

PROPOSED INDUSTRIAL DEVELOPMENT

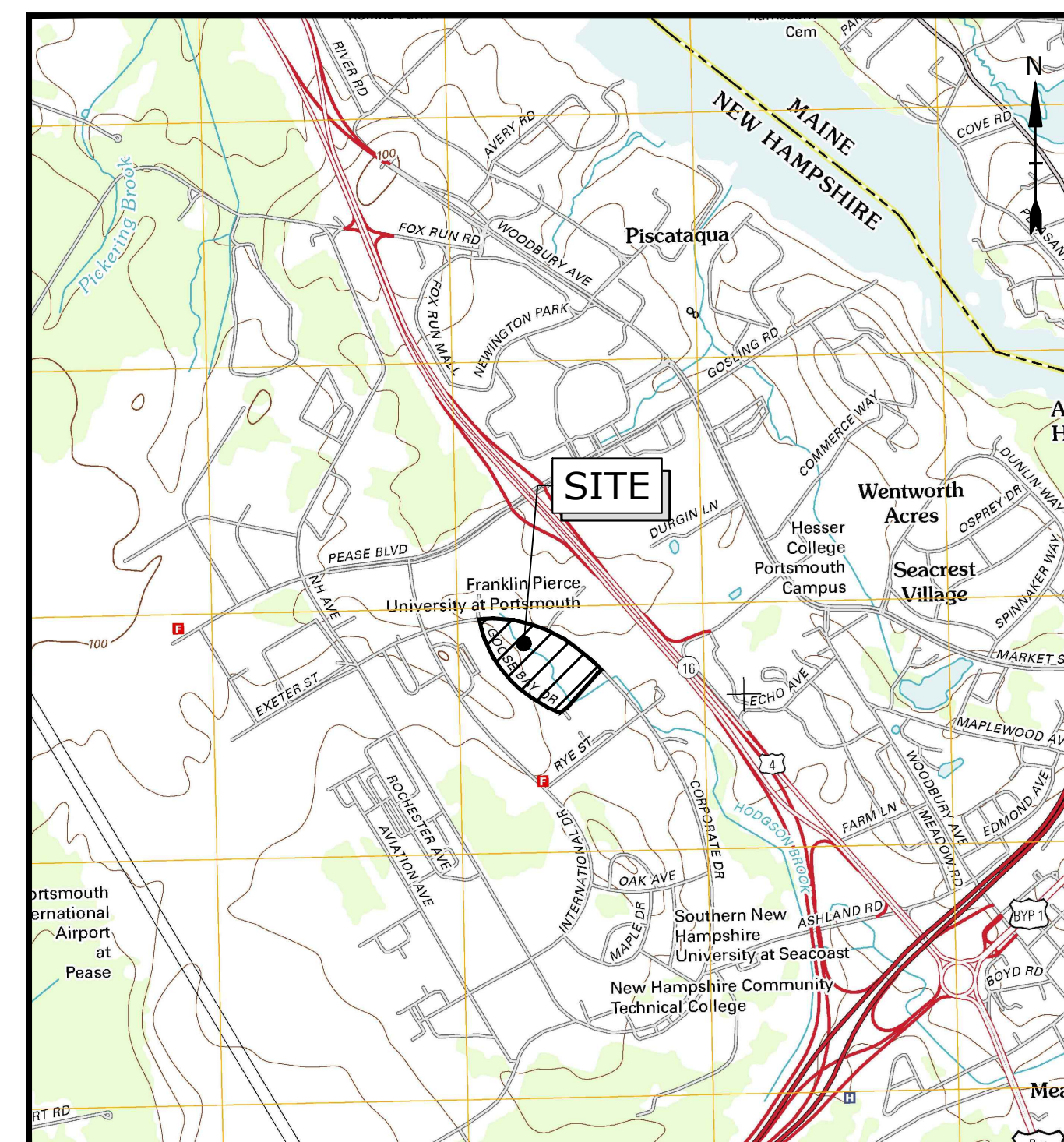
70 & 80 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE

PROJECT NO: L-0700-13

APRIL 3, 2018

REVISED: AUGUST 21, 2018

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	08/21/2018
1 of 4	EXISTING CONDITIONS PLAN	08/16/2018
2 of 4	EXISTING CONDITIONS PLAN	08/16/2018
3 of 4	EXISTING CONDITIONS PLAN	08/16/2018
4 of 4	EXISTING CONDITIONS PLAN	08/16/2018
1 of 2	SUBDIVISION PLAN	04/16/2018
2 of 2	SUBDIVISION PLAN	04/16/2018
C-101	DEMOLITION PLAN	08/21/2018
C-102	DEMOLITION PLAN	08/21/2018
C-103	DEMOLITION PLAN	08/21/2018
C-104	OVERALL SITE PLAN	08/21/2018
C-105	SITE PLAN	08/21/2018
C-106	SITE PLAN	08/21/2018
C-107	SITE PLAN	08/21/2018
C-108	GRADING, DRAINAGE & EROSION CONTROL PLAN	08/21/2018
C-109	GRADING, DRAINAGE & EROSION CONTROL PLAN	08/21/2018
C-110	GRADING, DRAINAGE & EROSION CONTROL PLAN	08/21/2018
C-111	UTILITIES PLAN	08/21/2018
C-112	UTILITIES PLAN	08/21/2018
C-113	UTILITIES PLAN	08/21/2018
C-114	LANDSCAPE PLAN	08/21/2018
C-115	LANDSCAPE PLAN	08/21/2018
C-116	LANDSCAPE PLAN	08/21/2018
C-117	PHOTOMETRIC LIGHTING PLAN	08/21/2018
C-118	PHOTOMETRIC LIGHTING PLAN	08/21/2018
C-119	PHOTOMETRIC LIGHTING PLAN	08/21/2018
C-501	EROSION CONTROL NOTES & DETAILS SHEET	08/21/2018
C-502	DETAILS SHEET	08/21/2018
C-503	DETAILS SHEET	08/21/2018
C-504	DETAILS SHEET	08/21/2018
C-505	DETAILS SHEET	08/21/2018
C-506	DETAILS SHEET	08/21/2018
C-507	DETAILS SHEET	08/21/2018
C-508	DETAILS SHEET	08/21/2018
C-509	DETAILS SHEET	08/21/2018
C-701	HODGSON BROOK GRADING, DRAINAGE & EROSION CONTROL PLAN	08/21/2018
C-702	HODGSON BROOK WETLAND PLANTING PLAN	08/21/2018
C-703	HODGSON BROOK DETAILS SHEET	08/21/2018
ASK-001	SITE PLAN - PERSPECTIVE	08/09/2018
ASK-002	BUILDING 1 CONCEPT PLANS	07/12/2018



LOCATION MAP
SCALE: 1" = 2,000'



OWNER:

PEASE DEVELOPMENT AUTHORITY
55 INTERNATIONAL DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801

CLIENT:

LONZA BIOLOGICS
101 INTERNATIONAL DRIVE
PORTSMOUTH, NH 03801

CIVIL ENGINEER:

Tighe&Bond
Engineers | Environmental Specialists
177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 02871
603.883.8800
www.tigheandbond.com

SURVEYOR:

DOUCET SURVEY, INC.
102 KENT PLACE
NEWMARKET, NEW HAMPSHIRE 03857

WETLAND SCIENTIST:

GOVE ENVIRONMENTAL SERVICES, INC.
8 CONTINENTAL DRIVE, UNIT H
EXETER, NEW HAMPSHIRE 03833

STREAM DESIGN
CONSULTANT:

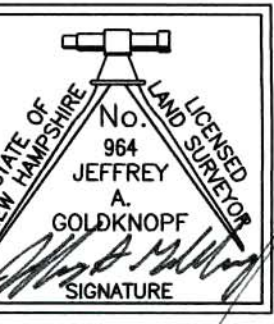
STREAMWORKS, PLLC
MADBURY, NEW HAMPSHIRE 03823

COMPLETE SET 40 SHEETS

DRAINAGE STRUCTURE TABLE			
CB #1013 RIM ELEV.=68.4' (1019) 18" HDPE INV.=64.4' (A) 18" HDPE INV.=64.4'	CBR #1324 RIM ELEV.=55.7' (A) 12" RCP INV.=52.3' (1325) 12" RCP INV.=51.9' (1305) 15" RCP INV.=51.9' (B) 22" RCP INV.=51.7'	CB #1461 RIM ELEV.=57.9' (1460) 12" RCP INV.=53.2'	CB #1732 RIM ELEV.=39.1' (1695) 10" RCP INV.=37.3'
CB #1019 RIM ELEV.=68.5' (A) 18" HDPE INV.=65.1' (1013) 18" HDPE INV.=64.7'	CB #1325 RIM ELEV.=55.7' (1399) 15" RCP INV.=51.9' (1324) 12" RCP INV.=51.8'	CB #1478 RIM ELEV.=54.2' (1515) 12" RCP INV.=47.2'	CBR #1733 RIM ELEV.=39.1' STRUCTURE DAMAGED
CB #1088 RIM ELEV.=66.6' (A) 6" HDPE INV.=62.0' (1111) 12" RCP INV.=61.6' (1095) 12" RCP INV.=61.6'	DMH #1338 RIM ELEV.=57.7' (SUMP)=49.9' (LARGE VAULT)	CB #1504 RIM ELEV.=48.9' (A) 12" RCP INV.=42.7' (1484) 12" RCP INV.=42.6'	DMH #1755 RIM ELEV.=42' (A) 24" RCP INV.=37.2' (B) 24" RCP INV.=33.1'
DMH #1095 RIM ELEV.=65.2' (1088) 12" RCP INV.=60.0' (1137) 12" RCP INV.=59.7'	CB #1345 RIM ELEV.=58.1' (1420) 12" RCP INV.=53.9'	CB #1515 RIM ELEV.=54.1' BROKEN GRATE – NOT OPENED	CB #1769 RIM ELEV.=42.5' (1756) 12" RCP INV.=38.1' (A) 12" RCP INV.=33.5'
CB #1111 RIM ELEV.=66.8' (1088) 12" RCP INV.=61.9'	CB #1381 RIM ELEV.=57.2' (1212) 15" RCP INV.=54.3' (1311) 15" RCP INV.=54.4'	CB #1542 RIM ELEV.=44.4' (1651) 12" RCP INV.=41.0'	CB #1935 RIM ELEV.=49.7' NOT OPENED – SILT SOCK
CB #1137 RIM ELEV.=60.7' (1095) 12" RCP INV.=57.3' (1285) 15" RCP INV.=56.8' (1141) 15" RCP INV.=56.8'	CB #1399 RIM ELEV.=55.5' (1325) 15" RCP INV.=52.3'	CB #1570 RIM ELEV.=40.7' (A) 18" RCP INV.=36.2' (B) 18" RCP INV.=36.2'	CB #2031 RIM ELEV.=59.0' NOT OPENED – SILT SOCK
DMH #1141 RIM ELEV.=61.1' (1300) 12" RCP INV.=57.2' (1137) 15" RCP INV.=56.9' (1147) 15" RCP INV.=56.6' (A) 15" RCP INV.=56.4' (B) 18" ASB INV.=56.3'	DMH #1408 RIM ELEV.=56.8' NOT OPENED – OFF SITE	CB #1572 RIM ELEV.=42.2' (1611) 12" RCP INV.=38.2'	DMH #2142 RIM ELEV.=62.8' (A) 24" HDPE INV.=58.2' (B) 24" HDPE INV.=56.8'
CB #1147 RIM ELEV.=61.5' (A) 15" RCP INV.=57.2' (1141) 15" RCP INV.=57.1'	CB #1420 RIM ELEV.=58.1' (1345) 12" RCP INV.=54.4' (1421) 12" HDPE INV.=54.1'	CB #1586 RIM ELEV.=41.9' (1580) 15" RCP INV.=36.4' (A) 15" RCP INV.=36.6'	DMH #2152 RIM ELEV.=64.3' NOT OPENED – SILT SOCK
CB #1183 RIM ELEV.=60.1' (1212) 15" RCP INV.=55.7'	DMH #1421 RIM ELEV.=57.4' (1420) 12" RCP INV.=54.3' SUMP=53.4' (FULL OF SILT)	CB #1611 RIM ELEV.=42.4' (1572) 12" RCP INV.=37.8' (A) 12" RCP INV.=37.5'	DMH #2170 RIM ELEV.=65.7' NOT OPENED – SILT SOCK
CB #1212 RIM ELEV.=57.5' (1183) 15" RCP INV.=54.8' (1381) 15" RCP INV.=54.6'	DMH #1438 RIM ELEV.=50.2' (A) 12" RCP INV.=44.6' (1439) 12" RCP INV.=44.6' (B) UNK. CMP INV.=42.9' (C) UNK. CMP INV.=42.9'	CB #1651 RIM ELEV.=44.6' (1542) 12" RCP INV.=39.5' (A) 12" RCP INV.=39.5'	CB #2246 RIM ELEV.=65.5' NOT OPENED – SILT SOCK
CB #1285 RIM ELEV.=60.7' (1137) 15" RCP INV.=57.0'	CBR #1439 RIM ELEV.=47.4' (1438) 12" RCP INV.=45.2'	CB #1678 RIM ELEV.=39.2' (TOP OF WATER) INV.=36.5' (A) 12" RCP INV.=35.4'	CBR #2327 RIM ELEV.=40.2' (A) 12" RCP INV.=38.3'
CBR #1305 RIM ELEV.=56.7' (1311) 12" RCP INV.=52.8' (A) 15" RCP INV.=52.7' (1324) 15" RCP INV.=52.7'	CBR #1444 RIM ELEV.=48.3' 12" HDPE INV.=46.4' (SUMP) INV.=42.8'	CB #1685 RIM ELEV.=39.2' (TOP OF WATER) INV.=36.6' (2330) 12" RCP INV.=36.4'	CBR #2329 RIM ELEV.=47.4' (A) 12" RCP INV.=42.0' SILT=41.9'
CB #1311 RIM ELEV.=57.1' (1381) 15" RCP INV.=53.4' (1305) 12" RCP INV.=53.0'	CB #1456 RIM ELEV.=58.1' (1460) 12" RCP INV.=52.5' DMH #1460 RIM ELEV.=58' (1461) 12" RCP INV.=51.6' (1456) 12" RCP INV.=51.5' (A) 15" RCP INV.=50.7'	DMH #1695 RIM ELEV.=42.8' (1732) 10" RCP INV.=36.4' (A) 48" RCP INV.=35.9' (B) NOT MEASURED (RECESSED – LARGE VAULT)	DMH #2330 RIM ELEV.=40.4' (1685) 12" RCP INV.=36.5' (A) 12" RCP INV.=36.3' (B) 15" RCP INV.=36.1'
		DMH #2336 RIM ELEV.=39.7' (A) 18" RCP INV.=36.1' (B) 24" RCP INV.=35.4'	

2	8/16/18	MOD. DRAINAGE	J.A.G.
		MOD. SOIL TYPES PER G.E.S.	
1	8/3/16	GENERAL EDITS AND	J.A.G.
		ADDED WETLANDS BUFFER	
NO.	DATE	DESCRIPTION	BY

NOTE:
ALL ELECTRIC, GAS, TEL. WATER, SEWER AND DRAIN SERVICES ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN ON THIS SITE 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.



PURSUANT TO RSA 676:1B, III:

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000."

Jeffrey A. Goldknopf L.L.S. #964
8-16-18 DATE

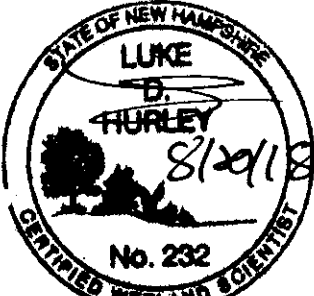
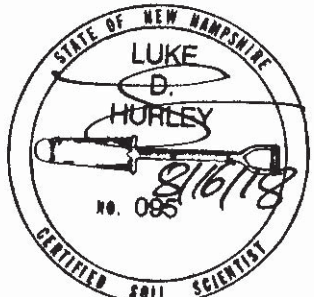
THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

SEWER STRUCTURE TABLE	
SMH #1062 RIM ELEV.=69.8' (A) 6" CLAY INV.=63.9' (B) 6" CLAY INV.=63.7' (1067) 8" CLAY INV.=62.6'	SMH #1551 RIM ELEV.=43.6' (A) 8" PVC INV.=35.6' (B) 12" UNK. INV.=34.2' (C) 12" UNK. INV.=34.1'
SMH #1067 RIM ELEV.=68.6' (1062) 8" CLAY INV.=60.4' (2242) 8" UNK. INV.=60.3'	SMH #1691 RIM ELEV.=39.9' (1784) UNK. INV.=34.2' (1722) UNK. INV.=34.1'
SMH #1078 RIM ELEV.=69.0' COULD NOT OPEN	SMH #1722 RIM ELEV.=41.1' (A) 6" CLAY INV.=33.2' (1691) UNK. CLAY INV.=33.1'
SMH #1123 RIM ELEV.=64' (1295) 8" PVC INV.=55.8'	SMH #1784 RIM ELEV.=41.1' (1921) 10" UNK. INV.=35.4' (1691) 10" UNK. INV.=35.5'
SMH #1169 RIM ELEV.=65.2' (1184) 15" STEEL INV.=53.8' (A) 15" STEEL INV.=53.8'	SMH #1921 RIM ELEV.=44.8' (1953) UNK. INV.=37' (1784) UNK. INV.=36.9'
SMH #1184 RIM ELEV.=60.4' (1296) 8" CLAY INV.=54.2' (1217) 15" STEEL INV.=52.7' (1169) 15" STEEL INV.=52.7'	SMH #1953 RIM ELEV.=50.1' (A) 6" CLAY INV.=42.4' (2080) UNK. INV.=42.2' (1921) UNK. INV.=42.2'
SMH #1217 RIM ELEV.=57.9' (1184) 15" STEEL INV.=52.3' (1400) 15" STEEL INV.=52.2'	SMH #2080 RIM ELEV.=57.9' (A) 8" UNK. INV.=50.1' 2187' 8" UNK. INV.=50.1' (1953) 8" UNK. INV.=49.9'
SMH #1296 RIM ELEV.=63.7' (1123) 8" PVC INV.=55.5' (2326) 8" UNK. INV.=55.0' (1184) 8" UNK. INV.=55.0'	SMH #2187 RIM ELEV.=63' (A) 6" PVC INV.=54.9' (2242) 8" PVC INV.=54.9' (2080) 8" PVC INV.=54.9'
SMH #1400 RIM ELEV.=55.6' (1217) 15" ASB INV.=49.3' (1415) 15" ASB INV.=49.3'	SMH #2242 RIM ELEV.=65.0' (1067) 8" CLAY INV.=56.8' (2187) 8" CLAY INV.=57.0'
SMH #1415 RIM ELEV.=57.9' (A) 12" PVC INV.=48.3' (1400) 18" UNK. INV.=47.9' (1450) 18" PVC INV.=48.0'	SMH #2326 RIM ELEV.=68.1' (1078) 8" PVC INV.=62.2' (1296) 8" ASB INV.=62.1'
SMH #1450 RIM ELEV.=60.5' (1415) 18" PVC INV.=47.6' (1459) 18" PVC INV.=47.5'	SMH #2328 RIM ELEV.=43.1' (1551) 12" UNK INV.=32.3' (A) 18" UNK INV.=32.3'
SMH #1459 RIM ELEV.=58.8' (A) 8" PVC INV.=48.4' (1450) 18" PVC INV.=47.1' (B) 18" PVC INV.=47.1'	

REFERENCE PLANS:

- "R.O.W. WORKSHEET, CORPORATE DRIVE PREPARED FOR PEASE DEVELOPMENT AUTHORITY" DATED DEC. 21, 1992 BY RICHARD D. BARTLETT & ASSOCIATES, INC. SHEETS 1 AND 2.
- "PEASE A.F.B. / PORTSMOUTH, N.H. REPAVE BASE STREETS, PORTSMOUTH AVE, ROCKINGHAM AVE." DATED 7 DEC 82 BY STRATETIC AIR COMMAND CIVIL ENGINEERING. SHEET 4 OF 5
- "PORTSMOUTH AIR FORCE BASE, PORTSMOUTH, N.H. ROADS AND STORAGE AREA FY-56" DATED DEC 1955 BY WHITMAN & HOWARD ENGINEERS. INDEX PAGE AND SHEETS 2 – 5 OF 11.
- "PEASE INTERNATIONAL TRADEPORT SUBDIVISION PLAT, INTERNATIONAL DRIVE LOTS BC11-001 & BC11-002, PORTSMOUTH, N.H." DATED FEBRUARY 5, 1993 BY RICHARD D. BARTLETT & ASSOCIATES INC. R.C.R.D. PLAN #D22536.
- "SUBDIVISION PLAN OF LAND FOR REDHOOK ALE BREWERY, INC. CORPORATE DRIVE, COUNTY OF ROCKINGHAM, PORTSMOUTH, N.H." DATED DECEMBER 10, 1994 BY RICHARD P. MILLETTE AND ASSOCIATES. R.C.R.D. PLAN #D-23978.
- "ALTA/ACSM LAND TITLE SURVEY FOR RESPORT, LLC, ONE INTERNATIONAL DRIVE, COUNTY OF ROCKINGHAM, PORTSMOUTH, N.H." DATED FEBRUARY 27, 1998 BY MILLETTE, SPRAGUE & COLWELL, INC. R.C.R.D. PLAN #D-26125.
- "FRANKLIN PIERCE COLLEGE, PEASE INTERNATIONAL TRADEPORT, 73 CORPORATE DRIVE, PORTSMOUTH, NH" DATED JANUARY 15, 1998 BY RONALD R. BURD. R.C.R.D. PLAN #D-26427.
- "SUBDIVISION PLAN FOR LAND LEASED BY PEASE DEVELOPMENT AUTHORITY & KNOWN AS #119 INTERNATIONAL DRIVE LOCATED AT PEASE INTERNATIONAL TRADEPORT, PORTSMOUTH, N.H." DATED MARCH 1, 2000 BY KNIGHT HILL LAND SURVEYING SERVICES, INC. R.C.R.D. PLAN #D-28059.
- "SUBDIVISION PLAT PREPARED FOR 80 CORPORATE DRIVE LLC C/O BOULOS PROPERTY MANAGEMENT, LOCATION CORPORATE & GOOSE BAY DRIVES, PEASE INTERNATIONAL TRADEPORT – PORTSMOUTH, NH" DATED APRIL 11, 2000 BY FWS LAND SURVEYING P.L.L.C. R.C.R.D. PLAN #D-28447.
- "LEASE LINE REVISION PLAN FOR LONZA BIOLOGICS, INC. 101 INTERNATIONAL DRIVE, PORTSMOUTH, NEW HAMPSHIRE" DATED FEB. 5, 2001 BY DOUCET SURVEY, INC. R.C.R.D. PLAN #D-28955.
- "LEASE LINE REVISION PLAN FOR LONZA BIOLOGICS, INC. 101 INTERNATIONAL DRIVE, PORTSMOUTH, NEW HAMPSHIRE" DATED SEPT. 17, 2001 BY DOUCET SURVEY, INC. R.C.R.D. PLAN #D-29538.
- "SUBDIVISION PLAN OF LAND OF PEASE DEVELOPMENT AUTHORITY TO BE LEASED TO NORTHEAST REHABILITATION (A PORTION OF TAX MAP 303, LOT 6) 105 & 121 CORPORATE DRIVE, PEASE TRADEPORT, PORTSMOUTH, NEW HAMPSHIRE" DATED NOV. 5, 2008 BY DOUCET SURVEY, INC. R.C.R.D. PLAN #D-35869.
- "CONDOMINIUM SITE & FLOOR PLAN PREPARED FOR PIONEER NEW HAMPSHIRE, LLC, LAND OF PEASE DEVELOPMENT AUTHORITY, TAX MAP PARCEL 305-3 (108, 110, 112 & 114 CORPORATE DRIVE) PORTSMOUTH, NEW HAMPSHIRE" DATED APRIL 12, 2013 BY FIELDSTONE LAND CONSULTANTS, PLLC. SHEET 1 OF 5. R.C.R.D. PLAN #D-37765.
- "SUBDIVISION PLAN FOR PEASE DEVELOPMENT AUTHORITY, (TAX MAP 303, LOT 4) 67 CORPORATE DRIVE, PEASE TRADEPORT, PORTSMOUTH NEW HAMPSHIRE" DATED MAY 29, 2009 BY DOUCET SURVEY, INC. (NOT RECORDED)
- "EXISTING CONDITIONS, BUILDING A, 80 CORPORATE DRIVE AND BUILDING B, 70 CORPORATE DRIVE, PORTSMOUTH, NH" DATED 4/14/2000 AND REVISED 6/05/2000 BY OPECHEE CONSTRUCTION CORPORATION. (NOT RECORDED)

LEGEND	
	EXISTING LEASE/R.O.W. LINES
	CHAIN LINK FENCE
	OVERHEAD WIRES
	SEWER LINE
	DRAIN LINE
	GAS LINE
	WATER LINE
	UNDERGROUND ELECTRIC LINE
	SEWER LINE PER REF. PLAN #15
	DRAIN LINE PER REF. PLAN #15
	GAS LINE PER REF. PLAN #15
	WATER LINE PER REF. PLAN #15
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	TREE LINE
	EDGE OF WETLAND (SEE NOTE #6)
	HISS LINE (SEE NOTE #6)
	UTILITY POLE
	SIGN
	GRANITE BOUND FOUND
	DRILL HOLE FOUND
	IRON PIPE/ROD FOUND
	4"x4" GRANITE BOUND TO BE SET
	5/8" REBAR W/ ID CAP TO BE SET
	BOLLARD
	FIRE HYDRANT
	WATER GATE VALVE
	GAS GATE VALVE
	PAD MOUNTED TRANSFORMER
	ELECTRIC BOX
	TELEPHONE BOX
	UTILITY BOX
	CABLE BOX
	CATCH BASIN
	CATCH BASIN
	DRAIN MANHOLE
	FLARED END SECTION
	ELECTRIC MANHOLE
	TELEPHONE MANHOLE
	SEWER MANHOLE
	CLEANOUT
	CATCH BASIN PER REF. PLAN #15
	DRAIN MANHOLE PER REF. PLAN #15
	SEWER MANHOLE PER REF. PLAN #15
	HAND HOLE
	WETLAND AREA
	CONFIFEROUS TREE
	DECIDUOUS TREE
	CONCRETE
	RIP RAP
	GRAVEL AREA
	LEDGE OUTCROP
	BOUND FOUND
	DRILL HOLE FOUND
	EDGE OF PAVEMENT
	SINGLE WHITE LINE
	DOUBLE YELLOW LINE
	VERTICAL GRANITE CURB
	HISS SOIL TYPE

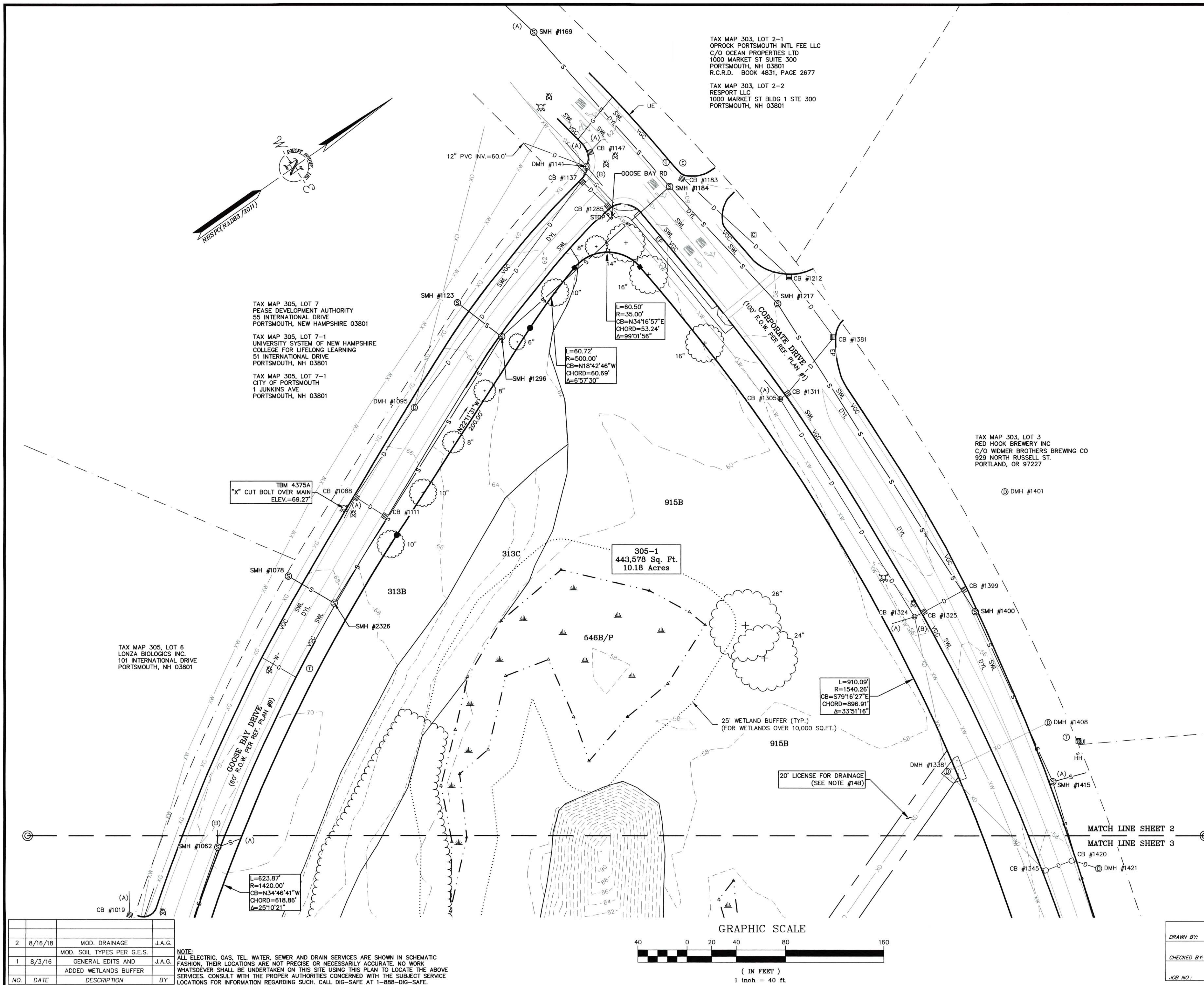


EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND AND LONZA
LAND OF
PEASE DEVELOPMENT AUTHORITY
(TAX MAP 305, LOTS 1 & 2)
GOOSE BAY DRIVE & CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE

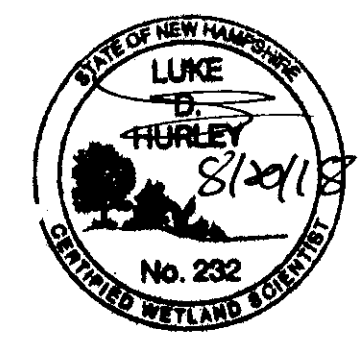
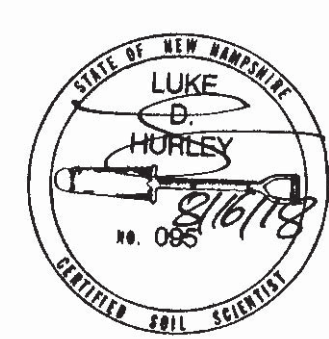
DRAWN BY:	K.C.W.	DATE:	DEC. 23, 2015
CHECKED BY:	J.A.G.	DRAWING NO.:	4375A
JOB NO.:	4375	SHEET	1 OF 4

DOUCET SURVEY

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10 Slater Street (Riverview Station) Kennebunk, ME (207) 502-7005
<http://www.doucetsurvey.com>



SOIL IDENTIFICATION LEGEND		
SYMBOL	SOIL TAXONOMIC NAME	SLOPE RATING
89C	CHATFIELD	8 TO 15 PERCENT SLOPES
313B	DEERFIELD	0 TO 8 PERCENT SLOPES
313C	DEERFIELD	8 TO 15 PERCENT SLOPES
915B	DEERFIELD VARIANT	0 TO 8 PERCENT SLOPES
546B/P	WALPOLE POORLY DRAINED	0 TO 8 PERCENT SLOPES
799B	UDORTHERTS URBAN LAND	0 TO 8 PERCENT SLOPES
799E	UDORTHERTS URBAN LAND	>25 PERCENT SLOPES



PURSUANT TO RSA 676:18, III:
I CERTIFY THAT THIS SURVEY IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000."

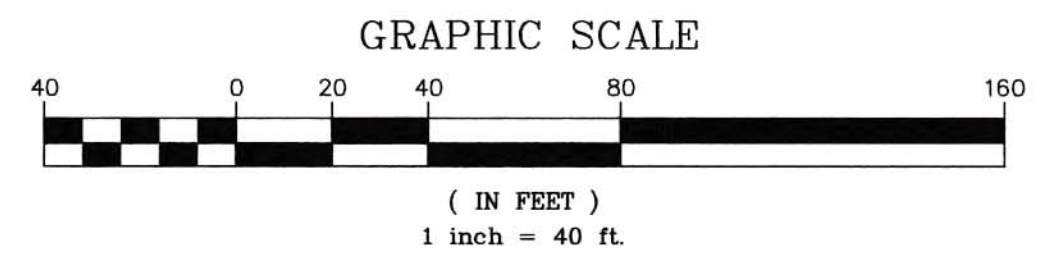
Jeffrey Goldknopf L.L.S. #964
8-16-18 DATE

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EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND AND LONZA
LAND OF
PEASE DEVELOPMENT AUTHORITY
(TAX MAP 305, LOTS 1 & 2)
GOOSE BAY DRIVE & CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE

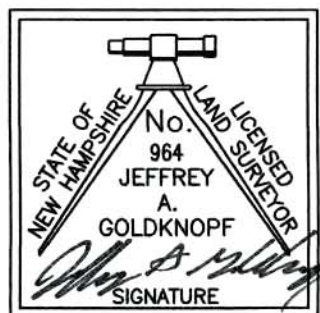
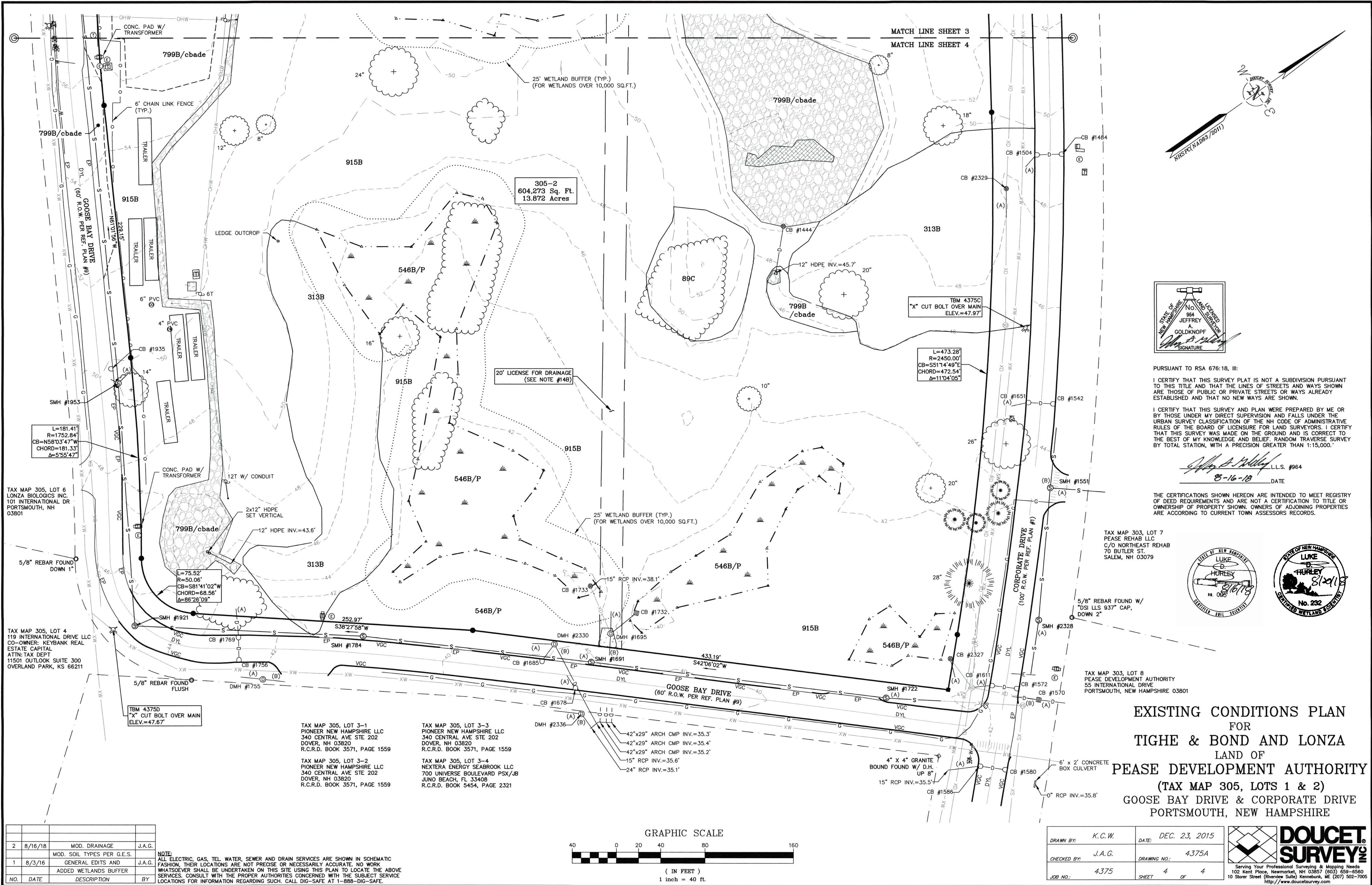
NO.	DATE	DESCRIPTION	BY
2	8/16/18	MOD. DRAINAGE	J.A.G.
1	8/3/16	MOD. SOIL TYPES PER G.E.S.	J.A.G.
1	8/3/16	GENERAL EDITS AND	J.A.G.
1	8/3/16	ADDED WETLANDS BUFFER	J.A.G.

NOTE:
ALL ELECTRIC, GAS, TEL. WATER, SEWER AND DRAIN SERVICES ARE SHOWN IN SCHEMATIC FASHION. THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN ON THIS SITE 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.



DRAWN BY:	K.C.W.	DATE:	DEC. 23, 2015
CHECKED BY:	J.A.G.	DRAWING NO.:	4375A
JOB NO.:	4375	SHEET	2 OF 4

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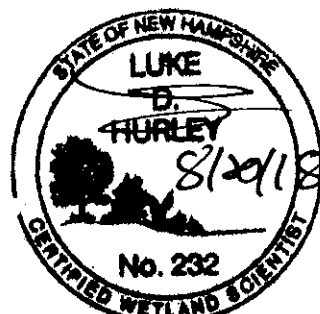
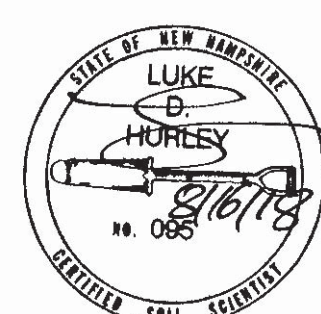
PURSUANT TO RSA 676:18, III:

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

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Jeffrey A. Goldknopf L.L.S. #964
8-16-18 DATE

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TAX MAP 303, LOT 7
PEASE REHAB LLC
C/O NORTHEAST REHAB
70 BUTLER ST.
SALEM, NH 03079

5/8" REBAR FOUND W/
"DSI LLS 937" CAP,
DOWN 2"

TAX MAP 303, LOT 8
PEASE DEVELOPMENT AUTHORITY
55 INTERNATIONAL DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801

DRAWN BY:	K.C.W.	DATE:	DEC. 23, 2015
CHECKED BY:	J.A.G.	DRAWING NO.:	4375A
JOB NO.:	4375	SHEET	4 OF 4



LINE TABLE		
LINE	BEARING	DISTANCE
L1	S45°42'46"E	50.48'
L2	S34°54'07"W	60.00'
L3	S38°27'58"W	58.32'
L4	N19°46'25"W	11.01'
L5	N83°06'54"W	78.59'
L6	N61°18'34"W	53.36'
L7	N58°30'04"W	48.37'
L8	S31°29'56"W	9.64'
L9	S33°35'17"W	57.08'
L10	S42°06'02"W	43.59'
L11	N55°44'33"W	33.55'
L12	N31°29'56"E	10.00'
L13	N58°30'04"W	47.88'

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	99.32'	1540.26'	3°41'40"	N81°57'05"E	99.30'
C2	152.83'	63.00'	138°59'47"	S61°54'24"W	118.02'
C3	61.10'	1480.00'	2°21'56"	N23°22'29"W	61.10'
C4	115.05'	560.00'	11°46'17"	N16°18'23"W	114.85'
C5	75.52'	50.06'	86°28'09"	S81°41'02"W	68.56'
C6	181.41'	1752.84'	5°55'47"	N58°03'47"W	181.33'
C7	338.74'	1420.00'	13°40'04"	S54°11'54"E	337.94'
C8	623.87'	1420.00'	25°10'21"	S34°46'41"E	618.86'
C9	60.72'	500.00'	6°57'30"	S18°42'46"E	60.69'
C10	60.50'	35.00'	99°01'56"	S34°16'57"W	53.24'
C11	942.18'	1480.00'	36°28'30"	S42°47'41"E	926.35'
C12	175.20'	1692.80'	5°55'47"	N58°03'47"W	175.12'
C13	466.96'	1540.26'	17°22'14"	N87°30'58"W	465.18'
C14	23.43'	1540.26'	0°52'17"	N78°23'43"W	23.43'
C15	203.02'	1540.26'	7°33'07"	N71°03'15"W	202.87'
C16	179.79'	1540.26'	6°41'16"	N60°07'29"W	179.68'
C17	237.27'	2450.00'	5°32'56"	N54°00'23"W	237.18'
C18	153.95'	170.00'	51°53'06"	N7°38'44"E	148.74'
C19	117.72'	130.00'	51°53'06"	N7°38'44"E	113.74'
C20	91.22'	130.00'	40°12'15"	N38°23'56"W	89.36'

TAX MAP 306, LOT 3-1A
PM 75 NH LLC
75 NEW HAMPSHIRE AVE SUITE 100
PORTSMOUTH, NH 03801

TAX MAP 306, LOT 3-1B
75 NEW HAMPSHIRE AVENUE LLC
11 COURT ST SUITE 100
EXETER, NH 03833

TAX MAP 306, LOT 3-2A
75 NEW HAMPSHIRE AVENUE LLC
11 COURT ST SUITE 100
EXETER, NH 03833

TAX MAP 306, LOT 3-3
75 NEW HAMPSHIRE AVENUE LLC
200 INTERNATIONAL DR STE 180
PORTSMOUTH, NH 03801

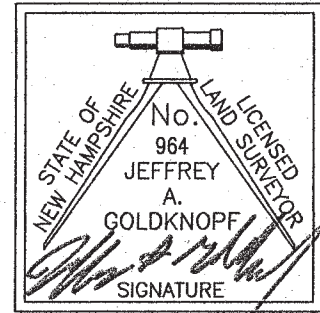
TAX MAP 306, LOT 3-4
HORNE 101 LLC
11 COURT STREET STE 100
EXETER, NH 03833

TAX MAP 306, LOT 2-1
100 INTERNATIONAL LLC
11 COURT ST STE 100
EXETER, NH 03833

TAX MAP 306, LOT 2-2
100 INTERNATIONAL GROUP LLC
11 COURT ST STE 100
EXETER, NH 03833

TAX MAP 306, LOT 6
CASTLEROCK LLC
C/O KAINE MANAGEMENT GROUP
210 COMMERCE WAY SUITE 300
PORTSMOUTH, NH 03801

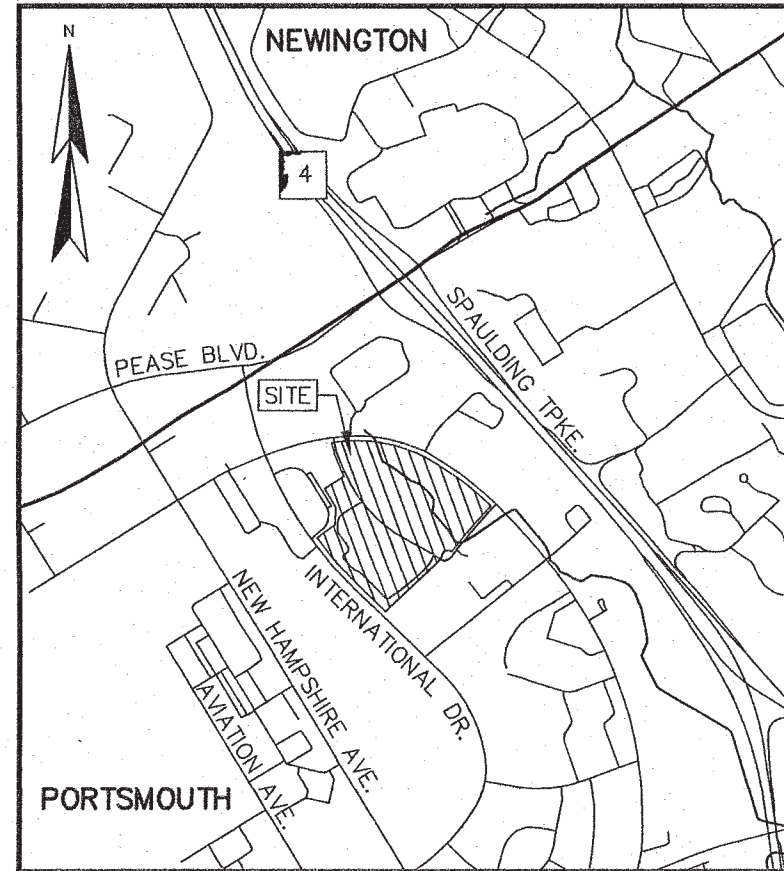
TAX MAP 305, LOT 4
119 INTERNATIONAL DRIVE LLC
CO-OWNER: KEYBANK REAL
ESTATE CAPITAL
ATTN: TAX DEPT
11501 OUTLOOK SUITE 300
OVERLAND PARK, KS 66211



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Jeffrey A. Goldknopf L.L.S. #964
DATE 4/16/18

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LOCATION MAP (n.t.s.)

LEGEND	
---	LEASE LINE
---	PROPOSED LEASE LINE
---	LEASE/ROW/EASEMENT LINE TO BE ABANDONED
---	APPROXIMATE ABUTTERS LOT LINE
---	EASEMENT LINE
□	BOUND FOUND
○	DRILL HOLE FOUND
○	IRON PIPE/ROD FOUND
TYP.	TYPICAL
GRAN.	GRANITE
CONC.	CONCRETE
BND. FND.	BOUND FOUND
D.H.F.	DRILL HOLE FOUND
I.P.F.	IRON PIPE FOUND
EP	EDGE OF PAVEMENT
VGC	VERTICAL GRANITE CURB
■	4"x4" GRANITE BOUND TO BE SET
●	5/8" REBAR W/ ID CAP TO BE SET

100 0 100 200
SCALE: 1 INCH = 100 FT.

SUBDIVISION PLAN
FOR
LONZA BIOLOGICS, INC.
AND
THE PEASE DEVELOPMENT AUTHORITY
OF
TAX MAP 305 LOTS 1, 2, 5 & 6
AND
GOOSE BAY DRIVE
INTERNATIONAL DRIVE - CORPORATE DRIVE
GOOSE BAY DRIVE
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY

DRAWN BY:	W.D.C.	DATE:	APRIL 16, 2018
CHECKED BY:	J.A.G.	DRAWING NO.:	5518A
JOB NO.:	5518	SHEET	1 OF 2

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NOTES:

1. REFERENCE: TAX MAP 305, LOTS 5 & 6
PHYSICAL ADDRESS: 101 INTERNATIONAL DRIVE
2. PROPOSED LEASE AREA: TAX MAP 305, LOT 6: 1,889,305 SQ. FT. OR 43.37 AC.
3. OWNER OF RECORD: PEASE DEVELOPMENT AUTHORITY
55 INTERNATIONAL DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
R.C.R.D. BOOK 4227, PAGE 001
4. LESSEE OF RECORD: TAX MAP 305, LOTS 5 & 6
LONZA BIOLOGICS, INC.
101 INTERNATIONAL DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
R.C.R.D. BOOK 3015, PAGE 2559
(LEASE EXTENSIONS AND MODIFICATIONS
HAVE NOT BEEN RECORDED, BUT HAVE
BEEN PROVIDED BY THE LESSEE)
SEE REFERENCE PLAN 10

5. ZONE: AIRPORT, BUSINESS, AND COMMERCIAL (ABC)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT AREA	217,800 sq.ft. OR 5.0 AC.
MINIMUM STREET FRONTAGE	200 ft.
FRONT YARD SETBACK	70 ft.
SIDE SETBACK	30 ft.
REAR SETBACK	50 ft.
MINIMUM OPEN SPACE	25 %

MAXIMUM STRUCTURE HEIGHT SHALL NOT EXCEED FAA CRITERIA

WETLAND BUFFER 25 ft. (PER PDA REGULATIONS: WETLANDS LESS THAN 1/4 ACRE DO NOT HAVE A BUFFER)

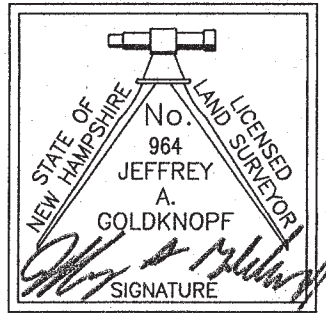
ZONING INFORMATION LISTED HEREON WAS PROVIDED BY TIGHE & BOND. ADDITIONAL REGULATIONS APPLY, AND REFERENCE IS HEREBY MADE TO THE EFFECTIVE ZONING ORDINANCE. THE LAND OWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS.

