

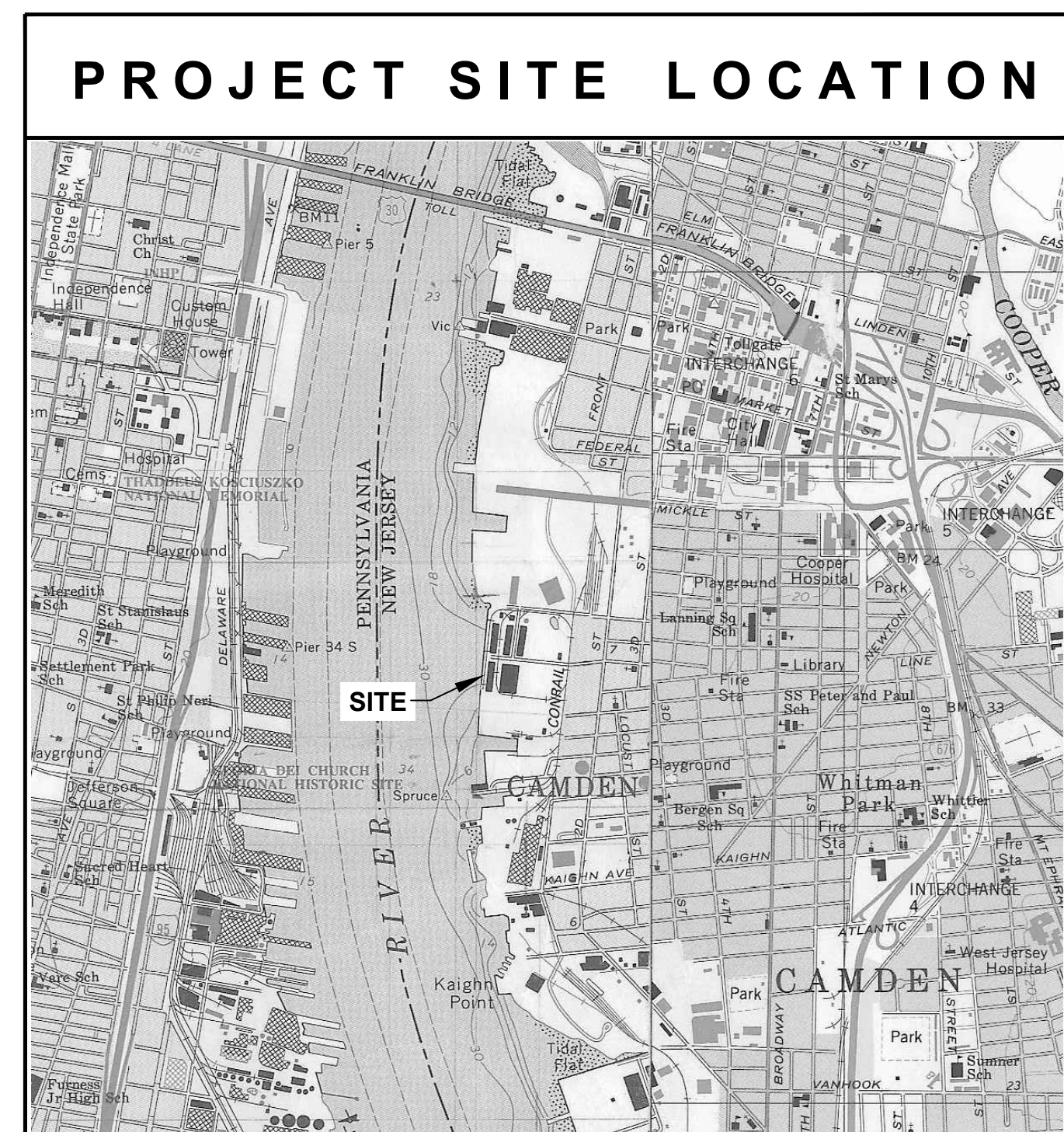
SOUTH JERSEY PORT CORPORATION

JOSEPH A. BALZANO TERMINAL

CAMDEN, NEW JERSEY

BERTH 4 - IMPROVEMENTS

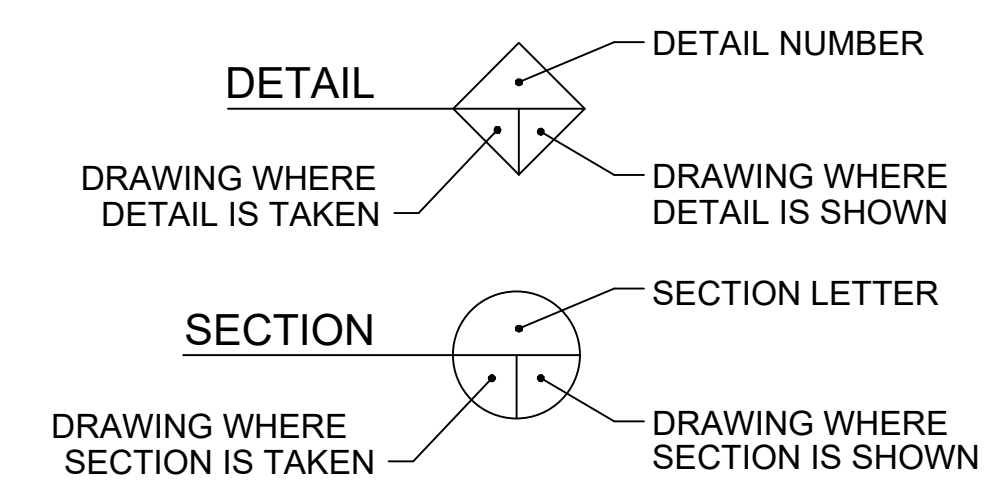
ISSUED
PRINTS



LIST OF DRAWINGS:

- T-1 TITLE SHEET
- N-1 PROJECT NOTES
- G-1 EXISTING SITE PLAN
- G-2 EXISTING PILE PLAN
- G-3 EXISTING SECTION
- S-1 NEW PAVING PLAN & SECTION
- S-2 NEW RIGID INCLUSIONS AND NEW STORMWATER INLET - PLAN & DETAILS
- S-3 REPAIR DETAILS & SECTIONS

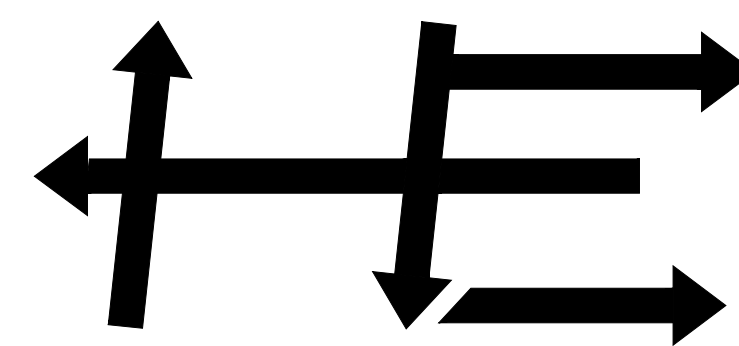
CROSS REFERENCE LEGEND



DATUM CHART

MEAN HIGH WATER	+2.58
NAVD88	0.0
MEAN LOW WATER	-3.62

PREPARED BY



S.T. HUDSON ENGINEERS, INC.
PROFESSIONAL ENGINEERS & CONSULTANTS

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approved by BW for BIDDING date 10/8/21		S.T. HUDSON ENGINEERS, INC. PROFESSIONAL ENGINEERS & CONSULTANTS 900 Dudley Avenue Cherry Hill, NJ 08002 Phone No. 856-342-6600 Fax No. 856-342-8323
drawn STAFF date 10/8/2021 contract checked BW FILE Sp-1518 21-050-08 dtftg. approval ADS		
description seal		SOUTH JERSEY PORT CORPORATION JOSEPH A. BALZANO MARINE TERMINAL CAMDEN, NEW JERSEY 08103
BERTH No.4 - IMPROVEMENTS		dwg. no. rev. T-1 A

ISSUED PRINTS

DESIGN NOTES:

THE CONTRACTOR SHALL PROVIDE A FULL SET OF SEALED CALCULATIONS CONFIRMING THE DESIGN OF THE RIGID INCLUSIONS USING THE LOADING AND SETTLEMENT CRITERIA PRIOR TO INSTALLATION OF THE TEST PILE OR ANY PRODUCTION PILES.

CONE PENETROMETER TESTING: CONETEC - JULY 27, 2021 REPORT DATE
 BEARING LOADING: WABCO 350 - 29 TONS EMPTY, 69 TONS LOADED - 6000 PSF
 SETTLEMENT CRITERIA: MAXIMUM SLAB SETTLEMENT - 1.5"
 TOTAL NUMBER OF FDC: 160
 AVERAGE LENGTH OF COLUMN - 53 L.F.

DESIGN PARAMETERS:

DESIGN CALCULATIONS FOR RIGID INCLUSIONS - BERTH 4 SIPC
 FINISHED DECK ELEVATION: +7.0 (NAVD88)
 FDC DIAMETER: 16 INCHES
 FDC LENGTH: 47 FT.
 FDC TOP ELEVATION: +2.0

DECK ELEVATION +7.0
 CONCRETE SLAB: 1.0 FT.
 DGA LOAD DISTRIBUTION PLATFORM: 3.0 FT.
 S7 STONE COMPACTED OVER RIGID INCLUSIONS: 1.0 FT.

RIGID INCLUSIONS TIP ELEVATION: -45.0
 GROUND WATER ELEVATION: 6.0
 LOAD TEST REQUIRED: ONE

GEOTECHNICAL INFORMATION:

- BORING LOCATIONS ARE SHOWN FOR INFORMATION ONLY AND ARE APPROXIMATE LOCATIONS. SEE THE BORING LOGS INCLUDED IN THE DESIGN INFORMATION.
- CONE PENETROMETER TESTS - CONETEC JULY 27, 2021 INCLUDED IN DESIGN INFORMATION

CONSTRUCTION NOTES:

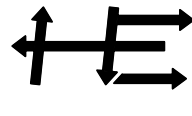
- RIGID INCLUSIONS SHALL BE INSTALLED WITHIN 6 INCHES OF THE LOCATION SHOWN ON THE PLANS.
- RIGID INCLUSIONS DESIGN SHALL BE CONFIRMED BY A FULL SCALE LOAD TEST PERFORMED AT THE SITE.
- PRODUCTION RIGID INCLUSIONS SHALL NOT BE INSTALLED PRIOR TO PERFORMING AND ACCEPTING THE RESULTS OF THE FULL SCALE LOAD TEST, UNLESS APPROVED BY THE ENGINEER.
- A QUALIFIED, FULL TIME QUALITY CONTROL REPRESENTATIVE PROVIDED BY THE RIGID INCLUSIONS INSTALLER SHALL BE RESPONSIBLE FOR INSTALLATION OF THE RIGID INCLUSIONS IN ACCORDANCE WITH THE DESIGN AND SHALL REPORT ALL RIGID INCLUSIONS CONSTRUCTION ACTIVITIES TO THE ENGINEER.
- RIGID INCLUSIONS SHALL BE ACCEPTED BASED ON THE FOLLOWING CRITERIA:
 - RIGID INCLUSIONS TO BE INSTALLED TO THE INSTALLATION CRITERIA DEVELOPED FROM A SATISFACTORY LOAD TEST.
 - THE GROUT MIX DESIGN SHALL PRODUCE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI. THE GROUT MIX DESIGN SHALL BE PRE-APPROVED BY THE DESIGNER AND SHALL DEMONSTRATE SUITABLE PERFORMANCE SUITABLE PERFORMANCE DURING LOAD TEST.
- RIGID INCLUSIONS NOT MEETING REQUIREMENTS DEFINED IN THE DESIGN AND LOAD TEST SHALL BE REINSTALLED TO MEET PROJECT REQUIREMENTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- FOOTING ELEVATIONS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SHALL BE REPORTED IN WRITING TO THE INSTALLER'S QC REPRESENTATIVE PRIOR TO INSTALLING RIGID INCLUSIONS.
- UTILITY LOCATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL CONFLICTS WITH RIGID INCLUSIONS LOCATIONS SHOWN ON THE PLANS. ALL EXISTING AND PROPOSED UTILITIES WITHIN THE PROJECT AREA SHALL BE FIELD VERIFIED AND COORDINATED WITH THE ENGINEER PRIOR TO INSTALLATION OF ANY RIGID INCLUSIONS.
- ALL RIGID INCLUSIONS SHALL EXTEND THROUGH FILL MATERIAL AND THROUGH ANY ORGANIC LAYER TO THE NATURAL SOIL
- RIGID INCLUSIONS THAT CANNOT BE INSTALLED TO THEIR PLANNED BOTTOM OF RIGID INCLUSIONS ELEVATIONS WILL BE EVALUATED AND DESIGN ADJUSTMENTS WILL BE MADE ON A CASE-BY-CASE BASIS.

