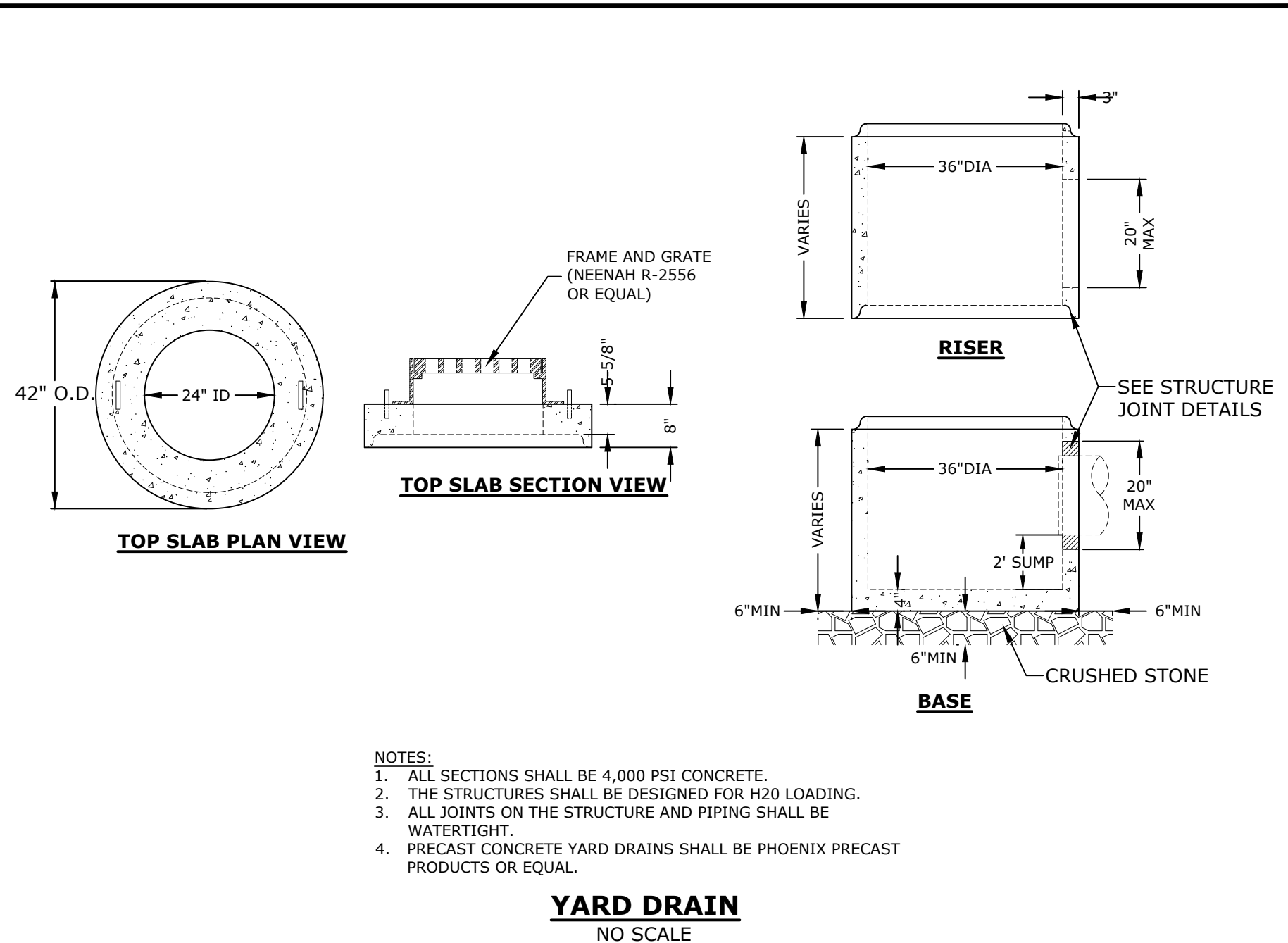
- NOTES:**
- HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF PORTSMOUTH DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
 - PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARD.
 - FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
 - ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

STRUCTURE JOINTS
NO SCALE



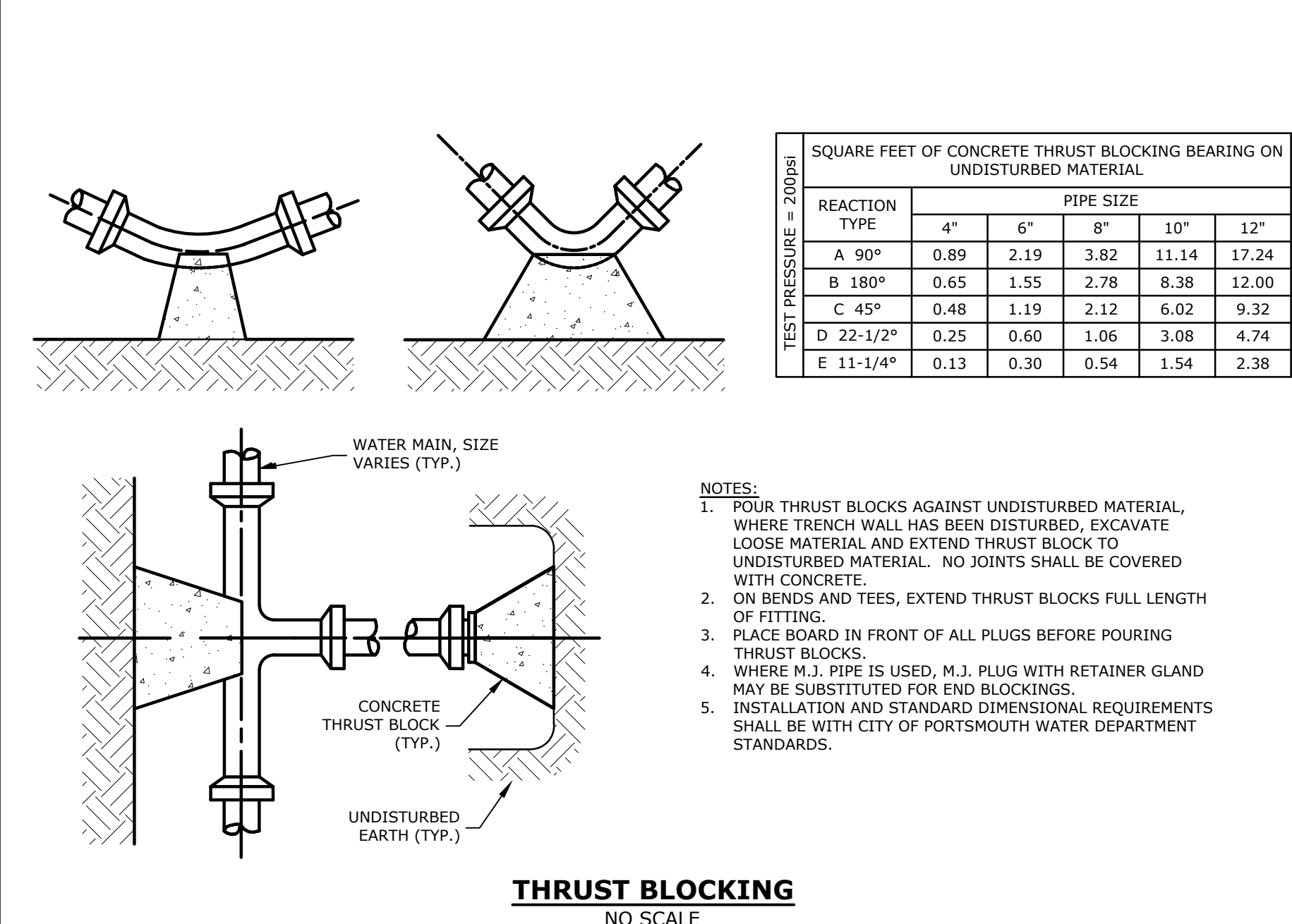
- NOTES:**
- MANHOLE FRAME AND COVER SHALL BE 32\"/>

SECTION A-A
DRAIN MANHOLE FRAME & COVER
NO SCALE



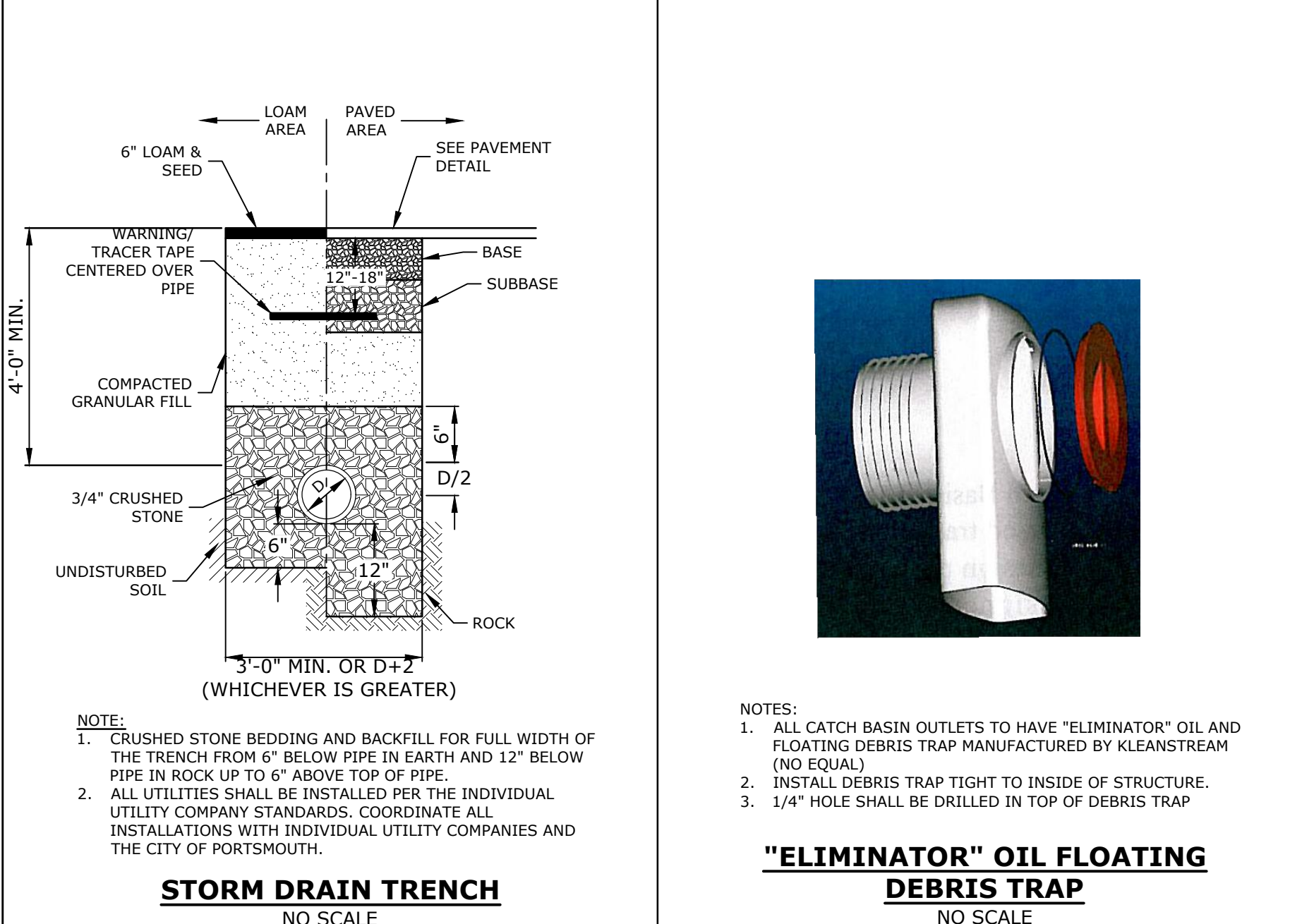
- NOTES:**
- ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
 - THE STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
 - ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.
 - PRECAST CONCRETE YARD DRAINS SHALL BE PHOENIX PRECAST PRODUCTS OR EQUAL.

YARD DRAIN
NO SCALE



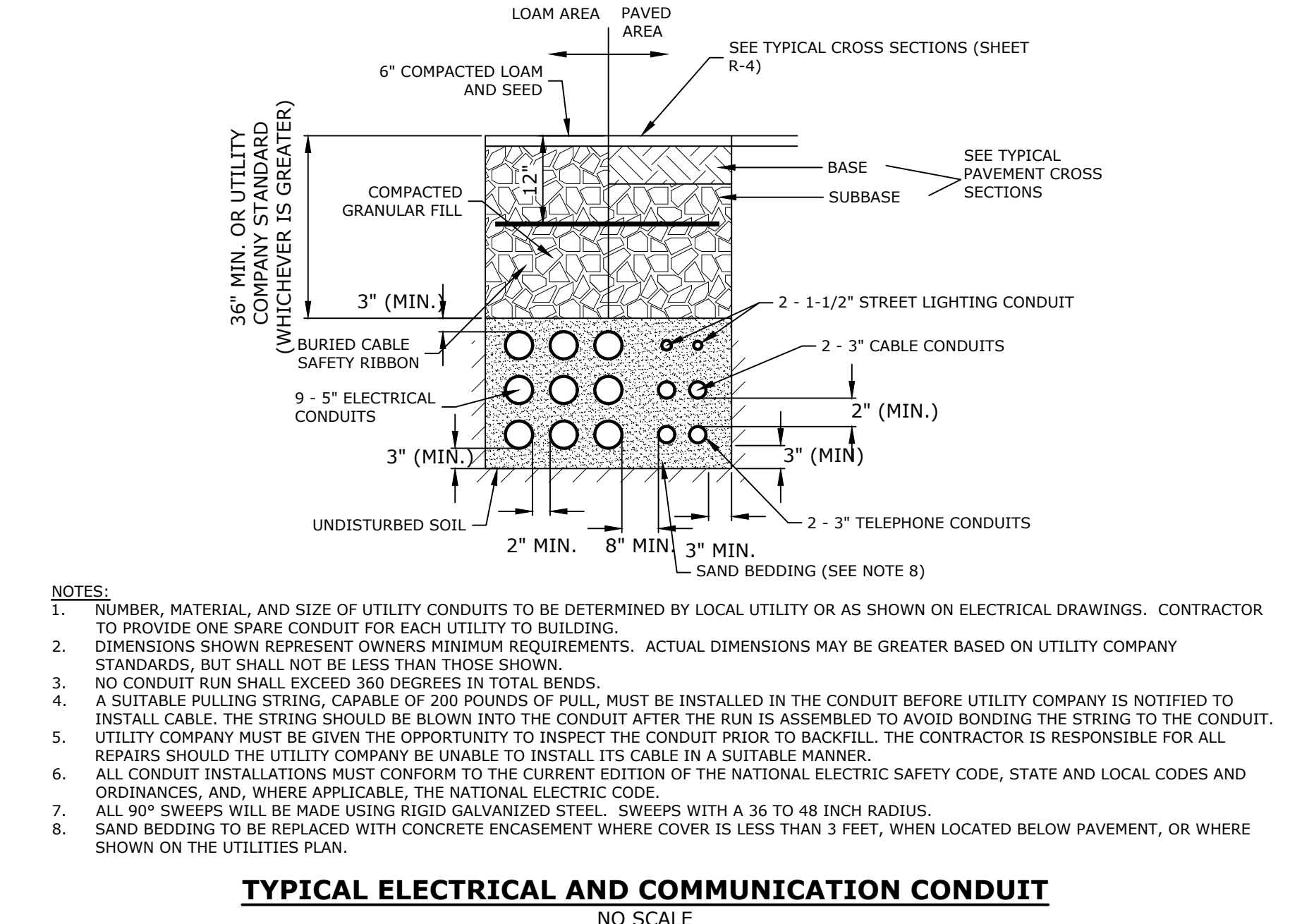
- NOTES:**
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
 - ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 - PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
 - WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
 - INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.

THRUST BLOCKING
NO SCALE



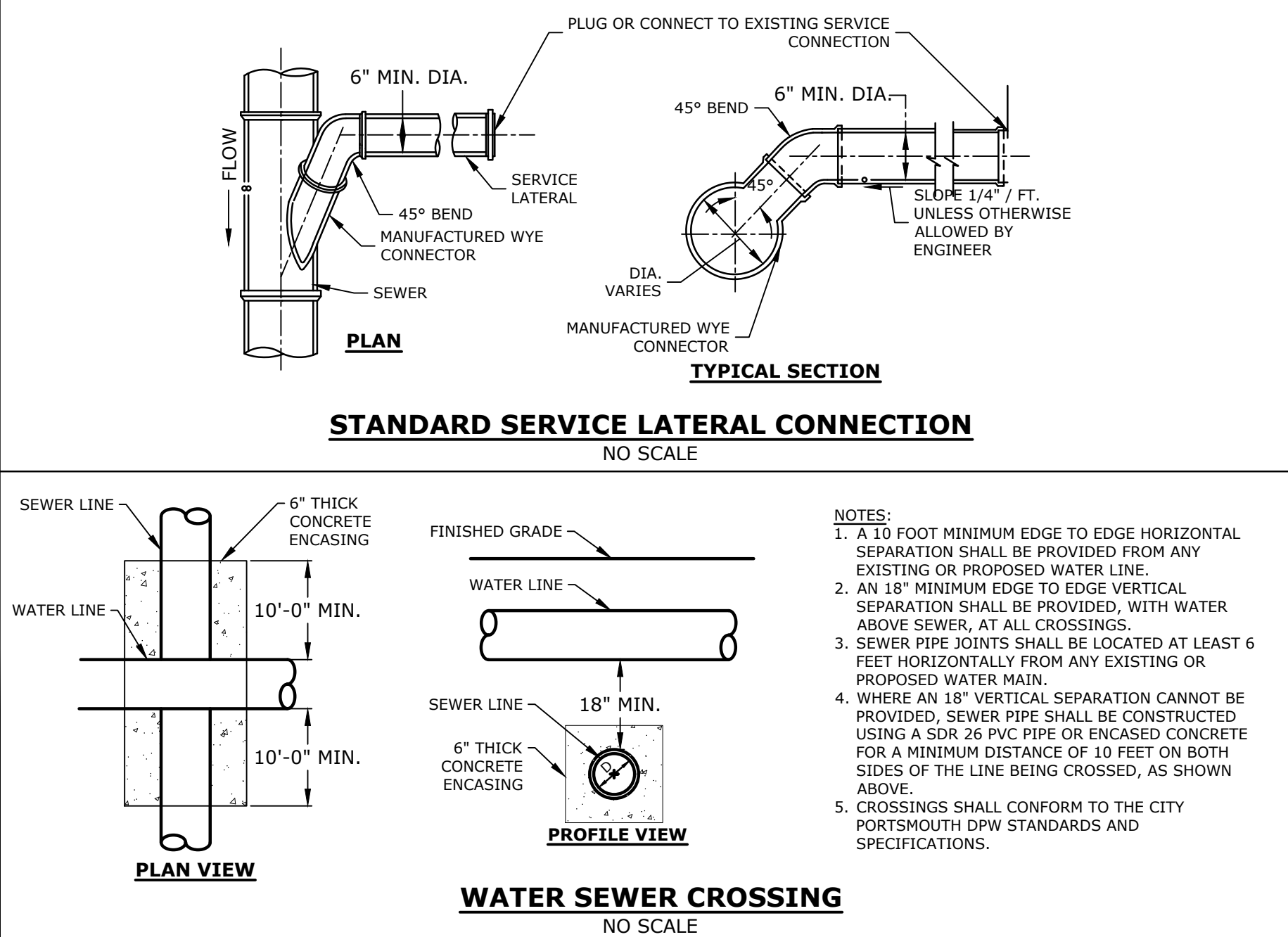
- NOTES:**
- CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6\"/>

"ELIMINATOR" OIL FLOATING DEBRIS TRAP
NO SCALE



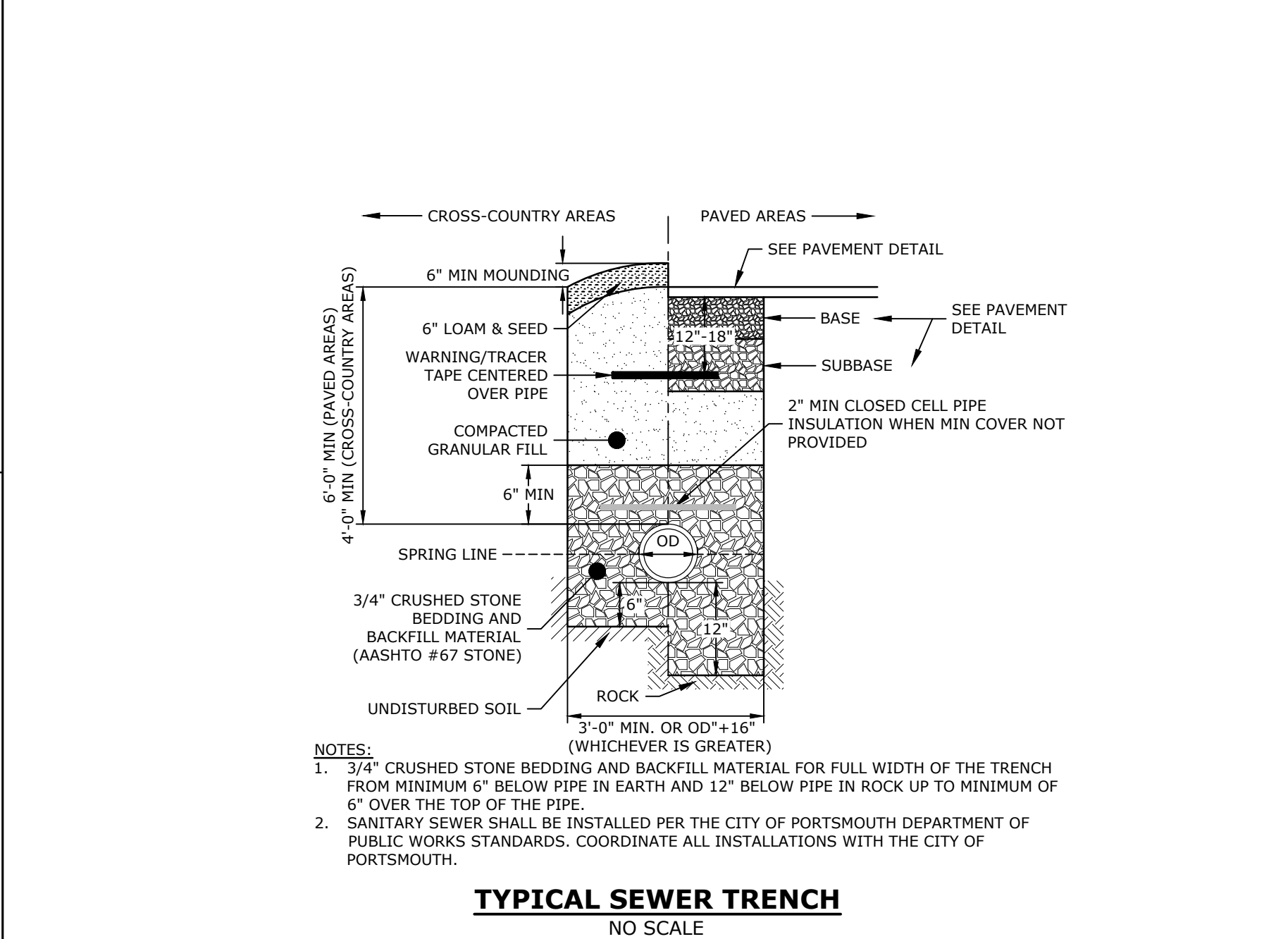
- NOTES:**
- NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
 - DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
 - NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
 - A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
 - UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
 - ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
 - ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
 - SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

