

NEW BEDFORD MARINE COMMERCE TERMINAL (NBMCT)
PHASE 3 BULKHEAD REPLACEMENT PROJECT (SITE 4)

NEW BEDFORD, MA
NOVEMBER 10, 2025

OWNER/APPLICANT



MASSACHUSETTS CLEAN ENERGY
TECHNOLOGY CENTER
63 FRANKLIN STREET
3RD FLOOR
BOSTON, MA 02110

PROGRAM MANAGER &
MARINE STRUCTURAL
ENGINEERING



FOTH INFRASTRUCTURE &
ENVIRONMENT, LLC
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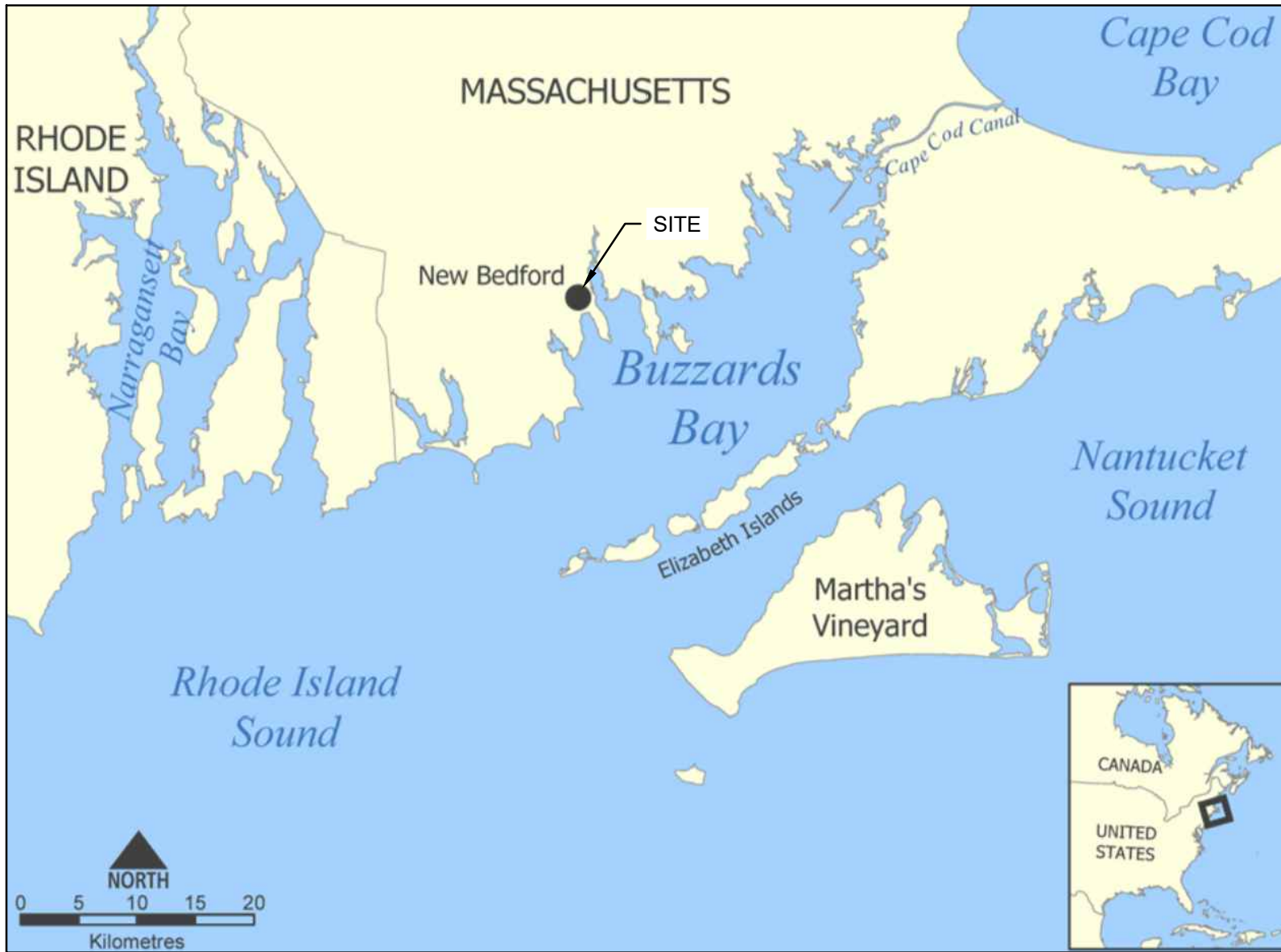
CATHODIC PROTECTION
SPECIALIST



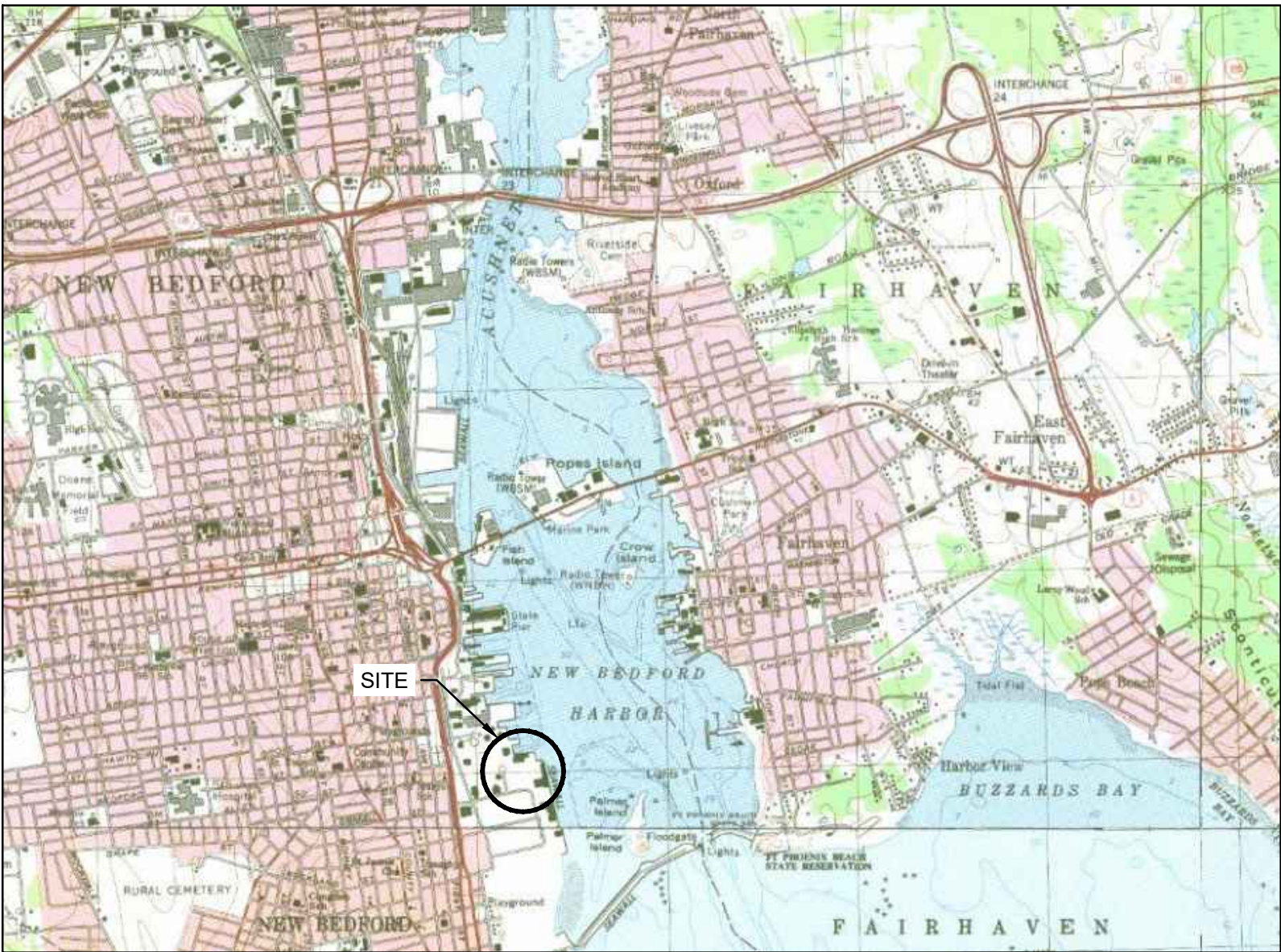
MASTEC PROFESSIONAL SERVICES
40 FEDERAL HILL RD
OXFORD, MA 01540

JOHN CONTILLO, JR
SENIOR CORROSION ENGINEER
PH: (401) 300-7910

THE FOLLOWING CURRENT EDITION STANDARD SPECIFICATIONS SHALL APPLY TO CONSTRUCTION ON THIS PROJECT: CITY OF NEW BEDFORD - DEPARTMENT OF PUBLIC INFRASTRUCTURE CONSTRUCTION STANDARDS AND SPECIFICATIONS (GOVERNING) AND MASSDOT STANDARD SPECIFICATIONS INCLUDING CONSTRUCTION & MATERIALS MANUALS (SECONDARY WHERE APPLICABLE).



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE



PROFESSIONAL SEAL	PROFESSIONAL SEAL	PROFESSIONAL SEAL	SHEET TITLE:
PROFESSIONAL RESPONSIBLE FOR G, C, CG, MR AND SR	PROFESSIONAL RESPONSIBLE FOR MR AND SR	PROFESSIONAL RESPONSIBLE FOR MD	COVER SHEET & SIGNATURE INDEX
			ISSUANCE: IFB DRAWINGS (11/10/2025)
			PROJECT NO: 0024M070.04
ENGINEER OF RECORD (PRIMARY STRUCTURAL)	ENGINEER OF RECORD (SECONDARY STRUCTURAL)	ENGINEER OF RECORD (DREDGING)	SHEET NUMBER G-001

GENERAL SYMBOLS		
EXISTING	PROPOSED	
		CONTOURS (MAJOR)
		CONTOURS (MINOR)
		CONDUIT
		ELECTRIC
		GAS
		STORM SEWER (DRAINAGE)
		SANITARY SEWER
		WATER (POTABLE / IRRIGATION)
		OVERHEAD UTILITY
		FIBER OPTICS
		COMMUNICATIONS
		COMPRESSED AIR
		LIMIT OF GRADING (DAYLIGHT)
		EROSION CONTROL
		FENCE
		GUARDRAIL
		ANNUAL HIGH TIDE LINE (AHTL)
		MEAN HIGH WATER (MHW)
		MEAN LOW WATER (MLW)
		PROPERTY LINE
		RESOURCE AREA
		TREELINE
		WATER SUPPLY
		WELL
		TREE CONIFEROUS
		TREE DECIDUOUS
		SHRUB
		CONTROL POINT
		BENCHMARK
		SECTION CORNER
		SOIL BORING
		CLEANOUT
		VALVE
		WATER VALVE
		GAS WELL
		ABANDONED MONITORING WELL
		MONITORING WELL
		MONITORING WELL NEST
		DRAIN MANHOLE
		ELECTRIC MANHOLE
		ELECTRIC CONTROL BOX
		ELECTRIC TRANSFORMER
		ELECTRIC METER
		MISC MANHOLE
		SEWER MANHOLE
		WATER MANHOLE
		COMMUNICATIONS MANHOLE
		AC UNIT
		VAULT
		GAS METER
		GAS GATE
		WATER GATE
		HYDRANT
		UTILITY POLE
		HANDHOLE
		LIGHT POLE
		TRASH CAN
		METAL POST
		PARKING METER
		PILE (TIMBER OR STEEL)
		SHEET PILE
		W BEAM

NOTE: NOT ALL LEGEND ENTRIES SHOWN ABOVE ARE UTILIZED IN THE PLAN SET.

GENERAL SYMBOLS (CONT)		
EXISTING	PROPOSED	
		TRAFFIC SIGN
		DRAINAGE ARROW
		HANDICAP SYMBOL
		CATCH BASIN
		INLET (CIRCULAR)
		CURB INLET
		SEWER CLEANOUT
		WETLAND SYMBOL
		TREE
HATCHING		
EXISTING	PROPOSED	
		CONCRETE
		GRAVEL
		SAND
		FILL/GROUND SURFACE
		RIP RAP
		STAGING AREA
		WETLAND
		DEMOLITION
		SITE RESTORATION
CONVENTIONAL SIGNS		
		CROSS SECTION SITE PLAN CALLOUT
		SECTION / DETAIL LABEL
		MATCHLINE
		SLOPE LABEL
		WATER LEVEL
		NORTH ARROW
		TIDAL FLOW DIRECTION

SHEET NUMBER	DRAWING NUMBER	SHEET TITLE	OWNER
GENERAL DRAWINGS (G-SERIES)			
1	G-001	COVER SHEET & SIGNATURE INDEX	FOTH/MSALEHI
2	G-002	LEGEND, ABBREVIATIONS, & DRAWING INDEX	FOTH/MSALEHI
3	G-003	KEY MAP	FOTH/MSALEHI
4	G-004	TERMINAL SURVEY CONTROL PLAN	FOTH/MSALEHI
5	G-005	GENERAL NOTES (CIVIL INFRASTRUCTURE)	FOTH/MSALEHI
6	G-006	GENERAL NOTES (MARINE INFRASTRUCTURE, 1 OF 2)	FOTH/MSALEHI
7	G-007	GENERAL NOTES (MARINE INFRASTRUCTURE, 2 OF 2)	FOTH/MSALEHI
8	G-008	CONSTRUCTION SEQUENCING & ACCESS CONTROL PLAN	FOTH/MSALEHI
CIVIL DRAWINGS, UPLAND INFRASTRUCTURE (C-SERIES)			
9	C-100	SITE CIVIL UTILITY PLAN	FOTH/MSALEHI
10	C-101	SITE CIVIL GRADING PLAN	FOTH/MSALEHI
11	C-300	SITE CIVIL SECTIONS 1 OF 3	FOTH/MSALEHI
12	C-301	SITE CIVIL SECTIONS 2 OF 3	FOTH/MSALEHI
13	C-302	SITE CIVIL SECTIONS 3 OF 3	FOTH/MSALEHI
14	C-500	SITE CIVIL DETAILS	FOTH/MSALEHI
CIVIL DRAWINGS, CATHODIC PROTECTION (CP-SERIES)			
15	CP001	CATHODIC PROTECTION SYSTEM PLAN	MASTEC/CONTILLO
16	CP002	CATHODIC PROTECTION SYSTEM DETAILS	MASTEC/CONTILLO
17	CP003	CATHODIC PROTECTION SYSTEM SECTION	MASTEC/CONTILLO
DREDGE DRAWINGS, MARINE INFRASTRUCTURE (MD-SERIES)			
18	MD101	DREDGE PLAN	FOTH/MCAMPAGNONE
19	MD102	DREDGE PLAN	FOTH/MCAMPAGNONE
20	MD103	EX. SECTION WITH EXCAVATION LIMITS	FOTH/MCAMPAGNONE
21	MD104	CAD CELL NO. 3 DISPOSAL PLAN	FOTH/MCAMPAGNONE
STRUCTURAL DRAWINGS, CAST-IN-PLACE CONCRETE PLATFORM (MR-SERIES)			
22	MR001	EXISTING CONDITIONS PLAN (BULKHEAD)	FOTH/MSALEHI
23	MR002	GEOTECHNICAL REFERENCES	FOTH/MSALEHI
24	MR010	CONSTRUCTION SEQUENCING - PHASE 1 PLAN	FOTH/MSALEHI
25	MR011	CONSTRUCTION SEQUENCING - PHASE 2 PLAN	FOTH/MSALEHI
26	MR012	CONSTRUCTION SEQUENCING - PHASE 3 PLAN	FOTH/MSALEHI
27	MR013	CONSTRUCTION SEQUENCING - PHASE 4 PLAN	FOTH/MSALEHI
28	MR014	CONSTRUCTION SEQUENCING - PHASE 5 PLAN	FOTH/MSALEHI
29	MR015	CONSTRUCTION SEQUENCING - PHASE 6 PLAN	FOTH/MSALEHI
30	MR016	CONSTRUCTION SEQUENCING - PHASE 7 PLAN	FOTH/MSALEHI
31	MR017	CONSTRUCTION SEQUENCING - PHASE 8 PLAN	FOTH/MSALEHI
32	MR018	CONSTRUCTION SEQUENCING - PHASE 9 PLAN	FOTH/MSALEHI
33	MR019	CONSTRUCTION SEQUENCING - PHASE 10 PLAN	FOTH/MSALEHI
34	MR100	MARINE INFRASTRUCTURE CONFIGURATION PLAN	FOTH/MSALEHI
35	MR101	MARINE INFRASTRUCTURE PILE LAYOUT PLAN	FOTH/MSALEHI
36	MR102	MARINE INFRASTRUCTURE PILE CAP LAYOUT PLAN	FOTH/MSALEHI
37	MR103	MARINE INFRASTRUCTURE PRECAST PLANKS LAYOUT PLAN	FOTH/MSALEHI
38	MR300	EX. SECTION WITH EXCAVATION EXTENTS AT CULVERT	FOTH/MSALEHI
39	MR301	EX. SECTION WITH EXCAVATION EXTENTS	FOTH/MSALEHI
40	MR302	EX. SECTION WITH EXCAVATION EXTENTS	FOTH/MSALEHI
41	MR303	STRUCTURAL SECTION 1 OF 3	FOTH/MSALEHI
42	MR304	STRUCTURAL SECTION 2 OF 3	FOTH/MSALEHI
43	MR305	STRUCTURAL SECTION 3 OF 3	FOTH/MSALEHI
44	MR500	CAST-IN-PLACE CONCRETE PLATFORM DETAIL 1 OF 4	FOTH/MSALEHI
45	MR501	CAST-IN-PLACE CONCRETE PLATFORM DETAIL 2 OF 4	FOTH/MSALEHI
46	MR502	CAST-IN-PLACE CONCRETE PLATFORM DETAIL 3 OF 4	FOTH/MSALEHI
47	MR503	CAST-IN-PLACE CONCRETE PLATFORM DETAIL 4 OF 4	FOTH/MSALEHI
48	MR504	UTILITY TRENCH DETAILS	FOTH/MSALEHI
49	MR505	FENDER DETAILS	FOTH/MSALEHI
50	MR506	BOLLARD DETAILS	FOTH/MSALEHI
51	MR507	LADDER DETAILS	FOTH/MSALEHI
52	MR508	PRECAST PILE CAP DETAIL 1 OF 6	FOTH/MSALEHI
53	MR509	PRECAST PILE CAP DETAIL 2 OF 6	FOTH/MSALEHI
54	MR510	PRECAST PILE CAP DETAIL 3 OF 6	FOTH/MSALEHI
55	MR511	PRECAST PILE CAP DETAIL 4 OF 6	FOTH/MSALEHI
56	MR512	PRECAST PILE CAP DETAIL 5 OF 6	FOTH/MSALEHI
57	MR513	PRECAST PILE CAP DETAIL 6 OF 6	FOTH/MSALEHI
58	MR514	PRECAST PLANK DETAIL	FOTH/MSALEHI
59	MR515	MAIN TERMINAL TO SHUSTER DETAILS	FOTH/MSALEHI

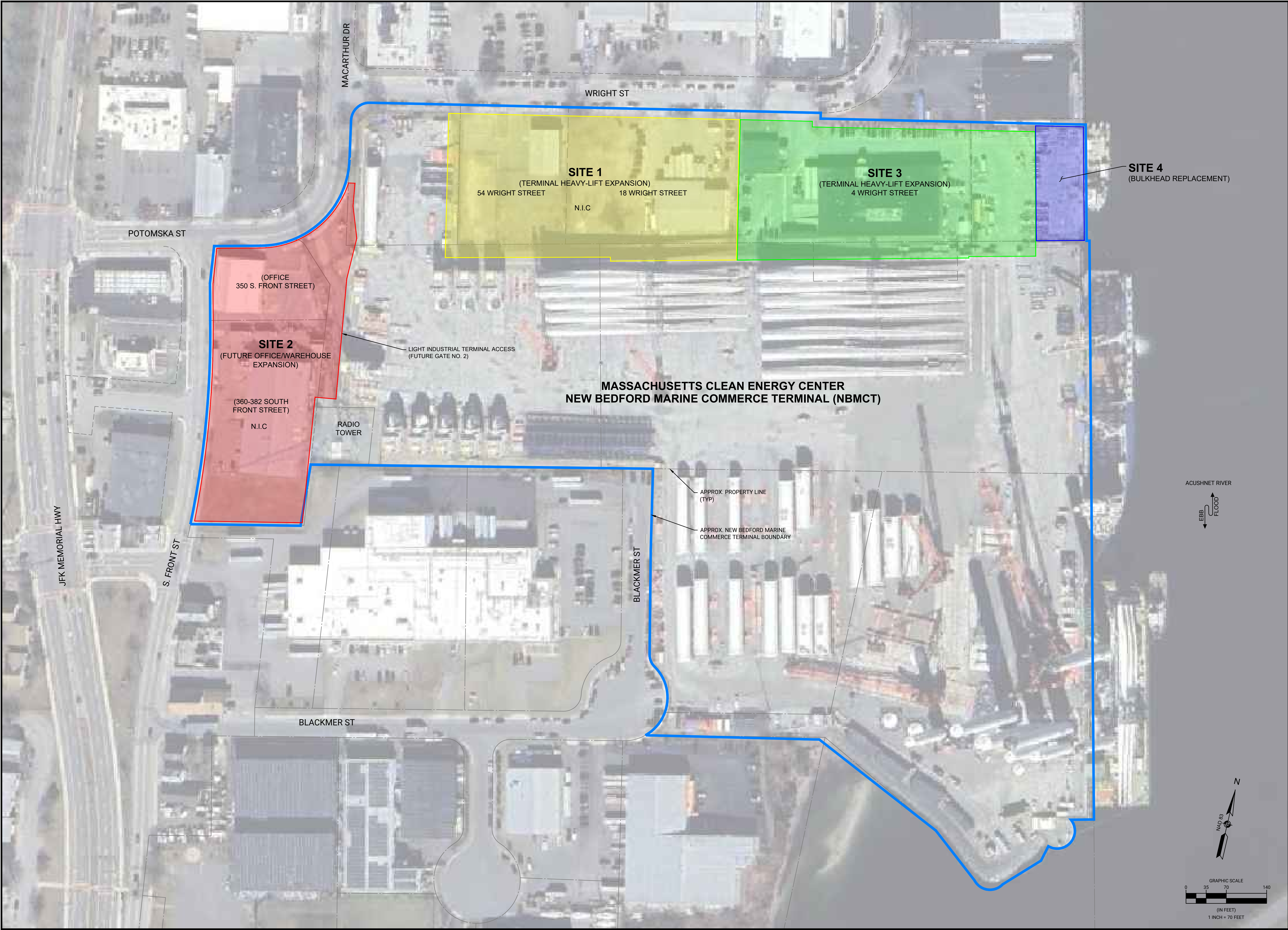
		STRUCTURAL DRAWINGS, UPLAND STORM STRUCTURES (S-SERIES)	
60	S-001	STORM MANHOLE DETAILS (NO. 6 NEW STRUCTURE)	FOTH/MSALEHI
61	S-002	CONCRETE COLLAR DETAILS	FOTH/MSALEHI
STRUCTURAL DRAWINGS, BULKHEAD REPLACEMENT (SR-SERIES)			
62	SR100	SHEETPILE BULKHEAD CONFIGURATION PLAN	FOTH/MSALEHI
63	SR101	COMBI-WALL 72IN OUTFALL PLAN	FOTH/MSALEHI
64	SR102	EAST-WEST BULKHEAD PLAN	FOTH/MSALEHI
65	SR103	EAST-WEST BULKHEAD INDUSTRIAL GRATING PLAN	
66	SR300	COMBI-WALL PROFILE	FOTH/MSALEHI
67	SR301	COMBI-WALL SECTION	FOTH/MSALEHI
68	SR302	COMBI-WALL OUTFALL SECTIONS	FOTH/MSALEHI
69	SR303	EAST-WEST BULKHEAD SECTION	FOTH/MSALEHI
70	SR304	EAST-WEST BULKHEAD SECTION	FOTH/MSALEHI
71	SR305	EAST-WEST BULKHEAD SECTION	FOTH/MSALEHI
72	SR306	NORTH BULKHEAD CLOSURE SECTION	FOTH/MSALEHI
73	SR307	NORTH END SECTION	FOTH/MSALEHI
74	SR500	COMBI-WALL DETAILS 1 OF 2	FOTH/MSALEHI
75	SR501	COMBI-WALL DETAILS 2 OF 2	FOTH/MSALEHI
76	SR502	EAST-WEST BULKHEAD DETAILS	FOTH/MSALEHI
77	SR503	CONCRETE CLOSURE DETAILS	FOTH/MSALEHI
78	SR504	CONCRETE RETAINING WALL	FOTH/MSALEHI

ABBREVIATIONS		ABBREVIATIONS (CONT)		ABBREVIATIONS (CONT)	
ABAN	ABANDON	GCL	GEOSYNTHETIC CLAY LINER	PUE	PUBLIC UTILITY EASEMENT
ADJ	ADJUST	GD	GROUND	PVC	POLYVINYL CHLORIDE
APPROX	APPROXIMATE	GS	GAS GATE	PVMT	PAVEMENT
A.C.	ASPHALT CONCRETE	GI	GUTTER INLET	PW	PRIVATE WELL
AHT	ANNUAL HIGH TIDE	GIP	GALVANIZED IRON PIPE	PWW	PAVED WATER WAY
ALT	ANNUAL LOW TIDE	GRAN	GRANITE	R	RADIUS
BB	BORING	GRAV	GRAVEL	R&D	REMOVE AND DISPOSE
BIT	BITUMINOUS	GRD	GUARD	RCP	REINFORCED CONCRETE PIPE
BD	BOUND	GW	GAS WELL	RD	ROAD
BL	BASELINE	HDPE	HIGH DENSITY POLYETHYLENE	RDWY	ROADWAY
BLDG	BUILDING	HDW	HEADWALL	REM	REMOVE
BM	BENCHMARK	HMA	HOT MIX ASPHALT	RET	RETAIN
BO	BY OTHERS	HOR	HORIZONTAL	RET	WALL RETAINING WALL
BOS	BOTTOM OF SLOPE	HYD	HYDRANT	ROW	RIGHT-OF-WAY
BR	BRIDGE	ID	INSIDE DIAMETER	RR	RAILROAD
CB	CATCH BASIN	IN	INCH	R&R	REMOVE AND RESET
CBICI	CATCH BASIN WITH CURB INLET	INV	INVERT	R&S	REMOVE AND STACK
CC	CEMENT CONCRETE	JCT	JUNCTION	RT	RIGHT
CCB	CAPE COD BERM	KSI	KIPS PER SQUARE INCH	SB	SOUTHBOUND
CCM	CEMENT CONCRETE MASONRY	L	LENGTH	SDR	STANDARD DIMENSION RATIO
CEM	CEMENT	LLDPE	LINEAR LOW DENSITY	SF	SQUARE FOOT
CJ	CURB INLET	POLYETHYLENE		SGC	SLOPED GRANITE CURB
CLF	CHAIN LINK FENCE	LB	LEACHING BASIN	SHLD	SHOULDER
CL	CENTERLINE	LHW	LEACHATE HEAD WELL	SMH	SEWER MANHOLE
OMP	CORRUGATED METAL PIPE	LP	LIGHT POLE	SS	STAINLESS STEEL
CSP	CORRUGATED STEEL PIPE	LT	LEFT	SSR	SIDE SLOPE RISER
CO	CLEANOUT	LWD	LOW WATER DATUM	ST	STREET
CONC	CONCRETE	LYS	LYSIMETER	STA	STATION
CONT	CONTINUED	MAX	MAXIMUM	STN	STONE
CONST	CONSTRUCTION	MB	MAIL BOX	SW	SIDEWALK
CP	CONTROL POINT	MH	MANHOLE	TAN	TANGENT
CY	CUBIC YARD	MHW	MEAN HIGH WATER	TEMP	TEMPORARY
Ø	DIAMETER	MHHW	MEAN HIGHER HIGH WATER	TC	TOP OF CURB
D	DIAMETER	MIN	MINIMUM	TOS	TOP OF SLOPE
DI	DUCTILE IRON	MISC	MISCELLANEOUS	TYP	TYPICAL
DWY	DRIVEWAY	MLW	MEAN LOW WATER	UP	UTILITY POLE
EB	EASTBOUND	MLLW	MEAN LOWER LOW WATER	VAR	VARIES
ELEV	ELEVATION	MW	MONITORING WELL	VERT	VERTICAL
EL.	ELEVATION	NB	NORTHBOUND	VC	VERTICAL CURVE
EMB	EMBANKMENT	NIC	NOT IN CONTRACT	VGC	VERTICAL GRANITE CURB
EOP	EDGE OF PAVEMENT	NO.	NUMBER	VIF	VERIFY IN FIELD
EXIST	EXISTING	NTS	NOT-TO-SCALE	WCR	WHEELCHAIR RAMP
EX	EXISTING	OD	OUTSIDE DIAMETER	WG	WATER GATE
EXC	EXCAVATION	OHWM	ORDINARY HIGH WATER MARK	WIP	WROUGHT IRON PIPE
F&C	FRAME AND COVER	PERM	PERMANENT	WM	WATER METER/WATER MAIN
F&G	FRAME AND GRATE	±	PLUS OR MINUS	X-SECT	CROSS SECTION
FDN	FOUNDATION	PC	POINT OF CURVATURE		
FES	FLARED END SECTION	PGL	PROFILE GRADE LINE		
FT	FOOT	PROJ	PROJECT		
GALV	GALVANIZED	PROP	PROPOSED		
GAR	GARAGE	PSB	PLANTABLE SOIL BORROW		
		PSI	POUNDS PER SQUARE INCH		

PROJECT: **MASSECC NBMCT - PHASE 3 BULKHEAD REPLACEMENT PROJECT (SITE 4)**

OWNER: **NEW BEDFORD MARINE COMMERCE TERMINAL (NBMCCT) NEW BEDFORD, MA**

REVISIONS	DESCRIPTION	DATE OF PREPARATION			
		NO.	DATE	BY	DATE
	SURVEYED				
	DRAWN	CJPMX56	11/7/2025		
	DESIGNED	MX56	11/7/2025		
	CHECKED	AIMJSG	11/7/2025		
PE STAMP					
SHEET TITLE: LEGEND, ABBREVIATIONS, & DRAWING INDEX					
ISSUANCE: IFB DRAWINGS (11/10/2025)					
PROJECT NO: 0024M070.04					
SHEET NUMBER G-002					



PROJECT:
**MASSCEC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

REVISIONS	
NO.	DESCRIPTION
1	
2	
3	
4	
5	

DATE OF PREPARATION

BY	DATE

SURVEYED	DATE

DRAWN	DATE
CJP/MXS6	11/7/2025

DESIGNED	DATE
MXS6	11/7/2025

CHECKED	DATE
AIM/JSG	11/7/2025

PE STAMP

SHEET TITLE:

KEY MAP

ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO:

0024M070.04

SHEET NUMBER

G-003

Tuesday, November 11, 2025 12:43:30 AM

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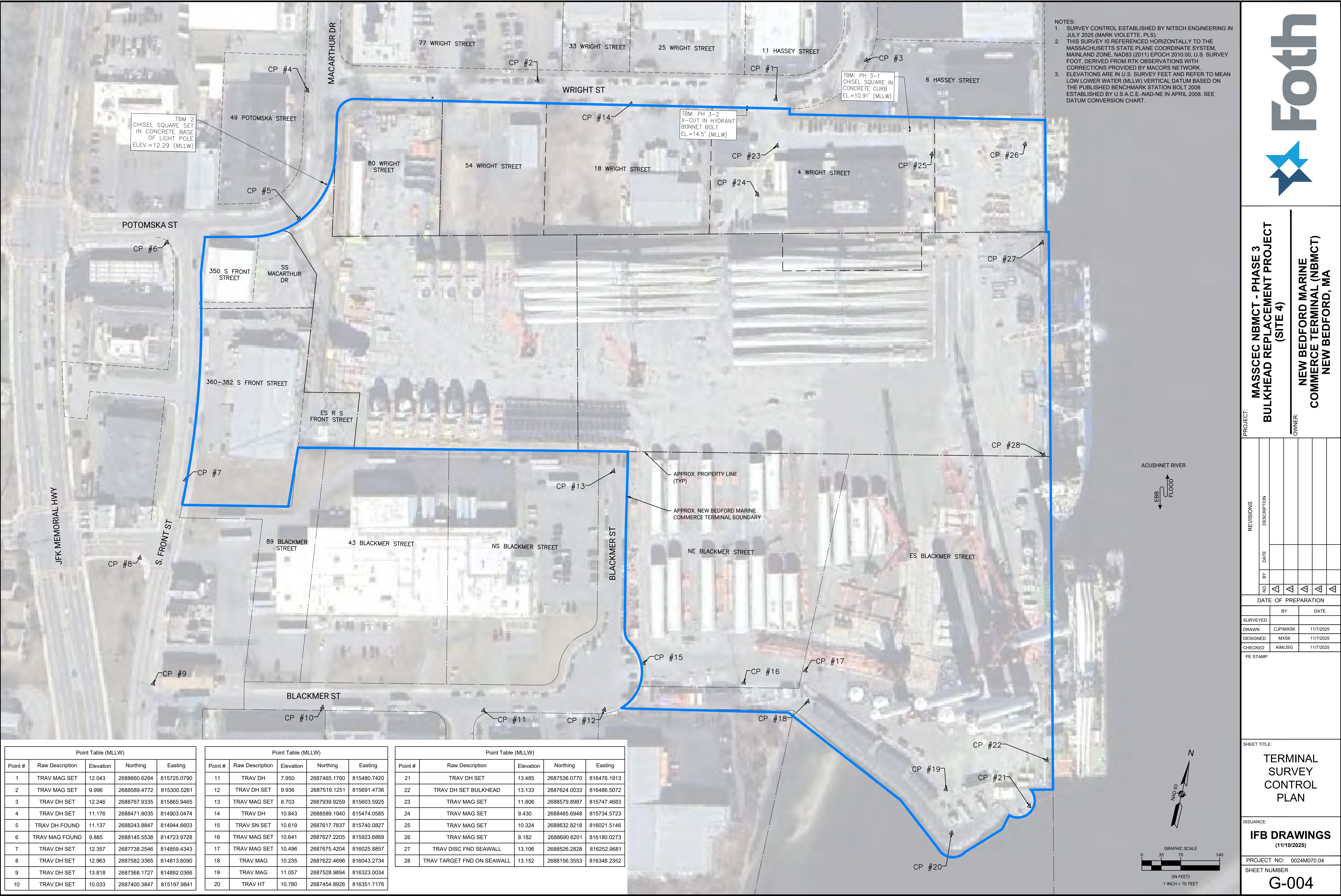
DWG Folder Location: PW:\FOTH-PW BENTLEY.COM\FOTH-PW-01\DOCUMENTS\CLIENTS\MA CLEAN ENERGY\0024M070.04\CAD\DRAWINGS\

Layout: g-004

Point Table (MLLW)				
Point #	Raw Description	Elevation	Northing	Easting
1	TRAV MAG SET	12.043	2688660.6264	815725.0790
2	TRAV MAG SET	9.996	2688589.4772	815300.5261
3	TRAV DH SET	12.246	2688767.9335	815865.9465
4	TRAV DH SET	11.176	2688471.8035	814903.0474
5	TRAV DH FOUND	11.137	2688243.8847	814944.6603
6	TRAV MAG FOUND	9.885	2688145.5538	814723.9728
7	TRAV DH SET	12.357	2687738.2546	814859.4343
8	TRAV DH SET	12.963	2687582.3365	814813.6090
9	TRAV DH SET	13.818	2687368.1727	814892.0366
10	TRAV DH SET	10.033	2687400.3847	815197.9841

Point Table (MLLW)				
Point #	Raw Description	Elevation	Northing	Easting
11	TRAV DH	7.950	2687465.1760	815480.7420
12	TRAV DH SET	9.936	2687519.1251	815691.4736
13	TRAV MAG SET	8.703	2687939.9259	815603.5925
14	TRAV DH	10.843	2688589.1940	815474.0585
15	TRAV SN SET	10.619	2687617.7837	815740.0827
16	TRAV MAG SET	10.641	2687627.2205	815923.6869
17	TRAV MAG SET	10.496	2687675.4204	816025.8857
18	TRAV MAG	10.235	2687622.4696	816043.2734
19	TRAV MAG	11.057	2687528.9894	816323.0034
20	TRAV HT	10.780	2687454.8926	816351.7176

Point Table (MLLW)				
Point #	Raw Description	Elevation	Northing	Easting
21	TRAV DH SET	13.485	2687536.0770	816476.1913
22	TRAV DH SET BULKHEAD	13.133	2687624.0033	816486.5072
23	TRAV MAG SET	11.806	2688579.8987	815747.4683
24	TRAV MAG SET	9.430	2688485.6948	815734.5723
25	TRAV MAG SET	10.324	2688632.8218	816021.5146
26	TRAV MAG SET	8.182	2688690.6201	816180.0273
27	TRAV DISC FND SEAWALL	13.106	2688526.2828	816252.9681
28	TRAV TARGET FND ON SEAWALL	13.152	2688156.3553	816348.2352



- NOTES:
1. SURVEY CONTROL ESTABLISHED BY NITSCH ENGINEERING IN JULY 2025 (MARK VIOLETTE, PLS).
 2. THIS SURVEY IS REFERENCED HORIZONTALLY TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, NAD83 (2011) EPOCH 2010.00, U.S. SURVEY FOOT, DERIVED FROM RTK OBSERVATIONS WITH CORRECTIONS PROVIDED BY MACORS NETWORK. ELEVATIONS ARE IN U.S. SURVEY FEET AND REFER TO MEAN LOW LOWER WATER (MLLW) VERTICAL DATUM BASED ON THE PUBLISHED BENCHMARK STATION BOLT 2008 ESTABLISHED BY U.S.A.C.E.-NAD-NE IN APRIL 2008. SEE DATUM CONVERSION CHART.
 - 3.



PROJECT: **MASSECC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

REVISIONS		DATE OF PREPARATION	
NO	DESCRIPTION	BY	DATE

DATE OF PREPARATION	
BY	DATE

SHEET TITLE:	

ISSUANCE:	

PROJECT NO: 0024M070.04	

G-004

GENERAL NOTES

1. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
2. THE SUBJECT PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREAS WITHOUT BASE FLOOD ELEVATION (BFE), AND "OTHER FLOOD AREAS" FLOOD "ZONE X" (AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD BASED ON THE FLOOD INSURANCE RATE MAP, MAP NO. 25005C0481G, WITH A MAP REVISED DATE OF JULY 16, 2014.
3. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES (INCLUDING THOSE LABELED PER RECORD DATA) PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
4. THE CONTRACTOR SHALL CALL DIGSAFE AT 1-800-322-4844 AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER AND ENGINEER PRIOR TO EXCAVATION.
5. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
6. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND OWNER'S REPRESENTATIVE FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES OCCURRING IN THE COURSE OF THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
7. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
8. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.
9. ANY WORK PERFORMED IN RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL OR STATE REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS, AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.
10. THE CONTRACTOR IS TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE UNITED STATES EPA FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNERS REPRESENTATIVE WITH WRITTEN REPORTS.
11. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN, STORM WATER POLLUTION PREVENTION PLAN AND STATE AND LOCAL REGULATIONS.
12. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH SPECIFICATIONS. IF NO SPECIFICATIONS ARE SUPPLIED, USE STATE OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
13. ITEM NUMBERS REFER TO THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE CITY OF NEW BEDFORD. WHEN IN CONFLICT, THE CITY OF NEW BEDFORD REQUIREMENTS SHALL PREVAIL.
14. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.
15. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICTS ALL WORK ASSOCIATED WITH THE PROJECT.
16. BEFORE INSTALLATION OF STORM OR SANITARY SEWER, OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT HE IS NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.
17. ADJUST/RECONSTRUCT ALL EXISTING CASTINGS, CLEANOUTS, ETC. WITHIN PROJECT AREA TO GRADE AS REQUIRED.
18. CONTRACTOR TO REMOVE & REPLACE PAVEMENT AS SPECIFIED.
19. SITE SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

DEMOLITION NOTES

1. ALL EXISTING ABOVE AND BELOW GROUND STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS NOTED OTHERWISE WITHIN THIS CONSTRUCTION SET AND/OR PROJECT SPECIFICATIONS. THIS INCLUDES FOUNDATION SLABS, WALLS AND FOOTINGS. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE BACKFILLED WITH SATISFACTORY MATERIALS AND COMPACTED TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATION.
2. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
3. TREE PROTECTION FENCING SHALL BE IN ACCORDANCE WITH THE DETAILED DRAWINGS. DO NOT OPERATE OR STORE EQUIPMENT, NOR HANDLE OR STORE MATERIALS WITHIN THE DRIP LINES OF THE TREES SHOWN TO REMAIN.
4. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
5. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AND AT THE CONTRACTOR'S EXPENSE.
6. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY / AGENCY OR THE CITY OF NEW BEDFORD.
7. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR OBTAINS PRIOR WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
8. EROSION & SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED AND FUNCTION PROPERLY PRIOR TO INITIATION OF DEMOLITION ACTIVITIES.
9. IF ASBESTOS OR HAZARDOUS MATERIALS ARE FOUND ON SITE, SUCH MATERIALS SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.

10. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
11. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
12. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
13. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC.. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
14. THE CONTRACTOR SHALL PROVIDE NEAT, STRAIGHT, FULL DEPTH, SAW CUTS OF EXISTING PAVEMENT WHERE INDICATED ALONG LIMITS OF PAVEMENT DEMOLITION.
15. ALL UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL, WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO: WELLS, ASBESTOS, UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE. AVAILABLE ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO PHASE I ESA, PHASE II, WETLAND AND STREAM DELINEATION AND ASBESTOS ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.
16. ALL PAVEMENT, BASE COURSES, SIDEWALKS, CURBS, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE AREA TO BE DEMOLISHED SHALL BE REMOVED TO FULL DEPTH. EXISTING BASE COURSE MATERIALS MAY BE WORKED INTO THE NEW PAVEMENT OR BUILDING SUBGRADE IF THE GRADATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC., ARE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT. BASE COURSE MATERIALS SHALL NOT BE WORKED INTO THE SUBGRADE AREAS TO RECEIVE LANDSCAPING.
17. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

LAYOUT NOTES

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND SHALL TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL RELOCATE EXISTING UTILITIES AS INDICATED OR AS NECESSARY FOR CONSTRUCTION.
3. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. THE CONTRACTOR SHALL INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVING, PRIOR TO THE INSTALLATION OF PAVED SURFACES.
4. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN.
5. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH EQUIVALENT MATERIALS AT THE CONTRACTOR'S EXPENSE.
6. SITE DIMENSIONS SHOWN ARE TO THE FACE OF CURB, EDGE OF PAVEMENT, OR DENSE GRADED GRAVEL UNLESS OTHERWISE NOTED.
7. COORDINATES ARE FOR BUILDING COLUMNS, EXTERIOR BUILDING WALLS, CENTER OF DRIVEWAYS, CENTER OF SANITARY SEWER MANHOLES, AND CENTER OF STRUCTURES PLACED SIX INCHES INSIDE FACE OF CURB FOR DRAIN INLETS, UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
9. REFER TO THE ARCHITECTURAL, PLUMBING & ELECTRICAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRY LOCATIONS AND PRECISE BUILDING DIMENSIONS.
10. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF NEW BEDFORD. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, ADDITION / DELETION OF PARKING SPACES, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, CHANGES TO LANDSCAPING, ETC.

GRADING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINAL GRADES, TOP OF GROUND LEVEL, TOP OF PAVEMENT, OR GRATE ELEVATION AT THE DRAWDOWN POINT UNLESS NOTED OTHERWISE.
2. REFER TO AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT.
3. ALL FILL UNDER PAVEMENT OR DENSE GRADED GRAVEL (HEAVY LIFT) SHALL BE COMPACTED TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
4. ALL ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.
5. CONTRACTOR SHALL STRICTLY ADHERE TO THE EROSION & SEDIMENT CONTROL PLAN PREPARED FOR THIS PROJECT.
6. EARTHWORK SHALL INCLUDE CLEARING AND GRUBBING, STRIPPING AND STOCKPILING TOPSOIL, MASS GRADING, EXCAVATION, FILLING, UNDER CUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.
7. CONTRACTOR TO REFILL UNDERCUT AREAS WITH SUITABLE MATERIAL AND COMPACT AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
8. CONTRACTOR TO PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO A DEPTH INDICATED ON THE LANDSCAPE PLANS (6" MINIMUM).
9. ALL SLOPES IN NON-PAVED AREAS SHALL BE 3:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
10. ALL AREAS NOT PAVED OR DENSE GRADED GRAVEL SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN, UNLESS NOTED OTHERWISE.
11. COMPACTED FILLS ARE TO BE MADE TO A MINIMUM OF THREE FEET ABOVE THE CROWN OF ANY PROPOSED SEWER PRIOR TO CUTTING OF TRENCHES FOR PLACEMENT OF SAID SEWERS. ALL FILLS SHALL BE CONTROLLED, COMPACTED, AND INSPECTED BY AN APPROVED TESTING LABORATORY OR AN INSPECTOR FROM THE APPROPRIATE GOVERNMENTAL AGENCY.
12. ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE. EXCESS SOIL MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
13. THE CONTRACTOR IS RESPONSIBLE FOR BALANCING THE SITE EARTHWORK BY IMPORTING OR EXPORTING AS NECESSARY TO ACHIEVE DESIGN GRADES AND SPECIFICATIONS.

STORM DRAINAGE NOTES

1. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
3. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES, SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
4. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES WITHIN THE PROPERTY ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
5. THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, DOWNSPOUTS, PIPING AND CONNECTION ETC. AS REQUIRED TO CONVEY THE ROOF AND PAVED SURFACE DRAINAGE TO THE INFILTRATION CHAMBERS.
6. ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 4' SHALL BE PROVIDED WITH STEPS SHALL MEET THE REQUIREMENTS OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
7. STORM SEWER PIPE LABELED "ST" SHALL BE ONE OF THE FOLLOWING: PVC SDR-35, OR HIGH DENSITY POLYETHYLENE. HIGH DENSITY POLYETHYLENE (HDPE) SHALL NOT BE PERMITTED WITHIN THE CITY RIGHT OF WAY. ANY USE OF HDPE WITHIN PRIVATE PROPERTY MUST CHANGE IN MATERIAL PRIOR TO ENTERING CITY LAYOUT. STORM SEWER PIPE LABELED "RCP" SHALL BE REINFORCED CONCRETE PIPE. ALL STORM SEWER PIPE IS TO BE INSTALLED PER MASSDOT SPECIFICATIONS OR CITY OF NEW BEDFORD SPECIFICATIONS.
8. STORM SEWER IS TO BE BEDDED WITH CLEAN GRANULAR MATERIAL-AGGREGATES NOT TO BE LARGER THAN 3/4" AND NOT SMALLER THAN NO. 8 SIEVE, AND SHALL BE FREE OF SILT AND FINES. BEDDING TO EXTEND MINIMUM OF 6" BELOW & 12" ABOVE THE PIPE AND AS SHOWN ON THE DETAILS.

UTILITY NOTES

1. ALL PROPOSED UTILITY LINES AND EXTENSIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PRIVATE UTILITY COMPANY SPECIFICATIONS. CONTRACTOR SHALL COORDINATE UTILITY DISCONNECTIONS WITH THE APPROPRIATE AGENCY.
2. THE CONTRACTOR IS PARTICULARLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF THE EXISTING UTILITIES SHOWN HEREON IS BASED ON TOPOGRAPHIC SURVEYS AND RECORD DRAWINGS. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE EXISTING UTILITIES CONFLICTING WITH IMPROVEMENTS SHOWN HEREON IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. MAINTAIN MINIMUM 10-FOOT HORIZONTAL AND 18-INCH MINIMUM VERTICAL SEPARATION BETWEEN SANITARY SEWER, STORM SEWER AND WATER SUPPLY LINE, UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT AND DENSE GRADED AGGREGATE CONSTRUCTION.
6. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE. TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
7. SANITARY SEWER SHALL BE PVC-SDR 35 PER ASTM D-3034 OR APPROVED EQUAL (CONFORMING TO CITY OF NEW BEDFORD WATER & SEWER DEPARTMENT RULES AND REGULATIONS) INSTALLED AT A MINIMUM SLOPE OF ONE PERCENT (1.00%) UNLESS NOTED OTHERWISE. SANITARY SEWER SERVICE SHALL BE INSTALLED AT A MINIMUM DEPTH OF FOUR FEET (4') UNLESS NOTED OTHERWISE. A MINIMUM OF 18" CLEARANCE SHALL BE MAINTAINED AT ALL WATER LINE & SANITARY SEWER CROSSINGS. SANITARY SEWER SERVICE JOINTS SHALL CONFORM TO ASTM D-3212.
8. SANITARY SEWER IS TO BE BEDDED WITH CLEAN GRANULAR MATERIAL-AGGREGATES NOT TO BE LARGER THAN 3/4" AND NOT SMALLER THAN NO. 8 SIEVE, AND SHALL BE FREE OF SILT AND FINES. BEDDING TO EXTEND MINIMUM OF 6" BELOW & 12" ABOVE THE PIPE AND AS SHOWN ON THE DETAILS.
9. DISTANCES SHOWN FOR BOTH SANITARY AND STORM SEWER PIPES ARE MEASURED FROM CENTER OF STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR ACTUAL FIELD CUT LENGTH. COORDINATES FOR STORM & SANITARY STRUCTURES ARE SHOWN TO THE CENTER STRUCTURE UNLESS NOTED OTHERWISE.
10. ROOF DRAINS, FOUNDATION DRAINS AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
11. CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO CASTINGS, VALVE BOXES, PEDESTALS, CLEANOUTS, ETC. TO MATCH PROPOSED FINISHED GRADES, UNLESS NOTED OTHERWISE.
12. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ALL IMPROVEMENTS. DRAWINGS SHALL INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLE FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE HORIZONTAL AND VERTICAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED.
13. ALL WATERLINE CROSSINGS SHALL MAINTAIN A VERTICAL SEPARATION OF 18" MINIMUM. SANITARY SEWER SHALL BE LOCATED 18" BELOW WATERMAIN AT ALL CROSSINGS. WATERMAIN SHALL BE LOCATED A MINIMUM OF 10" HORIZONTALLY FROM ANY SANITARY SEWER OR STORM SEWER. ALL MEASUREMENTS SHALL BE TAKEN FROM OUTSIDE OF SEWER PIPE TO THE OUTSIDE OF WATERMAIN ONE FULL LENGTH OF WATERMAIN PIPE SHALL BE LOCATED AT ALL CROSSINGS TO ENABLE BOTH JOINTS TO BE LOCATED AS FAR FROM SEWER AS POSSIBLE.
14. ALL WATER SERVICE PIPE SIZES 3" THRU 12" SHALL BE DUCTILE IRON PIPE CLASS 52 PIPE PER LOCAL JURISDICTION, FROM WATERMAIN THRU METER SETTING(S) INCLUDING THE METER BYPASS.
15. ALL WATER SERVICE PIPE, 2" AND SMALLER, SHALL BE K SOFT COPPER FROM WATERMAIN THRU CURB STOP, OR APPROVED EQUAL.
16. WATERLINE IS TO BE BEDDED WITH CLEAN GRANULAR MATERIAL-AGGREGATES NOT TO BE LARGER THAN 3/4" AND NOT SMALLER THAN NO. 8 SIEVE, AND SHALL BE FREE OF SILT AND FINES. BEDDING TO EXTEND MINIMUM OF 6" BELOW & 12" ABOVE THE PIPE AND AS SHOWN ON THE DETAILS.

ABBREVIATIONS

ABAN	ABANDON
ADJ	ADJUST
APPROX	APPROXIMATE
A.C.	ASPHALT CONCRETE
AHT	ANNUAL HIGH TIDE
ALT	ANNUAL LOW TIDE
BB	BORING
BIT	BITUMINOUS
BD	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCH MARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCB	CAPE COD BERM
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CI	CAST IRON
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTINUED
CONST	CONSTRUCTION
CP	CONTROL POINT
CY	CUBIC YARD
D	DIAMETER
Ø	DIAMETER
DJ	DUCTILE IRON
DWY	DRIVEWAY
EB	EASTBOUND
ELEV	ELEVATION
EL	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
EX	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDS	FOUNDATION
FES	FLARED END SECTION
FT	FOOT
GALV	GALVANIZED
GAR	GARAGE
GCL	GEOSYNTHETIC CLAY LINER
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
GW	GAS WELL
HDPE	HIGH DENSITY POLYETHYLENE
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
ID	INSIDE DIAMETER
IN	INCH
INV	INVERT
JCT	JUNCTION
KSI	KIPS PER SQUARE INCH
L	LENGTH
LLDPE	LINEAR LOW DENSITY POLYETHYLENE
LB	LEACHING BASIN
LHW	LEACHATE HEAD WELL

ABBREVIATIONS (CONT)

LP	LIGHT POLE
LT	LEFT
LWD	LOW WATER DATUM
LYS	LYSIMETER
MAX	MAXIMUM
MB	MAIL BOX
MH	MANHOLE
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
MW	MONITORING WELL
NB	NORTHBOUND
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT-TO-SCALE
OD	OUTSIDE DIAMETER
OHWM	ORDINARY HIGH WATER MARK
PERM	PERMANENT
+	PLUS OR MINUS
PC	POINT OF CURVATURE
PGL	PROFILE GRADE LINE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PW	PRIVATE WELL
PWW	PAVED WATER WAY
R	RADIUS
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT-OF-WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	SOUTHBOUND
SDR	STANDARD DIMENSION RATIO
SP	SQUARE FOOT
SCG	SLOPED GRANITE CURB
SHLD	SHOULDER
SMH	SEWER MANHOLE
SS	STAINLESS STEEL
SSR	SIDE SLOPE RISER
ST	STREET
STA	STATION
STN	STONE
SW	SIDEWALK
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
VGC	VERTICAL GRANITE CURB
VIF	VERIFY IN FIELD
WCR	WHEELCHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

PROJECT: **MASSECC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

REVISIONS	DESCRIPTION	DATE	BY	NO					

DATE OF PREPARATION		
BY	DATE	
SURVEYED		
DRAWN	CJPMX56	11/7/2025
DESIGNED	MX56	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

SHEET TITLE:
**GENERAL NOTES
(CIVIL
INFRASTRUCTURE)**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
G-005

1. ROCK ANCHORS SHALL BE INSTALLED TO A 45 DEGREE INCLINATION WITH RESPECT TO THE HORIZONTAL.
2. THE ROCK ANCHOR DESIGN LOAD IS 370 KIPS AND TESTING LOAD IS 480 KIPS. THE SPACING OF THE ROCK ANCHORS SHALL BE INSTALLED PER PLAN.
3. STRANDS SHALL COMPLY WITH ASTM A416, 0.6" DIA. 7-WIRE, 270 KSI.
4. GROUT SHALL COMPLY WITH ASTM C150, MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, WATER TO CEMENT RATIO RANGING FROM 0.4 TO 0.6.
5. ROCK ANCHOR DESIGN IS BY CONTRACTOR. ROCK ANCHOR ASSEMBLY INCLUDING GROUND ANCHOR, STAND-OFF PLATES AND CAP PLATES SHALL BE DESIGNED FOR THE TEST LOAD BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS.

1. MATERIAL USED FOR FACTORY EPOXY COATING SHALL BE BAR-287 235 MULTI-POUR EPOXY COATING AS MANUFACTURED BY DEVCO COATINGS OR EQUIVALENT ACCEPTED BY THE PROJECT ENGINEER FOR STEEL SHEET PILES.
2. MATERIAL USED FOR FACTORY EPOXY COATING SHALL BE SKOTCHKOTE FUSION BOND EPOXY COATING 6233 AS MANUFACTURED BY 3M OR EQUIVALENT ACCEPTED BY THE PROJECT ENGINEER FOR STEEL PIPE PILES.
3. ALL PILES LOCATED ON ROWS A SHALL BE WRAPPED WITH SEASHIELD SERIES 2000HD BY DENSO 10' ABOVE AND 10' BELOW THE MLWL. FOLLOW MANUFACTURER INSTALLATION PROCEDURE AND STANDARDS.
4. ALL PILES LOCATED ON ROWS A, B, C, D, E AND F SHALL BE WRAPPED WITH SEASHIELD SERIES 70 BY DENSO, 10' ABOVE MLWL AND 1' BELOW MLWL. FOLLOW MANUFACTURER INSTALLATION PROCEDURE AND STANDARDS.
5. FIELD TOUCH UP COATING SHALL BE IDENTICAL TO FACTORY COATING AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
6. DENSO 2000HD MARINE PILING TAPE SHALL APPLY ON ALL PILES IN CONTACT WITH WATER 5' ABOVE AND BELOW OF MLWL.
7. THE PROTECTIVE COATING SHALL BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COATING IS TO BE APPLIED IN TWO COATS TO ACHIEVE A MINIMUM OVERALL DRY FILM THICKNESS OF 15 MILS.
8. ALL HOLIDAYS OR OTHER IMPERFECTIONS IN THE COATING SHALL BE REMOVED OR REPAIRED AT THE CONTRACTORS EXPENSE PRIOR TO FINAL ACCEPTANCE OF THE WORK.

1. WELDING SHALL CONFORM TO AWS D1.1, THE 'STRUCTURAL WELDING CODE - STEEL', PUBLISHED BY THE AMERICAN WELDING SOCIETY. A WELDER CERTIFIED IN ACCORDANCE WITH AWS STANDARDS SHALL PERFORM WELDING.
2. WELDING ELECTRODES SHALL BE E70XX LOW HYDROGEN AND COMPLY WITH AWS A5.1 AND AWS A5.5.
3. UNLESS OTHERWISE INDICATED, ALL FILLET WELDS SHALL BE CONTINUOUS AND DOUBLE SIDED. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS.
4. ALL WELDS SHALL BE SUBJECT TO NON-DESTRUCTIVE TESTING AT THE DISCRETION OF THE ENGINEER OF RECORD.
5. ANY DEFECTS SHALL BE CORRECTED IN ACCORDANCE WITH AWS RULES AT NO ADDITIONAL COST TO THE OWNER.
6. ALL SPLICES, WHEN PERMITTED, SHALL BE COMPLETE JOINT PENETRATION GROOVE WELDS AND BE SUBJECT TO NON-DESTRUCTIVE TESTING.
7. WELDS USED FOR PIPE MANUFACTURE SHALL HAVE SIMILAR CORROSIONAL RESISTANT QUALITIES TO THE BASE MATERIAL.

1. CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318-19 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE', AS ADOPTED BY THE AMERICAN CONCRETE INSTITUTE.
2. PLATFORM CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS. PORTLAND CEMENT SHALL BE TYPE II. CONCRETE SHALL CONTAIN 7.5% (+/- 1.5%) ENTRAINED AIR AND HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.40.
3. CONCRETE MIX SHOULD BE DESIGNED AND TESTED BY CONTRACTOR AS TO DEVELOP THE REQUIRED COMPRESSIVE STRENGTH AND BE APPROVED BY ENGINEER BEFORE STARTING THE OPERATIONS.
4. USE ACCELERATORS/ADMIXTURES, AS NECESSARY, TO IMPROVE WORKABILITY AND REDUCE WATER/CEMENT RATIO TO CONTROL SHRINKAGE.
5. USE OF CORROSION INHIBITORS IN THE CONCRETE MIX IS REQUIRED. CORROSION INHIBITORS SHALL BE PROPORTIONED IN ACCORDANCE WITH THE SPECIFICATIONS.
6. SUBMIT PROPOSED CONCRETE MIX TO THE ENGINEER FOR REVIEW.
7. CONCRETE SHALL BE CONTROLLED CONCRETE, MIXED AND PLACED IN THE PRESENCE OF THE APPROVED TESTING AGENCY.
8. DO NOT PLACE CONCRETE UNTIL REINFORCEMENT AND EMBEDDED ITEMS HAVE BEEN APPROVED BY THE ENGINEER AND/OR THE APPROVED TESTING AGENCY (IF/WHEN DIRECTED). PROVIDE A MINIMUM OF 24 HOURS NOTIFICATION TO THE ENGINEER.
9. PROVIDE BROOM FINISH ON ALL CONCRETE SLABS.
10. PROVIDE SMOOTH FORM FINISH ON ALL OTHER EXPOSED SURFACES.

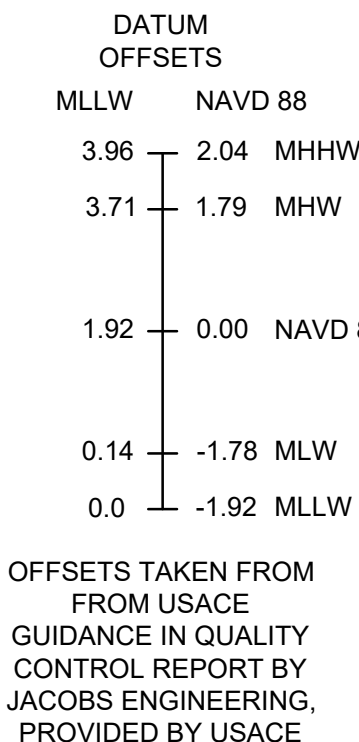
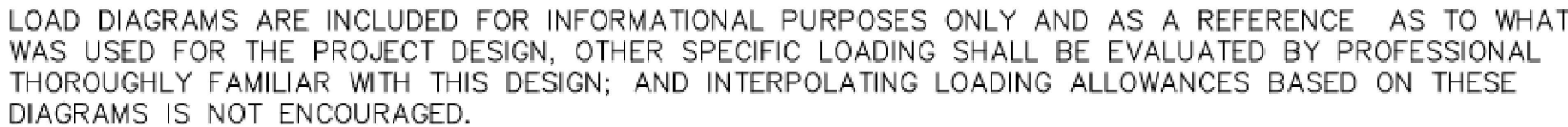
1. REINFORCING STEEL SHALL BE PLAIN, UNCOATED AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.
2. DETAILING, FABRICATION, AND ERECTION OF REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A775 OR ASTM 767 AND CONFORM TO THE REQUIREMENTS OF ACI-318 AND ACI-315' DETAILS AND DETAILING OF CONCRETE REINFORCEMENT".
3. REINFORCEMENT SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-19), ACI DETAILING MANUAL (SP-66), CRSI MANUAL OF STANDARD PRACTICE (MSP), AND THE STRUCTURAL WELDING CODE-REINFORCING STEEL (AWS D1.4).
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
5. PROVIDE SUPPLEMENTAL BARS AND ACCESSORIES AS REQUIRED TO HOLD REINFORCEMENT SECURELY IN POSITION.
6. MINIMUM CONCRETE PROTECTIVE COVER, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
 - a. CONCRETE EXPOSED TO WEATHER 3 INCHES
 - b. CONCRETE AT ADJACENT POURS 2 INCHES
 - c. CONCRETE PLACED AGAINST EARTH 3 INCHES
7. ALL CONTINUOUS REINFORCEMENT SHALL BE EXTENDED AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. USE STANDARD HOOKS UNLESS OTHERWISE INDICATED.
8. LAPS SHALL BE CLASS B TENSION LAP SPLICES, UNLESS NOTED OTHERWISE.
9. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS. PROVIDE MECHANICAL COUPLERS WHERE REQUIRED CONTINUOUS REINFORCEMENT EXCEEDS AVAILABLE LENGTHS.

1. FENDERS SHALL BE ZALDA TECHNOLOGY FENDER AND HDPE FACED PANEL "SC-1150" SER (HIGH FORMULA), ZALDA TECHNOLOGY USA (510) 783-4910 OR APPROVED EQUAL.

1. BOLLARD LOCATIONS ARE AS PLANS WITH 200 METRIC TONS PULL CAPACITY.

1. SCOUR PROTECTION SHALL BE ARMORFLEX 70L BY CONTECH ENGINEERED SOLUTIONS OR APPROVED EQUAL.
2. CELLULAR CONCRETE MATS SHALL BE PREFABRICATED AS AN ASSEMBLY OF CONCRETE BLOCKS, LACED WITH REVETMENT CABLES. CELLULAR CONCRETE MATS MAY BE ASSEMBLED ON-SITE BY HAND-PLACING THE INDIVIDUAL UNITS EITHER WITH OR WITHOUT SUBSEQUENT INSERTION OF CABLES.
3. INDIVIDUAL UNITS IN THE SYSTEM SHALL BE STAGGERED AND INTERLOCKED FOR ENHANCED STABILITY. THE MATS SHALL BE CONSTRUCTED OF OPEN AND/OR CLOSED CELL UNITS. OPEN CELL UNITS SHALL HAVE TWO VERTICAL OPENING OF RECTANGULAR CROSS SECTION WITH SUFFICIENT WALL THICKNESS TO RESIST SIPPING AND INSTALLATION.
4. PARALLEL STRANDS OF CABLE SHALL EXTEND THROUGH TWO CABLE DUCTS IN EACH BLOCK ALLOWING FOR LONGITUDINAL BINDING OF THE UNITS WITHIN A MAT.
5. EACH ROW OF UNITS SHALL BE Laterally OFFSET BY ONE-HALF OF A BLOCK WIDTH FROM THE ADJACENT ROW SO THAT ANY GIVEN BLOCK IS CABLED TO FOUR OTHER BLOCKS (TWO IN THE ROW ABOVE AND TWO IN THE ROW BELOW).
6. EACH BLOCK SHALL INCORPORATE INTERLOCKING SURFACES THAT MINIMIZE LATERAL DISPLACEMENT OF THE BLOCKS WITHIN THE MATS.
7. THE MATS MUST BE ABLE TO FLEX A MINIMUM OF 18 DEGREES BETWEEN ANY GIVEN ROW OR COLUMN OF BLOCKS IN THE UPLIFT DIRECTION AND A MINIMUM OF 45 DEGREES IN THE DOWNWARD DIRECTION.
8. THE CELLULAR CONCRETE MATS SHALL BE PLACED ON FILTER FABRIC. UNDER NO CIRCUMSTANCES SHALL THE FILTER FABRIC BE AFFIXED TO THE MATRESS IN A MANNER TO JEOPARDIZE THE FUNCTIONALITY OF THE FILTER FABRIC.
9. AT THE TIME OF DELIVERY TO THE PROJECT SITE, THE MINIMUM COMPRESSIVE STRENGTH OF AN INDIVIDUAL UNIT SHALL BE 3,500 PSI AND OF THE AVERAGE OF 3 UNITS SHALL BE 4,000 PSI.
10. AT THE TIME OF DELIVERY TO THE PROJECT SITE, THE MAXIMUM WATER ABSORPTION OF AN INDIVIDUAL UNIT SHALL BE 11.7 LB/FT³ AND OF THE AVERAGE OF 3 UNITS SHALL BE 9.1 LB/FT³.
11. REVETMENT CABLE SHALL BE CONSTRUCTED OF HIGH TENACITY, LOW ELONGATING, AND CONTINUOUS FILAMENT POLYESTER FIBERS. SECTIONS OF CABLE AND FITTINGS SHALL BE MADE IN A MANNER THAT INSURES A SAFE DESIGN FACTOR FOR MATS BEING LIFTED FROM BOTH ENDS, THEREBY FORMING A CATENARY.
12. MATS SHALL BE ANCHORED IN PLACE WITH MINIMUM 3" DIAMETER GALVANIZED PIPE DRIVEN FLUSH WITH TOP OF CONCRETE. THE DESIGN AND LAYOUT OF THE ANCHORED SYSTEM AND TOE ANCHORAGE SHALL BE BY THE MANUFACTURER.
13. GRADE SLOPE AS SHOWN IN SECTION TO FORM A SMOOTH PLANE SURFACE. PLACE FILTER FABRIC AND PLACE FILTERSTONE TO PROVIDE A UNIFORM GRADE SMOOTH PLANE SURFACE FOR PLACEMENT OF CELLAR CONCRETE MATS.
14. PLACE CONCRETE MATS IN ASSEMBLED LARGE MATRESSES. USE SPREADER BARS OR OTHER APPROVED DEVICES TO AID IN LIFTING AND PLACING OF THE MATS. THE EQUIPMENT USED SHALL HAVE ADEQUATE CAPACITY TO PLACE THE MATS WITHOUT BUMPING, DRAGGING, TEARING OR OTHERWISE DAMAGING THE UNDERLYING FABRIC OR CONCRETE MATS.

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**MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVIEWS	DESCRIPTION	DATE	BY	NO
				△
				△
				△
				△
DATE OF PREPARATION				
	BY	DATE		
SURVEYED				
DRAWN	CJP/MXS6	11/7/2025		
DESIGNED	MXS6	11/7/2025		
CHECKED	AIM/JSG	11/7/2025		
PE STAMP				

SHEET TITLE:

GENERAL NOTES
(MARINE
INFRASTRUCTURE,
2 OF 2)

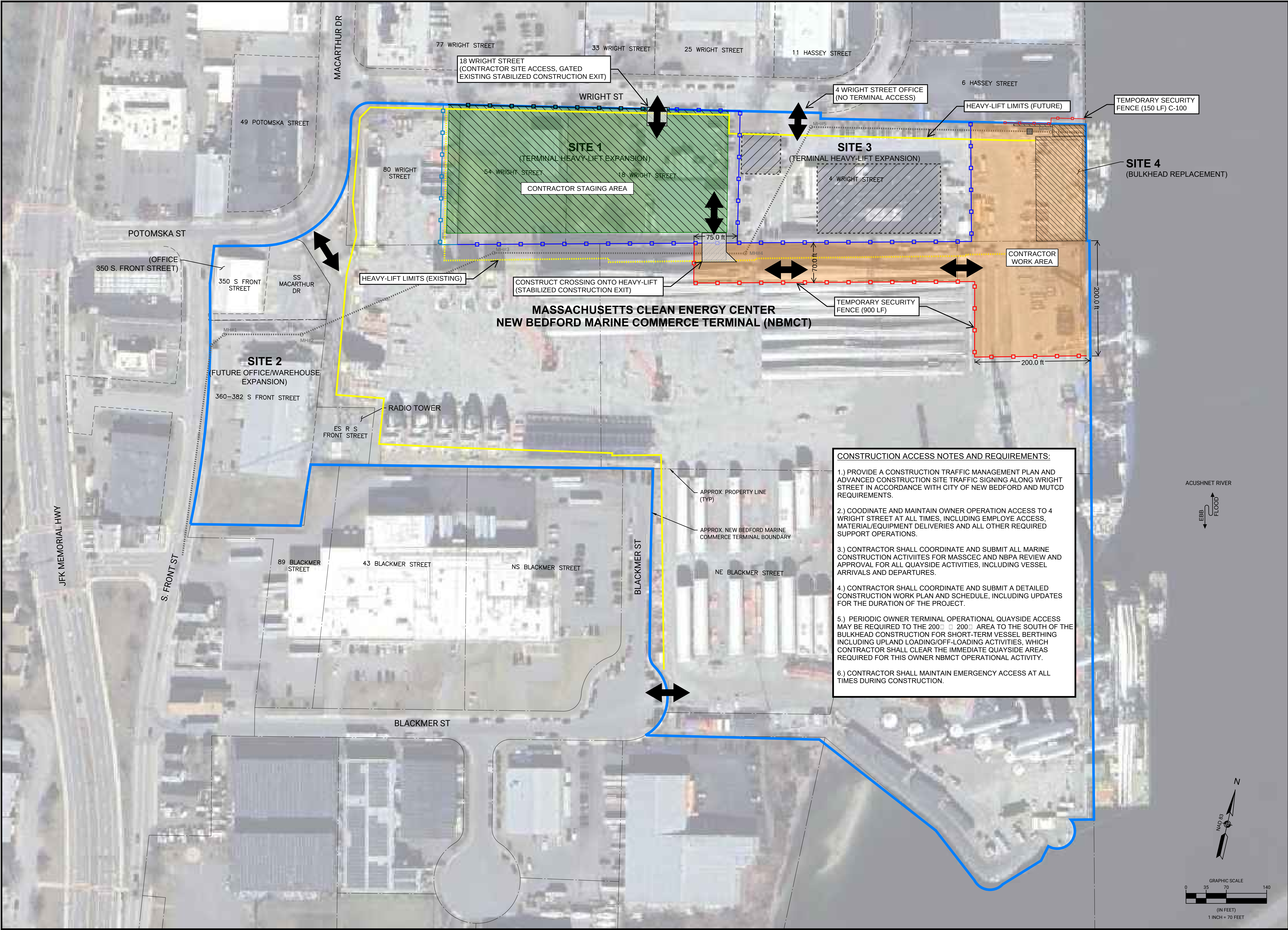
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

G-007



CONSTRUCTION ACCESS NOTES AND REQUIREMENTS:

- 1.) PROVIDE A CONSTRUCTION TRAFFIC MANAGEMENT PLAN AND ADVANCED CONSTRUCTION SITE TRAFFIC SIGNING ALONG WRIGHT STREET IN ACCORDANCE WITH CITY OF NEW BEDFORD AND MUTCD REQUIREMENTS.
- 2.) COODINATE AND MAINTAIN OWNER OPERATION ACCESS TO 4 WRIGHT STREET AT ALL TIMES, INCLUDING EMPLOYE ACCESS, MATERIAL/EQUIPMENT DELIVERIES AND ALL OTHER REQUIRED SUPPORT OPERATIONS.
- 3.) CONTRACTOR SHALL COORDINATE AND SUBMIT ALL MARINE CONSTRUCTION ACTIVIITES FOR MASSCEC AND NBPA REVIEW AND APPROVAL FOR ALL QUAYSIDE ACTIVITIES, INCLUDING VESSEL ARRIVALS AND DEPARTURES.
- 4.) CONTRACTOR SHALL COORDINATE AND SUBMIT A DETAILED CONSTRUCTION WORK PLAN AND SCHEDULE, INCLUDING UPDATES FOR THE DURATION OF THE PROJECT.
- 5.) PERIODIC OWNER TERMINAL OPERATIONAL QUAYSIDE ACCESS MAY BE REQUIRED TO THE 200' x 200' AREA TO THE SOUTH OF THE BULKHEAD CONSTRUCTION FOR SHORT-TERM VESSEL BERTHING INCLUDING UPLAND LOADING/OFF-LOADING ACTIVITIES, WHICH CONTRACTOR SHALL CLEAR THE IMMEDIATE QUAYSIDE AREAS REQUIRED FOR THIS OWNER NBMCT OPERATIONAL ACTIVITY.
- 6.) CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS AT ALL TIMES DURING CONSTRUCTION.

PROJECT: MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER: NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	

DATE OF PREPARATION

	BY	DATE
SURVEYED		
DRAWN	CJPMXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

SHEET TITLE:

CONSTRUCTION
SEQUENCING &
ACCESS
CONTROL PLAN

ISSUANCE:

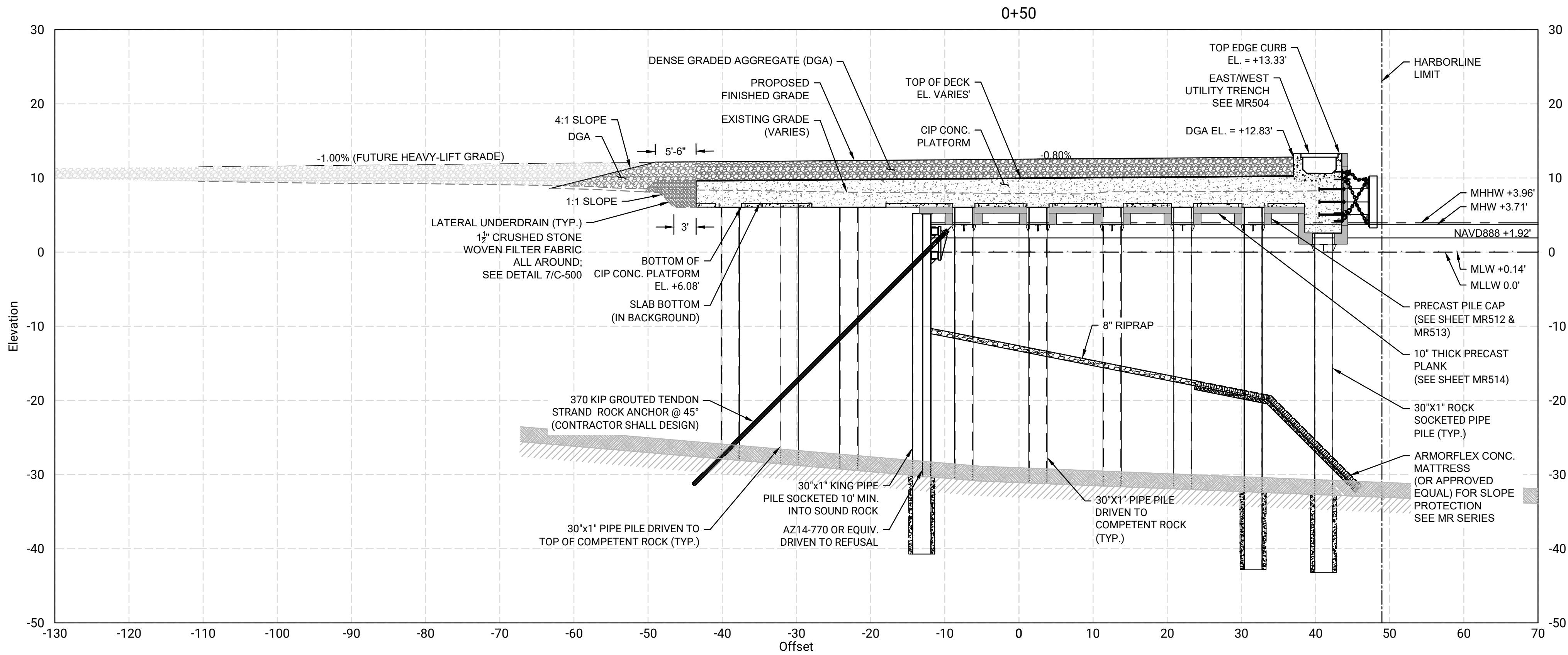
IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

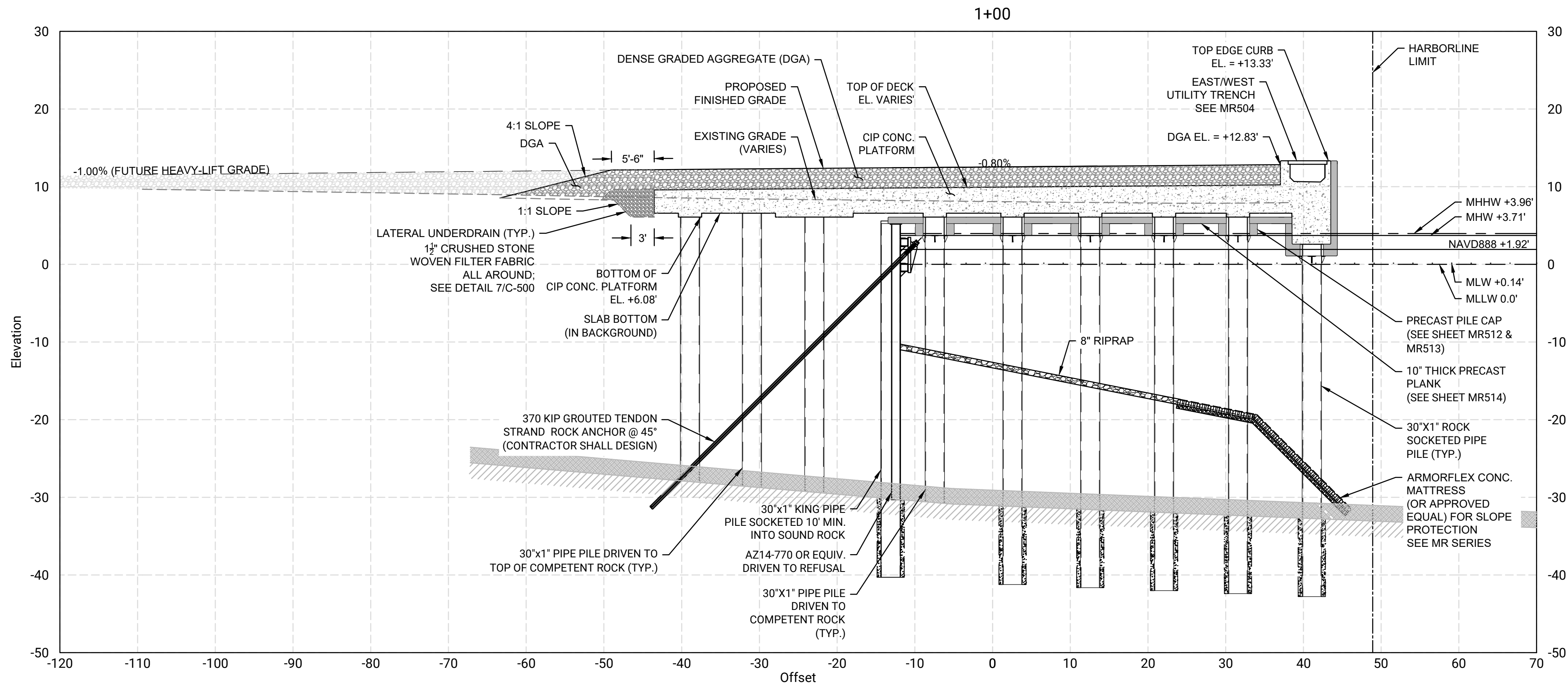
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G-008

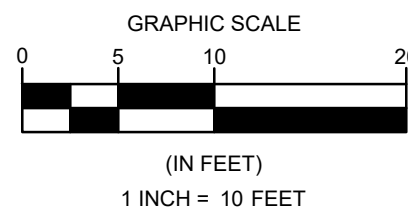
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A BULKHEAD GRADING SECTION
C-101 SCALE: 1" = 10'
NOTE: SEE MR SERIES FOR STRUCTURAL DETAILS.