6. FIELD SURVEY PERFORMED BY B.T. & J.C.M. DURING MARCH 2018 USING A TRIMBLE S6 ROBOTIC TOTAL STATION WITH A TRIMBLE TSC3 DATA COLLECTOR. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.
7. FLOOD HAZARD ZONE: "X", PER FIRM MAP #33015C0260E, DATED MAY 17, 2005.
8. HORIZONTAL DATUM BASED ON NH STATE PLANE 2800(NAD83/86) PER REFERENCE PLANS 10, 11, & 12.
9. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT LEGAL DESCRIPTION, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE.
10. TAX MAP 305, LOTS 1 & 2 ARE EITHER SUBJECT TO OR IN BENEFIT OF, BUT NOT LIMITED TO, THE FOLLOWING EASEMENTS/RIGHTS OF RECORD:
10.A. 50' WIDE ACCESS EASEMENT FOR THE BENEFIT OF LOT 305-2. (SHOWN PER REFERENCE PLAN 9)
10.B. APPROXIMATE LOCATION OF 20' WIDE LICENSE TO THE CITY OF PORTSMOUTH FOR THE PURPOSES OF MAINTAINING A DRAINAGE LINE. (SHOWN PER REFERENCE PLAN 9)
11. TAX MAP 305, LOTS 5 & 6 ARE EITHER SUBJECT TO OR IN BENEFIT OF, BUT NOT LIMITED TO, THE FOLLOWING EASEMENTS/RIGHTS OF RECORD:
11.A. 15' WIDE DRAINAGE EASEMENT. (SHOWN PER REFERENCE PLAN 10)
11.B. DRAINAGE EASEMENT. (SHOWN PER REFERENCE PLAN 10)
12. FINAL MONUMENTATION MAY BE DIFFERENT THAN THE PROPOSED MONUMENTATION SHOWN HEREON, DUE TO THE FACT THAT SITE CONDITIONS WILL DICTATE THE ACTUAL LOCATION AND TYPE OF MONUMENTS INSTALLED IN THE FIELD. PLEASE REFER TO EITHER THE "MONUMENTATION LOCATION PLAN" TO BE RECORDED OR CONTACT DOUCET SURVEY, INC. FOR CLARIFICATION OF MONUMENTS SET. (A RECORDED PLAN WILL BE PRODUCED AT THE DISCRETION OF DOUCET SURVEY, INC.).
13. IMPROVEMENTS SHOWN HEREON ARE APPROXIMATE.
14. REGARDING THE PORTION GOOSE BAY DRIVE TO BECOME PART OF THE PROPOSED LEASE AREA:
14.A. THE PEASE DEVELOPMENT AUTHORITY REPORTS THAT THE OWNERSHIP UNDERLYING ROADWAYS WITHIN THE TRADEPORT REMAINS VESTED IN THE PEASE DEVELOPMENT AUTHORITY.
14.B. THE PEASE DEVELOPMENT AUTHORITY REPORTS THAT THERE ARE UNDERLYING BLANKET UTILITY EASEMENTS ON LANDS IN THEIR OWNERSHIP. THIS MAY INCLUDE, BUT NOT BE LIMITED TO BURIED OR OVERHEAD ELECTRIC, TELECOMMUNICATIONS, GAS, WATER, AND SEWER.
15. THE APPLICANT WILL BE REQUESTING THE FOLLOWING WAIVER FROM THE CITY OF PORTSMOUTH PLANNING BOARD REGARDING SECTION IV.3.1. CUL-DE-SACS:
15.A. MAXIMUM LENGTH OF CUL-DE-SAC OF 500'
15.B. MINIMUM RADIUS OF CUL-DE-SAC PAVEMENT OF 50'

REFERENCE PLANS:

1. "R.O.W. WORKSHEET, CORPORATE DRIVE PREPARED FOR PEASE DEVELOPMENT AUTHORITY" DATED DEC. 21, 1992 BY RICHARD D. BARTLETT & ASSOCIATES, INC. SHEETS 1 AND 2. (NOT RECORDED)
2. "PEASE A.F.B. / PORTSMOUTH, N.H. REPAVE BASE STREETS, PORTSMOUTH AVE, ROCKINGHAM AVE." DATED 7 DEC 82 BY STRATETIC AIR COMMAND CIVIL ENGINEERING. SHEET 4 OF 5. (NOT RECORDED)
3. "PORTSMOUTH AIR FORCE BASE, PORTSMOUTH, N.H. ROADS AND STORAGE AREA FY-56" DATED DEC 1955 BY WHITMAN & HOWARD ENGINEERS. INDEX PAGE AND SHEETS 2 - 5 OF 11. (NOT RECORDED)
4. "PEASE INTERNATIONAL TRADEPORT SUBDIVISION PLAT, INTERNATIONAL DRIVE LOTS BC11-001 & BC11-002, PORTSMOUTH, N.H." DATED FEBRUARY 5, 1993 BY RICHARD D. BARTLETT & ASSOCIATES INC. R.C.R.D. PLAN D-22536.
5. "SUBDIVISION PLAN OF LAND FOR REDHOOK ALE BREWERY, INC. CORPORATE DRIVE, COUNTY OF ROCKINGHAM, PORTSMOUTH, N.H." DATED DECEMBER 10, 1994 BY RICHARD P. MILLETTE AND ASSOCIATES. R.C.R.D. PLAN D-23978.
6. "ALTA/ACSM LAND TITLE SURVEY FOR RESPORT, LLC, ONE INTERNATIONAL DRIVE, COUNTY OF ROCKINGHAM, PORTSMOUTH, N.H." DATED FEBRUARY 27, 1998 BY MILLETTE, SPRAGUE & COLWELL, INC. R.C.R.D. PLAN D-26125.
7. "FRANKLIN PIERCE COLLEGE, PEASE INTERNATIONAL TRADEPORT, 73 CORPORATE DRIVE, PORTSMOUTH, NH" DATED JANUARY 15, 1998 BY RONALD R. BURD. R.C.R.D. PLAN D-26427.
8. "SUBDIVISION PLAN FOR LAND LEASED BY PEASE DEVELOPMENT AUTHORITY & KNOWN AS 119 INTERNATIONAL DRIVE LOCATED AT PEASE INTERNATIONAL TRADEPORT, PORTSMOUTH, N.H." DATED MARCH 1, 2000 BY KNIGHT HILL LAND SURVEYING SERVICES, INC. R.C.R.D. PLAN D-28059.
9. "SUBDIVISION PLAT PREPARED FOR 80 CORPORATE DRIVE LLC C/O BOULOS PROPERTY MANAGEMENT, LOCATION CORPORATE & GOOSE BAY DRIVES, PEASE INTERNATIONAL TRADEPORT - PORTSMOUTH, NH" DATED APRIL 11, 2000 BY FWS LAND SURVEYING P.L.L.C. R.C.R.D. PLAN D-28447.
10. "LEASE LINE REVISION PLAN FOR LONZA BIOLOGICS, INC. 101 INTERNATIONAL DRIVE, PORTSMOUTH, NEW HAMPSHIRE" DATED SEPT. 17, 2001 BY DOUCET SURVEY, INC. R.C.R.D. PLAN D-29538.
11. "SUBDIVISION PLAN OF LAND OF PEASE DEVELOPMENT AUTHORITY TO BE LEASED TO NORTHEAST REHABILITATION (A PORTION OF TAX MAP 303, LOT 6) 105 & 121 CORPORATE DRIVE, PEASE TRADEPORT, PORTSMOUTH, NEW HAMPSHIRE" DATED NOV. 5, 2008 BY DOUCET SURVEY, INC. R.C.R.D. PLAN D-35869.
12. "CONDOMINIUM SITE & FLOOR PLAN PREPARED FOR PIONEER NEW HAMPSHIRE, LLC, LAND OF PEASE DEVELOPMENT AUTHORITY, TAX MAP PARCEL 305-3 (108, 110, 112 & 114 CORPORATE DRIVE) PORTSMOUTH, NEW HAMPSHIRE" DATED APRIL 12, 2013 BY FIELDSTONE LAND CONSULTANTS, PLLC. SHEET 1 OF 5. R.C.R.D. PLAN D-37765.
13. "SUBDIVISION PLAN FOR PEASE DEVELOPMENT AUTHORITY, (TAX MAP 303, LOT 4) 67 CORPORATE DRIVE, PEASE TRADEPORT, PORTSMOUTH NEW HAMPSHIRE" DATED MAY 29, 2009 BY DOUCET SURVEY, INC. (NOT RECORDED)
14. "EXISTING CONDITIONS, BUILDING A, 80 CORPORATE DRIVE AND BUILDING B, 70 CORPORATE DRIVE, PORTSMOUTH, NH" DATED 4/14/2000 AND REVISED 6/05/2000 BY OPECHEE CONSTRUCTION CORPORATION. (NOT RECORDED)
15. "EXISTING CONDITIONS PLAN FOR TIGHE & BOND AND LONZA, LAND OF PEASE DEVELOPMENT AUTHORITY, (TAX MAP 305, LOTS 1 & 2), GOOSE BAY DRIVE & CORPORATE DRIVE, PORTSMOUTH, NEW HAMPSHIRE" DATED DECEMBER 23, 2015 BY DOUCET SURVEY, INC. (NOT RECORDED)
16. "119 INTERNATIONAL DRIVE CONDOMINIUM, CONDOMINIUM SITE PLAN, FOR PROPERTY OWNED BY PEASE DEVELOPMENT AUTHORITY, LEASED TO 119 INTERNATIONAL DRIVE, LLC, KNOWN AS PORTSMOUTH TAX MAP 305, LOT 4, PORTSMOUTH, NH" DATED OCT. 10, 2017 BY KNIGHT HILL LAND SURVEYING SERVICES, INC. R.C.R.D. PLAN 40449
17. "ALTA/NSPS LAND TITLE SURVEY FOR 130 INTERNATIONAL DRIVE, LLC AND PEASE DEVELOPMENT AUTHORITY, 130 INTERNATIONAL DRIVE, PORTSMOUTH, NH" DATED JULY 2017 AND REVISED THROUGH 8/9/17 BY DOUCET SURVEY, INC. (NOT RECORDED)
18. "ALTA/ACSM LAND TITLE SURVEY FOR 100 INTERNATIONAL DRIVE, LLC, 100 INTERNATIONAL DRIVE, PEASE INTERNATIONAL TRADEPORT, PORTSMOUTH, NH" DATED MARCH 30, 2006 BY DOUCET SURVEY, INC. (NOT RECORDED)

SUBDIVISION PLAN
FOR
LONZA BIOLOGICS, INC.
AND
THE PEASE DEVELOPMENT AUTHORITY
OF
TAX MAP 305 LOTS 1, 2, 5 & 6
AND
GOOSE BAY DRIVE
INTERNATIONAL DRIVE - CORPORATE DRIVE
GOOSE BAY DRIVE
PORTSMOUTH, NEW HAMPSHIRE



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Jeffrey A. Goldknopf L.L.S. #964
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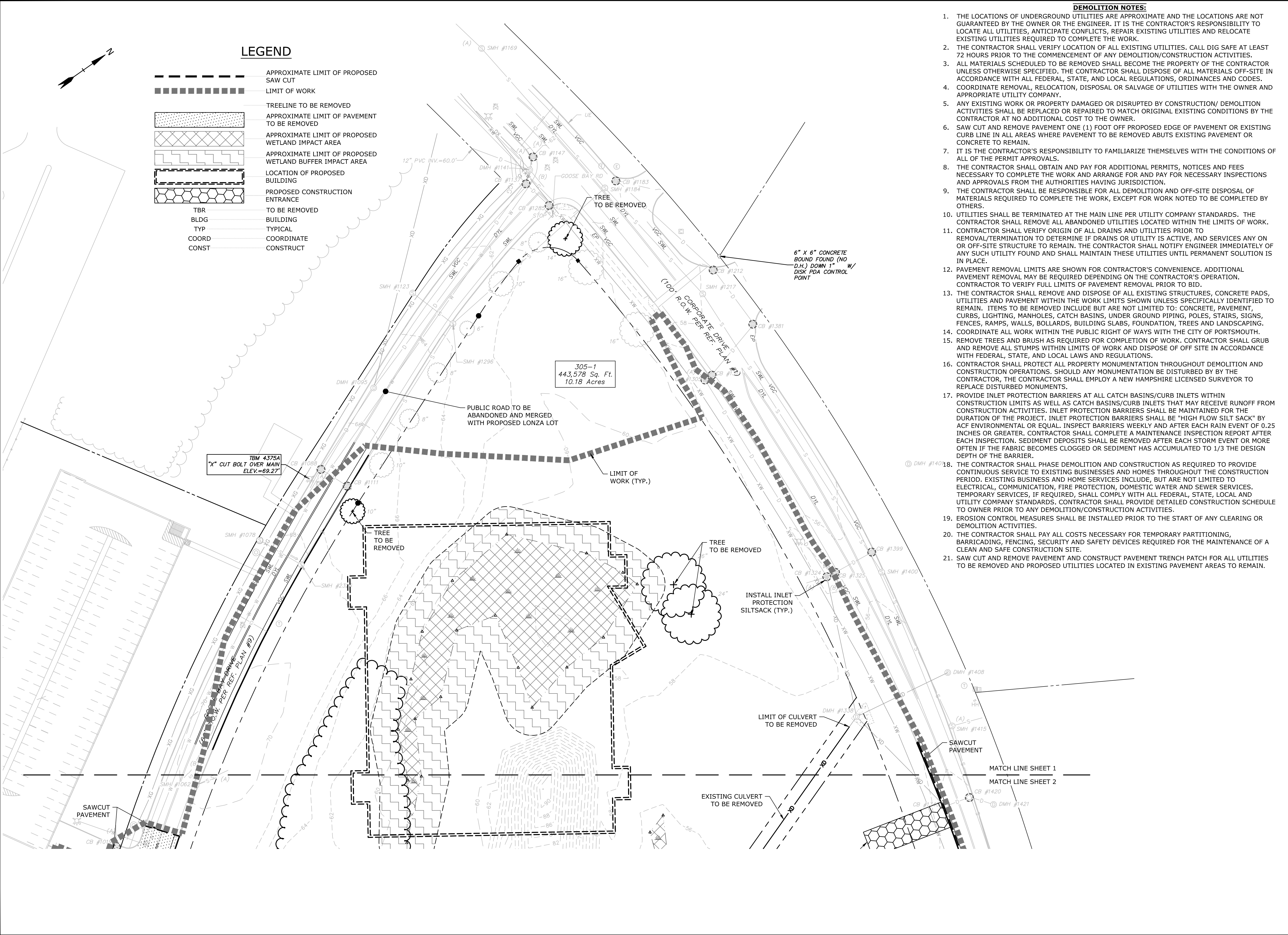
NO.	DATE	DESCRIPTION	BY

DRAWN BY:	W.D.C.	DATE:	APRIL 16, 2018
CHECKED BY:	J.A.G.	DRAWING NO.:	5518A
JOB NO.:	5518	SHEET	2 OF 2



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Last Save Date: August 20, 2018 3:11 PM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\CD-101 to C-103.dwg Layout Tab: C-101



- DEMOLITION NOTES:**
1. 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.
 2. 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.
 3. 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.
 4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
 5. 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.
 6. 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.
 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
 8. 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.
 9. 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.
 10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
 11. 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 IF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
 12. 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.
 13. 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, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
 14. COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
 15. 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.
 16. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
 17. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT MAY 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.
 18. 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.
 19. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
 20. 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.
 21. 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.

Tighe&Bond
Engineers | Environmental Specialists

STATE OF NEW HAMPSHIRE
SEAL
BRADLEY
No. 00550
LICENSED
PROFESSIONAL ENGINEER
8-21-18

STATE OF NEW HAMPSHIRE
SEAL
PATRICK
No. 18970
LICENSED
PROFESSIONAL SURVEYOR
8-21-18

SCALE IN FEET
0 40 80'
GRAPHIC SCALE

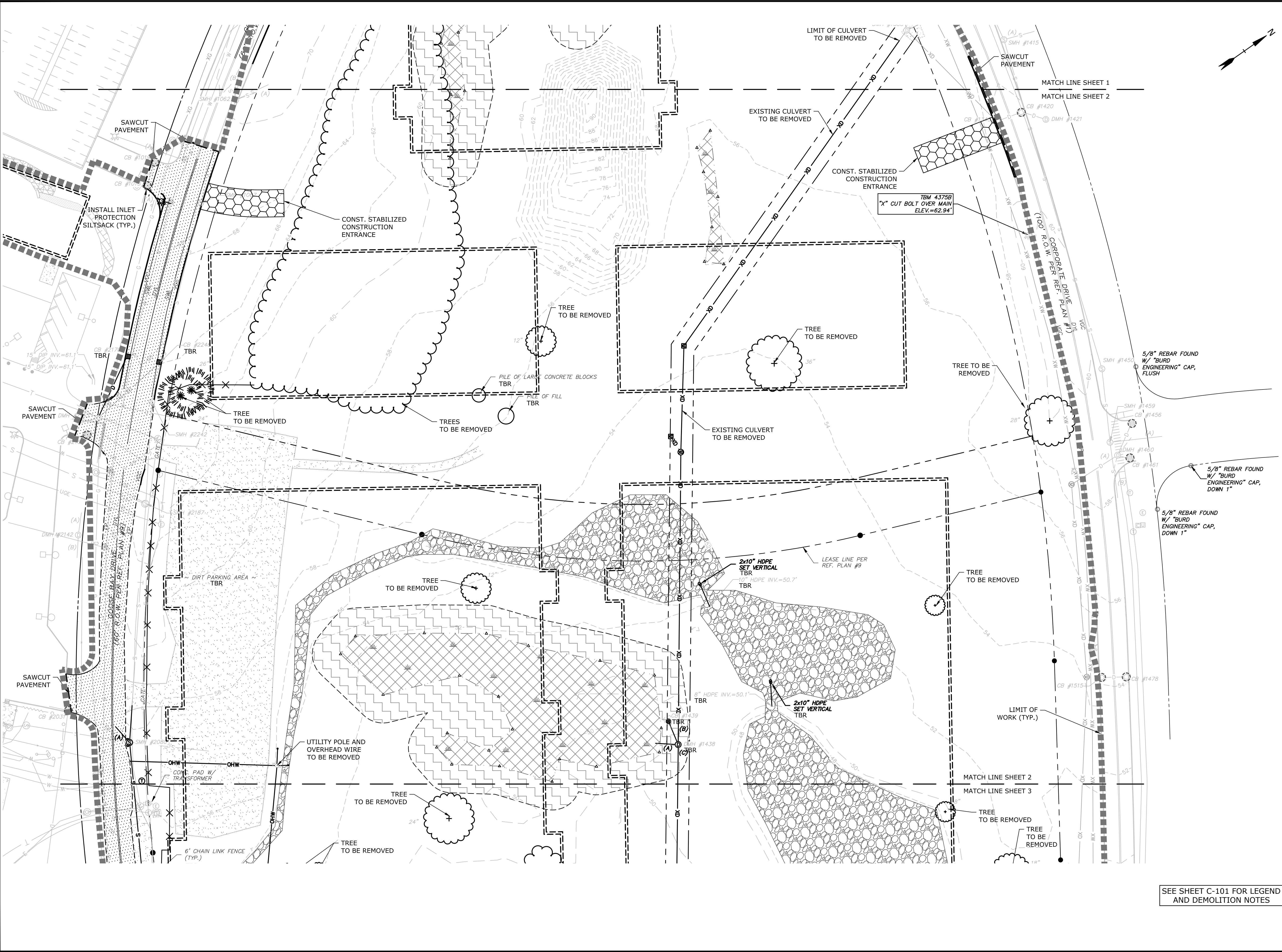
Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NO:		L-0700-013
DATE:		04/03/2018
FILE:		L0700-CD-101 to C-103.dwg
DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM
DEMOLITION PLAN		
SCALE:		AS SHOWN
C-101		

Last Save Date: August 20, 2018 3:11 PM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\CD-101 to C-103.dwg Layout Tab: C-102



Tighe&Bond
Engineers | Environmental Specialists

SCALE IN FEET
0 40 80
GRAPHIC SCALE

Proposed Industrial Development

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Portsmouth,
New Hampshire

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B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
MARK	DATE	DESCRIPTION

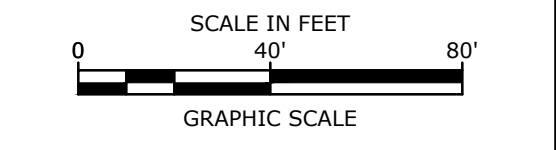
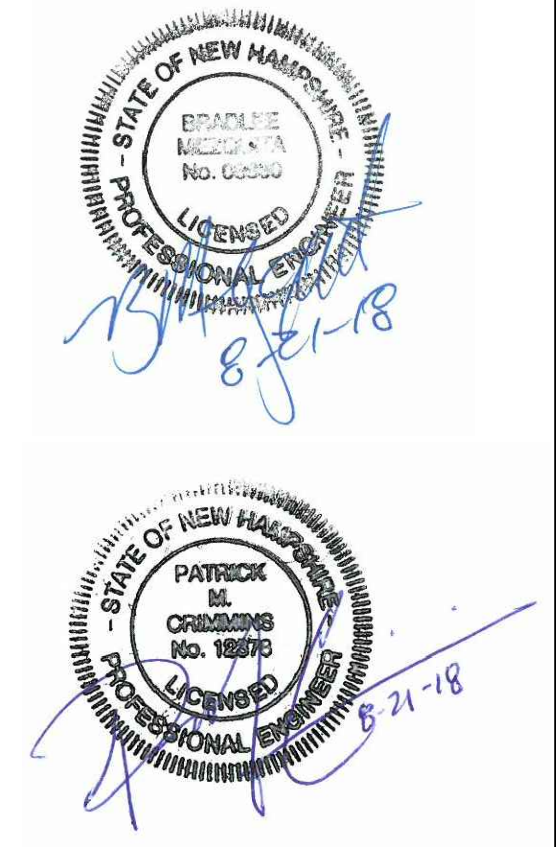
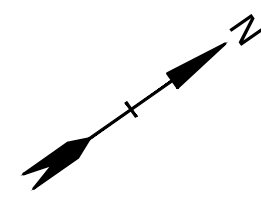
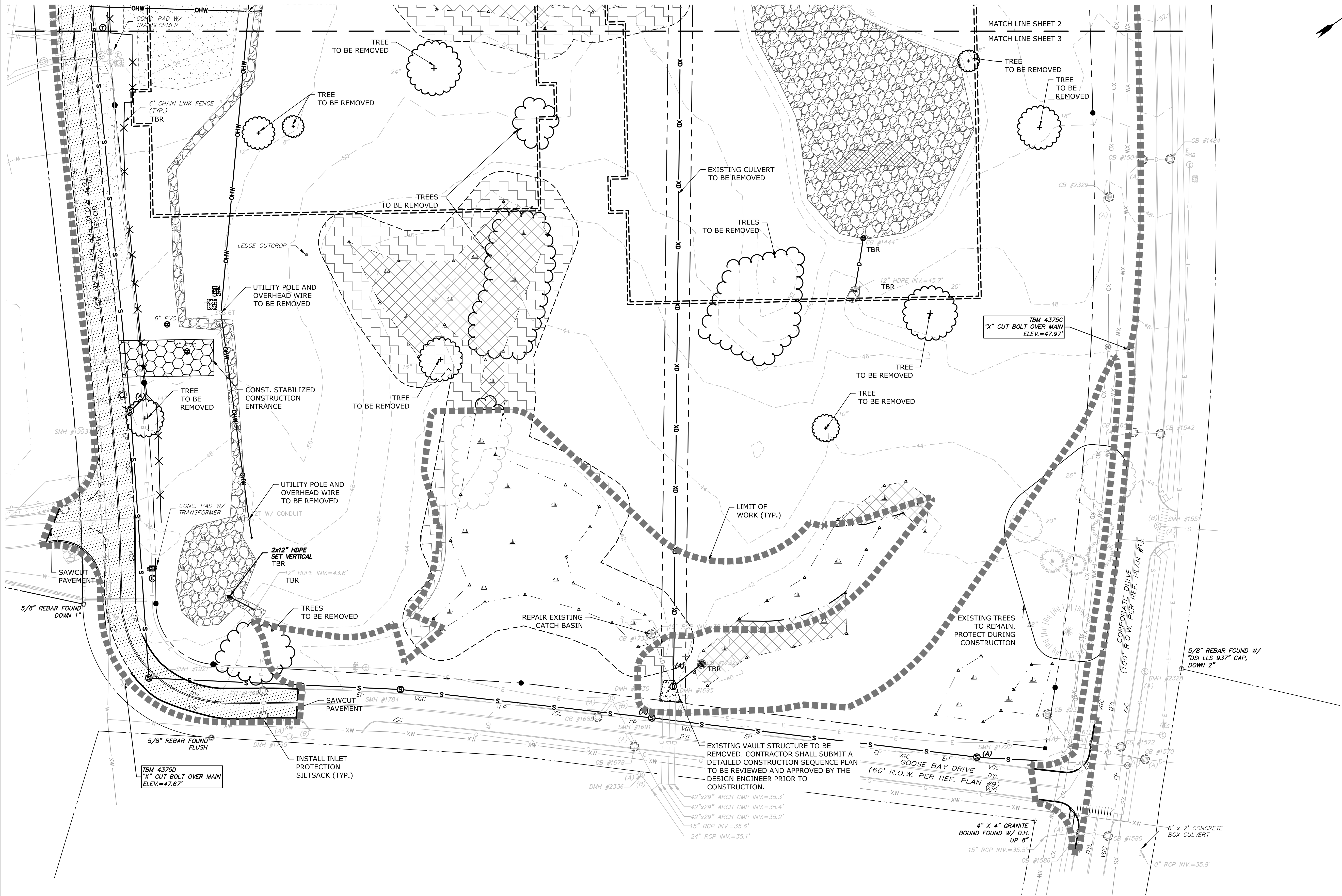
PROJECT NO: L-0700-013
DATE: 04/03/2018
FILE: L0700-CD-101 to C-103.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

DEMOLITION PLAN

SCALE: AS SHOWN

C-102

Last Save Date: August 20, 2018 3:11 PM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\CD-101 to C-103.dwg Layout Tab: C-103



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION
D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION

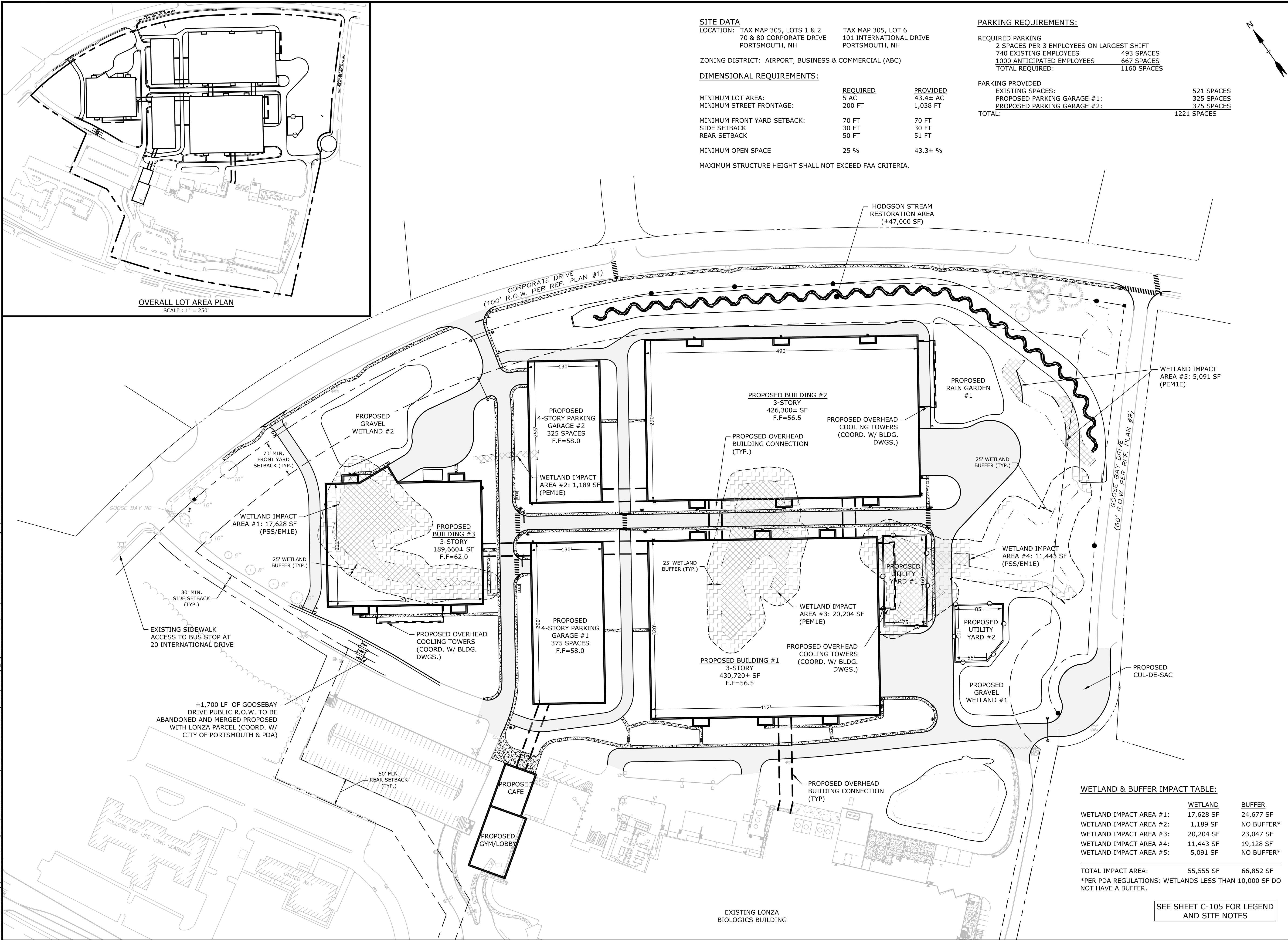
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DATE:	04/03/2018
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CHECKED:	PMC
APPROVED:	BLM

DEMOLITION PLAN

SCALE: AS SHOWN

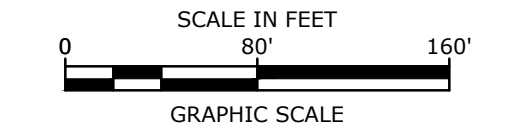
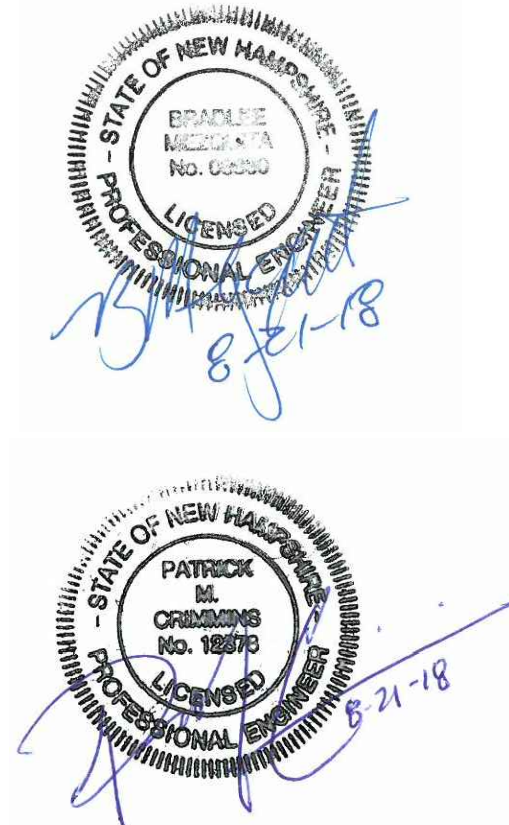
C-103

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Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\Lonza Biologics Expansion was 12/18/013 Iron Parcel (Redevelopment)\Drawings Figures\AutoCAD\Sheet\L0700-CS-104 to C-107.dwg Layout Tab: C-104



SITE DATA		
LOCATION:	TAX MAP 305, LOTS 1 & 2 70 & 80 CORPORATE DRIVE PORTSMOUTH, NH	TAX MAP 305, LOT 6 101 INTERNATIONAL DRIVE PORTSMOUTH, NH
ZONING DISTRICT: AIRPORT, BUSINESS & COMMERCIAL (ABC)		
DIMENSIONAL REQUIREMENTS:		
MINIMUM LOT AREA:	REQUIRED 5 AC	PROVIDED 43.4± AC
MINIMUM STREET FRONTAGE:	200 FT	1,038 FT
MINIMUM FRONT YARD SETBACK:	70 FT	70 FT
SIDE SETBACK	30 FT	30 FT
REAR SETBACK	50 FT	51 FT
MINIMUM OPEN SPACE	25 %	43.3± %
MAXIMUM STRUCTURE HEIGHT SHALL NOT EXCEED FAA CRITERIA.		

PARKING REQUIREMENTS:		
REQUIRED PARKING		
2 SPACES PER 3 EMPLOYEES ON LARGEST SHIFT		
740 EXISTING EMPLOYEES	493 SPACES	
1000 ANTICIPATED EMPLOYEES	667 SPACES	
TOTAL REQUIRED:	1160 SPACES	
PARKING PROVIDED		
EXISTING SPACES:		521 SPACES
PROPOSED PARKING GARAGE #1:		325 SPACES
PROPOSED PARKING GARAGE #2:		375 SPACES
TOTAL:		1221 SPACES



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

WETLAND & BUFFER IMPACT TABLE:

	WETLAND	BUFFER
WETLAND IMPACT AREA #1:	17,628 SF	24,677 SF
WETLAND IMPACT AREA #2:	1,189 SF	NO BUFFER*
WETLAND IMPACT AREA #3:	20,204 SF	23,047 SF
WETLAND IMPACT AREA #4:	11,443 SF	19,128 SF
WETLAND IMPACT AREA #5:	5,091 SF	NO BUFFER*

TOTAL IMPACT AREA: 55,555 SF 66,852 SF
*PER PDA REGULATIONS: WETLANDS LESS THAN 10,000 SF DO NOT HAVE A BUFFER.

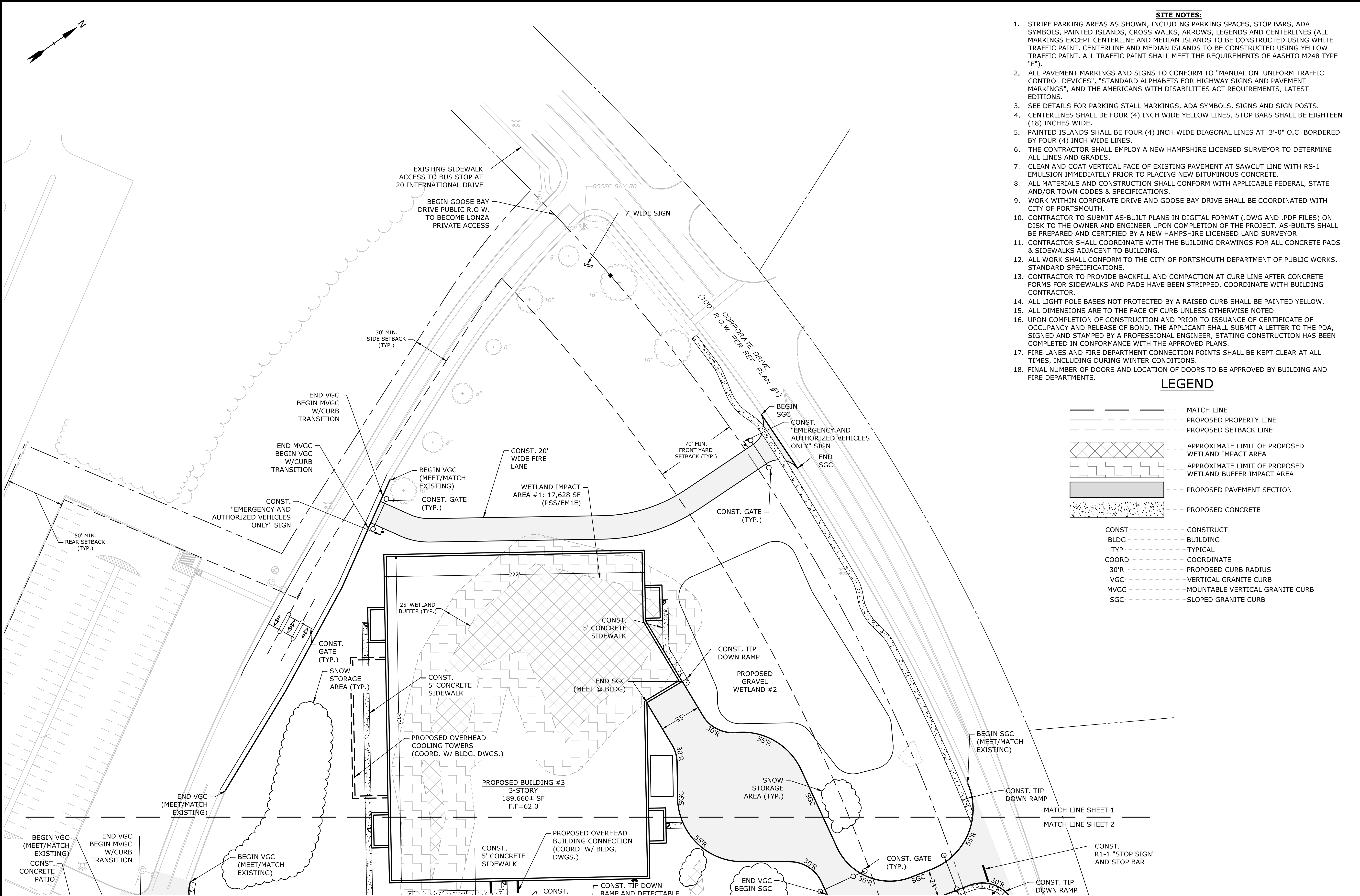
SEE SHEET C-105 FOR LEGEND AND SITE NOTES

OVERALL SITE PLAN

SCALE: AS SHOWN

C-104

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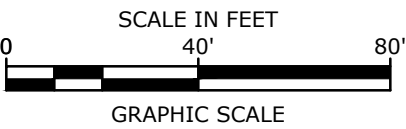
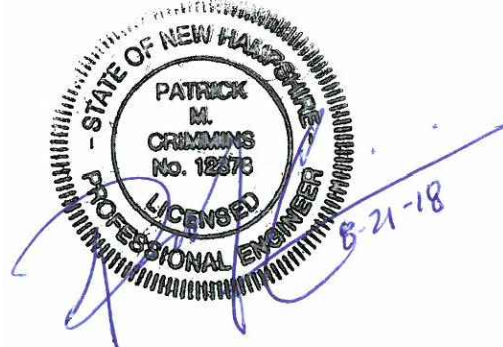
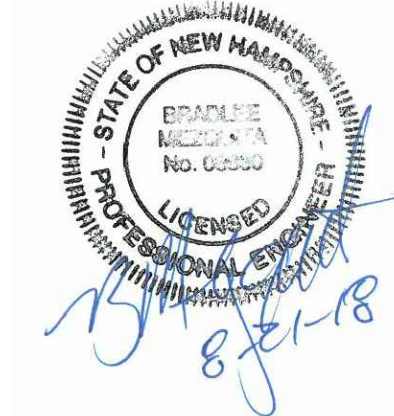


SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES (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 SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND/OR TOWN CODES & SPECIFICATIONS.
9. WORK WITHIN CORPORATE DRIVE AND GOOSE BAY DRIVE SHALL BE COORDINATED WITH CITY OF PORTSMOUTH.
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. CONTRACTOR SHALL COORDINATE WITH THE 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.
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. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
15. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
16. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY AND RELEASE OF BOND, THE APPLICANT SHALL SUBMIT A LETTER TO THE PDA, SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER, STATING CONSTRUCTION HAS BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED PLANS.
17. FIRE LANES AND FIRE DEPARTMENT CONNECTION POINTS SHALL BE KEPT CLEAR AT ALL TIMES, INCLUDING DURING WINTER CONDITIONS.
18. FINAL NUMBER OF DOORS AND LOCATION OF DOORS TO BE APPROVED BY BUILDING AND FIRE DEPARTMENTS.

LEGEND

- | | |
|------------------|--|
| --- | MATCH LINE |
| - - - | PROPOSED PROPERTY LINE |
| - . - . - | PROPOSED SETBACK LINE |
| [Hatched Box] | APPROXIMATE LIMIT OF PROPOSED WETLAND IMPACT AREA |
| [Stippled Box] | APPROXIMATE LIMIT OF PROPOSED WETLAND BUFFER IMPACT AREA |
| [Solid Grey Box] | PROPOSED PAVEMENT SECTION |
| [Dotted Box] | PROPOSED CONCRETE |
| CONST | CONSTRUCT |
| BLDG | BUILDING |
| TYP | TYPICAL |
| COORD | COORDINATE |
| 30'R | PROPOSED CURB RADIUS |
| VGC | VERTICAL GRANITE CURB |
| MVGC | MOUNTABLE VERTICAL GRANITE CURB |
| SGC | SLOPED GRANITE CURB |



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

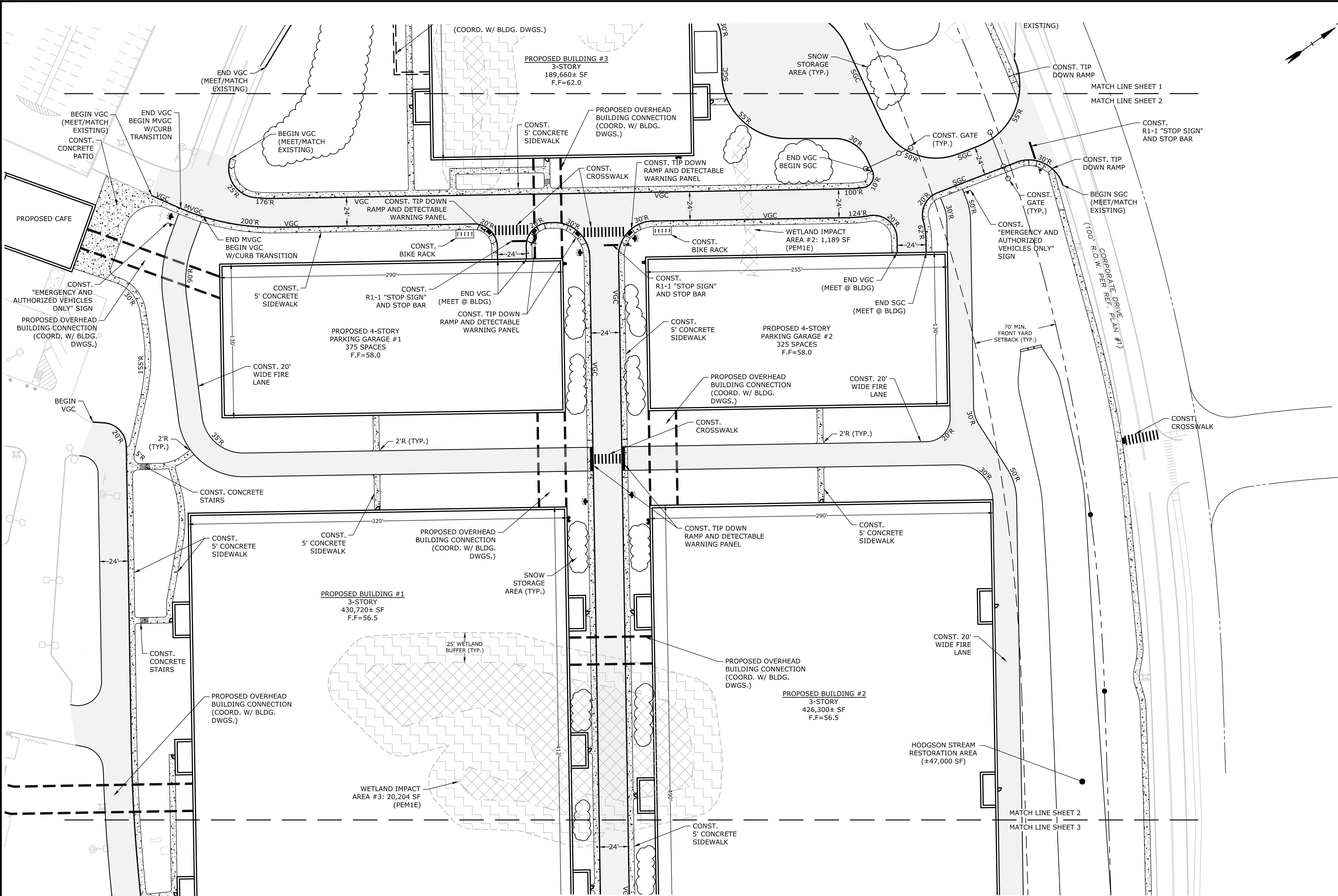
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C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
PROJECT NO: L-0700-013		
DATE: 04/03/2018		
FILE: L0700-CS-104 to C-107.dwg		
DRAWN BY: NAH		
CHECKED: PMC		
APPROVED: BLM		

SITE PLAN

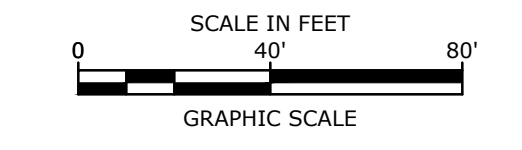
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C-105

Last Save Date: August 20, 2018 9:56 AM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\013 Iron Parcel Redevelopment\Drawings Figures\AutoCAD\Sheet\L0700-CS-104 to C-107.dwg Layout Tab: C-106



SEE SHEET C-105 FOR LEGEND
AND SITE NOTES



Proposed Industrial Development

Lonza Biologics

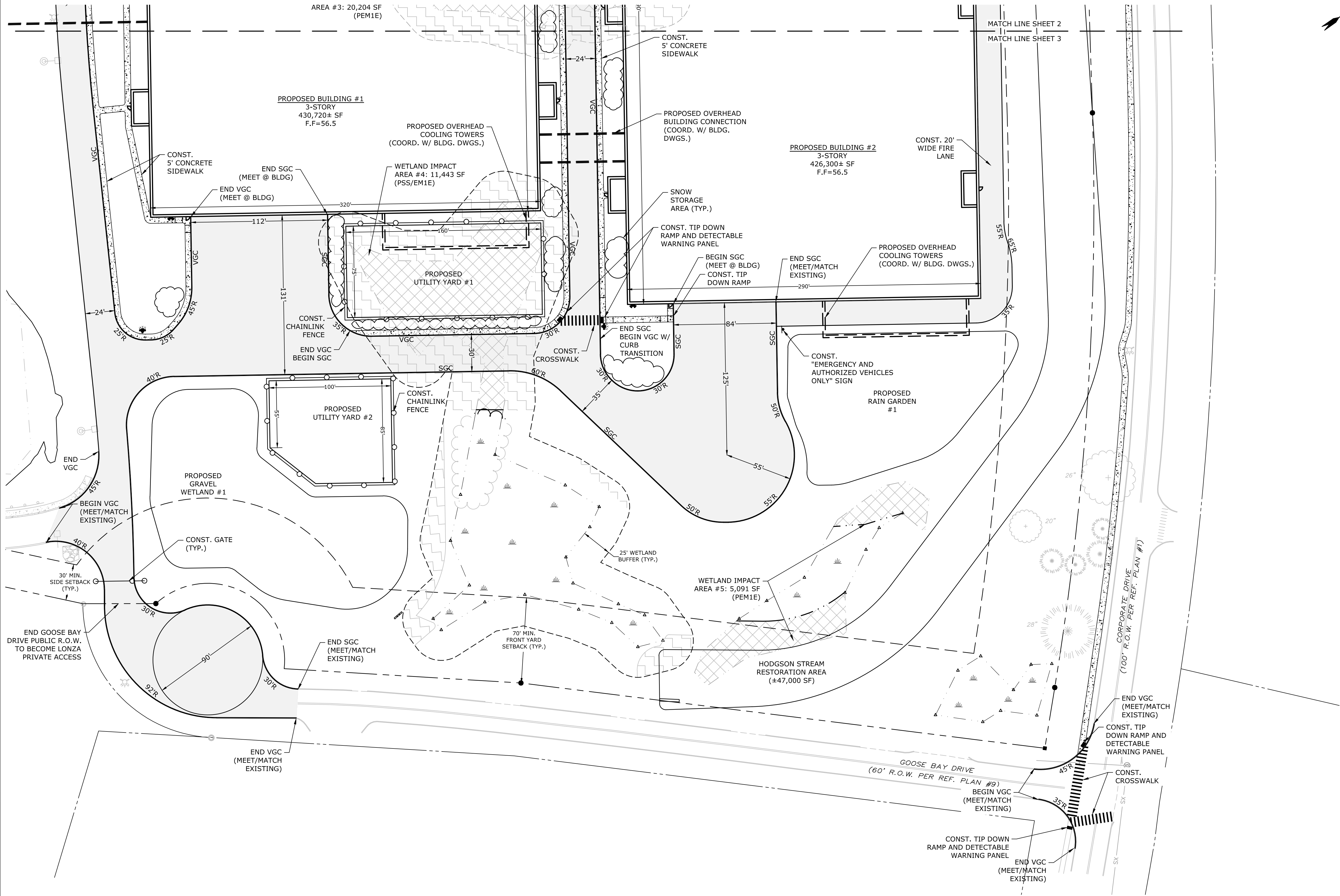
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION
D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
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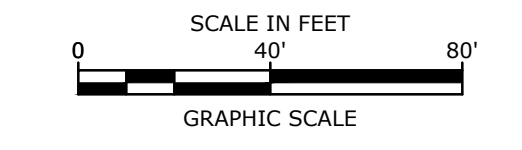
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DATE:	04/03/2018
FILE:	L0700-CS-104 to C-107.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

SITE PLAN
SCALE: AS SHOWN
C-106

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Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\CS-104 to C-107\dwg\Drawings Figures\AutoCAD\Sheet\0700-CS-104 to C-107.dwg Layout Tab: C-107



SEE SHEET C-105 FOR LEGEND
AND SITE NOTES



Proposed Industrial Development

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Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION
D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
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PROJECT NO:	L-0700-013
DATE:	04/03/2018
FILE:	L0700-CS-104 to C-107.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

SITE PLAN

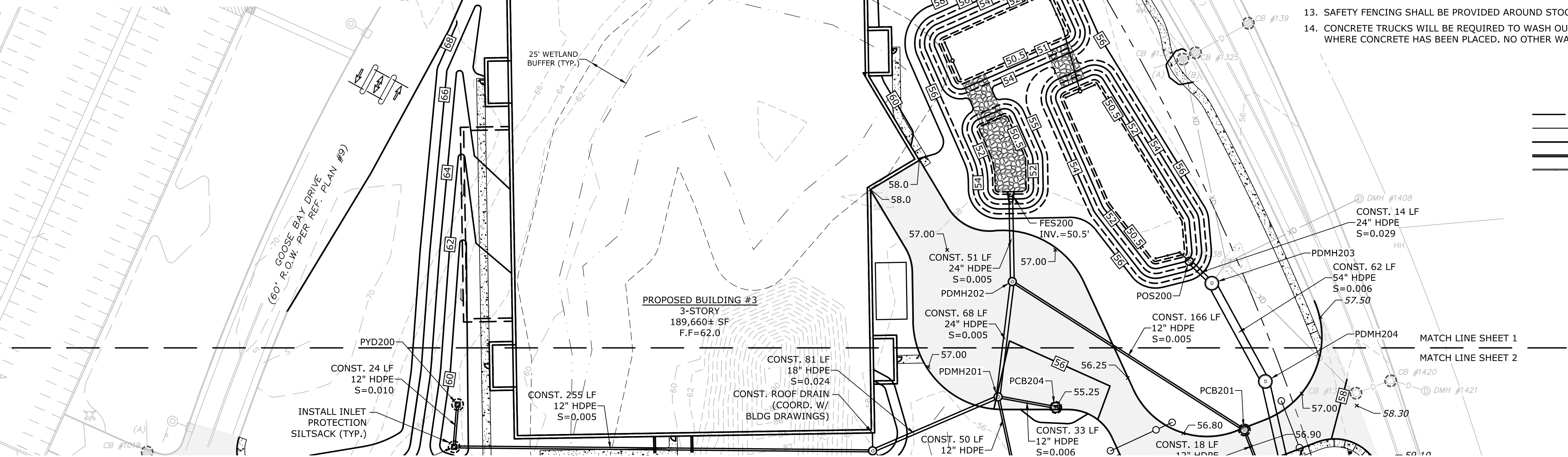
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C-107

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Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700 CG-108 to C-110.dwg Layout Tab: C-108

DRAINAGE STRUCTURE TABLE

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PCB101 RIM=56.00 INV.OUT=51.95	PCB113 RIM=53.60 INV.IN=46.55 INV.OUT=46.45	PDMH102 RIM=53.50 INV.IN=46.30 INV.IN=46.30 INV.OUT=46.20	PDMH302 RIM=53.60 INV.IN=49.45 INV.IN=49.45 INV.OUT=49.35	
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GRADING AND DRAINAGE NOTES:

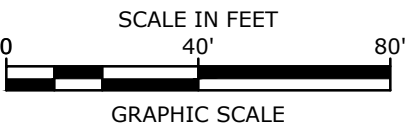
1. COMPACTION REQUIREMENTS:
BELOW PAVED OR CONCRETE AREAS 95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL 95%
BELOW LOAM AND SEED AREAS 90%
* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR APPROVED EQUAL), UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITIES PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCHBASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. 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.
6. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCHBASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
9. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCHBASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4" SUMPS.
11. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS AND CONSTRUCTION SPECIFICATIONS, LATEST REVISIONS.
12. 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.
13. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

EROSION CONTROL NOTES:

1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON DETAIL SHEETS.
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCHBASIN INLETS WITHIN THE WORK LIMITS. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
5. INSPECT INLET PROTECTION AND SILT FENCES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EXCELSIOR MAT ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL CATCHBASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLAND.
13. SAFETY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT.
14. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) SHOOT ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASH OUT WILL BE ALLOWED.

LEGEND

- MATCH LINE
- PROPOSED PROPERTY LINE
- PROPOSED CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SOCK
- PROPOSED CATCHBASIN
- PROPOSED DOUBLE GRATE CATCHBASIN
- PROPOSED DRAIN MANHOLE
- CONST CONSTRUCT
- BLDG BUILDING
- TYP TYPICAL
- COORD COORDINATE
- RD ROOF DRAIN
- VIF VERIFY IN FIELD



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NO:		L-0700-013
DATE:		04/03/2018
FILE:		L0700-CG-108 to C-110.dwg
DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM

GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

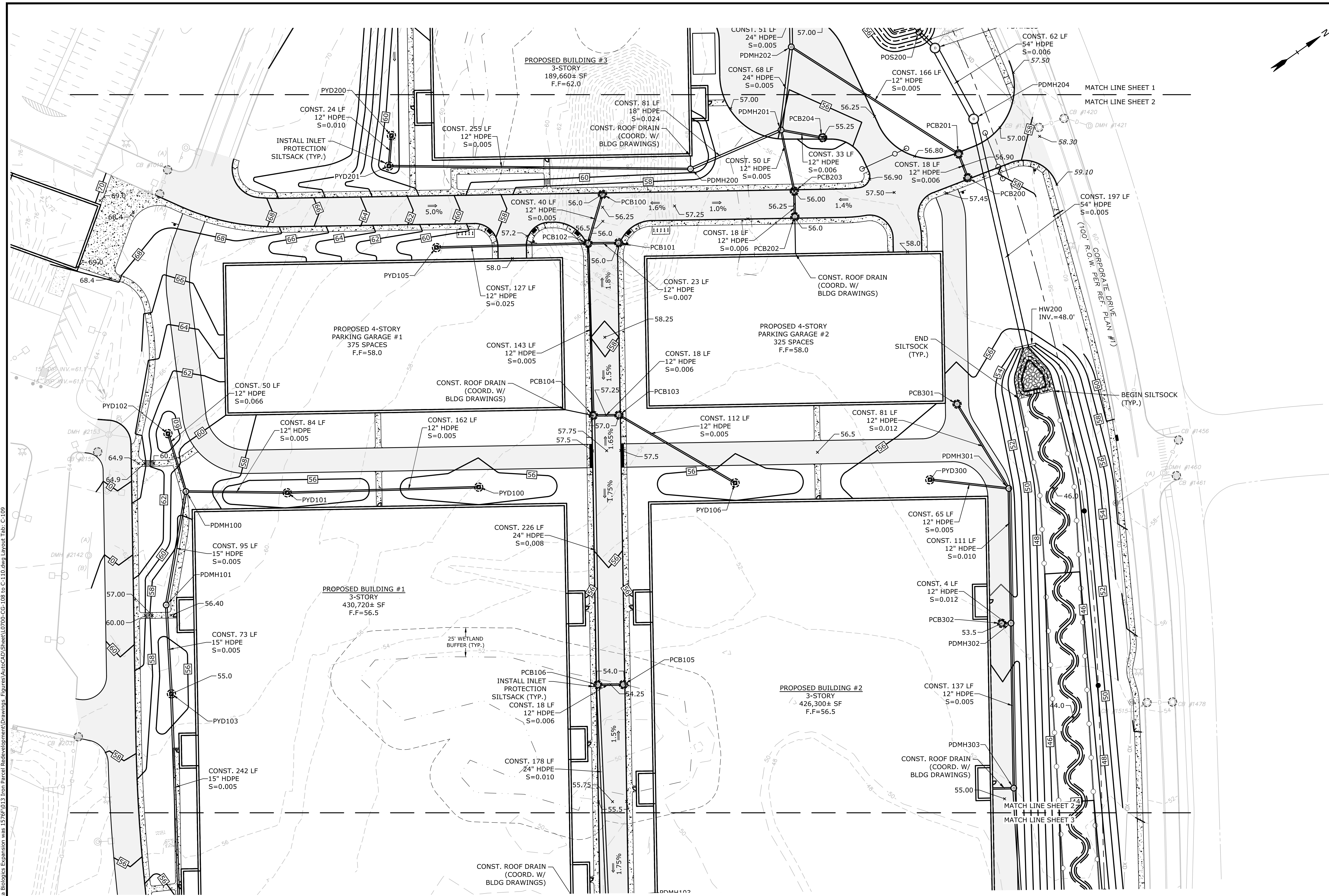
C-108

Portsmouth,
New Hampshire

PROJECT NO:	L-0700-013
DATE:	04/03/2018
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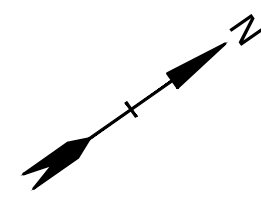
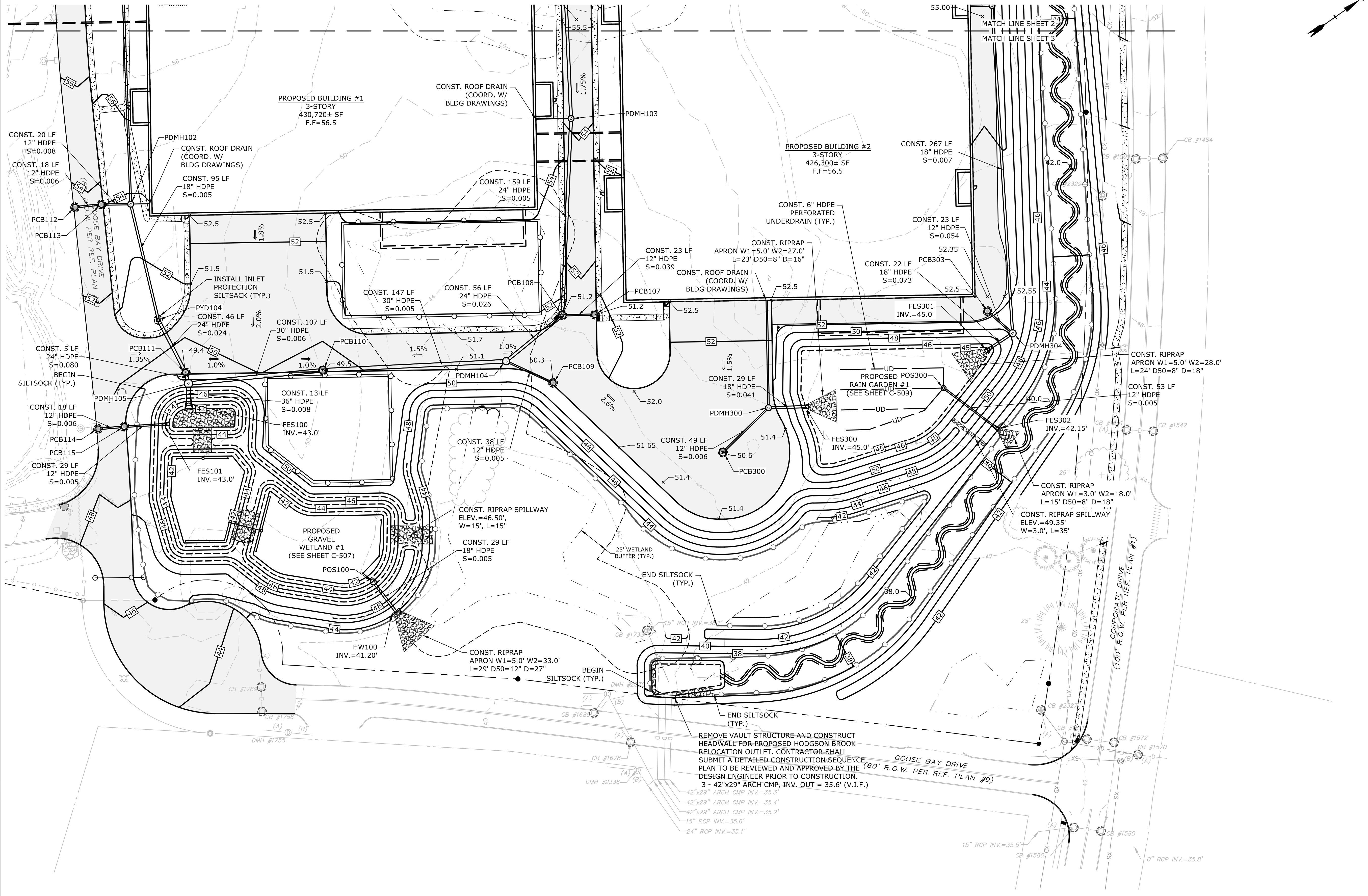
SCALE: AS SHOWN

C-109



SEE SHEET C-108 FOR LEGEND GRADING,
DRAINAGE & EROSION CONTROL NOTES, &
DRAINAGE STRUCTURE TABLE

Last Save Date: August 20, 2018 10:15 AM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700 CG-108 to C-110.dwg Layout Tab: C-110



Professional Engineer Seal for Bradie M. Bond, No. 00550, State of New Hampshire, License No. 821-18.