TYPICAL ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE



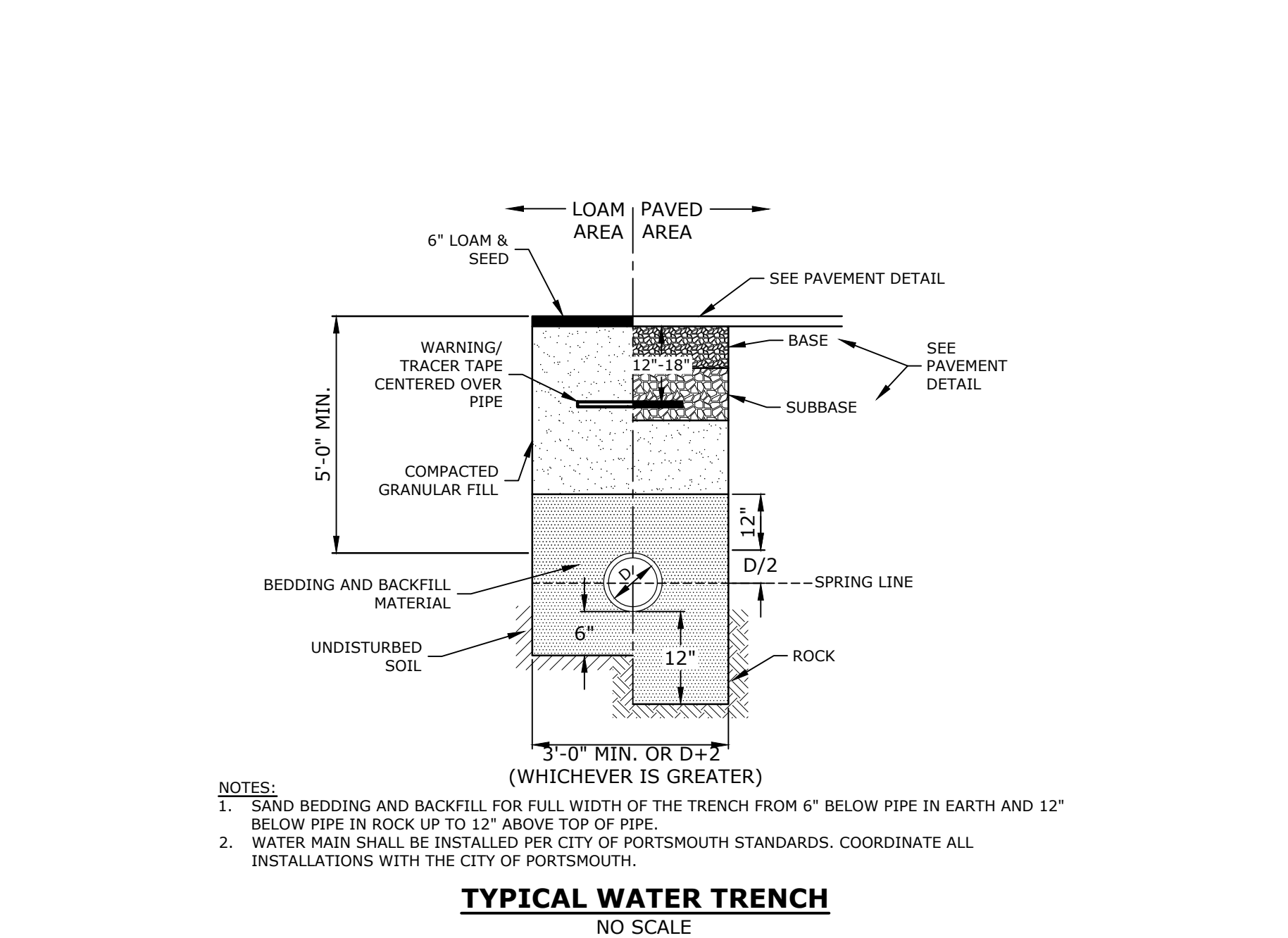
- NOTES:**
- A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED FROM ANY EXISTING OR PROPOSED WATER LINE.
 - AN 18\"/>

WATER SEWER CROSSING
NO SCALE



- NOTES:**
- 3/4\"/>

TYPICAL SEWER TRENCH
NO SCALE



- NOTES:**
- SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6\"/>

TYPICAL WATER TRENCH
NO SCALE

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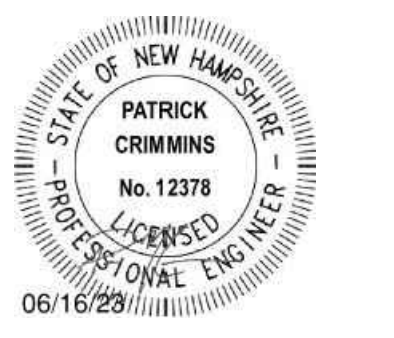
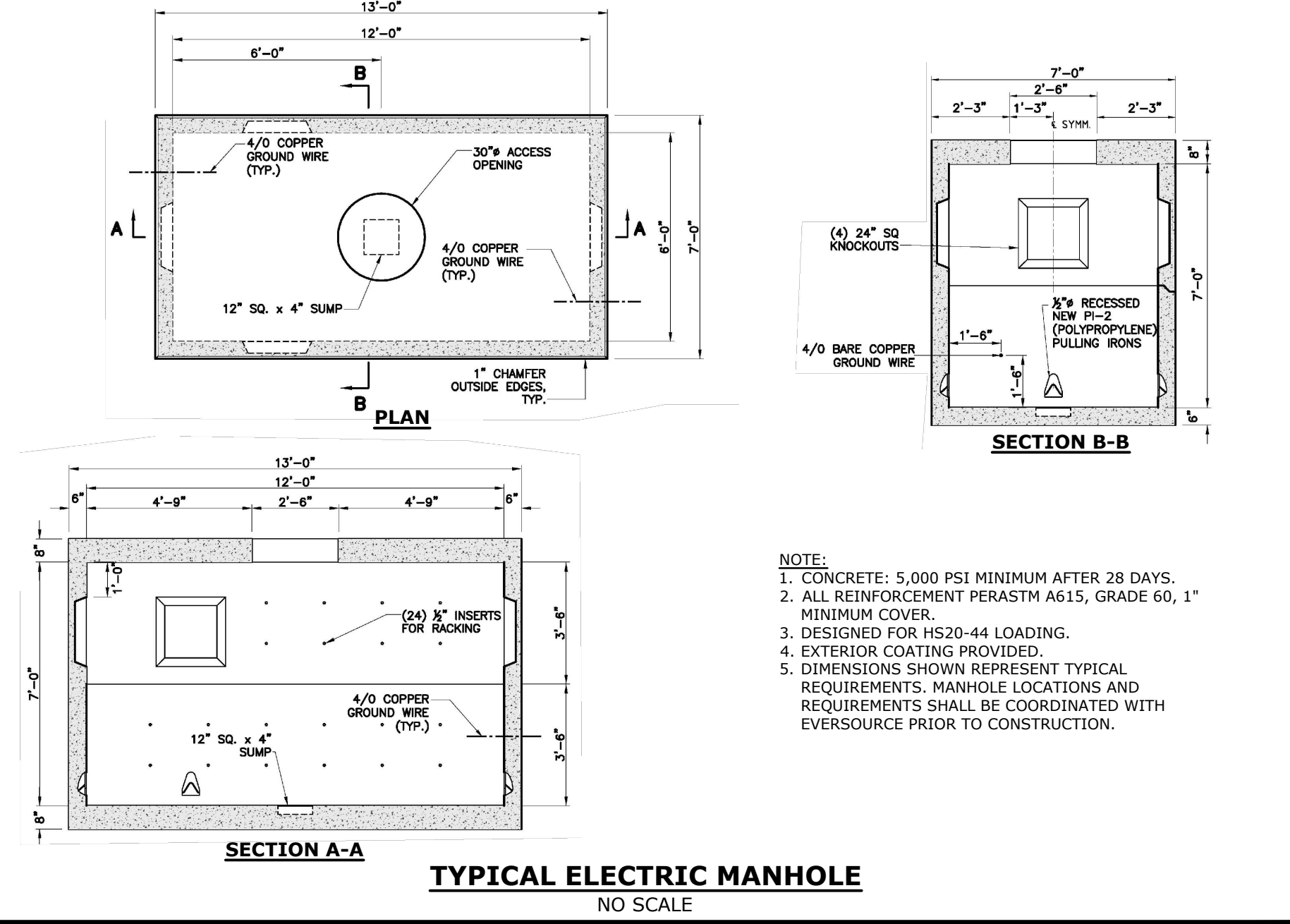
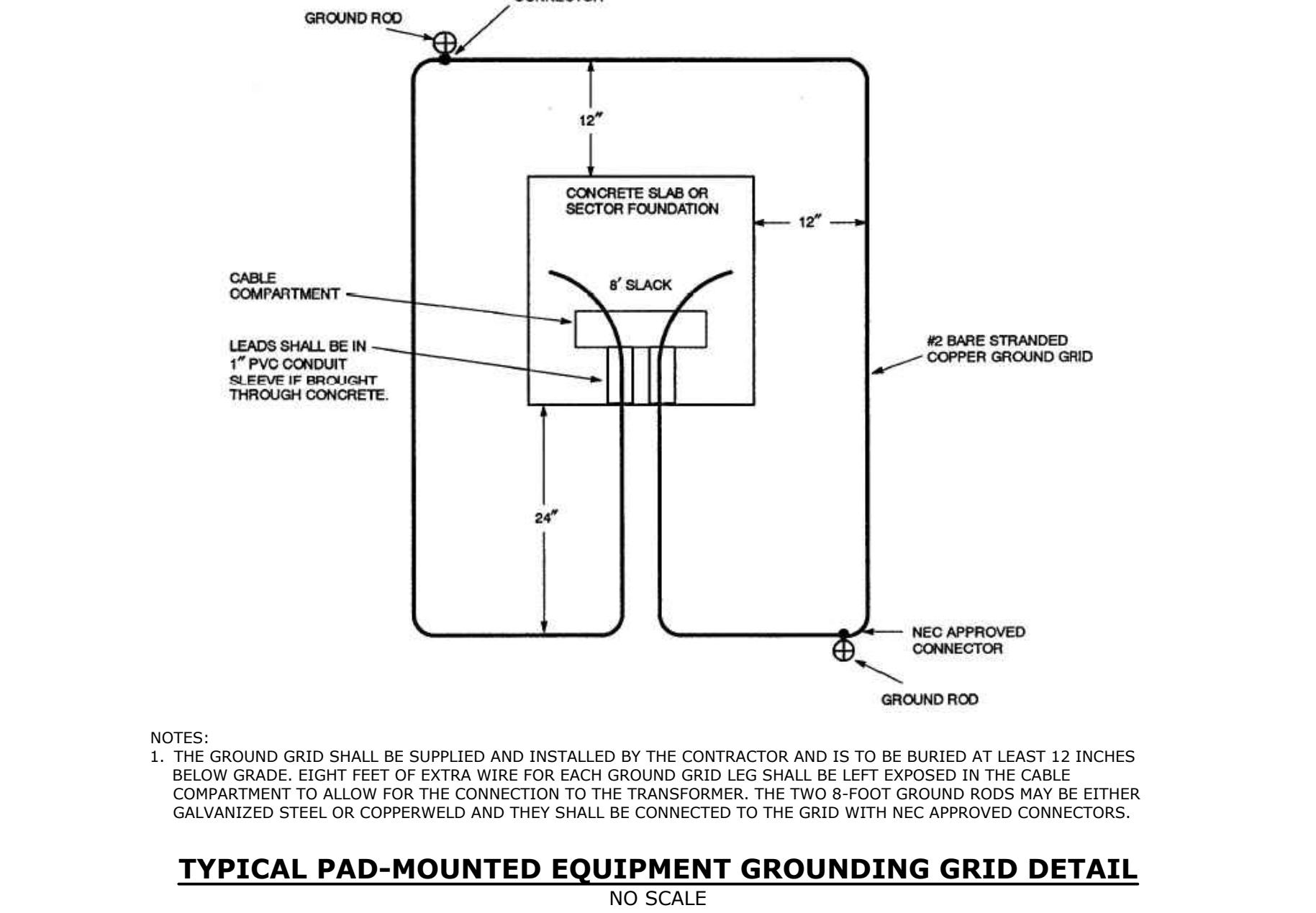
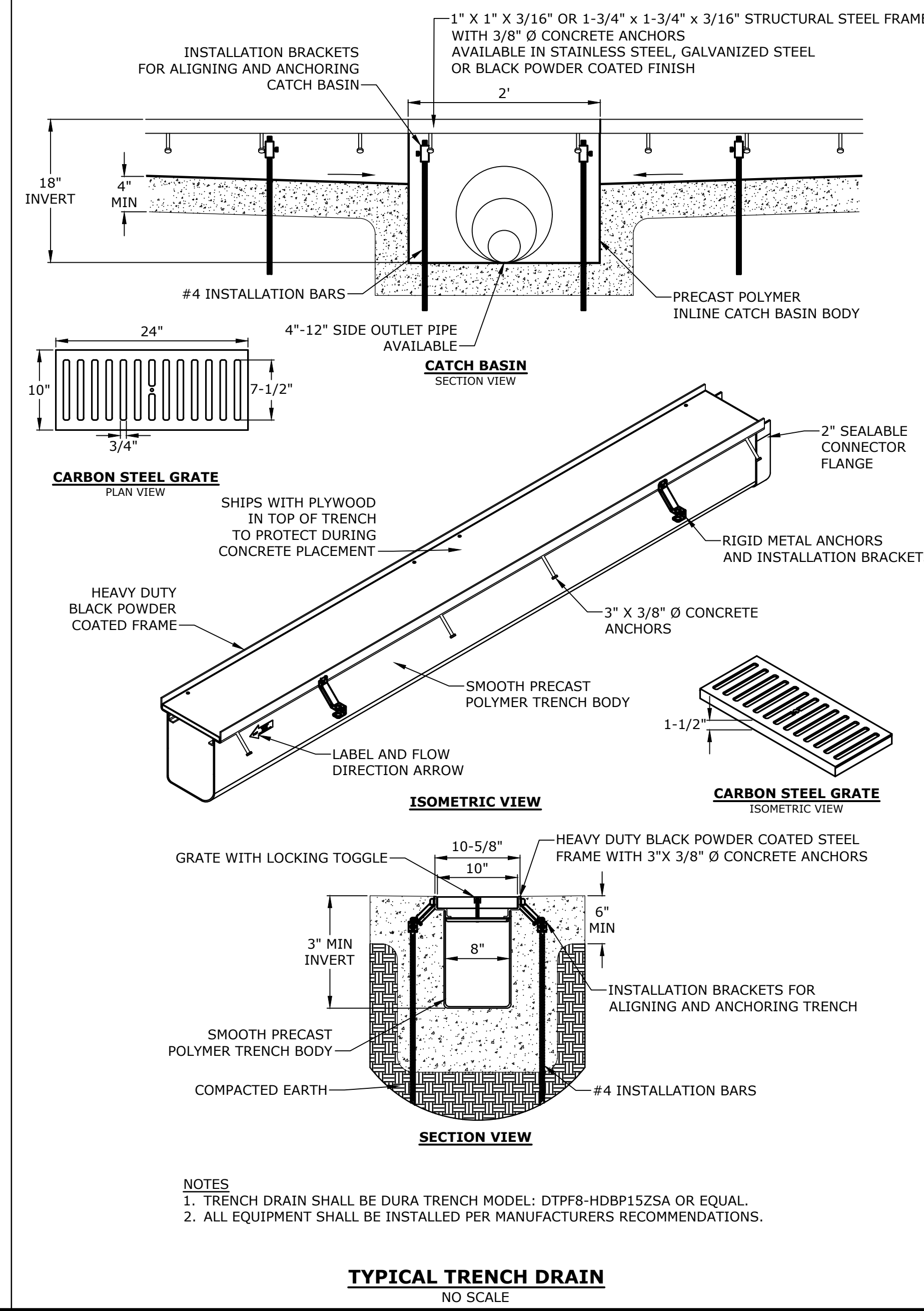
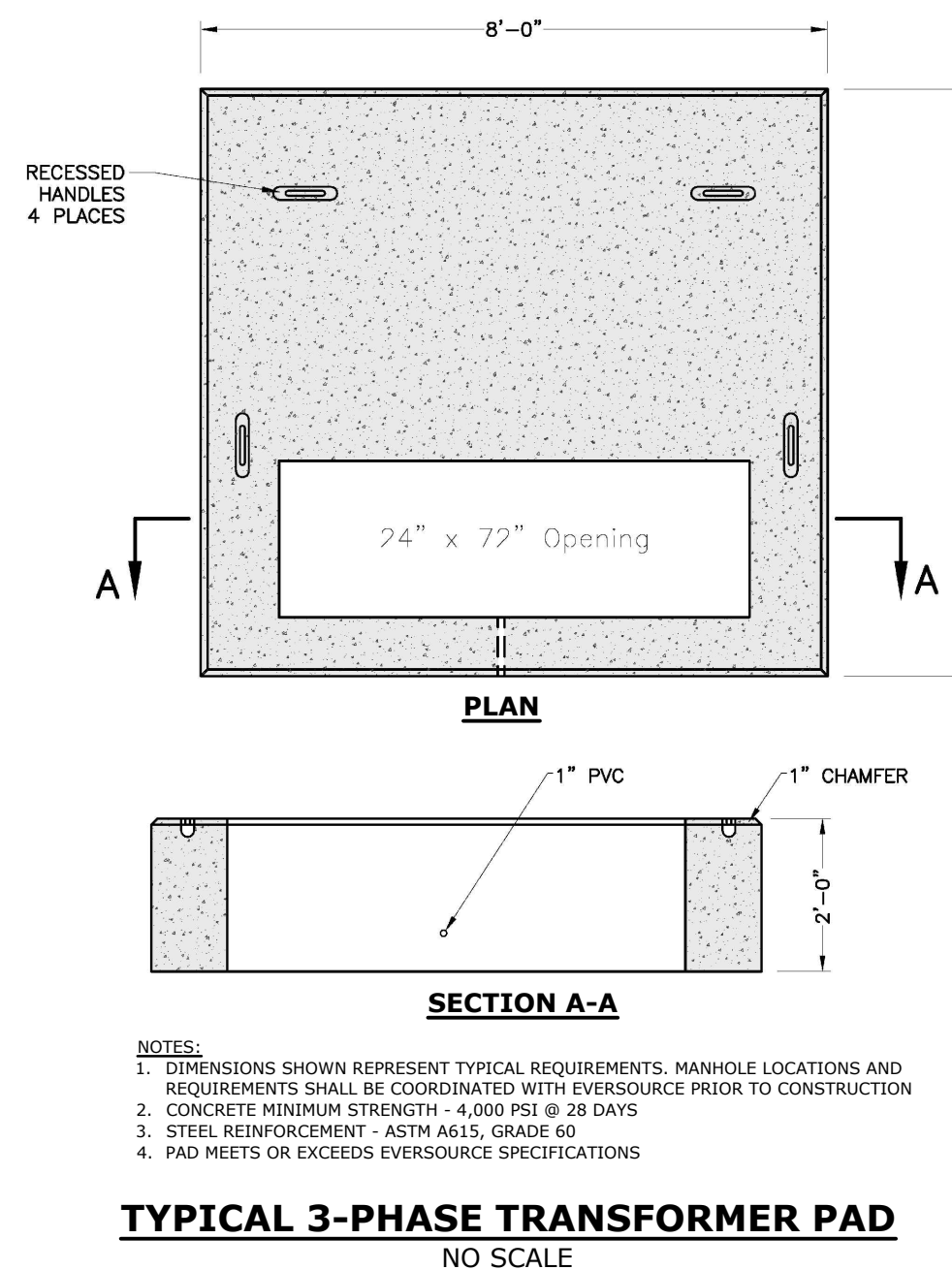
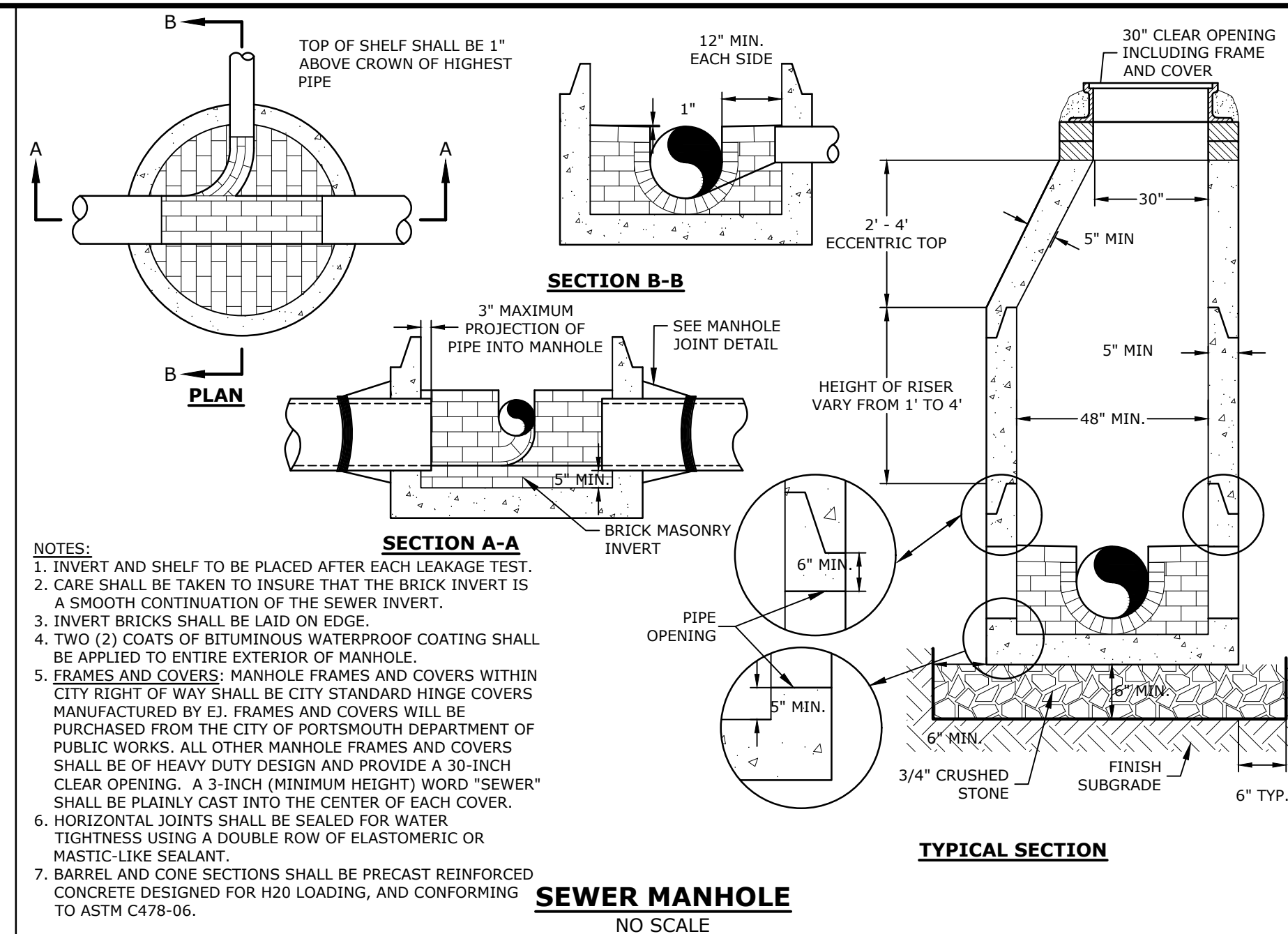
DETAILS SHEET

