

# CITY OF PORTSMOUTH, NEW HAMPSHIRE

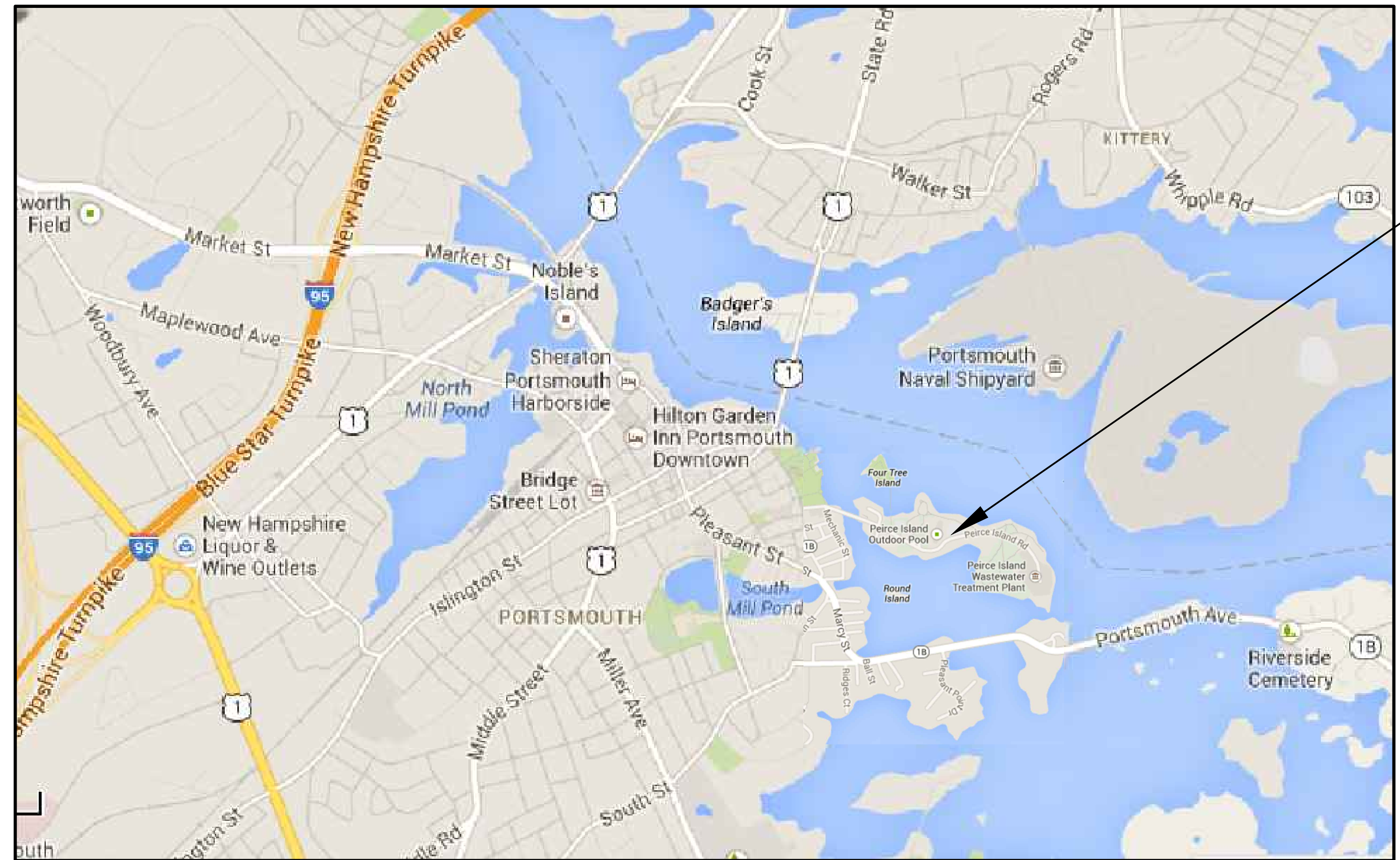
## PEIRCE ISLAND FORCE MAIN AND WATER MAIN REPLACEMENT

### AUGUST 2021 BID NUMBER #35-21

**PROJECT**  
PEIRCE ISLAND  
FORCE MAIN AND  
WATER MAIN  
REPLACEMENT  
Peirce Island, Portsmouth NH

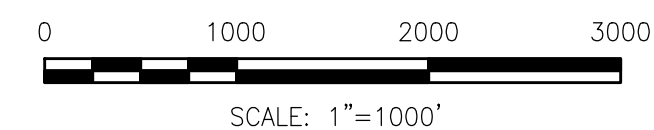
**OWNER**  
CITY OF PORTSMOUTH  
NEW HAMPSHIRE  
680 Peverly Hill Road  
Portsmouth, NH 03801

**ENGINEER**  
AECOM TECHNICAL SERVICES, INC.  
250 APOLLO DRIVE  
CHELMSFORD, MA 01824  
PHONE: (978) 905-2100  
www.aecom.com



**LOCATION PLAN**

APPROXIMATE SCALE: 1" = 1000'



**PROJECT  
LOCATION**

**INDEX OF DRAWINGS**

SHEET NO. TITLE

GENERAL

- 00 G-001 COVER SHEET, LOCATION PLAN AND INDEX OF DRAWINGS
- 00 G-002 OVERALL SITE AND KEY PLAN

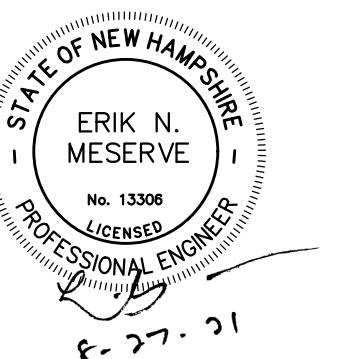
CIVIL

- 00 C-001 LEGEND, ABBREVIATIONS AND GENERAL NOTES
- 00 C-101 EXISTING CONDITIONS, EROSION CONTROL AND DEMOLITION PLAN I
- 00 C-102 EXISTING CONDITIONS, EROSION CONTROL AND DEMOLITION PLAN II
- 00 C-103 EXISTING CONDITIONS, EROSION CONTROL AND DEMOLITION PLAN III
- 00 C-104 CONTRACTOR ACCESS AND STAGING AREA AND SITE RESTORATION PLAN
- 00 C-105 PIPING PLAN AND PROFILE I
- 00 C-106 PIPING PLAN AND PROFILE II
- 00 C-107 PIPING PLAN AND PROFILE III
- 00 C-108 ENLARGED PLANS I
- 00 C-109 ENLARGED PLANS II
- 00 C-110 PIPING PLAN AND PROFILE PEIRCE ISLAND BRIDGE SLIPLINING
- 99 C-501 DETAILS I
- 99 C-502 DETAILS II
- 99 C-503 DETAILS III
- 99 C-504 DETAILS IV
- 99 C-505 DETAILS V

TRAFFIC MANAGEMENT

- 00 T-001 TRAFFIC MANAGEMENT PLAN I
- 00 T-002 TRAFFIC MANAGEMENT PLAN II
- 00 T-003 TRAFFIC MANAGEMENT PLAN III

**REGISTRATION**



**ISSUE/REVISION**

I/R	DATE	DESCRIPTION

**PROJECT NUMBER**

60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

**DISCIPLINE**

**CIVIL**

**SHEET TITLE**

**COVER SHEET, LOCATION  
PLAN AND INDEX OF  
DRAWINGS  
SHEET NUMBER**

**00 G-001**



**PROJECT**

**PEIRCE ISLAND  
FORCE MAIN AND  
WATER MAIN  
REPLACEMENT**

Peirce Island, Portsmouth NH

**OWNER**

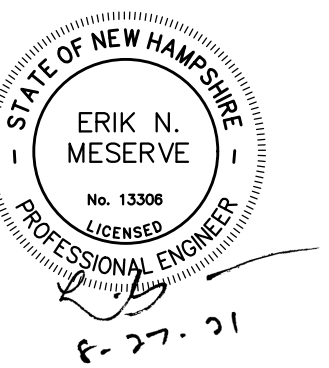
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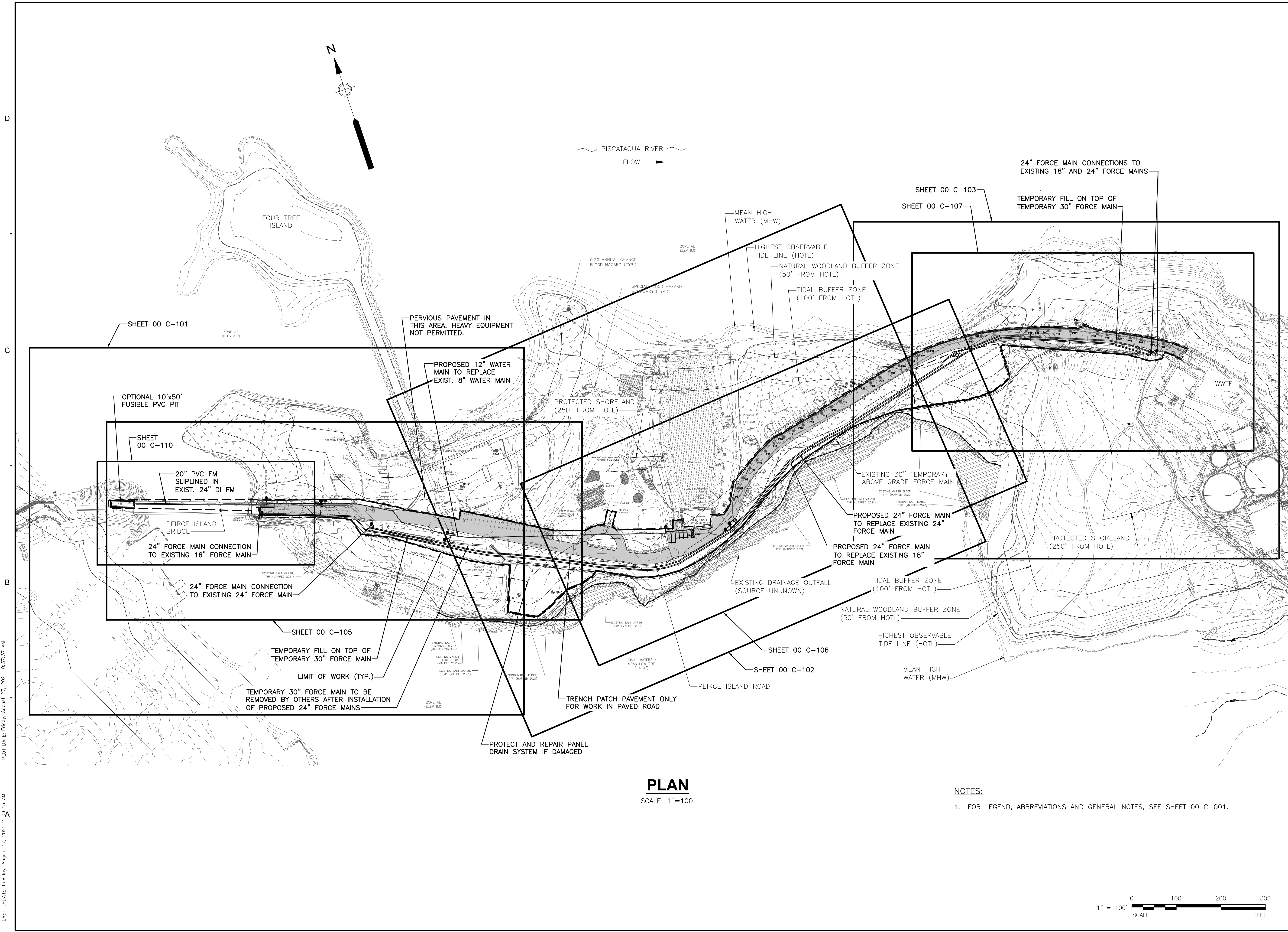
**DISCIPLINE**

**CIVIL  
SHEET TITLE**

**OVERALL SITE AND  
KEY PLAN**

**SHEET NUMBER**

**00 G-002**

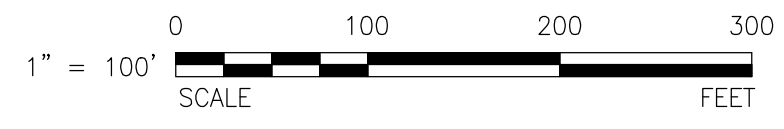


**PLAN**

SCALE: 1"=100'

**NOTES:**

- 1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.



PATH: I:\LEGACY\USCHIFFORD\DATA\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\00 CAD-GIS\SHEETS\00 G-002.DWG  
 PLOT DATE: Friday, August 27, 2021 10:37:37 AM  
 LAST UPDATE: Tuesday, August 17, 2021 11:50:43 AM

### GENERAL NOTES

- IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO PRESCRIBE A COMPLETE WORK OR IMPROVEMENT. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND ANY REQUIREMENTS INDICATED IN ONE OF THE DOCUMENTS IS AS BINDING AS HAVING BEEN INDICATED IN ALL.
- HORIZONTAL LOCATIONS SHOWN ARE REFERENCED TO THE NH STATE PLANE COORDINATE SYSTEM, NAD83.
- VERTICAL DATUM IS NAVD 88 AND IS BASED ON NATIONAL GEODETIC SURVEY FIRST ORDER CLASS 1 BENCHMARKS "V31 USGS" (PID:0C0289) HAVING A PUBLISHED ELEVATION OF 29.19' AND "W31" (PID:0C0413) HAVING A PUBLISHED ELEVATION OF 20.54'. REFER ALSO TO VERTICAL DATUM CONVERSION NOTE BELOW.
- TOPOGRAPHIC INFORMATION SHOWN IS THE RESULT OF A SURVEY MADE IN JULY 2013, AUGUST 2020 AND JANUARY 2021 BY DOUCET SURVEY, INC., 102 KENT PLACE, NEWMARKET, NH 03857. WETLAND BOUNDARIES, HIGHEST OBSERVABLE TIDE LINE (HOTL) AND EXISTING TREE SURVEY WERE DELINEATED BY NORMANDEAU ASSOCIATES, INC. ON JANUARY 14, 2021.
- THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS BASED ON RECORD DRAWINGS AND IS APPROXIMATE. THE OWNER DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-344-7233.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS AT THE SITE.
- THE CONTRACTOR SHALL ERECT EROSION CONTROL MEASURES PRIOR TO COMMENCING ANY CLEARING, EXCAVATION OR STORAGE OF BACKFILL MATERIAL ON-SITE. REFER TO SPECIFICATION SECTION 01568 AND DETAILS.
- THE ENGINEER MAY DIRECT THE CONTRACTOR TO VARY THE PROPOSED WORK DURING CONSTRUCTION TO MEET EXISTING CONDITIONS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK. REFER TO SPECIFICATION SECTION 01046 FOR ADDITIONAL REQUIREMENTS
- INTERRUPTION TO WATER AND OTHER EXISTING UTILITIES SHALL BE REQUESTED IN WRITING BY THE CONTRACTOR 3 DAYS IN ADVANCE OF THE WORK AND REVIEWED BY THE ENGINEER.
- CONTRACTOR SHALL MAINTAIN FLOW OF SEWAGE IN ACCORDANCE WITH SECTION 01063.
- EXISTING UTILITIES INTERFERING WITH THE WORK SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- PIPE SHALL BE AS INDICATED IN THE PIPING SCHEDULE AND SPECIFICATIONS. PROVIDE RESTRAINED MECHANICAL JOINT FITTINGS FOR CONNECTIONS TO EXISTING PIPING AS SPECIFIED .
- PIPING WHICH IS EXPOSED DURING EXCAVATION, INCLUDING TEE'S, VALVES, AND FITTINGS, AND IS NOT TO BE DEMOLISHED, SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
- ALL PIPING SHALL BE CONSTRUCTED WITH A MINIMUM OF 5 FEET OF COVER.
- ALL PIPES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER. NO SAGS OR CRESTS IN PIPING WILL BE PERMITTED.
- WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE WHICH MAY NOT BE SHOWN IN DETAILS (REQUIRED AS A RESULT OF CUTTING THE EXISTING PIPE BACK) IN ORDER TO COMPLETE THE CONNECTION AS REQUIRED.
- ALL SIGNAGE, HEADWALLS, GUARD RAILS, GUARD POSTS, FENCES, CURBS, ROADWAYS, SIDEWALKS AND ANY OTHER OBJECTS DISTURBED BY CONTRACTOR ACTIVITIES SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION OR BETTER AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- ALL AREAS OF EXCAVATION, BACKFILL, FILL AND GRADING SHALL BE RETURNED TO THE ORIGINAL GRADE UNLESS SHOWN ON THE DRAWINGS.
- ALL UTILITY BOXES, FRAMES, GRATES, ETC. DISTURBED BY CONTRACTOR AND NOT TO BE ABANDONED SHALL BE RESET TO THE PROPER GRADE AT NO ADDITIONAL COST TO THE OWNER.
- UNPAVED AREAS DISTURBED BY THE CONTRACTOR SHALL BE CLEARED AND GRUBBED IF REQUIRED, AND RESTORED WITH LOAM AND SEED. SEEDED AREAS SHALL BE PROTECTED BY SNOW FENCING UNTIL APPROVED TO BE REMOVED BY THE ENGINEER.
- ALL EXISTING PIPES TO BE ABANDONED SHALL BE PLUGGED AT OPEN ENDS. SEE PIPE PLUGGING DETAIL ON SHEET 99 C-502.
- RECORD DRAWINGS FOR EXISTING FACILITIES CAN BE FOUND IN THE SPECIFICATIONS.
- PROVIDE AND MAINTAIN ORANGE CONSTRUCTION FENCING ABOVE SALT MARSH AND MARSH ELDER AS NEEDED.

### VERTICAL DATUM CONVERSION NOTE:

SURVEY BY DOUCET ASSOCIATES IS BASED ON NAVD 88 DATUM. EXISTING PLANT AND FORCE MAIN RECORD DRAWINGS ARE BASED ON NGVD 29 DATUM. TO CONVERT NAVD 88 ELEVATIONS TO NGVD 29, ADD 0.77 FEET. TO CONVERT NGVD ELEVATIONS TO NAVD 88 SUBTRACT 0.77 FEET.

### CONCRETE NOTES:

- CONCRETE WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) AND THE CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI 350) AND SECTION 03300.
- USE NORMAL WEIGHT CAST-IN-PLACE CONCRETE WITH ASTM C 150, TYPE II CEMENT FOR ALL CONCRETE WORK.
- PROVIDE CONCRETE HAVING A 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND A MAXIMUM WATER-CEMENT RATIO OF 0.45 UNLESS OTHERWISE INDICATED OR SPECIFIED.
- AIR-ENTRAIN ALL CONCRETE.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 1064. PROVIDE WELDED WIRE FABRIC IN FLAT SHEETS. STAGGER SPLICES AND LAP AT LEAST TWO FULL MESHES.
- WAIT A MINIMUM OF 72 HOURS BEFORE PLACING ADJACENT CONCRETE SECTIONS.
- PROVIDE CONSTRUCTION AND EXPANSION JOINTS WHERE INDICATED. DO NOT OMIT OR ADD JOINTS.
- PROVIDE 3/4-INCH CHAMFER ON ALL EXPOSED CORNERS OF CONCRETE ELEMENTS.
- BROOM FINISH EXTERIOR CONCRETE SLABS UNLESS OTHERWISE INDICATED OR AS SPECIFIED.

### GEOTECHNICAL NOTES

- FOR EARTH EXCAVATION, BACKFILL, FILL AND GRADING SEE SPECIFICATION 02210.
- FOR DEWATERING SEE SPECIFICATION 02140.
- FOR EXCAVATION SUPPORT SYSTEM SEE SPECIFICATION 02160.
- BORING LOCATIONS ARE SHOWN ON THE PLANS AND BORING LOGS ARE BOUND IN THE SPECIFICATIONS.
- BORINGS WERE TAKEN FOR PURPOSES OF DESIGN AND INDICATE SUBSURFACE CONDITIONS AT BORING LOCATION ONLY. SUBSURFACE CONDITIONS MAY VARY FROM THOSE SHOWN IN THE LOG.
- IN ALL AREAS WHERE DEWATERING IS NECESSARY, MEASURES SHALL BE TAKEN TO ENSURE THE PRESERVATION OF WATERCOURSES AND COMPLIANCE WITH ALL REGULATIONS AND LAWS. ALL DEWATERING MUST BE DISCHARGED INTO SEDIMENT TRAPS AS INDICATED IN THE DETAILS AND AS SPECIFIED IN SPECIFICATION SECTION 01568.
- FOR ROCK EXCAVATION AND DISPOSAL, SEE SPECIFICATION SECTION 02211.

### ABBREVIATIONS

APPROX.	APPROXIMATE	TBM	TEMPORARY BENCHMARK
B&B	BALL AND BURLAP	TP	TEST PIT
BLDG.	BUILDING	TS&V	TAPPING SLEEVE AND VALVE
CB	CATCH BASIN	TYP.	TYPICAL
CONC.	CONCRETE	UE	UNDERGROUND ELECTRIC
C.I.	CAST IRON	V	VENT
CLF	CHAIN LINK FENCE	VERT.	VERTICAL
C.O. OR CO	CLEANOUT	VGC	VERTICAL GRANITE CURB
CW	CITY WATER OR CROSS WALK	WSO	WATER SHUT OFF
D	DRAIN	WV	WATER VALVE
DI	DUCTILE IRON		
DIA.	DIAMETER		
DIM.	DIMENSION		
DMH	DRAIN MANHOLE		
DWGS	DRAWINGS		
DYL OR DYCL	DOUBLE YELLOW CENTER LINE		
E	ELECTRICAL		
ECC.	ECCENTRIC		
EL. OR ELEV.	ELEVATION		
EMERG.	EMERGENCY		
EOP	EDGE OF PAVEMENT		
EXIST.	EXISTING		
FES	FLARED END SECTION		
FF OR F.F.E.	FINISHED FLOOR ELEVATION		
FM	FORCE MAIN		
FPVC	FUSIBLE PVC		
GAL.	GALLON		
GL	GLASS LINED		
GP	GUARD POST		
GRAN.	GRANITE		
GV	GATE VALVE		
HOTL	HIGHEST OBSERVABLE TIDE LINE		
INV.	INVERT		
LF	LINEAR FOOT		
L.O.W.	LIMIT OF WORK		
MECH.	MECHANICAL		
MH	MANHOLE		
MHW	MEAN HIGH WATER		
MLW	MEAN LOW WATER		
MJ	MECHANICAL JOINT		
MSL	MEAN SEA LEVEL		
N.C.	NORMALLY CLOSED		
PBS	PRINTED BOTH SIDES		
PSNH	PUBLIC SERVICE OF NEW HAMPSHIRE		
PVC	POLYVINYL CHLORIDE		
RCP	REINFORCED CONCRETE PIPE		
RED.	REDUCER		
RET.	RETAIN OR RETAINING		
SAN	SANITARY DRAIN		
SD	STORM DRAIN		
SL	SLUDGE OR STOP LINE		
SMH	SEWER MANHOLE		
SWL	SINGLE WHITE LINE		
SYL	SINGLE YELLOW LINE		

### LEGEND

EXISTING	PROPOSED
	LIMIT OF WORK
	STRUCTURE
	PIPE PLUG OR CAP
	DEMOLITION
	ABANDON IN PLACE
	TREE REMOVAL
	TEE
	REDUCER
	BEND
	GATE VALVE
	PIPE - ≤ 6" DIAM.
	PIPE - > 6" DIAM.
	DIRECTION OF FLOW
	MANHOLE
	CLEANOUT
	GUARD POST OR BOLLARD
	CHAIN LINK FENCE
	TEMPORARY FENCE
	SILT FENCE AND STRAW BALE EROSION CONTROL
	CONTOUR
	SPOT ELEVATION
	TOP OF SLOPE
	CRUSHED STONE MOWING STRIP
	CONCRETE
	CURB
	EXISTING PAVEMENT AREA TO BE REPAVED (RECLAIMED BASE)
	NEW PAVEMENT AREA (RECLAIMED BASE)
	POINT OF CONNECTION, NEW WORK TO EXIST.
	JERSEY BARRIER WITH PILED SAND
	PILED SAND



### PROJECT

**PEIRCE ISLAND  
FORCE MAIN AND  
WATER MAIN  
REPLACEMENT**

Peirce Island, Portsmouth NH

### OWNER

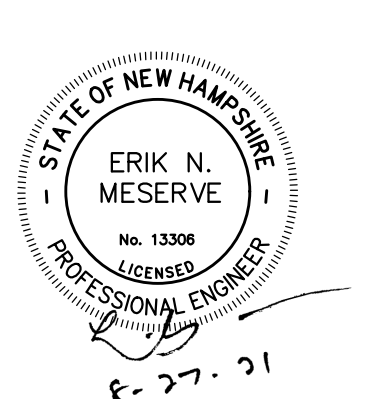
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### REGISTRATION



### ISSUE/REVISION

I/R	DATE	DESCRIPTION

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Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

### DISCIPLINE

**CIVIL  
SHEET TITLE**

**LEGEND, ABBREVIATIONS  
AND GENERAL NOTES**

### SHEET NUMBER

**00 C-001**



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Peirce Island, Portsmouth NH

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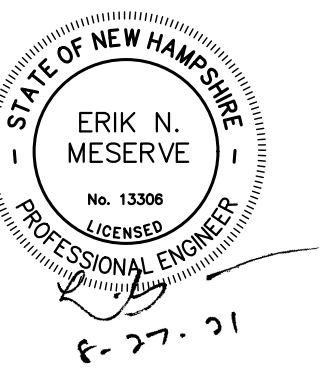
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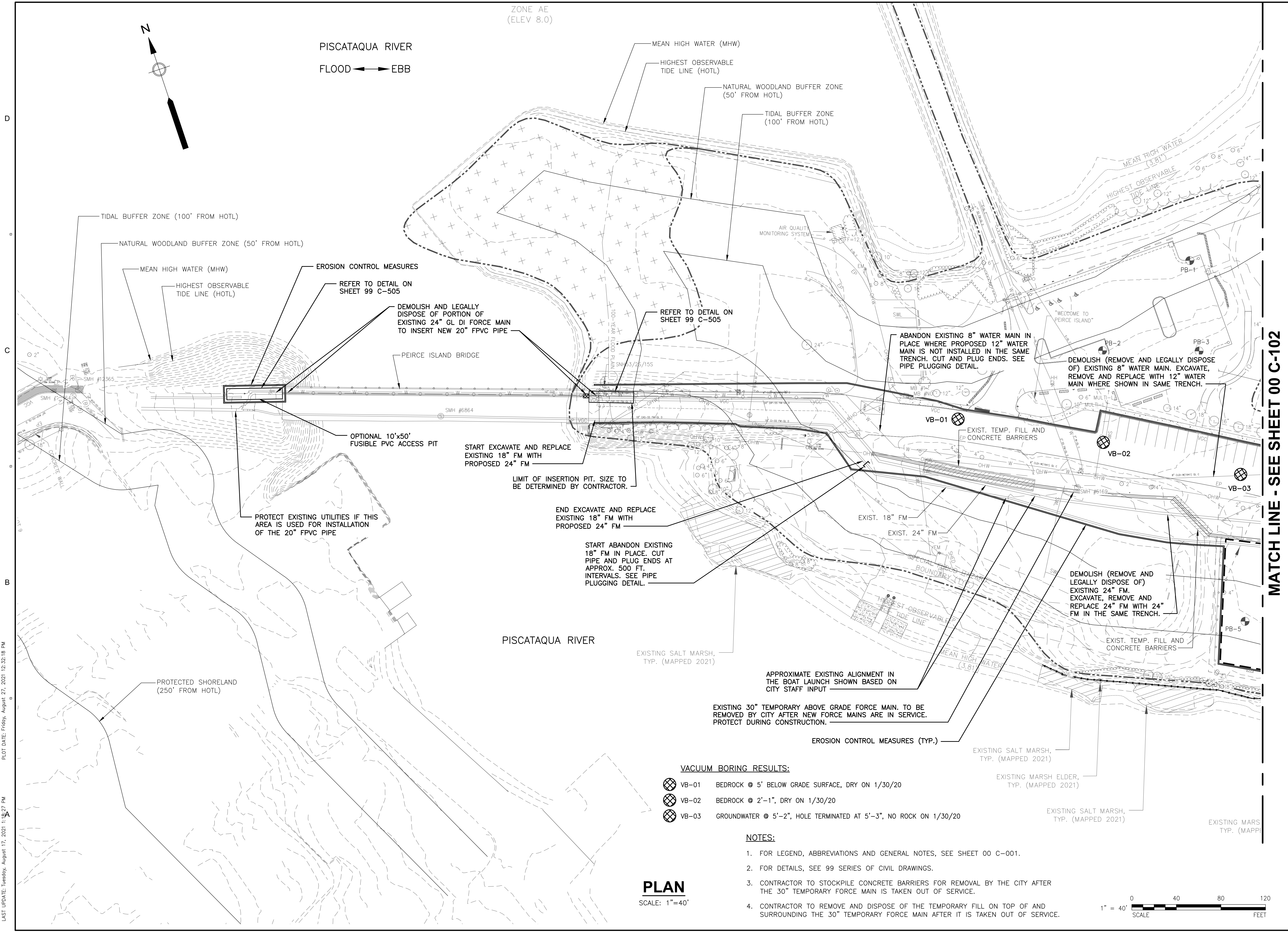
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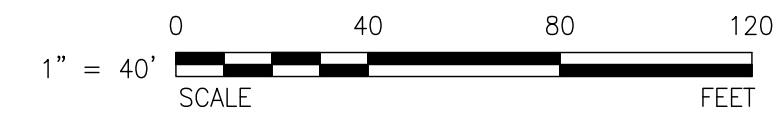
**CIVIL  
SHEET TITLE**

**EXISTING CONDITIONS,  
EROSION CONTROL AND  
DEMOLITION PLAN I  
SHEET NUMBER**

**00 C-101**



**PLAN**  
SCALE: 1"=40'



PATH: I:\LEGACY\USCH\PROJECTS\WATER\PEIRCE ISLAND FM REPLACEMENT\900 CAD-GIS\900 SHEETS\C-101.DWG  
 LAST UPDATE: Tuesday, August 17, 2021 1:13:27 PM  
 PLOT DATE: Friday, August 27, 2021 12:32:18 PM

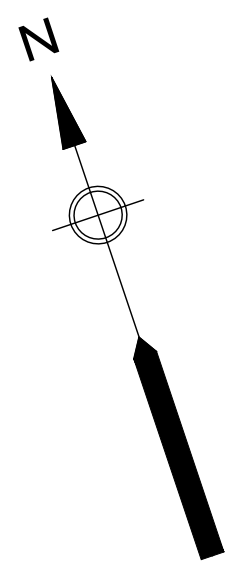
**MATCH LINE - SEE SHEET 00 C-102**

5 4 3 2 1

5 4 3 2 1

ZONE AE  
(ELEV 8.0)

PISCATAQUA RIVER  
FLOOD ← EBB



MEAN HIGH WATER (MHW)  
HIGHEST OBSERVABLE  
TIDE LINE (HOTL)

NATURAL WOODLAND BUFFER ZONE  
(50' FROM HOTL)

TIDAL BUFFER ZONE  
(100' FROM HOTL)

TIDAL BUFFER ZONE (100' FROM HOTL)

NATURAL WOODLAND BUFFER ZONE (50' FROM HOTL)

MEAN HIGH WATER (MHW)  
HIGHEST OBSERVABLE  
TIDE LINE (HOTL)

EROSION CONTROL MEASURES

REFER TO DETAIL ON  
SHEET 99 C-505

DEMOLISH AND LEGALLY  
DISPOSE OF PORTION OF  
EXISTING 24" GL DI FORCE MAIN  
TO INSERT NEW 20" FPVC PIPE

PEIRCE ISLAND BRIDGE

REFER TO DETAIL ON  
SHEET 99 C-505

ABANDON EXISTING 8" WATER MAIN IN  
PLACE WHERE PROPOSED 12" WATER  
MAIN IS NOT INSTALLED IN THE SAME  
TRENCH. CUT AND PLUG ENDS. SEE  
PIPE PLUGGING DETAIL.

DEMOLISH (REMOVE AND LEGALLY DISPOSE  
OF) EXISTING 8" WATER MAIN. EXCAVATE,  
REMOVE AND REPLACE WITH 12" WATER  
MAIN WHERE SHOWN IN SAME TRENCH.

OPTIONAL 10'x50'  
FUSIBLE PVC ACCESS PIT

START EXCAVATE AND REPLACE  
EXISTING 18" FM WITH  
PROPOSED 24" FM

LIMIT OF INSERTION PIT. SIZE TO  
BE DETERMINED BY CONTRACTOR.

END EXCAVATE AND REPLACE  
EXISTING 18" FM WITH  
PROPOSED 24" FM

START ABANDON EXISTING  
18" FM IN PLACE. CUT  
PIPE AND PLUG ENDS AT  
APPROX. 500 FT.  
INTERVALS. SEE PIPE  
PLUGGING DETAIL.

PROTECT EXISTING UTILITIES IF THIS  
AREA IS USED FOR INSTALLATION  
OF THE 20" FPVC PIPE

DEMOLISH (REMOVE AND LEGALLY DISPOSE OF)  
EXISTING 24" FM.  
EXCAVATE, REMOVE AND  
REPLACE 24" FM WITH 24"  
FM IN THE SAME TRENCH.

PROTECTED SHORELAND  
(250' FROM HOTL)

PISCATAQUA RIVER

EXISTING SALT MARSH,  
TYP. (MAPPED 2021)

APPROXIMATE EXISTING ALIGNMENT IN  
THE BOAT LAUNCH SHOWN BASED ON  
CITY STAFF INPUT

EXISTING 30" TEMPORARY ABOVE GRADE FORCE MAIN. TO BE  
REMOVED BY CITY AFTER NEW FORCE MAINS ARE IN SERVICE.  
PROTECT DURING CONSTRUCTION.

EROSION CONTROL MEASURES (TYP.)

EXISTING SALT MARSH,  
TYP. (MAPPED 2021)

EXISTING MARSH ELDER,  
TYP. (MAPPED 2021)

EXISTING SALT MARSH,  
TYP. (MAPPED 2021)

EXISTING MARSH  
TYP. (MAPPI

**VACUUM BORING RESULTS:**

- VB-01 BEDROCK @ 5' BELOW GRADE SURFACE, DRY ON 1/30/20
- VB-02 BEDROCK @ 2'-1", DRY ON 1/30/20
- VB-03 GROUNDWATER @ 5'-2", HOLE TERMINATED AT 5'-3", NO ROCK ON 1/30/20

**NOTES:**

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL DRAWINGS.
3. CONTRACTOR TO STOCKPILE CONCRETE BARRIERS FOR REMOVAL BY THE CITY AFTER THE 30" TEMPORARY FORCE MAIN IS TAKEN OUT OF SERVICE.
4. CONTRACTOR TO REMOVE AND DISPOSE OF THE TEMPORARY FILL ON TOP OF AND SURROUNDING THE 30" TEMPORARY FORCE MAIN AFTER IT IS TAKEN OUT OF SERVICE.







