

PLANS FOR:

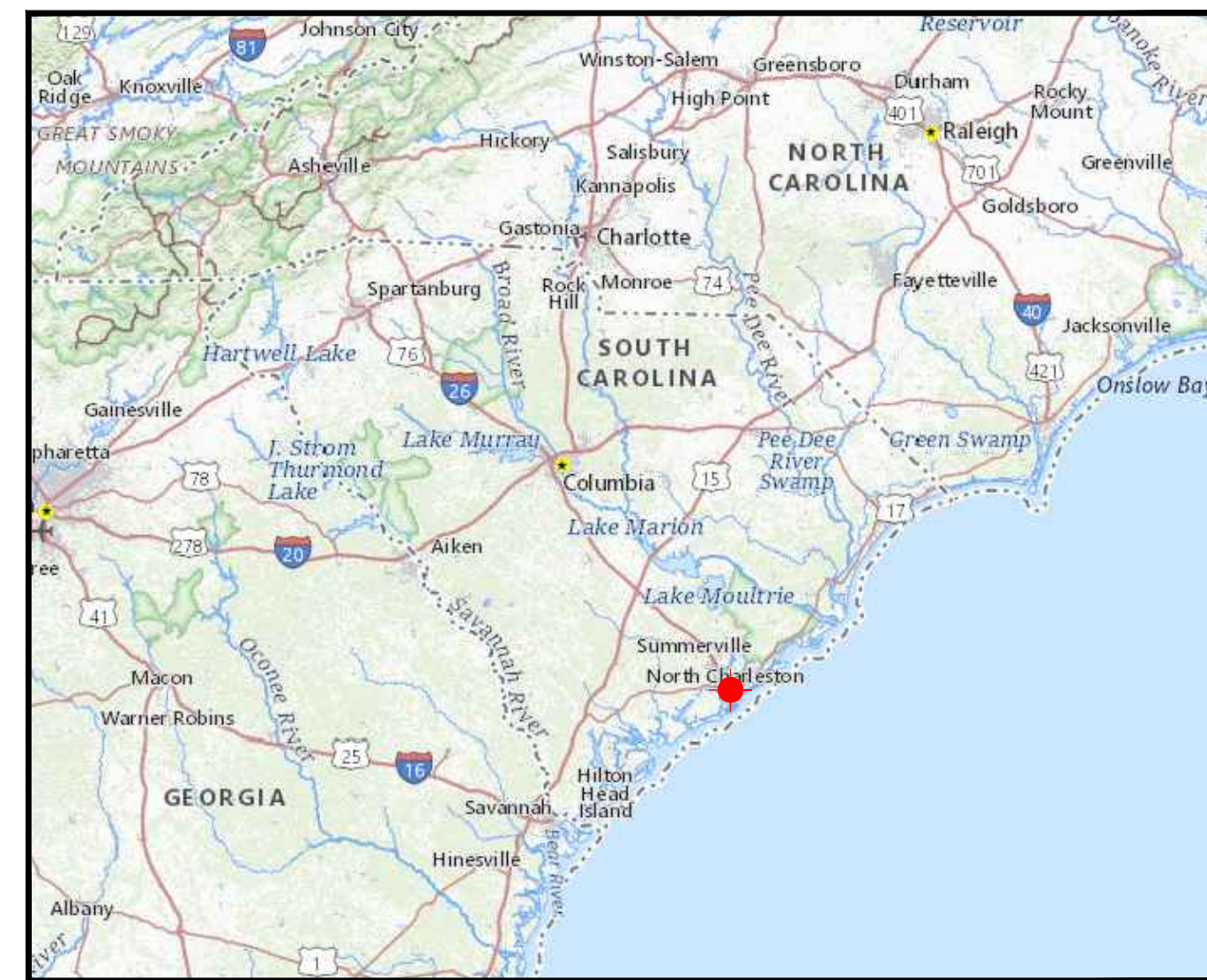
PATRIOTS POINT DEVELOPMENT AUTHORITY

USS YORKTOWN PIER REPAIRS

ADDENDUM 1 – MAY 07, 2026
MOUNT PLEASANT, SOUTH CAROLINA

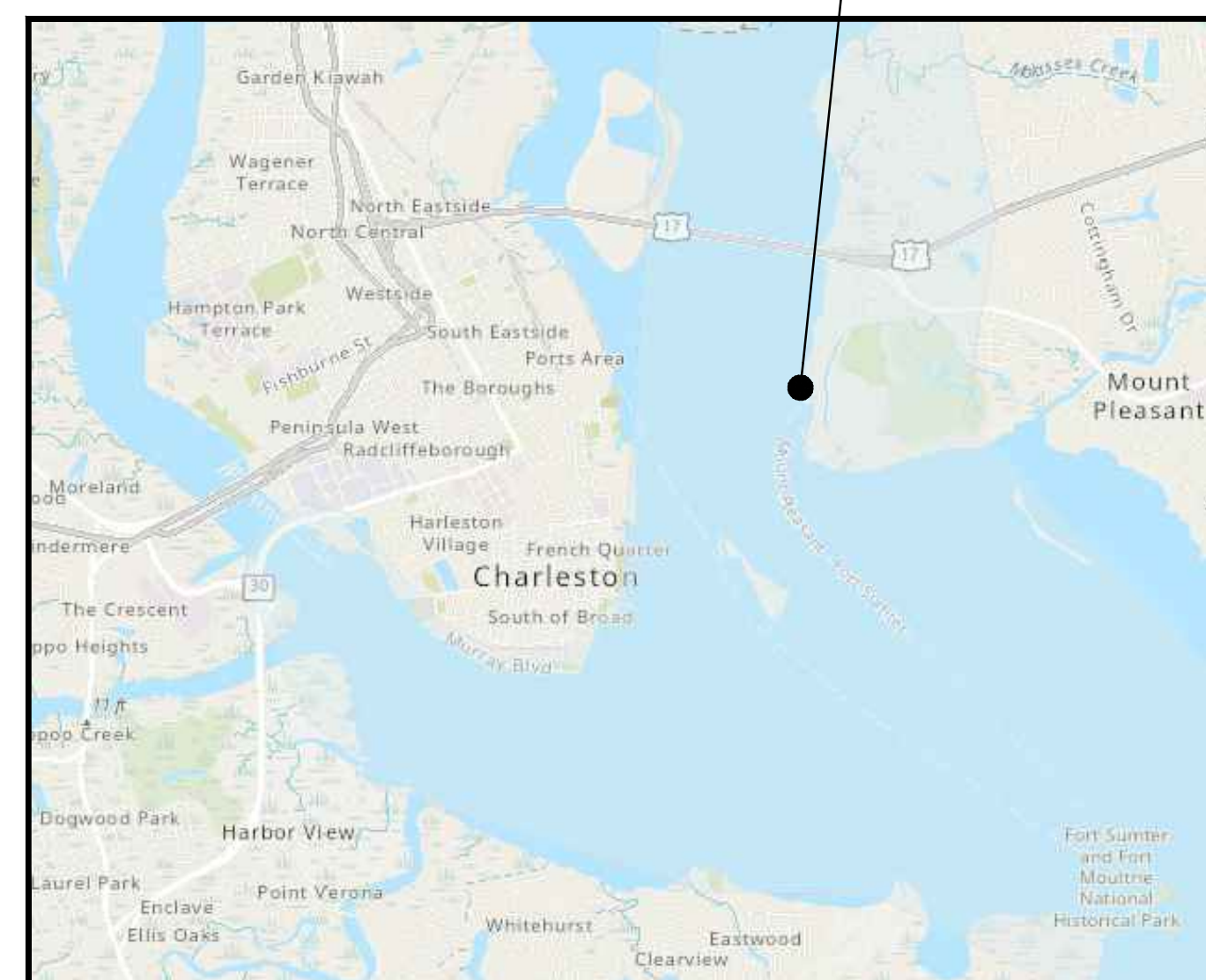
Revisions	Description	By	Appr.	Date
ISSUED FOR CONSTRUCTION		EL	DC	03.31.26
ADDENDUM 1		EL	DC	05.07.26

PROJECT LOCATION



LATITUDE: 32.790011 LONGITUDE: -79.907598

PROJECT SITE



PROJECT INFORMATION

PROJECT LOCATION

USS YORKTOWN CV-10
40 PATRIOTS POINT ROAD
MOUNT PLEASANT, SC 29464

CLIENT/OWNER



PATRIOTS POINT DEVELOPMENT AUTHORITY
40 PATRIOTS POINT ROAD
MOUNT PLEASANT, SC 29464
(O) 843-901-1651

OWNER CONTACT: DAVID COATES

ENGINEER



GEL ENGINEERING, LLC
2040 SAVAGE ROAD
CHARLESTON, SOUTH CAROLINA 29407
(O) 843-769-7378

ENGINEER OF RECORD: DANIEL CAMPBELL, PE (SC LICENSE No. 34504)

PROJECT DESCRIPTION

PATRIOTS POINT DEVELOPMENT AUTHORITY HAS ENGAGED GEL ENGINEERING, LLC TO PREPARE CONSTRUCTION DRAWINGS FOR REPAIRS OF THE CONCRETE PIER WHICH PROVIDES PUBLIC ACCESS TO THE PATRIOTS POINT NAVAL AND MARITIME MUSEUM IN MOUNT PLEASANT, SOUTH CAROLINA.

CODE INFORMATION

ALL CONSTRUCTION MUST BE PERFORMED IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UNLESS OTHERWISE NOTED:

BUILDING CODE
INTERNATIONAL BUILDING CODE 2021 WITH SOUTH CAROLINA MODIFICATIONS

THE FOLLOWING CODES ARE INCLUDED BY REFERENCE PER IBC 2021 CHAPTER 35:

STRUCTURAL STEEL
SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (ANSI/AISC 360-16)
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

STRUCTURAL CONCRETE
BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-19)
AMERICAN CONCRETE INSTITUTE (ACI)

STRUCTURAL TIMBER
NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION-WITH 2018 NDS SUPPLEMENT (ANSI/AWC NDS-2018)
AMERICAN WOOD COUNCIL (AWC)

WELDING
STRUCTURAL WELDING CODE - STEEL (AWS D1.1/D1.1M)
STRUCTURAL WELDING CODE - ALUMINUM (AWS D1.2/D1.2M)
STRUCTURAL WELDING CODE - SHEET STEEL (AWS D1.3/D1.3M)
STRUCTURAL WELDING CODE - REINFORCING STEEL (AWS D1.4/D1.4M)
STRUCTURAL WELDING CODE - BRIDGE WELDING CODE (AWS D1.5/D1.5M)
AMERICAN WELDING SOCIETY (AWS)

MASONRY
BUILDING CODE FOR MASONRY STRUCTURES (TMS 402-2016)
THE MASONRY SOCIETY (TMS)

ACCESSIBILITY STANDARD
2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN
THE DEPARTMENT OF JUSTICE

SCHEDULE OF DRAWINGS

SHEET NUMBER	SHEET TITLE
S0.1	Cover Sheet
S1.0	General Notes I
S1.1	General Notes II
S2.0	Overall Site
S3.0	Existing Conditions at Approach Pier I
S3.1	Existing Conditions at Approach Pier II
S3.2	Existing Conditions at Approach Pier III
S4.0	Existing Conditions at Original Pier Head I
S4.1	Existing Conditions at Original Pier Head II
S4.2	Existing Conditions at Original Pier Head III
S4.3	Existing Conditions at Original Pier Head IV
S4.4	Existing Conditions at Original Pier Head V
S4.5	Existing Conditions at Original Pier Head VI
S5.0	Existing Conditions at Pier Head Extension I
S5.1	Existing Conditions at Pier Head Extension II
S5.2	Existing Conditions at Pier Head Extension III
S5.3	Existing Conditions at Pier Head Extension IV
S5.4	Existing Conditions at Pier Head Extension V
S5.5	Existing Conditions at Pier Head Extension VI
S5.6	Existing Conditions at Pier Head Extension VII
S5.7	Existing Conditions at Pier Head Extension VIII
S5.8	Existing Conditions at Breasting Dolphin No. 2
S5.9	Existing Conditions at Pier Head Extension IX
S5.10	Existing Conditions at Breasting Dolphin No. 1
S5.11	Existing Conditions at Mooring Dolphins No. 1 and 2
S5.12	Existing Timber Fender System
S6.0	Timber Dock
S7.0	Details I
S7.1	Details II
S7.2	Details III
S7.3	Details IV

NOT INCLUDED IN PROJECT SCOPE

BID ALTERNATES

THE FOLLOWING BID ALTERNATES ARE FOR MATERIAL OR WORK THAT ARE NOT INCLUDED IN THE BASE BID PRICE. THE CONTRACTOR MUST INCLUDE A LUMP-SUM PRICE FOR EACH BID ALTERNATE.

BID ALTERNATE 1:

ALL WORK

BID ALTERNATE 2:

ALL WORK

BID ALTERNATE 3:

ALL WORK ASSOCIATED WITH MOORING DOLPHINS 1 AND 2.

BID ALTERNATE 4:

ALL WORK ASSOCIATED WITH THE TIMBER FENDER SYSTEM.

NOT INCLUDED IN PROJECT SCOPE

SPECIFICATIONS

THE FOLLOWING SPECIFICATIONS HAVE BEEN SUBMITTED AND ARE PART OF THE CONTRACT DOCUMENTS:

- SECTION 03 01 00 - MAINTENANCE OF CONCRETE
- SECTION 03 10 00 - CONCRETE FORMWORK
- SECTION 03 20 00 - CONCRETE REINFORCEMENT AND EMBEDDED ASSEMBLIES
- SECTION 03 30 00 - STRUCTURAL CONCRETE

ALLOWANCES

1. THE CONTRACTOR MUST INCLUDE THE FOLLOWING ALLOWANCES IN THE BID, AS FOLLOWS:

(\$ _____ / UNIT) x (ASSUMED QTY) = TOTAL ALLOWANCE

- PARTIAL DEPTH SPALL REPAIR (REPAIR TYPE I) PER 2/S7.0
 - 1.1.1. (\$ _____ / CF) x 50 CF = TOTAL ALLOWANCE
- PARTIAL DEPTH SPALL REPAIR (REPAIR TYPE II) PER 3/S7.0
 - 1.2.1. (\$ _____ / CF) x 25 CF = TOTAL ALLOWANCE
- PRESSURE INJECTION CRACK REPAIR (REPAIR TYPE III) PER 1/S7.1
 - 1.3.1. (\$ _____ / LF) x 150 LF = TOTAL ALLOWANCE
- GRAVITY FEED HORIZONTAL CRACK REPAIR (REPAIR TYPE IV) PER 2/S7.1
 - 1.4.1. (\$ _____ / LF) x 50 LF = TOTAL ALLOWANCE

ALLOWANCES CONT.

- CRACK REPAIR AT CURBS PER 3/S7.1
 - 1.5.1. (\$ _____ / LF) x 35 LF = TOTAL ALLOWANCE
- PRESTRESSED CONCRETE REPAIR (REPAIR TYPE V) PER 1/S7.2
 - 1.6.1. (\$ _____ / CF) x 5 CF = TOTAL ALLOWANCE
- REINFORCEMENT REPLACEMENT (REPAIR TYPE VI) PER 2/S7.2
 - 1.7.1. (\$ _____ / CF) x 10 LF = TOTAL ALLOWANCE
- SPALL REPAIR AT EXPOSED REINFORCEMENT DUE TO SHALLOW COVER (REPAIR TYPE VII) PER 3/7.2
 - 1.8.1. (\$ _____ / CF) x 5 CF = TOTAL ALLOWANCE

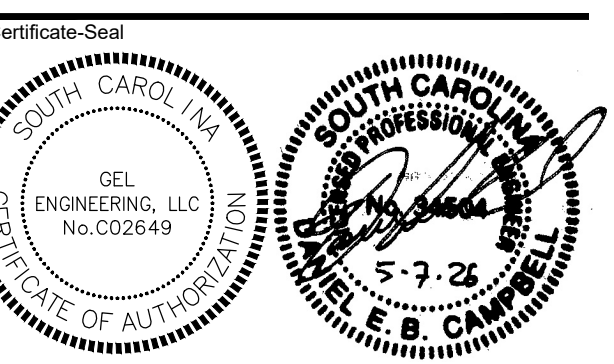
2. THE CONTRACTOR MUST PROVIDE A UNIT PRICE FOR EACH ALLOWANCE.

3. THE UNIT PRICE MUST INCLUDE ALL LABOR AND MATERIALS REQUIRED TO PERFORM THE WORK.

4. THE CONTRACTOR MUST KEEP AN UP-TO-DATE RECORD OF ALLOWANCES USED AS THE PROJECT PROGRESSES.

5. THE CONTRACTOR MAY NOT PERFORM WORK ON ALLOWANCES BEYOND THE AMOUNTS SPECIFIED ABOVE WITHOUT WRITTEN APPROVAL FROM THE OWNER.

6. THE TOTAL PRICE FOR ALL ALLOWANCES WILL BE INCLUDED IN THE CONTRACT AMOUNT. HOWEVER, IF THE FINAL QUANTITY OF USED ALLOWANCES ARE LESS THAN THE AMOUNTS SPECIFIED ABOVE, A CHANGE ORDER WILL REMOVE THE UNUSED ALLOWANCES FROM THE FINAL CONTRACT AMOUNT.



Client



Patriots Point Development Authority
40 Patriots Point Road
Mount Pleasant, SC 29464

Project
40 Patriots Point Road
Mount Pleasant, SC 29464

USS Yorktown
Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Cover Sheet

Project No. Drawing No.

PP0400124

Date

05.07.26

Scale AS SHOWN

S0.1

RELEASED FOR CONSTRUCTION

m:\clients\ppdp-patriots point development authority\2024_projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00123 - base.dwg - S0.1 (Plotted: 5/7/2026 10:48:10 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

DOCUMENTS

- ALL OBSERVATIONS AND RECOMMENDED REPAIRS ARE BASED ON CONDITIONS OBSERVED AND DOCUMENTED BY GEL ENGINEERING, LLC IN NOVEMBER AND DECEMBER 2024; CONDITIONS CAN CHANGE DUE TO ENVIRONMENTAL EFFECTS, SITE ACTIVITIES, ETC.
- THE CONSTRUCTION OF THE EXISTING FACILITIES WAS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADEY, INC. DATED MARCH 1980, THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE ONE PART OF THE CONTRACT DOCUMENTS AND MUST BE USED IN CONJUNCTION WITH THE REMAINING PARTS OF THE CONTRACT DOCUMENTS.
- "DRAWINGS" MEANS THE LATEST STRUCTURAL DESIGN DRAWINGS, UNLESS OTHERWISE NOTED. "SPECIFICATIONS" MEANS THE LATEST PROJECT SPECIFICATIONS, UNLESS OTHERWISE NOTED.
- ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL OR DETAIL TITLE OR NOTE.
- ASSUME EQUAL SPACING IF NOT INDICATED ON THE DRAWINGS.
- USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSION TAKEN FROM ELECTRONIC DRAWINGS FILES.