SCALE: AS SHOWN

C-505

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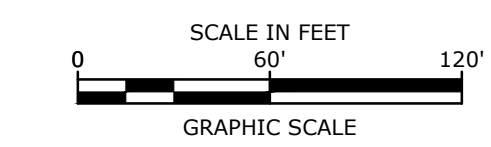
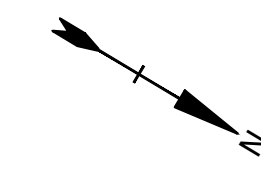


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100 New Hampshire Avenue
Portsmouth, NH

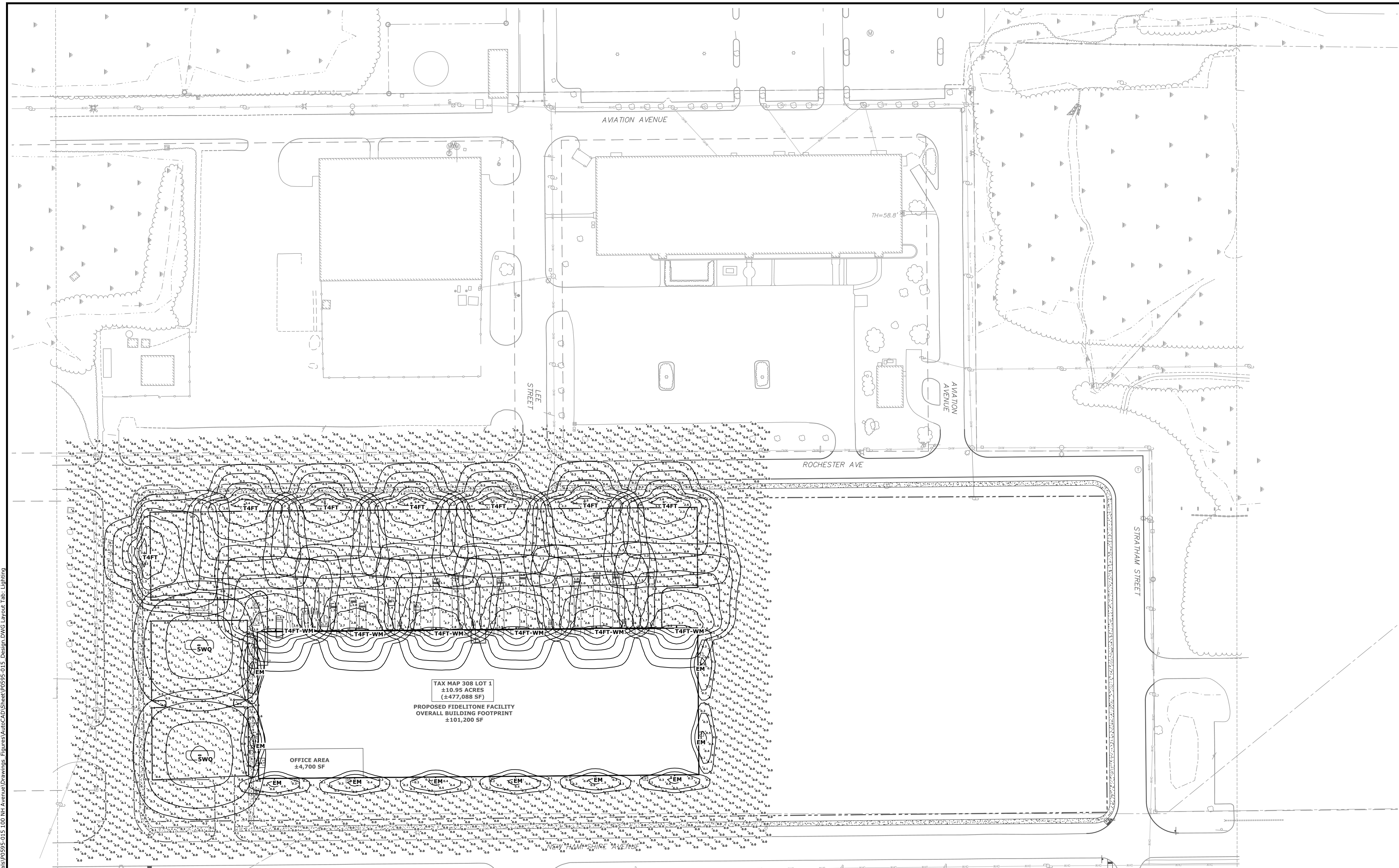
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C	3/29/2023	Planning Board / Revised Aot Submission
B	2/23/2023	TAC Resubmission
A	2/6/2023	Aot Submission

PROJECT NO:	P0595-015
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CHECKED:	NAH
APPROVED:	PMC

PHOTOMETRICS PLAN

SCALE: AS SHOWN

C-701



Symbol	Qty	Label	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts	[MANUFAC]	Mounting Height
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	10	EM	MERU-ACEM-DB	1.000	676	17	170	MULE LIGHTING	25
	7	T4FT	GALN-SA2D-740-U-T4FT-QM-BZ-WOFXX / SSS4A255FN1XX	1.000	15522	125	875	COOPER LIGHTING SOLUTIONS	25
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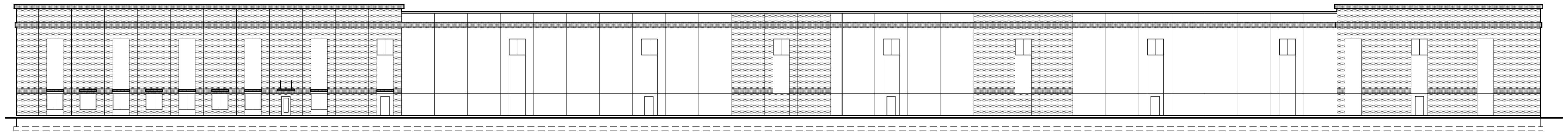
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Max/Min Ratio = 4.50

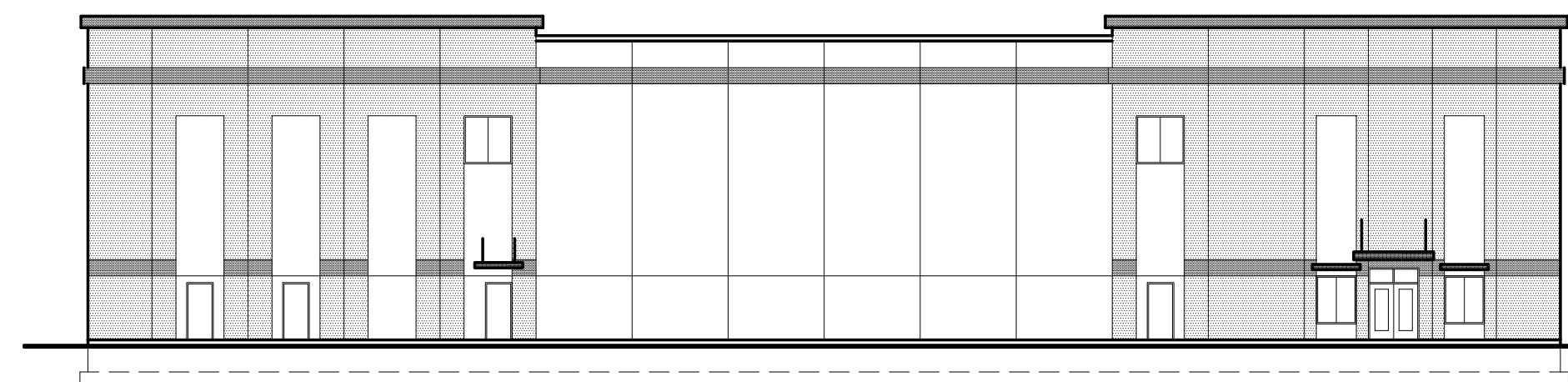
Trucking Area

Illuminance (Fc)
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Max/Min Ratio = 4.83

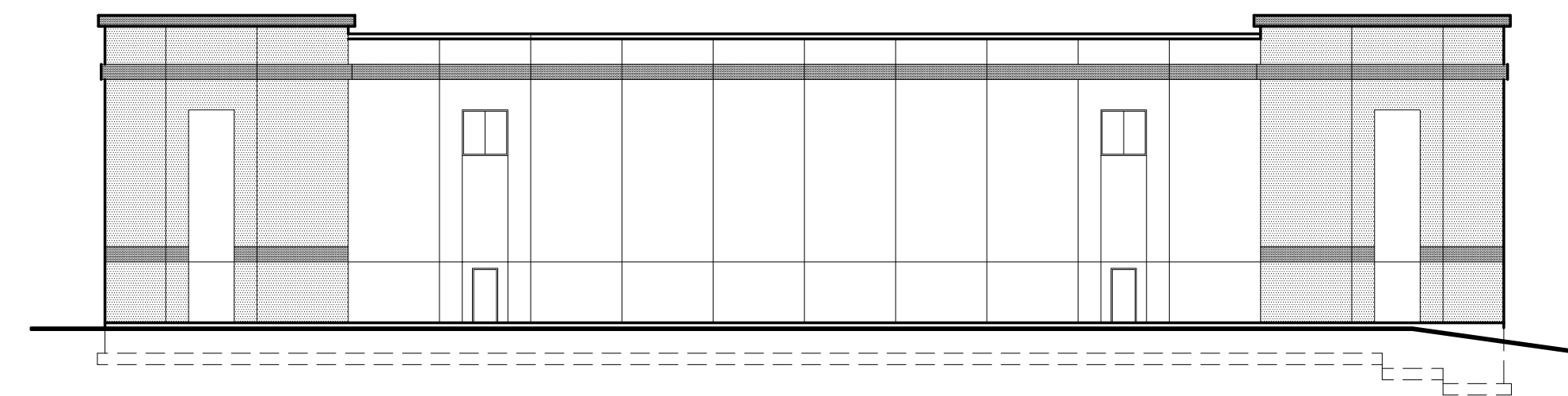
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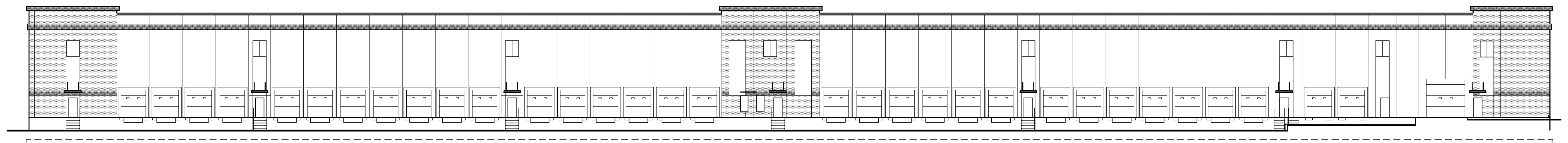
EAST ELEVATION



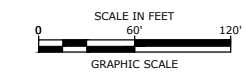
SOUTH ELEVATION



NORTH ELEVATION



WEST ELEVATION



**Proposed
Fidelitone
Facility**

Aviation Avenue
Group, LLC

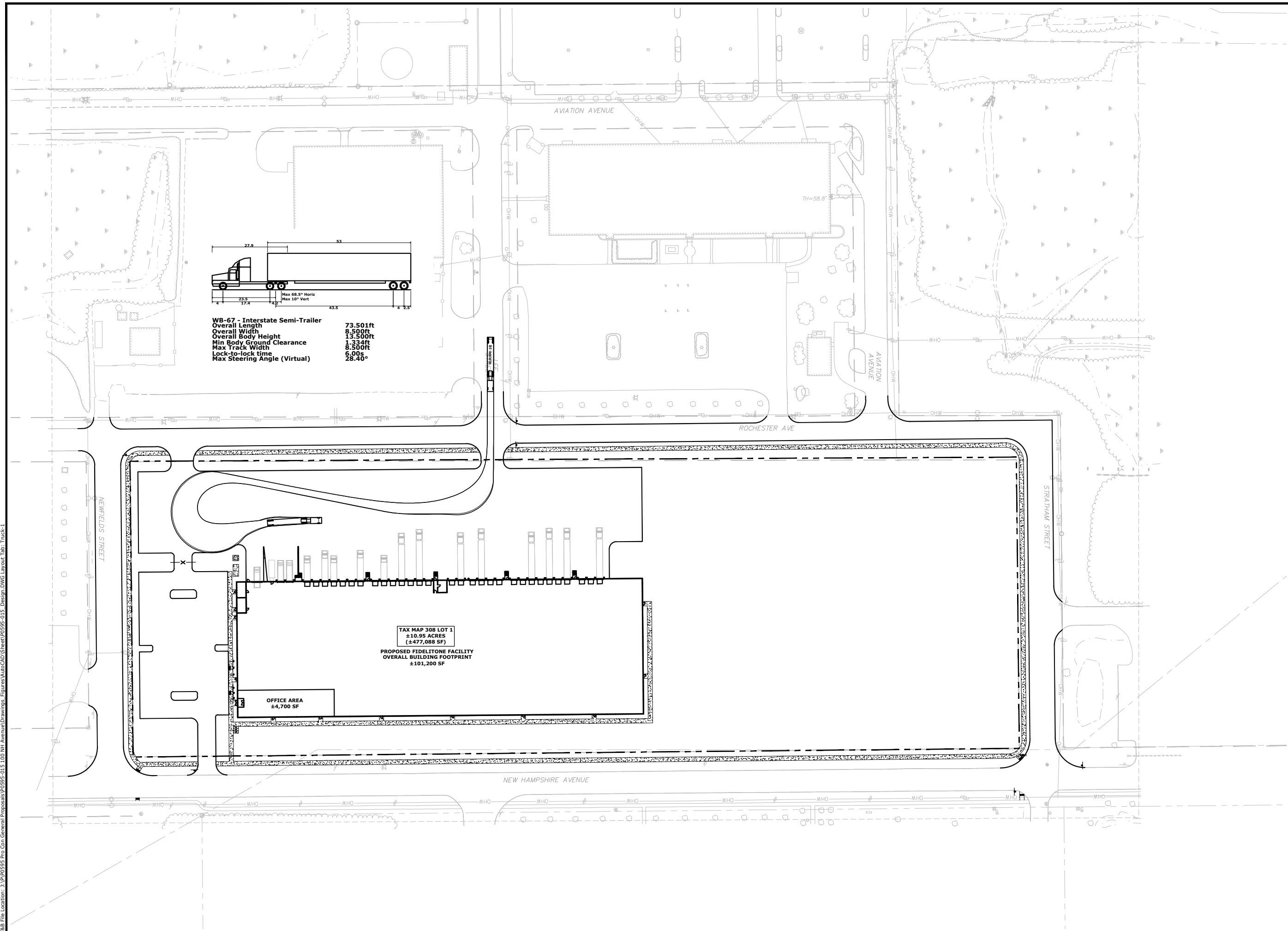
100 New Hampshire
Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
D	6/16/2023	TAC Submission
C	3/29/2023	Planning Board / Revised AOT Submission
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

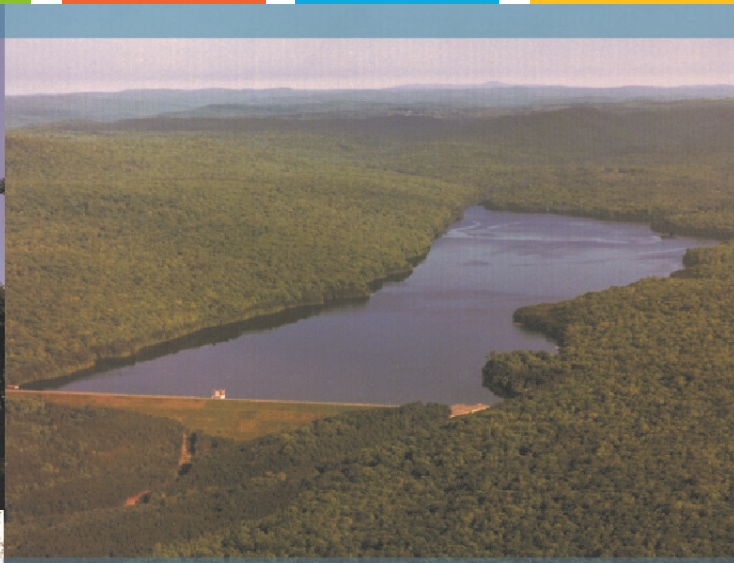
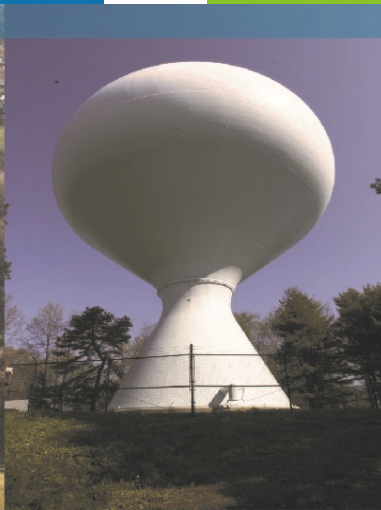
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DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
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CHECKED:	NAH
APPROVED:	PMC

**WB-67 TRUCK TURNING
EXHIBIT**

SCALE: AS SHOWN



Last Save Date: June 7, 2023 11:28 AM By: CML
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Proposed Fidelitone Facility

Portsmouth, NH

Drainage Analysis

Prepared For:

Aviation Avenue Group, LLC
210 Commerce Way Suite 300
Portsmouth, NH 03801

December 19, 2022

Last Revised: June 16, 2023



Section 1 Drainage Analysis

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Appendices

A Civil Plans (Bound Separately)

B Extreme Precipitation Tables

C Contech Engineered Solutions – Jellyfish Filter Maintenance Guide

D Remediation Site Documentation

E BMP Worksheets

F NRCS Web Soil Survey

J:\P\0595 Pro Con General Proposals\0595-015 100 NH Avenue\Report_Evaluation\Drainage Report\0595-015_Drainage Analysis_Rev-04.docx

Section 1

Drainage Analysis

The project site is identified as Map 308 Lot 1 on the City of Portsmouth Tax Maps. The site is located on a piece of land that is bound by Stratham Street to the north, New Hampshire Avenue to the east, Newfields Street to the south, and Rochester Avenue to the west. The proposed project is for the construction of a ±101,200 SF Fidelity facility including ±4,700 SF of office space, a parking area, loading dock areas, minor realignment of a portion of Rochester Avenue, and associated site improvements consisting of underground utilities, landscaping, lighting, and a stormwater management system. There is approximately 196,665 SF of existing impervious area that is currently untreated before entering the municipal drainage system. The proposed stormwater management system has been designed to provide treatment for the existing impervious surface that are currently untreated and for ±182,040 SF of additional impervious that results from the proposed project. The on-site underground detention system and treatment unit were sized to account for potential future buildout on the north side of the site. In addition to the on-site stormwater treatment the proposed project decreases the impervious area within the Rochester Avenue Right of Way by ±15,900 SF, while also adding seven (7) new offline catch basins to provide additional stormwater treatment within the Right of Way.

The Stormwater Management System was designed in accordance with the requirements of the New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain (AoT) rules and regulations (Env-Wq 1500). The system includes deep sump catch basins with oil water separator hoods, an underground detention system and a proprietary Jellyfish Filter Treatment Unit. In accordance with Env-Wq 1500 the proposed Jellyfish Filter Treatment Unit was sized to treat the Water Quality Flow (WQF). The WQF is the peak flow rate associated with the Water Quality Volume (WQV), which is based on equivalent to the volume of runoff attributable to the first one (1) inch of rainfall. The use of a proprietary treatment unit is proposed due to the site being located within multiple remediation areas as well as a Groundwater Management Zone (GMZ), and per the requirements of Env-Wq 1507.02 (c) no infiltration, filtering, or groundwater recharge practices are permitted in these areas.

1.1 Calculation Methods

The design storms analyzed in this study are the 1-year, 2-year, 10-year, 25-year and 50-year 24-hour Type III duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. A Type III storm pattern was used in the model. The rainfall data for these storm events was obtained from the data published by the Northeast Regional Climate Center (NRCC) at Cornell University, with an additional 15% added factor of safety as required by Env-Wq 1503.08(l) and shown in Table 1.1.