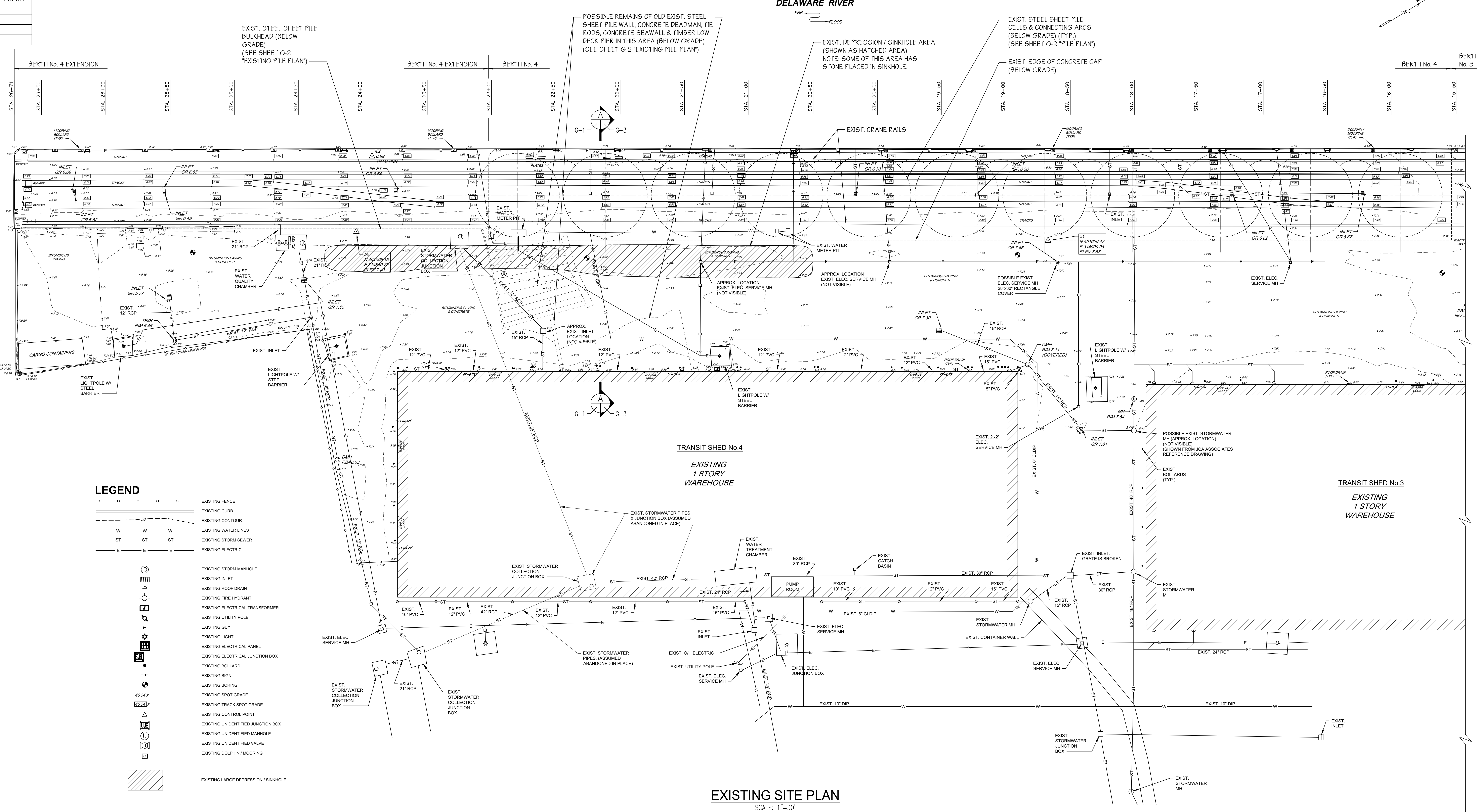
RIGID INCLUSIONS INSTALLATION PROCEDURES:

- THE GROUT MIX DESIGN SHALL PRODUCE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI. THE GROUT MIX DESIGN SHALL BE PRE-APPROVED BY THE DESIGNER AND SHALL DEMONSTRATE SUITABLE PERFORMANCE DURING LOAD TESTING. ONE 3 DAY AND ONE 7 DAY UNCONFINED COMPRESSIVE STRENGTH TEST SHALL BE PERFORMED ON SAMPLES RETRIEVED DURING THE INSTALLATION OF THE LOAD TEST PIER. ONE 3-DAY AND ONE 7-DAY SAMPLE SHALL ALSO BE TESTED PER WEEK OF PRODUCTION.
- RIGID INCLUSIONS SHALL BE ADVANCED USING A SPECIALLY DESIGNED FULL DISPLACING AUGER TO THE FULL DESIGN DEPTH. THE HOLLOW-SHAFT AUGER SHALL BE CAPABLE OF DELIVERING GROUT INTO THE SOIL CAVITY AS THE AUGER IS WITHDRAWN.
- THE HOLLOW SHAFT AUGER SHALL BE ADVANCED TO MEET THE INSTALLATION CRITERIA AS DEVELOPED AFTER A PASSING LOAD TEST.
- ONCE AT DESIGN DEPTH, GROUT SHALL BE PUMPED INTO THE HOLLOW-SHAFT AUGER. THE HOLLOW SHAFT AUGER SHALL THEN BE GRADUALLY RAISED PERMITTING THE GROUT TO BE RELEASED INTO THE CAVITY.
- THE TOP OF THE ELEMENT SHALL BE CONSTRUCTED AS DETERMINED BY DESIGNER AND SHOWN IN THESE DRAWINGS.
- CONCRETE MAY BE USED AS AN ALTERNATE TO GROUT PENDING APPROVAL BY THE ENGINEER.

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b			
description			
seal			

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SOUTH JERSEY PORT CORPORATION JOSEPH A. BALZANO MARINE TERMINAL CAMDEN, NEW JERSEY 08103			
drawn	STAFF	date	10/8/2021
checked	BW	FILE	Sp-1518
drftg.	approval	RHS	21-050-08
BERTH No.4 - IMPROVEMENTS			dwg. no.
PROJECT NOTES			N-1
			A



LEGEND

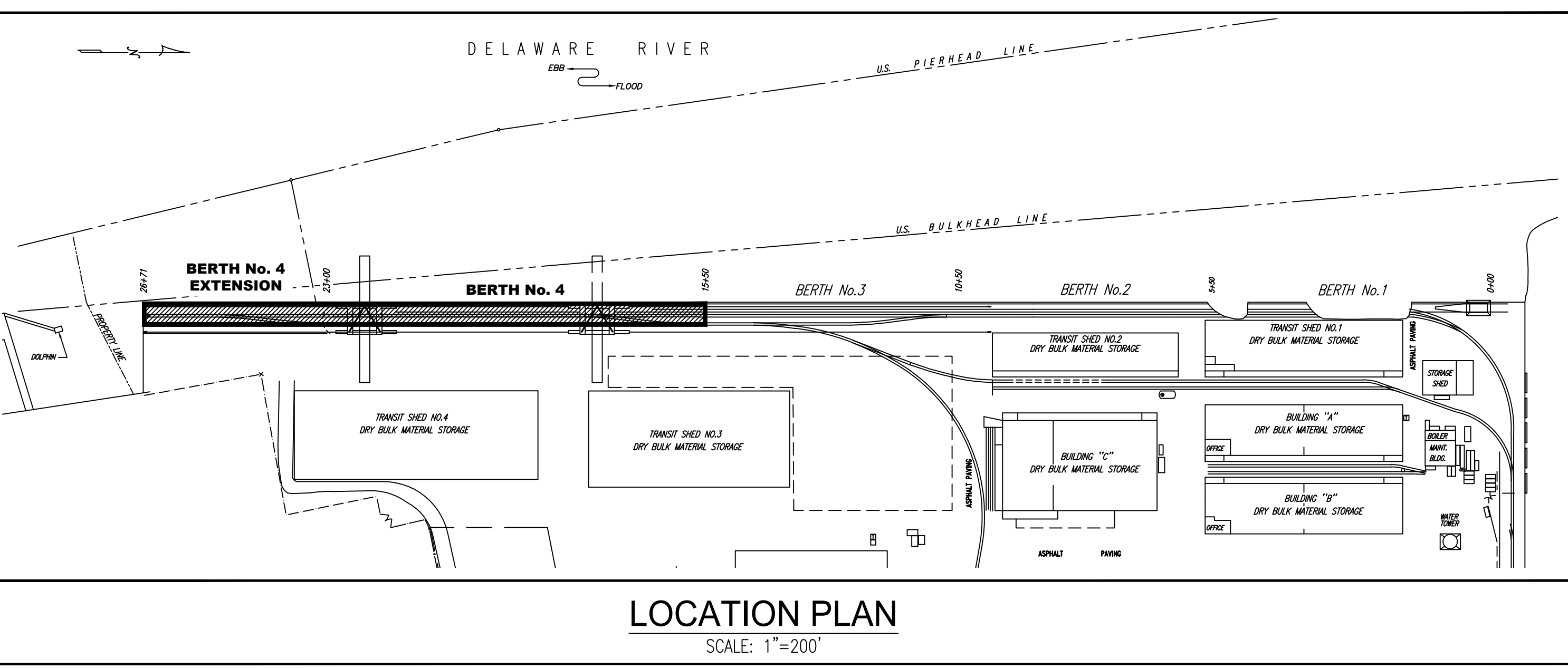
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	EXISTING CURB
	EXISTING CONTOUR
	EXISTING WATER LINES
	EXISTING STORM SEWER
	EXISTING ELECTRIC
	EXISTING STORM MANHOLE
	EXISTING INLET
	EXISTING ROOF DRAIN
	EXISTING FIRE HYDRANT
	EXISTING ELECTRICAL TRANSFORMER
	EXISTING UTILITY POLE
	EXISTING GUY
	EXISTING LIGHT
	EXISTING ELECTRICAL PANEL
	EXISTING ELECTRICAL JUNCTION BOX
	EXISTING BOLLARD
	EXISTING SIGN
	EXISTING BORING
	EXISTING SPOT GRADE
	EXISTING TRACK SPOT GRADE
	EXISTING CONTROL POINT
	EXISTING UNIDENTIFIED JUNCTION BOX
	EXISTING UNIDENTIFIED MANHOLE
	EXISTING UNIDENTIFIED VALVE
	EXISTING DOLPHIN/MOORING
	EXISTING LARGE DEPRESSION / SINKHOLE

EXISTING SITE PLAN

SCALE: 1"=30'

REFERENCE DRAWINGS:

- TITLE: "SPRUCE & FRONT STREETS, LOT 29, BLOCK 213 & LOT 1, BLOCK 214, CITY OF CAMDEN, NEW JERSEY - TOPOGRAPHIC SURVEY"
BY: PENNONI ASSOCIATES INC. OF HADDON HEIGHTS, NJ
PROJECT: S1HXU20002
SHEET No: V0401
DATED: 6/4/2020
- TITLE: "GRADING & UTILITY PLAN - TRANSIT SHED No. 4 FOR SOUTH JERSEY PORT CORPORATION SITUATE 2ND AND BECKETT STREETS, CAMDEN, NJ 08104"
BY: JCA ASSOCIATES, INC. OF MOORESTOWN, NJ
JOB No.: S1JPC-00300
FILE No.: BB-1625
DWG No.: C2
DATED: 8/11/2000
LAST REVISION - DATED: 12/12/2000
- TITLE: "TRANSIT SHED No. 4 - STORMWATER PLAN"
BY: S.T. HUDSON ENGINEERS, INC.
CONTRACT No.: H-6503
FILE No.: Sp-1455
DWG No.: 1
DATED: 6/4/2010



LOCATION PLAN

SCALE: 1"=200'

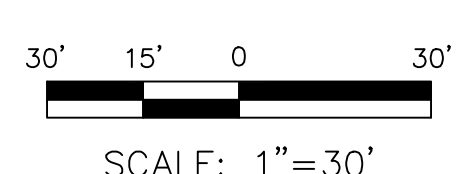
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driftg. approval	ADJ			

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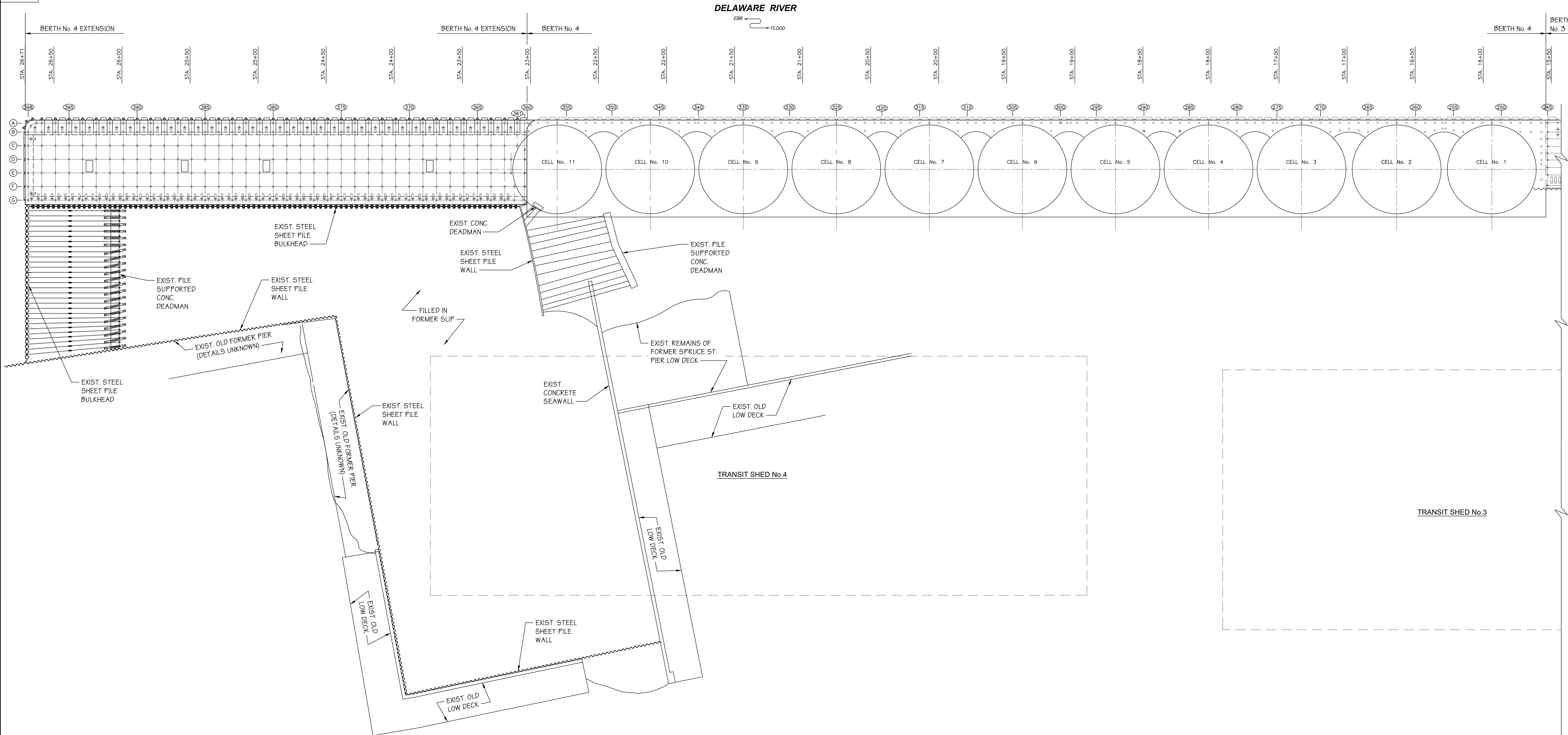
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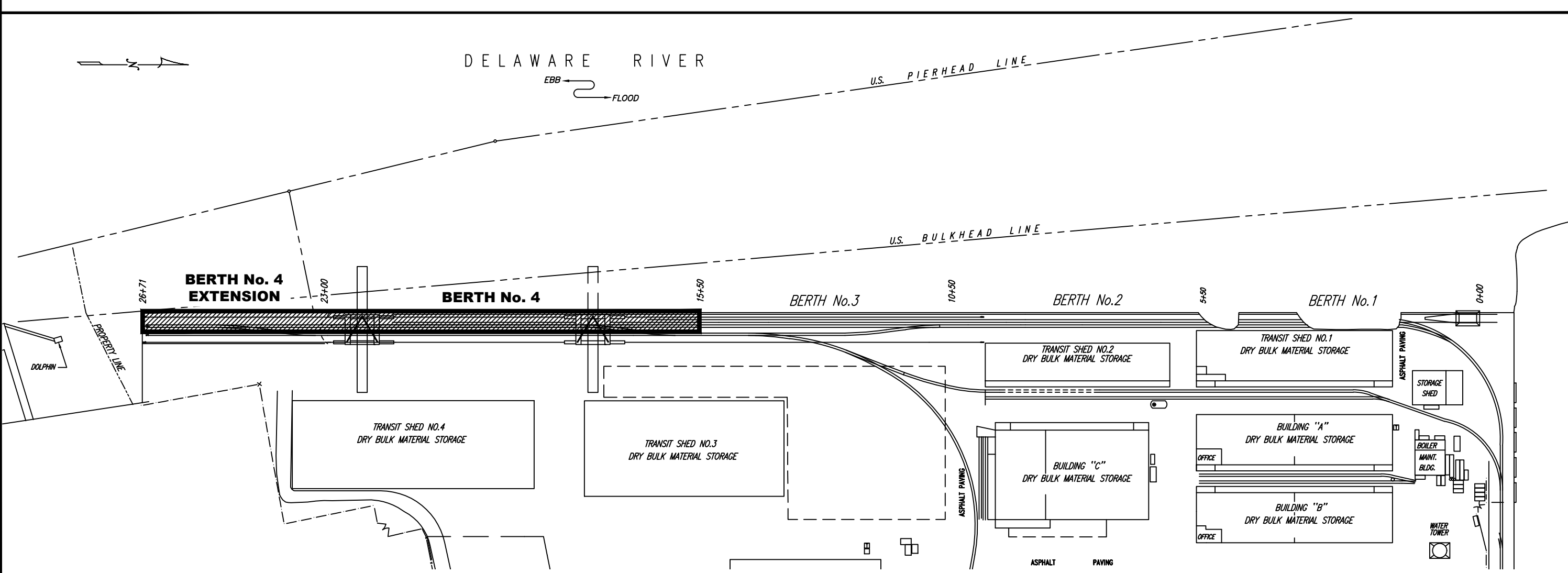
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EXISTING SITE PLAN			G-1	A



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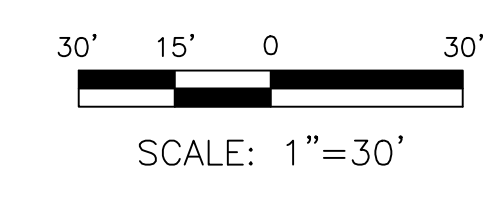


EXISTING PILE PLAN
SCALE: 1"=30'



LOCATION PLAN
SCALE: 1"=200'

- REFERENCE DRAWINGS:**
- TITLE: "BERTH No.4 FASTLAND & INFRASTRUCTURE - UTILITY PLAN"
BY: S.T. HUDSON ENGINEERS, INC.
CONTRACT No.: H-4857
FILE No.: Sp-1289
DWG No.: G-2
DATED: 8/3/1995
 - TITLE: "BERTH No.4 EXTENSION - STEEL SHEET PILE BULKHEAD"
BY: S.T. HUDSON ENGINEERS, INC.
CONTRACT No.: H-4488
FILE No.: Sp-1266
DWG No.: S-16
DATED: 8/2/1993



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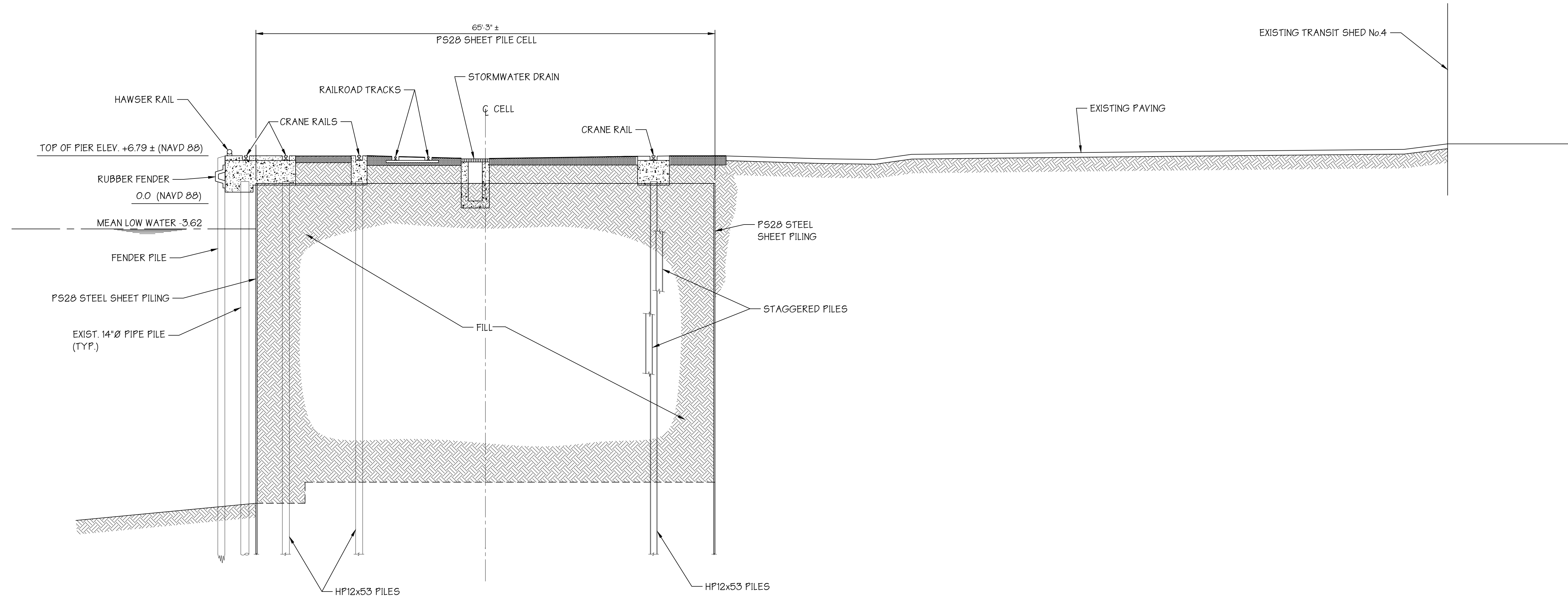
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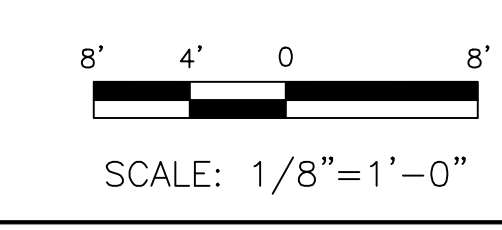
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BERTH 4 - IMPROVEMENTS				dwg. no.	rev.
EXISTING PILE PLAN				G-2	A