Professional Engineer Seal for Patrick R. O'Rourke, No. 18970, State of New Hampshire, License No. 821-18.

SCALE IN FEET
0 40 80
GRAPHIC SCALE

Proposed Industrial Development

Lonza Biologics

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	8/21/2018	REVISED TAC SUBMISSION
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PROJECT NO:	L-0700-013
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APPROVED:	BLM

GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-110

SEE SHEET C-108 FOR LEGEND GRADING, DRAINAGE & EROSION CONTROL NOTES, & DRAINAGE STRUCTURE TABLE

Last Save Date: August 20, 2018 10:21 AM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\Lonza Biologics Expansion\Drawings Figures\AutoCAD\Sheet\0700-CU-111 to C-113.dwg Layout Tab: C-111

LEGEND

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COORD

VIF

VIF

EXISTING STORM DRAIN

EXISTING SANITARY SEWER

EXISTING WATER

EXISTING GAS

EXISTING UNDERGROUND ELECTRIC

EXISTING OVERHEAD UTILITY

PROPOSED STORM DRAIN

PROPOSED SANITARY SEWER

PROPOSED WATER

PROPOSED GAS

PROPOSED UNDERGROUND ELECTRIC

PROPOSED UNDERGROUND COMMUNICATION

EXISTING CATCHBASIN

EXISTING DRAIN MANHOLE

EXISTING SEWER MANHOLE

EXISTING HYDRANT

EXISTING WATER VALVE

EXISTING ELECTRIC MANHOLE

EXISTING TELEPHONE MANHOLE

PROPOSED CATCHBASIN

PROPOSED DOUBLE GRATE CATCHBASIN

PROPOSED DRAIN MANHOLE

PROPOSED SEWER MANHOLE

PROPOSED WATER VALVE

PROPOSED HYDRANT

PROPOSED GAS VALVE

PROPOSED ELECTRIC MANHOLE

PROPOSED LIGHT POLE BASE

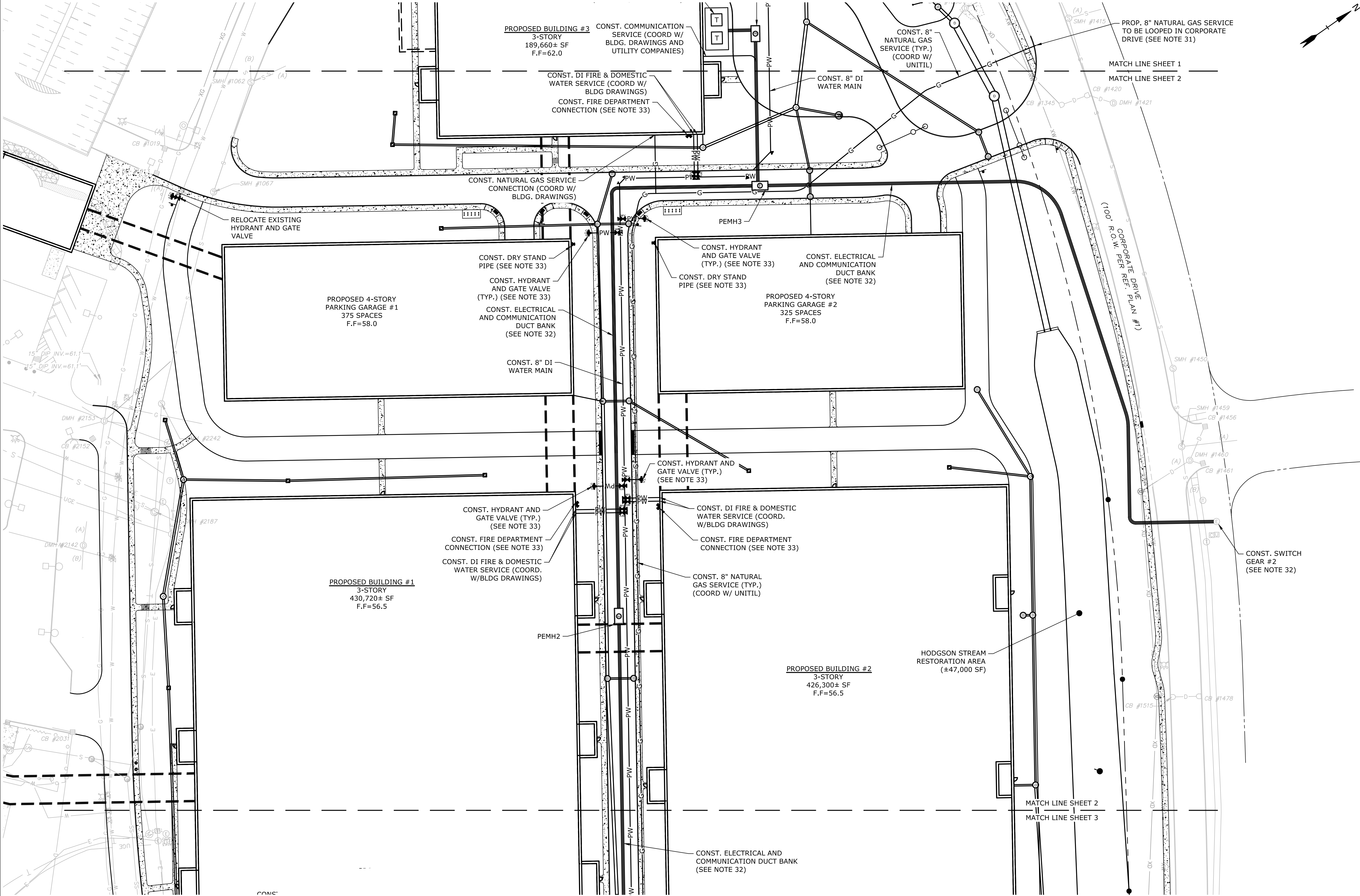
CONSTRUCT

TYPICAL

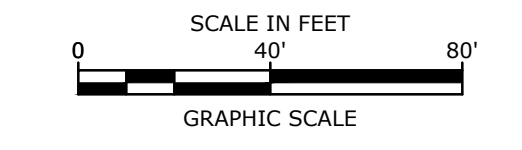
COORDINATE

VERIFY IN FIELD
-
- 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
WATER - CITY OF PORTSMOUTH DPW
SEWER - CITY OF PORTSMOUTH DPW
ELECTRIC - EVERSOURCE
COMMUNICATIONS - FAIRPOINT, COMCAST, FIRSTLIGHT
 - SEE EXISTING CONDITIONS PLAN 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 FIBERGLASS REINFORCED PLASTIC UNLESS OTHERWISE STATED.
 - ALL WORK WITHIN PORTSMOUTH ROWS SHALL BE COORDINATED WITH CITY OF PORTSMOUTH.
 - CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.
 - CONNECTIONS TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO CITY OF PORTSMOUTH STANDARDS.
 - EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE CITY OF PORTSMOUTH 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 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.
 - SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
 - HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH.
 - COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
 - ALL SEWER PIPE WITH LESS THAN 4' OF COVER 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.
 - EXISTING SEWER MAIN AND STRUCTURES IN GOOSE BAY DRIVE ARE BASED ON A PROPOSED DESIGN BY UNDERWOOD ENGINEERS, DATED JULY 28, 2017, AND IS SLATED FOR CONSTRUCTION IN SPRING 2018. THE PROPOSED ON-SITE SEWER DESIGN ELEVATIONS BASED ON THE UNDERWOOD PLAN DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH, AND VERIFY ALL INVERTS PRIOR TO CONSTRUCTION.
 - LOCATION SHOWN IS APPROXIMATE ONLY. FINAL DESIGN OF NATURAL GAS SERVICE TO BE COMPLETED BY UNTIL. WORK IN CORPORATE DRIVE MAY NEED TO BE COMPLETED IN CONJUNCTION WITH FUTURE RECONSTRUCTION OF CORPORATE DRIVE. COORDINATE WITH CITY OF PORTSMOUTH AND UNTIL.
 - LOCATION AND TYPE SHOWN IS APPROXIMATE ONLY. FINAL DESIGN OF ELECTRIC SERVICE AND ASSOCIATED INFRASTRUCTURE TO BE COMPLETED BY EVERSOURCE. WORK IN CORPORATE DRIVE MAY NEED TO BE COMPLETED IN CONJUNCTION WITH FUTURE RECONSTRUCTION OF CORPORATE DRIVE. COORDINATE WITH CITY OF PORTSMOUTH AND EVERSOURCE.
 - FINAL LOCATION OF FIRE HYDRANTS, FIRE DEPARTMENT CONNECTIONS AND DRY STAND PIPES WILL BE COORDINATED WITH THE BUILDING DRAWINGS AND APPROVED BY THE PORTSMOUTH FIRE DEPARTMENT PRIOR TO CONSTRUCTION.
- Tighe&Bond
Engineers | Environmental Specialists
-
- SCALE IN FEET
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GRAPHIC SCALE
- Proposed
Industrial
Development
- Lonza Biologics
- Portsmouth,
New Hampshire
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| D | 8/21/2018 | REVISED TAC SUBMISSION |
| C | 6/18/2018 | NHDES AOT SUBMISSION |
| B | 5/21/2018 | TAC SUBMISSION |
| A | 4/3/2018 | TAC WS SUBMISSION |
| MARK | DATE | DESCRIPTION |
| PROJECT NO: | | L-0700-013 |
| DATE: | | 04/03/2018 |
| FILE: | | L0700-CU-111 to C-113.dwg |
| DRAWN BY: | | NAH |
| CHECKED: | | PMC |
| APPROVED: | | BLM |
- UTILITIES PLAN
- SCALE: AS SHOWN
- C-111

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Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700\013 Iron Parcel Redevelopment\Drawings Figures\AutoCAD\Sheet\L0700-CU-111 to C-113.dwg Layout Tab: C-112



SEE SHEET C-111 FOR
UTILITY NOTES AND LEGEND



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

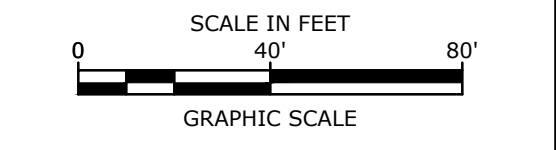
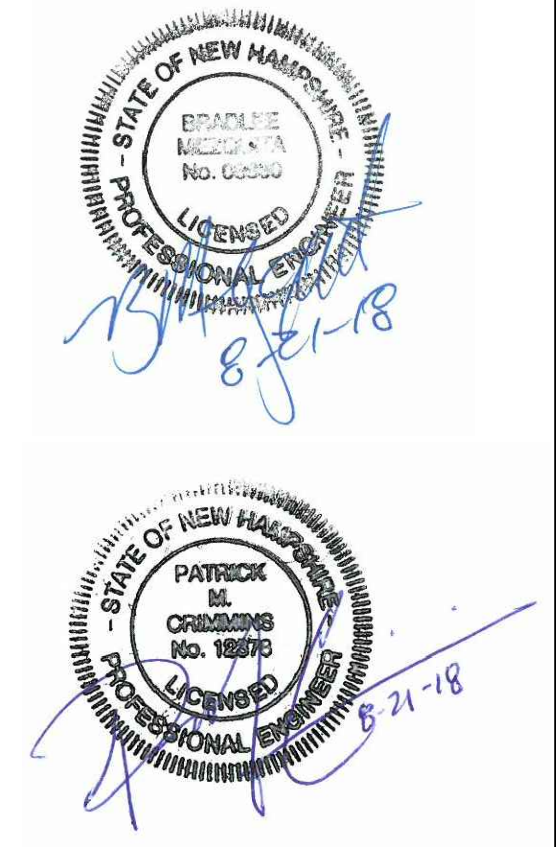
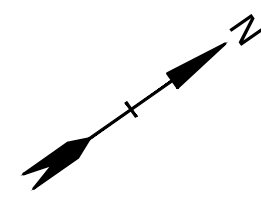
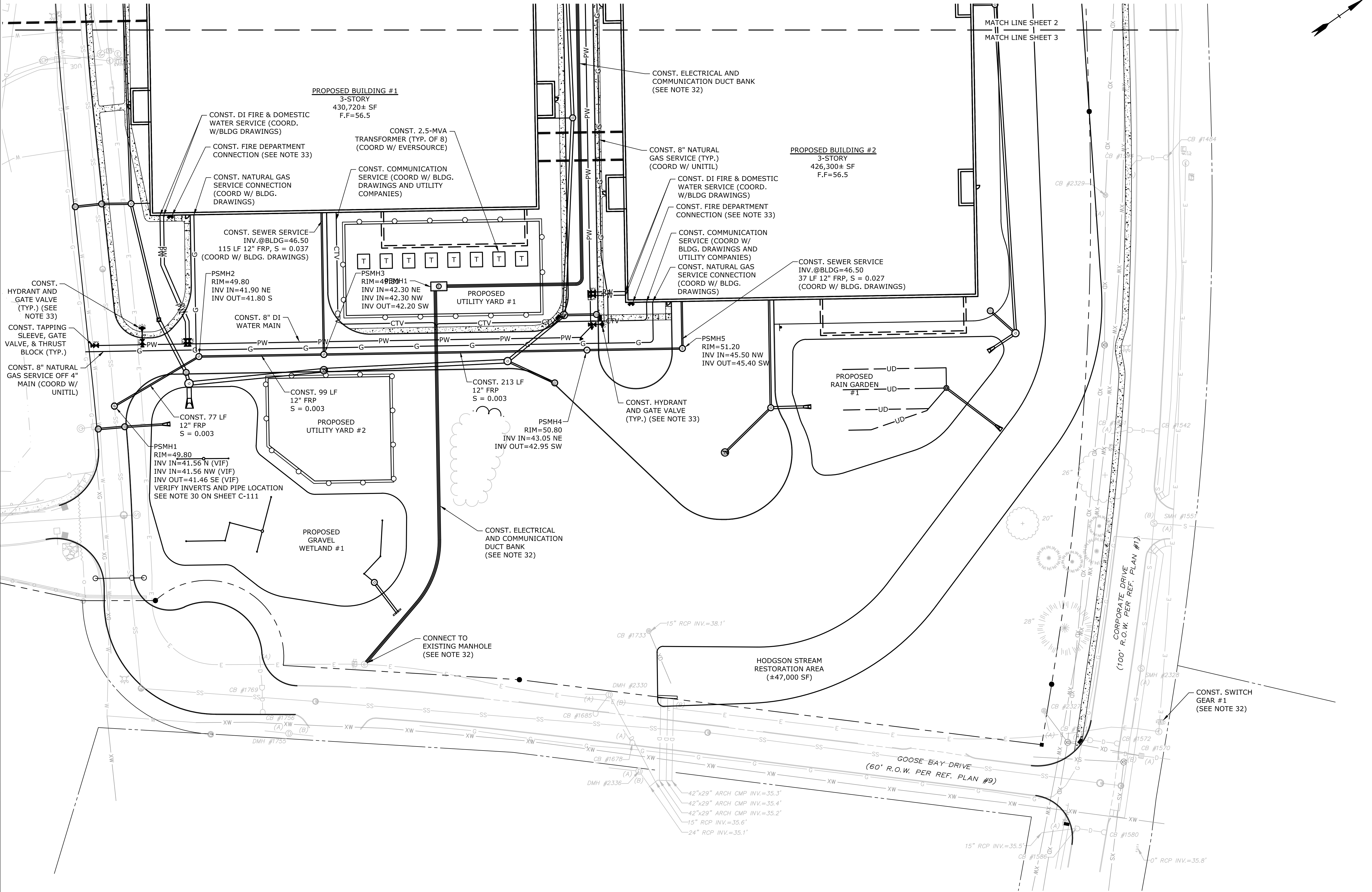
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PROJECT NO:	L-0700-013
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APPROVED:	BLM

UTILITIES PLAN

SCALE: AS SHOWN

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Proposed Industrial Development

Lonza Biologics

Portsmouth,
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PROJECT NO:	L-0700-013
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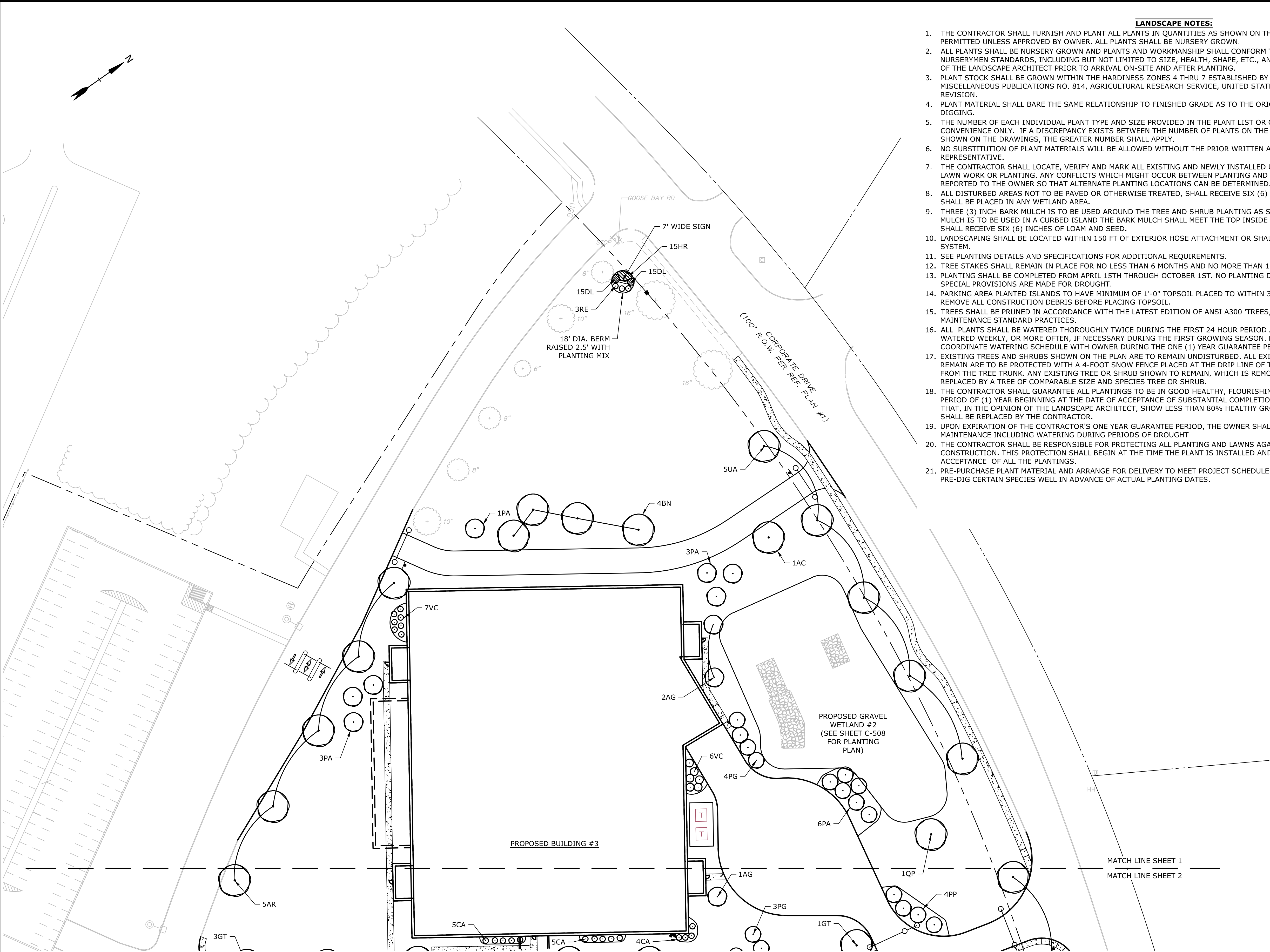
UTILITIES PLAN

SCALE: AS SHOWN

C-113

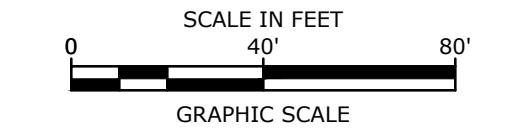
SEE SHEET C-111 FOR
UTILITY NOTES AND LEGEND

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File Location: J:\L0700\Lonza Biologicals Expansion\12-16-18\013 Iron Parcel Redevelopment\Drawings Figures\AutoCAD\Sheet\L0700-CL-114 to C-116.dwg Layout Tab: C-114



SEE SHEET C-116 FOR PLANT
SCHEDULE

- 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 BARE 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 SIX (6) INCHES OF LOAM AND SEED. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
 9. THREE (3) INCH 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 SIX (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. PARKING AREA PLANTED ISLANDS TO HAVE MINIMUM OF 1'-0" TOPSOIL PLACED TO WITHIN 3 INCHES OF THE TOP OF CURB ELEVATION. REMOVE ALL CONSTRUCTION DEBRIS BEFORE PLACING TOPSOIL.
 15. TREES SHALL BE PRUNED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI A300 'TREES, SHRUBS AND OTHER WOOD PLANT MAINTENANCE STANDARD PRACTICES.
 16. 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.
 17. 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.
 18. THE CONTRACTOR SHALL GUARANTEE ALL PLANTINGS TO BE IN GOOD HEALTHY, FLOURISHING AND ACCEPTABLE CONDITION FOR A PERIOD OF (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.
 19. UPON EXPIRATION OF THE CONTRACTOR'S ONE YEAR GUARANTEE PERIOD, THE OWNER SHALL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE INCLUDING WATERING DURING PERIODS OF DROUGHT.
 20. 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.
 21. 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.



Proposed Industrial Development

Lonza Biologicals

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION
D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION

PROJECT NO: L-0700-013
DATE: 04/03/2018
FILE: L0700-CL-114 to C-116.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

LANDSCAPE PLAN

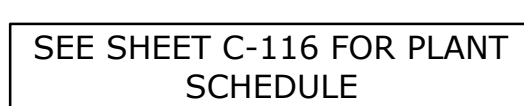
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C-114

Portsmouth,
New Hampshire

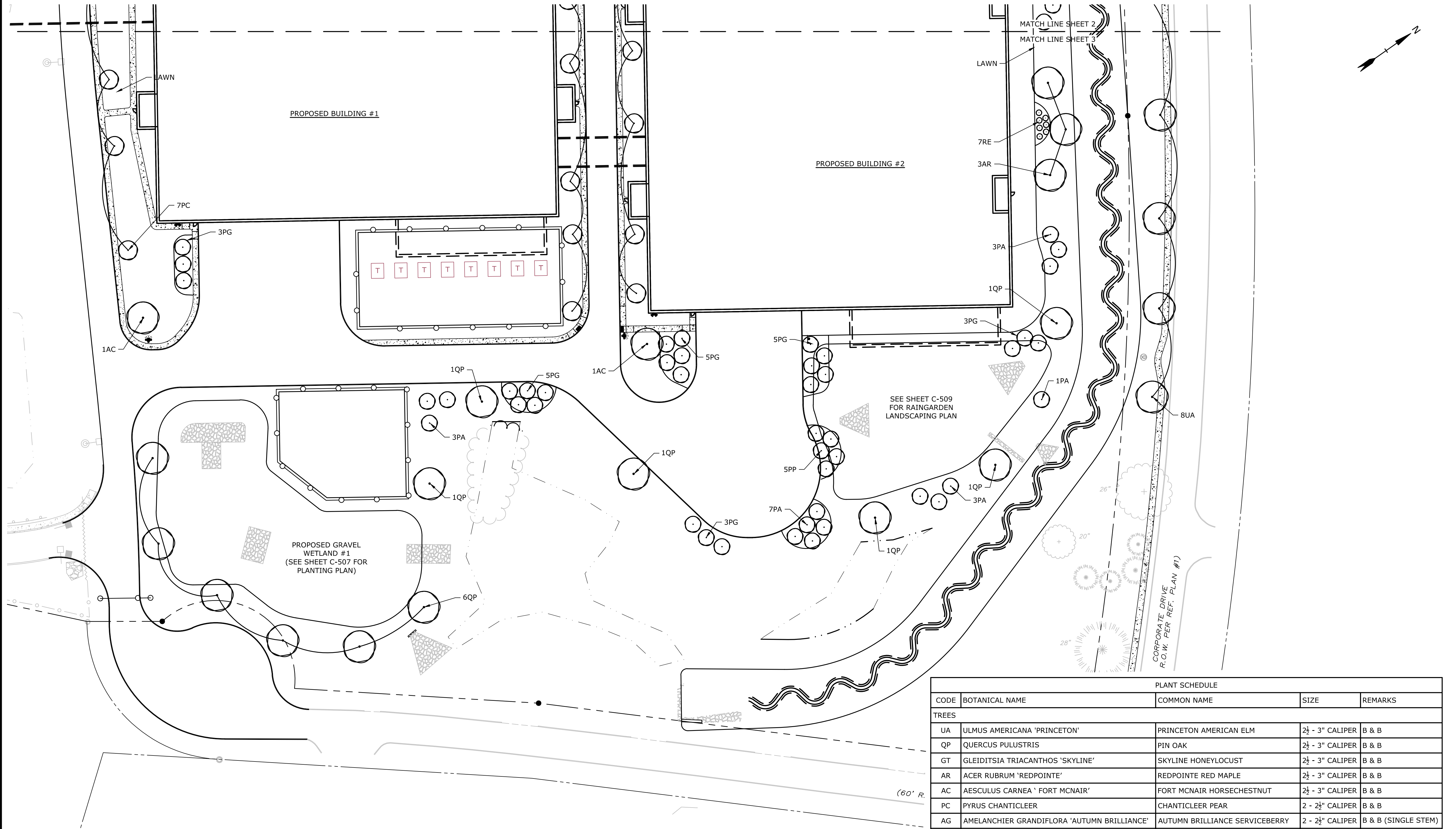
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C-115



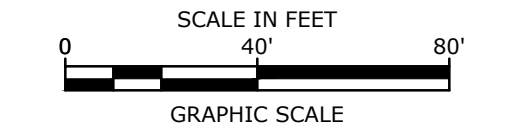
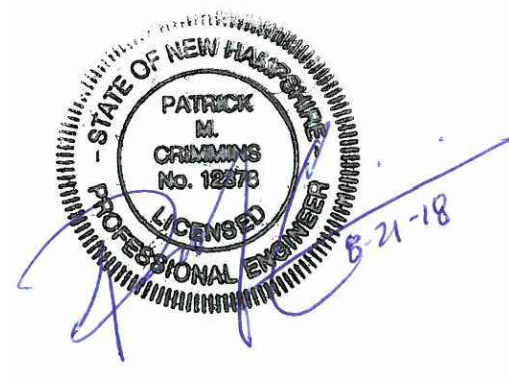
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Plot Date: Tuesday, August 21, 2018 Plotted by: Neil A. Hansen
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File Location: J:\L0700\Lonza Biologics Expansion Was 12/27/013 Iron Parcel (Redevelopment)\Drawings Figures\AutoCAD\Sheet\L0700-CL-114 to C-116.dwg Layout Tab: C-116



SEE SHEET C-114 FOR
LANDSCAPING NOTES

PLANT SCHEDULE				
CODE	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES				
UA	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2½ - 3" CALIPER	B & B
QP	QUERCUS PULSTRIS	PIN OAK	2½ - 3" CALIPER	B & B
GT	GLEIDITSIA TRIACANTHOS 'SKYLINE'	SKYLINE HONEYLOCUST	2½ - 3" CALIPER	B & B
AR	ACER RUBRUM 'REDPOINTE'	REDPOINTE RED MAPLE	2½ - 3" CALIPER	B & B
AC	AESCULUS CARNEA 'FORT MCNAIR'	FORT MCNAIR HORSECHESTNUT	2½ - 3" CALIPER	B & B
PC	PYRUS CHANTICLEER	CHANTICLEER PEAR	2 - 2½" CALIPER	B & B
AG	AMELANCHIER GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2 - 2½" CALIPER	B & B (SINGLE STEM)
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	12 - 14' HT.	B & B (MULTISTEM)
PG	PICEA GLAUCA	WHITE SPRUCE	8 - 10' HT.	B & B
PP	PICEA PUNGENS	COLORADO SPRUCE	8 - 10' HT.	B & B
PA	PICEA ABIES	NORWAY SPRUCE	8 - 10' HT.	B & B
SHRUBS				
VC	VIBURNUM CASSINOIDES	WITHEROD VIBURNUM	2½ - 3' HT.	B & B
RE	RHODODENDRON 'ENGLISH ROSEUM'	ENGLISH ROSEUM RHODODENDRON	2½ - 3' HT.	B & B
CA	CLETHERA ALNIFOLIA	SUMMERSWEET CLETHERA	7 GALLON	CONTAINER
HQ	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	2½ - 3' HT.	B & B
GROUNDCOVERS & PERENNIALS				
DL	HEMEROCALLIS 'STELLA DORO'	STELLA DORO DAYLILY	2 GALLON	CONTAINER
HR	HOSTA 'ROYAL STANDARD'	ROYAL STANDARD HOSTA	2 GALLON	CONTAINER
AS	ASTILBE 'VISIONS IN PINK'	VISIONS IN PINK ASTILBE	2 GALLON	CONTAINER
CAL	CALAMAGROSTIS 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	3 GALLON	CONTAINER



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

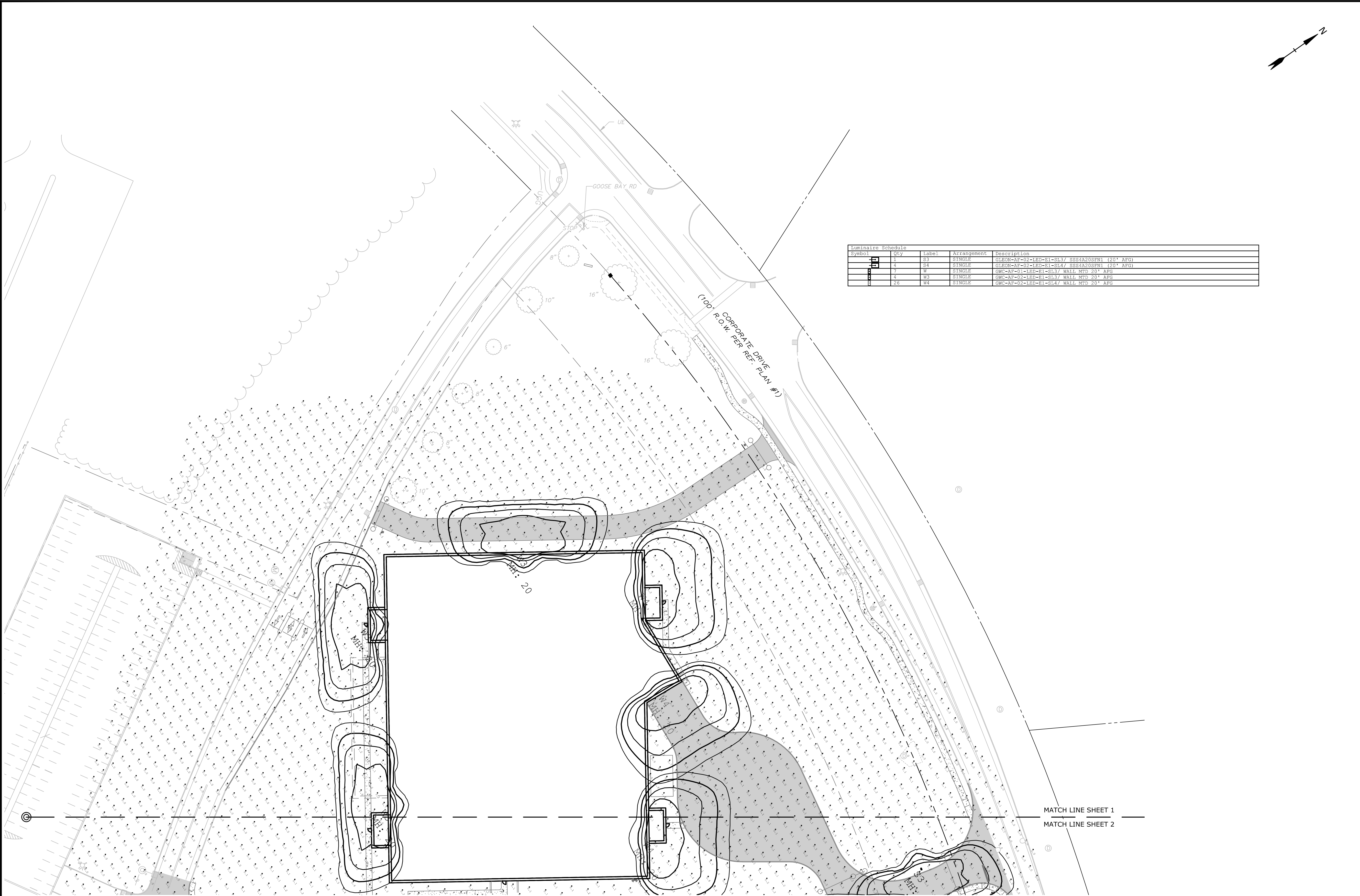
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LANDSCAPE PLAN

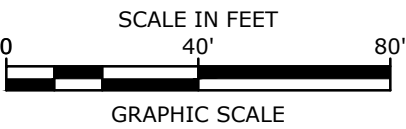
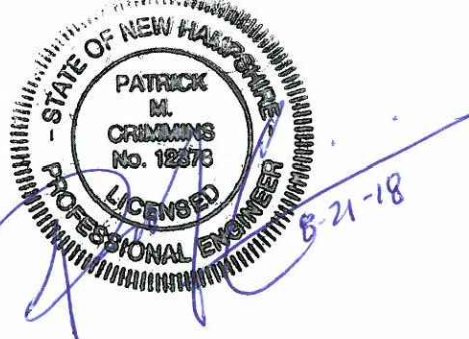
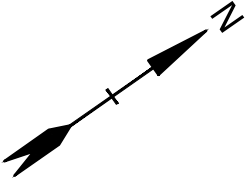
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C-116

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Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
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Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	1	S3	SINGLE	GLEON-AF-02-LED-B1-S13/ SSS4A203FN1 (20' AFG)
	4	S4	SINGLE	GLEON-AF-02-LED-B1-S14/ SSS4A203FN1 (20' AFG)
	7	W	SINGLE	GWC-AF-01-LED-B1-S13/ WALL MTD 20' AFG
	4	W3	SINGLE	GWC-AF-02-LED-B1-S13/ WALL MTD 20' AFG
	26	W4	SINGLE	GWC-AF-02-LED-B1-S14/ WALL MTD 20' AFG



Proposed
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Portsmouth,
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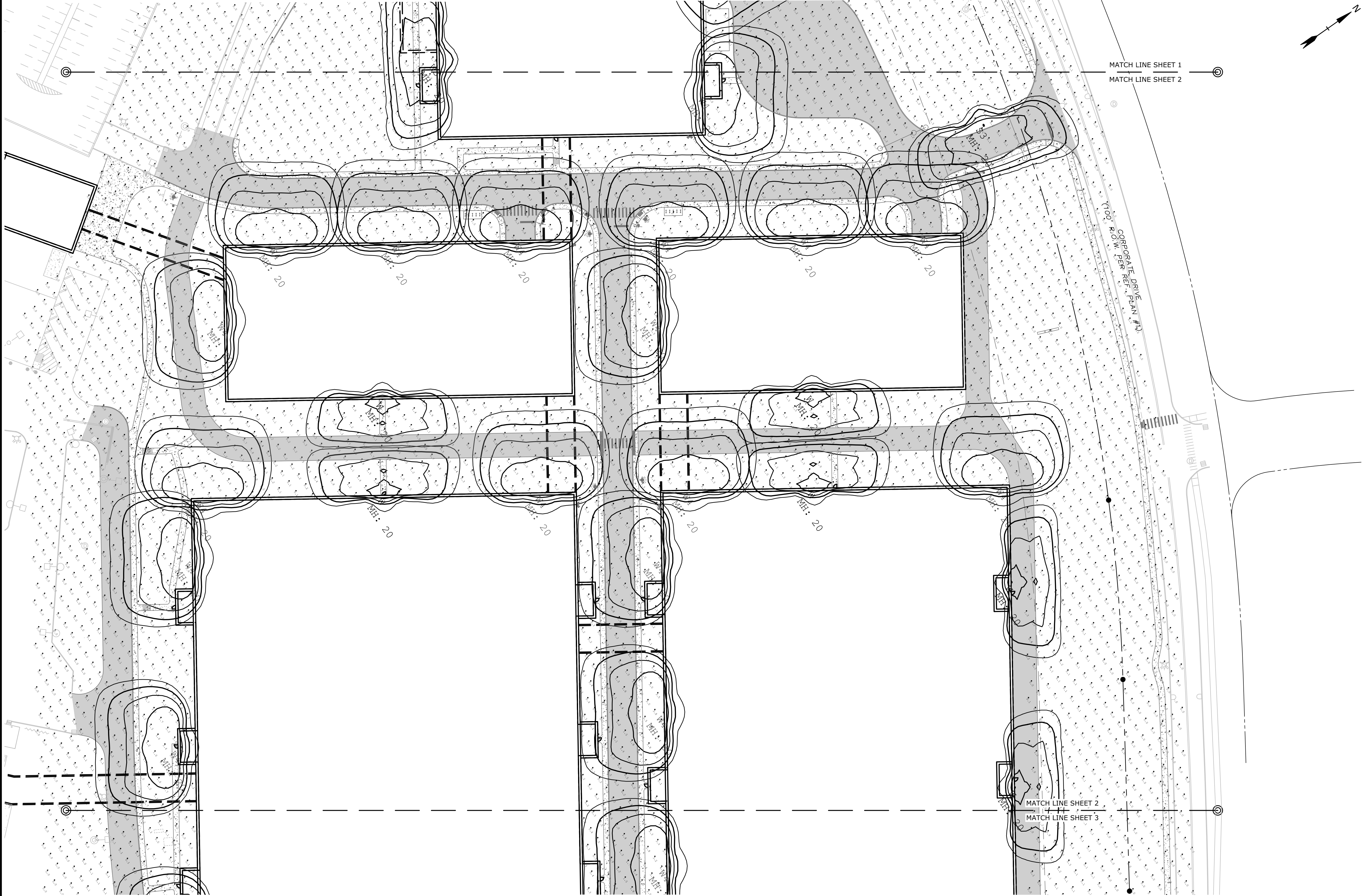
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PHOTOMETRIC LIGHTING
PLAN

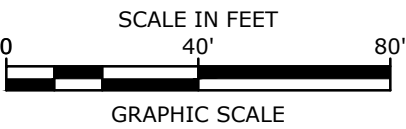
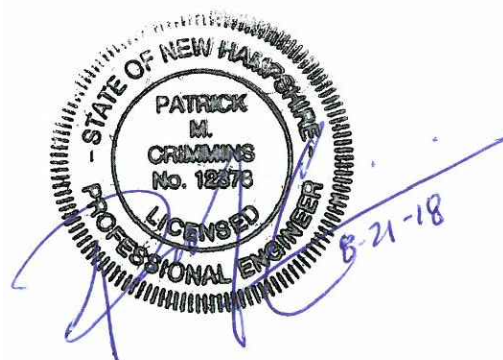
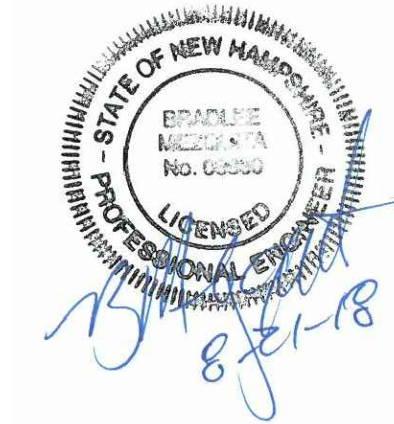
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C-117

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Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	1	S3	SINGLE	GLBON-AF-02-LED-B1-SL3/ SSS4A208FN1 (20' AFG)
	4	S4	SINGLE	GLBON-AF-02-LED-B1-SL4/ SSS4A208FN1 (20' AFG)
	1	W3	SINGLE	GWC-AF-01-LED-B1-SL3/ WALL MTD 20' AFG
	4	W4	SINGLE	GWC-AF-02-LED-B1-SL3/ WALL MTD 20' AFG
	26	W4	SINGLE	GWC-AF-02-LED-B1-SL4/ WALL MTD 20' AFG



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PHOTOMETRIC LIGHTING PLAN

SCALE: AS SHOWN

C-118

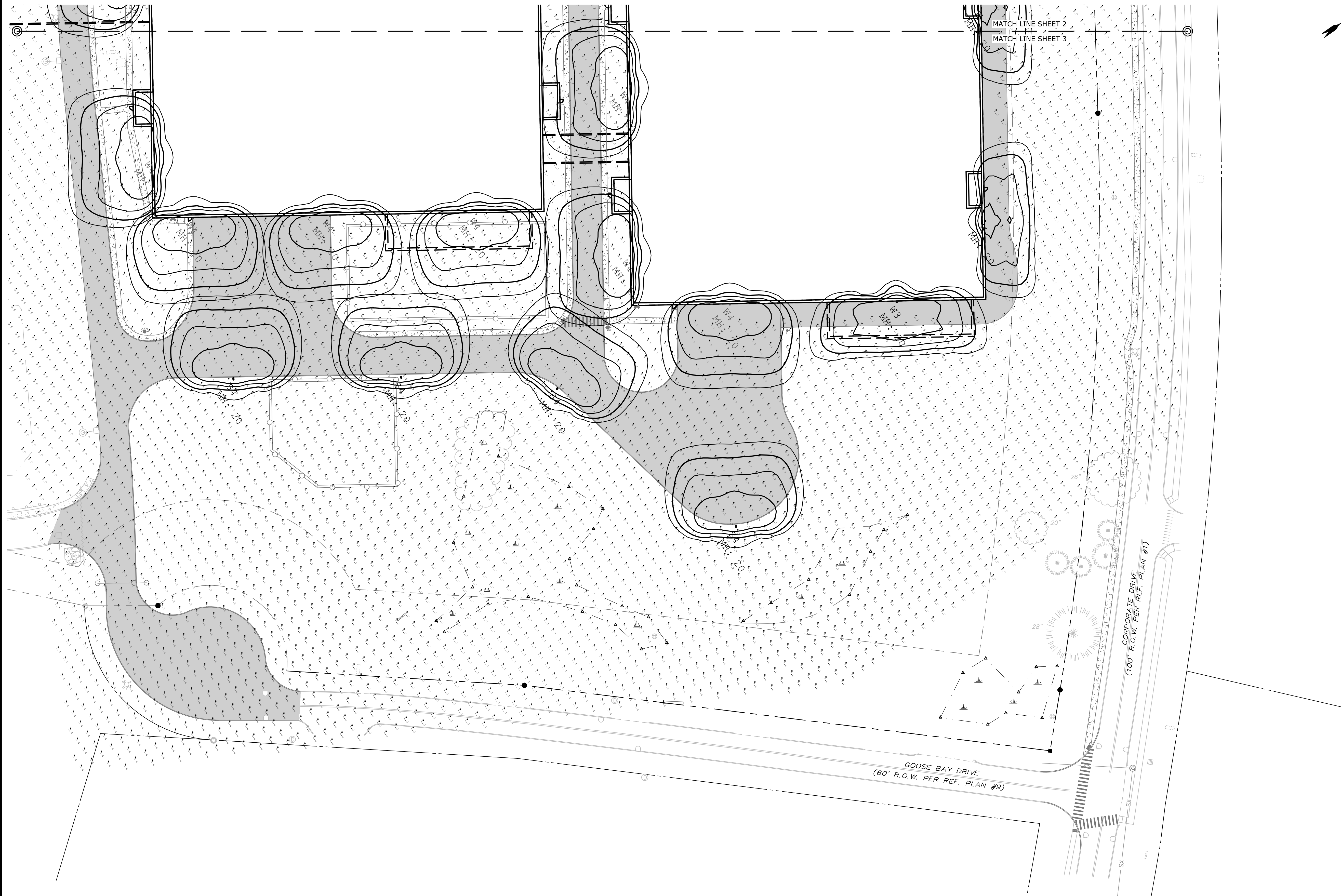
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C-119



Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	1	S3	SINGLE	GLEON-AP-02-LED-E1-SL3/ SSS4A20SFNI (20' AFG)
	4	S4	SINGLE	GLEON-AP-02-LED-E1-S14/ SSS4A20SFNI (20' AFG)
	7	W	SINGLE	GWC-AP-01-LED-E1-SL3/ WALL MTD 20' AFG
	4	W3	SINGLE	GWC-AP-02-LED-E1-S13/ WALL MTD 20' AFG

PROJECT OWNER:	PEASE DEVELOPMENT AUTHORITY 55 INTERNATIONAL DRIVE PORTSMOUTH, NH 03801
PROJECT APPLICANT:	LONZA BIOLOGICS 101 INTERNATIONAL DRIVE PORTSMOUTH, NH 03801
PROJECT ADDRESS:	70 & 80 CORPORATE DRIVE PORTSMOUTH, NH 03801
PROJECT LATITUDE:	43°-04'-59.0"N
PROJECT LONGITUDE:	71°-48'-09.7"W

THE PROJECT CONSISTS OF THE EXPANSION OF LONZA BIOLOGICS, WHICH INCLUDES THE CONSTRUCTION OF 3 PROPOSED BUILDINGS, 2 PARKING GARAGES AND ASSOCIATED SITE IMPROVEMENTS

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 23 ACRES.

BASED ON THE HIGH INTENSITY SOIL SURVEY PREPARED BY GOVE ENVIRONMENTAL SERVICES, INC. IN DECEMBER 2015, THE SITE SOILS VARY FROM WELL DRAINED TO VERY POORLY DRAINED AND PRIMARILY CONSIST OF SOMEWHAT POORLY DRAINED SOILS.

THE STORM WATER RUNOFF WILL ULTIMATELY DISCHARGE INTO HODGSON BROOK

1. CUT AND CLEAR TREES.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:

- NEW CONSTRUCTION
- CONTROL OF DUST
- NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
- CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPs PRIOR TO DIRECTING RUNOFF TO THEM
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
10. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
 - A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
 - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.;
 - E. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.
2. WINTER STABILIZATION PRACTICES:
 - A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
 - B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
 - C. AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
 - A. TEMPORARY SEEDING;
 - B. MULCHING.

4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY NOVEMBER 15.

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ADJACENT AREAS.

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

1. TEMPORARY GRASS COVER:
 - A. SEEDBED PREPARATION:
 - a. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE;
 - B. SEEDING:
 - a. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE;
 - b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED;
 - c. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING;
 - C. MAINTENANCE:
 - a. TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).

2. VEGETATIVE PRACTICE:
 - a. FOR PERMANENT MEASURES AND PLANTINGS:
 - a. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
 - b. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
 - c. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
 - d. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
 - e. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
 - f. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
 - g. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
 - h. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW. MANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):

- A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
 - A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
 - B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
 - C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
 - D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

1. FIRE-FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. EFFLUENT WASTE WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;

- ## 12. LANDSCAPE IRRIGATION.

1. WASTE MATERIAL:
 - A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
 - B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
 - C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
 - A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
 - B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
 - A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

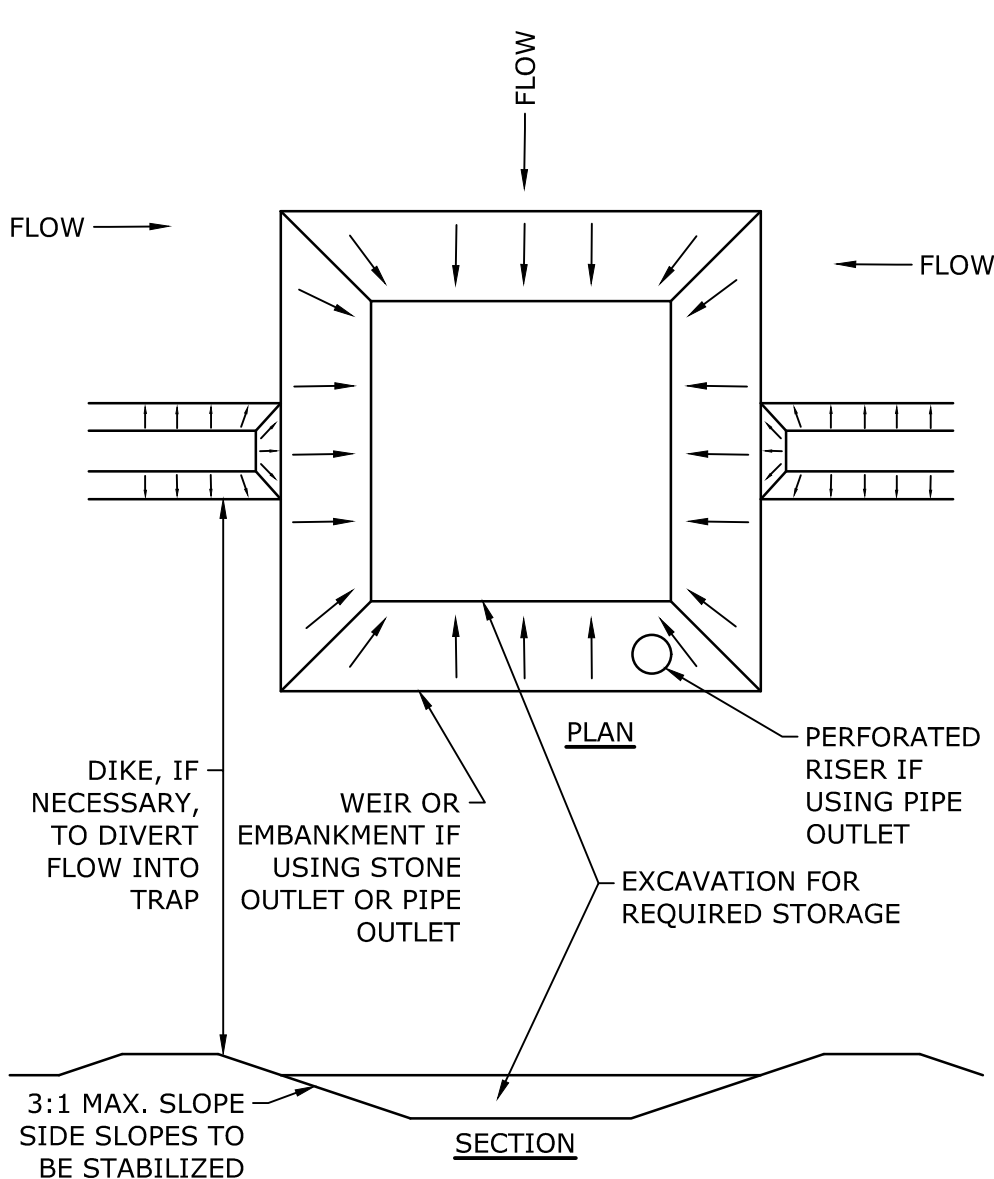
1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
 - A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
 - a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
 - b. ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE;
 - c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
 - d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
 - e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
 - f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
 - B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
 - g. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
 - h. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
 - i. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
 - C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:

- a. PETROLEUM PRODUCTS:
 - ALL ON SITE PETROLEUM VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
 - PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- b. FERTILIZERS:
 - FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
 - ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
 - STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
- c. PAINTS:
 - ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
 - EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
 - EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
- D. SPILL CLEANUP PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
 - a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
 - b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
 - c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
 - d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
 - e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
 - f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
- E. VEHICLE FUELING AND MAINTENANCE PRACTICE:
 - a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICAL FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
 - b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
 - c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
 - d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
 - e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
 - f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.