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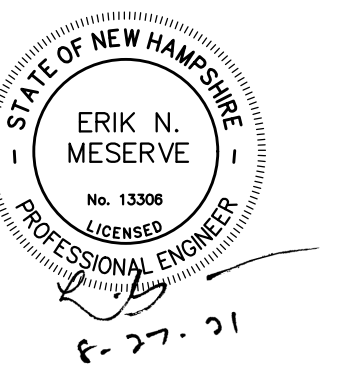
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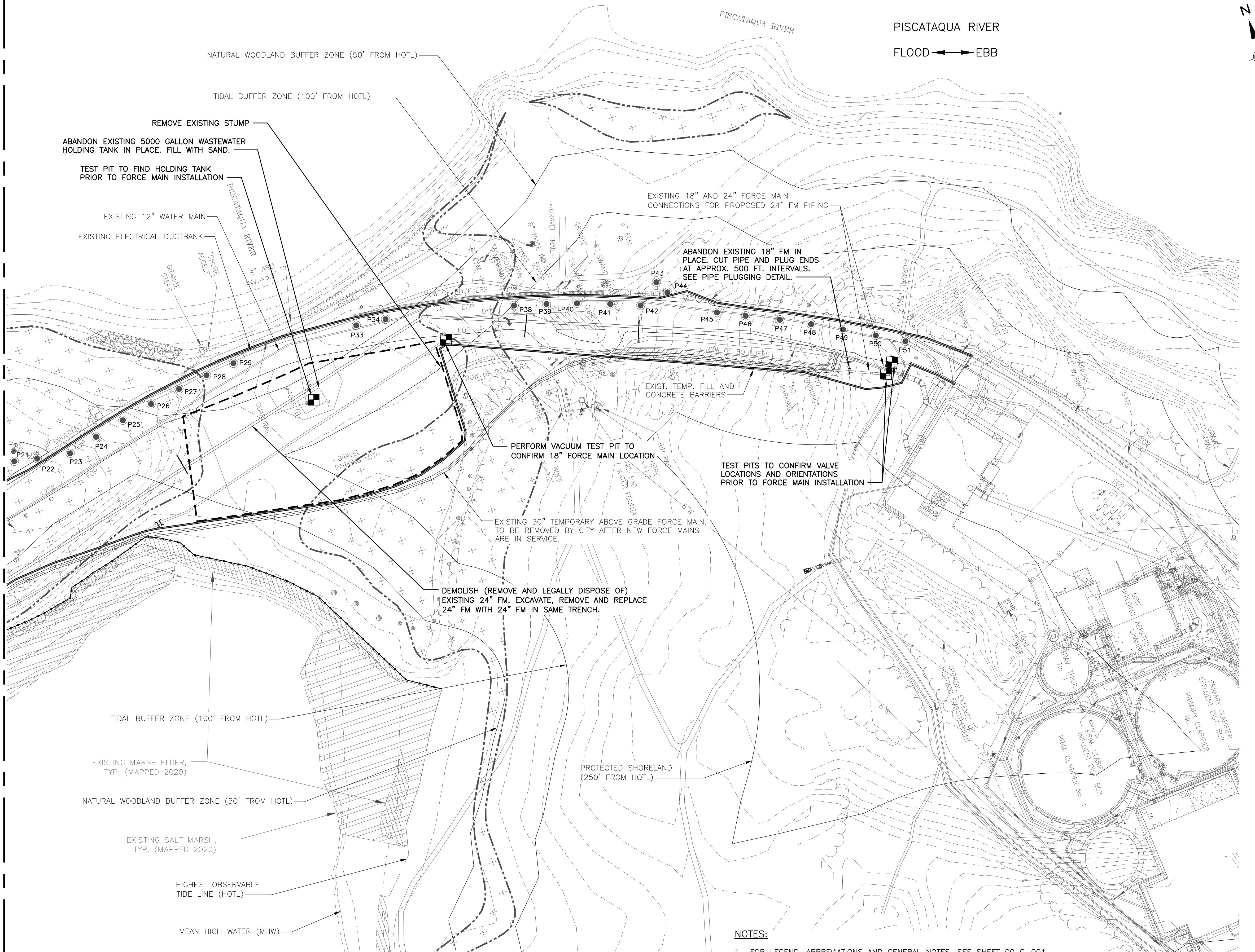
**SHEET TITLE**

**EXISTING CONDITIONS,  
EROSION CONTROL AND  
DEMOLITION PLAN III**

**SHEET NUMBER**

**00 C-103**

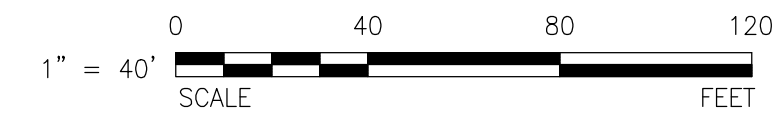
MATCH LINE - SEE SHEET 00 C-102



**PLAN**  
SCALE: 1"=40'

**NOTES:**

- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL DRAWINGS.
- CONTRACTOR TO STOCKPILE CONCRETE BARRIERS FOR REMOVAL BY THE CITY AFTER THE 30" TEMPORARY FORCE MAIN IS TAKEN OUT OF SERVICE.
- CONTRACTOR TO REMOVE AND DISPOSE OF THE TEMPORARY FILL ON TOP OF AND SURROUNDING THE 30" TEMPORARY FORCE MAIN AFTER IT IS TAKEN OUT OF SERVICE.



PATH: I:\LEGACY\USCHIFFORD\DATA\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\900 CAD-GIS\SHEETS\00 C-103.DWG  
 LAST UPDATE: Tuesday, August 17, 2021 11:53 AM  
 PLOT DATE: Friday, August 27, 2021 11:32:10 PM



**PROJECT**

**PEIRCE ISLAND  
FORCE MAIN AND  
WATER MAIN  
REPLACEMENT**

Peirce Island, Portsmouth NH

**OWNER**

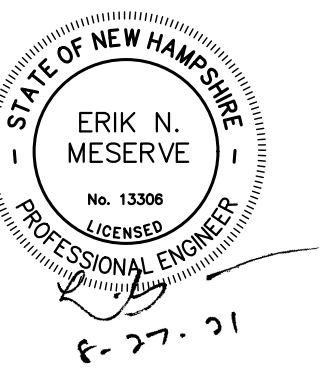
**CITY OF PORTSMOUTH  
NEW HAMPSHIRE**

680 Peverly Hill Road  
Portsmouth, NH 03801

**ENGINEER**

AECOM TECHNICAL SERVICES, INC.  
250 APOLLO DRIVE  
CHELMSFORD, MA 01824  
PHONE: (978) 905-2100  
www.aecom.com

**REGISTRATION**



**ISSUE/REVISION**

I/R	DATE	DESCRIPTION

**PROJECT NUMBER**

60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

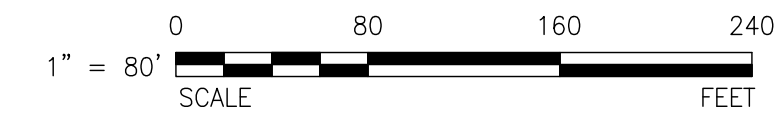
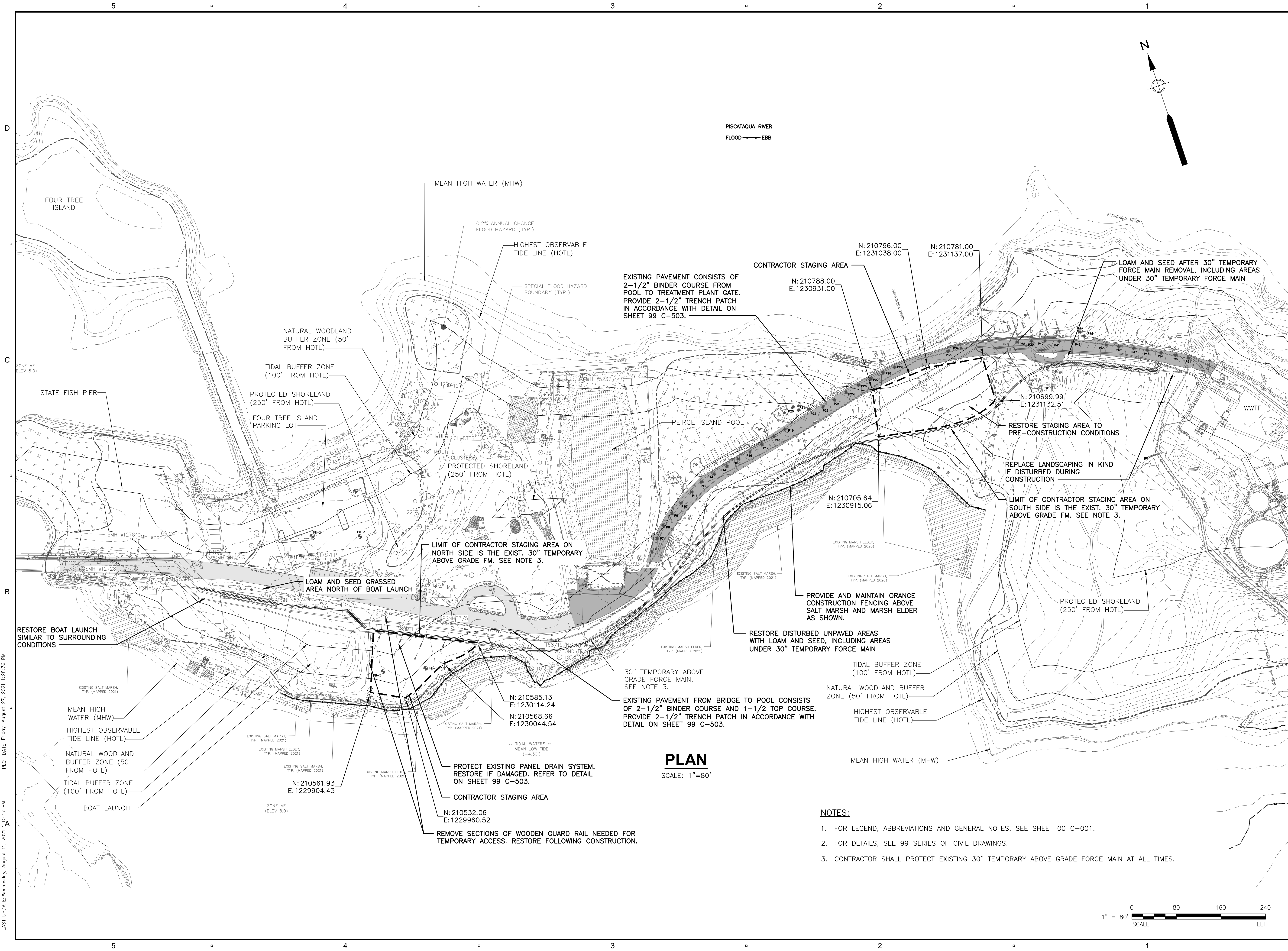
**DISCIPLINE**

**CIVIL  
SHEET TITLE**

**CONTRACTOR ACCESS AND  
STAGING AREA AND SITE  
RESTORATION PLAN**

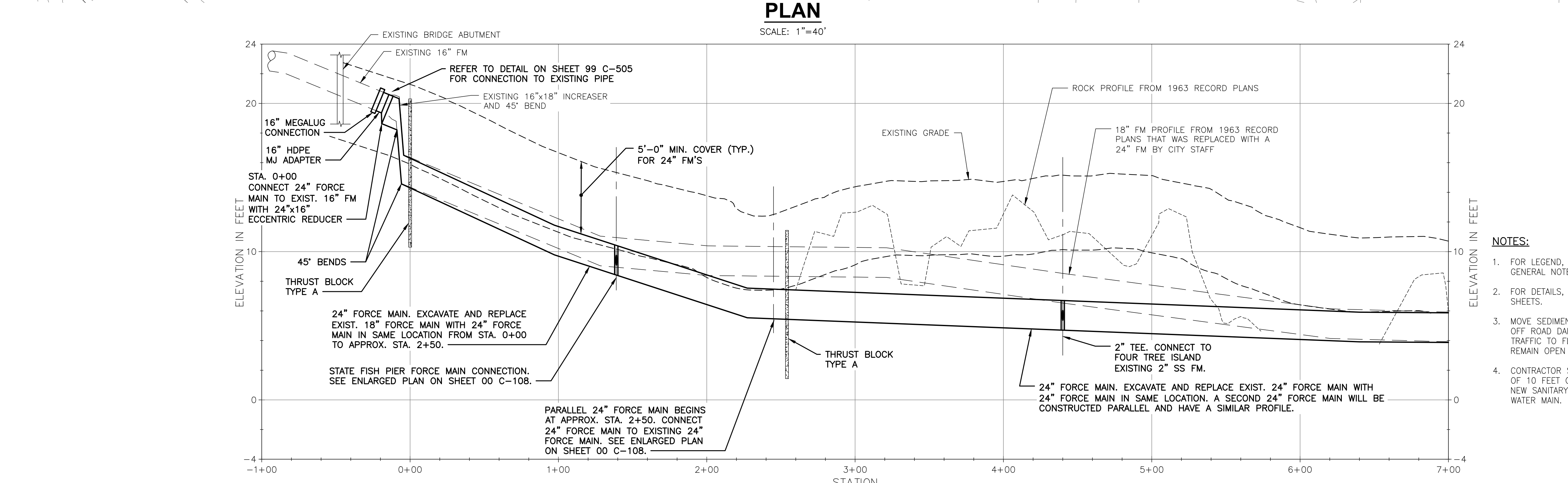
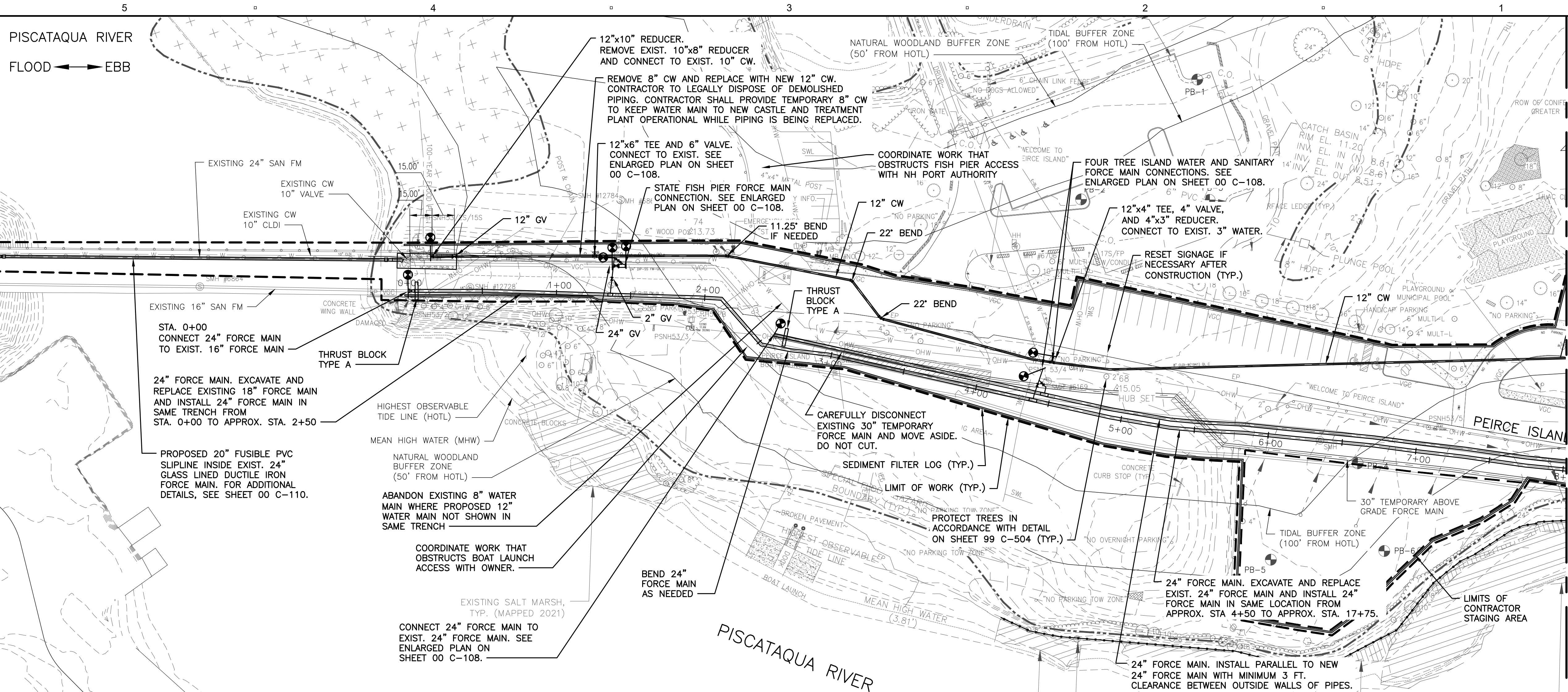
**SHEET NUMBER**

**00 C-104**



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 PLOT DATE: Friday, August 27, 2021 12:28:36 PM  
 LAST UPDATE: Wednesday, August 11, 2021 11:17:17 AM





FOR CONTINUATION, SEE SHEET 00 C-106

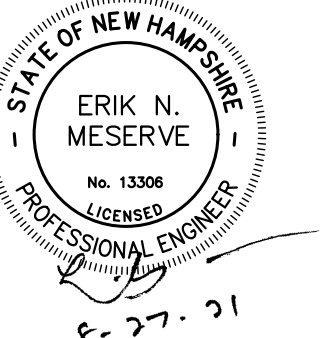


**PROJECT**  
**PEIRCE ISLAND FORCE MAIN AND WATER MAIN REPLACEMENT**  
 Peirce Island, Portsmouth NH

**OWNER**  
**CITY OF PORTSMOUTH NEW HAMPSHIRE**  
 680 Peverly Hill Road  
 Portsmouth, NH 03801

**ENGINEER**  
 AECOM TECHNICAL SERVICES, INC.  
 250 APOLLO DRIVE  
 CHELMSFORD, MA 01824  
 PHONE: (978) 905-2100  
 www.aecom.com

**REGISTRATION**



**ISSUE/REVISION**

I/R	DATE	DESCRIPTION

**PROJECT NUMBER**

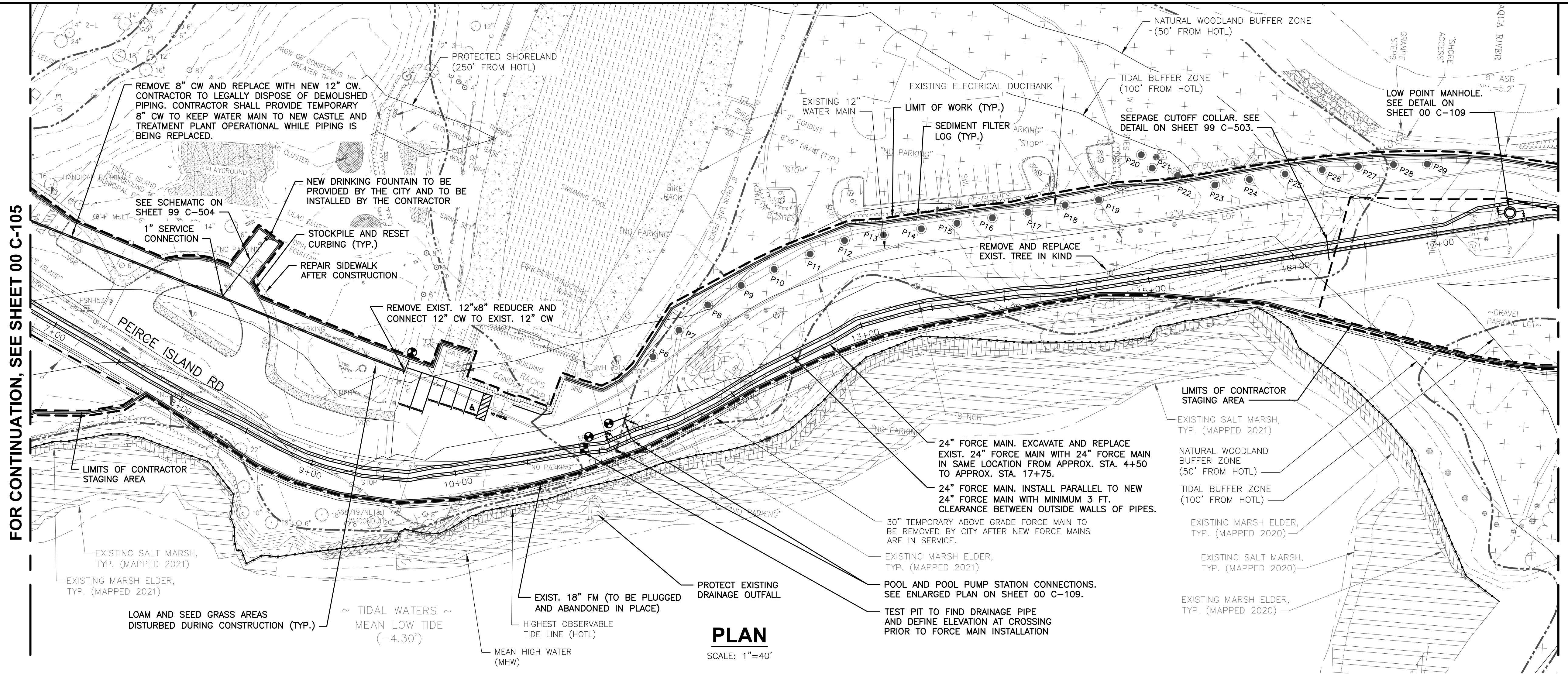
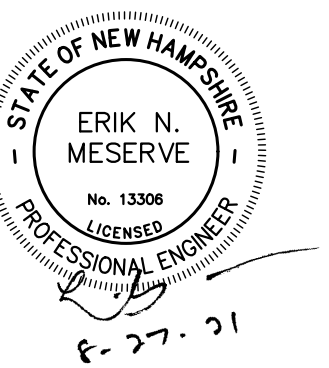
60649477  
 Designed By: **S. HE**  
 Drawn By: **M. THIBODEAU**  
 Dept Check: **C. BENZIGER**  
 Proj Check: **E. MESERVE**  
 Date: **AUGUST 2021**  
 Scale: **AS NOTED**

**DISCIPLINE**  
 CIVIL  
**SHEET TITLE**  
**PIPING PLAN AND PROFILE I**

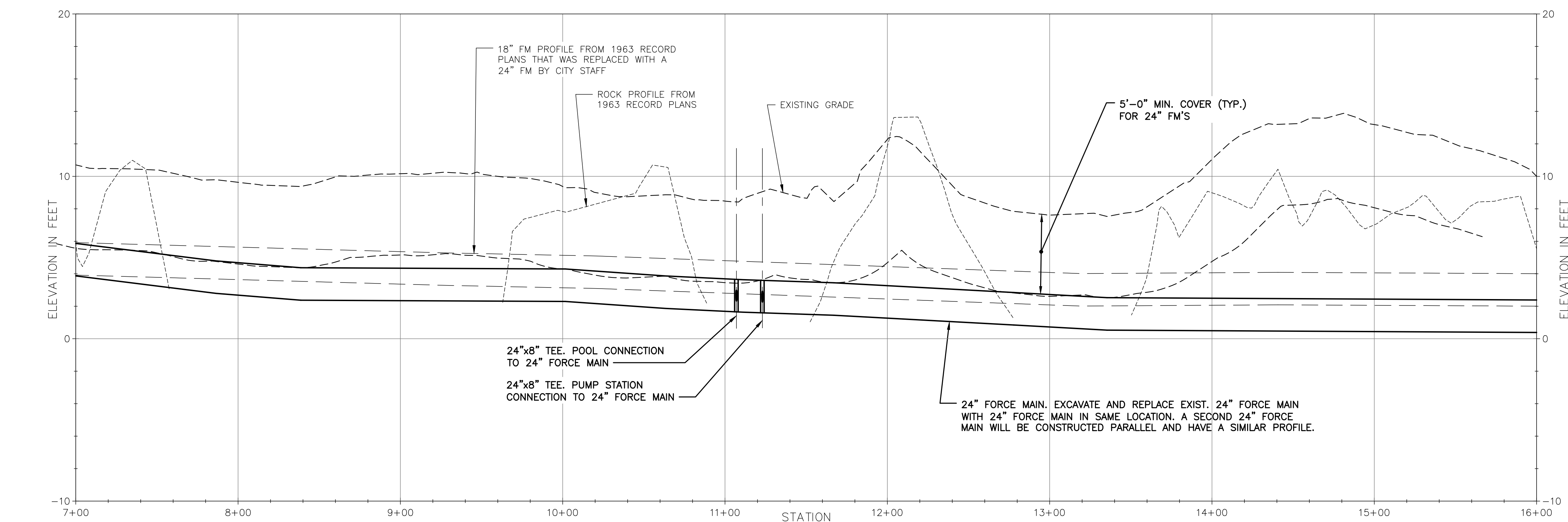
**SHEET NUMBER**  
**00 C-105**

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 PLOT DATE: Friday, August 27, 2021 1:26:28 PM

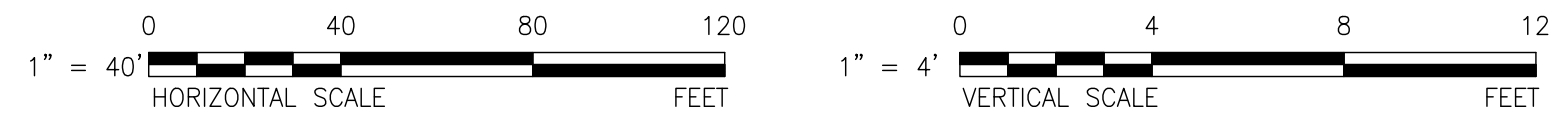




**PLAN**  
 SCALE: 1"=40'



**PROFILE**  
 SCALE: 1"=40' (HORIZ.)  
 1"=4' (VERT.)

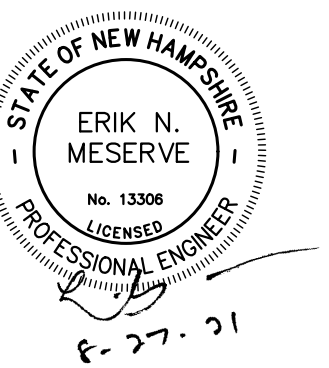


- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - MOVE SEDIMENT FILTER LOGS ON AND OFF ROAD DAILY AS NEEDED TO ALLOW TRAFFIC TO FLOW. ONE LANE OF ROAD TO REMAIN OPEN FOR TRAFFIC AT ALL TIMES.
  - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10 FEET OF SEPARATION BETWEEN NEW SANITARY FORCE MAIN AND NEW WATER MAIN WHERE POSSIBLE.

PATH: I:\LEGACY\USCHI\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\900 CAD-GIS\SHEETS\00 C-106.DWG  
 LAST UPDATE: Wednesday, August 11, 2021 1:33:12 PM  
 PLOT DATE: Friday, August 27, 2021 1:30:25 PM



**REGISTRATION**



**ISSUE/REVISION**

I/R	DATE	DESCRIPTION

**PROJECT NUMBER**

60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

**DISCIPLINE**

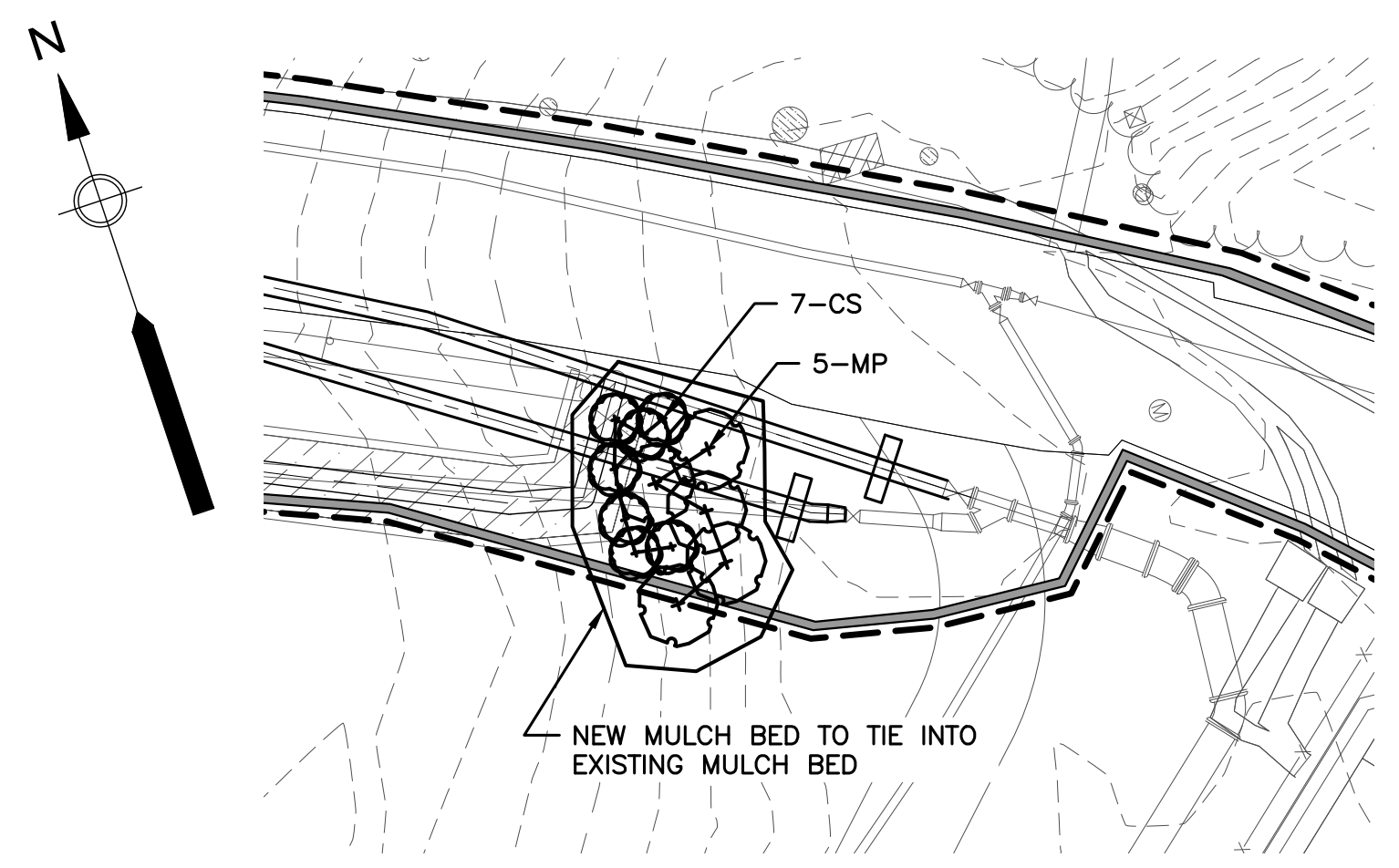
CIVIL

**SHEET TITLE**

**PIPING PLAN AND PROFILE III**

**SHEET NUMBER**

**00 C-107**

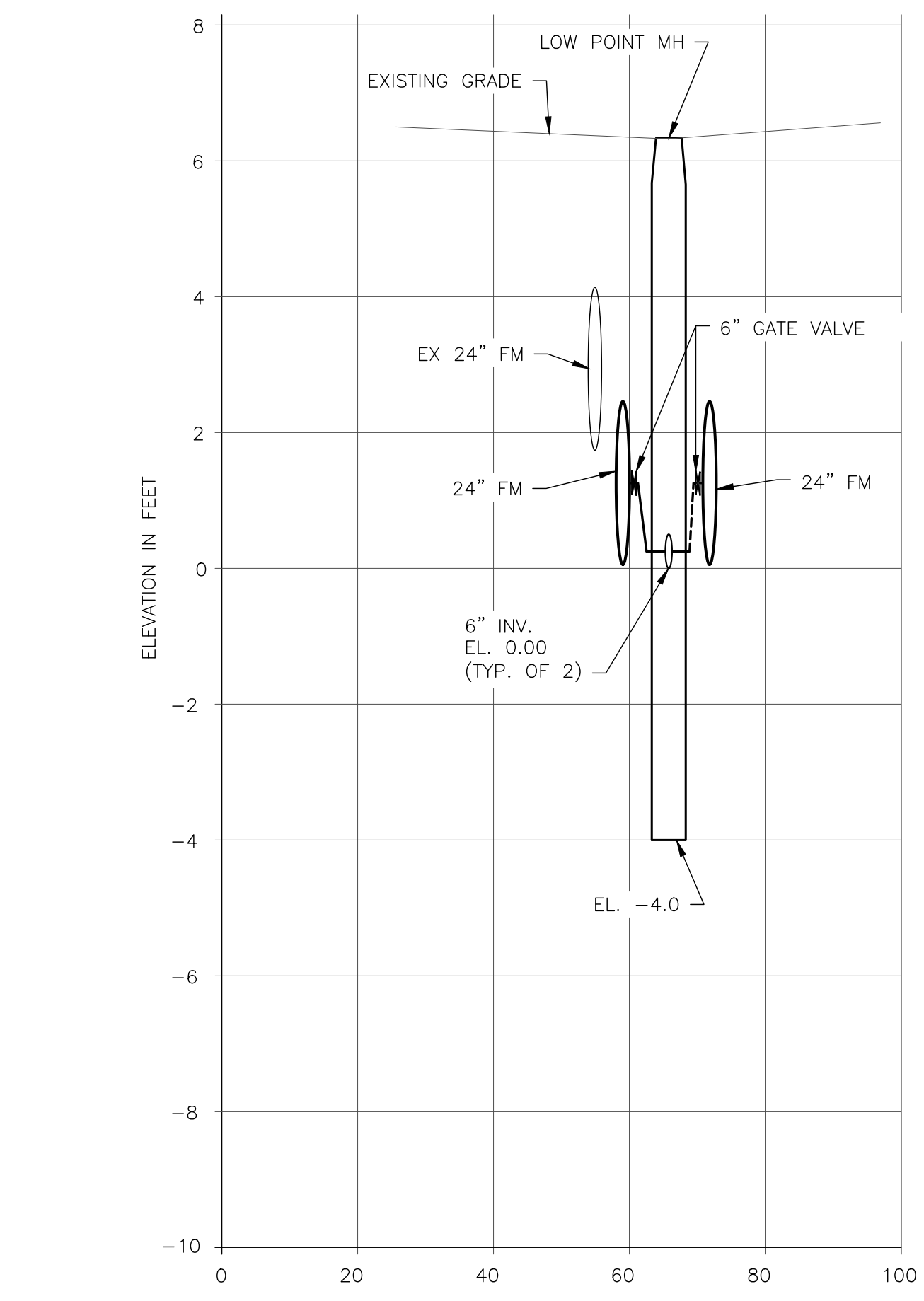


**PLANTING PLAN**

SCALE: 1"=20'