DEMOLITION

- THE CONTRACTOR MUST FURNISH ALL LABOR AND MATERIALS FOR SUCCESSFUL COMPLETION OF THIS PROJECT.
- ALL EXISTING CONDITIONS SHOWN ARE FOR REFERENCE ONLY AND ARE TO BE FIELD VERIFIED BY THE CONTRACTOR.
- REMOVED MATERIALS, UNLESS NOTED OTHERWISE, BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS.
- THE CONTRACTOR MUST USE QUALIFIED, EXPERIENCED PERSONNEL FOR REMOVAL AND DEMOLITION OPERATIONS. REMOVAL AND DEMOLITION OPERATIONS SHALL BE PERFORMED IN A CAREFUL AND ORDERLY MANNER TO AVOID HAZARDS TO PERSONS, DAMAGE TO PROPERTY, AND THE SPREADING OF DUST AND FLYING PARTICLES.
- THE EXACT EXTENT OF DEMOLITION TO BE DONE MUST BE VERIFIED AT THE SITE. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE DRAWINGS WITH THE EXISTING CONDITIONS.
- THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE MEANS AND METHODS OF DEMOLITION AND THE SAFETY OF THE EXISTING STRUCTURE.
- NO PORTIONS OF THE STRUCTURE MUST BE PERMITTED TO FALL NOR SHALL ANY DEBRIS BE DROPPED EXCEPT BY METHODS WHICH WILL INSURE LIFE SAFETY AND OTHER INSURANCE.
- DO NOT REMOVE MORE OF THE EXISTING STRUCTURE THAN NECESSARY. DO NOT DAMAGE, MAR, OR DEFACE THE REMAINING STRUCTURE OR MATERIALS TO BE REUSED.
- THE CONTRACTOR MUST PROVIDE SHORING IN ALL LOCATIONS WHERE EXISTING CONSTRUCTION TO REMAIN WILL BE AFFECTED BY DEMOLITION.

CONCRETE

- CONCRETE STRENGTH MUST MEET THE FOLLOWING 28-DAY COMPRESSIVE STRENGTH (f'c):
ALL STRUCTURAL CONCRETE 4,000 PSI
- PROVIDE NORMAL WEIGHT CONCRETE WITH A MINIMUM CURED DENSITY OF 145 PCF.
- ALL AGGREGATE MUST CONFORM TO ASTM C33, UNLESS OTHERWISE NOTED.
- THE USE OF CALCIUM CHLORIDE AND OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED.
- THE USE OF RECYCLED CONCRETE IS PROHIBITED.
- PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS, INCLUDING ALUMINUM CONDUIT, AND CONCRETE IS PROHIBITED, UNLESS OTHERWISE NOTED.
- MAX WATER:CEMENT RATIO = 0.45

EXISTING CONSTRUCTION

- THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE SITE, EXISTING CONSTRUCTION, AND PROPOSED SCOPE OF WORK BEFORE SUBMITTING A BID.
- THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING CONDITIONS FOR RESOLUTION PRIOR TO ORDERING MATERIALS AND BEGINNING WORK.
- DIMENSIONS INDICATED RELATIVE TO EXISTING STRUCTURES ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS AND BEGINNING WORK.
- THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ETC. NECESSARY TO ENSURE THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE WORK TO THE EXISTING CONSTRUCTION.
- THE CONTRACTOR MUST TAKE ALL FIELD MEASUREMENTS NECESSARY TO FACILITATE THE COMPLETE DETAILING, FABRICATION, AND ERECTION OF ALL STRUCTURAL MEMBERS.

CONTRACTOR RESPONSIBILITIES AND COORDINATION

- THE CONTRACTOR MUST FURNISH ALL LABOR AND MATERIALS FOR SUCCESSFUL COMPLETION OF THIS PROJECT.
- THE SPECIFICATIONS AND STRUCTURAL DRAWINGS REPRESENT THE REQUIRED REPAIR WORK AND DO NOT INDICATE THE METHOD OF DEMOLITION OR CONSTRUCTION, UNLESS OTHERWISE NOTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF DEMOLITION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF ALL TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT, WHILE BEING DEMOLISHED, IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY BRACES AND SUPPORTS. CONTRACTOR MUST RETAIN A STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT TO DESIGN ALL TEMPORARY BRACING AND CONSTRUCTION SUPPORTS. SUBMIT ANY DRAWINGS AND/OR CALCULATIONS TO THE OWNER FOR APPROVAL PRIOR TO PERFORMING ANY WORK.
- THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ELEVATIONS, NEW AND EXISTING, BY MEASUREMENTS AND SURVEYS AT THE JOB SITE PRIOR TO BEGINNING WORK AND SUBMITTING SHOP DRAWINGS.
- THE CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO ORDERING REPAIR MATERIALS AND BEGINNING WORK. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING CONDITIONS FOR RESOLUTION PRIOR TO ORDERING REPAIR MATERIALS AND BEGINNING WORK.
- THE CONTRACTOR MUST TAKE ANY AND ALL MEASUREMENTS NECESSARY TO VERIFY CONFORMANCE WITH THE DRAWINGS AND TO PERFORM THE WORK PROPERLY.
- ALL FIELDWORK MUST BE COORDINATED AND CONTINUOUSLY SUPERVISED BY THE CONTRACTOR.
- THE CONTRACTOR MUST MAKE NO DEVIATION FROM THE DRAWINGS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.
- THE CONTRACTOR MUST NOTIFY THE OWNER AND ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DRAWINGS AND DETAILS, FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK. COMPLY WITH STANDARD CONDITIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINISHED STATE.
- ALL CONSTRUCTION DEBRIS MUST BE REMOVED FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS.
- ANY DAMAGE CAUSED TO THE SITE FACILITIES OR LANDSCAPING DURING CONSTRUCTION ACTIVITIES MUST BE REMEDIATED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER. DAMAGED GRASSY AREAS MUST BE REMEDIATED WITH SOD; SEEDING IS NOT AN ACCEPTABLE REPAIR.
- "BY OTHERS" DENOTES A DELEGATED DESIGN. THE DELEGATED DESIGN IS INCLUDED IN THE CONTRACTOR'S SCOPE OF WORK AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WORK IS COMPLETED.
- REQUESTS FOR INFORMATION (RFI's)
15.1. WHEREAS THE CONTRACTOR WOULD LIKE TO PROVIDE A REQUEST FOR INFORMATION OR CLARIFICATION DURING THE CONSTRUCTION PHASES OF THE PROJECT, THE REQUEST MUST BE MADE IN WRITING TO THE OWNER AND ENGINEER OF RECORD. ALL RFI'S MUST BE SUBMITTED TO ALLOW A MINIMUM OF FIVE (5) BUSINESS DAYS FOR OWNER/ENGINEER OF RECORD REVIEW WITHOUT IMPACTING THE SCHEDULE.

CONCRETE REPAIR MATERIALS

- REPAIR MATERIALS:
 - BONDING PRIMER.....SIKA ARMATEC-110 EPOCEM
 - CORROSION INHIBITIVE PRIMER.....SIKA ARMATEC-110 EPOCEM
 - SHALLOW AND PARTIAL DEPTH CONCRETE REPAIR:
 - REPAIR MORTAR (HORIZ).....SIKATOP-122 PLUS
 - REPAIR MORTAR (VERT AND OH).....SIKATOP-123 PLUS
 - CONCRETE REPAIR DUE TO SHALLOW COVER
 - SIKAQUICK VOH
 - SIKADUR-32 HI-MOD LV
 - SIKAQUICK-1000
 - PATCH PIN.....HELIFIX PATCH PIN
 - CRACK REPAIR (INJECTION).....SIKA INJECTION-307
 - CRACK REPAIR (GRAVITY FEED).....SIKADUR-35 HI-MOD LV

THE CONTRACTOR MAY SUBMIT ALTERNATE REPAIR MATERIALS TO THE ENGINEER OF RECORD FOR REVIEW. THE ALTERNATE MATERIALS MUST MEET OR EXCEED THE PROPERTIES OF THE MATERIALS PROVIDED ABOVE.

- THE CONTRACTOR MUST INSTALL REPAIR MATERIALS PER MANUFACTURER SPECIFICATIONS.
- SEE SHEETS S7.0 THROUGH S7.2 FOR MORE INFORMATION.

REINFORCEMENT

- REINFORCEMENT MUST CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:

DEFORMED BARS	ASTM A615, GR 60
WELDED WIRE FABRIC	ASTM A185
- DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI-318 AND ACI-315.
- ALL LAP SPLICES ARE TO BE ACI STANDARD CLASS B TENSION LAP SPLICES. WHERE BARS OF DIFFERENT SIZES LAP, PROVIDE LAP SPLICE LENGTH FOR LARGER BAR.
- WHERE A 90-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 90-DEG. HOOK. WHERE A 135-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 135-DEG. HOOK. WHERE A 180-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 180-DEG. HOOK.
- WHERE SHEETS OF WELDED WIRE FABRIC ARE GRAPHICALLY INDICATED TO LAP, PROVIDE ACI STANDARD FULL TENSION WELDED WIRE FABRIC LAP SPLICE.
- FOR BARS INDICATED IN GROUPS, PROVIDE BARS OF EACH GROUP AT EQUAL SPACING, UNLESS OTHERWISE NOTED.
- WHERE DOWELS ARE INDICATED BUT NOT SIZED, PROVIDE DOWELS THAT MATCH SIZE AND LOCATION OF MAIN REINFORCEMENT AND LAP SPLICE WITH THE MAIN REINFORCEMENT.
- WHERE CONCRETE ELEMENTS INTERSECT WALLS, PROVIDE DOWELS TO EXTEND WALL REINFORCEMENT CONTINUOUS.
- REINFORCEMENT MUST HAVE THE FOLLOWING MINIMUM CONCRETE PROTECTION (CLEAR COVER), UNLESS OTHERWISE NOTED:

SURFACES NOT FORMED	3"
FORMED SURFACES IN CONTACT WITH SOIL OR WATER, OR EXPOSED TO WEATHER	2"
BEAMS, GIRDER, AND COLUMNS	1 1/2"
SLABS AND JOISTS, TOP BARS	3/4"
SLABS AND JOISTS, BOTTOM BARS AND WALLS	1"
- NO CONSTRUCTION MUST BE MADE WITHOUT REINFORCEMENT. THE FOLLOWING PERCENTAGE OF THE GROSS CROSS SECTIONAL AREA MUST BE PROVIDED AS MINIMUM REINFORCEMENT WHERE NO REINFORCEMENT IS INDICATED:

SPREAD FOOTINGS	BOTTOM 0.33%
STRIP FOOTINGS	BOTTOM 0.20%
SLABS	TOP AND BOTTOM 0.20%
BEAMS	TOP AND BOTTOM 0.33% STIRRUPS #3 @ 12"
COLUMNS	VERTICAL 1.00% TIES #3 @ 18"
WALLS	VERT AND HORIZ, SEE TYPICAL WALL DETAILS
- CONTINUOUS TOP AND BOTTOM BARS, WHEN INDICATED IN CROSS SECTION ONLY, MUST BE LAPPED AS FOLLOWS:
 - TOP BARS AT MIDSPANS.
 - BOTTOM BARS CENTERED OVER SUPPORTS.
- PROVIDE UNCOATED REINFORCEMENT, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL

- STRUCTURAL STEEL MUST CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES, UNLESS OTHERWISE NOTED:

W-SHAPE	ASTM A992 (Fy=50ksi)
PLATES	ASTM A36 (Fy=36ksi)
ANGLES	ASTM A36 (Fy=36ksi)
PIPE	ASTM A53, GR B (Fy=35ksi)
HOLLOW STRUC. SECTIONS (RECT)	ASTM A500, GR B (Fy=46ksi)
HOLLOW STRUC. SECTIONS (RND)	ASTM A500, GR B (Fy=42ksi)
CHANNELS	ASTM A36 (Fy=36ksi)
ANCHOR BOLTS	ASTM A307, ASTM F1554, GR 36
HEADED STUDS	ASTM A108
- FOR STEEL MEMBERS AND EMBEDMENTS EXPOSED TO WEATHER, PROVIDE MARINE GRADE PAINT TO MATCH EXISTING.
- ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES MUST BE SHOWN ON THE SHOP DRAWINGS FOR APPROVAL BY THE ARCHITECT AND ENGINEER OF RECORD.
- FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ARCHITECT AND ENGINEER OF RECORD.



Engineering LLC

2040 Savage Road Charleston, SC 29407
P 843.769.7378 F 843.769.7397
www.gel.com

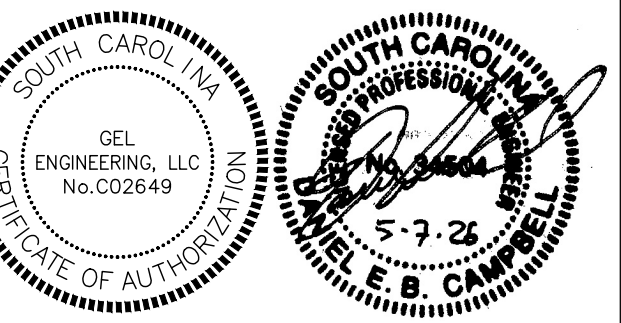
a member of The GEL Group Inc
ENVIRONMENTAL • ENGINEERING • SURVEYING

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants

Certificate-Seal



Client



Patriots Point Development Authority
40 Patriots Point Road
Mount Pleasant, SC 29464

Project
40 Patriots Point Road
Mount Pleasant, SC 29464

**USS Yorktown
Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

General Notes I

Project No. _____ Drawing No. _____

PP0A00124

Date _____

05-07-26

Scale AS SHOWN

S1.0

RELEASED FOR CONSTRUCTION

m:\clients\ppdp-patriots point development authority\2024_projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00123 - base.dwg - \$1.0 (Plotted: 5/7/2026 10:00:56 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

DRILLED-IN ANCHORS

- 1. ADHESIVE ANCHORED THREADED ROD SYSTEMS:
HIT-HY 200 SYSTEM HILTI CORPORATION
HIT-HY 270 SYSTEM (MASONRY ONLY) HILTI CORPORATION
HIT-RE 500 SYSTEM HILTI CORPORATION
2. MECHANICAL EXPANSION ANCHORED SYSTEMS:
KWIK BOLT TZ HILTI CORPORATION
KWIK BOLT 3 HILTI CORPORATION
3. ALTERNATE SYSTEM EQUIVALENT OR EXCEEDING THE PROPERTIES OF THE SYSTEMS ABOVE WILL BE CONSIDERED; THE CONTRACTOR MUST SUBMIT TO THE ENGINEER OF RECORD FOR REVIEW.
4. REFER TO PLANS AND DETAILS FOR ANCHOR LOCATIONS, SIZE, AND EMBEDMENT REQUIREMENTS.
5. ANCHORS ARE TO BE 3/4" DIAMETER WITH A MINIMUM EMBEDMENT OF 6", UNLESS OTHERWISE NOTED.
6. INSTALL ANCHORS TO MEET THE REQUIREMENTS INDICATED ON THE DRAWINGS, THE CURRENT INTERNATIONAL COUNCIL OF BUILDING OFFICIALS (ICBO) REPORT, AND THE MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR MUST LOCATE EXISTING REINFORCEMENT PRIOR TO BEGINNING ANCHOR INSTALLATION.
8. MASONRY ANCHORS ARE TO BE INSTALLED IN SOLID MASONRY OR IN HOLLOW MASONRY THAT HAS BEEN GROUTED SOLID AT LEAST ONE COURSE ABOVE AND ONE COURSE BELOW THE ANCHOR, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL CONNECTIONS

- 1. STRUCTURAL STEEL CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:
ANGLES: ASTM A36
WTS: ASTM A36
PLATES: ASTM A36
BOLTS, NUTS, WASHERS: ASTM A325 OR A490
WELD ELECTRODES: E70XX
2. ALL CONNECTIONS, UNLESS INDICATED AS BEING FULLY DESIGNED ON THE STRUCTURAL DRAWINGS, MUST BE DESIGNED AND DETAILED BY AN ENGINEER LICENSED IN THE STATE OF THE PROJECT. THE DESIGN AND DETAILING MUST COMPLY WITH ALL APPLICABLE CODES AND SPECIFICATION SECTIONS.
3. ALL SHOP AND FIELD CONNECTIONS MUST BE WELDED. SUBMITTAL FROM CONTRACTOR FOR VARIATIONS TO TYPICAL CONNECTION DETAILS WILL BE CONSIDERED.
4. FOR CONNECTION DESIGN AND DETAILING, SET CONNECTION WORK POINT AT INTERSECTION OF MEMBER CENTERLINES UON.
5. PROVIDE STIFFENERS, CONTINUITY PLATES, DOUBLER PLATES, OR OTHER NECESSARY ADDITIONAL LOCAL STRENGTHENING MEASURES AS REQUIRED. MEMBER SIZES INDICATED ON DRAWINGS ARE SIZED FOR MEMBER BEHAVIOR AWAY FROM THE CONNECTIONS.
6. ALL WELDING MUST BE PERFORMED BY PREQUALIFIED WELDERS, AND MUST CONFORM TO THE REQUIREMENTS OF THE STRUCTURAL WELDING CODE, UNLESS OTHERWISE NOTED.
7. ALL WELDING ELECTRODES MUST COMPLY WITH THE REQUIREMENTS OF TABLE 4.1 OF THE STRUCTURAL WELDING CODE, ANSI/AWS D1.1.
8. FOR EXPOSED WELDS, PROVIDE WELDING IN CONFORMANCE WITH AWS D1.5.
9. WELDS NOT OTHERWISE NOTED ON DRAWINGS MUST BE CONTINUOUS FILLET WELDS. THE MINIMUM SIZE SHALL BE 1/4" OR AS REQUIRED BY THE AISC SPECIFICATIONS, WHICHEVER IS LARGER. THE MINIMUM WELD LENGTH SHALL BE 3".