B BULKHEAD GRADING SECTION
C-101 SCALE: 1" = 10'
NOTE: SEE MR SERIES FOR STRUCTURAL DETAILS.



PROJECT: **MASSECC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	

DATE OF PREPARATION		
	BY	DATE
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DRAWN	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

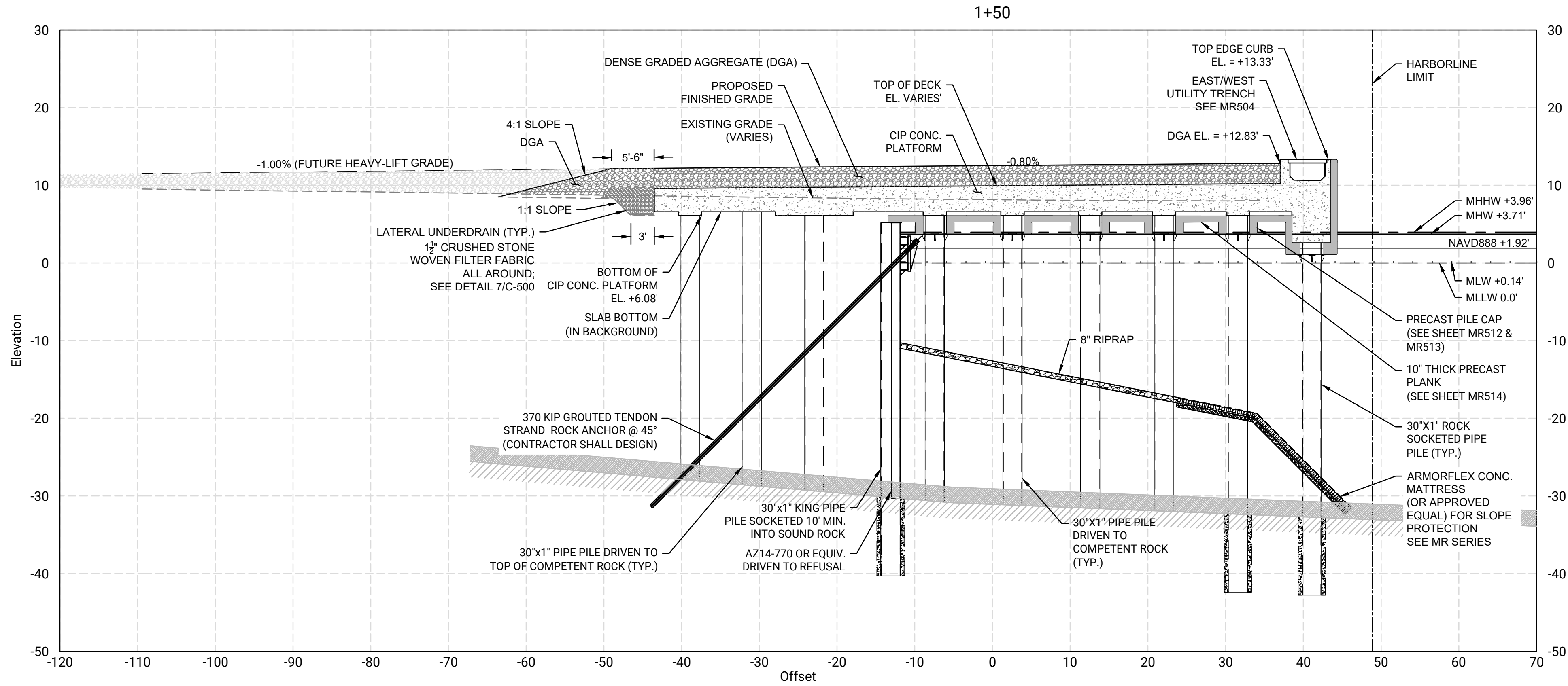
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SHEET TITLE:
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SECTIONS 1
OF 3**

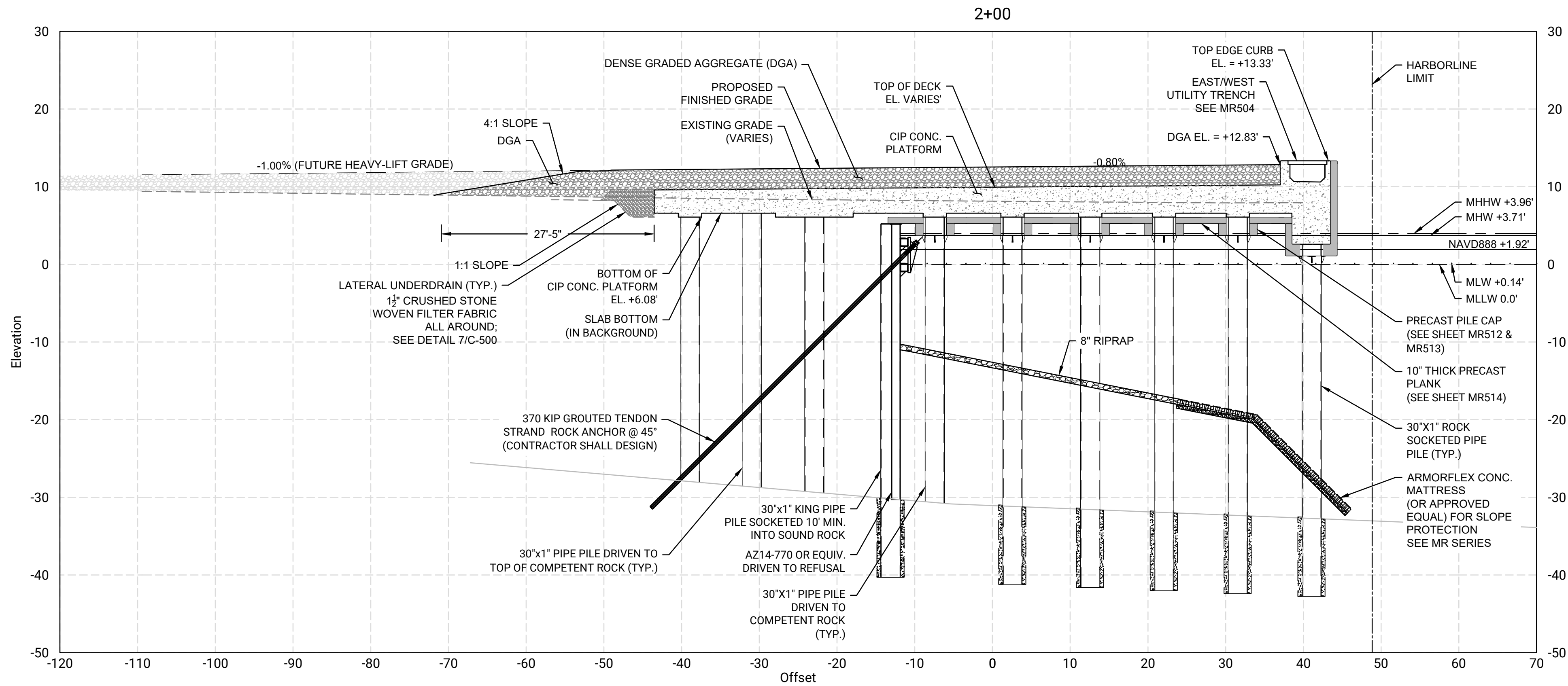
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(11/10/2025)**

PROJECT NO: 0024M070.04
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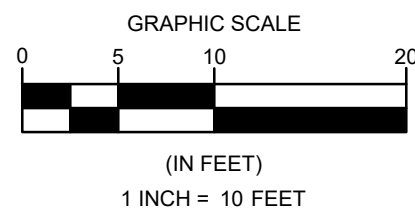
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C BULKHEAD GRADING SECTION
C-101 SCALE: 1" = 10'
NOTE: SEE MR SERIES FOR STRUCTURAL DETAILS.



D BULKHEAD GRADING SECTION
C-101 SCALE: 1" = 10'
NOTE: SEE MR SERIES FOR STRUCTURAL DETAILS.



PROJECT: **MASSECC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

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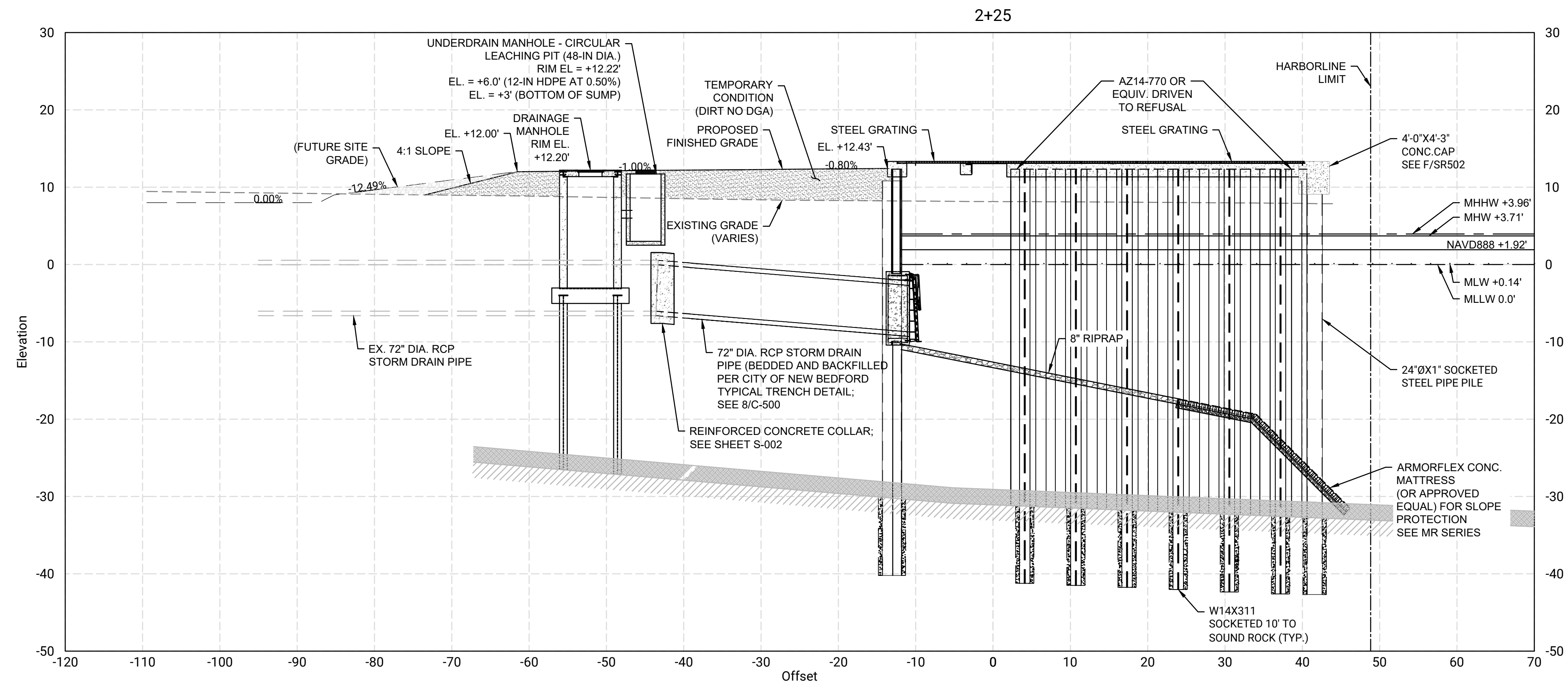
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DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

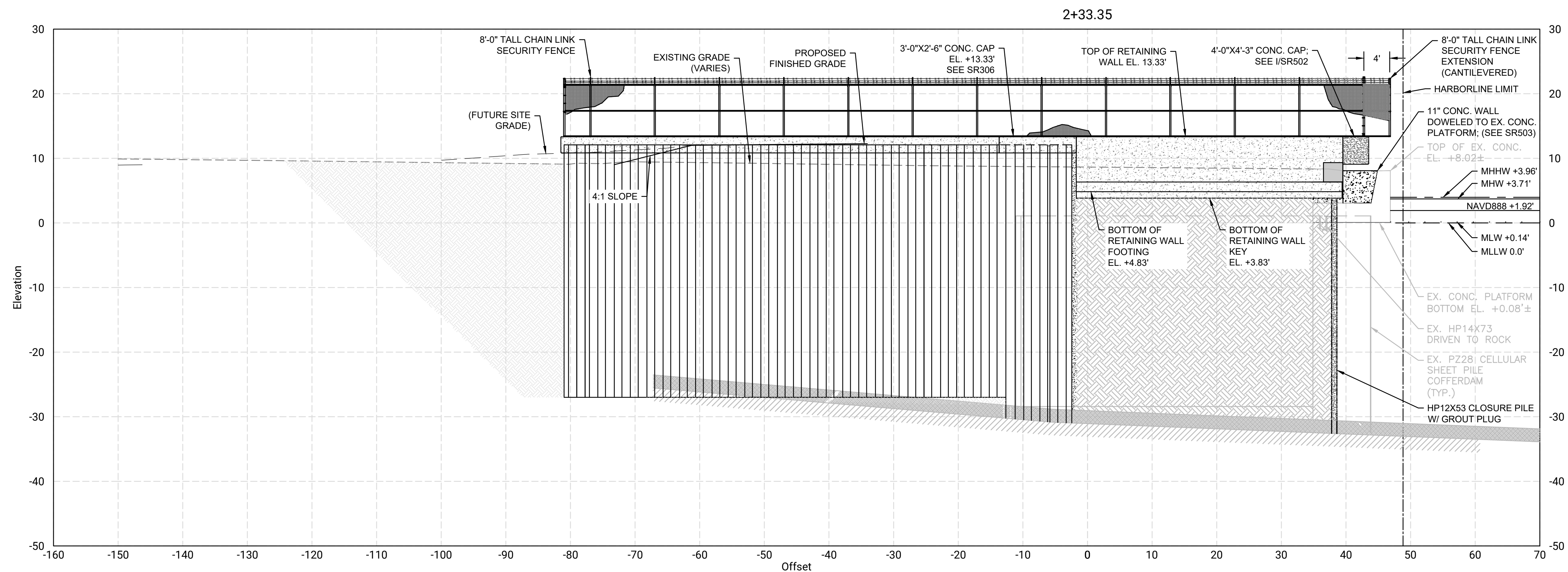
SHEET TITLE:
**SITE CIVIL
SECTIONS
2 OF 3**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
C-301

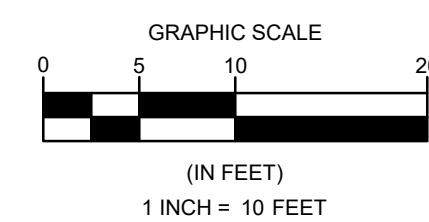


E EAST/WEST COMBI-WALL GRADING SECTION
C-101 SCALE: 1" = 10'
 NOTE: SEE MR SERIES FOR STRUCTURAL DETAILS.



F RETAINING WALL GRADING SECTION
C-101 SCALE: 1" = 10'

NOTE: SEE SR306 FOR STRUCTURAL DETAILS.



**MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

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DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025
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SHEET TITLE:

SITE CIVIL
SECTIONS
3 OF 3

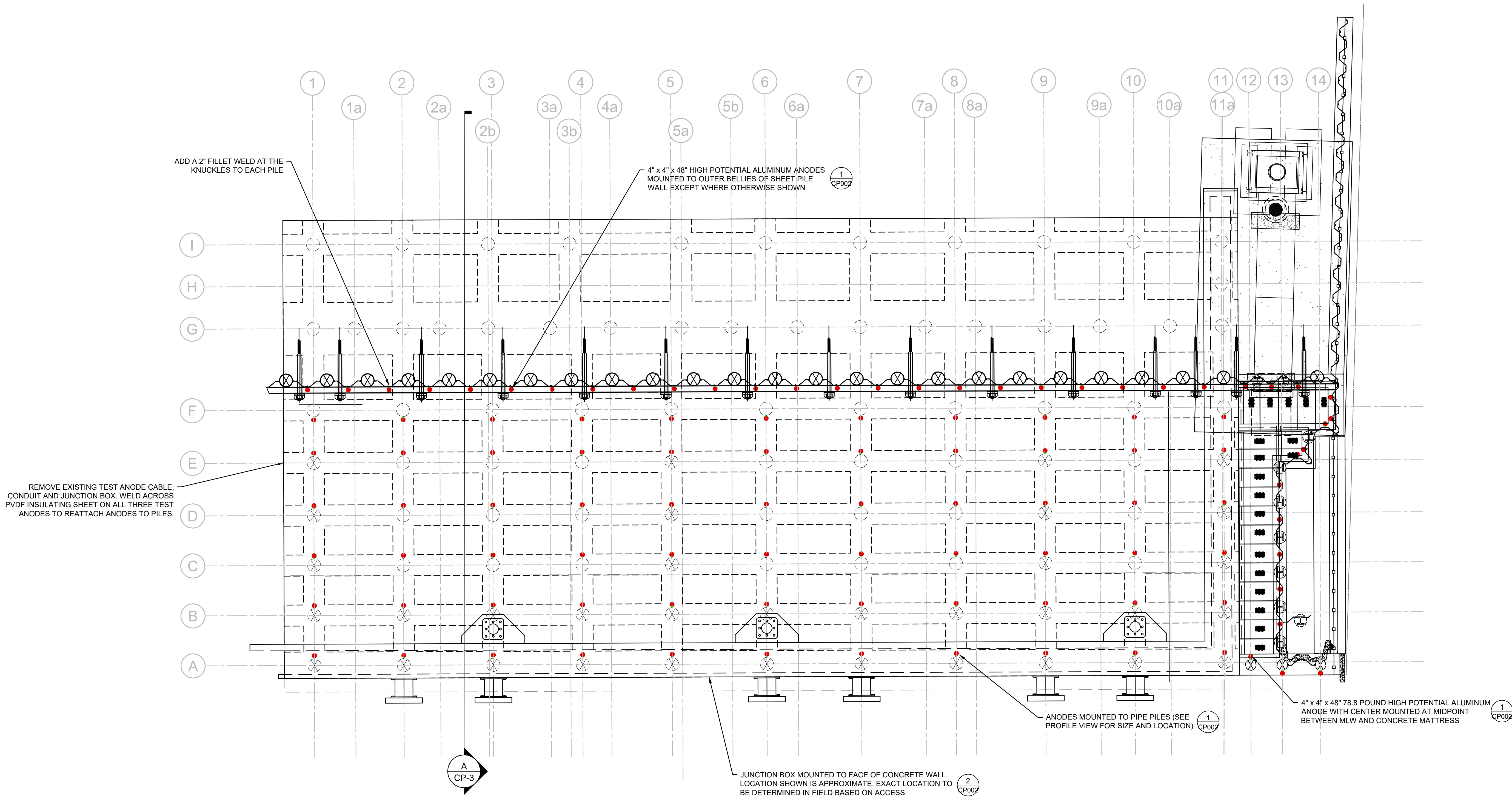
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

C-302



1 SITE PLAN
CP001 SCALE: NONE

PROJECT:
MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER:
NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA

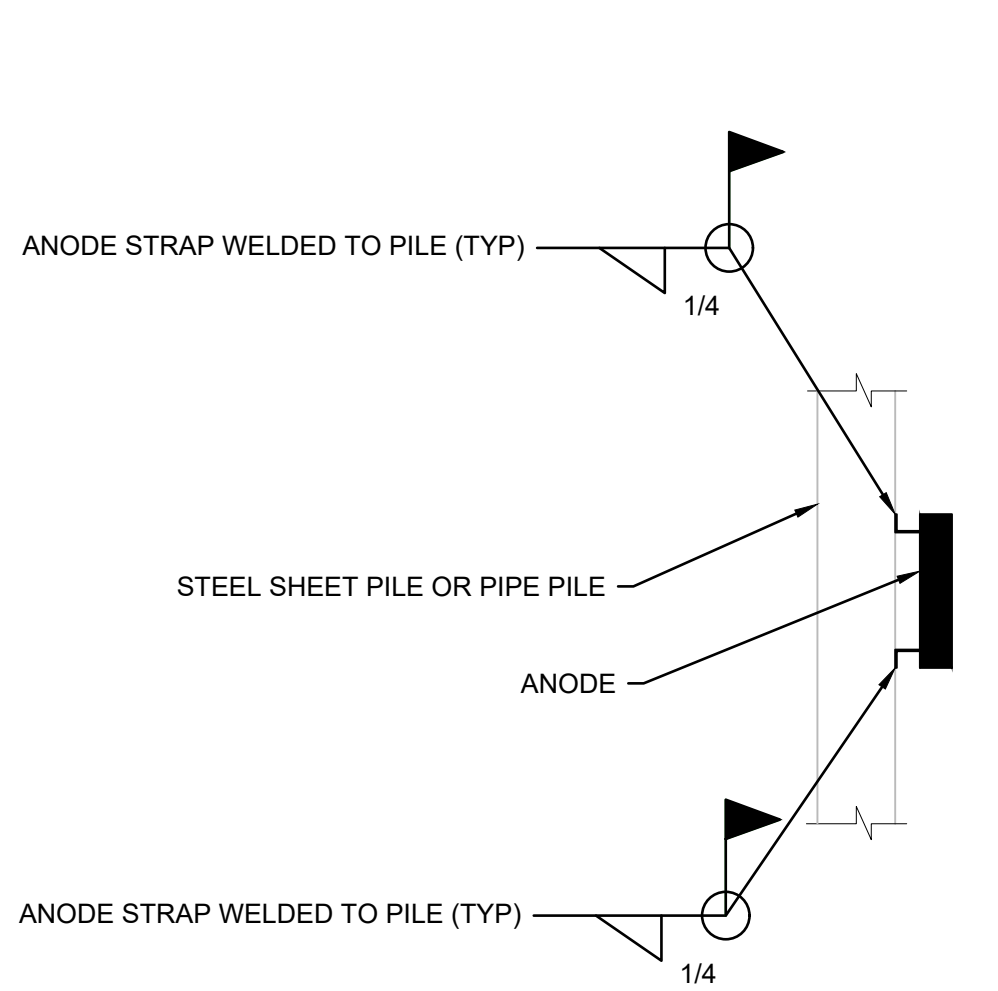
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SURVEYED		
DRAWN	DT	11/10/2025
DESIGNED	JC	11/10/2025
CHECKED	JC	11/10/2025

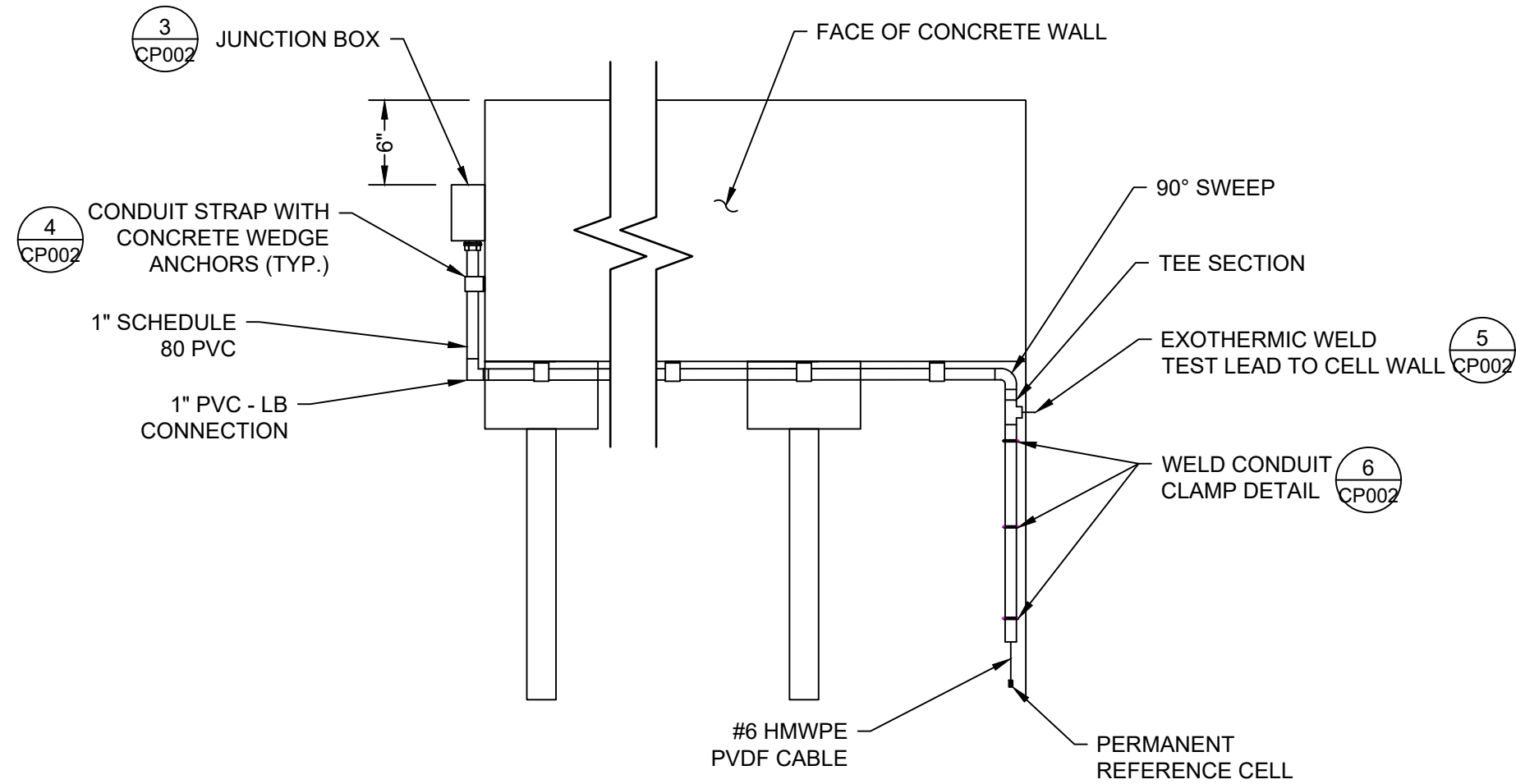
SHEET TITLE:
CATHODIC
PROTECTION
SYSTEM
SITE PLAN

ISSUANCE:
IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04
SHEET NUMBER
CP001

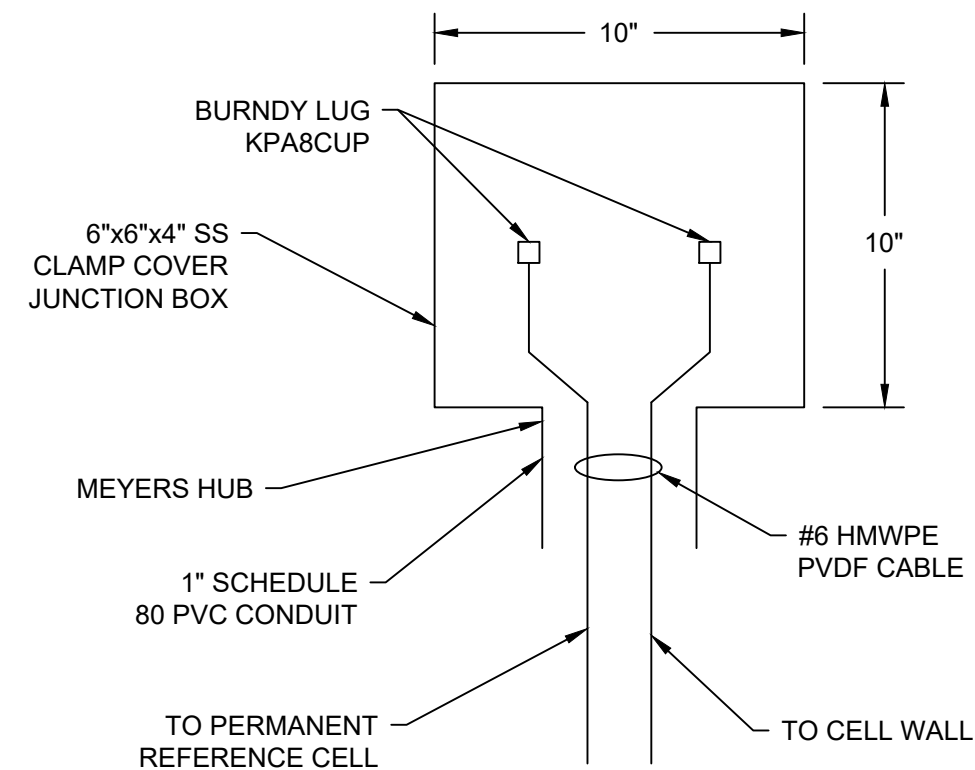


1 OFFSET MOUNT ANODE INSTALLATION -TYPICAL
CP002 SCALE: NONE



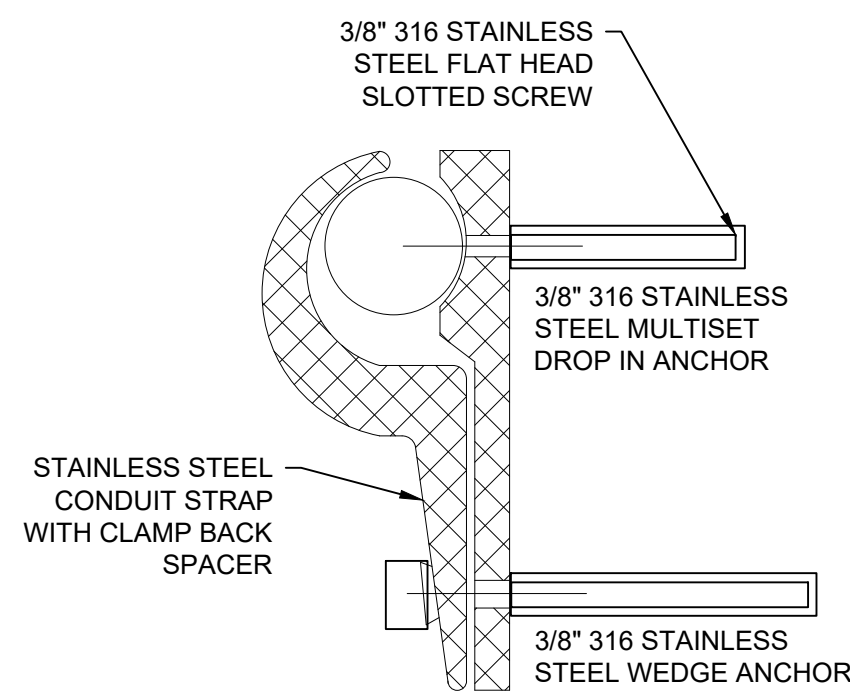
- NOTES:
- ALL CONDUIT 1" SCHEDULE 80 PVC UNLESS OTHERWISE NOTED.
 - CONDUIT SHALL BE MOUNTED TO CONCRETE WITH 3/8" 316 STAINLESS STEEL WEDGE ANCHORS AND STAINLESS STEEL CONDUIT STRAP WITH CLAMP BACK SPACER.
 - MAX. SPACING OF 2 FEET BETWEEN STRAPS.
 - ALL HARDWARE SHALL BE STAINLESS STEEL.
 - MAX. SPACING OF 4 FEET BETWEEN CLAMPS.
 - CONDUIT SHALL BE MOUNTED TO UNDERSIDE OF CONCRETE WALL.
 - ONE (1) #6 HMWPE PVDF CABLE SHALL BE ATTACHED TO A PERMANENT REFERENCE CELL UPON IMMEDIATE EXIT OF 1" SCHEDULE 80 PVC AT BOTTOM OF WALL.
 - ONE (1) #6 HMWPE PVDF CABLE SHALL BE EXOTHERMICALLY WELDED TO THE WALL UPON IMMEDIATE EXIT OF 1" SCHEDULE 80 PVC TEE SECTION AT TOP OF WALL.

2 JUNCTION BOX TEST STATION INSTALLATION DETAIL
CP002 SCALE: NONE

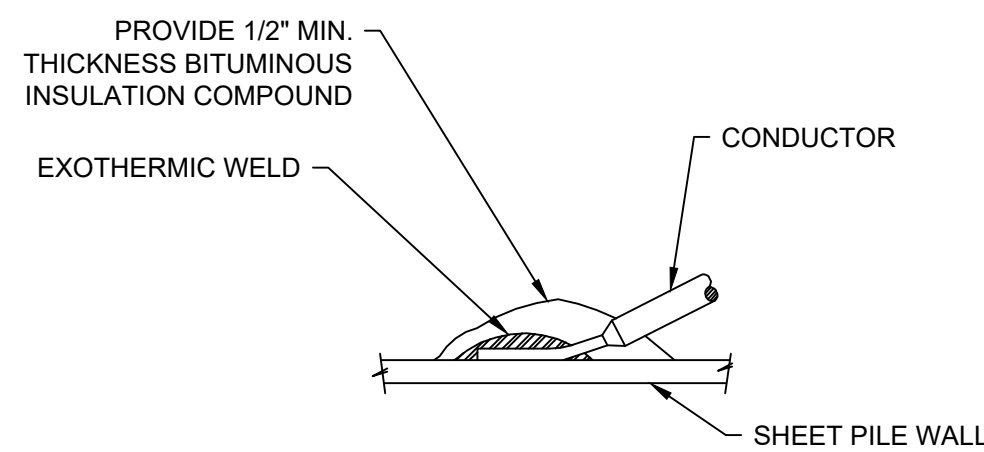


- NOTES:
- ALL HARDWARE INSIDE JUNCTION BOX SHALL BE COPPER AND MOUNTED ON PHENOLIC BACKING
 - JUNCTION BOX SHALL BE MOUNTED USING STAINLESS STEEL CONCRETE WEDGE ANCHORS AND STAINLESS STEEL HARDWARE.

3 JUNCTION BOX DETAIL
CP002 SCALE: NONE

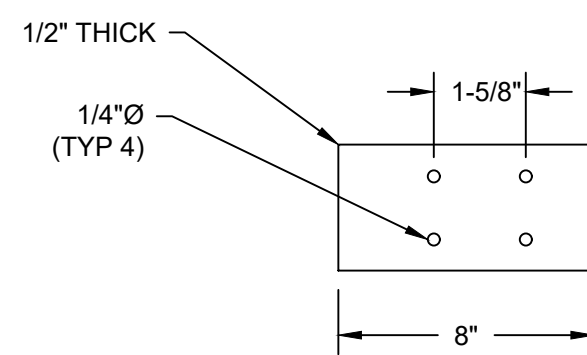


4 CONDUIT STRAP WITH CONCRETE WEDGE ANCHORS
CP002 SCALE: NONE

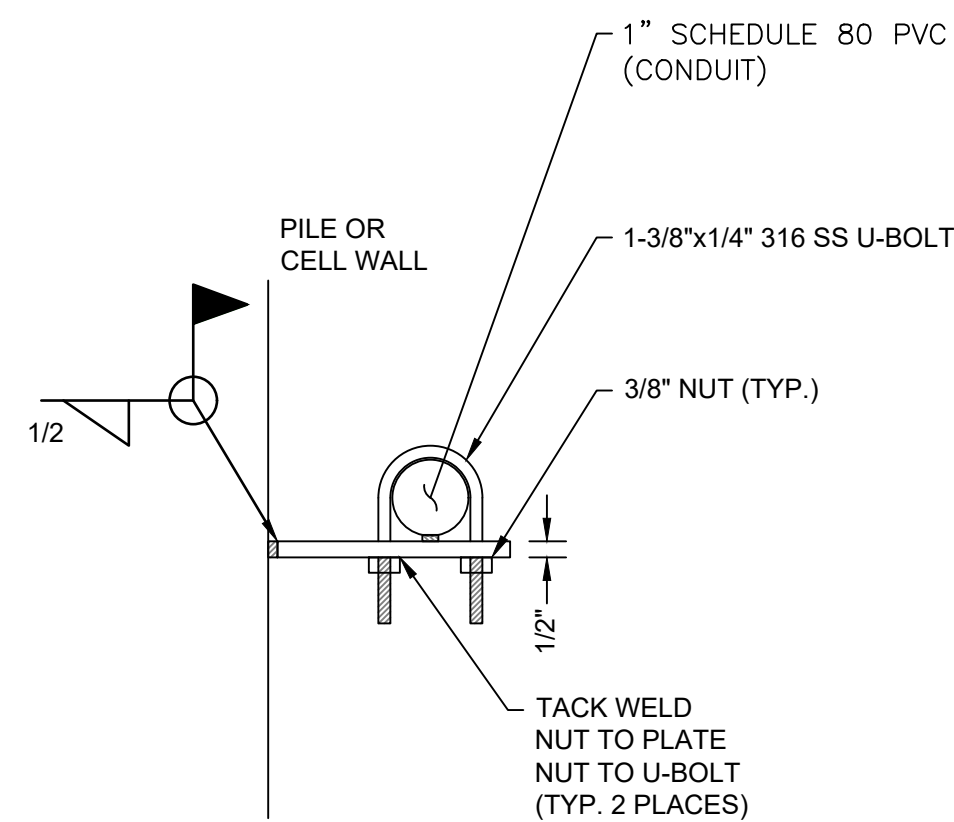


NOTE:
METAL SURFACE MUST BE DRY
AND FREE OF FOREIGN MATERIAL
AND COATING PRIOR TO WELDING.

5 CONDUIT STRAP WITH CONCRETE WEDGE ANCHORS
CP002 SCALE: NONE



6 WELDED CONDUIT CLAMP DETAIL
CP002 SCALE: NONE



PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC)
NEW BEDFORD, MA**

REVISIONS	NO	BY	DATE	DESCRIPTION
DATE OF PREPARATION				
		BY	DATE	
SURVEYED				
DRAWN	DT		11/10/2025	
DESIGNED	JC		11/10/2025	
CHECKED	JC		11/10/2025	

SHEET TITLE:

**CATHODIC
PROTECTION
SYSTEM
DETAILS**

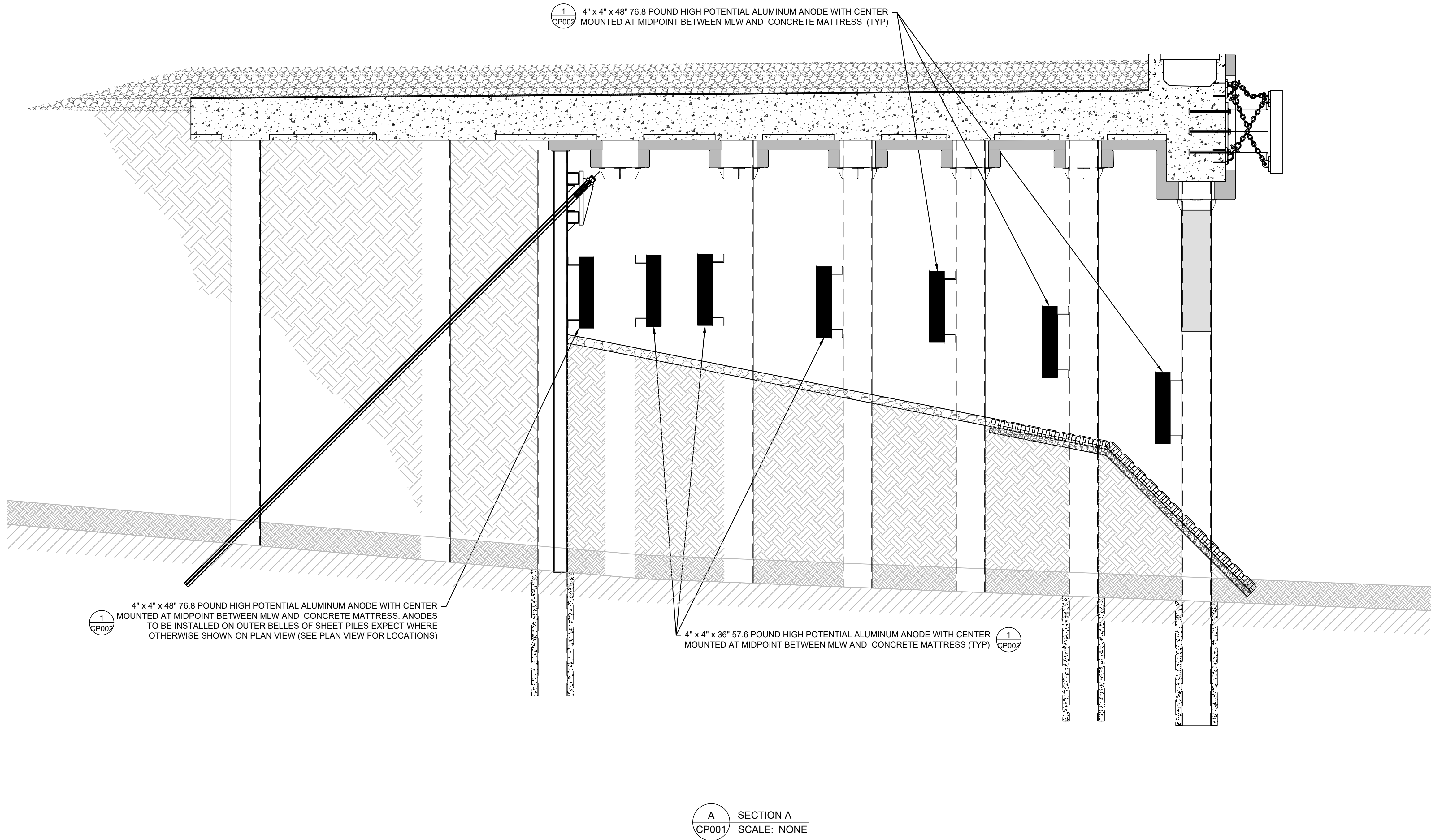
ISSUANCE:

**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04

SHEET NUMBER

CP002



PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

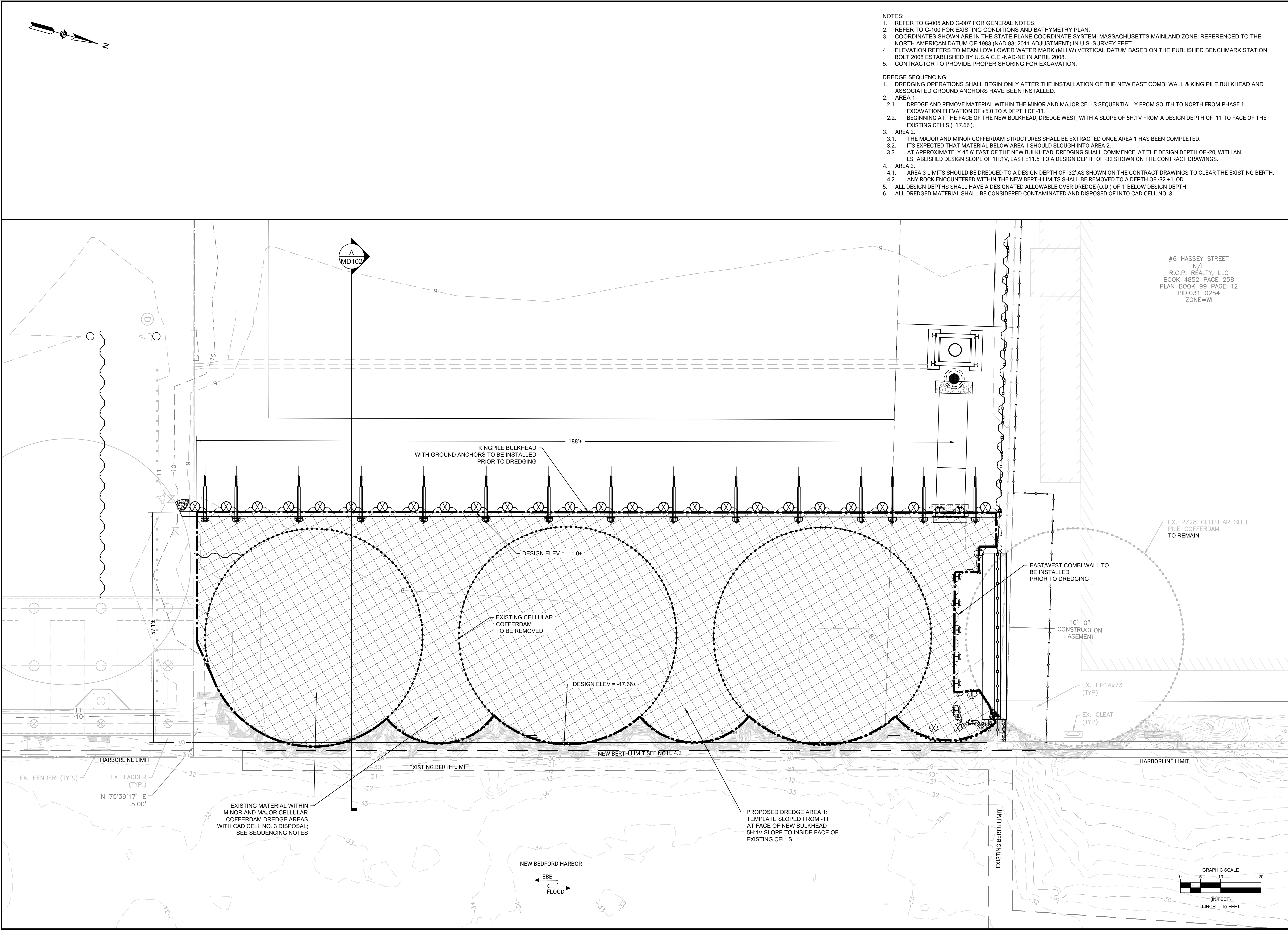
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DATE OF PREPARATION	
BY	DATE
SURVEYED	
DRAWN	DT 11/10/2025
DESIGNED	JC 11/10/2025
CHECKED	JC 11/10/2025

SHEET TITLE:
**CATHODIC
PROTECTION
SYSTEM
SECTION**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
CP003



- NOTES:
1. REFER TO G-005 AND G-007 FOR GENERAL NOTES.
 2. REFER TO G-100 FOR EXISTING CONDITIONS AND BATHYMETRY PLAN.
 3. COORDINATES SHOWN ARE IN THE STATE PLANE COORDINATE SYSTEM, MASSACHUSETTS MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83; 2011 ADJUSTMENT) IN U.S. SURVEY FEET.
 4. ELEVATION REFERS TO MEAN LOW LOWER WATER MARK (MLLW) VERTICAL DATUM BASED ON THE PUBLISHED BENCHMARK STATION BOLT 2008 ESTABLISHED BY U.S.A.C.E.-NAD-NE IN APRIL 2008.
 5. CONTRACTOR TO PROVIDE PROPER SHORING FOR EXCAVATION.
- DREDGE SEQUENCING:
1. DREDGING OPERATIONS SHALL BEGIN ONLY AFTER THE INSTALLATION OF THE NEW EAST COMBI WALL & KING PILE BULKHEAD AND ASSOCIATED GROUND ANCHORS HAVE BEEN INSTALLED.
 2. AREA 1:
 - 2.1. DREDGE AND REMOVE MATERIAL WITHIN THE MINOR AND MAJOR CELLS SEQUENTIALLY FROM SOUTH TO NORTH FROM PHASE 1 EXCAVATION ELEVATION OF +5.0 TO A DEPTH OF -11.
 - 2.2. BEGINNING AT THE FACE OF THE NEW BULKHEAD, DREDGE WEST, WITH A SLOPE OF 5H:1V FROM A DESIGN DEPTH OF -11 TO FACE OF THE EXISTING CELLS (±17.66).
 3. AREA 2:
 - 3.1. THE MAJOR AND MINOR COFFERDAM STRUCTURES SHALL BE EXTRACTED ONCE AREA 1 HAS BEEN COMPLETED.
 - 3.2. ITS EXPECTED THAT MATERIAL BELOW AREA 1 SHOULD SLOUGH INTO AREA 2.
 - 3.3. AT APPROXIMATELY 45.6' EAST OF THE NEW BULKHEAD, DREDGING SHALL COMMENCE AT THE DESIGN DEPTH OF -20, WITH AN ESTABLISHED DESIGN SLOPE OF 1H:1V, EAST ±11.5' TO A DESIGN DEPTH OF -32 SHOWN ON THE CONTRACT DRAWINGS.
 4. AREA 3:
 - 4.1. AREA 3 LIMITS SHOULD BE DREDGED TO A DESIGN DEPTH OF -32' AS SHOWN ON THE CONTRACT DRAWINGS TO CLEAR THE EXISTING BERTH.
 - 4.2. ANY ROCK ENCOUNTERED WITHIN THE NEW BERTH LIMITS SHALL BE REMOVED TO A DEPTH OF -32 ±1' OD.
 5. ALL DESIGN DEPTHS SHALL HAVE A DESIGNATED ALLOWABLE OVER-DREDGE (O.D.) OF 1' BELOW DESIGN DEPTH.
 6. ALL DREDGED MATERIAL SHALL BE CONSIDERED CONTAMINATED AND DISPOSED OF INTO CAD CELL NO. 3.

#6 HASSEY STREET
N/F
R.C.P. REALTY, LLC
BOOK 4852 PAGE 258
PLAN BOOK 99 PAGE 12
PID:031 0254
ZONE=W1



PROJECT: **MASSECC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
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DATE OF PREPARATION	
BY	DATE
SURVEYED	
DRAWN	CJPMXS6 11/7/2025
DESIGNED	MXS6 11/7/2025
CHECKED	AIMJSG 11/7/2025

PE STAMP

SHEET TITLE: **DREDGE
PLAN**

ISSUANCE: **IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04

SHEET NUMBER: **MD101**



PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

NO.	BY	DATE	REVISIONS	
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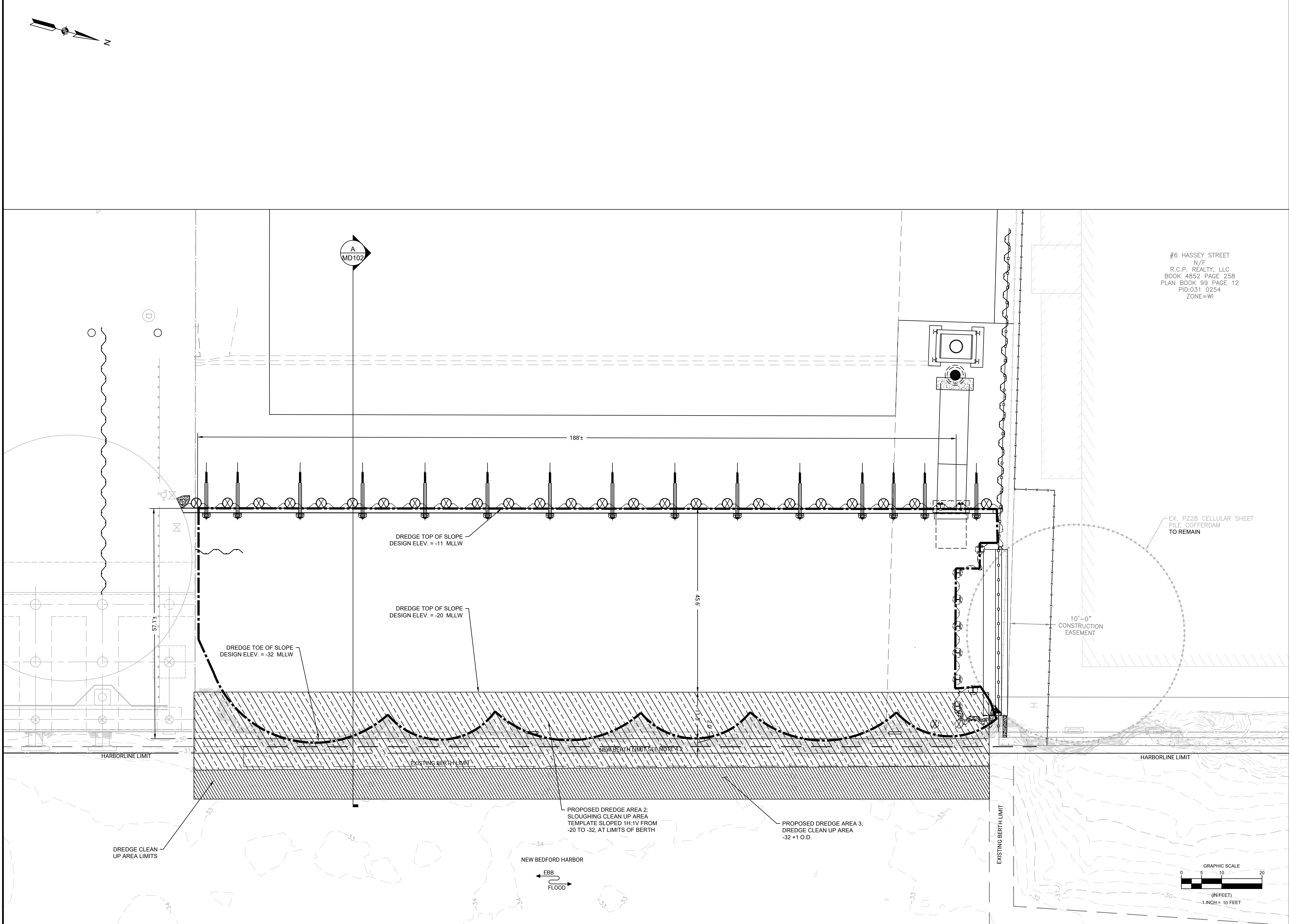
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	BY	DATE
SURVEYED		
DRAWN	CJPMXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

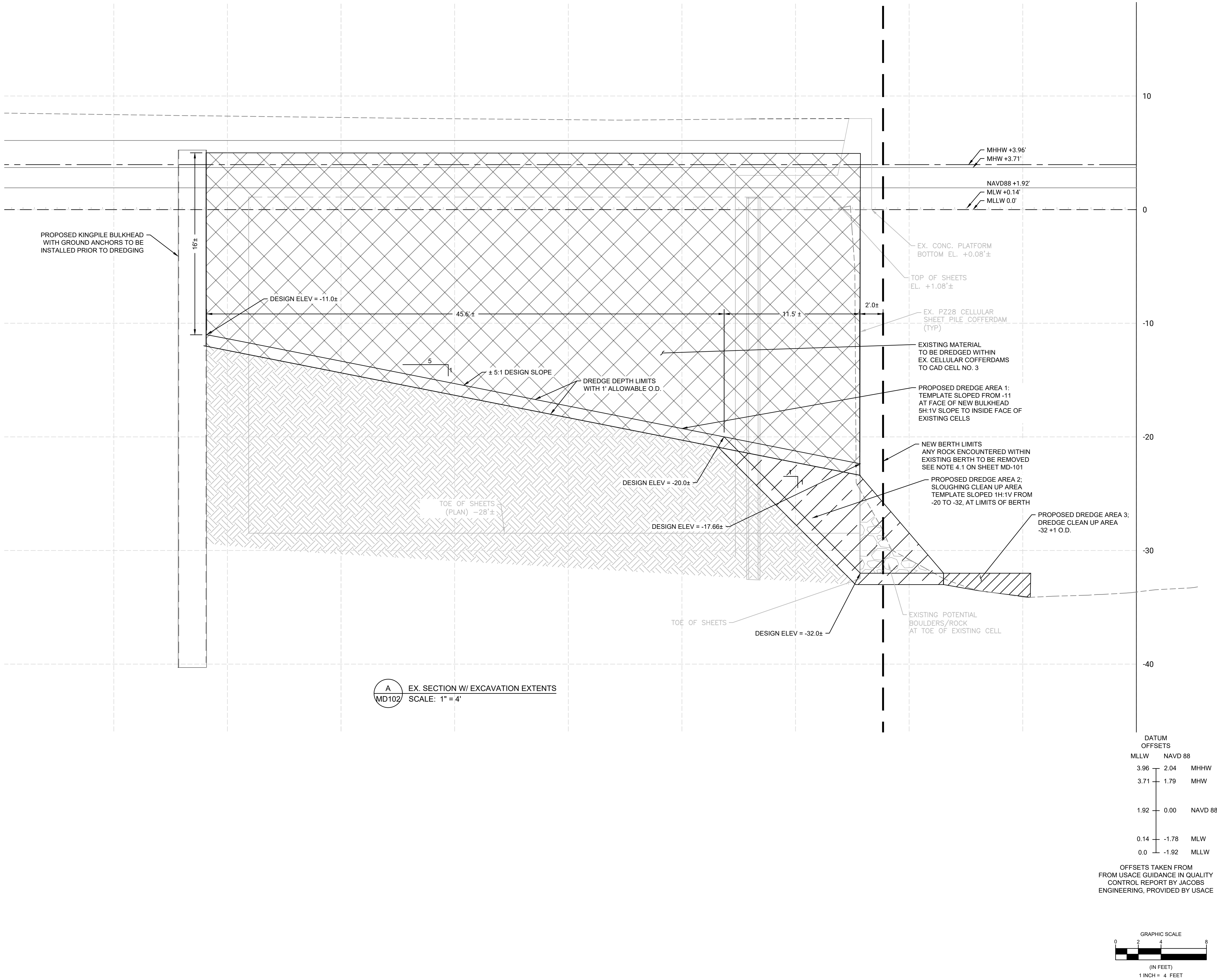
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SHEET TITLE:
**DREDGE
PLAN**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MD102





PROJECT: **MASCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC)
NEW BEDFORD, MA**

REVISIONS			
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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

SHEET TITLE: **EX. SECTION
WITH
EXCAVATION
LIMITS**

ISSUANCE: **IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MD103



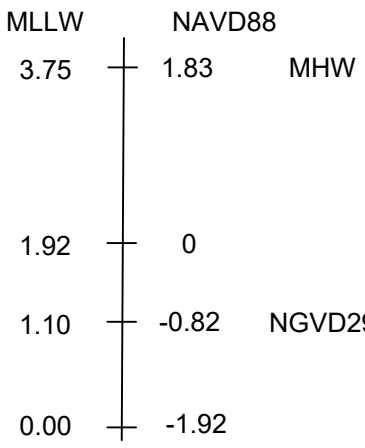
- DISPOSAL NOTES:
1. DATUM REPRESENTED IN MLLW.
 2. CAD CELL NO. 3 CONTOURS FROM LATEST CONDITIONS SURVEYS PROVIDED BY FOTH DATED 03/15/2024 & 09/25/2025.
 3. CAD CELL NO. 3 AREA CONTOURS ARE BASED ON 3x3A VALUE DATA SET AND SHOWN AT 1' CONTOUR INTERVAL FOR CLARITY.
 4. ALL ACCESS TO CAD CELL NO. 3 SHALL BE THROUGH CAD CELL NO. 4 AS SHOWN ON THE DISPOSAL PLAN. NO ALLOWABLE ACCESS THROUGH LHCC OR CAD CELL NO. 2 ACCESS CHANNEL. THE CONTRACTOR MAY REMOVE AND REINSTALL SILT CURTAIN PILES AS REQUIRED TO GAIN ACCESS TO CAD CELL NO. 3 THROUGH CAD CELL NO. 4.
 5. SEE SPECIFICATIONS SECTION 35 24 00 DREDGING & DISPOSAL IN CAD CELLS FOR MORE INFORMATION.
 6. MAXIMUM ALLOWABLE FILL ELEVATION WITHIN LOWER HARBOR CAD CELL IS -10.0 FT NAVD88. NO MATERIAL SHALL BE PLACED ABOVE THIS ELEVATION. ANY MATERIAL PLACED ABOVE THE MAXIMUM FILL ELEVATION SHALL BE REMOVED AT THE EXPENSE OF THE CONTRACTOR.
 7. THE CONTRACTOR SHALL ENSURE PLACEMENT OF DISPOSAL MATERIAL REMAINS WITHIN THE FOOTPRINT OF THE MAXIMUM FILL ELEVATION OF CAD CELL NO. 3.
 8. THE CONTRACTOR SHALL SUBMIT A DISPOSAL PLAN WITH DETAILED PLACEMENT METHODOLOGY.
 9. THE CONTRACTOR IS AUTHORIZED TO CONDUCT BED LEVELING WITH CAD CELL NO. 3 FOOTPRINT.
 10. EXISTING BATHYMETRIC DATA SHOWS AN ACCESS CHANNEL LOCATED AT THE SOUTHERN END OF CAD CELL NO. 2. IT IS ANTICIPATED THAT A CONTAINMENT BERM WILL BE CONSTRUCTED ACROSS THE ACCESS CHANNEL FOR CAD CELL NO. 2 PRIOR TO THE START OF THE DREDGING AND REMOVAL OF MATERIAL FROM WITHIN THE CELLULAR COFFERDAMS. FUTURE CONTAINMENT BERM SHOWN FOR REFERENCE.
 11. CAD 4 SILT CURTAIN MAY BE REMOVED AT THE COMPLETION OF THE LEONARDS WHARF PROJECT. CAD CELL NO. 4 SUPPORT PILES TO REMAIN AT THE COMPLETION OF THE LEONARDS WHARF PROJECT.
 12. THE CONTRACTOR SHALL REMOVE EXISTING SILT CURTAIN PILES AS REQUIRED TO CREATE ACCESS TO CAD CELL NO. 3 AS SHOWN ON THE PLAN. THE CONTRACTOR SHALL LOCATE THE NORTHING, EASTING, AND ELEVATION OF THE THE TOP OF THE PILE PRIOR TO REMOVAL. THE CONTRACTOR SHALL REINSTALL THE REMOVED PILE TO THE SAME POSITION & ELEVATION PRIOR TO DEMOBILIZATION. THE CONTRACTOR SHALL REPLACE ANY SILT CURTAIN PILE DAMAGED DURING THE DISPOSAL OPERATION.
 13. SEE SPECIFICATIONS SECTION 35 24 00 DREDGING & DISPOSAL FOR ALLOWABLE TUG & PUSH BOAT REQUIREMENTS FOR MOVEMENT OF SCOWS WITHIN THE CAD CELL AREA.

LEGEND:

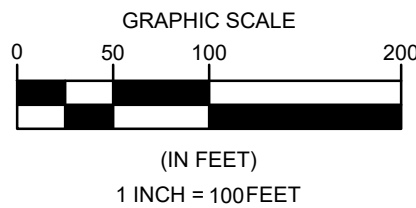
- LIMITS OF CAD CELL NO. 3 DISPOSAL AREA
- - - AS BUILT LIMIT OF EXISTING CAD CELL & EXISTING CAD CELL ACCESS CHANNELS
- ○ ○ AS-BUILT SILT CURTAIN PILE LOCATION



DATUM OFFSETS



OFFSETS TAKEN FROM
JACOBS ENG. QUALITY CONTROL REPORT
PROJECT DATUMS DEFINED
(PROVIDED BY USACE)



PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

NO.	BY	DATE		DESCRIPTION
		DATE	DESCRIPTION	
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DATE OF PREPARATION

BY	DATE

SURVEYED	CJP/MXS6	11/7/2025
DRAWN	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

SHEET TITLE: **CAD CELL
NO. 3
DISPOSAL
PLAN**

ISSUANCE: **IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04

SHEET NUMBER

MD104

REVISIONS		
NO.	BY	DATE
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DATE OF PREPARATION		
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SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025
PE STAMP		

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SHEET TITLE:

EXISTING
CONDITIONS
PLAN
(BULKHEAD)

ISSUANCE:

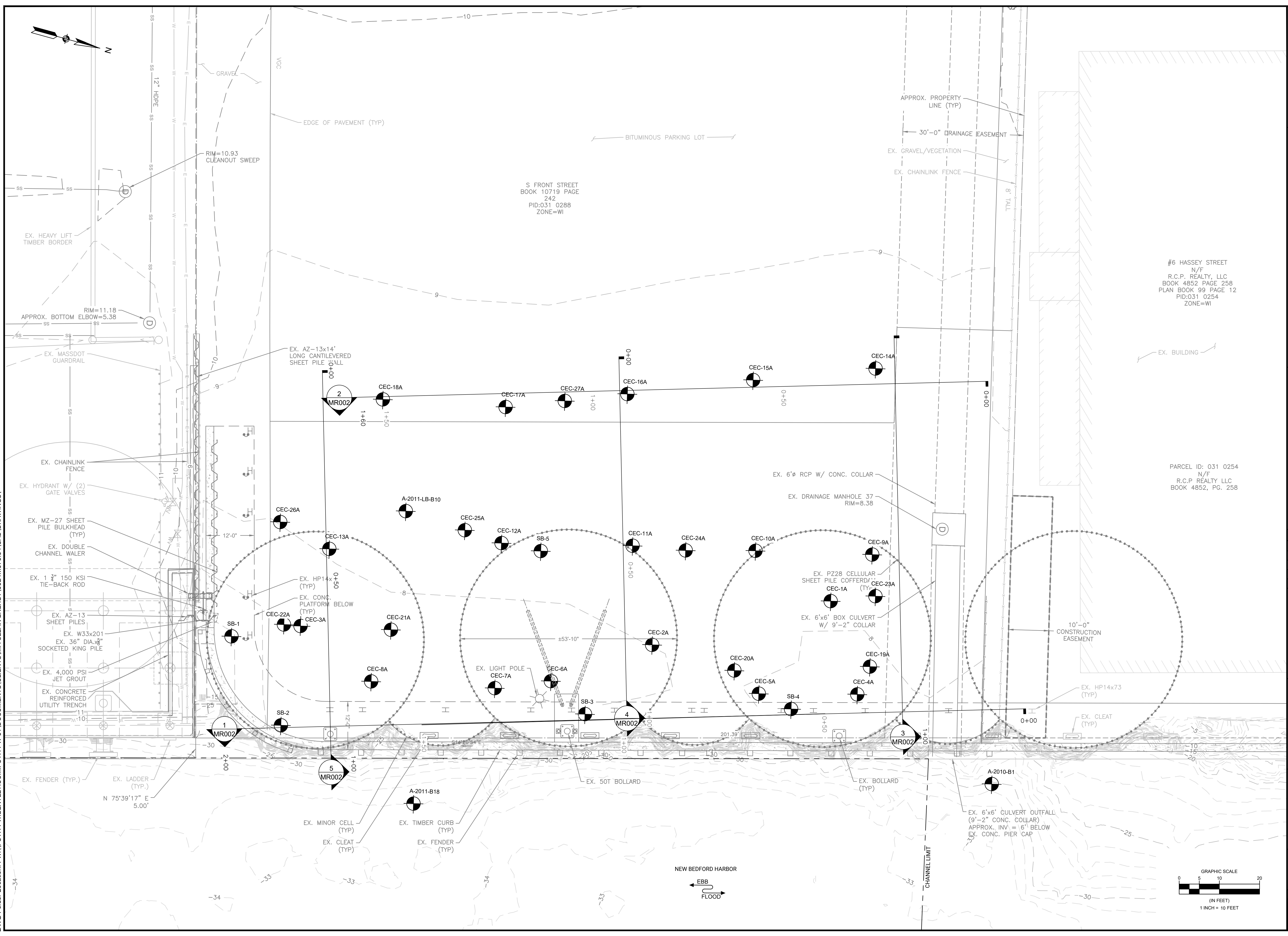
IFB DRAWINGS

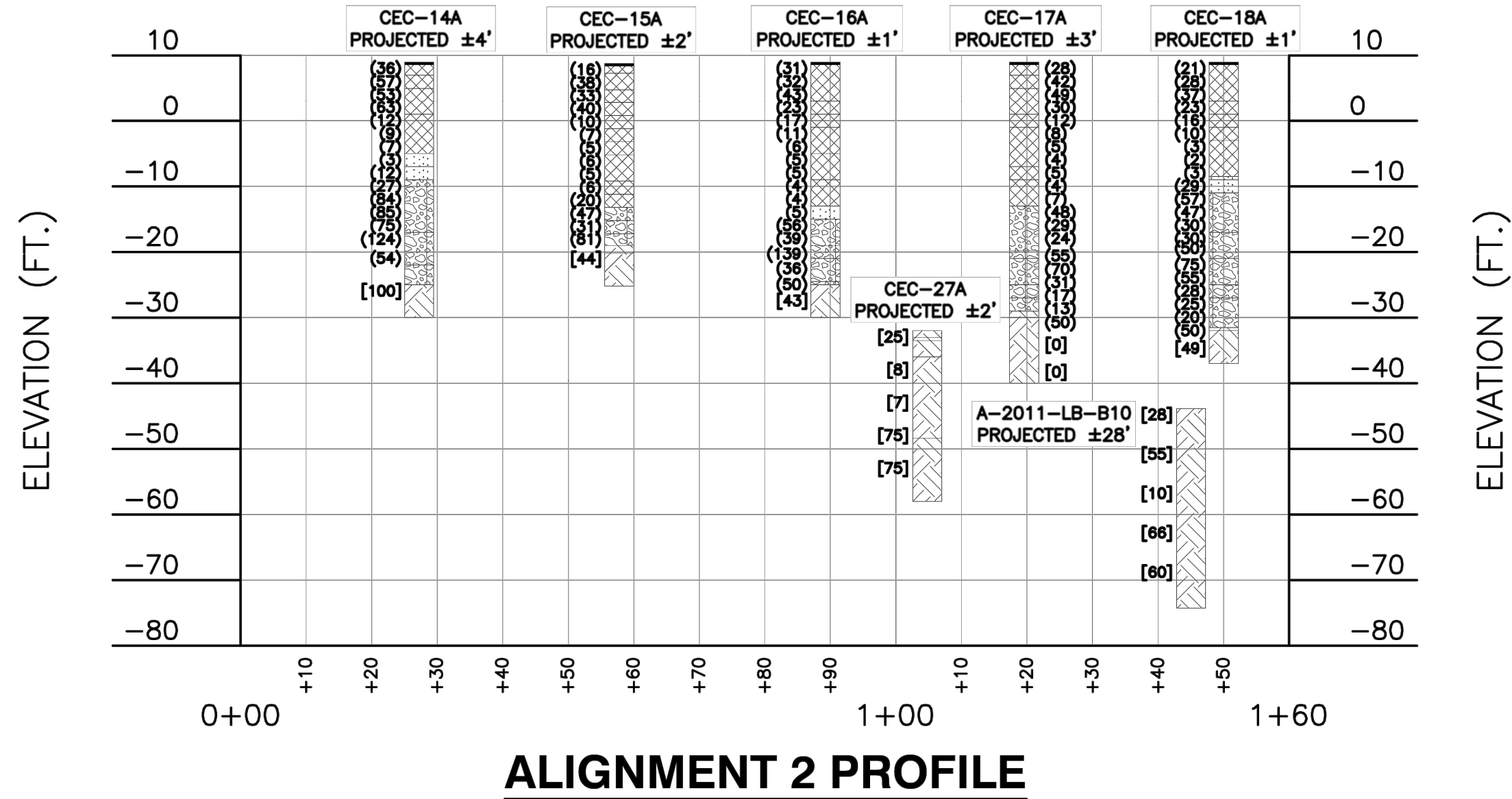
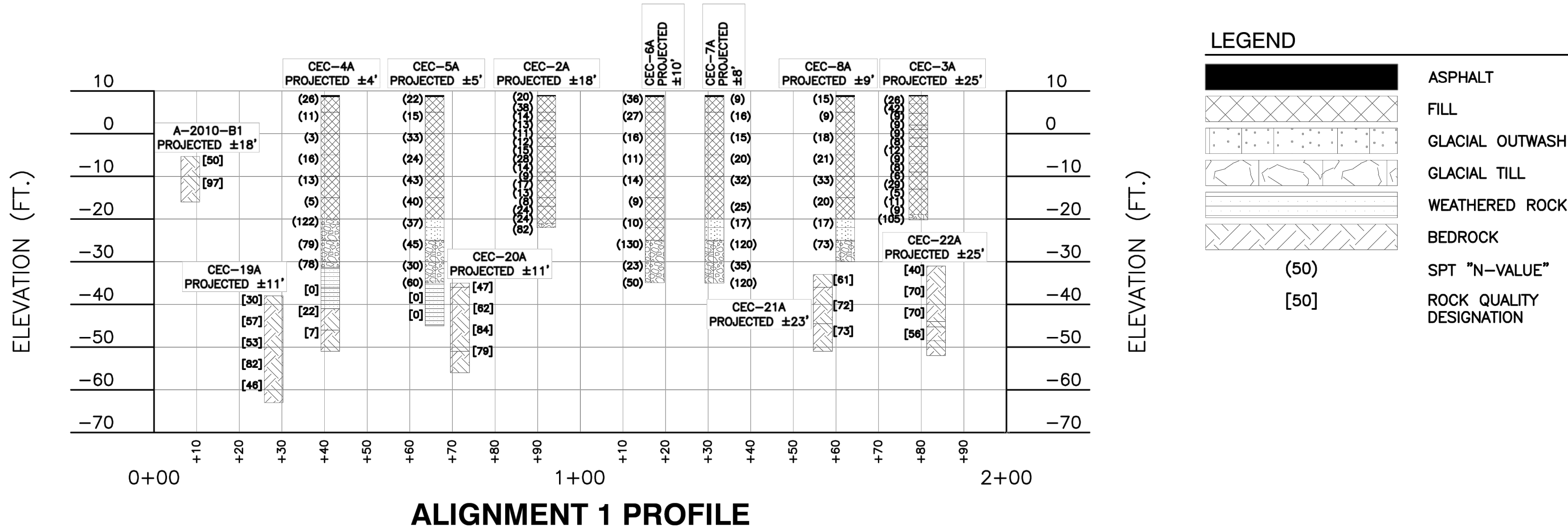
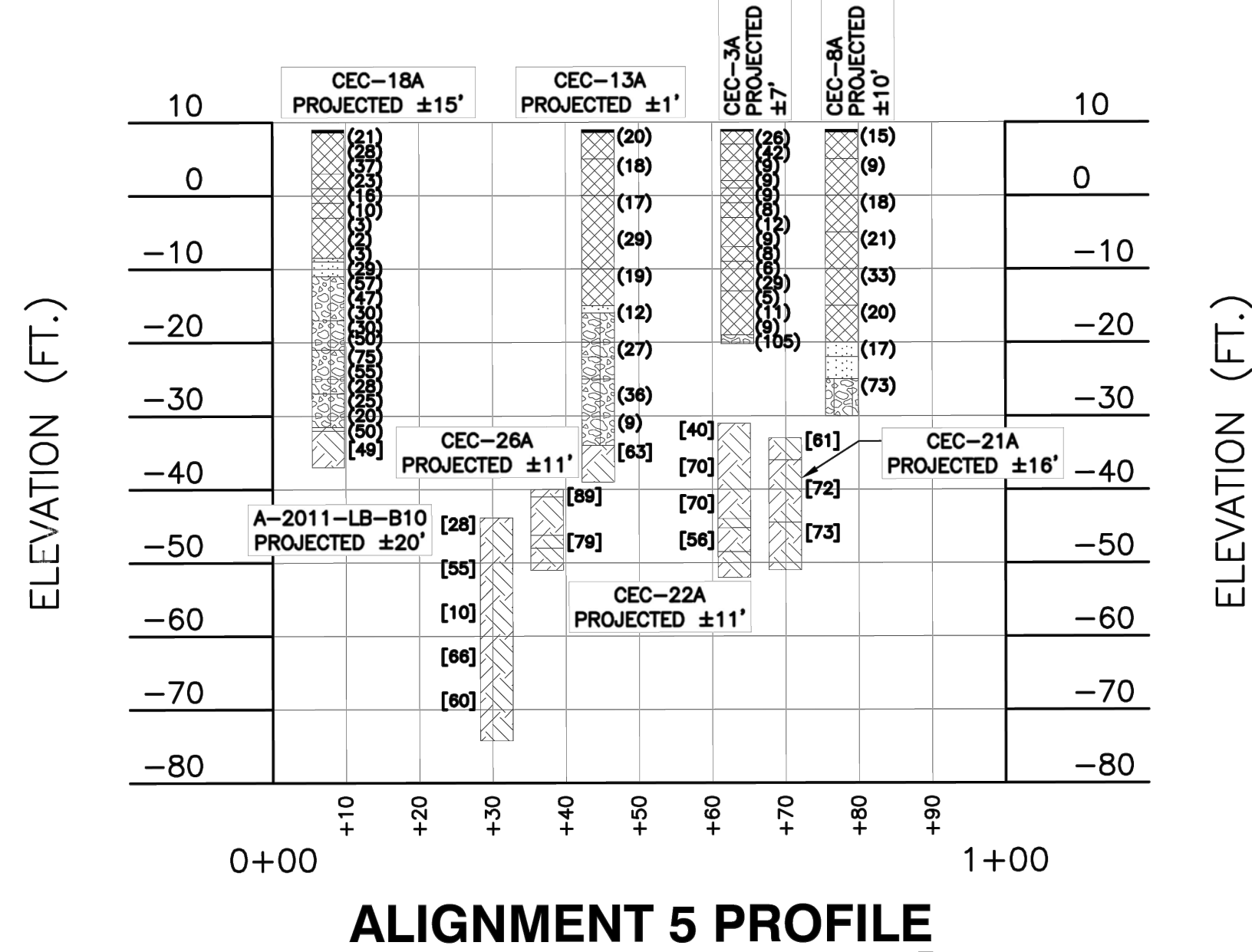
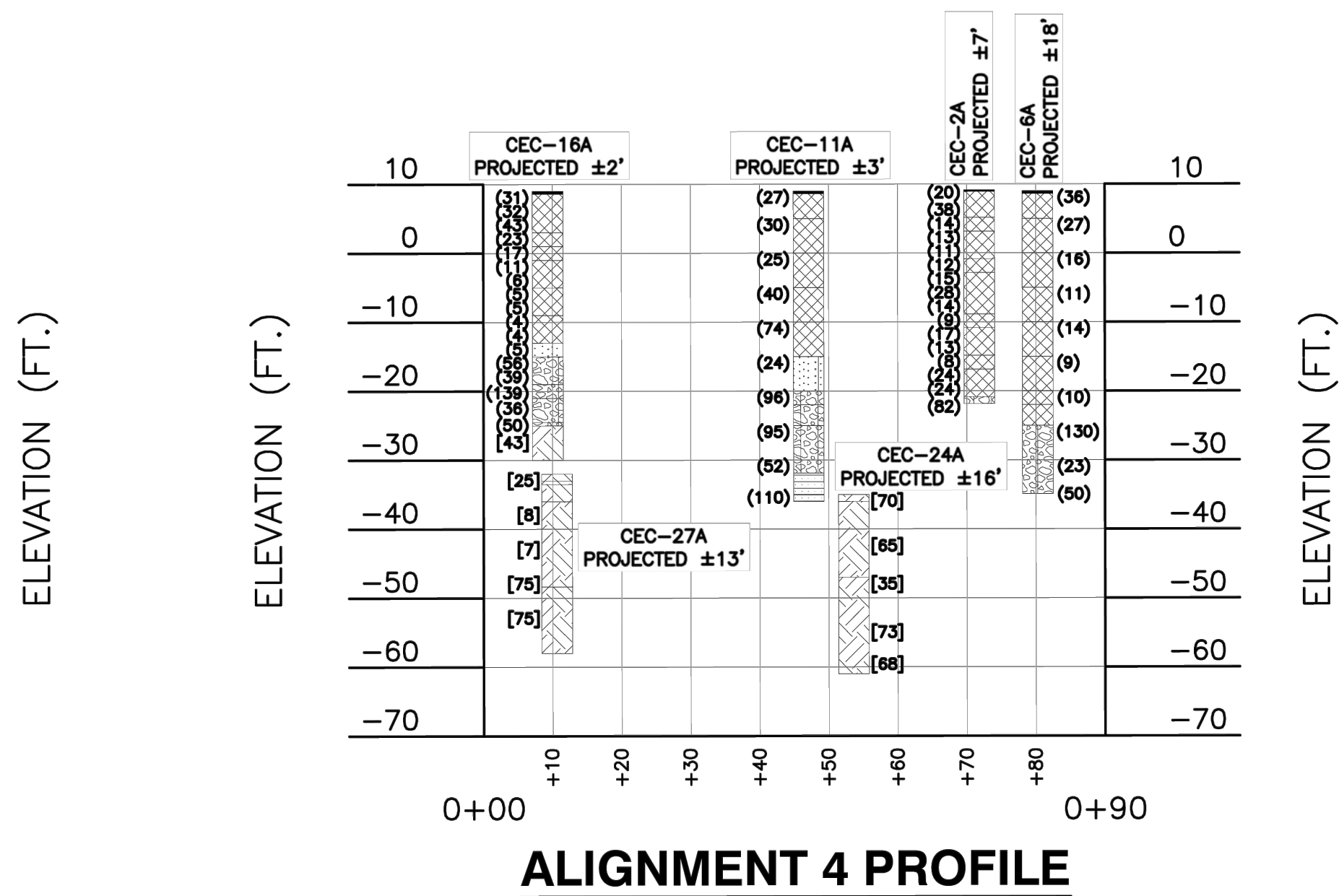
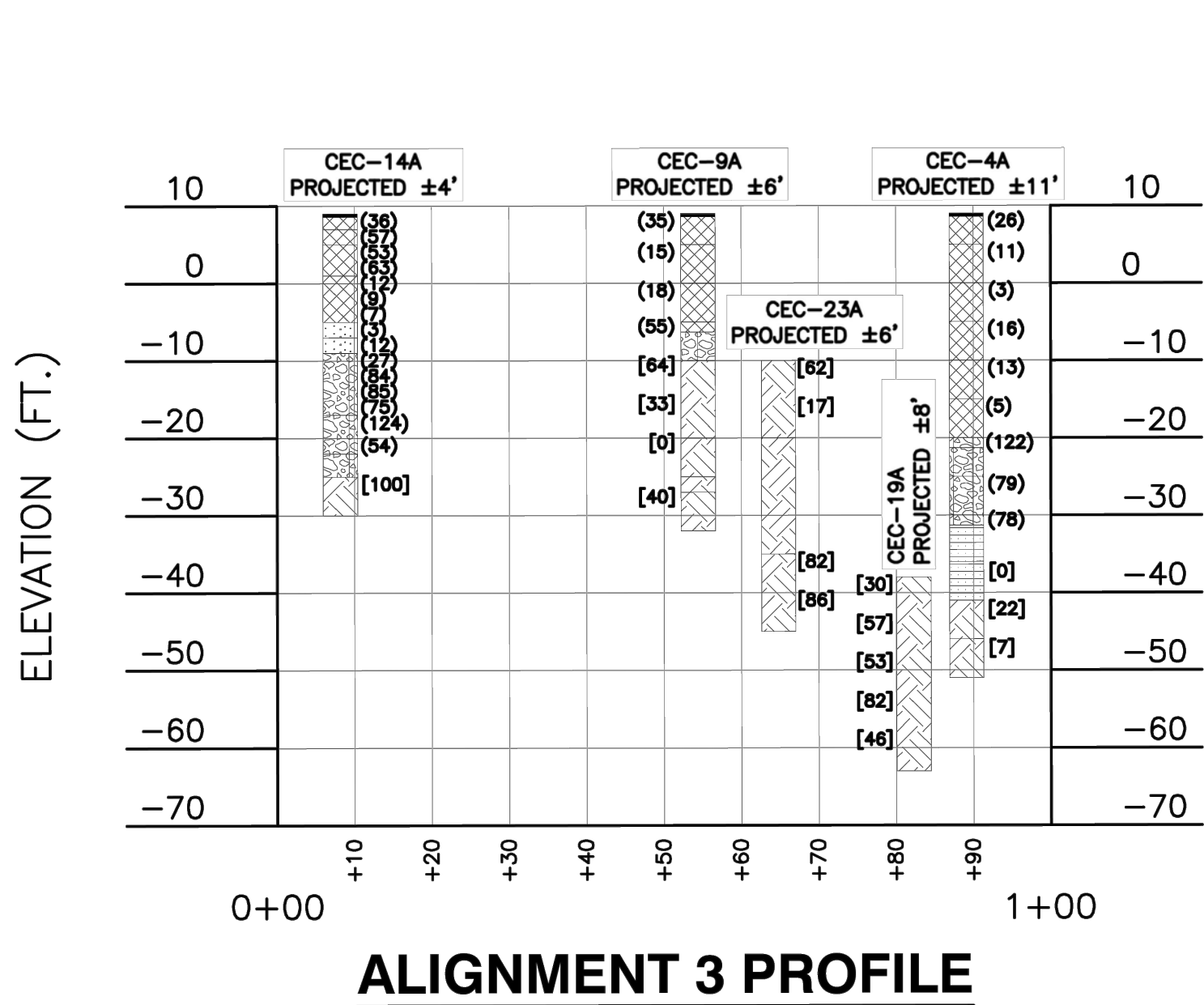
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR001