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EXISTING SECTION
SCALE: 1/8"=1'-0"
G-1 A G-3



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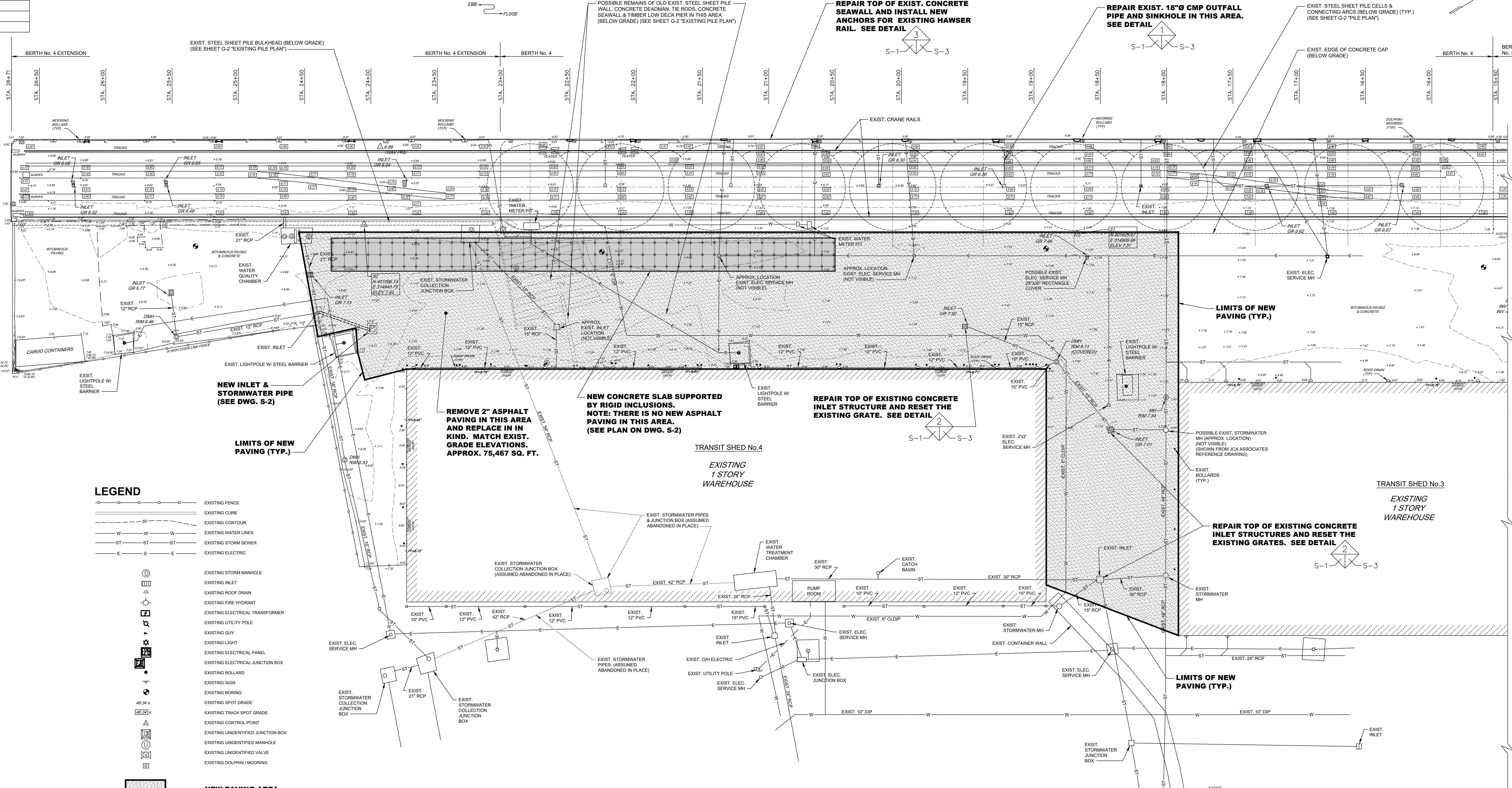
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BERTH 4 - IMPROVEMENTS		dwg. no.	rev.
EXISTING SECTION		G-3	A

DELAWARE RIVER

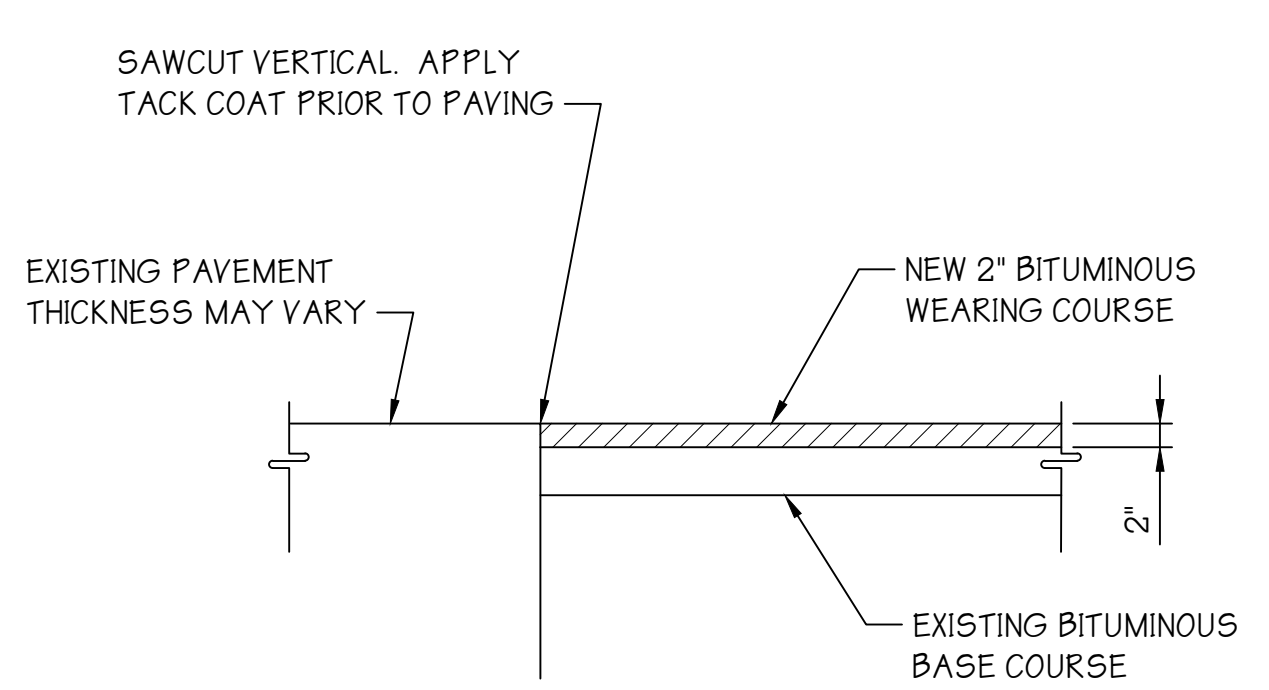


LEGEND

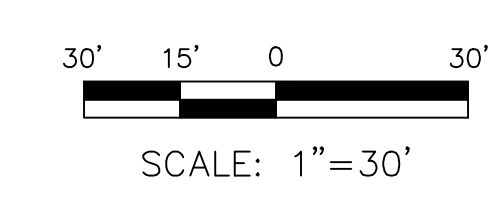
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- EXISTING STORM SEWER
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- EXISTING STORM MANHOLE
- EXISTING INLET
- EXISTING ROOF DRAIN
- EXISTING FIRE HYDRANT
- EXISTING ELECTRICAL TRANSFORMER
- EXISTING UTILITY POLE
- EXISTING GUY
- EXISTING LIGHT
- EXISTING ELECTRICAL PANEL
- EXISTING ELECTRICAL JUNCTION BOX
- EXISTING BOLLARD
- EXISTING SIGN
- EXISTING BORING
- EXISTING SPOT GRADE
- EXISTING TRACK SPOT GRADE
- EXISTING CONTROL POINT
- EXISTING UNIDENTIFIED JUNCTION BOX
- EXISTING UNIDENTIFIED MANHOLE
- EXISTING UNIDENTIFIED VALVE
- EXISTING DOLPHIN/MOORING

NEW PAVING AREA

NEW PAVING PLAN
SCALE: 1"=30'



TYPICAL PAVING SECTION
SCALE: N.T.S.



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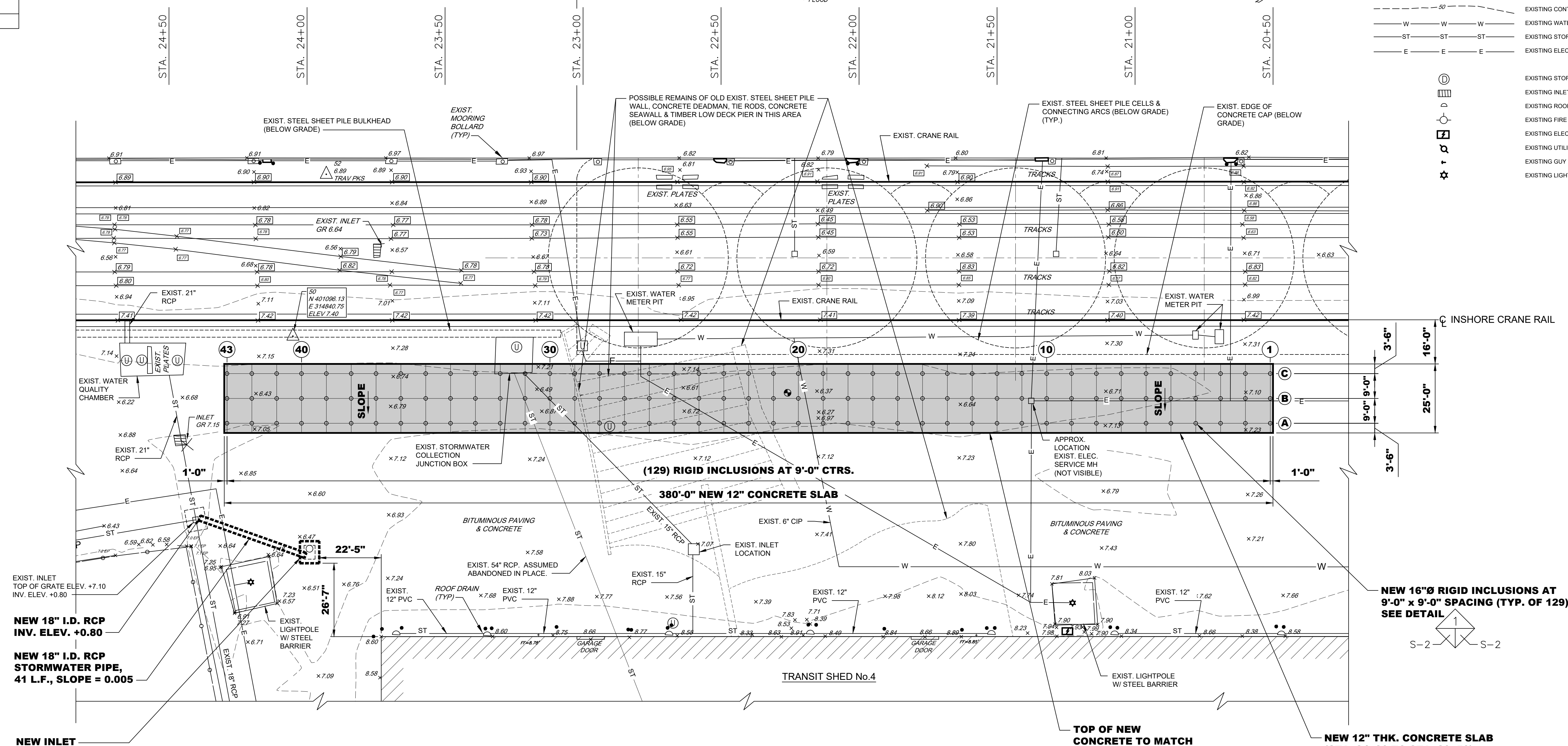
BERTH No.4 - IMPROVEMENTS		dwg. no.	rev.
NEW PAVING PLAN & SECTION		S-1	A