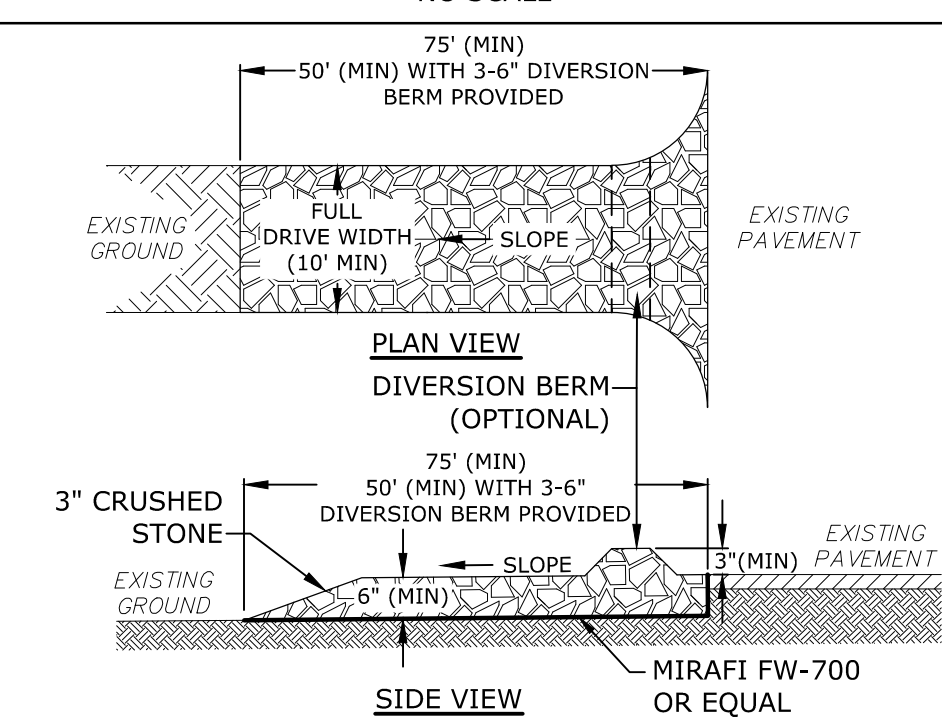
THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:

1. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
2. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
3. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
4. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

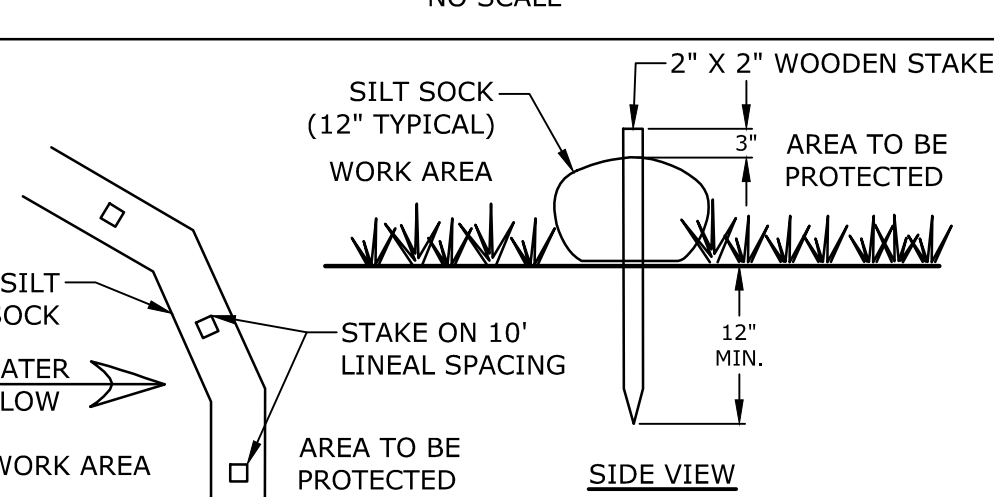


1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING AREA TO A SINGLE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. TRAP OUTLET SHALL BE MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP.
5. TRAP SHALL DISCHARGE TO A STABILIZED AREA.
6. TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

NO SCALE



STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

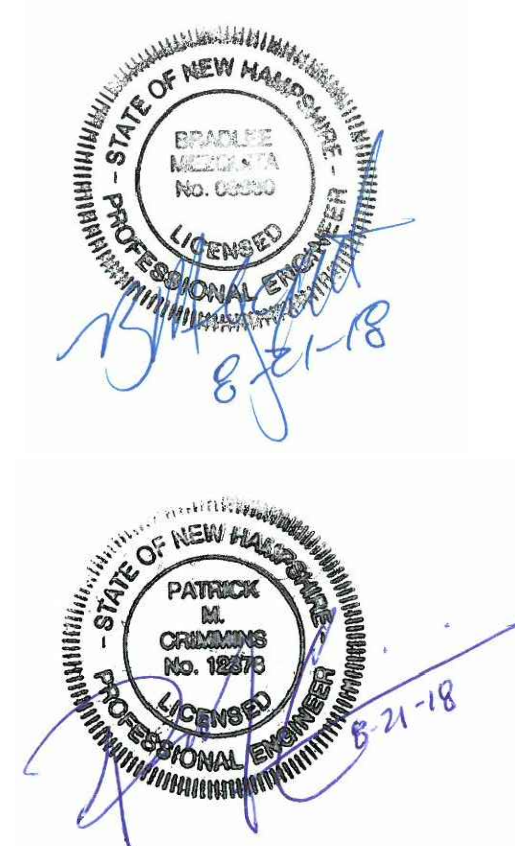
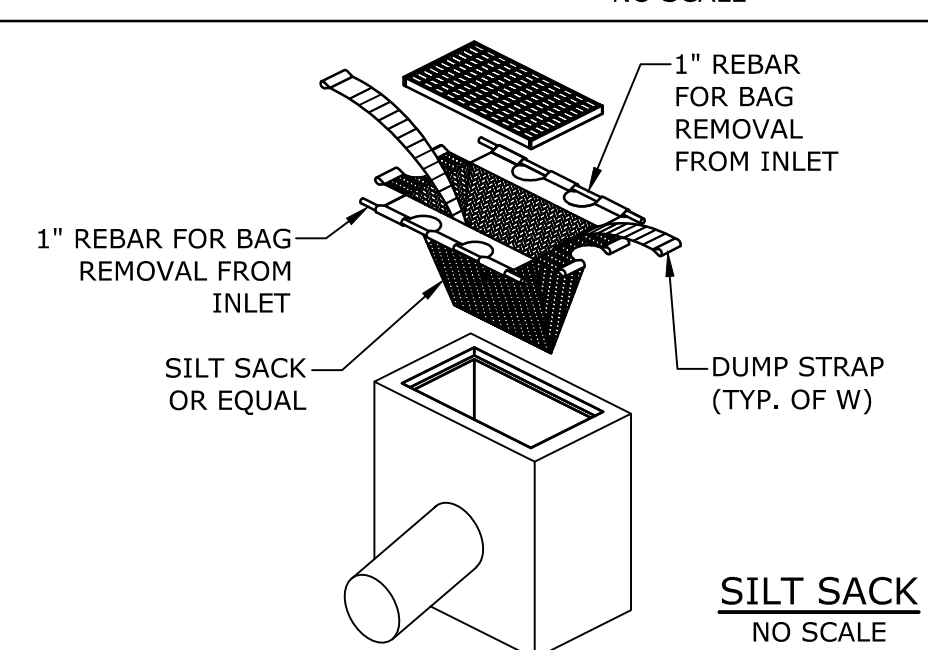


PLAN VIEW

NOTES:

1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL
2. INSTALL SILT SOCK IN ACCORDANCE WITH...

NO SCALE



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New Hampshire

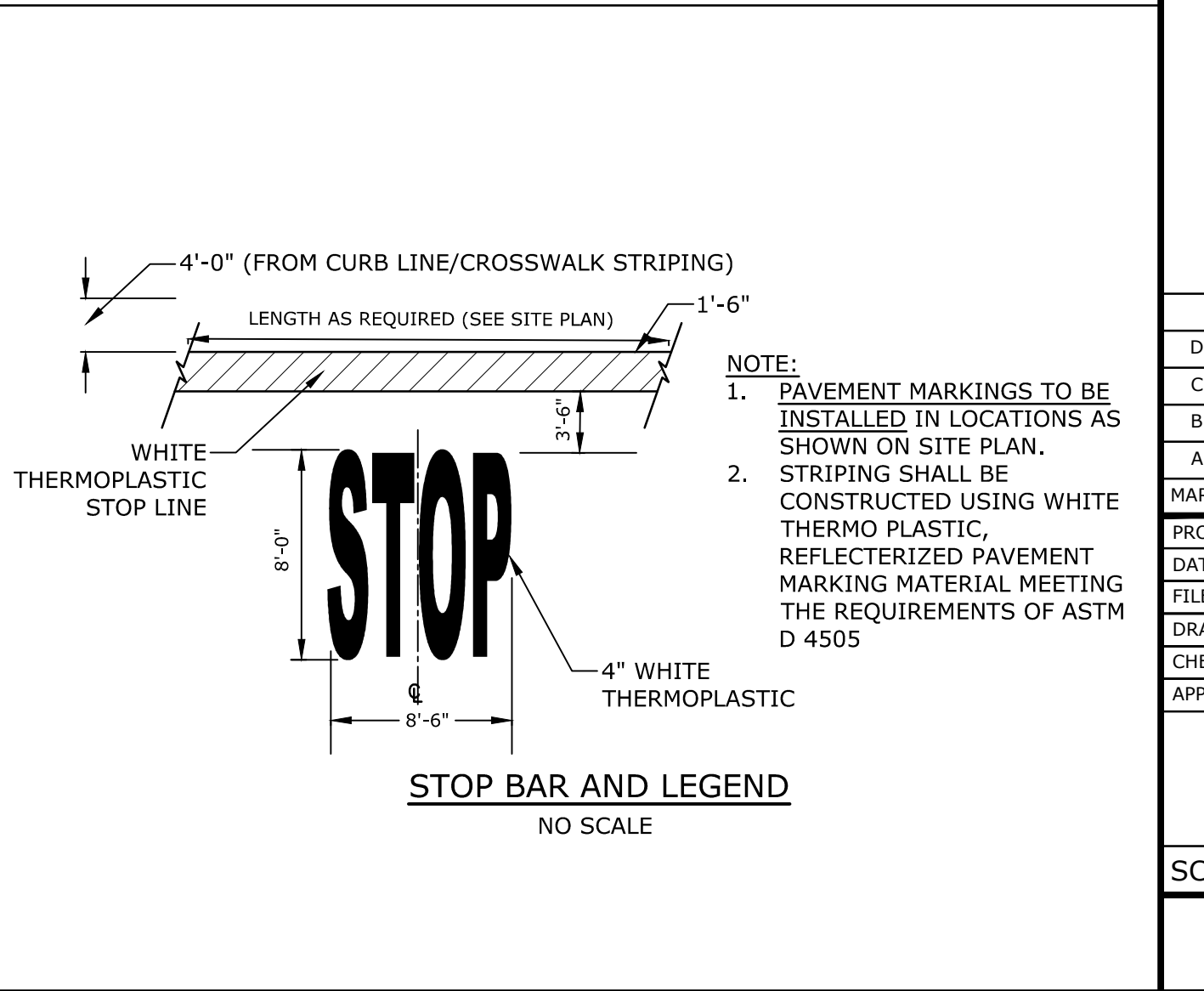
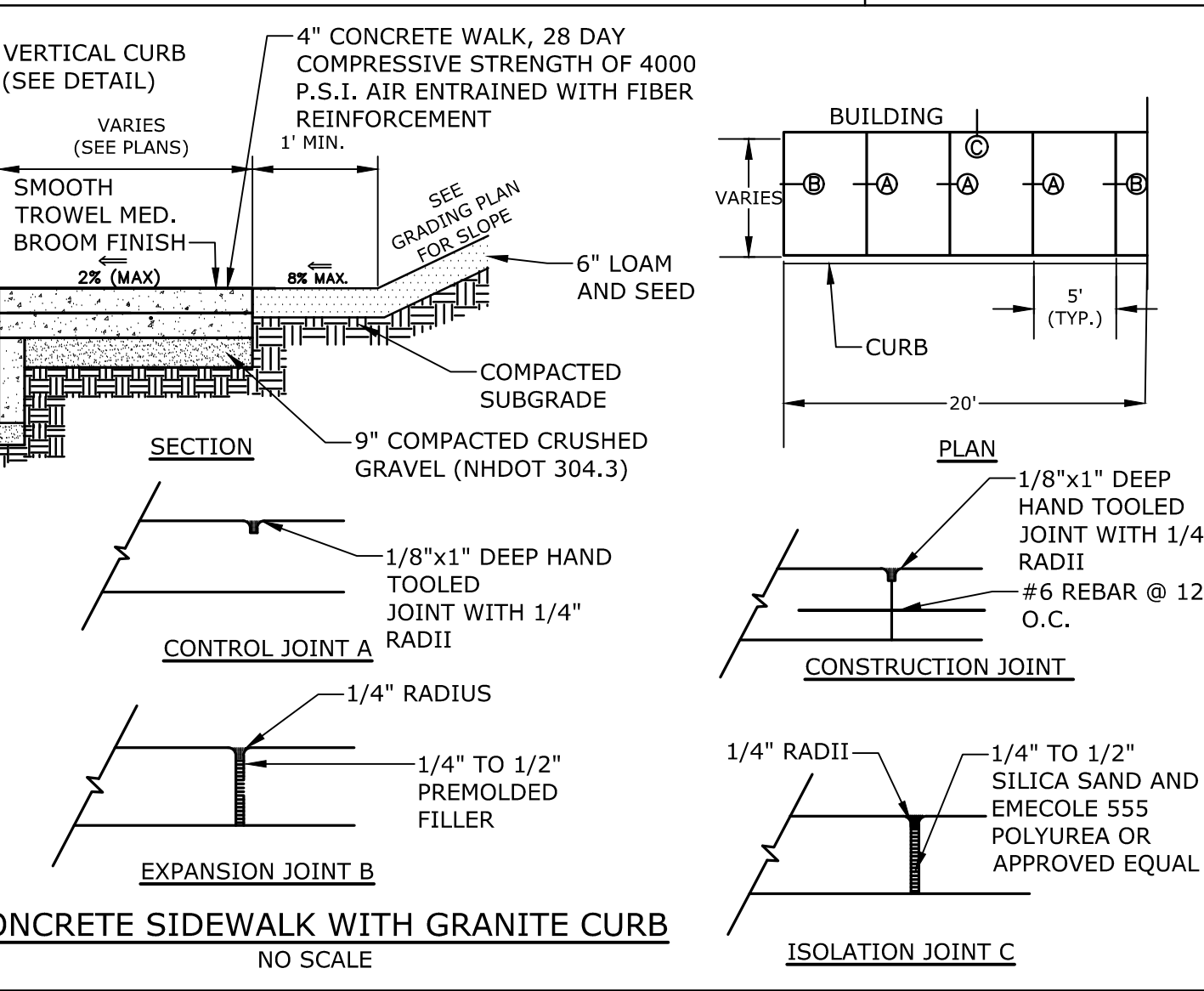
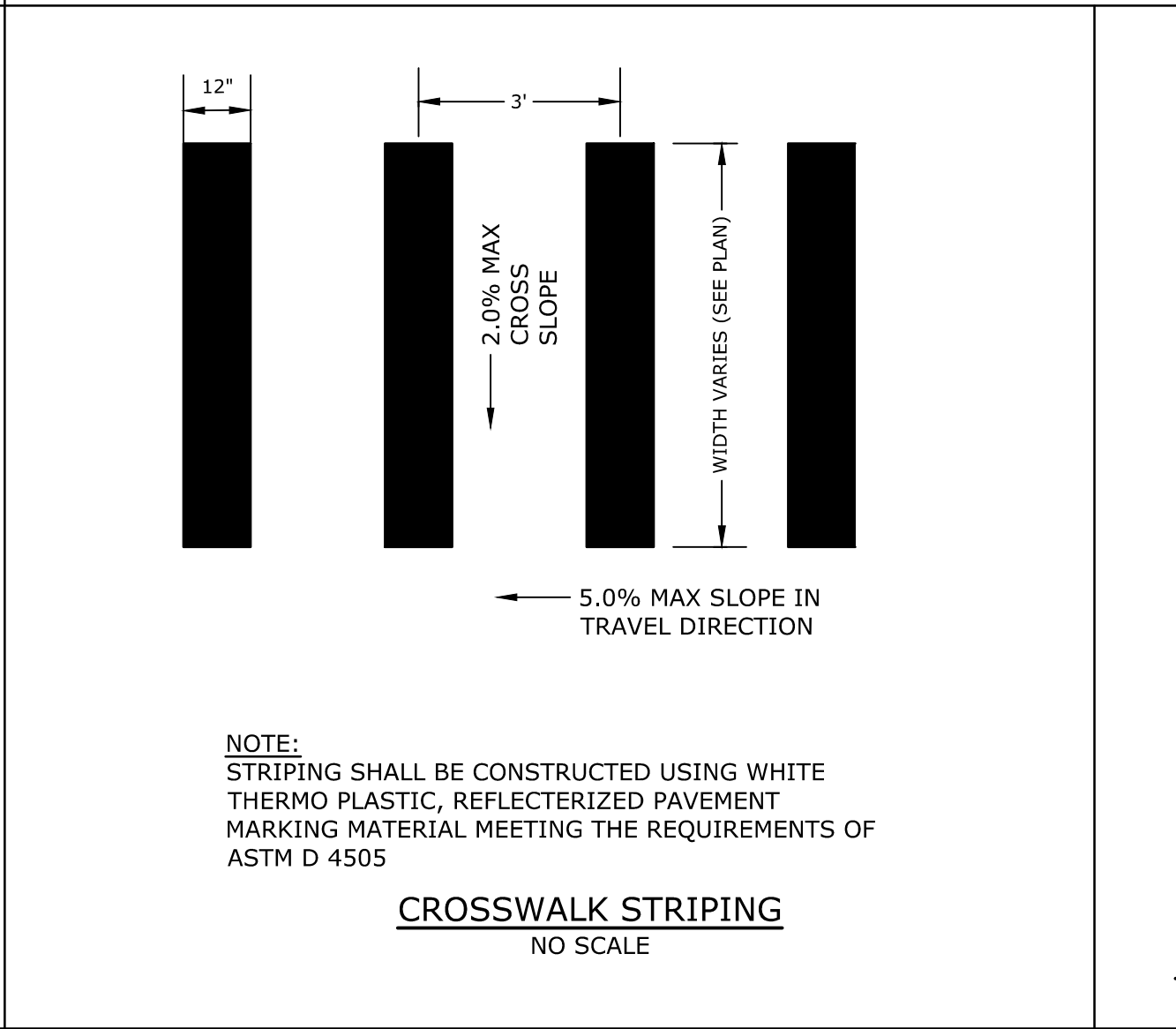
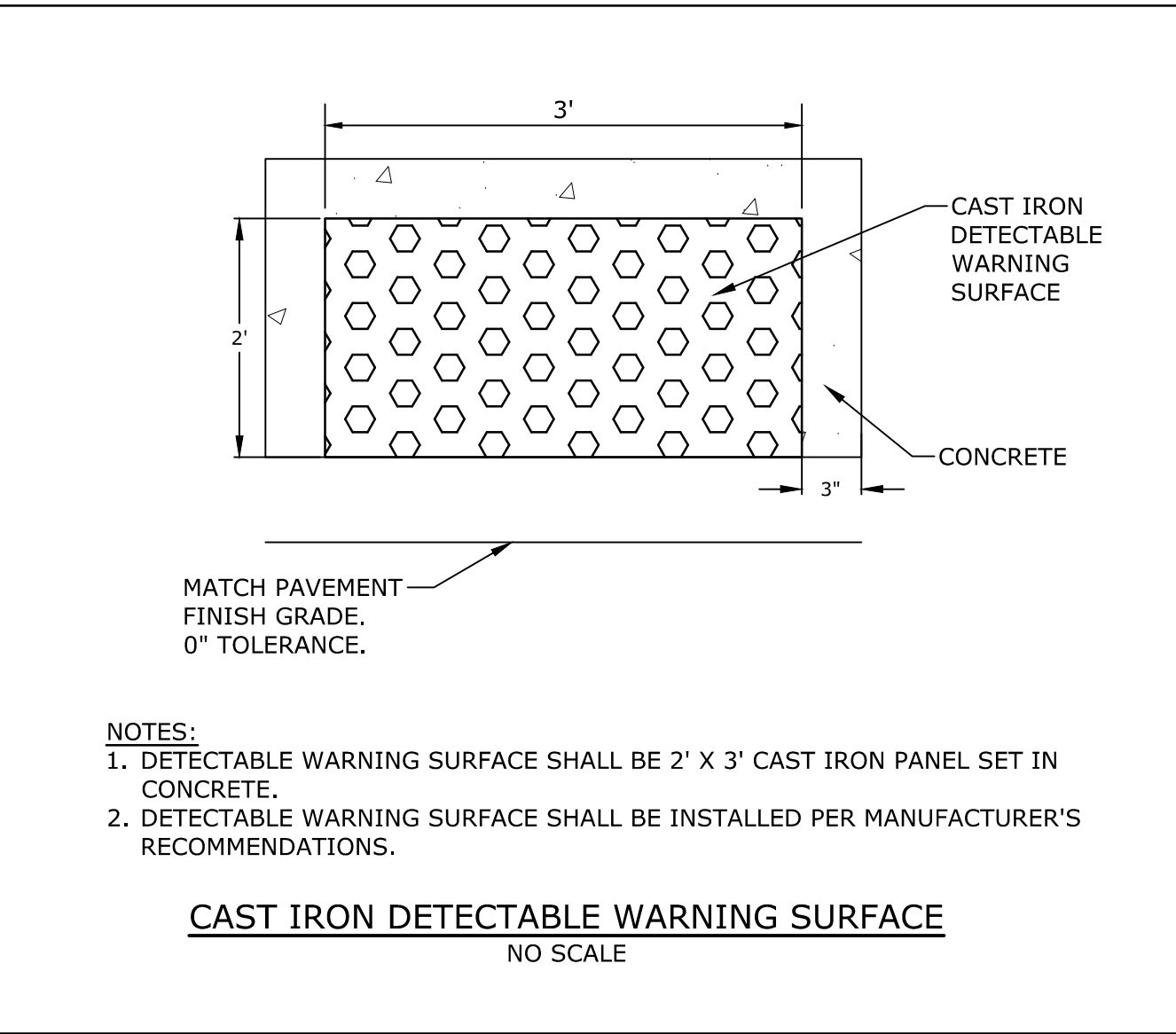
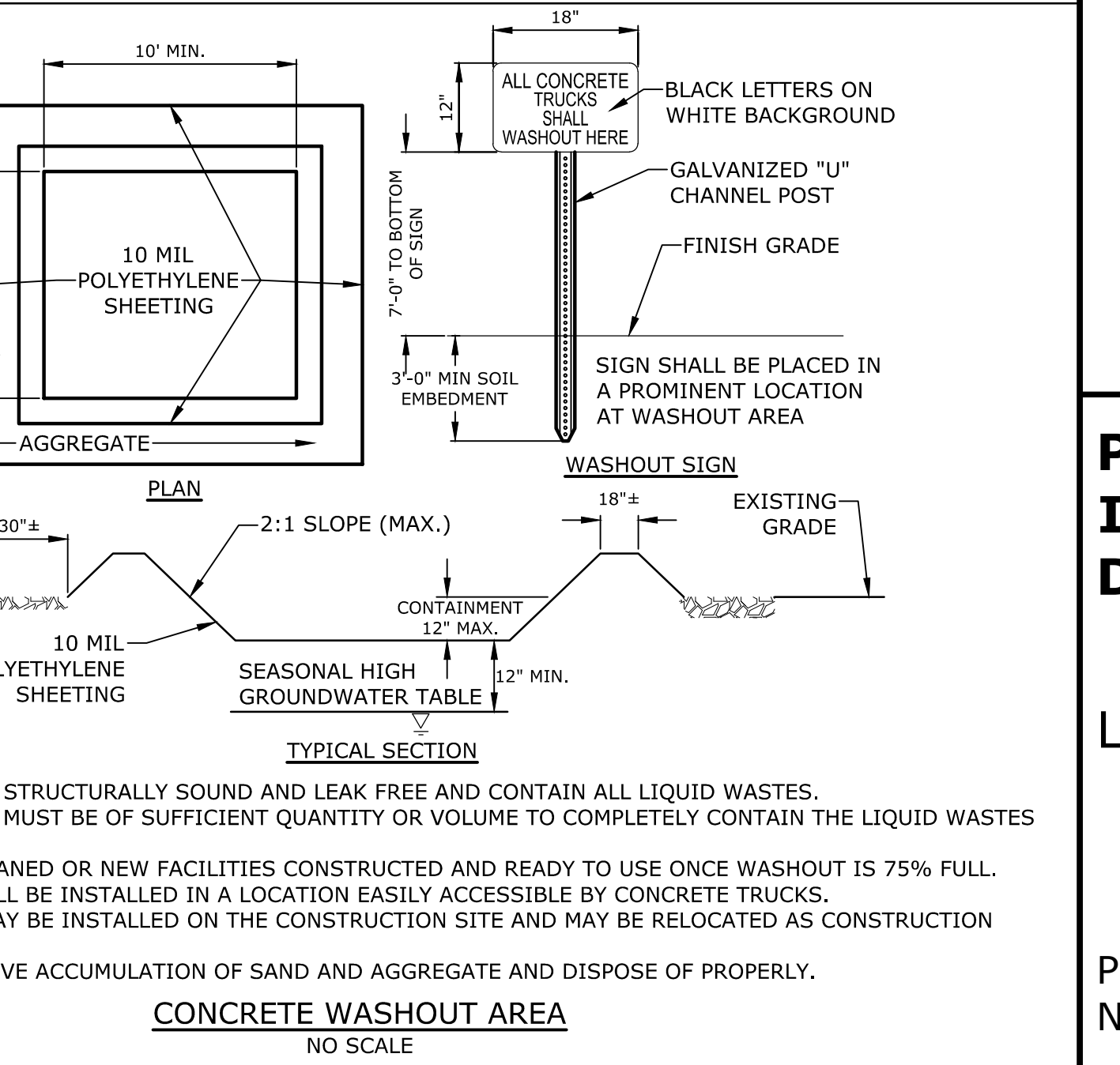
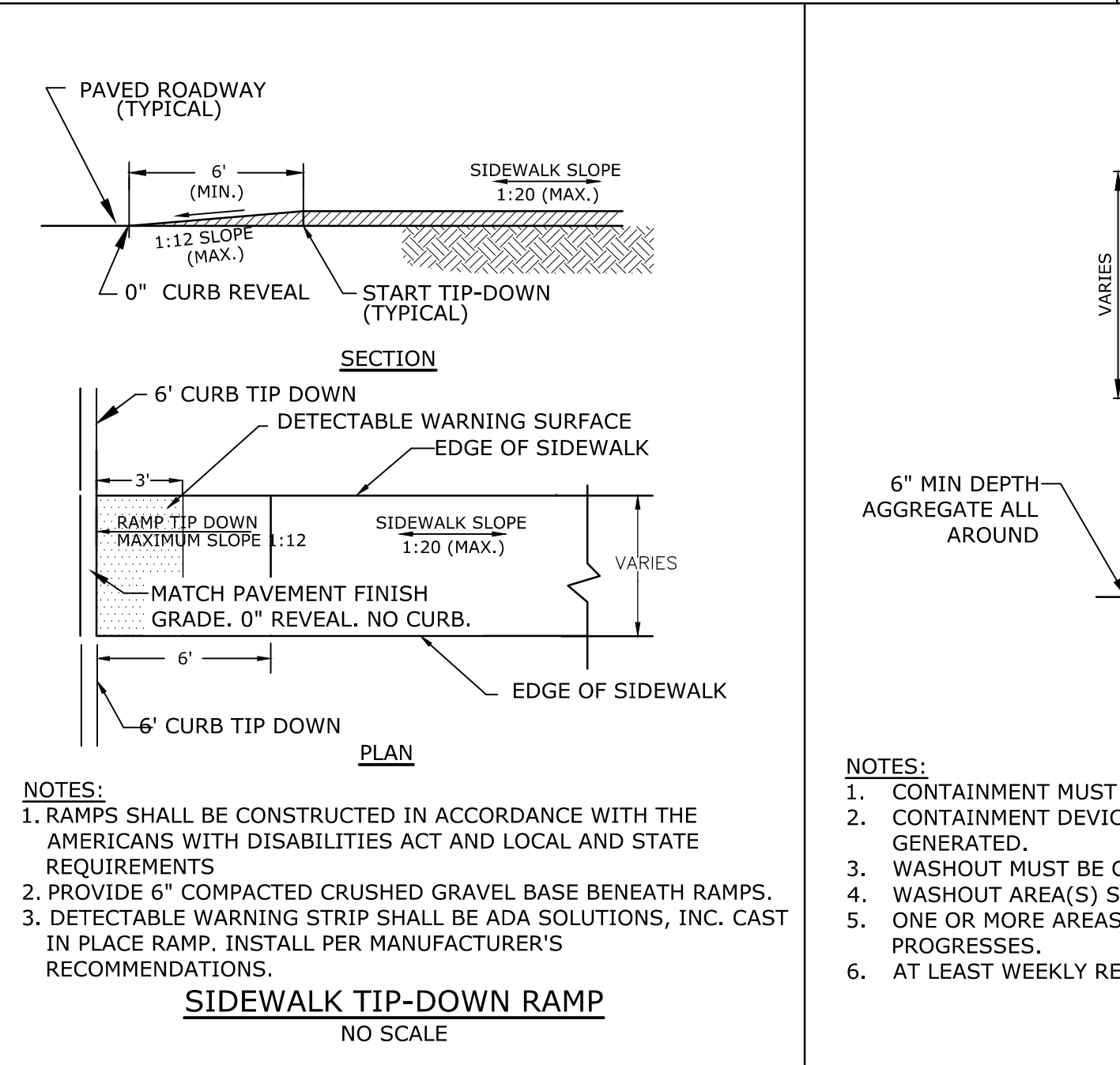
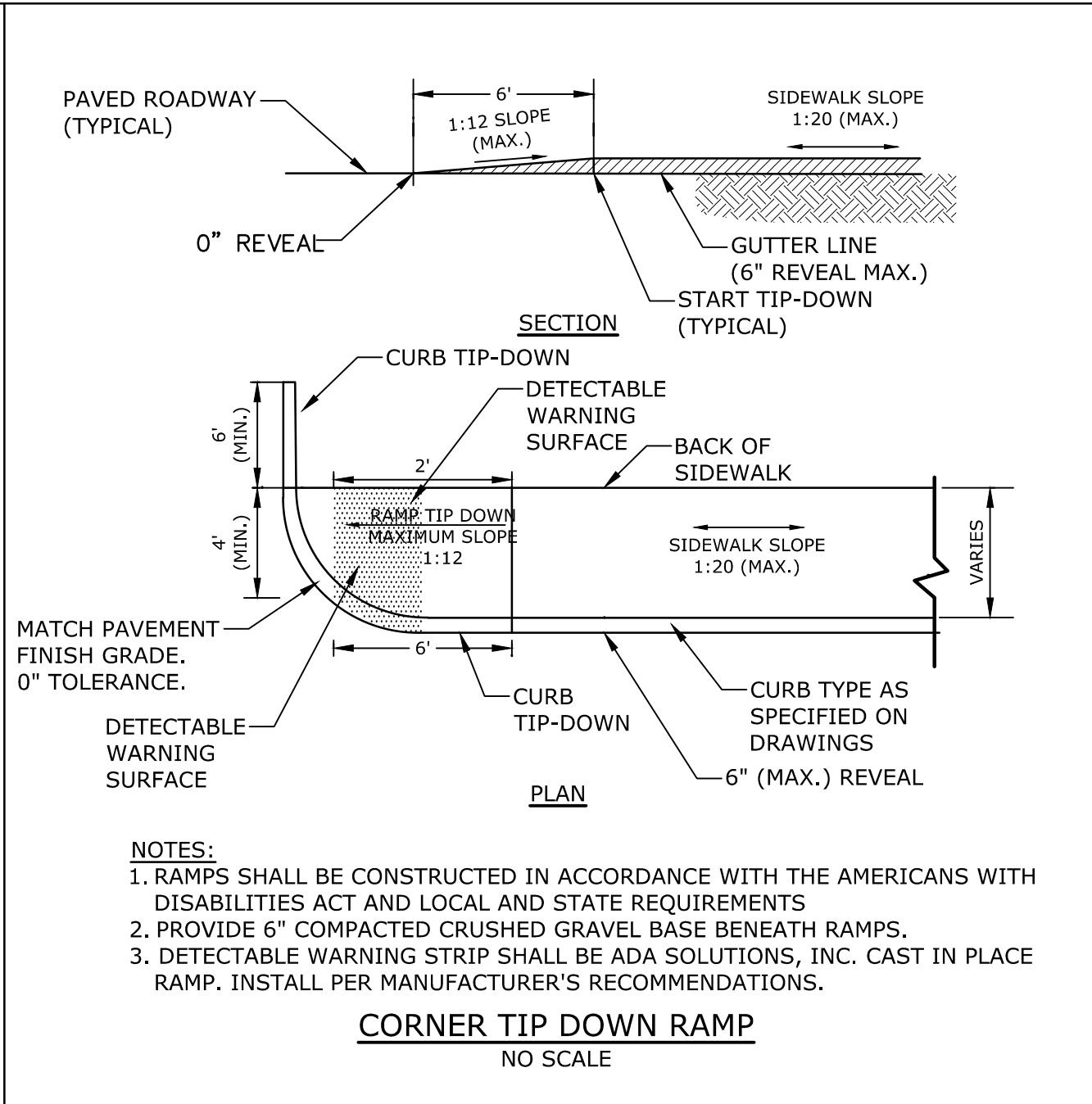
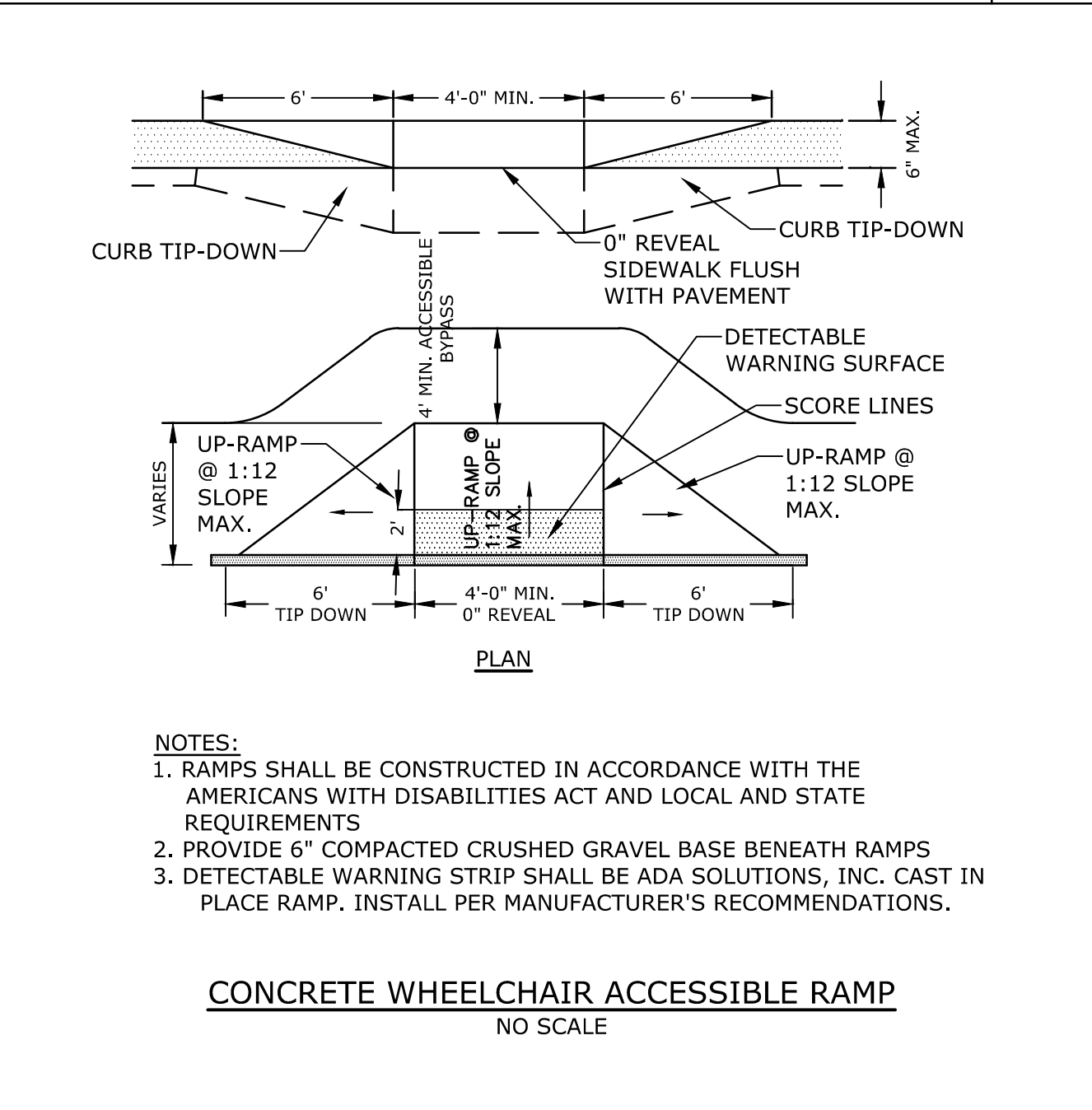
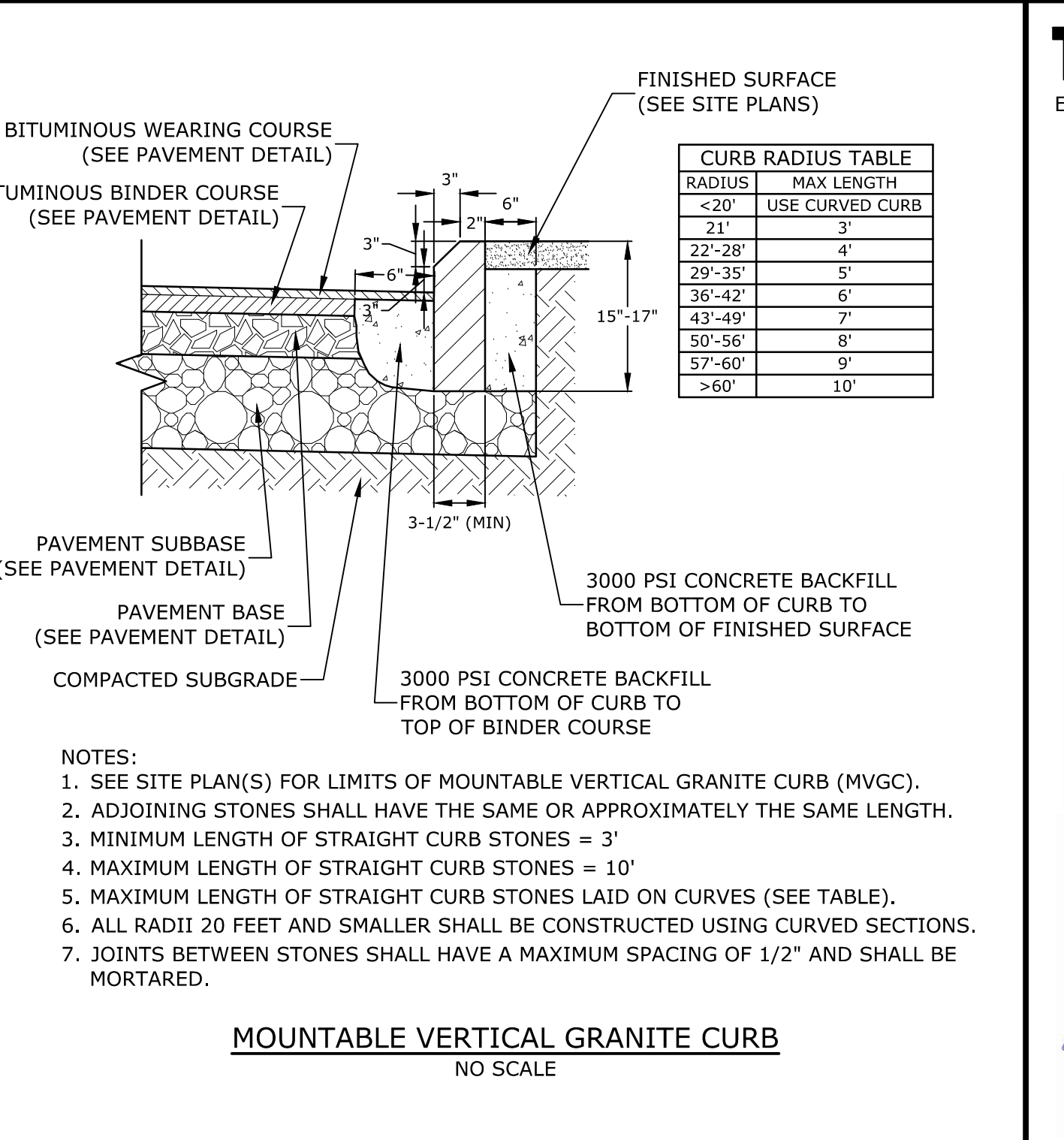
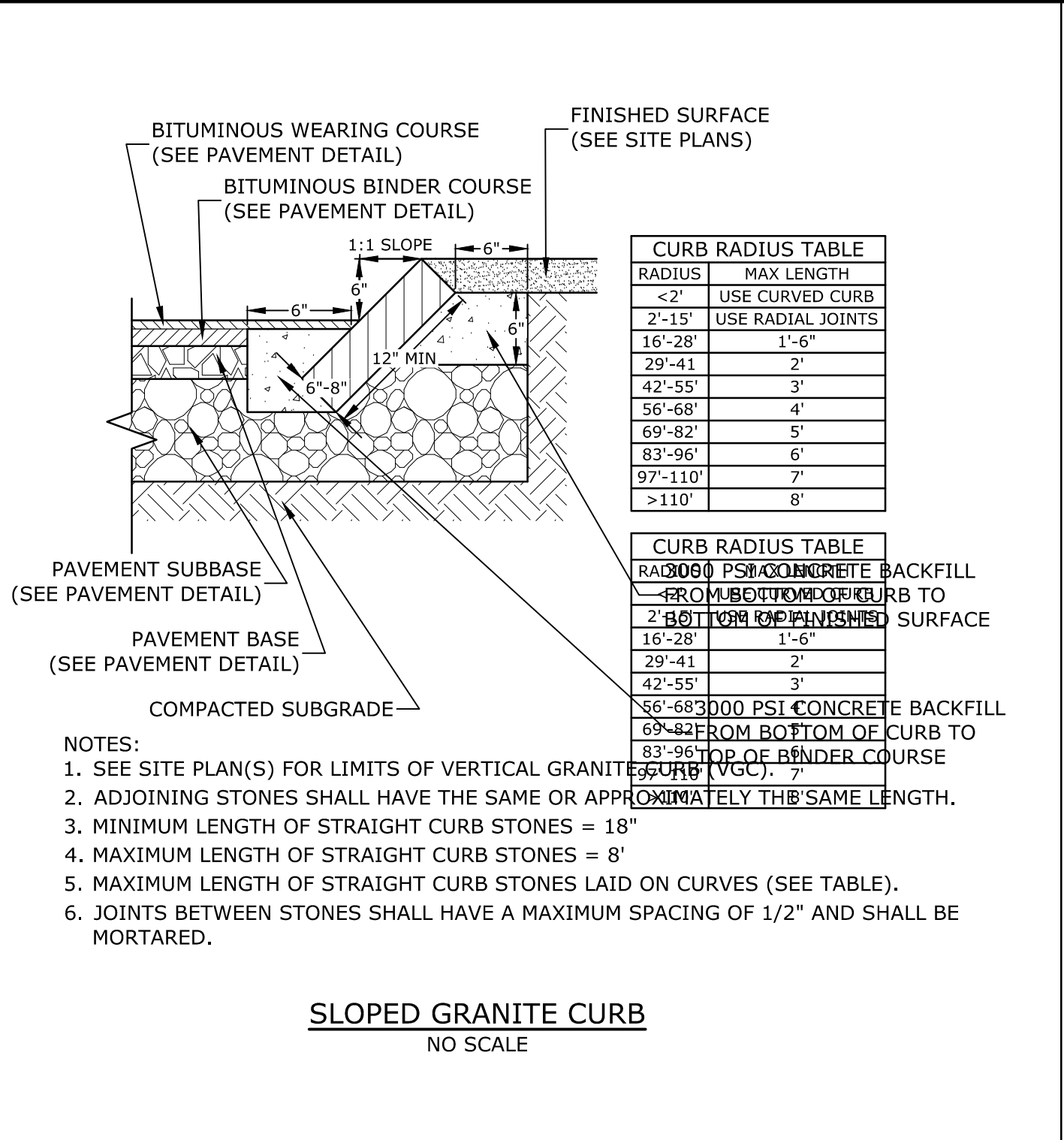
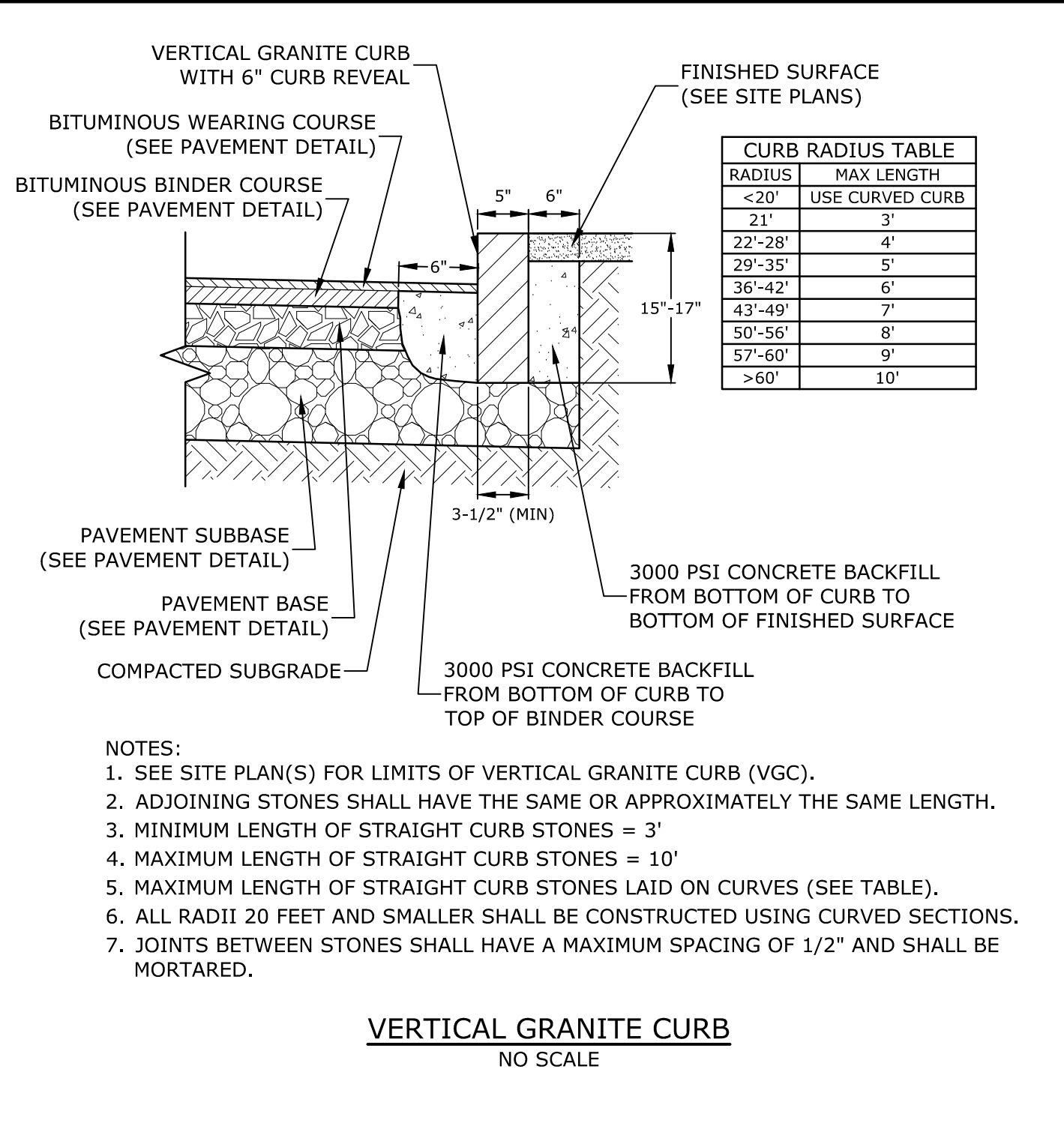
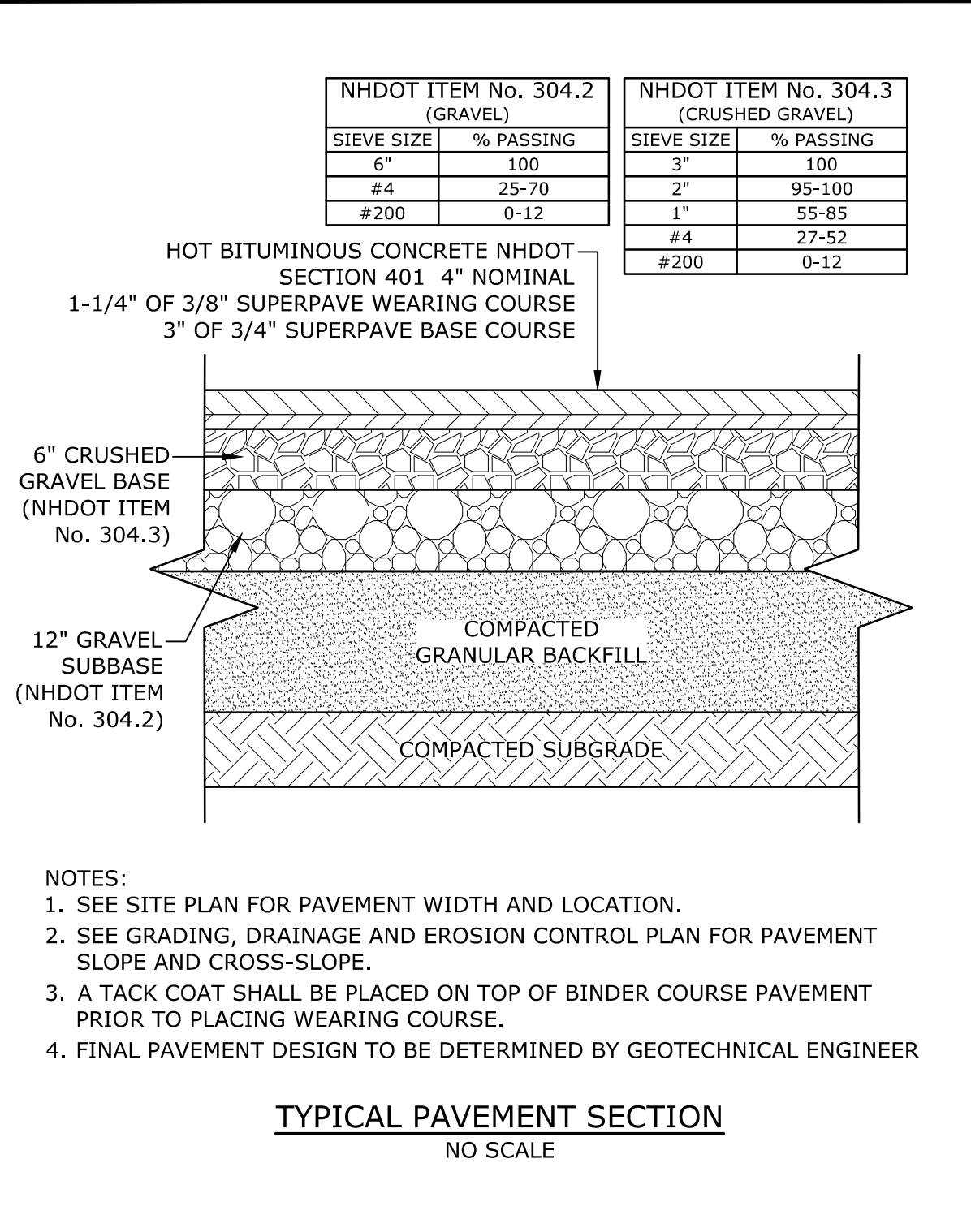
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D	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NO:		L-0700-013
DATE:		04/03/2018
FILE: L0700-CD-501 to C-508.dwg		
DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM

EROSION CONTROL NOTES

SCALE: AS SHOWN

C-501

Last Save Date: August 20, 2018 3:51 PM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700-CD-501 to C-508.dwg Layout Tab: C-502
Figures\AutoCAD\Sheet\Drawings