NOTES:

1) FOR SOIL PROFILE LOCATIONS, SEE SHEET MR001

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PROJECT:

MASSEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER:

NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC)
NEW BEDFORD, MA

REVISIONS	
NO	DESCRIPTION

DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

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SHEET TITLE:

GEOTECHNICAL
REFERENCES

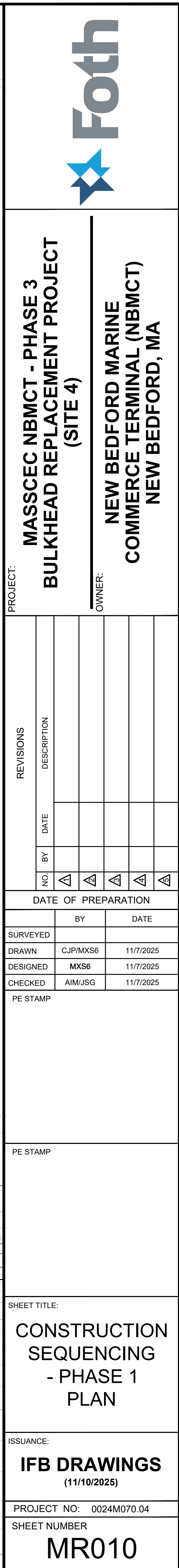
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR002



PROJECT: **MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

- BENJAMIN

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DATE OF PREPARATION

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SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

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SHEET TITLE:

CONSTRUCTION SEQUENCING - PHASE 2 PLAN

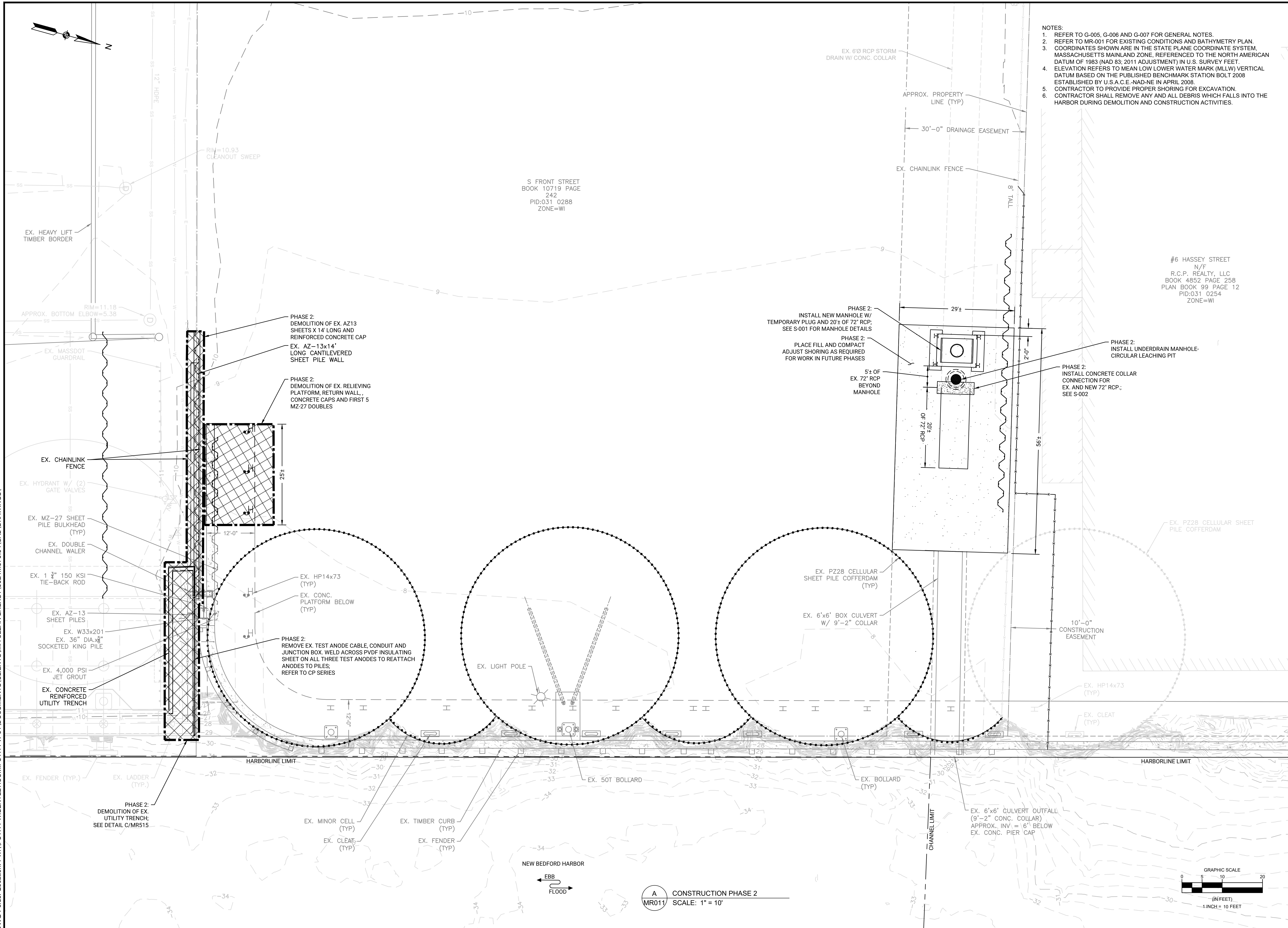
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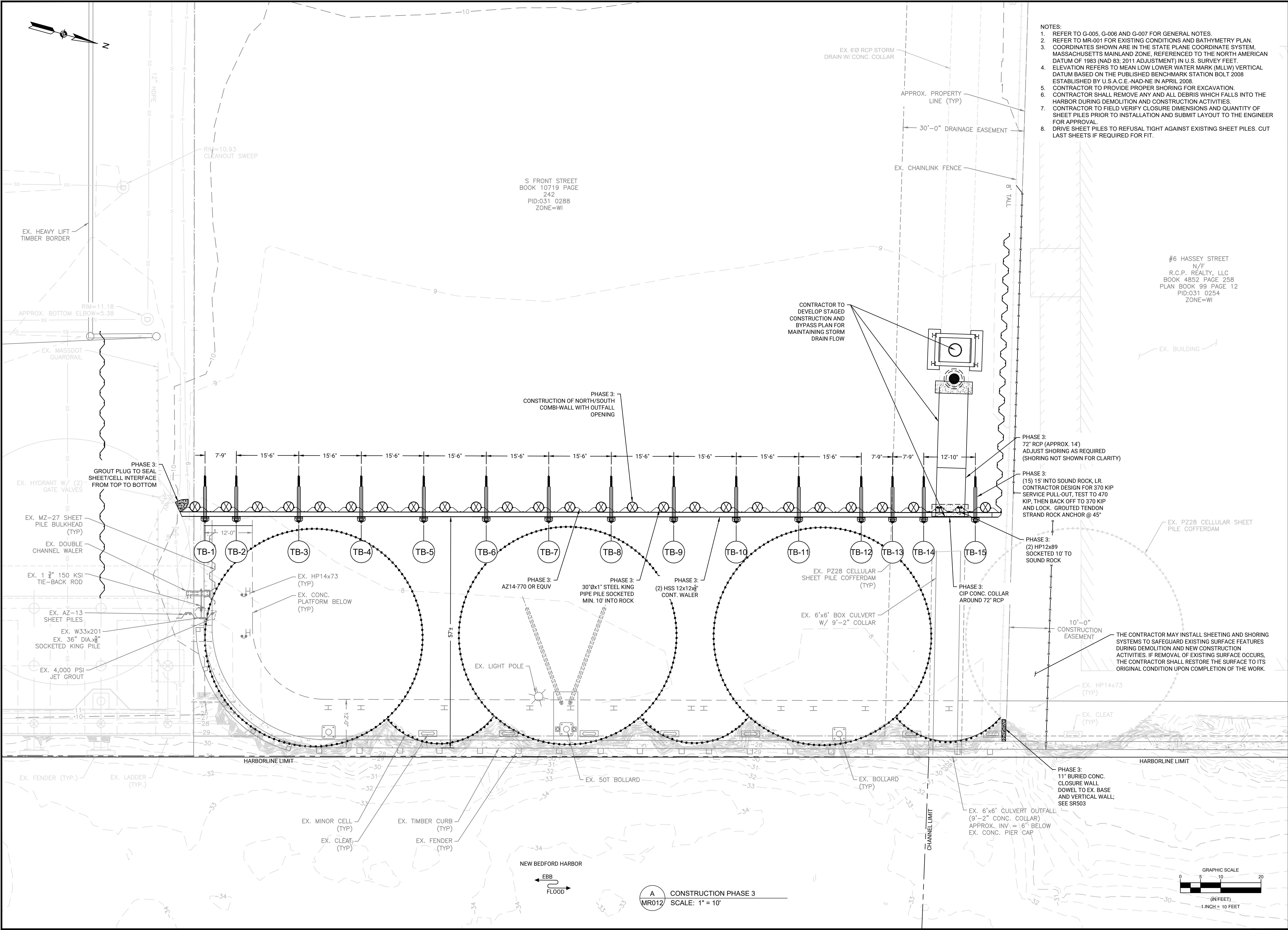
IFB DRAWINGS
(11/10/2025)

PROJECT NO:	0024M070.04
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SHEET NUMBER

MR011





- NOTES:
1. REFER TO G-005, G-006 AND G-007 FOR GENERAL NOTES.
 2. REFER TO MR-001 FOR EXISTING CONDITIONS AND BATHYMETRY PLAN.
 3. COORDINATES SHOWN ARE IN THE STATE PLANE COORDINATE SYSTEM, MASSACHUSETTS MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83; 2011 ADJUSTMENT) IN U.S. SURVEY FEET.
 4. ELEVATION REFERS TO MEAN LOW LOWER WATER MARK (MLLW) VERTICAL DATUM BASED ON THE PUBLISHED BENCHMARK STATION BOLT 2008 ESTABLISHED BY U.S.A.C.E.-NAD-NE IN APRIL 2008.
 5. CONTRACTOR TO PROVIDE PROPER SHORING FOR EXCAVATION.
 6. CONTRACTOR SHALL REMOVE ANY AND ALL DEBRIS WHICH FALLS INTO THE HARBOR DURING DEMOLITION AND CONSTRUCTION ACTIVITIES.
 7. CONTRACTOR TO FIELD VERIFY CLOSURE DIMENSIONS AND QUANTITY OF SHEET PILES PRIOR TO INSTALLATION AND SUBMIT LAYOUT TO THE ENGINEER FOR APPROVAL.
 8. DRIVE SHEET PILES TO REFUSAL TIGHT AGAINST EXISTING SHEET PILES. CUT LAST SHEETS IF REQUIRED FOR FIT.

PROJECT: MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER: NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA

REVISIONS	
NO.	DESCRIPTION

DATE OF PREPARATION	
BY	DATE
SURVEYED	
DRAWN	CJP/MXS6 11/7/2025
DESIGNED	MXS6 11/7/2025
CHECKED	AIM/JSG 11/7/2025

PE STAMP

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SHEET TITLE:

CONSTRUCTION SEQUENCING - PHASE 3 PLAN

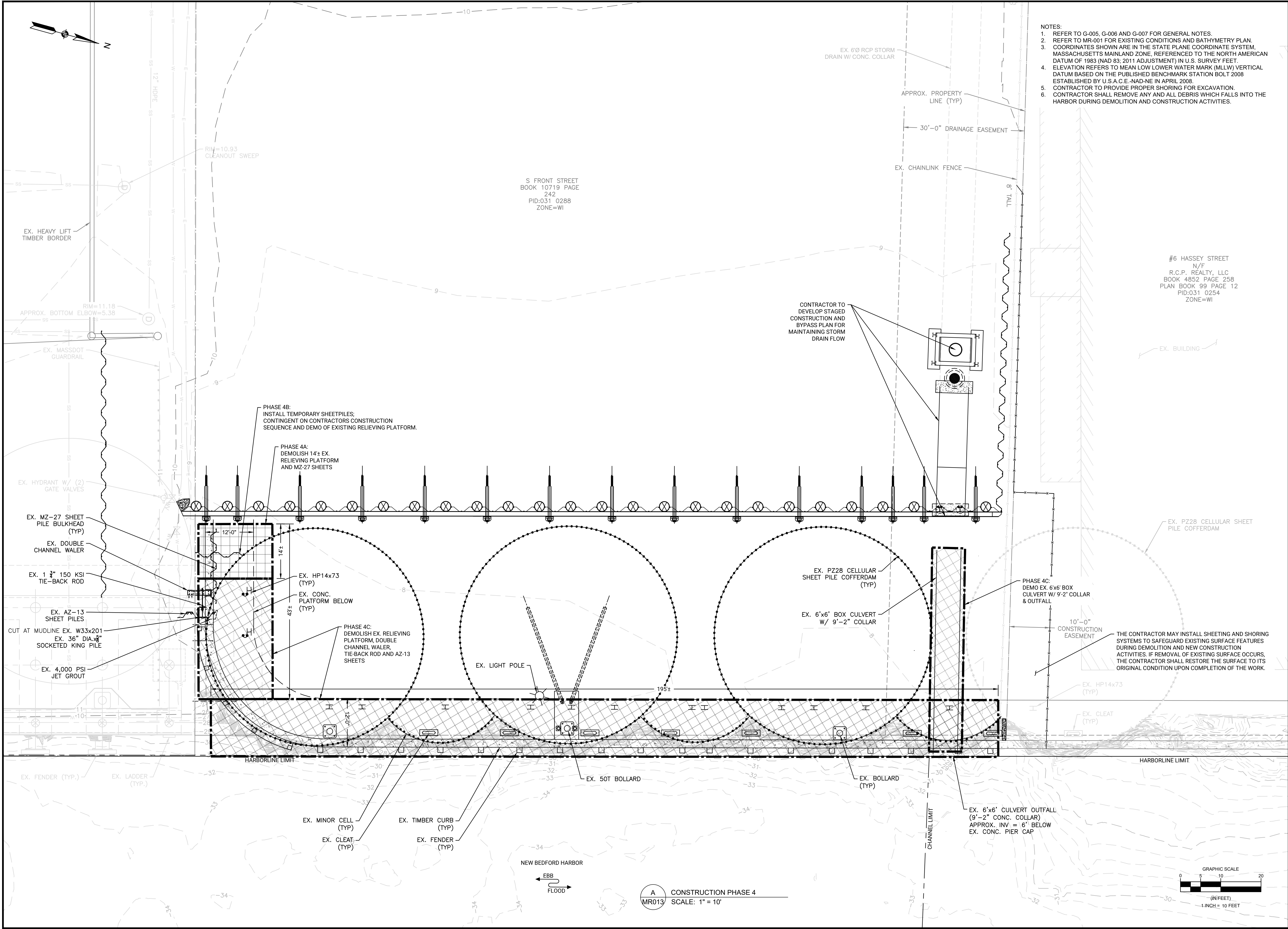
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR012



- NOTES:
1. REFER TO G-005, G-006 AND G-007 FOR GENERAL NOTES.
 2. REFER TO MR-001 FOR EXISTING CONDITIONS AND BATHYMETRY PLAN.
 3. COORDINATES SHOWN ARE IN THE STATE PLANE COORDINATE SYSTEM, MASSACHUSETTS MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83; 2011 ADJUSTMENT) IN U.S. SURVEY FEET. ELEVATION REFERS TO MEAN LOW LOWER WATER MARK (MLLW) VERTICAL DATUM BASED ON THE PUBLISHED BENCHMARK STATION BOLT 2008 ESTABLISHED BY U.S.A.C.E.-NAD-NE IN APRIL 2008.
 4. CONTRACTOR TO PROVIDE PROPER SHORING FOR EXCAVATION.
 5. CONTRACTOR SHALL REMOVE ANY AND ALL DEBRIS WHICH FALLS INTO THE HARBOR DURING DEMOLITION AND CONSTRUCTION ACTIVITIES.

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MASSCEC NBCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER:
NEW BEDFORD MARINE
COMMERCE TERMINAL (NBCT)
NEW BEDFORD, MA

PROJECT:

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DATE OF PREPARATION

SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

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SHEET TITLE:

CONSTRUCTION
SEQUENCING
- PHASE 4
PLAN

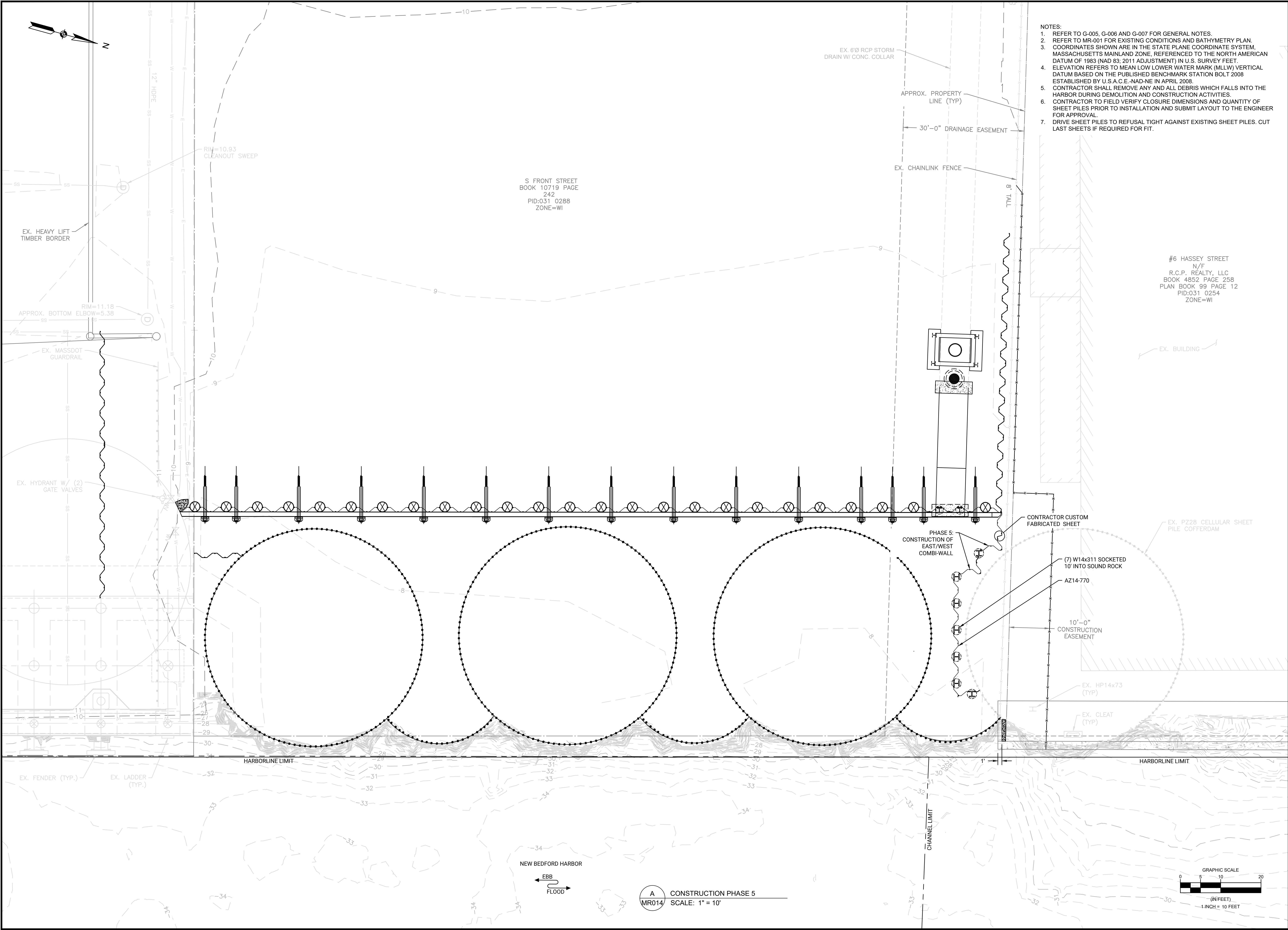
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR013



PROJECT:

**MASSECE NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

NO.	DATE	DESCRIPTION
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DATE OF PREPARATION

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SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

SHEET TITLE:

**CONSTRUCTION
SEQUENCING
- PHASE 5
PLAN**

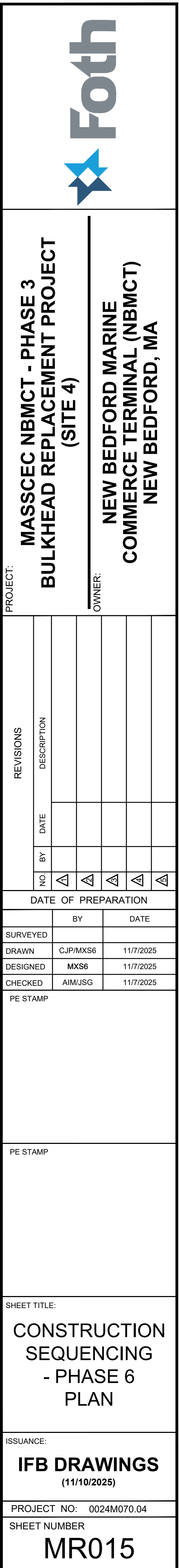
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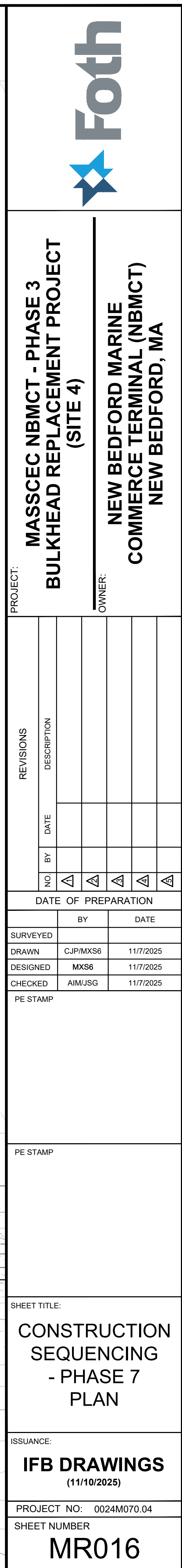
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04

SHEET NUMBER

MR014





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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

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SHEET TITLE:

CONSTRUCTION
SEQUENCING
- PHASE 8
PLAN

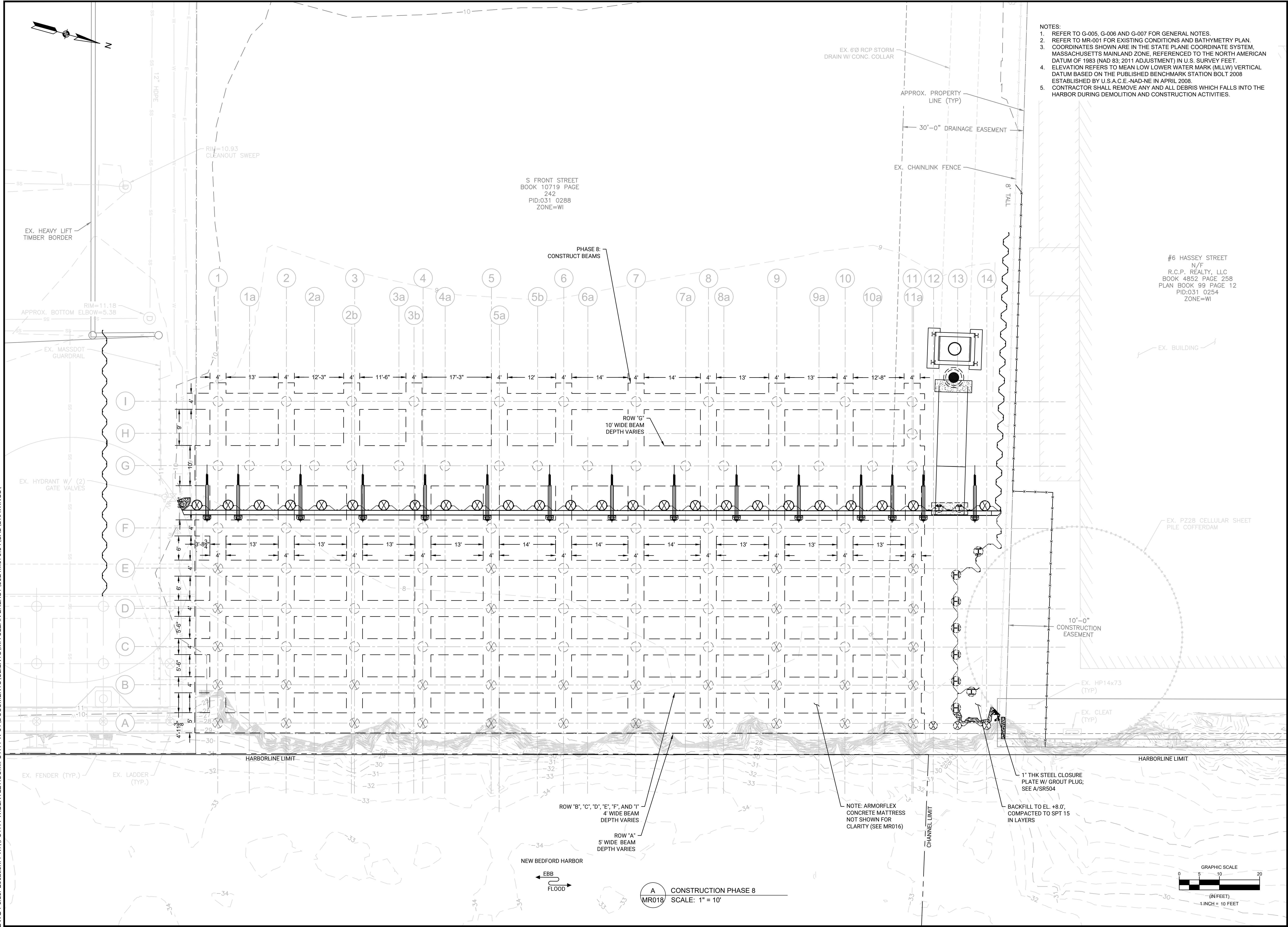
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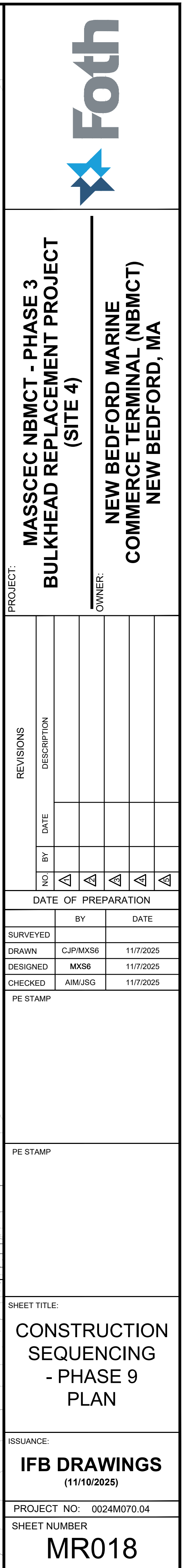
IFB DRAWINGS

(11/10/2025)

PROJECT NO: 0024M070.04
SHEET NUMBER

MR017





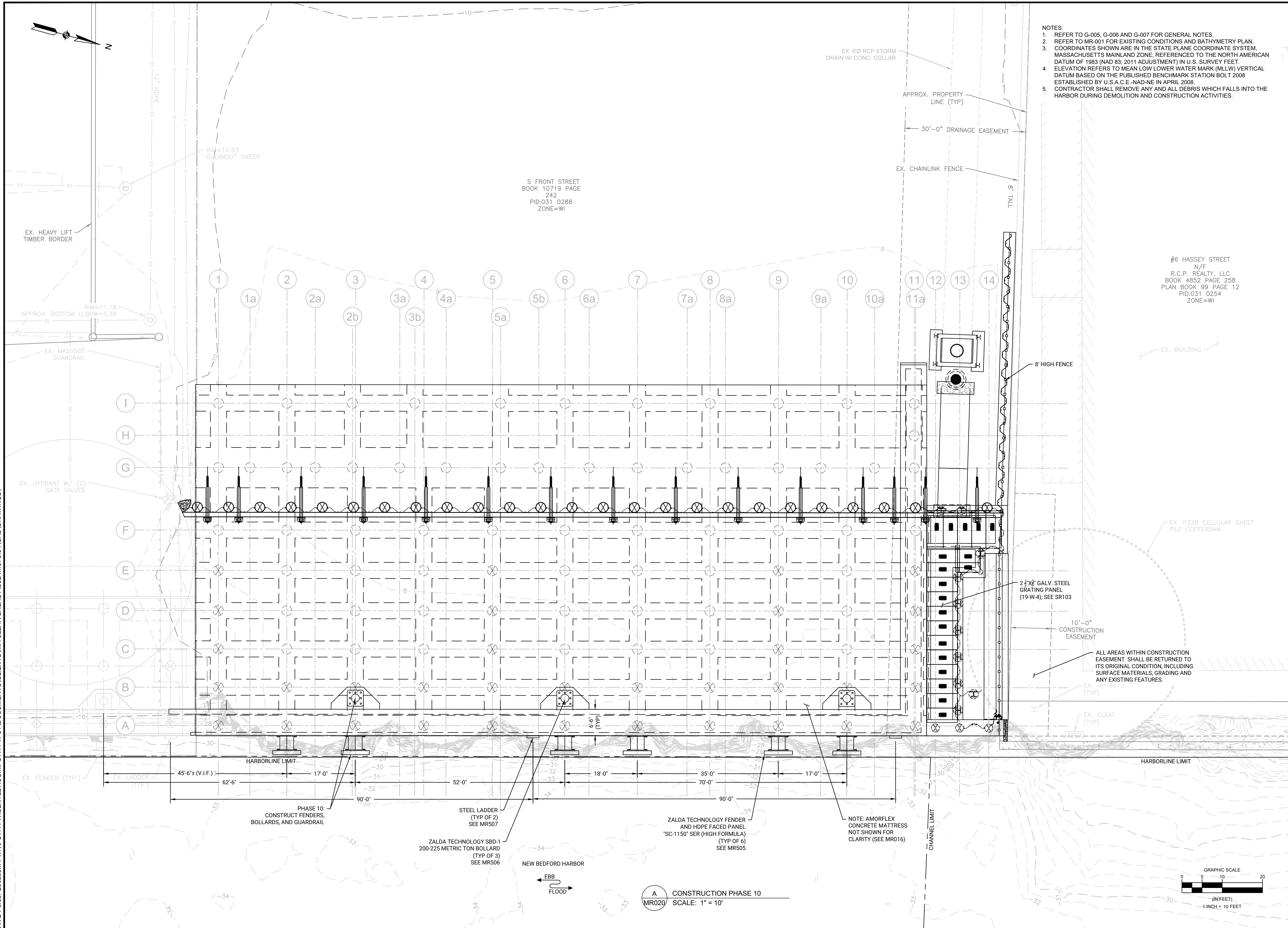
#6 HASSEY STREET
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R.C.P. REALTY, LLC
BOOK 4852 PAGE 258
PLAN BOOK 99 PAGE 12
PID:031 0254
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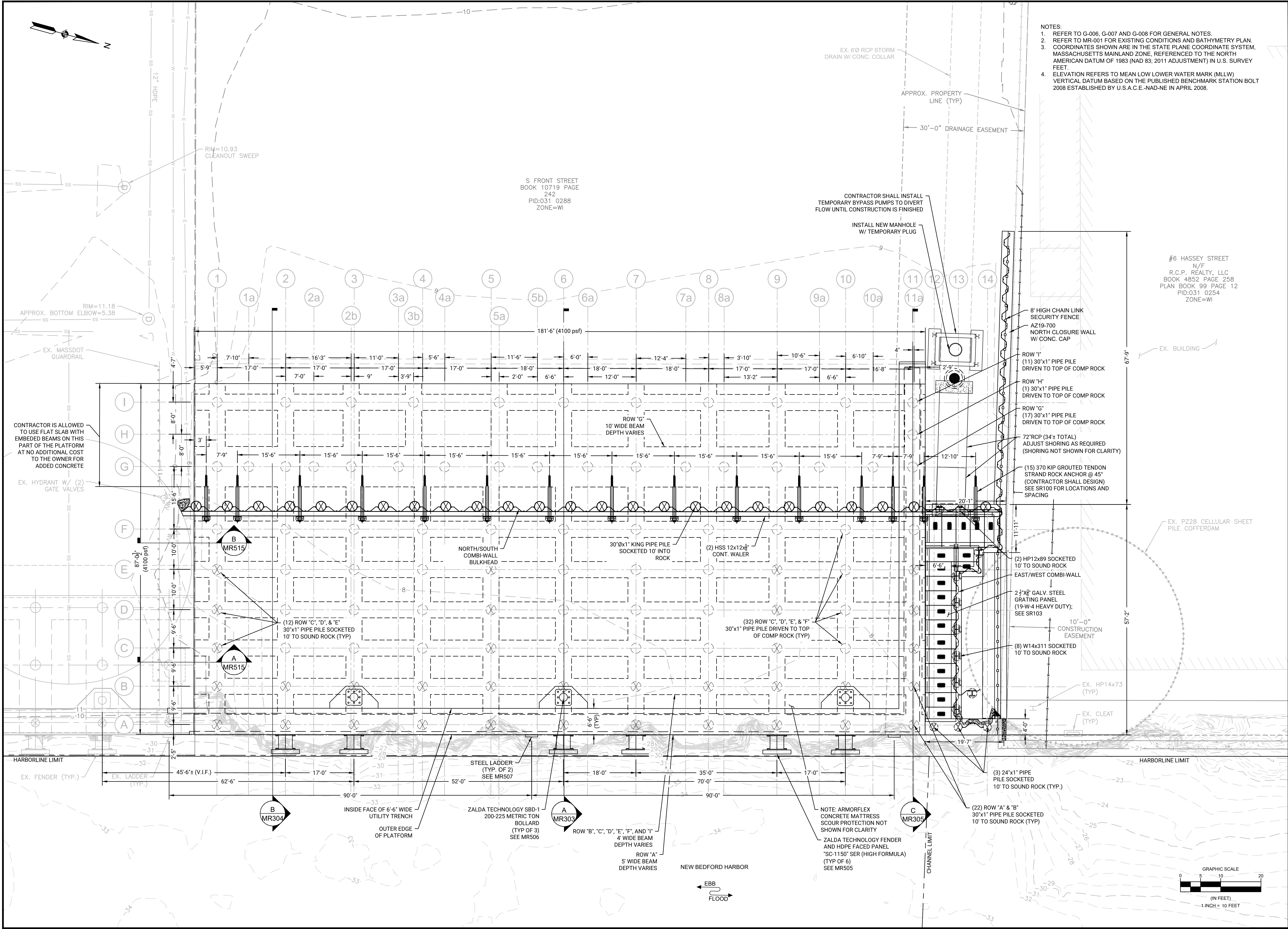
DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

11/11/2016

PE STAMP

PROJECT NO: 0024M070.04
SHEET NUMBER
MR019





- NOTES:
1. REFER TO G-006, G-007 AND G-008 FOR GENERAL NOTES.
 2. REFER TO MR-001 FOR EXISTING CONDITIONS AND BATHYMETRY PLAN.
 3. COORDINATES SHOWN ARE IN THE STATE PLANE COORDINATE SYSTEM, MASSACHUSETTS MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83; 2011 ADJUSTMENT) IN U.S. SURVEY FEET.
 4. ELEVATION REFERS TO MEAN LOW LOWER WATER MARK (MLLW) VERTICAL DATUM BASED ON THE PUBLISHED BENCHMARK STATION BOLT 2008 ESTABLISHED BY U.S.A.C.E.-NAD-NE IN APRIL 2008.

PROJECT: **MASSECEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS		DATE	BY	NO.
DESCRIPTION				

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

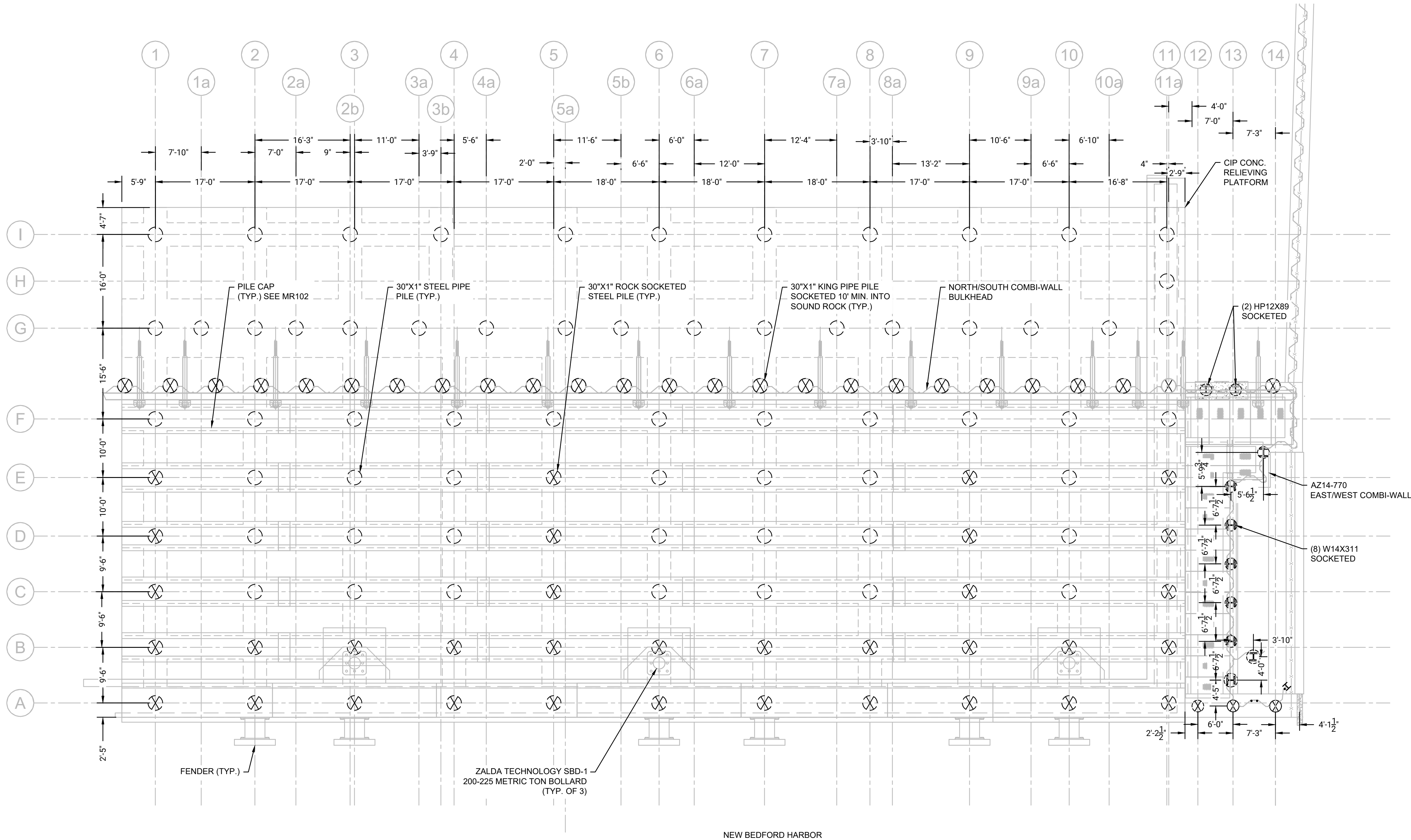
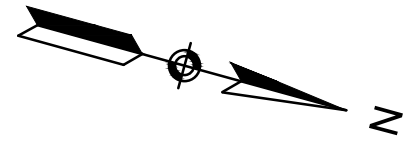
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SHEET TITLE: **MARINE
INFRASTRUCTURE
CONFIGURATION
PLAN**

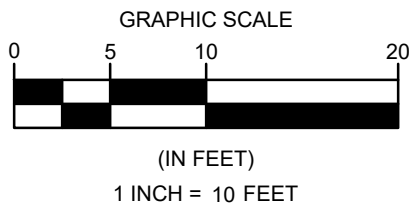
ISSUANCE: **IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MR100





- NOTES:
1. SEE SHEETS MR508 THROUGH MR513 FOR ADDITIONAL DIMENSIONS AND INFORMATION RELATED TO THE PRECAST CONCRETE PILE CAPS.
 2. LINEWORK SCREENED FOR CLARITY.
 3. EXISTING STRUCTURES NOT SHOWN FOR CLARITY.
 4. PRECAST PLANKS NOT SHOWN FOR CLARITY. SEE SHEETS MR514 FOR ADDITIONAL DIMENSIONS AND INFORMATION.



PROJECT: **MASSECEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

NO.	BY	DATE	REVISIONS	
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DATE OF PREPARATION		
	BY	DATE
SURVEYED	CJP/MXS6	11/7/2025
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

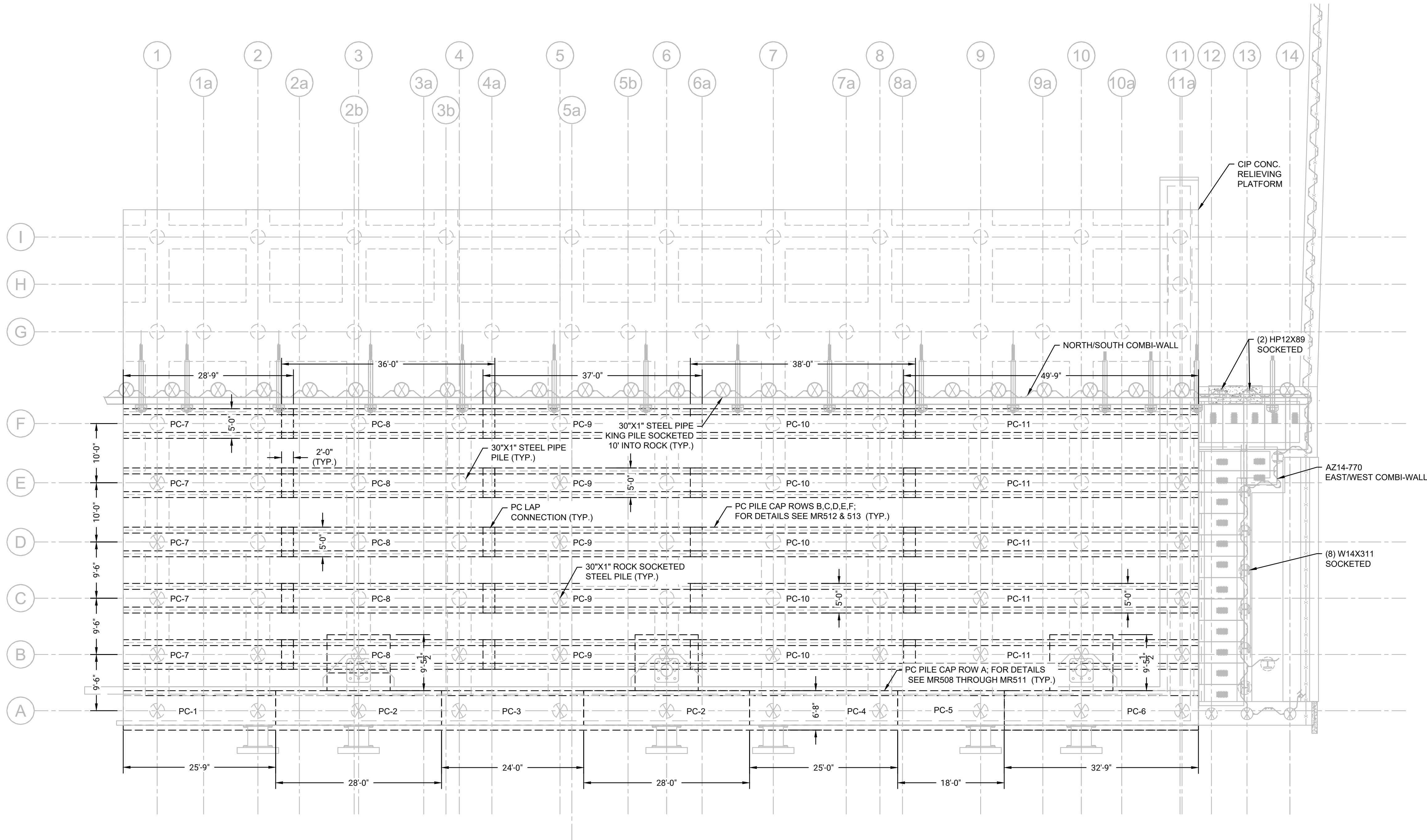
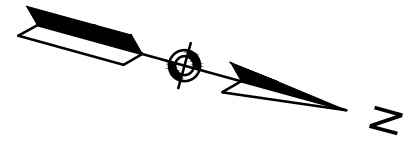
PE STAMP

SHEET TITLE:
**MARINE
INFRASTRUCTURE
PILE LAYOUT
PLAN**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MR101

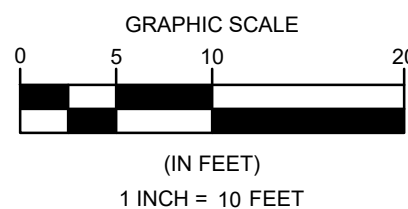




NEW BEDFORD HARBOR



1 PRECAST PILE CAPS
MR102 SCALE: 1" = 10'



- NOTES:
1. SEE SHEETS MR508 THROUGH MR513 FOR ADDITIONAL DIMENSIONS AND INFORMATION RELATED TO THE PRECAST CONCRETE PILE CAPS.
 2. LINEWORK SCREENED FOR CLARITY.
 3. EXISTING STRUCTURES NOT SHOWN FOR CLARITY.
 4. PRECAST PLANKS NOT SHOWN FOR CLARITY. SEE SHEETS MR514 FOR ADDITIONAL DIMENSIONS AND INFORMATION.

PROJECT:
**MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS		DATE		BY	
NO.	DESCRIPTION	DATE		BY	

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

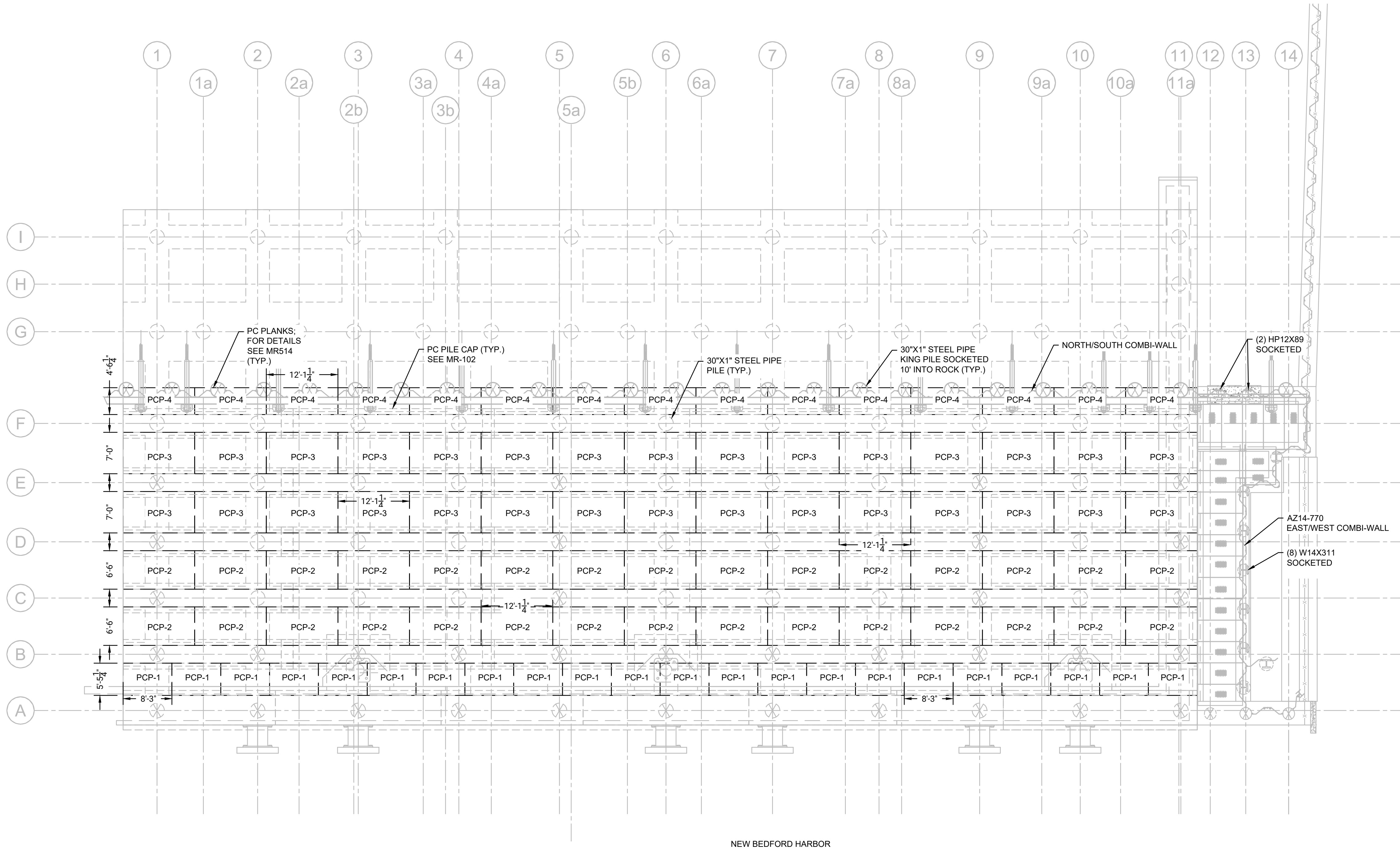
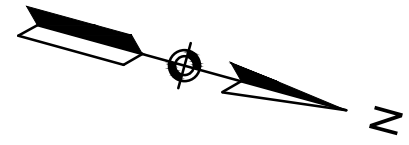
SHEET TITLE:
**MARINE
INFRASTRUCTURE
PILE CAP
LAYOUT
PLAN**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

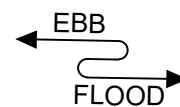
PROJECT NO: 0024M070.04
SHEET NUMBER

MR102

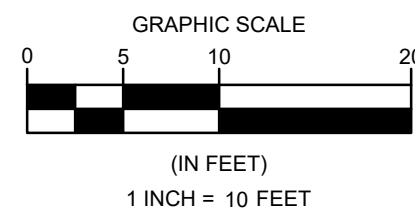




NEW BEDFORD HARBOR



1 PRECAST PLANKS
MR103 SCALE: 1" = 10'



- NOTES:
1. SEE SHEETS MR508 THROUGH MR513 FOR ADDITIONAL DIMENSIONS AND INFORMATION RELATED TO THE PRECAST CONCRETE PILE CAPS.
 2. LINEWORK SCREENED FOR CLARITY.
 3. EXISTING STRUCTURES NOT SHOWN FOR CLARITY.

PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC)
NEW BEDFORD, MA**

REVISIONS		DATE		BY	
DESCRIPTION		DATE		BY	
NO					

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE: **MARINE
INFRASTRUCTURE
PRECAST
PLANKS
LAYOUT PLAN**

ISSUANCE: **IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MR103

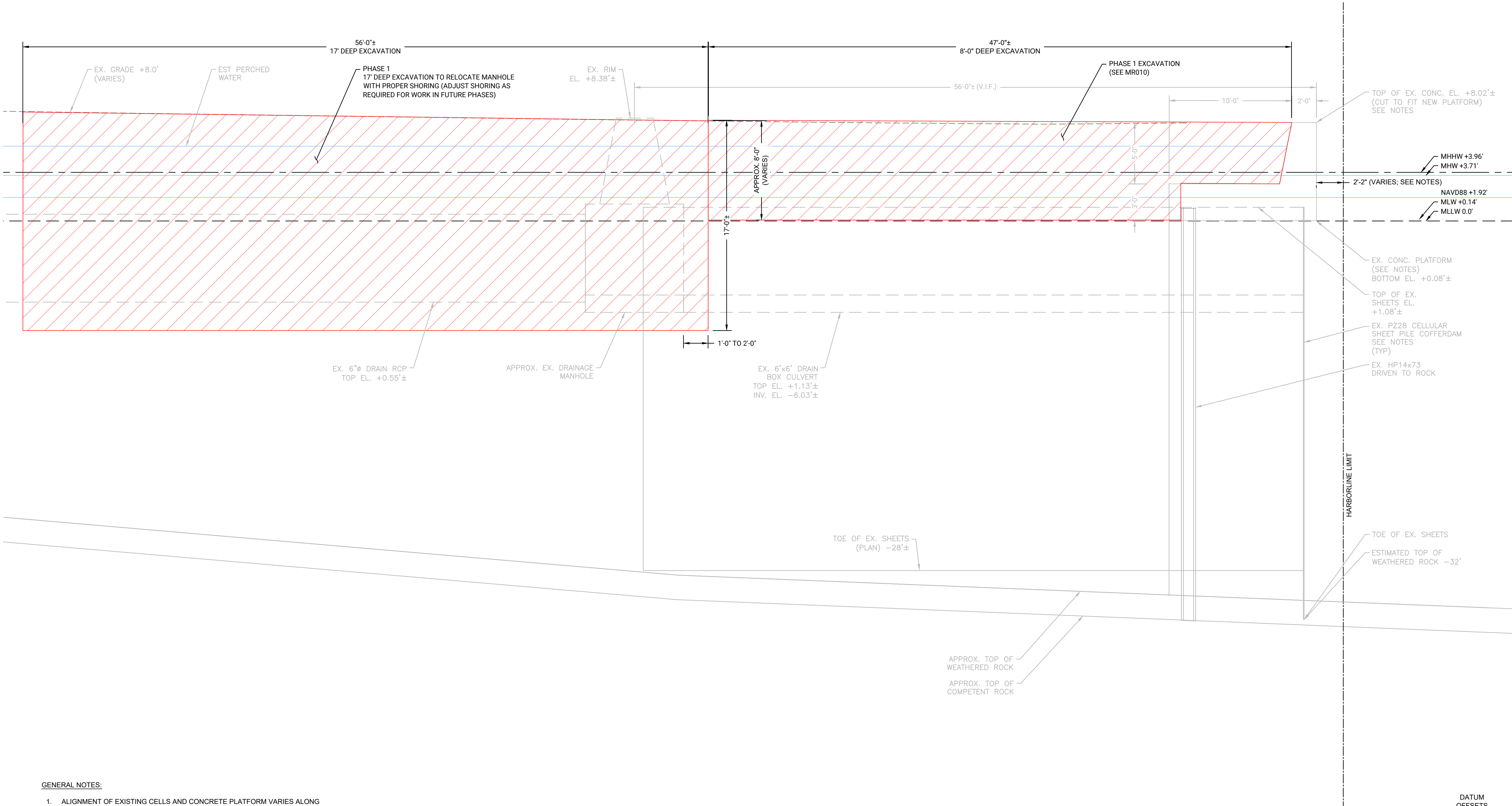
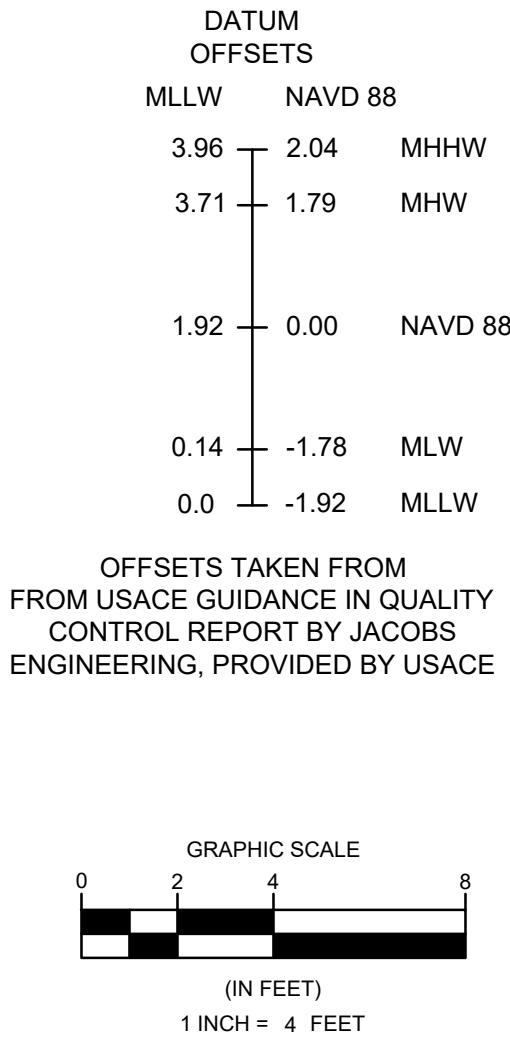


Tuesday, November 11, 2025 8:16:11 AM

DWG Filename: 24m070.04 masscec_marine infra sections.dwg Layout: mr300
DWG Folder Location: PW:\\FOTH-PW BENTLEY.COM\\FOTH-PW-01\\DOCUMENTS\\CLIENTS\\MA CLEAN ENERGY\\0024M070.04\\CAD\\DRAWINGS\\

- GENERAL NOTES:
- ALIGNMENT OF EXISTING CELLS AND CONCRETE PLATFORM VARIES ALONG PROPOSED PLATFORM DEPENDING ON WHERE THE SECTION IS CUT. CONTRACTOR SHALL PERFORM SURVEY TO VERIFY LOCATION OF EXISTING STRUCTURES PRIOR TO PERFORMING WORK.

B
MR010 EX. SECTION W/ EXCAVATION EXTENTS AT CULVERT
SCALE: 1" = 4'





PROJECT:
**MASSECEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

REVISIONS	
NO	DESCRIPTION
1	
2	
3	
4	
5	

DATE OF PREPARATION	
BY	DATE
CJP/MXS6	11/7/2025
MXS6	11/7/2025
AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

**EX. SECTION WITH
EXCAVATION
EXTENTS AT
CULVERT**

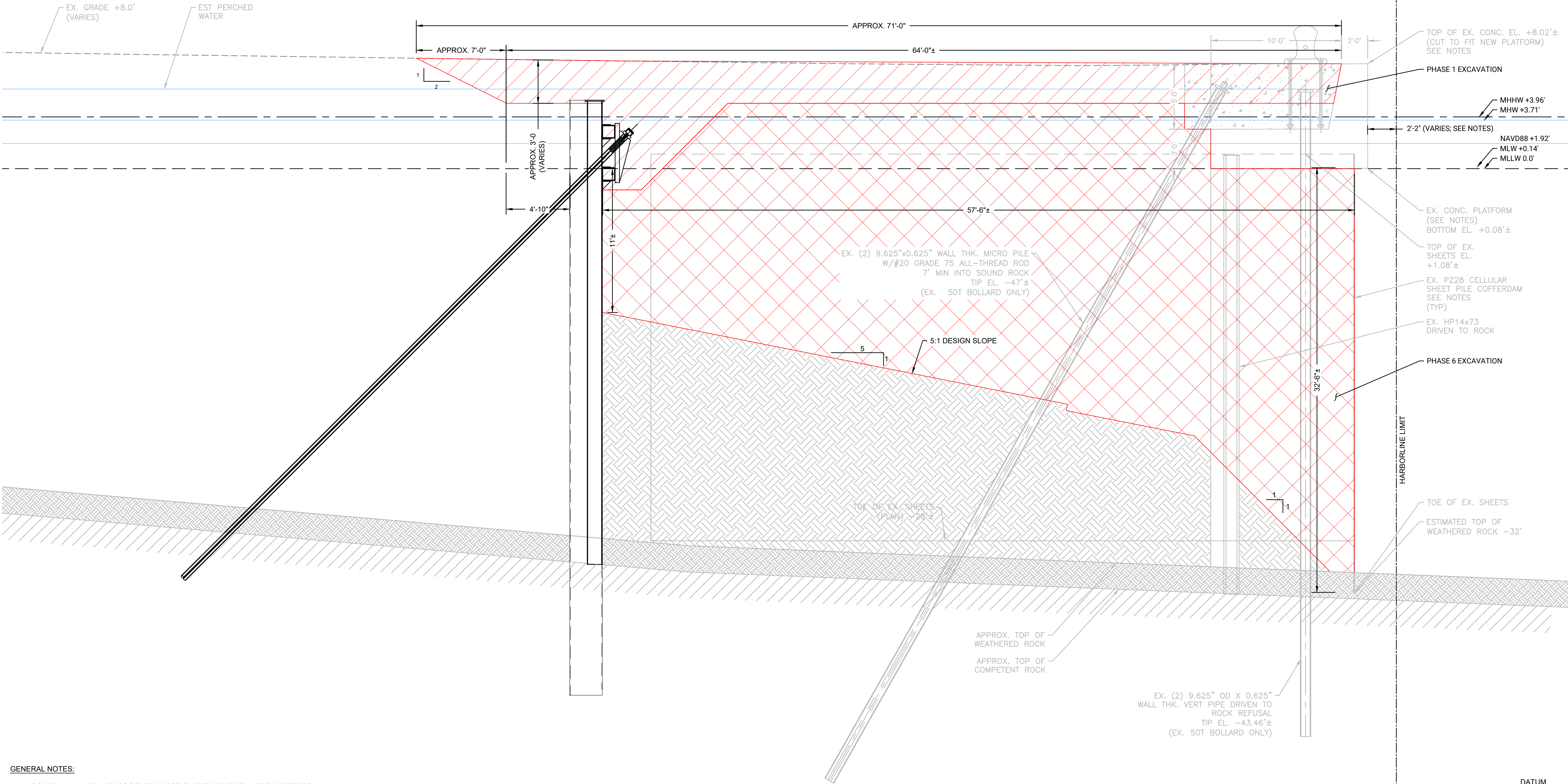
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

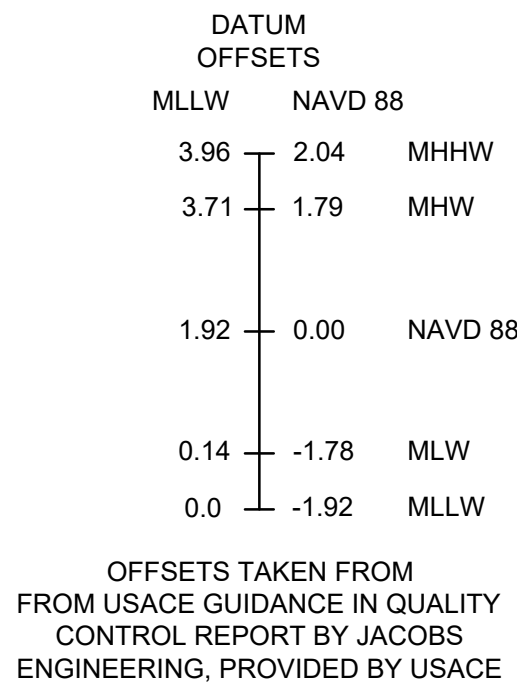
SHEET NUMBER

MR300



- GENERAL NOTES:
- COMBI-WALL AND ANCHORS SHOWN FOR CLARITY ON EXCAVATION EXTENTS.
 - ALIGNMENT OF EXISTING CELLS AND CONCRETE PLATFORM VARIES ALONG PROPOSED PLATFORM DEPENDING ON WHERE THE SECTION IS CUT. CONTRACTOR SHALL PERFORM SURVEY TO VERIFY LOCATION OF EXISTING STRUCTURES PRIOR TO PERFORMING WORK.

A
MR010 EX. SECTION W/ EXCAVATION EXTENTS
SCALE: 1" = 4'



PROJECT:
**MASSCEC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

REVISIONS	
NO	DESCRIPTION
1	
2	
3	
4	
5	

DATE OF PREPARATION	
BY	DATE

DATE OF PREPARATION	
BY	DATE

PE STAMP

PE STAMP

SHEET TITLE:

**EX. SECTION
WITH
EXCAVATION
EXTENTS**

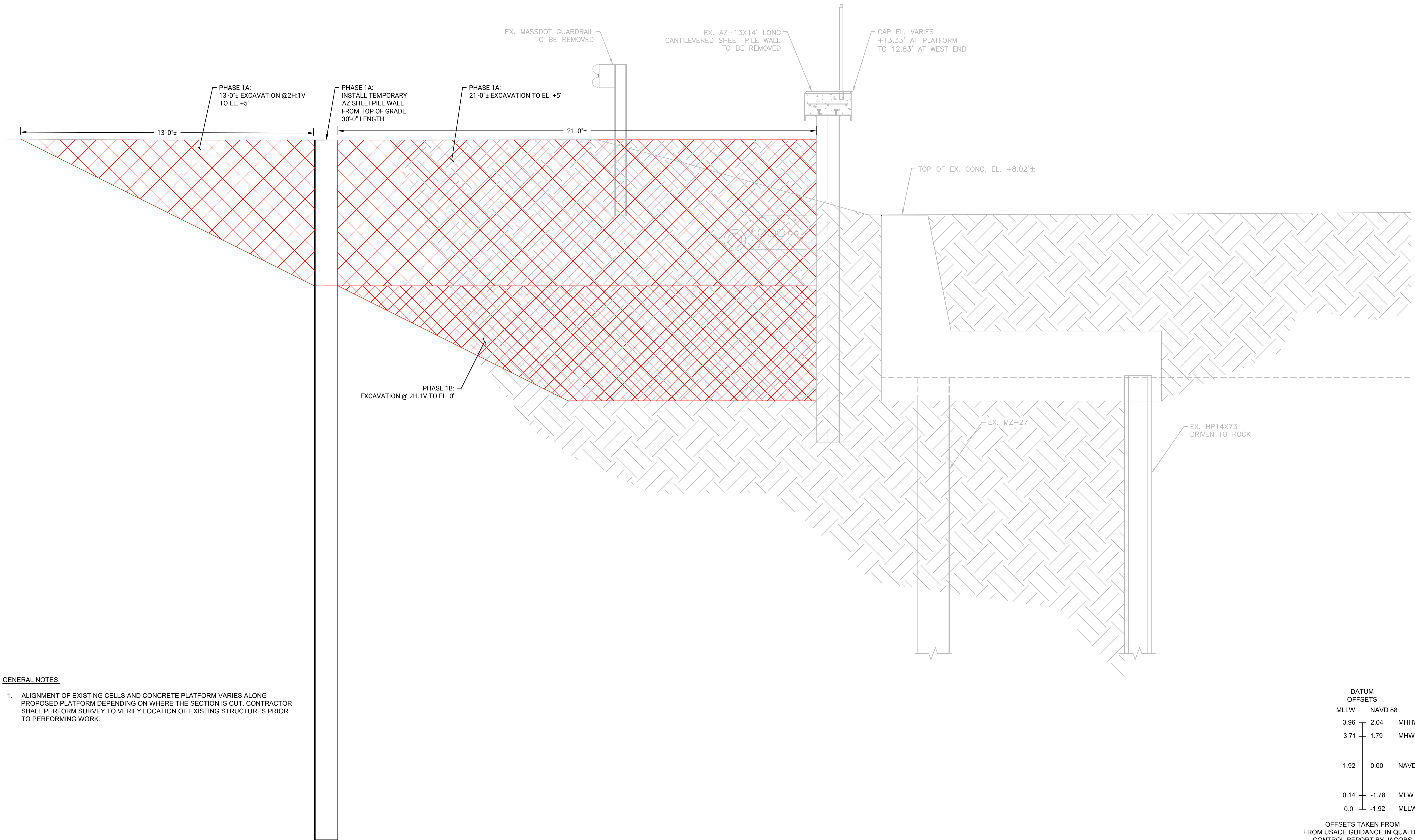
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

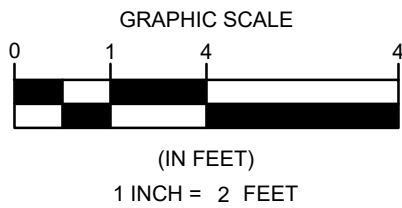
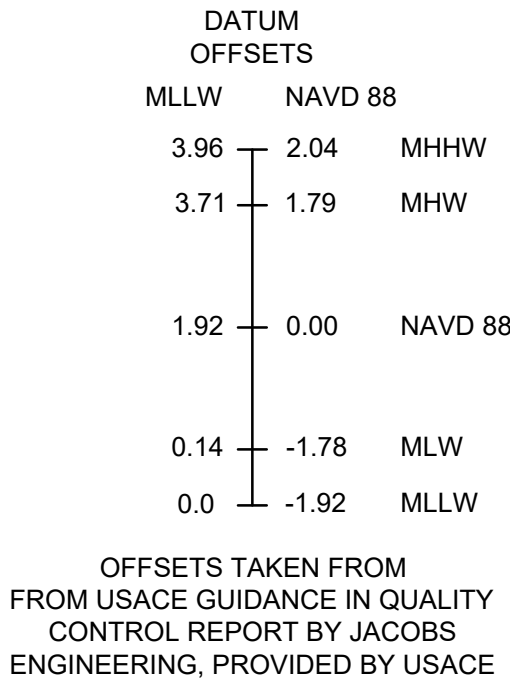
MR301



GENERAL NOTES:

1. ALIGNMENT OF EXISTING CELLS AND CONCRETE PLATFORM VARIES ALONG PROPOSED PLATFORM DEPENDING ON WHERE THE SECTION IS CUT. CONTRACTOR SHALL PERFORM SURVEY TO VERIFY LOCATION OF EXISTING STRUCTURES PRIOR TO PERFORMING WORK.