SHOP DRAWING SUBMITTALS

- 1. THIRTY DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR MUST SUBMIT FOR THE ENGINEER OF RECORD'S REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE ENGINEER OF RECORD. THE ENGINEER OF RECORD MUST HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE MUST BE DEVELOPED AND SUBMITTED TO THE ENGINEER OF RECORD. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE ENGINEER OF RECORD WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN BUSINESS DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.
2. THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO THE ENGINEER OF RECORD AND OTHER APPLICABLE TRADES. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
2.1. THE SHOP DRAWING IS REQUESTED.
2.2. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
2.3. THE ENGINEER OF RECORD'S AND OTHER MEMBERS OF THE DESIGN TEAM'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
2.4. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
2.5. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
2.6. THE SUBMITTAL IS COMPLETE.
3. THE ENGINEER OF RECORD MUST RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE ENGINEER OF RECORD'S REVIEW OF SUBMITTALS MUST BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK MUST BE STARTED WITHOUT SUCH REVIEW.
4. FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE SUPPLIER, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER'S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE SUPPLIER'S ENGINEER.
5. THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR ENGINEER OF RECORD REVIEW; SEE THE SPECIFICATIONS FOR MORE INFORMATION IF INCLUDED IN THE BID DOCUMENTS:
03200 S CONCRETE REINFORCING LAYOUT
03300 C CONCRETE MIX DESIGNS
03300 S CONCRETE CONSTRUCTION JOINT LAYOUT
05120 S STRUCTURAL STEEL
05120 S C STRUCTURAL STEEL CONNECTIONS
S = SHOP DRAWINGS REQUIRED
C = SUPPORTING CALCULATIONS REQUIRED, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT.

GALVANIZED COATING

- 1. MARINE-GRADE COLD GALVANIZING SHALL CONFORM WITH THE REQUIREMENTS OF THE FOLLOWING:
ASTM A780
ASTM B117
DOD-P-21035A
MIL-P-26915
MIL-P-46105
SSPC PAINT 20
ISO 12944
2. ACCEPTABLE COLD GALVANIZING PRODUCTS INCLUDE:
17007 BY AERVOE INDUSTRIES, INC
COLD GALVANIZING CORROSION INHIBITOR BY ITW PROBRANDS
3. THE CONTRACTOR MAY SUBMIT ALTERNATE REPAIR MATERIALS TO THE ENGINEER OF RECORD FOR REVIEW. THE ALTERNATE MATERIALS MUST MEET OR EXCEED THE PROPERTIES OF THE MATERIALS PROVIDED ABOVE.
4. THE CONTRACTOR MUST INSTALL REPAIR MATERIALS PER MANUFACTURER'S SPECIFICATIONS.

ABBREVIATIONS

Table with 4 columns: Abbreviation, Description, Abbreviation, Description. Includes terms like ADL, ADJ, ALT, APPROX, ARCH, B/, B/B, BLDG, BLK, BLKG, BM, BOT, BRDG, BRG, BTW, C, C/C, CIP, CL, CLR, CMU, COL, COMP, CONC, CONN, CONST, CONT, CS, DBL, DET, DELAM, DIA, DIAG, DIM(S), DL, DN, DWG(S), DWL(S), EA, ECC, EF, EFFLO, EL, ELEC, ENGR, EOR, EQ, EQUIP, ERB, EW, EXP, EXIST, EXT, F/F, FIN, FL, FND, FP, FS, FTG, GA, GALV, GEN, GR, HK, HORZ, HP, HT, HVY, ID, IF, INFO, INT, INTRM, JST(S), JT, K, KLF, KSF, LL, LLH, LLV, LOC, LONG, LOS, LP, LWC, LT, LT WT, M, MATL, MAX, MC, MECH, MEZZ, MFGR, MID, MIN, MISC, MOD, MSE, MTL, MULT, NIC, NO, NOM, NS, NTS, NWC, NWT, OC, OD, OF, OH, OPNG(S), OPP, PC, PCC, PCF, PCY, PERP, PL, PRCST, PRLL, PSC, PSF, RAD, RECM'D, RECT, REF, REINF, REQD, RIK, RND, RRIK, S4S, SCHED, SDL, SECT, SF, SHT, SIM, SOG, SP, SPEC(S), STD, STL, STRCT, STRCTL, SUPPTS, SYM, T, T/, T/O, T&B, TRANS, TEMP, TEN, TH, TOD, TYP, UON, V, VEG, VERT, VIF, W/, W/O, WD, WP, WPFG, WS, WWF, LOW POINT, LIGHTWEIGHT CONCRETE, LIGHT, LIGHTWEIGHT MOMENT, MATERIAL, MAXIMUM, MOMENT CONNECTION(S), MECHANICAL, MEZZANINE, MANUFACTURER, MIDDLE, MINIMUM, MISCELLANEOUS, MODERATE, MECHANICALLY STABILIZED EARTH, METAL, MULTIPLE, NOT IN CONTRACT, NUMBER, NOMINAL, NEAR SIDE, NOT TO SCALE, NORMAL WEIGHT CONCRETE, NORMAL WEIGHT, ON CENTER, OUTSIDE DIAMETER, OUTSIDE FACE, OPPOSITE HAND, OPENING(S), OPPOSITE, PIECE, POORLY CONSOLIDATED CONCRETE, POUNDS PER CUBIC FOOT, POUNDS PER CUBIC YARD, PERPENDICULAR, PLATE, PRECAST, PARALLEL, PRESTRESSED CONCRETE, POUNDS PER SQUARE FOOT, RADIUS, RECOMMENDED, RECTANGULAR, REFERENCE, REINFORCE(D) (ING) OR (MENT) REQUIRED, REPLACE IN-KIND, ROUND, REMOVE AND REPLACE IN-KIND, LUMBER SURFACED 4 SIDES, SCHEDULE(D), SUPERIMPOSED DEAD LOAD, SECTION, SQUARE FOOT (FEET), SHEET, SIMILAR, SLAB ON GRADE, SPACE, SPECIFICATION(S), STANDARD, STEEL, STRUCTURE, STRUCTURAL SUPPORT(S), SYMMETRICAL, TENSION, TOP OF, THROUGHOUT, TOP AND BOTTOM, TRANSVERSE, TEMPERATURE, TENSION, THICK OR THICKNESS, TOP OF DECK, TYPICAL, UNLESS OTHERWISE NOTED, SHEAR, VEGETATION, VERIFY IN FIELD, WITH, WITHOUT, WOOD, WORK POINT, WATERPROOFING, WATERSTOP, WELDED WIRE FABRIC.

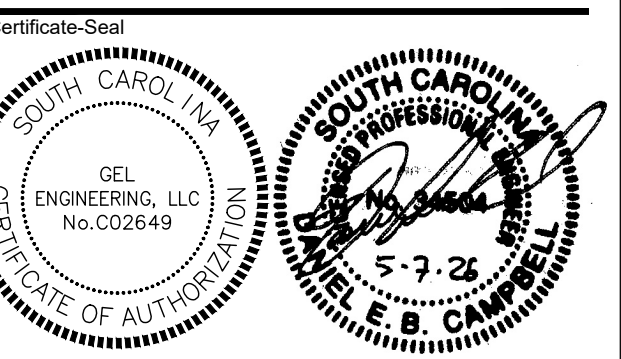


2040 Savage Road Charleston, SC 29407
P 843.769.7378 F 843.769.7397
www.GEL.com

a member of The GEL Group Inc
ENVIRONMENTAL • ENGINEERING • SURVEYING

Revisions table with columns: Description, By, Appr, Date. Includes entry: ADDENDUM 1, EL, DC, 05.07.26

Consultants



Client



Patriots Point Development Authority
40 Patriots Point Road
Mount Pleasant, SC 29464

Project
40 Patriots Point Road
Mount Pleasant, SC 29464

USS Yorktown
Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

General Notes II

Project No. Drawing No.
PPDA00124
Date: 05.07.26
Scale: AS SHOWN S1.1

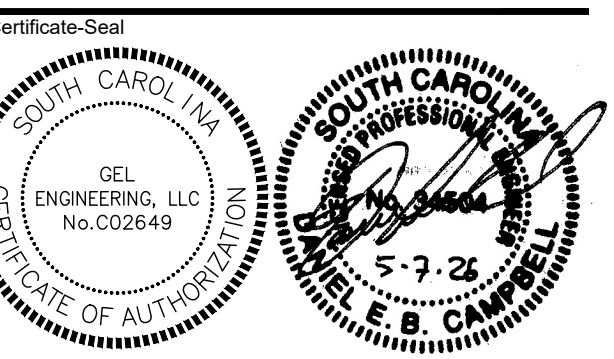
RELEASED FOR CONSTRUCTION

m:\clients\ppda-patriots point development authority\2024_projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00123 - base.dwg - \$1.1 (Plotted: 5/7/2026 10:04:55 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

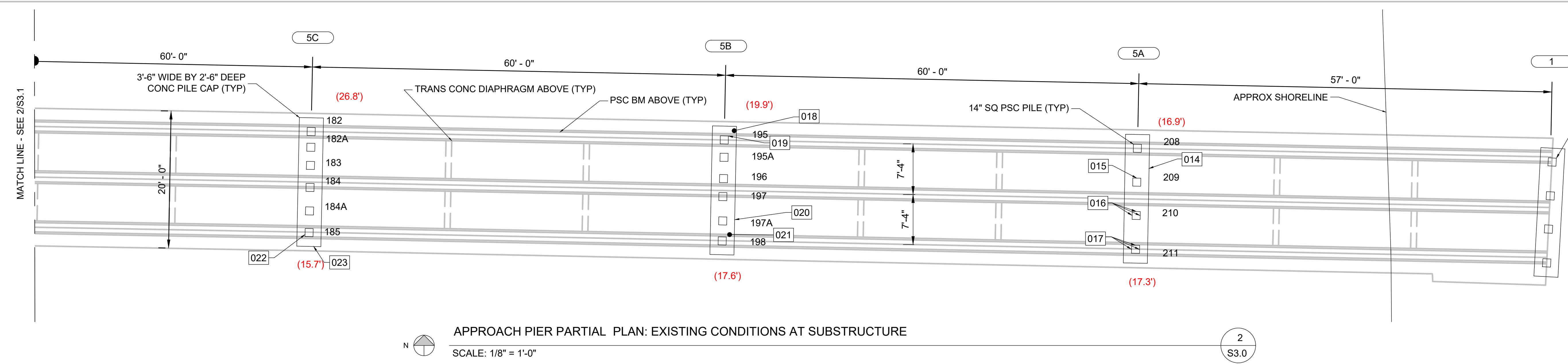
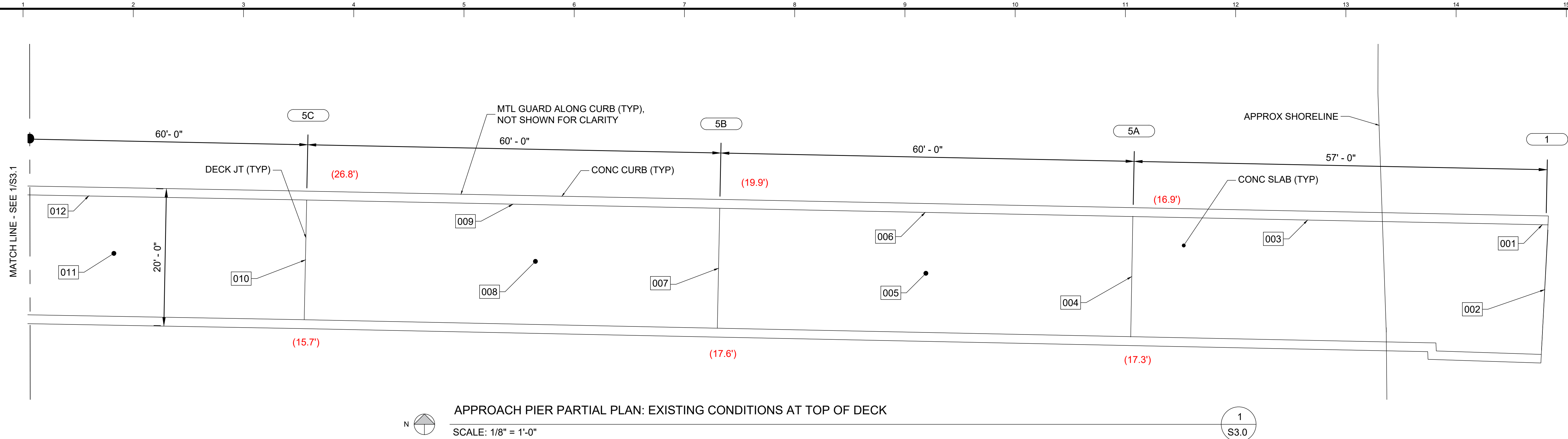
**USS Yorktown
 Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
**Existing Conditions at
 Approach Pier I**

Project No. _____ Drawing No. _____
 PPD000124
 Date 05.07.26
 Scale AS SHOWN **S3.0**

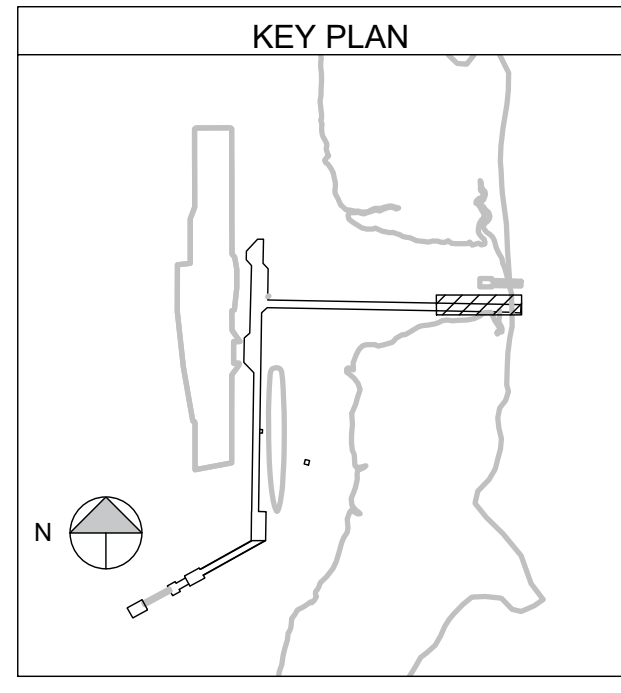
RELEASED FOR CONSTRUCTION



NOTE	ELEMENT	OBSERVATIONS										REPAIR				
		CONC DEFECTS					OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION			
		SPALL IMPENDING	SPALL EXPOSED	REINF # OF BARS	SHALLOW REINF	CRACK HOLLOW	CORR.	DETERIOR-ATION MISSING	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)			HEIGHT (IN)		
001	CURB	✓									8	16		8	LT DEBRIS BUILD UP	2/S7.0
002	JT MATL							✓				FULL			PREVIOUS REPAIR	4/S7.2
003	CURB		✓									8	5	1	LT DEBRIS AND VEG GROWTH	2/S7.0
004	JT MATL							✓				FULL			LT DEBRIS AND VEG GROWTH	4/S7.2
005	TOP OF DECK		✓		5	✓					72				N&S CURBS	3/S7.2
006	CURB						✓				180	1/16			N&S CURBS	3/S7.1
007	JT MATL								✓	✓		FULL			MISSING/LT DEBRIS AND VEG GROWTH	4/S7.2
008	TOP OF DECK		✓		20	✓					144					3/S7.2
009	CURB						✓				120	1/16			N&S CURBS	3/S7.1
010	JT MATL							✓				FULL			MINOR DEBRIS AND VEG GROWTH	4/S7.2
011	TOP OF DECK		✓		11	✓					144					3/S7.2
012	CURB						✓				120	1/16			N&S CURBS	3/S7.1
013	PILE	✓									8	8		3		3/S7.0
014	PILE CAP						✓				72	1/16			PREVIOUS REPAIR	1/S7.1
015	PILE						✓				14	1/16			HORZ	1/S7.1
016	PILE						✓				42	1/16			HORZ,N:W,E FACES	1/S7.1
017	PILE						✓				42	1/16			HORZ,N:W,E FACES	1/S7.1

NOTE	ELEMENT	OBSERVATIONS										REPAIR				
		CONC DEFECTS					OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION			
		SPALL IMPENDING	SPALL EXPOSED	REINF # OF BARS	SHALLOW REINF	CRACK HOLLOW	CORR.	DETERIOR-ATION MISSING	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)			HEIGHT (IN)		
018	PILE CAP	✓			1						18	4	1/2		AT UNDERSIDE	3/S7.0
019	PILE CAP	✓			1		✓				8	4	1/2		AT UNDERSIDE	3/S7.0
020	PILE CAP	✓			2			✓			36		6	24		3/S7.0
021	PILE CAP		✓								12	12			AT UNDERSIDE	2/S7.0
022	PILE CAP	✓			5						5	14	7			3/S7.0
023	PILE CAP	✓			✓	1	✓				12	2	1/4			3/S7.0

- SHEET NOTES**
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC DATED MARCH 1980, THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
 - PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
 - 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
 - (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
 - PILES TYPICALLY COVERED WITH MARINE GROWTH FROM THE WATERLINE TO THE MUDLINE.