TABLE 1.1 – EXTREME PRECIPITATION ESTIMATES (NRCC)

YEAR	24-hr Estimate (inches)	+ 15% (inches)
1	2.66	3.06
2	3.21	3.69
10	4.87	5.60
25	6.17	7.10
50	7.40	8.51

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow, and channel flow. Runoff curve numbers were calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.
2. New Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices Selection and Design, December 2008.
3. "Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

1.2 Pre-Development Conditions

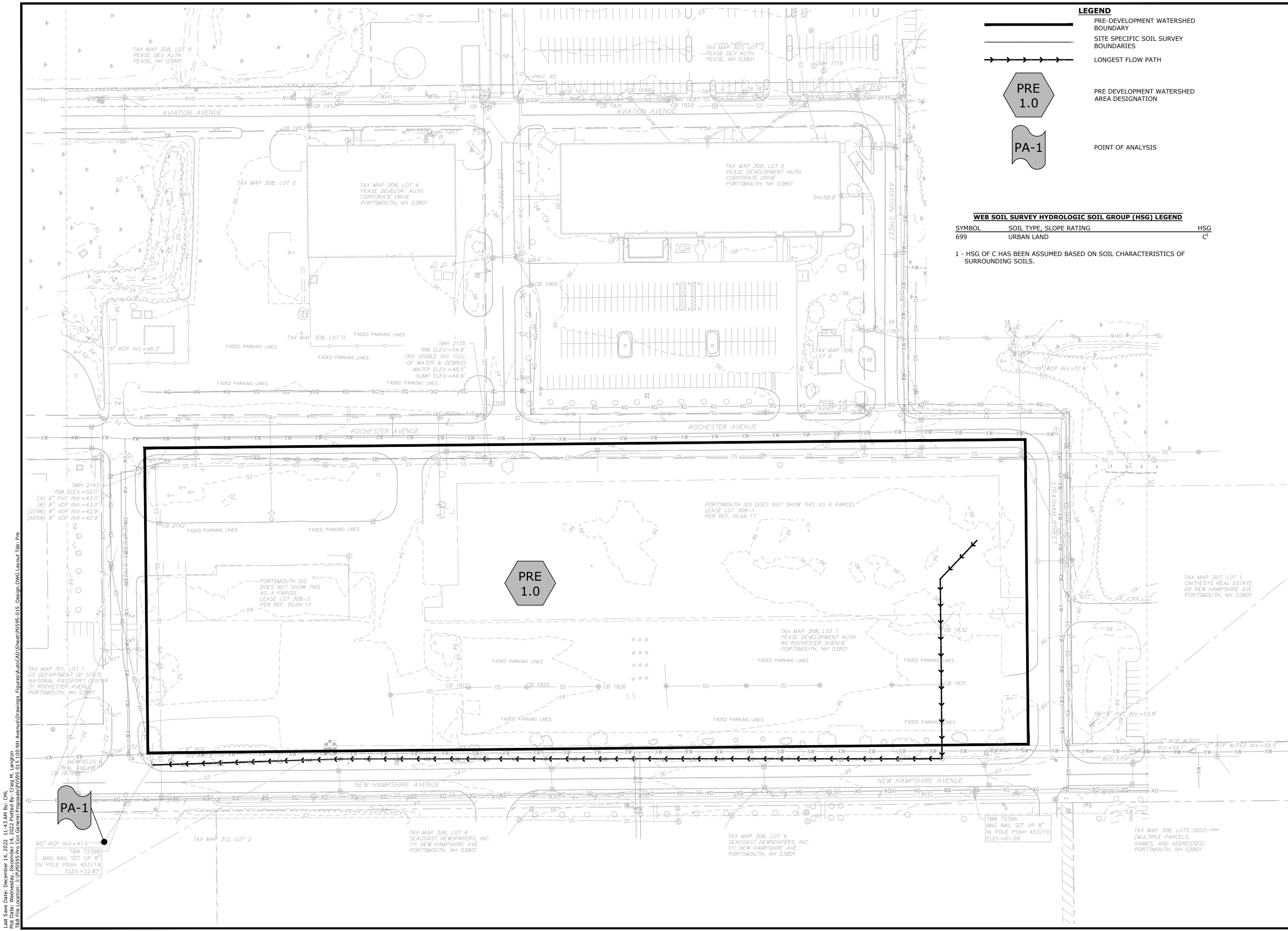
To analyze the Pre-Development condition, the site has been modeled utilizing one (1) sub-catchment area (PRE-1.0) with the distinct point of analysis (PA-1). This point of analysis and watershed are depicted on the plan entitled "Pre-Development Watershed Plan", Sheet C-801.

The point of analysis and their contributing watershed area is described below:

Point of Analysis One (PA-1)

Point of analysis PA-1 is comprised of one (1) watershed area (PRE-1.0). This area includes the land that is currently utilized as an abandoned parking lot along with a grassed area. Runoff from this area travels southwest to northeast across the site via overland flow which is then collected in a closed drainage system then flowing through Point of Analysis 1 (PA-1).

1.2.1 Pre-Development Watershed Plan



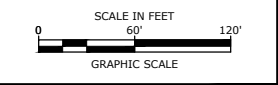
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- PRE-DEVELOPMENT WATERSHED BOUNDARY
- SITE SPECIFIC SOIL SURVEY BOUNDARIES
- LONGEST FLOW PATH
- PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- POINT OF ANALYSIS

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
	URBAN LAND	C ¹

1 - HSG of C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.



**Proposed
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Aviation Avenue
Group, LLC

100 New Hampshire
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Portsmouth, NH

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DATE:		12/19/2022
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APPROVED:		PMC

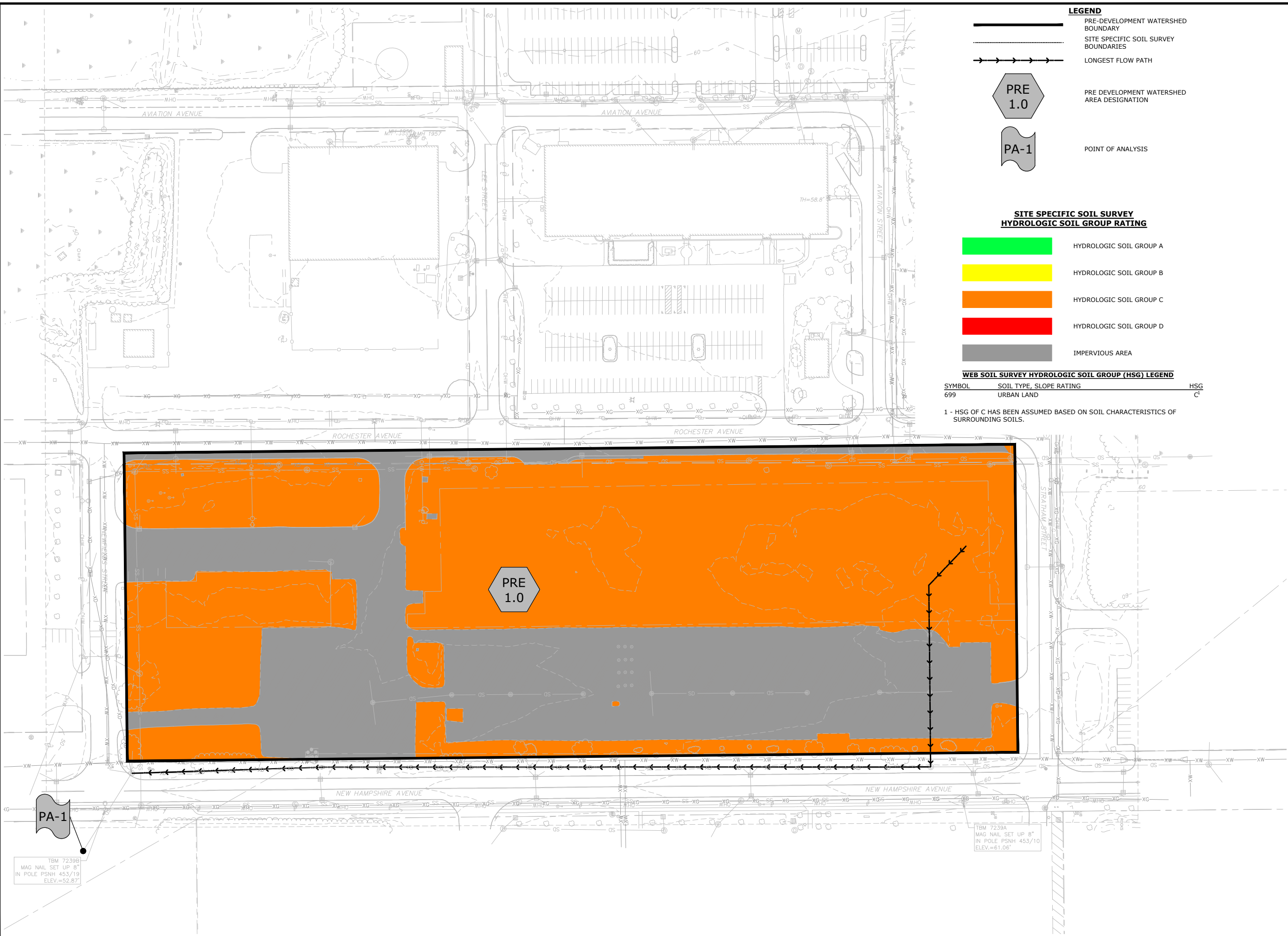
**PRE-DEVELOPMENT
WATERSHED PLAN**

SCALE: AS SHOWN

C-801

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1.2.2 Pre-Development Soil Plan



LEGEND

- PRE-DEVELOPMENT WATERSHED BOUNDARY
- SITE SPECIFIC SOIL SURVEY BOUNDARIES
- LONGEST FLOW PATH
- PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- POINT OF ANALYSIS

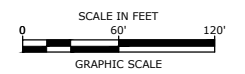
SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP RATING

- HYDROLOGIC SOIL GROUP A
- HYDROLOGIC SOIL GROUP B
- HYDROLOGIC SOIL GROUP C
- HYDROLOGIC SOIL GROUP D
- IMPERVIOUS AREA

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
	URBAN LAND	C ¹

1 - HSG OF C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.



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Avenue
Portsmouth, NH

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TBM 7239B
MAG NAIL SET UP 8"
IN POLE PSNH 453/19
ELEV.=52.87'

TBM 7239A
MAG NAIL SET UP 8"
IN POLE PSNH 453/10
ELEV.=61.06'

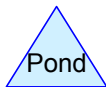
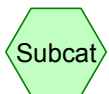
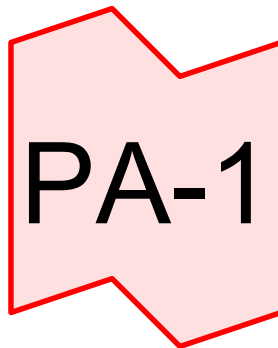
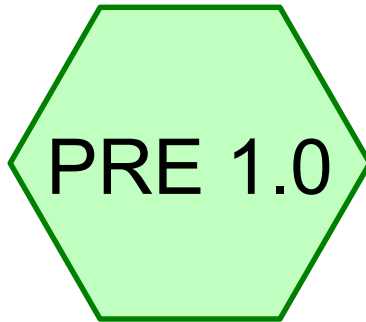
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DATE:		12/19/2022
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CHECKED:		NAH
APPROVED:		PMC

**PRE-DEVELOPMENT SOIL
COVERAGE COLOR PLAN**

SCALE: AS SHOWN

C-803

1.2.3 Pre-Development Calculation



P0595-015_Pre

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.914	74	>75% Grass cover, Good, HSG C (PRE 1.0)
4.515	98	Paved parking, HSG C (PRE 1.0)
11.429	83	TOTAL AREA

P0595-015_Pre

Prepared by Tighe & Bond

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Type III 24-hr 1-Year Rainfall=3.06"

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Page 3

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:

Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>1.49"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=20.01 cfs 1.423 af

Link PA-1:

Inflow=20.01 cfs 1.423 af
Primary=20.01 cfs 1.423 af

Total Runoff Area = 11.429 ac Runoff Volume = 1.423 af Average Runoff Depth = 1.49"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

P0595-015_Pre

Prepared by Tighe & Bond

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Type III 24-hr 2-Year Rainfall=3.69"

Printed 12/14/2022

Page 4

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:

Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>2.02"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=27.08 cfs 1.922 af

Link PA-1:

Inflow=27.08 cfs 1.922 af
Primary=27.08 cfs 1.922 af

Total Runoff Area = 11.429 ac Runoff Volume = 1.922 af Average Runoff Depth = 2.02"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

Summary for Subcatchment PRE 1.0:

Runoff = 49.71 cfs @ 12.07 hrs, Volume= 3.542 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.60"

Area (sf)	CN	Description
301,177	74	>75% Grass cover, Good, HSG C
196,664	98	Paved parking, HSG C
497,841	83	Weighted Average
301,177		60.50% Pervious Area
196,664		39.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0150	0.83		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.69"
0.2	38	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
2.3	595	0.0030	4.27	13.42	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
2.3	869	0.0030	6.20	59.70	Pipe Channel, 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.012 Concrete pipe, finished
5.0	1,512	Total			

Summary for Link PA-1:

Inflow Area = 11.429 ac, 39.50% Impervious, Inflow Depth > 3.72" for 10-Year event

Inflow = 49.71 cfs @ 12.07 hrs, Volume= 3.542 af

Primary = 49.71 cfs @ 12.07 hrs, Volume= 3.542 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

P0595-015_Pre

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Type III 24-hr 25-Year Rainfall=7.10"

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Page 6

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:

Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>5.12"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=67.64 cfs 4.876 af

Link PA-1:

Inflow=67.64 cfs 4.876 af
Primary=67.64 cfs 4.876 af

Total Runoff Area = 11.429 ac Runoff Volume = 4.876 af Average Runoff Depth = 5.12"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

P0595-015_Pre

Prepared by Tighe & Bond

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Type III 24-hr 50-Year Rainfall=8.51"

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Page 7

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:

Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>6.46"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=84.49 cfs 6.154 af

Link PA-1:

Inflow=84.49 cfs 6.154 af
Primary=84.49 cfs 6.154 af

Total Runoff Area = 11.429 ac Runoff Volume = 6.154 af Average Runoff Depth = 6.46"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

1.3 Post-Development Conditions

The post-development drainage condition is characterized by two (2) sub watershed areas POST-1.0 and POST-1.1 modeled at the same point of analysis as the pre-development condition. This point of analysis and watersheds are depicted on the plan entitled "Post Development Watershed Plan", Sheets C-802.

The point of analysis and their contributing watershed area is described below:

Point of Analysis One (PA-1)

Point of analysis PA-1 is comprised of two (2) sub watershed areas POST-1.0 and POST-1.1 as shown on the Post-Development Watershed Plan (Sheet C-802). These areas include the additional proposed impervious area on site as well the proposed green / landscaped areas on site. The proposed impervious areas generating runoff on site include roofs, parking lots, concrete sidewalks, and loading dock areas. Runoff from site is captured via overland flow then captured in the proposed onsite drainage system where it is detained and treated prior to being discharged through Point of Analysis 1 (PA-1).

1.3.1 Post-Development Watershed Plan



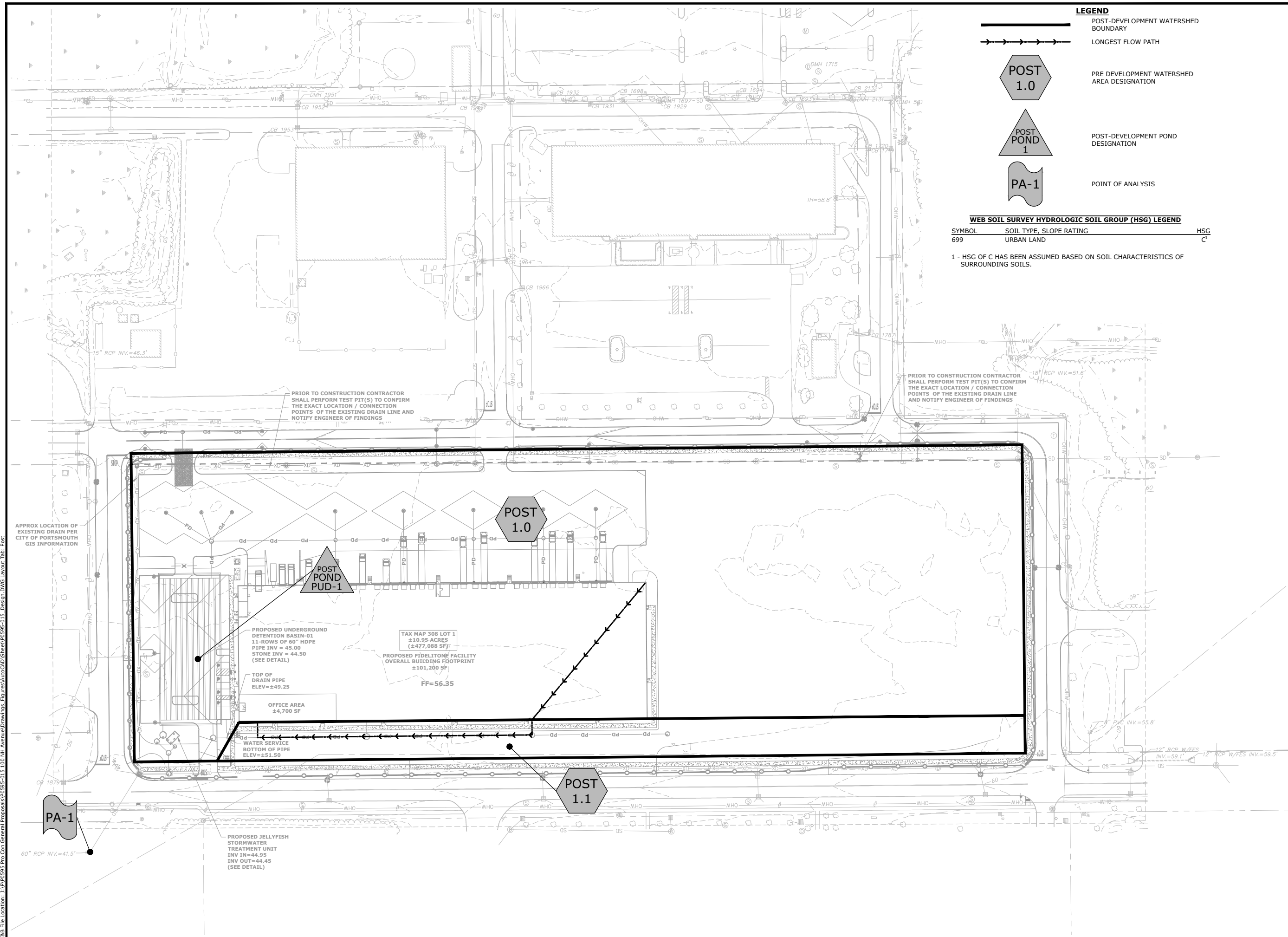
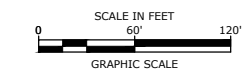
LEGEND

POST-DEVELOPMENT WATERSHED BOUNDARY
 LONGEST FLOW PATH
 PRE DEVELOPMENT WATERSHED AREA DESIGNATION
 POST-DEVELOPMENT POND DESIGNATION
 POINT OF ANALYSIS

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
	URBAN LAND	C ¹

1 - HSG OF C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.



Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
D	6/16/2023	TAC Resubmission
C	2/2/2023	AsT Submission
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO: P0595-015
DATE: 12/19/2022
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CHECKED: NAH
APPROVED: PMC

POST-DEVELOPMENT WATERSHED PLAN

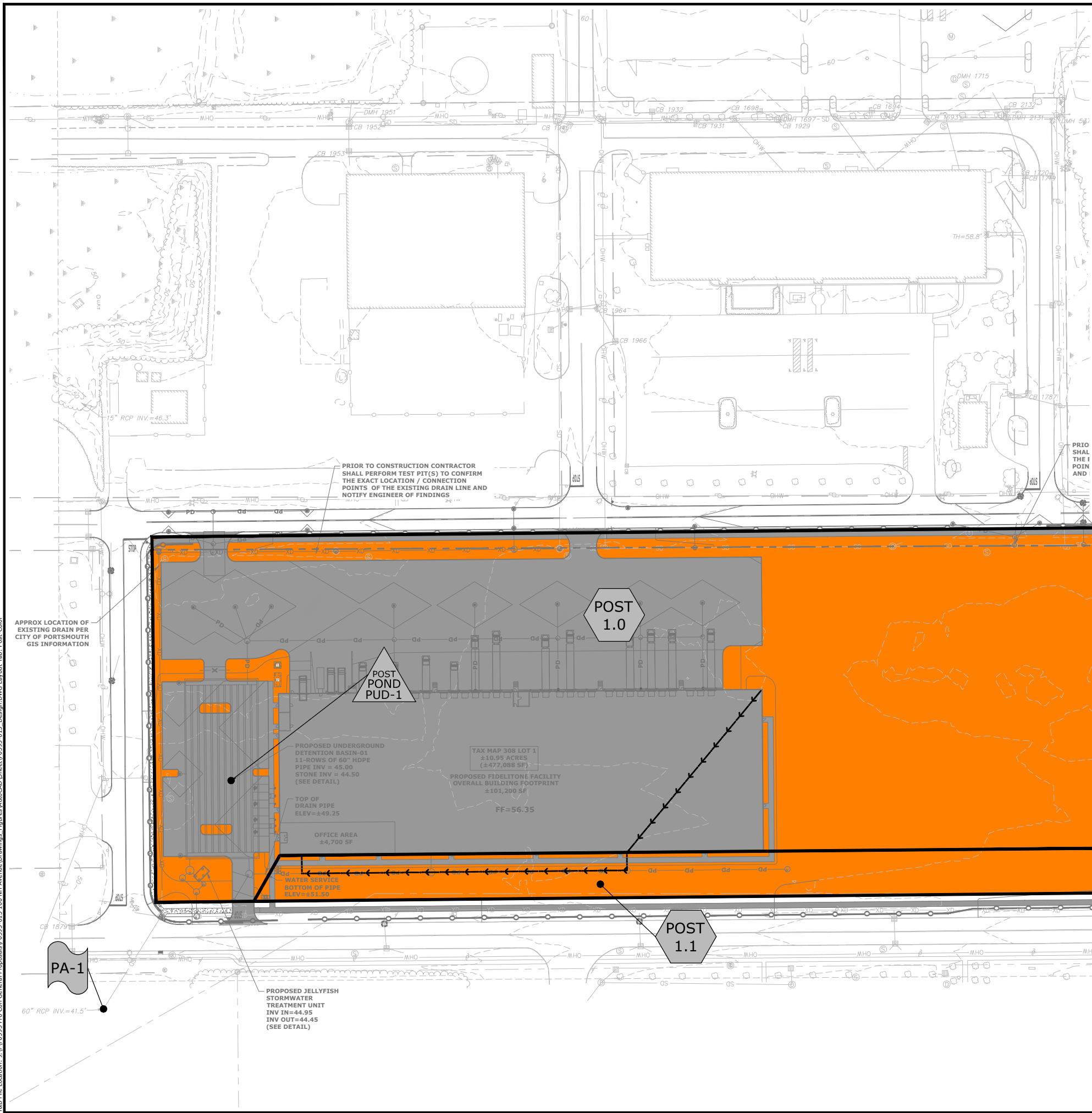
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C-802

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1.3.2 Post-Development Soil Plan

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LEGEND

POST-DEVELOPMENT WATERSHED BOUNDARY
 LONGEST FLOW PATH
 PRE-DEVELOPMENT WATERSHED AREA DESIGNATION
 POST-DEVELOPMENT POND DESIGNATION
 POINT OF ANALYSIS

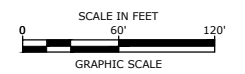
**SITE SPECIFIC SOIL SURVEY
HYDROLOGIC SOIL GROUP RATING**

HYDROLOGIC SOIL GROUP A
 HYDROLOGIC SOIL GROUP B
 HYDROLOGIC SOIL GROUP C
 HYDROLOGIC SOIL GROUP D
 IMPERVIOUS AREA

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
699	URBAN LAND	C ¹

1 - HSG of C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.