C EX. SECTION W/ EXCAVATION EXTENTS
MR010 SCALE: 1" = 2'





PROJECT:

MASSECC NBMCCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER:

NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA

NO	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
2				
3				
4				
5				

DATE OF PREPARATION	
BY	DATE
SURVEYED	
DRAWN	CJP/MXS6 11/7/2025
DESIGNED	MXS6 11/7/2025
CHECKED	AIM/JSG 11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

EX. SECTION
WITH
EXCAVATION
EXTENTS

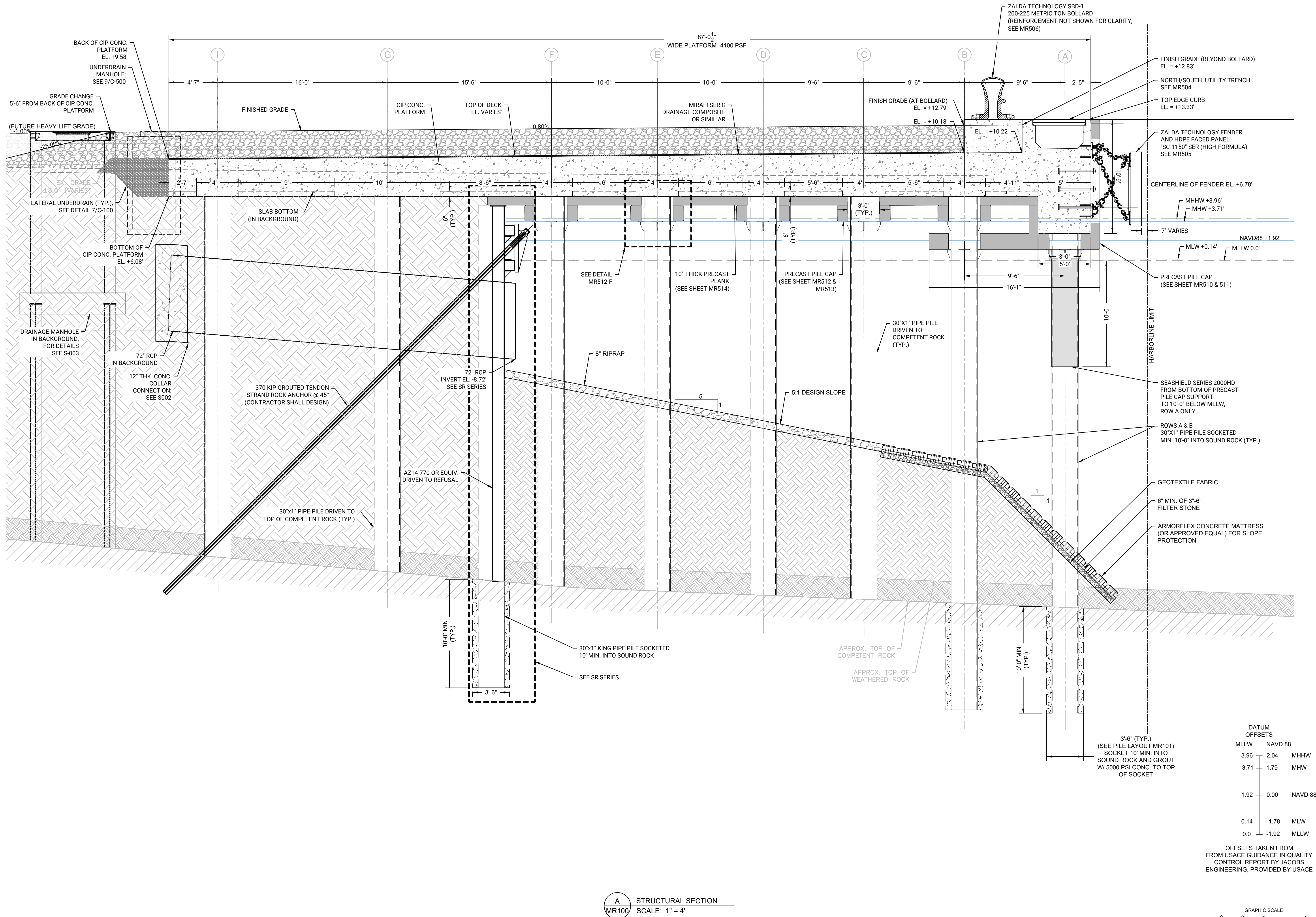
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR302



PROJECT: MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER: NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA

REVISIONS	
NO.	DESCRIPTION

DATE OF PREPARATION	
BY	DATE

PE STAMP

PE STAMP

SHEET TITLE:

STRUCTURAL SECTION
1 OF 3

ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR303



**PROJECT: MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

[illegible]

DATE OF PREPARATION

	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

STRUCTURAL
SECTION
2 OF 3

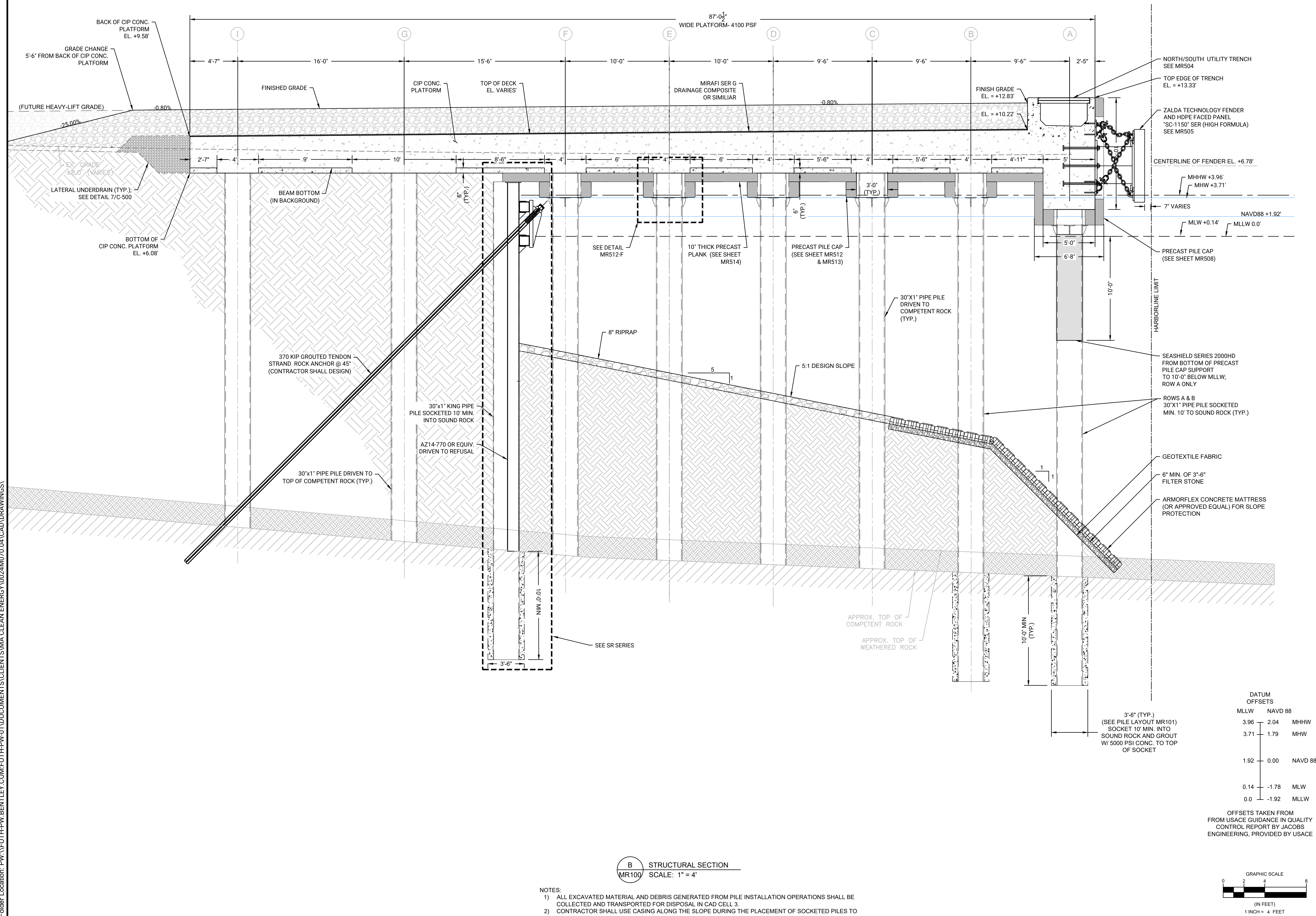
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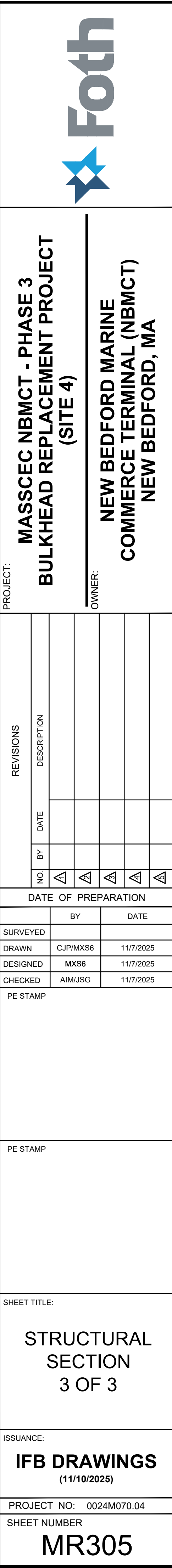
IFB DRAWINGS
(11/10/2025)

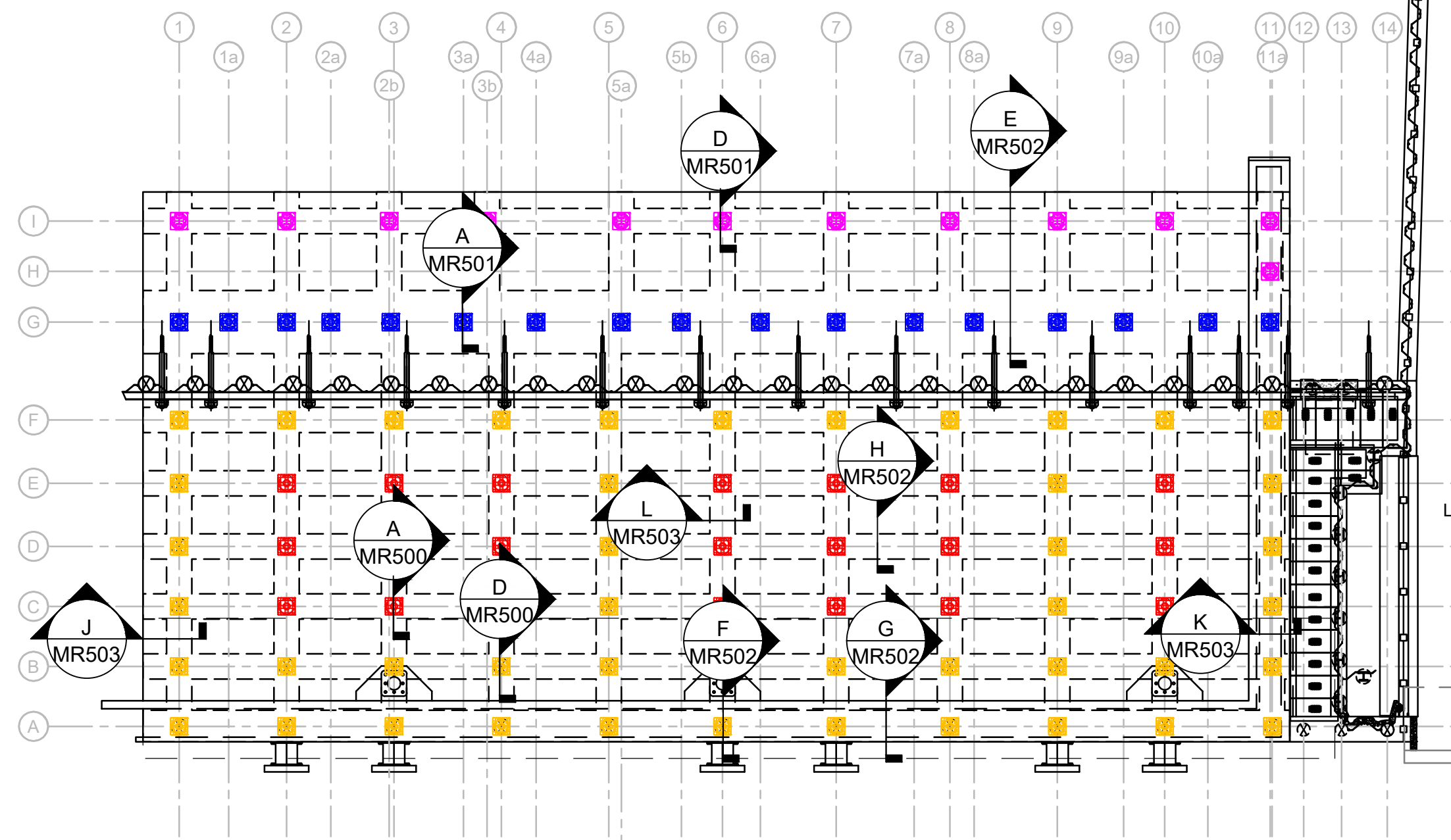
PROJECT NO: 0024M070.04

SHEET NUMBER

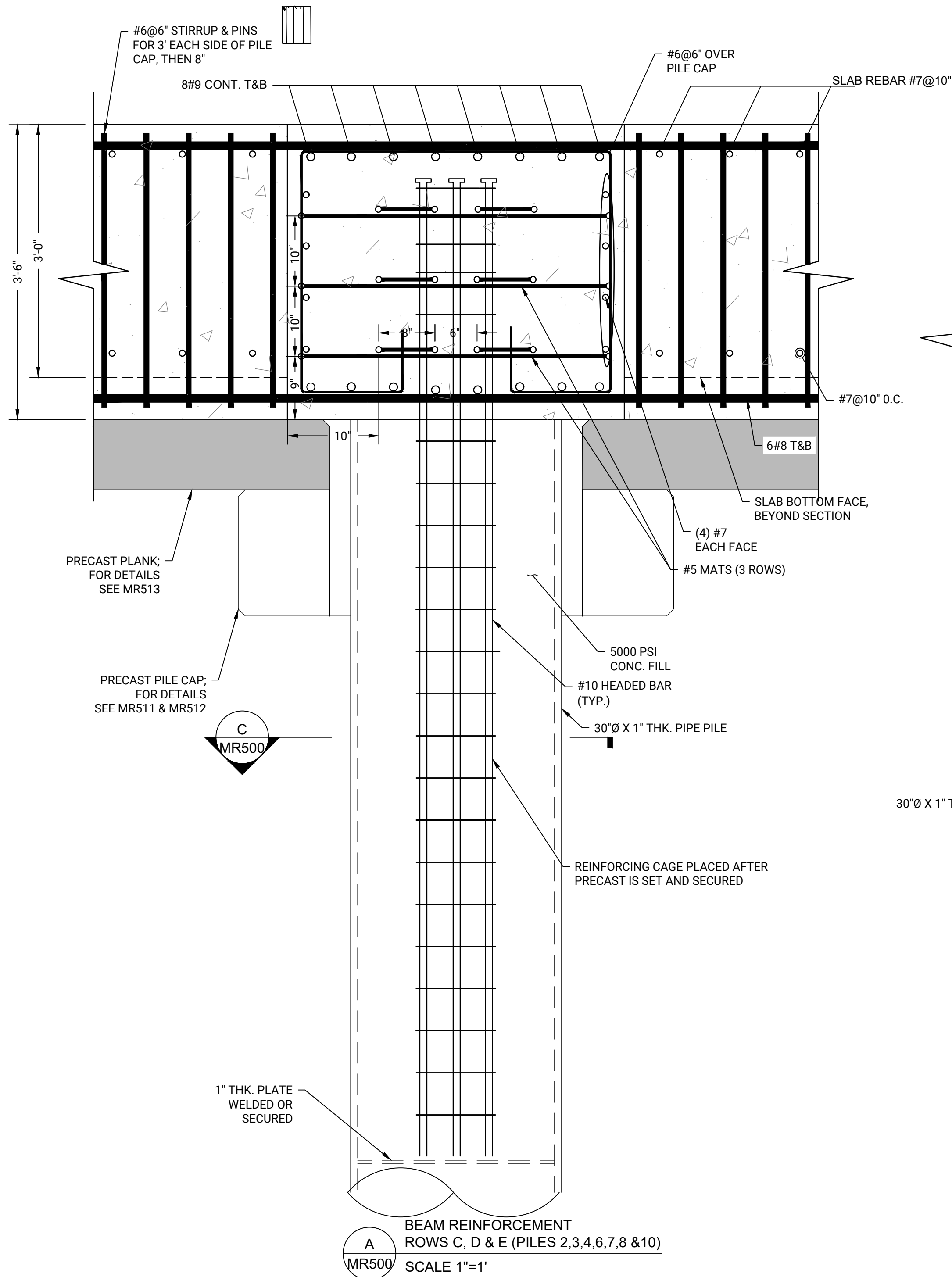
MR304





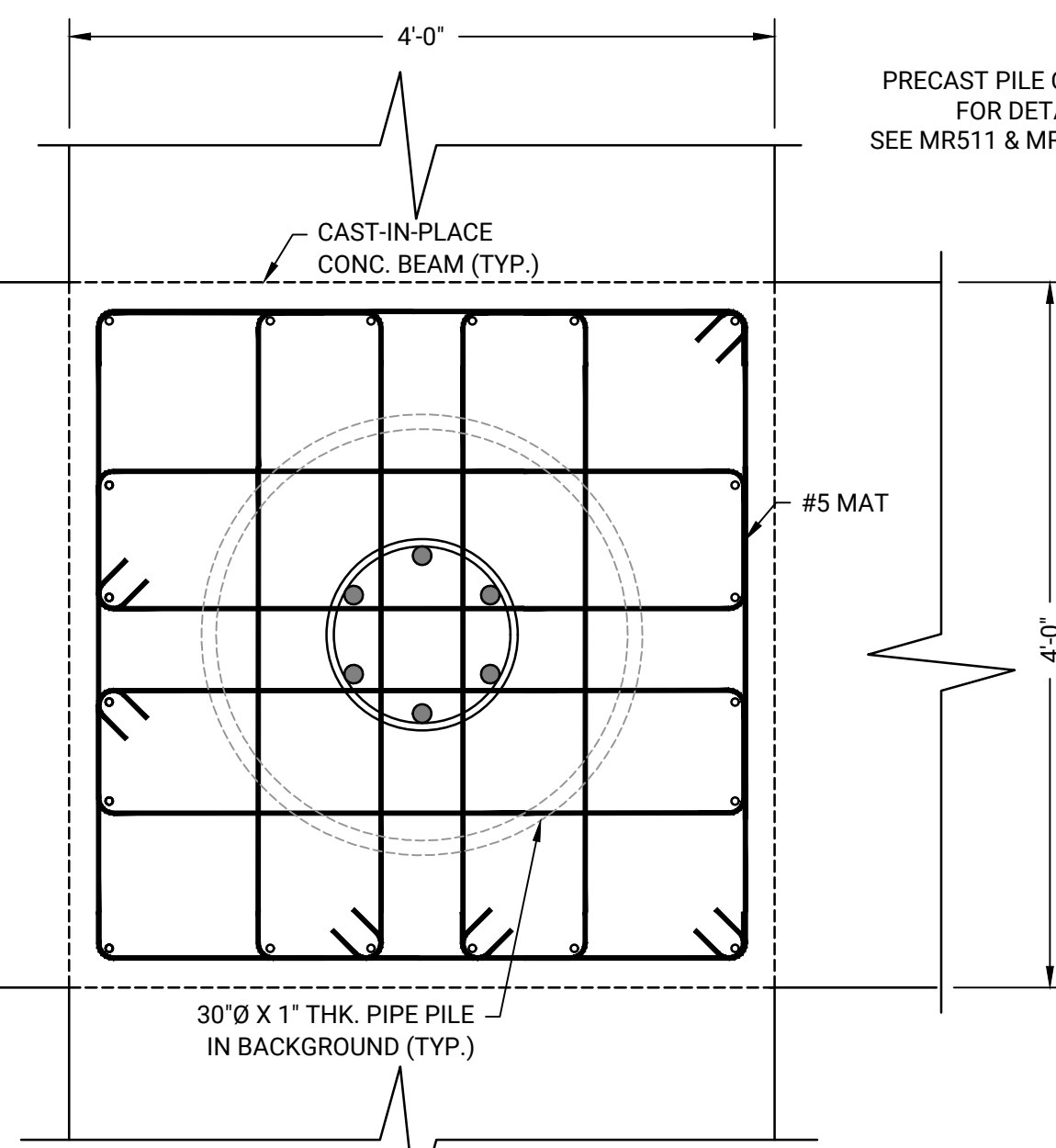


1 BEAM REINFORCEMENT PLAN
MR500 SCALE 1"=20'

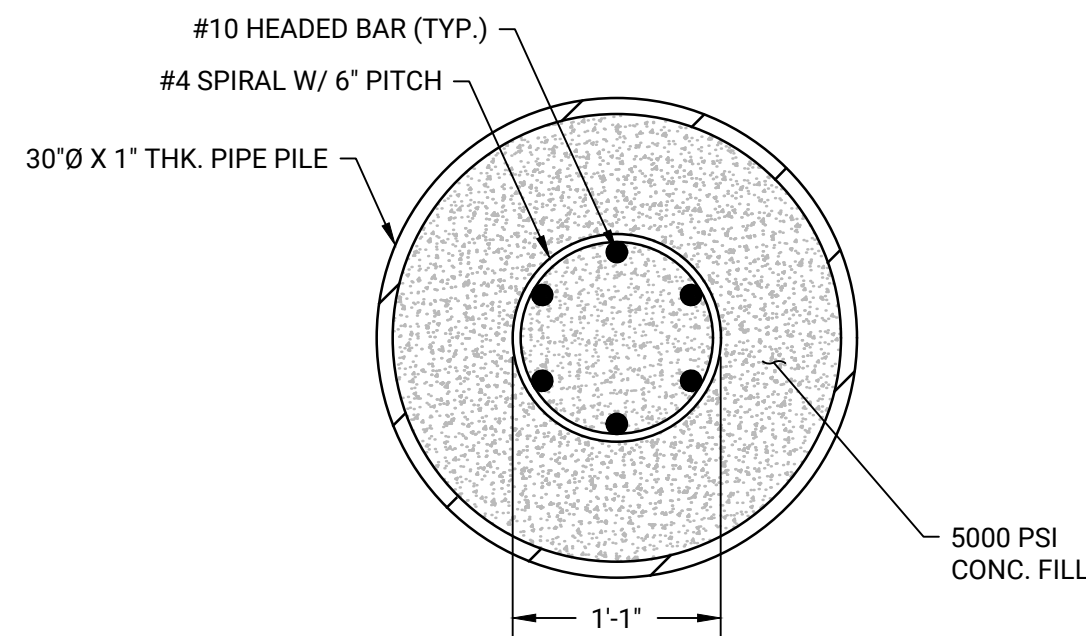


A BEAM REINFORCEMENT
ROWS C, D & E (PILES 2,3,4,6,7,8 & 10)
MR500 SCALE 1"=1'

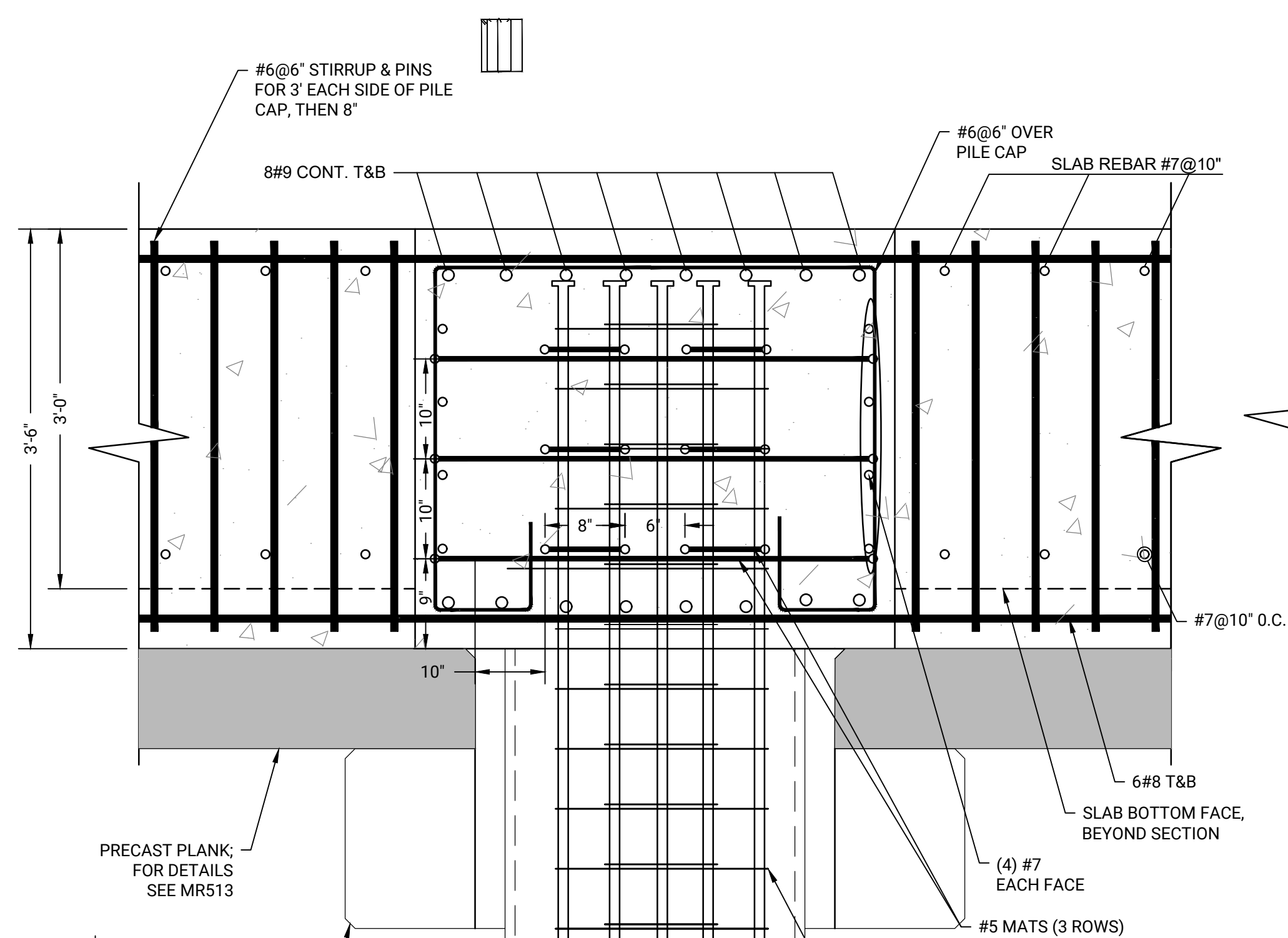
LEGEND:
MAT TYPE 1
MAT TYPE 2
MAT TYPE 3
MAT TYPE 4



B PILE CAP MAT TYPE 1
ROWS C, D & E DRIVEN
MR500 SCALE 1"=1'



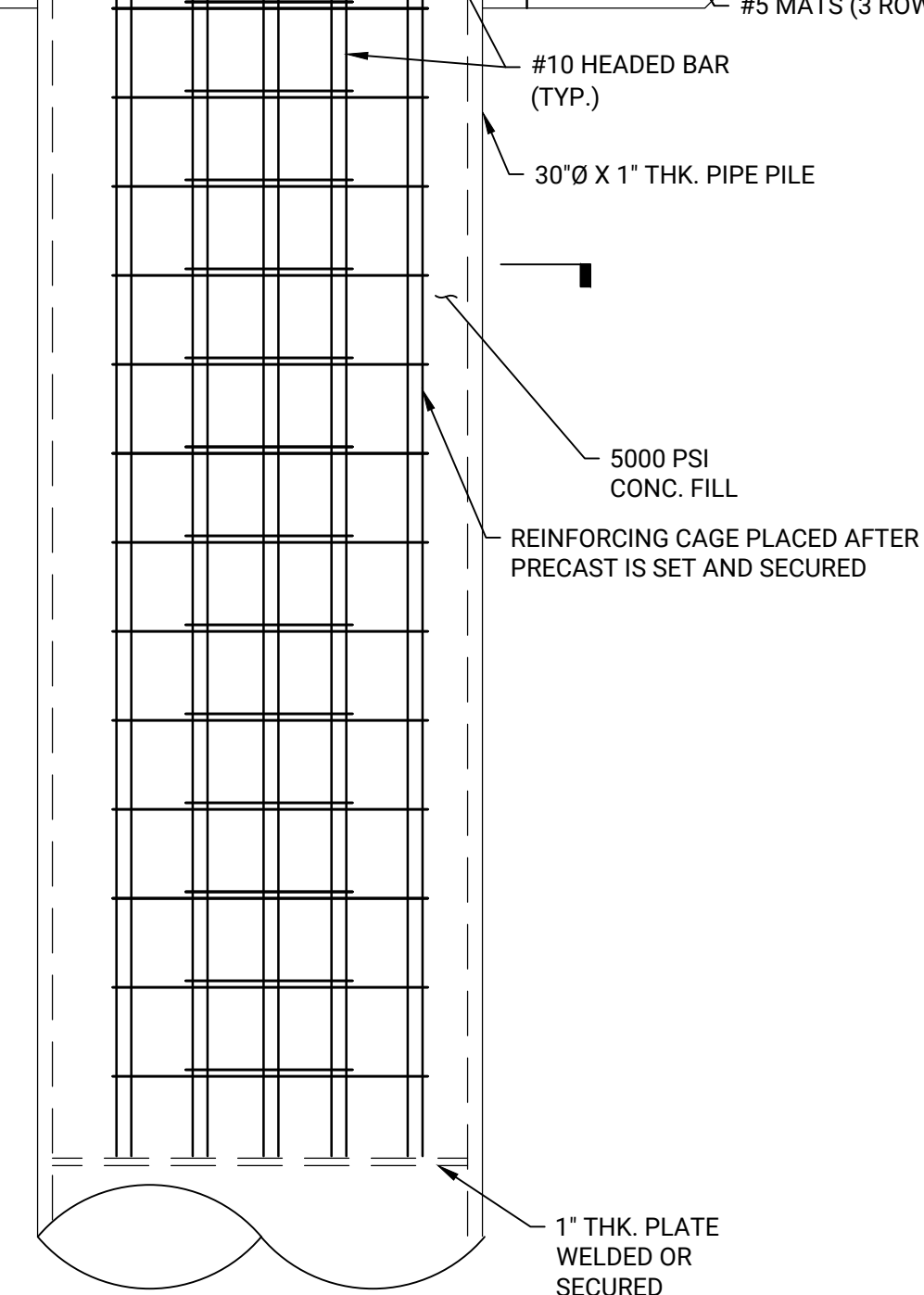
C STEEL PIPE PILE SECTION
ROWS C, D & E DRIVEN
MR500 SCALE 1"=1'



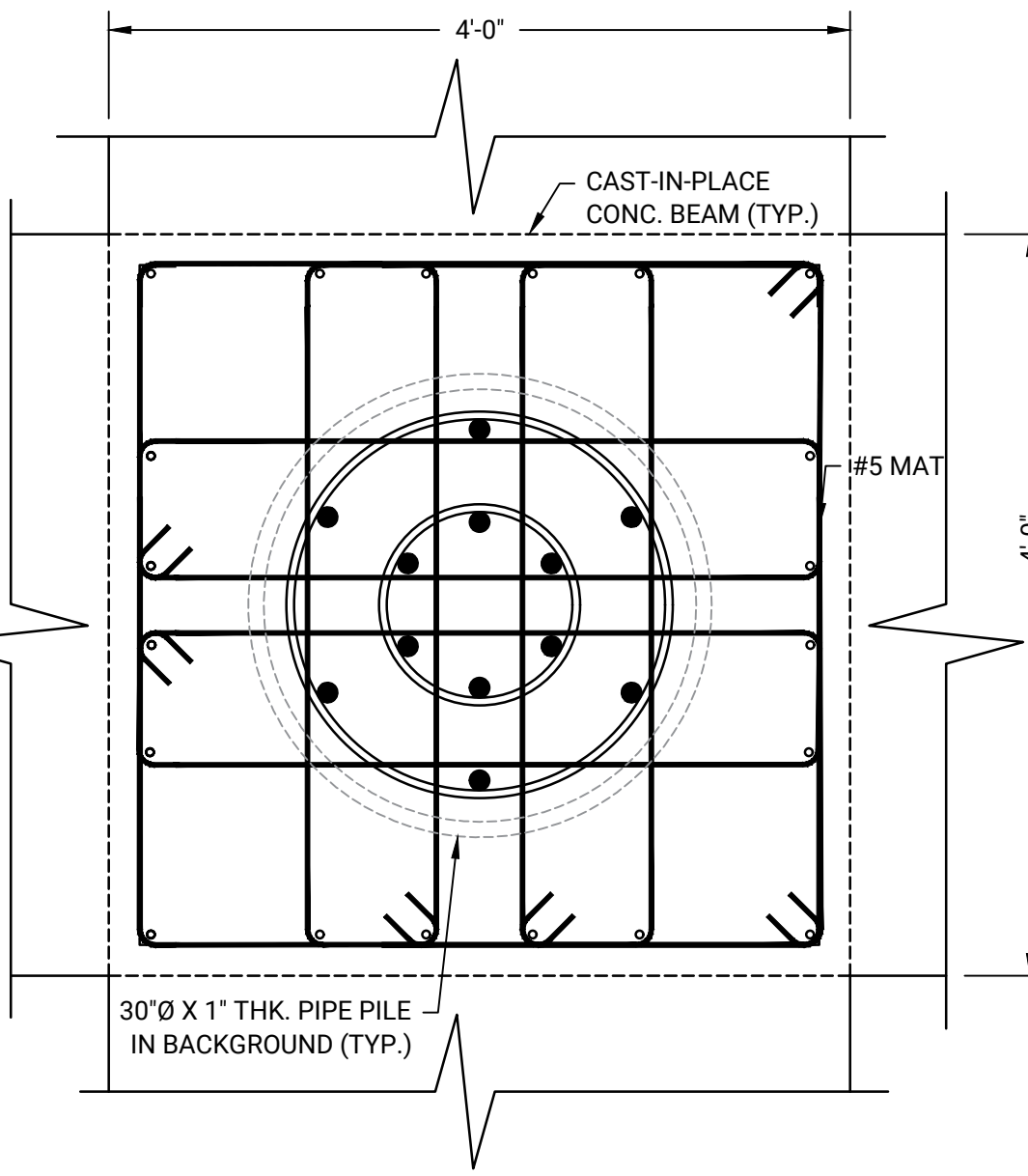
PRECAST PLANK;
FOR DETAILS
SEE MR513

PRECAST PILE CAP;
FOR DETAILS
SEE MR511 & MR512

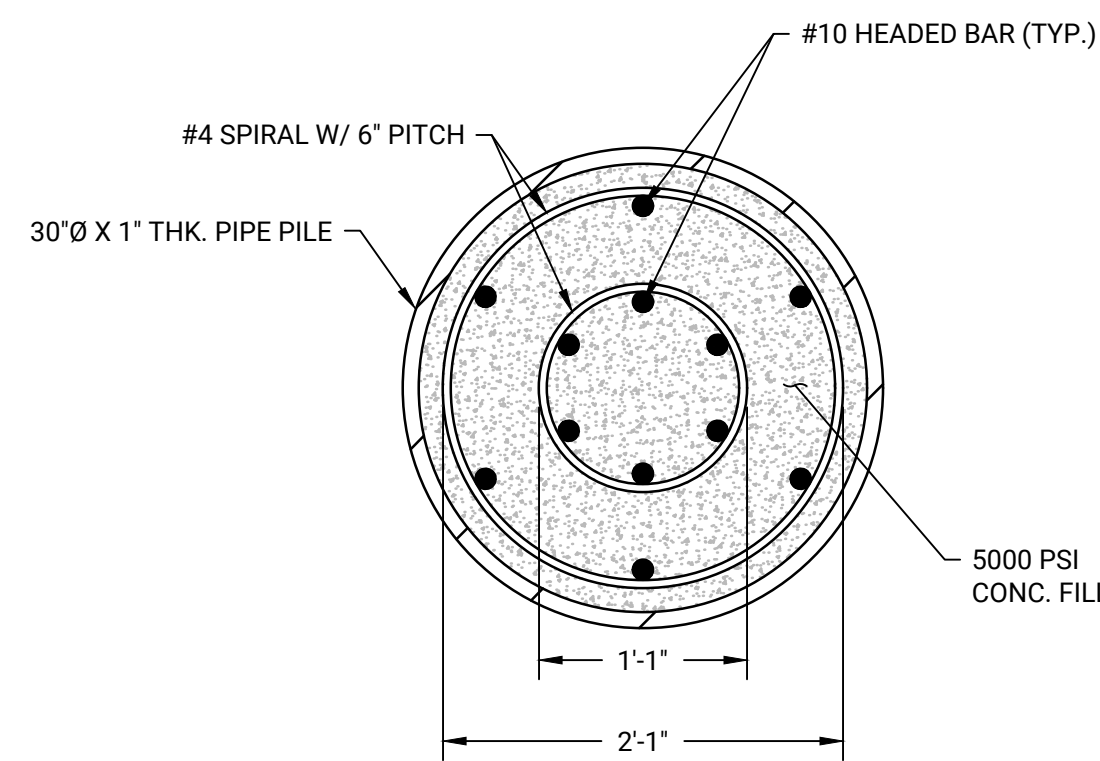
F MR500



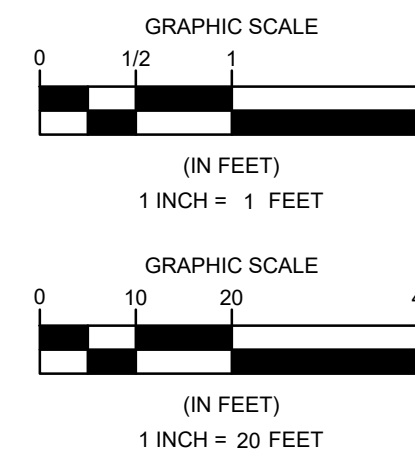
D BEAM REINFORCEMENT
ROWS A, B & F: PILES 1 TO 11
ROWS C, D & E: PILES 1, 5, 9 & 11
MR500 SCALE 1"=1'



E PILE CAP MAT TYPE 2
ROWS A, B & F: PILES 1 TO 11
ROWS C, D & E: PILES 1, 5, 9 & 11
MR500 SCALE 1"=1'



F STEEL PIPE PILE SECTION
ROWS A, B & F
ROWS C, D & E SOCKETED
MR500 SCALE 1"=1'



PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA**

REVISIONS	DESCRIPTION	DATE	BY	NO

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

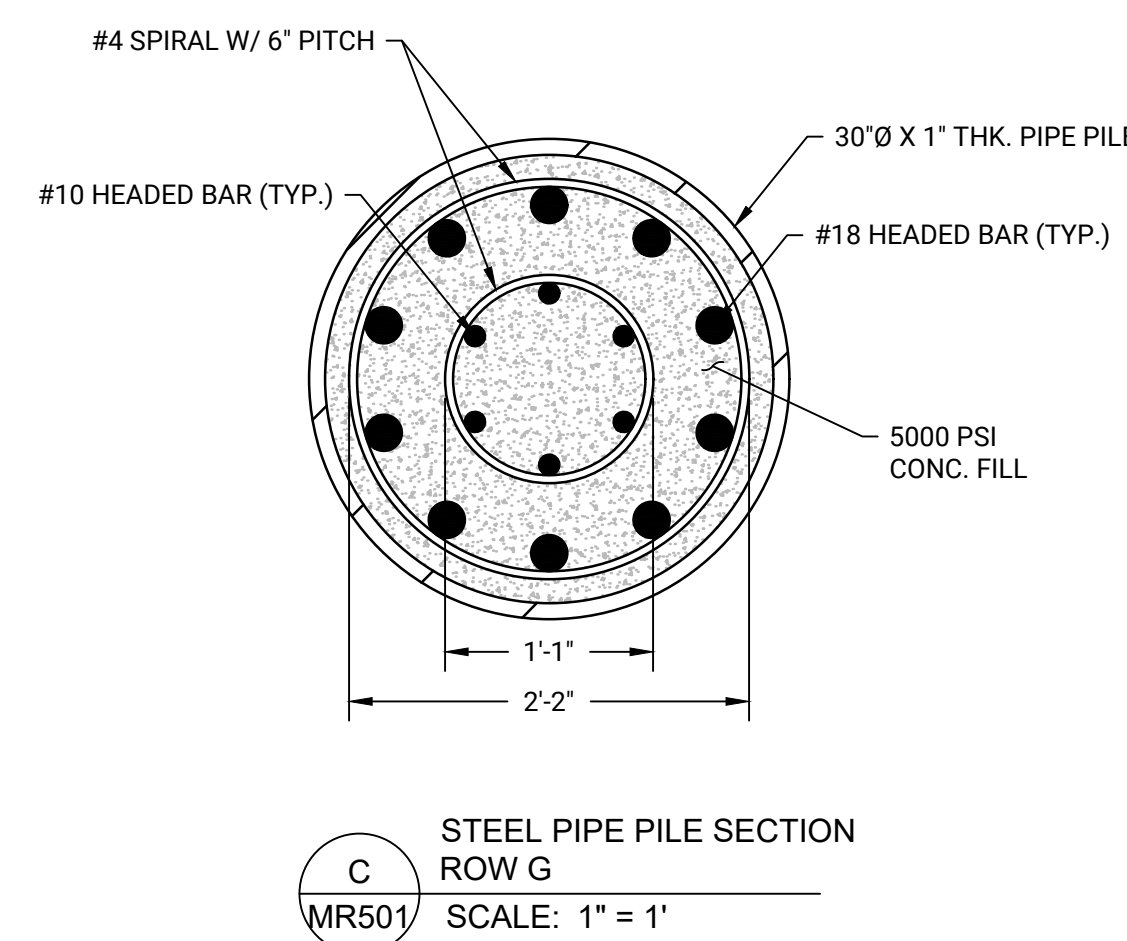
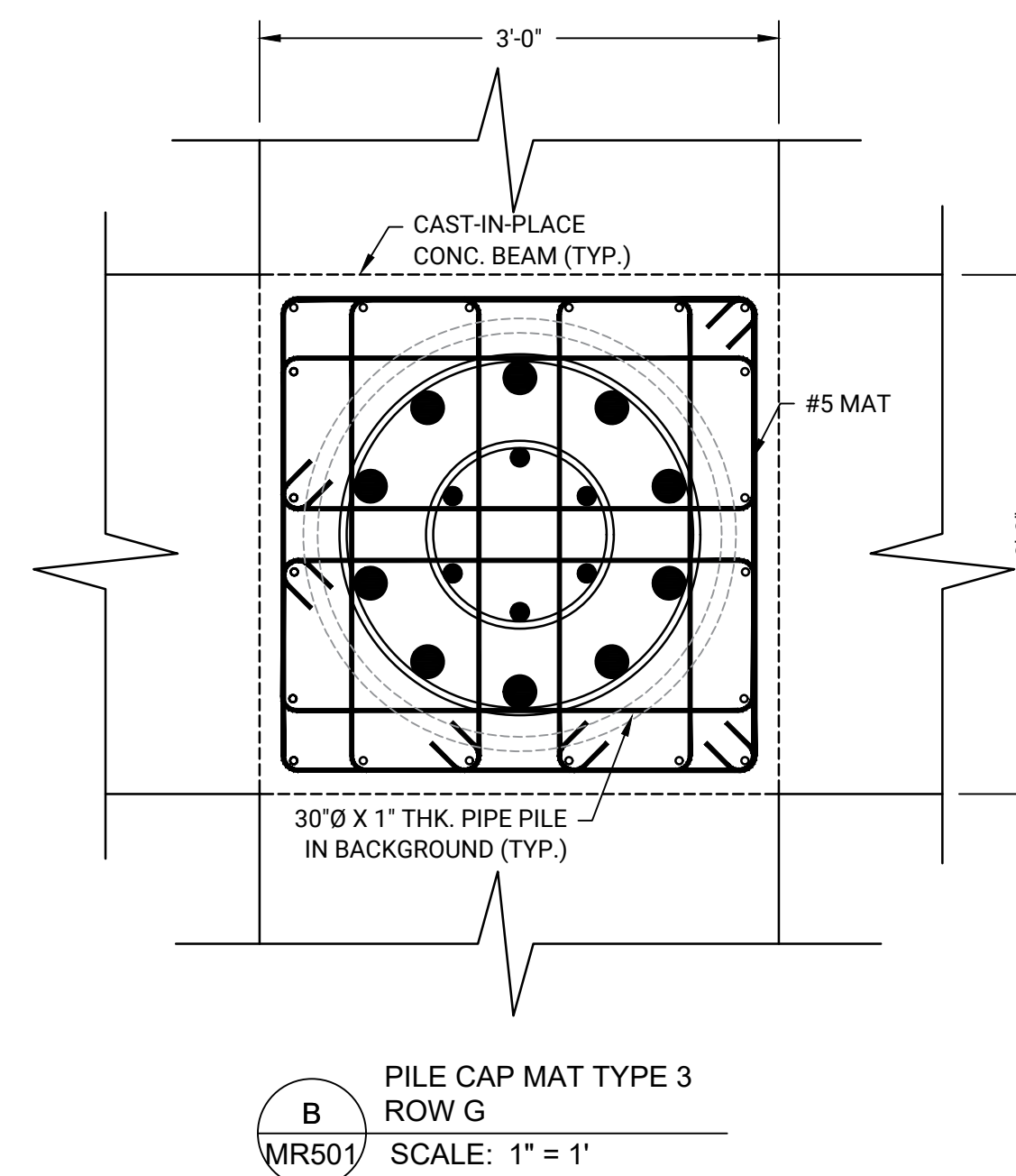
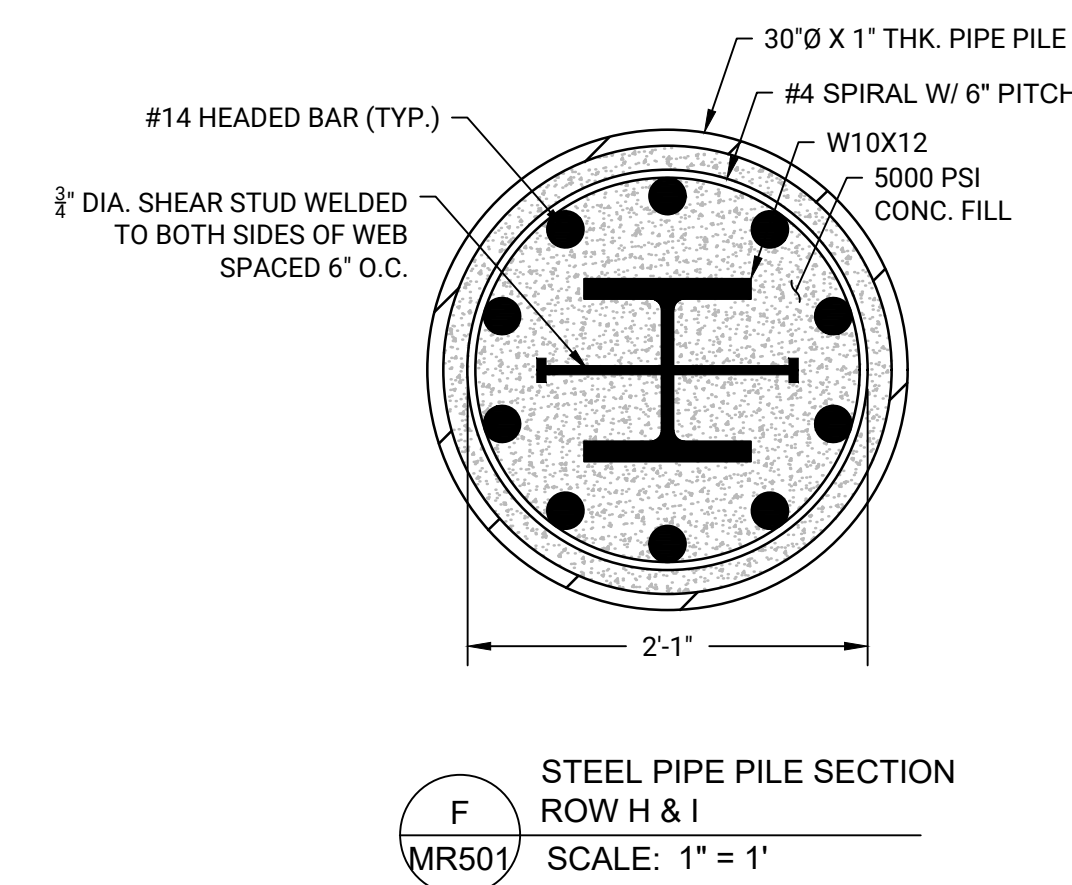
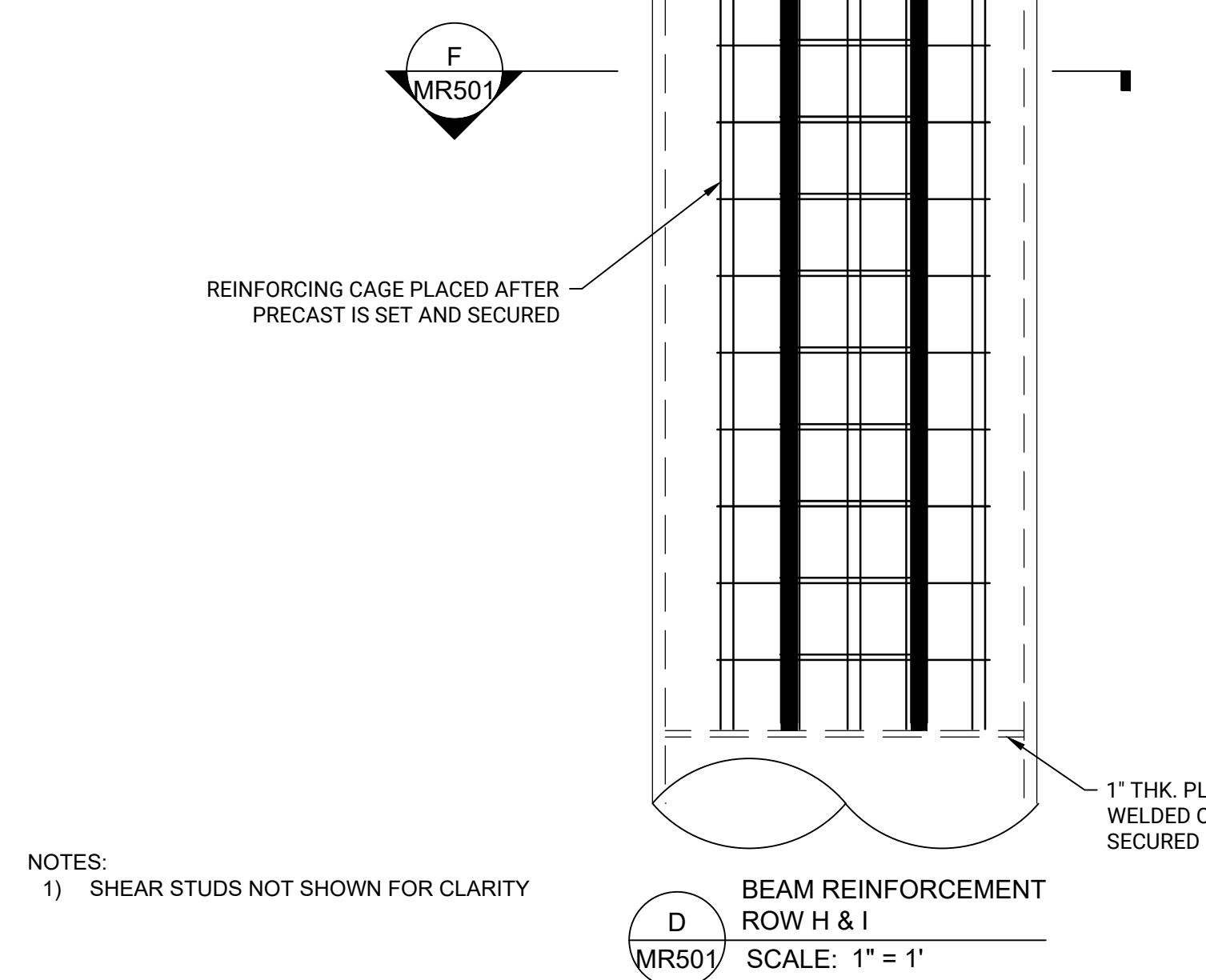
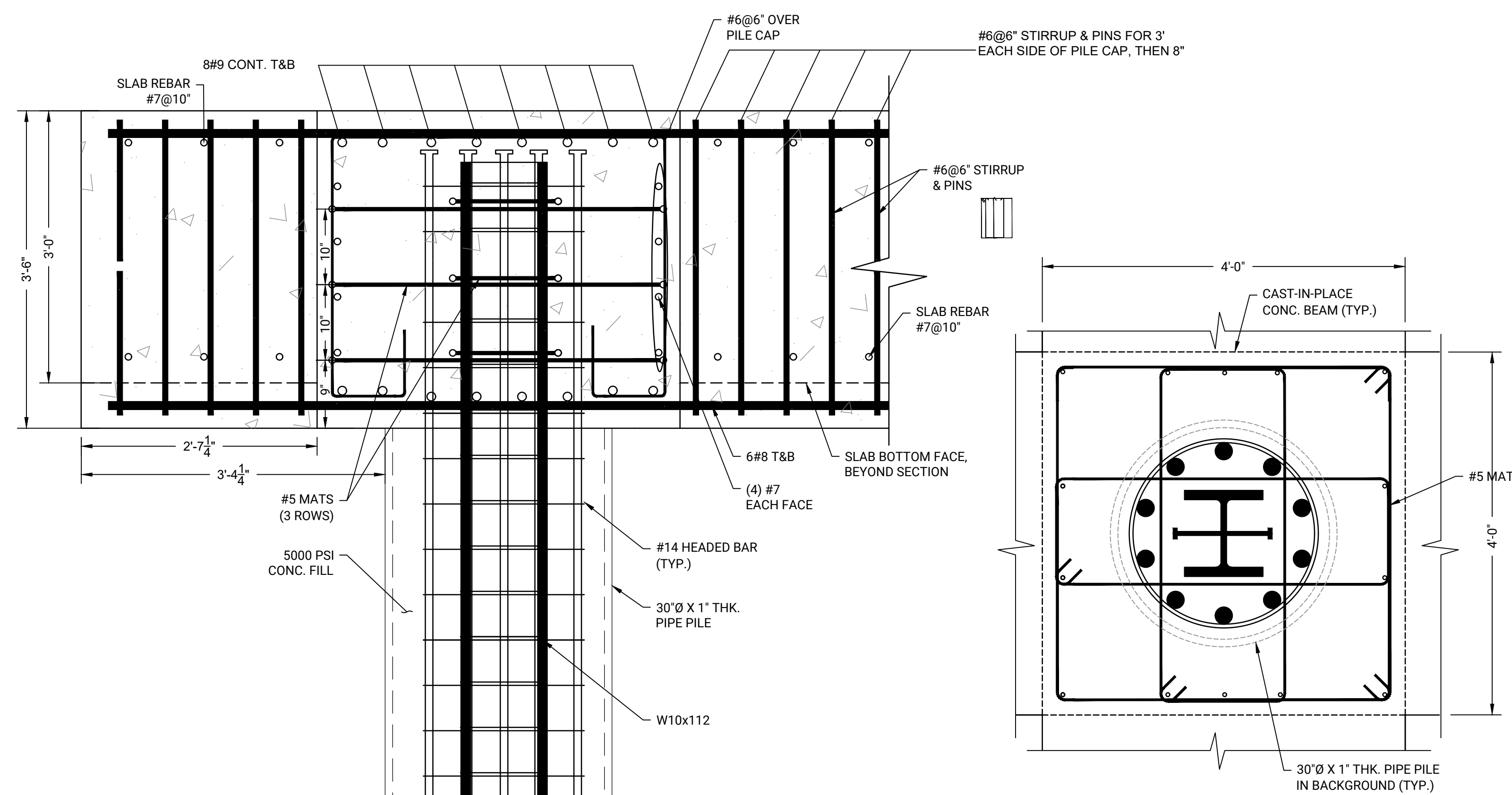
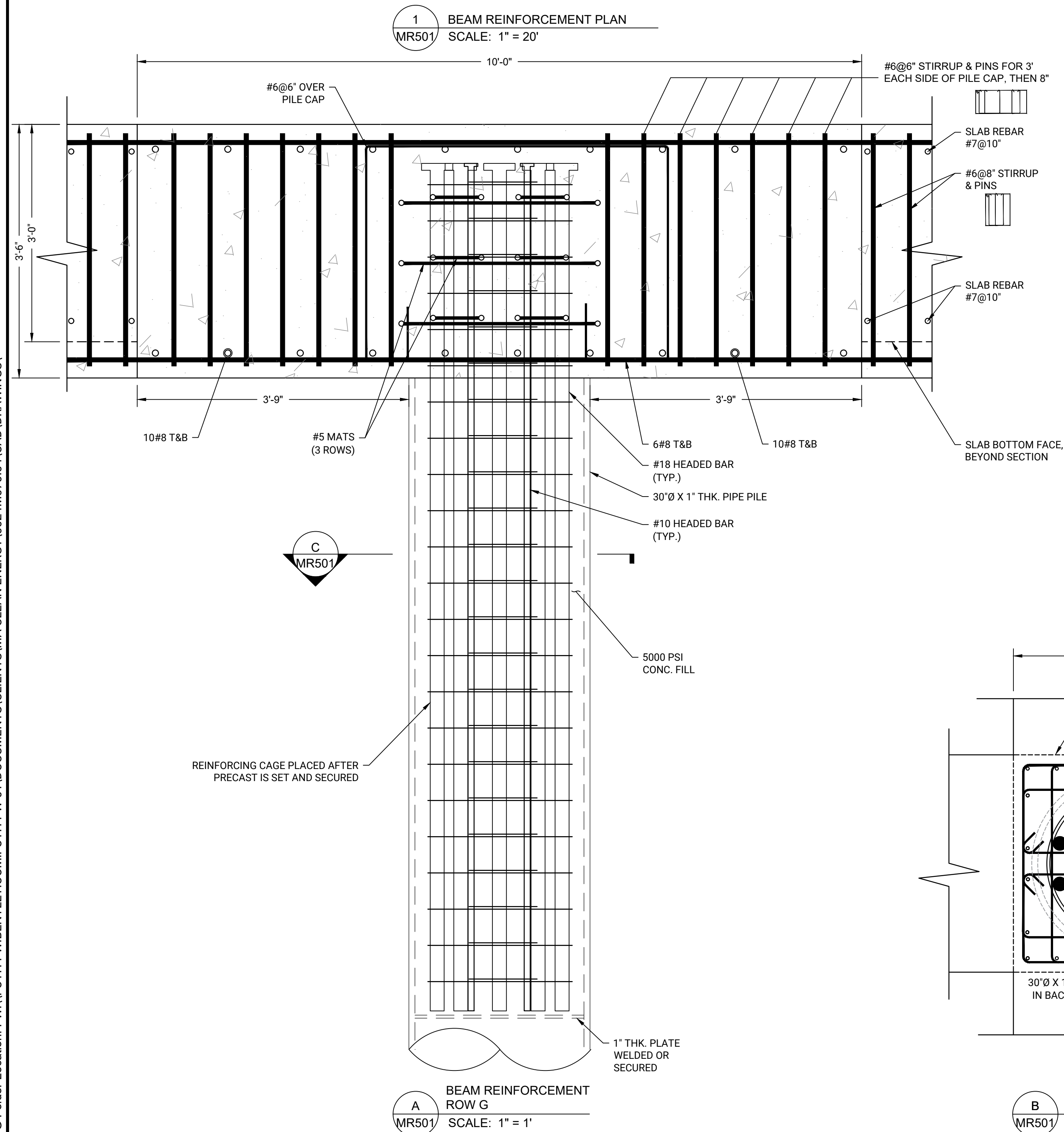
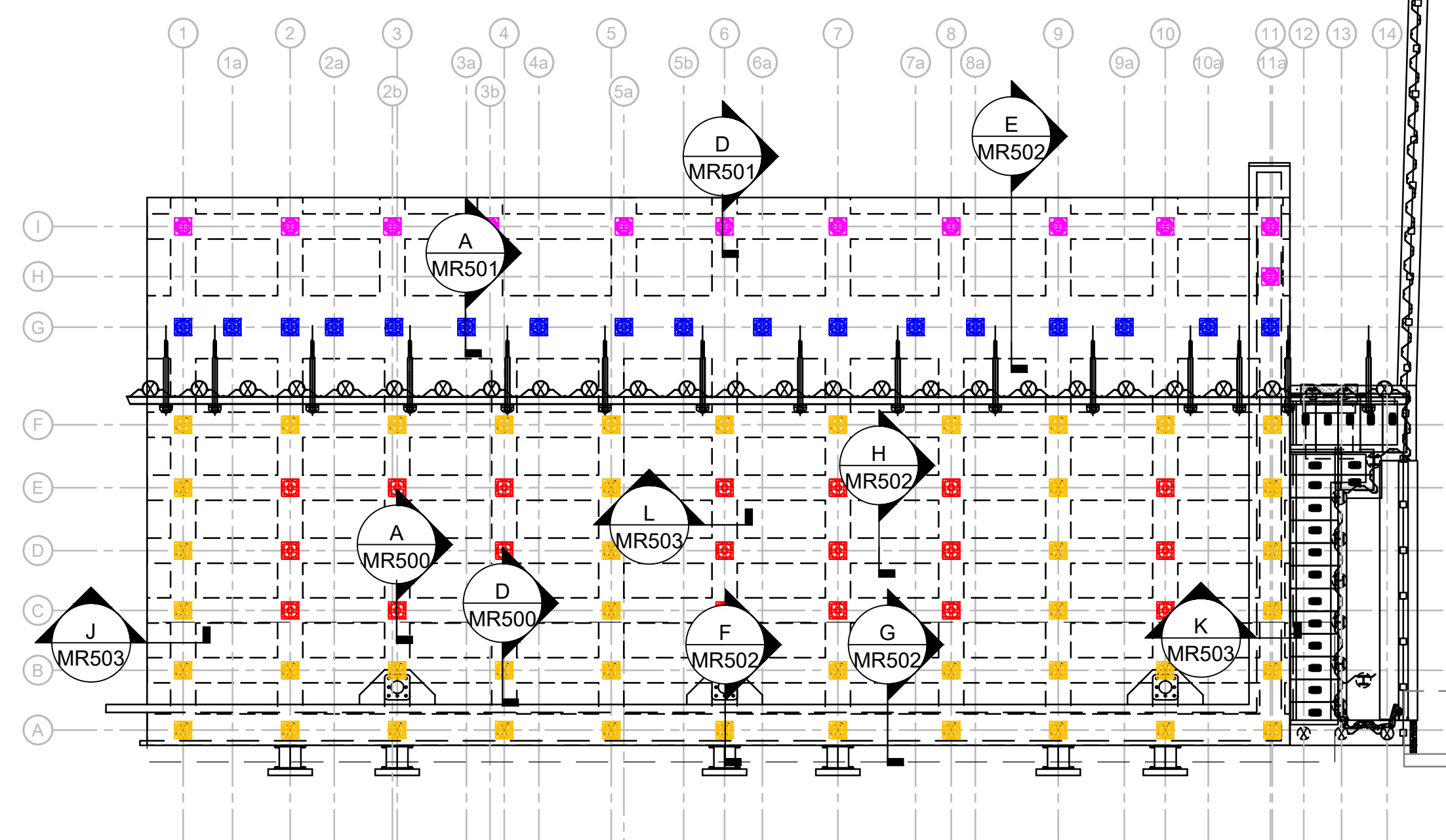
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SHEET TITLE: **CAST-IN-PLACE
CONCRETE
PLATFORM
DETAIL 1 OF 4**

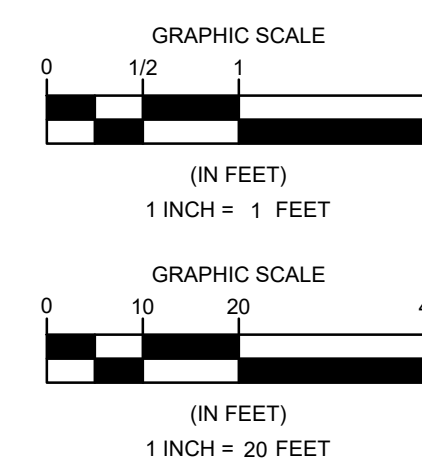
ISSUANCE: **IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04

SHEET NUMBER **MR500**



NOTES:
1) SHEAR STUDS NOT SHOWN FOR CLARITY



PROJECT:
MASSEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS			
NO.	BY	DATE	DESCRIPTION
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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

CAST-IN-PLACE
CONCRETE
PLATFORM
DETAIL 2 OF 4

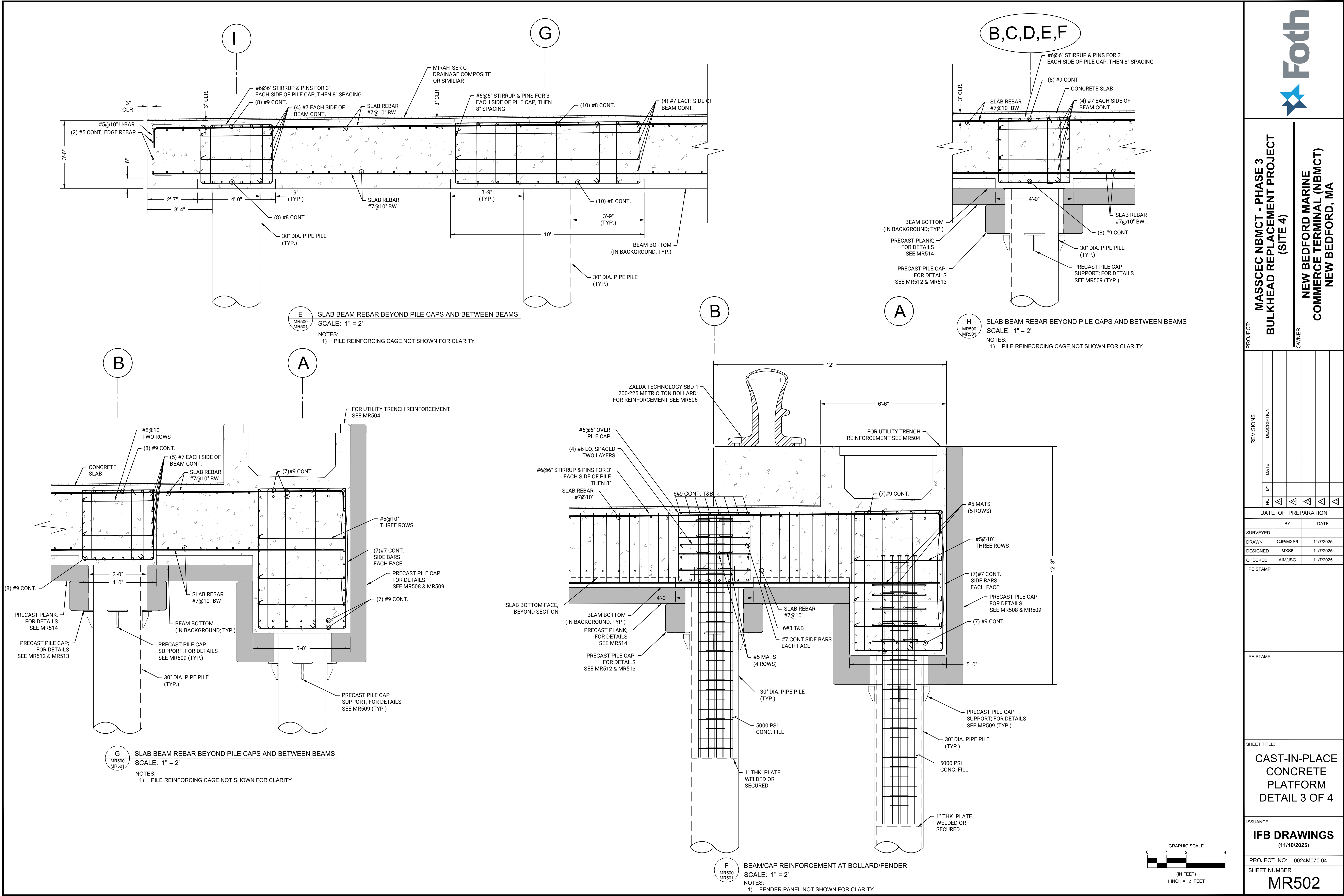
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR501



PROJECT: MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER: NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA

REVISIONS	DESCRIPTION	DATE	BY	NO.
				1
				2
				3
				4

DATE OF PREPARATION

	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

**CAST-IN-PLACE
CONCRETE
PLATFORM
DETAIL 3 OF 4**

ISSUANCE:

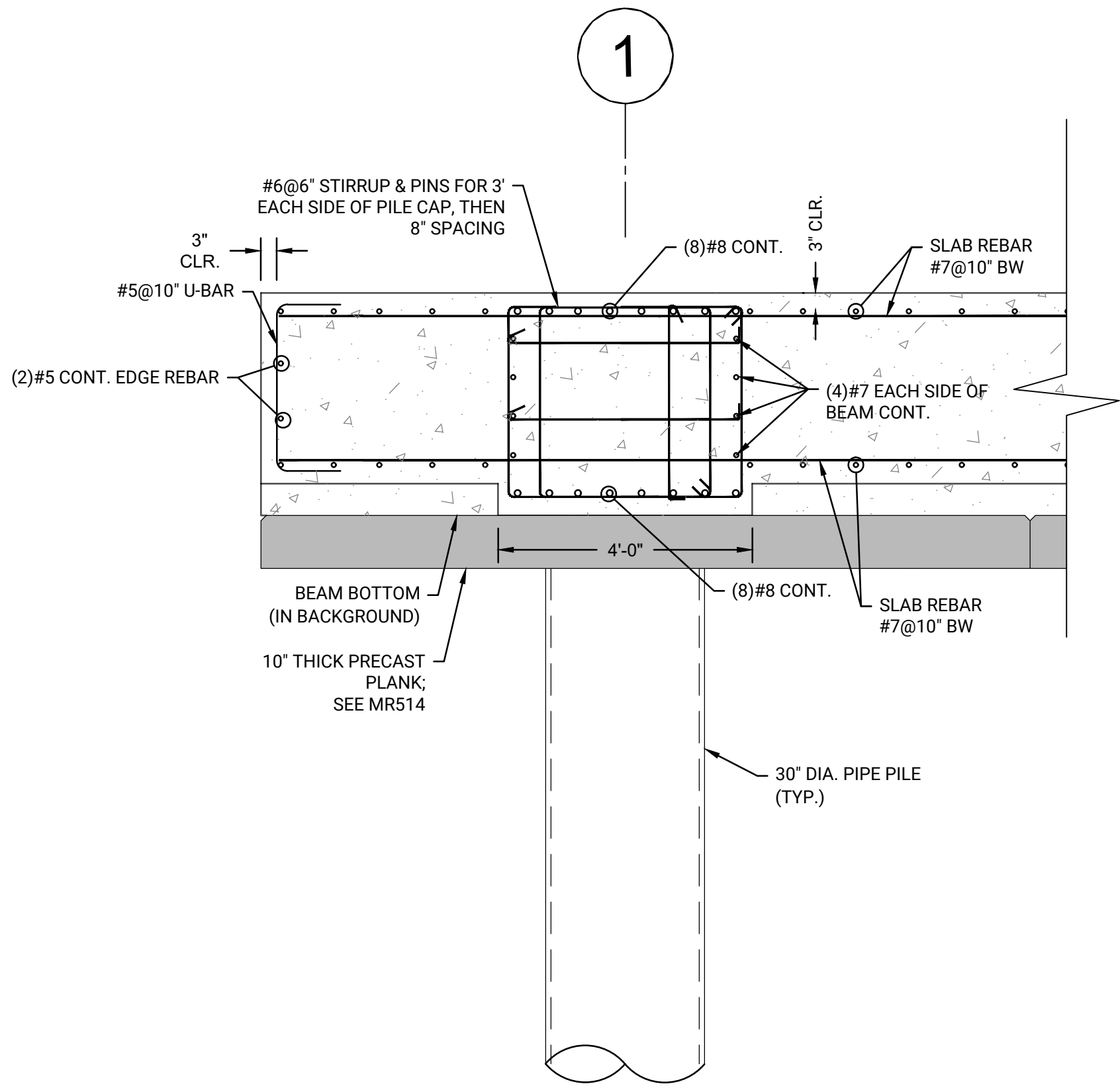
IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

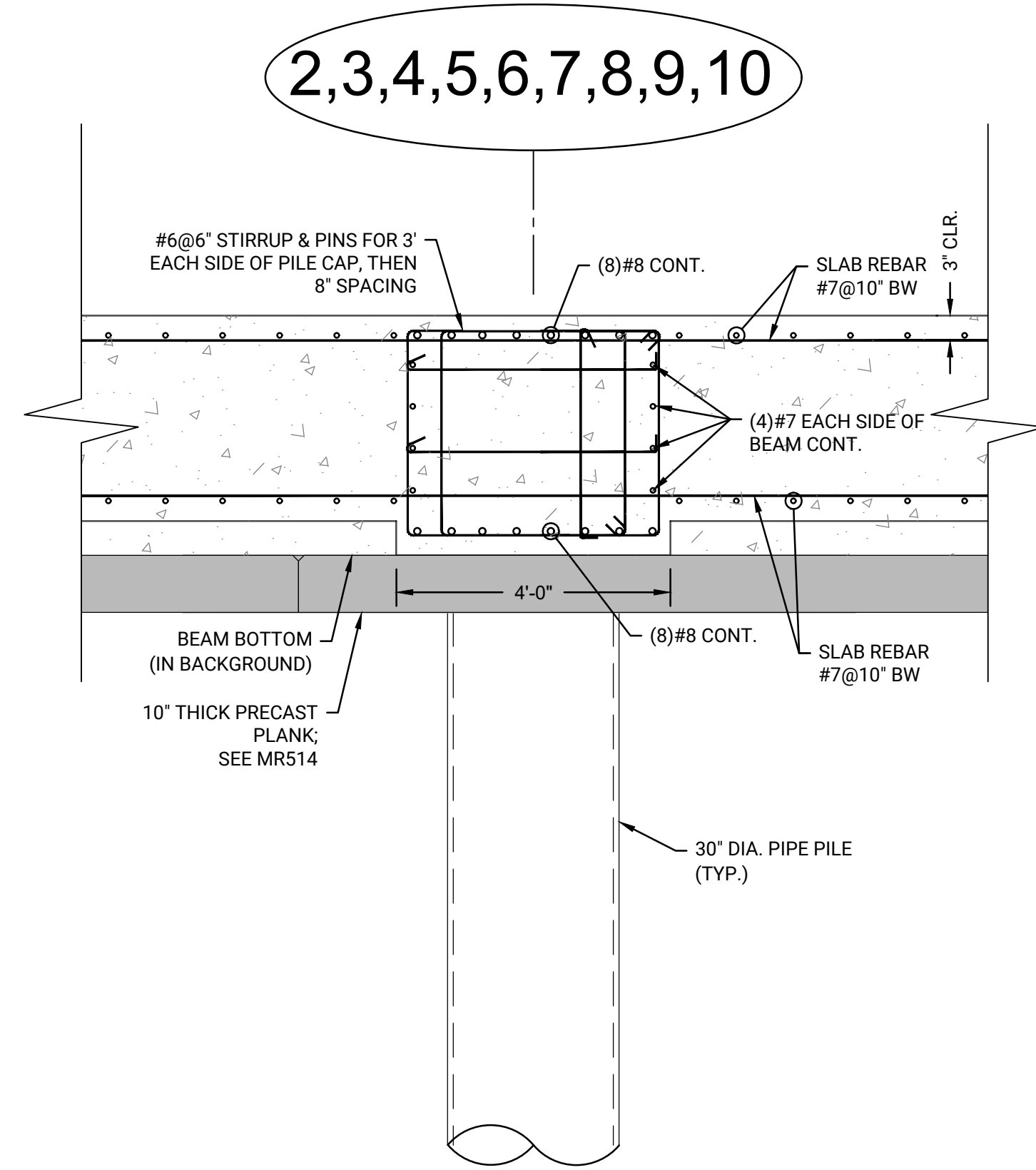
SHEET NUMBER

MR502

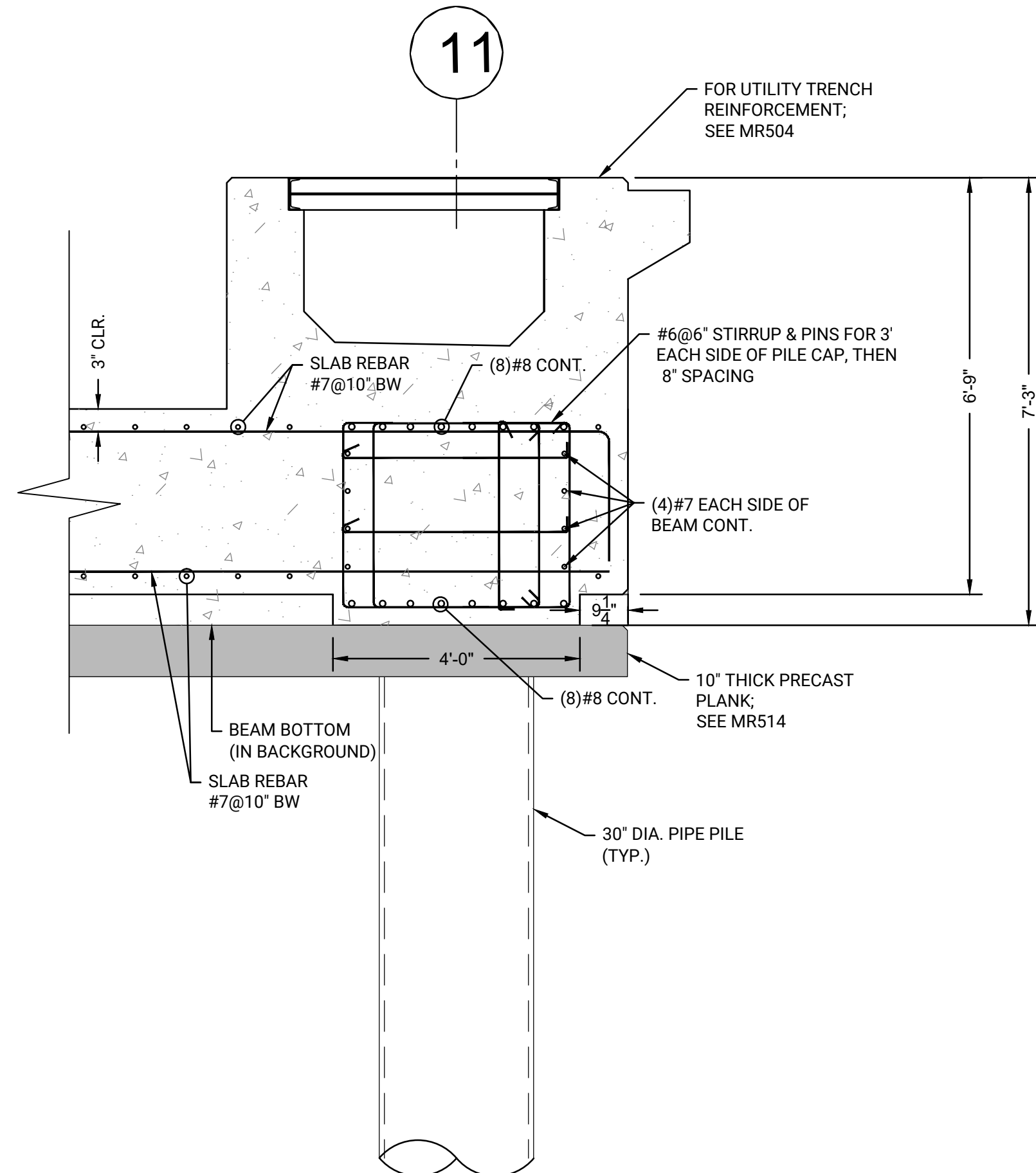
Tuesday, November 11, 2025 8:25:49 AM
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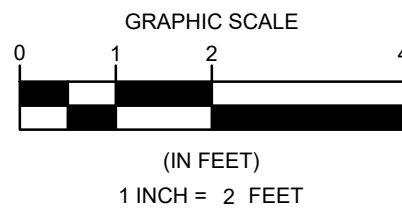
J SLAB BEAM REBAR BEYOND PILE CAPS AND BETWEEN BEAMS
SCALE: 1" = 2'
NOTES:
1) PILE REINFORCING CAGE NOT SHOWN FOR CLARITY



L SLAB BEAM REBAR BEYOND PILE CAPS AND BETWEEN BEAMS
SCALE: 1" = 2'
NOTES:
1) PILE REINFORCING CAGE NOT SHOWN FOR CLARITY



K SLAB BEAM REBAR BEYOND PILE CAPS AND BETWEEN BEAMS
SCALE: 1" = 2'
NOTES:
1) PILE REINFORCING CAGE NOT SHOWN FOR CLARITY



PROJECT: **MASCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC)
NEW BEDFORD, MA**

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
2				
3				
4				
5				

DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

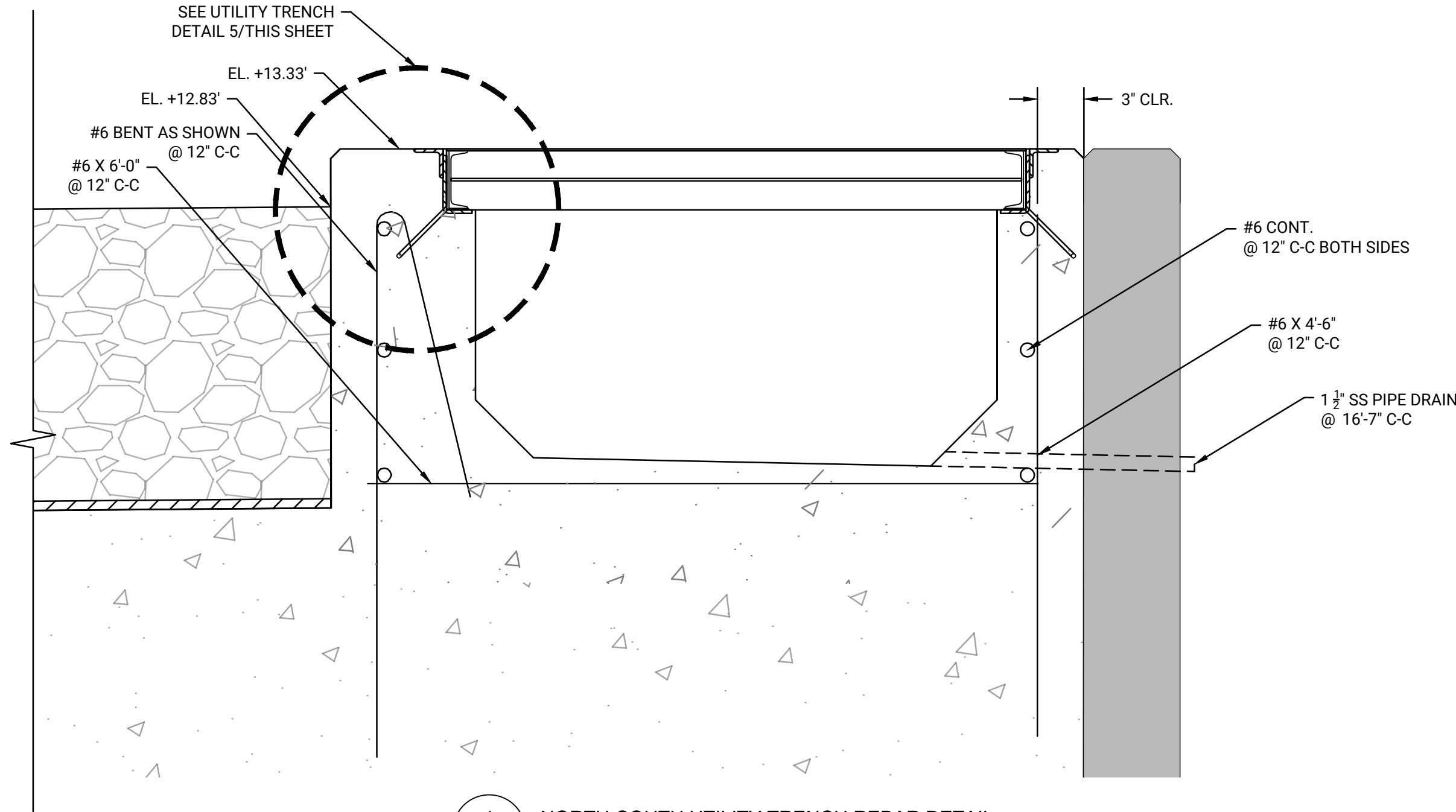
PE STAMP

PE STAMP

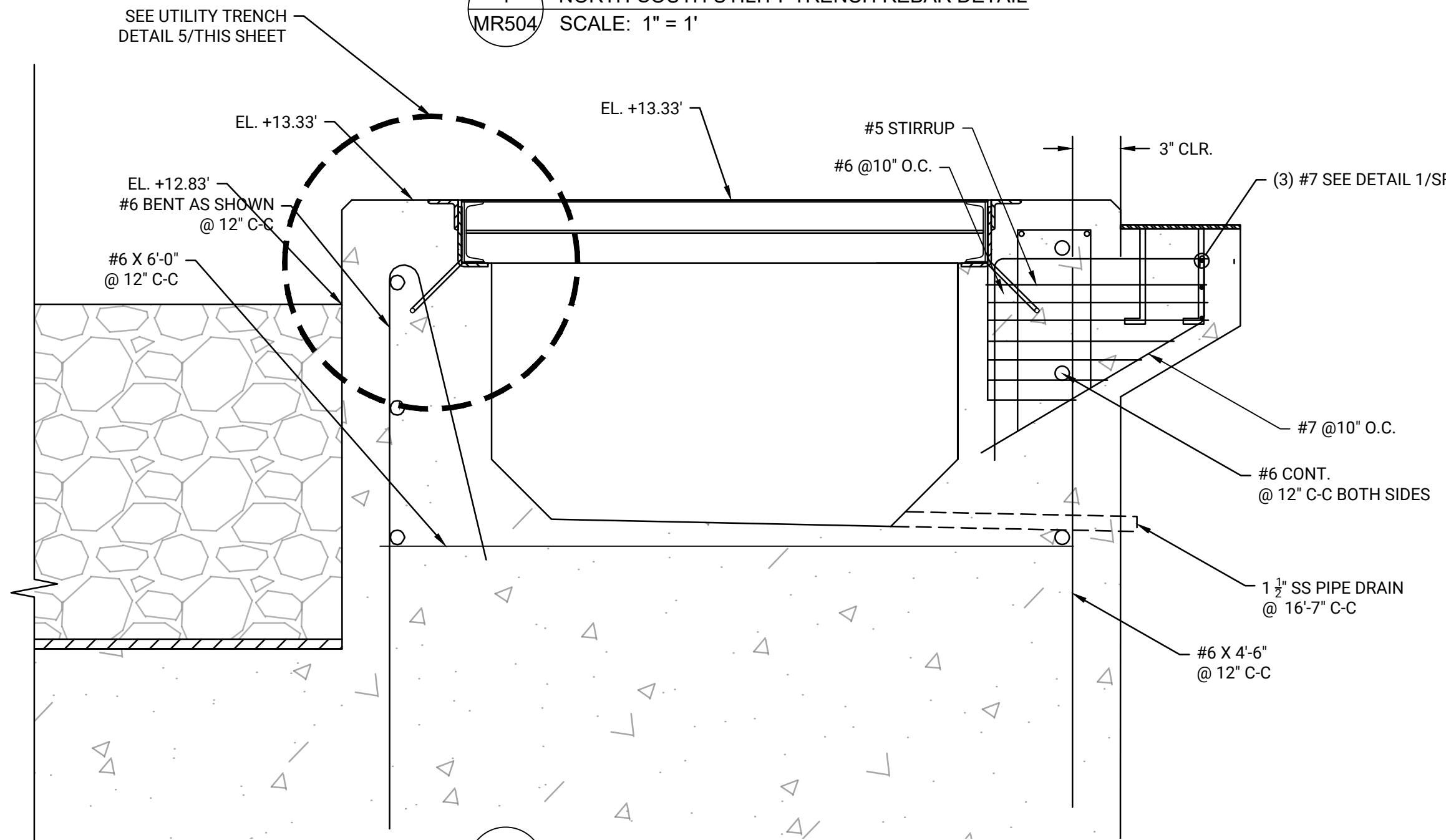
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**CAST-IN-PLACE
CONCRETE
PLATFORM
DETAIL 4 OF 4**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