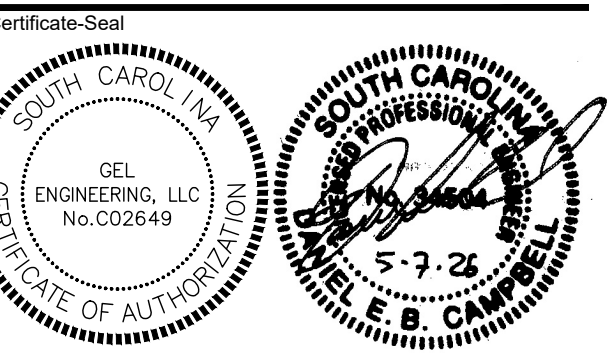


m:\clients\ppdpatriots point development authority\2024_projects\ppda0124_uss_yorktown_pier_assessment\2.0_cad\ppda0123_base.dwg - S3.0 (Plotted: 5/7/2026 10:10:11 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

**USS Yorktown
 Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

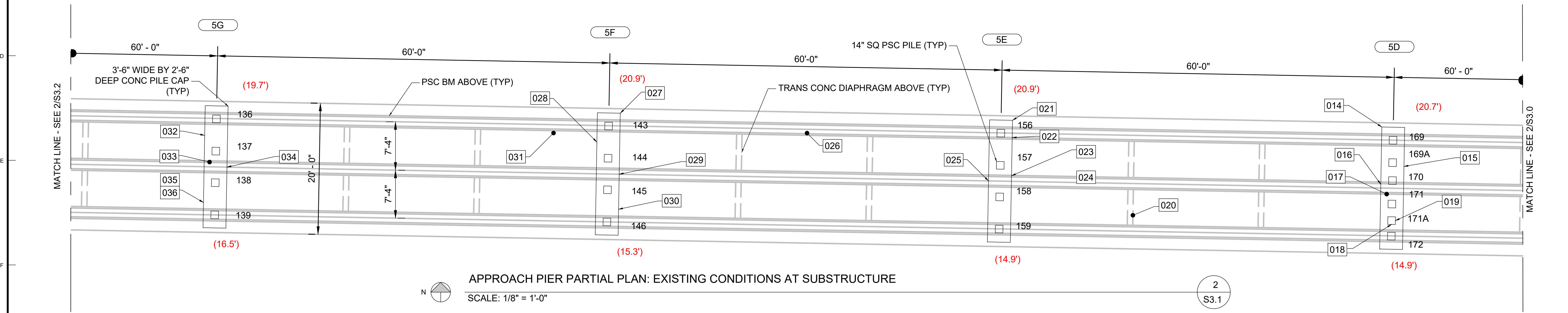
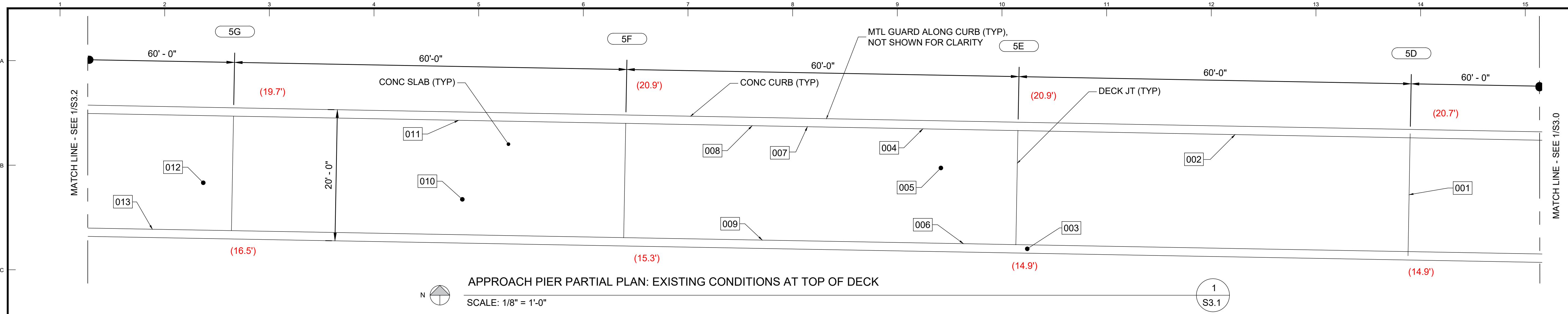
Sheet Title

**Existing Conditions at
 Approach Pier II**

Project No. _____ Drawing No. _____
 PPD00124
 Date: 05.07.26
 Scale: AS SHOWN

S3.1

RELEASED FOR CONSTRUCTION

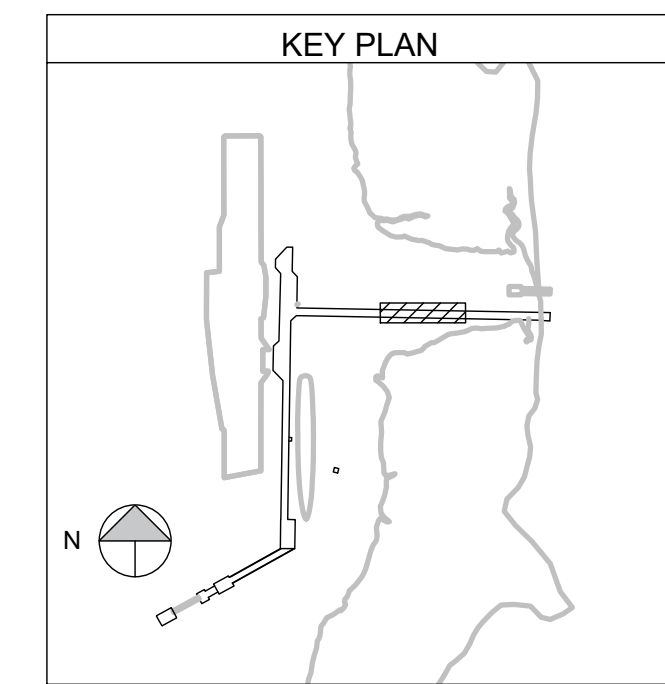


NOTE	ELEMENT	OBSERVATIONS										REPAIR					
		CONC DEFECTS					OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION				
		SPALL IMPENDING	SPALL EXPOSED	REIN#	# OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR. DETERIORATION	MISSING	LENGTH (IN)			WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)	
001	JT MATL															MINOR DEBRIS AND VEG GROWTH	4/S7.2
002	CURB															N & S CURBS	3/S7.1
003	CURB	✓															2/S7.0
004	CURB	✓															2/S7.0
005	TOP OF DECK		✓		1												3/S7.2
006	CURB	✓															2/S7.0
007	CURB															N & S CURBS	3/S7.1
008	CURB	✓															2/S7.0
009	CURB	✓	✓														2/S7.0
010	TOP OF DECK			✓	16	✓											3/S7.2
011	CURB															N & S CURBS	3/S7.1
012	TOP OF DECK		✓	1	✓												3/S7.2
013	CURB		✓	1	✓												3/S7.2
014	PILE CAP	✓															3/S7.2
015	PILE CAP	✓	✓													BOT EDGE	2/S7.0
016	PILE CAP																1/S7.1
017	PILE CAP															T/O UNDERSIDE	2/S7.0
018	PILE															VERT CS	1/S7.1
019	PILE															VERT CS	1/S7.1
020	DIAPHRAGM	✓	✓	1												2 LOC; TOTAL	3/S7.0
021	PILE CAP																1/S7.1
022	PILE CAP	✓															2/S7.0
023	PILE CAP															6-IN FROM BOT; CS	1/S7.1
024	PILE CAP	✓														E FACE	2/S7.0
025	PILE CAP															CS	1/S7.1
026	BEAM	✓															1/S7.2
027	PILE CAP	✓															2/S7.0
028	PILE CAP	✓	✓	✓	1	✓											3/S7.0

NOTE	ELEMENT	OBSERVATIONS										REPAIR						
		CONC DEFECTS					OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION					
		SPALL IMPENDING	SPALL EXPOSED	REIN#	# OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR. DETERIORATION	MISSING	LENGTH (IN)			WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)		
029	PILE CAP																CS	1/S7.1
030	PILE CAP																VERT & HORZ	1/S7.1
031	BEAM	✓	✓	✓	1	✓											AT UNDERSIDE	1/S7.2
032	PILE CAP	✓	✓															2/S7.0
033	PILE CAP																HORZ	1/S7.1
034	PILE CAP																AT UNDERSIDE; CS	1/S7.1
035	PILE CAP																PCC AT UNDERSIDE	2/S7.0
036	PILE CAP																AT UNDERSIDE	1/S7.1

SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC DATED MARCH 1980, THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH MARINE GROWTH FROM THE WATERLINE TO THE MUDLINE.

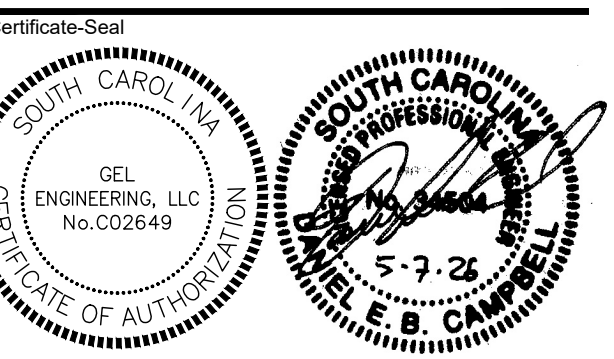


m:\clients\ppdpatriots point development authority\2024\projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00123 - base.dwg - S3.1 (Plotted: 5/7/2026 10:06:15 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

**USS Yorktown
 Pier Repairs**

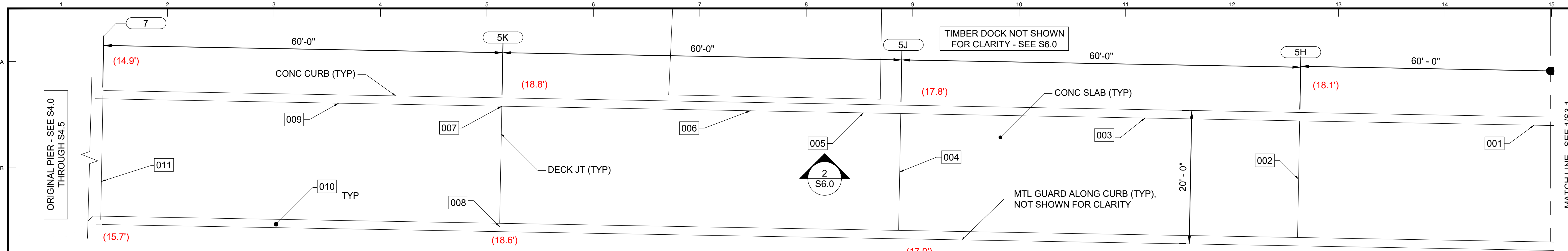
This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

**Existing Conditions at
 Approach Pier III**

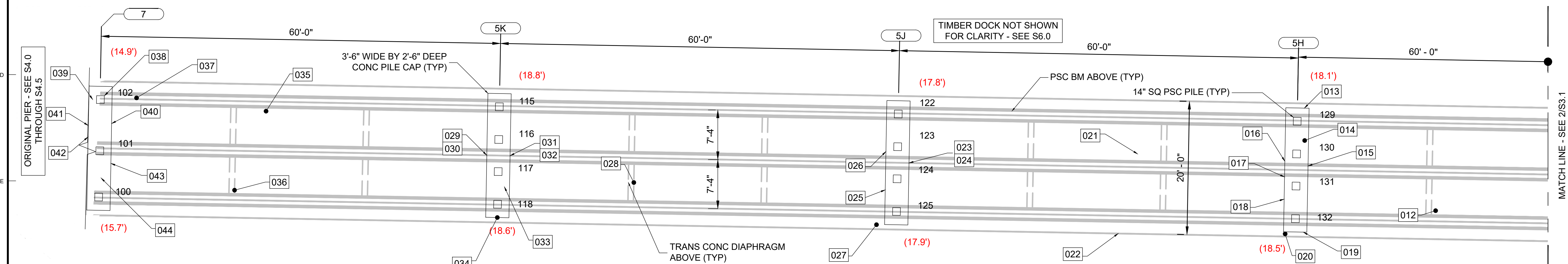
Project No. _____ Drawing No. _____
 PPD000124
 Date 05.07.26
 Scale AS SHOWN
S3.2

RELEASED FOR CONSTRUCTION



APPROACH PIER PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK

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



APPROACH PIER PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE

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

OBSERVATIONS

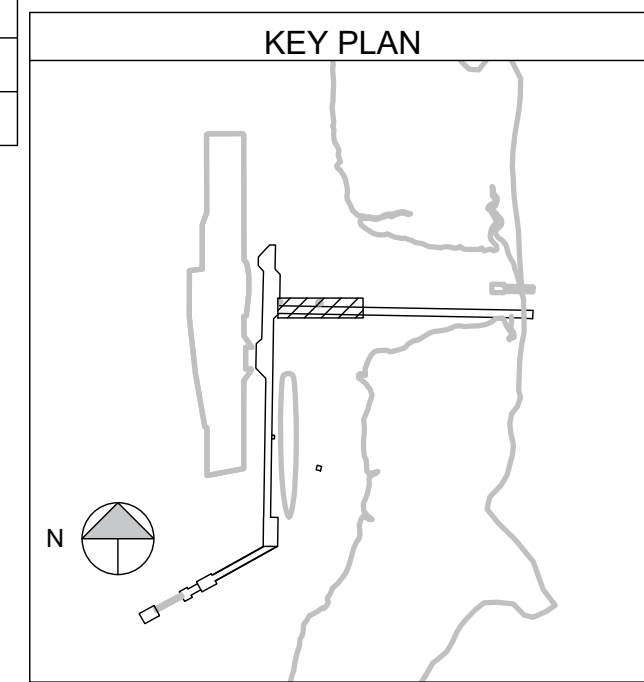
NOTE	ELEMENT	CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION	REPAIR	
		SPALL IMPENDING	SPALL EXPOSED	REIN#	# OF BARS	SHALLOW REIN#	CRACK	HOLLOW	CORR.	DETERIOR-ATION	MISSING	LENGTH (IN)	WIDTH (IN)			DEPTH (IN)
001	CURB						✓				180	1/16			N & S CURBS	3/S7.1
002	JT MATL							✓						FULL	MINOR DEBRIS BUILD UP	4/S7.2
003	CURB						✓				180	1/16			N & S CURBS	3/S7.1
004	JT MATL								✓					FULL	MINOR DEBRIS BUILD UP AND VEG GROWTH	4/S7.2
005	CURB										68	15		12	SECTION REMOVED FOR DOCK ACCESS	2/S7.3
006	CURB						✓				120	1/16			N & S CURBS	3/S7.1
007	JT MATL								✓							4/S7.2
008	JT MATL								✓						MINOR DEBRIS BUILD UP	4/S7.2
009	CURB						✓				240	1/16			N & S CURBS	3/S7.1
010	GUARD							✓							LT-TO-MOD T/O	5/S7.2
011	JT MATL								✓		240	FULL			DETERIORATED JT MATL	4/S7.2
012	DIAPHRAGM	✓									10	4	3		1 UTILITY BOLT EXPOSED	2/S7.0
013	PILE CAP		✓									42	4			2/S7.0
014	PILE CAP						✓				224	3/8			ALONG UNDERSIDE; CS	1/S7.1
015	PILE CAP							✓			224			16	PCC	2/S7.0
016	PILE CAP						✓				224	1/4			ALONG UNDERSIDE; CS	1/S7.1
017	PILE CAP	✓									10	10		10		2/S7.0
018	PILE CAP		✓								67			12		2/S7.0
019	PILE CAP		✓									42	12			2/S7.0
020	DECK	✓									24	16	3			2/S7.0
021	DECK	✓	✓	✓	2	✓					3	3	1/2		3 LOC; EA	3/S7.0
022	DECK	✓	✓	✓	4	✓					10	4	1/2		4 LOC; EA	3/S7.0
023	PILE CAP						✓				224	1/4				1/S7.1
024	PILE CAP		✓								224			24	CS	2/S7.0
025	PILE CAP		✓								96	30				2/S7.0
026	PILE CAP						✓				224	3/16			CS	1/S7.1
027	DECK	✓		✓	6						24	24	5		AT UNDERSIDE	3/S7.0

OBSERVATIONS

NOTE	ELEMENT	CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION	REPAIR	
		SPALL IMPENDING	SPALL EXPOSED	REIN#	# OF BARS	SHALLOW REIN#	CRACK	HOLLOW	CORR.	DETERIOR-ATION	MISSING	LENGTH (IN)	WIDTH (IN)			DEPTH (IN)
028	DIAPHRAGM	✓									30	8		4		2/S7.0
029	PILE CAP							✓			180	1/4				1/S7.1
030	PILE CAP		✓								8	4				2/S7.0
031	PILE CAP	✓	✓	✓		✓					224		1 1/2	30		3/S7.0
032	PILE CAP						✓					1/4			CS	1/S7.1
033	DIAPHRAGM	✓		✓	1	✓					30	8	4		UTILITY BRACKET DISCONNECTED	3/S7.0
034	DECK	✓									24	8		3	AT UNDERSIDE	2/S7.0
035	ROD							✓							AT THRU RODS; TYP 2 PER SPAN FACE	5/S7.2
036	DIAPHRAGM	✓	✓	✓	4	✓					21	21	3		4 LOC; TOTAL	3/S7.0
037	DECK	✓		✓	1						24	4	3		AT UNDERSIDE	3/S7.0
038	PILE						✓					1/16			VERT & HORZ AT ALL FACES IN EXPOSED T/ 16-IN OF PILE W/ CS; HEAVY MARINE GROWTH BELOW	1/S7.1
039	BEAM	✓		✓	1	✓					10	4	1		UP TO 15% LOS	1/S7.2
040	PILE CAP										532			36	PREVIOUS SHOTCRETE REPAIR AT ALL FACES	NOTE 4/S7.0
041	DECK	✓		✓	1	✓					6	4	3/4		AT CLOSURE POUR AT UNDERSIDE; UP TO 15% LOS	3/S7.0
042	DECK	✓		✓	1	✓					16	8	1		AT CLOSURE POUR; UP TO 15% LOS	3/S7.0
043	BEAM	✓									10	24		4	AT BEARING	2/S7.0
044	DIAPHRAGM	✓		✓	1	✓					30	8	4			3/S7.0

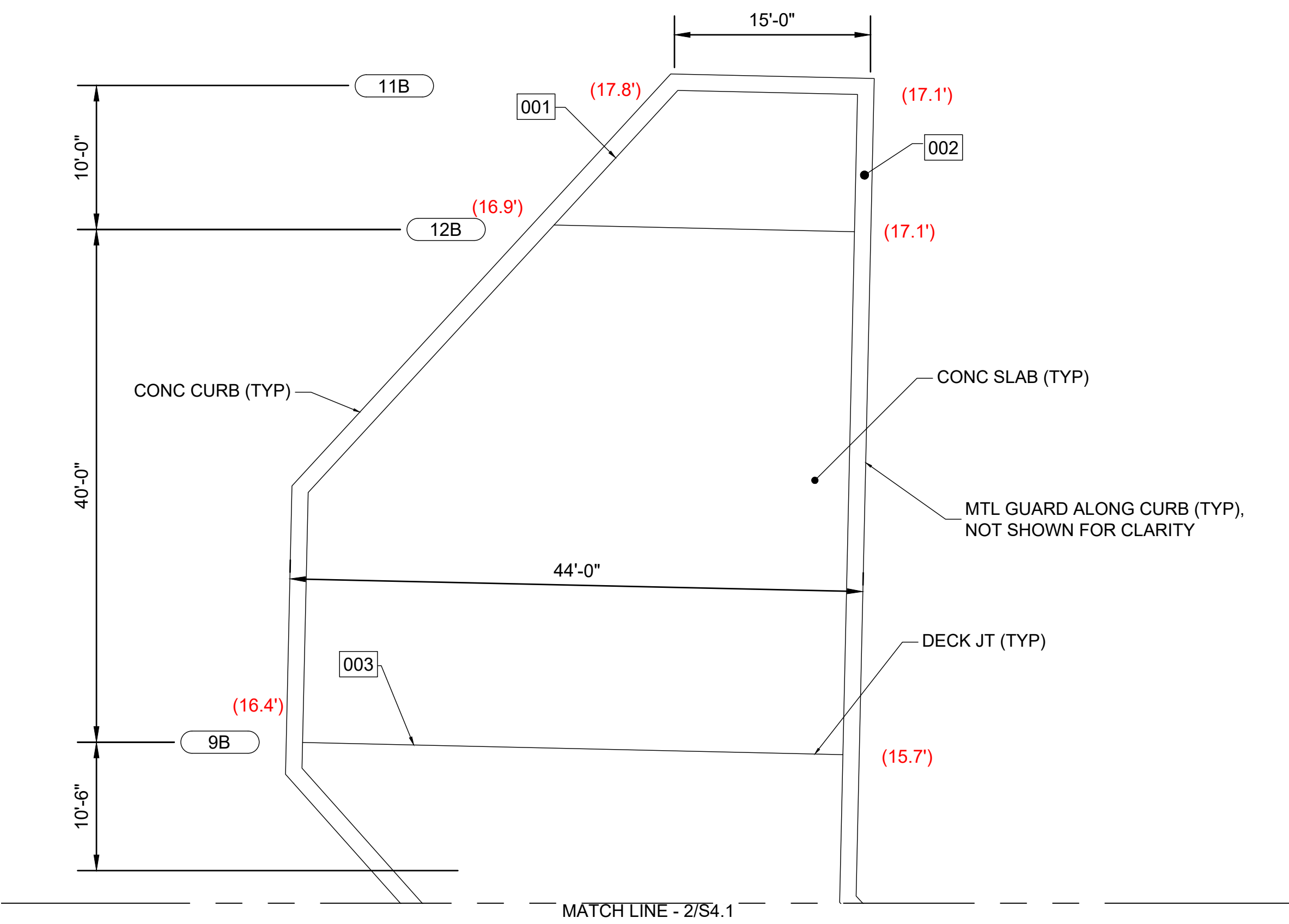
SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRAHY, INC DATED MARCH 1980, THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 0000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH MARINE GROWTH FROM THE WATERLINE TO THE MUDLINE.