Tighe&Bond
Engineers | Environmental Specialists

Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
MARK	DATE	DESCRIPTION
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DATE: 04/03/2018		
FILE: L0700-CD-501 to C-508.dwg		
DRAWN BY: NAH		
CHECKED: PMC		
APPROVED: BLM		
DETAILS SHEETS		
SCALE: AS SHOWN		
C-502		

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Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L0700-CD-501 to C-508.dwg Layout Tab: C-503

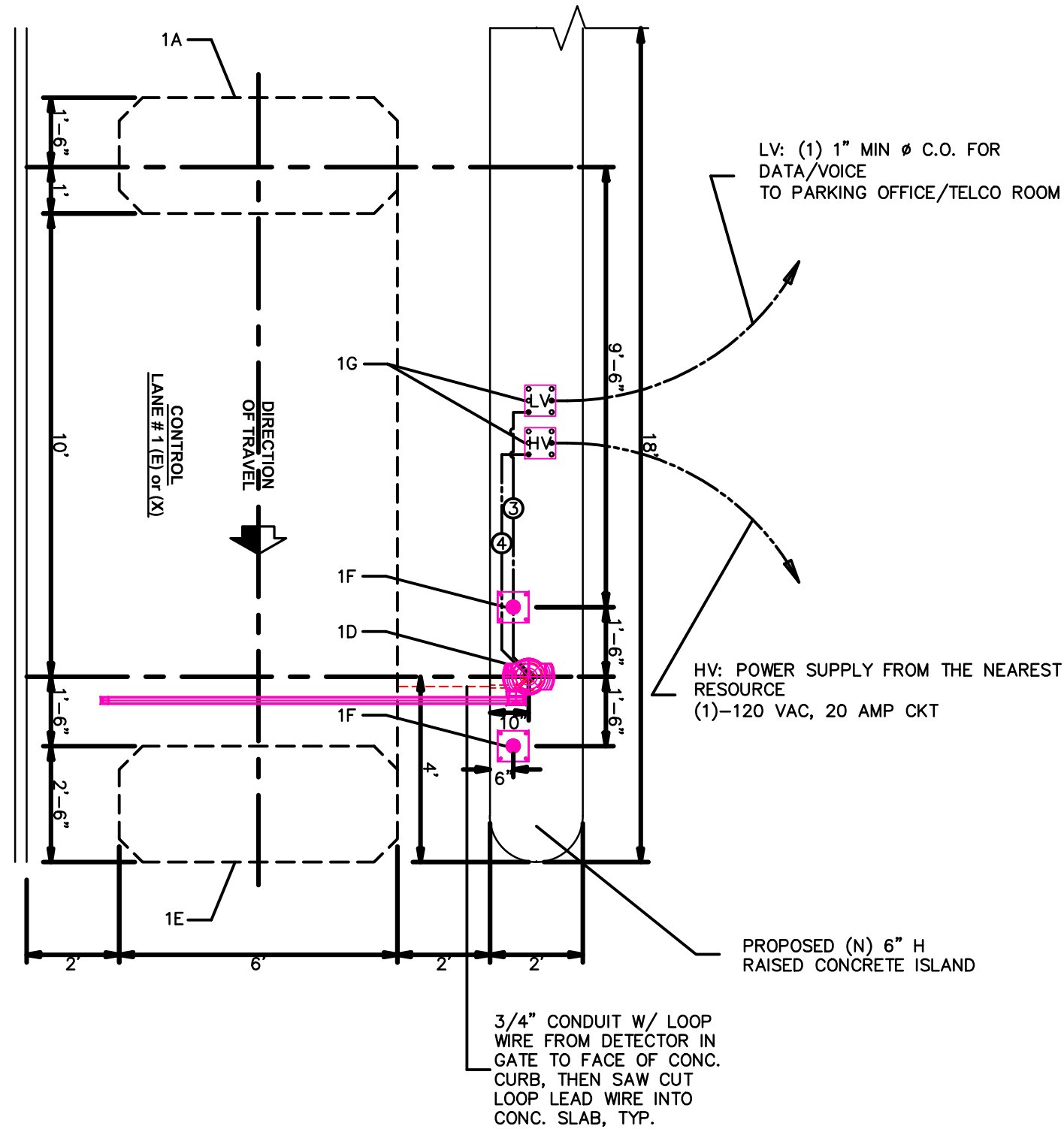
- LEGEND**
- ① 1" ϕ C.O., ARONET CABLE (DATA)
 - ② 22/4 CAT3, PVC (VOICE)
 - ③ 3/4" ϕ C.O., 22/8 CABLE O.S., PVC (DATA)
 - ④ ONE (1) 115VAC, 20AMP CIRCUIT (POWER)

CONTROL LANE GENERAL NOTES:

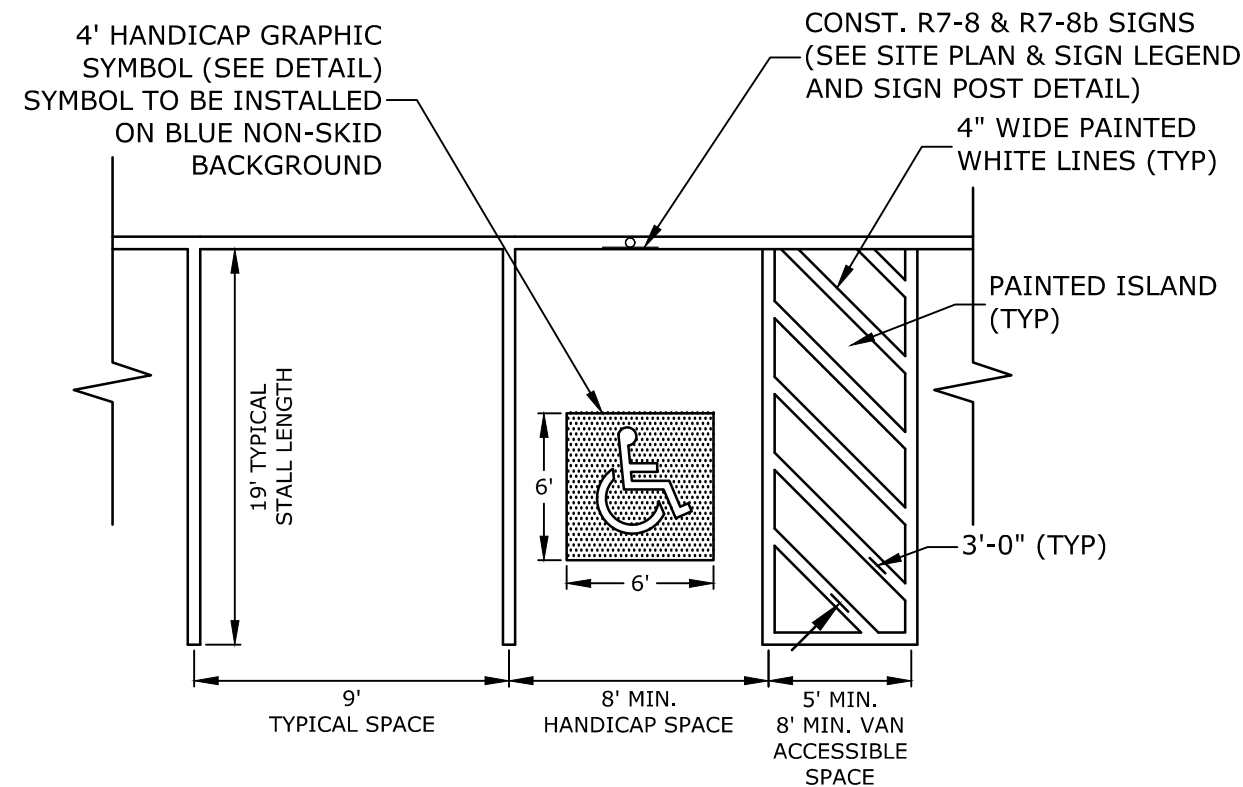
- THIS DRAWING IS NOT TO BE USED FOR ELECTRICAL CIRCUITRY, REFER TO ELECTRICAL DRAWINGS.
- DENOTES CONDUIT AND WIRE FOR POWER OR PULL WIRE FOR CONTROLS BY ELECTRICAL CONTRACTOR.
- DENOTES CONDUIT AND WIRE BY ELECTRICAL CONTRACTOR.
- C.O. (CONDUIT ONLY) DENOTES CONDUIT AND PULL WIRE.
- STUB-UP CONDUIT 8" ABOVE TOP OF CONCRETE ISLAND PLUS 3'-0" OF WIRE FOR PARKING EQUIPMENT SUPPLIER.
- ELECTRICAL CONTRACTOR SHALL VERIFY WITH PARKING EQUIPMENT SUPPLIER AS TO THE ACTUAL POWER REQUIREMENTS TO EACH LOCATION BEFORE START OF WORK.
- ELECTRICAL CONTRACTOR SHALL VERIFY WITH INTERCOM SYSTEM SUPPLIER AS TO THE ACTUAL CONDUIT SIZE REQUIRED BEFORE START OF WORK.
- CONCRETE CURBS SHALL BE 6" HIGH UNO.
- FOR ADDITIONAL PARKING EQUIPMENT REQUIREMENTS, REFER TO SPECS.
- COORDINATE WITH ELECTRICAL DRAWINGS.

PARKING CONTROL EQUIPMENT LIST:

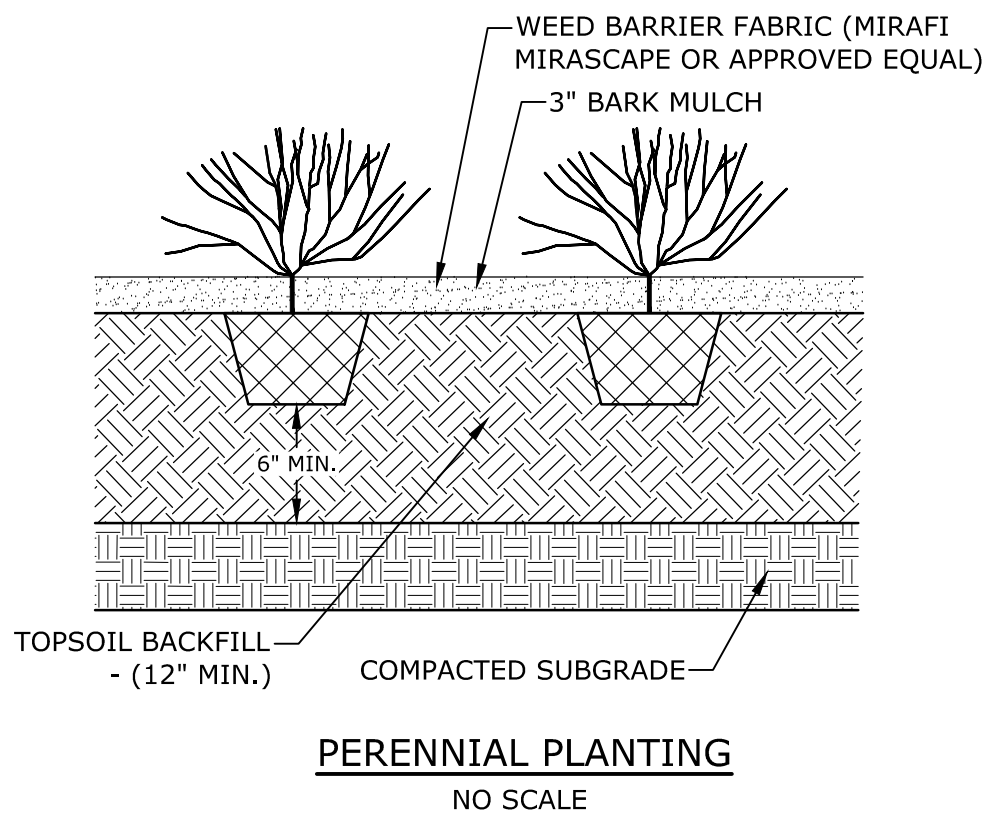
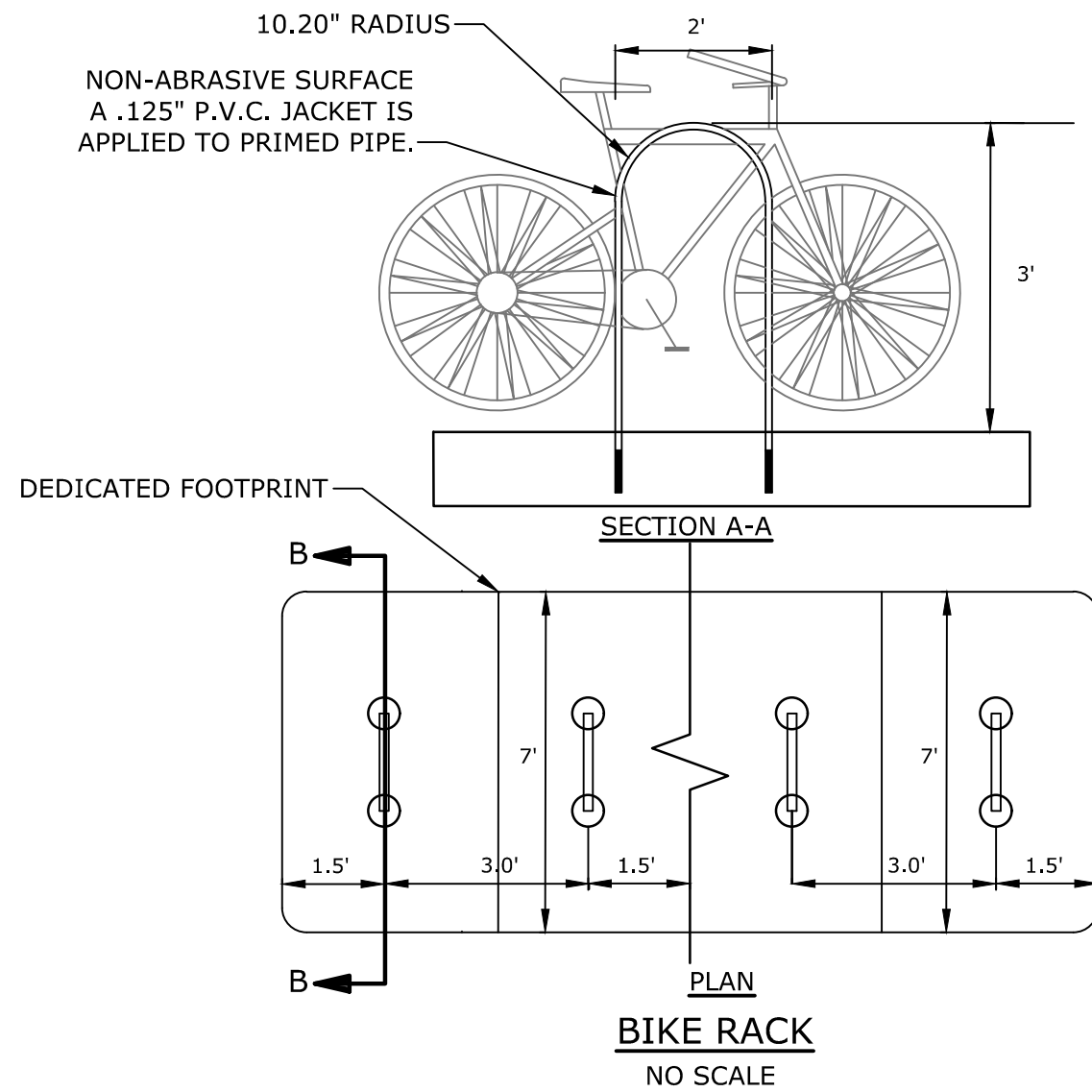
- CONTROL LANE # 1 (E) or (X)
- 1A - ARMING LOOP DETECTOR ASSEMBLY
 - 1B - SKIDATA ENTRY/EXIT COLUMN UNLIMITED (See Detail)
 - 1C - TWO-WAY INTERCOM UNIT
 - 1D - SKIDATA BARRIER GATE (See Detail)
 - 1E - CLOSING LOOP DETECTOR ASSEMBLY
 - 1F - PROTECTION POST
 - 1G - INGROUND JUNCTION BOXES (8"x8"x4") FOR POWER & DATA



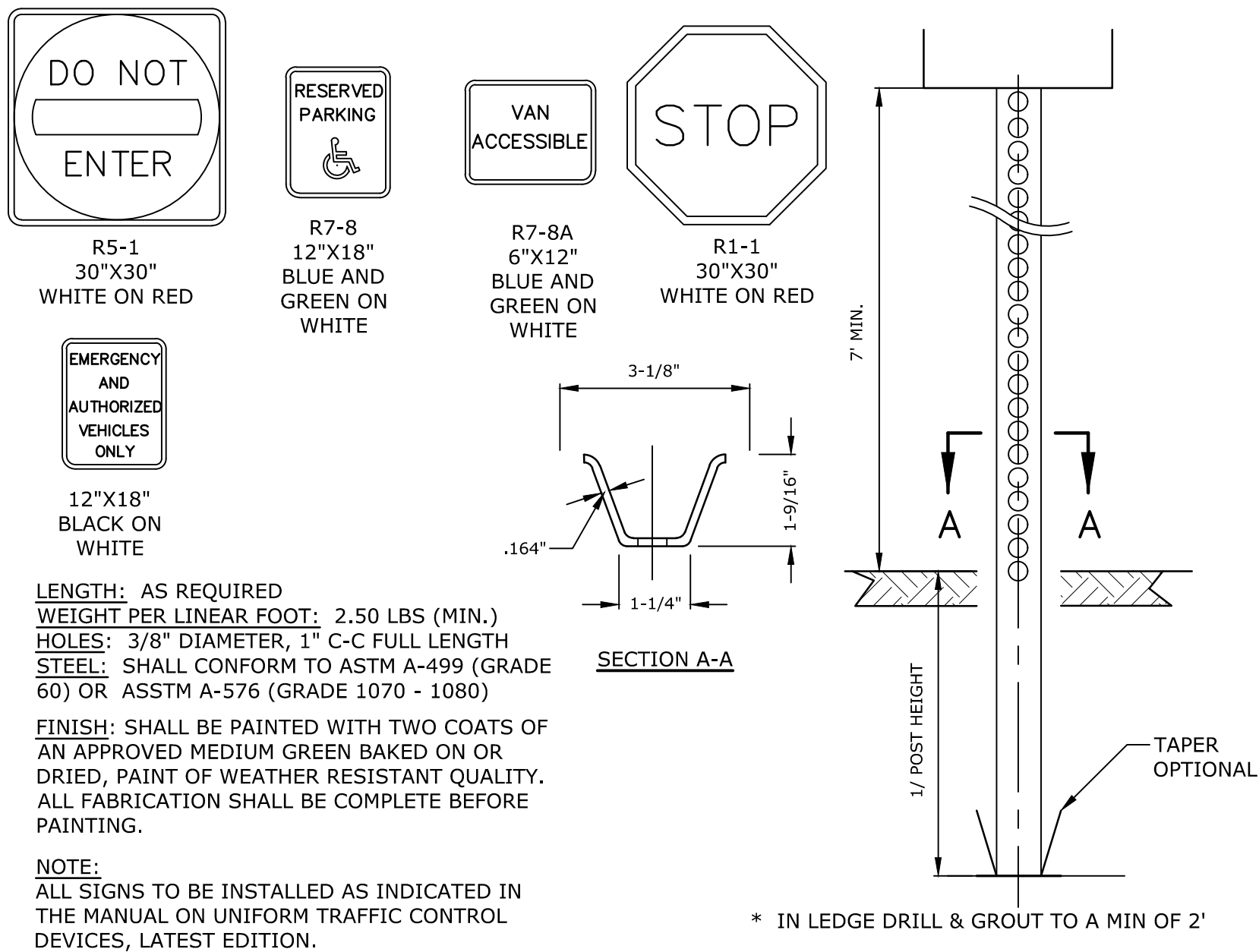
TYPICAL PARKING EQUIPMENT DETAILS
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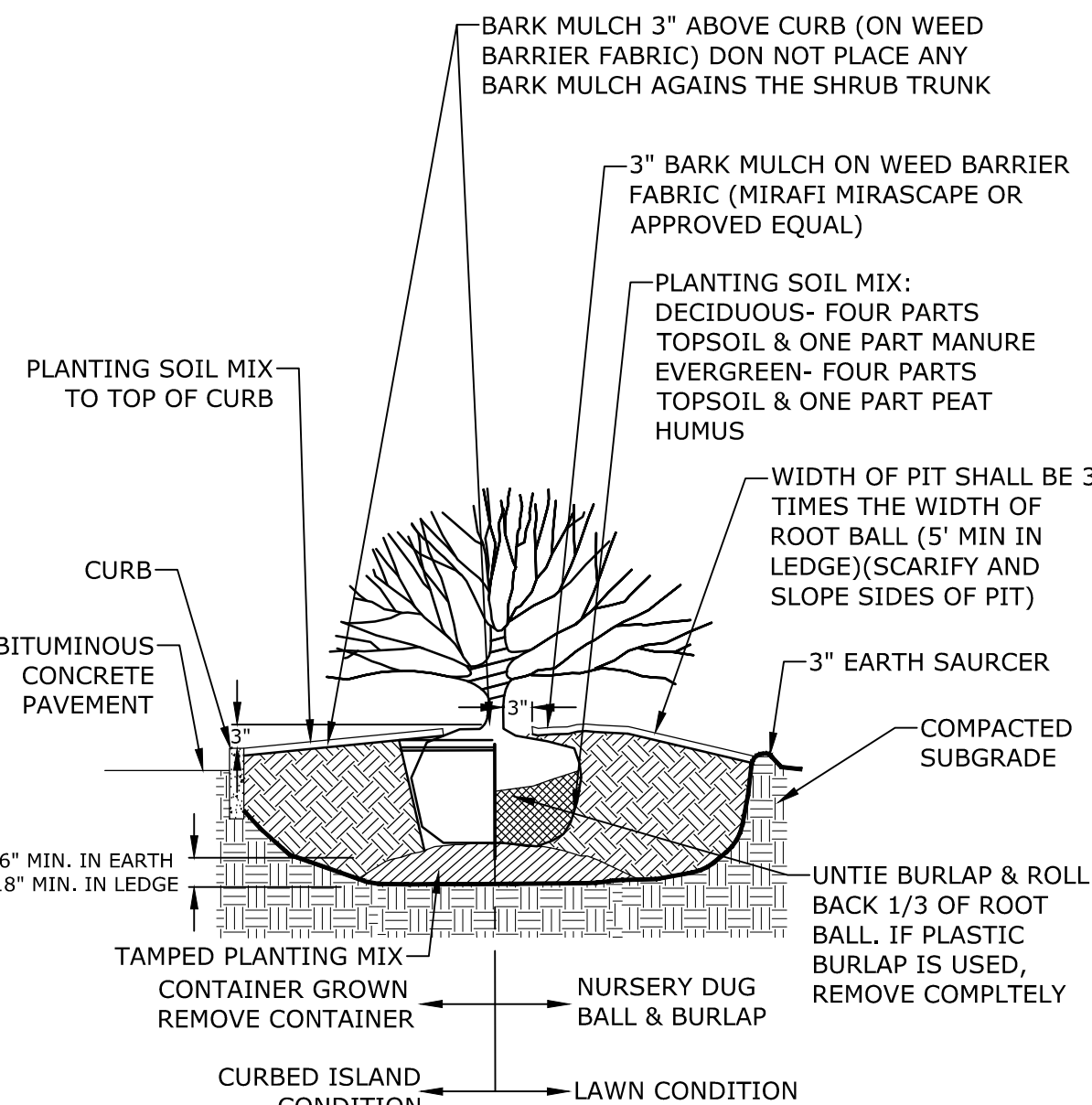
STALL STRIPING-SINGLE STRIPE
NO SCALE



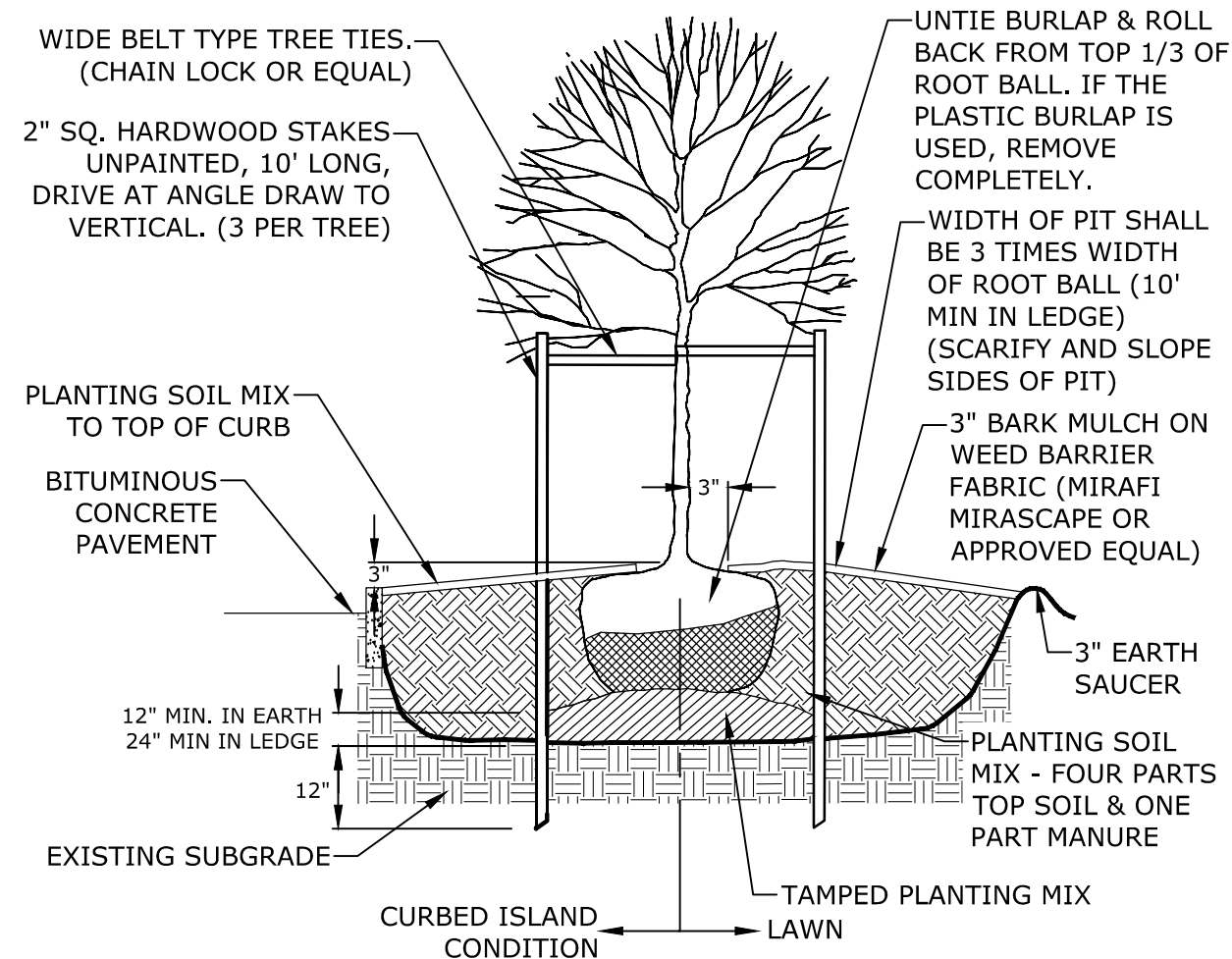
PERENNIAL PLANTING
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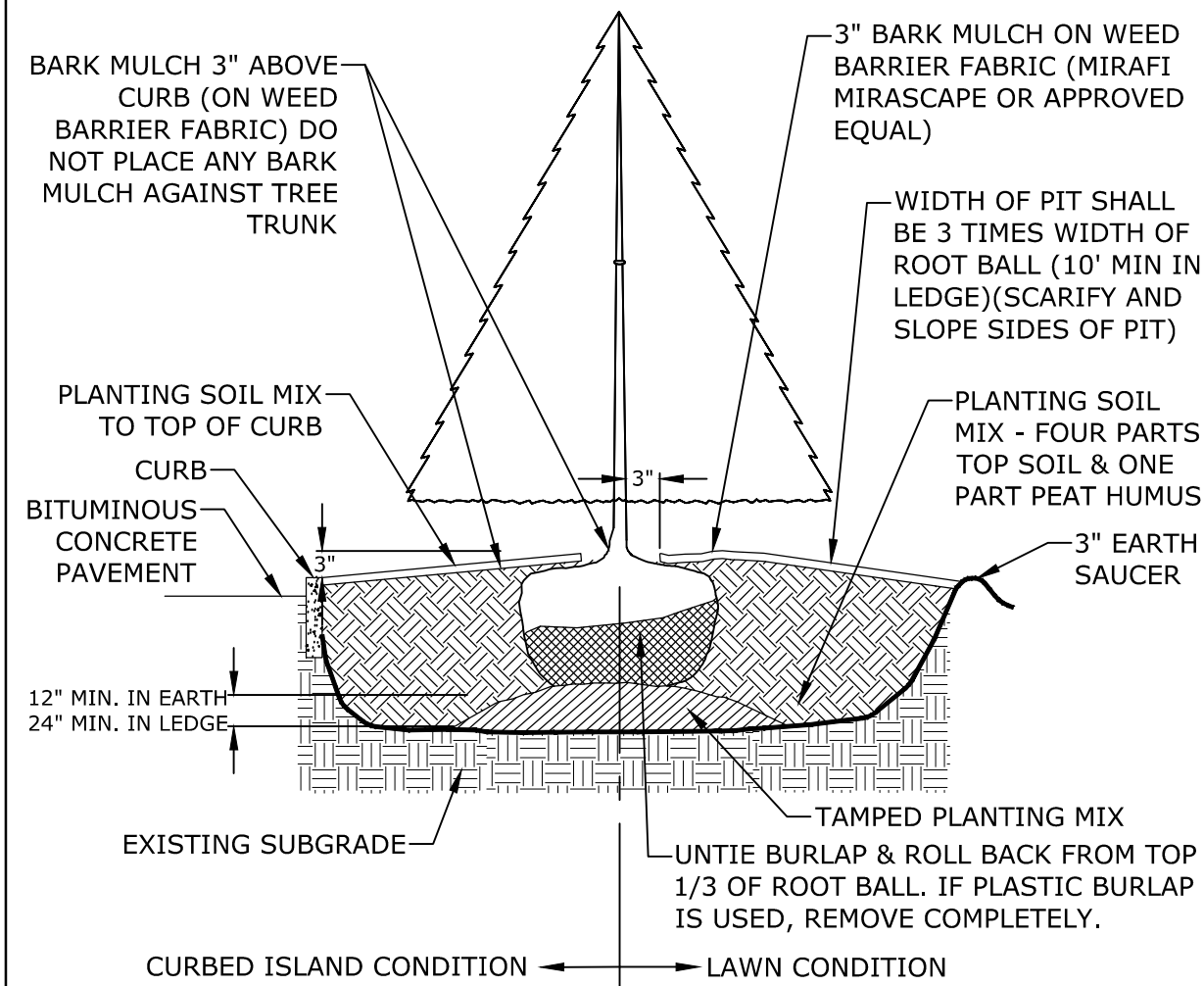
SIGN LEGEND & SIGN POST
NO SCALE



SHRUB PLANTING
NO SCALE



DECIDUOUS TREE PLANTING
NO SCALE



EVERGREEN TREE PLANTING
NO SCALE



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

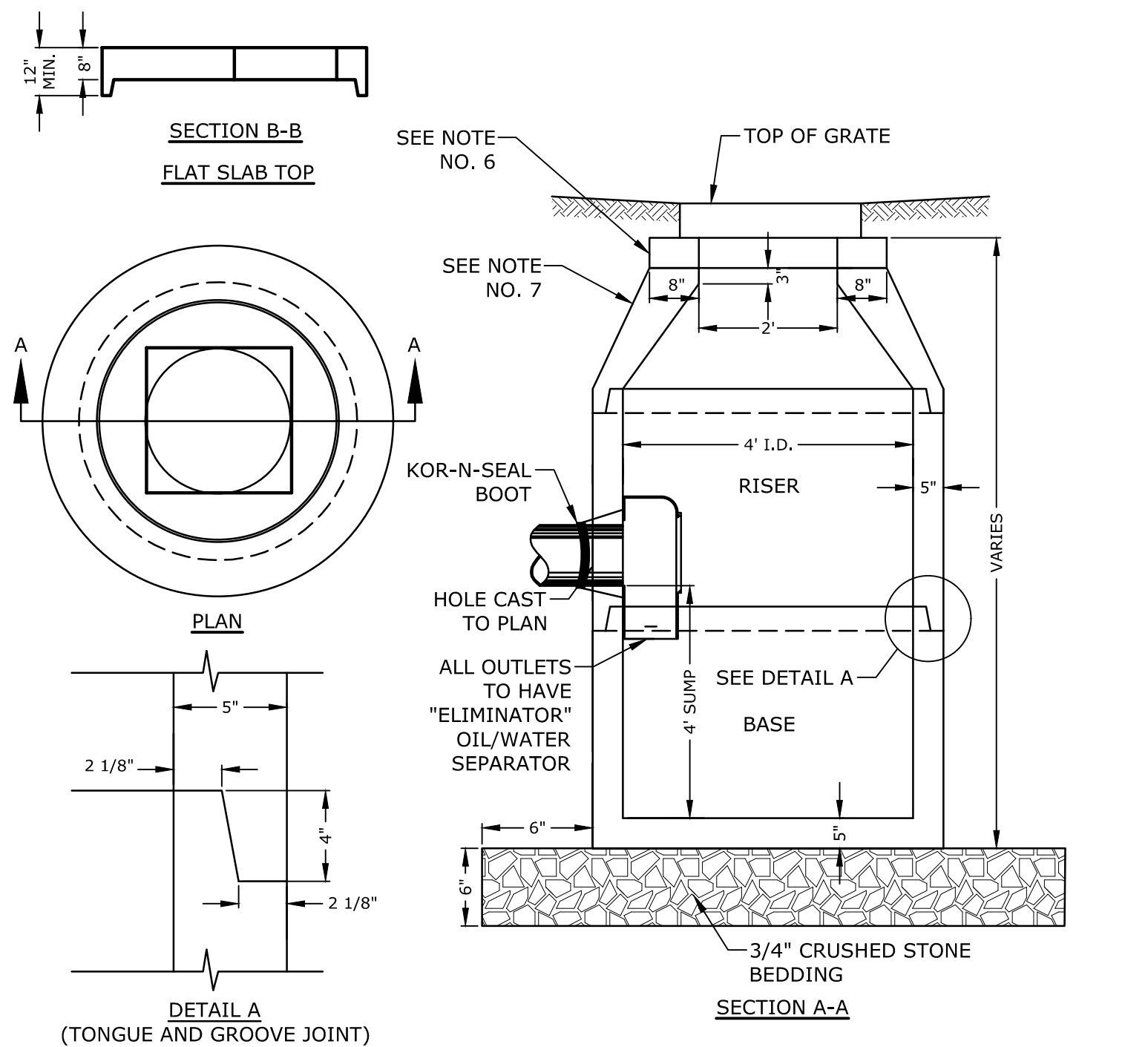
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DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM

DETAILS SHEET

SCALE: AS SHOWN

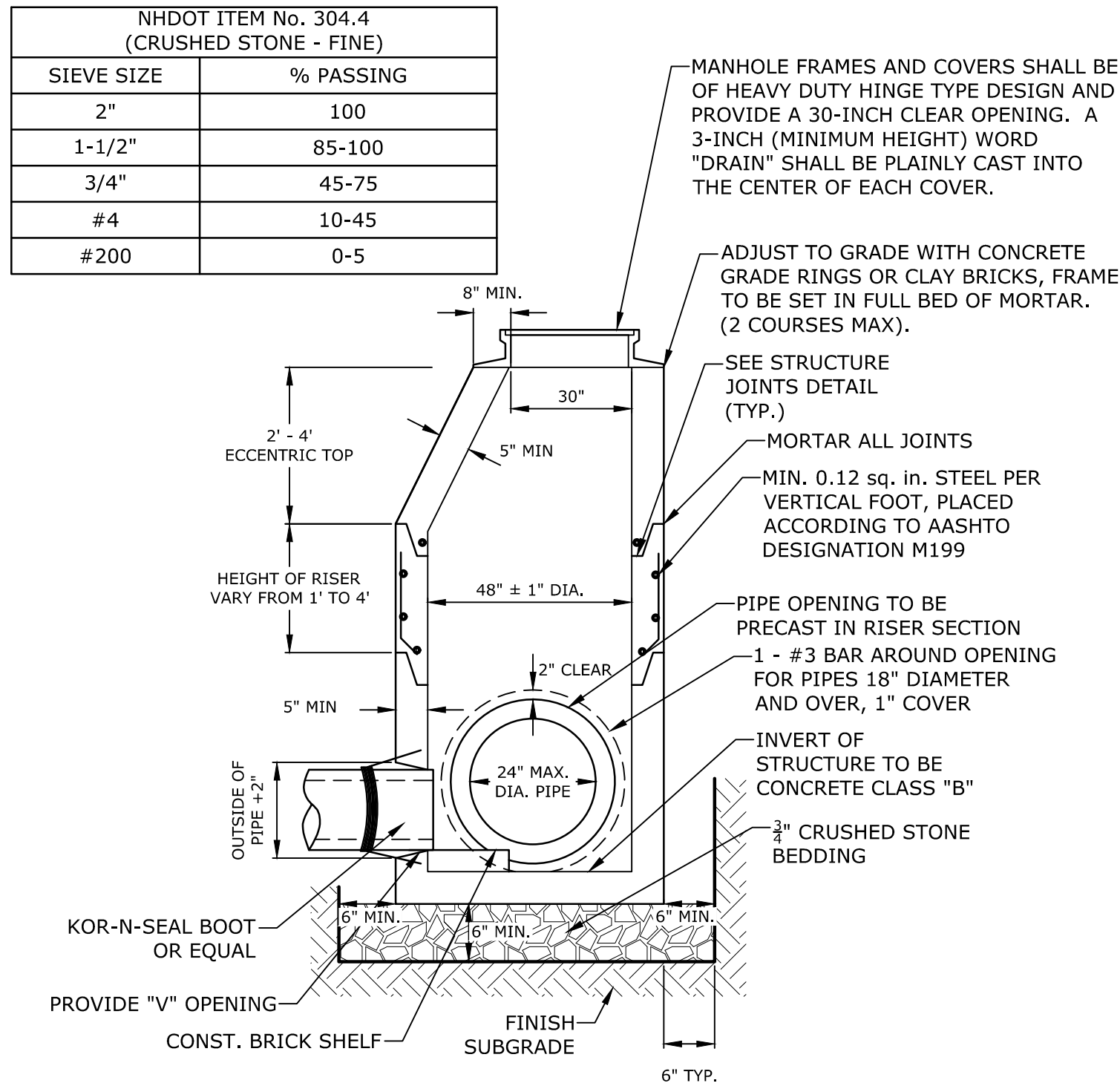
C-503

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Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
P&E File Location: J:\L0700-Lonza Biologics Expansion\WAS 1218\013 Iron Parcel (Redevelopment)\Drawings Figures\AutoCAD\Sheet\L0700-CD-501 to C-508.dwg Layout Tab: C-504



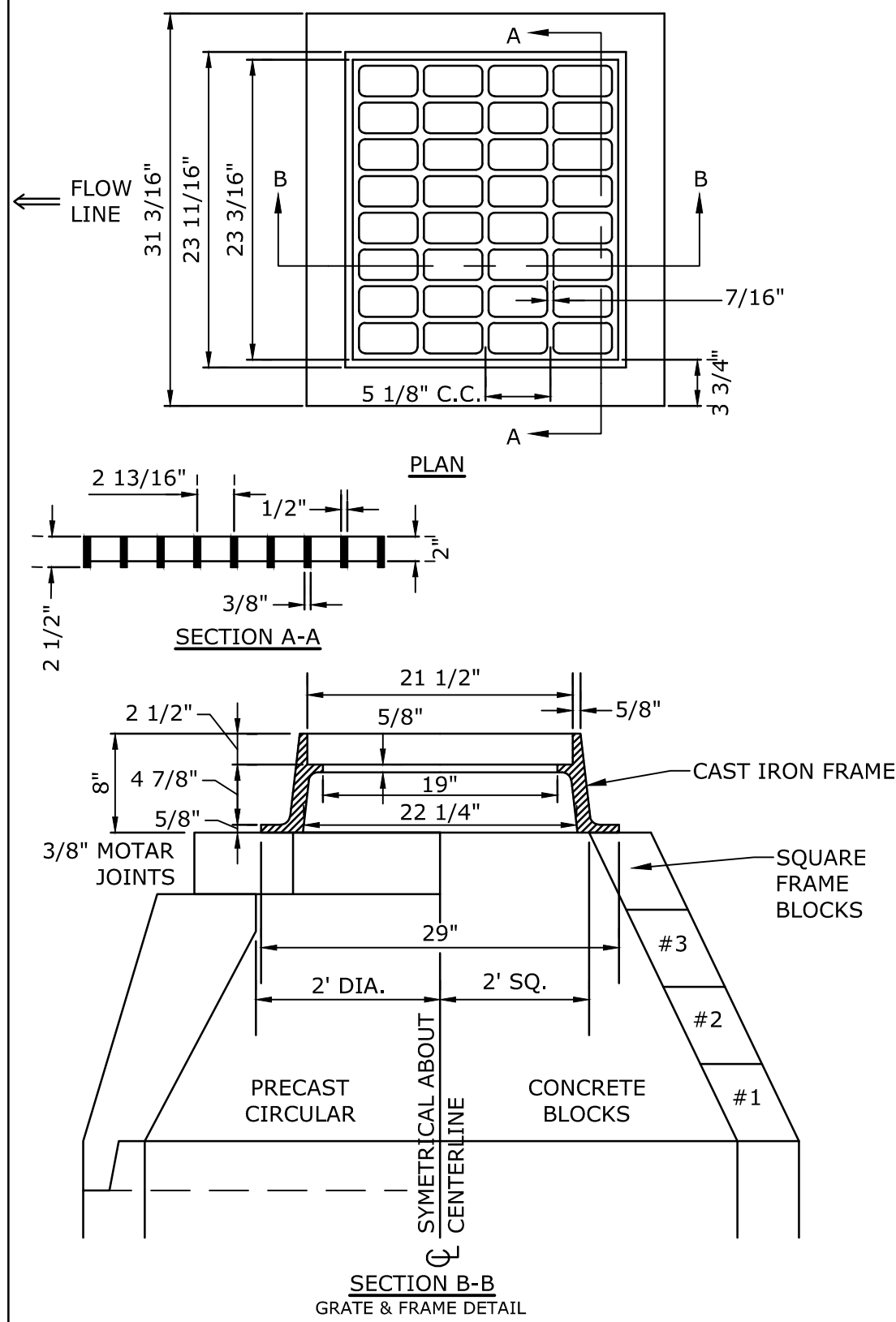
- NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
 4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
 5. THE STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
 6. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
 7. 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.
 8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
 9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
 10. 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.
 11. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.
 12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

4' DIAMETER CATCHBASIN
NO SCALE



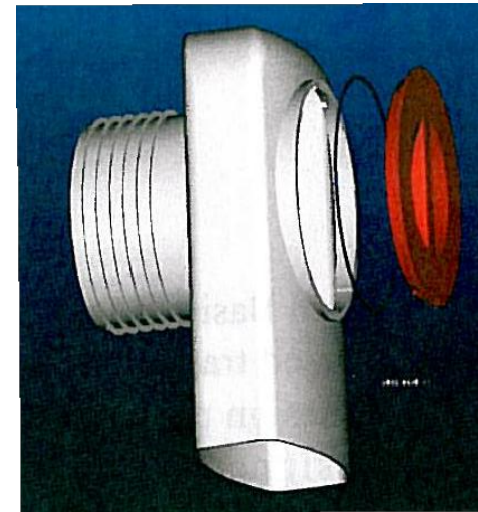
- NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
 4. THE STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
 5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
 6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
 7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
 8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
 9. 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.
 10. ALL STRUCTURES 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.

4' DIAMETER DRAIN MANHOLE
NO SCALE



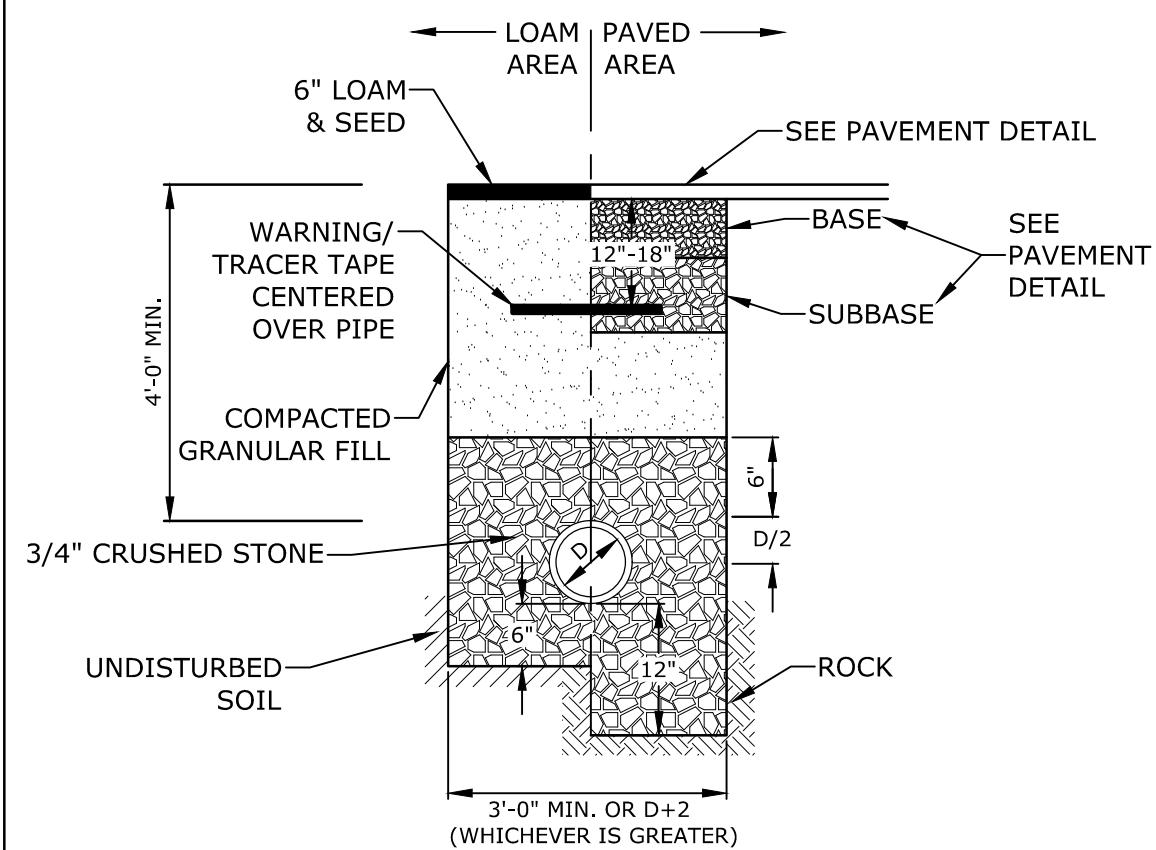
- NOTE:
1. GRATE TO BE CAST IRON (NHDOT TYPE B ALTERNATE 1)
 2. FRAME AND GRATE TO BE MANUFACTURED IN THE USA

CATCH BASIN FRAME & GRATE
NO SCALE



- NOTES:
1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL).
 2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
 3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP
NO SCALE



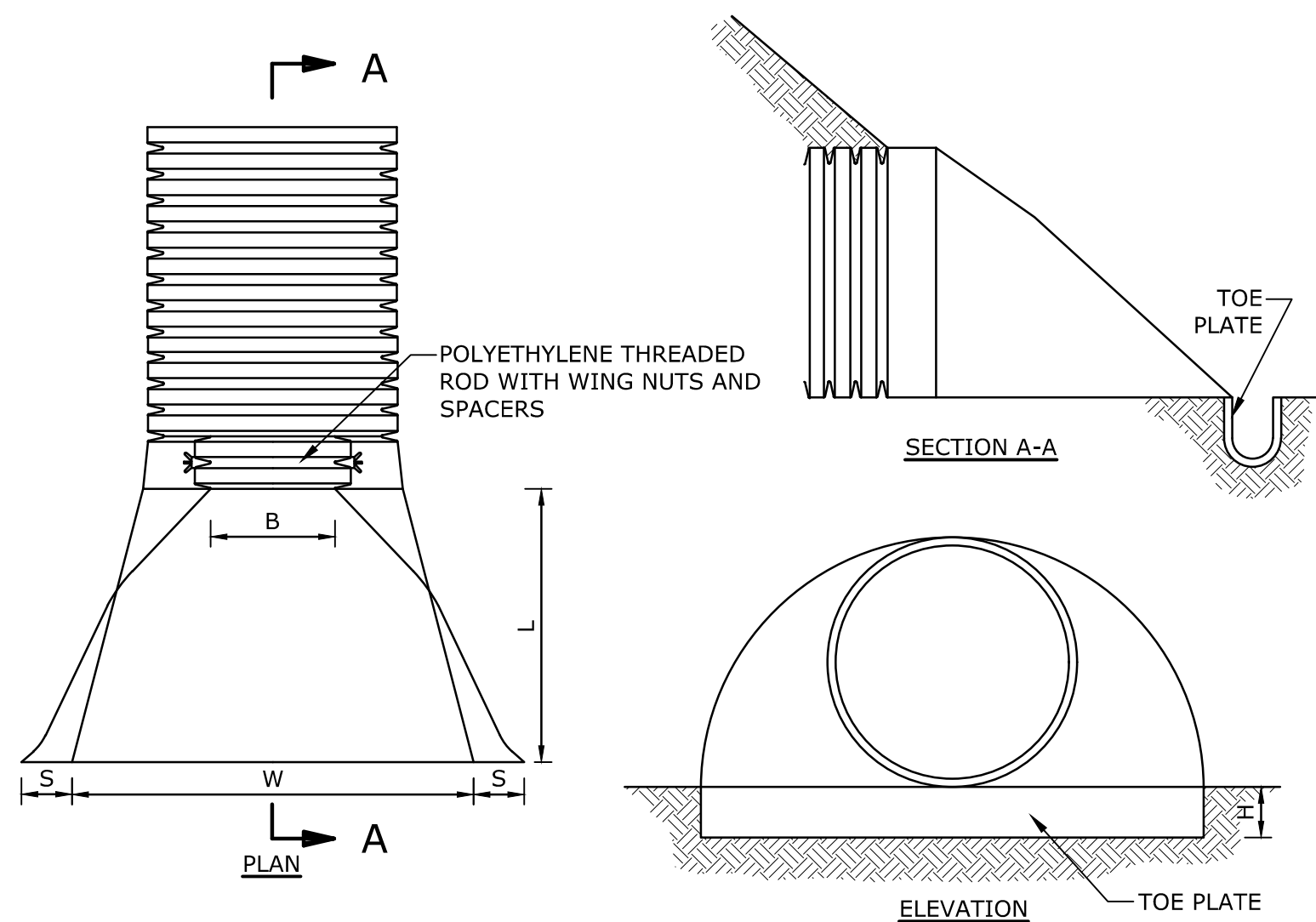
- NOTE:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
 2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.

STORM DRAIN TRENCH
NO SCALE

NOTES:

1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS.
2. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.

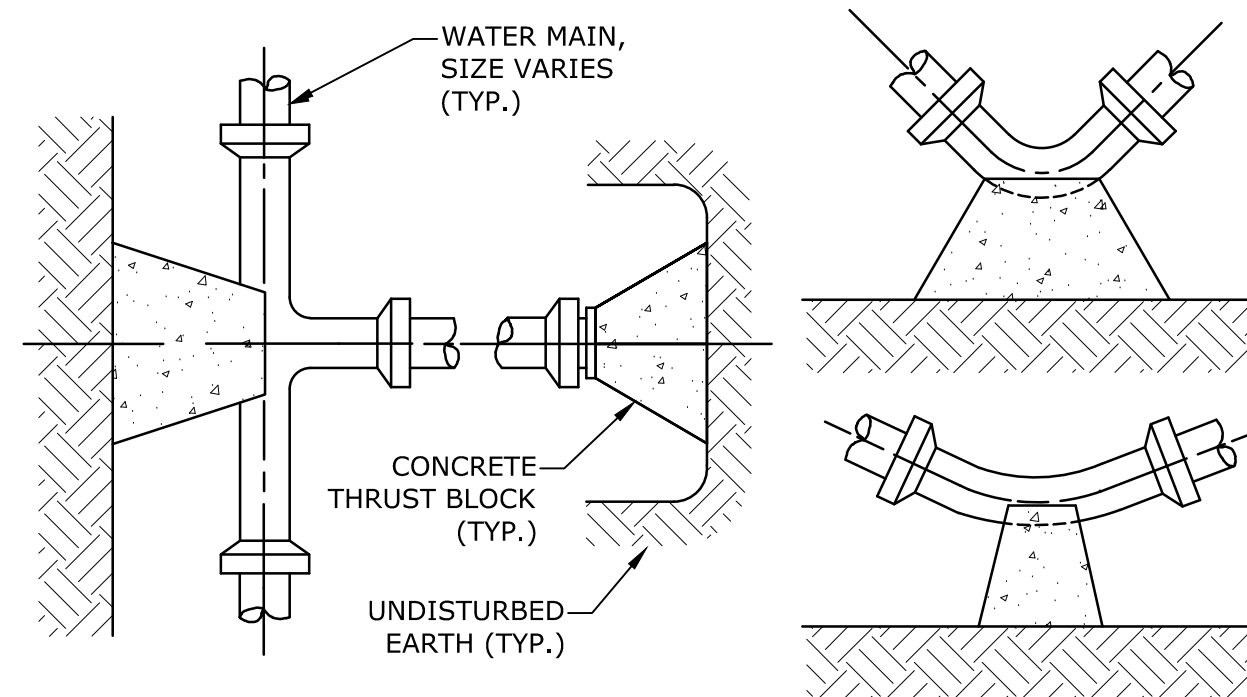
RIP-RAP APRON DETAIL
NO SCALE



- NOTE:
1. END SECTIONS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, COLUMBUS, OHIO. END SECTIONS TO BE WELDED TO PIPE AS PER MANUFACTURER'S RECOMMENDATIONS.