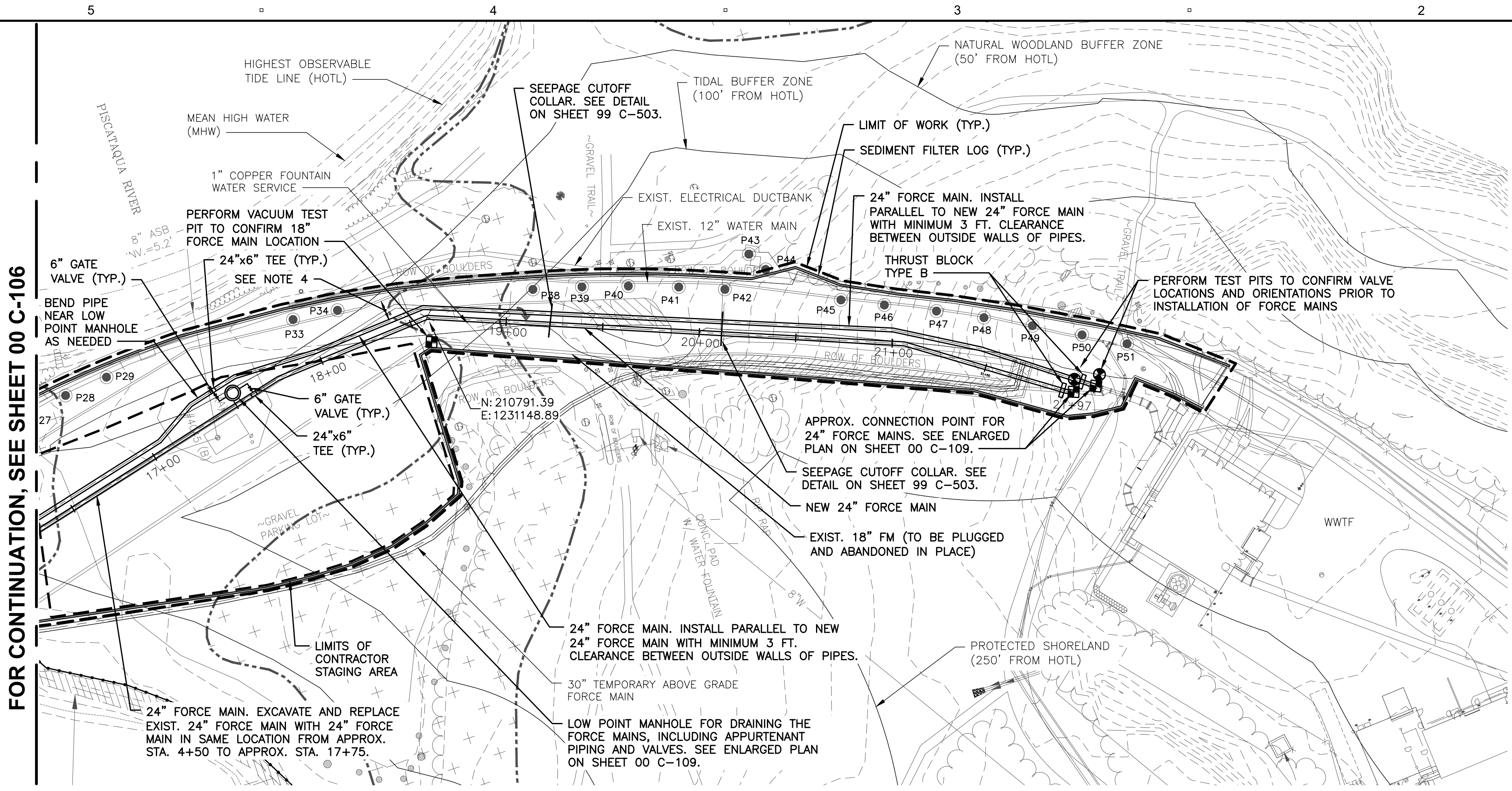
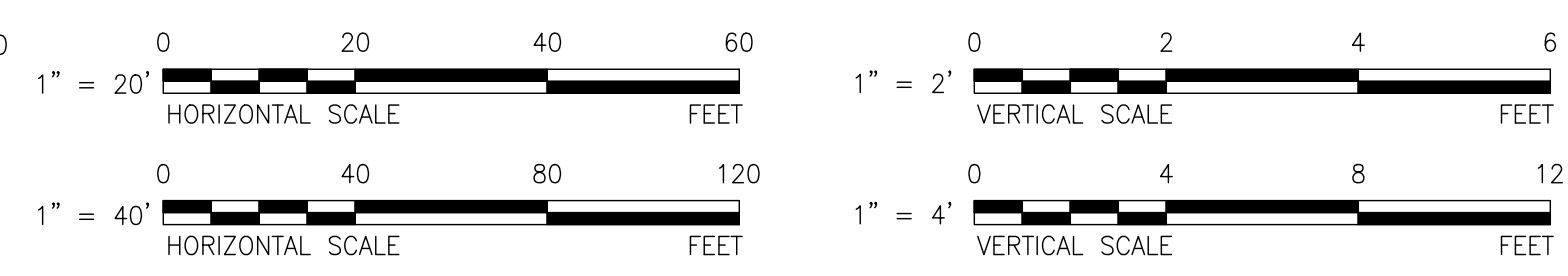
**PLANT SCHEDULE**

KEY	QTY	BOTANICAL NAME	COMMON NAME	INSTALL. SIZE	COMMENTS
CS	26	CORNUS SERICEA 'CARDINAL'	CARDINAL DOGWOOD	4-5 FT.	B&B
MP	23	MYRICA PENSYLVANICA	BAYBERRY	4-5 FT.	B&B



**LOW POINT MANHOLE SECTION**

SCALE: 1"=20' (HORIZ.)  
 1"=2' (VERT.)

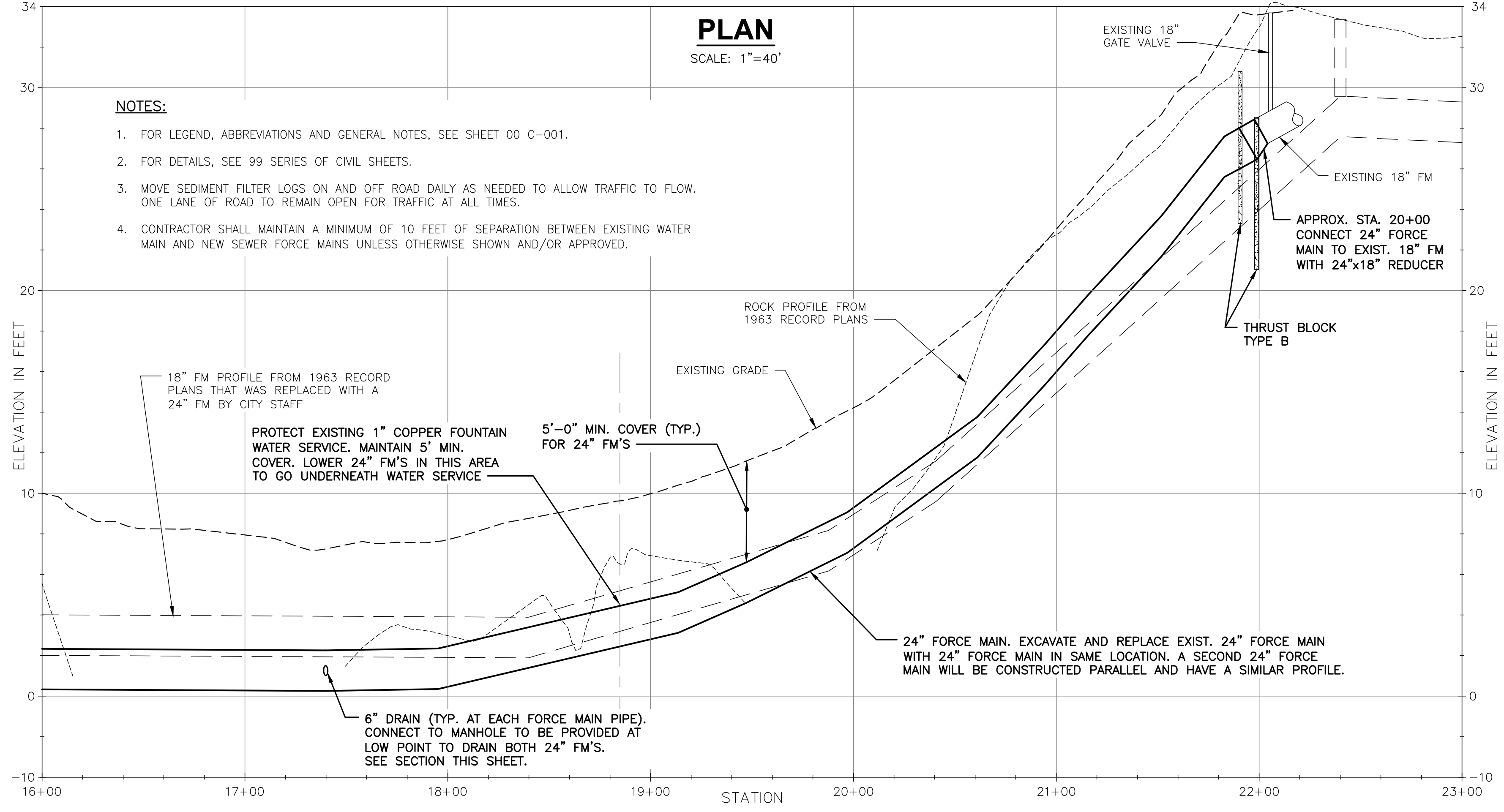


FOR CONTINUATION, SEE SHEET 00 C-106

**PLAN**

SCALE: 1"=40'

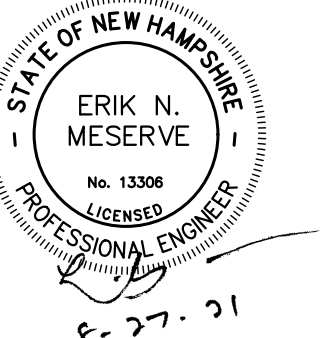
- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - MOVE SEDIMENT FILTER LOGS ON AND OFF ROAD DAILY AS NEEDED TO ALLOW TRAFFIC TO FLOW. ONE LANE OF ROAD TO REMAIN OPEN FOR TRAFFIC AT ALL TIMES.
  - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10 FEET OF SEPARATION BETWEEN EXISTING WATER MAIN AND NEW SEWER FORCE MAINS UNLESS OTHERWISE SHOWN AND/OR APPROVED.



**PROFILE**

SCALE: 1"=40' (HORIZ.)  
 1"=4' (VERT.)





I/R	DATE	DESCRIPTION

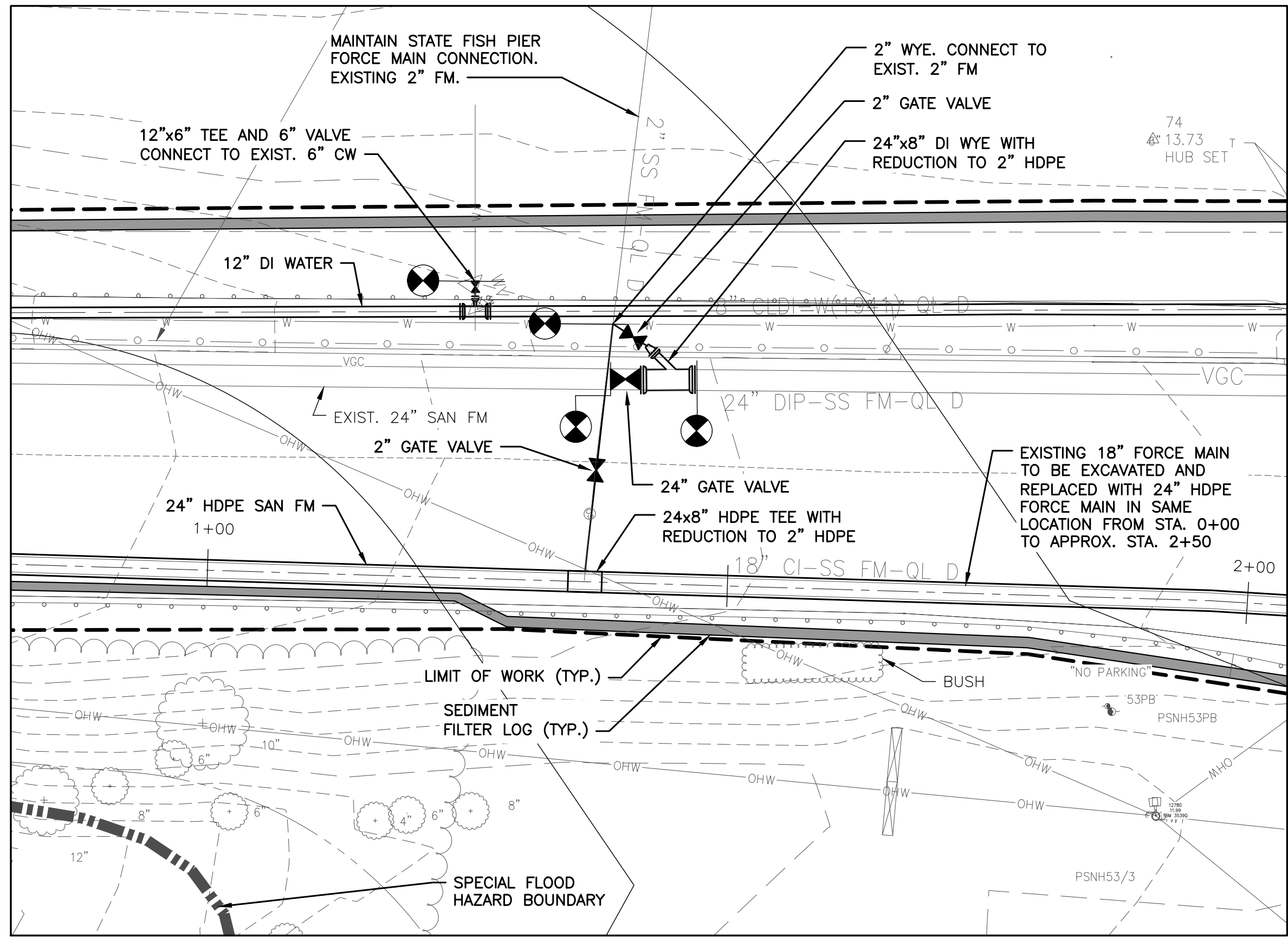
60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

CIVIL

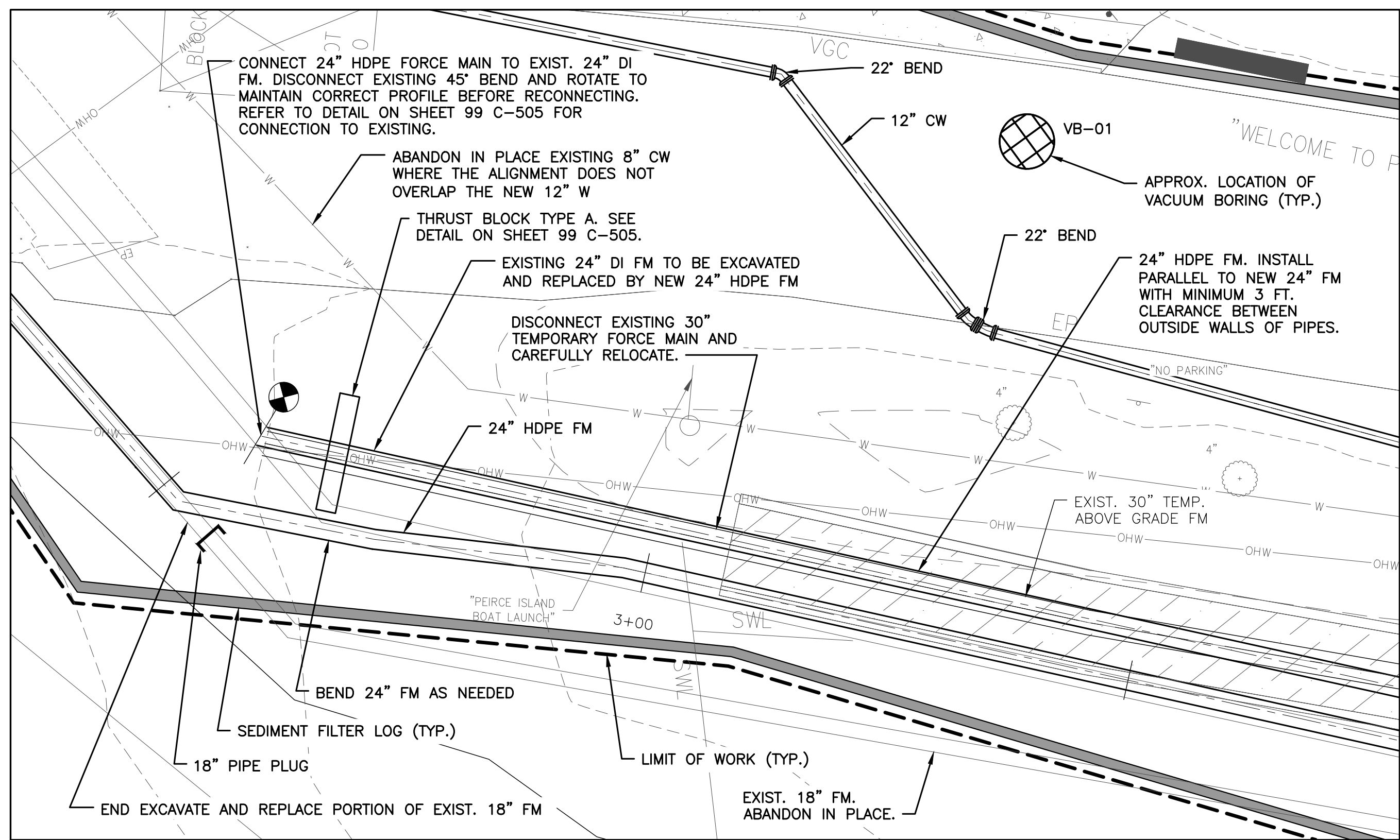
**ENLARGED PLANS I**

**00 C-108**



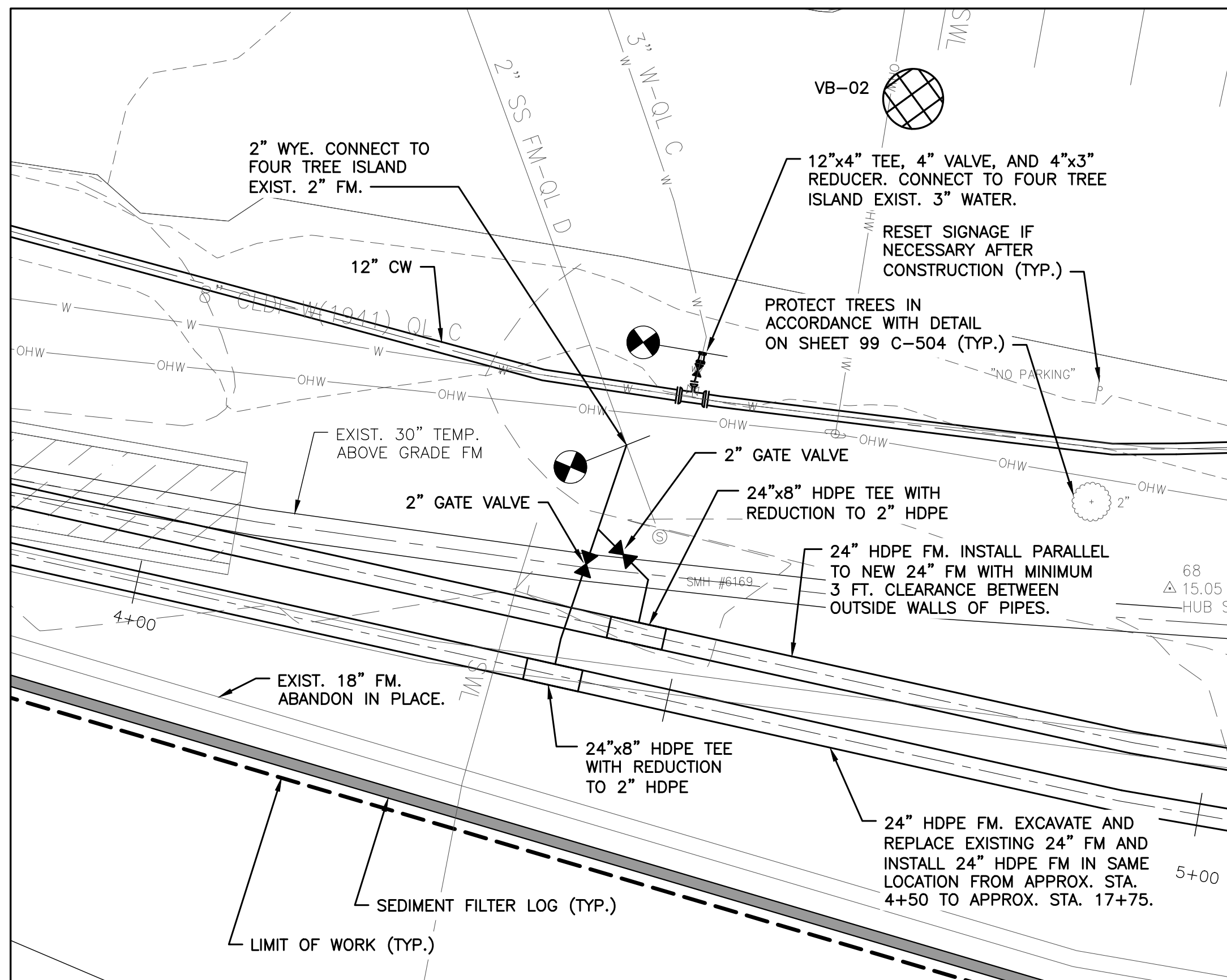
**PLAN AT STA. 1+50 - STATE FISH PIER**

SCALE: 1"=10'



**PLAN AT STA. 2+50 - BOAT RAMP PARKING LOT**

SCALE: 1"=10'

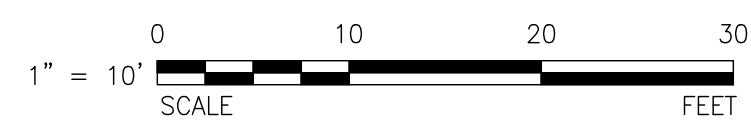


**PLAN AT STA. 4+20 - FOUR TREE ISLAND**

SCALE: 1"=10'

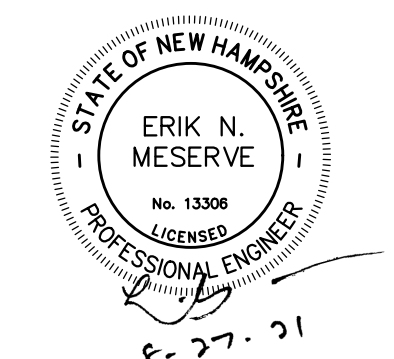
**NOTES:**

- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- MOVE SEDIMENT FILTER LOGS ON AND OFF ROAD DAILY AS NEEDED TO ALLOW TRAFFIC TO FLOW. ONE LANE OF ROAD TO REMAIN OPEN FOR TRAFFIC AT ALL TIMES.





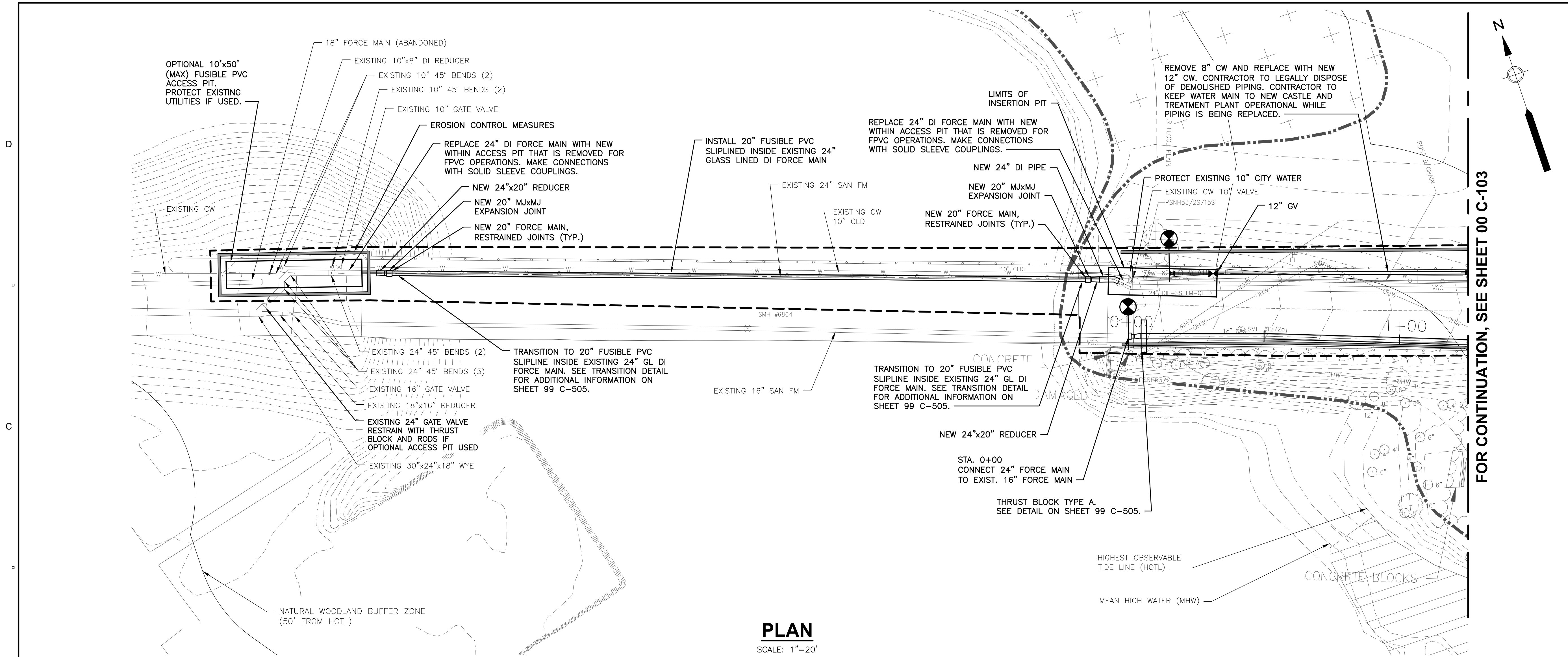




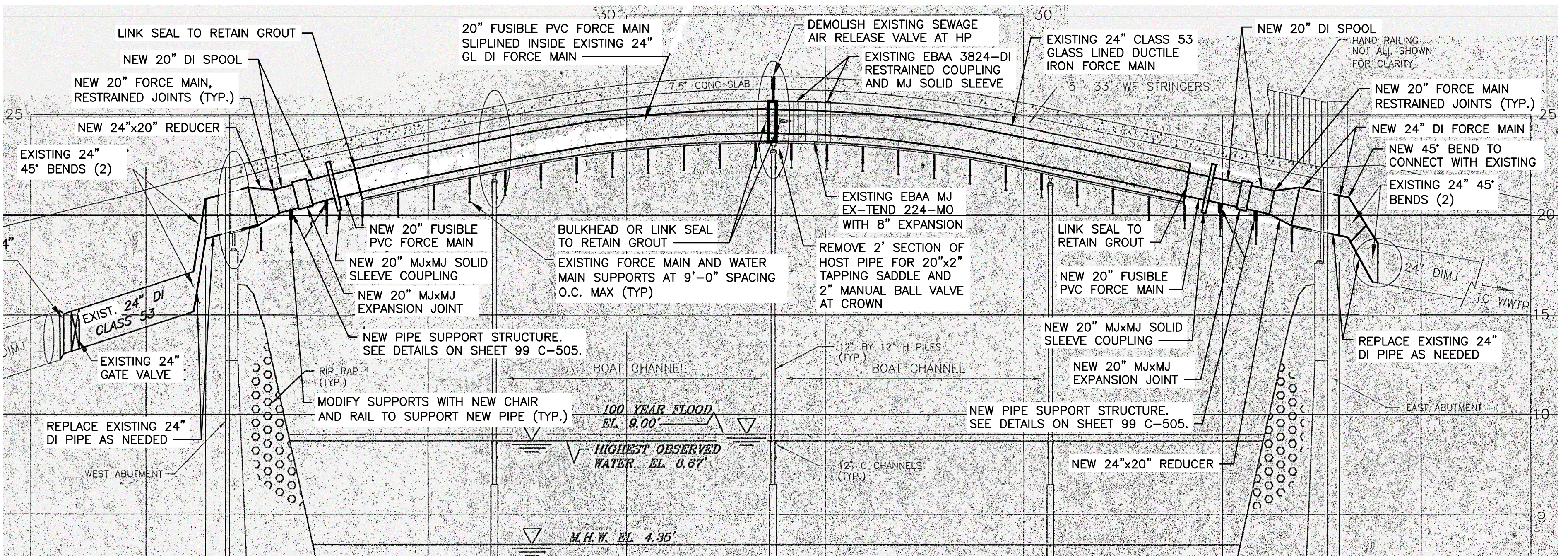
I/R	DATE	DESCRIPTION

**60649477**

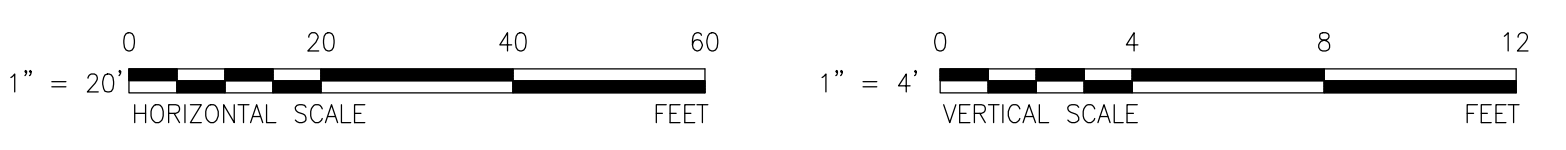
Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>



**PLAN**  
 SCALE: 1"=20'



**PROFILE**  
 SCALE: 1"=20' (HORIZ.)  
 1"=4' (VERT.)



- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - MOVE SEDIMENT FILTER LOGS ON AND OFF ROAD DAILY AS NEEDED TO ALLOW TRAFFIC TO FLOW. ONE LANE OF ROAD TO REMAIN OPEN FOR TRAFFIC AT ALL TIMES.
  - REMOVE AND REPLACE EXISTING INSULATION AND JACKET WITH NEW INSULATION AND JACKET WHERE NECESSARY. INSULATION TO BE NEW 2" PIPE INSULATION (TRYMER 2000 OR APPROVED EQUAL) AND JACKET TO BE 0.024" ALUMINUM JACKETING (BY JM).