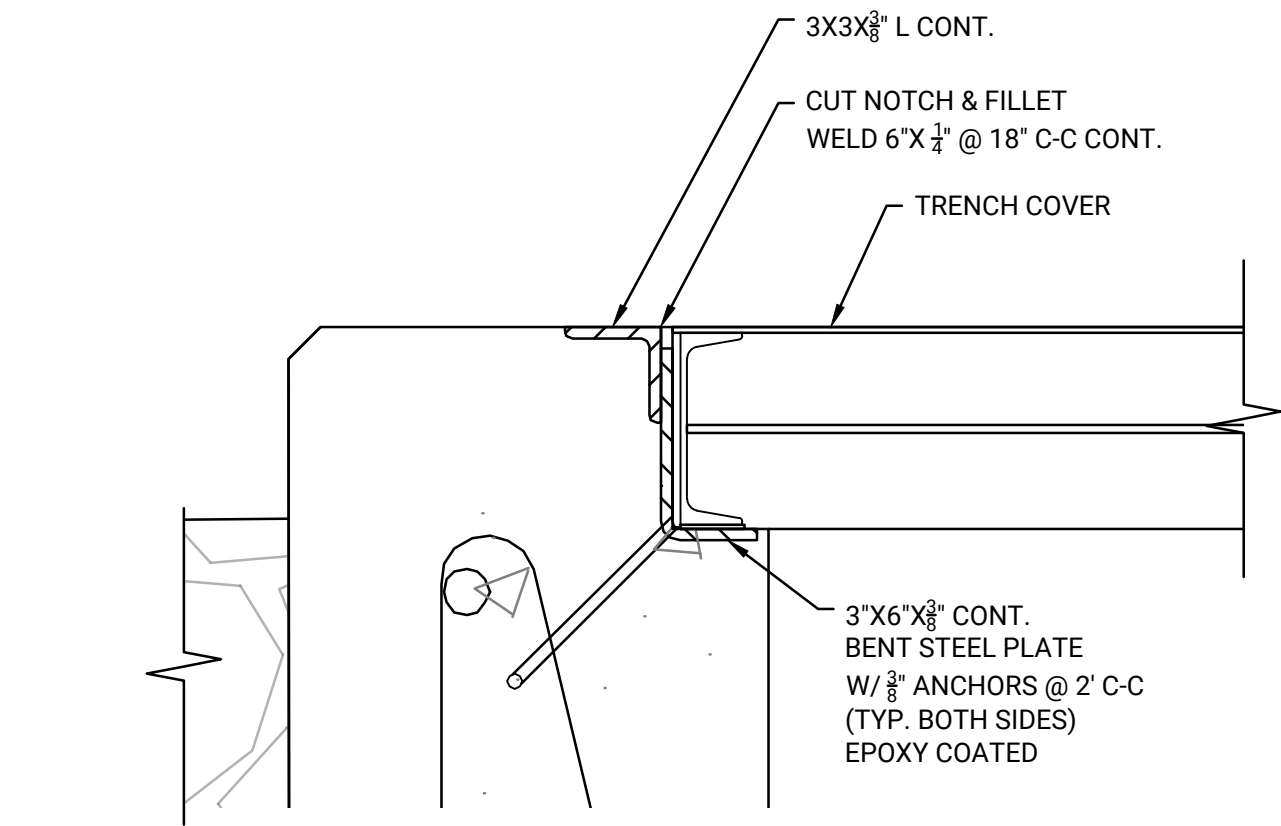
PROJECT NO: 0024M070.04
SHEET NUMBER
MR503



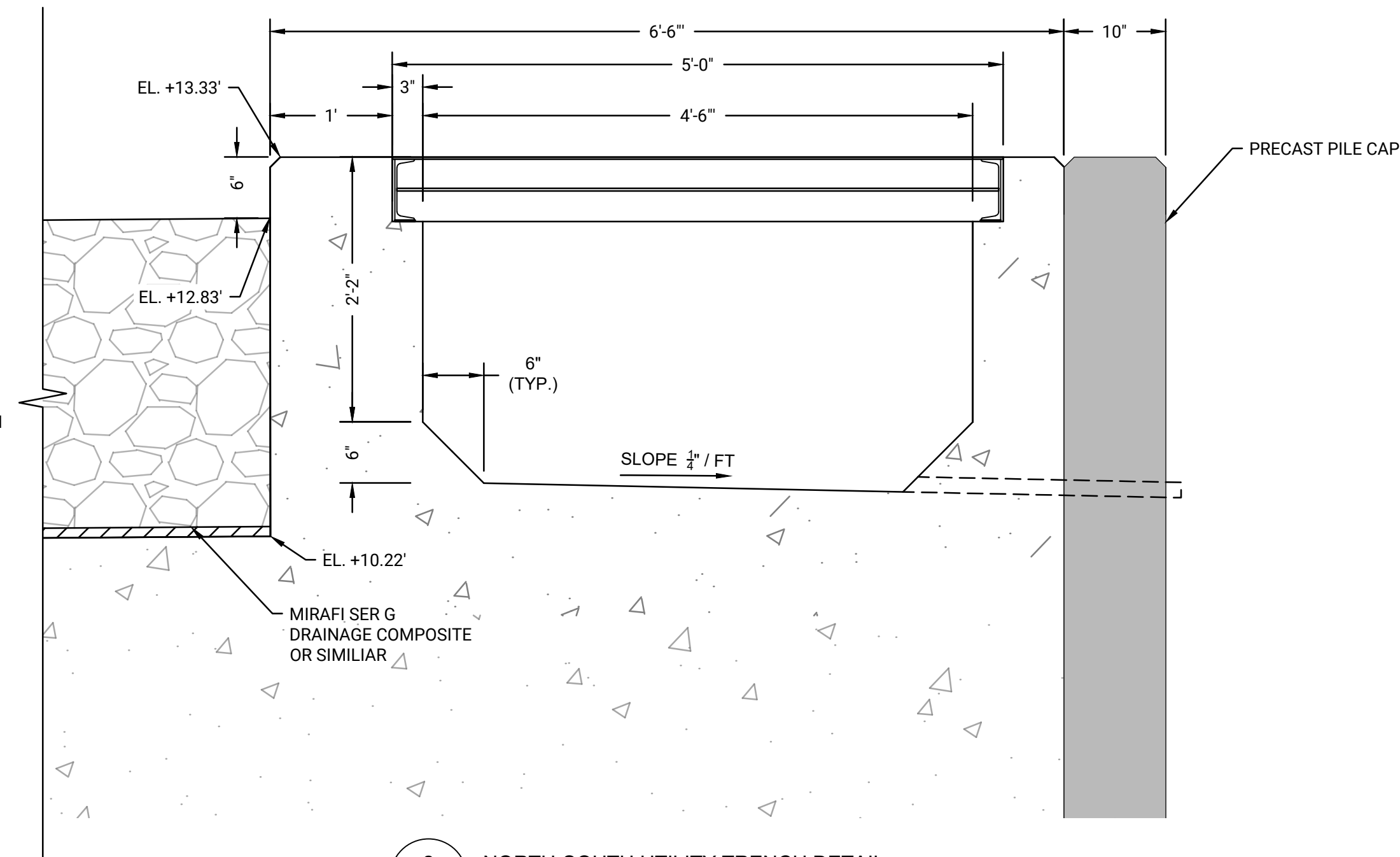
1 NORTH-SOUTH UTILITY TRENCH REBAR DETAIL
MR504 SCALE: 1" = 1'



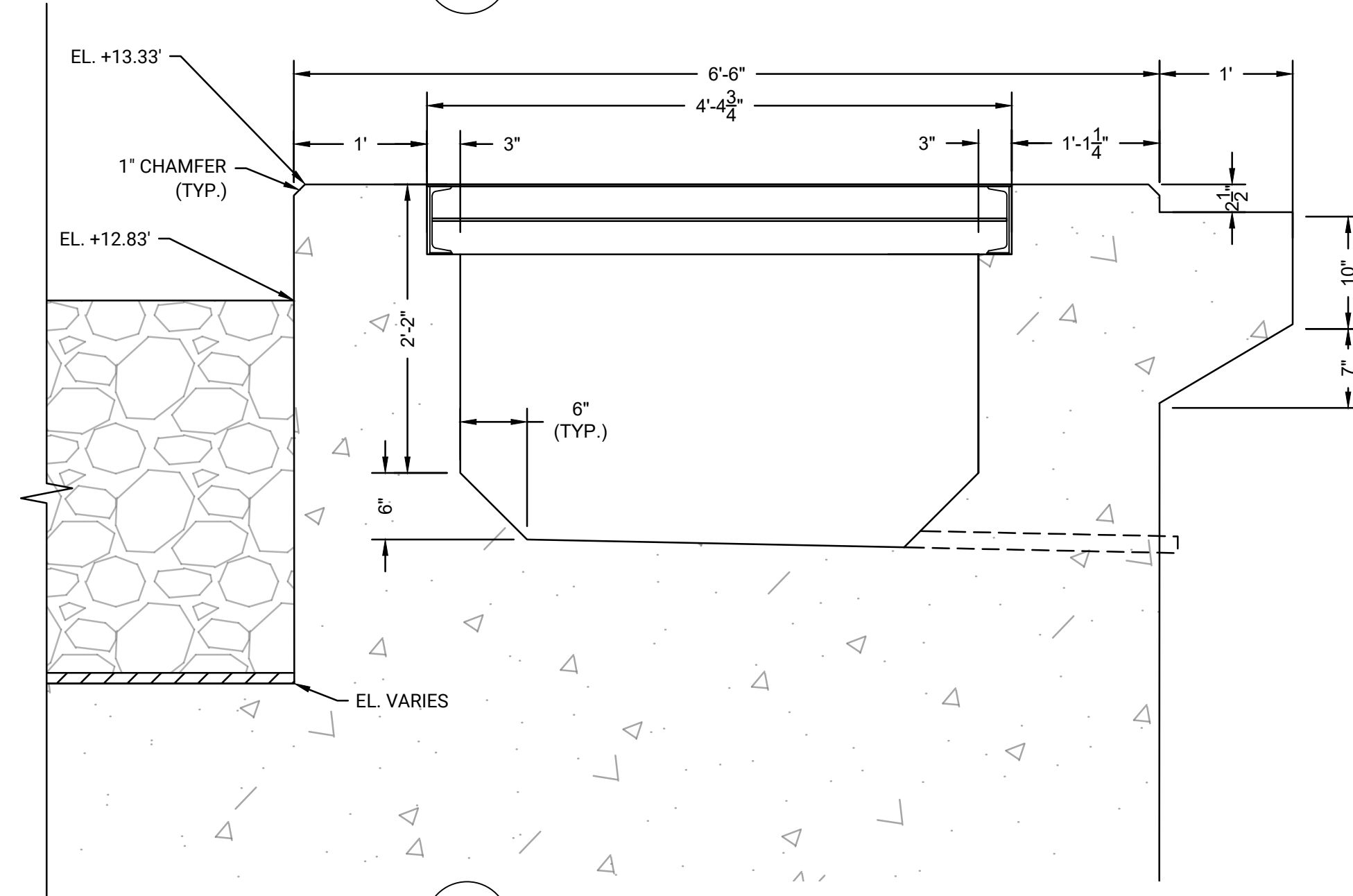
3 EAST-WEST UTILITY TRENCH REBAR DETAIL
MR504 SCALE: 1" = 1'



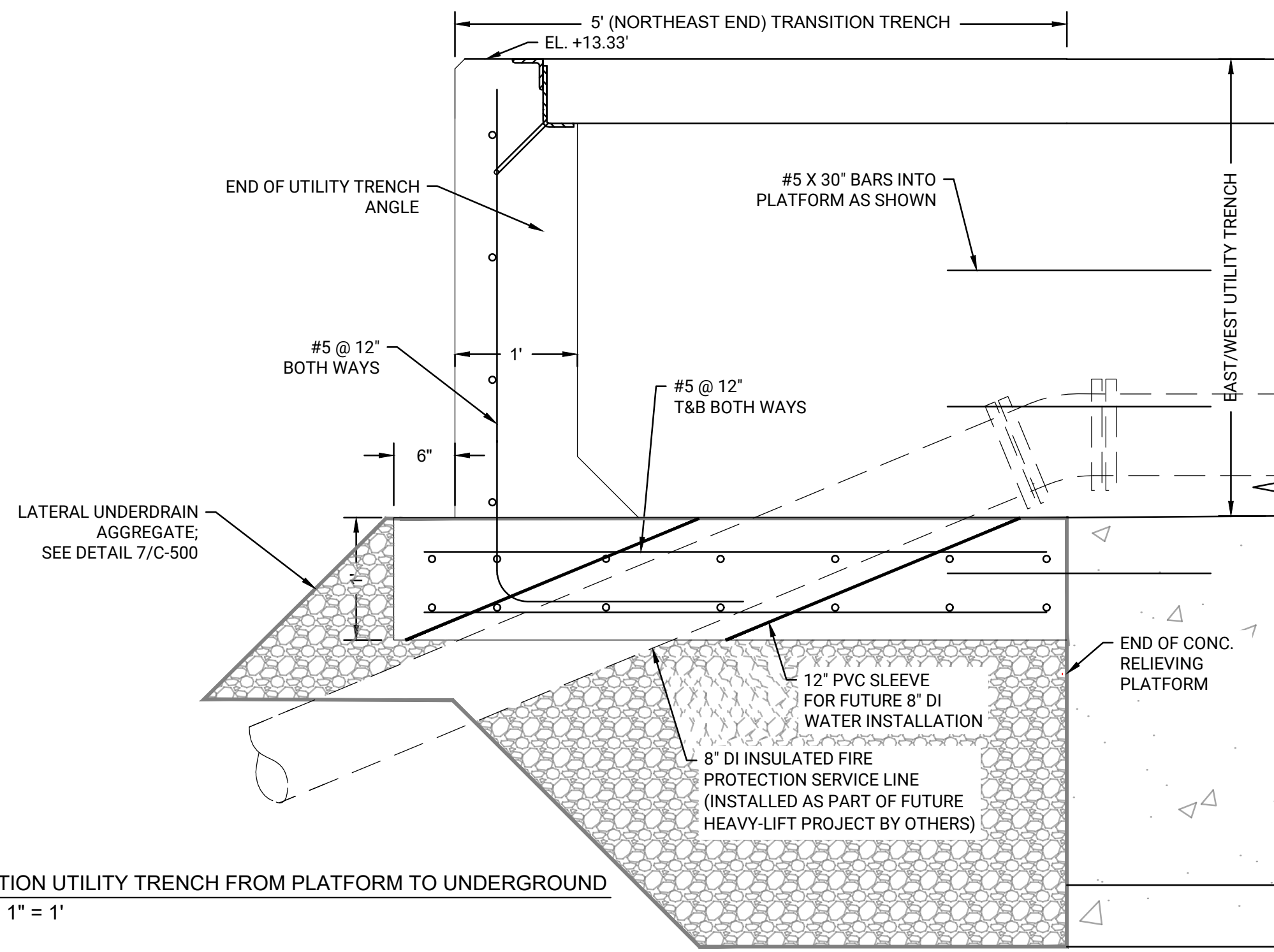
5 TYP. UTILITY TRENCH ANGLE DETAIL
MR504 SCALE: 1" = 1/2'



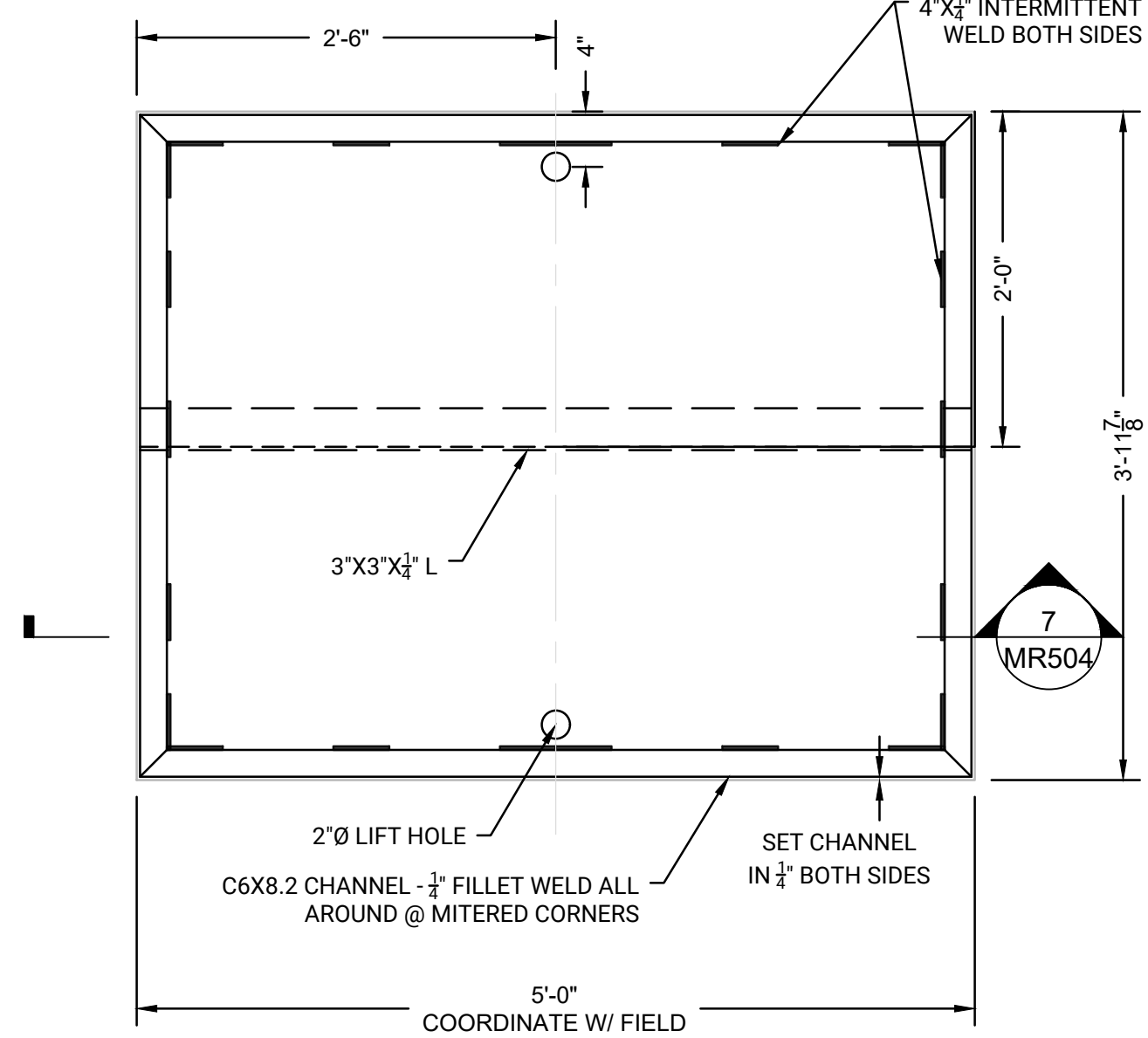
2 NORTH-SOUTH UTILITY TRENCH DETAIL
MR504 SCALE: 1" = 1'



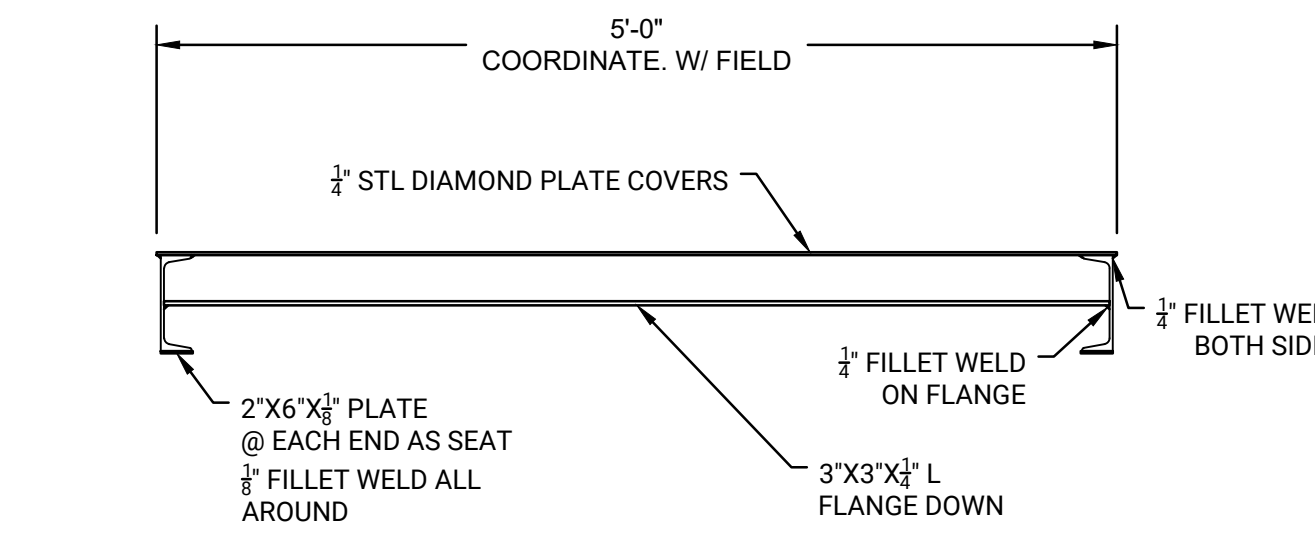
4 EAST-WEST UTILITY TRENCH DETAIL
MR504 SCALE: 1" = 1'



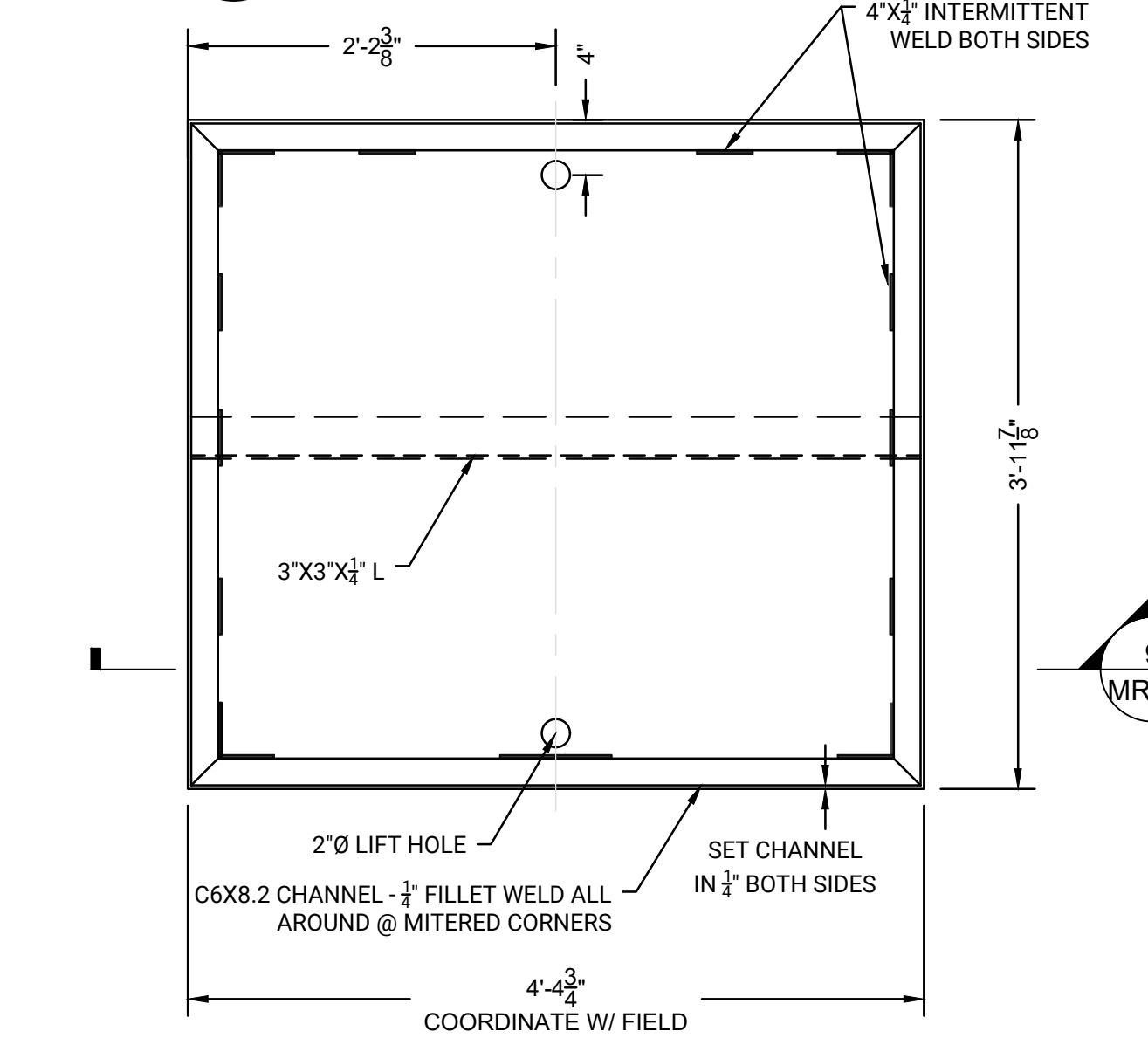
10 TRANSITION UTILITY TRENCH FROM PLATFORM TO UNDERGROUND
MR305 SCALE: 1" = 1'



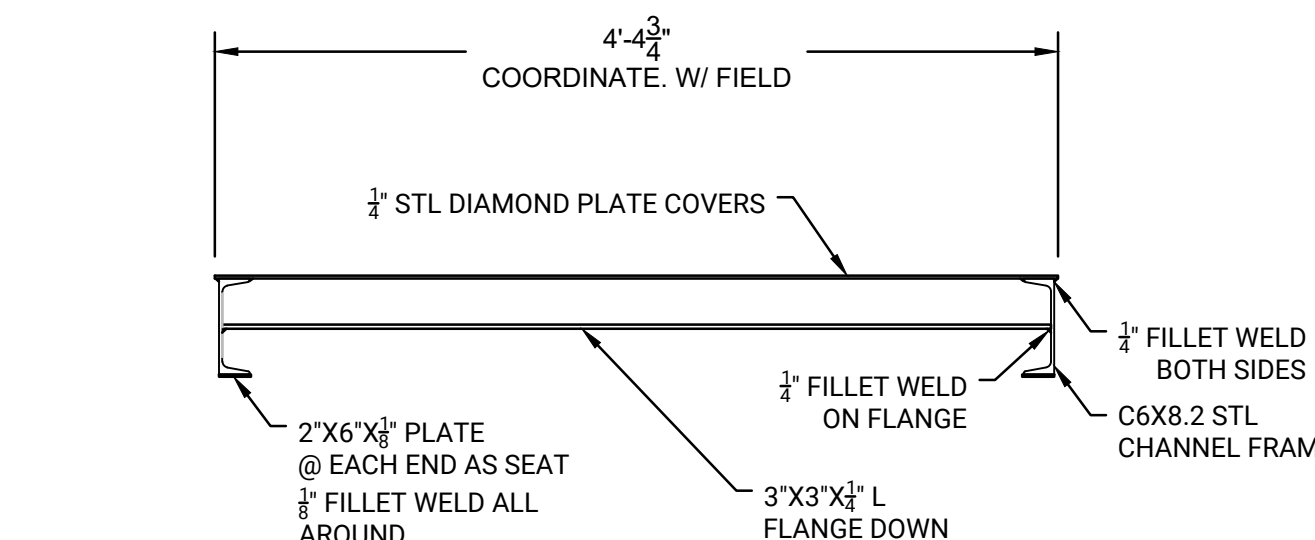
6 NORTH-SOUTH UTILITY TRENCH COVER PLAN
MR504 SCALE: 1" = 1'



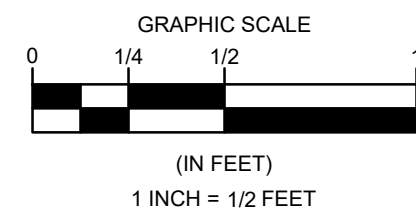
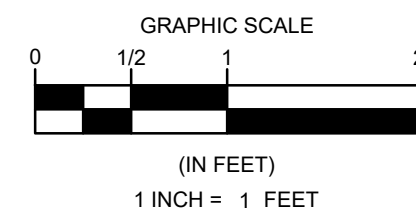
7 NORTH-SOUTH UTILITY TRENCH COVER SECTION
MR504 SCALE: 1" = 1'



8 EAST-WEST UTILITY TRENCH COVER PLAN
MR504 SCALE: 1" = 1'



9 EAST-WEST UTILITY TRENCH COVER SECTION
MR504 SCALE: 1" = 1'



REVISONS	DESCRIPTION	DATE	BY	NO.					

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:
UTILITY TRENCH DETAILS

ISSUANCE:
IFB DRAWINGS (11/10/2025)

PROJECT NO: 0024M070.04
SHEET NUMBER
MR504

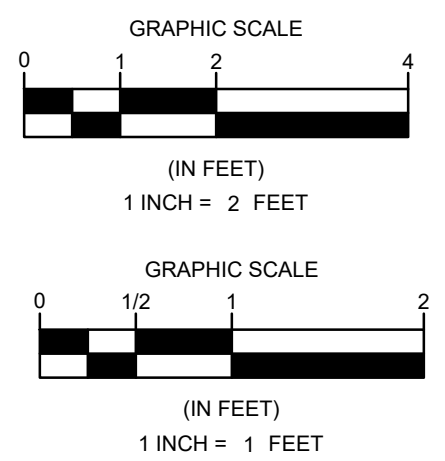
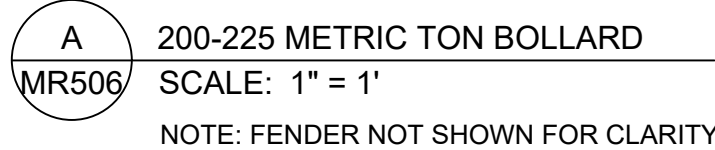
DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

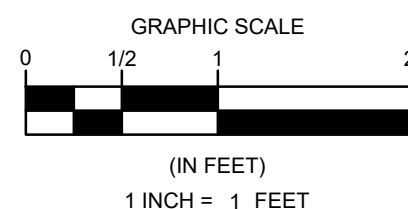
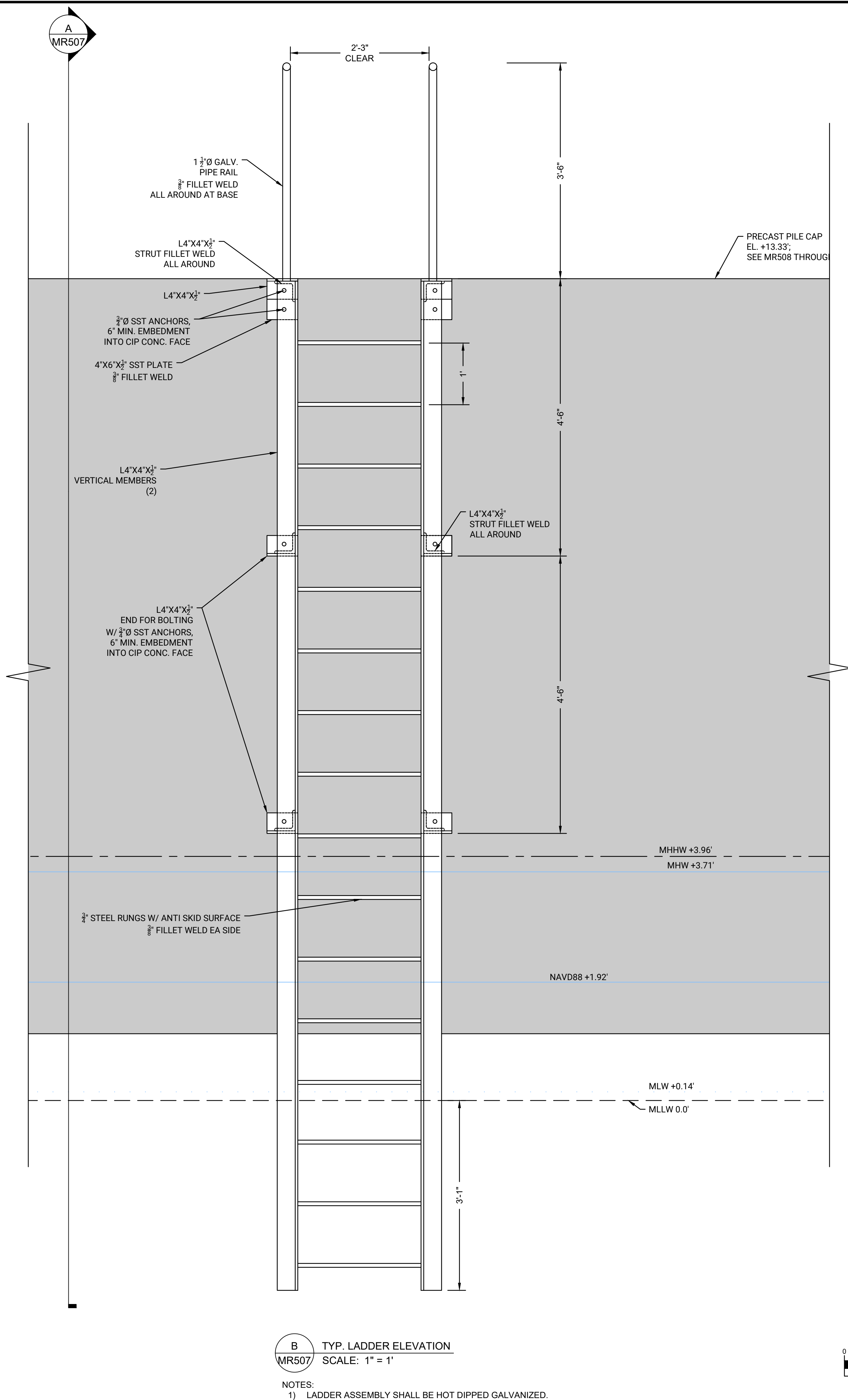
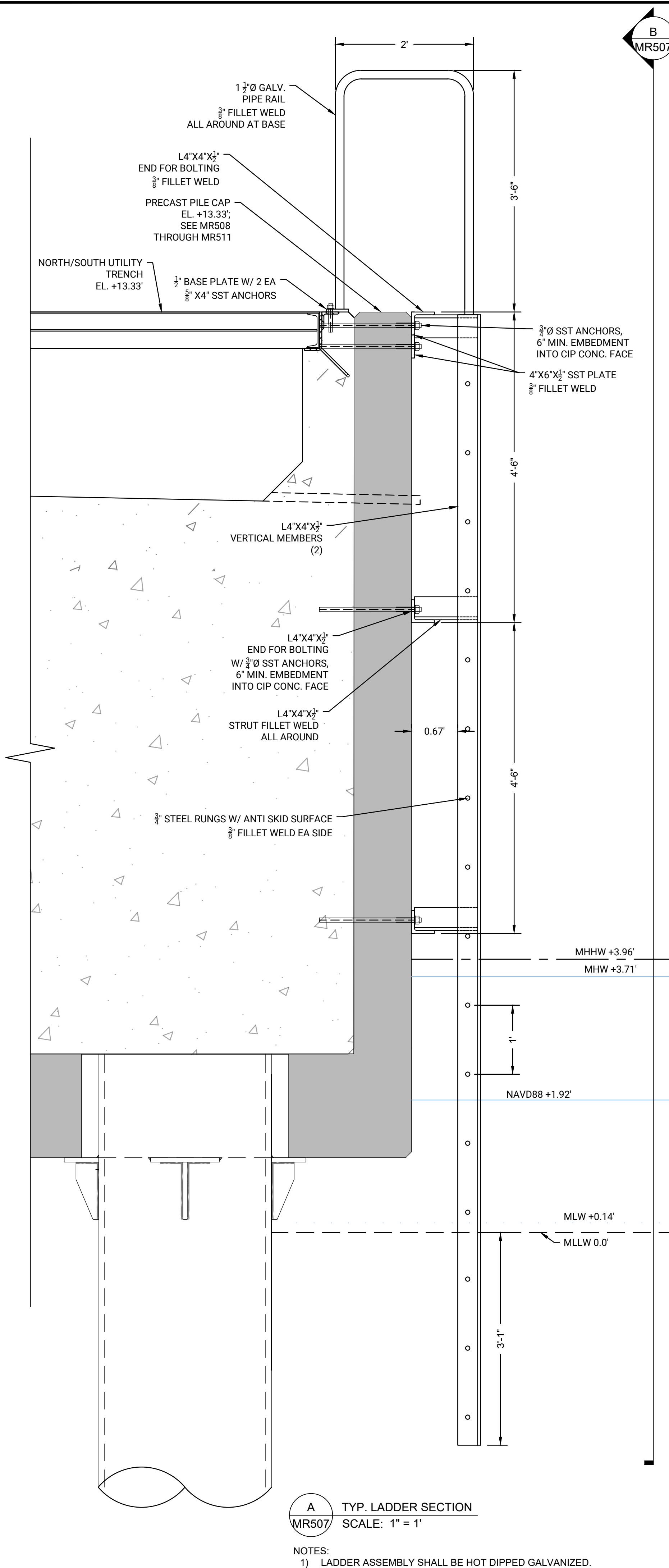
BOLLARD DETAILS

IFB DRAWINGS

(11/10/2025)

MR506







PROJECT: MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER: NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA

NO.	REVISIONS		DATE OF PREPARATION	
	DESCRIPTION	DATE	BY	DATE
1				
2				
3				
4				
5				

SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

**LADDER
DETAILS**

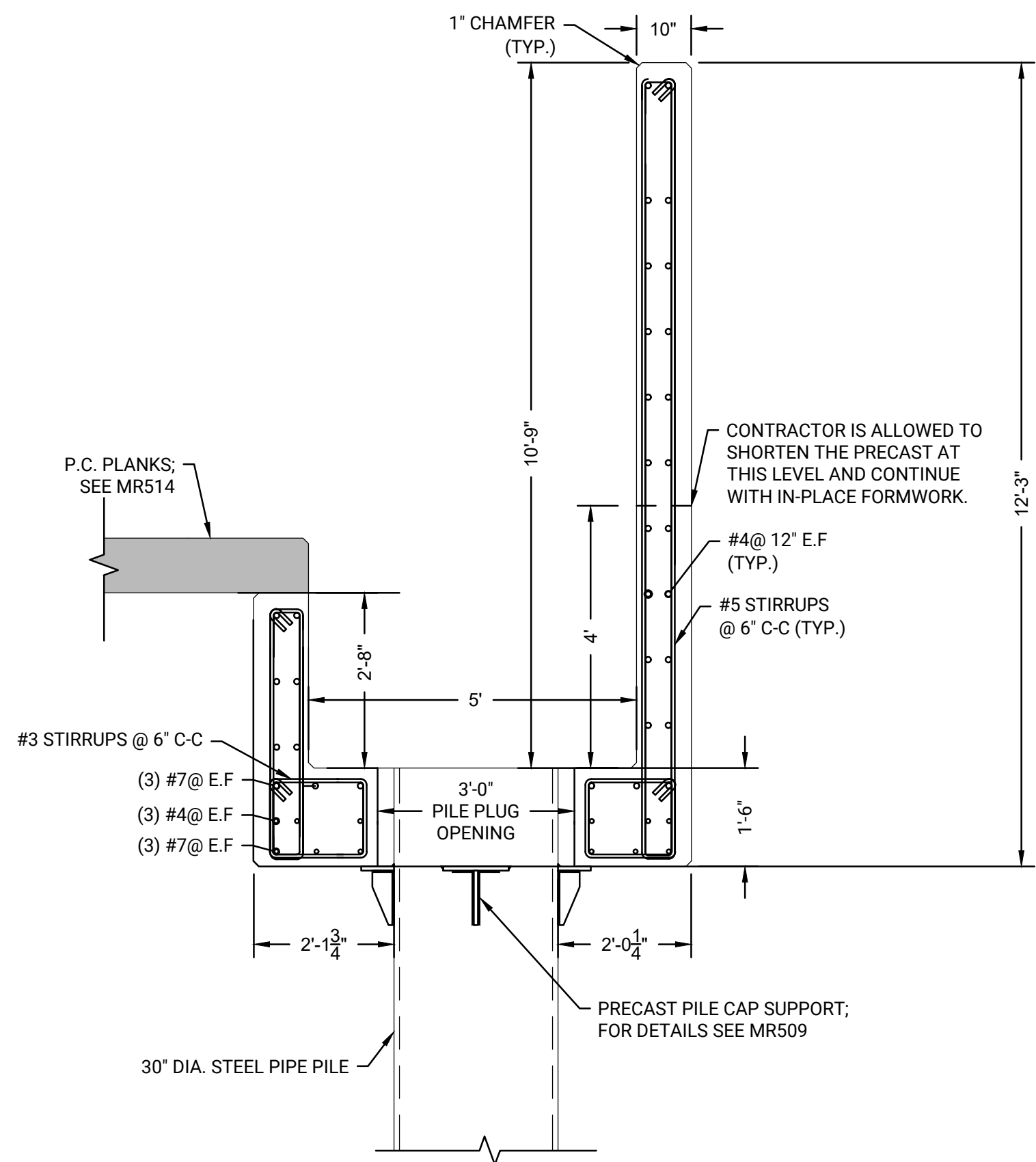
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

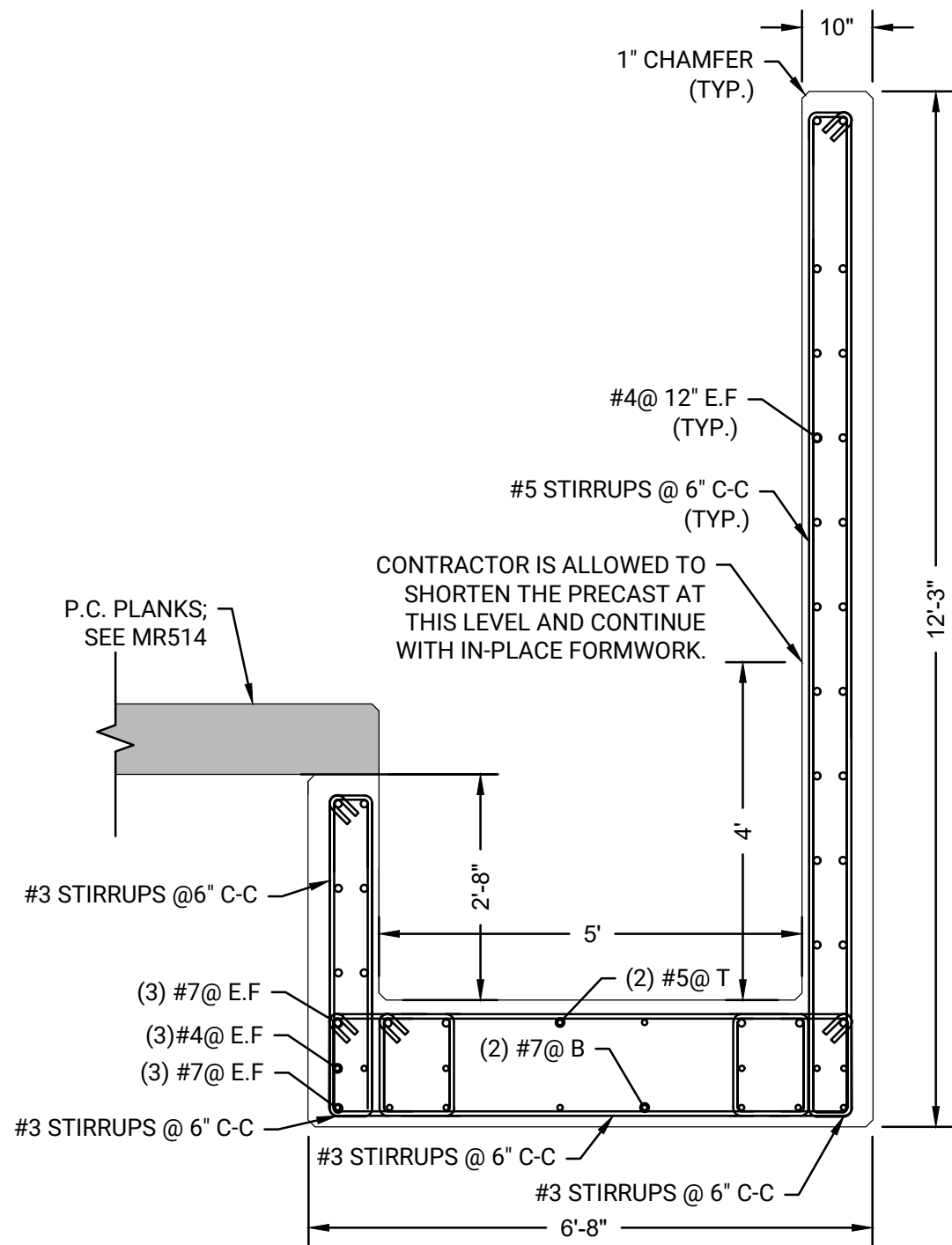
PROJECT NO: 0024M070.04

SHEET NUMBER

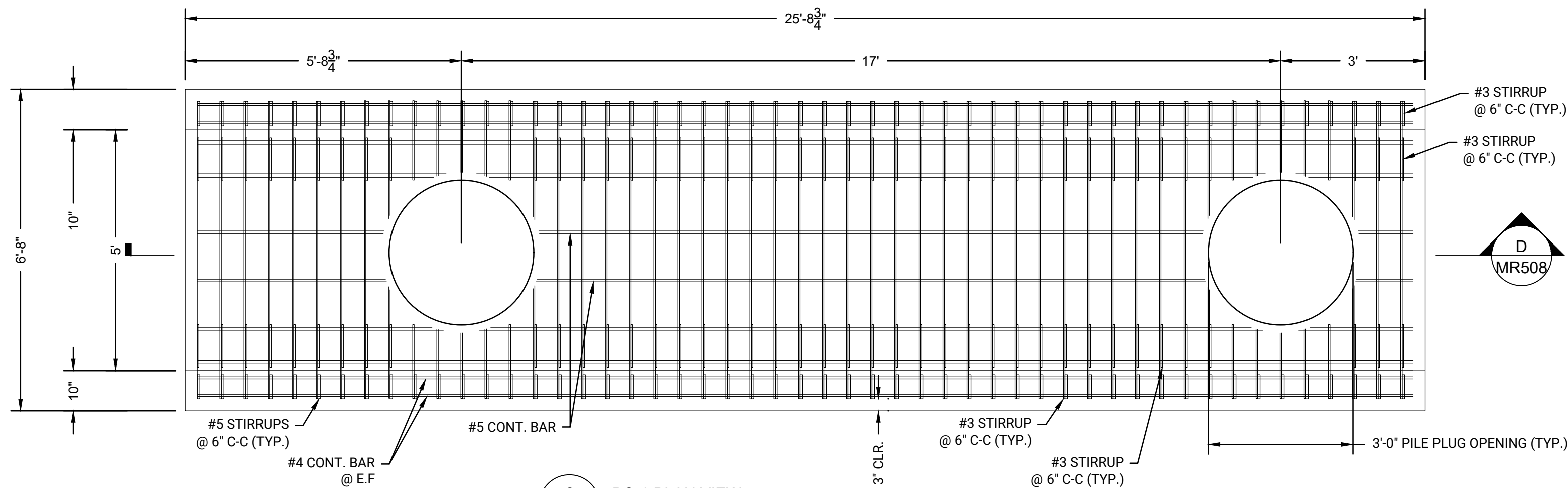
MR507



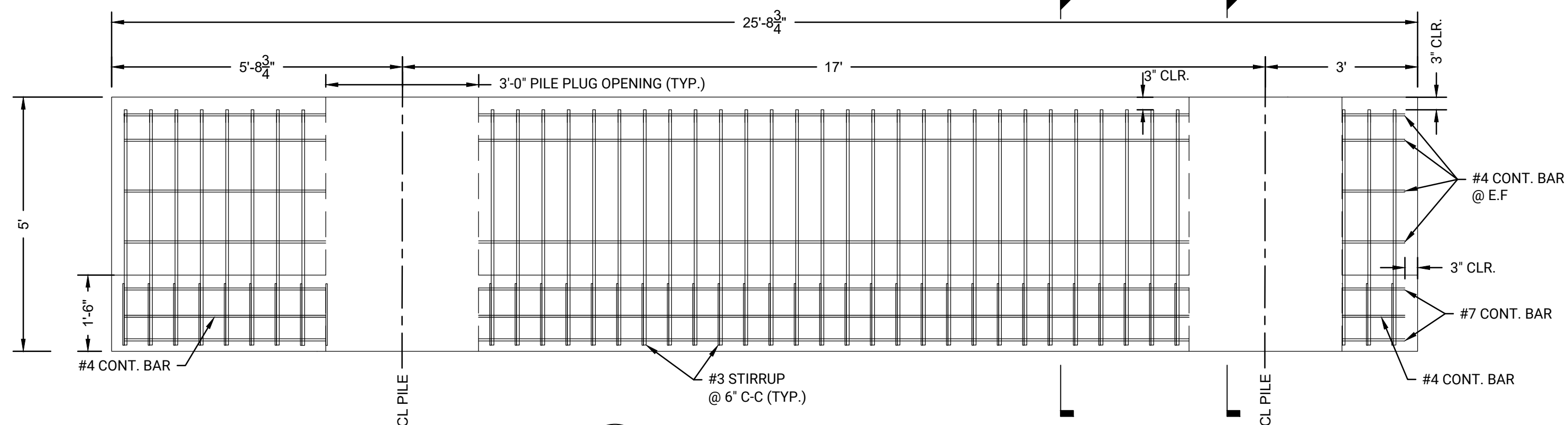
A TYPICAL SECTION AT PILE: PC-1, PC-3, PC-4, PC-5
SCALE: 1" = 2'
NOTES:
1) PILE PLUG REINFORCEMENT NOT SHOWN FOR CLARITY



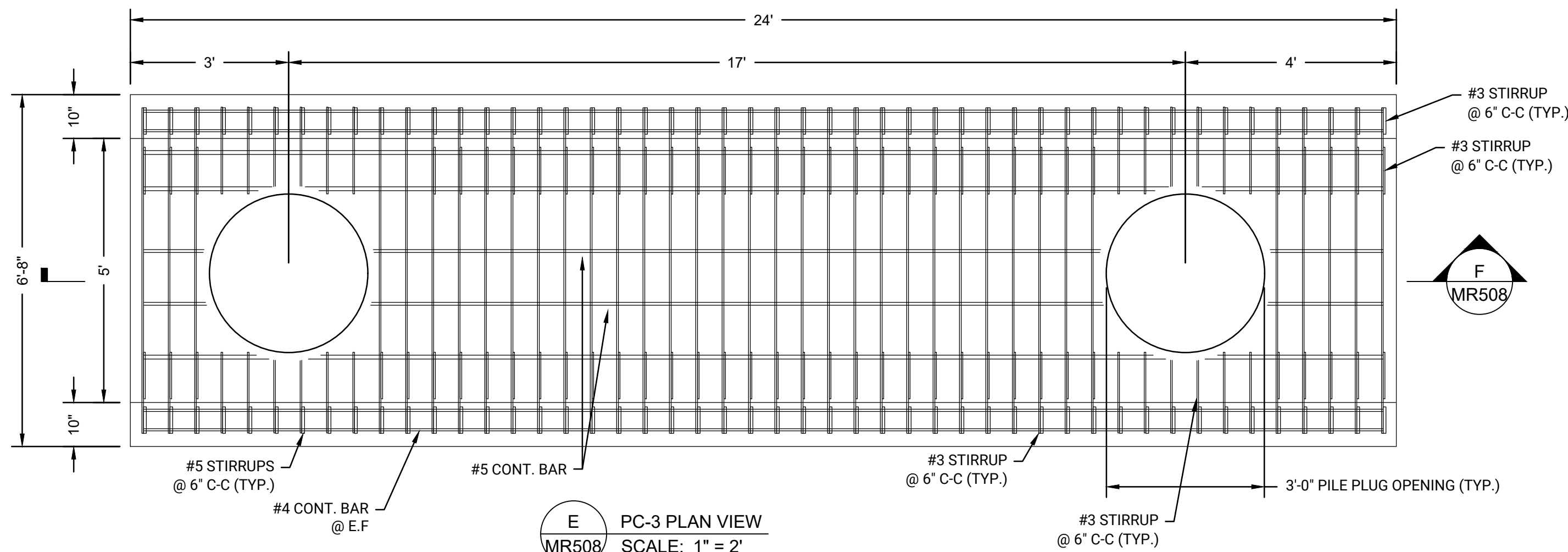
B TYPICAL SECTION AT PILE: PC-1, PC-3, PC-4, PC-5
SCALE: 1" = 2'



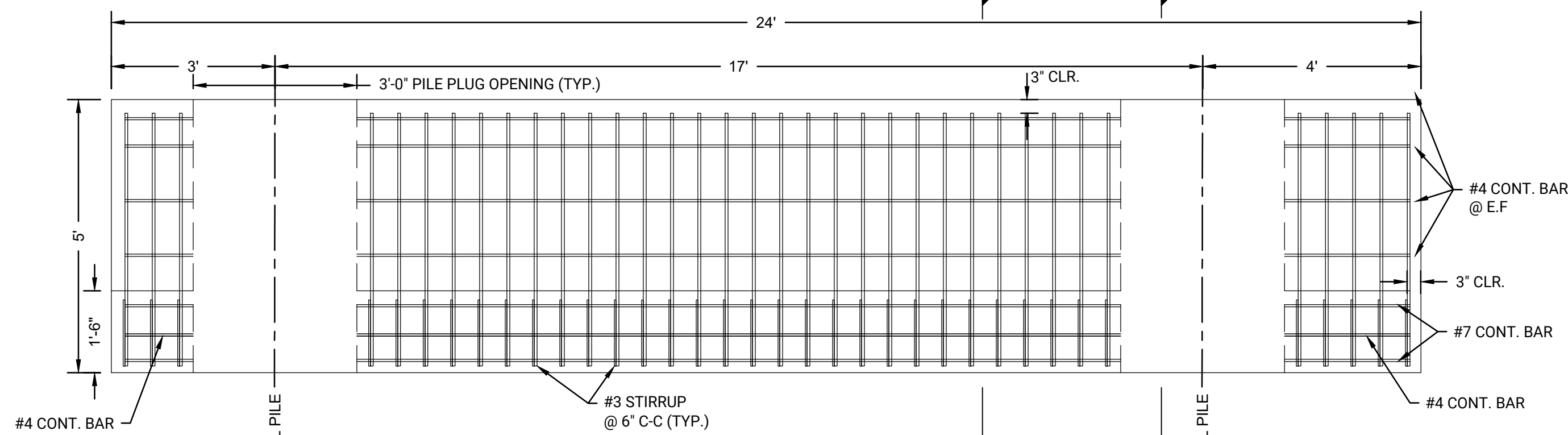
C PC-1 PLAN VIEW
SCALE: 1" = 2'



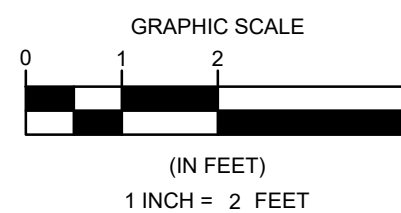
D PC-1 SECTION VIEW
SCALE: 1" = 2'



E PC-3 PLAN VIEW
SCALE: 1" = 2'



F PC-3 SECTION VIEW
SCALE: 1" = 2'



PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS	DESCRIPTION	DATE	BY	NO.					

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

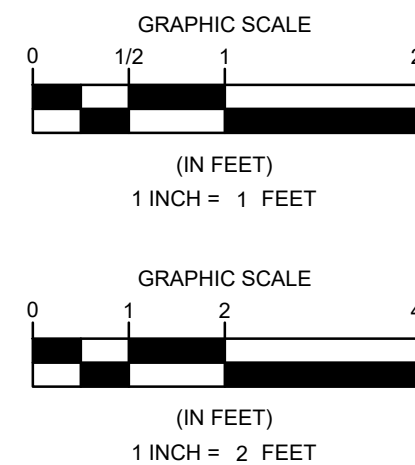
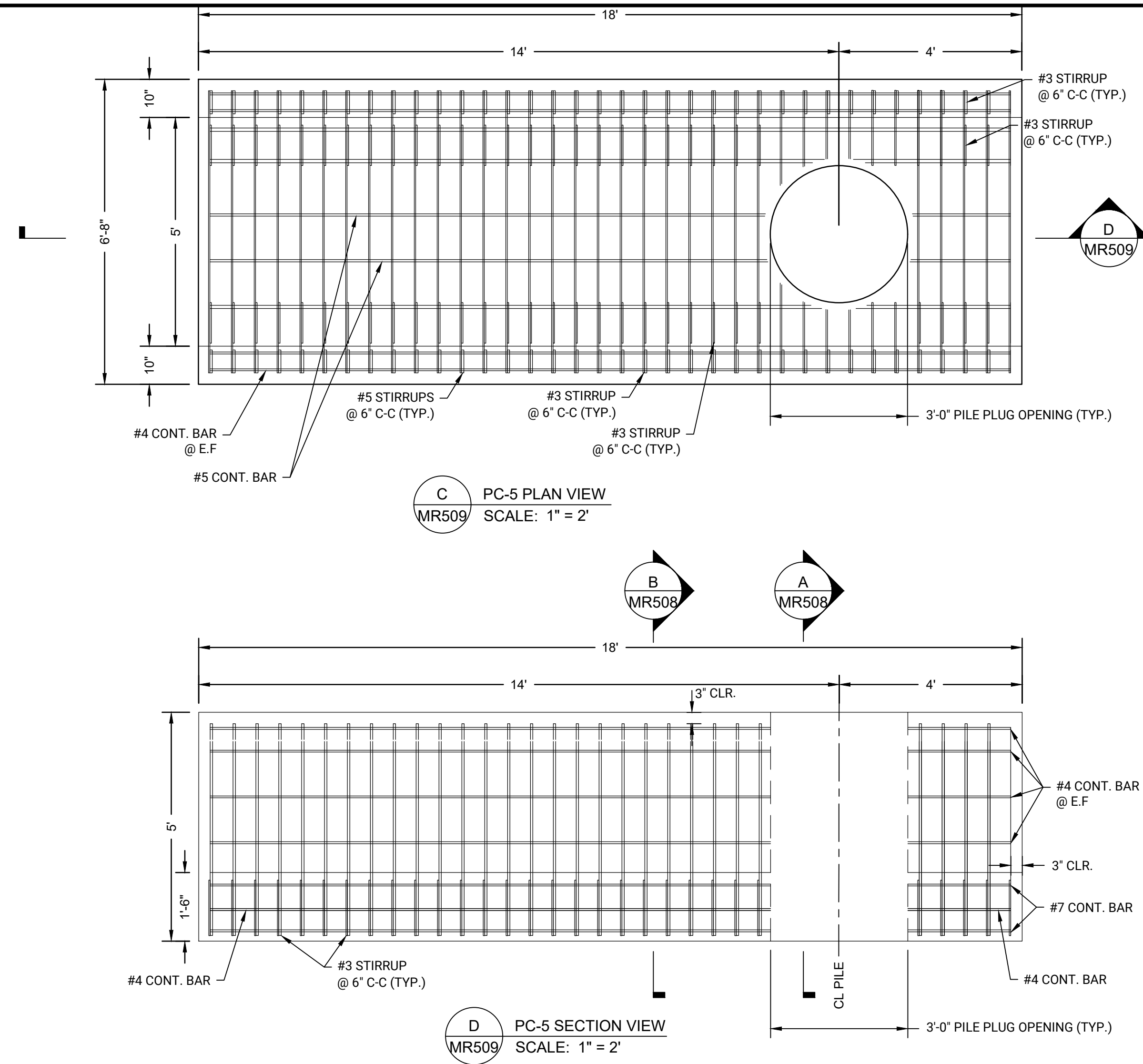
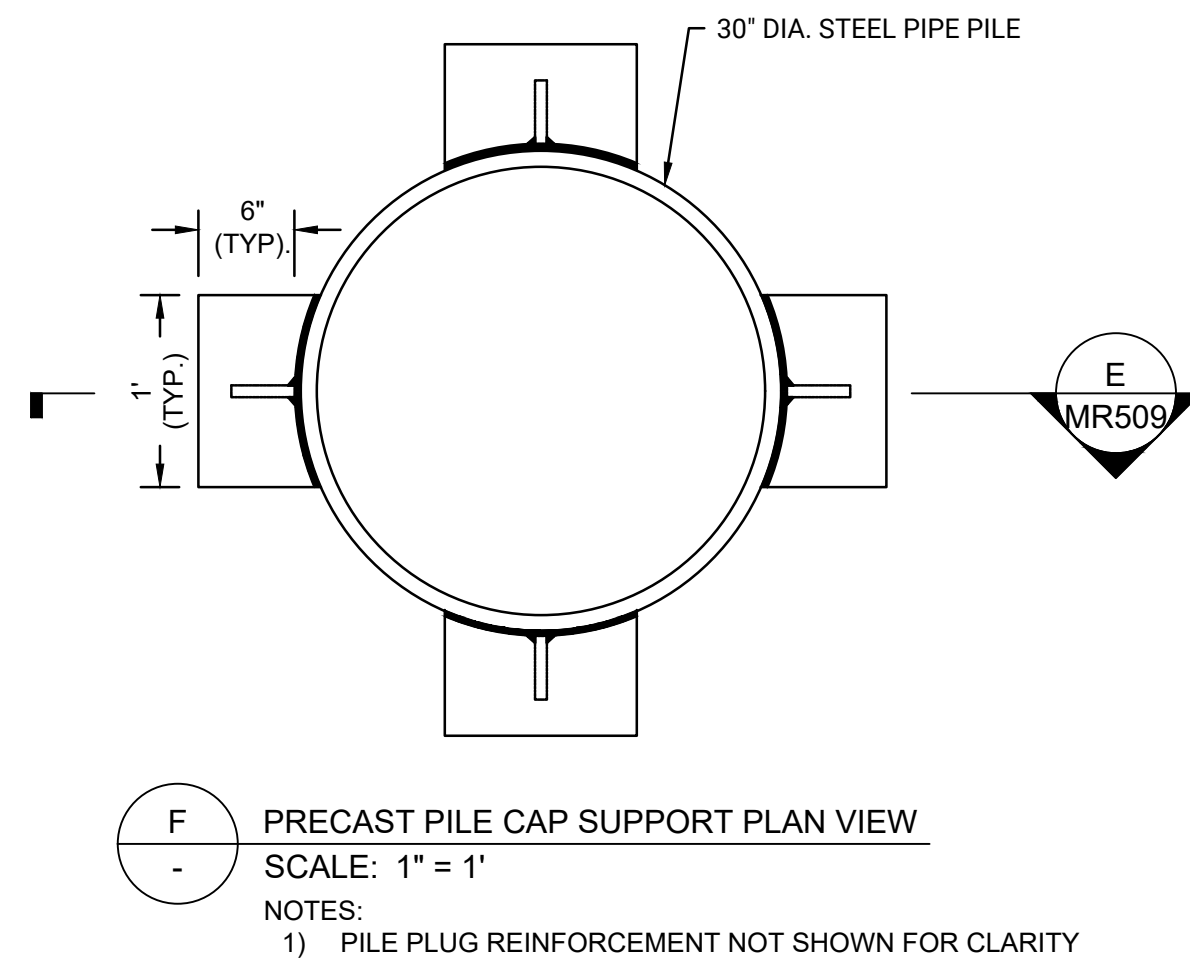
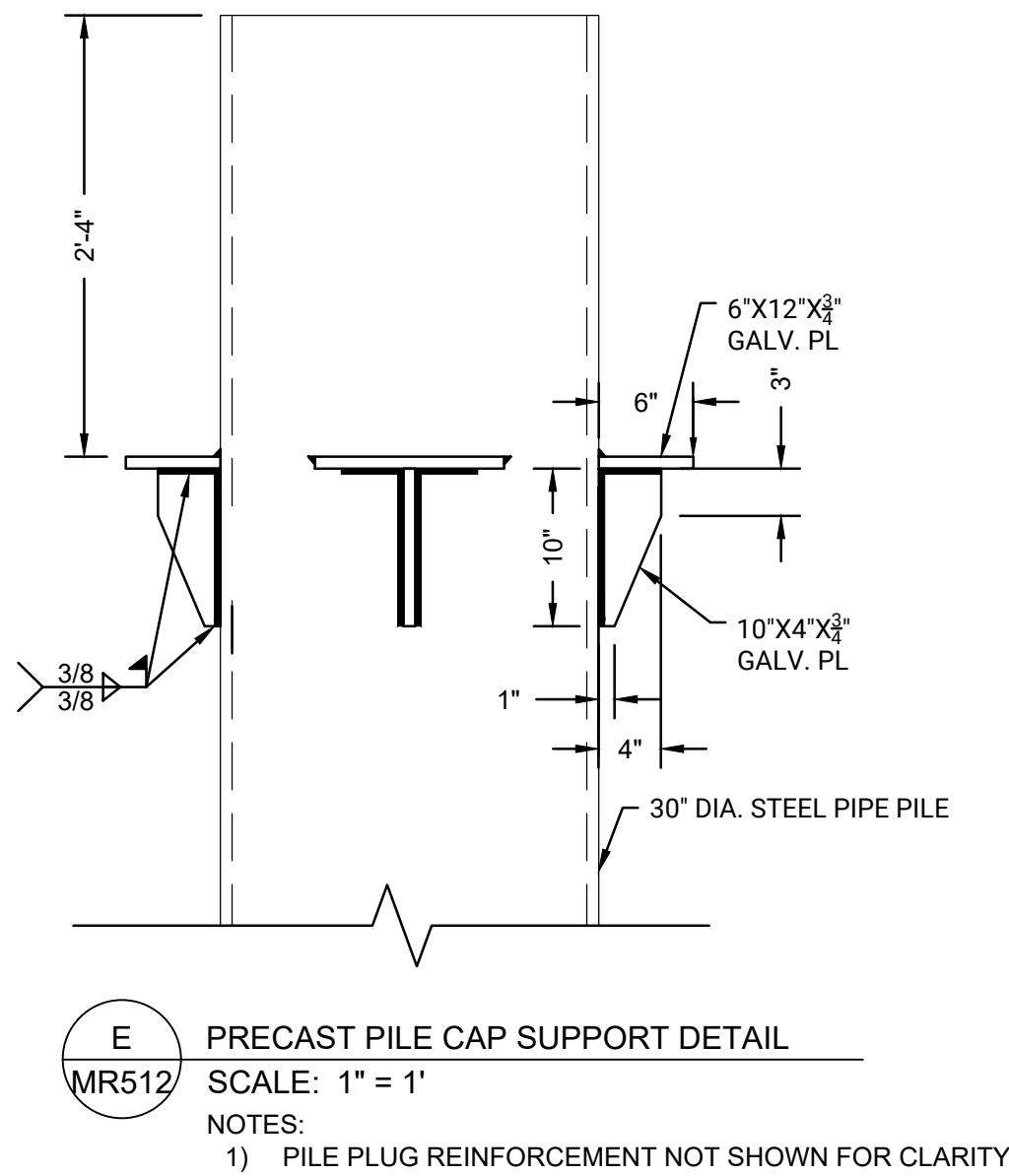
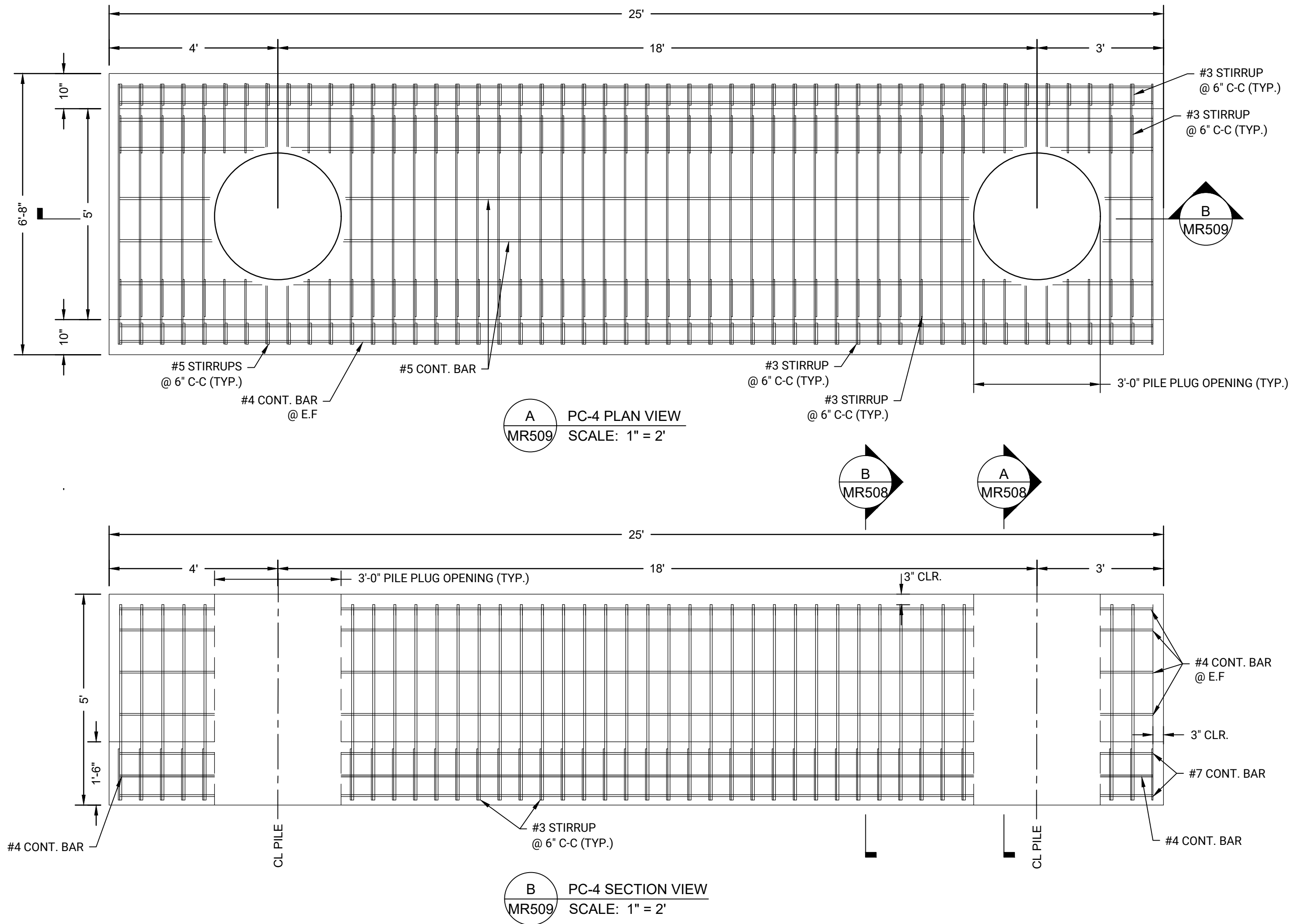
PE STAMP

PE STAMP

SHEET TITLE:
**PRECAST
PILE CAP
DETAIL 1 OF 6**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MR508



PROJECT:
MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER:
NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
2				
3				
4				
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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

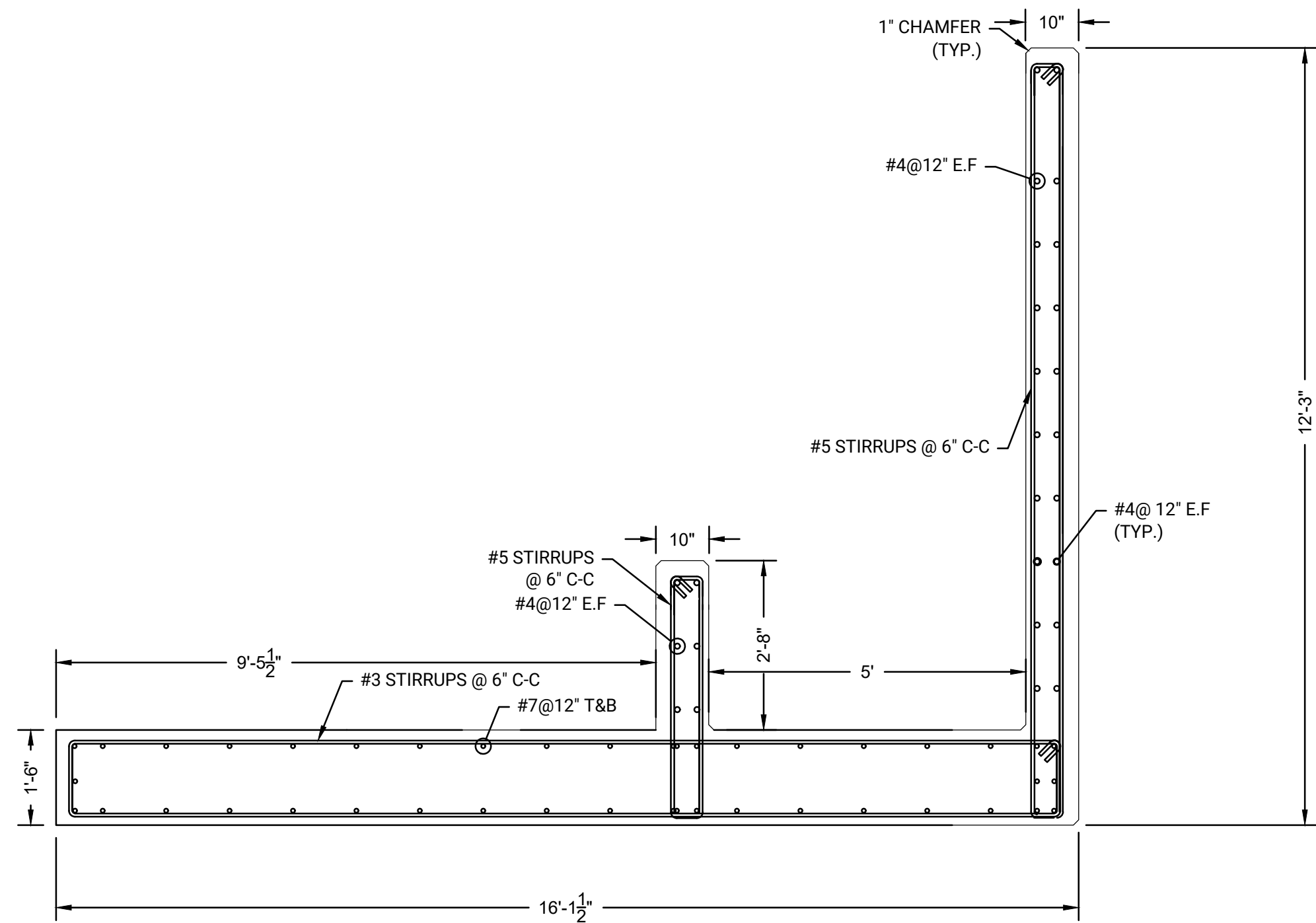
PE STAMP

PE STAMP

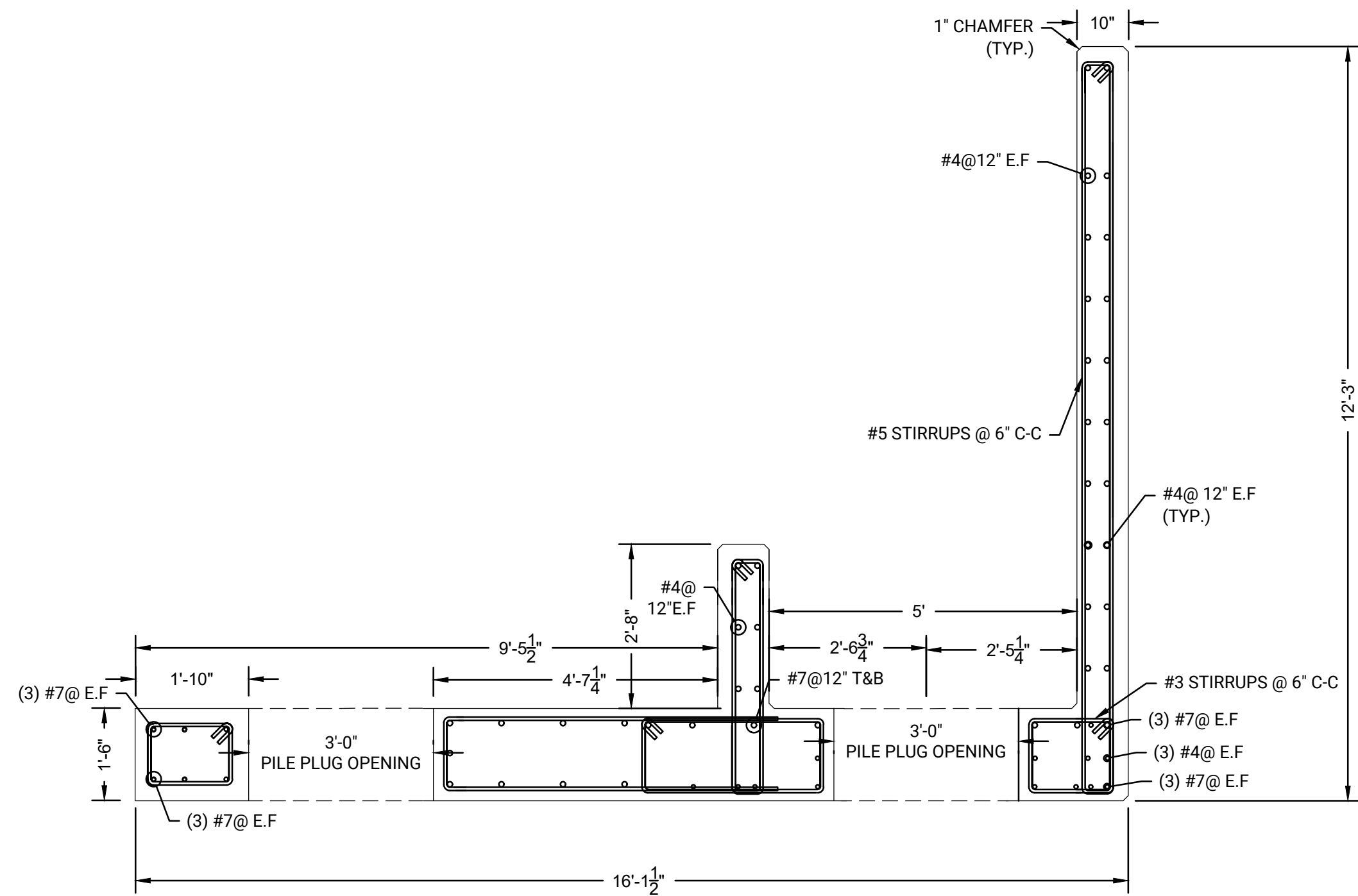
SHEET TITLE:
**PRECAST
PILE CAP
DETAIL 2 OF 6**