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DELaware RIVER
 BERTH No. 4 EXTENSION BERTH No. 4

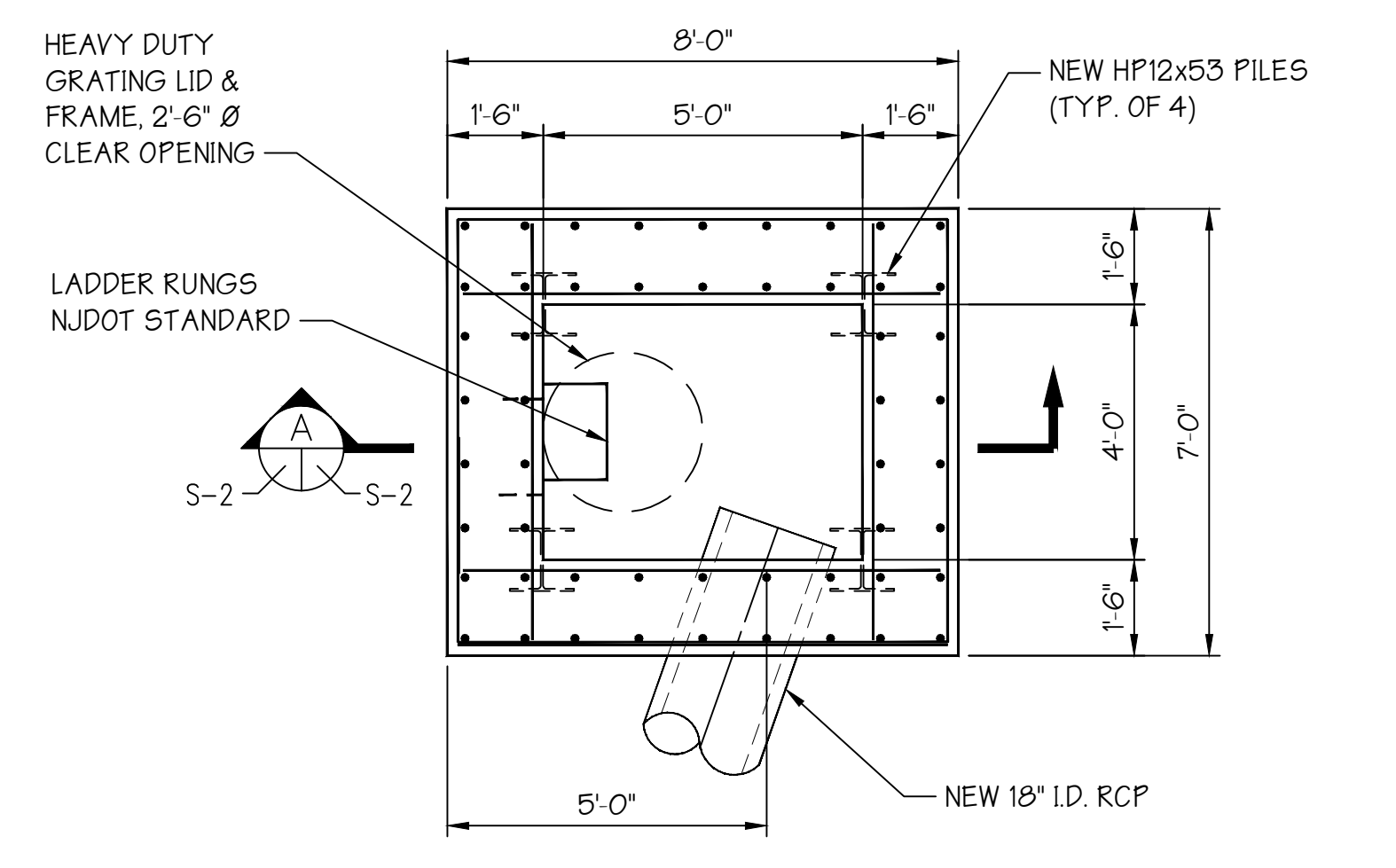
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- EXISTING FENCE
- EXISTING CURB
- EXISTING CONTOUR
- EXISTING WATER LINES
- EXISTING STORM SEWER
- EXISTING ELECTRIC
- EXISTING STORM MANHOLE
- EXISTING RILET
- EXISTING ROOF DRAIN
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- EXISTING UNIDENTIFIED MANHOLE
- EXISTING UNIDENTIFIED VALVE
- EXISTING DOLPHIN / MOORING



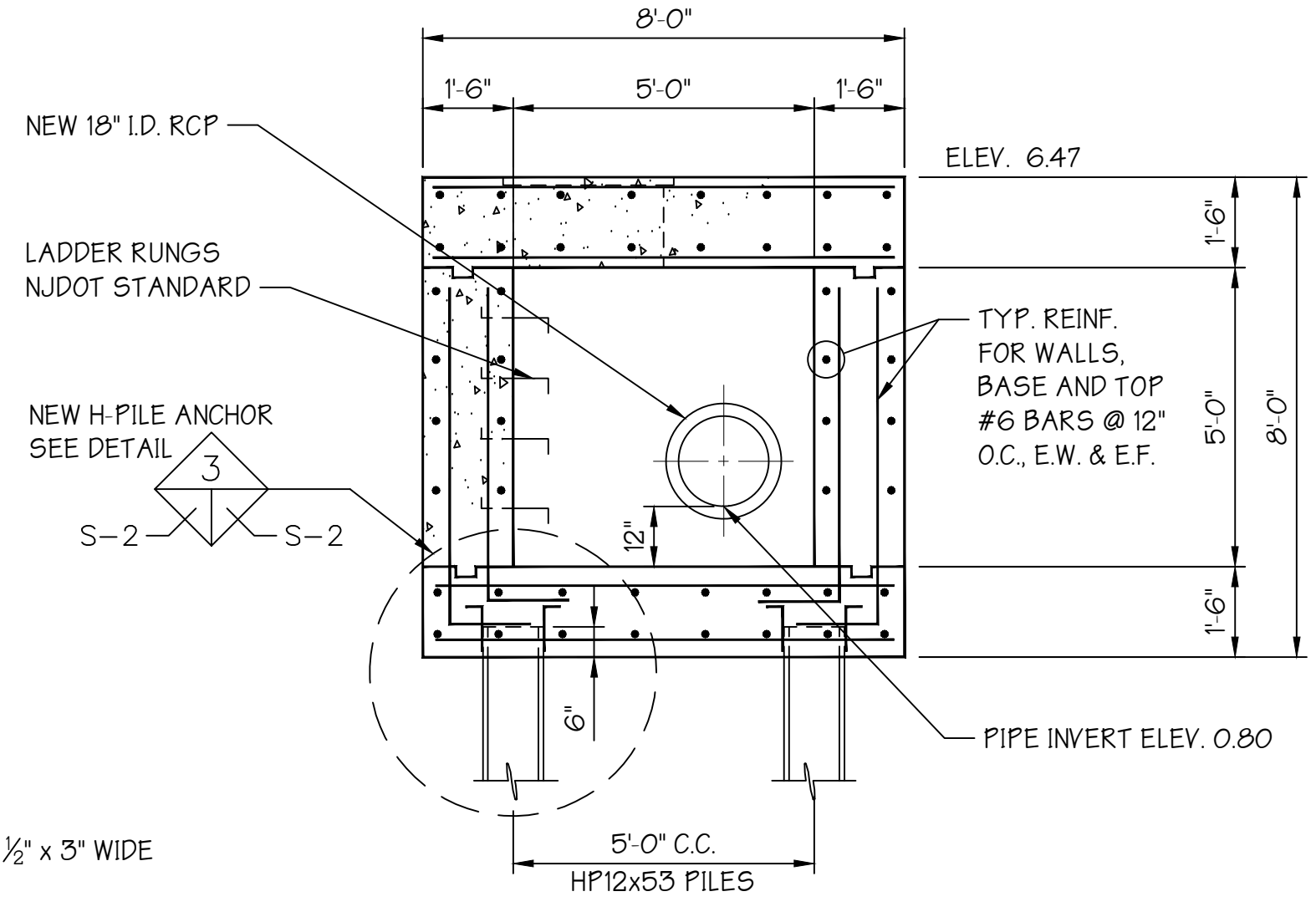
NEW CONCRETE SLAB & RIGID INCLUSIONS PLAN

SCALE: 1"=20'



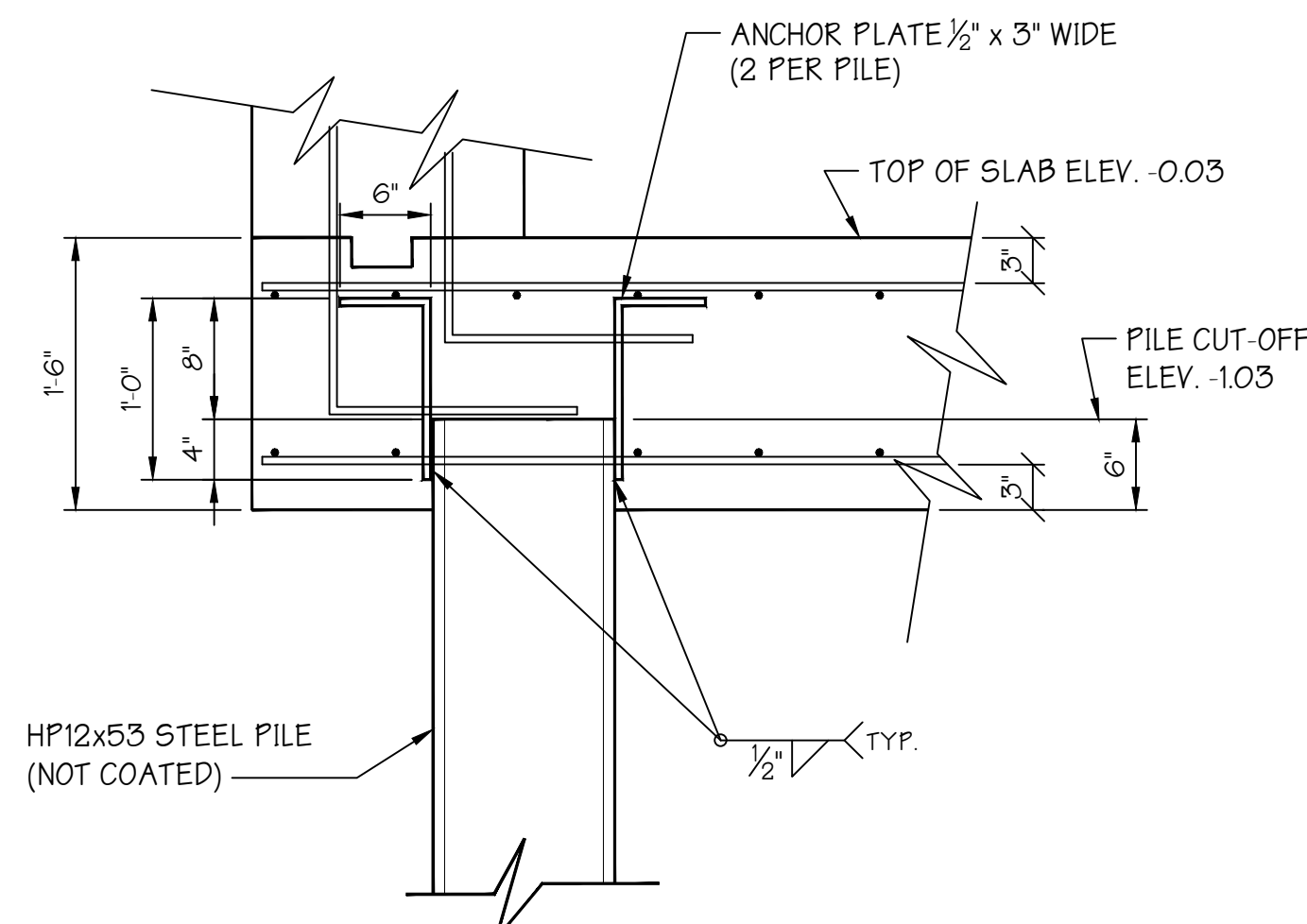
NEW INLET DETAIL

SCALE: 3/8"=1'-0"