PATH: I:\LEGACY\USCH\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\900 CAD-GIS\SHEETS\CAD C-110.DWG  
 LAST UPDATE: Tuesday, August 17, 2021 10:20 AM  
 PLOT DATE: Friday, August 27, 2021 1:50:46 PM

**FOR CONTINUATION, SEE SHEET 00 C-103**

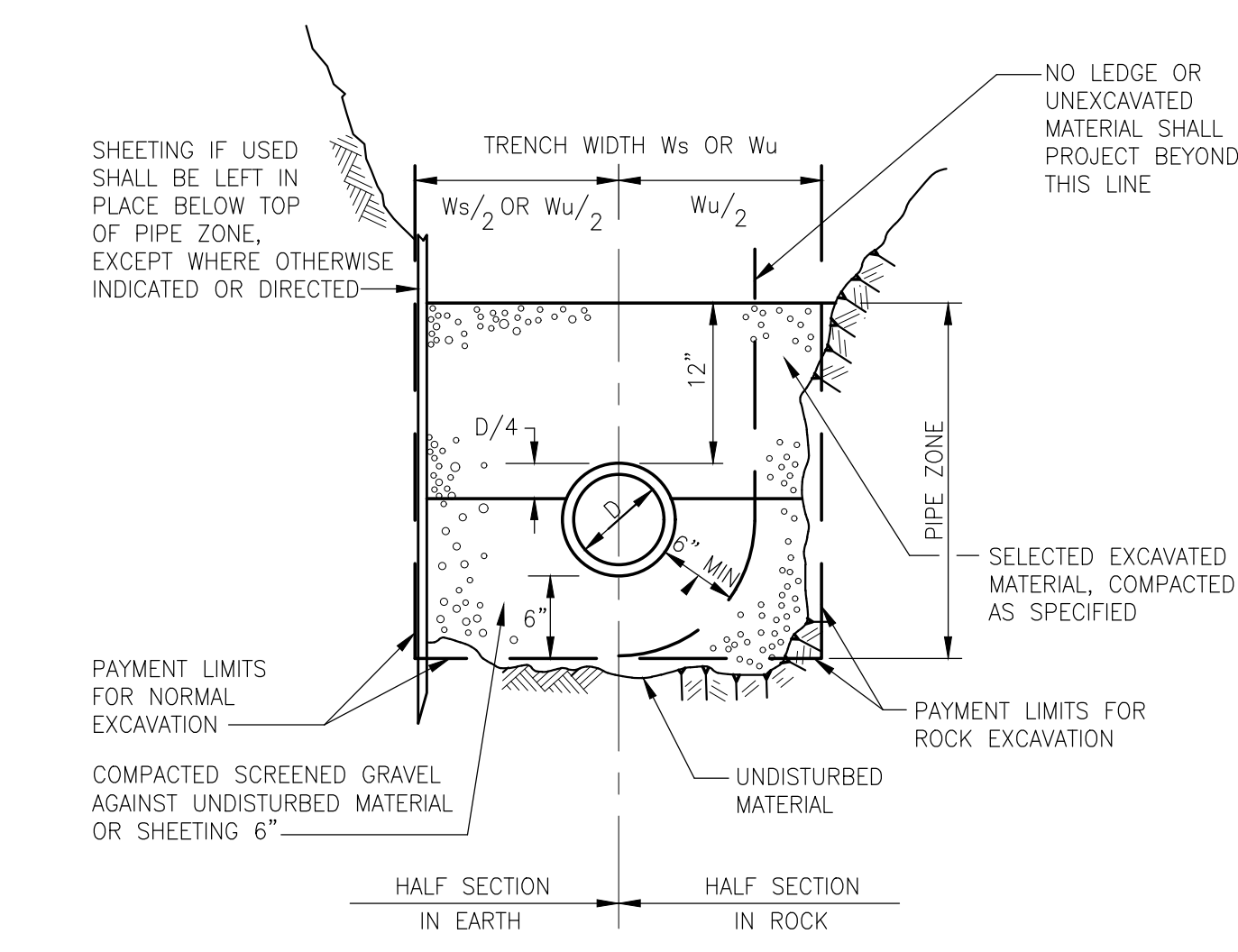
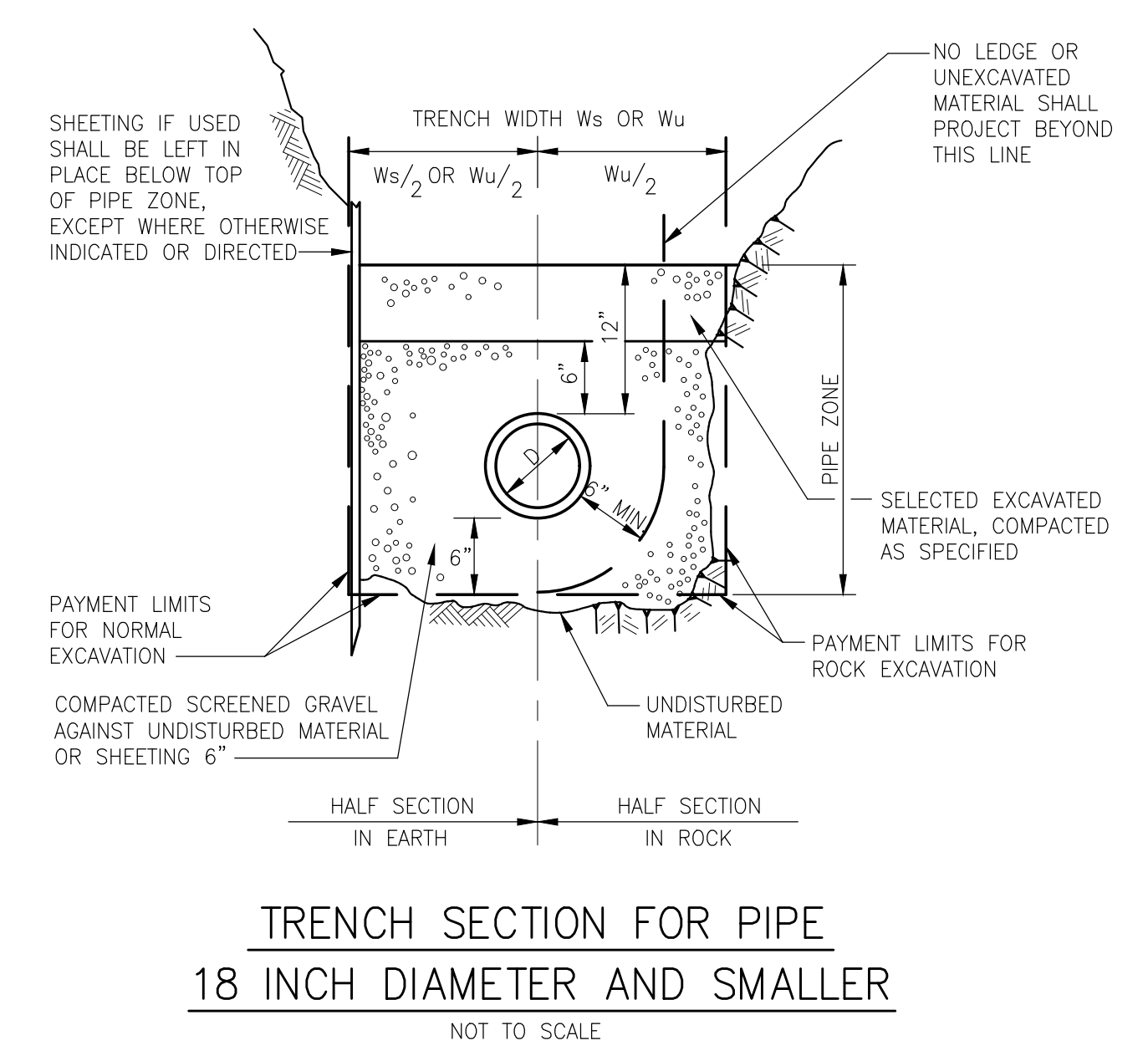




I/R	DATE	DESCRIPTION

60649477

Designed By: **S. HE**  
 Drawn By: **M. THIBODEAU**  
 Dept Check: **C. BENZIGER**  
 Proj Check: **E. MESERVE**  
 Date: **AUGUST 2021**  
 Scale: **AS NOTED**

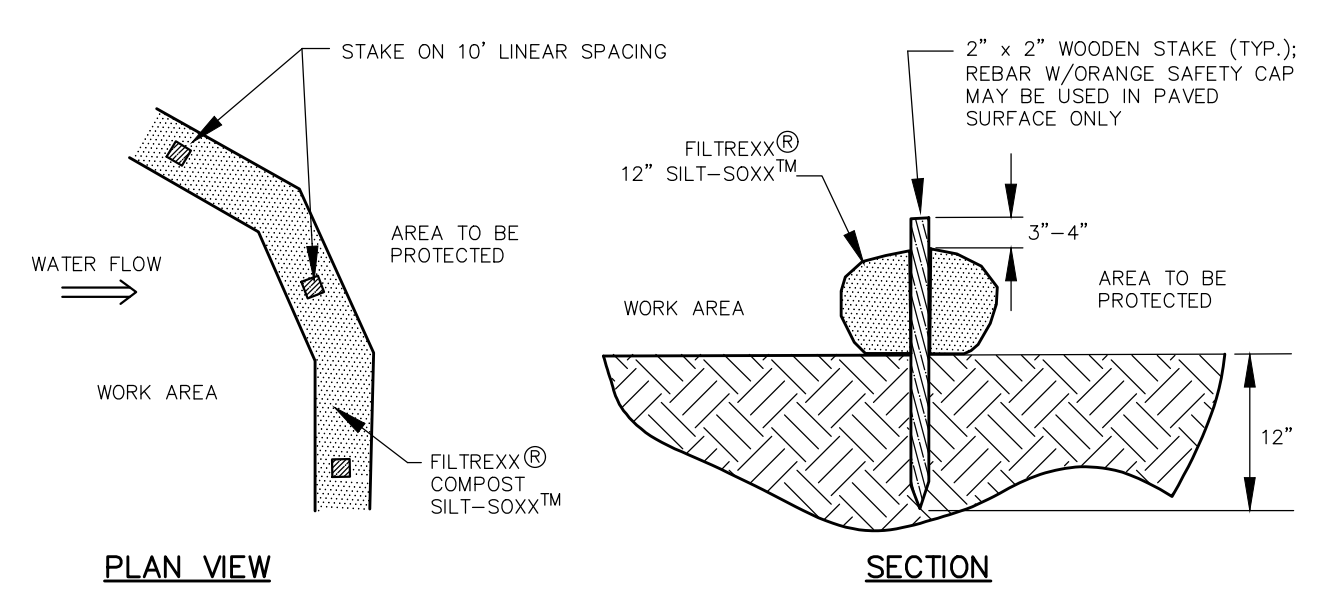


**TRENCH SECTION FOR DI OR PVC PIPE 20 INCH DIAMETER AND LARGER**  
 NOT TO SCALE  
 2-1.1.2 (REV. 03-15-95)

TRENCH WIDTH $W_s$ OR $W_u$		
NOMINAL PIPE DIAMETER $D$	DEPTH OF PIPE INVERT BELOW GROUND SURFACE	
	0 TO 12'	12' TO 20'
	>20'	
24" AND SMALLER	5'-0"	7'-0"
OVER 24"	$D + 3'-0"$	$D + 5'-0"$
TWO 24"	$2D + 6'-0"$	$2D + 8'-0"$
	$2D + 10'-0"$	

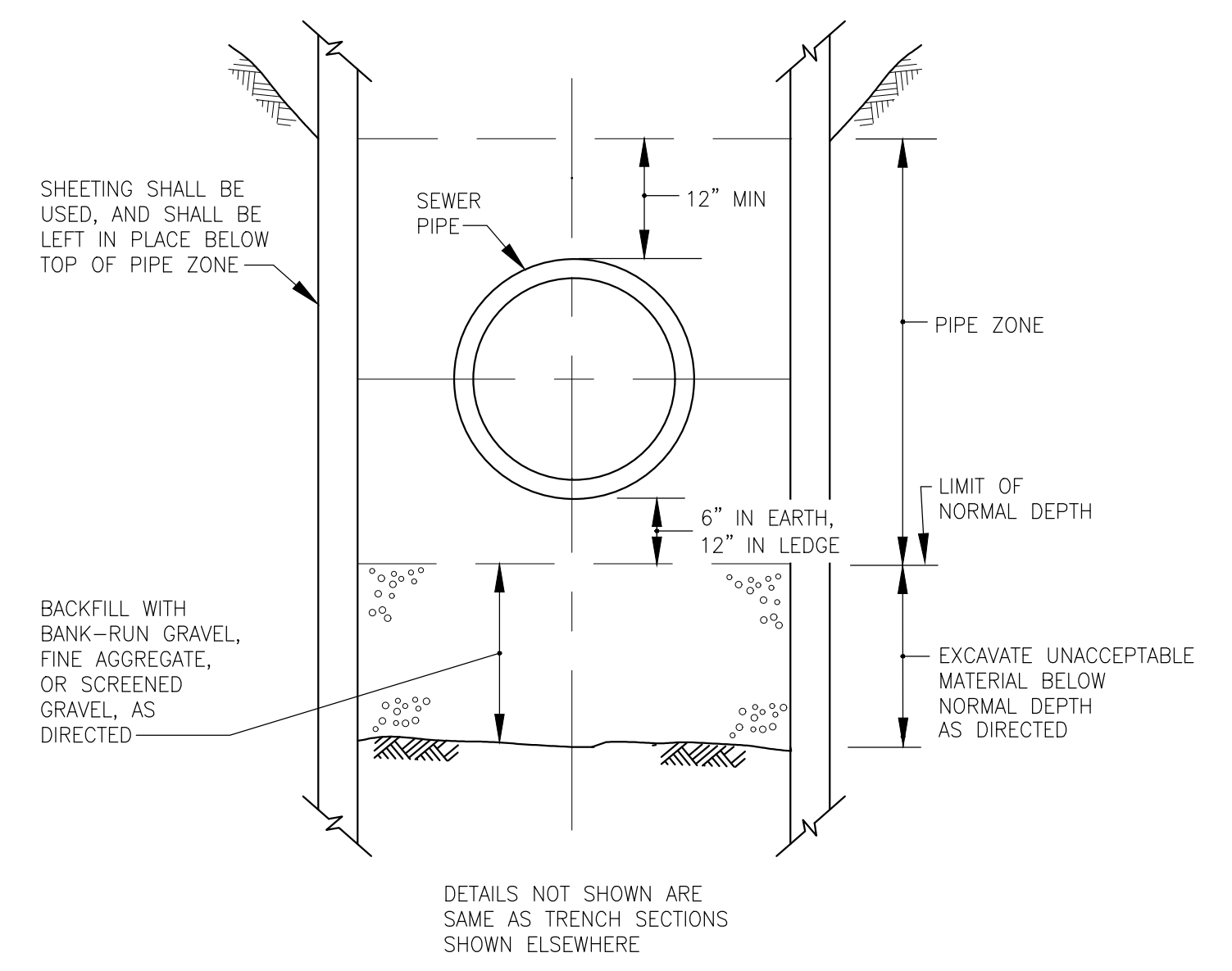
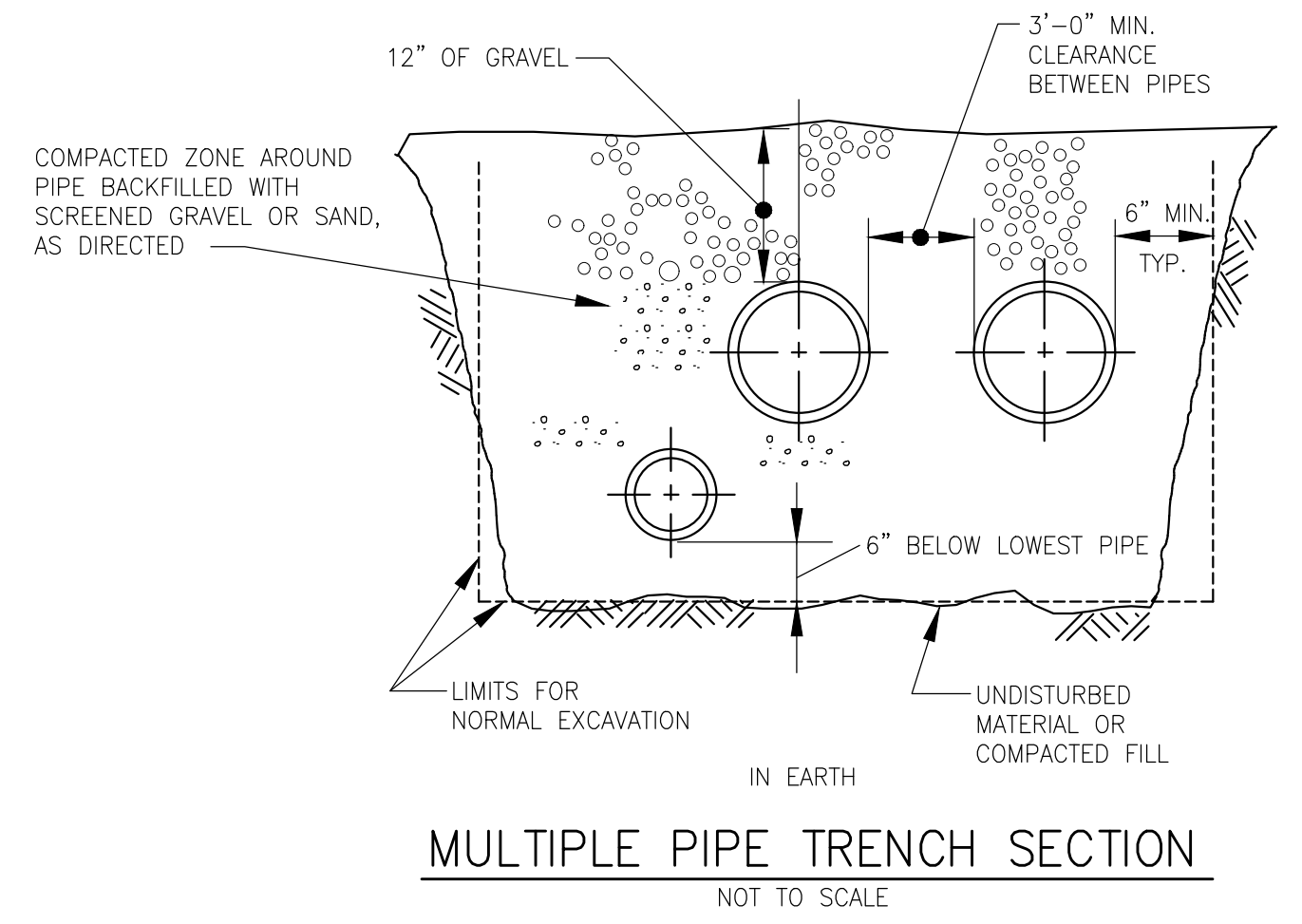
- PIPE TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH  $W_s$  (SHEETED) OR  $W_u$  (UNSHEETED) ABOVE THE TOP OF PIPE ZONE.
- TRENCHES SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH  $W_u$  BELOW THE TOP OF PIPE ZONE.
- SHEETING MUST BE USED IF EXCAVATION AND BACKFILL, BELOW NORMAL DEPTH, IS REQUIRED. SHEETING SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF PIPE.

**GENERAL NOTES FOR PIPE TRENCHES**  
 NOT TO SCALE  
 2-1.1.11 (REV. 10-23-95)

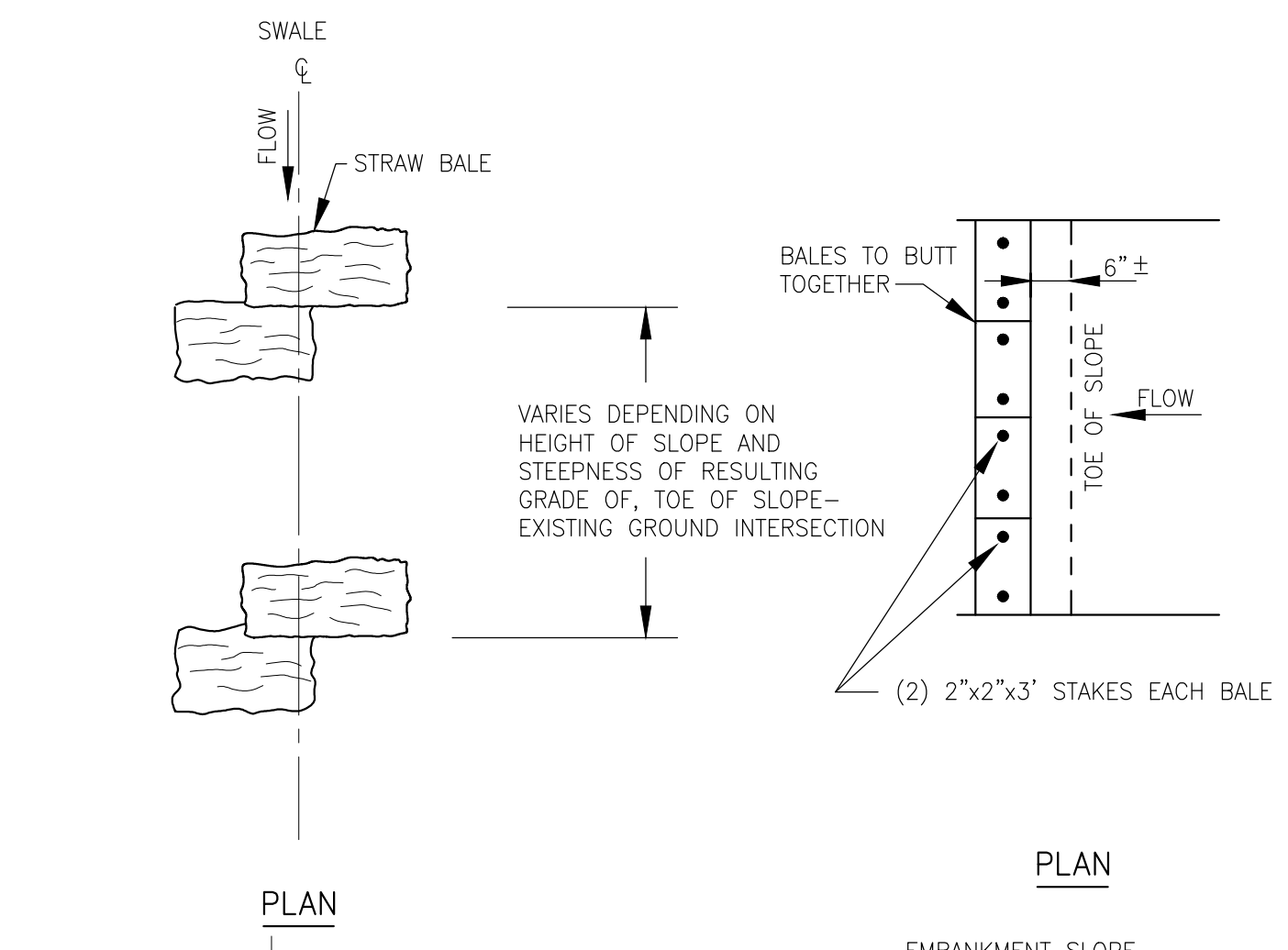


- NOTES:**
- SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS FOR AREAS OF REVETMENT CONSTRUCTION.
  - ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
  - SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
  - ALL SEDIMENT TRAPPED BY SILTSOXX SHALL BE DISPOSED OF PROPERLY.

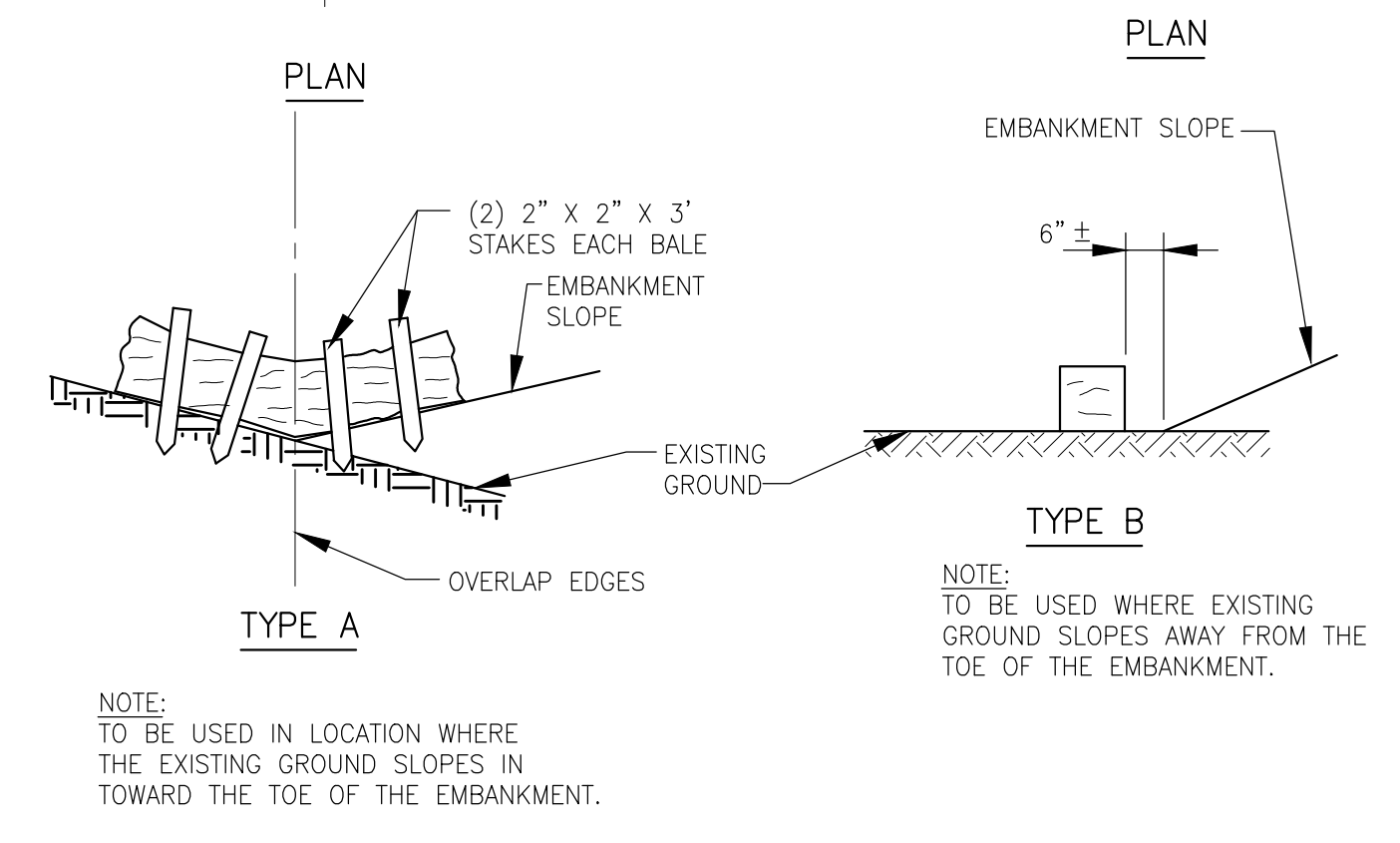
**SEDIMENT FILTER LOG STAKING DETAIL**  
 NOT TO SCALE



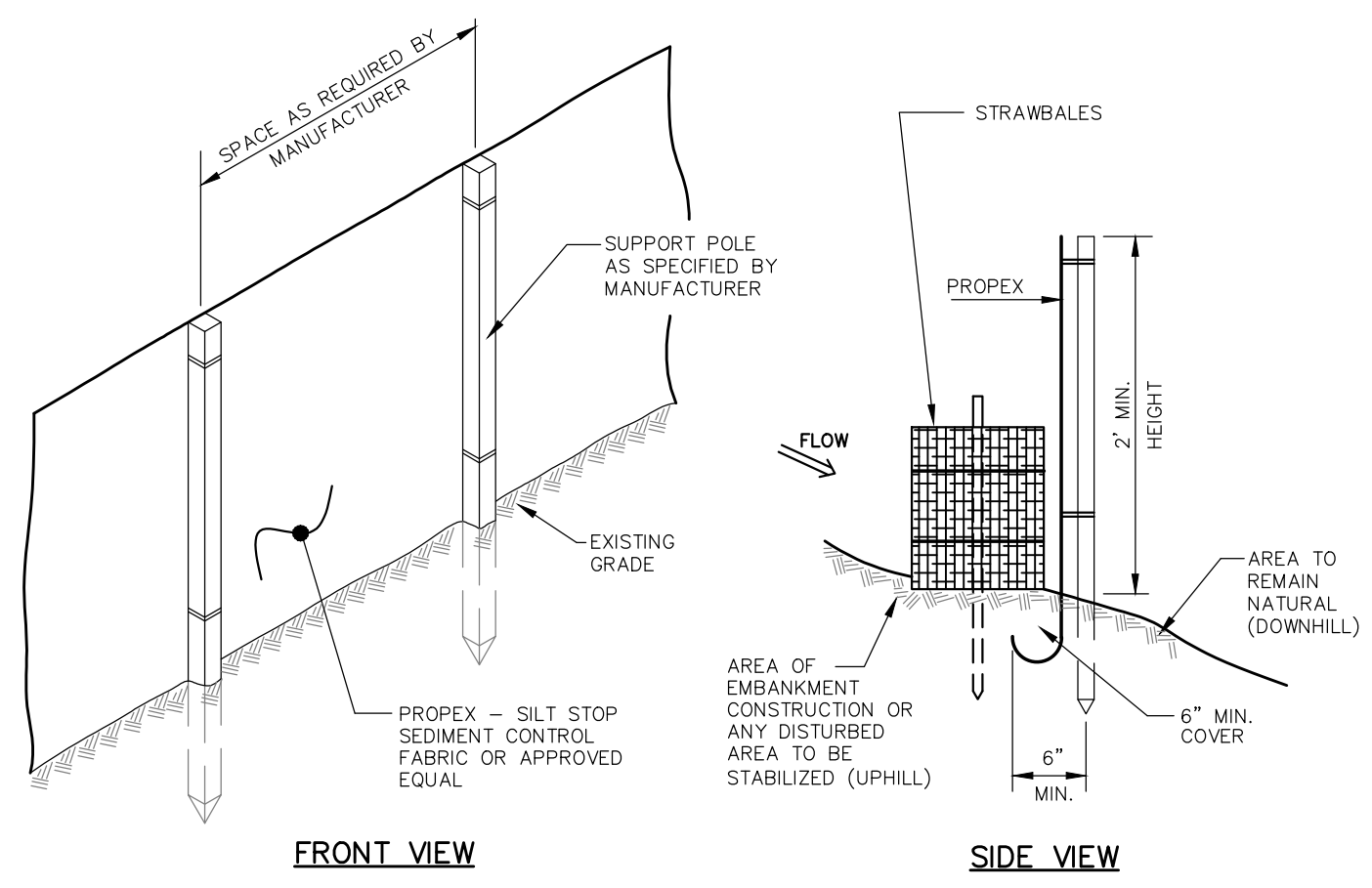
**TRENCH SECTION IN UNACCEPTABLE MATERIAL**  
 NOT TO SCALE  
 2-1.1.21 (REV. 03-15-95)



**STRAW BALE EROSION CONTROL**  
 NOT TO SCALE  
 2-1.60.4 (REV. 09-29-95)



**STRAW BALE EROSION CONTROL**  
 NOT TO SCALE  
 2-1.60.4 (REV. 09-29-95)



**SILT FENCE/STRAWBALE DETAIL**  
 NOT TO SCALE

PATH: I:\LEGACY\USCH\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\900 CAD-GIS\SHEETS\09 C-501.DWG  
 LAST UPDATE: Wednesday, August 11, 2021 12:34 PM  
 PLOT DATE: Friday, August 27, 2021 1:02:31 PM





I/R	DATE	DESCRIPTION

60649477

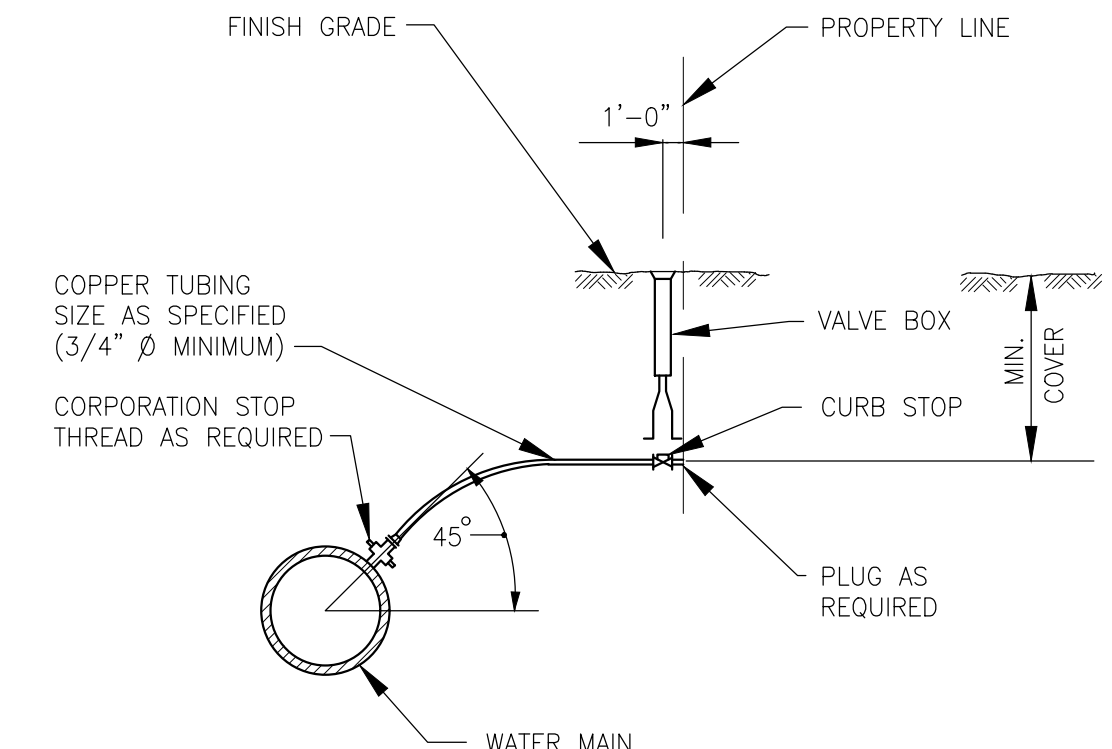
Designed By: **S. HE**  
 Drawn By: **M. THIBODEAU**  
 Dept Check: **C. BENZIGER**  
 Proj Check: **E. MESERVE**  
 Date: **AUGUST 2021**  
 Scale: **AS NOTED**

CIVIL

SHEET TITLE

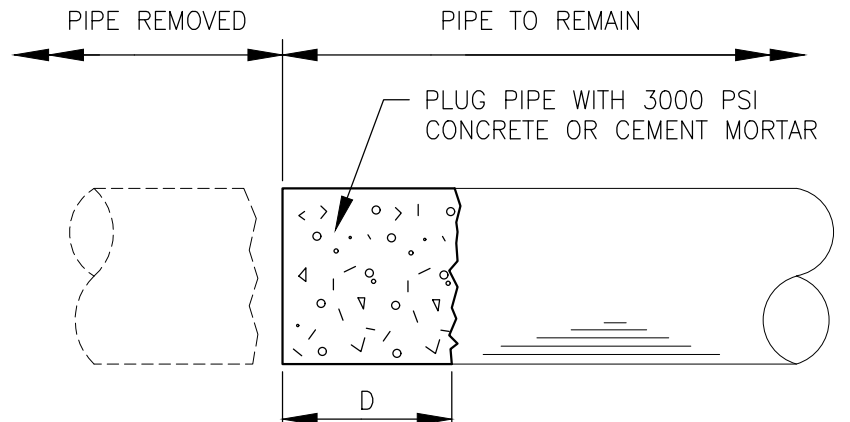
**DETAILS II**

**99 C-502**



**SERVICE CONNECTION**

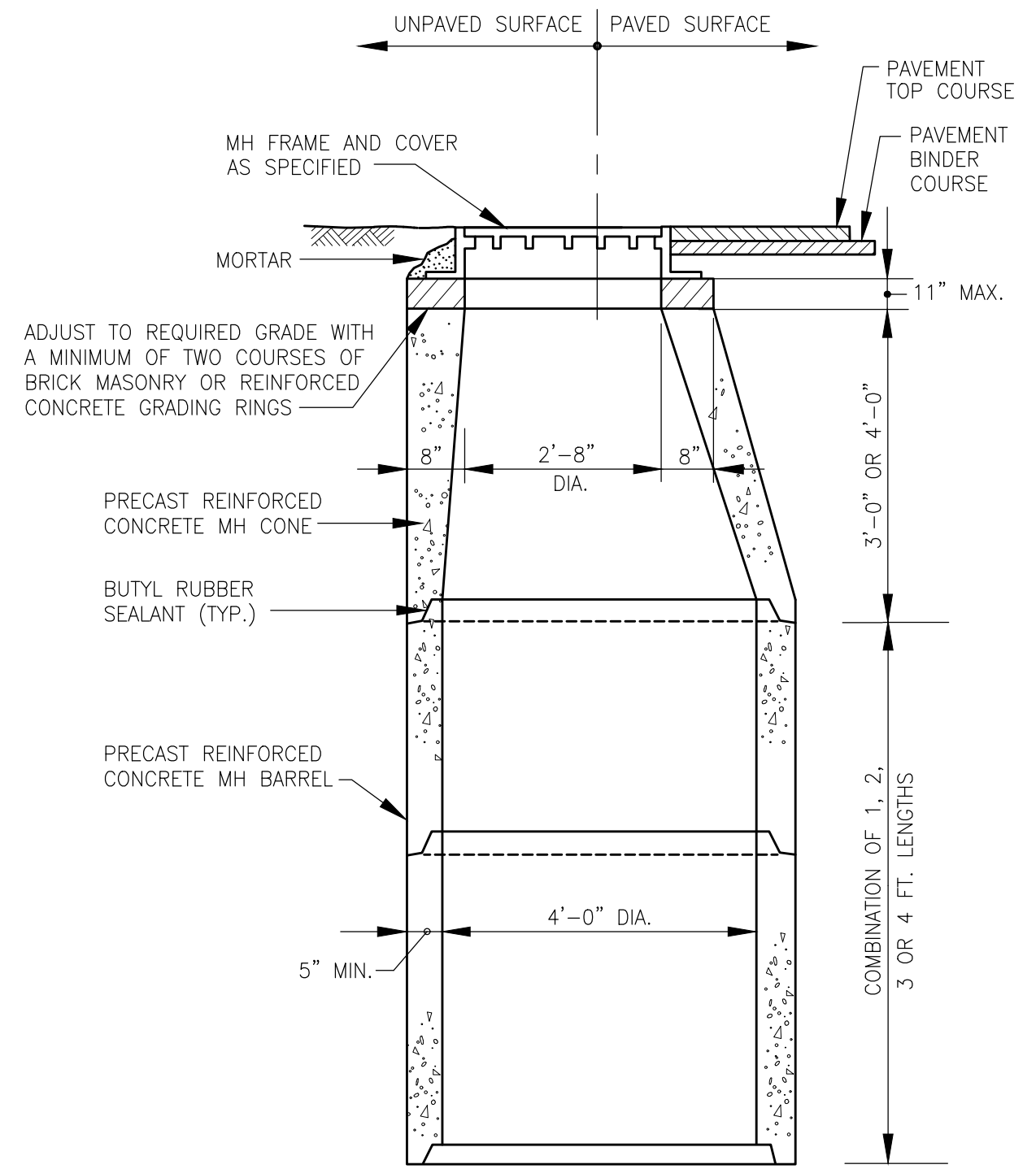
NTS  
 2-1.20 (REV. 12-15-94)