Proposed Fidelitone Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

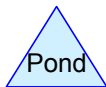
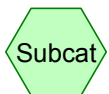
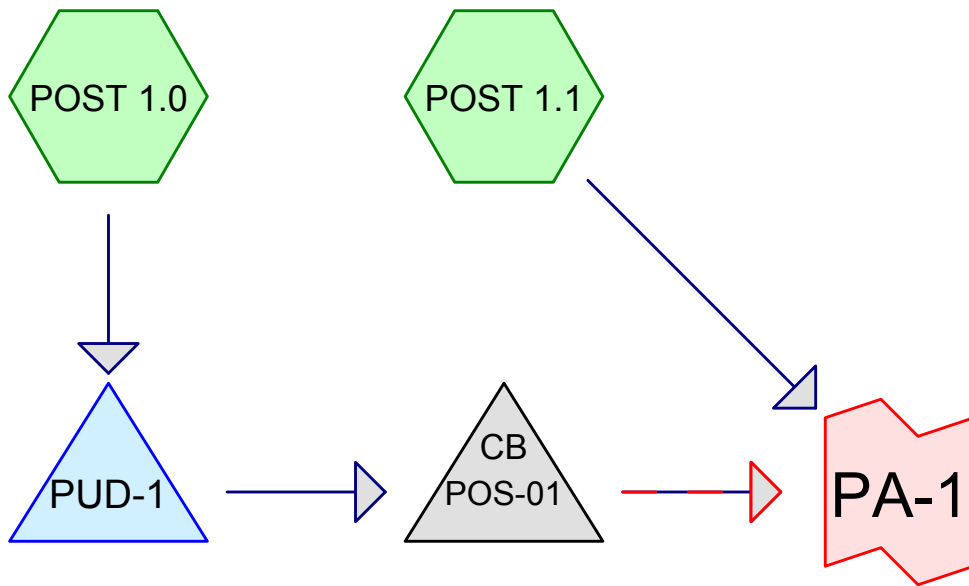
MARK	DATE	DESCRIPTION
D	6/16/2023	TAC Resubmission
C	2/2/2023	AoT Submission
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO: P0595-015
 DATE: 12/19/2022
 FILE: P0595-015_DESIGN.DWG
 DRAWN BY: CML
 CHECKED: NAH
 APPROVED: PMC

POST-DEVELOPMENT SOIL COVERAGE COLOR PLAN

SCALE: AS SHOWN

1.3.3 Post-Development Calculation



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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.576	74	>75% Grass cover, Good, HSG C (POST 1.0, POST 1.1)
4.985	98	Paved parking, HSG C (POST 1.0, POST 1.1)
3.868	98	Roofs, HSG C (POST 1.0)
11.429	93	TOTAL AREA

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Type III 24-hr 1-Year Rainfall=3.06"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=442,775 sf 85.53% Impervious Runoff Depth>2.51"
Flow Length=1,156' Tc=5.3 min CN=95 Runoff=28.10 cfs 2.123 af

SubcatchmentPOST 1.1: Runoff Area=55,066 sf 12.62% Impervious Runoff Depth>1.11"
Tc=5.0 min CN=77 Runoff=1.60 cfs 0.117 af

Pond POS-01: Peak Elev=46.64' Inflow=12.97 cfs 2.124 af
Primary=12.07 cfs 2.095 af Secondary=0.90 cfs 0.029 af Outflow=12.97 cfs 2.124 af

Pond PUD-1: Peak Elev=47.37' Storage=17,166 cf Inflow=28.10 cfs 2.123 af
Outflow=12.97 cfs 2.124 af

Link PA-1: Inflow=13.97 cfs 2.241 af
Primary=13.97 cfs 2.241 af

Total Runoff Area = 11.429 ac Runoff Volume = 2.240 af Average Runoff Depth = 2.35"
22.54% Pervious = 2.576 ac 77.46% Impervious = 8.853 ac

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Type III 24-hr 1-Year Rainfall=3.06"

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Summary for Subcatchment POST 1.0:

Runoff = 28.10 cfs @ 12.08 hrs, Volume= 2.123 af, Depth> 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.06"

Area (sf)	CN	Description
168,481	98	Roofs, HSG C
64,089	74	>75% Grass cover, Good, HSG C
210,205	98	Paved parking, HSG C
442,775	95	Weighted Average
64,089		14.47% Pervious Area
378,686		85.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	77	0.0125	1.16		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.69"
0.2	27	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	102	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	216	0.0050	4.20	7.43	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	125	0.0050	5.09	16.00	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
0.8	223	0.0025	4.72	33.35	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.8	222	0.0020	4.68	44.99	Pipe Channel, 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
0.6	164	0.0015	4.43	55.63	Pipe Channel, 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
5.3	1,156	Total			

Summary for Subcatchment POST 1.1:

Runoff = 1.60 cfs @ 12.08 hrs, Volume= 0.117 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.06"

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Type III 24-hr 1-Year Rainfall=3.06"

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Area (sf)	CN	Description
0	98	Roofs, HSG C
48,116	74	>75% Grass cover, Good, HSG C
6,950	98	Paved parking, HSG C
55,066	77	Weighted Average
48,116		87.38% Pervious Area
6,950		12.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0					Direct Entry,
3.0	0				Total, Increased to minimum Tc = 5.0 min

Summary for Pond POS-01:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 2.51" for 1-Year event
 Inflow = 12.97 cfs @ 12.22 hrs, Volume= 2.124 af
 Outflow = 12.97 cfs @ 12.22 hrs, Volume= 2.124 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.07 cfs @ 12.22 hrs, Volume= 2.095 af
 Secondary = 0.90 cfs @ 12.22 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 46.64' @ 12.22 hrs

Flood Elev= 54.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. To JellyFish Treatment Unit C= 0.600
#2	Secondary	46.30'	36.0" Vert. To PDMH-13 C= 0.600

Primary OutFlow Max=12.05 cfs @ 12.22 hrs HW=46.64' TW=0.00' (Dynamic Tailwater)
 ↳1=To JellyFish Treatment Unit(Orifice Controls 12.05 cfs @ 4.36 fps)

Secondary OutFlow Max=0.89 cfs @ 12.22 hrs HW=46.64' TW=0.00' (Dynamic Tailwater)
 ↳2=To PDMH-13 (Orifice Controls 0.89 cfs @ 1.99 fps)

Summary for Pond PUD-1:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 2.51" for 1-Year event
 Inflow = 28.10 cfs @ 12.08 hrs, Volume= 2.123 af
 Outflow = 12.97 cfs @ 12.22 hrs, Volume= 2.124 af, Atten= 54%, Lag= 8.8 min
 Primary = 12.97 cfs @ 12.22 hrs, Volume= 2.124 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Starting Elev= 45.00' Surf.Area= 17,150 sf Storage= 0 cf

Peak Elev= 47.37' @ 12.25 hrs Surf.Area= 17,150 sf Storage= 17,166 cf

Flood Elev= 50.00' Surf.Area= 17,150 sf Storage= 42,731 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 14.8 min (796.2 - 781.3)

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Type III 24-hr 1-Year Rainfall=3.06"

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Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0 cf	83.59'W x 205.17'L x 6.08'H Field A 104,336 cf Overall - 51,829 cf Embedded = 52,507 cf x 0.0% Voids
#2A	45.00'	43,660 cf	ADS N-12 60" x 99 Inside #1 Inside= 59.5"W x 59.5"H => 19.30 sf x 20.00'L = 386.0 cf Outside= 67.0"W x 67.0"H => 22.91 sf x 20.00'L = 458.2 cf Row Length Adjustment= +11.00' x 19.30 sf x 11 rows 80.59' Header x 19.30 sf x 2 = 3,110.7 cf Inside
		43,660 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. Orifice C= 0.600
#2	Primary	47.50'	8.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=12.87 cfs @ 12.22 hrs HW=47.37' TW=46.64' (Dynamic Tailwater)

- 1=Orifice (Orifice Controls 12.87 cfs @ 4.10 fps)
- 2=Sharp-Crested Rectangular Weir(Controls 0.00 cfs)

Summary for Link PA-1:

Inflow Area = 11.429 ac, 77.46% Impervious, Inflow Depth > 2.35" for 1-Year event
 Inflow = 13.97 cfs @ 12.17 hrs, Volume= 2.241 af
 Primary = 13.97 cfs @ 12.17 hrs, Volume= 2.241 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

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Type III 24-hr 2-Year Rainfall=3.69"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=442,775 sf 85.53% Impervious Runoff Depth>3.12"
Flow Length=1,156' Tc=5.3 min CN=95 Runoff=34.57 cfs 2.646 af

SubcatchmentPOST 1.1: Runoff Area=55,066 sf 12.62% Impervious Runoff Depth>1.57"
Tc=5.0 min CN=77 Runoff=2.31 cfs 0.166 af

Pond POS-01: Peak Elev=46.91' Inflow=17.22 cfs 2.646 af
Primary=14.52 cfs 2.569 af Secondary=2.70 cfs 0.078 af Outflow=17.22 cfs 2.646 af

Pond PUD-1: Peak Elev=47.75' Storage=21,338 cf Inflow=34.57 cfs 2.646 af
Outflow=17.22 cfs 2.646 af

Link PA-1: Inflow=18.54 cfs 2.812 af
Primary=18.54 cfs 2.812 af

Total Runoff Area = 11.429 ac Runoff Volume = 2.812 af Average Runoff Depth = 2.95"
22.54% Pervious = 2.576 ac 77.46% Impervious = 8.853 ac

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Type III 24-hr 2-Year Rainfall=3.69"

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Summary for Subcatchment POST 1.0:

Runoff = 34.57 cfs @ 12.08 hrs, Volume= 2.646 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.69"

Area (sf)	CN	Description
168,481	98	Roofs, HSG C
64,089	74	>75% Grass cover, Good, HSG C
210,205	98	Paved parking, HSG C
442,775	95	Weighted Average
64,089		14.47% Pervious Area
378,686		85.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	77	0.0125	1.16		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.69"
0.2	27	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	102	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	216	0.0050	4.20	7.43	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	125	0.0050	5.09	16.00	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
0.8	223	0.0025	4.72	33.35	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.8	222	0.0020	4.68	44.99	Pipe Channel, 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
0.6	164	0.0015	4.43	55.63	Pipe Channel, 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
5.3	1,156	Total			

Summary for Subcatchment POST 1.1:

Runoff = 2.31 cfs @ 12.08 hrs, Volume= 0.166 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.69"

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Type III 24-hr 2-Year Rainfall=3.69"

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Area (sf)	CN	Description
0	98	Roofs, HSG C
48,116	74	>75% Grass cover, Good, HSG C
6,950	98	Paved parking, HSG C
55,066	77	Weighted Average
48,116		87.38% Pervious Area
6,950		12.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0					Direct Entry,
3.0	0				Total, Increased to minimum Tc = 5.0 min

Summary for Pond POS-01:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 3.12" for 2-Year event
 Inflow = 17.22 cfs @ 12.21 hrs, Volume= 2.646 af
 Outflow = 17.22 cfs @ 12.21 hrs, Volume= 2.646 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.52 cfs @ 12.21 hrs, Volume= 2.569 af
 Secondary = 2.70 cfs @ 12.21 hrs, Volume= 0.078 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 46.91' @ 12.21 hrs

Flood Elev= 54.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. To JellyFish Treatment Unit C= 0.600
#2	Secondary	46.30'	36.0" Vert. To PDMH-13 C= 0.600

Primary OutFlow Max=14.48 cfs @ 12.21 hrs HW=46.90' TW=0.00' (Dynamic Tailwater)
 ↳1=To JellyFish Treatment Unit(Orifice Controls 14.48 cfs @ 4.69 fps)

Secondary OutFlow Max=2.67 cfs @ 12.21 hrs HW=46.90' TW=0.00' (Dynamic Tailwater)
 ↳2=To PDMH-13 (Orifice Controls 2.67 cfs @ 2.64 fps)

Summary for Pond PUD-1:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 3.12" for 2-Year event
 Inflow = 34.57 cfs @ 12.08 hrs, Volume= 2.646 af
 Outflow = 17.22 cfs @ 12.21 hrs, Volume= 2.646 af, Atten= 50%, Lag= 7.9 min
 Primary = 17.22 cfs @ 12.21 hrs, Volume= 2.646 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Starting Elev= 45.00' Surf.Area= 17,150 sf Storage= 0 cf

Peak Elev= 47.75' @ 12.22 hrs Surf.Area= 17,150 sf Storage= 21,338 cf

Flood Elev= 50.00' Surf.Area= 17,150 sf Storage= 42,731 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 15.7 min (791.4 - 775.7)

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Type III 24-hr 2-Year Rainfall=3.69"

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Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0 cf	83.59'W x 205.17'L x 6.08'H Field A 104,336 cf Overall - 51,829 cf Embedded = 52,507 cf x 0.0% Voids
#2A	45.00'	43,660 cf	ADS N-12 60" x 99 Inside #1 Inside= 59.5"W x 59.5"H => 19.30 sf x 20.00'L = 386.0 cf Outside= 67.0"W x 67.0"H => 22.91 sf x 20.00'L = 458.2 cf Row Length Adjustment= +11.00' x 19.30 sf x 11 rows 80.59' Header x 19.30 sf x 2 = 3,110.7 cf Inside
		43,660 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. Orifice C= 0.600
#2	Primary	47.50'	8.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=16.86 cfs @ 12.21 hrs HW=47.74' TW=46.90' (Dynamic Tailwater)

1=Orifice (Orifice Controls 13.84 cfs @ 4.40 fps)

2=Sharp-Crested Rectangular Weir (Weir Controls 3.02 cfs @ 1.60 fps)

Summary for Link PA-1:

Inflow Area = 11.429 ac, 77.46% Impervious, Inflow Depth > 2.95" for 2-Year event

Inflow = 18.54 cfs @ 12.19 hrs, Volume= 2.812 af

Primary = 18.54 cfs @ 12.19 hrs, Volume= 2.812 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

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Type III 24-hr 10-Year Rainfall=5.60"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=442,775 sf 85.53% Impervious Runoff Depth>5.01"
Flow Length=1,156' Tc=5.3 min CN=95 Runoff=53.99 cfs 4.245 af

SubcatchmentPOST 1.1: Runoff Area=55,066 sf 12.62% Impervious Runoff Depth>3.13"
Tc=5.0 min CN=77 Runoff=4.65 cfs 0.330 af

Pond POS-01: Peak Elev=47.85' Inflow=36.15 cfs 4.244 af
Primary=20.56 cfs 3.832 af Secondary=15.58 cfs 0.412 af Outflow=36.15 cfs 4.244 af

Pond PUD-1: Peak Elev=48.49' Storage=29,510 cf Inflow=53.99 cfs 4.245 af
Outflow=36.15 cfs 4.244 af

Link PA-1: Inflow=39.65 cfs 4.574 af
Primary=39.65 cfs 4.574 af

Total Runoff Area = 11.429 ac Runoff Volume = 4.575 af Average Runoff Depth = 4.80"
22.54% Pervious = 2.576 ac 77.46% Impervious = 8.853 ac

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Type III 24-hr 10-Year Rainfall=5.60"

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Summary for Subcatchment POST 1.0:

Runoff = 53.99 cfs @ 12.08 hrs, Volume= 4.245 af, Depth> 5.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.60"

Area (sf)	CN	Description
168,481	98	Roofs, HSG C
64,089	74	>75% Grass cover, Good, HSG C
210,205	98	Paved parking, HSG C
442,775	95	Weighted Average
64,089		14.47% Pervious Area
378,686		85.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	77	0.0125	1.16		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.69"
0.2	27	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	102	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	216	0.0050	4.20	7.43	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	125	0.0050	5.09	16.00	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
0.8	223	0.0025	4.72	33.35	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.8	222	0.0020	4.68	44.99	Pipe Channel, 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
0.6	164	0.0015	4.43	55.63	Pipe Channel, 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
5.3	1,156	Total			

Summary for Subcatchment POST 1.1:

Runoff = 4.65 cfs @ 12.08 hrs, Volume= 0.330 af, Depth> 3.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.60"

P0595-015_Post

Type III 24-hr 10-Year Rainfall=5.60"

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Area (sf)	CN	Description
0	98	Roofs, HSG C
48,116	74	>75% Grass cover, Good, HSG C
6,950	98	Paved parking, HSG C
55,066	77	Weighted Average
48,116		87.38% Pervious Area
6,950		12.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0					Direct Entry,
3.0	0				Total, Increased to minimum Tc = 5.0 min

Summary for Pond POS-01:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 5.01" for 10-Year event
 Inflow = 36.15 cfs @ 12.15 hrs, Volume= 4.244 af
 Outflow = 36.15 cfs @ 12.15 hrs, Volume= 4.244 af, Atten= 0%, Lag= 0.0 min
 Primary = 20.56 cfs @ 12.15 hrs, Volume= 3.832 af
 Secondary = 15.58 cfs @ 12.15 hrs, Volume= 0.412 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 47.85' @ 12.15 hrs

Flood Elev= 54.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. To JellyFish Treatment Unit C= 0.600
#2	Secondary	46.30'	36.0" Vert. To PDMH-13 C= 0.600

Primary OutFlow Max=20.56 cfs @ 12.15 hrs HW=47.85' TW=0.00' (Dynamic Tailwater)
 ↑1=To JellyFish Treatment Unit(Orifice Controls 20.56 cfs @ 6.54 fps)

Secondary OutFlow Max=15.56 cfs @ 12.15 hrs HW=47.85' TW=0.00' (Dynamic Tailwater)
 ↑2=To PDMH-13 (Orifice Controls 15.56 cfs @ 4.23 fps)

Summary for Pond PUD-1:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 5.01" for 10-Year event
 Inflow = 53.99 cfs @ 12.08 hrs, Volume= 4.245 af
 Outflow = 36.15 cfs @ 12.15 hrs, Volume= 4.244 af, Atten= 33%, Lag= 4.4 min
 Primary = 36.15 cfs @ 12.15 hrs, Volume= 4.244 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Starting Elev= 45.00' Surf.Area= 17,150 sf Storage= 0 cf

Peak Elev= 48.49' @ 12.17 hrs Surf.Area= 17,150 sf Storage= 29,510 cf

Flood Elev= 50.00' Surf.Area= 17,150 sf Storage= 42,731 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 15.5 min (779.8 - 764.3)

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Type III 24-hr 10-Year Rainfall=5.60"

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Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0 cf	83.59'W x 205.17'L x 6.08'H Field A 104,336 cf Overall - 51,829 cf Embedded = 52,507 cf x 0.0% Voids
#2A	45.00'	43,660 cf	ADS N-12 60" x 99 Inside #1 Inside= 59.5"W x 59.5"H => 19.30 sf x 20.00'L = 386.0 cf Outside= 67.0"W x 67.0"H => 22.91 sf x 20.00'L = 458.2 cf Row Length Adjustment= +11.00' x 19.30 sf x 11 rows 80.59' Header x 19.30 sf x 2 = 3,110.7 cf Inside
		43,660 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. Orifice C= 0.600
#2	Primary	47.50'	8.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=34.00 cfs @ 12.15 hrs HW=48.47' TW=47.85' (Dynamic Tailwater)

1=Orifice (Orifice Controls 11.91 cfs @ 3.79 fps)

2=Sharp-Crested Rectangular Weir (Weir Controls 22.09 cfs @ 2.93 fps)

Summary for Link PA-1:

Inflow Area = 11.429 ac, 77.46% Impervious, Inflow Depth > 4.80" for 10-Year event

Inflow = 39.65 cfs @ 12.14 hrs, Volume= 4.574 af

Primary = 39.65 cfs @ 12.14 hrs, Volume= 4.574 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

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Type III 24-hr 25-Year Rainfall=7.10"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=442,775 sf 85.53% Impervious Runoff Depth>6.50"
Flow Length=1,156' Tc=5.3 min CN=95 Runoff=69.10 cfs 5.507 af

SubcatchmentPOST 1.1: Runoff Area=55,066 sf 12.62% Impervious Runoff Depth>4.45"
Tc=5.0 min CN=77 Runoff=6.58 cfs 0.469 af

Pond POS-01: Peak Elev=48.42' Inflow=49.92 cfs 5.503 af
Primary=23.54 cfs 4.745 af Secondary=26.38 cfs 0.758 af Outflow=49.92 cfs 5.503 af

Pond PUD-1: Peak Elev=48.98' Storage=34,665 cf Inflow=69.10 cfs 5.507 af
Outflow=49.92 cfs 5.503 af

Link PA-1: Inflow=55.93 cfs 5.972 af
Primary=55.93 cfs 5.972 af

Total Runoff Area = 11.429 ac Runoff Volume = 5.977 af Average Runoff Depth = 6.28"
22.54% Pervious = 2.576 ac 77.46% Impervious = 8.853 ac

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Type III 24-hr 25-Year Rainfall=7.10"

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Summary for Subcatchment POST 1.0:

Runoff = 69.10 cfs @ 12.08 hrs, Volume= 5.507 af, Depth> 6.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=7.10"

Area (sf)	CN	Description
168,481	98	Roofs, HSG C
64,089	74	>75% Grass cover, Good, HSG C
210,205	98	Paved parking, HSG C
442,775	95	Weighted Average
64,089		14.47% Pervious Area
378,686		85.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	77	0.0125	1.16		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.69"
0.2	27	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	102	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	216	0.0050	4.20	7.43	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	125	0.0050	5.09	16.00	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
0.8	223	0.0025	4.72	33.35	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.8	222	0.0020	4.68	44.99	Pipe Channel, 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
0.6	164	0.0015	4.43	55.63	Pipe Channel, 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
5.3	1,156	Total			

Summary for Subcatchment POST 1.1:

Runoff = 6.58 cfs @ 12.08 hrs, Volume= 0.469 af, Depth> 4.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=7.10"

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Type III 24-hr 25-Year Rainfall=7.10"

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Area (sf)	CN	Description
0	98	Roofs, HSG C
48,116	74	>75% Grass cover, Good, HSG C
6,950	98	Paved parking, HSG C
55,066	77	Weighted Average
48,116		87.38% Pervious Area
6,950		12.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0					Direct Entry,
3.0	0				Total, Increased to minimum Tc = 5.0 min