ISSUANCE:
IFB DRAWINGS
(11/10/2025)

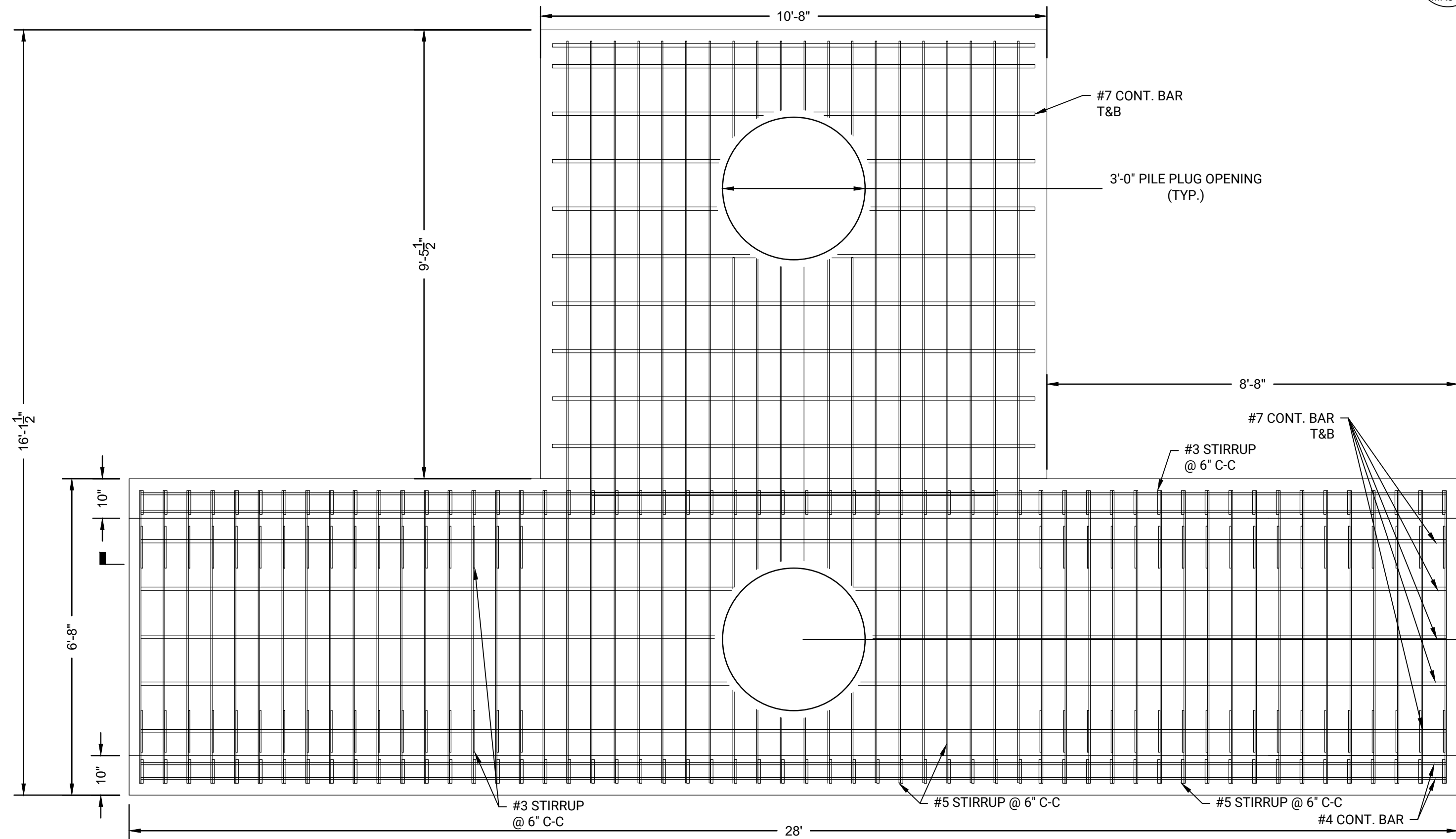
PROJECT NO: 0024M070.04
SHEET NUMBER
MR509



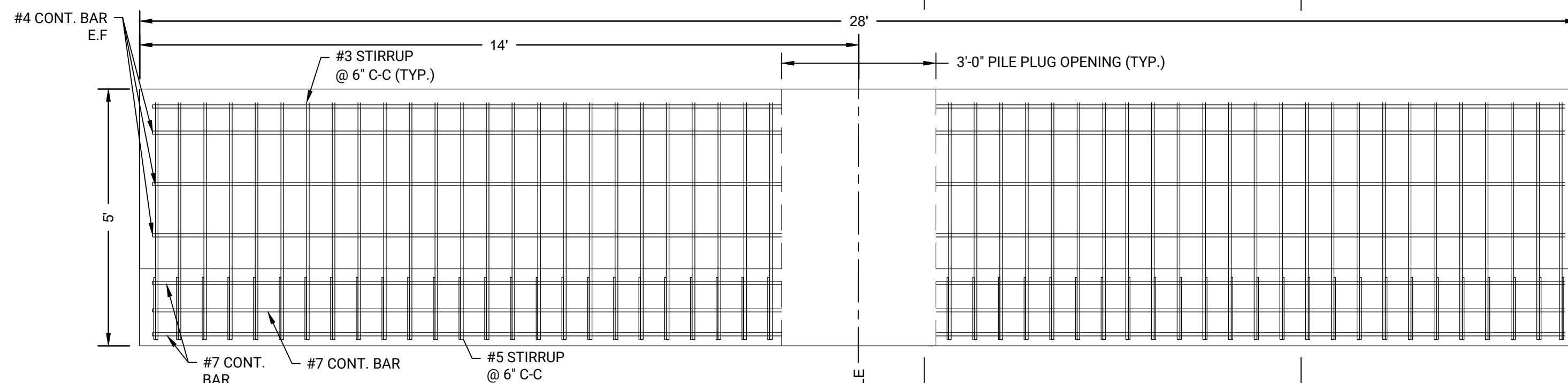
A
TYPICAL PC FRONT PILE CAP SECTION AT BOLLARD
SCALE: 1" = 2'



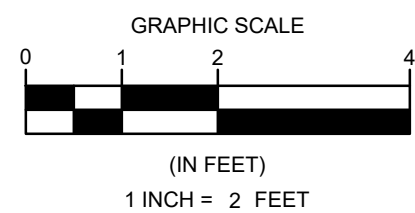
B
TYPICAL PC FRONT PILE CAP SECTION AT BOLLARD PILE
SCALE: 1" = 2'



C
PC-2 PLAN VIEW
SCALE: 1" = 2'



D
PC-2 SECTION VIEW
SCALE: 1" = 2'



PROJECT:
**MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS		DESCRIPTION		DATE		BY		NO	

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

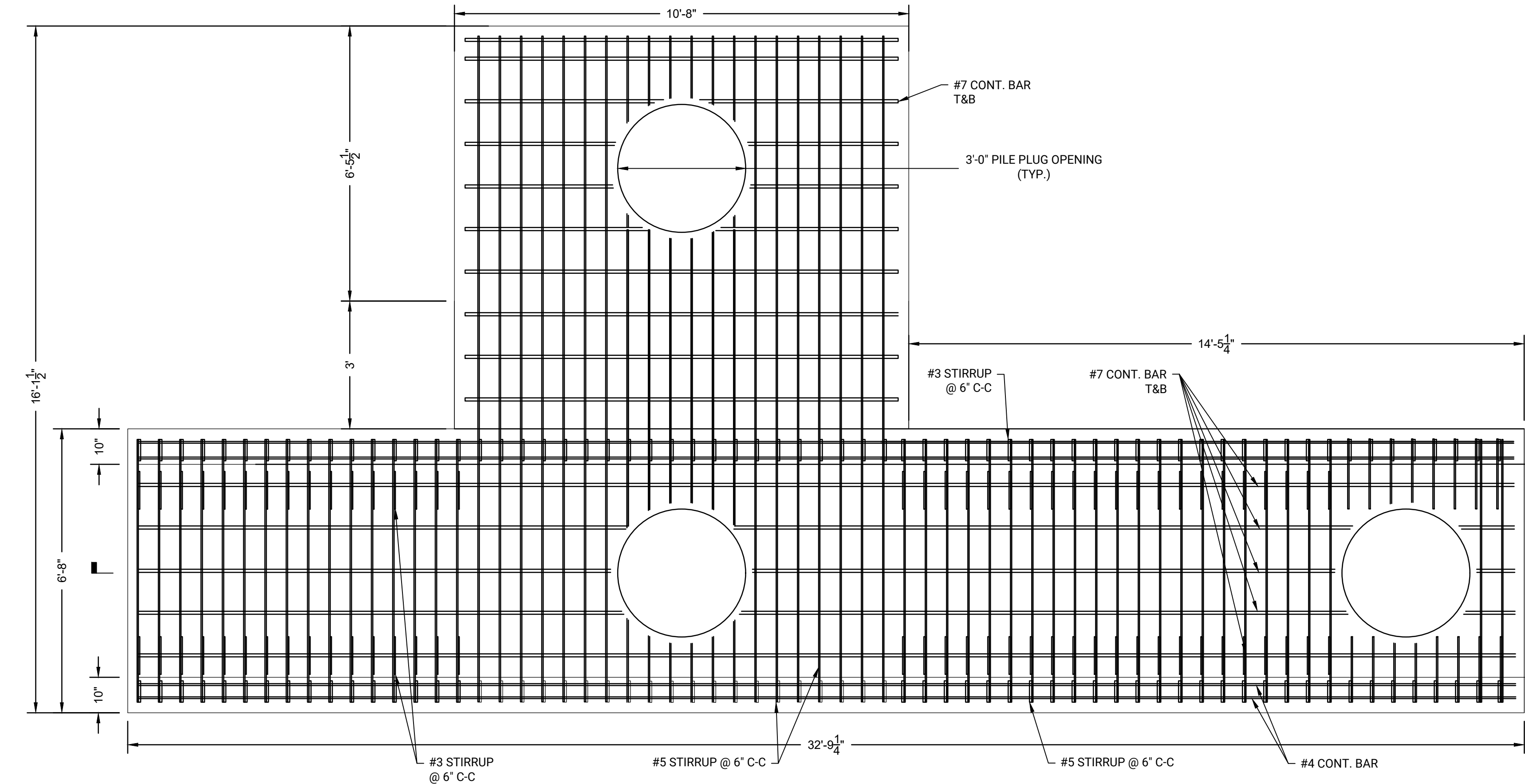
PE STAMP

PE STAMP

SHEET TITLE:
**PRECAST
PILE CAP
DETAIL 3 OF 6**

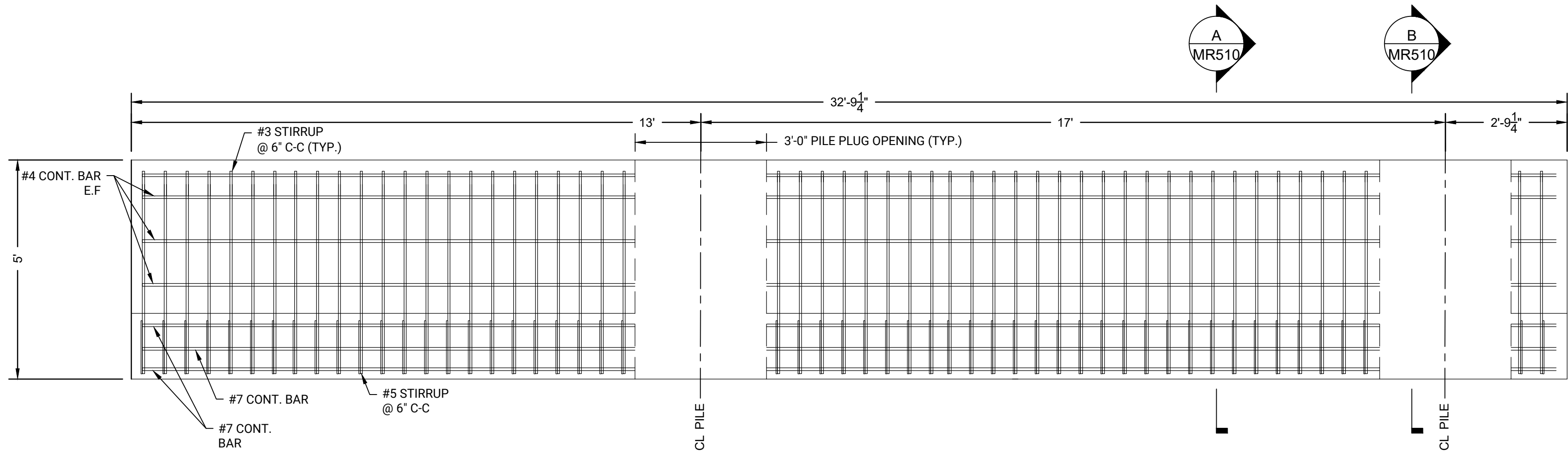
ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MR510



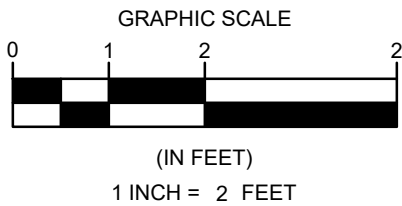
A
MR511

PC-6 PLAN VIEW
SCALE: 1" = 2'



B
MR511

PC-6 SECTION VIEW
SCALE: 1" = 2'



PROJECT: **MASSECE NBMC T - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC T)
NEW BEDFORD, MA**

REVISIONS	
NO	DESCRIPTION

DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

**PRECAST
PILE CAP
DETAIL 4 OF 6**

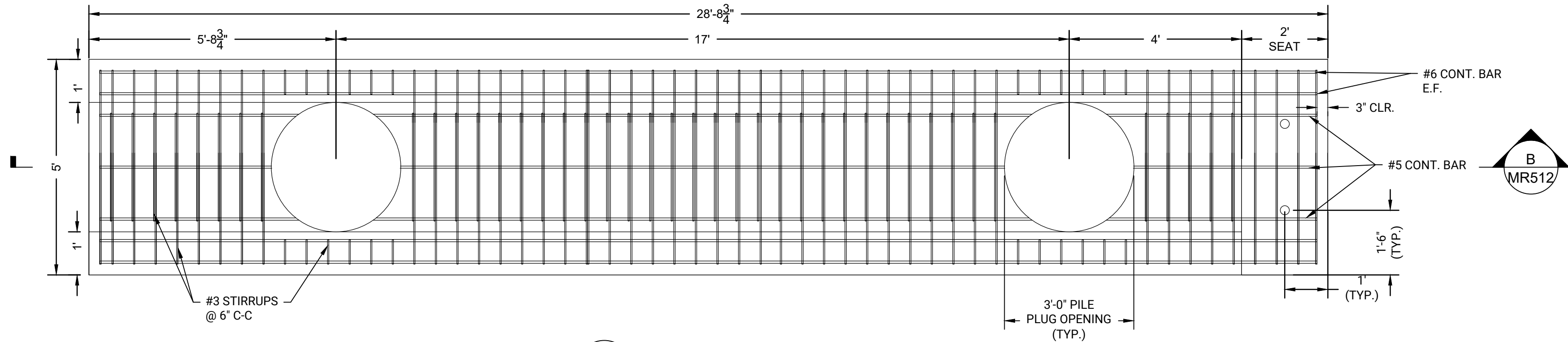
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

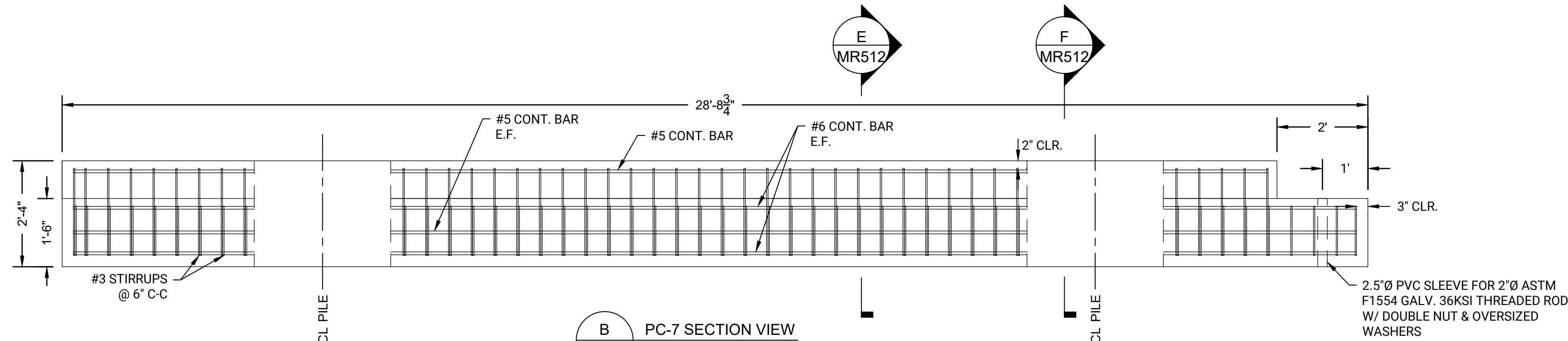
PROJECT NO: 0024M070.04

SHEET NUMBER

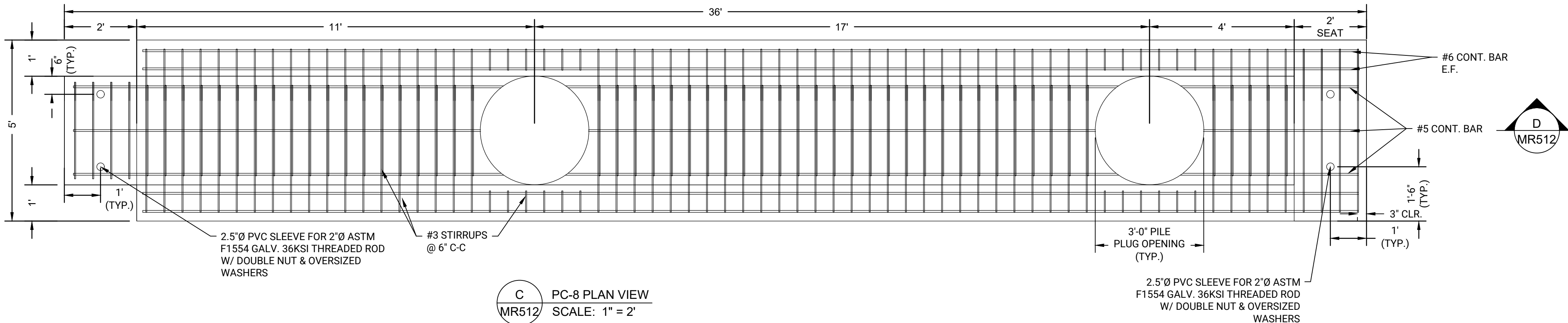
MR511



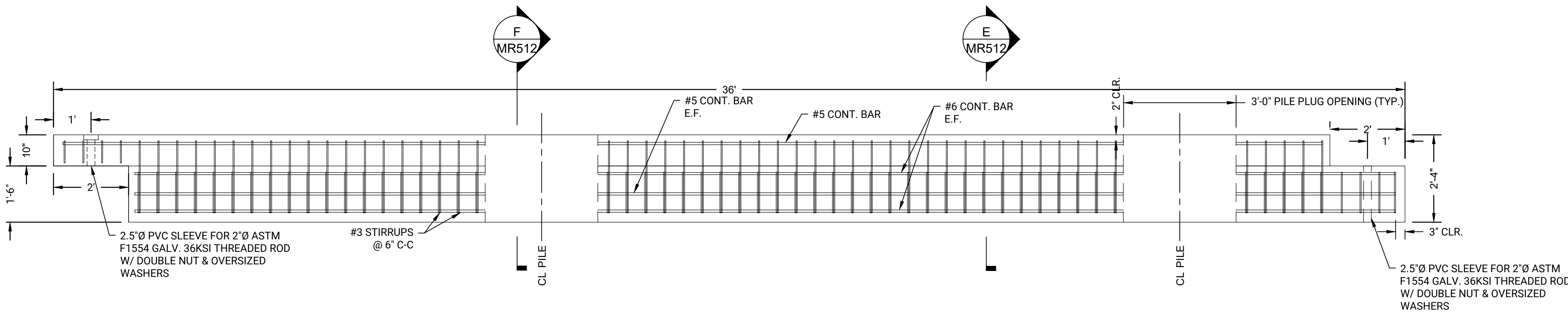
A PC-7 PLAN VIEW
MR512
SCALE: 1" = 2'



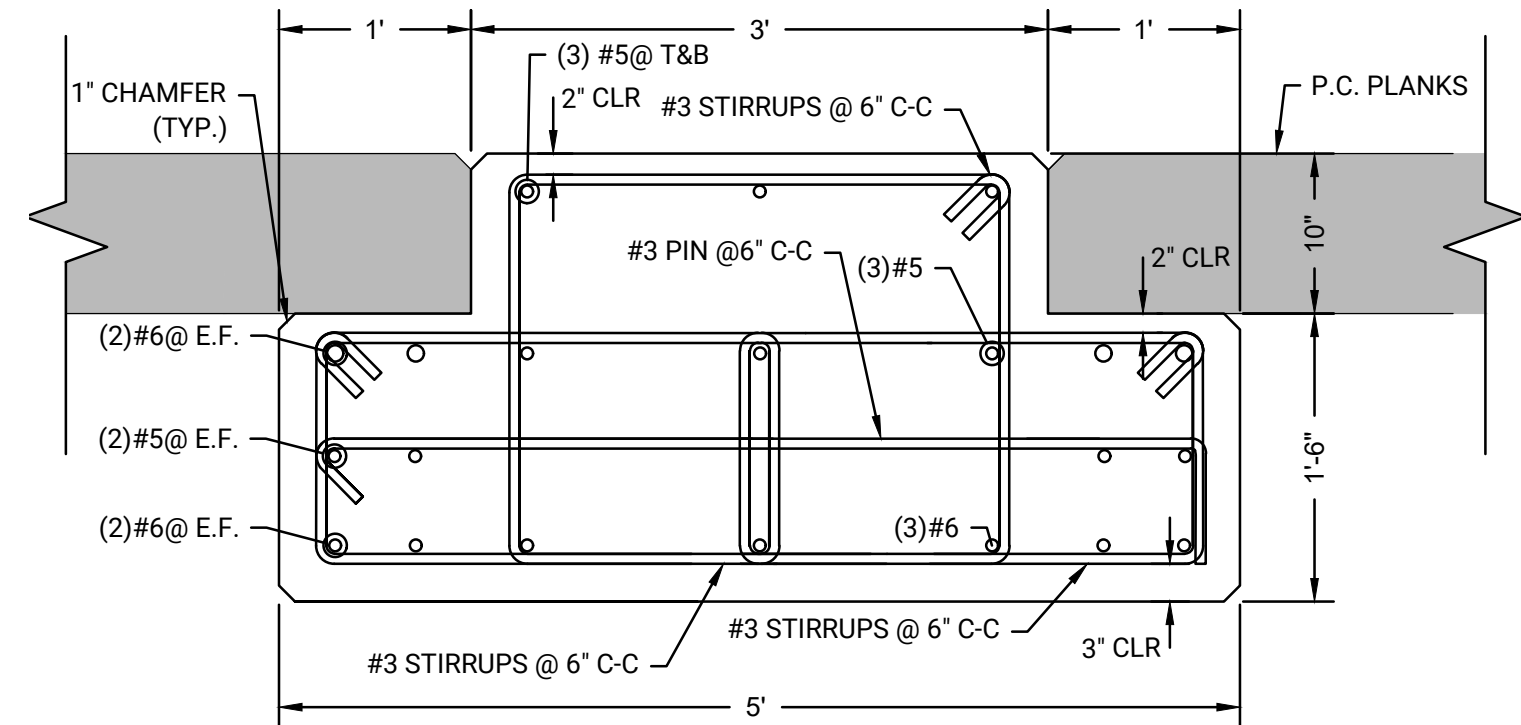
B PC-7 SECTION VIEW
MR512
SCALE: 1" = 2'



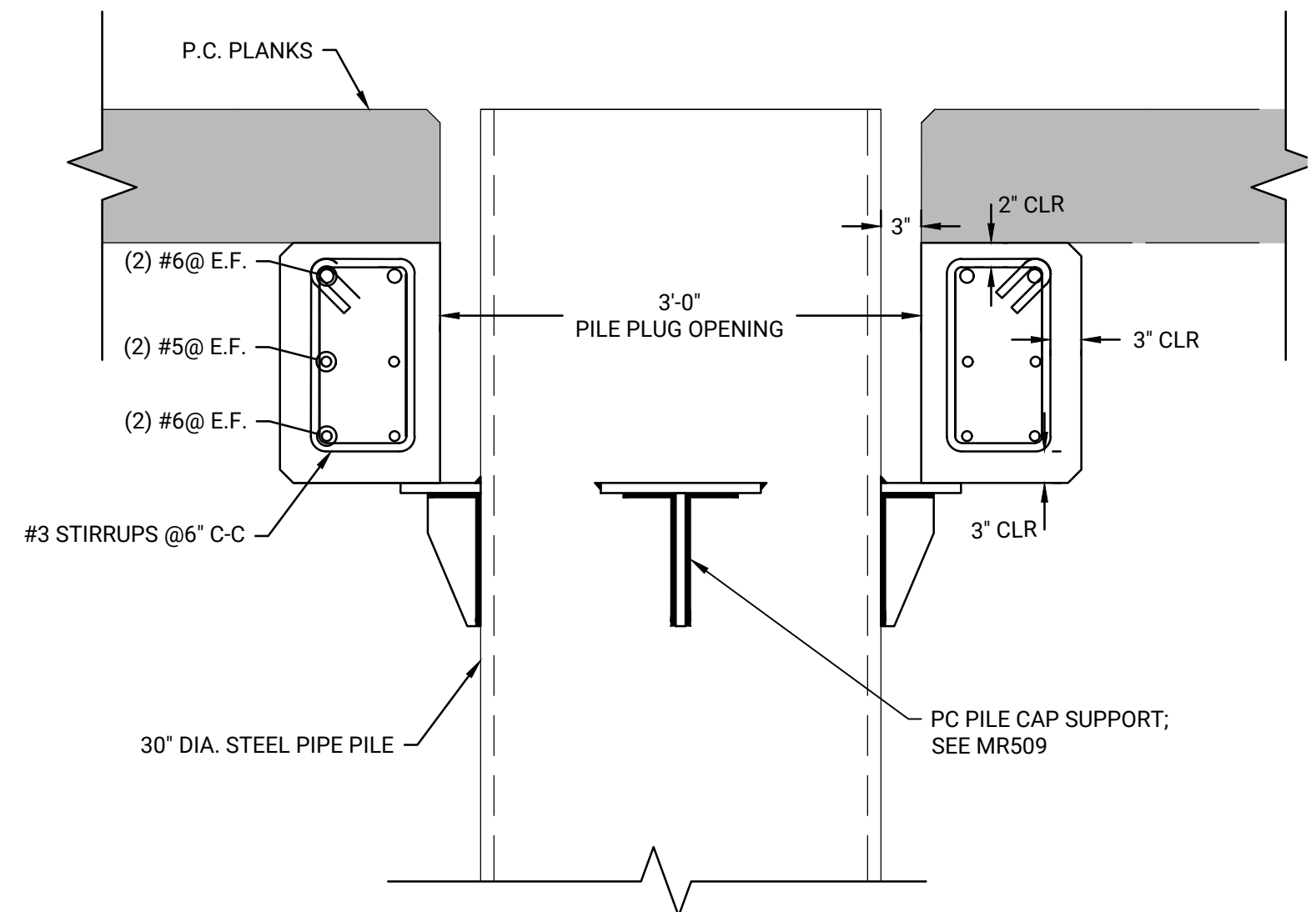
C PC-8 PLAN VIEW
MR512
SCALE: 1" = 2'



D PC-8 SECTION VIEW
MR512
SCALE: 1" = 2'

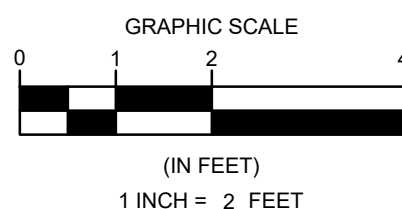
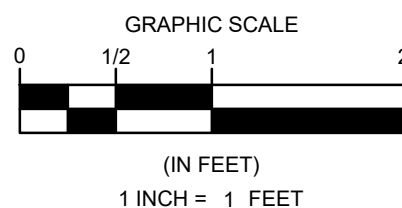


E TYPICAL PC PILE CAP REINFORCEMENT SECTION
MR512
MR513
SCALE: 1" = 1'



NOTE:
1. REINFORCEMENT FOR P.C. PLANKS AND PILE NOT SHOWN FOR CLARITY.

F TYPICAL PC PILE CAP REINFORCEMENT DETAIL AT PILE
MR303
MR304
MR512
MR513
SCALE: 1" = 1'



Foth

PROJECT:

MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER:

NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCCT)
NEW BEDFORD, MA

NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DATE OF PREPARATION

	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

PRECAST
PILE CAP
DETAIL 5 OF 6

ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO:

0024M070.04

SHEET NUMBER

MR512

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

OWNER:

[illegible]

DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025
PE STAMP		

PE STAMP

SHEET TITLE

PRECAST
PILE CAP
DETAIL 6 OF 6

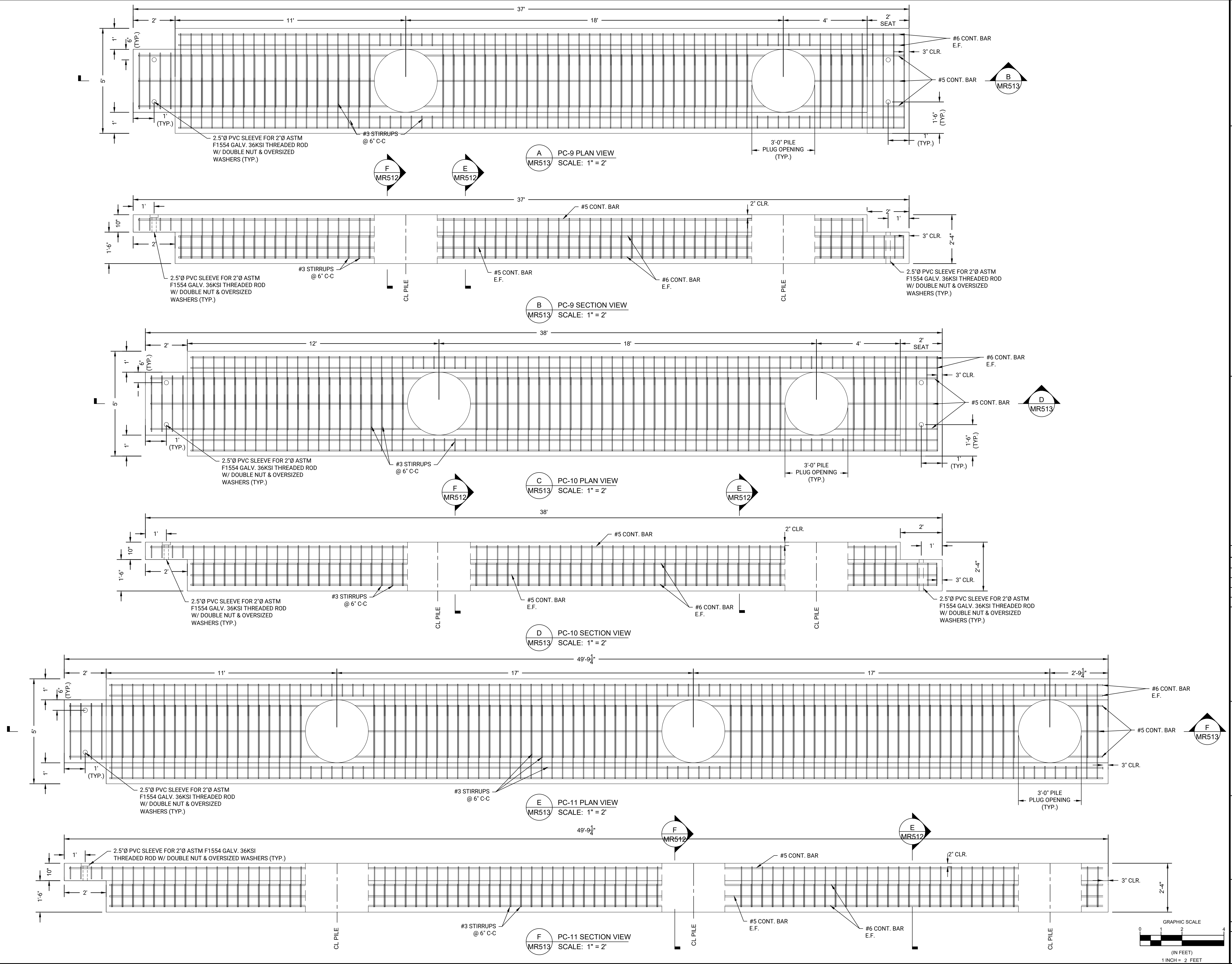
ISSUANCE:

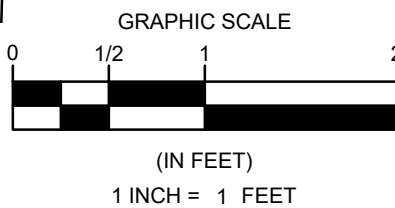
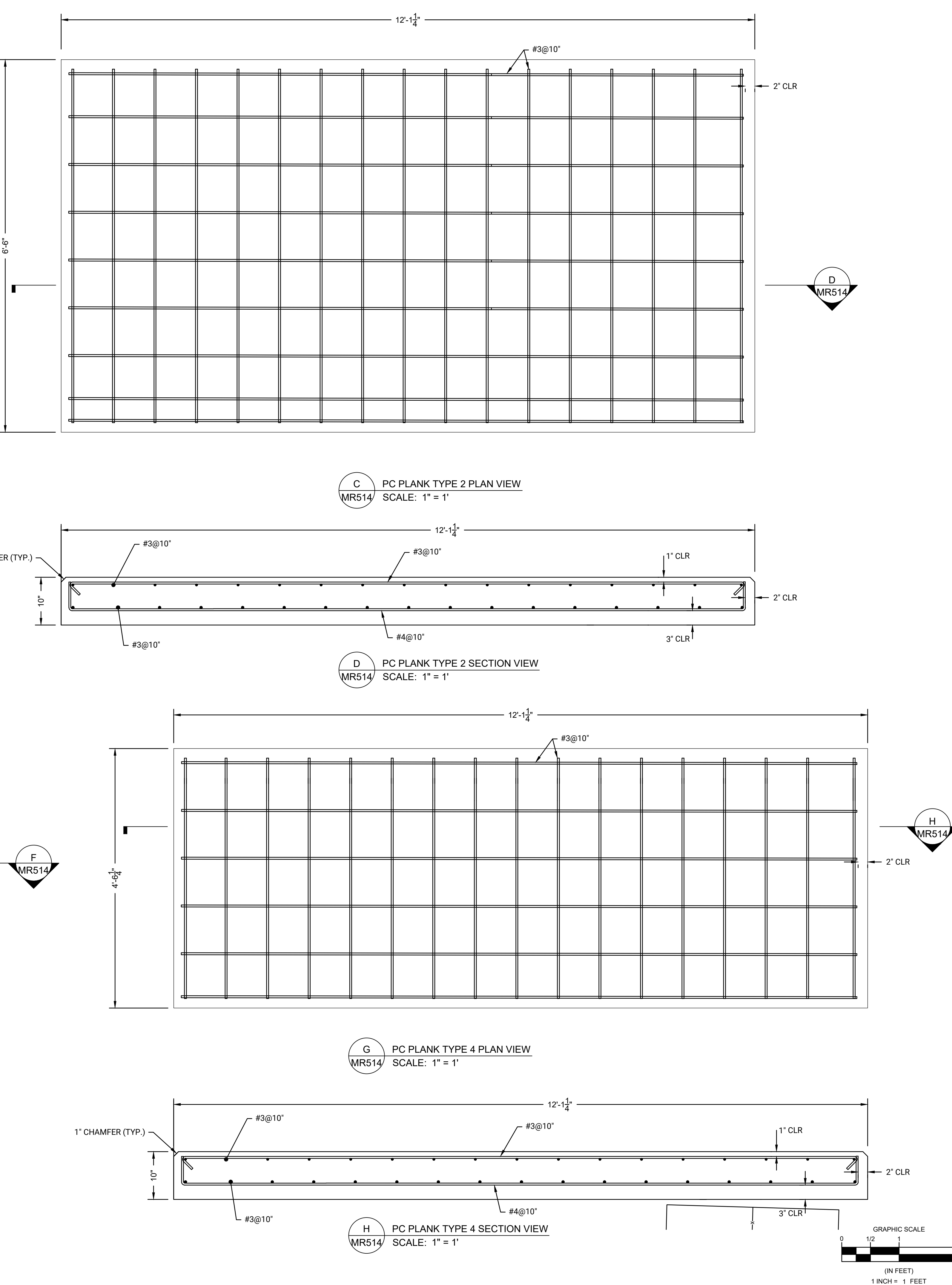
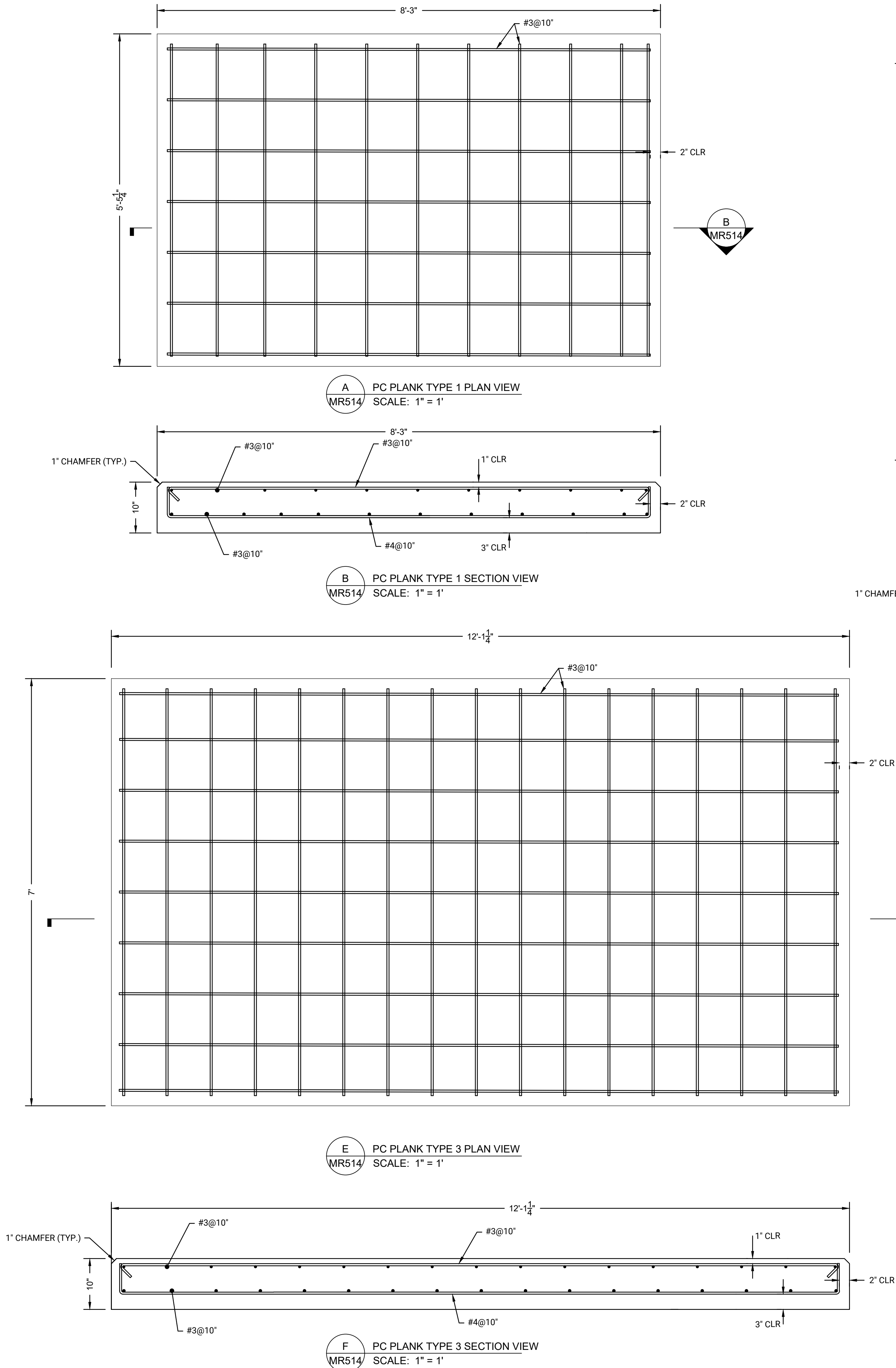
IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR513





PROJECT: **MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

NO.	BY	DATE	DESCRIPTION						
1									
2									
3									
4									
5									

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

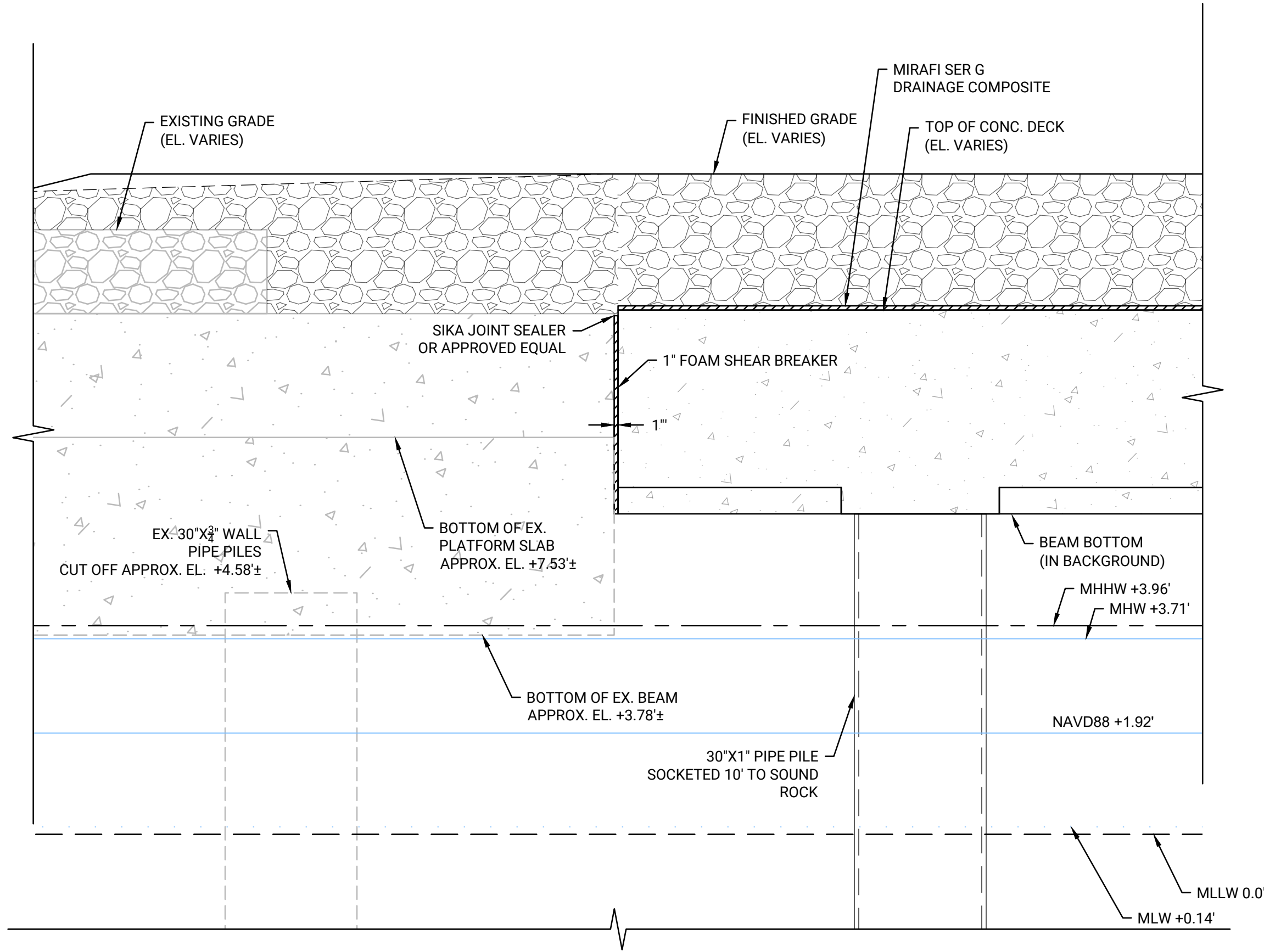
PE STAMP

PE STAMP

SHEET TITLE:
**PRECAST
PLANK DETAIL**

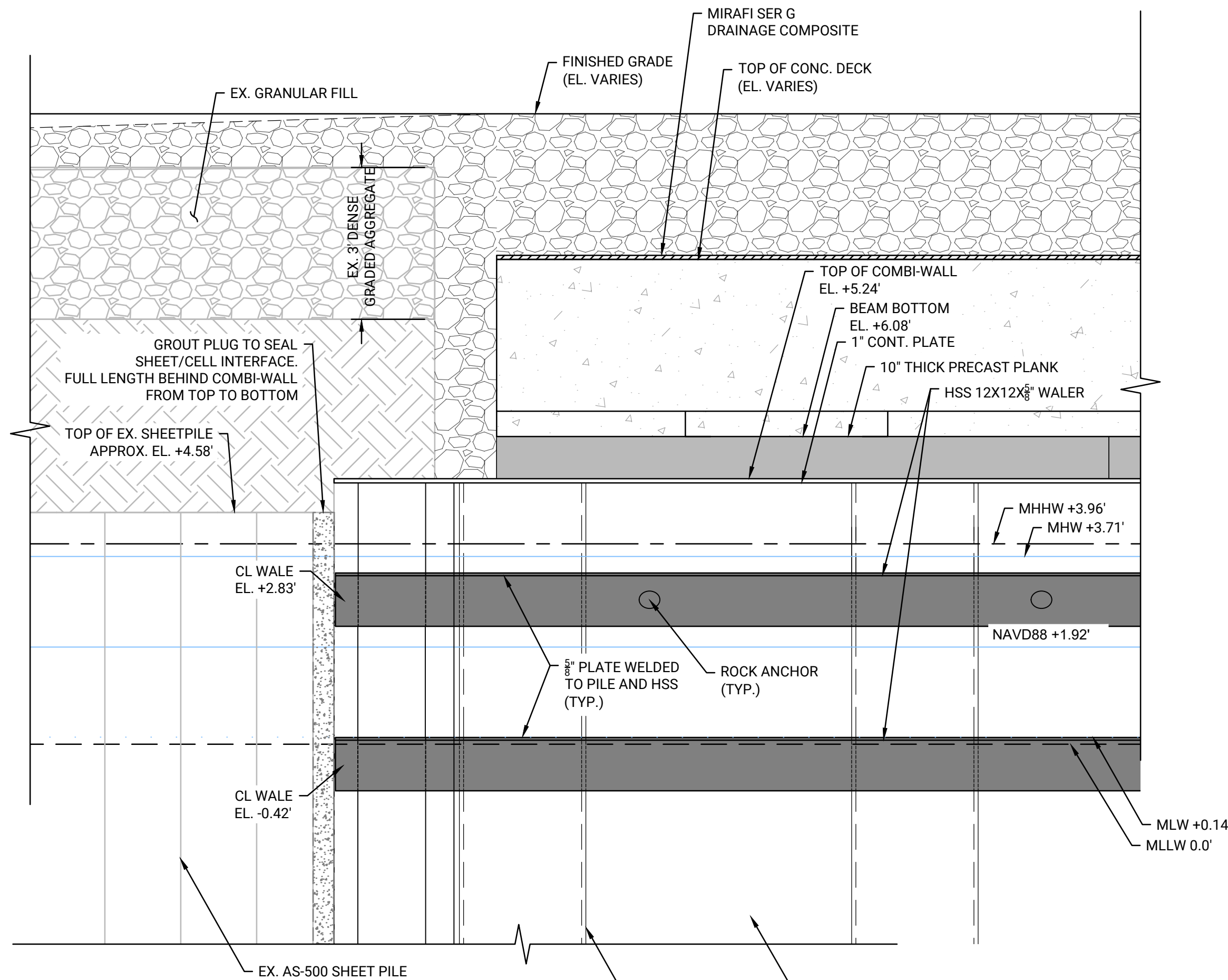
ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
MR514



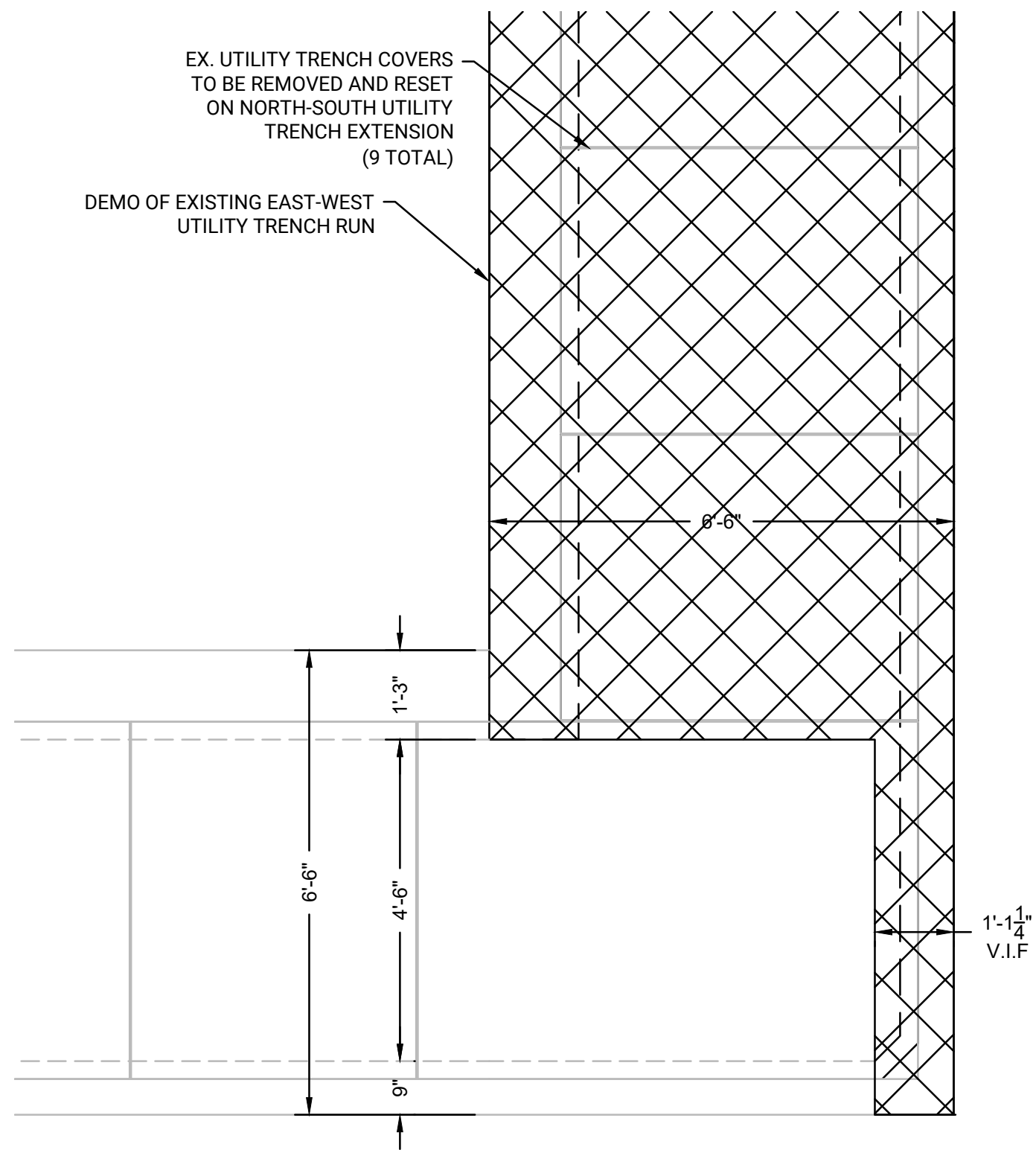
A SECTION AT SOUTH EDGE OF PLATFORM
MR100 SCALE: 1" = 2'

GENERAL NOTES:
1. PILE TO PLATFORM CONNECTIONS NOT SHOWN FOR CLARITY.



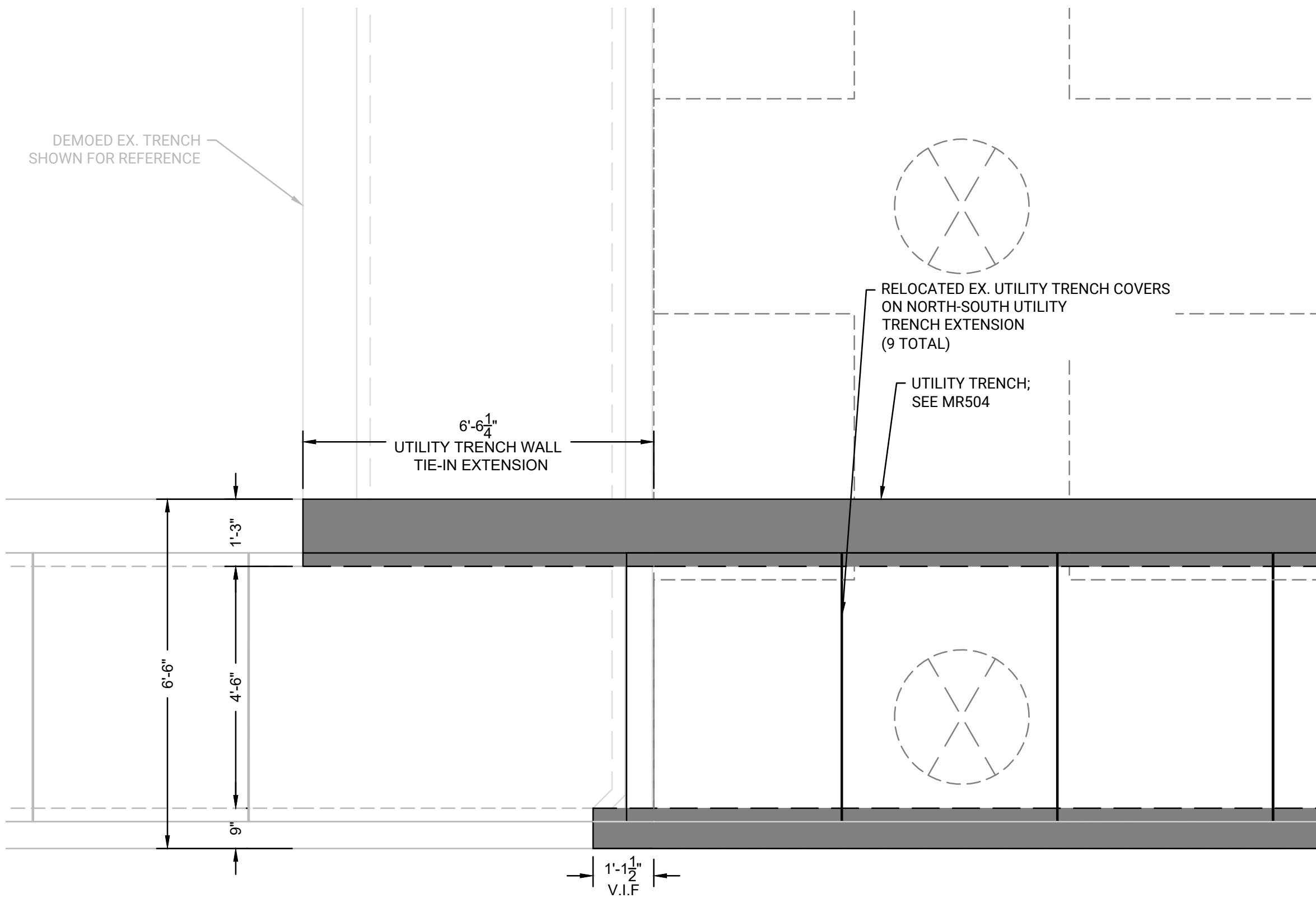
B SECTION AT SOUTH EDGE OF PLATFORM
MR100 SCALE: 1" = 2'

GENERAL NOTES:
1. PILE TO PLATFORM CONNECTIONS NOT SHOWN FOR CLARITY.



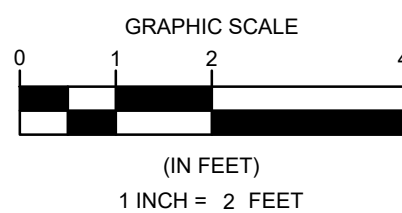
C EXISTING UTILITY TRENCH DEMO
MR011 SCALE: 1" = 2'

NOTES:
1. CONTRACTOR SHALL CLEAN SAW CUT PORTION OF EXISTING UTILITY TRENCH SHOWN.
2. IMMEDIATELY AFTER SAW CUT, CONTRACTOR SHALL CLEAN THE SAW CUT REBAR AND PROTECT SAW CUT REBAR BY APPLYING RUST INHIBITOR OR PROTECTIVE COATING. CONTRACTOR SHALL SUBMIT PROTECTIVE MATERIAL FOR ENGINEER APPROVAL.
3. CONTRACTOR SHALL APPLY 4 INCHES OF GROUT ON TOP OF THE SAW CUT AREA TO PROTECT REBAR.



D NORTH-SOUTH UTILITY TRENCH TIE-IN TO MAIN TERMINAL
MR018 SCALE: 1" = 2'

NOTES: CONCRETE PLATFORM BEAMS AND PILES SCREEN FOR CLARITY



REVISIONS	DESCRIPTION	DATE	BY	NO.					

DATE OF PREPARATION

	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

**MAIN
TERMINAL
TO SHUSTER
DETAILS**

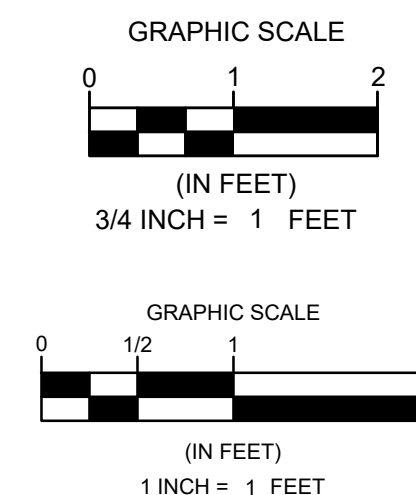
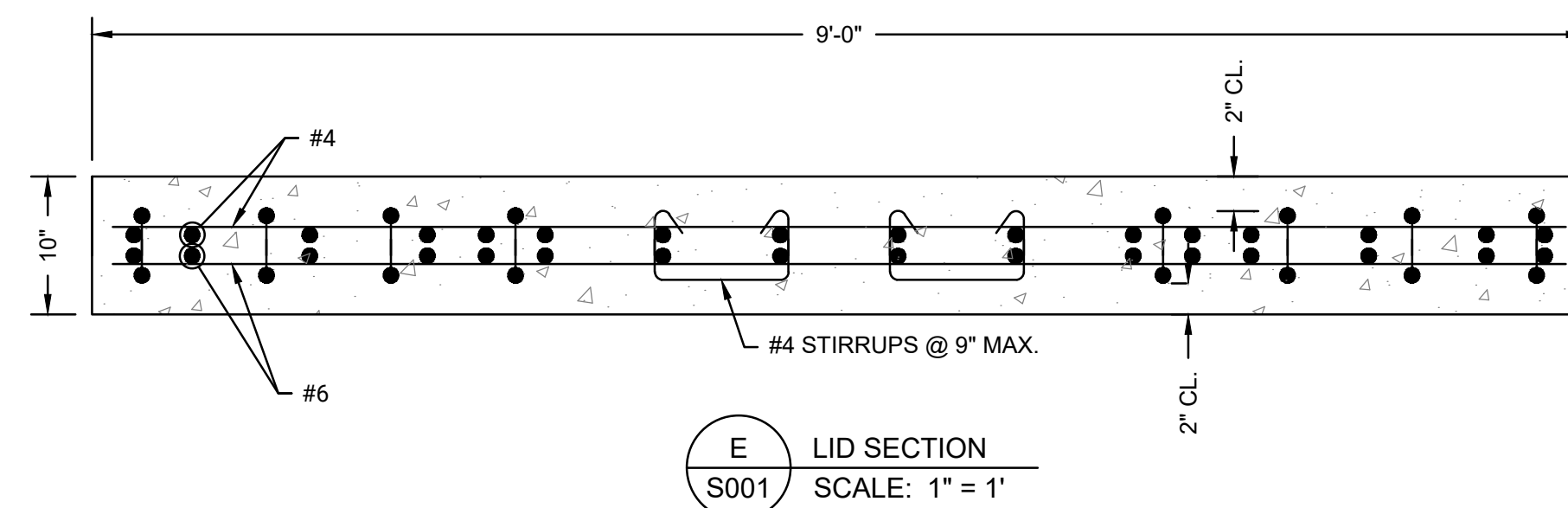
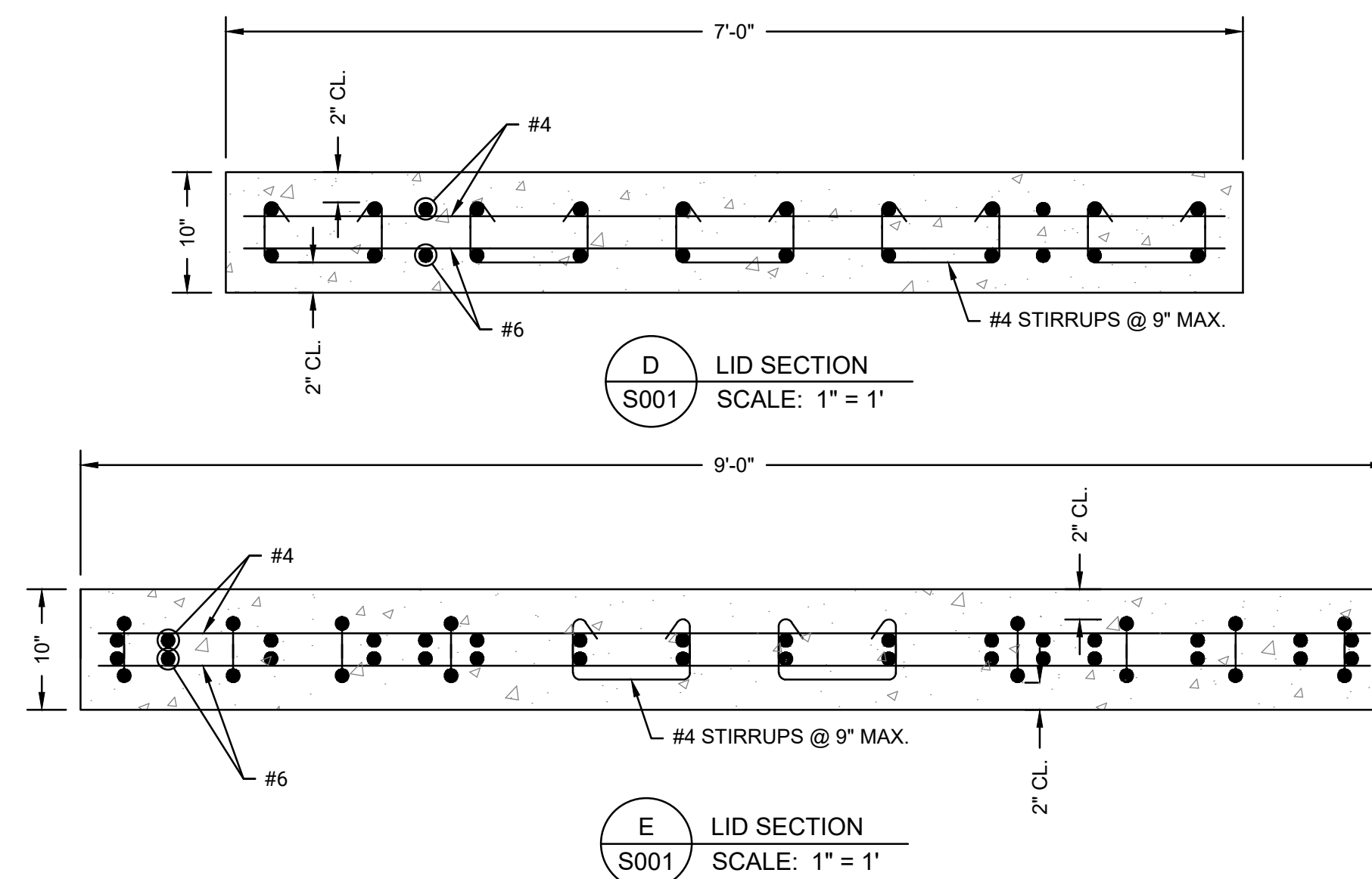
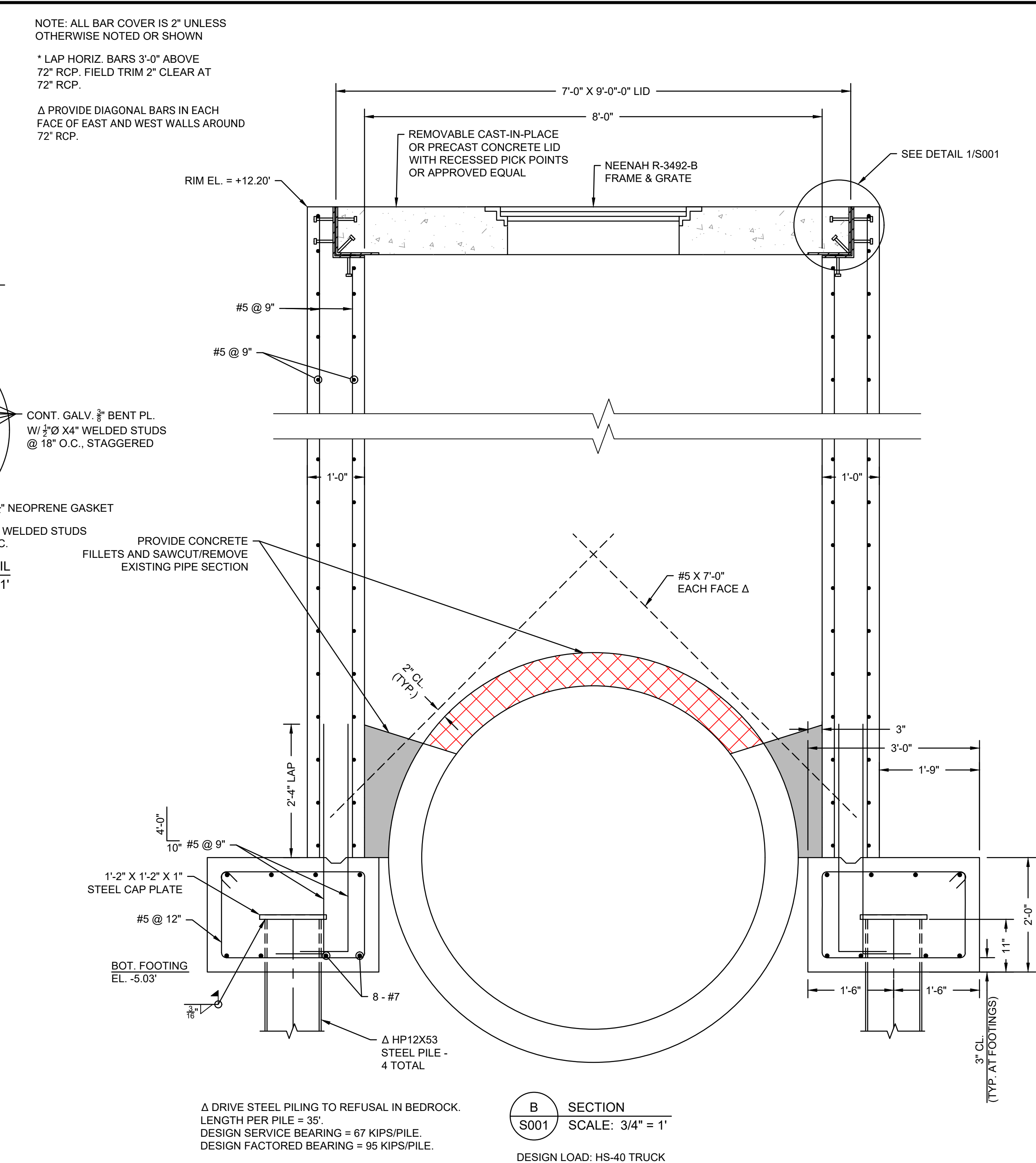
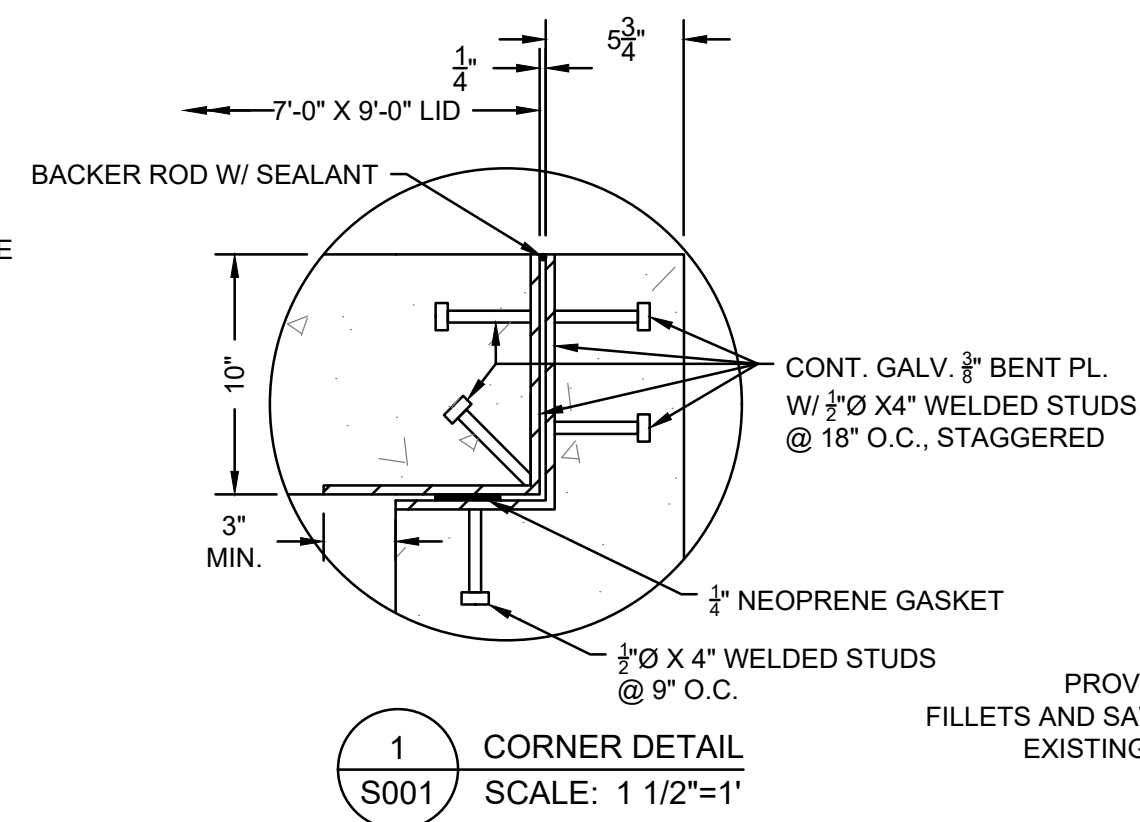
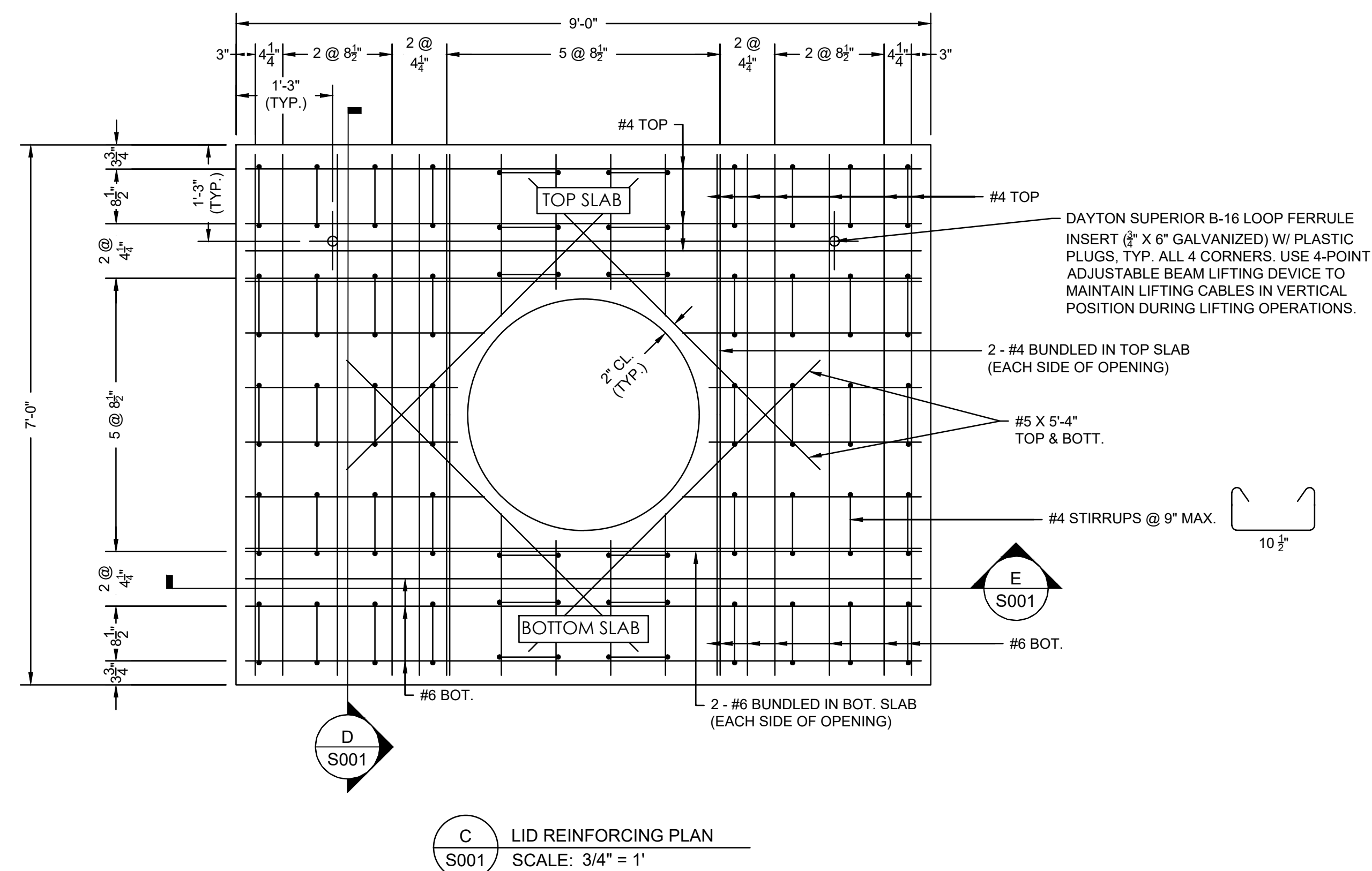
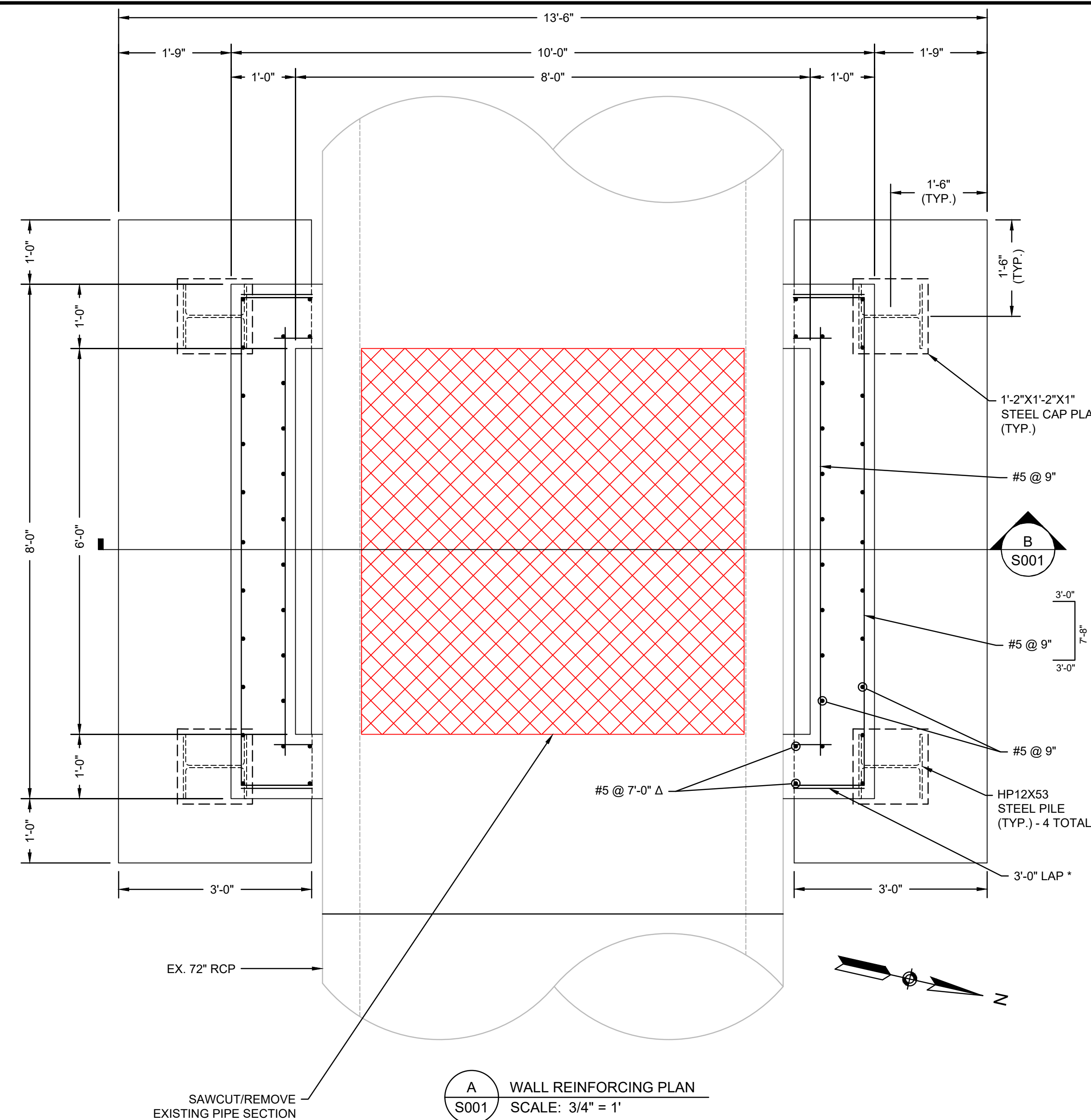
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