**NOTES:**  
 1. PLUG ALL ABANDONED PIPES AT THEIR TERMINATIONS.  
 2. DEPTH OF PLUG (D) SHALL BE EQUAL TO DIAMETER OF PIPE (12\"/>

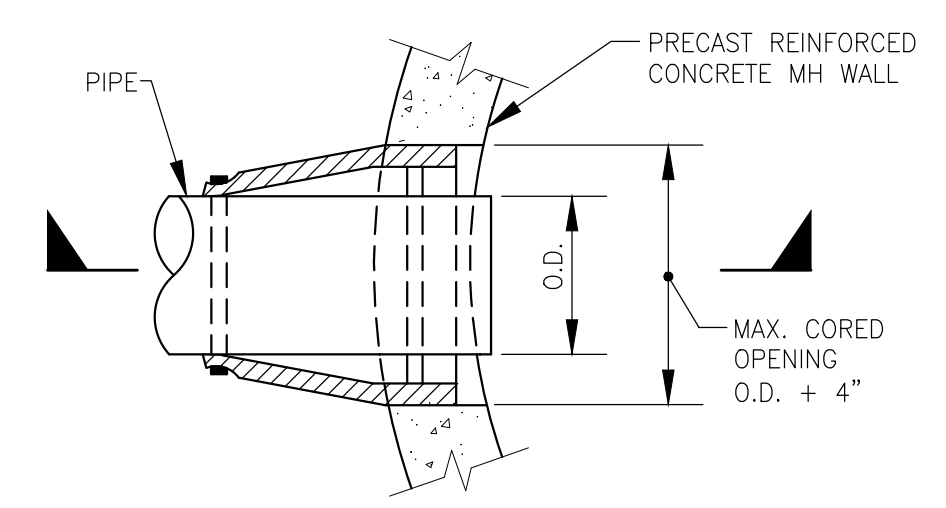
**TYPICAL PIPE PLUGGING DETAIL**

NTS

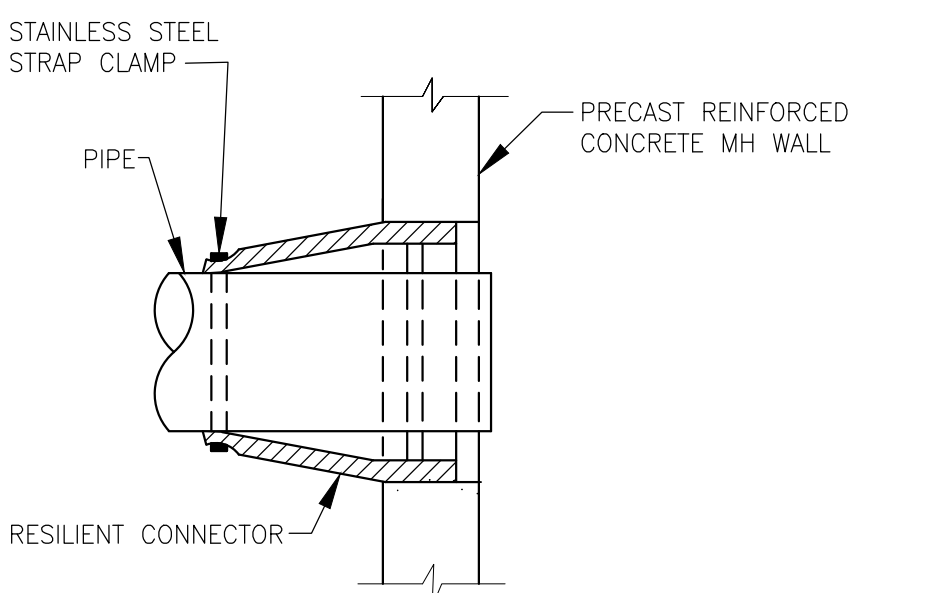


**4'-0\"/>
 WITH ECCENTRIC CONE TOP**

NOT TO SCALE



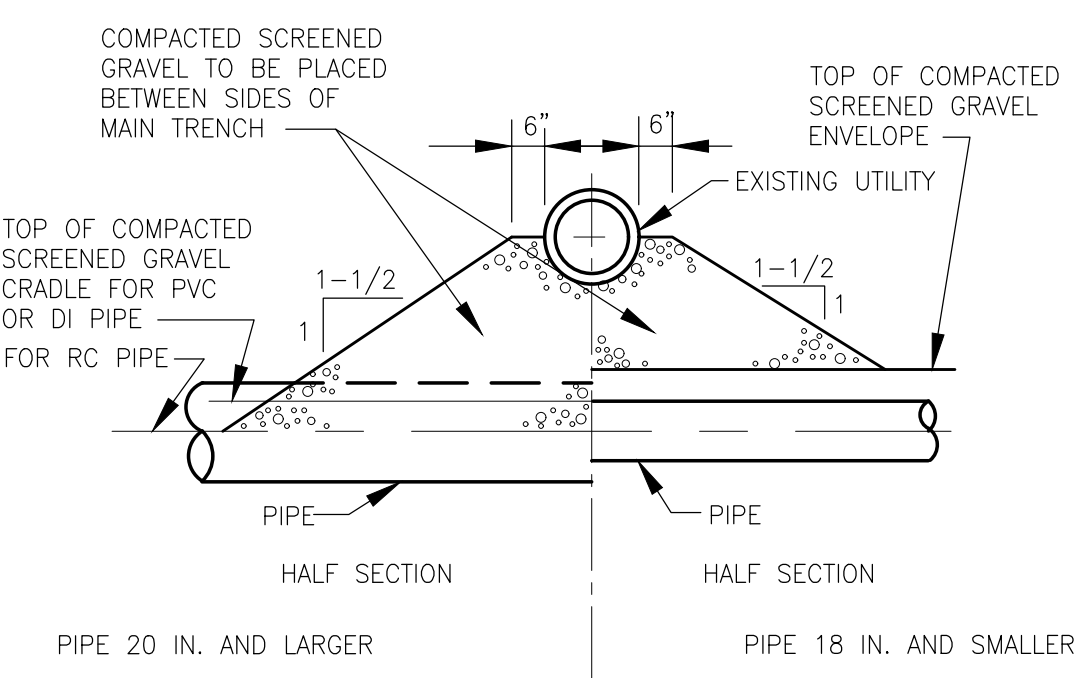
**PLAN**



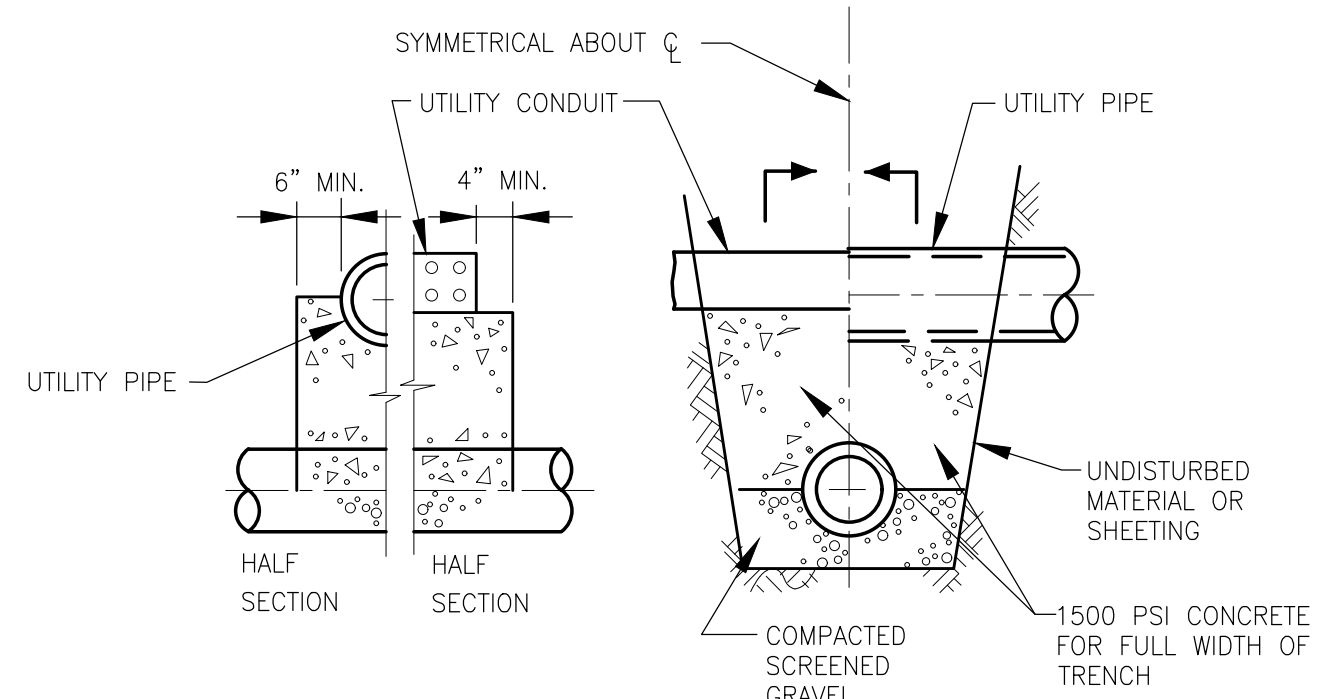
**SECTION**

**WATERTIGHT RESILIENT CONNECTOR  
 FOR CONNECTING PIPES TO  
 PRECAST CONCRETE MANHOLES**

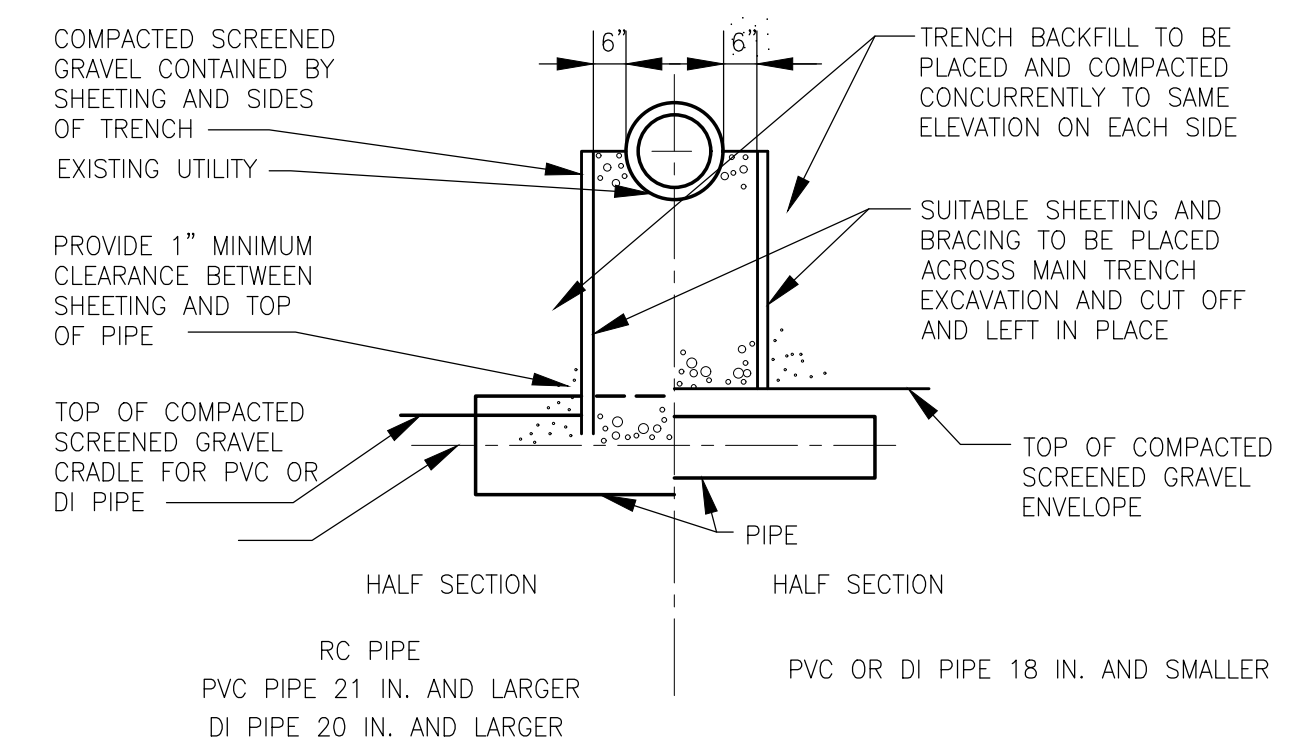
NOT TO SCALE  
 2-1.5.62.1 (REV. 4-5-96)



**TYPE A**



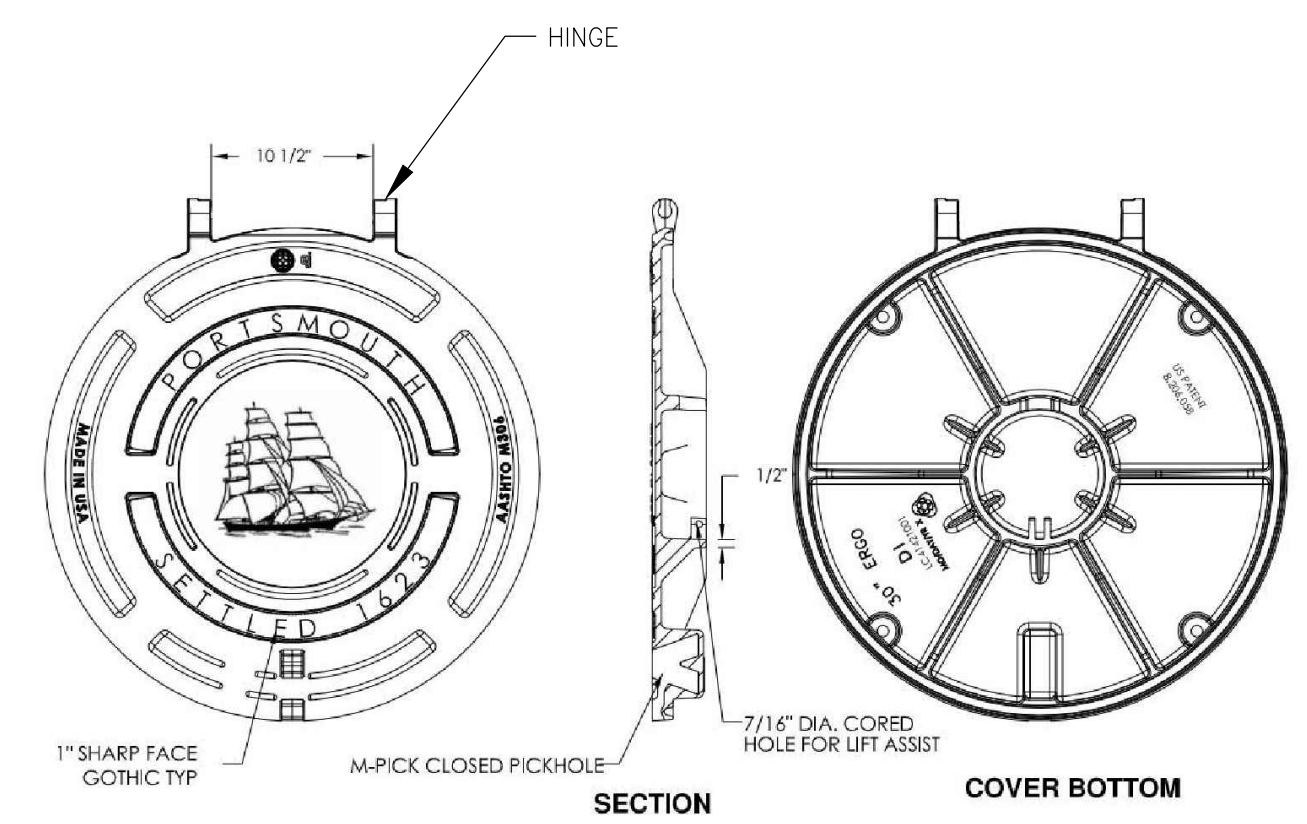
**TYPE C**



**TYPE B**

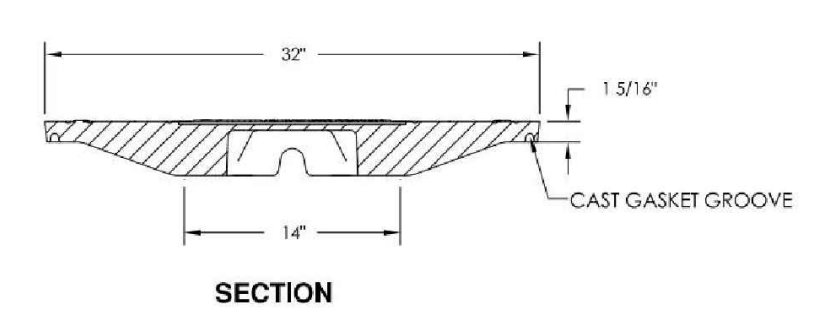
**TYPICAL SUPPORTS FOR UTILITIES**

NOT TO SCALE  
 2-1.8 (REV. 03-15-95)



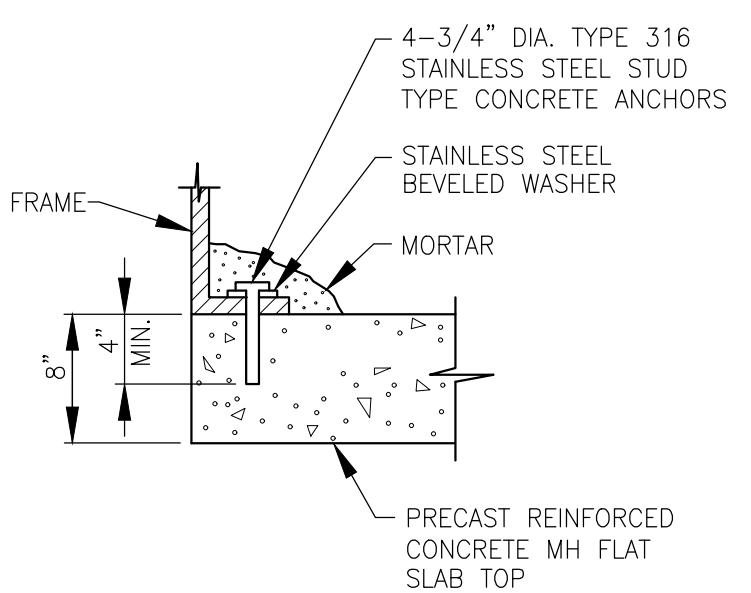
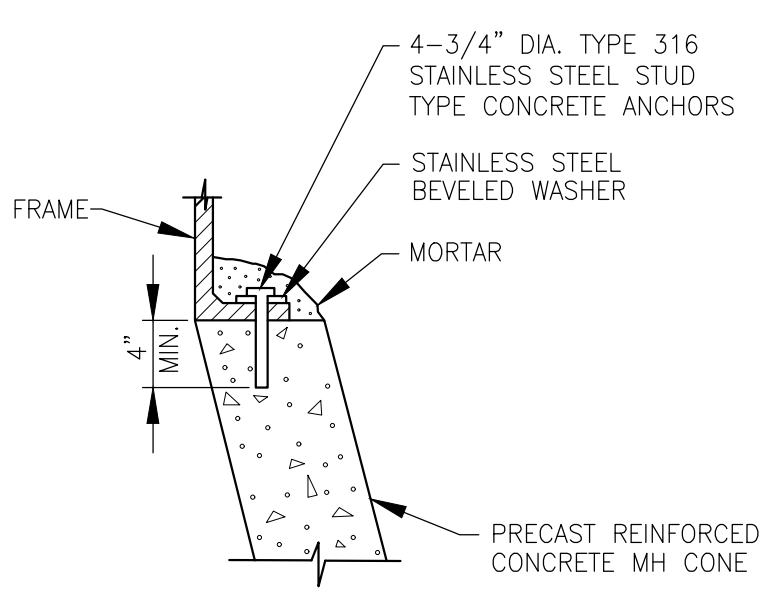
**MANHOLE COVER**

NOT TO SCALE



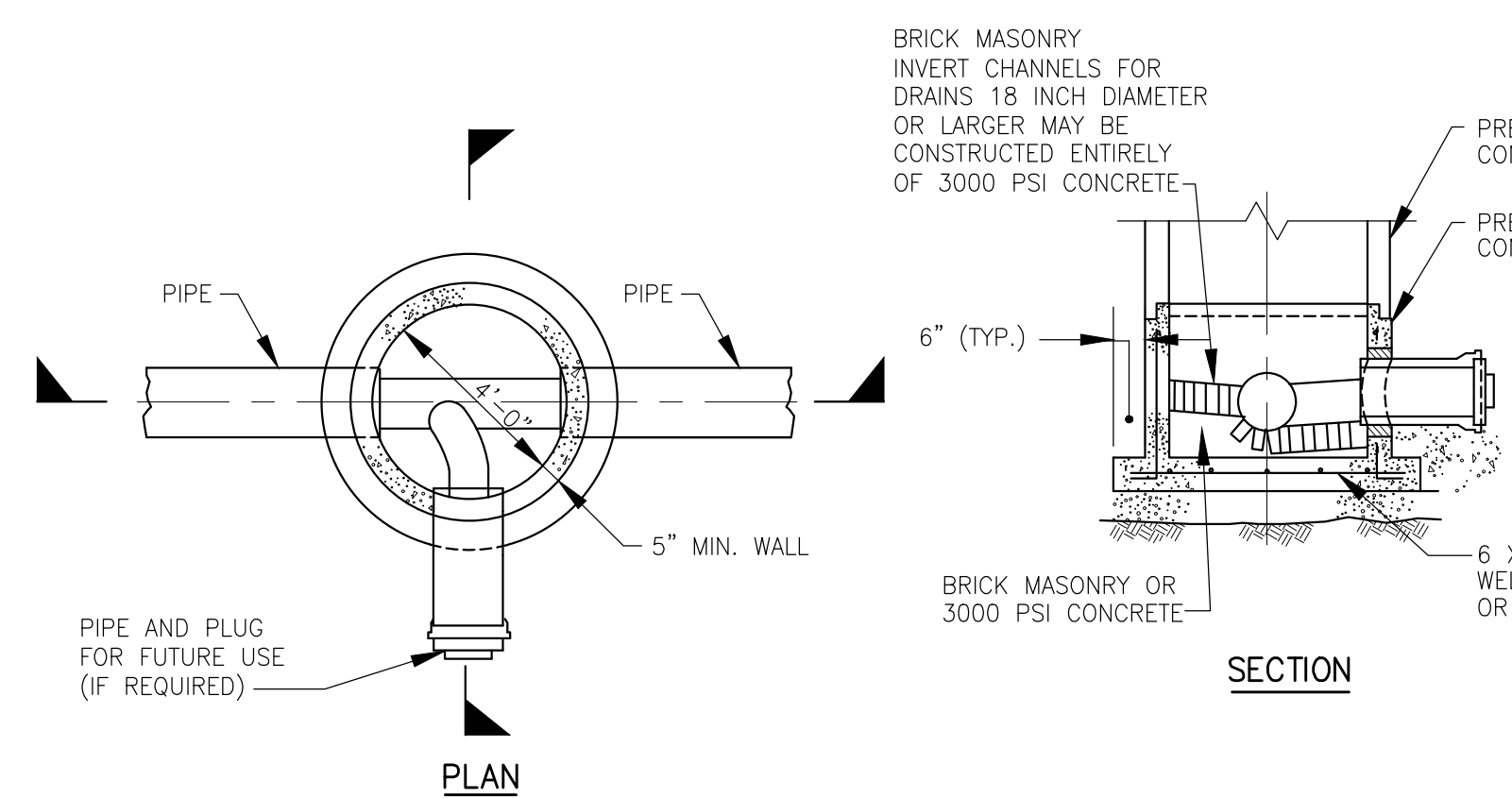
**SECTION**

**NOTES:**  
 1. CITY TO PROVIDE MANHOLE FRAMES AND COVERS. CONTRACTOR TO INSTALL MANHOLE FRAMES AND COVERS.

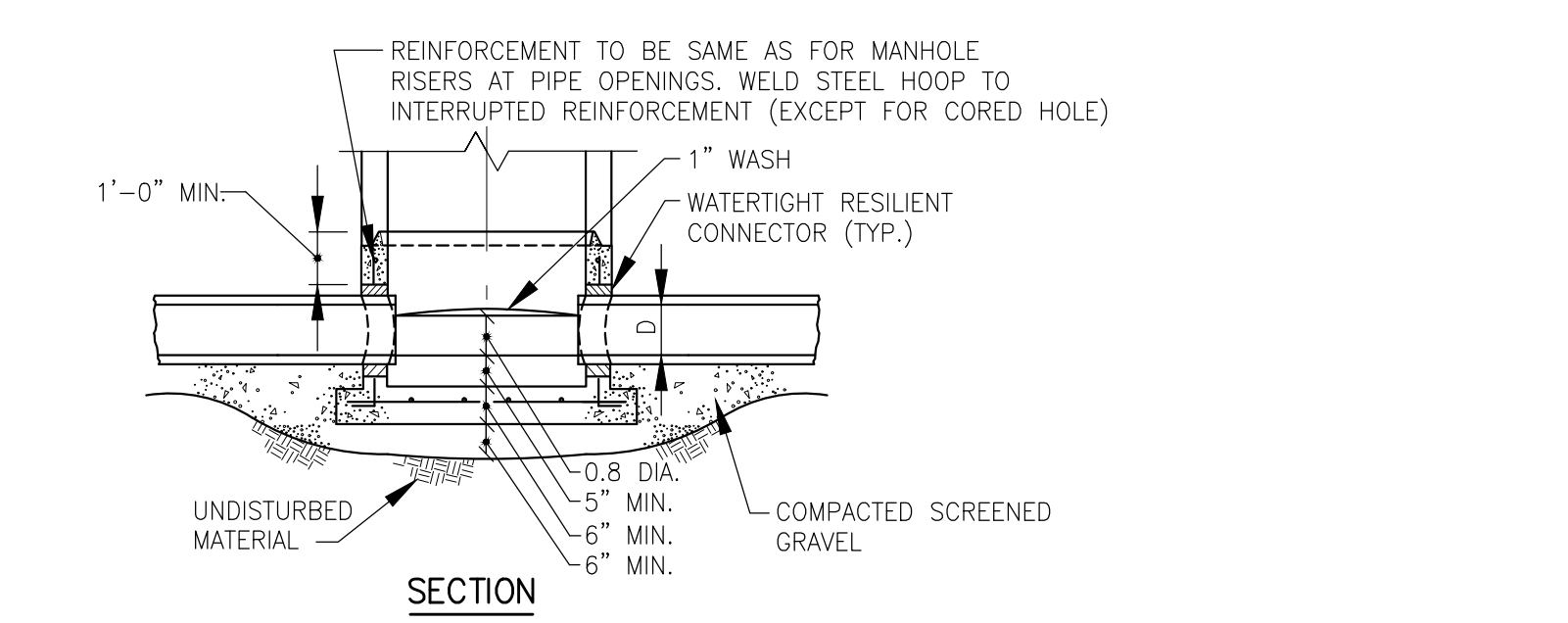


**ANCHOR BOLT DETAILS FOR  
 FRAMES FOR MANHOLE TOPS**

NOT TO SCALE



**PLAN**



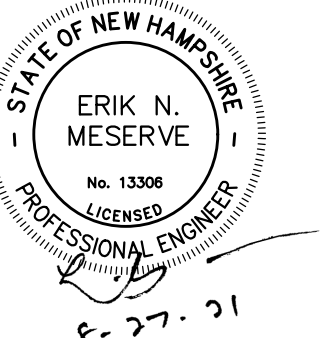
**SECTION**

**4'-0\"/>
 MANHOLE BASE FOR SEWER/DRAIN MANHOLES**

NOT TO SCALE

PATH: I:\LEGACY\USCHIFFORD\DATA\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\900 CAD-GIS\SHEETS\99 C-502.DWG  
 LAST UPDATE: Thursday, August 12, 2021 11:33 AM  
 PLOT DATE: Friday, August 27, 2021 1:01:27 PM



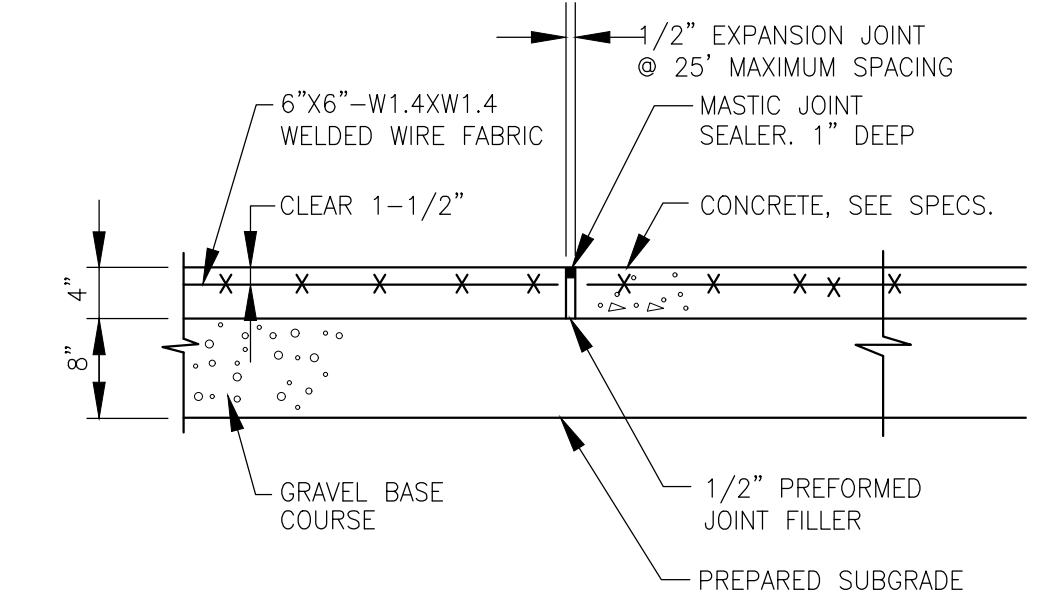


I/R	DATE	DESCRIPTION

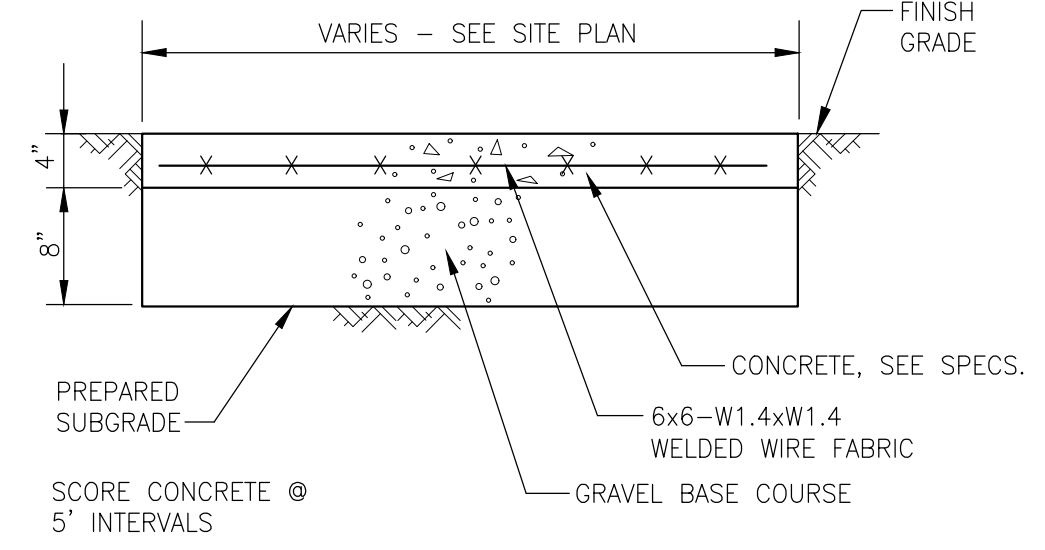
60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