Summary for Pond POS-01:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 6.50" for 25-Year event
 Inflow = 49.92 cfs @ 12.12 hrs, Volume= 5.503 af
 Outflow = 49.92 cfs @ 12.12 hrs, Volume= 5.503 af, Atten= 0%, Lag= 0.0 min
 Primary = 23.54 cfs @ 12.12 hrs, Volume= 4.745 af
 Secondary = 26.38 cfs @ 12.12 hrs, Volume= 0.758 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 48.42' @ 12.12 hrs

Flood Elev= 54.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. To JellyFish Treatment Unit C= 0.600
#2	Secondary	46.30'	36.0" Vert. To PDMH-13 C= 0.600

Primary OutFlow Max=23.20 cfs @ 12.12 hrs HW=48.35' TW=0.00' (Dynamic Tailwater)

↑1=To JellyFish Treatment Unit(Orifice Controls 23.20 cfs @ 7.39 fps)

Secondary OutFlow Max=25.15 cfs @ 12.12 hrs HW=48.35' TW=0.00' (Dynamic Tailwater)

↑2=To PDMH-13 (Orifice Controls 25.15 cfs @ 4.88 fps)

Summary for Pond PUD-1:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 6.50" for 25-Year event
 Inflow = 69.10 cfs @ 12.08 hrs, Volume= 5.507 af
 Outflow = 49.92 cfs @ 12.12 hrs, Volume= 5.503 af, Atten= 28%, Lag= 2.6 min
 Primary = 49.92 cfs @ 12.12 hrs, Volume= 5.503 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Starting Elev= 45.00' Surf.Area= 17,150 sf Storage= 0 cf

Peak Elev= 48.98' @ 12.16 hrs Surf.Area= 17,150 sf Storage= 34,665 cf

Flood Elev= 50.00' Surf.Area= 17,150 sf Storage= 42,731 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 15.1 min (773.7 - 758.7)

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Type III 24-hr 25-Year Rainfall=7.10"

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Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0 cf	83.59'W x 205.17'L x 6.08'H Field A 104,336 cf Overall - 51,829 cf Embedded = 52,507 cf x 0.0% Voids
#2A	45.00'	43,660 cf	ADS N-12 60" x 99 Inside #1 Inside= 59.5"W x 59.5"H => 19.30 sf x 20.00'L = 386.0 cf Outside= 67.0"W x 67.0"H => 22.91 sf x 20.00'L = 458.2 cf Row Length Adjustment= +11.00' x 19.30 sf x 11 rows 80.59' Header x 19.30 sf x 2 = 3,110.7 cf Inside
		43,660 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. Orifice C= 0.600
#2	Primary	47.50'	8.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=41.71 cfs @ 12.12 hrs HW=48.86' TW=48.35' (Dynamic Tailwater)

1=Orifice (Orifice Controls 10.80 cfs @ 3.44 fps)

2=Sharp-Crested Rectangular Weir (Weir Controls 30.91 cfs @ 2.93 fps)

Summary for Link PA-1:

Inflow Area = 11.429 ac, 77.46% Impervious, Inflow Depth > 6.27" for 25-Year event

Inflow = 55.93 cfs @ 12.11 hrs, Volume= 5.972 af

Primary = 55.93 cfs @ 12.11 hrs, Volume= 5.972 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

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Type III 24-hr 50-Year Rainfall=8.51"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=442,775 sf 85.53% Impervious Runoff Depth>7.91"
Flow Length=1,156' Tc=5.3 min CN=95 Runoff=83.24 cfs 6.696 af

SubcatchmentPOST 1.1: Runoff Area=55,066 sf 12.62% Impervious Runoff Depth>5.74"
Tc=5.0 min CN=77 Runoff=8.47 cfs 0.605 af

Pond POS-01: Peak Elev=48.90' Inflow=61.59 cfs 6.688 af
Primary=25.78 cfs 5.570 af Secondary=35.81 cfs 1.118 af Outflow=61.59 cfs 6.688 af

Pond PUD-1: Peak Elev=49.45' Storage=38,888 cf Inflow=83.24 cfs 6.696 af
Outflow=61.59 cfs 6.688 af

Link PA-1: Inflow=69.28 cfs 7.293 af
Primary=69.28 cfs 7.293 af

Total Runoff Area = 11.429 ac Runoff Volume = 7.301 af Average Runoff Depth = 7.67"
22.54% Pervious = 2.576 ac 77.46% Impervious = 8.853 ac

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Type III 24-hr 50-Year Rainfall=8.51"

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Summary for Subcatchment POST 1.0:

Runoff = 83.24 cfs @ 12.08 hrs, Volume= 6.696 af, Depth> 7.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=8.51"

Area (sf)	CN	Description
168,481	98	Roofs, HSG C
64,089	74	>75% Grass cover, Good, HSG C
210,205	98	Paved parking, HSG C
442,775	95	Weighted Average
64,089		14.47% Pervious Area
378,686		85.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	77	0.0125	1.16		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.69"
0.2	27	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	102	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	216	0.0050	4.20	7.43	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	125	0.0050	5.09	16.00	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
0.8	223	0.0025	4.72	33.35	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.8	222	0.0020	4.68	44.99	Pipe Channel, 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
0.6	164	0.0015	4.43	55.63	Pipe Channel, 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
5.3	1,156	Total			

Summary for Subcatchment POST 1.1:

Runoff = 8.47 cfs @ 12.07 hrs, Volume= 0.605 af, Depth> 5.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=8.51"

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Type III 24-hr 50-Year Rainfall=8.51"

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Area (sf)	CN	Description
0	98	Roofs, HSG C
48,116	74	>75% Grass cover, Good, HSG C
6,950	98	Paved parking, HSG C
55,066	77	Weighted Average
48,116		87.38% Pervious Area
6,950		12.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0					Direct Entry,
3.0	0				Total, Increased to minimum Tc = 5.0 min

Summary for Pond POS-01:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 7.90" for 50-Year event
 Inflow = 61.59 cfs @ 12.12 hrs, Volume= 6.688 af
 Outflow = 61.59 cfs @ 12.12 hrs, Volume= 6.688 af, Atten= 0%, Lag= 0.0 min
 Primary = 25.78 cfs @ 12.12 hrs, Volume= 5.570 af
 Secondary = 35.81 cfs @ 12.12 hrs, Volume= 1.118 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 48.90' @ 12.12 hrs

Flood Elev= 54.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. To JellyFish Treatment Unit C= 0.600
#2	Secondary	46.30'	36.0" Vert. To PDMH-13 C= 0.600

Primary OutFlow Max=25.50 cfs @ 12.12 hrs HW=48.84' TW=0.00' (Dynamic Tailwater)

↑1=To JellyFish Treatment Unit(Orifice Controls 25.50 cfs @ 8.12 fps)

Secondary OutFlow Max=34.65 cfs @ 12.12 hrs HW=48.84' TW=0.00' (Dynamic Tailwater)

↑2=To PDMH-13 (Orifice Controls 34.65 cfs @ 5.43 fps)

Summary for Pond PUD-1:

Inflow Area = 10.165 ac, 85.53% Impervious, Inflow Depth > 7.91" for 50-Year event
 Inflow = 83.24 cfs @ 12.08 hrs, Volume= 6.696 af
 Outflow = 61.59 cfs @ 12.12 hrs, Volume= 6.688 af, Atten= 26%, Lag= 2.6 min
 Primary = 61.59 cfs @ 12.12 hrs, Volume= 6.688 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Starting Elev= 45.00' Surf.Area= 17,150 sf Storage= 0 cf

Peak Elev= 49.45' @ 12.16 hrs Surf.Area= 17,150 sf Storage= 38,888 cf

Flood Elev= 50.00' Surf.Area= 17,150 sf Storage= 42,731 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 14.8 min (769.5 - 754.7)

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Type III 24-hr 50-Year Rainfall=8.51"

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Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0 cf	83.59'W x 205.17'L x 6.08'H Field A 104,336 cf Overall - 51,829 cf Embedded = 52,507 cf x 0.0% Voids
#2A	45.00'	43,660 cf	ADS N-12 60" x 99 Inside #1 Inside= 59.5"W x 59.5"H => 19.30 sf x 20.00'L = 386.0 cf Outside= 67.0"W x 67.0"H => 22.91 sf x 20.00'L = 458.2 cf Row Length Adjustment= +11.00' x 19.30 sf x 11 rows 80.59' Header x 19.30 sf x 2 = 3,110.7 cf Inside
		43,660 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	24.0" Vert. Orifice C= 0.600
#2	Primary	47.50'	8.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=51.40 cfs @ 12.12 hrs HW=49.31' TW=48.84' (Dynamic Tailwater)

1=Orifice (Orifice Controls 10.34 cfs @ 3.29 fps)

2=Sharp-Crested Rectangular Weir (Weir Controls 41.06 cfs @ 2.97 fps)

Summary for Link PA-1:

Inflow Area = 11.429 ac, 77.46% Impervious, Inflow Depth > 7.66" for 50-Year event

Inflow = 69.28 cfs @ 12.11 hrs, Volume= 7.293 af

Primary = 69.28 cfs @ 12.11 hrs, Volume= 7.293 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs



GENERAL CALCULATIONS - WQV and WQF (optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

10.17	ac	A = Area draining to the practice
8.69	ac	A _i = Impervious area draining to the practice
0.86	decimal	I = Percent impervious area draining to the practice, in decimal form
0.82	unitless	R _v = Runoff coefficient = 0.05 + (0.9 x I)
8.33	ac-in	WQV = 1" x R _v x A
30,249	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")

Water Quality Flow (WQF)

1	inches	P = Amount of rainfall. For WQF in NH, P = 1".
0.82	inches	Q = Water quality depth. Q = WQV/A
98	unitless	CN = Unit peak discharge curve number. CN = 1000 / (10 + 5P + 10Q - 10 * [Q ² + 1.25 * Q * P] ^{0.5})
0.2	inches	S = Potential maximum retention. S = (1000/CN) - 10
0.034	inches	I _a = Initial abstraction. I _a = 0.2S
5.0	minutes	T _c = Time of Concentration
600.0	cfs/mi ² /in	q _u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III.
7.812	cfs	WQF = q _u x WQV. Conversion: to convert "cfs/mi ² /in * ac-in" to "cfs" multiply by 1mi ² /640ac.

Designer's Notes: _____

This calculation represents the treatment train directed to Contech Jellyfish Treatment Unit.

Full Treatment in compliance with Env-Wq 1508.10 shall be achieved by use of a proprietary flow-through device. The proposed Contech Jellyfish Treatment Unit - Model#: JFPD0816 will be used to treat the WQF as calculated in the above spreadsheet. The specified device is designed to treat up to 7.84 cfs of flow.

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Type III 24-hr 100-Year Rainfall=10.19"

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Stage-Discharge for Pond POS-01:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
45.00	0.00	0.00	0.00	46.04	5.73	5.73	0.00
45.02	0.00	0.00	0.00	46.06	5.93	5.93	0.00
45.04	0.01	0.01	0.00	46.08	6.12	6.12	0.00
45.06	0.02	0.02	0.00	46.10	6.32	6.32	0.00
45.08	0.04	0.04	0.00	46.12	6.52	6.52	0.00
45.10	0.06	0.06	0.00	46.14	6.72	6.72	0.00
45.12	0.09	0.09	0.00	46.16	6.93	6.93	0.00
45.14	0.12	0.12	0.00	46.18	7.13	7.13	0.00
45.16	0.16	0.16	0.00	46.20	7.34	7.34	0.00
45.18	0.20	0.20	0.00	46.22	7.55	7.55	0.00
45.20	0.25	0.25	0.00	46.24	7.76	7.76	0.00
45.22	0.30	0.30	0.00	46.26	7.97	7.97	0.00
45.24	0.36	0.36	0.00	46.28	8.18	8.18	0.00
45.26	0.42	0.42	0.00	46.30	8.39	8.39	0.00
45.28	0.48	0.48	0.00	46.32	8.61	8.60	0.00
45.30	0.55	0.55	0.00	46.34	8.83	8.82	0.01
45.32	0.62	0.62	0.00	46.36	9.06	9.03	0.03
45.34	0.70	0.70	0.00	46.38	9.30	9.25	0.05
45.36	0.79	0.79	0.00	46.40	9.54	9.46	0.08
45.38	0.87	0.87	0.00	46.42	9.79	9.68	0.11
45.40	0.96	0.96	0.00	46.44	10.05	9.89	0.15
45.42	1.06	1.06	0.00	46.46	10.31	10.11	0.20
45.44	1.16	1.16	0.00	46.48	10.57	10.32	0.25
45.46	1.26	1.26	0.00	46.50	10.85	10.54	0.31
45.48	1.37	1.37	0.00	46.52	11.13	10.75	0.37
45.50	1.48	1.48	0.00	46.54	11.41	10.97	0.44
45.52	1.59	1.59	0.00	46.56	11.70	11.18	0.52
45.54	1.71	1.71	0.00	46.58	11.99	11.39	0.60
45.56	1.83	1.83	0.00	46.60	12.29	11.60	0.69
45.58	1.96	1.96	0.00	46.62	12.59	11.81	0.78
45.60	2.09	2.09	0.00	46.64	12.90	12.02	0.88
45.62	2.22	2.22	0.00	46.66	13.21	12.23	0.98
45.64	2.36	2.36	0.00	46.68	13.52	12.43	1.09
45.66	2.50	2.50	0.00	46.70	13.84	12.63	1.21
45.68	2.64	2.64	0.00	46.72	14.16	12.83	1.33
45.70	2.79	2.79	0.00	46.74	14.48	13.03	1.45
45.72	2.94	2.94	0.00	46.76	14.81	13.23	1.59
45.74	3.09	3.09	0.00	46.78	15.14	13.42	1.72
45.76	3.25	3.25	0.00	46.80	15.47	13.60	1.86
45.78	3.41	3.41	0.00	46.82	15.80	13.79	2.01
45.80	3.57	3.57	0.00	46.84	16.13	13.97	2.16
45.82	3.74	3.74	0.00	46.86	16.46	14.14	2.32
45.84	3.91	3.91	0.00	46.88	16.79	14.31	2.49
45.86	4.08	4.08	0.00	46.90	17.12	14.47	2.65
45.88	4.25	4.25	0.00	46.92	17.45	14.62	2.83
45.90	4.43	4.43	0.00	46.94	17.77	14.77	3.01
45.92	4.61	4.61	0.00	46.96	18.09	14.90	3.19
45.94	4.79	4.79	0.00	46.98	18.40	15.03	3.38
45.96	4.97	4.97	0.00	47.00	18.70	15.13	3.57
45.98	5.16	5.16	0.00	47.02	19.05	15.28	3.77
46.00	5.35	5.35	0.00	47.04	19.40	15.43	3.97
46.02	5.54	5.54	0.00	47.06	19.75	15.57	4.18

1.4 Peak Rate Comparisons

The following table summarizes and compares the pre- and post-development peak runoff rates from the 1-year, 2-year, 10-year, 25-year and 50-year storm events at each point of analysis.

Point of Analysis	1-Year Storm	2-Year Storm	10-Year Storm	25-Year Storm	50-Year Storm
Pre-Development Watershed (PA-1)	20.01	27.08	49.71	67.64	84.49
Post-Development Watershed (PA-1)	13.97	18.54	39.65	55.93	69.28

The Peak Runoff Control Requirements of Env-Wq 1507.06 are required to be met for the point of analysis. As shown in Table 1.4 the Post-Development flows are decreased from the Pre-Development flows at PA-1.

The Channel Protection requirements of Env-Wq 1507.05 are met for the point of analysis as the 2-year, 24-hour Post-Development peak flowrate (18.54 cfs) is less than or equal to the 1-year, 24-hour pre-development peak flowrate (20.01 cfs).

1.5 Mitigation Description

1.5.1 Mitigation Calculations

The proposed project area has been evaluated to treat the required water quality flow (WQF) per the requirements of Env-Wq 1500. These calculations have been provided in appendix E of this report.

1.5.2 Pre-Treatment Methods for Protecting Water Quality

Pretreatment methods for protecting water quality on this site include offline deep sump catch basins with oil water separator hoods.

BMP	Total Suspended Solids	Total Phosphorus
Deep Sump Catch Basin w/Hood ¹	15%	5%

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix B.

1.5.3 Treatment Methods for Protecting Water Quality

The runoff from proposed impervious areas will be captured in the proposed closed drainage system directed to an underground detention system and then treated by an ADS Water Quality Unit. The water quality unit has been sized to treat the Water Quality Flow from the contributing subcatchment areas. The system has been designed with an internal bypass structure that diverts peak flows greater than the 1-inch storm event.

Table 1.6 below, shows design pollutant removal efficient for the proposed Jellyfish Filter Treatment Unit which meets the requirements of Env-Wq 1508.10. Additional reference information on the proposed Jellyfish Filter Treatment Unit can be found in Appendix C.

Table 1.6 – Pollutant Removal Efficiencies		
BMP	Total Suspended Solids	Total Phosphorus
Jellyfish Filter Treatment Unit ¹	89%	59%

1. Pollutant removal efficiencies per Contech Engineered Solutions Jellyfish Filter Performance testing results.

Table 1.7 – Pollutant Removal Calculations				
Total Suspended Solids Removal				
BMP	TSS Removal Rate	Starting TSS Load	TSS Removed	Remaining TSS Load
Deep Sump Catch Basin w/Hood ¹	0.15	1.00	0.15	0.85
Jellyfish Filter Treatment Unit ²	0.89	0.85	0.76	0.09
Total Suspended Solids Removed:				91%

Total Phosphorus Removal				
	TP Removal Rate	Starting TP Load	TP Removed	Remaining TP Load
Deep Sump Catch Basin w/Hood ¹	0.05	1.00	0.05	0.95
Jellyfish Filter Treatment Unit ²	0.59	0.95	0.56	0.39
Total Phosphorus Removed:				61%

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix B.
2. Pollutant removal efficiencies per Contech Engineered Solutions Jellyfish Filter Performance testing results.

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APPENDIX A
(Bound Separately)

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APPENDIX B

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	70.808 degrees West
Latitude	43.075 degrees North
Elevation	0 feet
Date/Time	Tue, 29 Jun 2021 09:16:17 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.82	1.04	1yr	0.70	0.98	1.21	1.56	2.03	2.66	2.92	1yr	2.35	2.81	3.21	3.94	4.54	1yr
2yr	0.32	0.50	0.62	0.81	1.02	1.30	2yr	0.88	1.18	1.51	1.94	2.49	3.21	3.57	2yr	2.84	3.43	3.93	4.67	5.32	2yr
5yr	0.37	0.58	0.73	0.97	1.24	1.60	5yr	1.07	1.46	1.88	2.43	3.14	4.07	4.57	5yr	3.60	4.40	5.03	5.93	6.70	5yr
10yr	0.41	0.64	0.81	1.11	1.44	1.88	10yr	1.25	1.72	2.22	2.88	3.74	4.87	5.53	10yr	4.31	5.31	6.07	7.10	7.98	10yr
25yr	0.47	0.75	0.96	1.32	1.76	2.32	25yr	1.52	2.13	2.76	3.61	4.73	6.17	7.10	25yr	5.46	6.82	7.78	9.02	10.06	25yr
50yr	0.53	0.85	1.09	1.52	2.05	2.74	50yr	1.77	2.51	3.27	4.30	5.65	7.40	8.58	50yr	6.55	8.25	9.40	10.81	11.99	50yr
100yr	0.60	0.97	1.25	1.76	2.39	3.22	100yr	2.06	2.96	3.86	5.11	6.74	8.86	10.38	100yr	7.84	9.98	11.35	12.96	14.30	100yr
200yr	0.67	1.09	1.41	2.02	2.79	3.80	200yr	2.41	3.49	4.58	6.09	8.06	10.62	12.55	200yr	9.40	12.07	13.71	15.54	17.05	200yr
500yr	0.79	1.30	1.69	2.45	3.43	4.71	500yr	2.96	4.34	5.71	7.65	10.19	13.50	16.15	500yr	11.95	15.53	17.61	19.77	21.55	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.73	0.89	1yr	0.63	0.87	0.92	1.32	1.66	2.23	2.53	1yr	1.97	2.43	2.85	3.16	3.88	1yr
2yr	0.32	0.49	0.60	0.81	1.00	1.19	2yr	0.86	1.16	1.37	1.82	2.34	3.05	3.46	2yr	2.70	3.32	3.82	4.55	5.07	2yr
5yr	0.35	0.54	0.67	0.92	1.17	1.40	5yr	1.01	1.37	1.61	2.13	2.74	3.80	4.21	5yr	3.36	4.05	4.71	5.54	6.26	5yr
10yr	0.39	0.59	0.73	1.03	1.32	1.60	10yr	1.14	1.56	1.81	2.40	3.07	4.38	4.89	10yr	3.88	4.70	5.46	6.43	7.22	10yr
25yr	0.44	0.67	0.83	1.19	1.56	1.90	25yr	1.35	1.86	2.10	2.78	3.56	4.70	5.94	25yr	4.16	5.72	6.69	7.84	8.73	25yr
50yr	0.48	0.73	0.91	1.31	1.77	2.17	50yr	1.53	2.12	2.35	3.10	3.97	5.31	6.88	50yr	4.70	6.61	7.80	9.11	10.08	50yr
100yr	0.54	0.81	1.02	1.47	2.02	2.47	100yr	1.74	2.42	2.63	3.45	4.40	5.96	7.96	100yr	5.27	7.65	9.09	10.60	11.64	100yr
200yr	0.59	0.89	1.13	1.64	2.29	2.82	200yr	1.98	2.76	2.94	3.83	4.86	6.67	9.21	200yr	5.91	8.85	10.59	12.34	13.46	200yr
500yr	0.69	1.03	1.32	1.92	2.73	3.38	500yr	2.36	3.30	3.41	4.39	5.56	7.76	11.16	500yr	6.87	10.73	12.98	15.12	16.29	500yr