MR515



**MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS		
NO.	BY	DATE
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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP	10/31/2025
DESIGNED	TJC	10/31/2025
CHECKED	DJE	10/31/2025
PE STAMP		

SHEET TITLE:

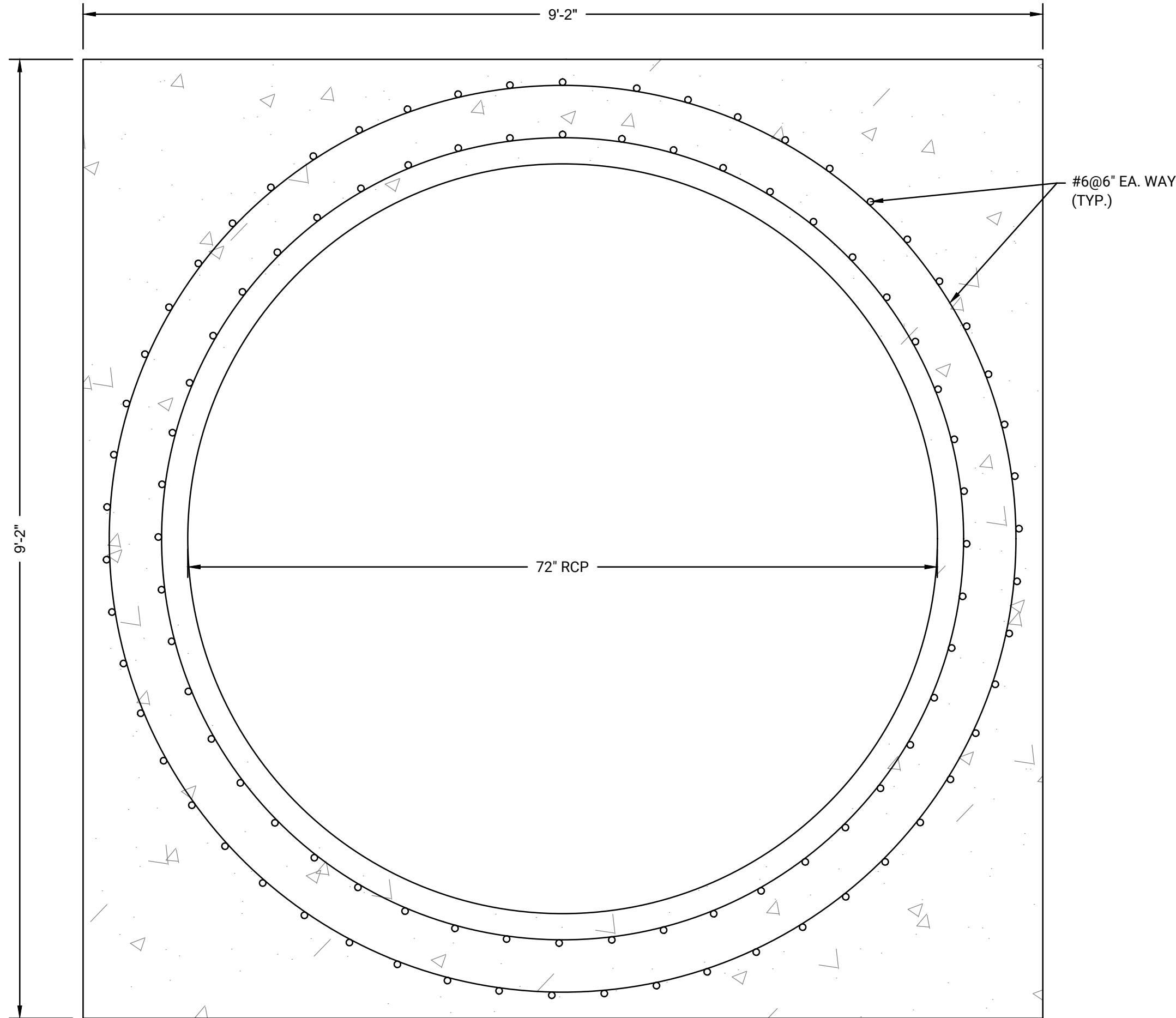
STORM MANHOLE
DETAILS (NO. 6
NEW
STRUCTURE)

ISSUANCE:

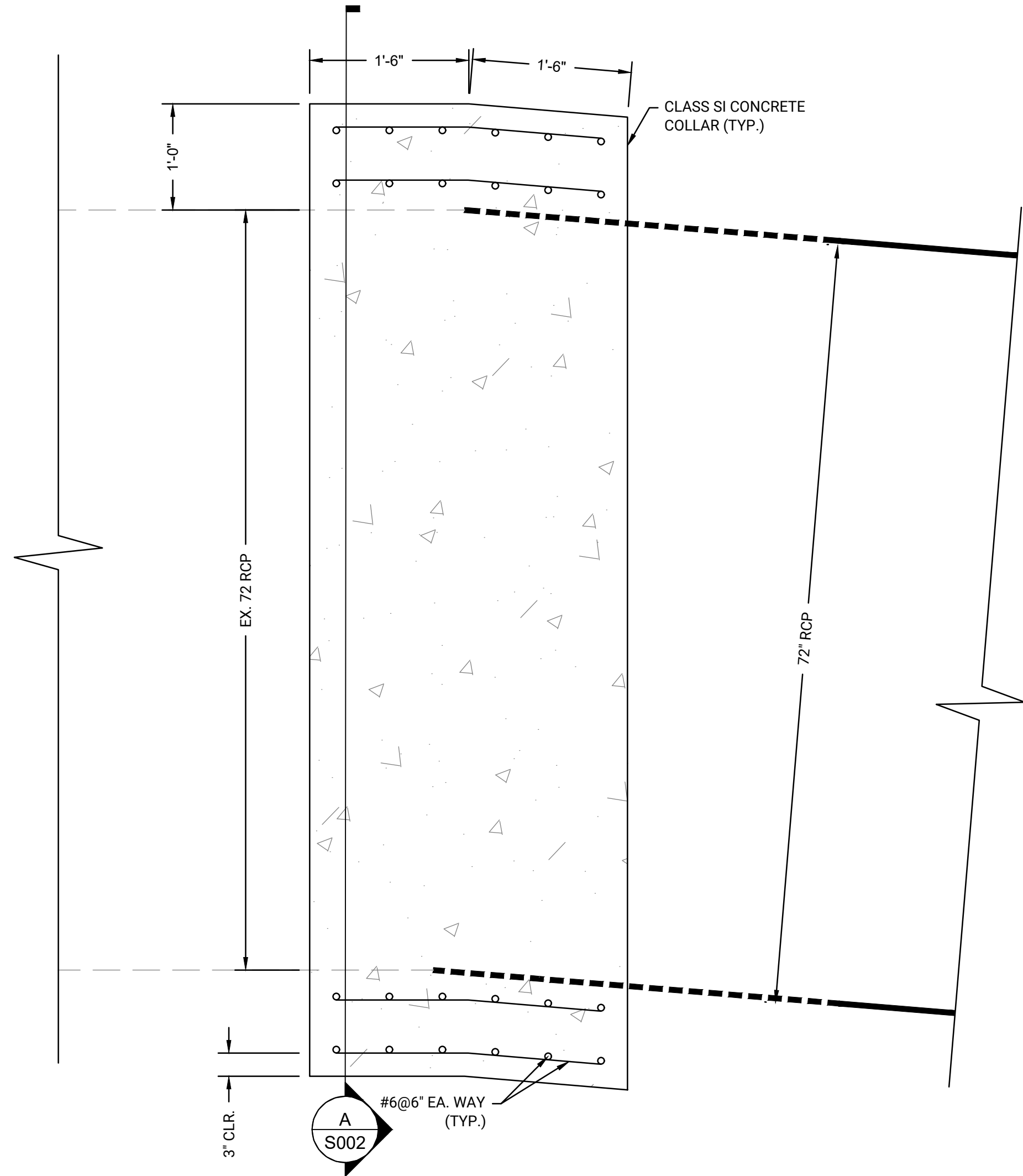
IFB DRAWINGS

(11/10/2025)

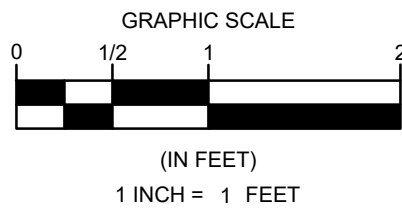
PROJECT NO: 0024M070.04
SHEET NUMBER S-001



A
S002 72" RCP CONCRETE COLLAR
SCALE: 1" = 1'



B
S002 72" RCP CONCRETE COLLAR
SCALE: 1" = 1'





PROJECT:
**MASSECEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS	
NO.	DESCRIPTION
1	
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DATE OF PREPARATION	
BY	DATE

SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

SHEET TITLE:

**CONCRETE
COLLAR DETAILS**

ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

S-002

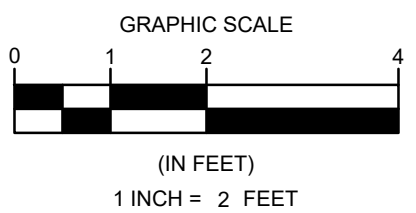
REVISIONS				
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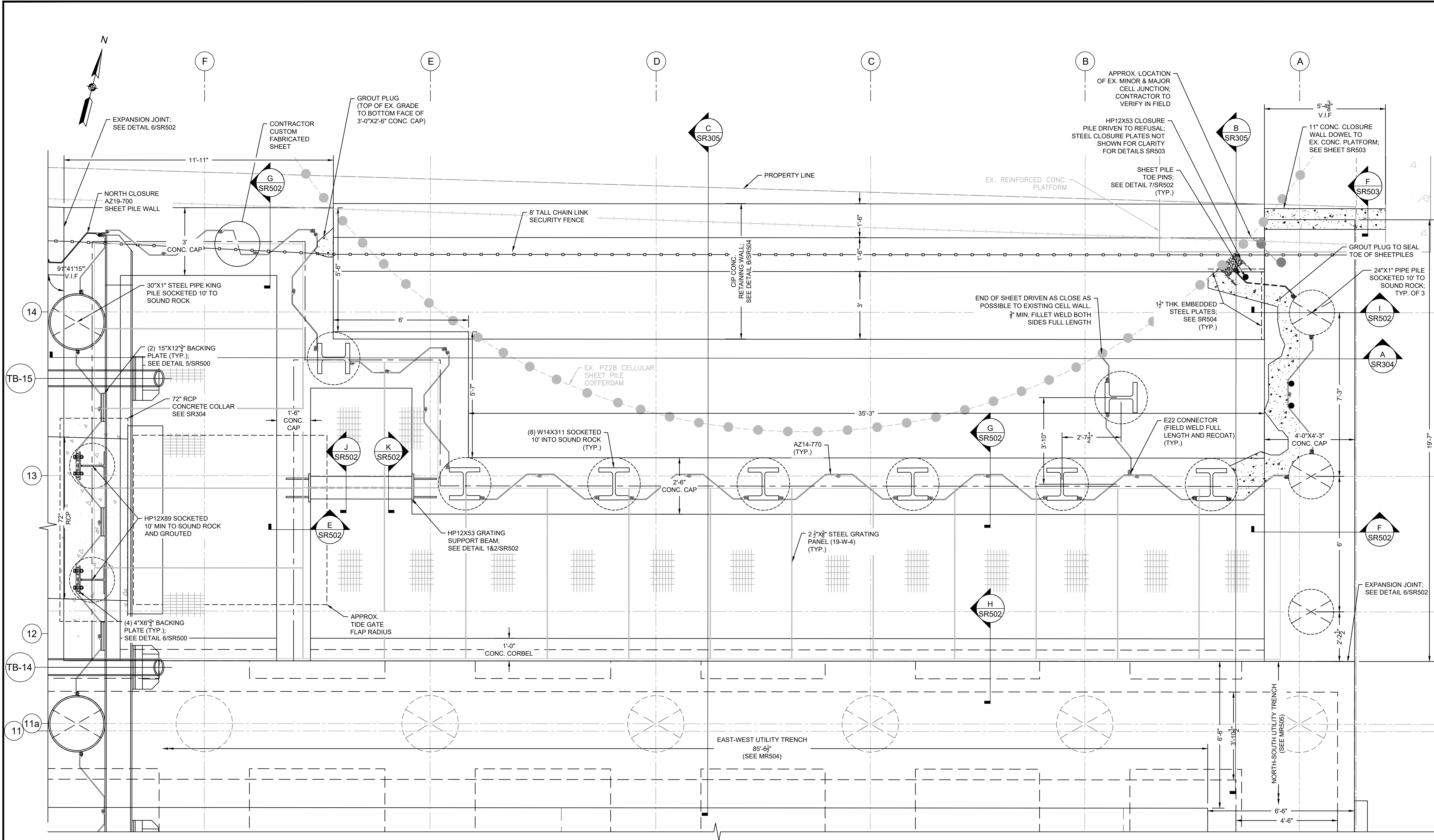
DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSJ	11/7/2025

PE STAMP

COMBI-WALL
72IN OUTFALL
PLAN

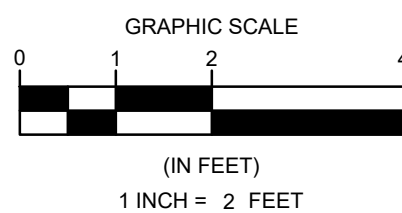
PROJECT NO: 0024M070.04
SHEET NUMBER





2 EAST/WEST COMBI WALL AND NORTH CLOSURE PARTIAL PLAN DETAIL
SCALE: 1" = 2'

NOTES:
1) STEEL GRATING SCREENED FOR CLARITY.



PROJECT: **MASCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIMJSG	11/7/2025

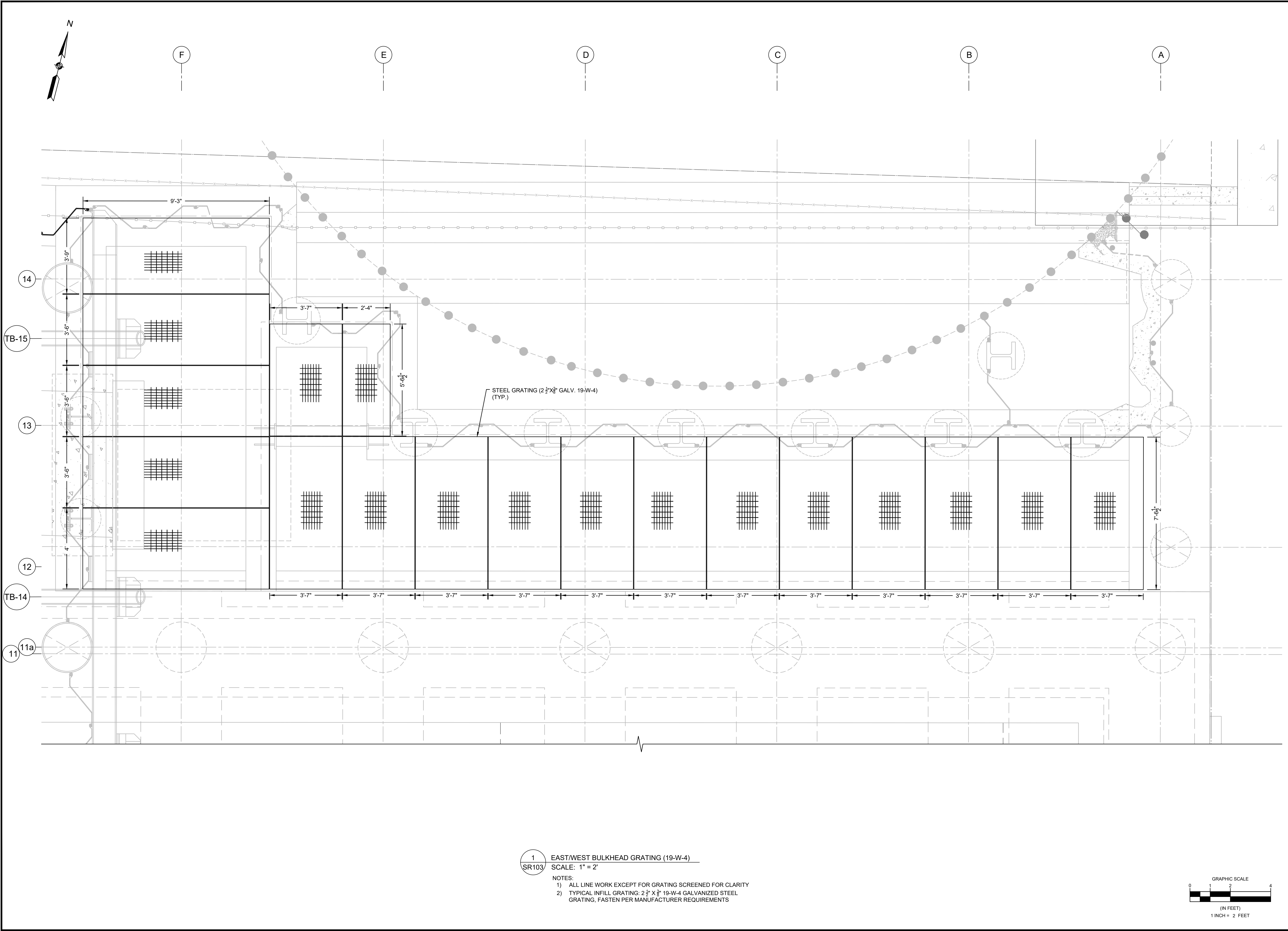
PE STAMP

PE STAMP

SHEET TITLE:
**EAST-WEST
BULKHEAD
PLAN**

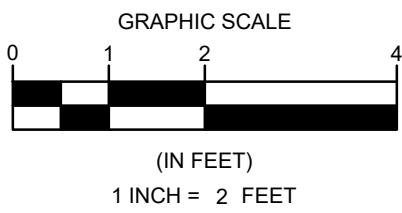
ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
SR102



1 EAST/WEST BULKHEAD GRATING (19-W-4)
SR103 SCALE: 1" = 2'

- NOTES:
- 1) ALL LINE WORK EXCEPT FOR GRATING SCREENED FOR CLARITY
 - 2) TYPICAL INFILL GRATING: 2 1/2" X 3/8" 19-W-4 GALVANIZED STEEL GRATING, FASTEN PER MANUFACTURER REQUIREMENTS



PROJECT:
**MASCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC)
NEW BEDFORD, MA**

REVISIONS	
NO	DESCRIPTION

DATE OF PREPARATION	
BY	DATE

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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

COMBI-WALL
SECTION

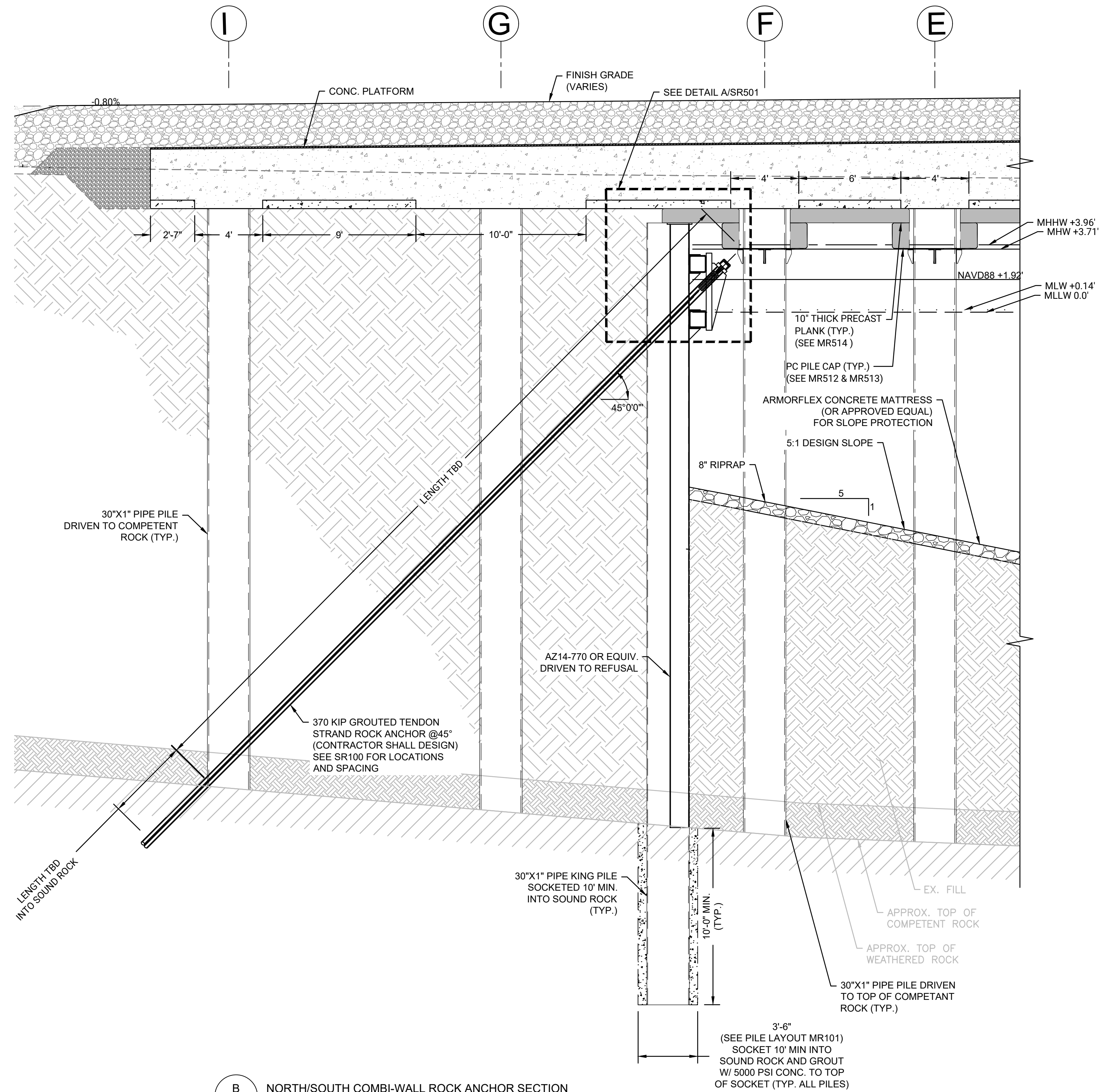
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

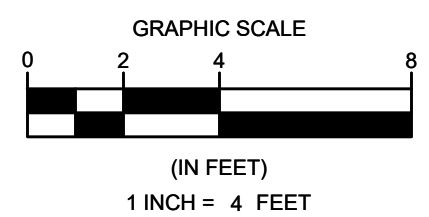
PROJECT NO: 0024M070.04

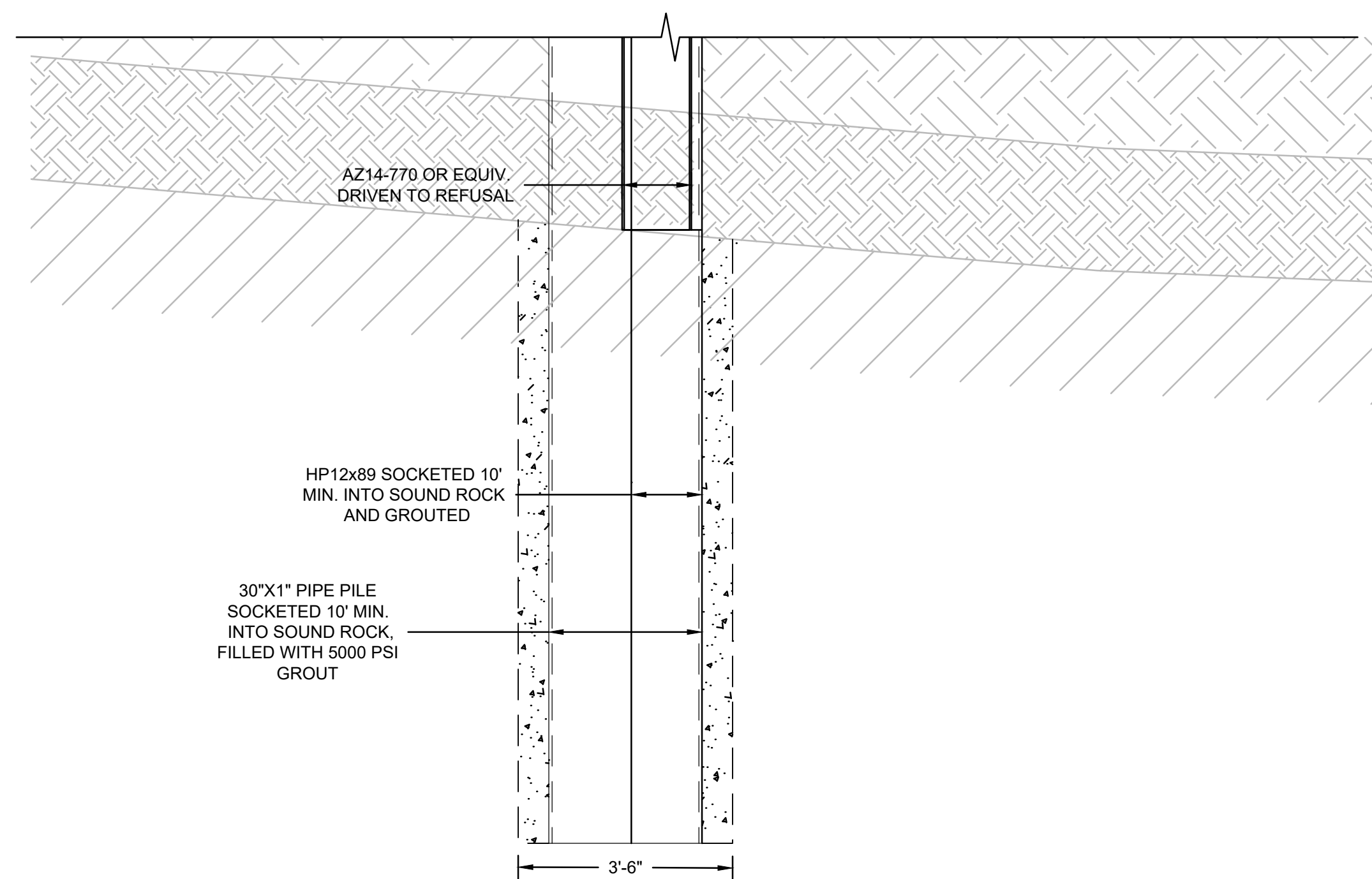
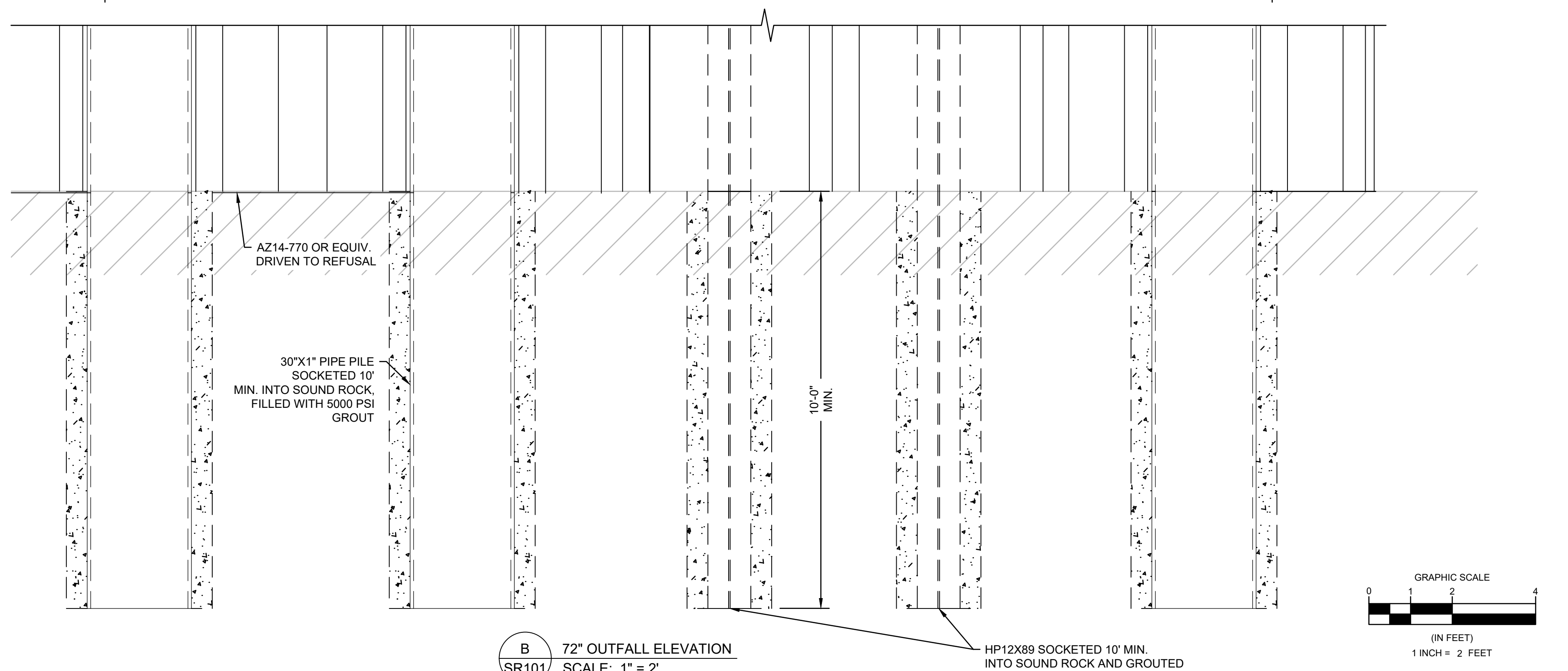
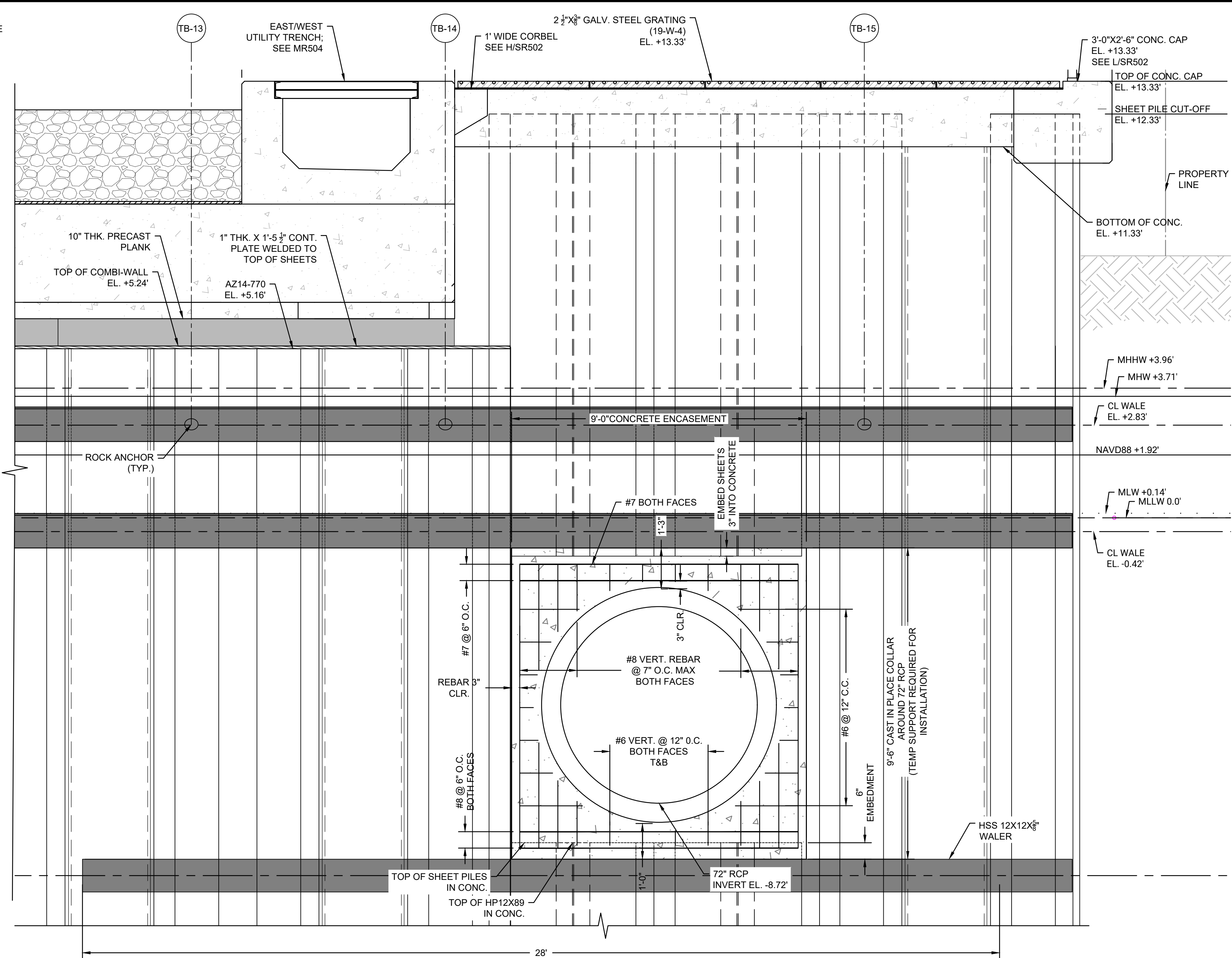
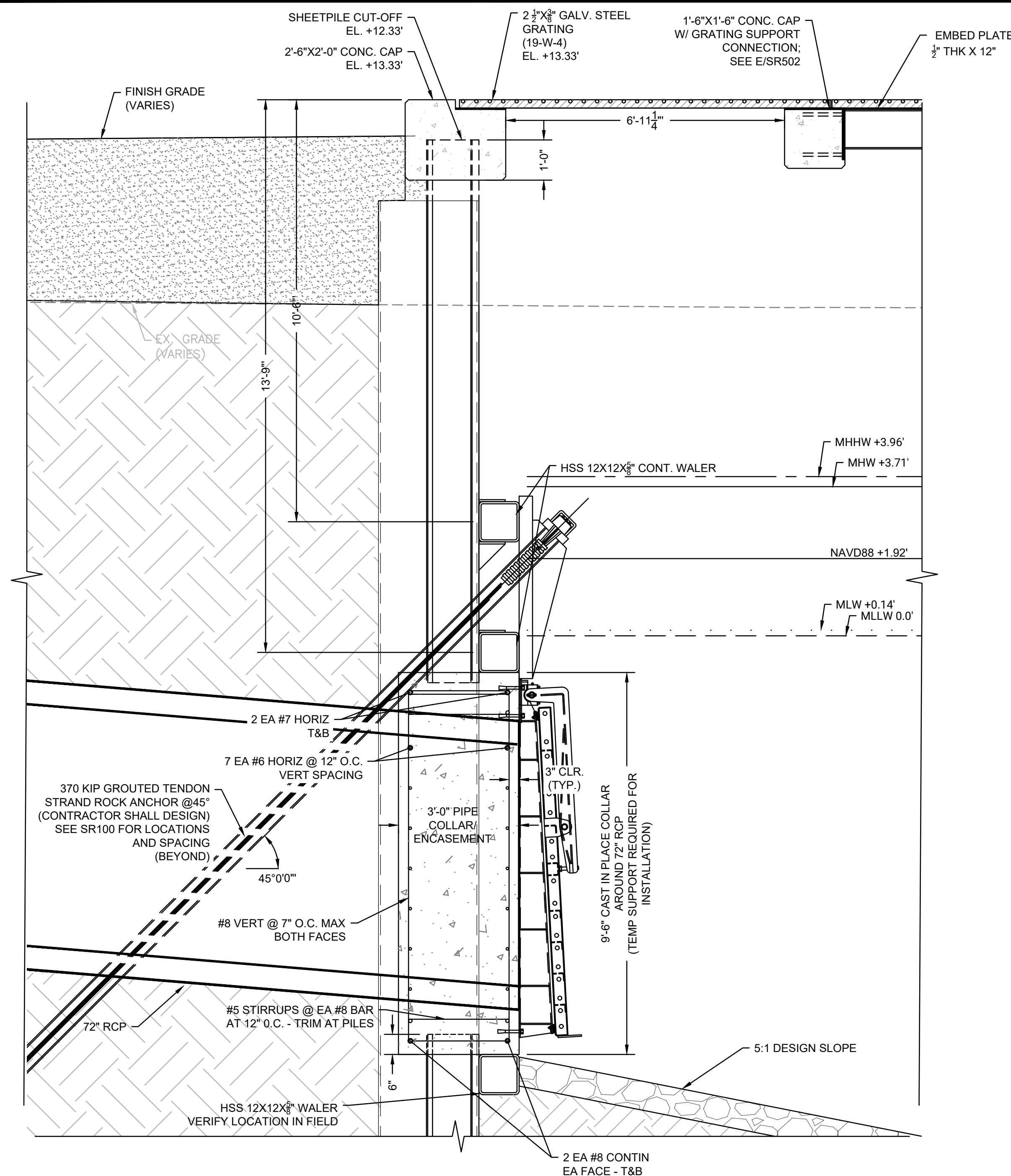
SHEET NUMBER

SR301



B NORTH/SOUTH COMBI-WALL ROCK ANCHOR SECTION
SR100 SCALE: 1" = 4'
 NOTES:
 1) PILE CONNECTIONS NOT SHOWN FOR CLARITY

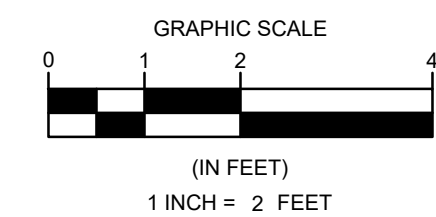




A 72" OUTFALL AT NORTH/SOUTH COMBI WALL AND EAST/WEST COMBI WALL INTERFACE
SR101 SCALE: 1" = 2'

B 72" OUTFALL ELEVATION
SR101 SCALE: 1" = 2'

HP12X89 SOCKETED 10' MIN.
INTO SOUND ROCK AND GROUTED



PROJECT: **MASSEC NBMT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

[illegible]

DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025
PE STAMP		

PE STAMP

SHEET TITLE:

COMBI-WALL OUTFALL SECTIONS

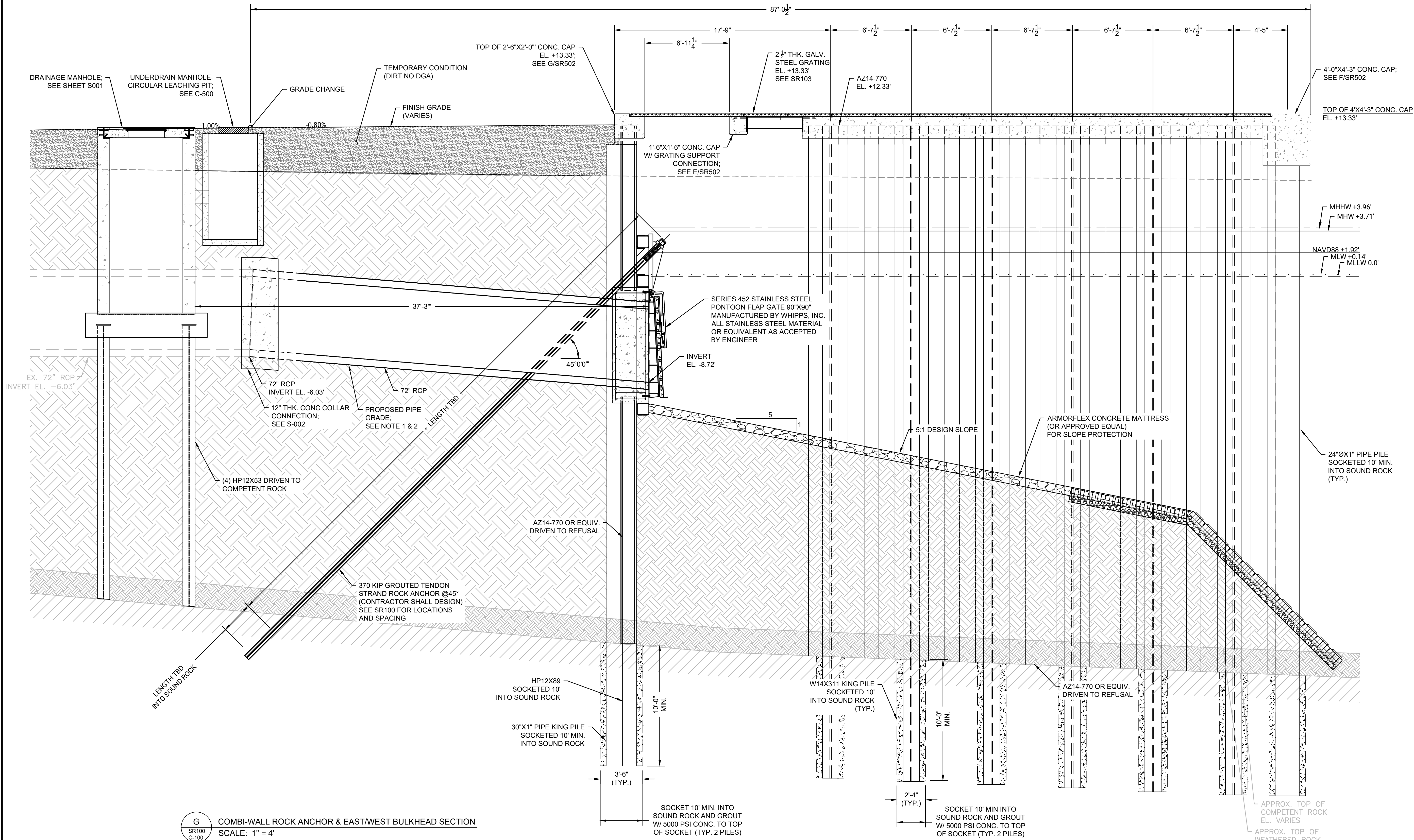
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

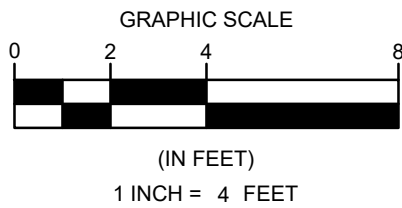
SR302



G COMBI-WALL ROCK ANCHOR & EAST/WEST BULKHEAD SECTION
SR100 C-100
SCALE: 1" = 4'

NOTES:

- 1) THE EXISTING INVERT ELEVATION HAS BEEN DETERMINED BASED ON DATA PRESENTED IN DRAWINGS TITLED 'NEW BEDFORD JOHN F. KENNEDY MEMORIAL HIGHWAY EXTENSION', DATED 1982, PROVIDED BY THE CITY OF NEW BEDFORD.
- 2) THE CONTRACTOR SHALL PERFORM FIELD VERIFICATION OF THE INVERT ELEVATION AND PROMPTLY NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES OR DEVIATIONS FROM THE DOCUMENTED EXISTING CONDITION.



PROJECT: **MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS	
NO.	DESCRIPTION
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DATE OF PREPARATION		
BY	DATE	
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE: **EAST-WEST
BULKHEAD
SECTION**

ISSUANCE: **IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
SR303

**MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS			
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DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSJ	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

EAST-WEST
BULKHEAD
SECTION

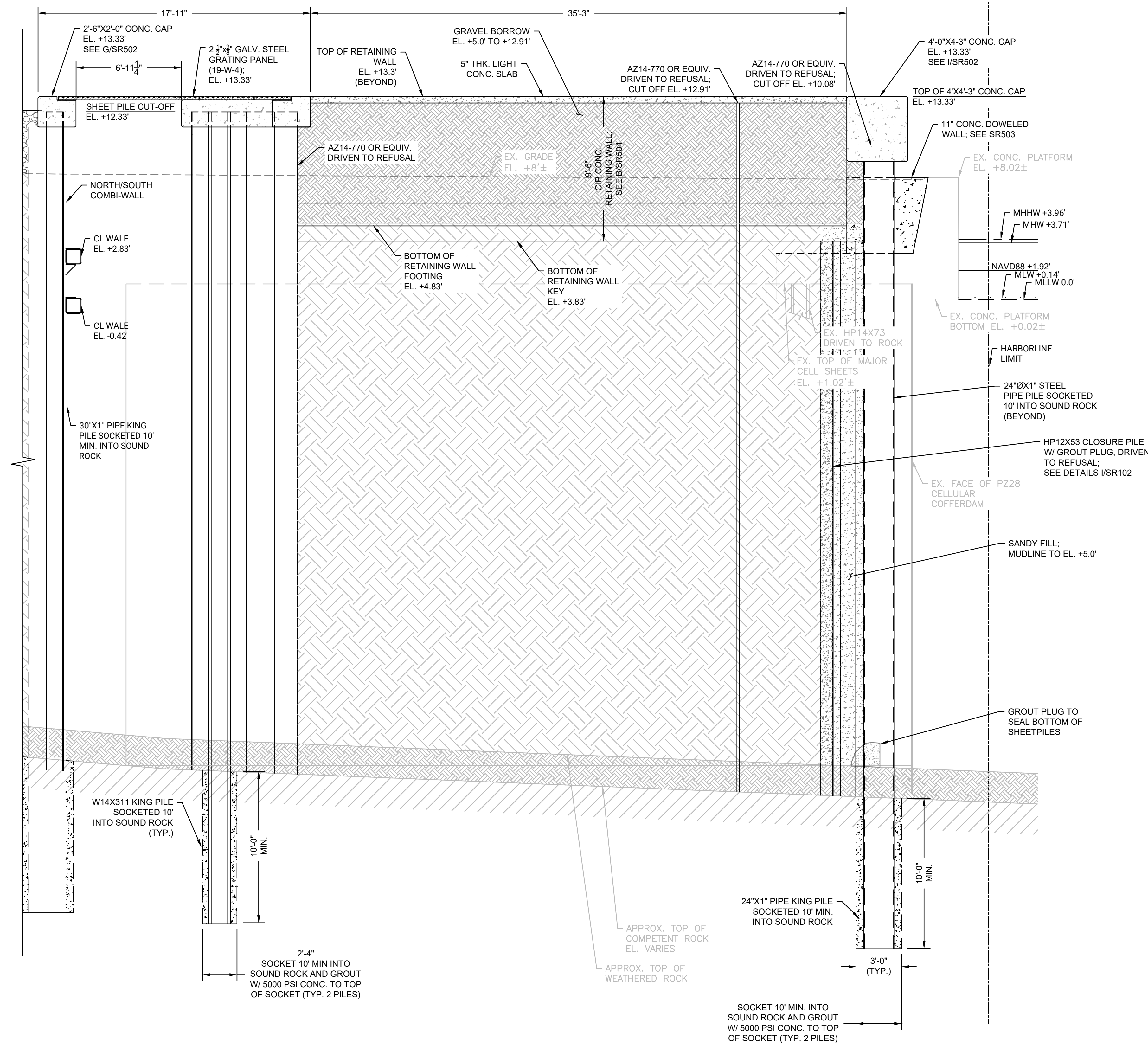
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

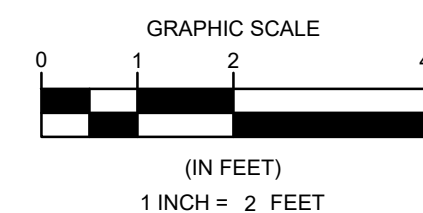
PROJECT NO: 0024M070.04

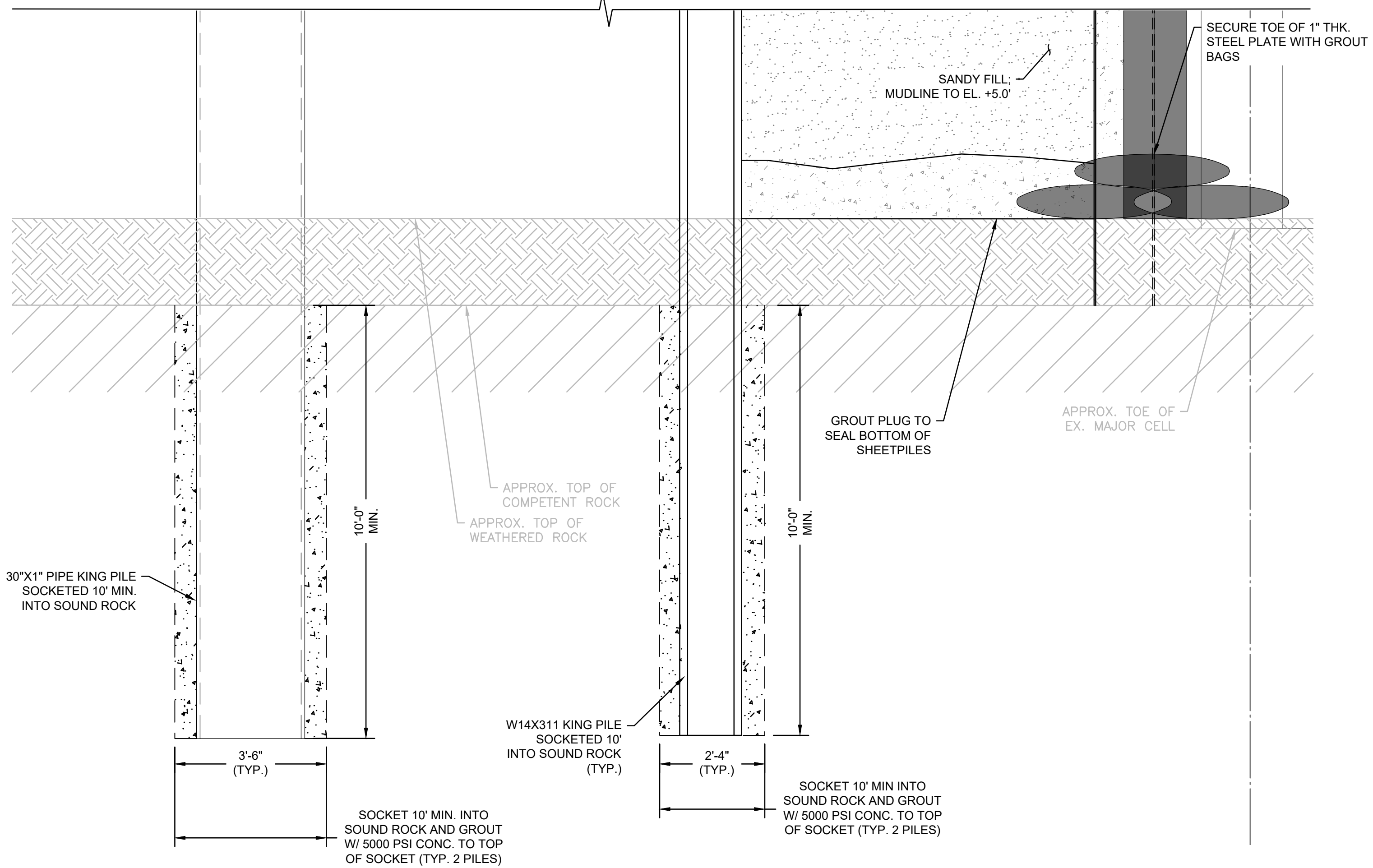
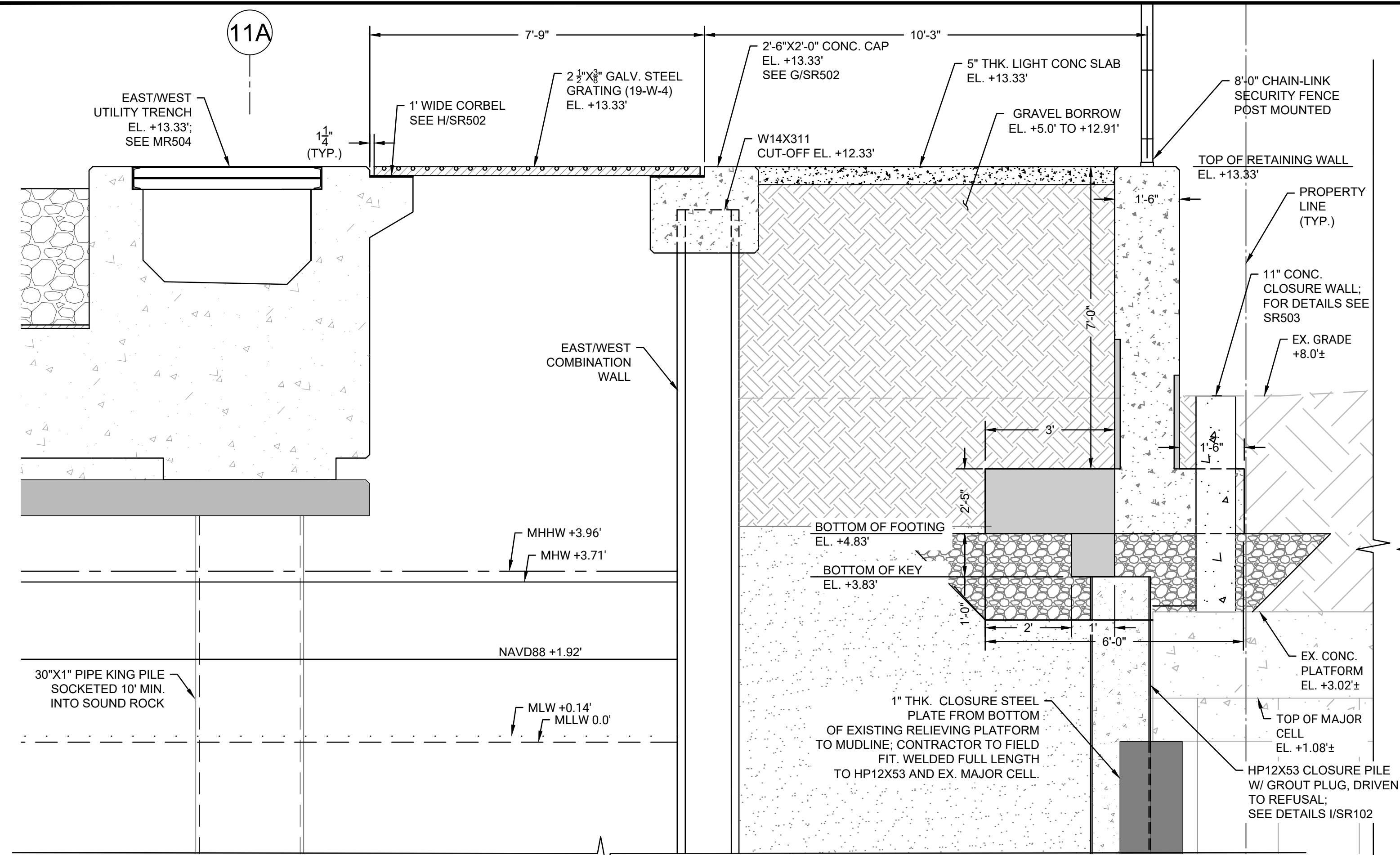
SHEET NUMBER

SR304

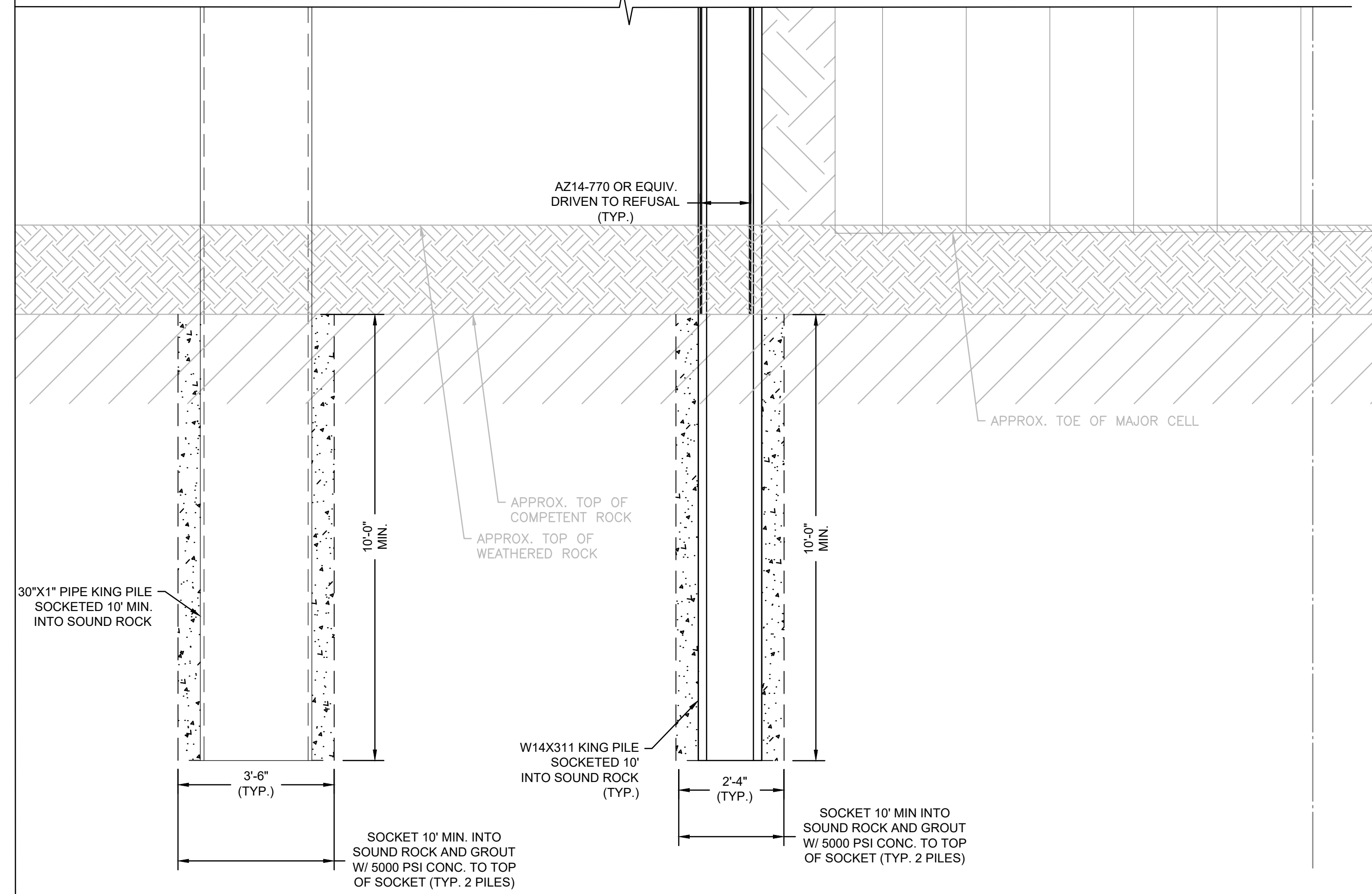
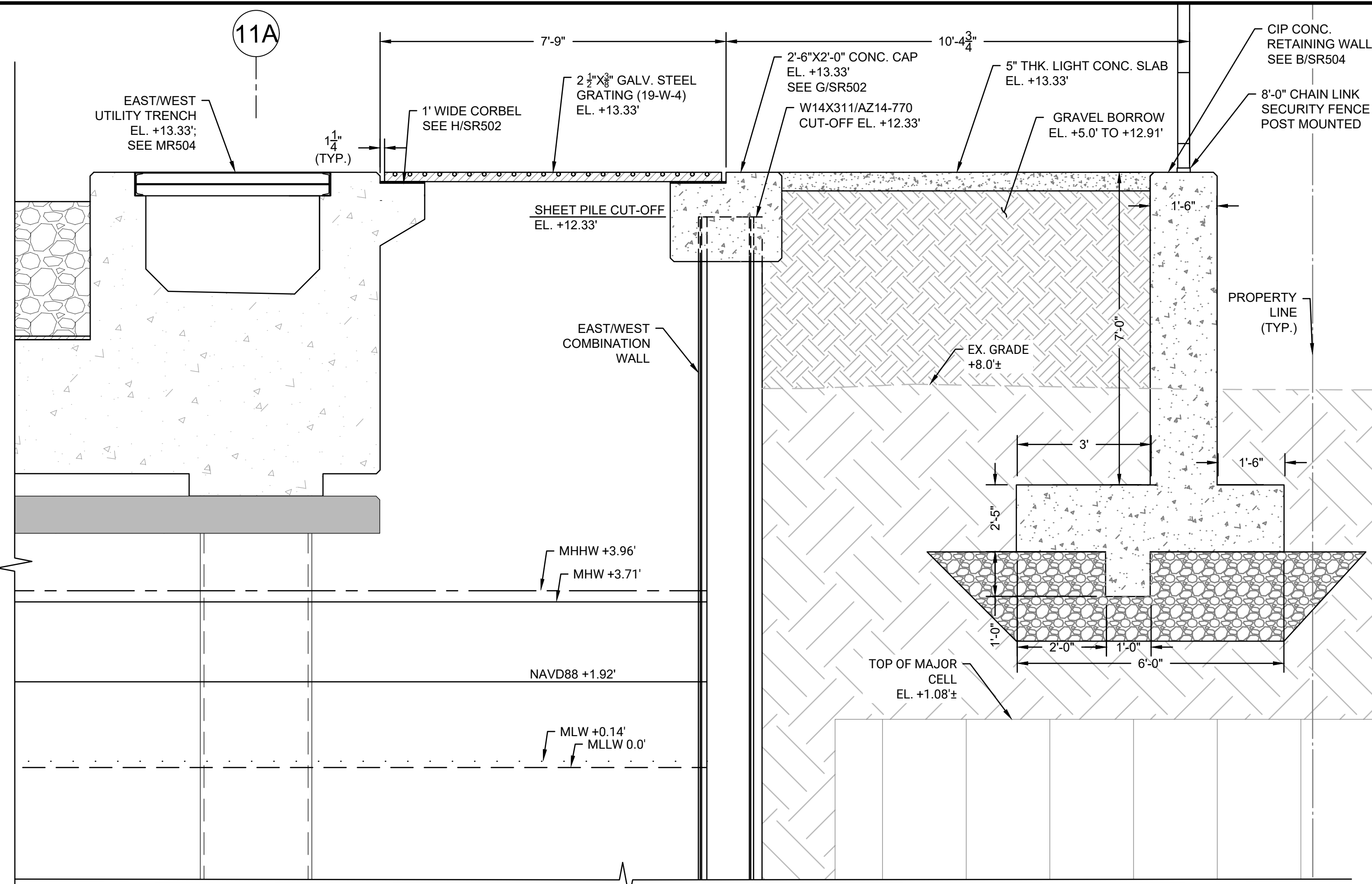


A EAST/WEST BULKHEAD SECTION
SR102 SCALE: 1" = 4'

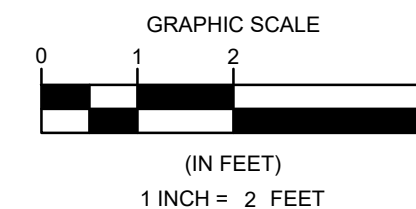




B EAST/WEST BULKHEAD
SR102 SCALE: 1" = 2'



C EAST/WEST BULKHEAD
SR102 SCALE: 1" = 2'



PROJECT: **MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER: **NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
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DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:
**EAST-WEST
BULKHEAD
SECTION**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

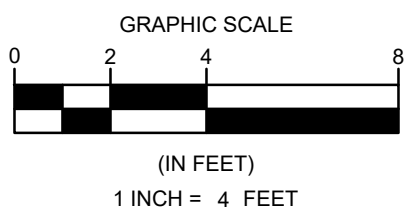
PROJECT NO: 0024M070.04
SHEET NUMBER

SR305

DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

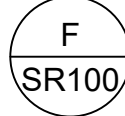
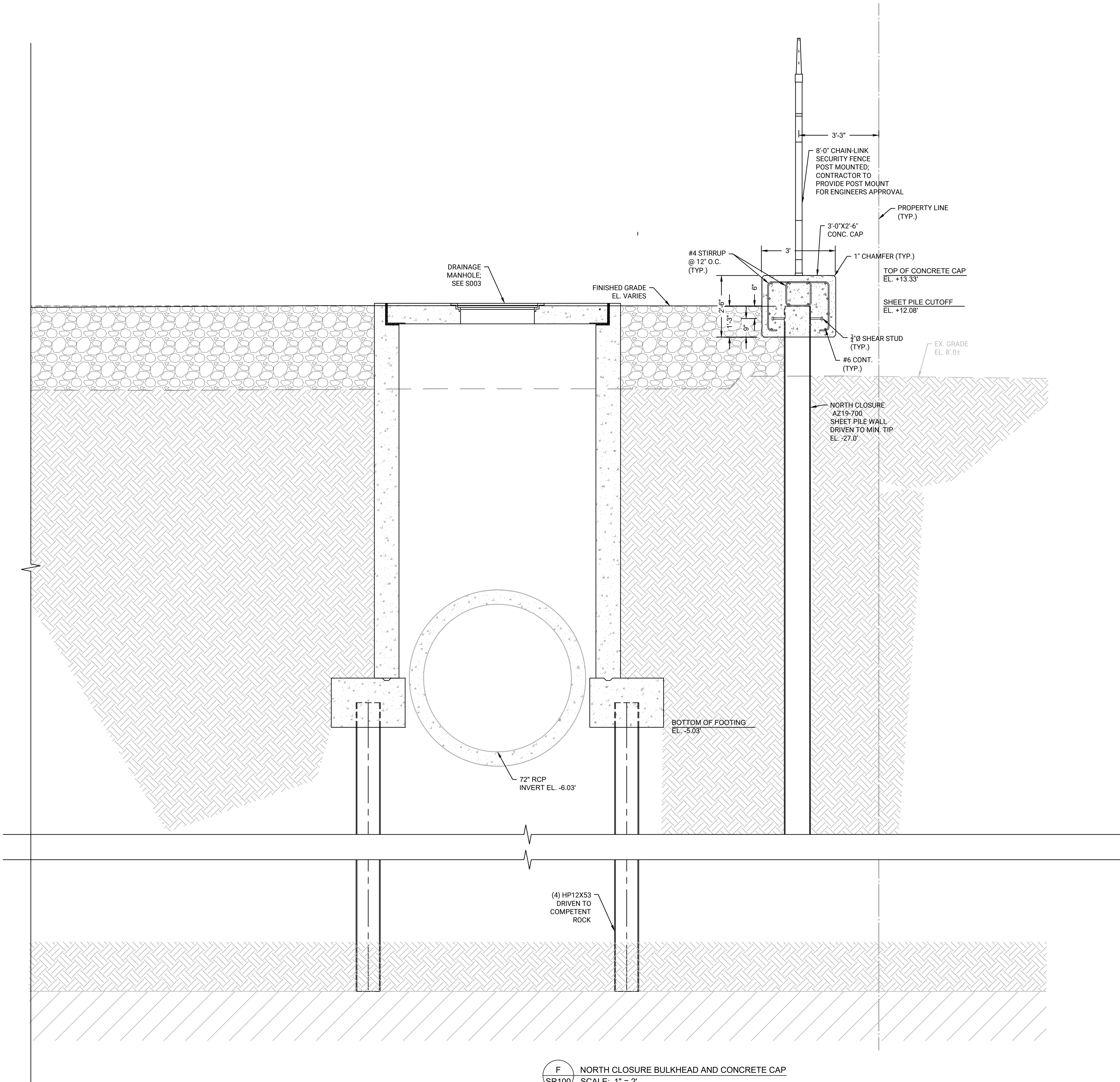
PE STAMP

SR306

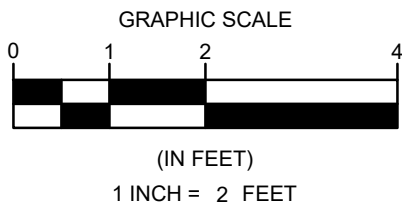


NOTES:

1) ALIGNMENT OF EXISTING CELLS AND CONCRETE PLATFORM VARIES ALONG PROPOSED PLATFORM DEPENDING ON WHERE THE SECTION IS CUT. CONTRACTOR SHALL PERFORM SURVEY TO VERIFY LOCATION OF EXISTING STRUCTURES PRIOR TO PERFORMING WORK.



NORTH CLOSURE BULKHEAD AND CONCRETE CAP
SCALE: 1" = 2'



REVISIONS		DATE		BY		NO	
DESCRIPTION							

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

NORTH END SECTION

ISSUANCE:
IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04
SHEET NUMBER

SR307

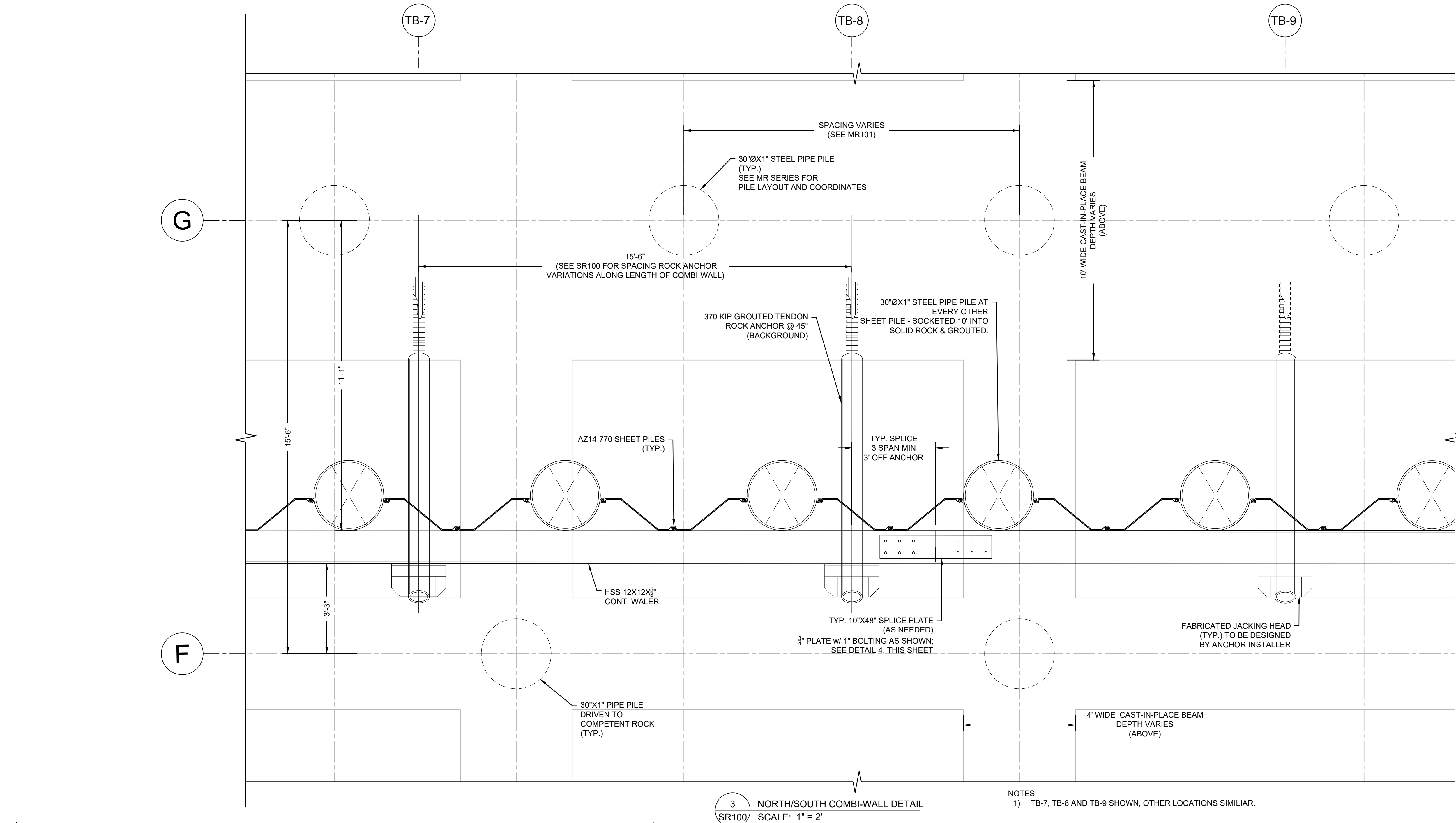
PROJECT:

**MASSECEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:

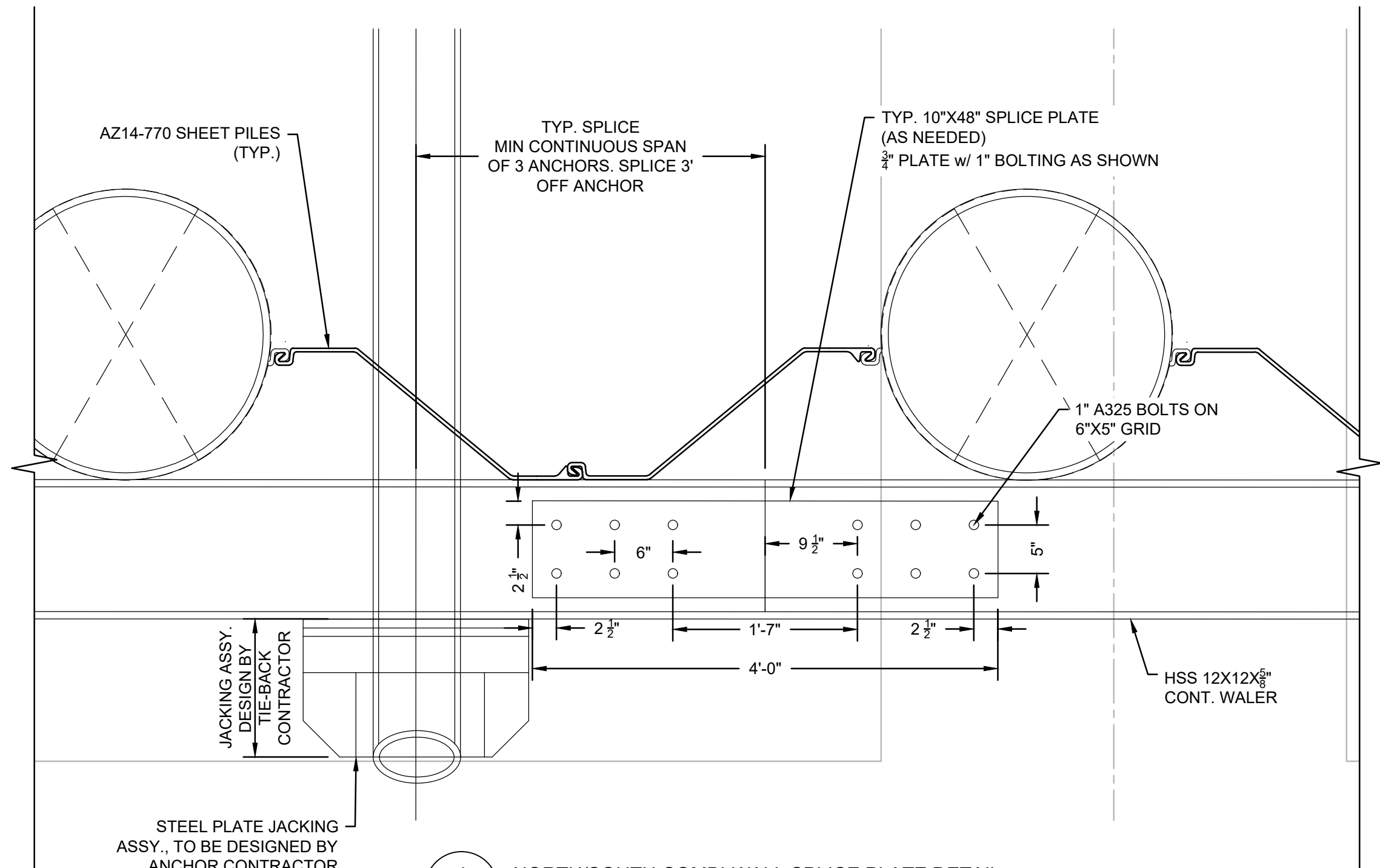
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**



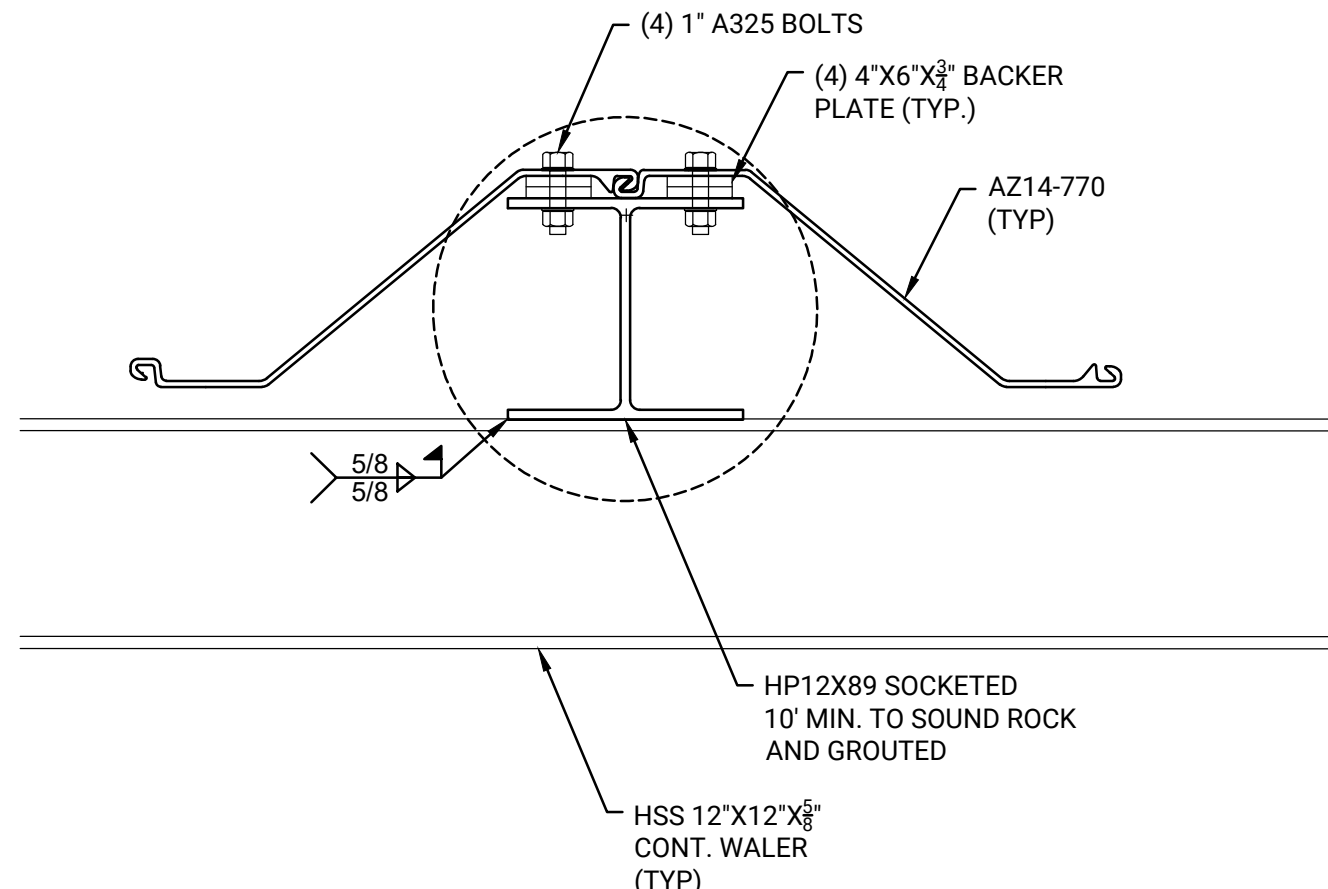


3 NORTH/SOUTH COMBI-WALL DETAIL
SCALE: 1" = 2'

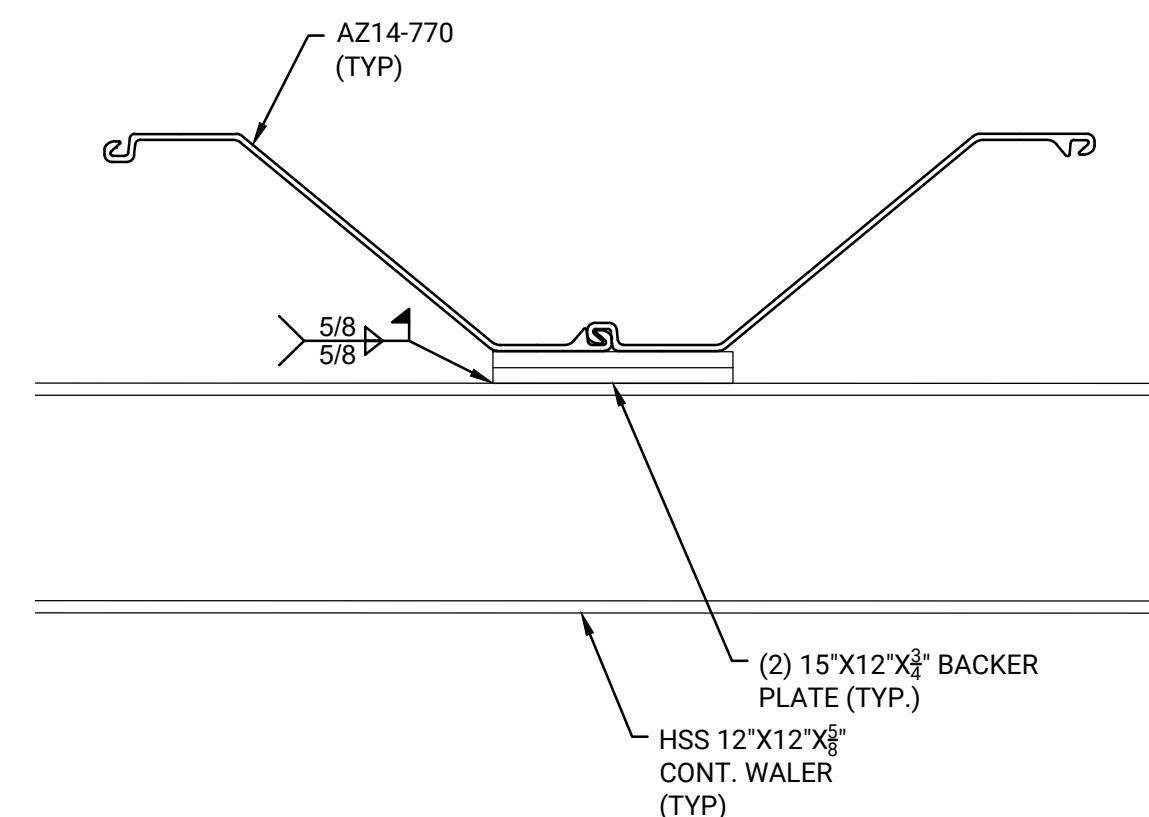
NOTES:
1) TB-7, TB-8 AND TB-9 SHOWN, OTHER LOCATIONS SIMILAR.