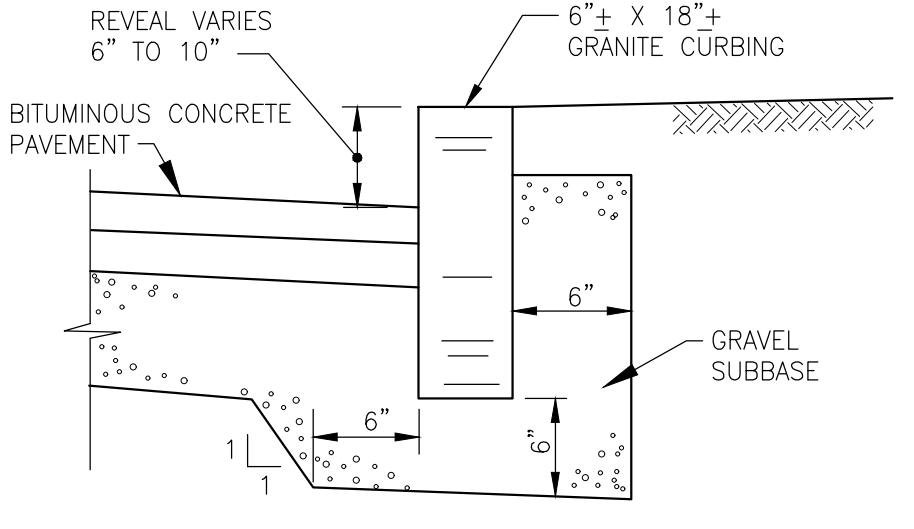
CIVIL



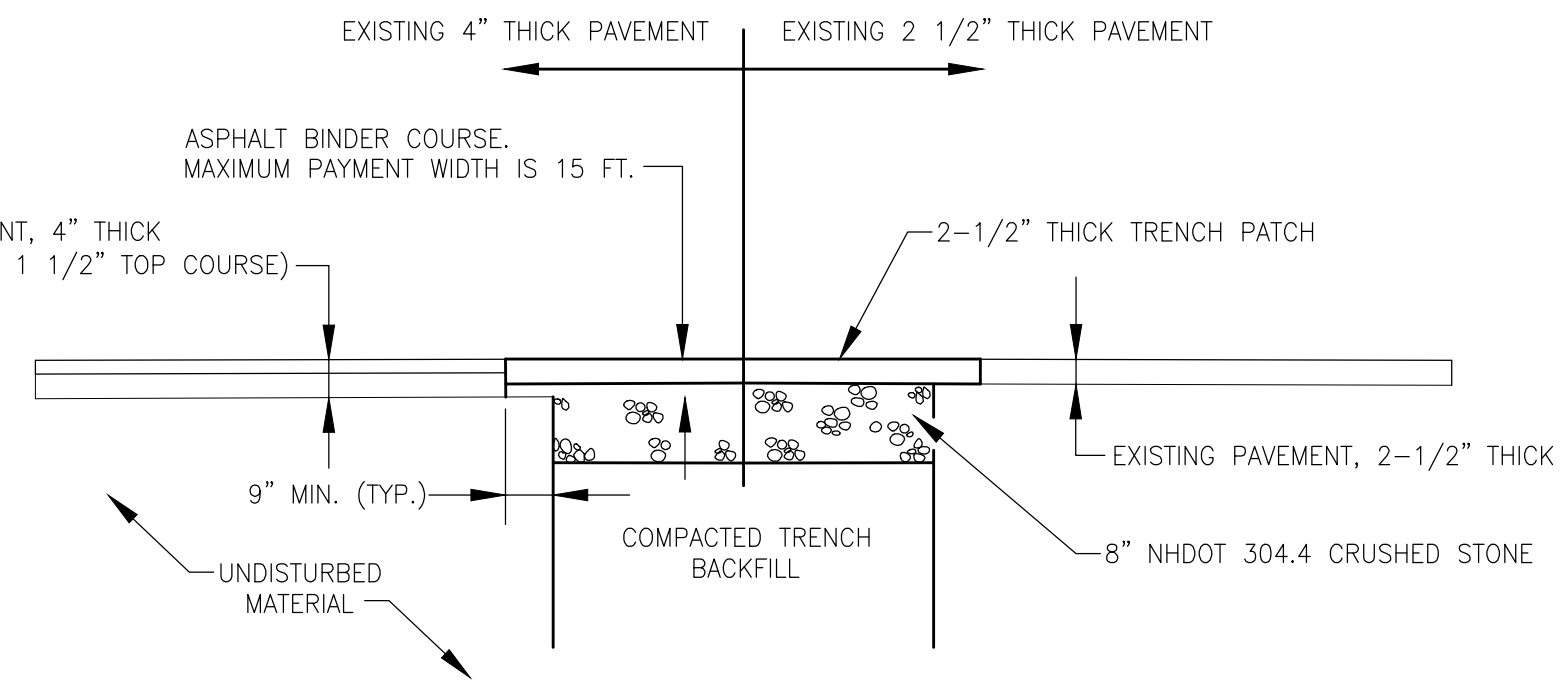
**EXPANSION JOINT FOR CONCRETE WALKWAYS**  
 NOT TO SCALE  
 2-1.41.1.1 (REV. 12-15-94)



**CONCRETE WALKWAY SECTION**  
 NOT TO SCALE  
 2-1.41.1 (REV. 12-15-94)

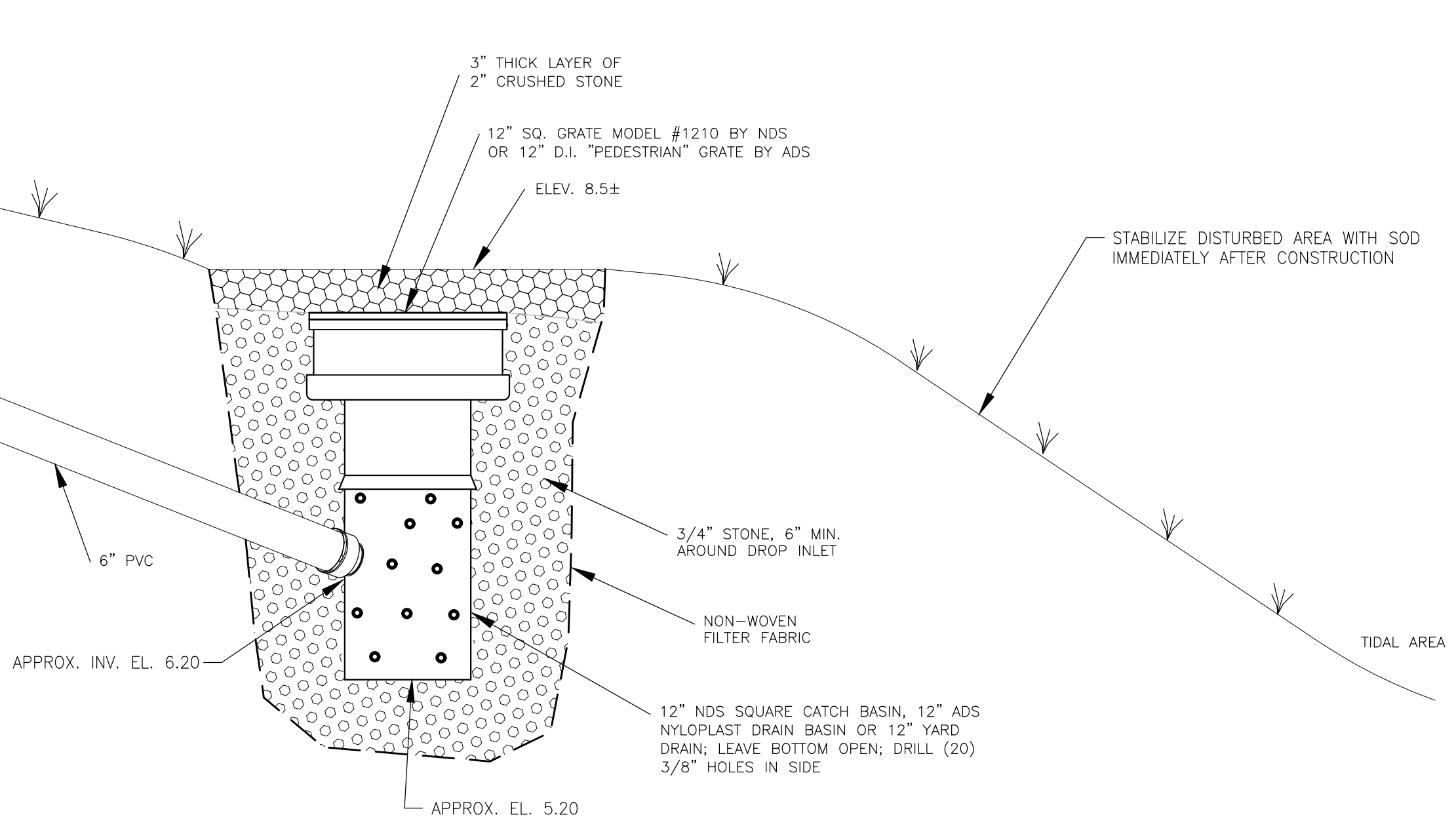


**GRANITE CURB**  
 NOT TO SCALE  
 2-1.42.1 (REV. 12-15-94)

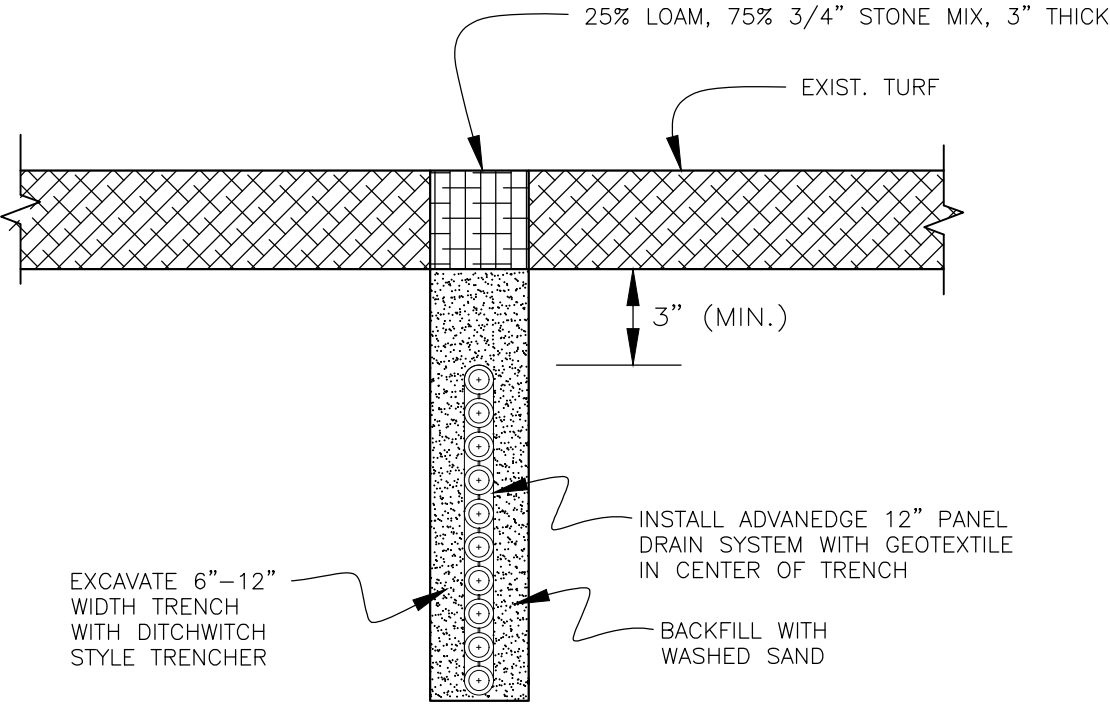


NOTE:  
 1. REMOVE AND DISPOSE OF EXCESS MATERIAL TO LOCATION AS DIRECTED BY THE ENGINEER.

**PAVEMENT TRENCH REPAIR**  
 NOT TO SCALE



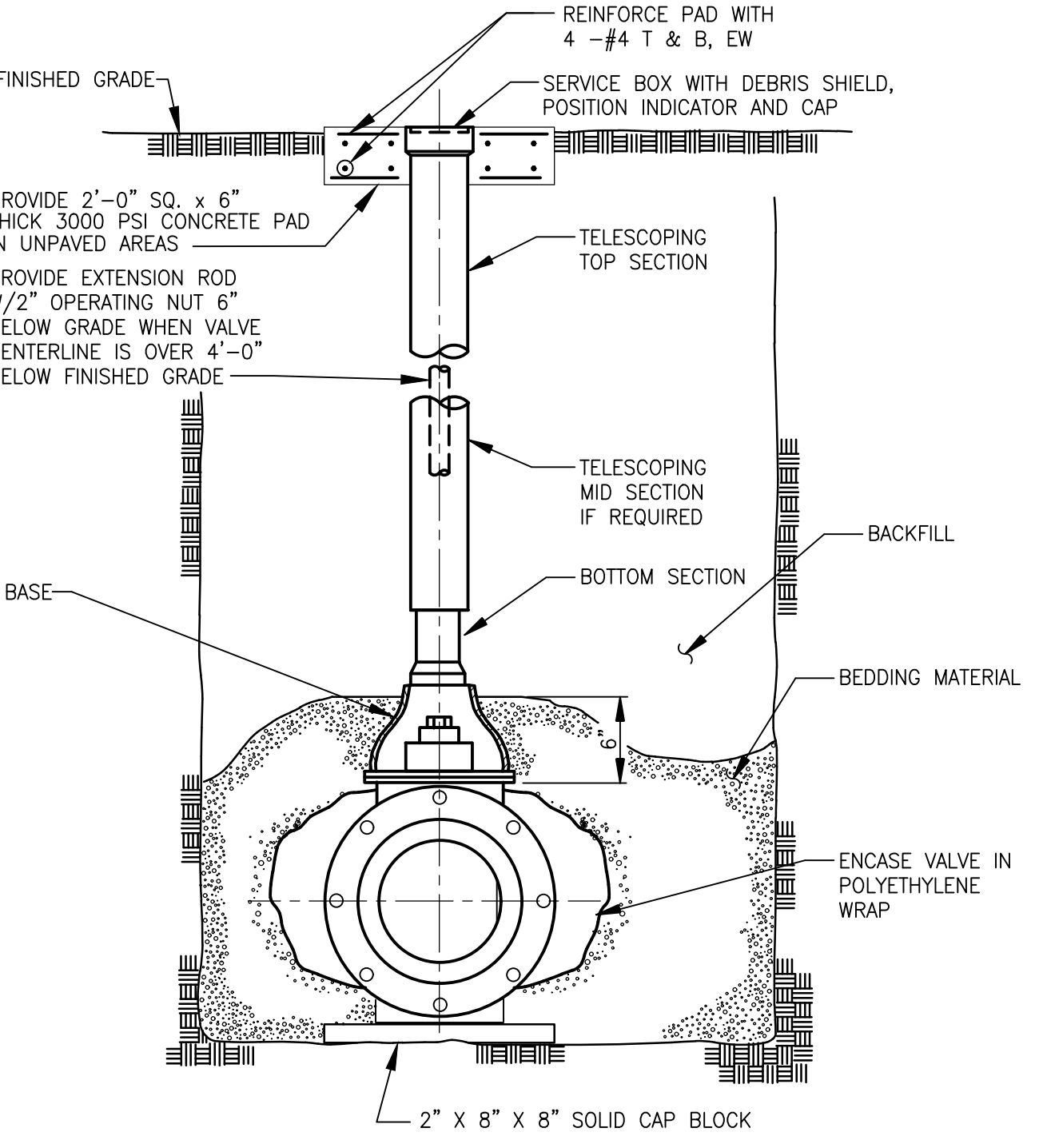
**YARD DRAIN FOR GRASSED PARKING DRAINAGE SYSTEM**  
 NOT TO SCALE



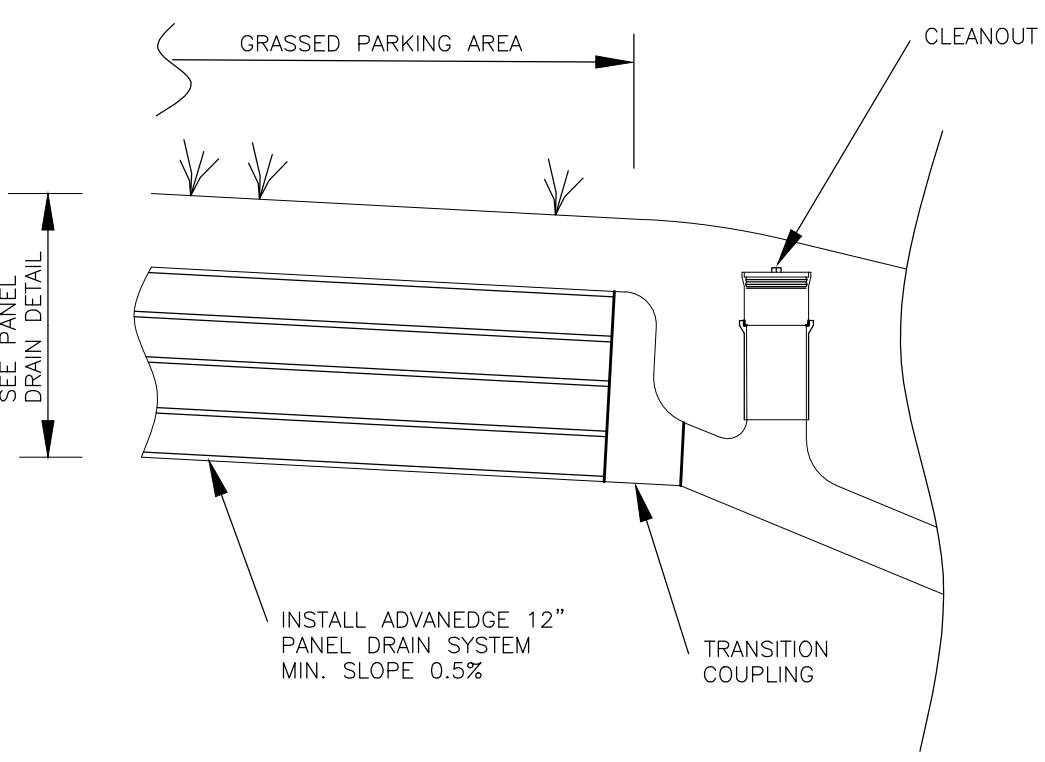
**EXISTING PERFORATED PANEL DRAINAGE SYSTEM**  
 NOT TO SCALE

**NOTES FOR PERFORATED PANEL DRAINAGE SYSTEM:**

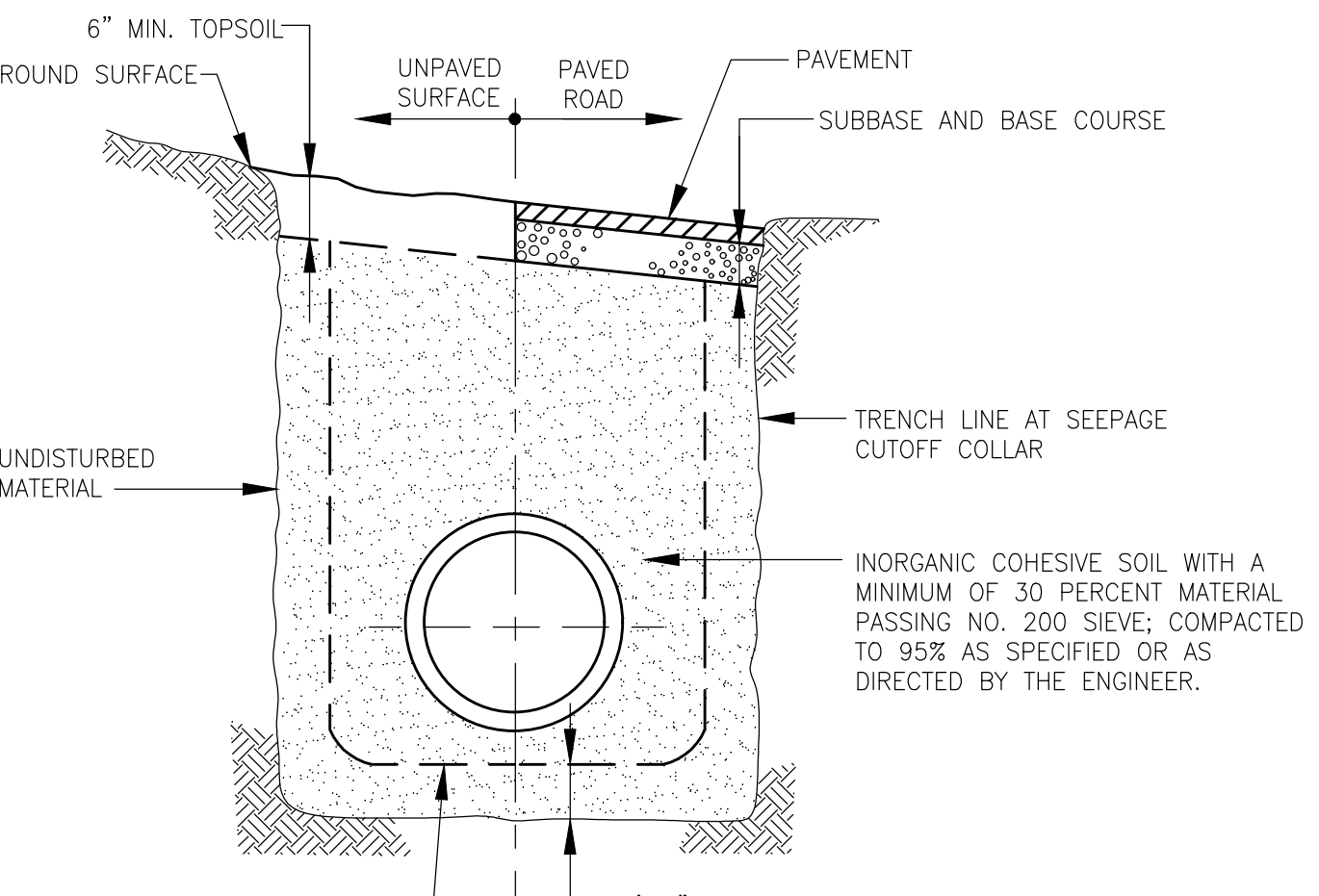
1. PROVIDE ADVANEDGE COUPLINGS AND FITTINGS AS NEEDED TO INSTALL THE SYSTEM AS SHOWN.
2. PROVIDE END CAPS AT TERMINATION POINTS TO PREVENT SOIL INFILTRATION INTO THE SYSTEM.
3. PANEL DRAINAGE SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



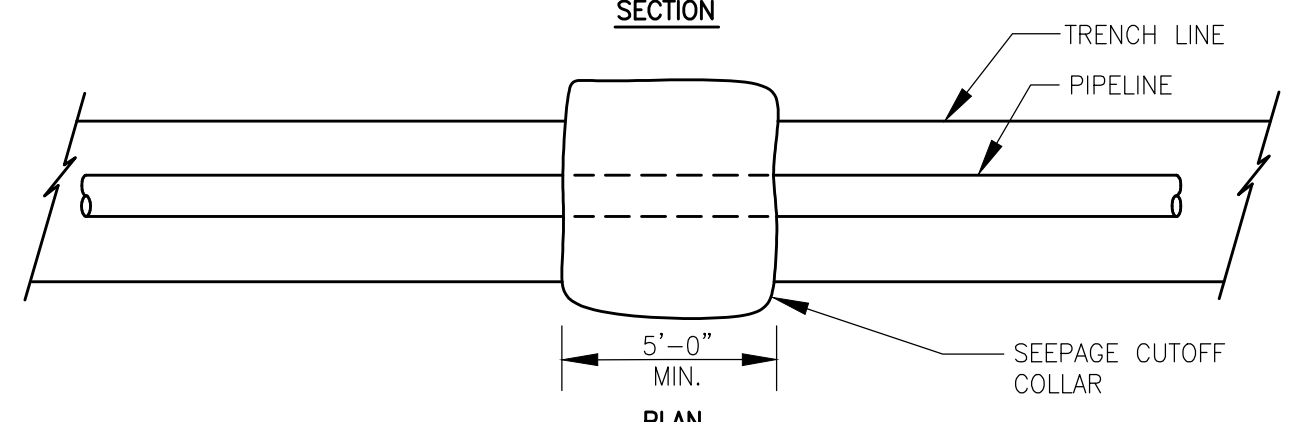
**BURIED GATE VALVE**  
 NTS



**PROTECT/RESTORE**



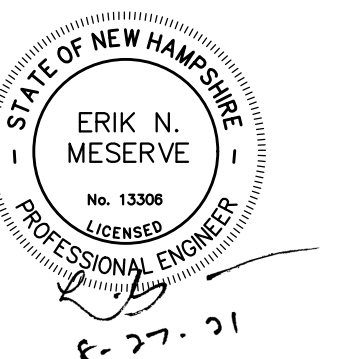
NOTE: SEEPAGE CUTOFF COLLAR SHALL BE CONSTRUCTED AT 300-FT INTERVALS OR AT MANHOLES AND STRUCTURES, WHICHEVER IS LESS, TO OBSTRUCT THE FREE FLOW OF GROUNDWATER AFTER CONSTRUCTION IS COMPLETED.



**PIPE TRENCH SECTION WITH SEEPAGE CUTOFF**  
 NOT TO SCALE  
 2-9.2.5 (REV. 9-3-98)

PATH: I:\LEGACY\USCH\PROJECTS\WAKEFIELD\DATA\PROJECTS\WAKEFIELD\DATA\PEIRCE ISLAND FM REPLACEMENT\900 CAD-GIS\99 C-503.DWG  
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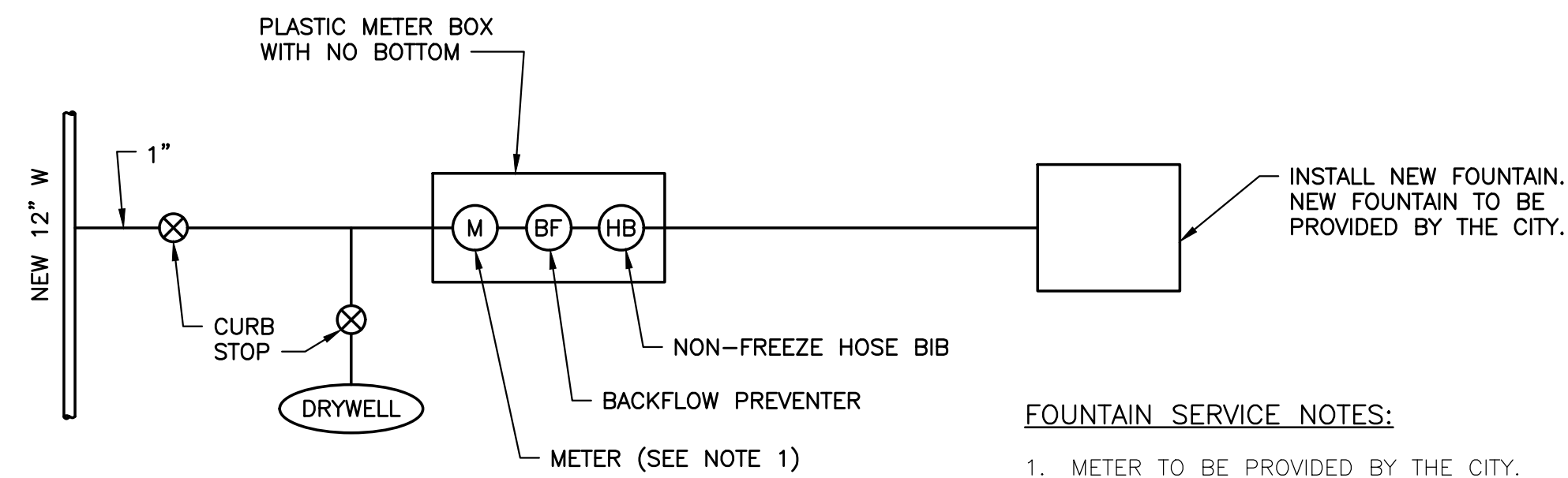


I/R	DATE	DESCRIPTION

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

LANDSCAPING NOTES:

1. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES PRIOR TO STARTING WORK. CONTRACTOR TO VERIFY THAT ADEQUATE DRAINAGE EXISTS PRIOR TO PLANTING.
2. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
3. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER AT THE NURSERY AND AT THE SITE. ALL TREES SHALL HAVE A SINGLE LEADER UNLESS SPECIFIED OTHERWISE. NO UN-APPROVED SUBSTITUTIONS WILL BE ACCEPTED. PLANT SPECIES AND CULTIVAR, SIZE AND QUANTITY SHALL NOT CHANGE WITHOUT APPROVAL OF LANDSCAPE ARCHITECT.
4. LOCATION OF ALL TREES AND SHRUBS SHALL BE MARKED FOR THE APPROVAL OF THE PROJECT ENGINEER. MARKING SHALL BE COMPLETED THE DAY PRIOR TO COMMENCEMENT OF PLANTING.
5. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS ORIGINAL GRADE BEFORE DIGGING. PLANT TO BE TRANSPLANTED SHALL BE DUG CAREFULLY, WITH ADEQUATE ROOT-BALLS AND PRUNED ACCORDING TO ANA STANDARD PRACTICE. TREES WITH ROOT FLARE COVERED BY MORE THAN 1.5" OF SOIL WILL BE REJECTED PRIOR TO INSTALLATION. SET PLANTS PLUMB.
6. ALL TREES AND SHRUBS SHALL BE BALLED IN BURLAP OR CONTAINERIZED, UNLESS SPECIFIED OTHERWISE. NO ROOT-BOUND CONTAINER GROWN STOCK WILL BE ACCEPTED. ALL PLASTIC ROOT WRAPPING AND METAL WIRE BASKETS SHALL BE CAREFULLY REMOVED AT THE TIME OF PLANTINGS, EXCEPT WIRE THAT IS DIRECTLY UNDER THE ROOT-BALLS.
7. AFTER CONDUCTING SOIL TESTS WITHIN PLANTING AREAS, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING PLANTING TOPSOIL AND/OR AMENDMENTS FOR BACKFILLING AT ALL PLANTS, AS NECESSARY. SUBMIT WRITTEN CONTENT ANALYSIS TO OWNER/REP. FOR APPROVAL. ADD 'PHC HEALTHY START 3-4-3' AND 'MYCOR TREE OR PLANT SAVER 4-7-4', OR EQUAL. FOLLOW MANUFACTURER'S GUIDELINES. THE PLANTING TOPSOIL IS TO BE SANDY LOAM MODIFIED WITH ORGANIC COMPONENT TO HAVE AT LEAST 4% ORGANIC MATTER BUT NOT MORE THAN 8% ORGANIC MATTER, DRY WEIGHT BASIS, A COMPACTED MINIMUM INFILTRATION RATE OF 2.5 CM/HR, PH RANGE OF 5.5 TO 6.5, AND NO COARSE FRAGMENTS OVER 2.5 CM IN SIZE.
8. CONTRACTOR SHALL PLACE 2" TO 3" OF FINE SHREDDED, AGED 2 YEARS, DARK BROWN PINE BARK MULCH THROUGHOUT THE BED AREAS. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK. SUBMIT SAMPLE OF MULCH FOR APPROVAL.
9. ALL EVERGREEN PLANTS SHALL BE SPRAYED WITH AN ANTI-DESICCANT THE FIRST WEEK OF NOVEMBER, THE FIRST WINTER FOLLOWING PLANTING.
10. FLOOD PLANTS THOROUGHLY ONCE IMMEDIATELY AFTER PLANTING AND TWICE DURING THE FIRST TWENTY-FOUR HOUR PERIOD AFTER PLANTING.
11. EXTREME CARE SHALL BE TAKEN NOT TO DISTURB EXISTING PLANT MATERIALS. ANY PLANT INJURED OR DESTROYED SHALL BE REPLACED WITH A PLANT OF EQUAL OR GREATER SIZE AND SPECIES AT THE CONTRACTORS EXPENSE.
12. IF NECESSARY, NEW PLANTING SHOULD BE PLACED OUTSIDE OF THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES. CRZ RADIUS EQUALS ONE-FOOT TIMES THE DBH (DIAMETER-AT-BREAST-HEIGHT) OF THE TREES, MEASURED FROM THE TREE TRUNK. TREE FENCING IS NECESSARY TO PROTECT EXISTING VEGETATION TO BE PRESERVED FROM BOTH FOOT AND VEHICULAR TRAFFIC. TREE FENCING TO BE LOCATED AT THE EDGE OF THE CRZ.
13. DO NOT WRAP TRUNK OF TREE.
14. THE CONTRACTOR SHALL MAINTAIN THE PLANTS FOR A MINIMUM OF 90 DAYS FOLLOWING INSTALLATION, OR LONGER IF CONTRACTED BY THE OWNER. BEFORE THE END OF THE 90-DAY PERIOD, THE CONTRACTOR SHALL PROVIDE A WRITTEN MAINTENANCE OUTLINES TO THE OWNERS AND THE CONTRACTOR SHALL BE AVAILABLE TO ANSWER QUESTIONS OR CONCERNS AT THAT TIME.
15. THE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A MINIMUM OF ONE YEAR FROM FINAL ACCEPTANCE BY OWNER/REP. THE CONTRACTOR SHALL REPLACE ANY DEAD MATERIALS AT HIS/HER OWN EXPENSE.

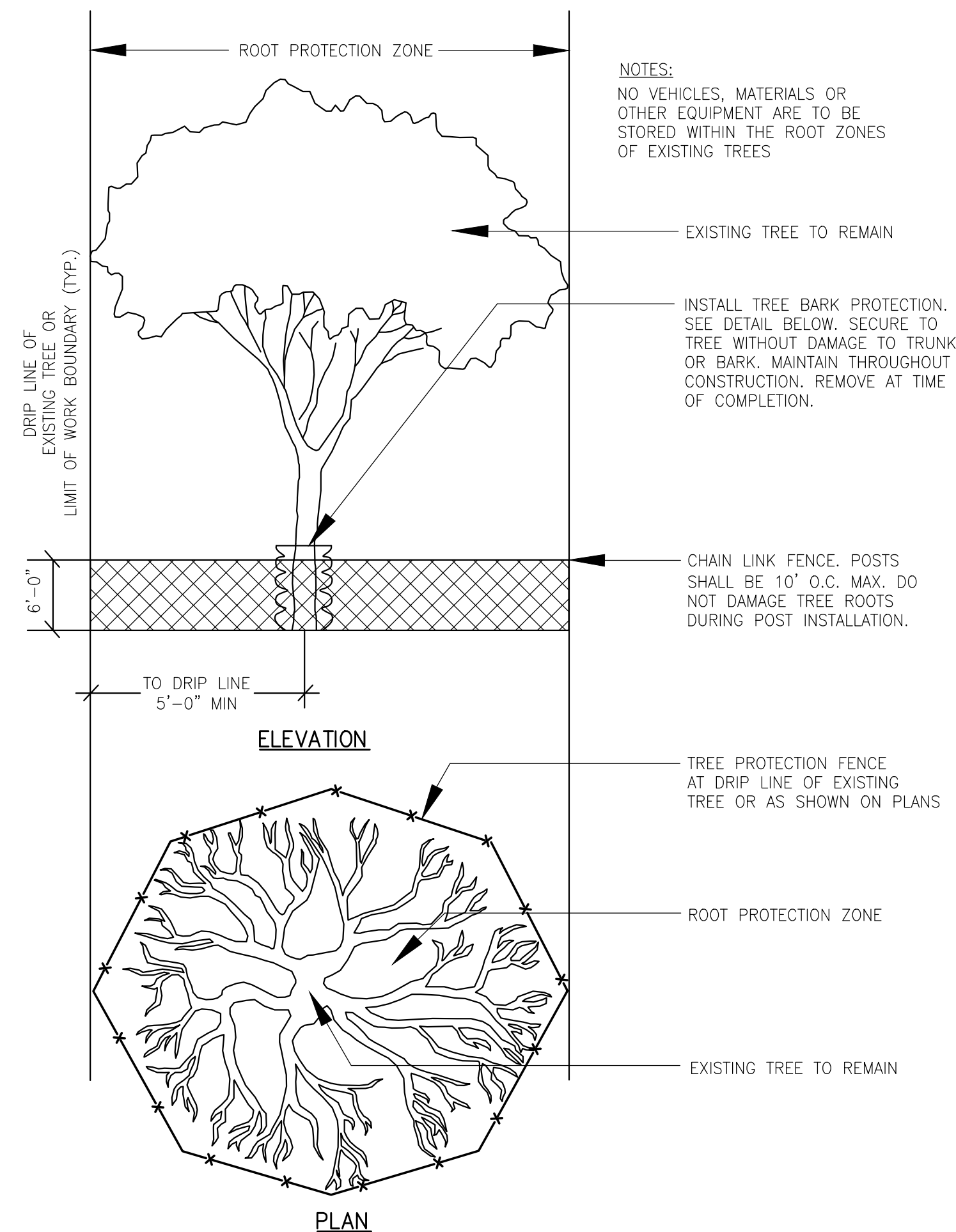


FOUNTAIN SERVICE NOTES:

1. METER TO BE PROVIDED BY THE CITY.

**FOUNTAIN SERVICE CONNECTION SCHEMATIC**

SCALE: NONE



NOTES:  
NO VEHICLES, MATERIALS OR OTHER EQUIPMENT ARE TO BE STORED WITHIN THE ROOT ZONES OF EXISTING TREES

EXISTING TREE TO REMAIN

INSTALL TREE BARK PROTECTION. SEE DETAIL BELOW. SECURE TO TREE WITHOUT DAMAGE TO TRUNK OR BARK. MAINTAIN THROUGHOUT CONSTRUCTION. REMOVE AT TIME OF COMPLETION.