m:\clients\ppdp-patriots point development authority\2024_projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00123 - base.dwg - S3.2 (Plotted: 5/7/2026 10:09:00 AM)

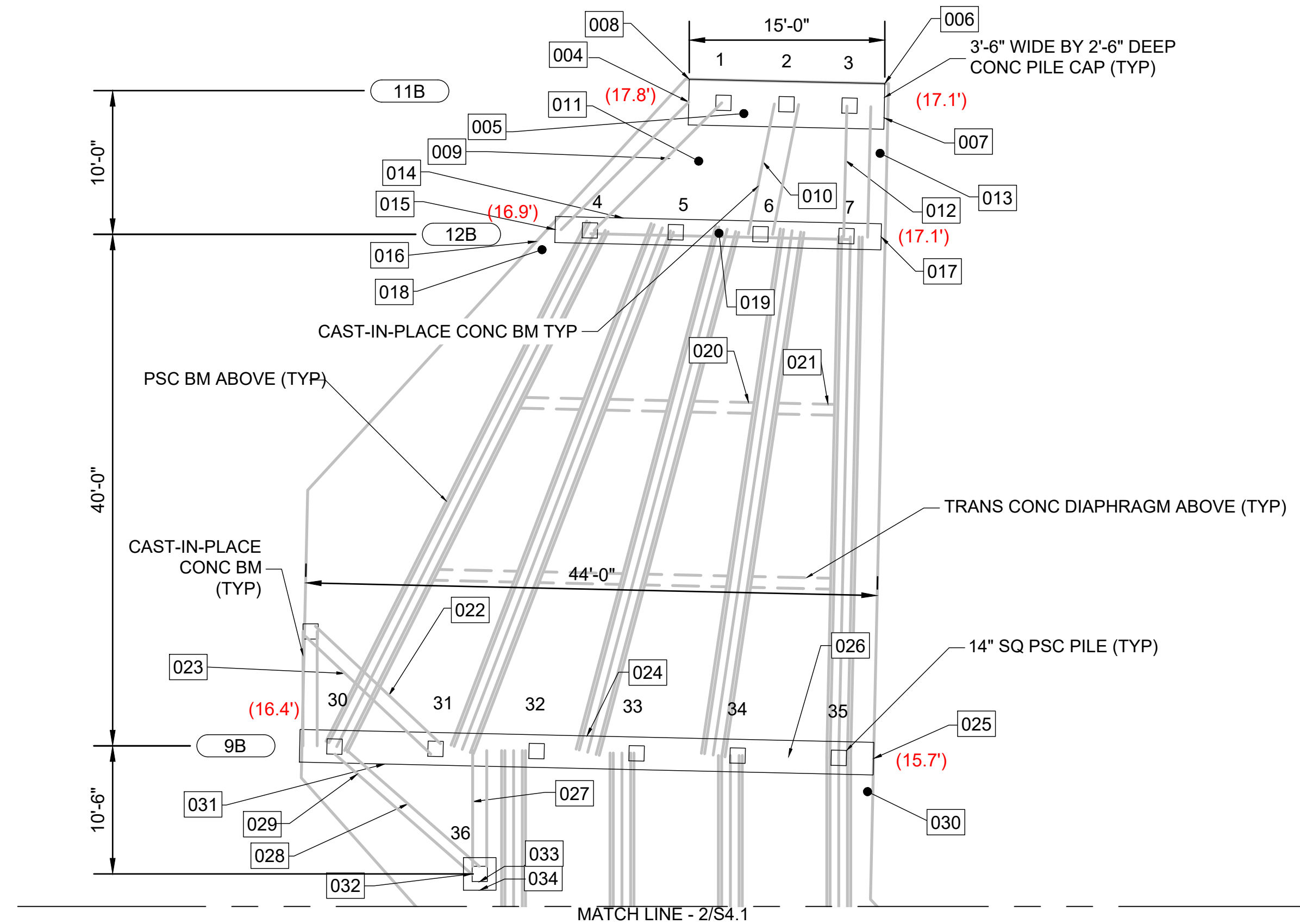
THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK

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

1
S4.0



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE

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

2
S4.0

NOTE	ELEMENT	OBSERVATIONS										DESCRIPTION	REPAIR			
		CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS						
		SPALL IMPENDING	SPALL EXPOSED	REIN#	# OF BARS	SHALLOW REIN#	CRACK	HOLLOW	CORR. DETERIORATION	MISSING	LENGTH (IN)			WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)
001	CURB						✓				86	1/16			E & W CURBS	3/S7.1
002	GUARD							✓							8 LOC	5/S7.2
003	JT MATL								✓		516				DEBRIS BUILD UP	4/S7.2
004	PILE CAP						✓				84	1/16			VERT & HORZ; CS	1/S7.1
005	PILE CAP						✓				30	1/16			AT UNDERSIDE	1/S7.1
006	PILE CAP	✓									17	12	3/4			2/S7.0
007	PILE CAP	✓									5	5	1			2/S7.0
008	PILE CAP	✓									6	4	3/4			2/S7.0
009	BEAM	✓	✓		3						60	12		16	UP TO 50% LOS	2/S7.2
010	BEAM	✓	✓	✓	8						60	12	16		UP TO 50% LOS (PHOTO 1)	2/S7.2
011	DECK	✓	✓	✓			✓				10	3	1/2		AT UNDERSIDE	2/S7.0
012	BEAM	✓	✓	✓	6						96	12		16	UP TO 50% LOS	2/S7.2
013	DECK						✓								EXPOSED CHAIRS; CS TYP AT UNDERSIDE	3/S7.2
014	PILE CAP						✓				300	1/16			VERT & HORZ	1/S7.1
015	PILE CAP	✓		✓	1						4	4	1/2			3/S7.0
016	DECK	✓		✓	2						20	5	2		3 LOC; EA; AT UNDERSIDE	3/S7.0
017	PILE CAP						✓				60	1/8			VERT & HORZ; CS; EXTENTS TO UNDERSIDE T/ 12-IN OF PILE 7	1/S7.1
018	DECK	✓		✓	5						12	8	1		4 LOC; EA; UP TO 15% LOS	3/S7.0
019	PILE CAP						✓				60	1/16			AT UNDERSIDE; CS	1/S7.1
020	DIAPHRAGM	✓		✓							6	12	1/4			3/S7.0
021	DIAPHRAGM														CS AT DIAPHRAGM CONNECTION HARDWARE	3/S7.3
022	PILE CAP						✓				240	1/8			VERT & HORZ	1/S7.1
023	PILE CAP						✓				144	3/16			HORZ	1/S7.1
024	PILE CAP						✓				132	1/16			VERT & HORZ	1/S7.1
025	PILE CAP						✓				72	1/16			VERT & HORZ	1/S7.1
026	DIAPHRAGM	✓		✓	5						48	12	3		UP TO 30% LOS (PHOTO 2)	3/S7.0
027	BEAM	✓		✓	2						16	6	1/2		UP TO 50% LOS	2/S7.2
028	BEAM	✓		✓	1						12	6	1 1/2		UP TO 50% LOS	2/S7.2
029	BEAM		✓								48	2				2/S7.0
030	DECK	✓		✓	9	✓					6	3	1		UP TO 30% LOS	3/S7.2
031	PILE CAP										1140			24	SHOTCRETE	NOTE 4/S7.0
032	PILE CAP						✓				10	1/16			VERT EXTENTS TO PILE 36	1/S7.1
033	PILE						✓				6	1/32			VERT; CS	1/S7.1
034	PILE CAP						✓				36	1/32			VERT	1/S7.1



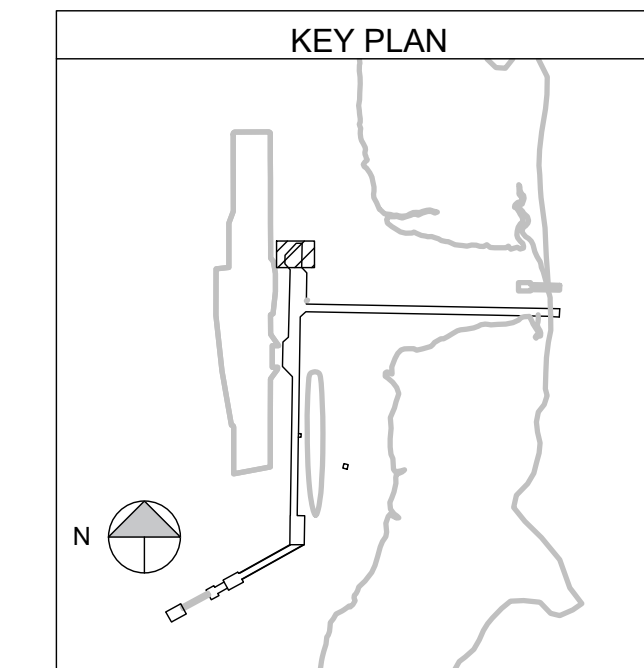
PHOTOGRAPH 1



PHOTOGRAPH 2

SHEET NOTES

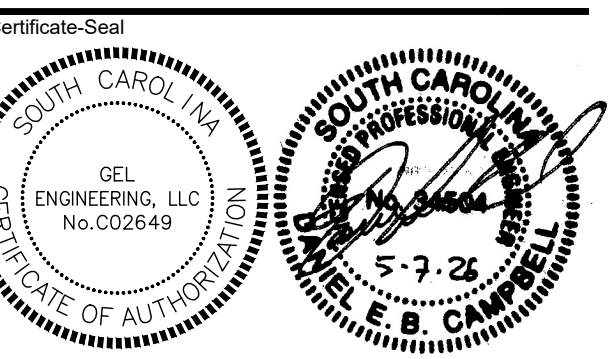
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.



Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
40 Patriots Point Road
Mount Pleasant, SC 29464

Project
40 Patriots Point Road
Mount Pleasant, SC 29464

USS Yorktown
Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Existing Conditions at
Original Pier Head I

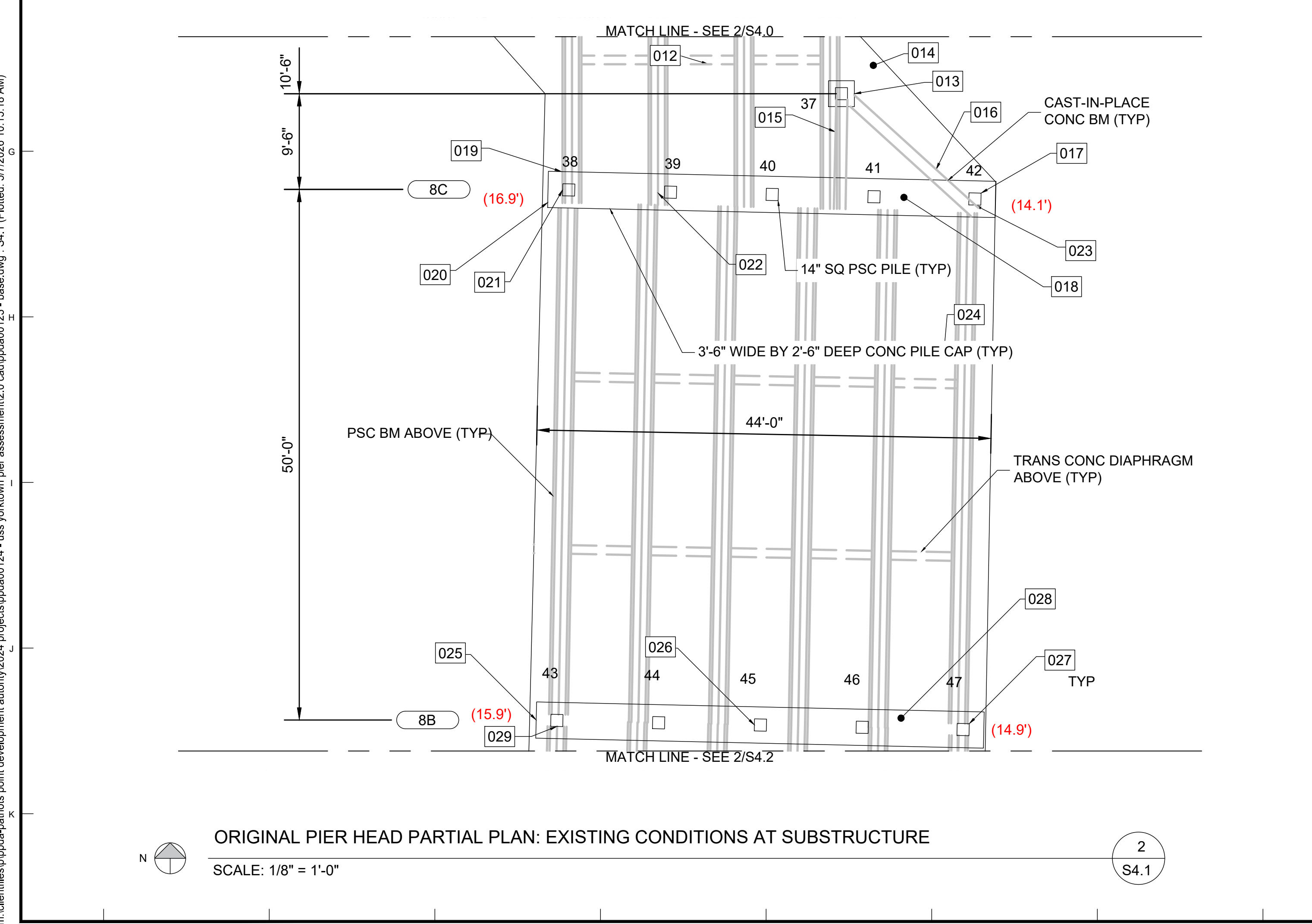
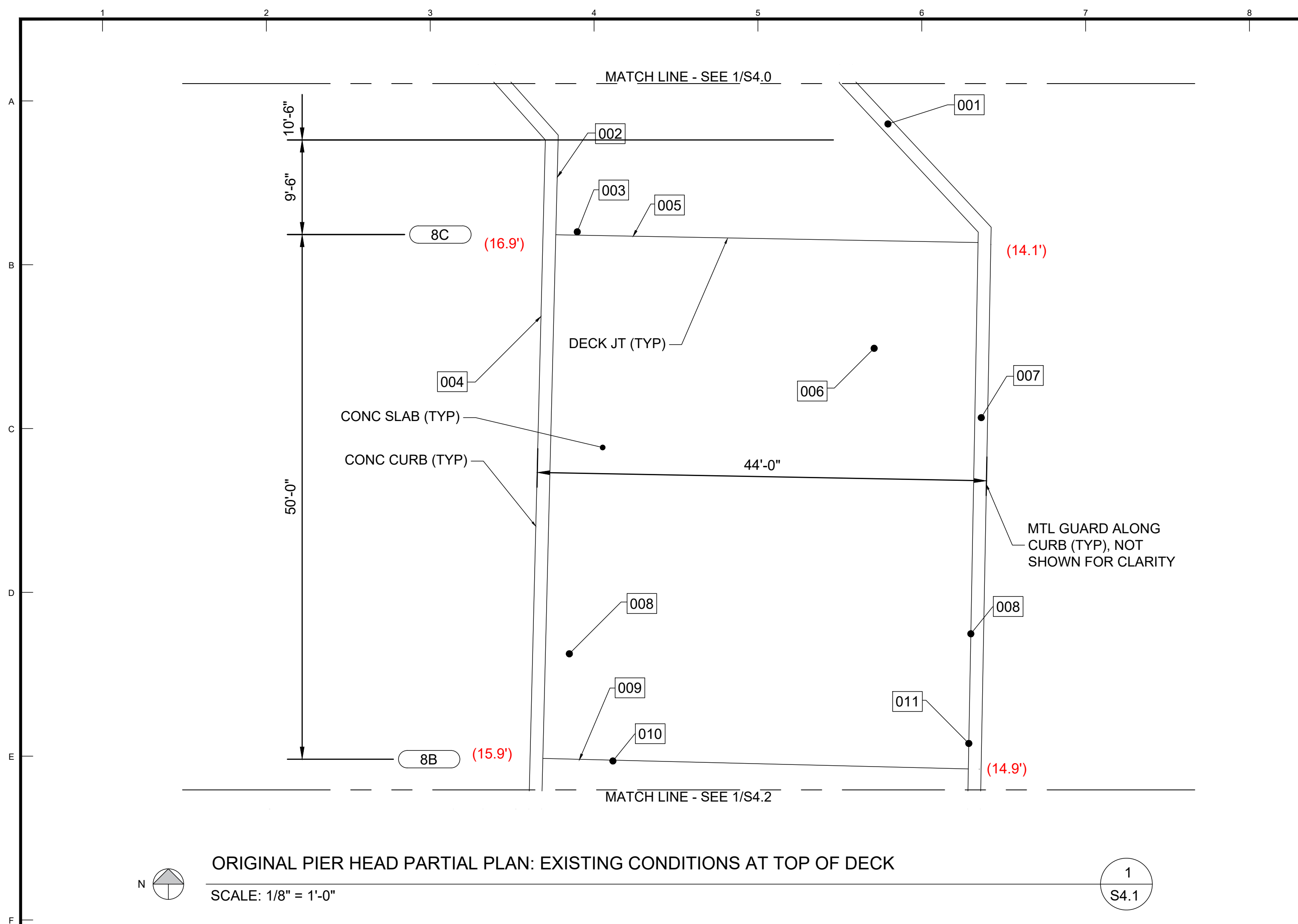
Project No. _____ Drawing No. _____
PPDA00124
Date
05.07.26
Scale
AS SHOWN

S4.0

RELEASED FOR CONSTRUCTION

m:\clients\ppda-patriots point development authority\2024_projects\ppda00124_uss_yorktown_pier_assessment\2.0_cad\ppda00123_base.dwg - S4.0 (Plotted: 5/7/2026 10:14:43 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.