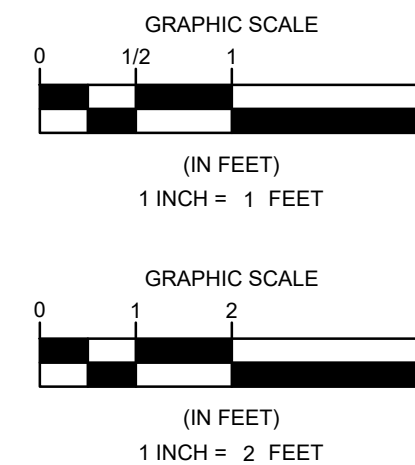
4 NORTH/SOUTH COMBI-WALL SPLICE PLATE DETAIL
SCALE: 1" = 1'



5 4"X6"X3/4" BACKER PLATE DETAIL
SCALE: 1" = 1'



6 15"X12"X3/4" BACKER PLATE DETAIL
SCALE: 1" = 1'



PROJECT:

MASSEC NBMC - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)

OWNER:

NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMC)
NEW BEDFORD, MA

NO.	BY	DATE	DESCRIPTION
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DATE OF PREPARATION	
BY	DATE
SURVEYED	
DRAWN	CJP/MXS6 11/7/2025
DESIGNED	MXS6 11/7/2025
CHECKED	AIM/JSG 11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

COMBI-WALL
DETAILS 1 OF 2

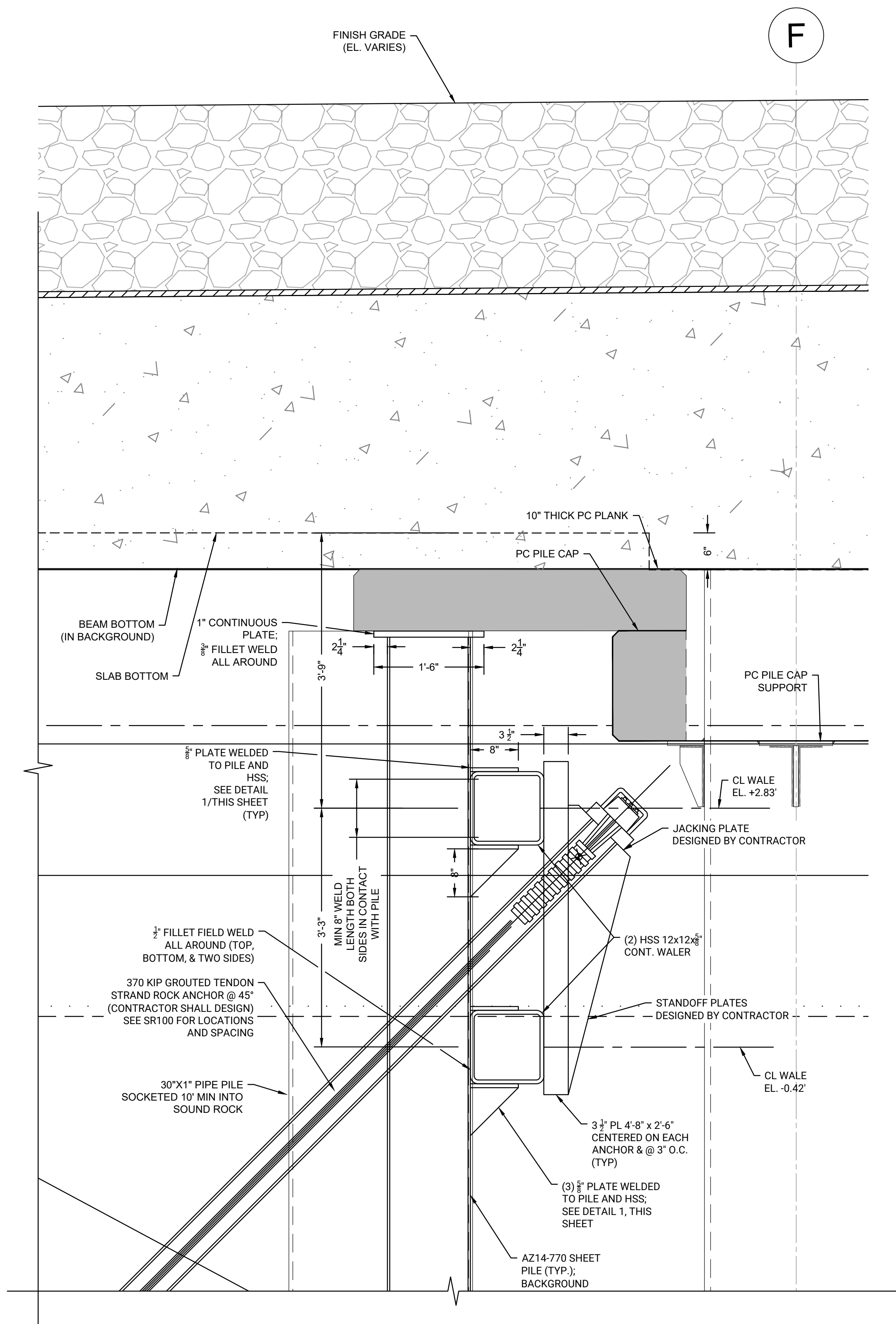
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

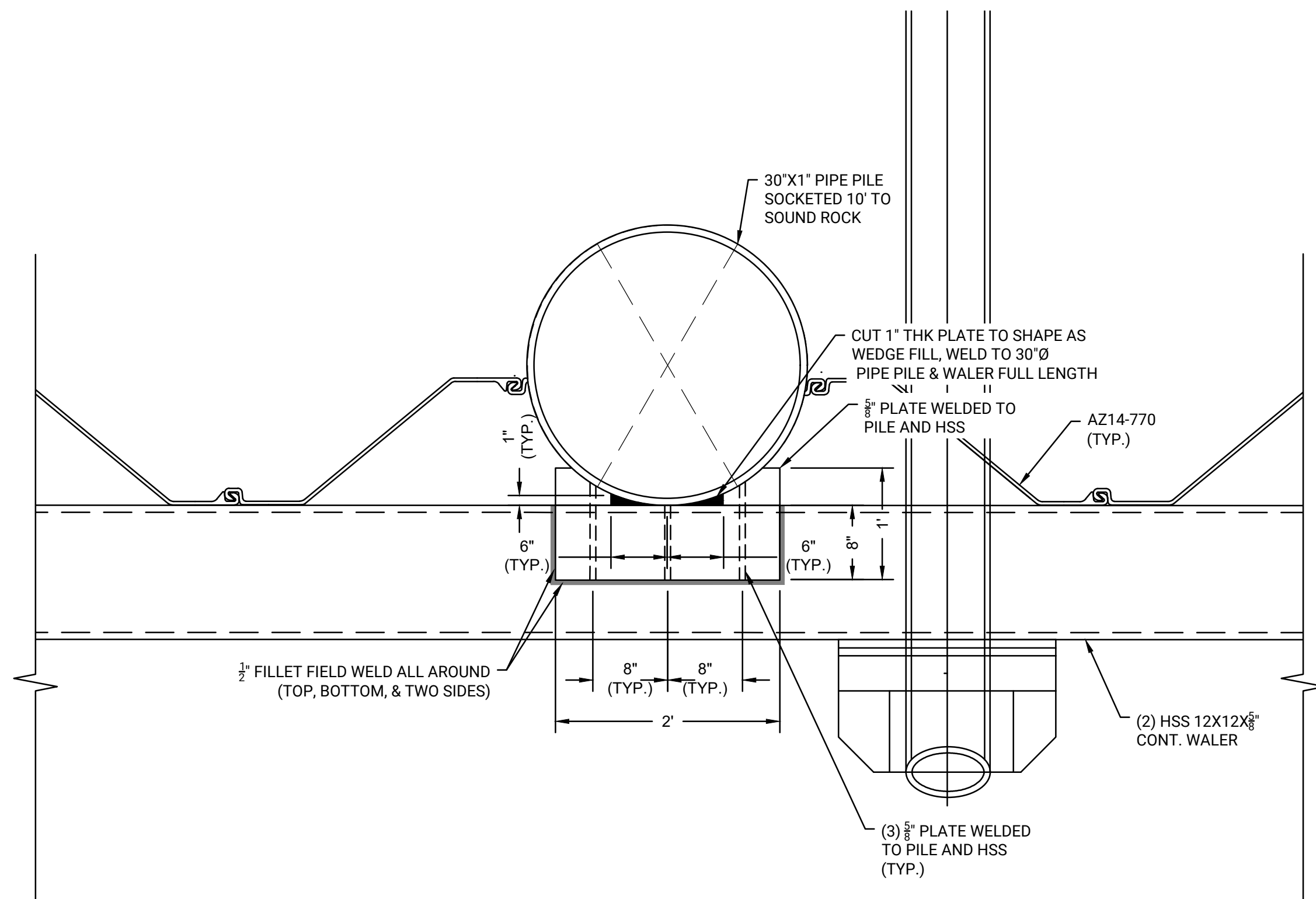
PROJECT NO: 0024M070.04

SHEET NUMBER

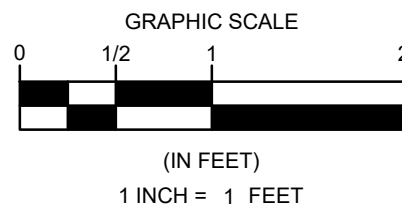
SR500



A
SR301 **ROCK ANCHOR DETAILS**
SCALE: 1" = 1'



1
SR501 **COMBI-WALL WALER CONNECTION**
SCALE: 1" = 1'



PROJECT:

**MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REV	NO	BY	DATE	DESCRIPTION
	1			

DATE OF PREPARATION

	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

SHEET TITLE:

**COMBI-WALL
DETAILS 2 OF 2**

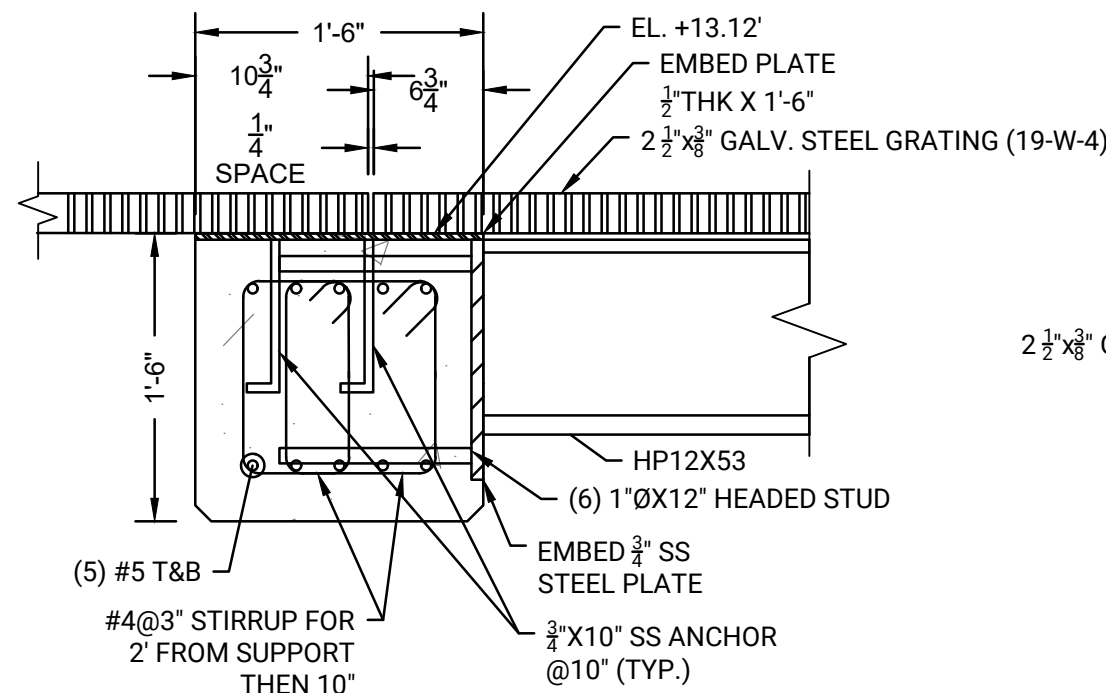
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

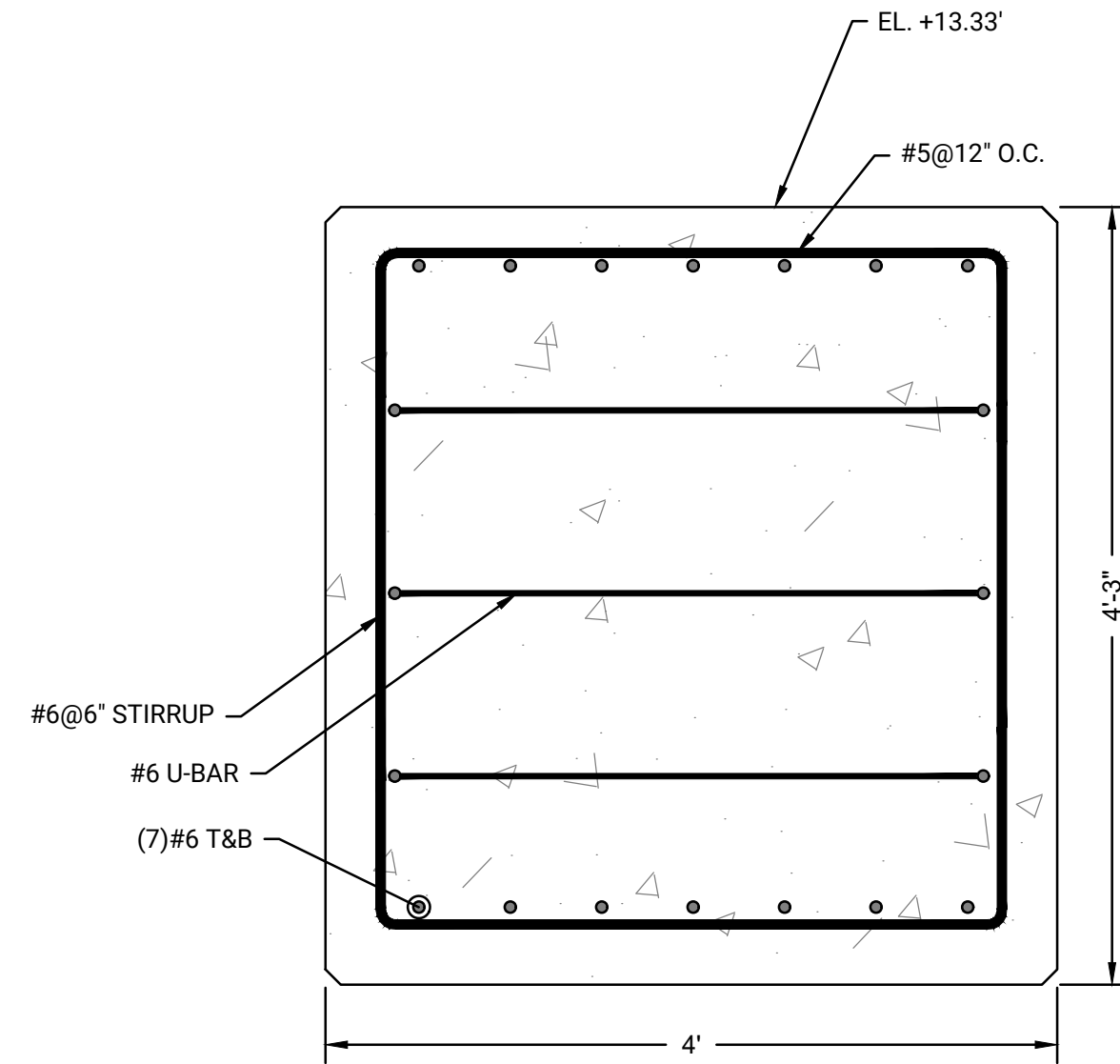
SHEET NUMBER

SR501



E
SR102
SCALE: 1"=1'

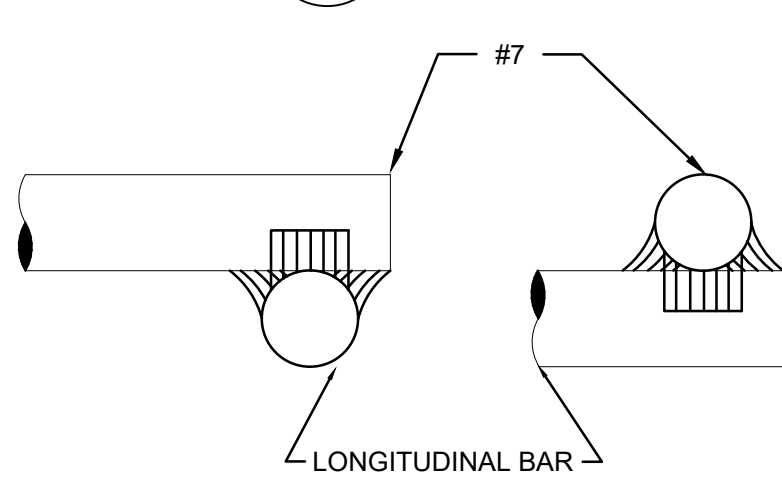
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SR302
SR303



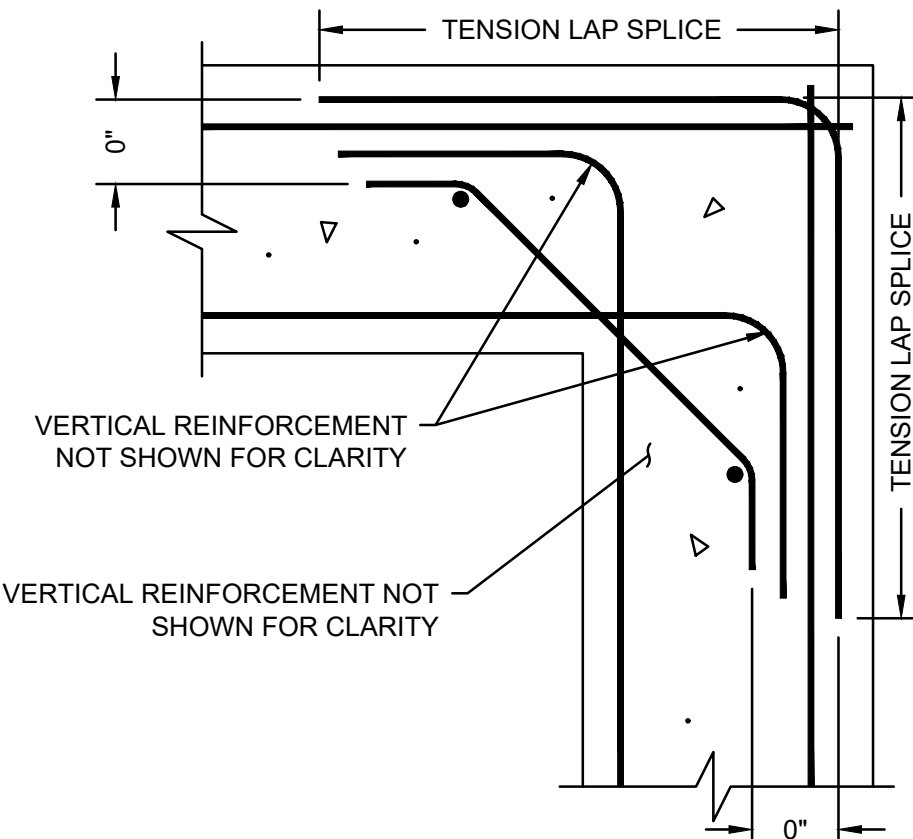
I
SR102
SCALE: 1"=1'

I
SR304
SR306

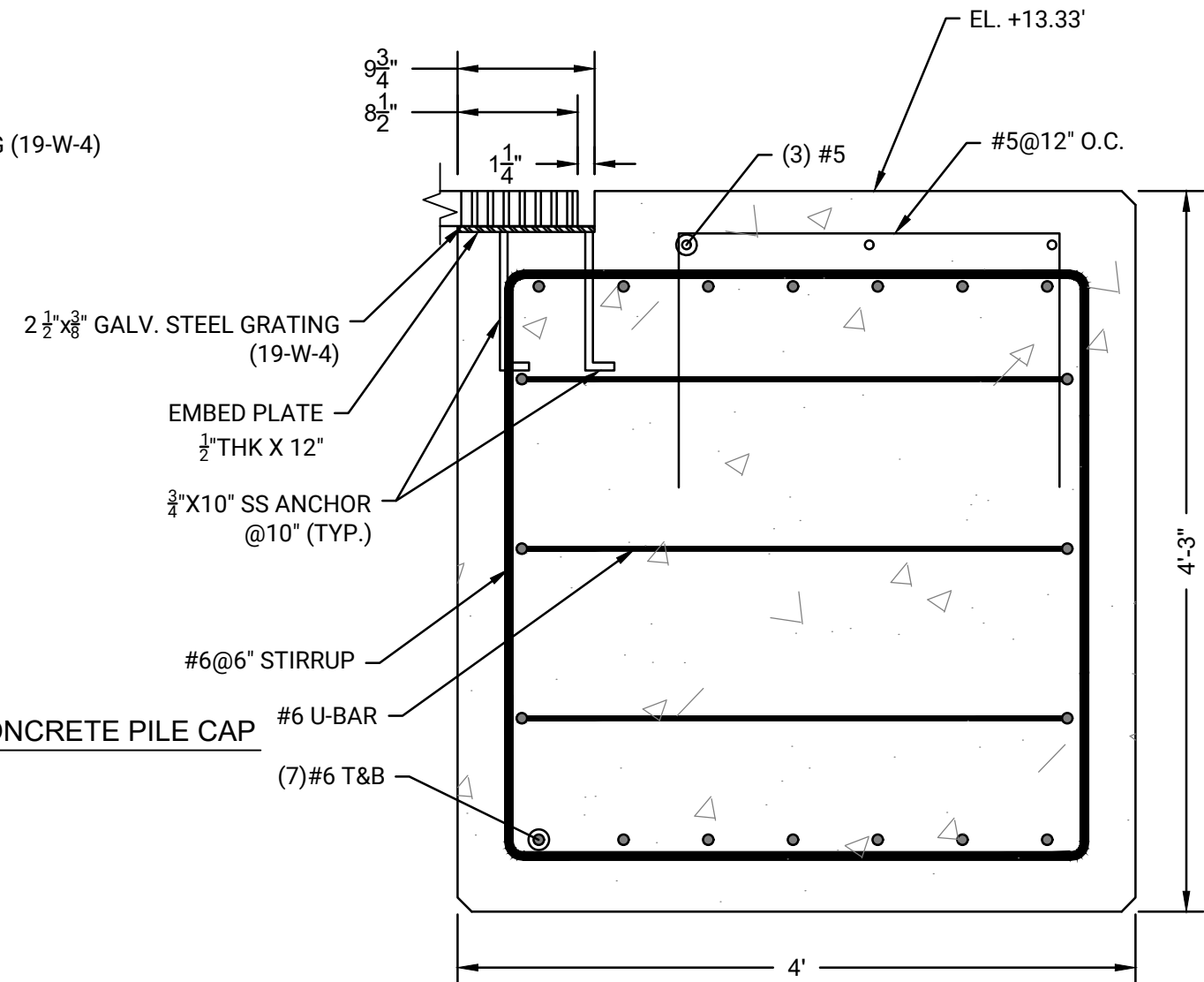
NOTES:
1) SEE DETAIL H/SR503 FOR 24"Ø STEEL PIPE PILE
REINFORCEMENT CAGE



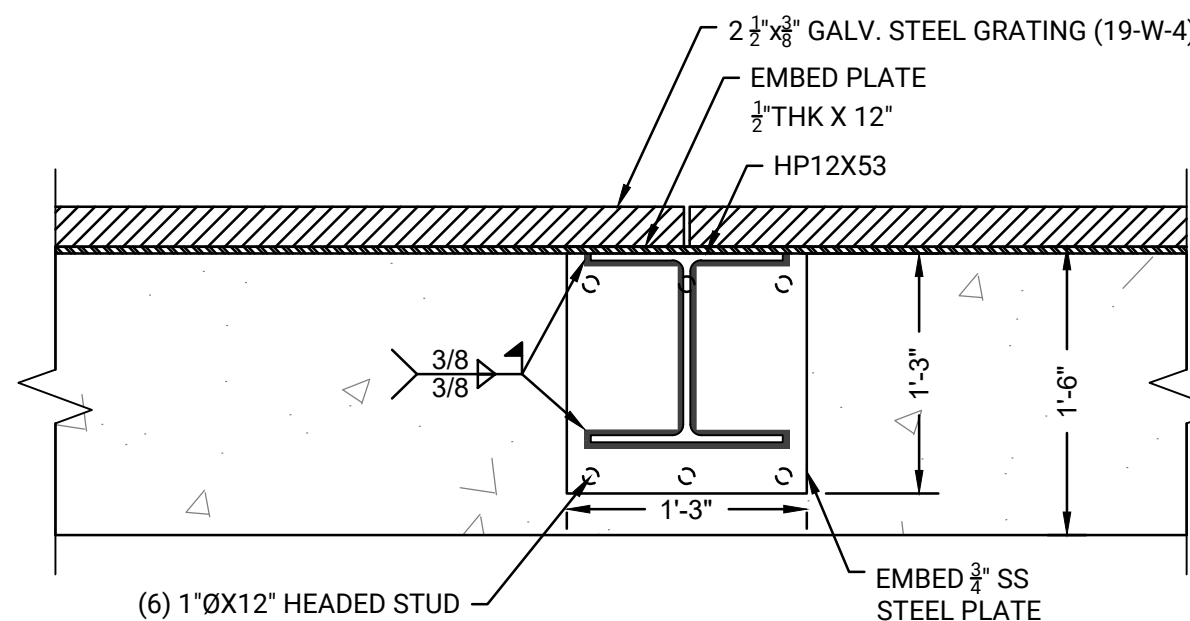
1
MR502
SCALE: NTS



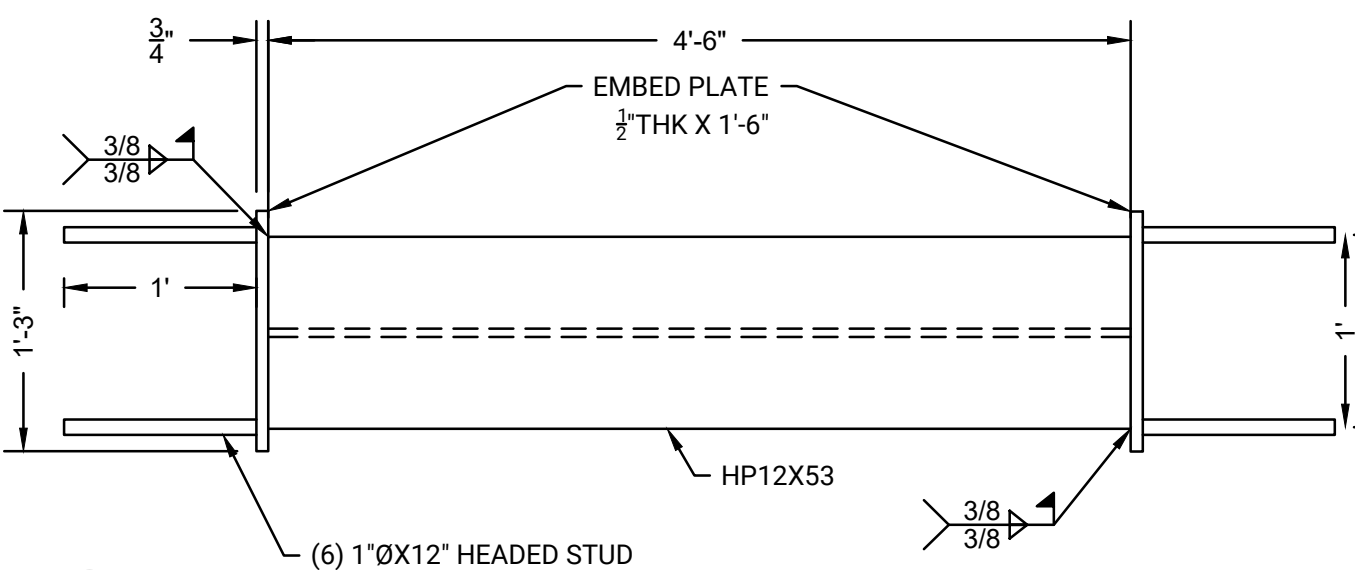
4
SR102
SCALE: NTS



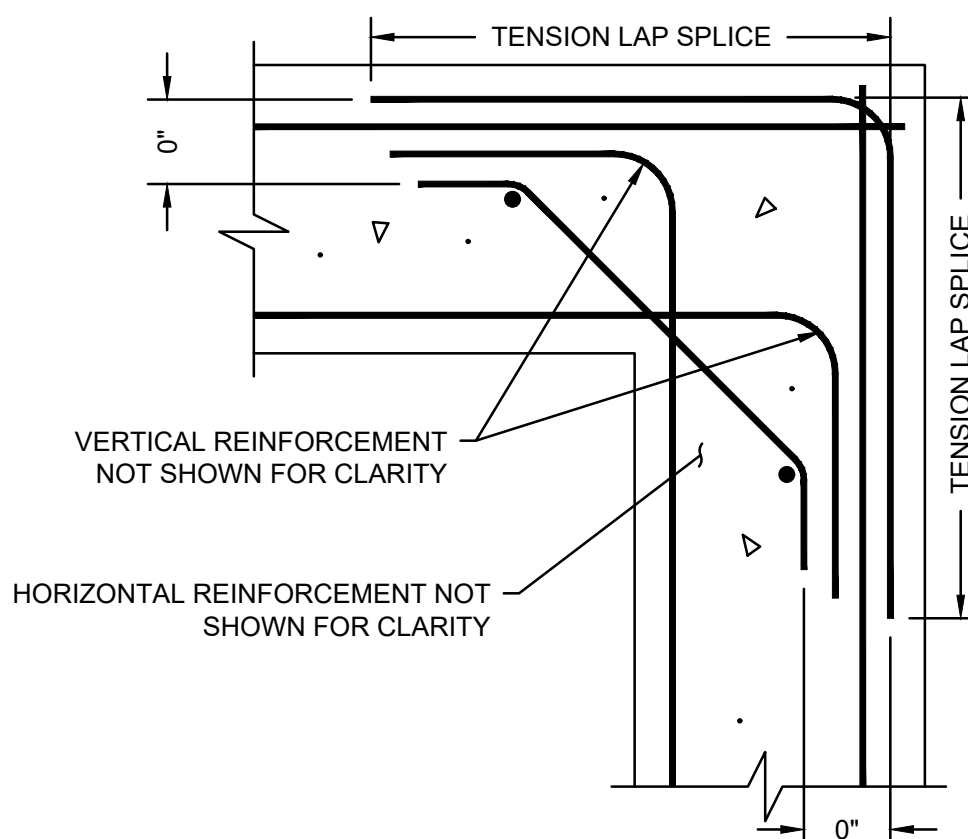
F
SR102
SR303
SCALE: 1"=1'



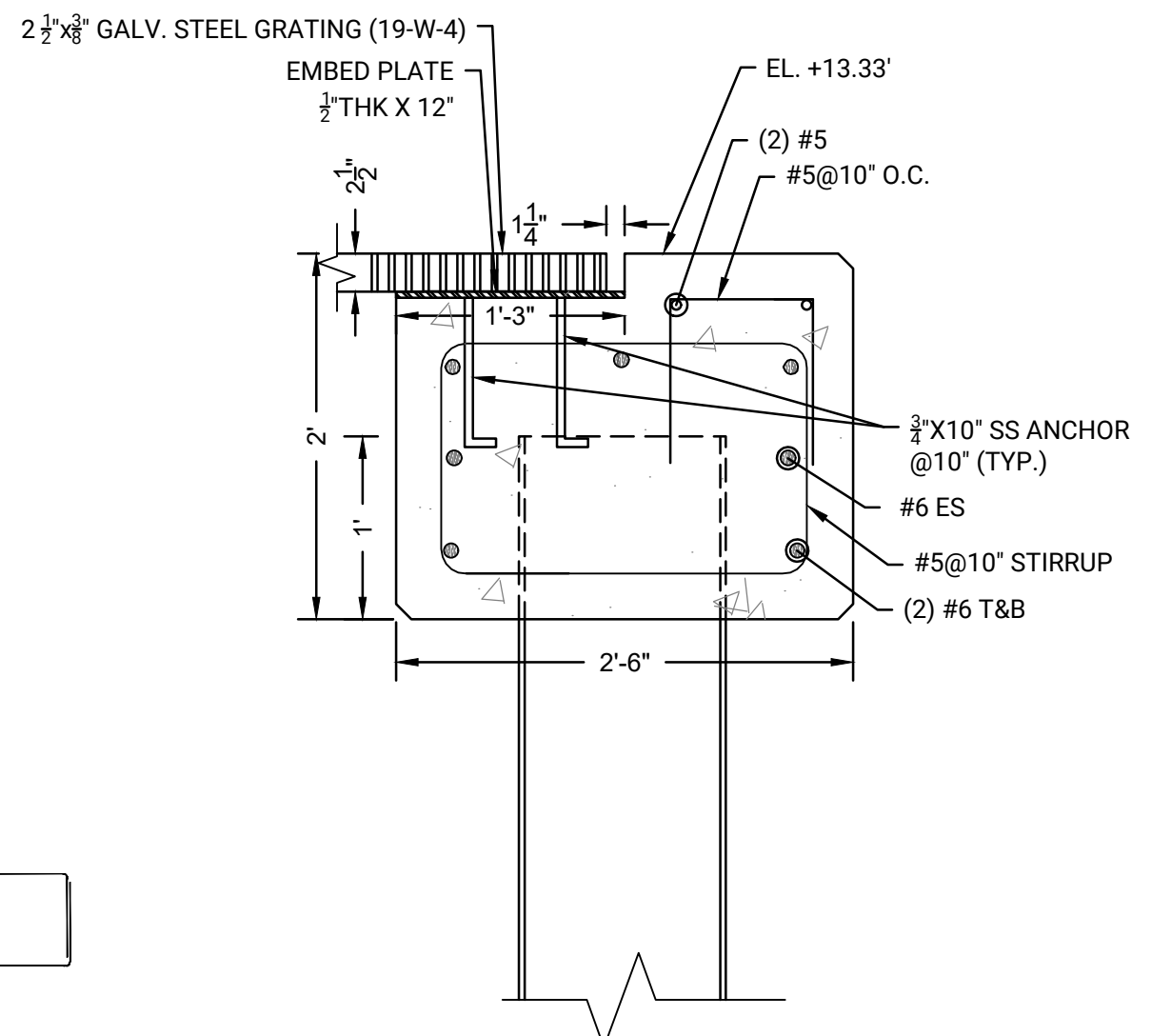
J
SR102
SCALE: 1"=1'



2
SR102
SCALE: 1"=1'



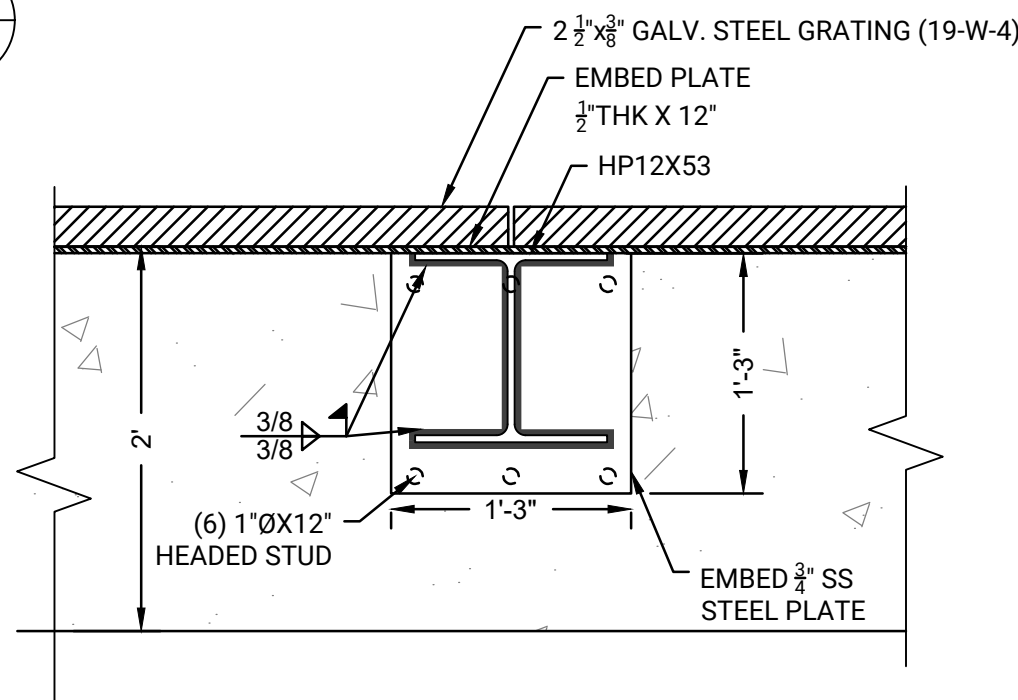
5
SR102
SCALE: NTS



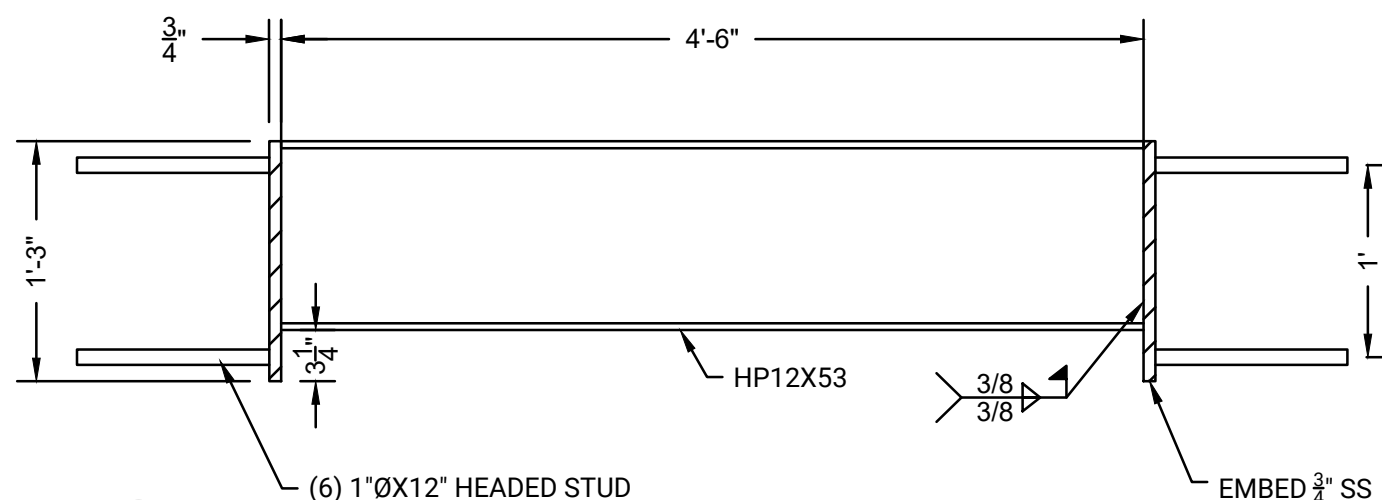
G
SR102
SR302
SCALE: 1"=1'

G
SR304
SR305

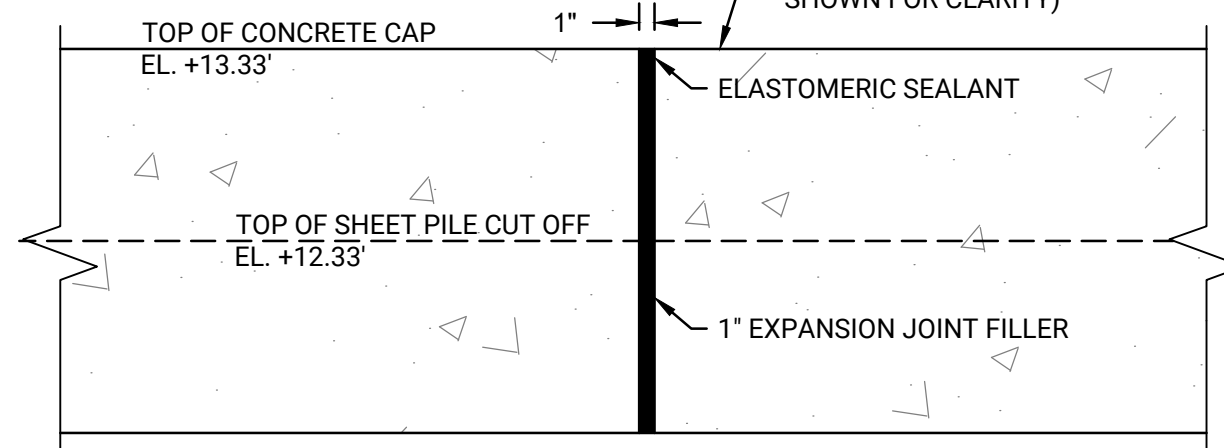
G
SR306



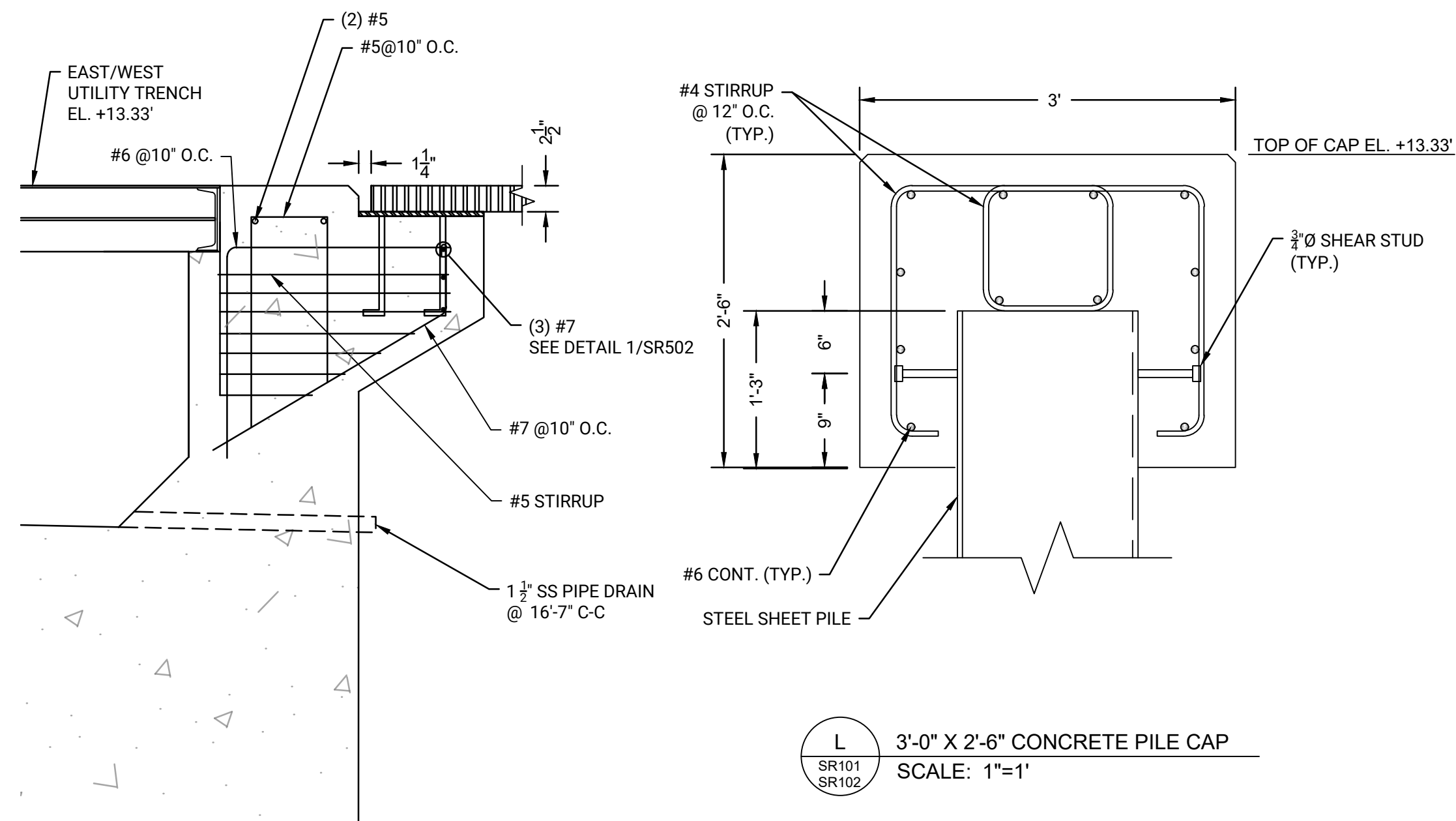
K
SR102
SCALE: 1"=1'



3
SR102
SCALE: 1"=1'

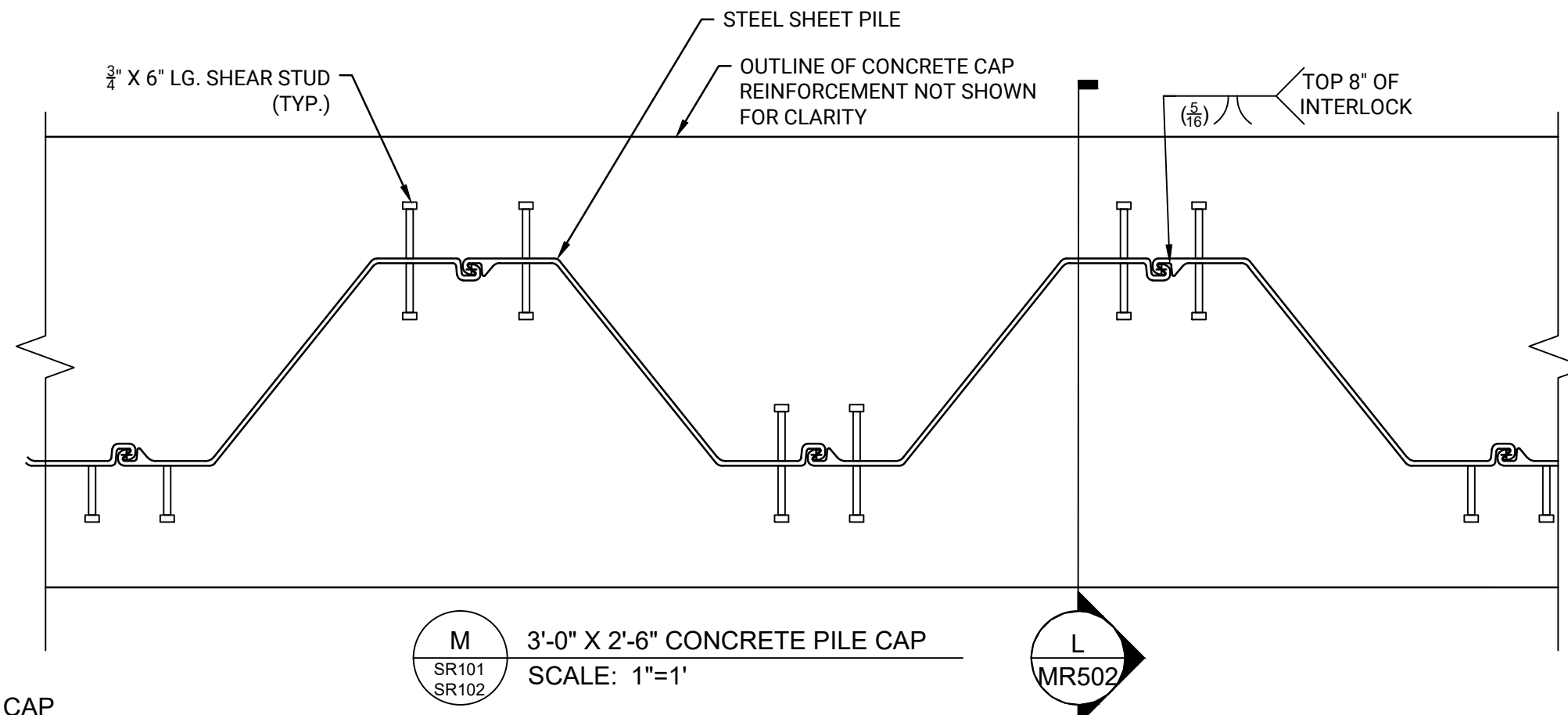


6
SR101
SR102
SCALE: NTS



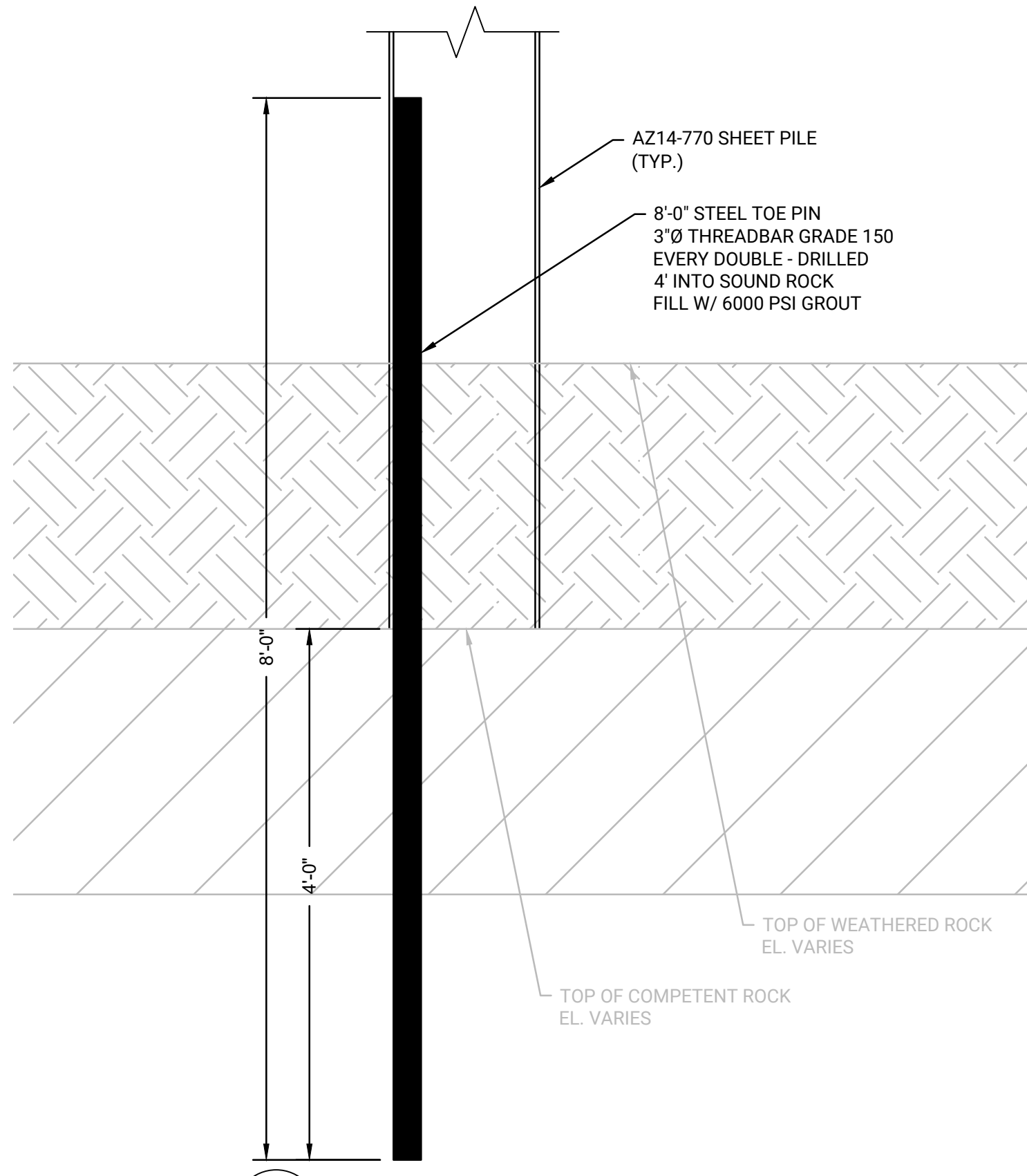
H
SR102
SCALE: 1"=1'

H
SR302
SR305

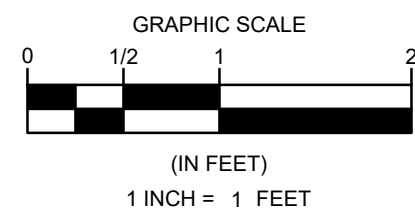


M
SR101
SR102
SCALE: 1"=1'

MR502



7
SR102
SCALE: 1"=1'



PROJECT:
**MASSECC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

OWNER:
**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

REVISIONS

NO.	DATE	DESCRIPTION

DATE OF PREPARATION

SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

**EAST-WEST
BULKHEAD
DETAILS**

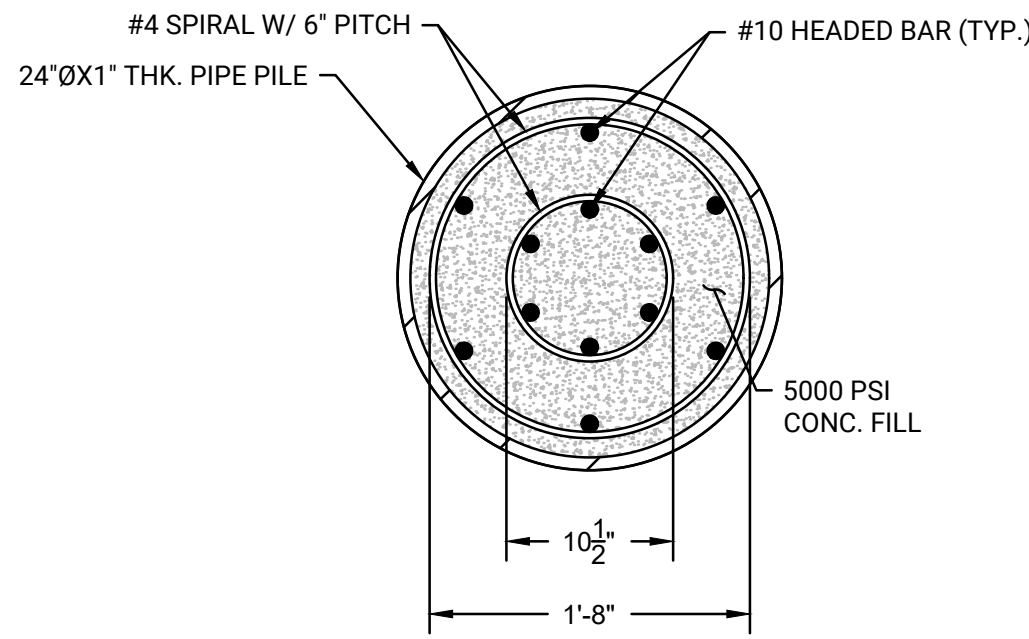
ISSUANCE:

IFB DRAWINGS
(11/10/2025)

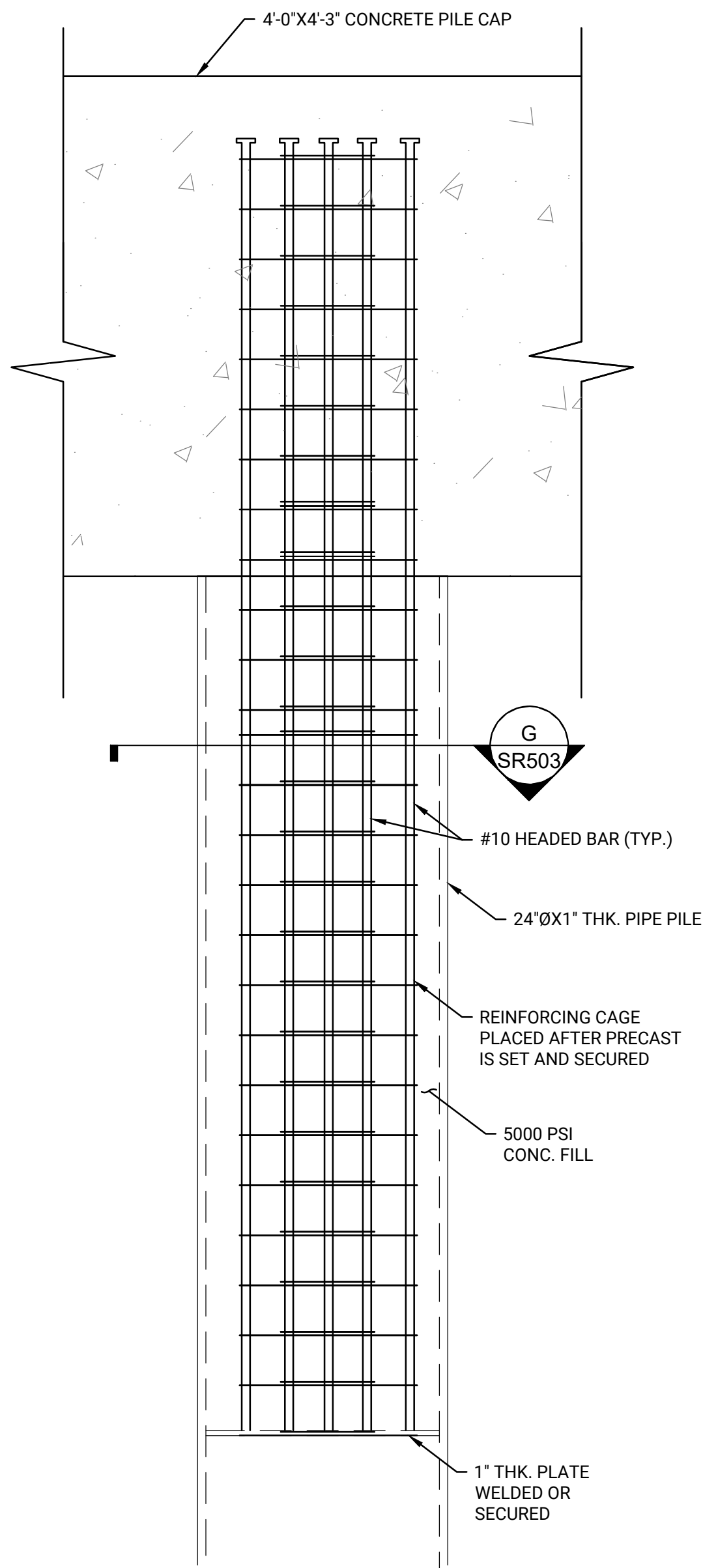
PROJECT NO: 0024M070.04

SHEET NUMBER

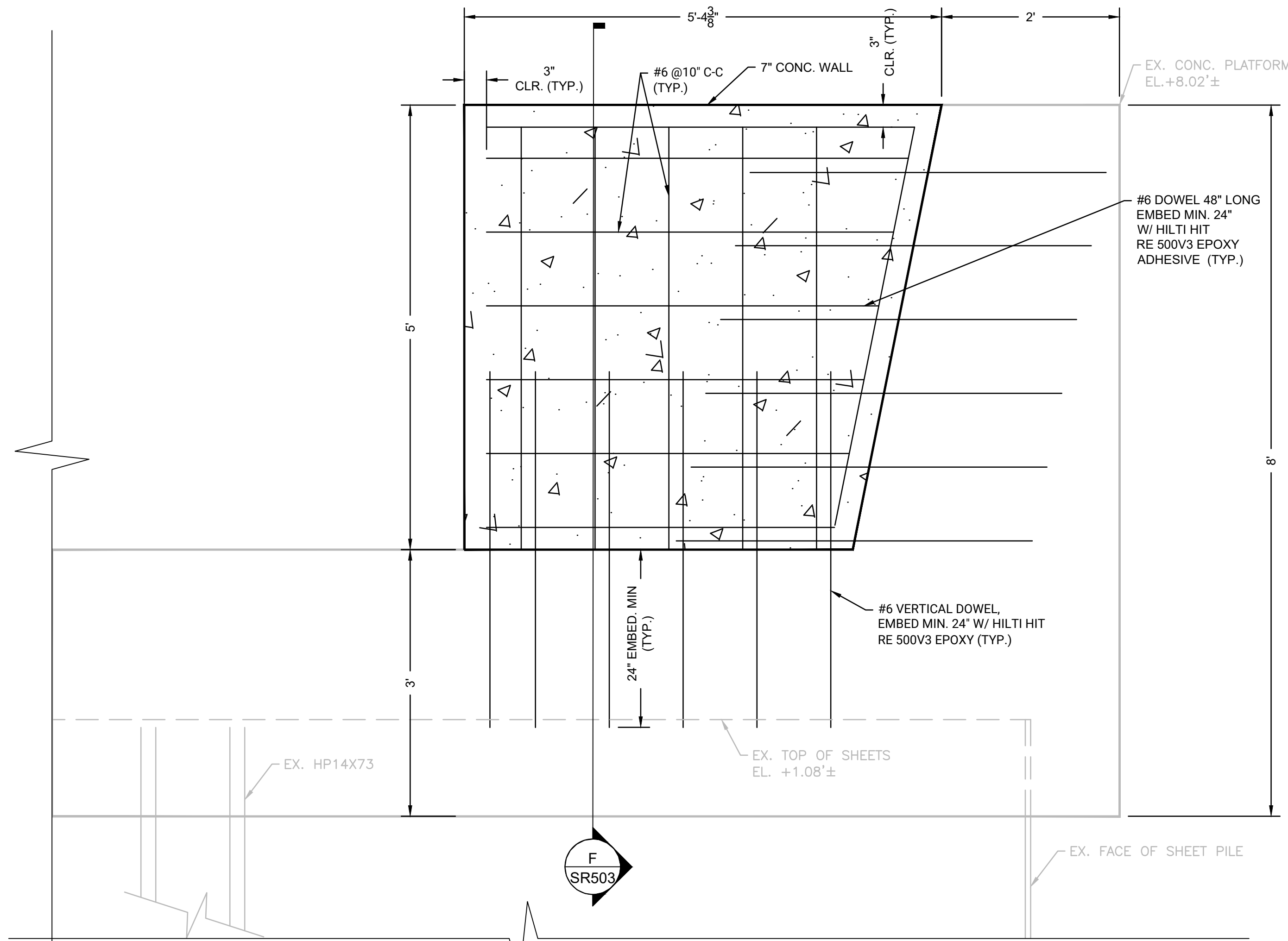
SR502



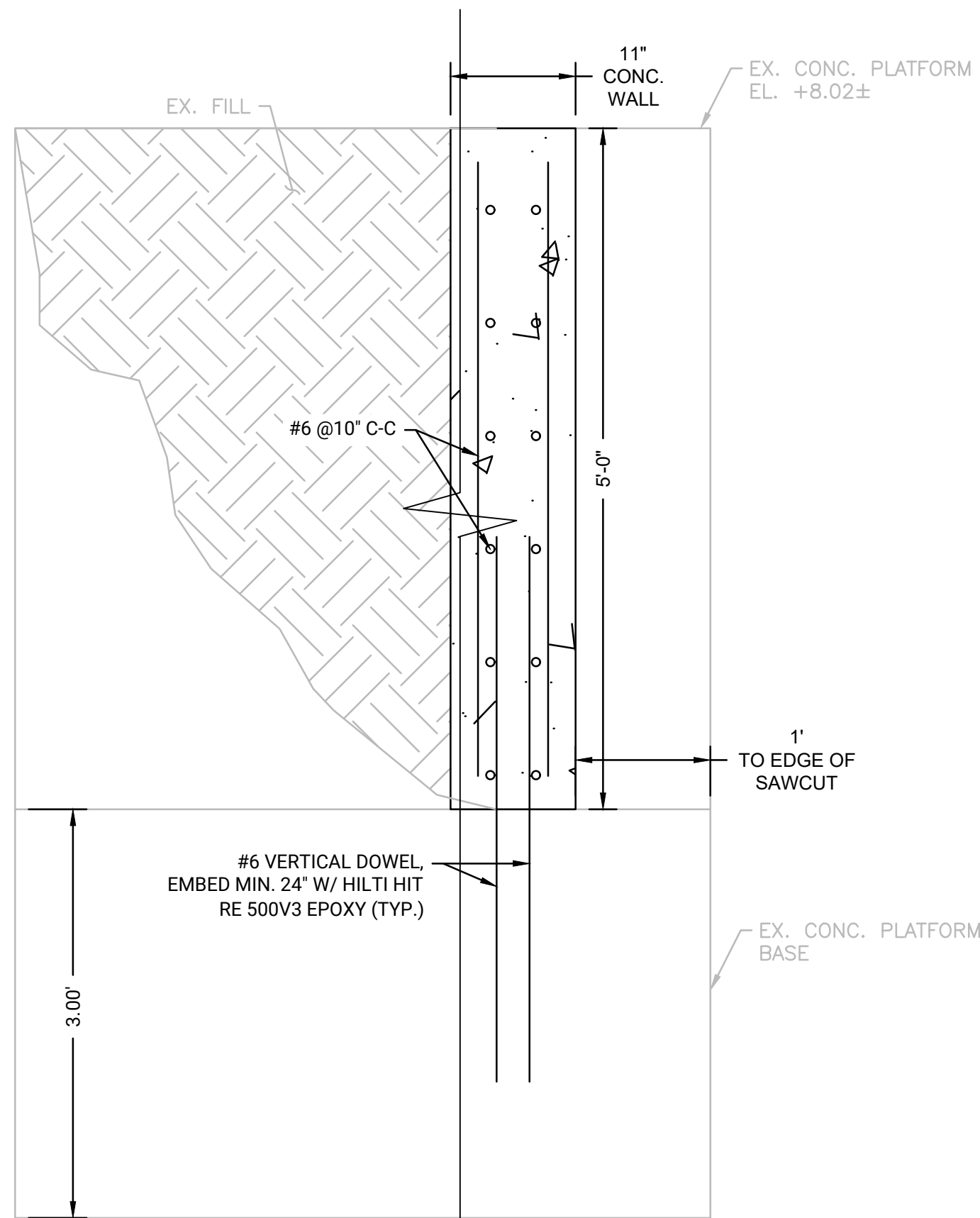
G 24" DIA. STEEL PIPE PILE REINFORCEMENT CAGE
SCALE: 1" = 1'



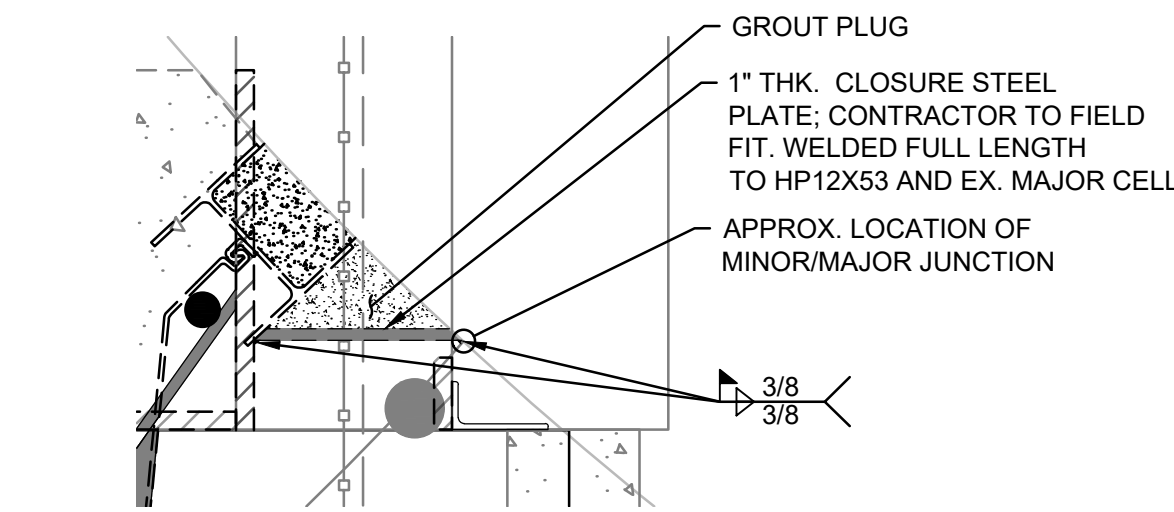
H 24" DIA. STEEL PIPE PILE REINFORCEMENT CAGE
SCALE: 1" = 1'



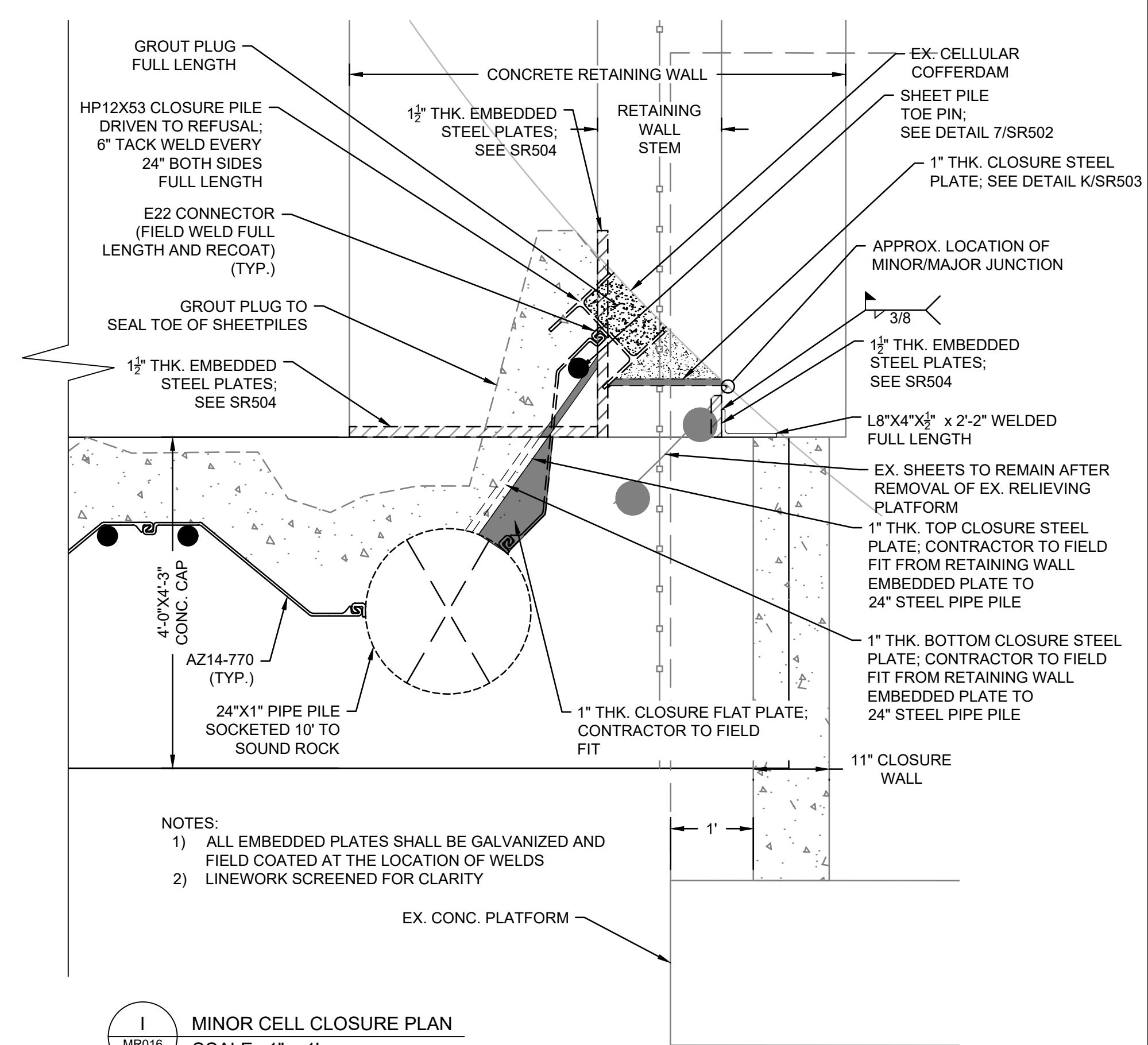
E CONCRETE CLOSURE WALL REINFORCEMENT DETAILS
SCALE: 1" = 1'



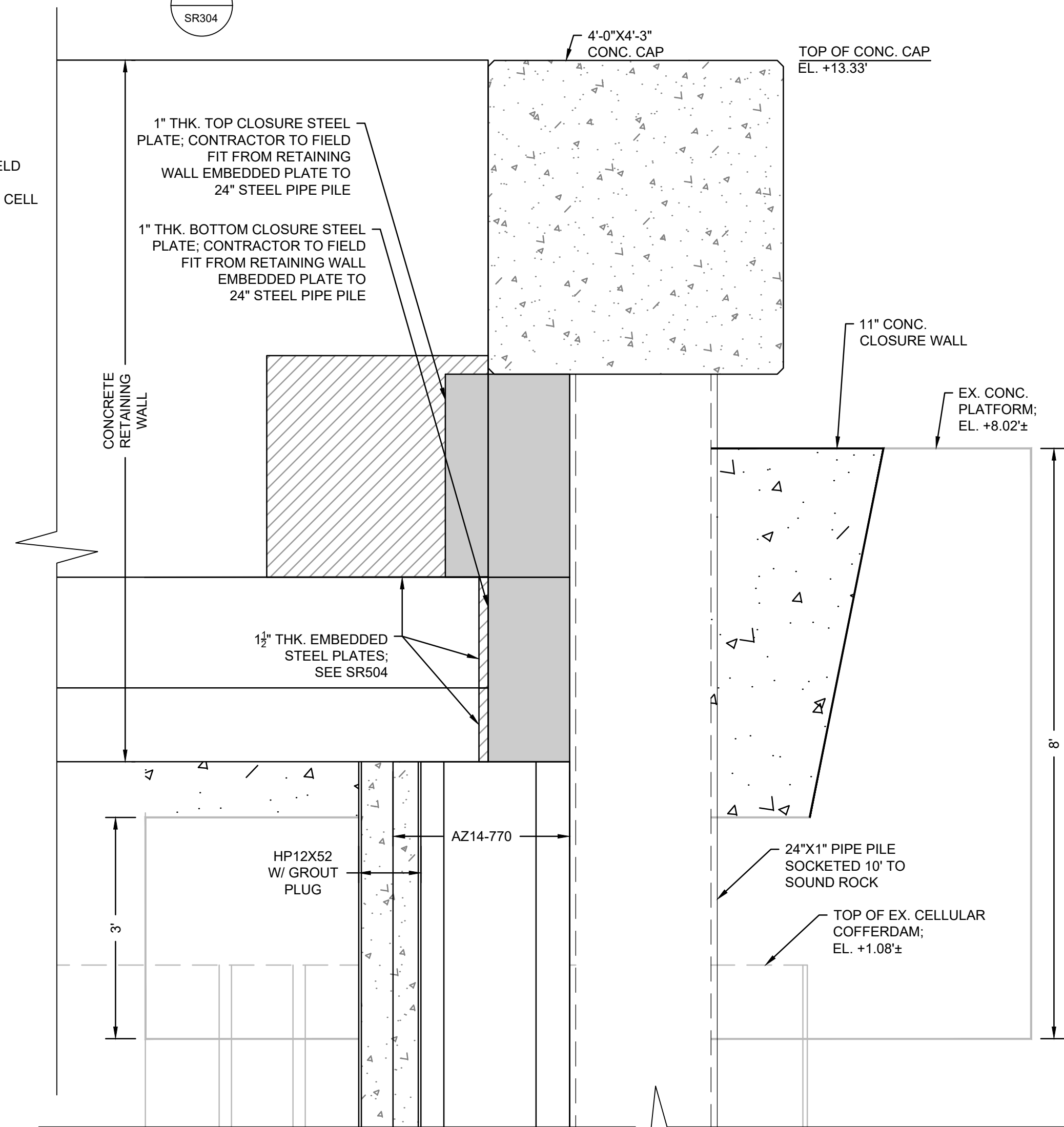
F CONCRETE CLOSURE WALL SECTION
SCALE: 1" = 1'



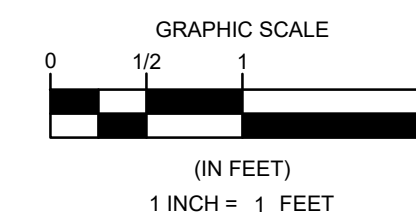
K 1" THK. CLOSURE STEEL PLATE
SCALE: 1" = 1'



I MINOR CELL CLOSURE PLAN
SCALE: 1" = 1'



J MINOR CELL CLOSURE ELEVATION
SCALE: 1" = 1'



REV/SIONS				
NO.	BY	DATE	DESCRIPTION	
	△			
	△			
	△			
	△			
	△			

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:
**CONCRETE
CLOSURE
DETAILS**

ISSUANCE:
**IFB DRAWINGS
(11/10/2025)**

PROJECT NO: 0024M070.04
SHEET NUMBER
SR503

**PROJECT: MASSCEC NBMCT - PHASE 3
BULKHEAD REPLACEMENT PROJECT
(SITE 4)**

**NEW BEDFORD MARINE
COMMERCE TERMINAL (NBMCT)
NEW BEDFORD, MA**

[illegible]

DATE OF PREPARATION		
	BY	DATE
SURVEYED		
DRAWN	CJP/MXS6	11/7/2025
DESIGNED	MXS6	11/7/2025
CHECKED	AIM/JSG	11/7/2025

PE STAMP

PE STAMP

SHEET TITLE:

CONCRETE RETAINING WALL

ISSUANCE:

IFB DRAWINGS
(11/10/2025)

PROJECT NO: 0024M070.04

SHEET NUMBER

SR504