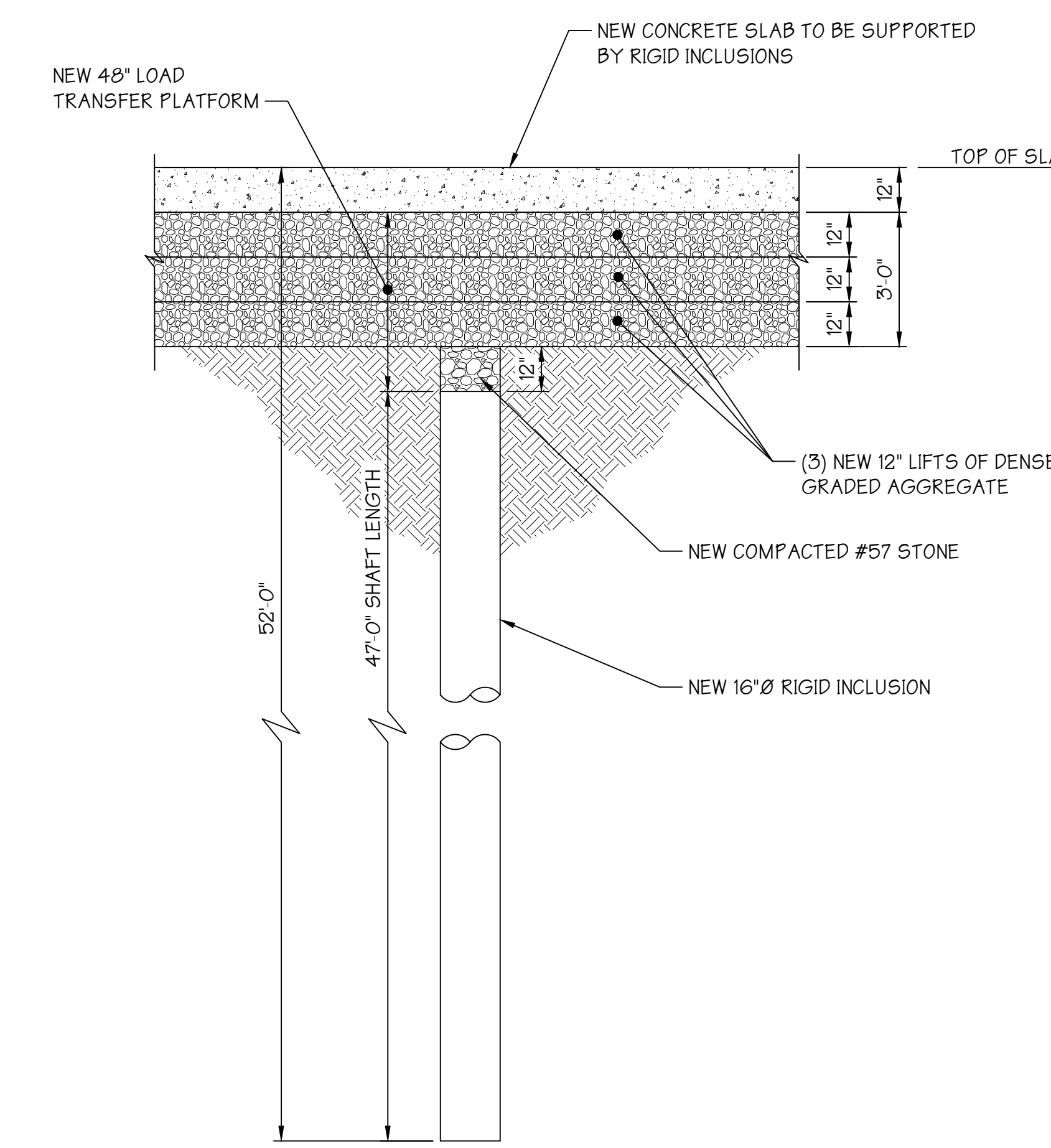
SECTION

SCALE: 3/8"=1'-0"



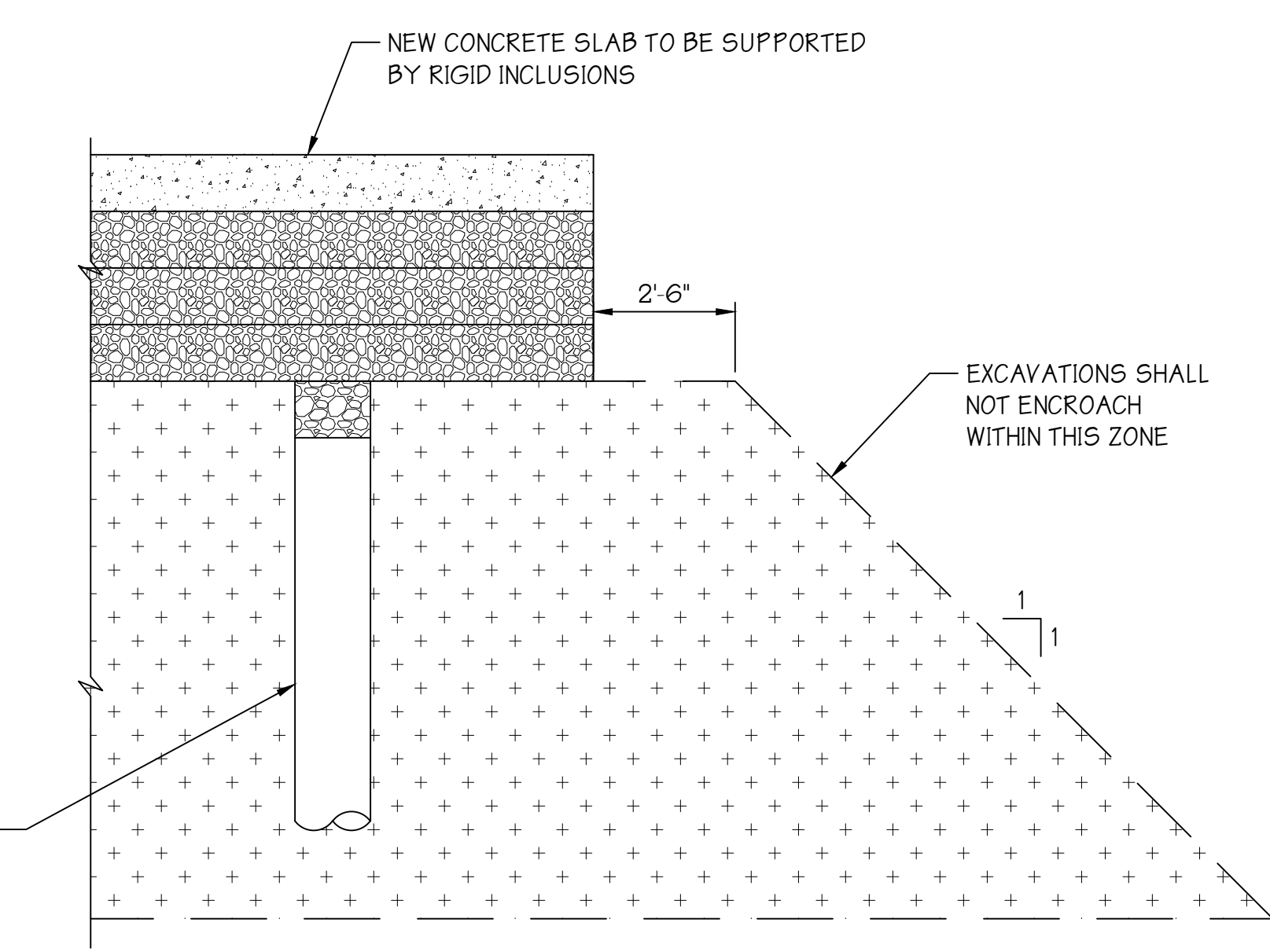
H-PILE ANCHOR DETAIL

SCALE: 1"=1'-0"



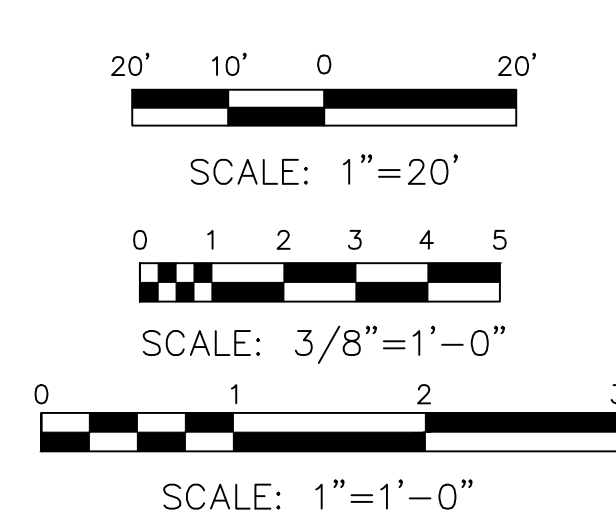
TYPICAL RIGID INCLUSION DETAIL

SCALE: 3/8"=1'-0"



ADJACENT EXCAVATION DETAIL

SCALE: 3/8"=1'-0"