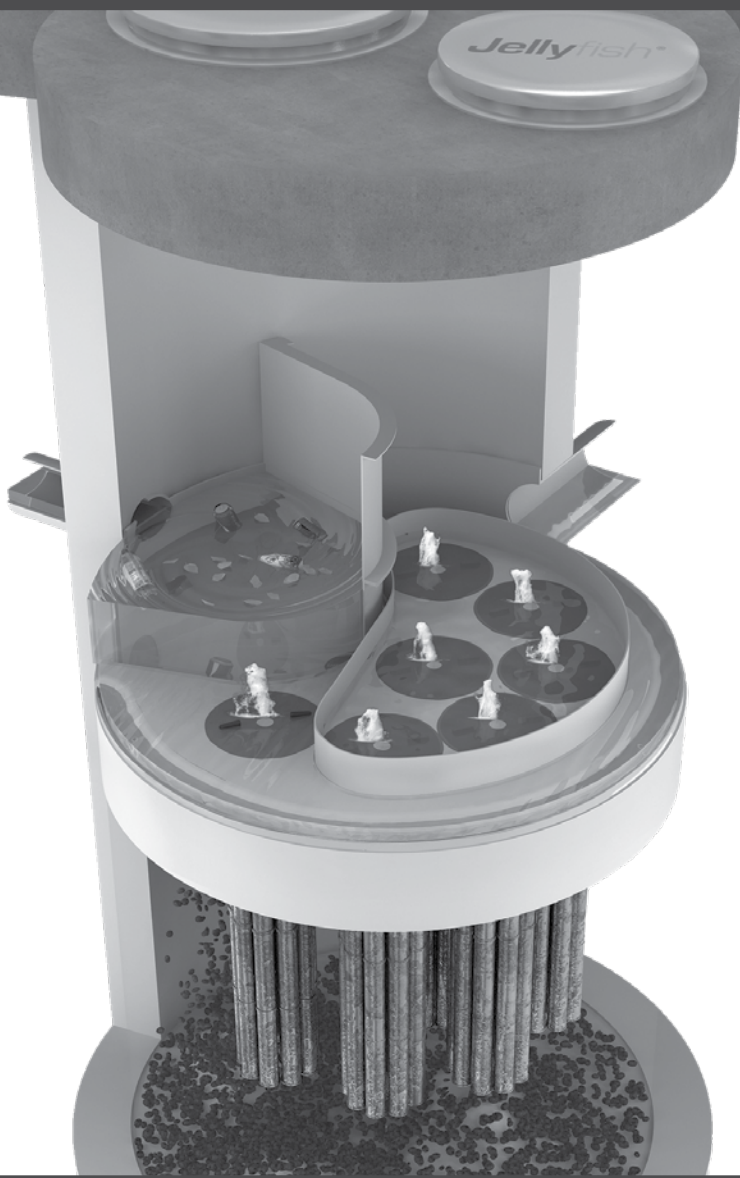
Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.54	0.72	0.89	1.08	1yr	0.77	1.06	1.26	1.75	2.21	3.00	3.14	1yr	2.66	3.02	3.58	4.37	5.05	1yr
2yr	0.33	0.52	0.64	0.86	1.06	1.26	2yr	0.92	1.24	1.48	1.96	2.51	3.43	3.69	2yr	3.03	3.54	4.07	4.82	5.64	2yr
5yr	0.40	0.61	0.76	1.05	1.33	1.61	5yr	1.15	1.58	1.88	2.53	3.24	4.33	4.93	5yr	3.84	4.74	5.36	6.34	7.13	5yr
10yr	0.47	0.71	0.89	1.24	1.60	1.96	10yr	1.38	1.92	2.27	3.09	3.93	5.33	6.16	10yr	4.72	5.92	6.75	7.80	8.71	10yr
25yr	0.57	0.87	1.08	1.54	2.03	2.55	25yr	1.75	2.49	2.93	4.05	5.10	7.79	8.26	25yr	6.90	7.95	9.02	10.27	11.35	25yr
50yr	0.66	1.01	1.26	1.81	2.43	3.10	50yr	2.10	3.03	3.57	4.96	6.24	9.76	10.34	50yr	8.64	9.94	11.25	12.63	13.88	50yr
100yr	0.78	1.18	1.47	2.13	2.92	3.77	100yr	2.52	3.68	4.34	6.10	7.64	12.21	12.94	100yr	10.81	12.44	14.02	15.57	16.99	100yr
200yr	0.91	1.37	1.73	2.51	3.50	4.59	200yr	3.02	4.49	5.29	7.51	9.36	15.32	16.21	200yr	13.56	15.59	17.49	19.17	20.80	200yr
500yr	1.12	1.67	2.15	3.13	4.44	5.95	500yr	3.84	5.81	6.86	9.90	12.27	20.70	21.84	500yr	18.32	21.00	23.45	25.25	27.19	500yr

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APPENDIX C

Jellyfish[®] Filter Maintenance Guide





JELLYFISH® FILTER INSPECTION & MAINTENANCE GUIDE

Jellyfish units are often just one of many structures in a more comprehensive stormwater drainage and treatment system.

In order for maintenance of the Jellyfish filter to be successful, it is imperative that all other components be properly maintained. The maintenance and repair of upstream facilities should be carried out prior to Jellyfish maintenance activities.

In addition to considering upstream facilities, it is also important to correct any problems identified in the drainage area. Drainage area concerns may include: erosion problems, heavy oil loading, and discharges of inappropriate materials.

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1.0 Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system.

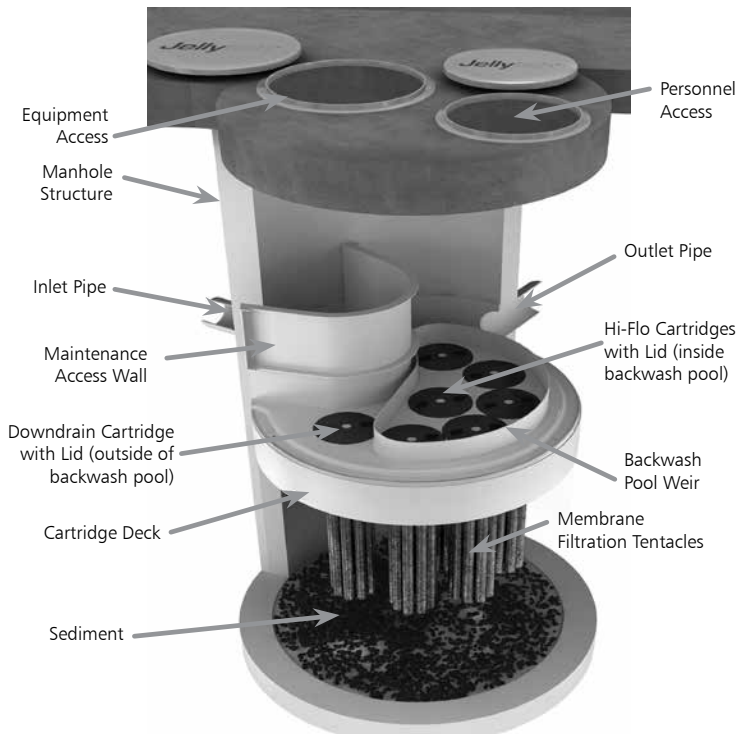
Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Additional maintenance activities may be required in the event of non-storm event runoff, such as base-flow or seasonal flow, an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted from surface observations and include:

- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW) or inlet bay for vault systems

Maintenance activities include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed



Note: Separator Skirt not shown

2.0 Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of, the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; *or per the approved project stormwater quality documents (if applicable), whichever is more frequent.*

1. A minimum of quarterly inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
2. Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
3. Inspection is recommended after each major storm event.
4. Inspection is required immediately after an upstream oil, fuel or other chemical spill.

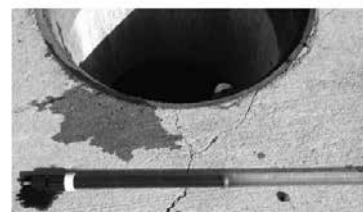
3.0 Inspection Procedure

The following procedure is recommended when performing inspections:

1. Provide traffic control measures as necessary.
2. Inspect the MAW or inlet bay for floatable pollutants such as trash, debris, and oil sheen.
3. Measure oil and sediment depth in several locations, by lowering a sediment probe until contact is made with the floor of the structure. Record sediment depth, and presences of any oil layers.
4. Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
5. Inspect the MAW (where appropriate), cartridge deck and receptacles, and backwash pool weir, for damaged or broken components.

3.1 Dry weather inspections

- Inspect the cartridge deck for standing water, and/or sediment on the deck.
- No standing water under normal operating conditions.
- Standing water inside the backwash pool, but not outside the backwash pool indicates, that the filter cartridges need to be rinsed.



Inspection Utilizing Sediment Probe

- Standing water outside the backwash pool is not anticipated and may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- Any appreciable sediment ($\geq 1/16''$) accumulated on the deck surface should be removed.

3.2 Wet weather inspections

- Observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW or inlet bay.
- Less than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
- Greater than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
- 18 inches or greater and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges need to be rinsed.

4.0 Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

1. Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.
2. Floatable trash, debris, and oil removal.
3. Deck cleaned and free from sediment.
4. Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
5. Replace tentacles if rinsing does not restore adequate hydraulic capacity, remove accumulated sediment, or if damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
6. Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
7. The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged or compromised by the spill.

5.0 Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

1. Provide traffic control measures as necessary.
2. Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures.
Caution: Dropping objects onto the cartridge deck may cause damage.

3. Perform Inspection Procedure prior to maintenance activity.
4. To access the cartridge deck for filter cartridge service, descend into the structure and step directly onto the deck. Caution: Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
5. Maximum weight of maintenance crew and equipment on the cartridge deck not to exceed 450 lbs.

5.1 Filter Cartridge Removal

1. Remove a cartridge lid.
2. Remove cartridges from the deck using the lifting loops in the cartridge head plate. Rope or a lifting device (available from Contech) should be used. **Caution: Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Wet cartridges typically weigh between 100 and 125 lbs.**
3. Replace and secure the cartridge lid on the exposed empty receptacle as a safety precaution. Contech does not recommend exposing more than one empty cartridge receptacle at a time.

5.2 Filter Cartridge Rinsing

1. Remove all 11 tentacles from the cartridge head plate. Take care not to lose or damage the O-ring seal as well as the plastic threaded nut and connector.



Cartridge Removal & Lifting Device



2. Position tentacles in a container (or over the MAW), with the threaded connector (open end) facing down, so rinse water is flushed through the membrane and captured in the container.
3. Using the Jellyfish rinse tool (available from Contech) or a low-pressure garden hose sprayer, direct water spray onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. **Caution: Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane.**

4. Collected rinse water is typically removed by vacuum hose.
5. Reassemble cartridges as detailed later in this document. Reuse O-rings and nuts, ensuring proper placement on each tentacle.

5.3 Sediment and Floatables Extraction

1. Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning only through the maintenance access wall (MAW) opening. Be careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck on manhole systems. Do not lower the vacuum wand through a cartridge receptacle, as damage to the receptacle will result.
2. Vacuum floatable trash, debris, and oil, from the MAW opening or inlet bay. Alternatively, floatable solids may be removed by a net or skimmer.



Vacuuming Sump Through MAW

3. Pressure wash cartridge deck and receptacles to remove all sediment and debris. Sediment should be rinsed into the sump area. Take care not to flush rinse water into the outlet pipe.
4. Remove water from the sump area. Vacuum or pump equipment should only be introduced through the MAW or inlet bay.
5. Remove the sediment from the bottom of the unit through the MAW or inlet bay opening.



Vacuuming Sump Through MAW

6. For larger diameter Jellyfish Filter manholes (≥ 8 -ft) and some vaults complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.

5.4 Filter Cartridge Reinstallation and Replacement

1. Cartridges should be installed after the deck has been cleaned. It is important that the receptacle surfaces be free from grit and debris.
2. Remove cartridge lid from deck and carefully lower the filter cartridge into the receptacle until head plate gasket is seated squarely in receptacle. **Caution: Do not force the cartridge downward; damage may occur.**
3. Replace the cartridge lid and check to see that both male threads are properly seated before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation. See next page for additional details.
4. If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.

5.5 Chemical Spills

Caution: If a chemical spill has been captured, do not attempt maintenance. Immediately contact the local hazard response agency and contact Contech.

5.6 Material Disposal

The accumulated sediment found in stormwater treatment and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments to contain measurable concentrations of heavy metals and organic chemicals (such as pesticides and petroleum products). Areas with the greatest potential for high pollutant loading include industrial areas and heavily traveled roads. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.

Jellyfish Filter Components & Filter Cartridge Assembly and Installation

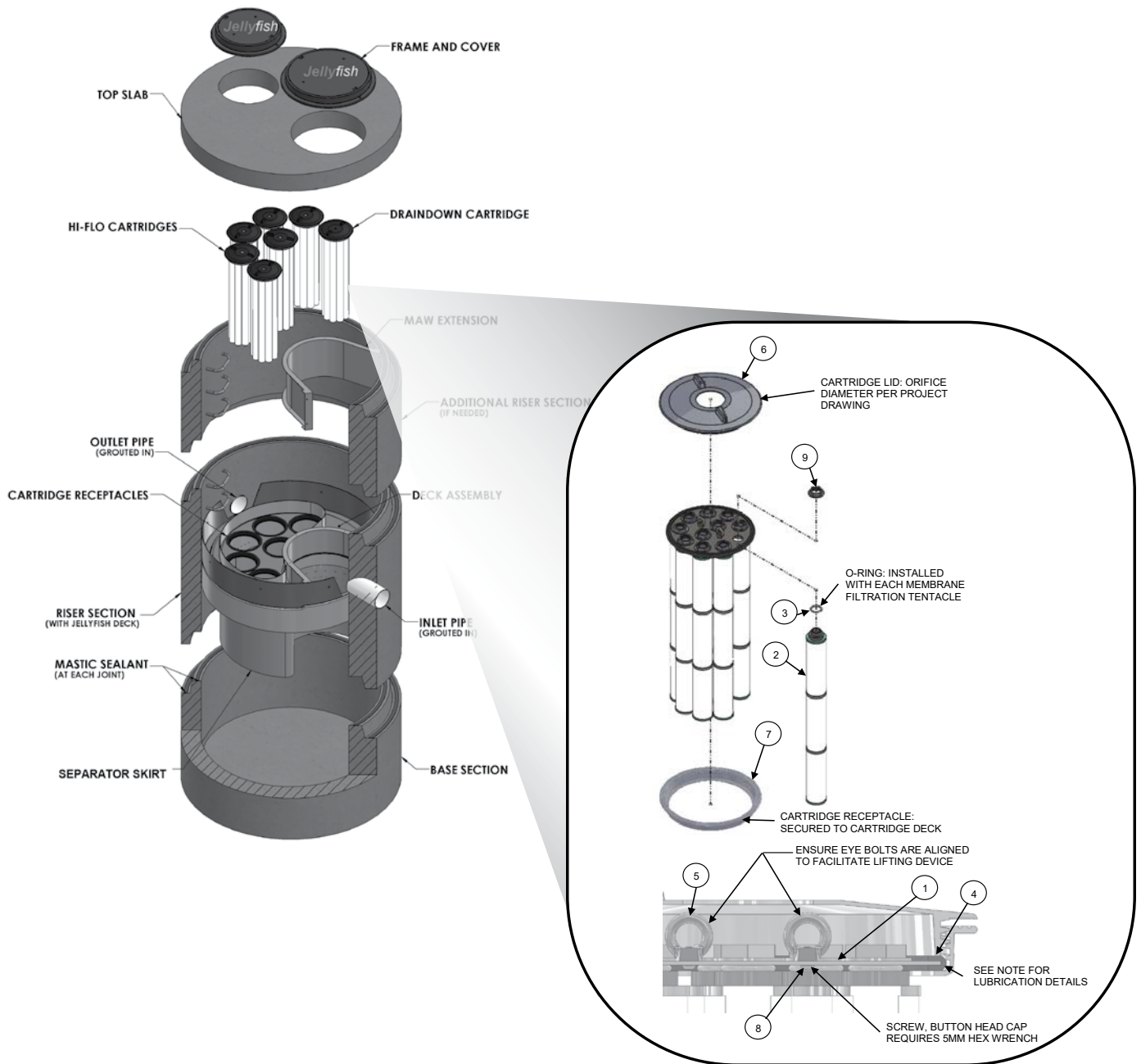


TABLE 1: BOM

ITEM NO.	DESCRIPTION
1	JF HEAD PLATE
2	JF TENTACLE
3	JF O-RING
4	JF HEAD PLATE GASKET
5	JF CARTRIDGE EYELET
6	JF 14IN COVER
7	JF RECEPTACLE
8	BUTTON HEAD CAP SCREW M6X14MM SS
9	JF CARTRIDGE NUT

TABLE 2: APPROVED GASKET LUBRICANTS

PART NO.	MFR	DESCRIPTION
78713	LA-CO	LUBRI-JOINT
40501	HERCULES	DUCK BUTTER
30600	OATEY	PIPE LUBRICANT
PSLUBXL1Q	PROSELECT	PIPE JOINT LUBRICANT

NOTES:

Head Plate Gasket Installation:

Install Head Plate Gasket (Item 4) onto the Head Plate (Item 1) and liberally apply a lubricant from Table 2: Approved Gasket Lubricants onto the gasket where it contacts the Receptacle (Item 7) and Cartridge Lid (Item 6). Follow Lubricant manufacturer's instructions.

Lid Assembly:

Rotate Cartridge Lid counter-clockwise until both male threads drop down and properly seat. Then rotate Cartridge Lid clockwise approximately one-third of a full rotation until Cartridge Lid is firmly secured, creating a watertight seal.

Jellyfish Filter Inspection and Maintenance Log

Owner:		Jellyfish Model No:	
Location:		GPS Coordinates:	
Land Use:	Commercial:	Industrial:	Service Station:
	Roadway/Highway:	Airport:	Residential:

Date/Time:						
Inspector:						
Maintenance Contractor:						
Visible Oil Present: (Y/N)						
Oil Quantity Removed:						
Floatable Debris Present: (Y/N)						
Floatable Debris Removed: (Y/N)						
Water Depth in Backwash Pool						
Draindown Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Draindown Cartridges: (Y/N)						
Hi-Flo Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Hi-Flo Cartridges: (Y/N)						
Sediment Depth Measured: (Y/N)						
Sediment Depth (inches or mm):						
Sediment Removed: (Y/N)						
Cartridge Lids intact: (Y/N)						
Observed Damage:						
Comments:						



Support

- Drawings and specifications are available at www.conteches.com/jellyfish.
- Site-specific design support is available from Contech Engineered Solutions.
- Find a Certified Maintenance Provider at www.conteches.com/ccmp

Jellyfish[®]

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APPENDIX D

Site Number: **100330336**Project Number: **0036693**Name and Address: **BUILDING 119 (SITE 36) 5B6
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **BUILDING 119 (SITE 36) 5B6
PORTSMOUTH**[Mapit](#)Wellhead Protection Area: **No**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **REGISTRATION**Discovery Date: **04/12/2016**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N****Activities (1)**

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
04/12/2016	UIC Application Received	LOCKER	04/26/2016	UIC Registration Issued	REGISTERED

Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4601803	REGISTRATION	SITE #36 INJECTION REGISTRATION (5B6) ISSUED	04/26/2016 .08 MB

Site Number: **100330336**Project Number: **0036693**Name and Address: **BUILDING 119 (SITE 36) 5B6
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **BUILDING 119 (SITE 36) 5B6
PORTSMOUTH**[Mapit](#)Wellhead Protection Area: **No**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **REGISTRATION**Discovery Date: **04/12/2016**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N**

No Vapor Recovery Information

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
06/09/2022	Non-Permit GW Monitoring Result Received	UNASSIGNED			

Activity Documents (1)

Document Type	Document Title	Document Date	File Size
5001486	REPORT TO DES SITE 36 FALL 2021 SAMPLING EVENT DATA TRANSMITTAL 7-APR-2022	06/09/2022	5.00 MB

10/19/2021	Additional Information Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4958065	REPORT TO DES FINAL SS036 FAALL 2021 REMEDIAL ACTION-OPERATIONS FIELD WORK NOTIFICATION	10/19/2021	4.61 MB

10/23/2020	Annual Report Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4884500	REPORT DRAFT 2019 GROUNDWATER MONITORING REPORT	10/23/2020	5.00 MB

01/22/2019	Additional Information Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4755436	REPORT TO DES FINAL IN SITU CHEMICAL OXIDATION PILOT STUDY COMPLETION REPORT	01/22/2019	5.00 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
11/14/2018	Additional Information Received	SANDIN	12/14/2018	TECHNICAL INFORMATION PROVIDED	REPORT INCOMPLETE

Activity Documents (2)

Document Type	Document Title	Document Date	File Size
4749416	CORRESPONDENCE	DES COMMENTS 12.14.18	12/14/2018 .08 MB
4746936	REPORT TO DES	DRAFT IN-SITU CHEMICAL OXIDATION PILOT STUDY COMPLETION REPORT	11/14/2018 5.00 MB

11/07/2018	Additional Information Received	OTHER	11/13/2018	No Action Necessary (Report filed)	WETLANDS VIOLATIONS CASE CLOSED
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Activity Documents (2)

Document Type	Document Title	Document Date	File Size
4747011	CORRESPONDENCE-FROM	WETLANDS CASE CLOSED	11/13/2018 .20 MB
4746460	REPORT TO DES	2018 WETLAND MONITORING REPORT	11/07/2018 2.90 MB

01/31/2018	Additional Information Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4696966	REPORT TO DES	FINAL IN SITU CHEMICAL OXIDATION PILOT STUDY	01/31/2018 5.00 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N****Activities (31)**

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
01/30/2018	Additional Information Received	UNASSIGNED			

Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4696071	REPORT TO DES	DRAFT IN SITU CHEMICAL OXIDATION PILOT STUDY IMPLEMENTATION REPORT	01/30/2018 5.00 MB

12/20/2017	Additional Information Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4688637	REPORT TO DES	2017 WETLAND MONITORING REPORT	12/20/2017 5.00 MB

08/24/2017	Additional Information Received	UNASSIGNED			
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01/27/2017	Additional Information Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4640648	CORRESPONDENCE-TO	RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION	01/27/2017 1.20 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
12/21/2016	Additional Information Received	OTHER			

Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4635429	REPORT TO DES	2016 WETLAND MONITORING REPORT	12/21/2016 3.81 MB

11/15/2016	Additional Information Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4632437	REPORT TO DES	2015 ANNUAL REPORT	11/15/2016 5.00 MB

11/02/2016	Additional Information Received	OTHER	11/16/2016	TECHNICAL INFORMATION PROVIDED	RESTORATION PLAN APPROVED BY D. PRICE
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Activity Documents (2)

Document Type	Document Title	Document Date	File Size
4637567	CORRESPONDENCE	WETLANDS RESTORATION PLAN APPROVAL	11/16/2016 .22 MB
4630201	REPORT TO DES	WETLAND RESTORATION PLAN LEE STREET SITE 36	11/01/2016 5.00 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N****Activities (31)**

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
10/27/2016	Additional Information Received	HILTON	11/04/2016	Not Approved	ISCO FAILURE NOT EVALUATED. DES DID NOT APPROVE ORIGINALLY, CANNOT CONCUR NOW

Activity Documents (2)