CHAIN LINK FENCE. POSTS SHALL BE 10' O.C. MAX. DO NOT DAMAGE TREE ROOTS DURING POST INSTALLATION.

TREE PROTECTION FENCE AT DRIP LINE OF EXISTING TREE OR AS SHOWN ON PLANS

ROOT PROTECTION ZONE

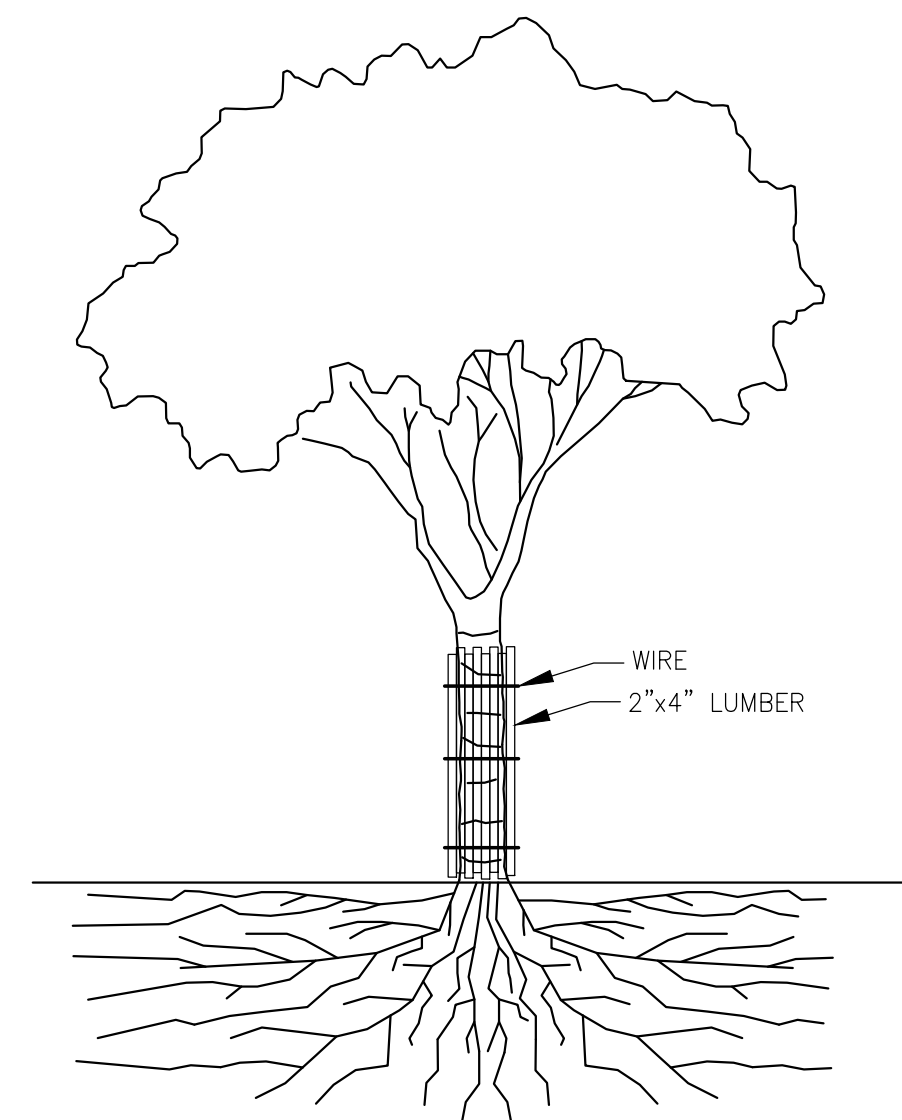
EXISTING TREE TO REMAIN

NOTES:

1. THIS DETAIL APPLIES FOR THE PROTECTION OF ALL TREES WITHIN LIMIT OF WORK.
2. NO VEHICLES, MATERIALS OR OTHER EQUIPMENT ARE TO BE STORED WITHIN THE ROOT ZONES OF EXISTING TREES.

**TREE PROTECTION**

NTS

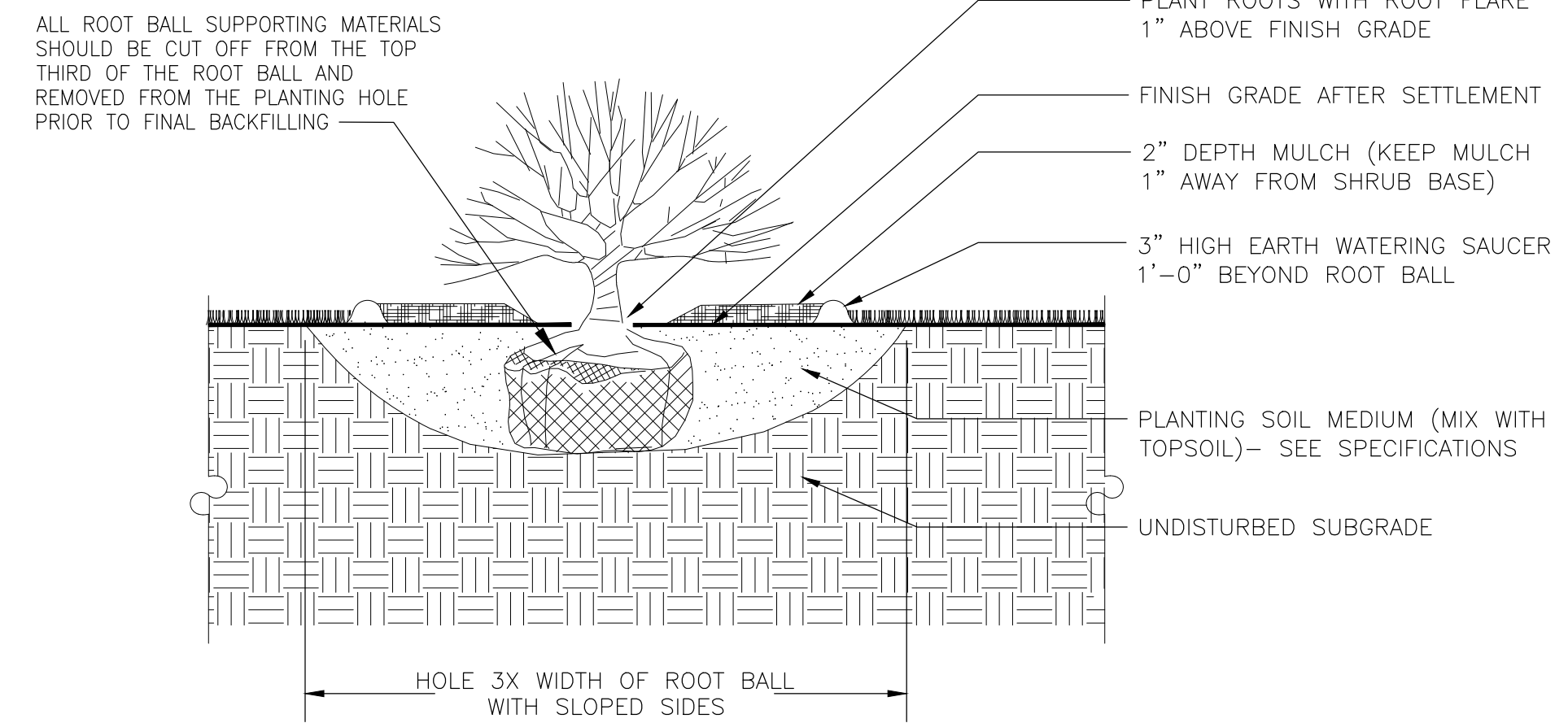


NOTES:

1. THIS DETAIL APPLIES FOR THE PROTECTION OF ALL TREES WITHIN LIMIT OF WORK.
2. IN SITUATIONS WHERE A PROTECTED TREE REMAINS IN THE IMMEDIATE AREA OF INTENDED CONSTRUCTION AND THE TREE MAY BE IN DANGER OF BEING DAMAGED BY CONSTRUCTION EQUIPMENT OR OTHER ACTIVITY, THE CONTRACTOR OR SUBCONTRACTOR SHALL PROTECT THE TREE WITH 2"x4" LUMBER ENCIrcLED WITH WIRE OR OTHER MEANS THAT DO NOT DAMAGE THE TREE. THE INTENT IS TO PROTECT THE TRUNK OF THE TREE AGAINST INCIDENTAL CONTACT BY LARGE CONSTRUCTION EQUIPMENT.

**TREE BARK PROTECTION**

NTS



SECTION

NOTES:

1. SCARIFY SOILS CONTINUOUSLY TO A DEPTH OF 4" AT INTERFACE BETWEEN SOIL TYPES AND LIFTS TO PROMOTE BLENDING OF SOILS.
2. SEE SHEET 00 C-107 FOR PLANT LIST AND PLAN FOR SPACING.
3. ALL PLANTING TO BE DONE AS PER ANSI A300 (PART 6) 2012.

**SHRUB PLANTING**

NOT TO SCALE

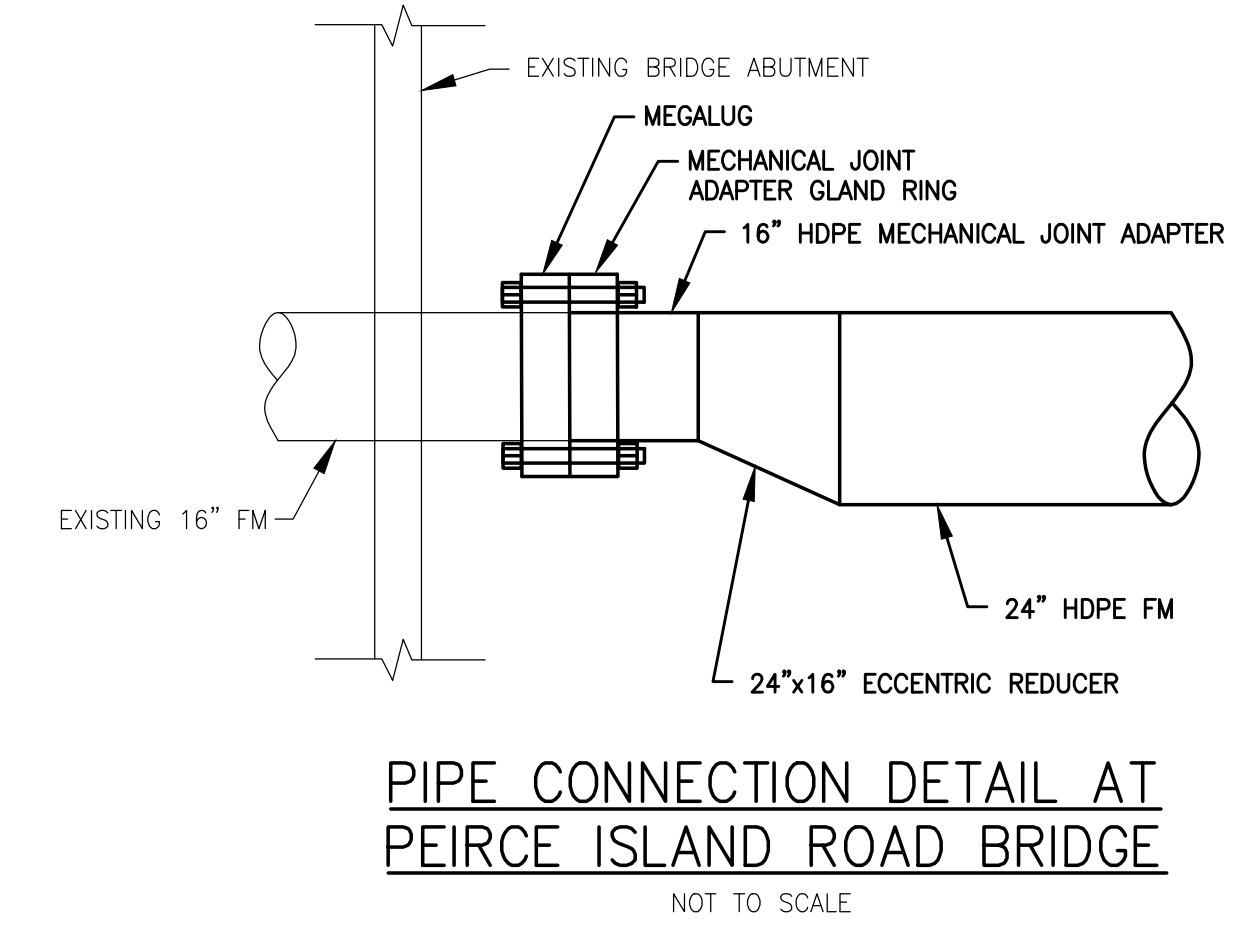




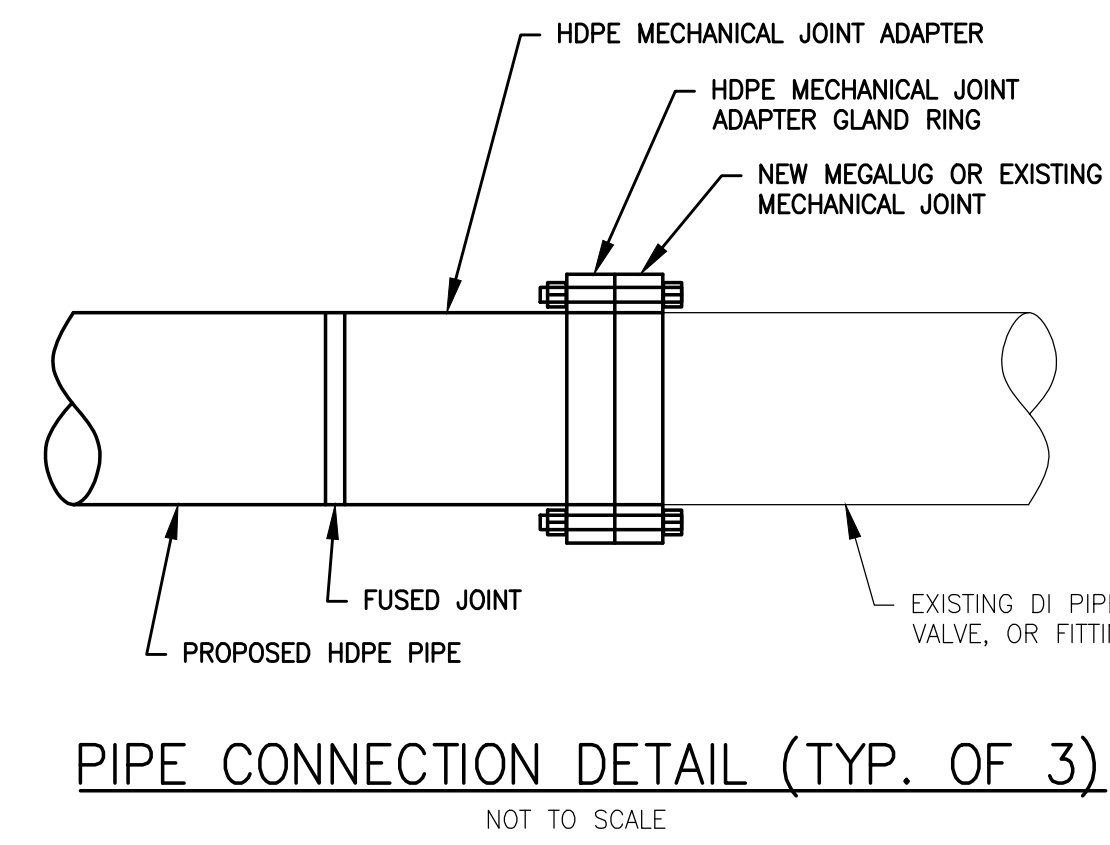
I/R	DATE	DESCRIPTION

60649477

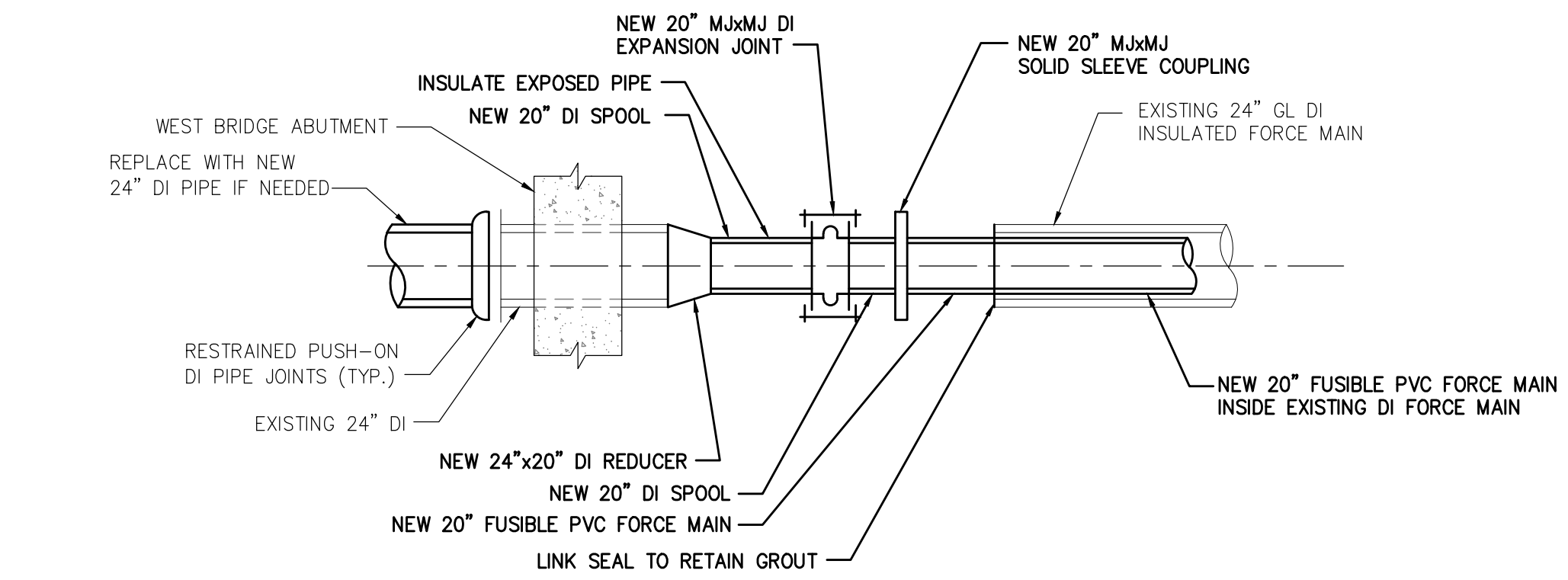
Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>



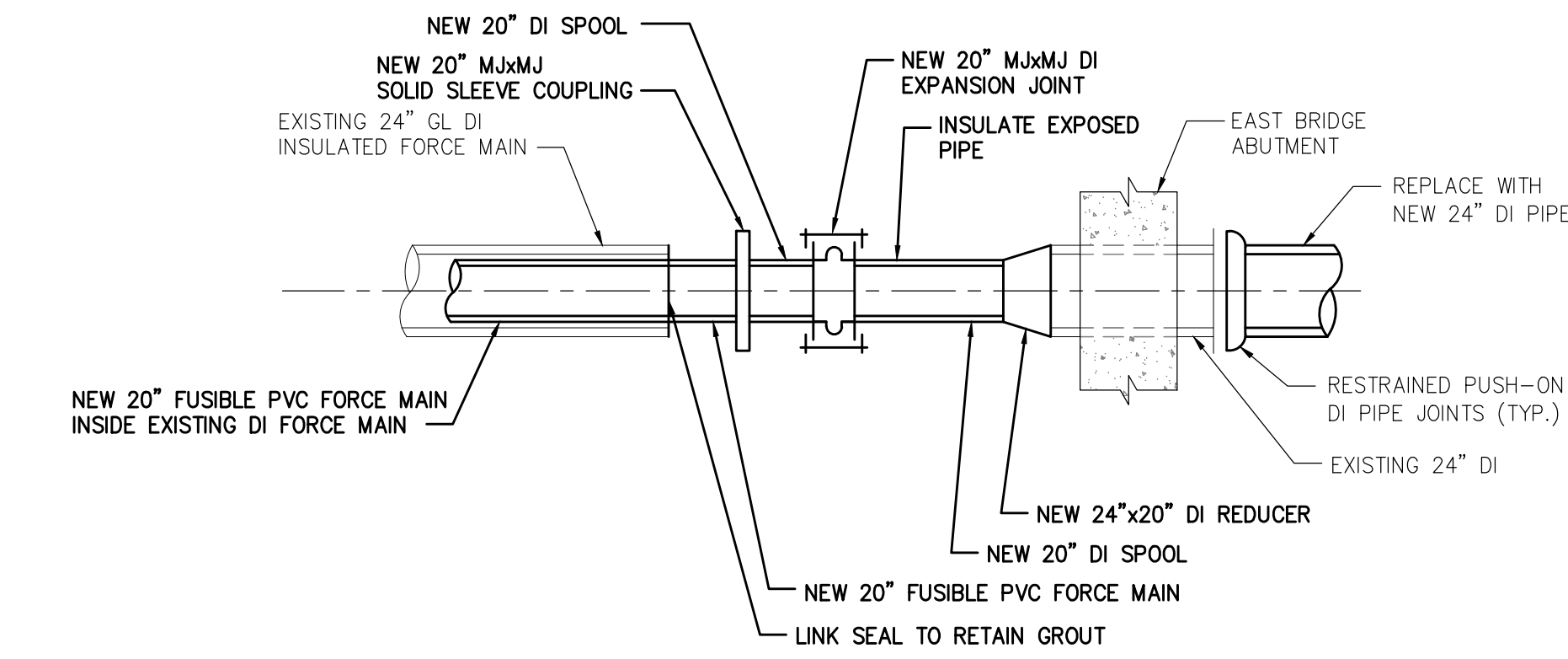
**PIPE CONNECTION DETAIL AT PEIRCE ISLAND ROAD BRIDGE**  
 NOT TO SCALE



**PIPE CONNECTION DETAIL (TYP. OF 3)**  
 NOT TO SCALE

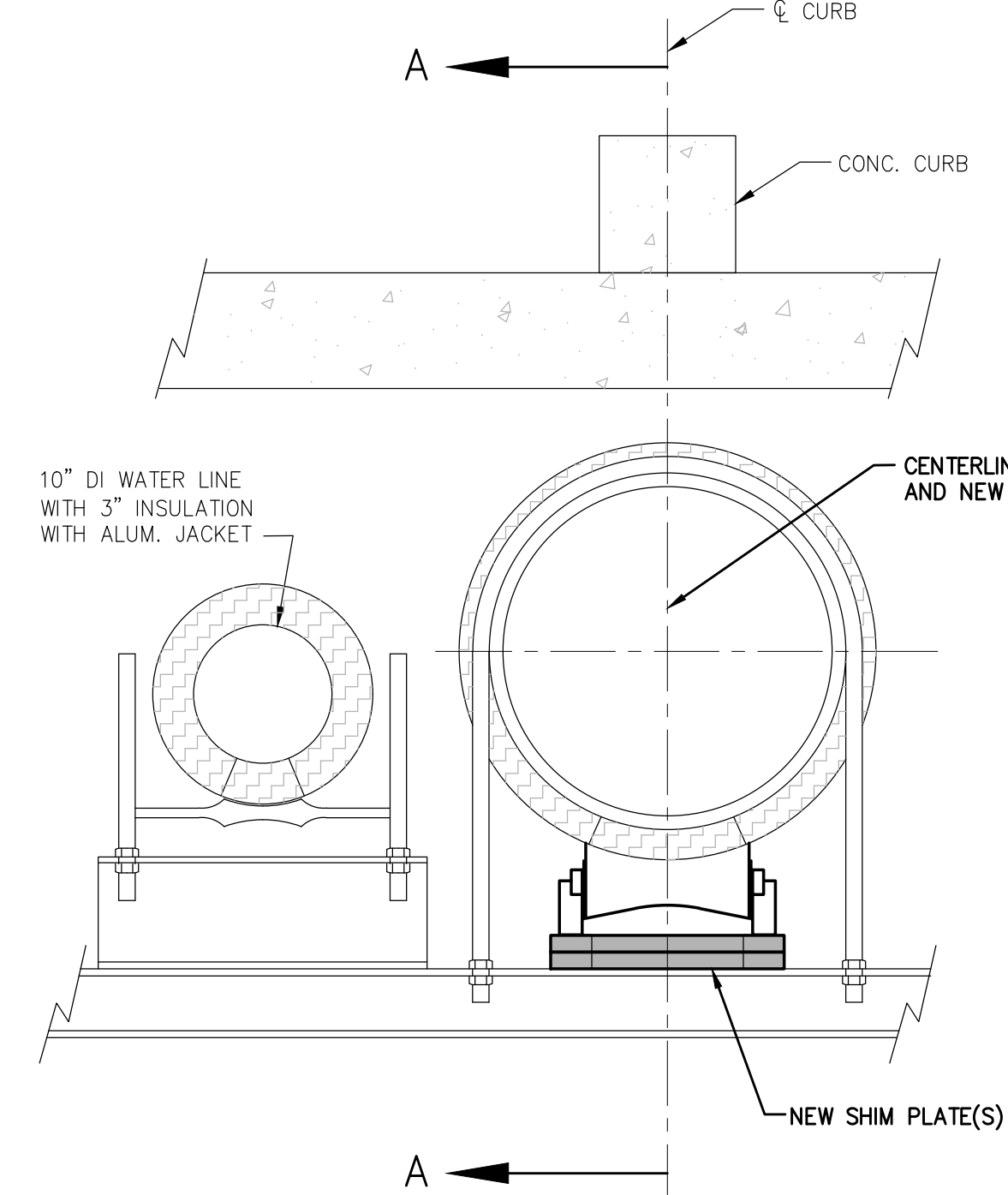


**WEST ABUTMENT**

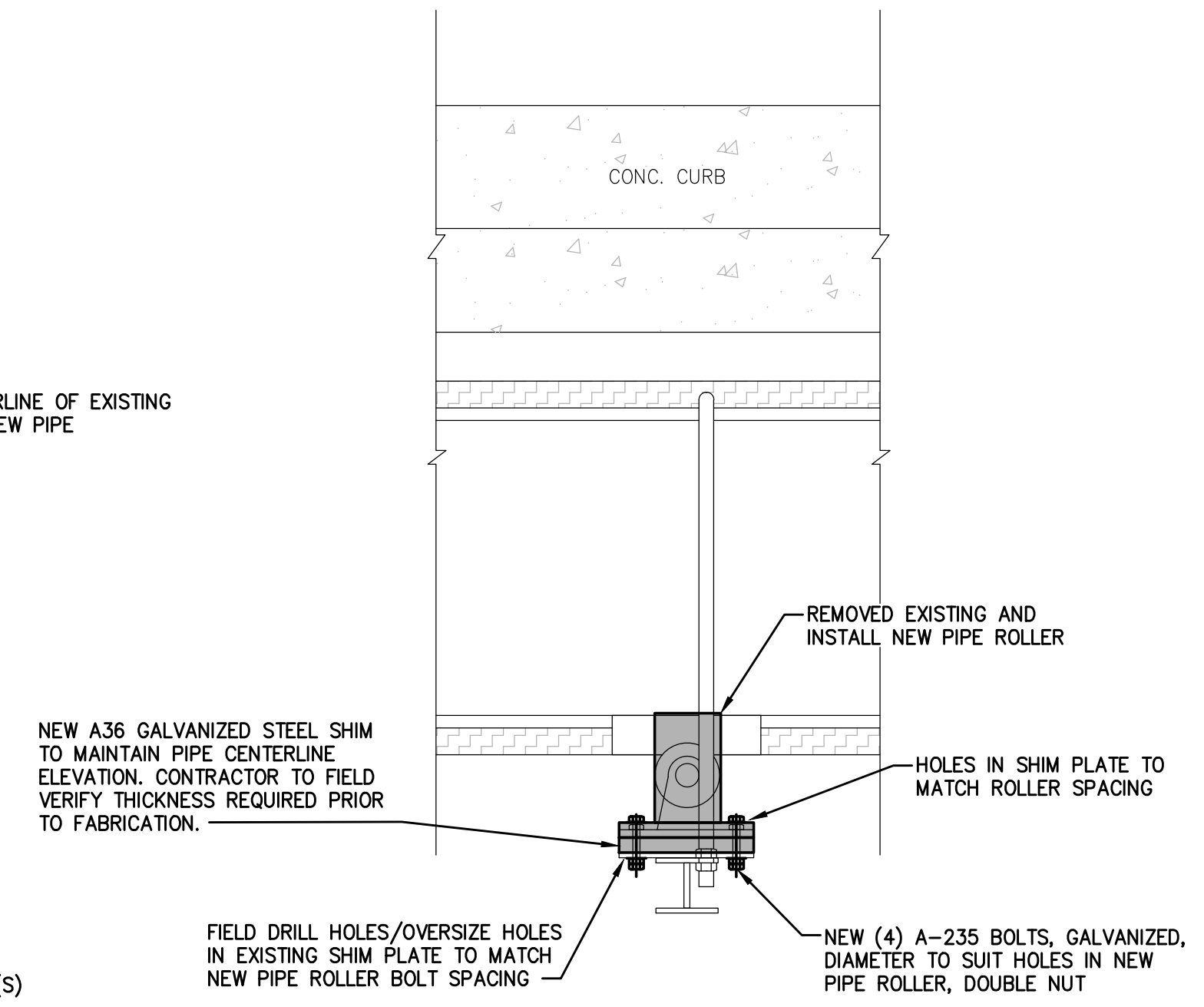


**EAST ABUTMENT**

- NOTES:**
1. ALL JOINTS TO BE RESTRAINED.
  2. ALL FUSIBLE PVC JOINTS SHALL BE BUTT FUSED UNLESS INDICATED OTHERWISE.
  3. FIELD VERIFY DIMENSIONS SO AS TO PROVIDE SUPPORT WHERE SHOWN ON THE PROFILE ON SHEET 00 C-110.

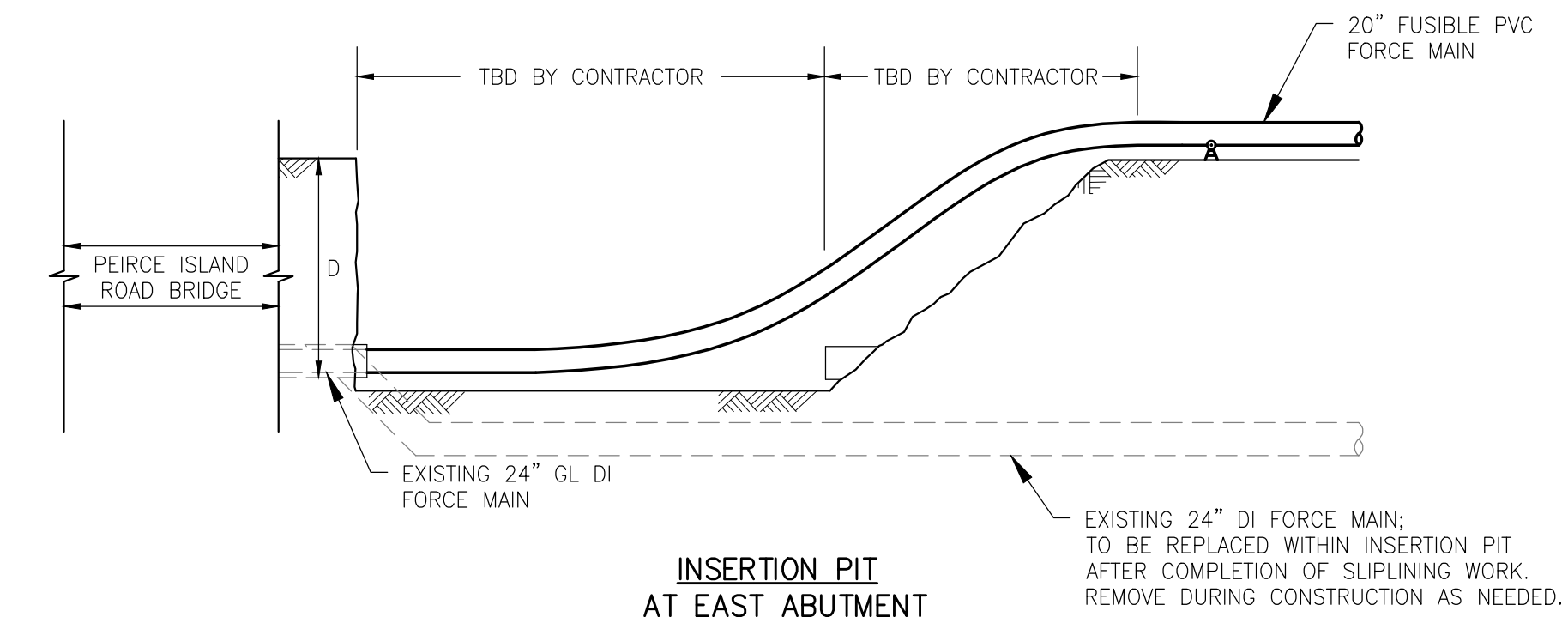
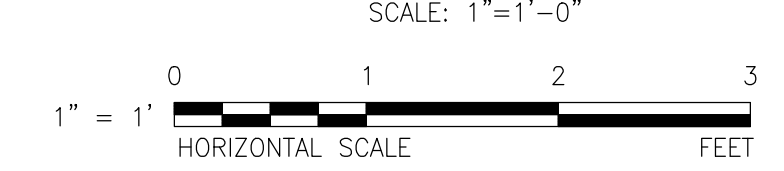


**SECTION**



**ELEVATION A-A**

**PIPE SUPPORT DETAIL (TYP. OF 4)**

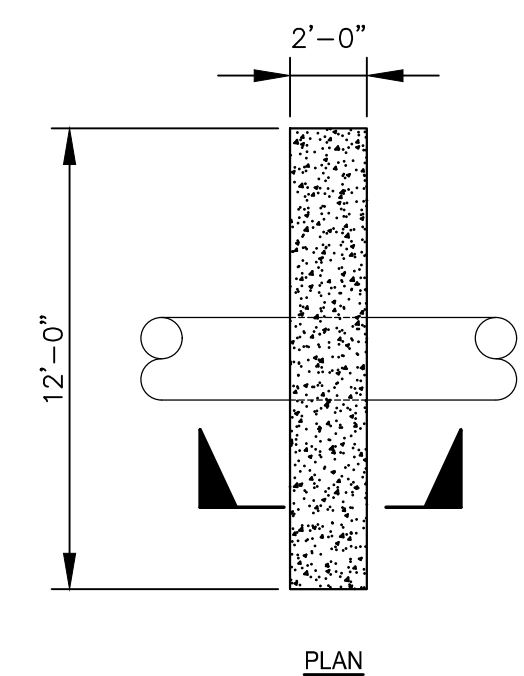


- NOTES:**
1. LENGTH OF INSERTION PIT AT EAST ABUTMENT IS DEPENDENT ON DEPTH (D) OF EXISTING FORCE MAIN.
  2. CONTRACTOR SHALL DETERMINE LENGTH (L) OF ACCESS PIT AT WEST ABUTMENT TO ACCOMMODATE PULLING EQUIPMENT.