HDPE END SECTION
NO SCALE

PIPE DIA.	S	B	H	L	W
12"	6.5"	10"	6.5"	25"	29"
15"	6.5"	10"	6.5"	25"	29"
18"	7.5"	15"	6.5"	32"	35"
24"	7.5"	18"	6.5"	36"	45"
30"	7.5"	12"	8.6"	58"	63"
36"	7.5"	25"	8.6"	58"	63"



TEST PRESSURE = 2000psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38

- NOTES:
1. 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.
 2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
 4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
 5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH TOWN OF EXETER WATER DEPARTMENT STANDARDS.

THRUST BLOCKING DETAIL
NO SCALE



Proposed Industrial Development

Lonza Biologics

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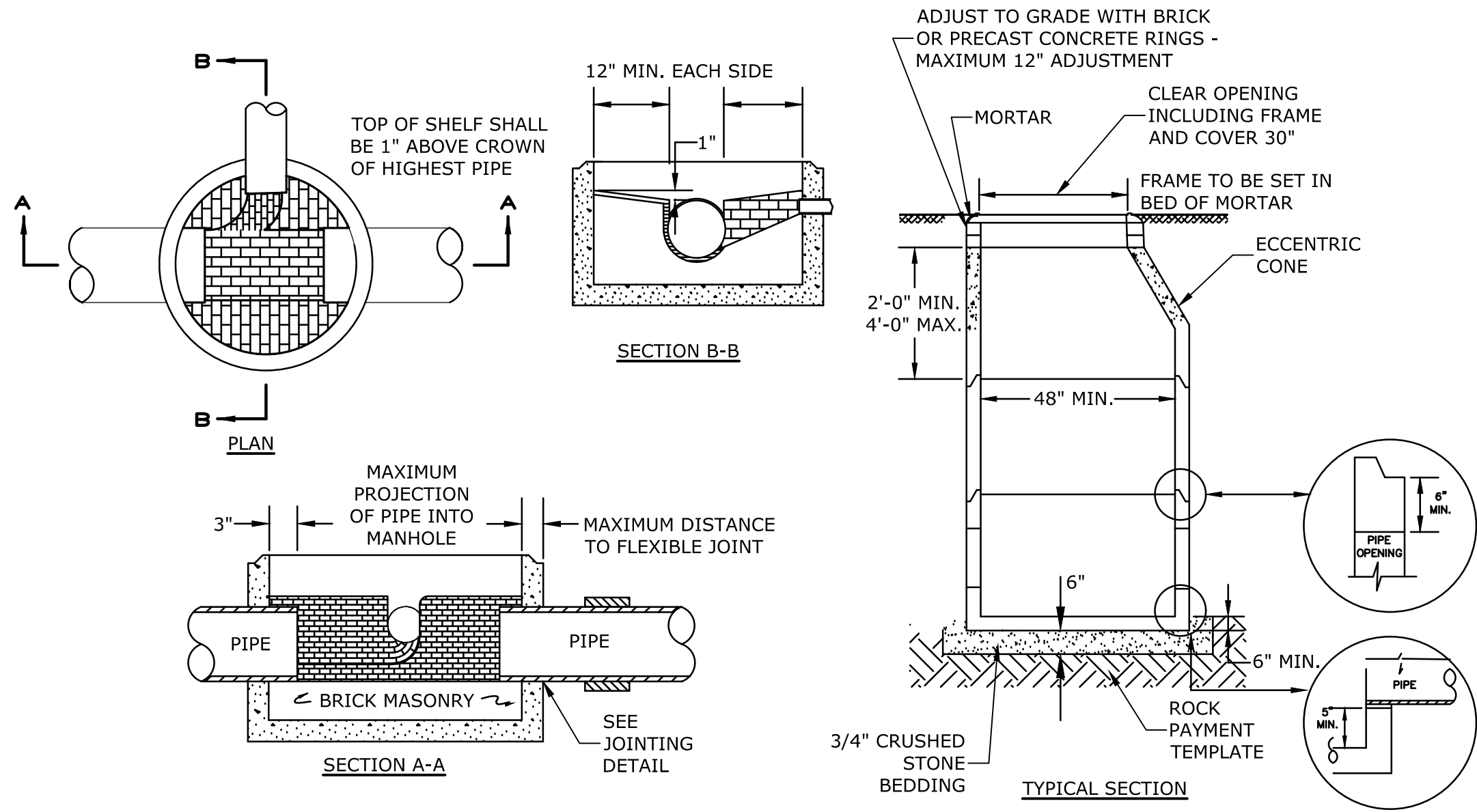
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B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NO:		L-0700-013
DATE:		04/03/2018
FILE:		L0700-CD-501 to C-508.dwg
DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM

DETAILS SHEETS

SCALE: AS SHOWN

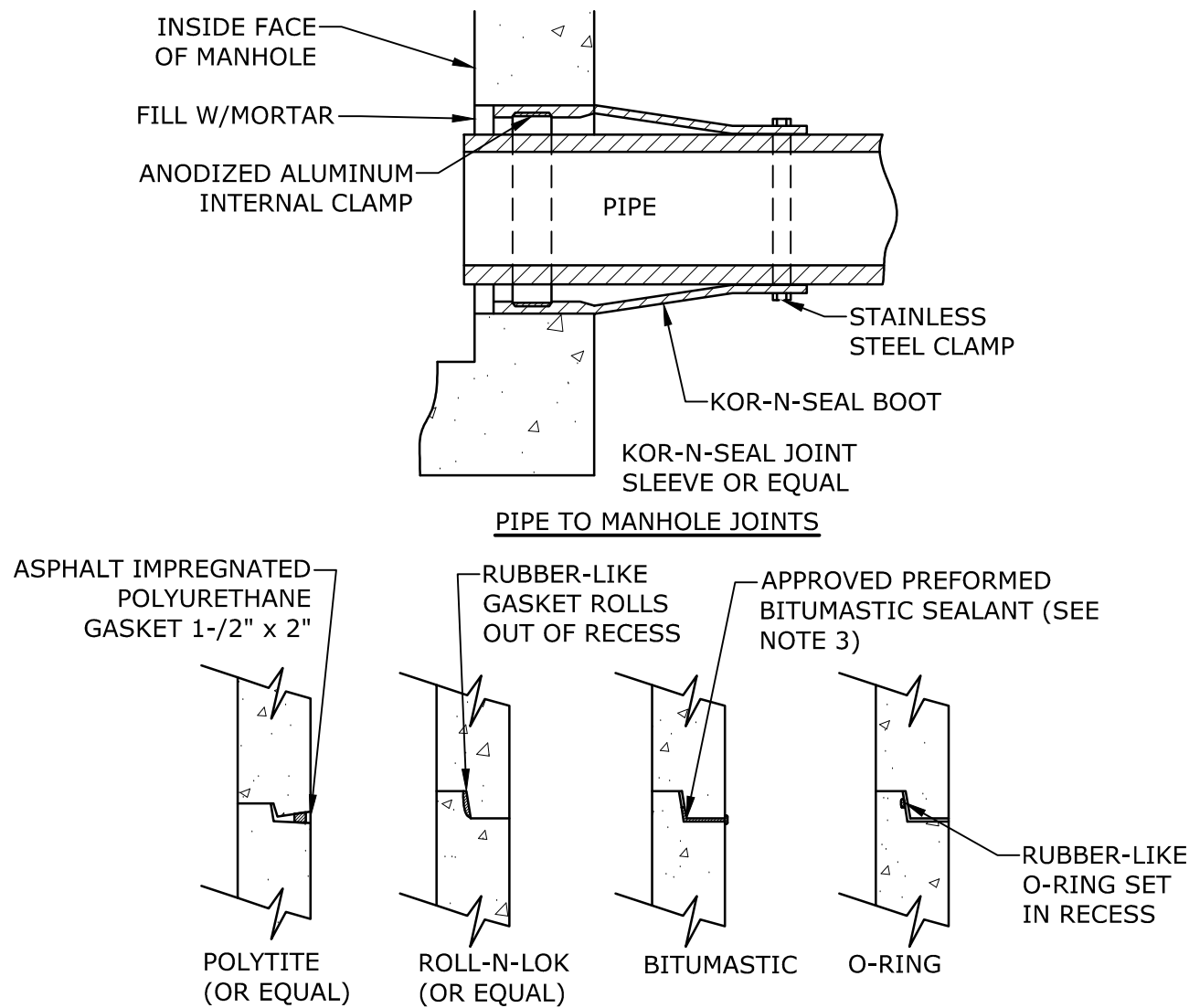
C-504

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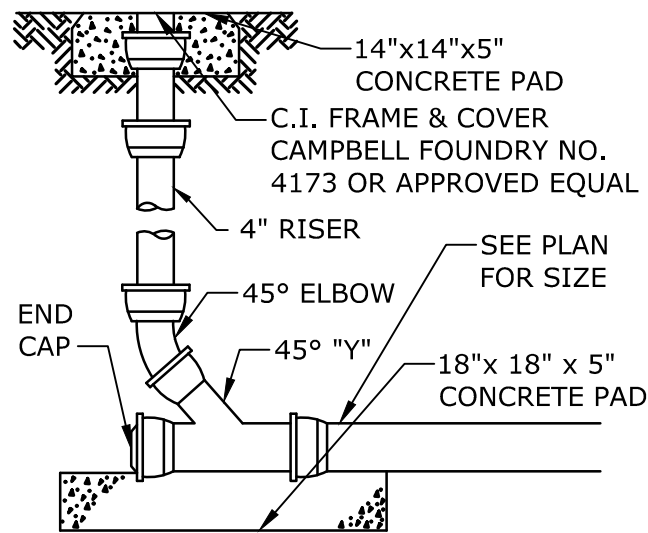
- NOTES:
1. INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST.
 2. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
 3. INVERT BRICKS SHALL BE LAID ON EDGE.
 4. BITUMINOUS WATERPROOF COATING TO BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
 5. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS WITHIN CITY RIGHT OF WAY SHALL BE CITY STANDARD HINGE COVERS MANUFACTURED BY EJ. FRAMES AND COVERS WILL BE PURCHASED FROM THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS. ALL OTHER MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
 6. HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT.
 7. BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H2O LOADING, AND CONFORMING TO ASTM C478-06.

SEWER MANHOLE
NO SCALE

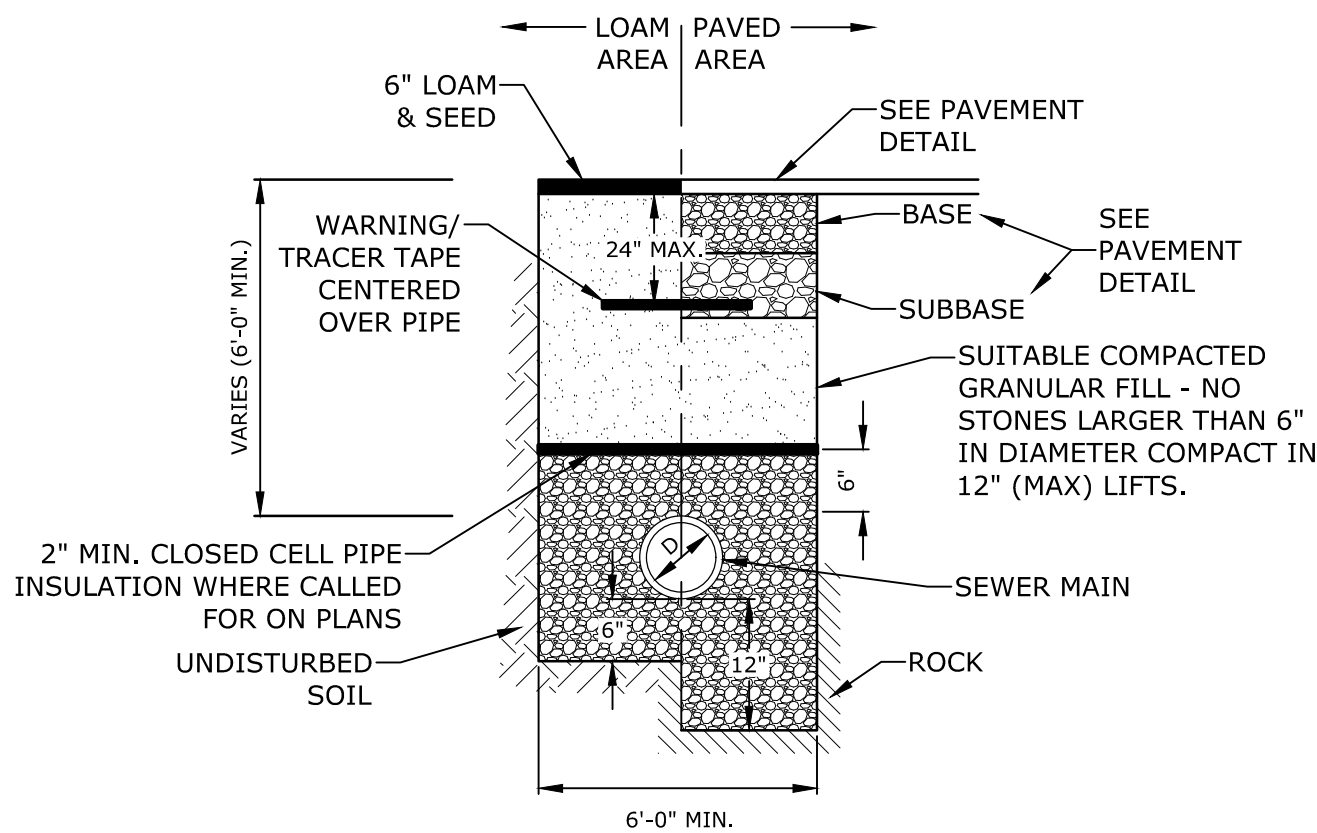


- NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER TOWN OF EXETER DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
 2. PIPE TO MANHOLE JOINTS SHALL BE PER TOWN OF EXETER STANDARD.
 3. FOR BITUMASTIC TYPE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

MANHOLE JOINTS
NO SCALE

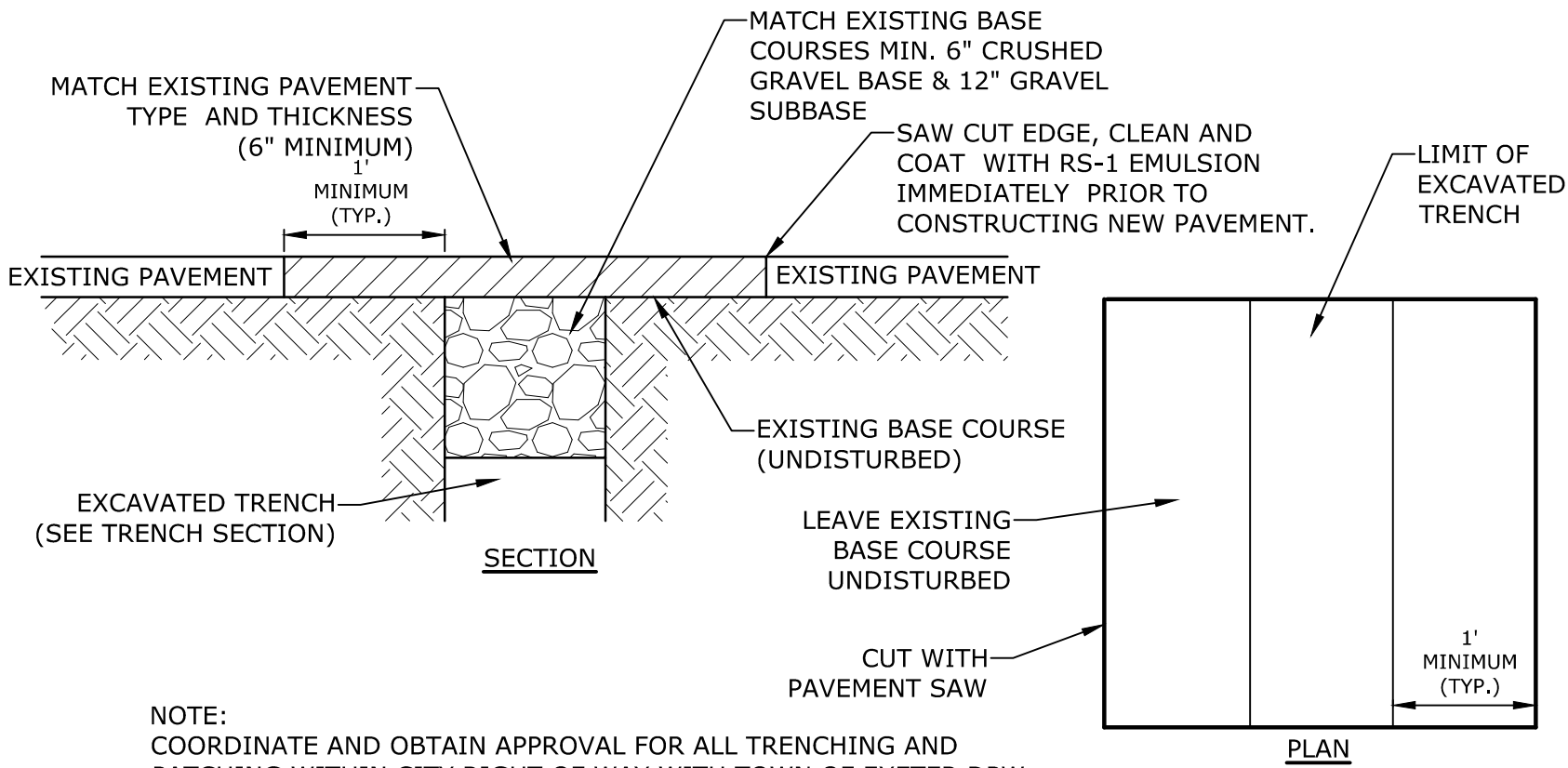


CLEAN-OUT
NO SCALE



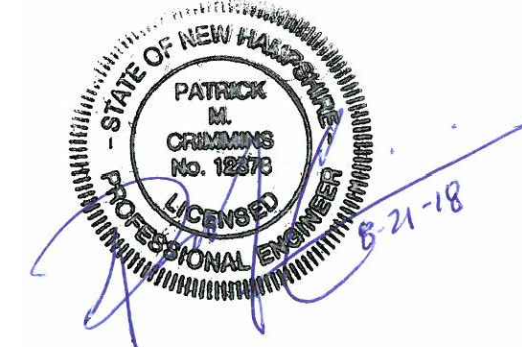
- NOTE:
1. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

TYPICAL SEWER TRENCH
NO SCALE



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

ROADWAY TRENCH PATCH
NO SCALE



Proposed Industrial Development

Lonza Biologics

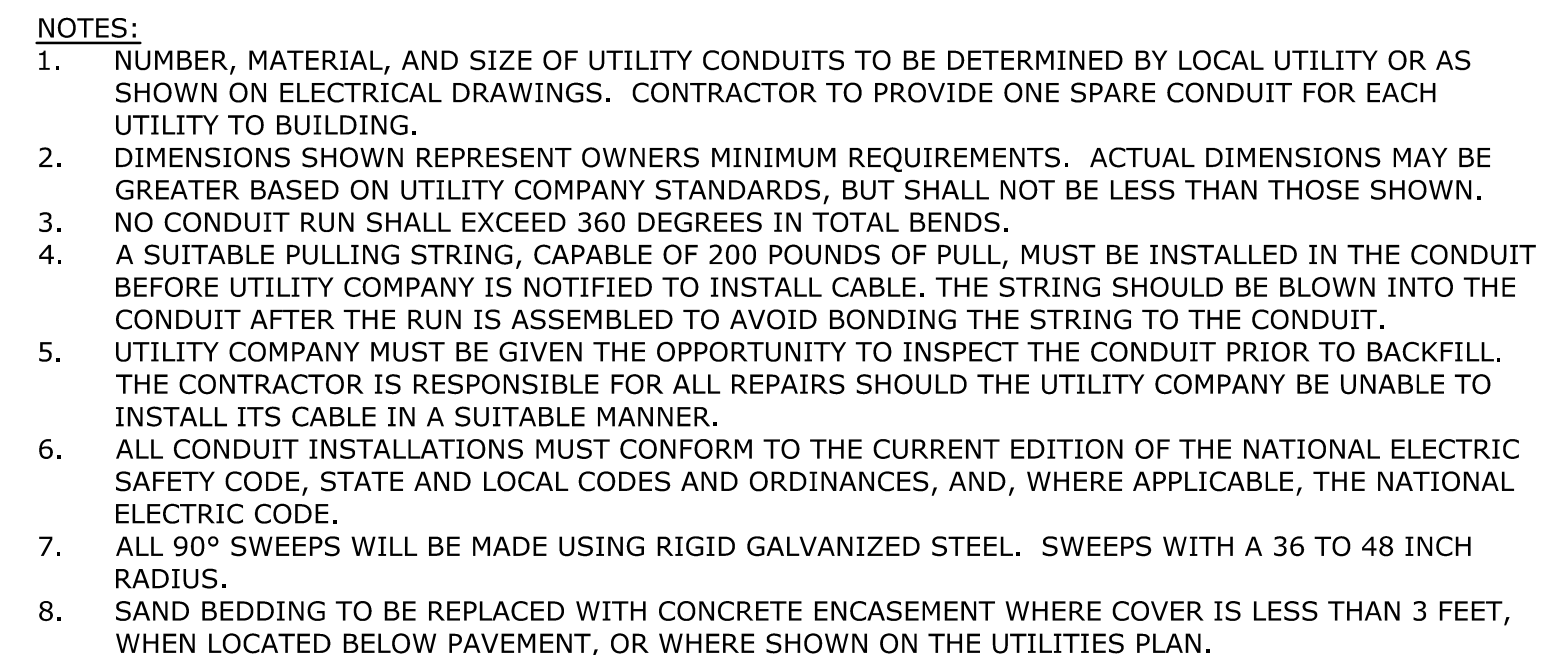
Portsmouth,
New Hampshire

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C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
PROJECT NO: L-0700-013		
DATE: 04/03/2018		
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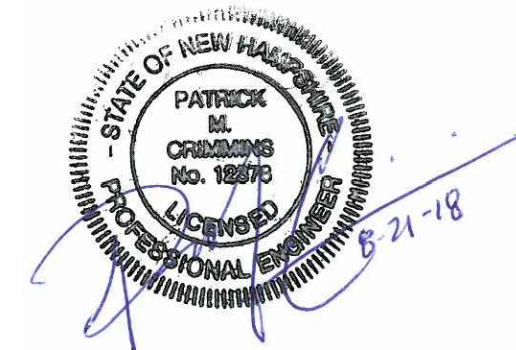
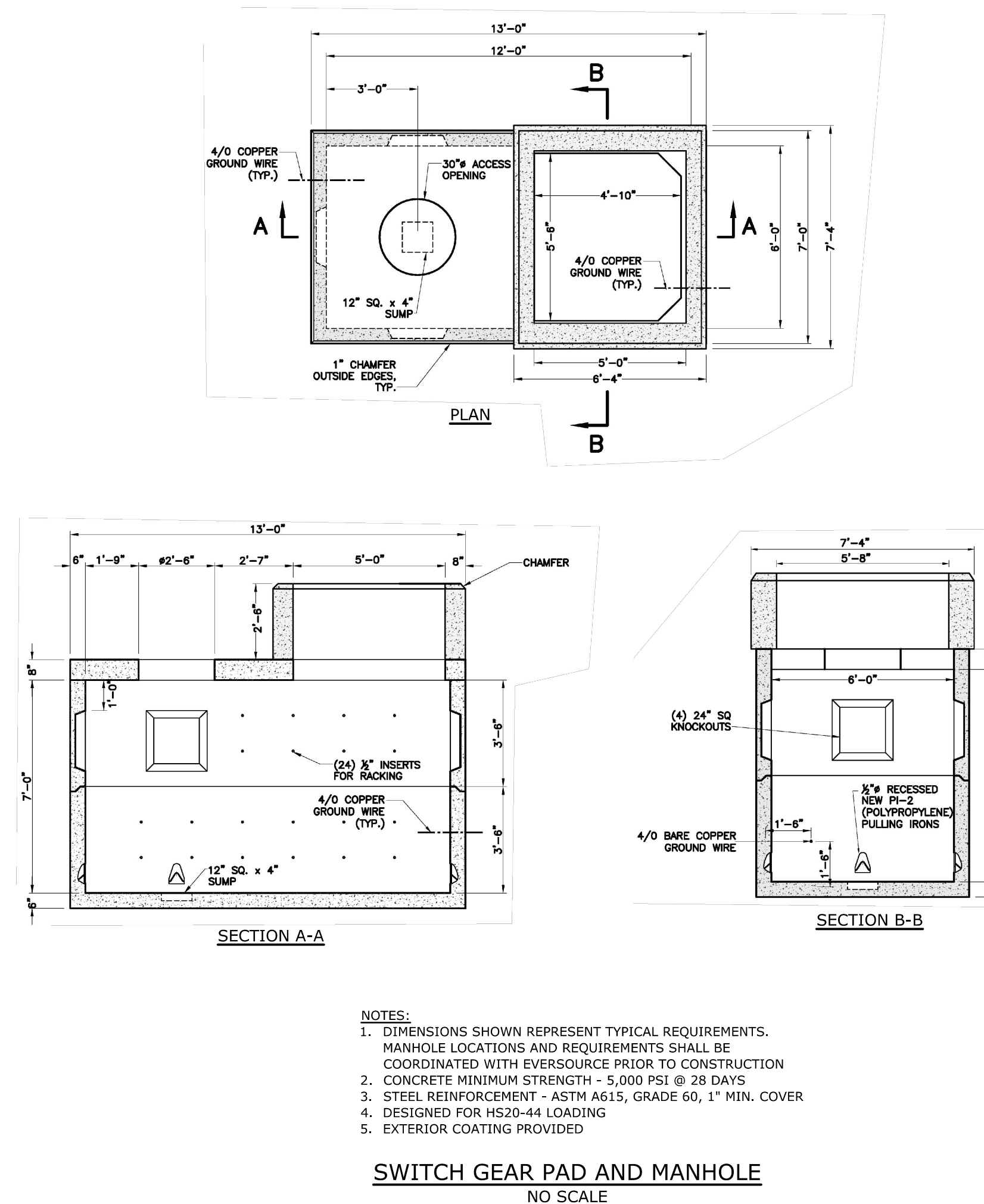
DETAILS SHEETS

SCALE: AS SHOWN

C-505



ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

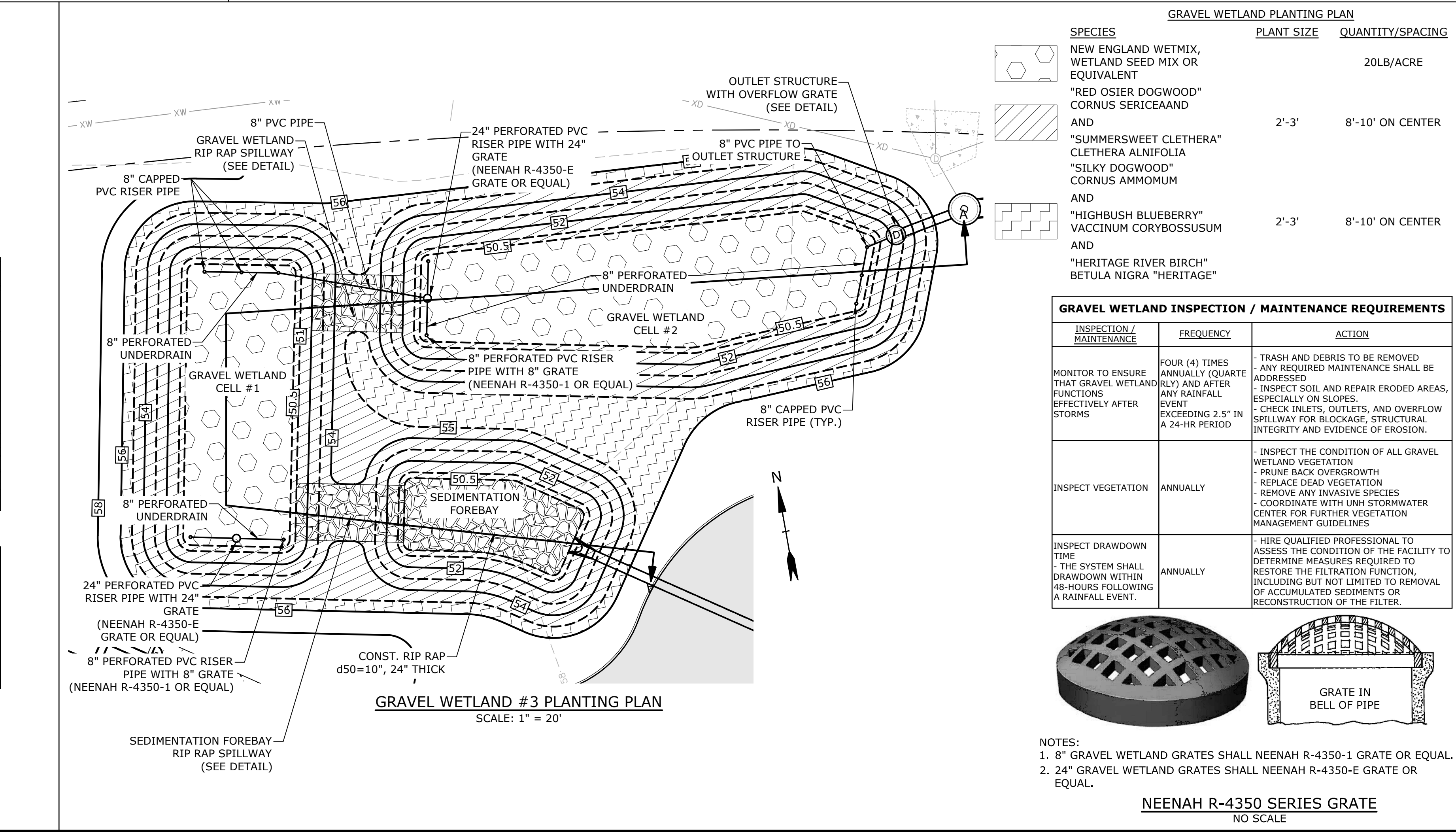
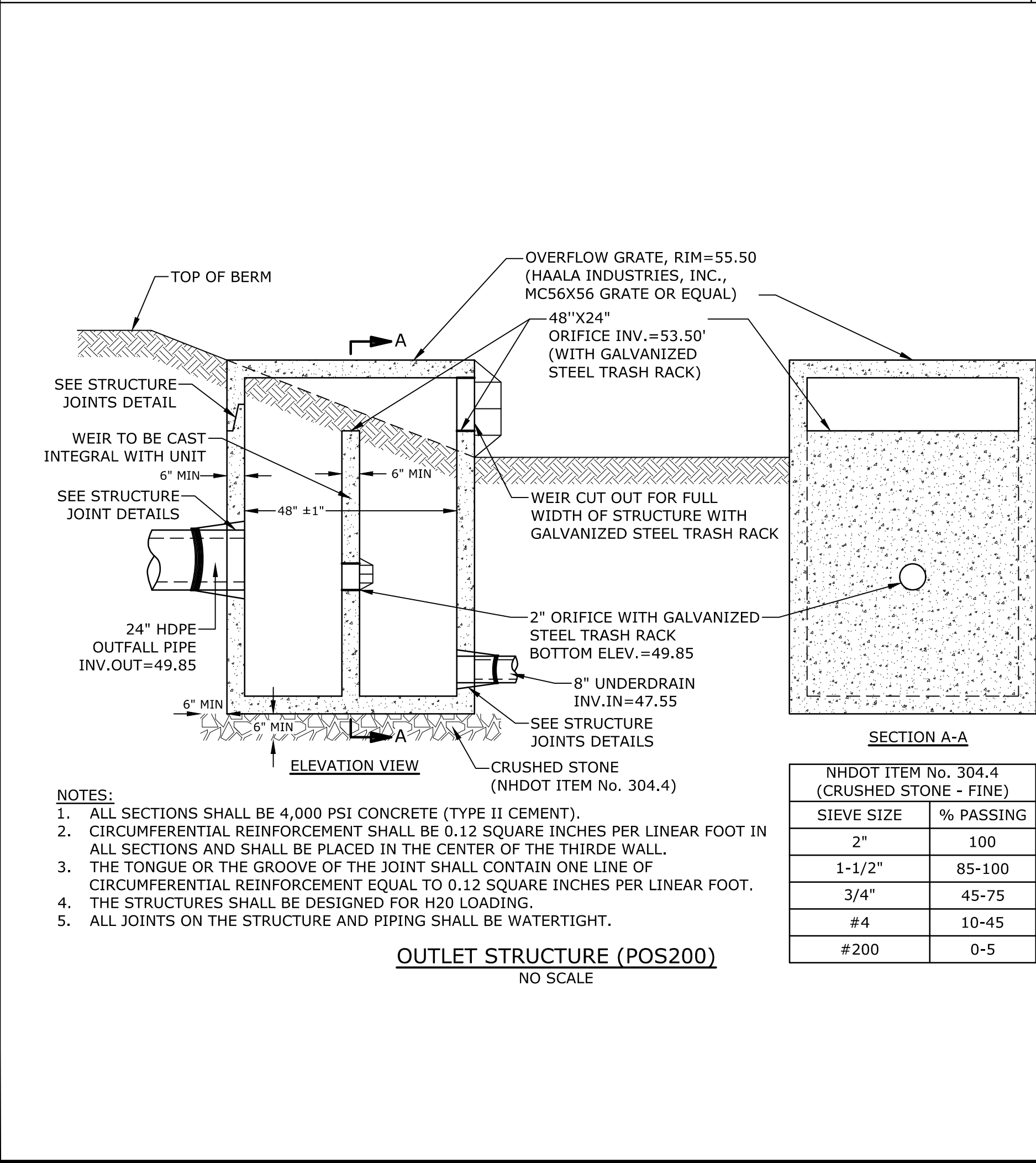
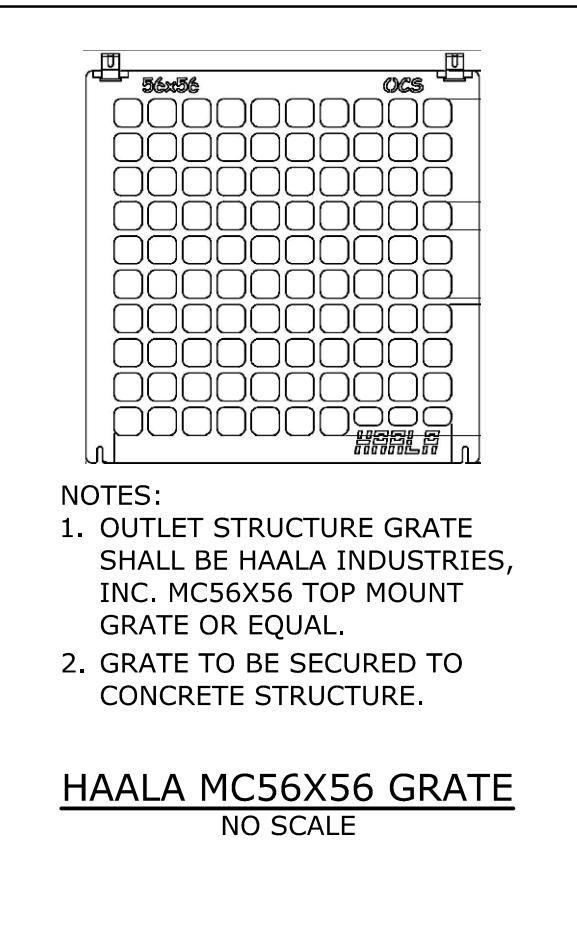
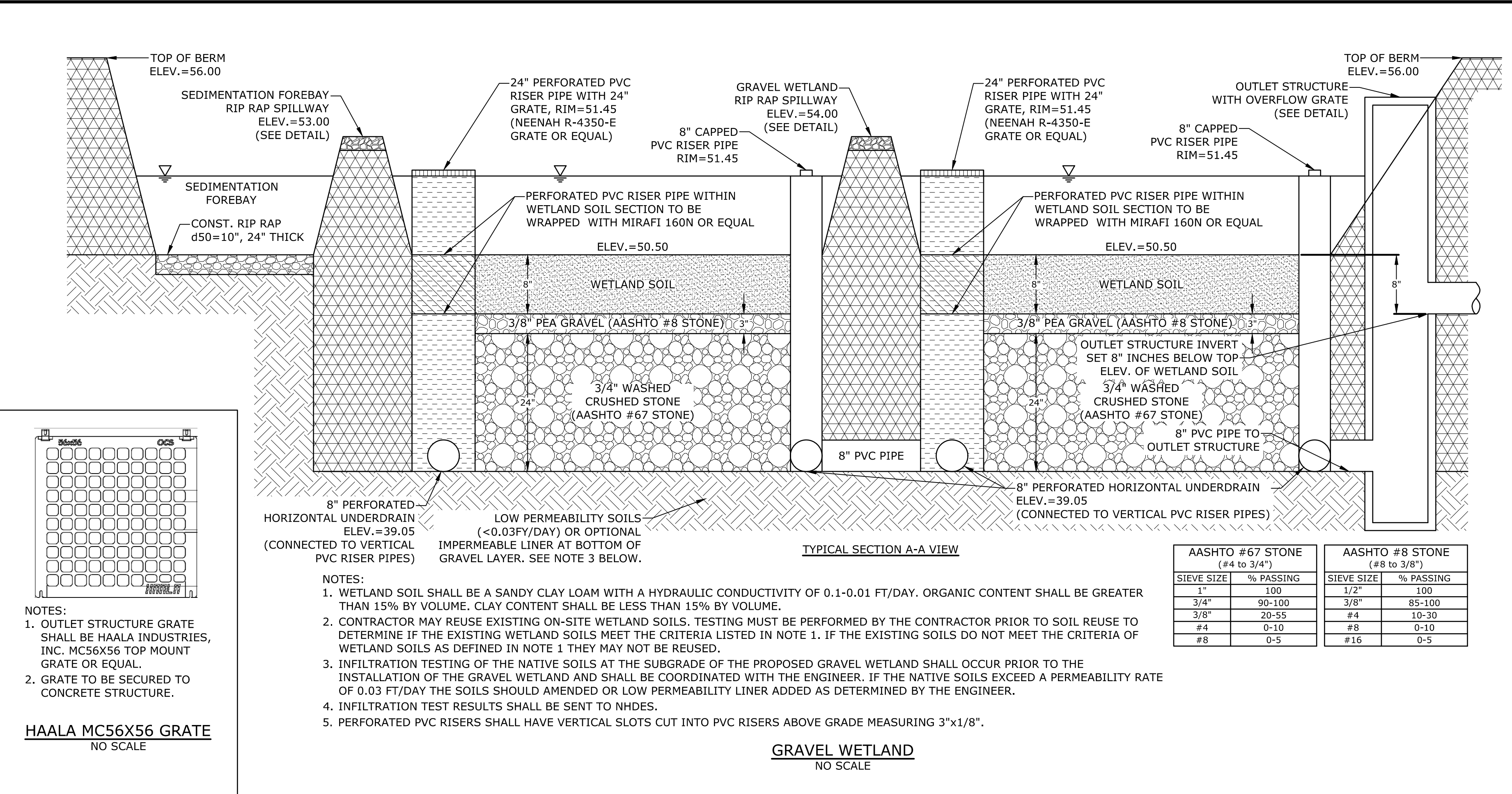
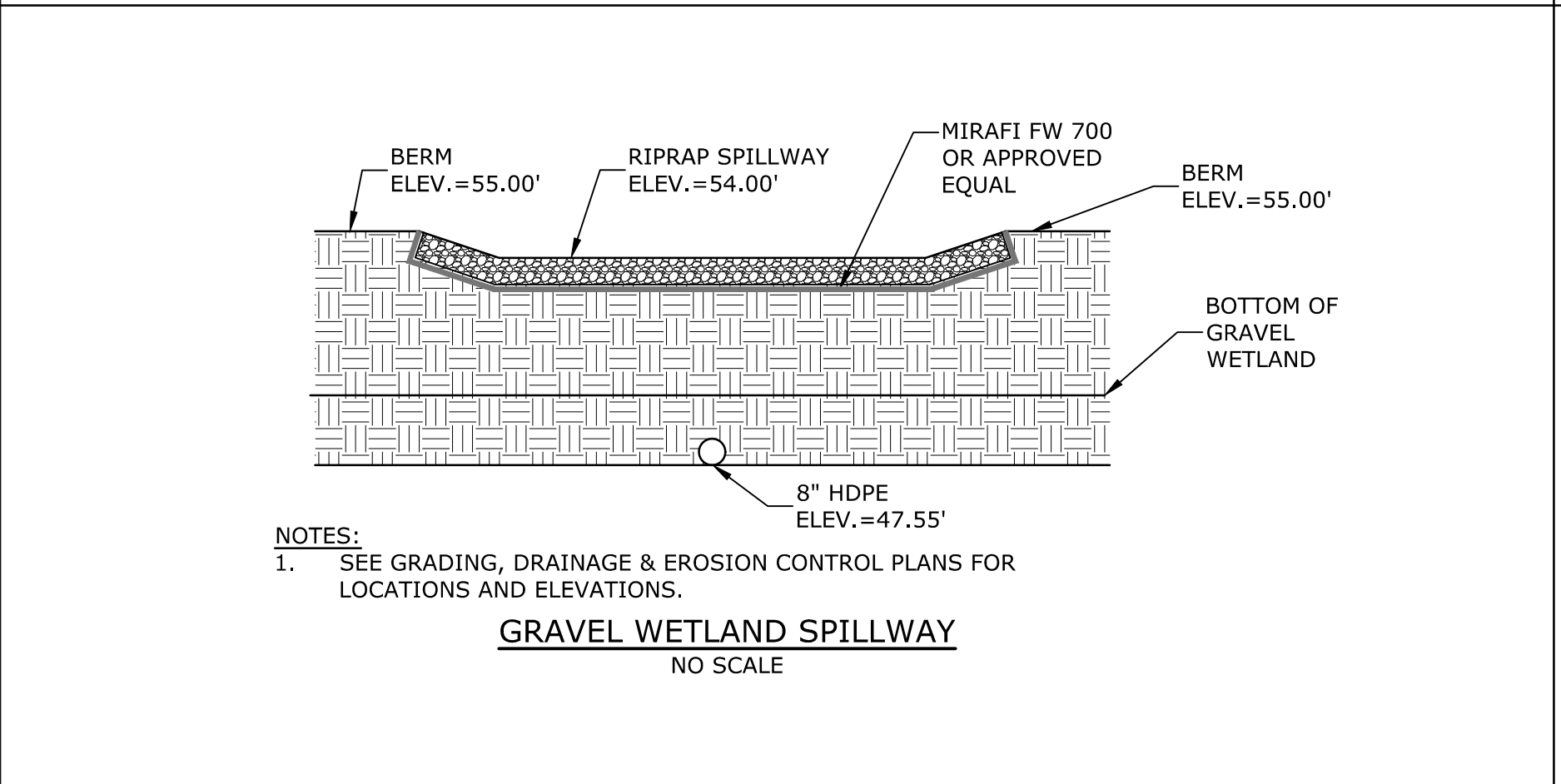
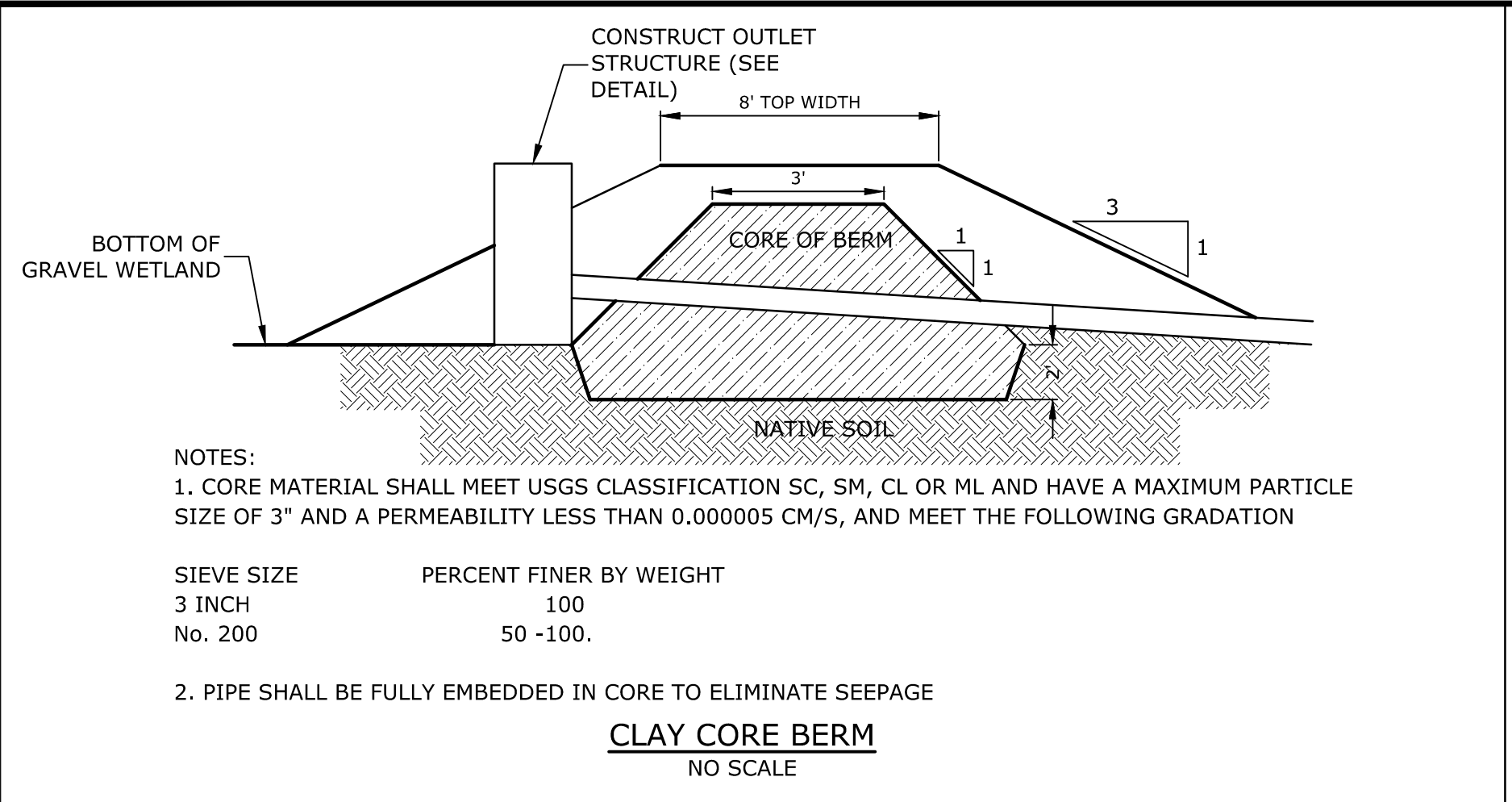
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DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM

DETAILS SHEETS

SCALE: AS SHOWN

C-506

Last Save Date: August 20, 2018 3:51 PM By: NAHANSEN
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Tighe&Bond
Engineers | Environmental Specialists

Proposed Industrial Development

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Portsmouth, New Hampshire

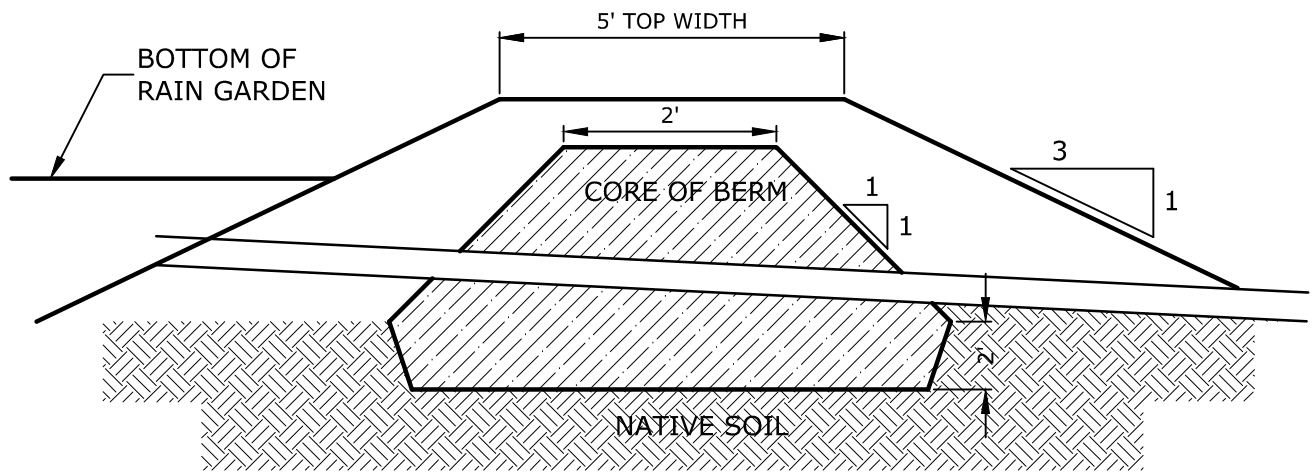
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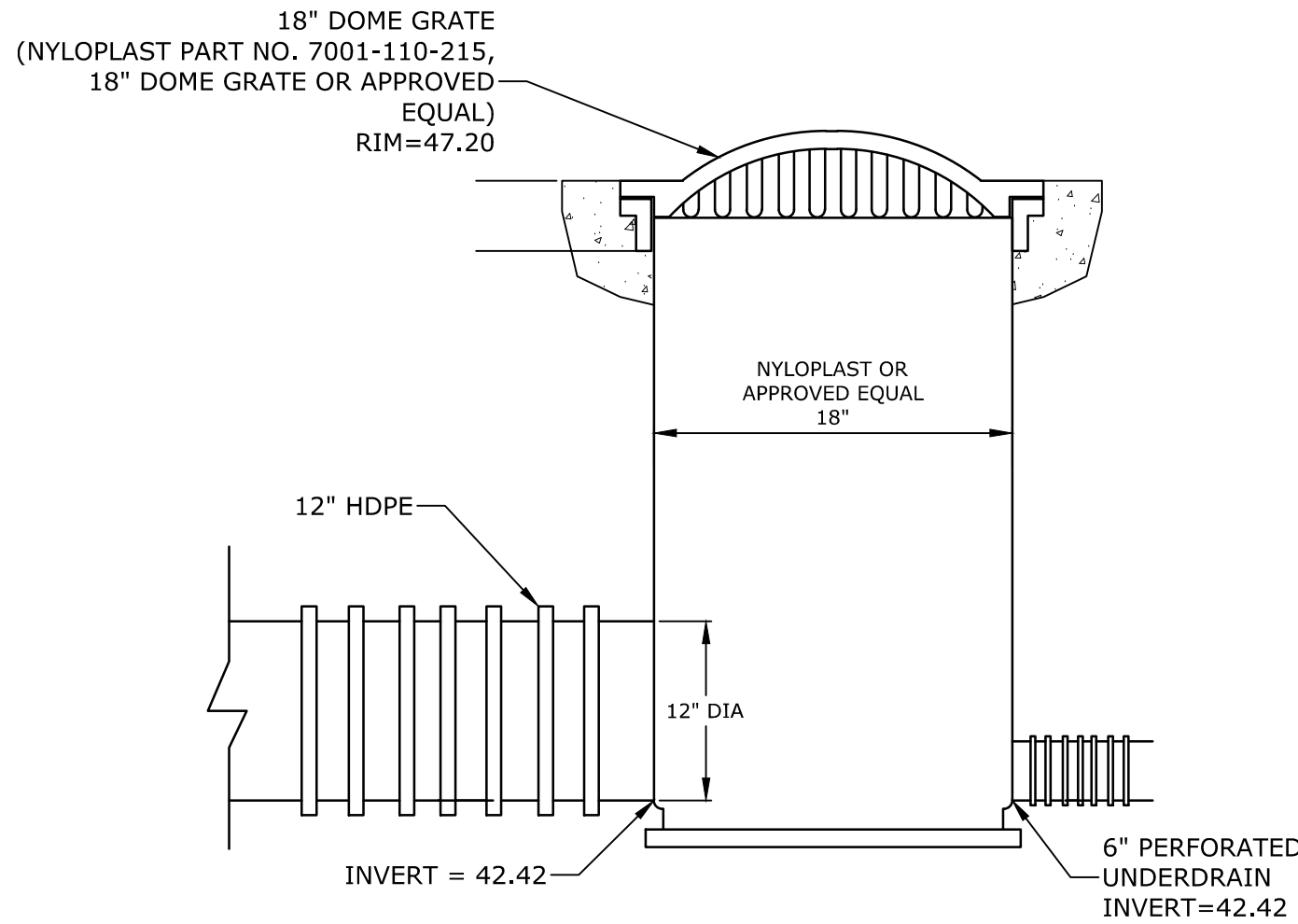
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C-508	

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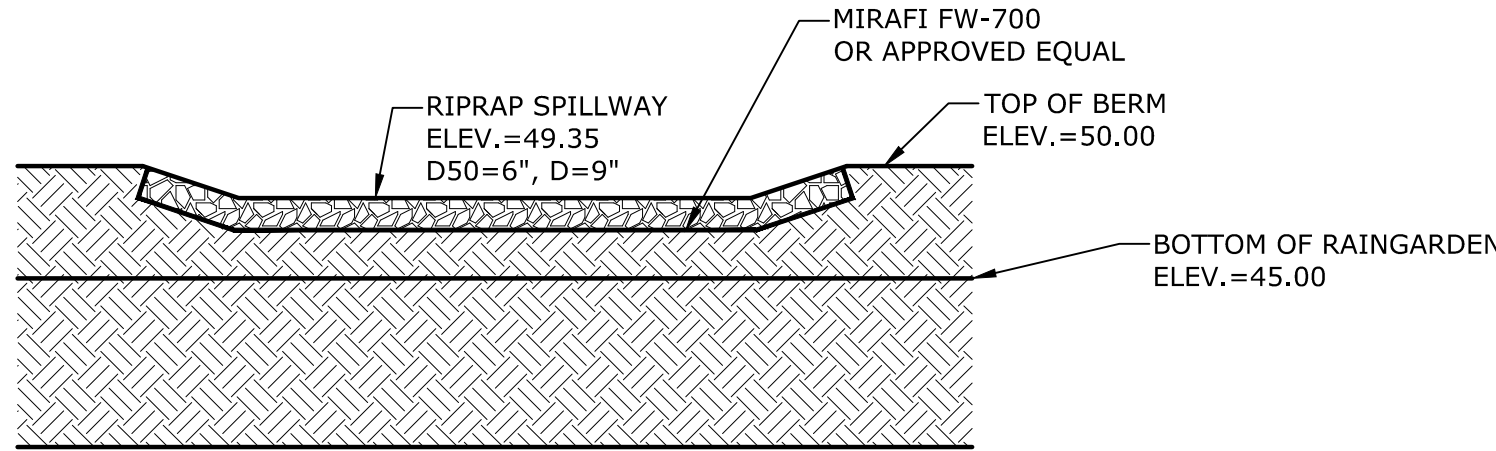


- NOTES:
1. CORE MATERIAL SHALL MEET USGS CLASSIFICATION SC, SM, CL OR ML AND HAVE A MAXIMUM PARTICLE SIZE OF 3" AND A PERMEABILITY LESS THAN 0.000005 CM/S, AND MEET THE FOLLOWING GRADATION
- | SIEVE SIZE | PERCENT FINER BY WEIGHT |
|------------|-------------------------|
| 3 INCH | 100 |
| No. 200 | 50 -100. |
2. PIPE SHALL BE FULLY EMBEDDED IN CORE TO ELIMINATE SEEPAGE

CLAY CORE BERM
NO SCALE



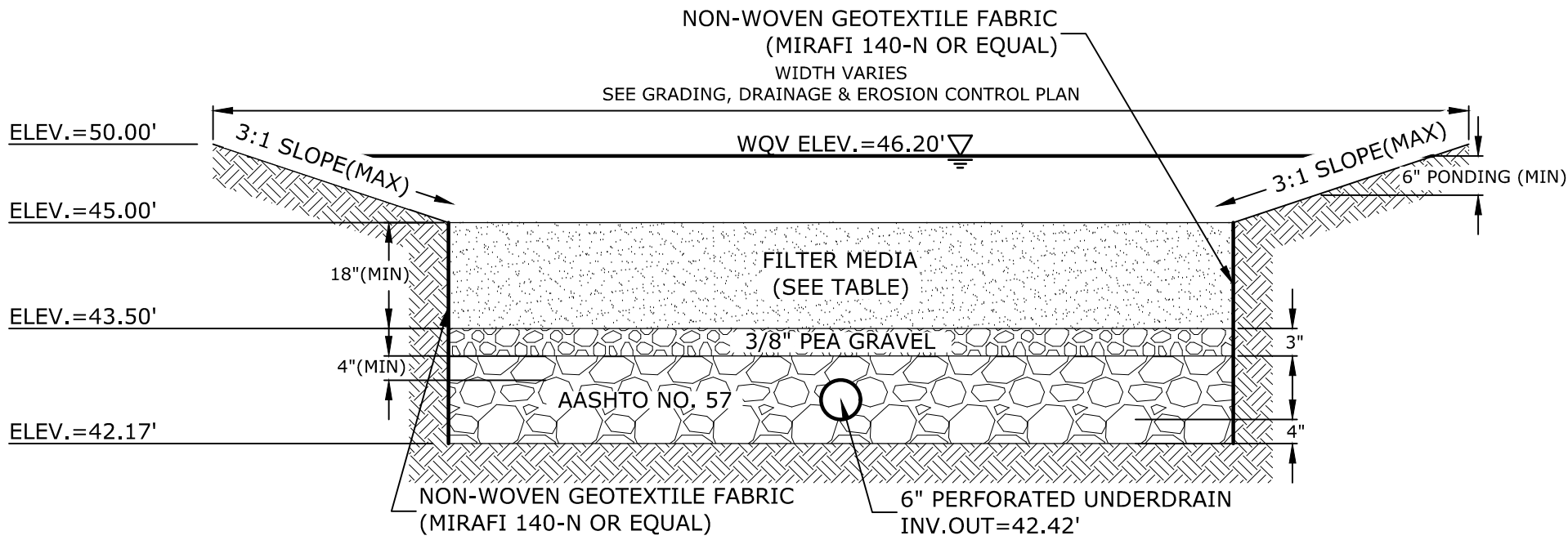
OUTLET STRUCTURE DETAIL (POS300)
NO SCALE



NOTE:
SEE GRADING, DRAINAGE & EROSION CONTROL PLANS, SHEET C-110, FOR LOCATIONS AND ELEVATIONS.