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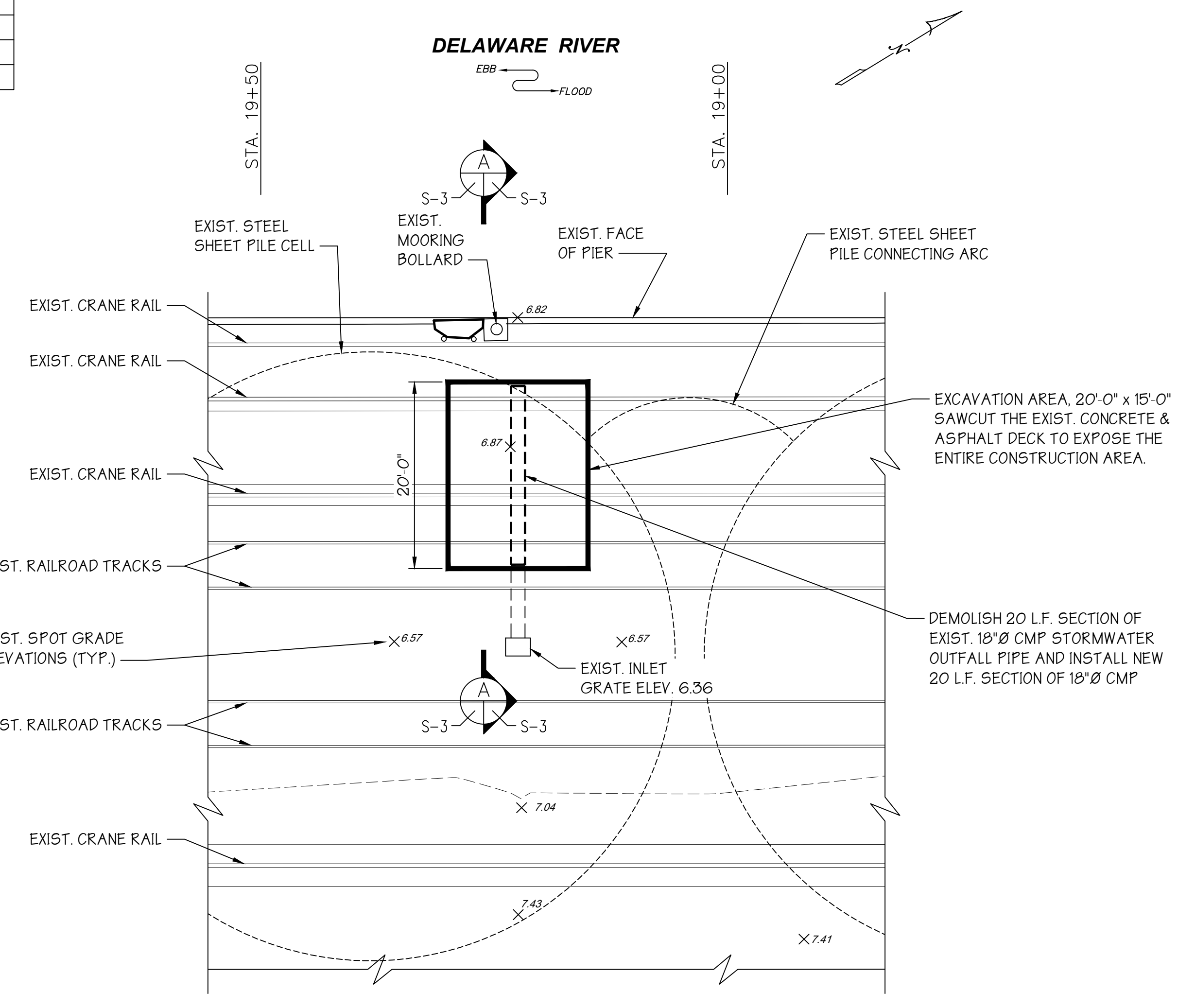
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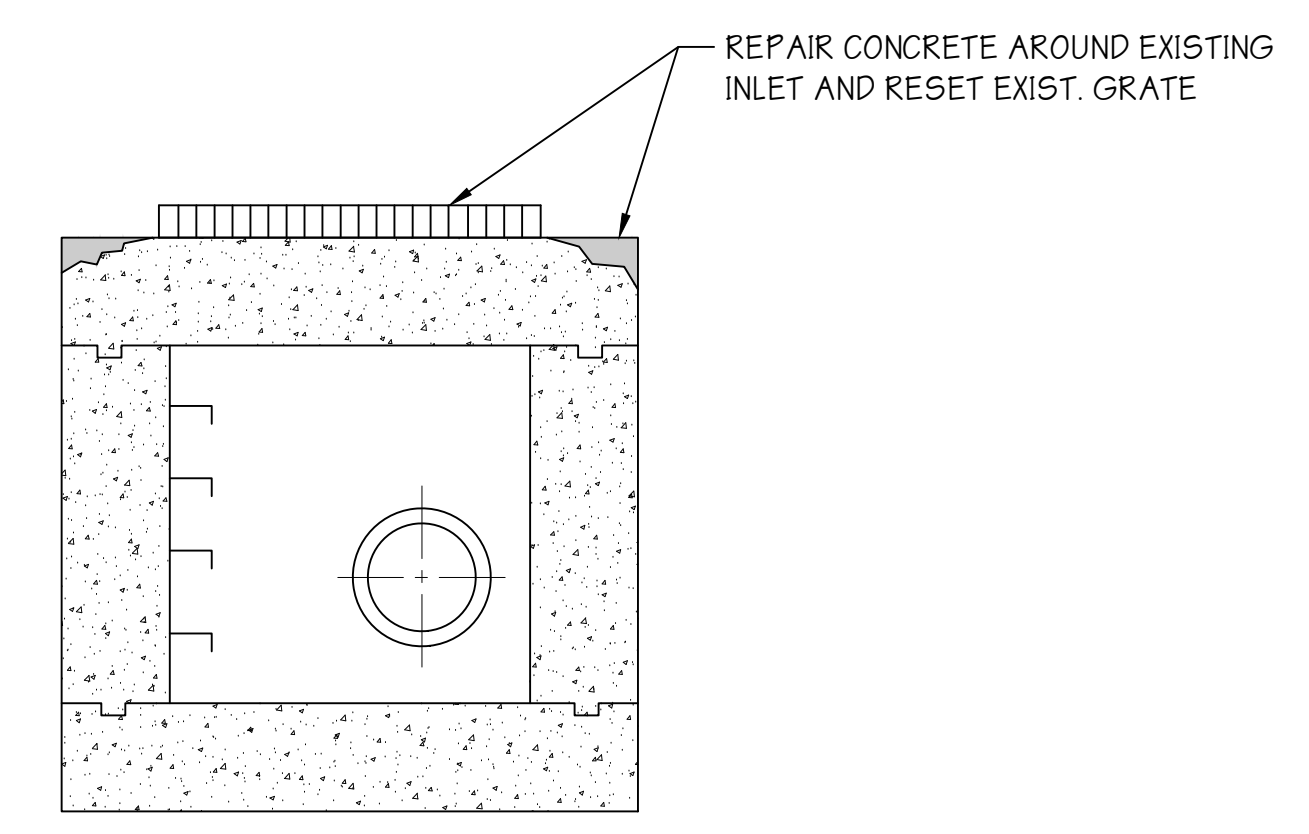
BERTH No.4 - IMPROVEMENTS
 NEW RIGID INCLUSIONS AND
 NEW STORMWATER INLET - PLAN & DETAILS

dwg. no. **S-2** rev. **A**

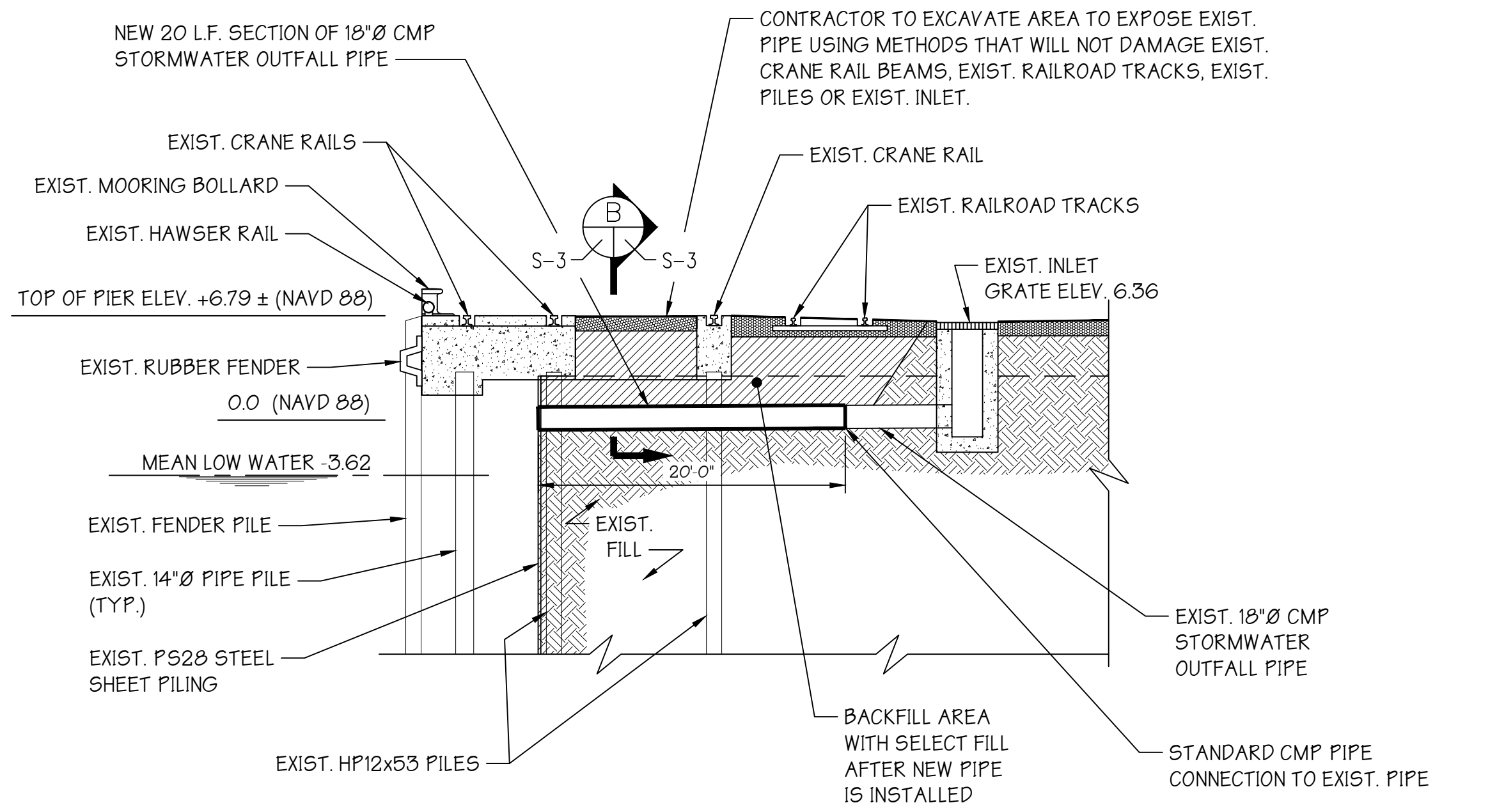
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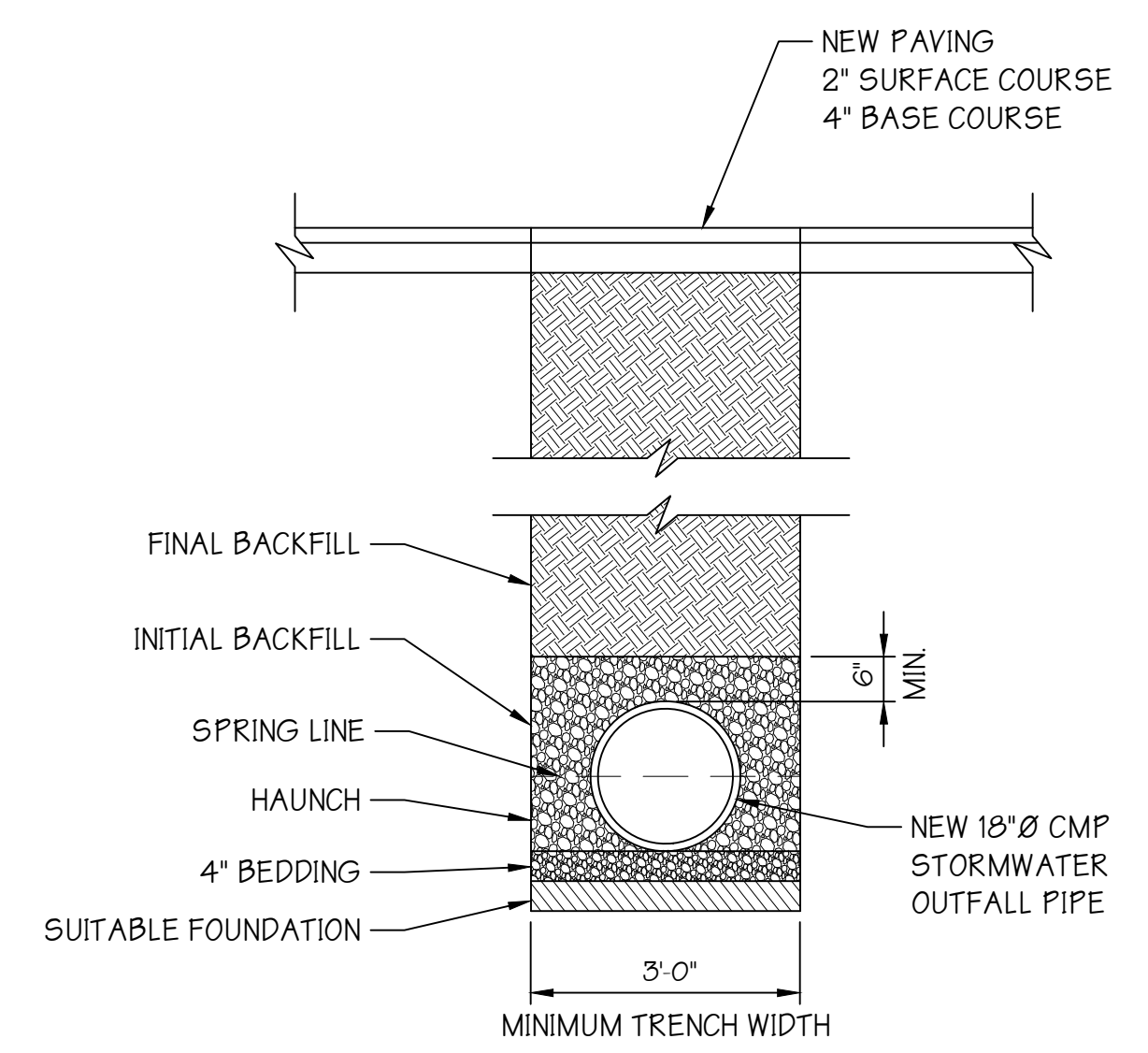
STORMWATER OUTFALL PIPE REPAIR DETAIL
SCALE: 1"=10'