**SLIPLING TRENCH SECTIONS - LONGITUDINAL**  
 NOT TO SCALE

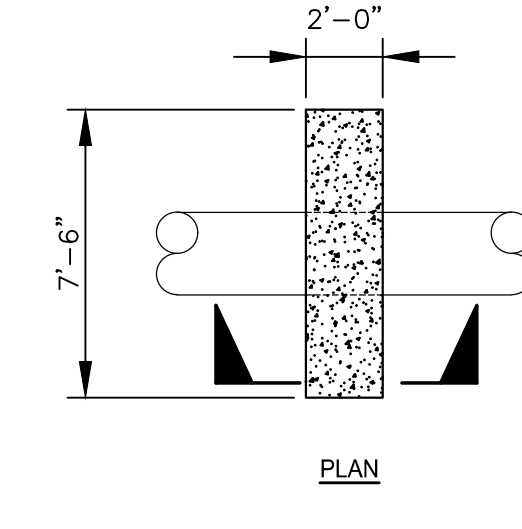
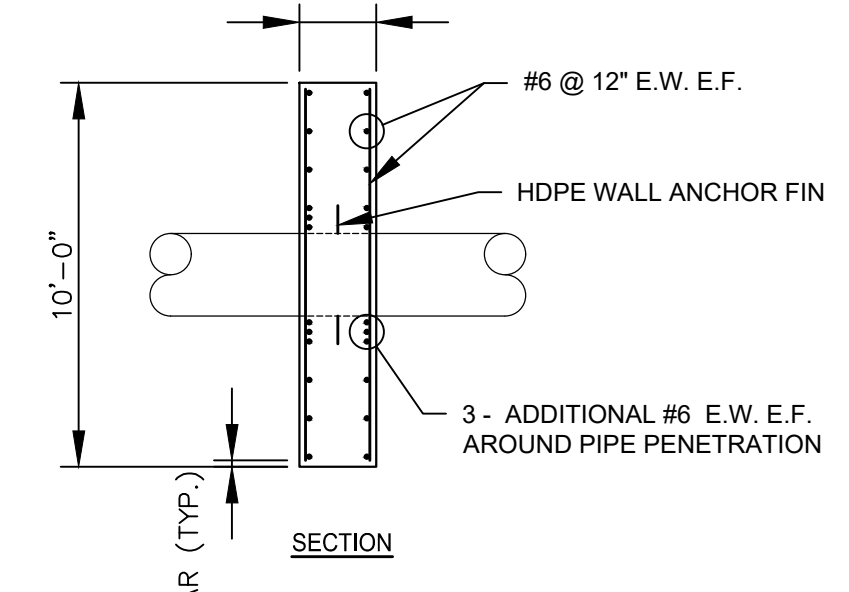
**TRANSITION FROM FUSIBLE PVC TO DUCTILE IRON**

NOT TO SCALE



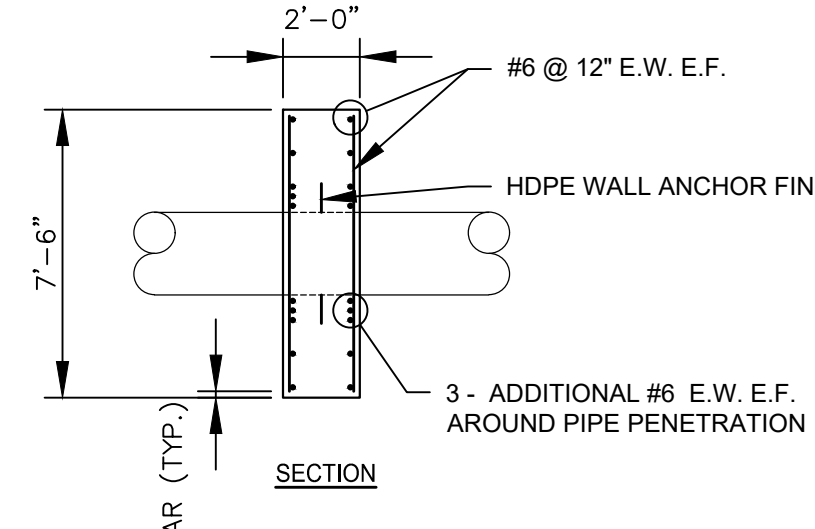
**THRUST BLOCK A DETAIL**

NTS



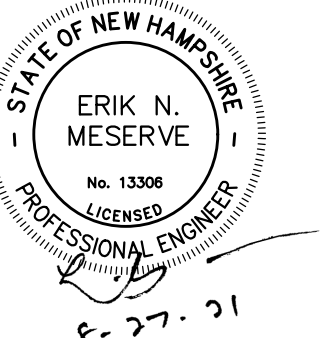
**THRUST BLOCK B DETAIL**

NTS



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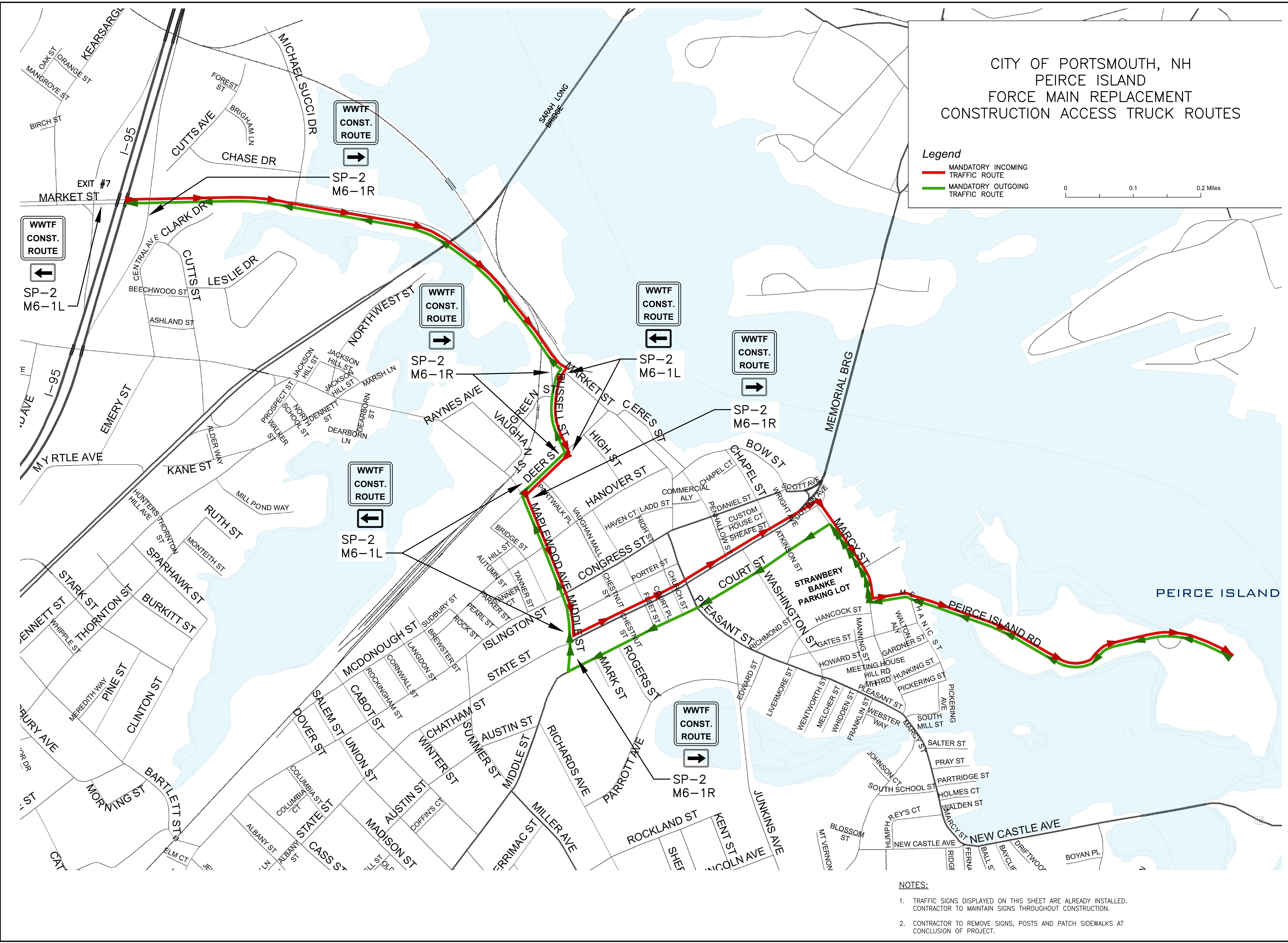
60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

CIVIL

**TRAFFIC MANAGEMENT**  
**PLAN i**

**00 T-001**



- NOTES:**
1. TRAFFIC SIGNS DISPLAYED ON THIS SHEET ARE ALREADY INSTALLED. CONTRACTOR TO MAINTAIN SIGNS THROUGHOUT CONSTRUCTION.
  2. CONTRACTOR TO REMOVE SIGNS, POSTS AND PATCH SIDEWALKS AT CONCLUSION OF PROJECT.

PATH: \\FILENAME.L\LEGACY\USCHI\FPODI\DATA\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\00 CAD-GIS\05\SHEETS\00 T-001.DWG  
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 PLOT DATE: Friday, August 27, 2021 12:51:02 PM



**PROJECT**

**PEIRCE ISLAND  
FORCE MAIN AND  
WATER MAIN  
REPLACEMENT**

Peirce Island, Portsmouth NH

**OWNER**

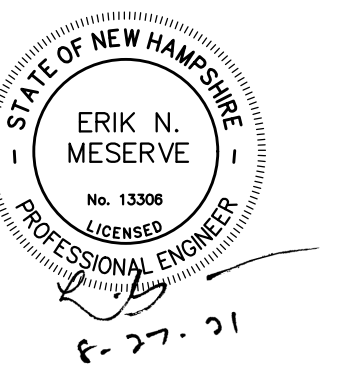
**CITY OF PORTSMOUTH  
NEW HAMPSHIRE**

680 Peverly Hill Road  
Portsmouth, NH 03801

**ENGINEER**

AECOM TECHNICAL SERVICES, INC.  
250 APOLLO DRIVE  
CHELMSFORD, MA 01824  
PHONE: (978) 905-2100  
www.aecom.com

**REGISTRATION**



**ISSUE/REVISION**

I/R	DATE	DESCRIPTION

**PROJECT NUMBER**

60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

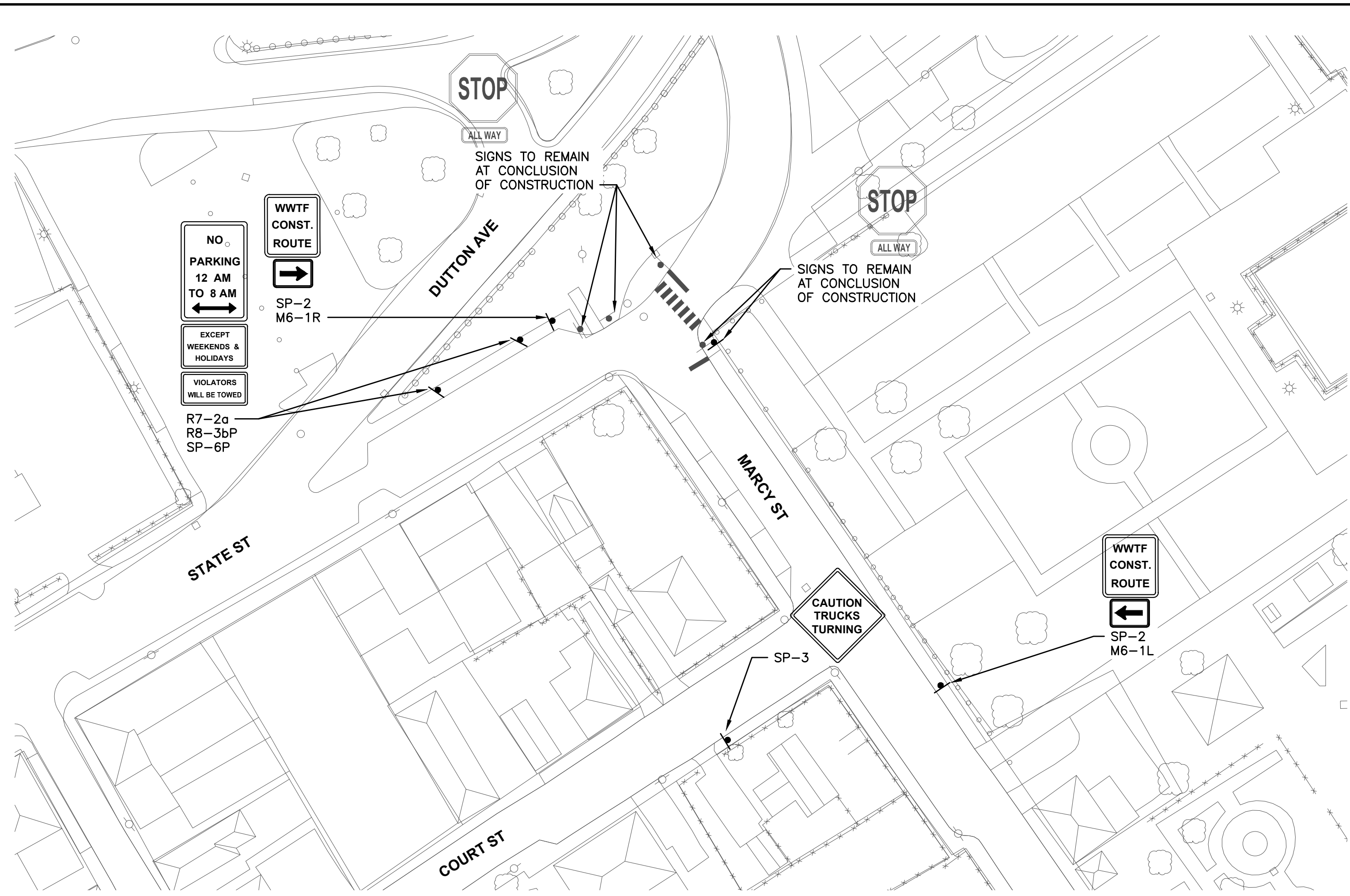
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**CIVIL  
SHEET TITLE**

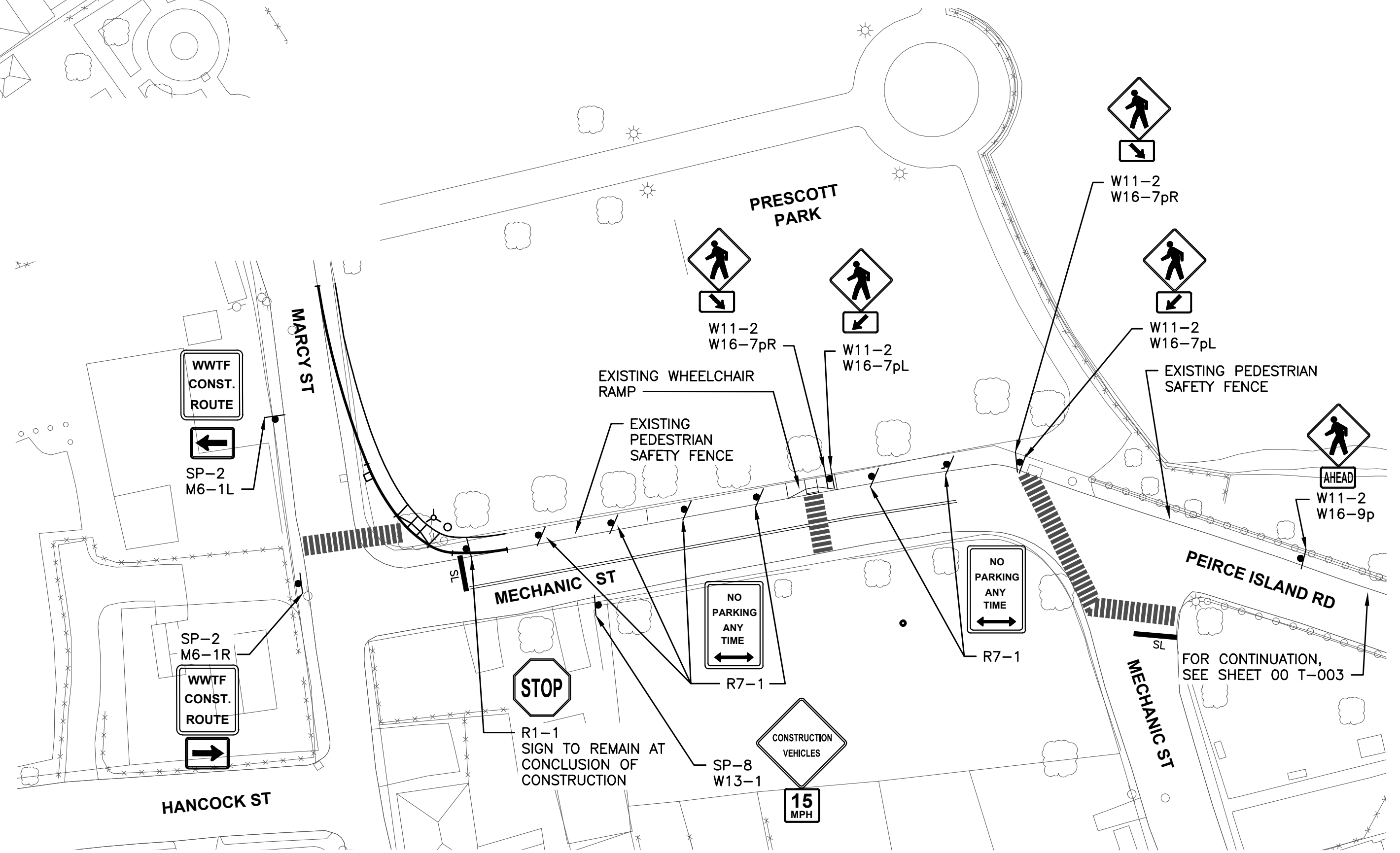
**TRAFFIC MANAGEMENT  
PLAN II**

**SHEET NUMBER**

**00 T-002**



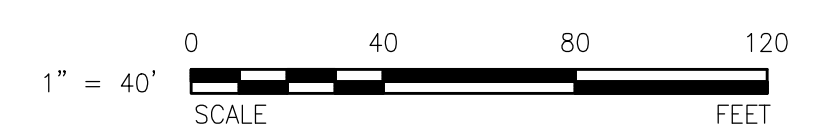
**PLAN**  
SCALE: 1"=40'



**PLAN**  
SCALE: 1"=40'

**NOTES:**

1. TRAFFIC SIGNS DISPLAYED ON THIS SHEET ARE ALREADY INSTALLED. CONTRACTOR TO MAINTAIN SIGNS THROUGHOUT CONSTRUCTION.
2. CONTRACTOR TO REMOVE SIGNS AT CONCLUSION OF PROJECT.



PATH:\FILENAME.L\LEGACY\USCHIFFORD\DATA\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\00 CAD-GIS\SHEETS\00 T-002.DWG  
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**PROJECT**

**PEIRCE ISLAND  
FORCE MAIN AND  
WATER MAIN  
REPLACEMENT**

Peirce Island, Portsmouth NH

**OWNER**

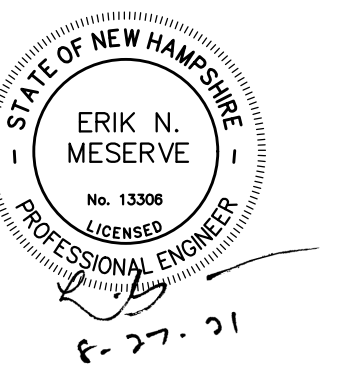
**CITY OF PORTSMOUTH  
NEW HAMPSHIRE**

680 Peverly Hill Road  
Portsmouth, NH 03801

**ENGINEER**

AECOM TECHNICAL SERVICES, INC.  
250 APOLLO DRIVE  
CHELMSFORD, MA 01824  
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www.aecom.com

**REGISTRATION**



**ISSUE/REVISION**

I/R	DATE	DESCRIPTION

**PROJECT NUMBER**

60649477

Designed By:	<b>S. HE</b>
Drawn By:	<b>M. THIBODEAU</b>
Dept Check:	<b>C. BENZIGER</b>
Proj Check:	<b>E. MESERVE</b>
Date:	<b>AUGUST 2021</b>
Scale:	<b>AS NOTED</b>

**DISCIPLINE**

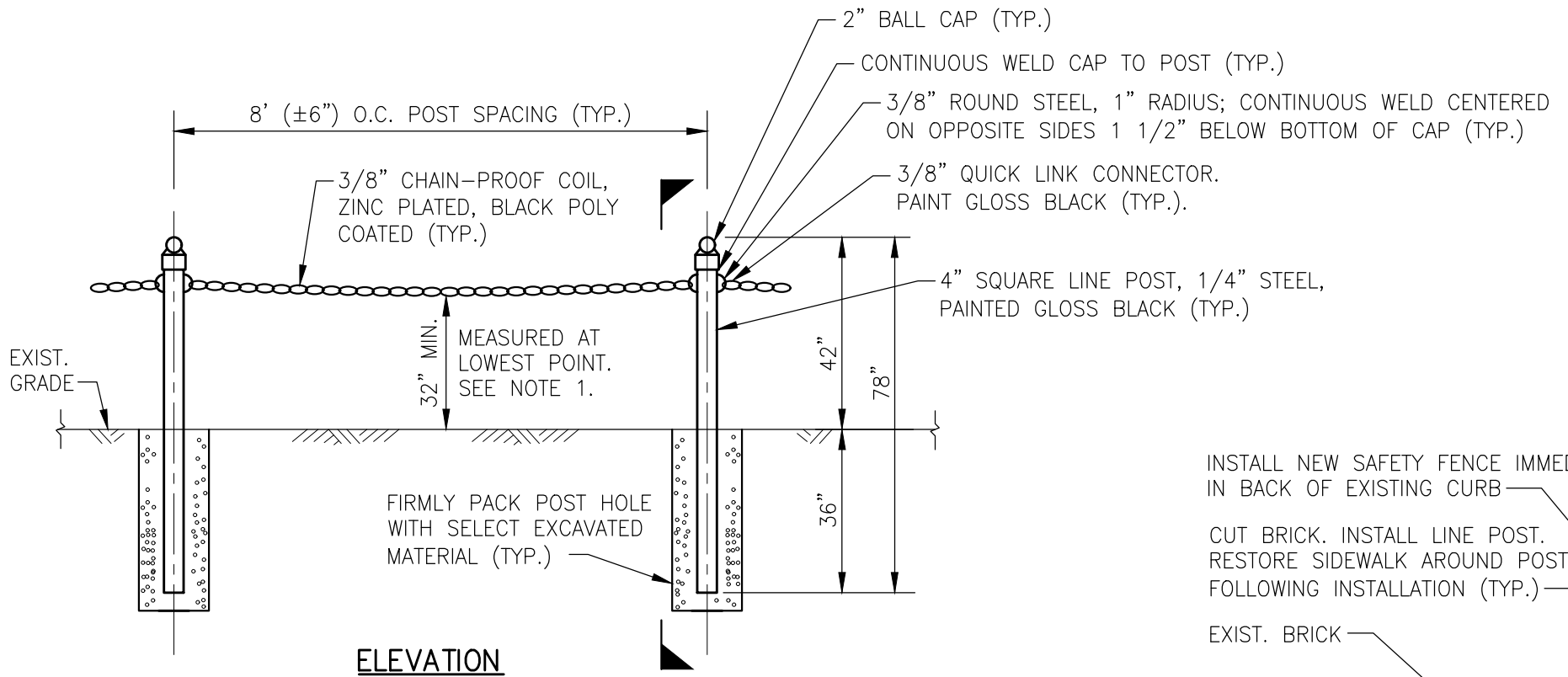
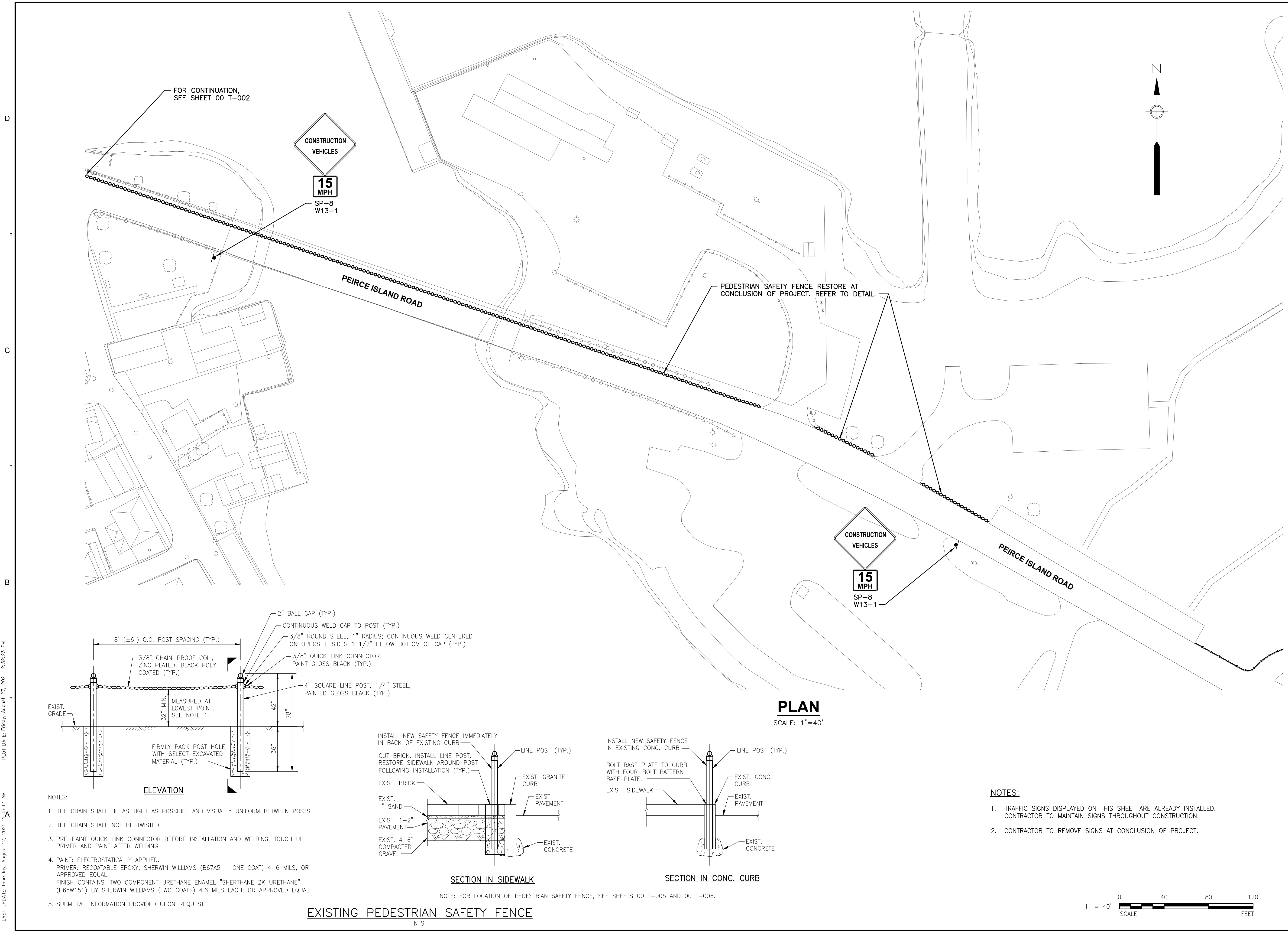
CIVIL

**SHEET TITLE**

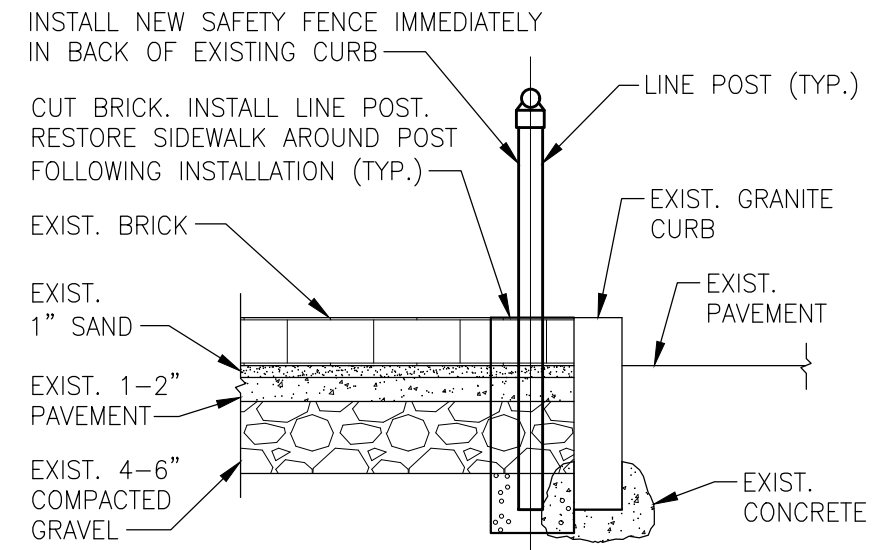
**TRAFFIC MANAGEMENT  
PLAN III**

**SHEET NUMBER**

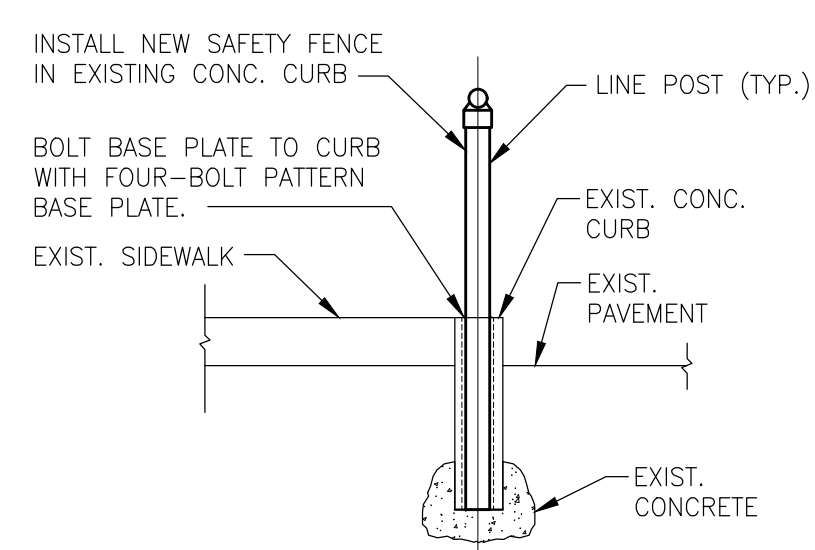
**00 T-003**



- NOTES:**
1. THE CHAIN SHALL BE AS TIGHT AS POSSIBLE AND VISUALLY UNIFORM BETWEEN POSTS.
  2. THE CHAIN SHALL NOT BE TWISTED.
  3. PRE-PAINT QUICK LINK CONNECTOR BEFORE INSTALLATION AND WELDING. TOUCH UP PRIMER AND PAINT AFTER WELDING.
  4. PAINT: ELECTROSTATICALLY APPLIED.  
PRIMER: RECOATABLE EPOXY, SHERWIN WILLIAMS (B67A5 - ONE COAT) 4-6 MILS, OR APPROVED EQUAL.  
FINISH CONTAINS: TWO COMPONENT URETHANE ENAMEL "SHERTHANE 2K URETHANE" (B65W151) BY SHERWIN WILLIAMS (TWO COATS) 4.6 MILS EACH, OR APPROVED EQUAL.
  5. SUBMITTAL INFORMATION PROVIDED UPON REQUEST.



**SECTION IN SIDEWALK**



**SECTION IN CONC. CURB**

**EXISTING PEDESTRIAN SAFETY FENCE**

NOTE: FOR LOCATION OF PEDESTRIAN SAFETY FENCE, SEE SHEETS 00 T-005 AND 00 T-006.

PATH:\FILENAME.U:\LEGACY\USCHIFFORD\DATA\PROJECTS\WAKEFIELD\DATA\_2\EVERYONE\PORTSMOUTH PEIRCE ISLAND FM REPLACEMENT\00 CAD-GIS\SHEETS\00 T-003.DWG  
 LAST UPDATE: Thursday, August 12, 2021 11:50:13 AM PLOT DATE: Friday, August 27, 2021 12:52:23 PM