RIPRAP OVERFLOW SPILLWAY
NO SCALE

RAINGARDEN PLANT SCHEDULE				
CODE	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES				
BN	BETULA NIGRA	RIVER BIRCH	12 - 14' HT	B & B (CLUMP)
AC	AMALANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	6 - 7' HT	B & B (CLUMP)
SHRUBS				
VD	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	5 GALLON	CONTAINER
CA	CLEThERA ALNIFOLIA	SUMMERSWEET CLEThERA	5 GALLON	CONTAINER
PERENNIALS				
PV	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	3 GALLON	CONTAINER
EM	EUPATORIUM MACULATUM	JOE PYE WEED	2 GALLON	CONTAINER
AI	ASCLEPIAS INCARNATA	MARSH MILKWEED	2 GALLON	CONTAINER
RG	RUDBECKIA 'GOLDSTURM'	GOLDSTURM BLACKEYED SUSAN	1 GALLON	CONTAINER
EP	ECHINACEA 'PURPUREA'	PURPLE CONEFLOWER	1 GALLON	CONTAINER



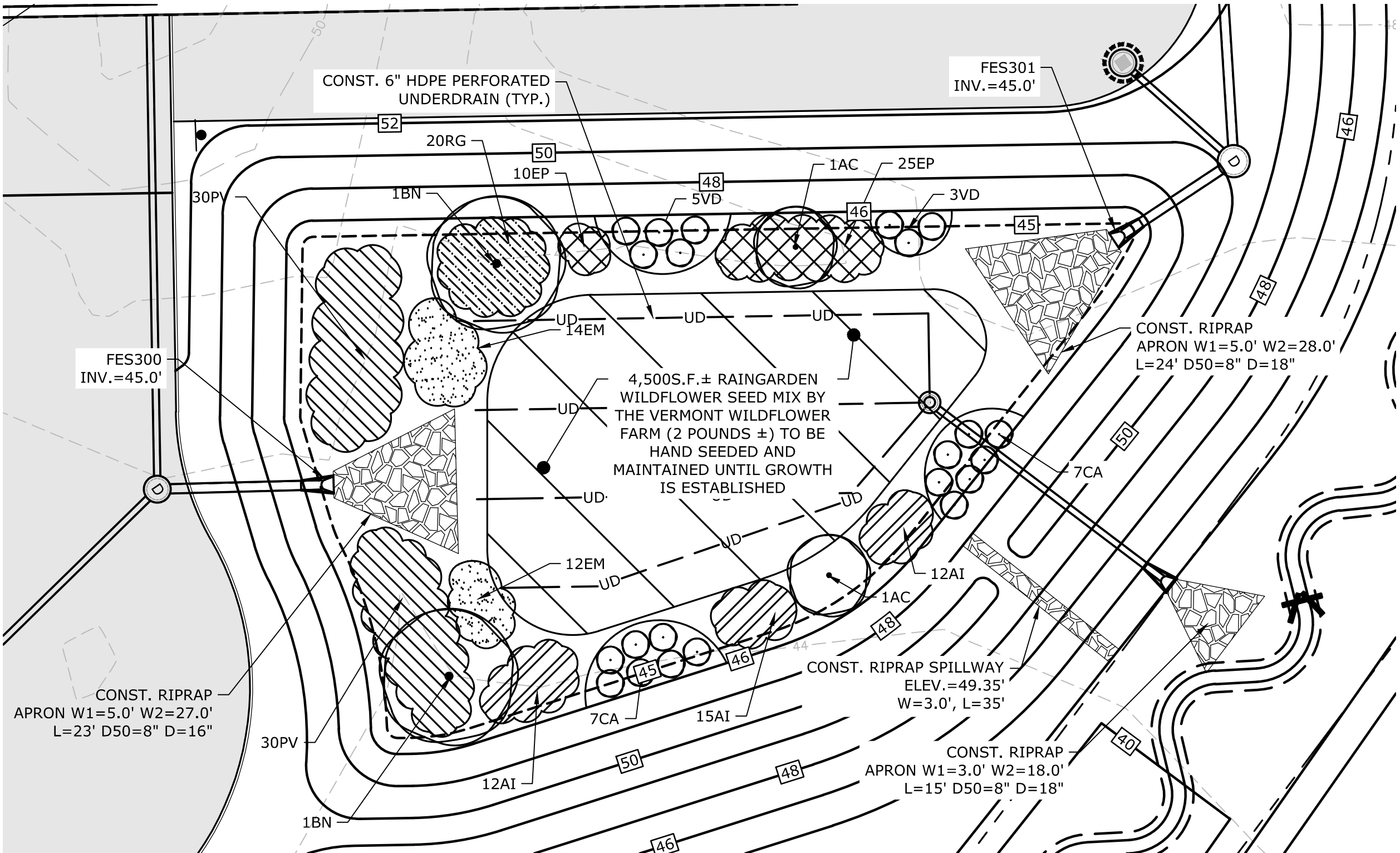
SECTION VIEW

FILTER MEDIA COMPOSITION:			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL SIEVE NO.	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH	20-30	200	5 MAX.

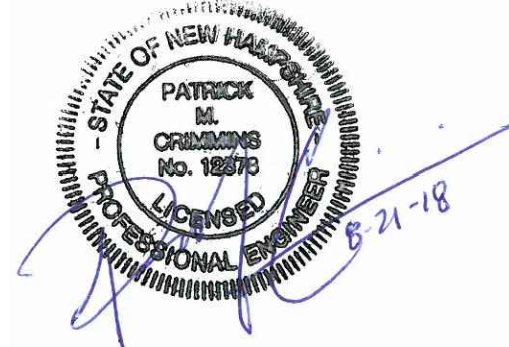
- NOTES:
1. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
 2. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.
 3. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND ELEVATIONS.
 4. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33):

SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

RAIN GARDEN
NO SCALE



RAIN GARDEN PLANTING PLAN
SCALE: 1" = 20'



Proposed Industrial Development

Lonza Biologics

Portsmouth,
New Hampshire

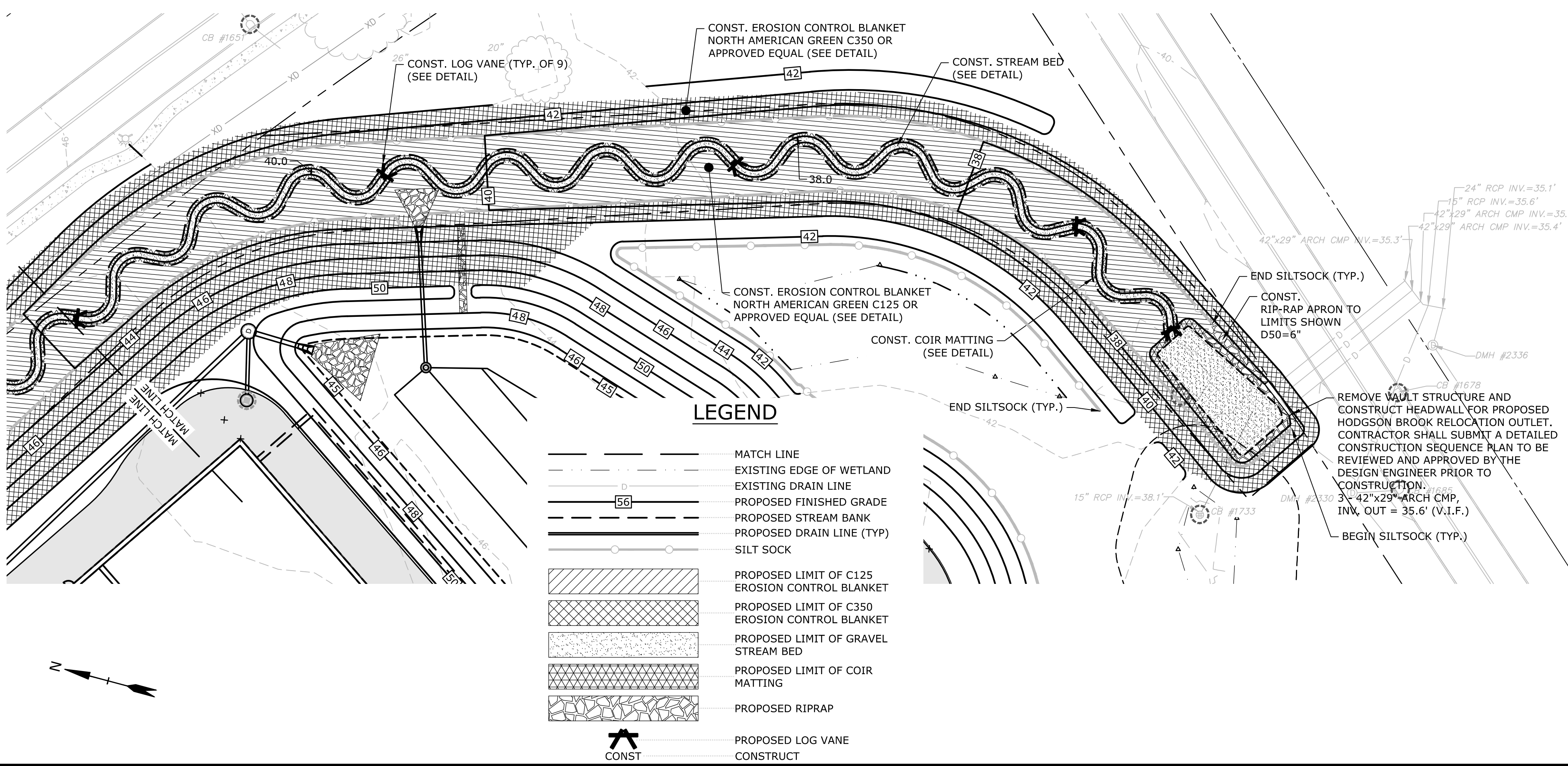
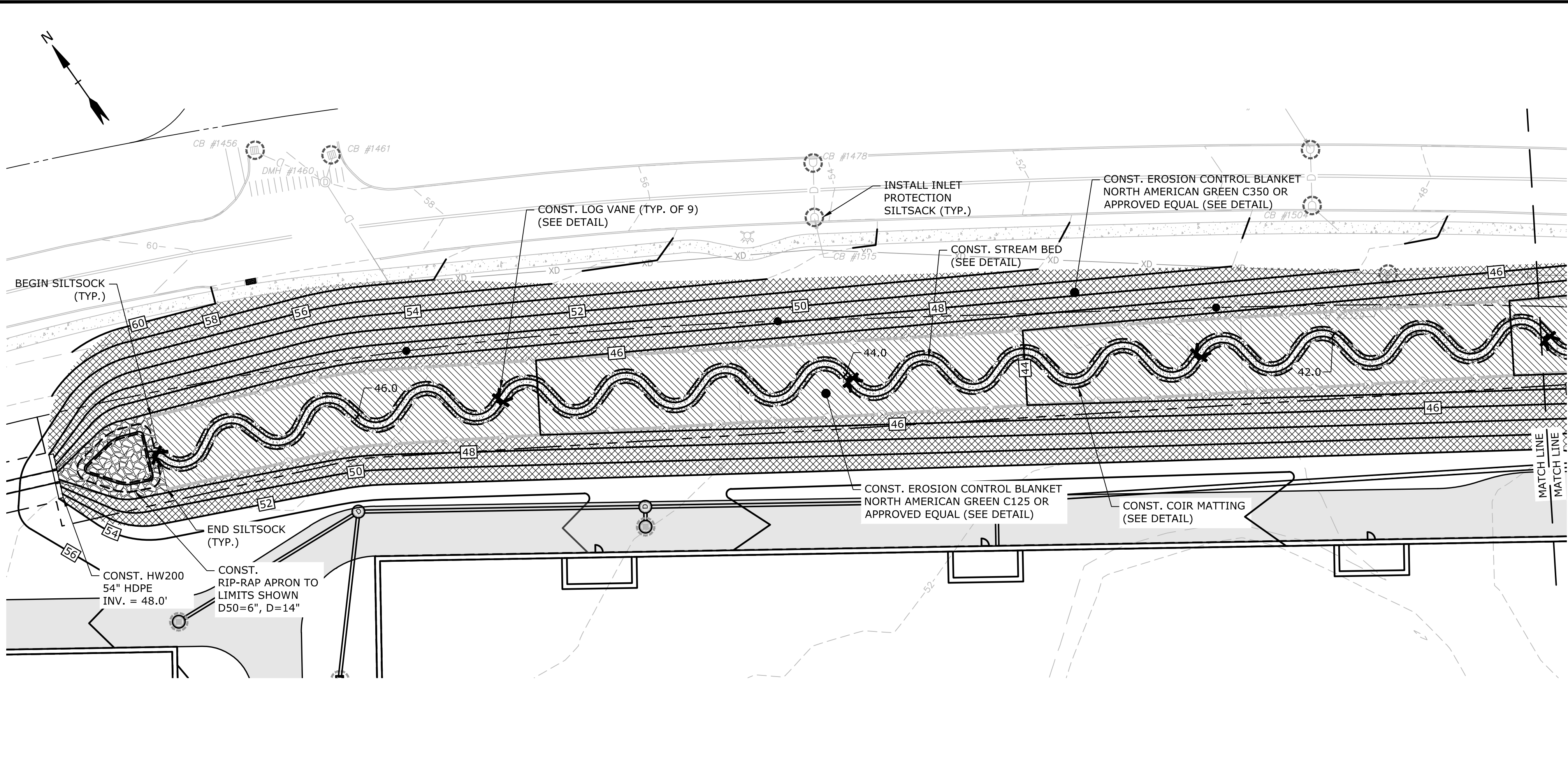
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DRAWN BY: NAH		
CHECKED: PMC		
APPROVED: BLM		

DETAILS SHEETS

SCALE: AS SHOWN

C-509

Last Save Date: August 20, 2018 3:55 PM By: NAHANSEN
Plot Date: Tuesday, August 21, 2018 Plotted By: Neil A. Hansen
File Location: J:\L-0700\013 Iron Parcel Redevelopment\Drawings Figures\AutoCAD\Sheet\L0700-CS-701 to C-703.dwg Layout Tab: C-701



CONSTRUCTION SEQUENCE:

THIS STREAM RESTORATION IS A PART OF A LARGER DEVELOPMENT PROJECT AS A WHOLE, THE CONSTRUCTION SEQUENCE BELOW DETAILS ONLY ACTIVITIES PERTAINING TO THE STREAM CORRIDOR. IT DOES NOT INCLUDE ACTIVITIES THAT MIGHT USUALLY BE INCLUDED IN SUCH A SEQUENCE, SUCH AS (BUT NOT LIMITED TO) CLEARING AND GRUBBING, CONSTRUCTION LAYOUT, TRAFFIC CONTROL, EROSION CONTROL, AND MATERIAL DISPOSAL. THE SEQUENCE IS SUBJECT TO CHANGE TO INTEGRATE FLUIDLY WITH THE ENTIRE PROJECT, AND MAY CHANGE TO THE DESIRES OF THE CONTRACTOR, AS THEY SEE BEST FIT. CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION SEQUENCE PRIOR TO CONSTRUCTION TO BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER. THIS CONSTRUCTION SEQUENCE ASSUMES THAT THE EXISTING DRAINAGE INFRASTRUCTURE IS TO REMAIN IN PLACE UNTIL THE STREAM IS BUILT.

STREAM CORRIDOR CONSTRUCTION SEQUENCE:

- EXCAVATE AND GRADE THE STREAM CORRIDOR, FROM THE TOP OF THE VALLEY, DOWN TO THE TOP OF THE FLOODPLAIN AND INTO THE CENTER OF THE CORRIDOR, LEAVING AN ACCESS RAMP AT THE START AND END OF THE PROJECT. IF REQUIRED, THE GRADE MAY BE SET LOWER TO ALLOW FOR BACKFILLING OF LOAM, SHOULD THE EXISTING EARTH BE OF POOR MATERIAL. DO NOT OVER-COMPACT FLOODPLAIN OR VALLEY SLOPES; COMPACT ONLY BY TRACK-WALKING OR APPLYING PRESSURE WITH THE BUCKET OF THE EXCAVATOR. THE FLOODPLAIN AND SLOPES SHOULD BE LEFT ROUGH, TO ALLOW SEED TO GROW MORE EASILY. LEAVE AN ACCESS PATH ALONG THE TOP OF THE VALLEY TO ONE OR BOTH SIDES, TO ALLOW FOR THE TRANSPORT AND TEMPORARY STAGING OF IN-STREAM MATERIALS AND MOVEMENT OF HEAVY EQUIPMENT. THIS MAY ALSO BE DONE BY USING THE UPSTREAM ACCESS RAMP TO DELIVER MATERIALS BEHIND THE EXCAVATOR, USING THE CORRIDOR AS THE PATH. THIS IS NOT PREFERRED, SINCE OVER-COMPACTION IS LIKELY TO OCCUR RESULTING FROM THE EXCESSIVE USE.
- BECAUSE THE CONSTRUCTION WILL BE PERFORMED IN THE DRY, CONSTRUCTION WILL START AT THE DOWNSTREAM END OF THE RESTORED HODGSON BROOK. STARTING AT THE DOWNSTREAM END OF THE STREAM, BEGIN BY EXCAVATING THE POOL WHICH WILL REDIRECT WATER INTO THE EXISTING CULVERTS BELOW GOOSE BAY DRIVE FROM UPSTREAM OF THE POOL. WORKING FROM UPSTREAM OF THE SECTION UNDER CONSTRUCTION, BEGIN THE FINE GRADING OF THE STREAM CHANNEL. THIS MAY BE DONE BY OVER-EXCAVATING THE CHANNEL AND BANKS, THEN INSTALLING THE COMPOST LOG ROLL STREAM BANKS. INITIALLY THE BED SLOPE OF THE STREAM IS GRADED UNIFORM, AND THEN RIFFLES AND POOLS GRADED NEAR THE FINISHING STEPS. THE LOWER COMPOST LOG SHOULD SIT BELOW THE THALWEG OF THE STREAM, AND ONCE SET IN PLACE AT THE CORRECT ELEVATION, MAY HAVE FILL PLACED BEHIND THE ROLLS. THE STREAM CHANNEL SHOULD THEN BE BACKFILLED AT THE RIFFLES AND POOLS WITH APPROPRIATELY GRADED MATERIAL, LEAVING THE POOLS AS DEEPER FEATURES IN THE STREAM CHANNEL. AS CONSTRUCTION CONTINUES UPSTREAM, MERGING THE COMPOST LOG ROLLS SHOULD BE DONE SUCH THAT THE UPSTREAM-MOST END OF THE ROLLS IS CURLED OUT FROM THE BANK, SUCH THAT THE NEXT UPSTREAM ROLLS MAY BE PLACED LINEARLY INTO THE BANK, AND FLOWS WILL BE DIRECTED AS TO NOT CAUSE EROSION OR AVULSION BETWEEN THE ROLLS (SHIPLAPPED CONSTRUCTION). EXTRA HEAVY ATTACHMENT (CONNECTIONS) OF THE ROLLS AT THESE LOCATIONS SHOULD BE PERFORMED WITH BIODEGRADABLE MATERIALS. WHILE CONSTRUCTION CONTINUES, BACKFILLING OF ANY FLOODPLAIN LOAM - SHOULD IT BE DEEMED NECESSARY - SHOULD BE PERFORMED TO THE FINAL GRADE OF THE FLOODPLAIN. CONSTRUCT IN-STREAM STRUCTURES (LOG CROSS VANES) AS THEY ARE REACHED, AS WELL AS FLOODPLAIN SILLS. ADDITIONAL FLOODPLAIN FEATURES MAY BE CONSTRUCTED AT THIS TIME, SUCH AS HABITAT LOGS AND BOULDERS, TREE STANDS, AND VERNAL POOLS (ALL OPTIONAL, BUT RECOMMENDED). CONSTRUCTION MATERIALS MAY BE PROVIDED ON-DEMAND USING THE ACCESS PATH ALONG THE TOP OF THE VALLEY. MATERIALS (LOGS, REBAR, GEOTEXTILE, RIFFLE MATERIAL, COMPOST ROLLS, ETC.) MAY BE SET OUTSIDE THE STREAM CORRIDOR, AND GATHERED BY THE EXCAVATOR FROM INSIDE THE CORRIDOR, OR LESS PREFERABLY, PLACED BEHIND THE EXCAVATOR IN THE CORRIDOR. ALL FINE GRADING AND STRUCTURES SHOULD BE CHECKED FOR ELEVATIONS AND GEOMORPHIC METRICS BEFORE STARTING THE NEXT UPSTREAM SECTION.
- SEED AND MULCH THE CORRIDOR AND TOP OF VALLEY WITH THE TEMPORARY STABILIZATION SEED MIX (PREFERABLY A CONSERVATION MIX WITH AT LEAST 10% WILDFLOWER SEEDS, THOUGH MAY BE OF A PERENNIAL RYEGRASS). SEED TO THE AMOUNTS AS SPECIFIED BY THE SEED MANUFACTURER - WITH GREATER APPLICATION ON THE STEEPER VALLEY SLOPES - AND MULCH WITH WOOD CHIPS (90% GROUND COVERAGE) OR STRAW (TO A DEPTH OF 1 INCH). WATER AS SPECIFIED BY THE SEED MANUFACTURER, IF DROUGHT PERSISTS LONGER THAN THE RECOMMENDED WATERING RATE. ALLOW THE GRASS TO GROW TO A HEIGHT OF 2 INCHES BEFORE PROCEEDING TO THE NEXT STEP. IF ANY BARE PATCHES EXIST, RESEED AND MULCH TO ENSURE STABILIZATION. THIS STEP MAY BE PERFORMED AS A SECTION OF STREAM IS CONSTRUCTED, WHICH MAY REDUCE THE OVERALL CONSTRUCTION DURATION, THOUGH IT MAY COME AT A COST OF INCREASED WATERING EFFORT.
- WHEN ALL PREVIOUS STEPS HAVE BEEN COMPLETED, THE STREAM SHOULD BE OPENED UP TO FLOWS. FIRST, THE EXISTING DRAINAGE CULVERT AT THE DOWNSTREAM END SHOULD BE EXCAVATED AND REMOVED. GRADE AND TEMPORARILY STABILIZE THE INCOMING FLOWS TO THE DOWNSTREAM POOL. PROCEED TO THE INLET TO THE STREAM AND CONSTRUCT (IF NOT ALREADY DONE IN STEP 2) THE INLET POOL AND GRADING. FLOWS MAY THEN BE DIRECTED INTO THE STREAM CHANNEL, IN A MANNER THAT SHALL BE DETERMINED IN THE FIELD, BASED ON THE MANNER IN WHICH THE INCOMING CULVERT AND UPSTREAM INFRASTRUCTURE IS BEING CONSTRUCTED. ALLOWING INCOMING FLOWS TO THE STREAM MAY BE PERFORMED CONCURRENTLY WITH THAT OF THE OUTLET, PROVIDED THE CONTRACTOR HAS THE LABOR AND EQUIPMENT AVAILABLE. HOWEVER, CAUTION SHOULD BE EXERCISED TO ENSURE THAT FLOWS ARE ABLE TO EXIT THE CORRIDOR FULLY AND APPROPRIATELY, TO PREVENT DAMAGE AND/OR FLOODING TO THE SITE.
- WITH THE STREAM NOW CARRYING FLOWS, THE ENTIRE SITE SHOULD BE SEEDED AND PLANTED AS SPECIFIED IN THE PLANTING PLAN. THIS MAY BE DONE COMPLETELY OR PARTIALLY AS CONSTRUCTION OF THE STREAM TAKES PLACE. AT THIS POINT THE TEMPORARY STABILIZATION GRASS SHOULD HAVE TAKEN HOLD ENOUGH TO PROVIDE SOME COVER FOR SEEDS, AND KEEP IN MOISTURE DURING THE DAY. THIS STEP SHOULD ONLY BE DONE DURING A GROWING SEASON AND NOT IN MID-SUMMER OR WINTER, TO HELP ENSURE PLANTING SUCCESS. THIS STEP MAY BE DONE AFTER STEP 6, IF CONSTRUCTION ENDS BEFORE A PLANTING SEASON IS SET TO BEGIN. THIS STEP SHOULD BE PERFORMED WHEN THE APPROPRIATE EQUIPMENT IS AVAILABLE. THIS MAY HELP EXPEDITE THE PROCESS, RATHER THAN PERFORMING IT ALL COMPLETELY BY HAND.
- FINALLY, MONITORING DEVICES AND COMPONENTS SHOULD BE INSTALLED, MEASUREMENTS RECORDED, AND INSTRUMENTS CALIBRATED AS NECESSARY. PLEASE REFER TO THE MONITORING PLAN SECTION OF THIS REPORT FOR MORE DETAILS ON THE MONITORING METHODS AND SCHEDULES.

SEE SHEET C-108 FOR GRADING,
DRAINAGE & EROSION CONTROL NOTES



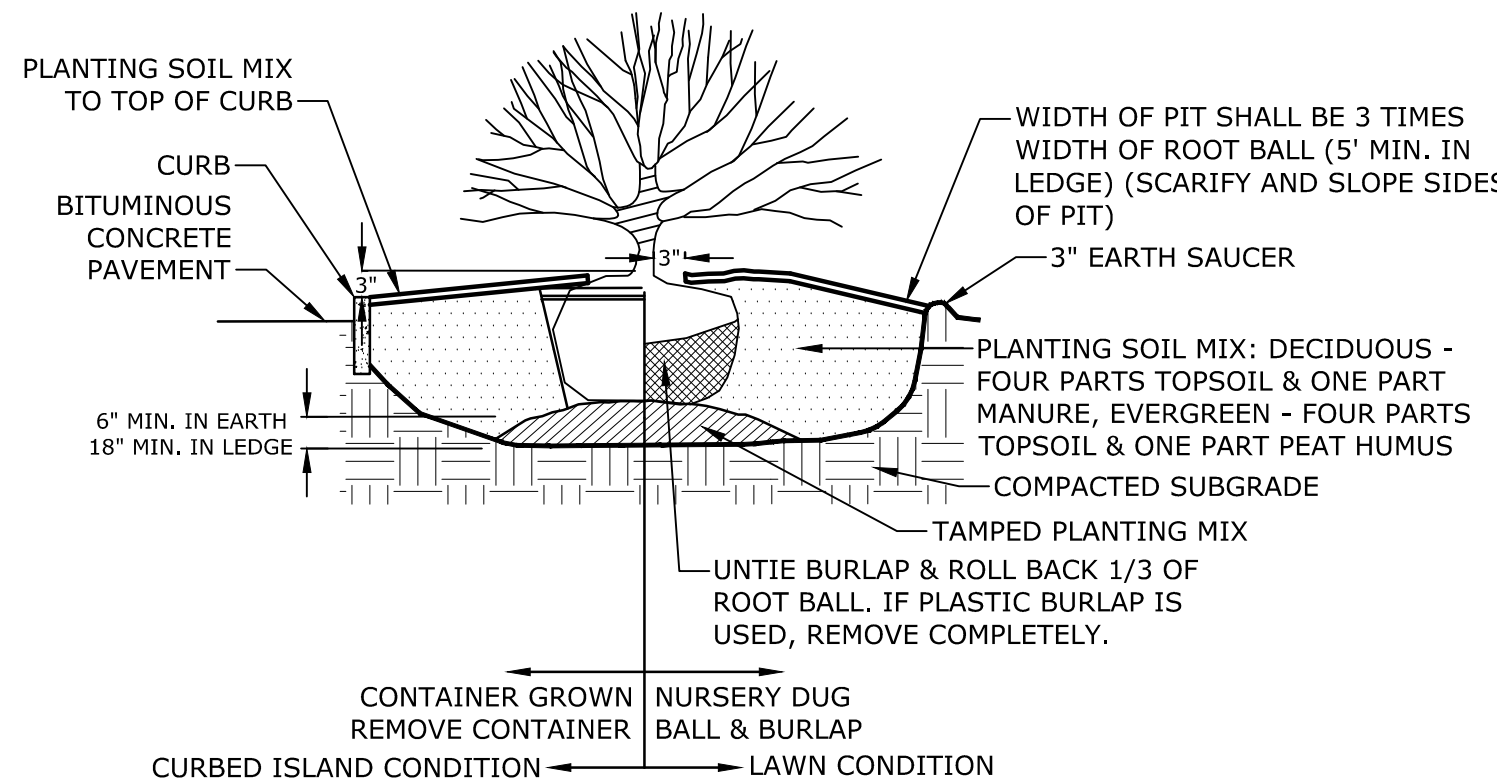
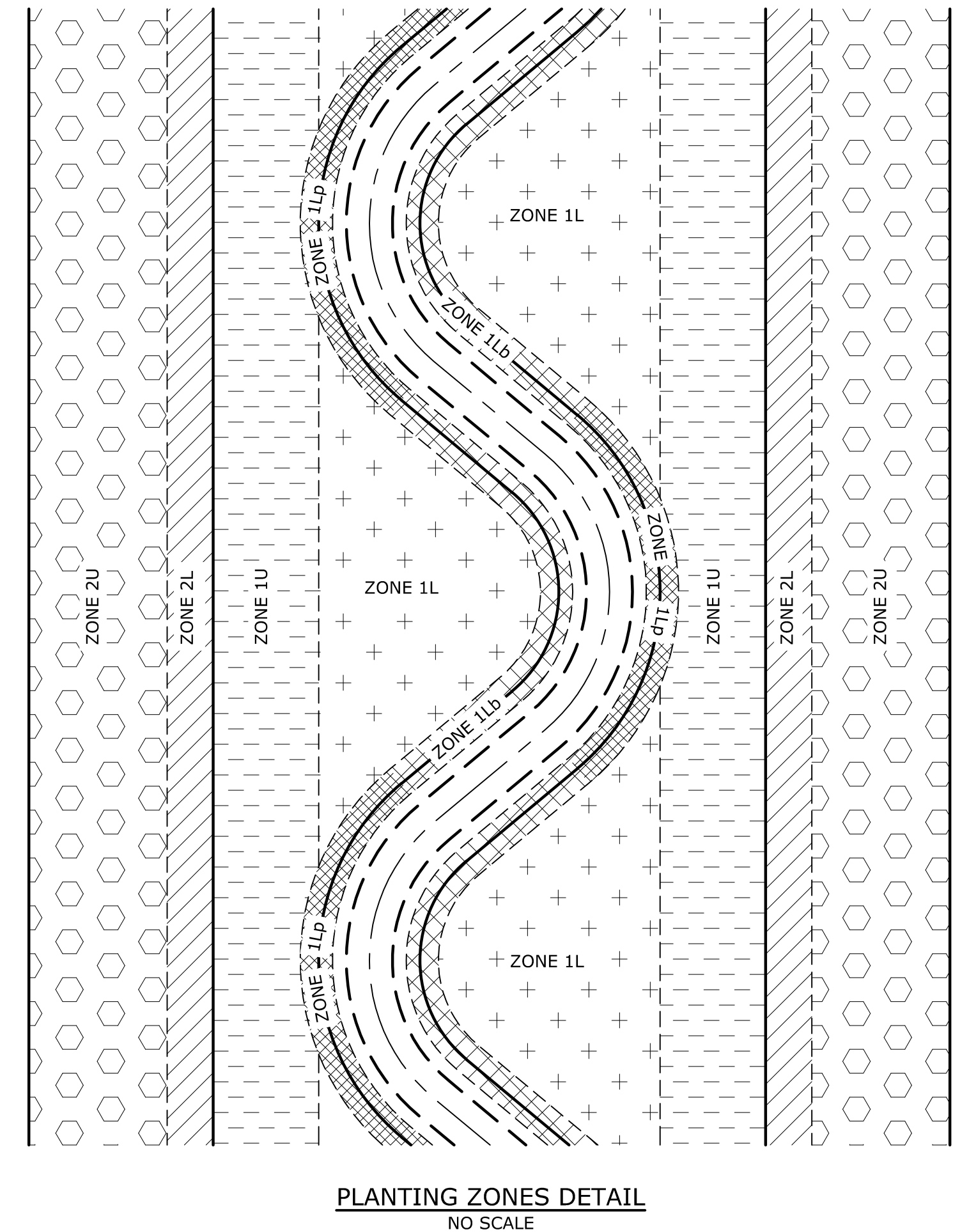
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Lonza Biologics

Portsmouth,
New Hampshire

D	8/21/2018	REVISED TAC SUBMISSION
C	6/18/2018	NHDES AOT SUBMISSION
B	5/21/2018	TAC SUBMISSION
A	4/3/2018	TAC WS SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NO:		L-0700-013
DATE:		04/03/2018
FILE:		L0700-CS-701 to C-703.dwg
DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM
HODGSON BROOK GRADING, DRAINAGE & EROSION CONTROL PLAN		
SCALE:		AS SHOWN

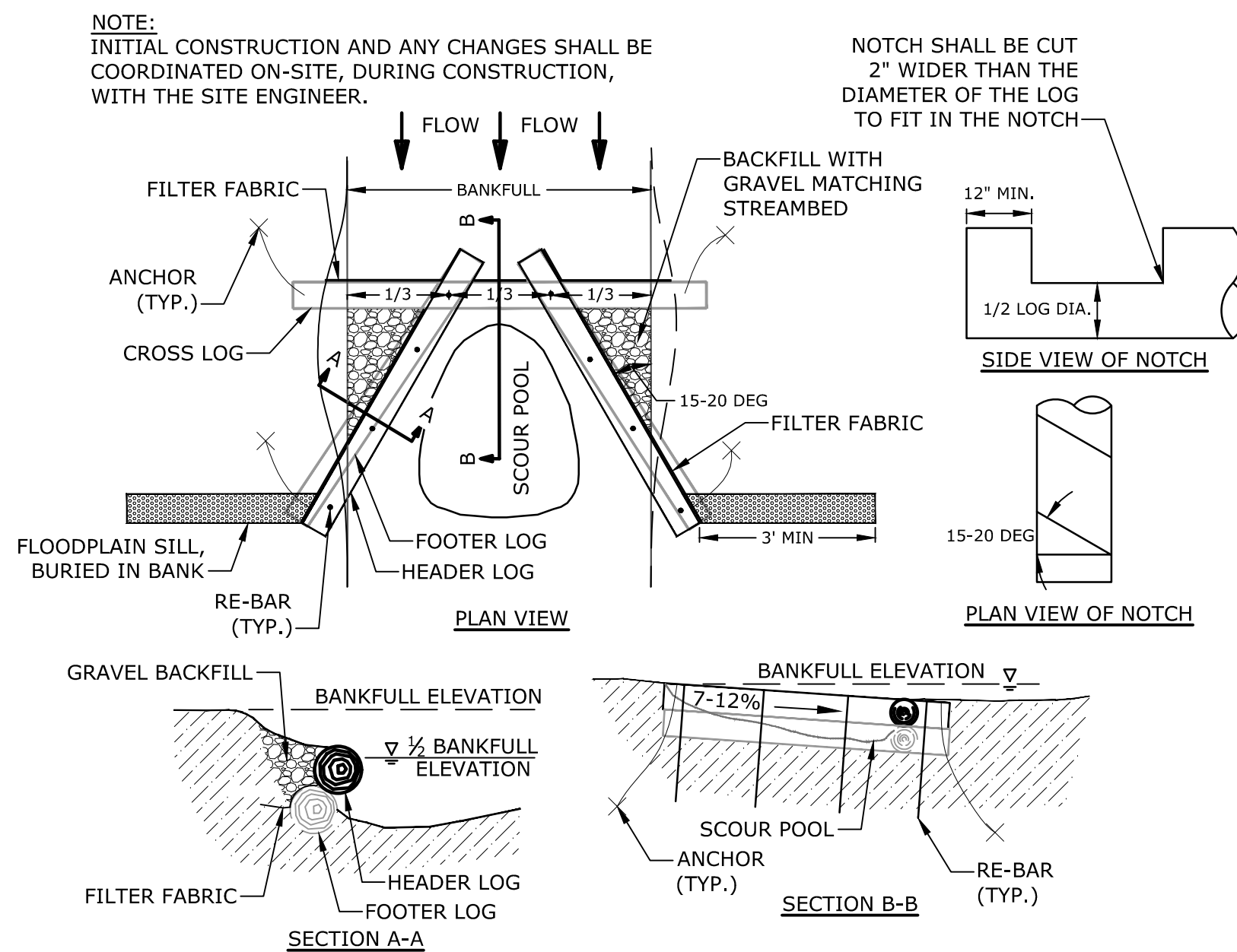
C-701



- NOTE:
PLANT AT SAME DEPTH AS PREVIOUSLY PLANTED, OR WITHIN 2" ABOVE.

SHRUB PLANTING
NO SCALE

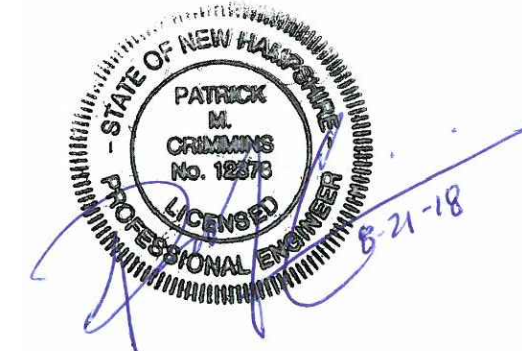
PLANTING ZONES DETAIL
NO SCALE



1. EXCAVATE A TRENCH FOR THE VANE.
2. SET THE CROSS LOG
3. SET THE VANE LOG(S).
4. PIN THE LOG VANE ARMS WITH 4' LONG, $\frac{1}{2}$ " REBAR HAMMERED INTO PRE-DRILLED HOLES (2ft ON CENTER). HOLES ARE ANGLED OFF THE VERTICAL, ALTERNATING DIRECTION (UPSTREAM, DOWNSTREAM).
5. EXCAVATE A TRENCH FOR THE GEOTEXTILE FABRIC ON THE UPSTREAM SIDE OF THE VANE. THE TRENCH SHALL BE AT LEAST 1.5' DEEP.
6. ANCHORS SHALL BE CABLED TO THE LOGS BY $>\frac{1}{2}$ " WIRE ROPE (CABLE), FASTENED WITH GRIPPLE CLIPS OR BOLTED CLAMPS.
7. ANCHORS SHALL BE EITHER LARGE (>100 LB) ROCK OR REBAR CROSSES (TWO PIECES OF 2' LENGTH, $\frac{1}{2}$ " REBAR FASTENED AT THEIR CENTERS).
8. STAPLE OR NAIL THE GEOTEXTILE ON THE UPSTREAM SIDE OF THE LOG, JUST ABOVE MID-DIAMETER, FOR THE FULL LENGTH OF THE LOG. FOLD OVER THE GEOTEXTILE FABRIC ALONG NAIL LINE. THE STAPLES/NAILS SHALL BE AT LEAST 1' ON CENTERS OR CLOSER. THE STAPLE/ NAIL LENGTH SHOULD BE AT LEAST 1".
9. BACKFILL THE UPSTREAM SIDE OF THE VANE.
10. EXCAVATE A SILL TRENCH (MINIMUM LENGTH OF 3') AT THE BANK-END OF THE LOG; EITHER A STONE SILL WITH MINIMUM DEPTH OF 2' OR A GEOTEXTILE SILL - TWO PARALLEL TRENCHES WITH A MINIMUM DEPTH OF 2'.
11. CONSTRUCT THE SILL: PLACE >1 ' SIZE STONES IN TRENCH, COVER WITH GEOTEXTILE (MIRAFI N140 OR APPROVED EQUAL), BACKFILL; OR PLACE GEOTEXTILE IN PARALLEL TRENCHES, COVERING A MOUND BETWEEN THEM, AND BACKFILL.
12. WEAVE ONE CONTINUOUS GEOTEXTILE ALONG VANE AND SILL.

1. CROSS LOGS SHALL BE A MINIMUM OF 8" IN DIAMETER. VANE ARM LOGS SHALL BE A MINIMUM OF 6" IN DIAMETER. ALL LOGS SHOULD BE RELATIVELY STRAIGHT AND, OF A HARDWOOD, HEMLOCK, OR LARCH SPECIES.
2. CROSS LOGS SHALL BE A MINIMUM OF 8' IN LENGTH AND BE PINNED EVERY 2'. VANE ARM LOGS SHALL BE A MINIMUM OF 7', AND PINNED EVERY 2'.
3. VANE ARM LOGS SHALL BE BURIED INTO THE BANK A MINIMUM OF 2', WHERE THEY SHALL BE KEYED INTO THE BANK WITH A SILL OF A MINIMUM LENGTH OF 3'.
4. NAIL FILTER FABRIC (MIRAFI 140N OR APPROVED EQUAL) ON TOP OF FOOTER LOG USING 3" 10d GALVANIZED COMMON NAIL OR SIMILAR AT 1' INTERVALS ALONG THE LOG. FOLD OVER THE FILTER FABRIC ALONG THE NAIL LINE.
5. SET THE ELEVATION OF THE TOP OF THE CROSS LOG TO THE DESIGNED THALWEG (CENTERLINE) ELEVATION OF THE STREAMBED.
6. THE CROSS NOTCH CAN BE FORMED BY MAKING CUTS 1"-2" APART WITH A CHAINSAW, THEN KNOCKING OUT THE SECTIONS WITH A CHISEL AND HAMMER.
7. THE ANGLE OF THE CROSS NOTCH SHALL MATCH THE ANGLE BETWEEN THE VANE ARMS AND THE STREAM BANK.
8. SCOUR POOLS SHALL BE OVER DUG BY ~1.4x THE RIFLE DEPTH, OR ABOUT 1' - 1.25' DEEP.

LOG CROSS VANE
NO SCALE



Proposed Industrial Development

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MARK	DATE	DESCRIPTION
PROJECT NO:		L-0700-013
DATE:		04/03/2018
FILE: L0700-CS-701 to C-703.dwg		
DRAWN BY:		NAH
CHECKED:		PMC
APPROVED:		BLM

HODGSON BROOK DETAILS SHEET

SCALE: AS SHOWN

C-703



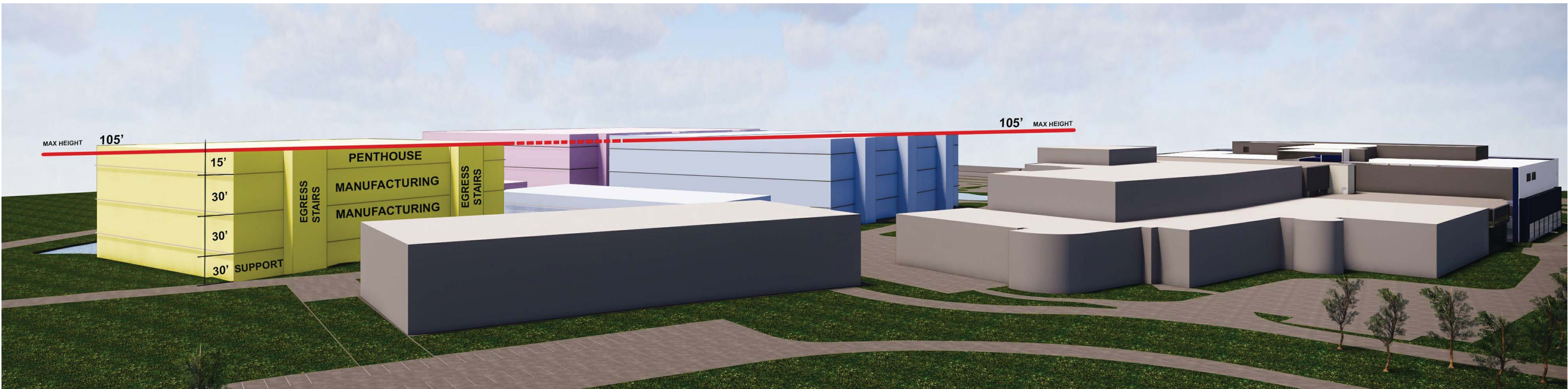
A SITE PLAN
ASK-001 1" = 100'-0"

LEGEND

- PHASE 1 (3-5 YEARS)
- PHASE 2 (5-10 YEARS)
- PHASE 3 (10-15 YEARS)



1 AXONOMETRIC VIEW
ASK-001 NONE



2 PERSPECTIVE VIEW
ASK-001 NONE

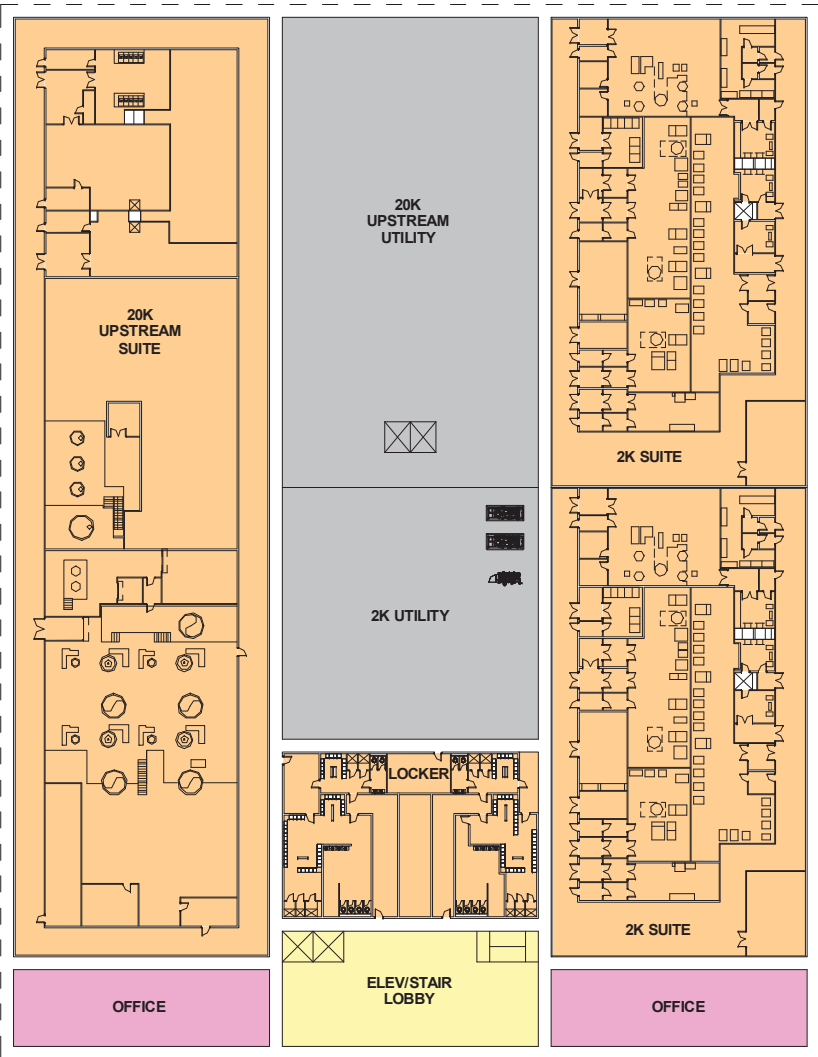


**SITE PLAN -
PERSPECTIVE**

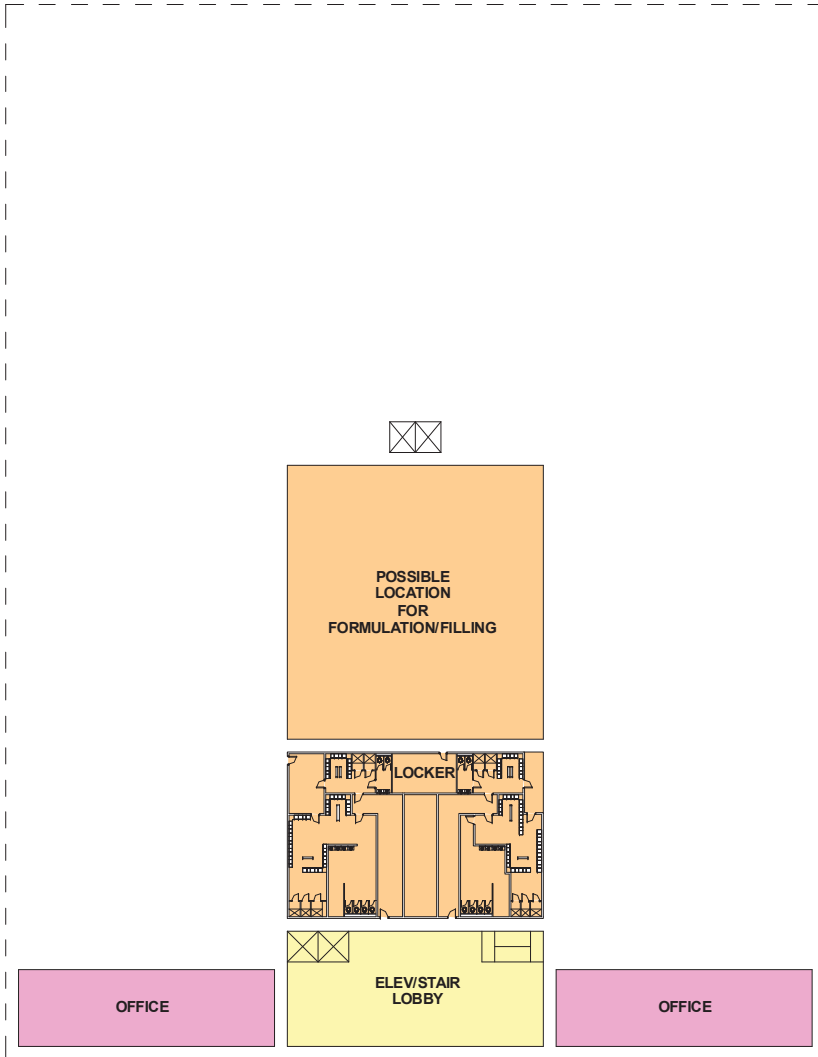
ASK-001

DATE: 09 AUG 2018 REVISION: A

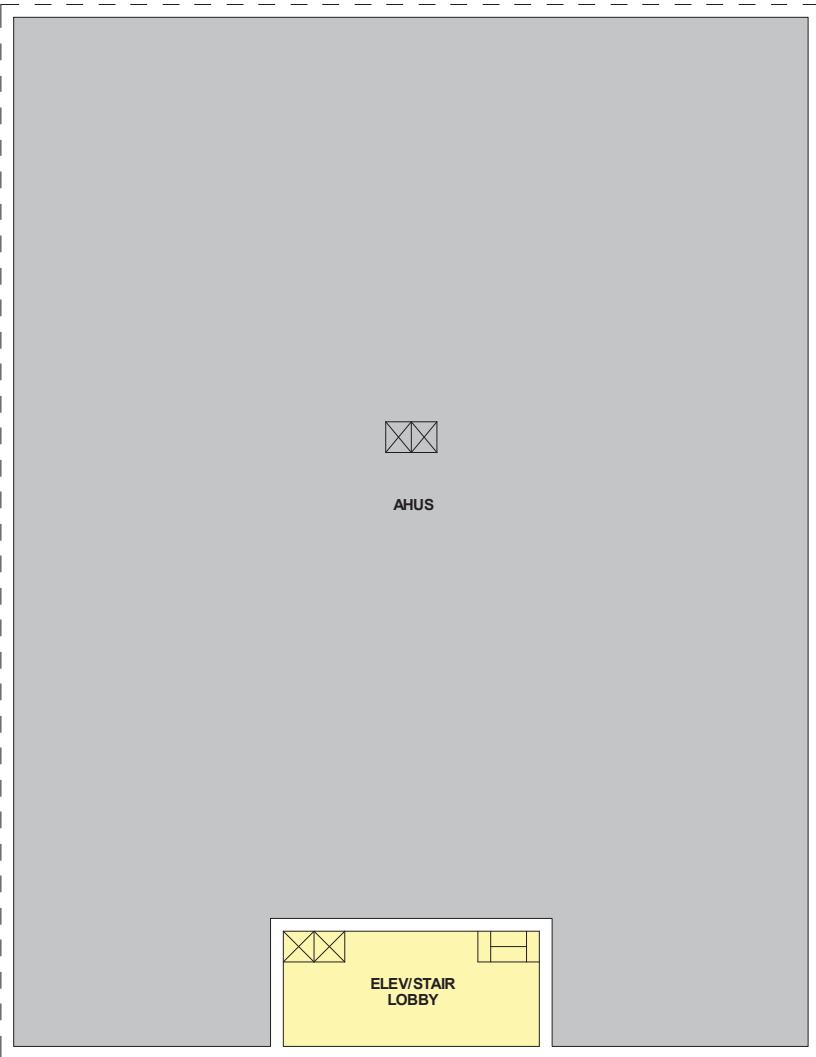




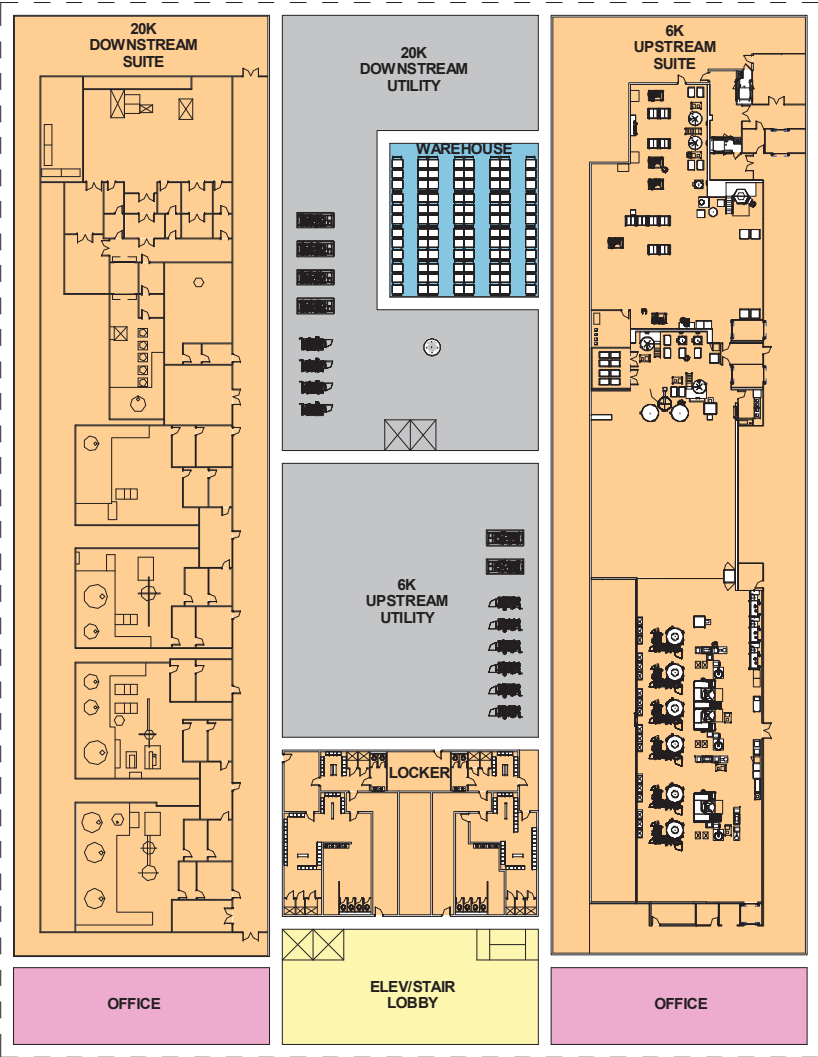
3rd Floor @ 60'-0"