Document Type	Document Title	Document Date	File Size
4630401	CORRESPONDENCE	DES COMMENTS 11.4.16 TO ISCO RESTART PLAN 10.27.16	11/04/2016 .08 MB
4629781	REPORT TO DES	IN SITU CHEMICAL OXIDATION (ISCO) INJECTIONS RESTART PLAN	10/27/2016 1.75 MB

10/27/2016	Additional Information Received	OTHER	11/01/2016	No Action Necessary (Report filed)	WETLANDS BUREAU TO OVERSEE VIOLATIONS
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4629780	CORRESPONDENCE-TO	RESPONSE TO NHDES LRM REGARDING ISCO	10/25/2016 .13 MB

08/10/2016	Additional Information Received	UNASSIGNED			
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4616481	REPORT TO DES	DRAFT LONG-TERM MONITORING PLAN REVISION 5	08/10/2016 5.00 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N****Activities (31)**

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
07/27/2016	Additional Information Received	HILTON	09/14/2016	TECHNICAL INFORMATION PROVIDED	AF PROCEEDING WITHOUT REGULATOR CONCURRENCE. IMPLEMENTATION RESULTED IN WETLANDS VIOLATIONS

Activity Documents (2)

Document Type	Document Title	Document Date	File Size
4624264	CORRESPONDENCE	DES EMAIL 9.22.16	09/22/2016 .07 MB
4614946	REPORT TO DES	FINAL ADDITIONAL INVESTIGATION AND PILOT STUDY WORK PLAN 01-JUL-2016	07/27/2016 5.00 MB

06/09/2016	Additional Information Received	HILTON	06/30/2016	No Action Necessary (Report filed)	EPA TO ADDRESS
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4606629	CORRESPONDENCE-TO	RESPONSE TO COMMENTS (EPA) ON DRAFT SUPPLEMENTAL SITE INVEST STATUS REPORT 22-APR-2016	06/09/2016 .17 MB

06/09/2016	Additional Information Received	HILTON	06/30/2016	Not Approved	SEE 6.30.16 PBC LETTER ATTACHED TO DRAFT PSWP
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4606630	CORRESPONDENCE-TO	RESPONSE TO COMMENTS ON THE DRAFT SUPPLEMENTAL SITE INVESTIGATION STATUS REPORT 22-APR-2016	06/09/2016 .19 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N****Activities (31)**

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
06/09/2016	Work Plan Received	HILTON	06/30/2016	Not Approved	PREVIOUS COMMENTS UNRESOLVED, DES DOES NOT CONCUR WITH APPROACH AS PROPOSED. PROGRAM-WIDE LETTER OF 6.30.16 APPLIES

Activity Documents (3)

Document Type	Document Title	Document Date	File Size
4624250	CORRESPONDENCE	EMAIL TRANSMITING DES 6.30.16 LETTER	06/30/2016 .04 MB
4624249	CORRESPONDENCE	DES LETTER 6.30.16	06/30/2016 .04 MB
4606631	REPORT TO DES	DRAFT ADDITIONAL INVESTIGATION AND PILOT STUDY WORK PLAN 01-JUN-2016	06/09/2016 5.00 MB

06/05/2015	Additional Information Received	UNASSIGNED			
01/27/2015	Additional Information Received	HILTON	03/31/2015	TECHNICAL INFORMATION PROVIDED	DES EMAIL DETAILING REPORT AND CONCEPTUAL SITE MODEL DEFICIENCIES

Activity Documents (2)

Document Type	Document Title	Document Date	File Size
4541861	CORRESPONDENCE	DES EMAIL COMMENTS 3.31.15 TO 1.26.15 SSI STATUS REPORT	03/31/2015 .06 MB
4535965	REPORT TO DES	SUPPLEMENTAL SITE INVESTIGATION STATUS REPORT SITE 36 SS036 BUILDING 119 26-JAN-2015	01/27/2015 5.00 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N****Activities (31)**

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
02/10/2014	Additional Information Received	HILTON	10/02/2014	TECHNICAL INFORMATION PROVIDED	DES EMAIL COMMENTS TO SITE STATUS AND WORK THROUGH SUMMER 2014

Activity Documents (4)

Document Type	Document Title	Document Date	File Size
4520591	CORRESPONDENCE SITE 36 ADDITIONAL COMMENTS-CONCERNS	11/03/2014	.08 MB
4521795	CORRESPONDENCE 10-2-14 DES EMAIL	10/02/2014	.07 MB
4487323	CORRESPONDENCE SITE 36 STATUS REPORT AND WORK PLAN; DES COMMENTS	03/17/2014	.05 MB
4484102	REPORT TO DES STATUS REPORT AND SUPPLEMENTAL SITE INVESTIGATION WORK PLAN ADDENDUM 10-FEB-2014	02/10/2014	3.72 MB

12/13/2012	Additional Information Received	HILTON	12/13/2012	TECHNICAL INFORMATION PROVIDED	S HILTON HELD CONF CALL WITH SHAW TO DISCUSS HYDROPUNCH DRILL & SAMPLE DEPTHS.
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4424839	CORRESPONDENCE-FROM SITE 36 S HILTON DEC 13 2012 EMAIL TO SHAW ENV	12/13/2012	.03 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)PHONE: **210-395-9420**Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N****Activities (31)**

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
11/09/2012	Additional Information Received	HILTON	12/13/2012	TECHNICAL INFORMATION PROVIDED	SEE DES TELE CONFERENCE E-MAIL DATED 13-DEC-2012

Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4422065	REPORT TO DES RESPONSE TO COMMENTS TABLE SUPPLEMENTAL SITE INVESTIGATION WORK PLAN 01-NOV-2012	11/09/2012	.14 MB

11/09/2012	Additional Information Received	HILTON	12/13/2012	TECHNICAL INFORMATION PROVIDED	SEE DES TELE CONFERENCE E-MAIL 13 DEC 2012
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Activity Documents (1)

Document Type	Document Title	Document Date	File Size
4422064	REPORT TO DES DRAFT FINAL SUPPLEMENTAL SITE INVESTIGATION WORK PLAN 01-NOV-2012	11/09/2012	2.48 MB

08/03/2012	Additional Information Received	HILTON	09/13/2012	TECHNICAL INFORMATION PROVIDED	
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Activity Documents (3)

Document Type	Document Title	Document Date	File Size
4487465	CORRESPONDENCE SITE 36 COMMENTS TO AUG 2012 DRAFT SOIL GW CONF SAM.	09/13/2012	.05 MB
4487464	CORRESPONDENCE SITE 36 COVER TO COMMENTS SI WORK PLAN AUGUST 2012.	09/13/2012	.06 MB
4402604	REPORT TO DES DRAFT SUPPLEMENTAL SITE INVESTIGATION WORK PLAN 01-AUG-2012	08/03/2012	1.43 MB

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
12/12/2011	Additional Information Received	UNASSIGNED			

Activity Documents (2)

Document Type	Document Title	Document Date	File Size
4543394	CORRESPONDENCE PEASE AFB; DES REVIEW OF WHITE PAPER FOR SITE 36	12/12/2011	.02 MB
4543395	CORRESPONDENCE CDES REVIEW WHITE PAPER FOR SITE 36	12/12/2011	.02 MB

06/29/1993	Additional Information Received	SMITH	07/02/1993	Technical Report Approved	
04/07/1993	Additional Information Received	SMITH	05/14/1993	Comments to Waste Management Division	

Site Number: **100330336**Project Number: **0004283**Name and Address: **BUILDING 119 (SITE 36)
PEASE AIR FORCE BASE
PORTSMOUTH**Responsible Party: **U S AIR FORCE
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853**[Mapit](#)

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**Assigned To: **SANDIN**Discovery Date: **05/14/1993**

Eligible:

Eligibility Determined on:

MTBE: **N**Brownfield: **N**

No Vapor Recovery Information

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APPENDIX E



GENERAL CALCULATIONS - WQV and WQF (optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

10.55	ac	A = Area draining to the practice
7.99	ac	A _i = Impervious area draining to the practice
0.76	decimal	I = Percent impervious area draining to the practice, in decimal form
0.73	unitless	R _v = Runoff coefficient = 0.05 + (0.9 x I)
7.72	ac-in	WQV = 1" x R _v x A
28,031	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")

Water Quality Flow (WQF)

1	inches	P = Amount of rainfall. For WQF in NH, P = 1".
0.73	inches	Q = Water quality depth. Q = WQV/A
97	unitless	CN = Unit peak discharge curve number. CN = 1000 / (10 + 5P + 10Q - 10 * [Q ² + 1.25 * Q * P] ^{0.5})
0.3	inches	S = Potential maximum retention. S = (1000/CN) - 10
0.055	inches	I _a = Initial abstraction. I _a = 0.2S
5.0	minutes	T _c = Time of Concentration
600.0	cfs/mi ² /in	q _u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III.
7.239	cfs	WQF = q _u x WQV. Conversion: to convert "cfs/mi ² /in * ac-in" to "cfs" multiply by 1mi ² /640ac.

Designer's Notes: _____

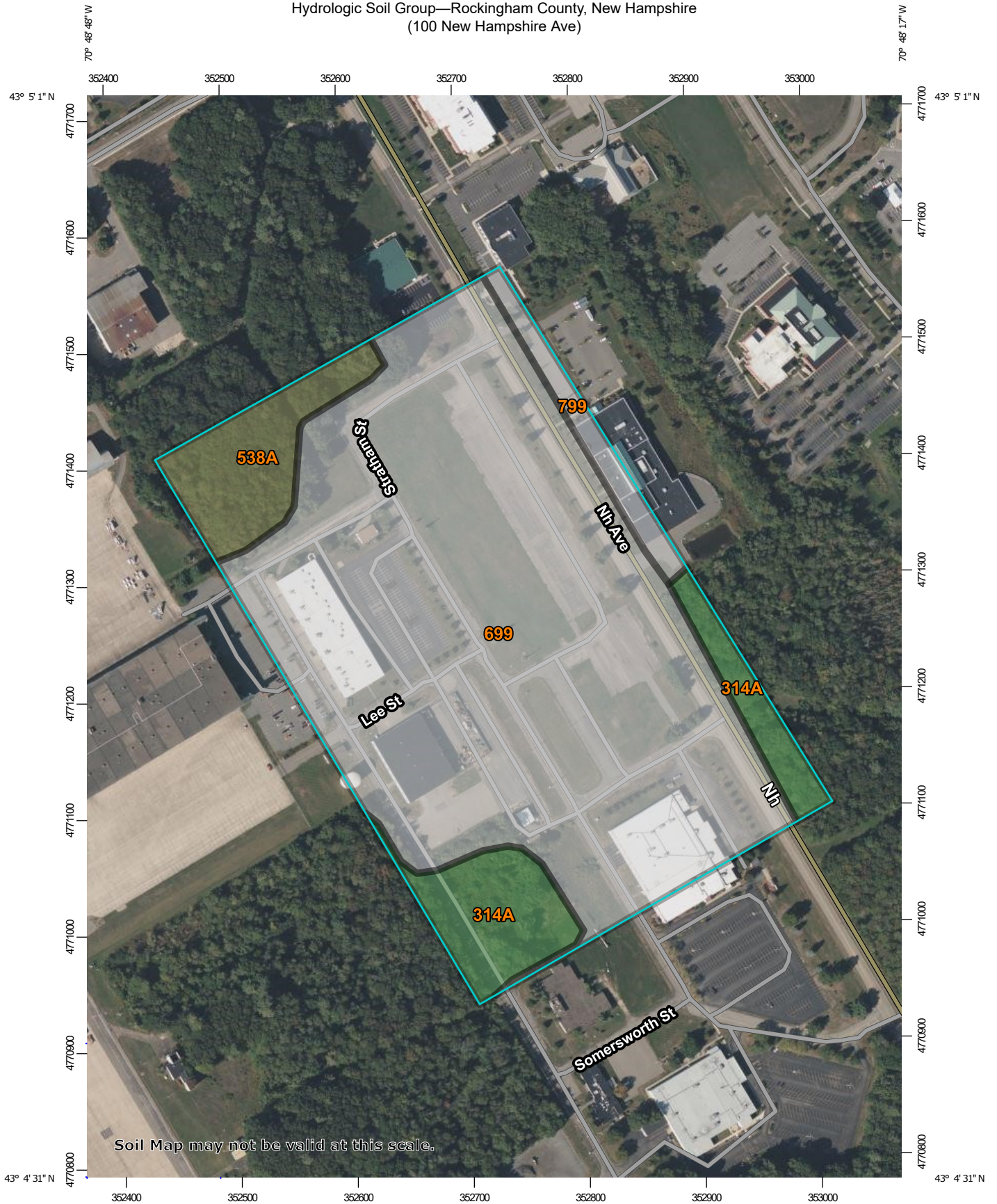
This calculation represents the treatment train directed to Contech Jellyfish Treatment Unit.

Full Treatment in compliance with Env-Wq 1508.10 shall be achieved by use of a proprietary flow-through device. The proposed Contech Jellyfish Treatment Unit - Model#: JFPD0816 will be used to treat the WQF as calculated in the above spreadsheet. The specified device is designed to treat up to 7.84 cfs of flow.

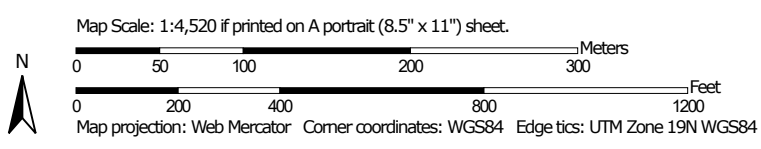
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APPENDIX F

Hydrologic Soil Group—Rockingham County, New Hampshire
(100 New Hampshire Ave)




Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockingham County, New Hampshire
 Survey Area Data: Version 24, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
314A	Pipestone sand, 0 to 5 percent slopes	A/D	4.7	10.0%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	C/D	3.4	7.4%
699	Urban land		36.8	79.3%
799	Urban land-Canton complex, 3 to 15 percent slopes		1.5	3.3%
Totals for Area of Interest			46.5	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

P0595-015
June 16, 2023

Michael R. Mates, PE
Pease Development Authority
55 International Drive
Portsmouth, NH 03801

Re: **Trip Generation Memorandum
Distribution Facility
100 New Hampshire Avenue, Portsmouth, NH**

Dear Mr. Mates:

Tighe & Bond has prepared this trip generation memorandum as an update to the previously approved *Traffic Impact Assessment*, revised February 17, 2023, for an Advanced Manufacturing Facility located at 100 New Hampshire Avenue within the Pease International Tradeport in Portsmouth, NH. The applicant has revised the proposed use and site layout to construct a 100,000+/- square foot distribution facility in place of the previously proposed and approved advanced manufacturing facility. The revised site design accommodates truck access via two full access driveways on Rochester Avenue: one directly opposite Lee Street, and one east of Newfields Street. Passenger car access will be provided via a full access driveway on New Hampshire Avenue. Visitor/employee parking will be separated from truck parking and loading dock operation by an emergency access gate. The proposed building is expected to be complete and occupied by Fall 2024. This memorandum describes the proposed trip generation based on tenant data, and resultant impact on traffic operations.

Trip Generation

Site generated traffic volumes were estimated using site-specific data provided by the perspective building tenant. The distribution facility is anticipated to be a low throughput facility, operating between 5:00 AM and 5:00 PM with no overnight operations. The facility will utilize approximately 30 box trucks to deliver large-scale items such as large furniture directly to the consumer. These deliveries typically require large amounts of time, often requiring on-site assembly. As such, it is assumed each of the 30 trucks will make two delivery runs each day. Trip generation also assumes up to four large tractor trailer deliveries to provide goods to be partially assembled on site and delivered to the end customer via box truck.

Additionally, the building will be staffed by up to 30 employees who will remain at the facility throughout the day. Based on the trip generation analysis, the facility is expected to generate approximately 288 total trips (160 cars and 128 trucks) per day with the majority of the projected trips occurring outside the peak periods between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The full trip generation summary is shown in Table 1.

The previously developed distribution of site traffic for the full study is expected to remain the same for this tenant. Based on the low throughput of the facility, the proposed development is expected to generate significantly less site traffic than the previously approved advanced manufacturing facility.



Conclusions & Recommendations

1. A 100,000+/- square foot distribution facility is proposed to be constructed on the presently vacant lot on New Hampshire Avenue in the Pease Tradeport area in Portsmouth, NH. The development will provide approximately 74 parking spaces to accommodate employee and visitor parking. A total of 30 truck loading docks and 20 trailer storage spaces will also be provided. The proposed development is expected to be complete and occupied by Fall 2024.
2. Access to the Site will be provided via three full access, unsignalized driveways. One driveway on New Hampshire Avenue will serve passenger cars, while two driveways on Rochester Avenue will serve truck traffic to and from the proposed loading docks. Trucks will access the site to and from Rochester Avenue to the south. The employee and visitor parking area will be separated from the truck parking and loading dock area by an emergency access gate.
3. Based on the program data provided by the perspective tenant, the proposed manufacturing facility is expected to generate 288 trips over a typical weekday with minimal estimated trips during the peak hours. The total number of daily and peak hour trips projected are significantly lower than the previously approved trip generation, which included 996 total trips. Truck trips are also significantly reduced under the proposed site use, with minimal tractor trailer deliveries and up to 30 box trucks providing local delivery of large-scale goods such as furniture.
4. Based on the results of the foregoing analysis, it is the professional opinion of Tighe & Bond that the addition of site-generated traffic is expected to have a negligible effect on traffic operations within the study area.

Sincerely,

TIGHE & BOND, INC.



Greg Lucas, PE, PTOE, RSP1
Senior Project Manager

Enclosures Trip Generation Summary (Table 1)
 Conceptual Site Plan

TABLE 1

Site-Generated Traffic Summary

Time Period	Entering Trips					Exiting Trips					Total Trips			
	Enter Truck	Enter Cars	Total Enter	% of Total Entering Trips	% of Total Entering Trucks	Exit Truck	Exit Cars	Total Exit	% of Total Exiting Trips	% of Total Exiting Trucks	% Total Trips	Total Trips	Total Trucks	Total Cars
5:00 AM	2	30	32	22.2%	3%			0	0.0%	0%	11.1%	32	2	30
6:00 AM	2	25	27	18.8%	3%			0	0.0%	0%	9.4%	27	2	25
7:00 AM		5	5	3.5%	0%	15		15	10.4%	23%	6.9%	20	15	5
8:00 AM			0	0.0%	0%	15		15	10.4%	23%	5.2%	15	15	0
9:00 AM			0	0.0%	0%	2		2	1.4%	3%	0.7%	2	2	0
10:00 AM			0	0.0%	0%	2		2	1.4%	3%	0.7%	2	2	0
11:00 AM	20		20	13.9%	31%		5	5	3.5%	0%	8.7%	25	20	5
12:00 PM	10	10	20	13.9%	16%	15	15	30	20.8%	23%	17.4%	50	25	25
1:00 PM		10	10	6.9%	0%	15		15	10.4%	23%	8.7%	25	15	10
2:00 PM			0	0.0%	0%			0	0.0%	0%	0.0%	0	0	0
3:00 PM	10		10	6.9%	16%		10	10	6.9%	0%	6.9%	20	10	10
4:00 PM	20		20	13.9%	31%		20	20	13.9%	0%	13.9%	40	20	20
5:00 PM			0	0.0%	0%		30	30	20.8%	0%	10.4%	30	0	30
	64	80	144	100.0%	100.0%	64	80	144	100.0%	100.0%	100%	288	128	160

Methodology Notes (based on tenant data)

- Hours of operation are between 5:00 AM and 5:00 PM
- Assume delivery trucks leave and return to the site twice during the day
- Assume maximum of 30 box trucks take two delivery runs per day
- Maximum of 30 employees who work on site throughout day
- Assume 30 employee box truck drivers
- Assume four tractor trailer truck deliveries to site each day



Last Save Date: May 31, 2023 11:52 AM By: CML
 Plot Date: Wednesday, May 31, 2023 Plotted By: Craig M. Langton
 PLOT FILE LOCATION: J:\P\9595 Pro Con General Proposals\9595-015 100 NH Avenue\Drawings Figures\AutoCAD\Sheet\9595-015 Concepts\3.2.DWG Layout Tab: O-Site

SITE DATA:

LOCATION: TAX MAP 308, LOT 1
 80 ROCHESTER AVENUE
 PORTSMOUTH, NEW HAMPSHIRE

ZONING DISTRICT: INDUSTRIAL
 ALLOWED USE: INDUSTRIAL / WAREHOUSE

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
MINIMUM LOT AREA:	10 ACRES	±10.95 ACRES

MINIMUM STREET FRONTAGE:	200 FT	±1,200 FT
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MINIMUM SETBACKS:	70 FT	51 FT ⁽¹⁾
• FRONT:	50 FT	142 FT
• SIDE:	50 FT	150.2 FT
• REAR:		

MAXIMUM BUILDING HEIGHT:	PER FAA	36 FT
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MINIMUM OPEN SPACE:	25%	±51%
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(1) - ON NOVEMBER 15, 2022 THE CITY OF PORTSMOUTH ZONING BOARD OF ADJUSTMENT VOTED TO RECOMMEND APPROVAL TO THE PDA BOARD FOR A VARIANCE FROM PART 304.03(C) TO ALLOW A 51 FOOT FRONT YARD WHERE 70 FEET IS REQUIRED.

PARKING REQUIREMENTS:

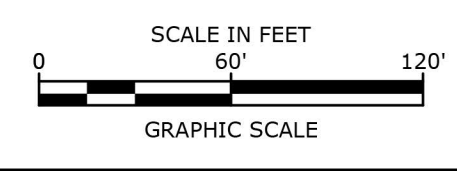
PARKING STALL LAYOUT:
 • STANDARD 90°

DRIVE AISLE WIDTH:
 • 90° (2-WAY TRAFFIC)

PARKING SPACE REQUIREMENTS:
 INDUSTRIAL:
 2 / 3 EMPLOYEES (LARGEST SHIFT)
 +1 / COMPANY-OWNED-VEHICLE
 = 60 EMPLOYEES x 2/3 EMPLOYEES
 + 2 COMPANY-OWNED-VEHICLE =

	REQUIRED	PROPOSED
WIDTH: 8.5' MIN		9' X 18' (162 SF)
AREA: 160 SF MIN		
24 FT		24 FT (MIN)
40 SPACES		74 SPACES ⁽¹⁾
42 SPACES		

(1) - FOUR (4) ADA SPACES PROVIDED



PROPOSED LOGISTICS DISTRIBUTION FACILITY
 PORTSMOUTH, NEW HAMPSHIRE

CONCEPTUAL SITE PLAN

FIGURE:	1 OF 1
DATE:	5/30/2023
DRAWN BY:	CML/NHW
CHECKED BY:	PMC
APPROVED BY:	PMC

Tighe & Bond