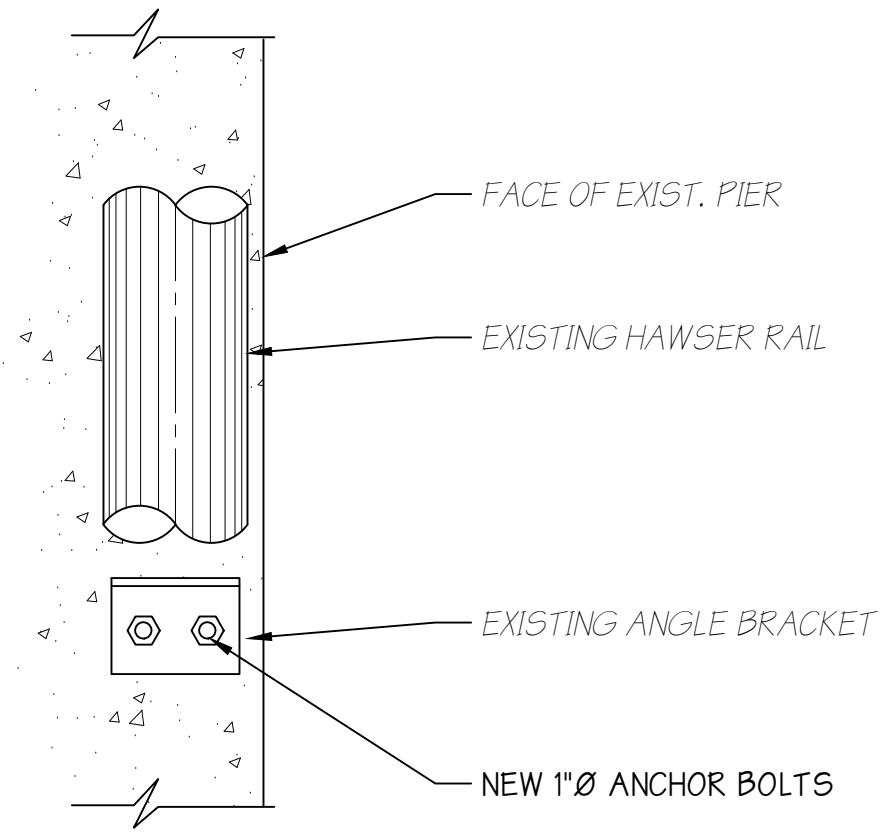
TYPICAL INLET REPAIR DETAIL
SCALE: N.T.S.



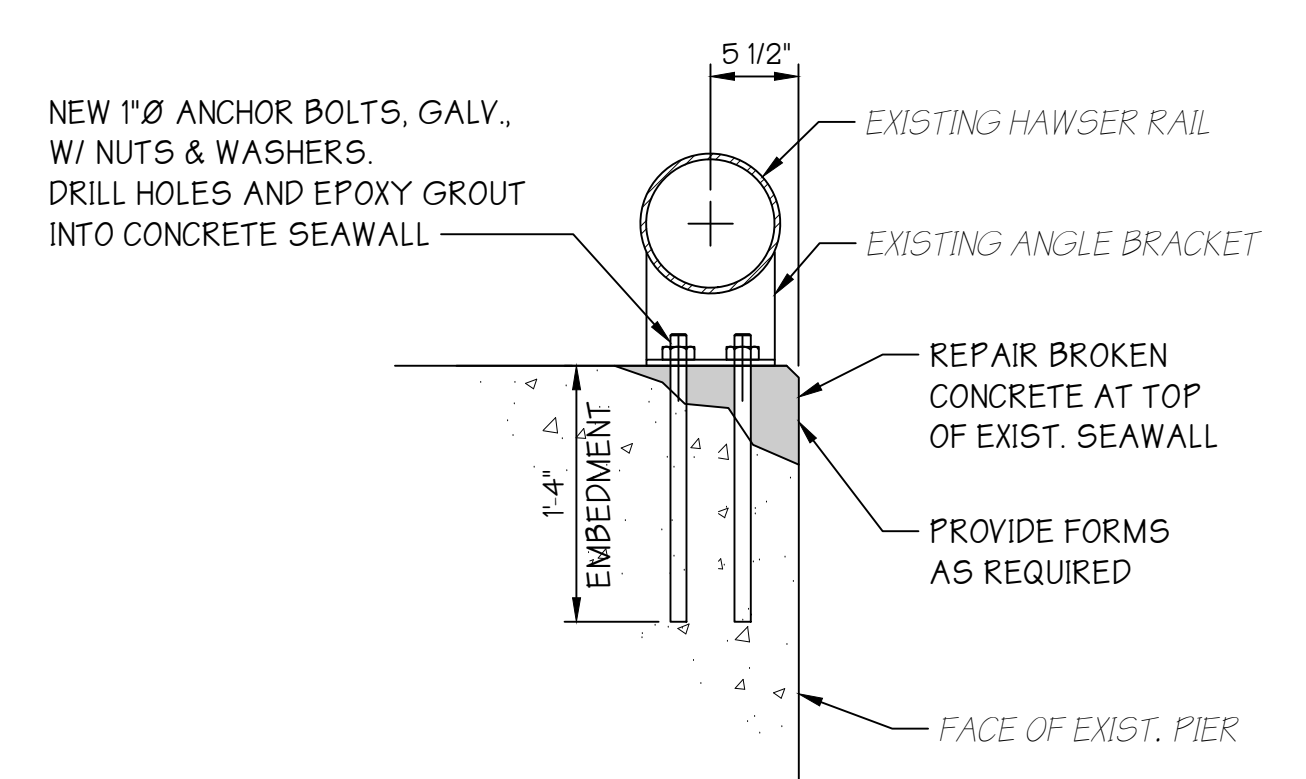
SECTION A-A
SCALE: 1/8"=1'-0"



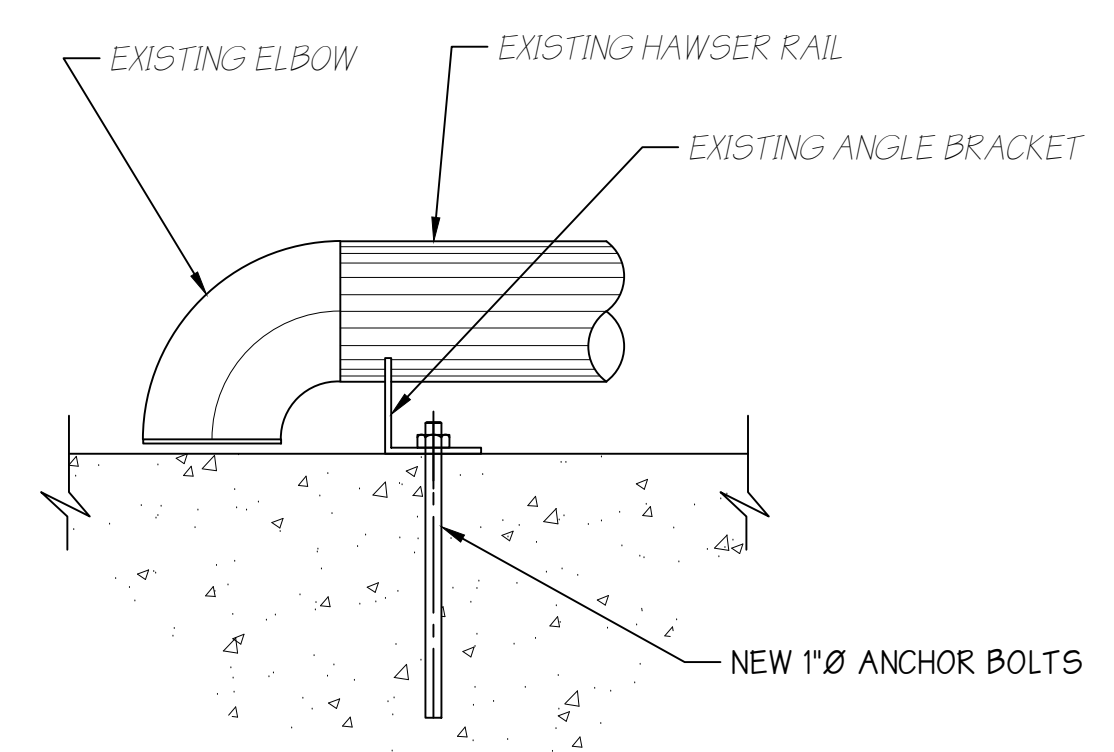
SECTION B-B
SCALE: N.T.S.



PLAN



SECTION C-C

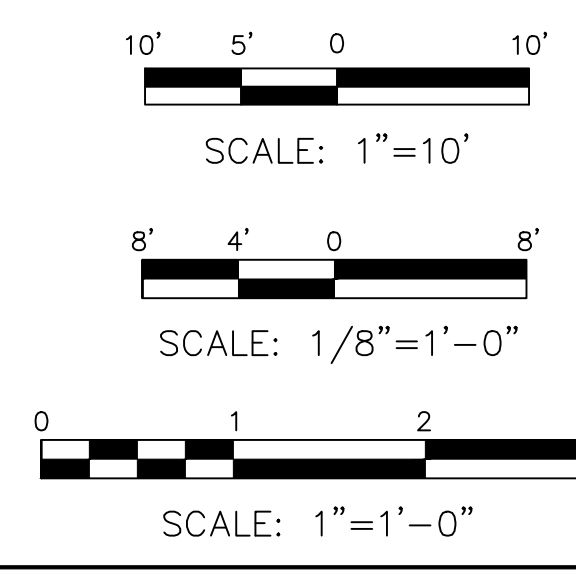


ELEVATION AT END

HAWSER RAIL REPAIR DETAIL
SCALE: 1"=1'-0"

CONCRETE REPAIRS SPALLED AREAS

1. REMOVE ALL LOOSE CONCRETE
2. SURFACE PREPARATION SIKKA ARMIK 110 EPOCEM APPROVED EQUIVALENT - REFER TO SPECIFICATION
3. PATCH AREAS WITH FIVE STAR STRUCTURAL CONCRETE OR APPROVED EQUIVALENT. REFER TO SPECIFICATION
4. COAT AREA AFTER PATCH HAS CURED. REFER TO SPECIFICATION
5. COAT ANY EXPOSED REINFORCING OR EMBEDDED STEEL. REFER TO SPECIFICATION



approvals			
approved by	for	date	
BW	BIDDING	10/8/21	

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CAMDEN, NEW JERSEY 08103

drawn	STAFF	date	10/8/2021	contract	
checked	BW	FILE	Sp-1518	21-050-08	
drftg. approval	RLS				
BERTH No.4 - IMPROVEMENTS				dwg. no.	rev.
REPAIR DETAILS & SECTIONS				S-3	A