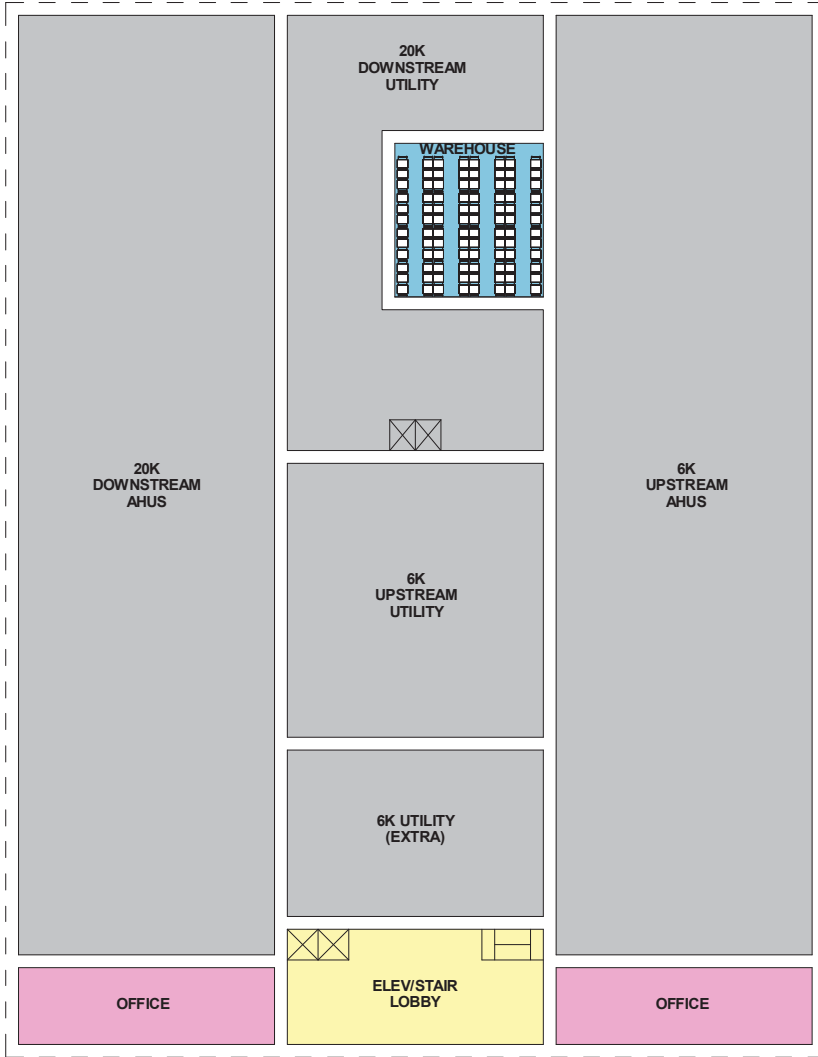
3rd Floor Intermediate @ 75'-0"



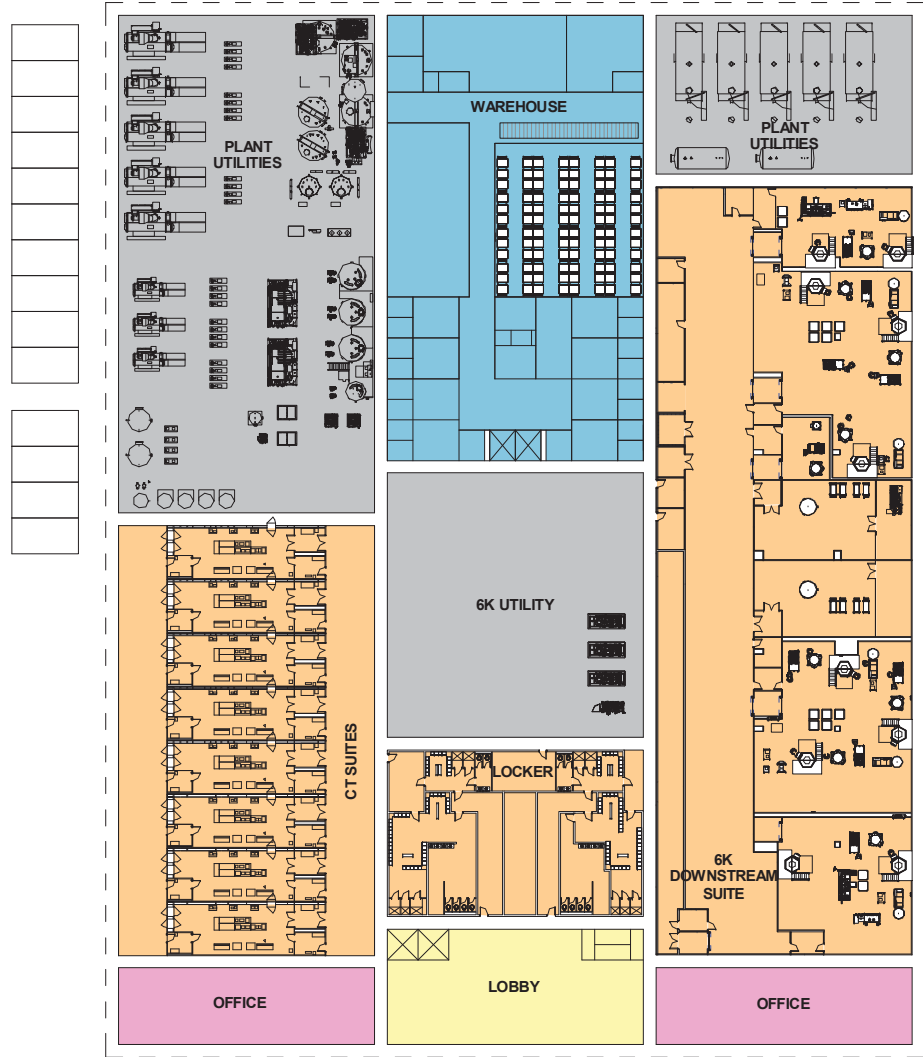
Penthouse @ 90'-0"



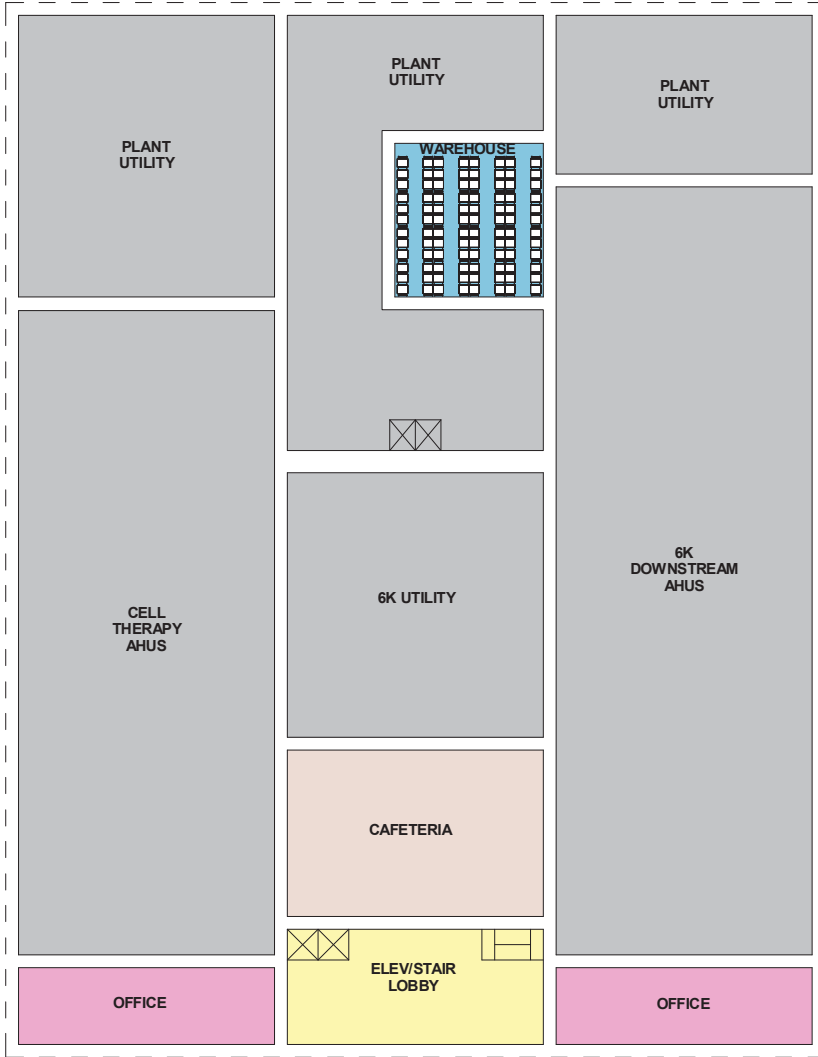
2nd Floor @ 30'-0"



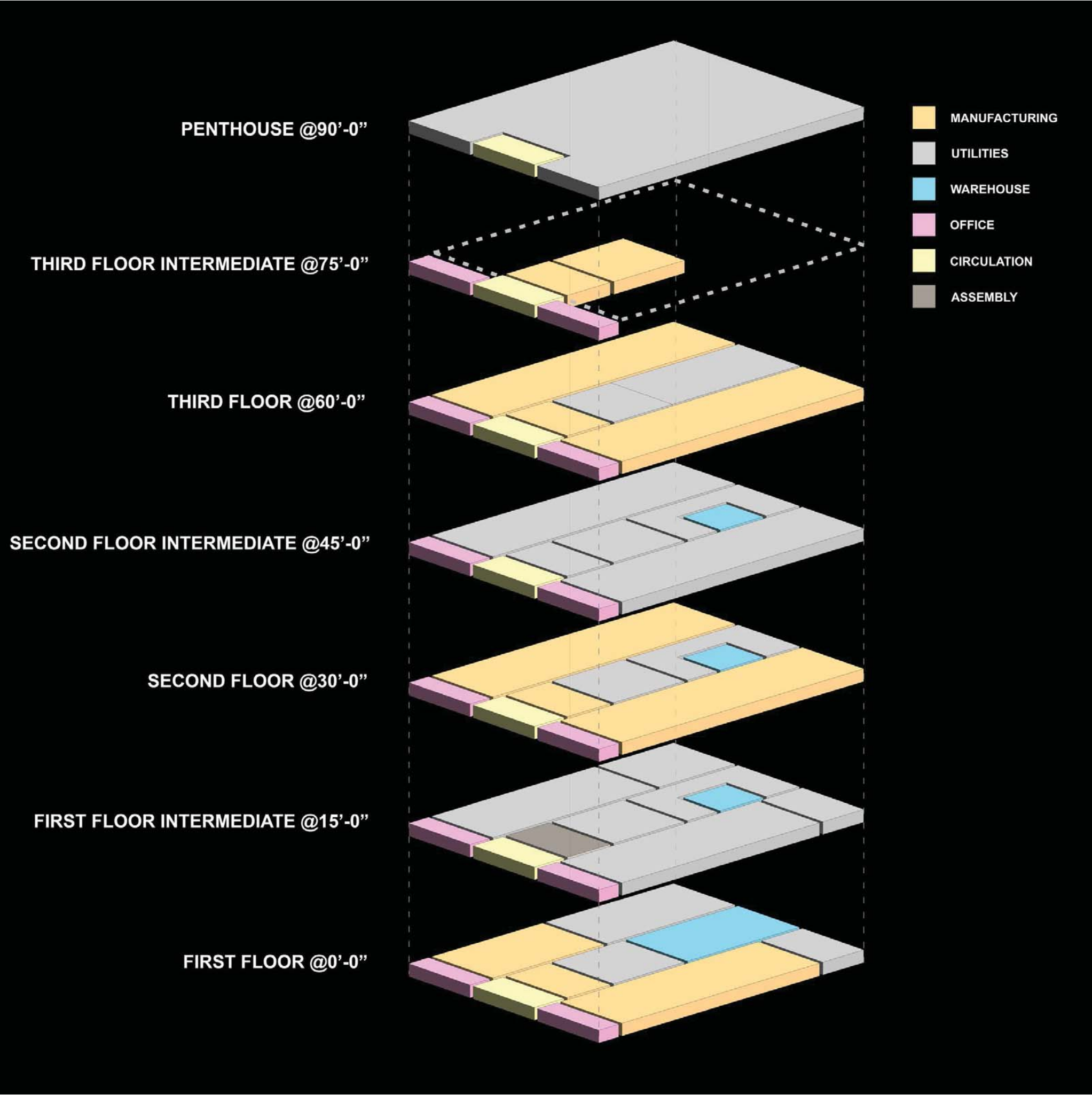
2nd Floor Intermediate @ 45'-0"



1st Floor @ 0'-0"



1st Floor Intermediate @ 15'-0"



1 AXONOMETRIC VIEW
ASK-002 1" = 60'-0"

Master Plan Area Summary (Square Feet) - Option 0					
Floor	Area	Building			Site Total
		Building 1	Building 2	Building 3	
1	First Floor Total	137,840	160,000	62,000	359,840
	Manufacturing	61,700	70,000		131,700
	Lab/Office	12,000	20,000		32,000
	Circulation	19,210	16,000		
	Warehouse	17,000	12,000		
2	Support Utility	27,930	42,000	62,000	131,930
	Second Floor Total	137,840	160,000	62,000	359,840
	Manufacturing	79,900	90,000	62,000	231,900
	Lab/Office	12,000	20,000		32,000
	Warehouse	3,480	3,600		7,080
3	Circulation	19,170	16,000		35,170
	Support Utility	23,290	30,400		53,690
	Third Floor Total	155,040	160,000	62,000	377,040
	Manufacturing	97,100	90,000	62,000	249,100
	Lab/Office	12,000	20,000		32,000
	Circulation	17,740	16,000		33,740
	Support Utility	28,200	34,000		62,200
Total		430,720	480,000	186,000	1,096,720

2 SCHEDULE
ASK-002 NONE

3 CONCEPT PLANS
ASK-002 1" = 50'-0"

5.3 Facility Design— Building Renderings



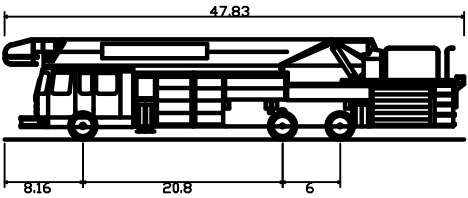
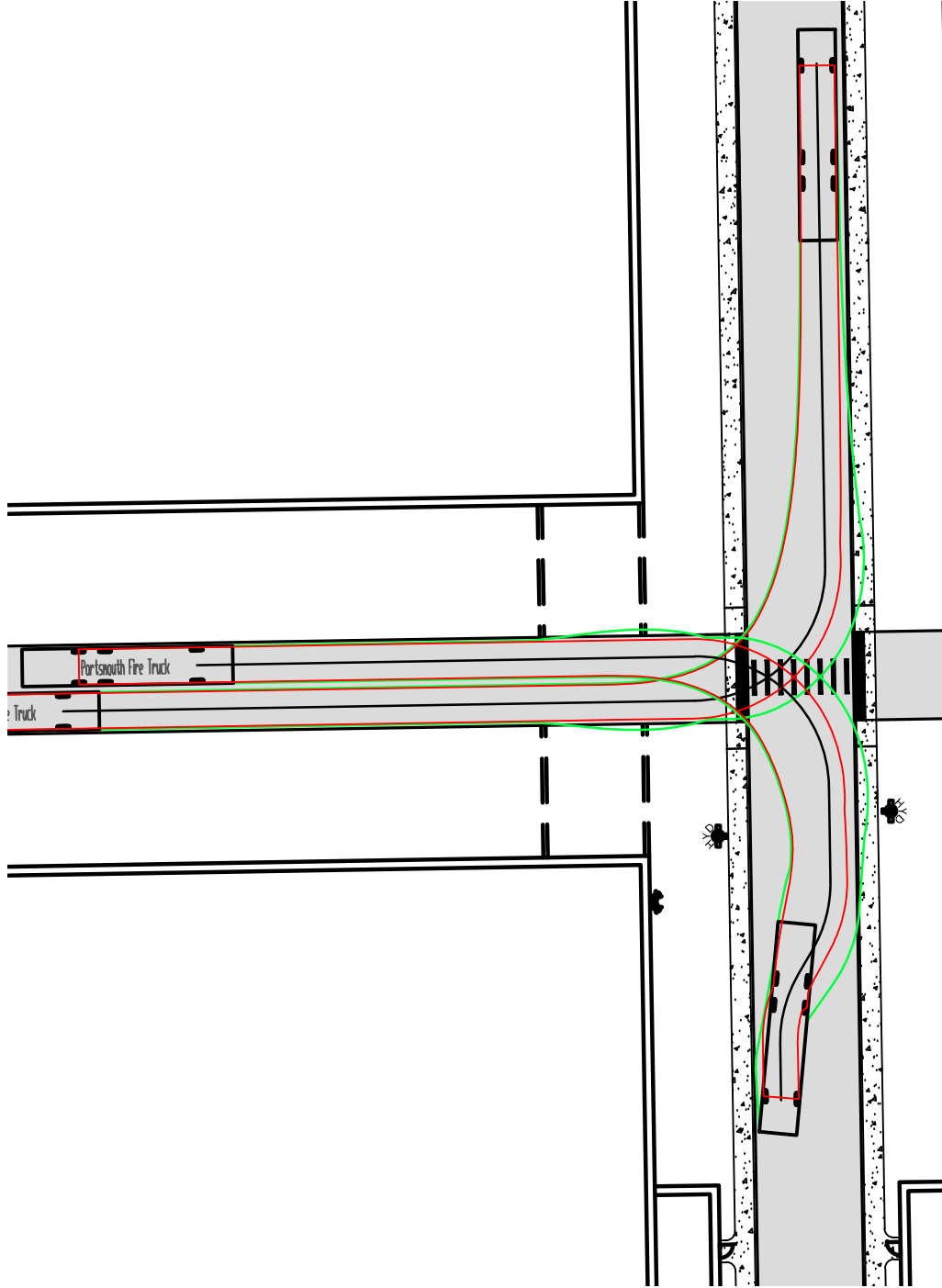
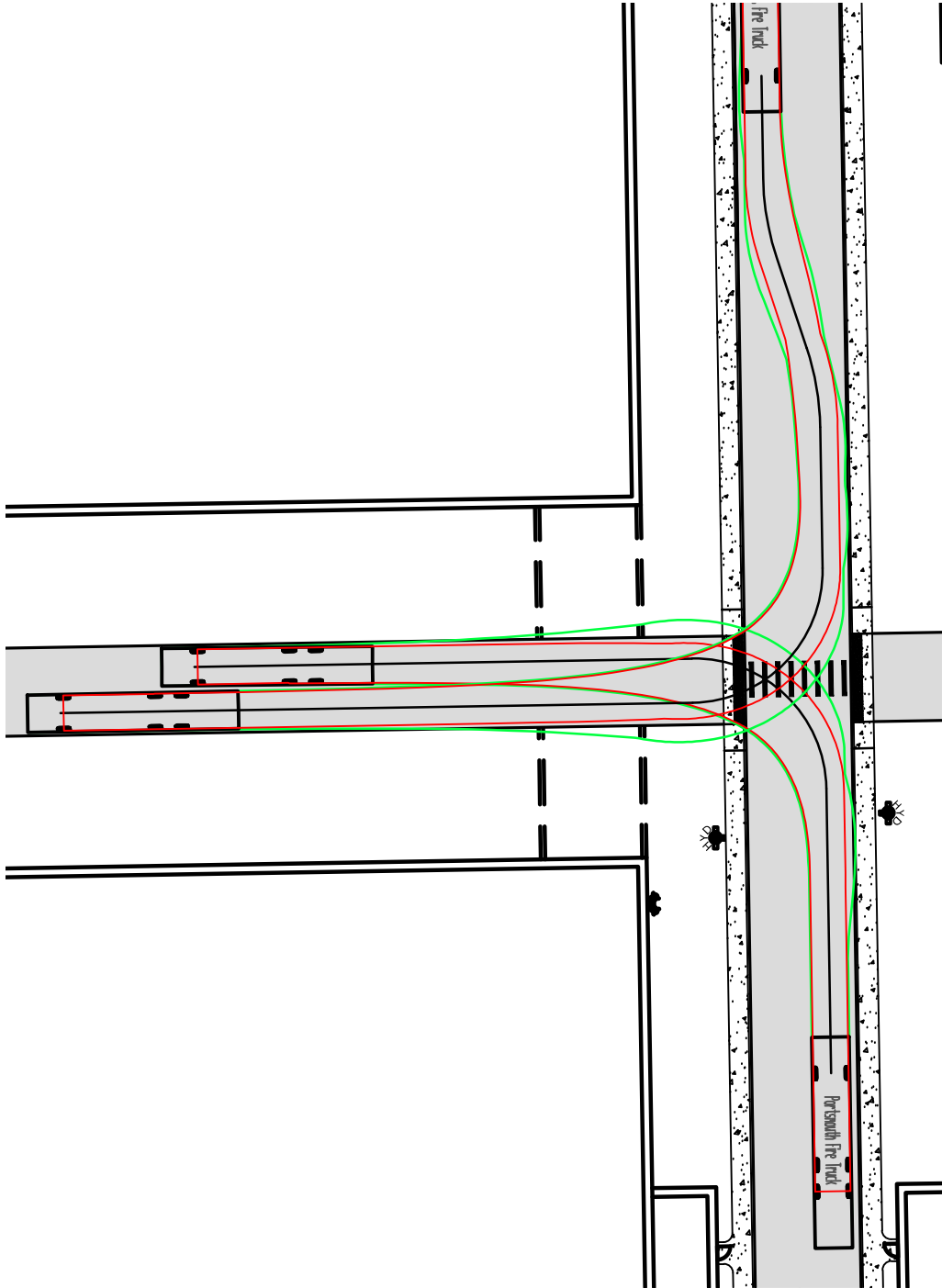
Image 5.10 – Facility Rendering

5.3 Facility Design— Building Renderings

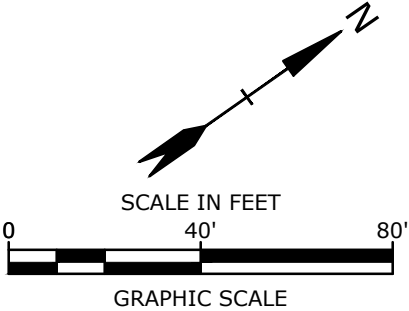


Image 5.11 – Facility Rendering

FILENAME: J:\L0700 LONZA BIOLOGICS EXPANSION WAS 157WF 013 IRON PARCEL REDEVELOPMENT\DRAWINGS_FIGURES\AUTOCAD\SHEET\L0700-CS-104 TO C-107.DWG
SAVE DATE: 8/20/2018 9:56 AM
PLOT DATE: 8/21/2018 11:28 AM



Portsmouth Fire Truck
Overall Length 47.830ft
Overall Width 8.500ft
Overall Body Height 10.432ft
Min Body Ground Clearance 0.862ft
Track Width 8.000ft
Lock-to-lock time 6.00s
Max Steering Angle (Virtual) 38.00°



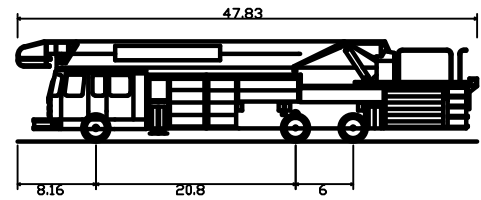
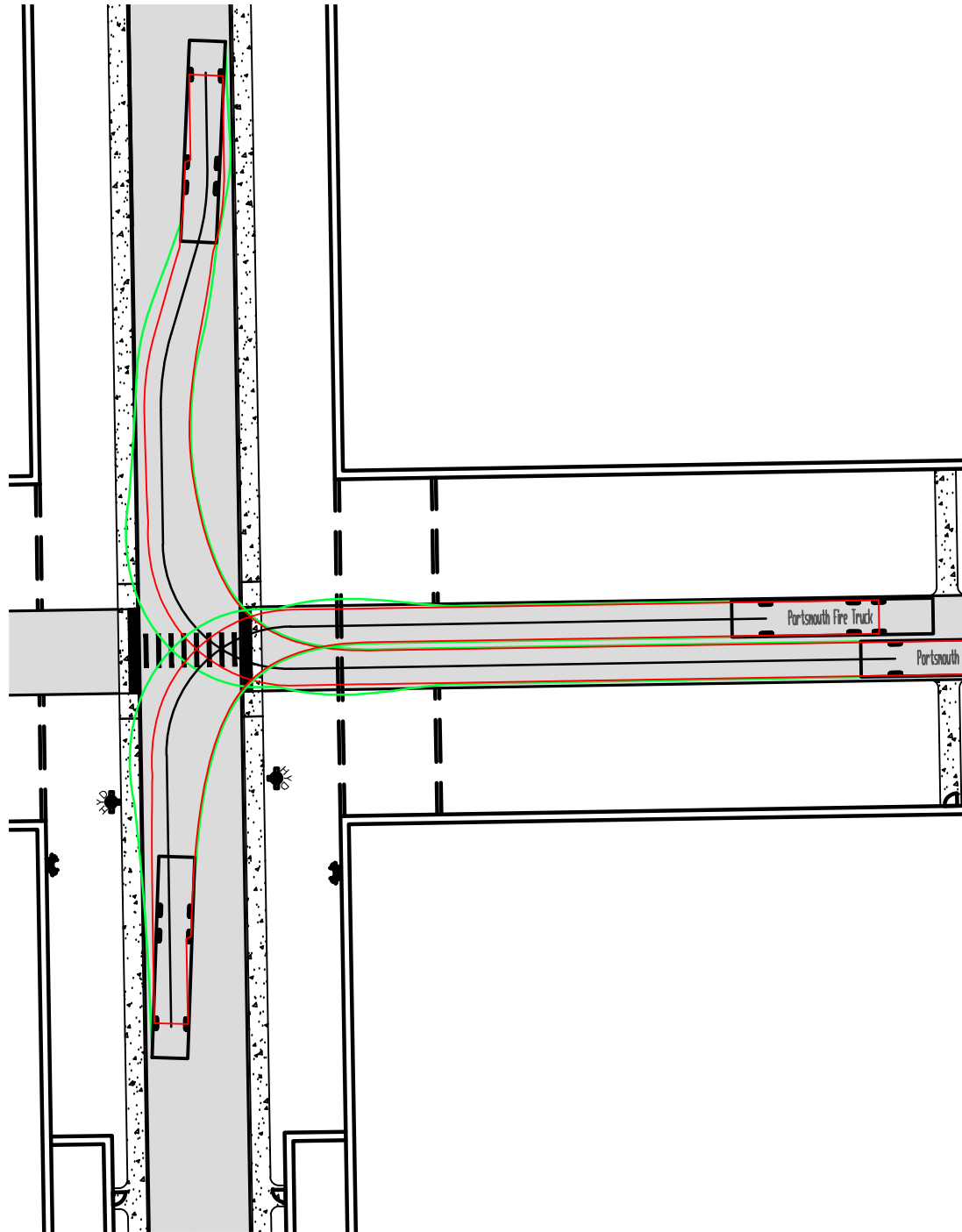
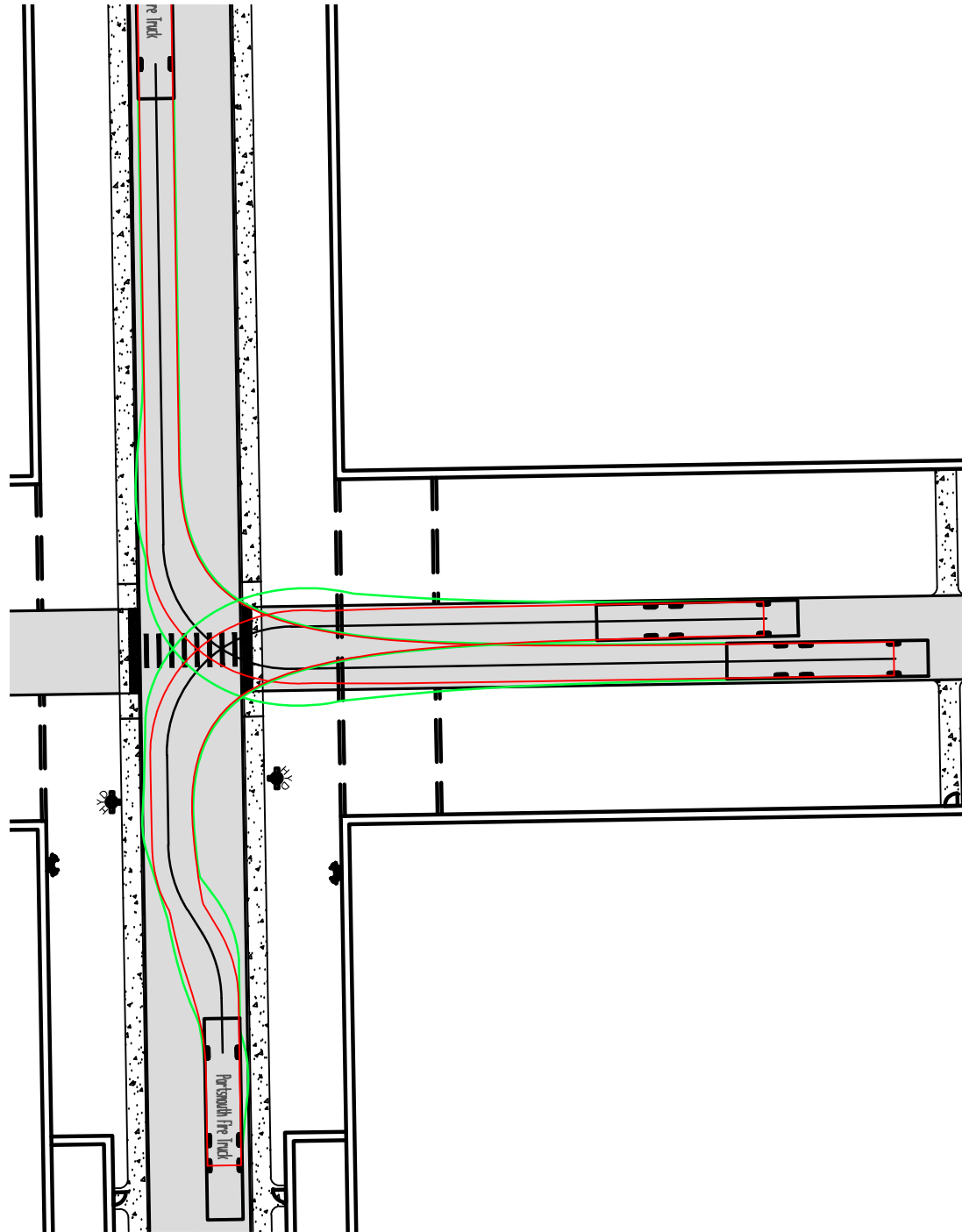
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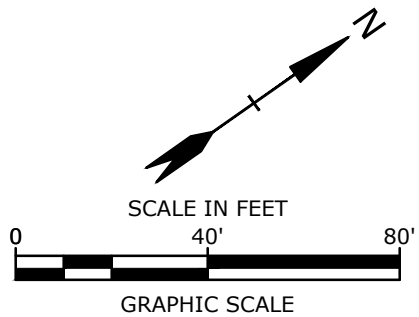
Portsmouth,
New Hampshire

A	8/21/2018	Fire Truck Turning Exhibits
MARK	DATE	DESCRIPTION
PROJECT NO:		L-0700-013
FILE:		L0700-CS-104 to C-107.dwg
DRAWN BY:		NAH
CHECKED:		PMC
APPROVED BY:		BLM
FIRE TRUCK TURNING EXHIBIT		
SCALE:		AS SHOWN
1 OF 5		

FILENAME: J:\L0700 LONZA BIOLOGICS EXPANSION WAS 157WF 013 IRON PARCEL REDEVELOPMENT\DRAWINGS\FIGURES\AUTOCAD\SHEET\L0700-CS-104 TO C-107.DWG
SAVE DATE: 8/20/2018 9:56 AM
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Lock-to-lock time 6.00s
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**Proposed
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Development**

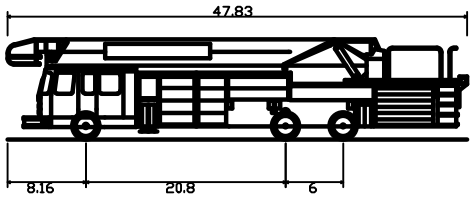
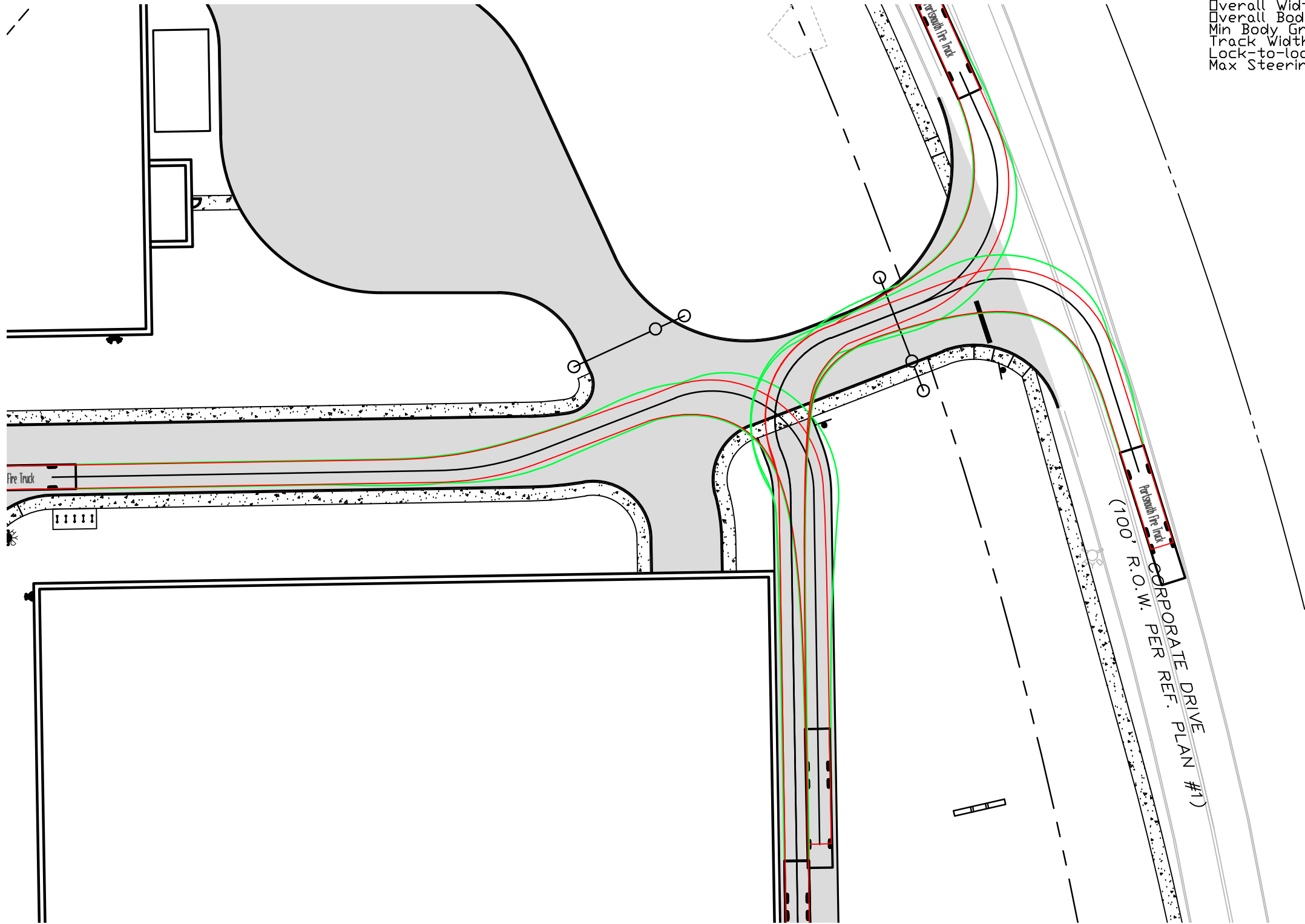
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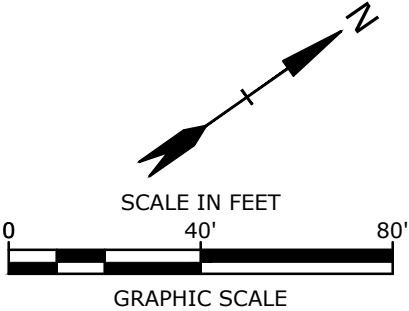
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FIRE TRUCK TURNING EXHIBIT	
SCALE:	AS SHOWN
2 OF 5	

FILENAME: J:\L0700 LONZA BIOLOGICS EXPANSION WAS 157WF 013 IRON PARCEL REDEVELOPMENT\DRAWINGS_FIGURES\AUTOCAD\Sheet\L0700-CS-104 TO C-107.DWG
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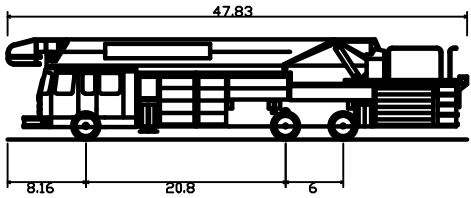
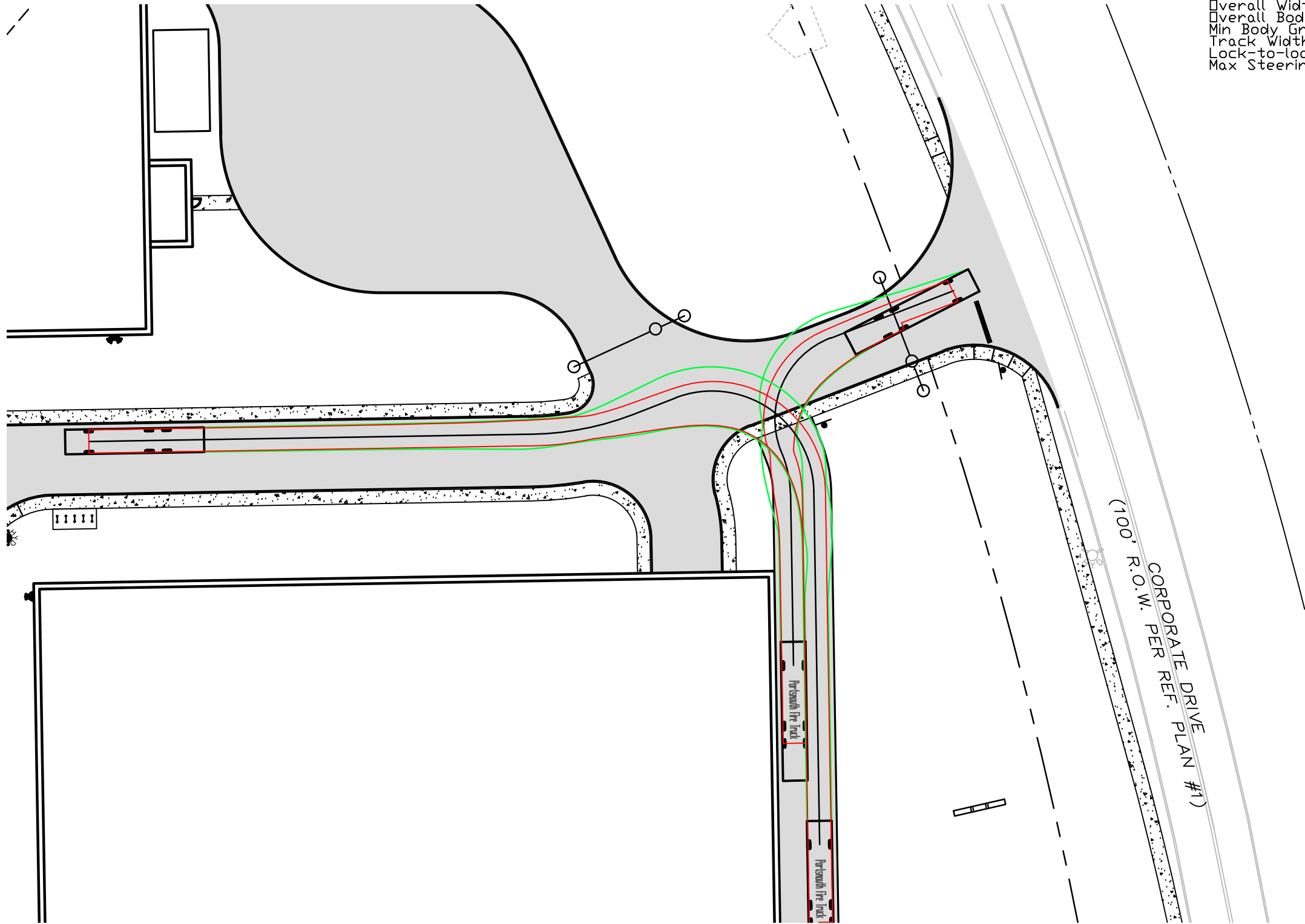
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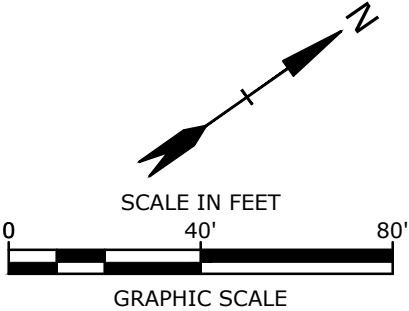
Portsmouth,
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FIRE TRUCK TURNING EXHIBIT		
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3 OF 5		

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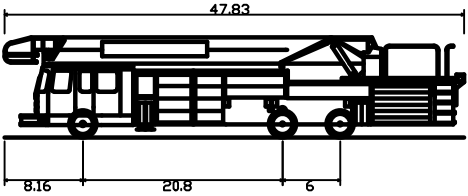
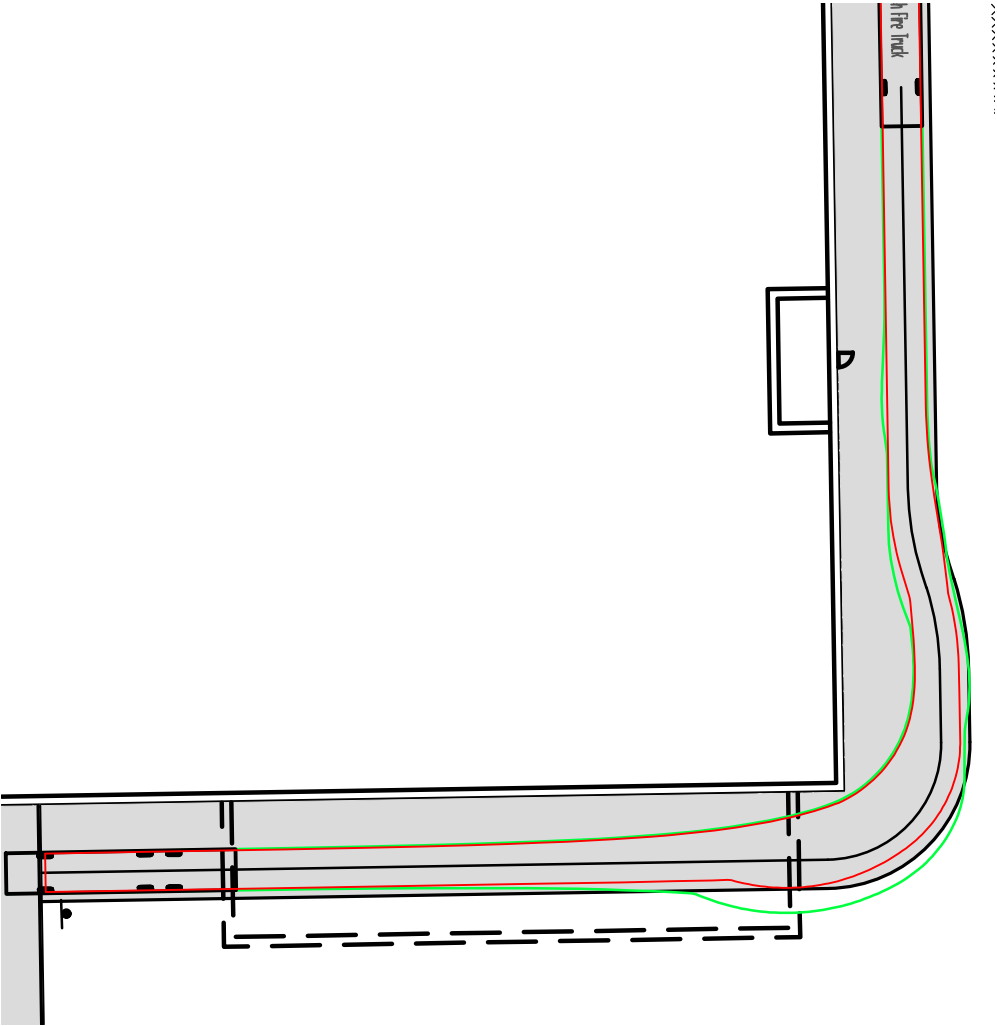
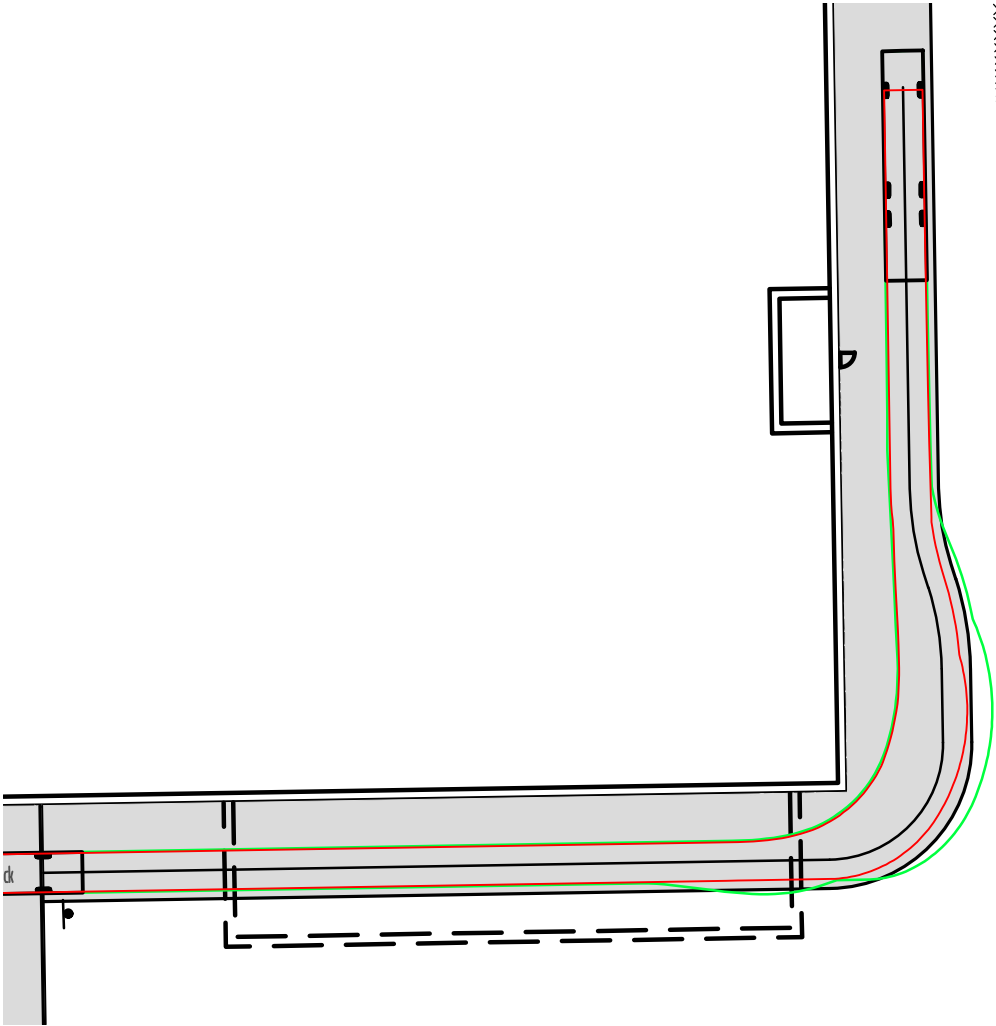
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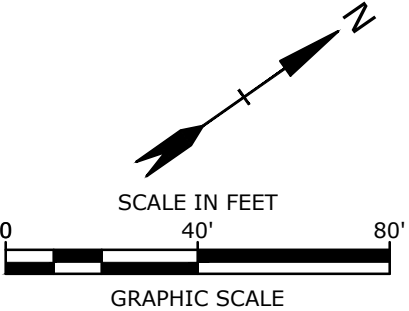
**FIRE TRUCK TURNING
EXHIBIT**

SCALE: AS SHOWN

FILENAME: J:\L0700 LONZA BIOLOGICS EXPANSION WAS 157WF 013 IRON PARCEL REDEVELOPMENT\DRAWINGS_FIGURES\AUTOCAD\SHEET\L0700-CS-104 TO C-107.DWG
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