NOTE	ELEMENT	OBSERVATIONS											DESCRIPTION	REPAIR			
		CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS							
		SPALL IMPENDING	SPALL EXPOSED	REINFC	# OF BARS	SHALLOW REINFC	CRACK	HOLLOW	CORR. DETERIORATION	MISSING	LENGTH (IN)	WIDTH (IN)			DEPTH (IN)	HEIGHT (IN)	
001	GUARD															8 LOC	5/S7.2
002	CURB															E & W CURBS	3/S7.1
003	TOP OF DECK	✓														2 LOC; EA	2/S7.0
004	CURB		✓														2/S7.0
005	JT MATL															DEBRIS BUILD UP	4/S7.2
006	TOP OF DECK	✓		✓	1											LT SURFACE CORROSION (PHOTO 1)	3/S7.0
007	GUARD															2 LOC	5/S7.2
008	OTHER															LOOSE/ NOT ENGAGED BOLLARD HARDWARE	TIGHTEN
008	TOP OF DECK				10	✓											3/S7.2
009	JT MATL															DEBRIS BUILD UP	4/S7.2
010	CURB				10	✓											3/S7.2
011	CURB	✓															2/S7.0
012	DIAPHRAGM	✓		✓	2											UP TO 30% LOS	3/S7.0
013	PILE CAP						✓									VERT & HORZ	1/S7.1
014	DECK	✓			15	✓										UP TO 30% LOS	3/S7.0
015	BEAM	✓	✓	✓	1											UP TO 30% LOS	3/S7.0
016	BEAM	✓	✓	✓	2											W/ PCC; UP TO 30% LOS (PHOTO 2)	3/S7.0
017	PILE							✓								2 LOC; EA; VERT; CS	1/S7.1
018	PILE CAP							✓								AT UNDERSIDE	1/S7.1
019	PILE CAP															SHOTCRETE AT N,E & S FACES	NOTE 4/S7.0
020	PILE CAP							✓								VERT & HORZ	1/S7.1
021	PILE							✓								VERT	1/S7.1
022	BEAM	✓		✓	2											2 LOC; EA; UP TO 25% LOS	1/S7.2
023	PILE							✓								VERT	1/S7.1
024	DECK				3	✓										EA; UP TO 25% LOS	3/S7.2
025	PILE CAP							✓								VERT & HORZ; W/ EFFLO CS	1/S7.1
026	PILE							✓								VERT; CS	1/S7.1
027	PILE															SHOTCRETE VISIBLE ON ALL PILES	NOTE 4/S7.0
028	BEAM															SHOTCRETE SPALLING IN ISO LOC AT BEAM SEATS; SHOTCRETE COVERS ~ 4-FT OF BEAMS	NOTE 4/S7.0
029	PILE							✓								VERT	1/S7.1

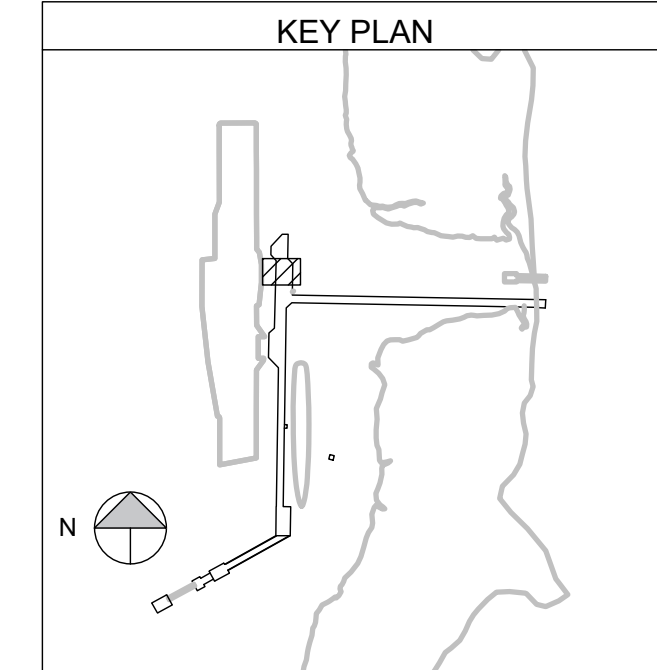


PHOTOGRAPH 1



PHOTOGRAPH 2

- SHEET NOTES**
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
 - PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
 - 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
 - (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
 - PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.

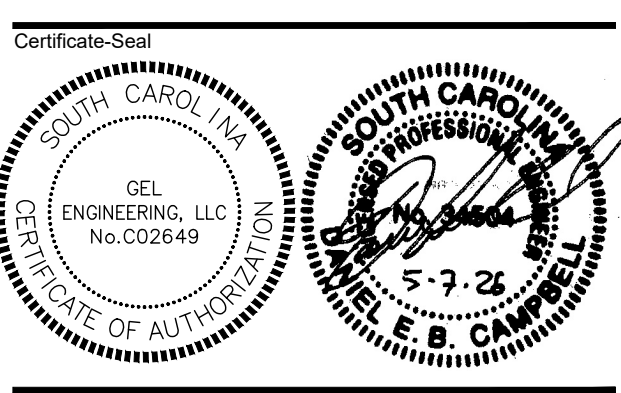


a member of The GEL Group Inc
 ENVIRONMENTAL • ENGINEERING • SURVEYING

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

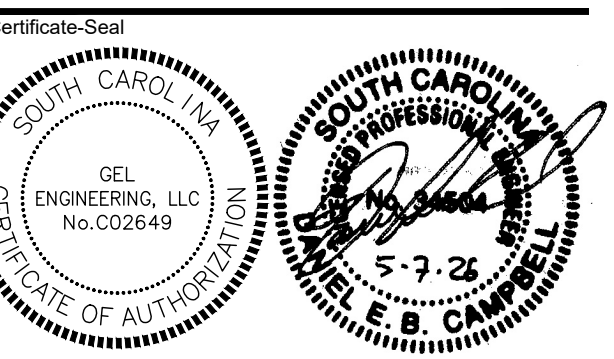
USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Existing Conditions at
 Original Pier Head II

Revisions	Description	By	Appr	Date
	ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
	ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

**USS Yorktown
 Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

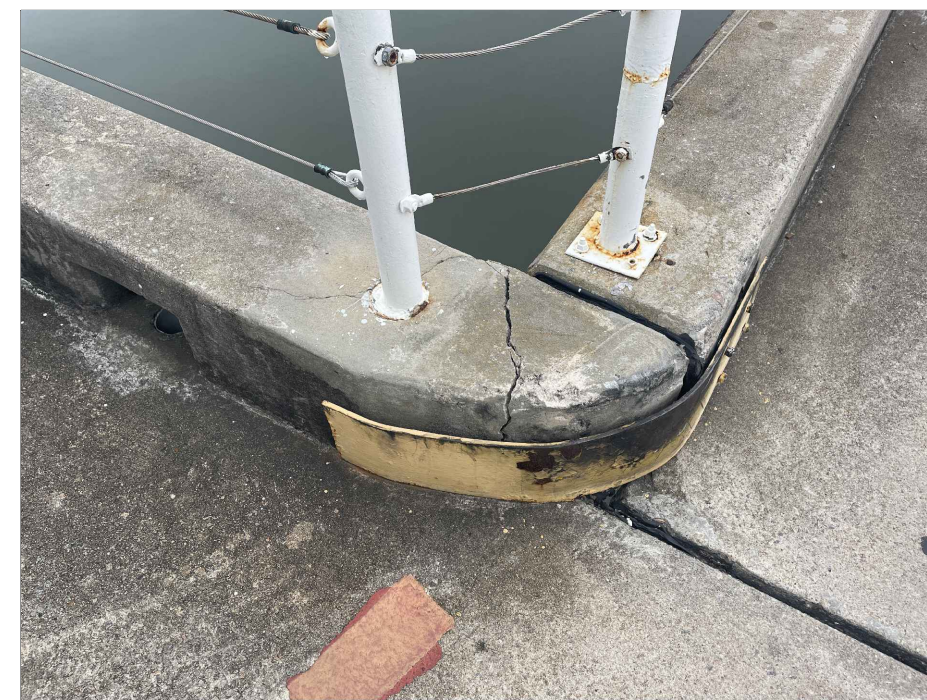
**Existing Conditions at
 Original Pier Head III**

Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN

S4.2

RELEASED FOR CONSTRUCTION

NOTE	ELEMENT	OBSERVATIONS										DESCRIPTION	REPAIR			
		CONC DEFECTS					OTHER DEFECTS		APPROX EXTENTS							
		SPALL IMPENDING	SPALL EXPOSED	REINF	# OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR.	DETERIOR-ATION	MISSING			LENGTH (IN)	WIDTH (IN)	DEPTH (IN)
001	GUARD						✓		✓		2	1/16			IN RAIL VERT; HVY CORROSION AT BASE PL UP TO 50% LOS	RRIK
002	CURB							✓			25	1/16			E & W CURB	3S/7.1
003	CURB	✓	✓								36	14		11	IMPACT DAMAGE (PHOTO 1)	2/S7.0
004	JT MATL								✓		492					4/S7.2
005	TOP OF DECK				5	✓					8	1/2			5 LOC; EA	3/S7.2
006	CURB							✓			60	1/16				3S/7.1
007	TOP OF DECK							✓			40	1/16				2/S7.1
008	DECK				3	✓					20				AT UNDERSIDE	3/S7.2
009	PILE CAP										516			30	SHOTCRETE	NOTE 4/S7.0
010	BEAM	✓		✓	1						9	2	2		UP 10% LOS (PHOTO 2)	3/S7.0
011	BEAM		✓								5	3				2/S7.0
012	PILE		✓								20	4	3			2/S7.0



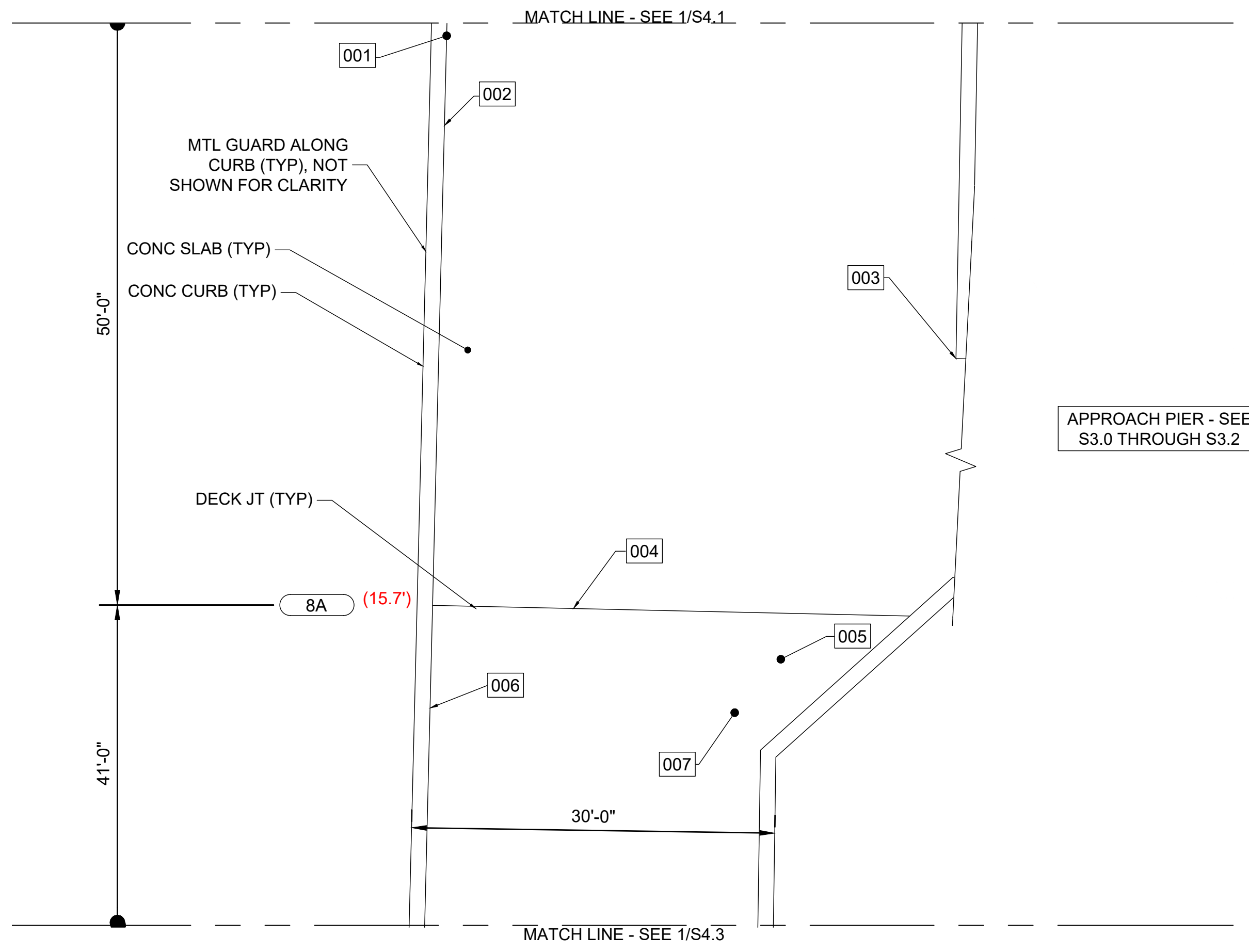
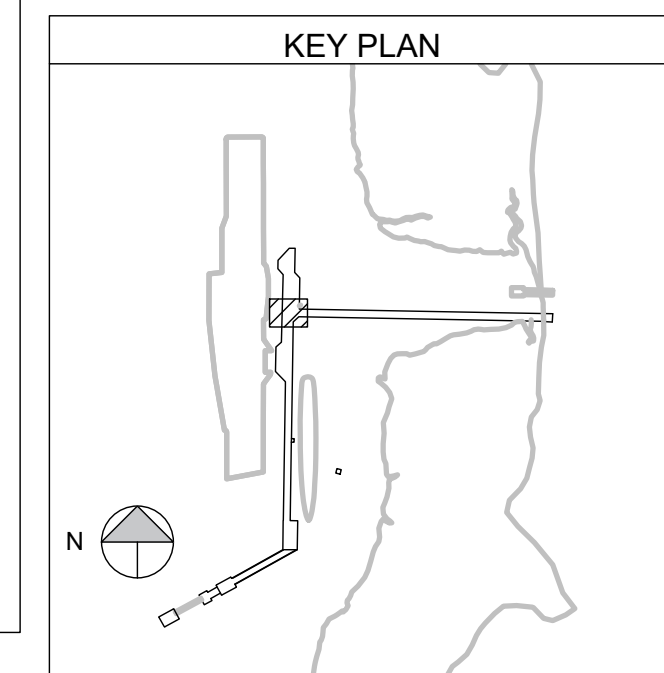
PHOTOGRAPH 1



PHOTOGRAPH 2

SHEET NOTES

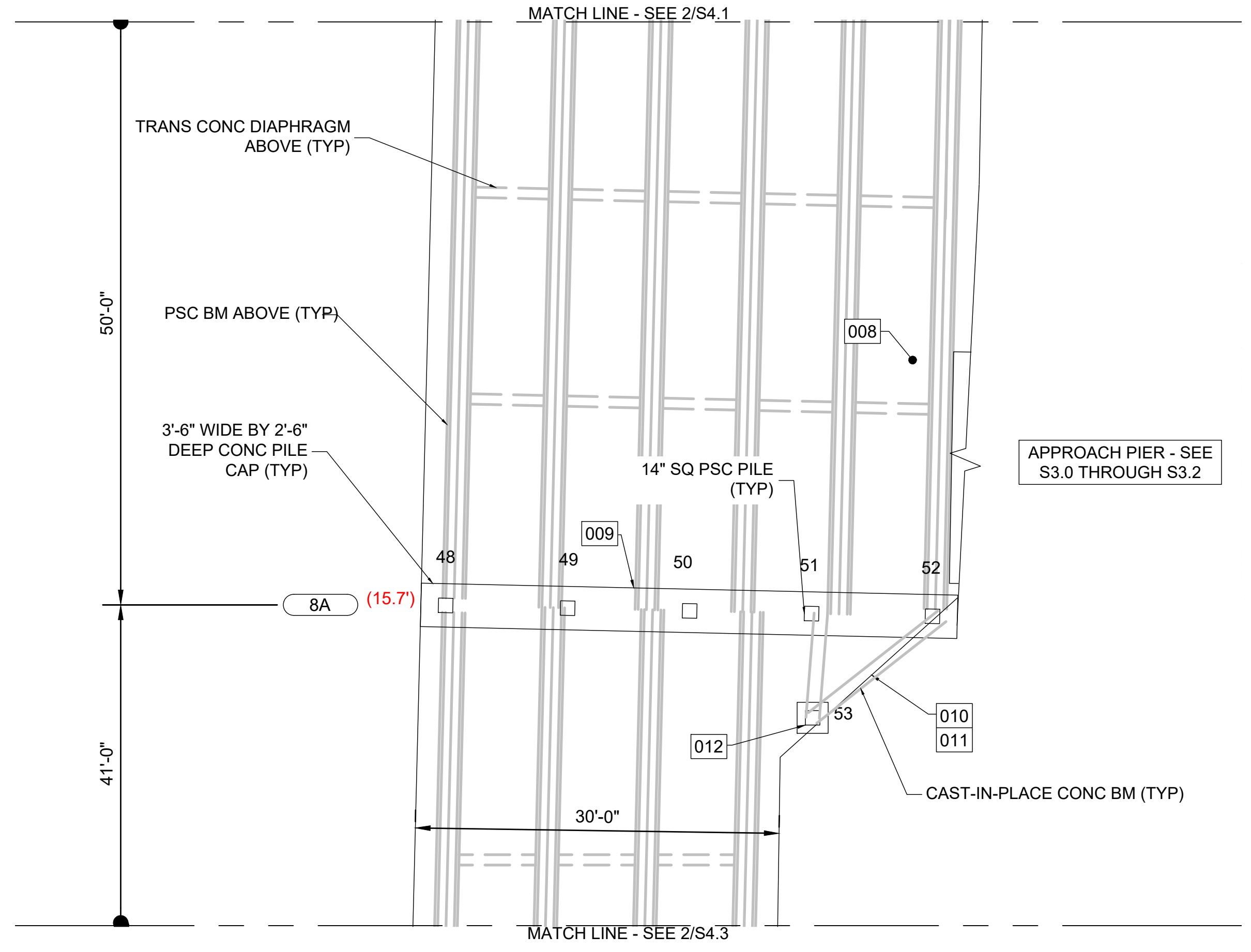
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK

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

1
S4.2



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE

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

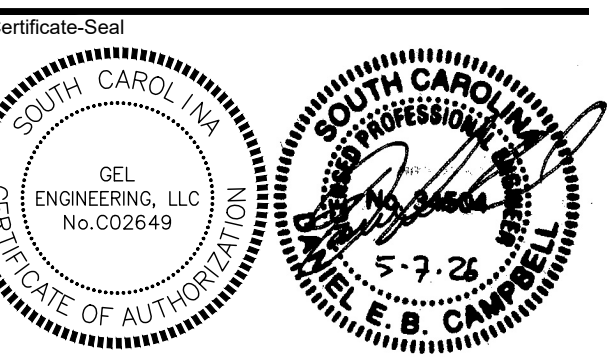
2
S4.2

m:\clients\ppdp-patriots point development authority\2024_projects\ppda0124_uss_yorktown_pier_assessment\2.0_cad\ppda0124_base.dwg - S4.2 (Plotted: 5/7/2026 10:16:47 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions	Description	By	Appr	Date
	ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
	ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

**USS Yorktown
 Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

**Existing Conditions at
 Original Pier Head IV**

Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN

S4.3

RELEASED FOR CONSTRUCTION

NOTE	ELEMENT	OBSERVATIONS										REPAIR							
		CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS			DESCRIPTION						
		SPALL IMPENDING	SPALL EXPOSED	REINF # OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR.	DETERIORATION	MISSING	LENGTH (IN)			WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)			
001	JT MATL													360				E & W CURB	4/S7.2
002	CURB													35	1/16			4 LOC	3S/7.1
003	GUARD																	UP TO 75% LOS AT BOLLARD	5/S7.2
004	GUARD																	AT CURB (PHOTO 1)	2/S7.0
005	CURB	✓	✓											15	11		13		4/S7.2
006	JT MATL													528					3S/7.1
007	CURB													48	1/16			E & W CURB	3S/7.1
008	GUARD																	4 LOC	5/S7.2
009	BEAM	✓												6	22	6			2/S7.0
010	PILE CAP													1056			30	SHOTCRETE N & S FACES	NOTE 4/S7.0
011	PILE CAP	✓												4	2	2			2/S7.0
012	BEAM	✓	✓											2	22	5			2/S7.0
013	DECK	✓	✓	✓	4									12	6	3/4		5 LOC; EA; UP TO 25% LOS	3/S7.0
014	PILE	✓												40	8			2 LOC; EA (PHOTO 2)	2/S7.0
015	PILE CAP	✓		✓	2									2	2	1		2 LOC; EA; UP TO 25% LOS	3/S7.0
016	PILE													9	1/32			VERT CS	1/S7.1
017	PILE													13	1/16			CS	1/S7.1
018	PILE													12	1/16			2 LOC; EA; VERT	1/S7.1
019	PILE CAP													24	1/16			EXTENTS TO UNDERSIDE	1/S7.1



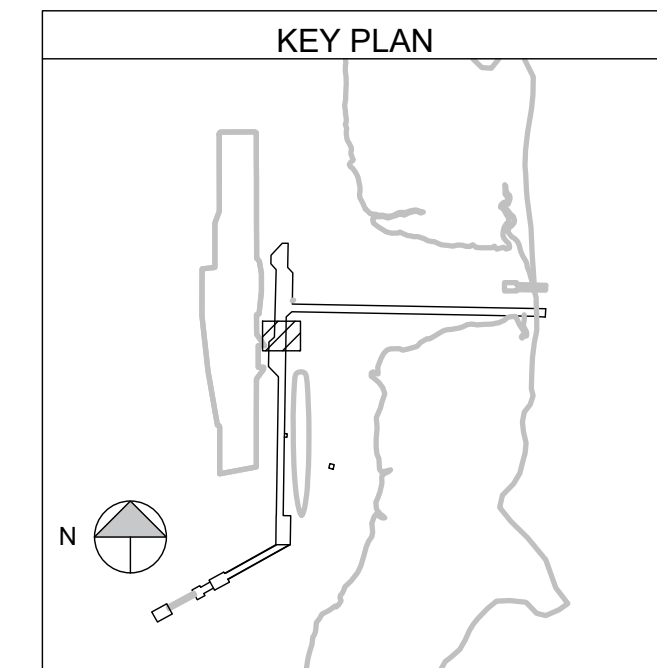
PHOTOGRAPH 1



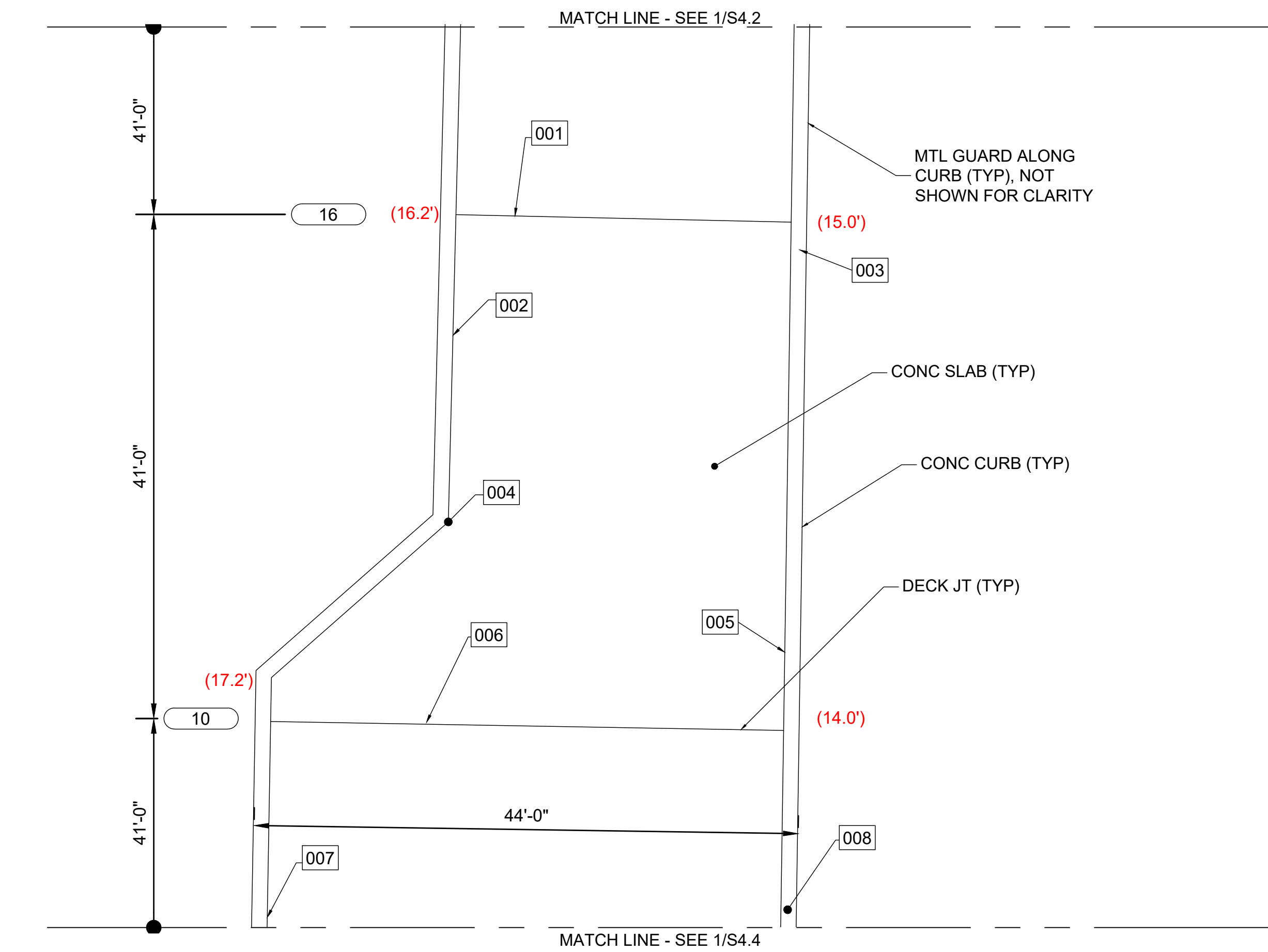
PHOTOGRAPH 2

SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRAIDY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.

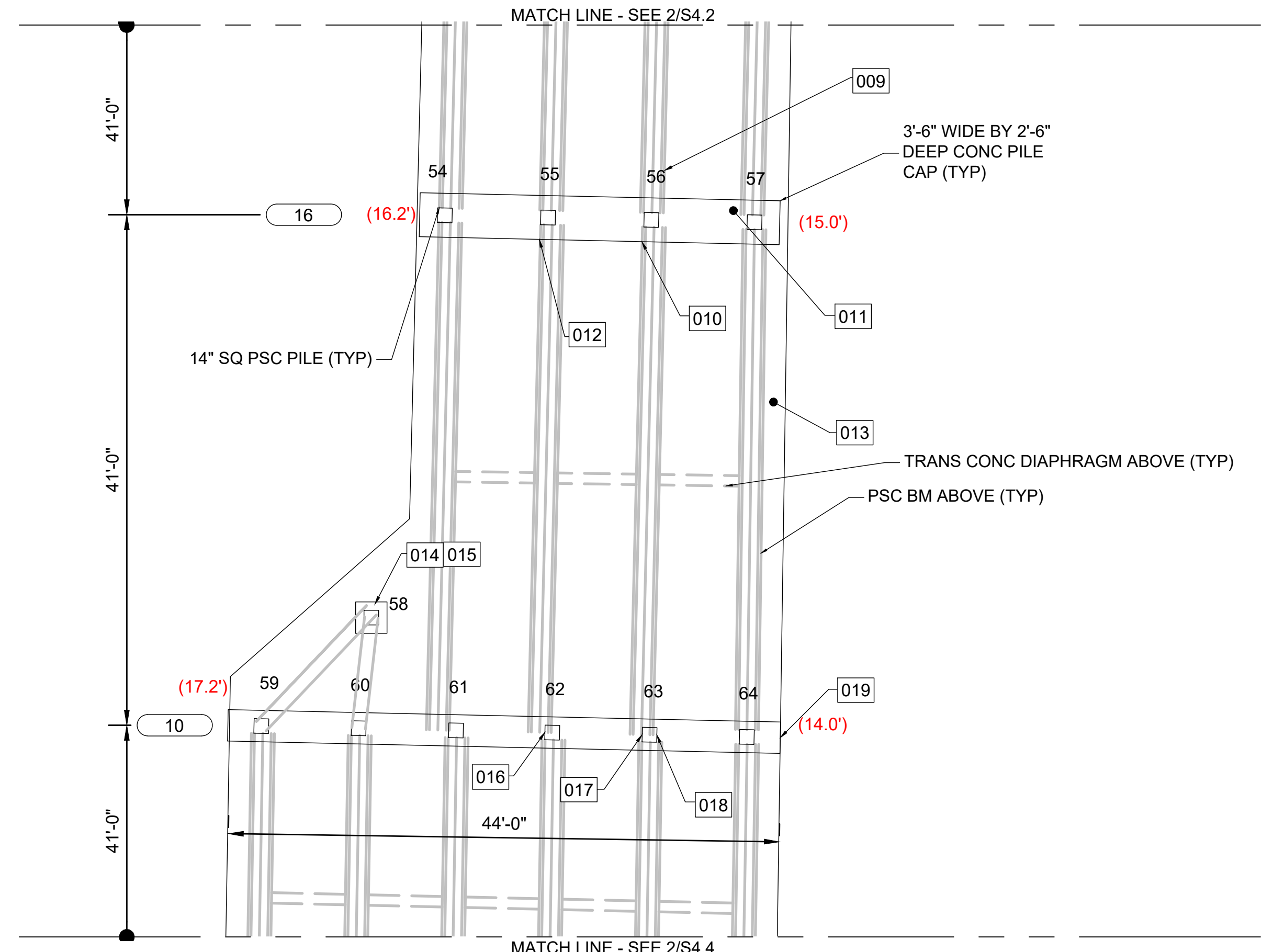


KEY PLAN



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK
 SCALE: 1/8" = 1'-0"

1
S4.3

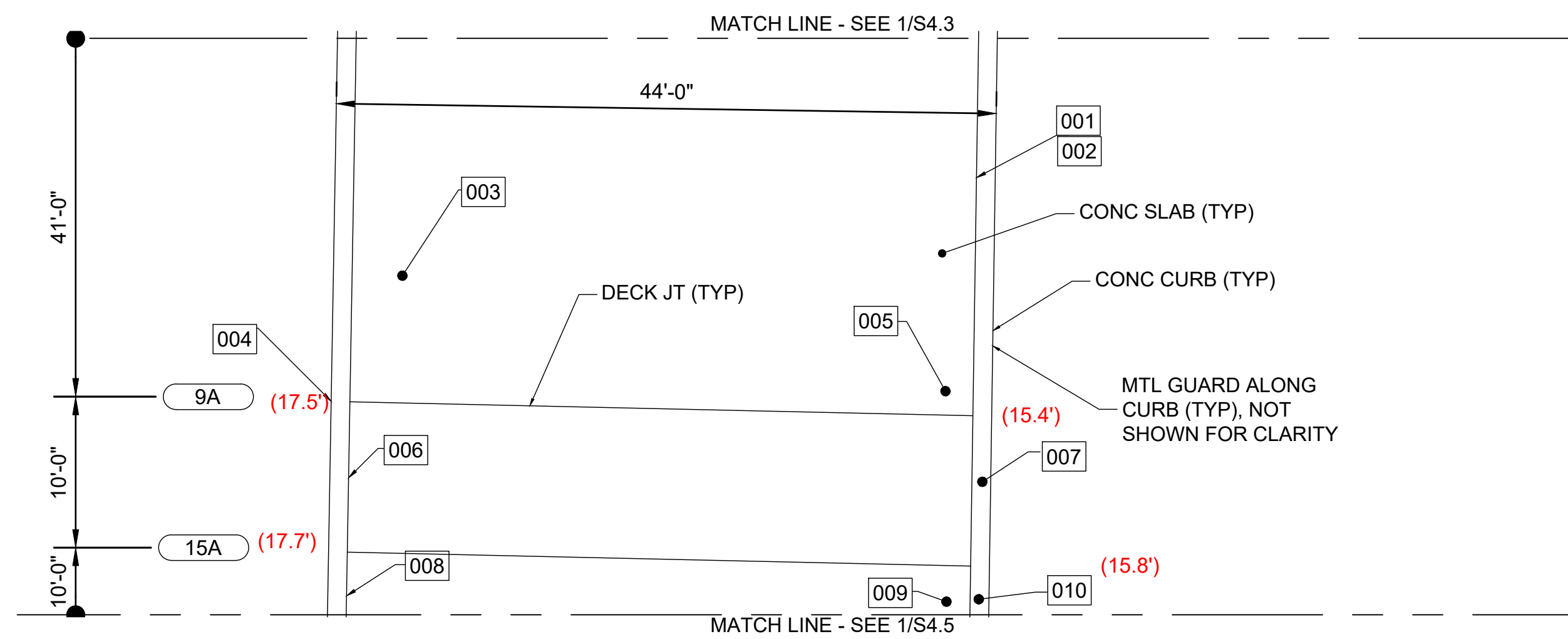


ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE
 SCALE: 1/8" = 1'-0"

2
S4.3

m:\clients\ppda\patriots point development authority\2024_projects\ppda\0124_uss_yorktown_pier_assessment\2.0_cad\ppda\0124_base.dwg - S4.3 (Plotted: 5/7/2026 10:12:02 AM)

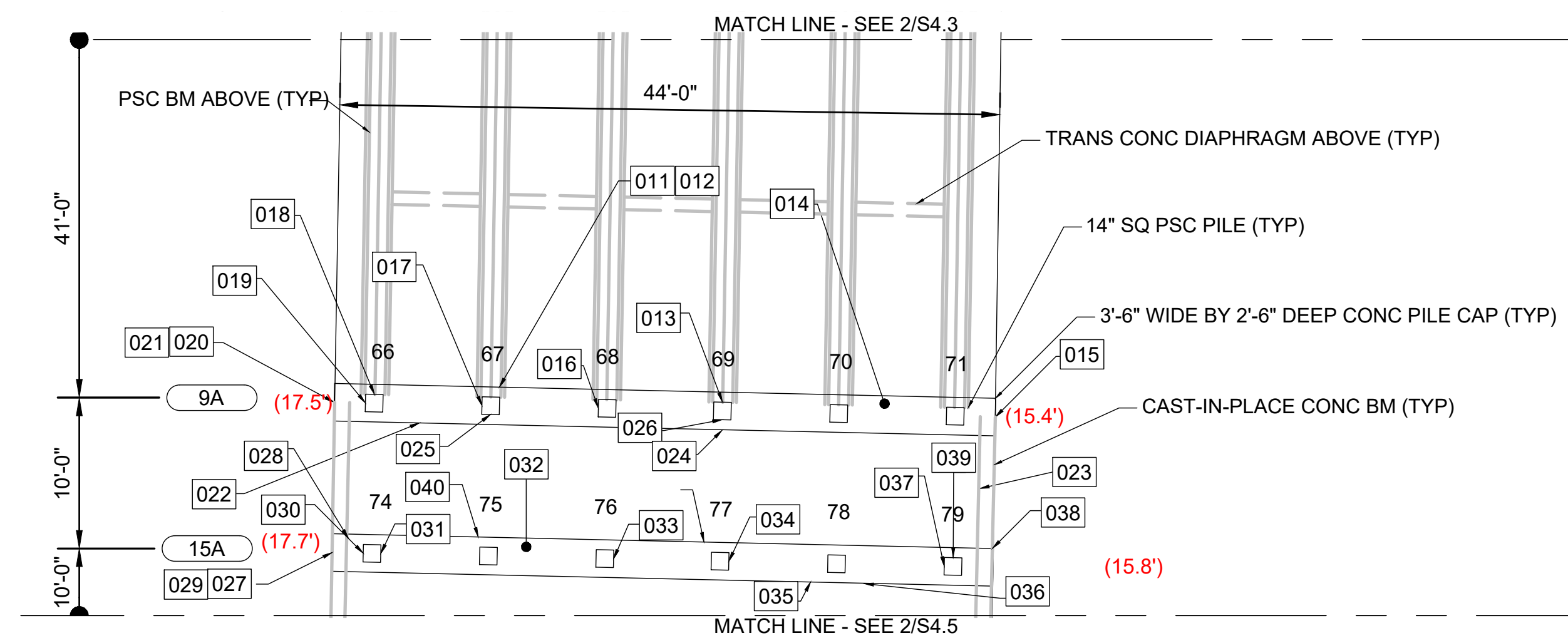
THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK

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

1
S4.4



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE

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

2
S4.4

NOTE	ELEMENT	OBSERVATIONS										LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)	DESCRIPTION	REPAIR				
		CONC DEFECTS						OTHER DEFECTS										APPROX EXTENTS			
		SPALL IMPENDING	SPALL EXPOSED	REINF # OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR. DETERIORATION	MISSING	LENGTH	WIDTH							DEPTH	HEIGHT		
001	CURB			1								3				3/S7.2					
002	CURB	✓										6	3	1/2		2/S7.0					
003	TOP OF DECK	✓										1	1	1/8	30 LOC OVER 3 1/2 SQ FT AREA	2/S7.0					
004	CURB		✓									10	13			2/S7.0					
005	TOP OF DECK	✓										4	6	1/2	4 LOC; EA	2/S7.0					
006	CURB							✓				14	1/16		E & W CURB	3S/7.1					
007	GUARD								✓						2 LOC	5/S7.2					
008	CURB							✓				22	1/16		E & W CURB	3S/7.1					
009	CURB	✓		1								4	7	2	W/ SURFACE CORROSION	3/S7.0					
010	GUARD								✓						2 LOC	5/S7.2					
011	PILE CAP	✓	✓	2			✓					528			30 UP TO 25% LOS	3/S7.0					
012	PILE CAP						✓					528	1/4			1/S7.1					
013	PILE						✓					18	1/16		VERT	1/S7.1					
014	PILE CAP						✓					210	3/16		AT UNDERSIDE	1/S7.1					
015	PILE						✓					6	1/32		2 LOC; EA; VERT; E FACE	1/S7.1					
016	PILE						✓					36	1/16		VERT & HORZ; W FACE (PHOTO 1)	1/S7.1					
017	PILE						✓					24	1/16		VERT & HORZ; N & W FACES	1/S7.1					
018	PILE						✓					24	1/32		2 LOC; EA; N FACE	1/S7.1					
019	PILE						✓					20	1/16		VERT & DIAG; W FACE	1/S7.1					
020	PILE CAP	✓		1								5	5	1/2	UP TO 15% LOS	3/S7.0					
021	PILE CAP						✓					24	1/16		DIAG	1/S7.1					
022	PILE CAP	✓	✓	2			✓					528	30		UP TO 25% LOS	3/S7.0					
023	BEAM	✓	✓	7								60	12	6		1/S7.2					
024	PILE CAP	✓						✓				528			30	2/S7.0					
025	PILE						✓					20	1/32		VERT & HORZ; CS; S FACE	1/S7.1					
026	PILE						✓					16	1/32		HORZ; S FACE	1/S7.1					
027	PILE CAP	✓						✓				12	6		2 LOC; EA	2/S7.0					
028	PILE CAP	✓							✓			36	6			2/S7.0					
029	PILE CAP						✓					60	1/8		VERT & HORZ CS; W FACE	1/S7.1					
030	PILE						✓					12	1/32		VERT; W FACE	1/S7.1					
031	PILE						✓					16	1/32		VERT & HORZ; E FACE	1/S7.1					
032	PILE CAP						✓					1056	1/4		2 LOC; AT UNDERSIDE W EFFLO AND CS	1/S7.1					
033	PILE						✓					12	1/16		VERT; E FACE	1/S7.1					
034	PILE						✓					10	1/32		VERT; CS; E FACE	1/S7.1					
035	PILE CAP	✓							✓			132			30 25% HEAVY ABRASION UP TO 1-IN DEEP; 25% SOUNDS HOLLOW	2/S7.0					
036	PILE CAP	✓							✓			309	2		E END OF S FACE; UP TO 1 1/2-IN OF HORZ DISPLACEMENT (PHOTO 2)	3/S7.0					
037	PILE						✓					8	1/16		VERT; W FACE	1/S7.1					
038	PILE CAP	✓		2								18	9	5	UP TO 50% LOS	2/S7.2					
039	PILE CAP						✓					72	1/16		VERT & HORZ	1/S7.1					
040	PILE CAP	✓							✓			264			15 2/3 OF WESTERN HALF; AND 1/3 OF EASTERN HALF	2/S7.0					



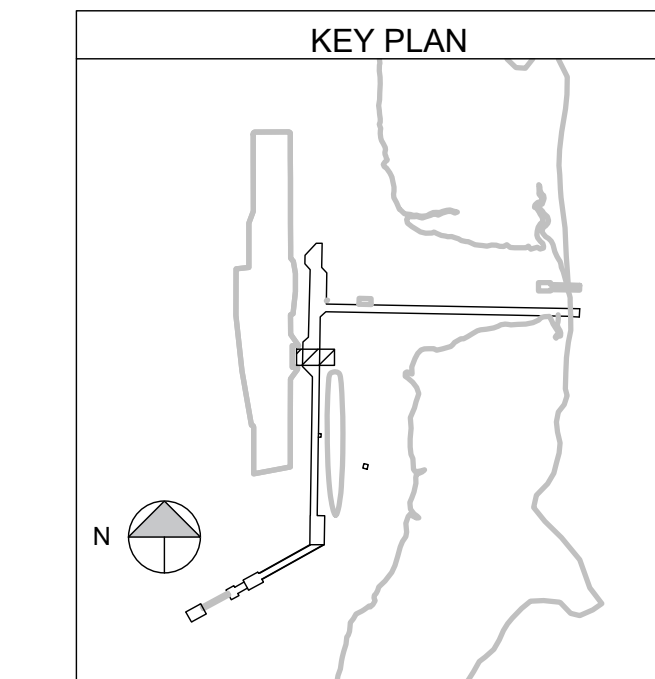
PHOTOGRAPH 1



PHOTOGRAPH 2

SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRAIDY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.



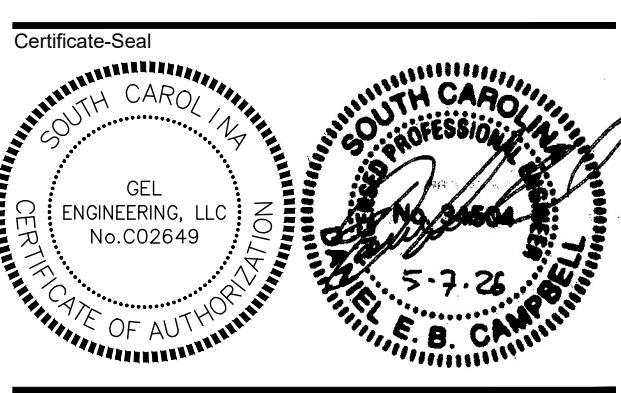
GEL Problem Solved
Engineering LLC
 2040 Savage Road Charleston, SC 29407
 P 843.769.7378 F 843.769.7397
 www.GEL.com

a member of The GEL Group Inc
 ENVIRONMENTAL • ENGINEERING • SURVEYING

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Existing Conditions at
 Original Pier Head V

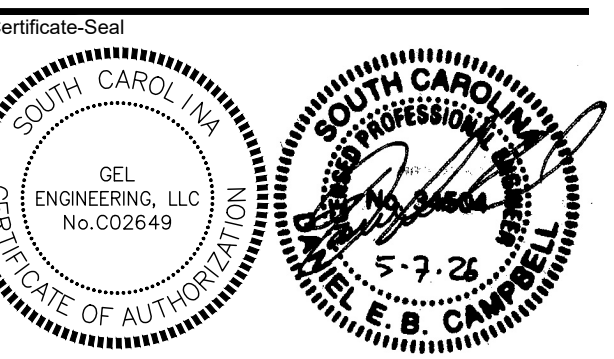
Project No. _____ Drawing No. _____
 PPD000124
 Date 05.07.26
 Scale AS SHOWN

S4.4

RELEASED FOR CONSTRUCTION

m:\clients\ppde-patriots point development authority\2024_projects\ppda0124 - uss yorktown pier assessment\2.0 cad\ppda0123 - base.dwg - S4.4 (Plotted: 5/7/2026 10:16:32 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

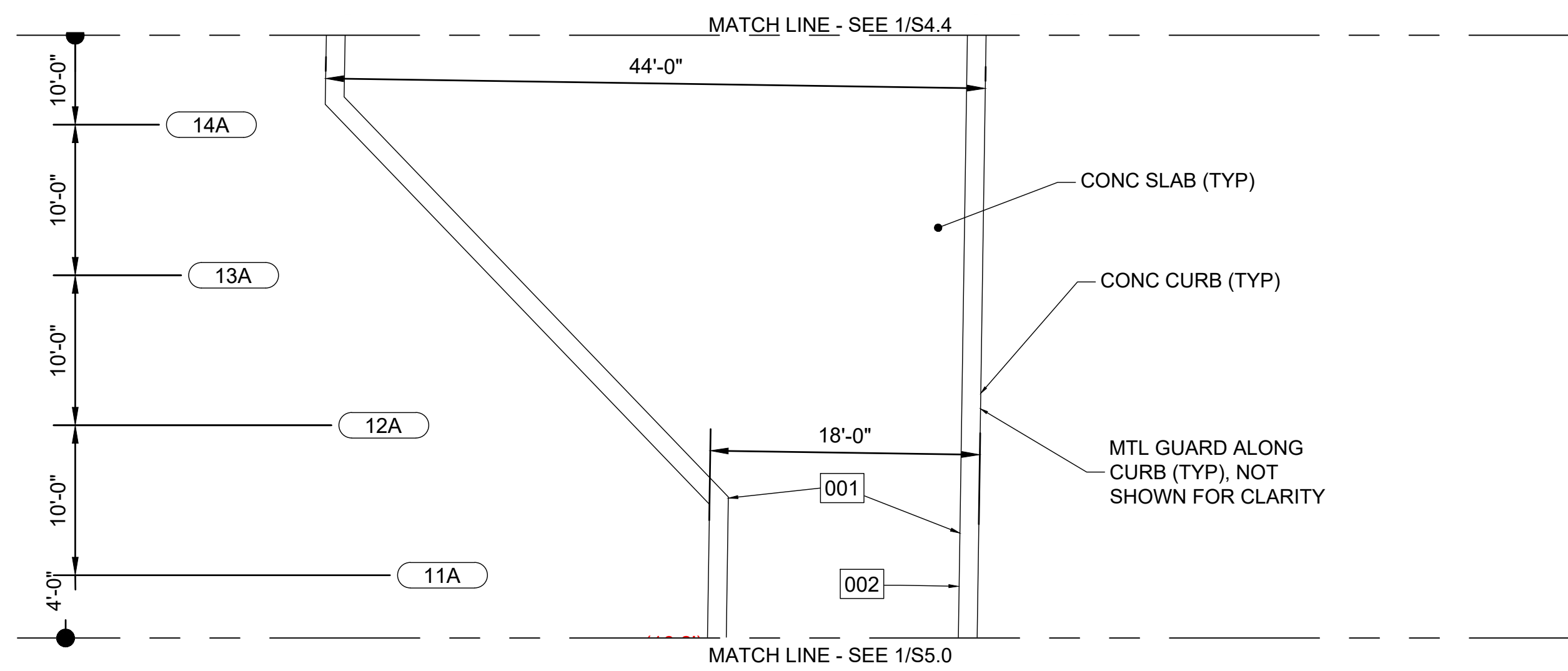
This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
**Existing Conditions at
 Original Pier Head VI**

Project No. Drawing No.
 PPD00124
 Date: 05-07-26
 Scale: AS SHOWN
S4.5

RELEASED FOR CONSTRUCTION

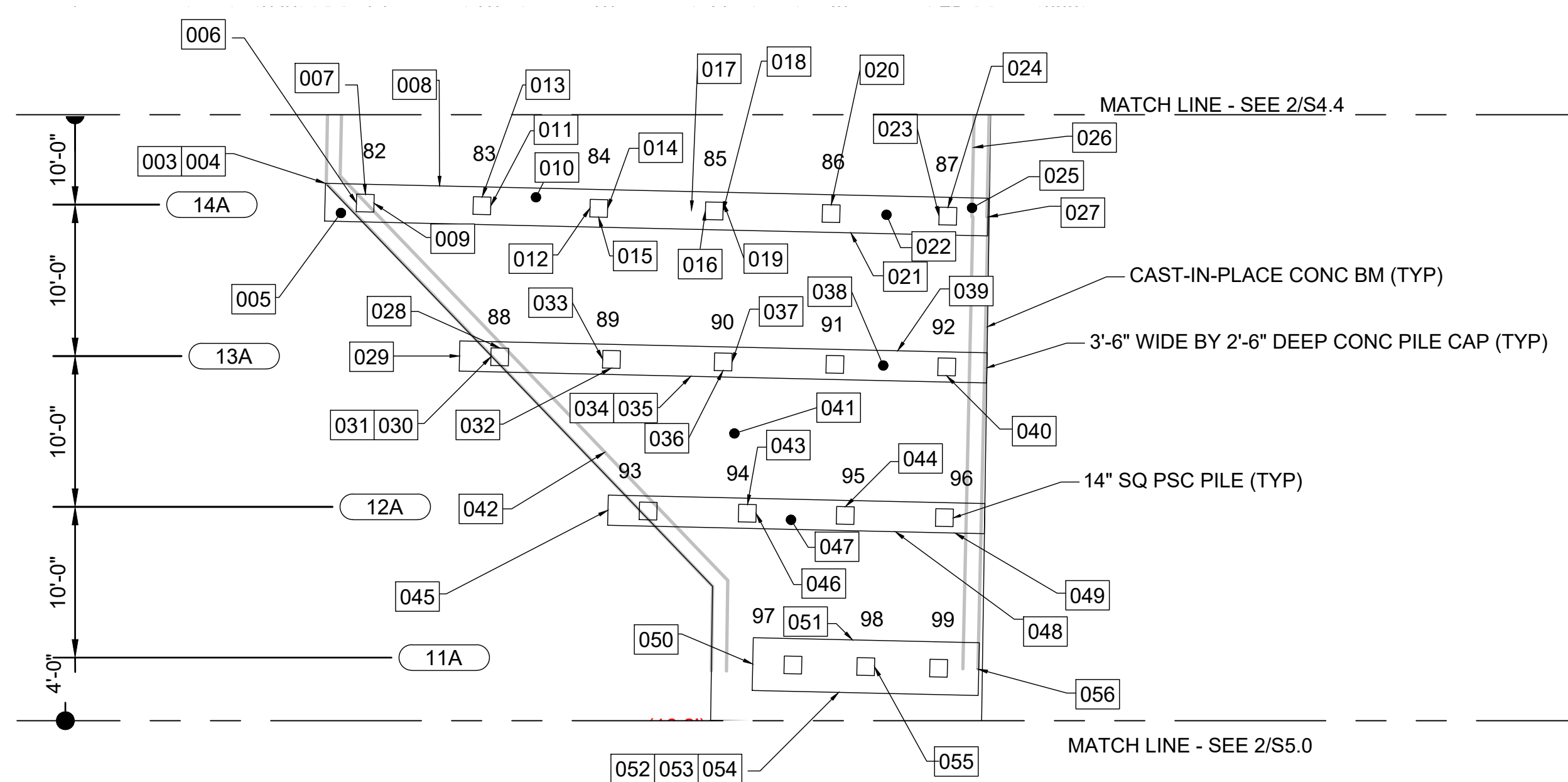
NOTE	ELEMENT	OBSERVATIONS										REPAIR						
		CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION				
		SPALL IMPENDING	SPALL EXPOSED	REINF	# OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR.	DETERIOR-ATION	MISSING		LENGTH (IN)		WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)	
001	TOP OF DECK				2	✓							4					3/S7.2
002	CURB	✓		✓	1									4		4	7	3/S7.0
003	PILE CAP		✓										12	6	1			2/S7.0
004	PILE CAP	✓											3	5	4			2/S7.0
005	PILE CAP		✓										12	6			AT UNDERSIDE W/ CS	2/S7.0
006	PILE							✓					10	1/16			2 LOC; EA; W FACE	1/S7.1
007	PILE								✓				35	1/8			VERT & HORZ; CS; N FACE	1/S7.1
008	PILE CAP		✓						✓				270			30		2/S7.0
009	PILE							✓					12	1/16			VERT; E FACE	1/S7.1
010	PILE CAP							✓					528	3/16			AT UNDERSIDE W/ CS	1/S7.1
011	PILE							✓					16	1/8			VERT; E FACE	1/S7.1
012	PILE							✓					12	1/32			4 LOC; EA; VERT; W FACE	1/S7.1
013	PILE							✓					30	1/32			VERT & HORZ; CS; N FACE	1/S7.1
014	PILE							✓					12	1/32			VERT; CS; E FACE	1/S7.1
015	PILE CAP	✓		✓	4								60	5	3		UP TO 75% LOS	2/S7.2
016	PILE							✓					50	1/16			VERT & HORZ; S FACE	1/S7.1
017	DIAPHRAGM	✓		✓	5								6	6	3/4			3/S7.0
018	PILE							✓					12	1/8			CS; E FACE	1/S7.1
019	PILE	✓											6	3	1/4			2/S7.0
020	PILE							✓					10	1/16			VERT & HORZ; CS; N FACE	1/S7.1
021	PILE CAP		✓						✓				330			30	SOUNDS HOLLOW; REMAINING HAS HEAVY ABRASION UP TO 1-IN DEEP	2/S7.0
022	PILE CAP				2	✓							16				UP TO 50% LOS	3/S7.2
023	PILE							✓					24	1/32			VERT & HORZ; CS; W FACE	1/S7.1
024	PILE							✓					15	1/32			VERT & HORZ; N FACE	1/S7.1
025	PILE CAP		✓										48	5	5		AT UNDERSIDE	2/S7.0
026	BEAM	✓	✓	✓	7								96	8		12	UP TO 25% LOS	1/S7.2
027	PILE CAP	✓											7	4	1			2/S7.0
028	PILE							✓					12	1/32			VERT & HORZ; N FACE	1/S7.1
029	PILE CAP							✓					24	1/8			VERT	1/S7.1
030	PILE							✓					9	1/32			CS; W FACE	1/S7.1
031	PILE							✓					12	1/32			VERT & HORZ; W FACE	1/S7.1
032	PILE							✓					16	1/8			CS; S FACE	1/S7.1
033	PILE							✓					15	1/16			VERT; W FACE	1/S7.1
034	PILE CAP							✓					420	1/4			CS; S FACE	1/S7.1
035	PILE CAP		✓						✓				360			28		2/S7.0
036	PILE							✓					12	1/32			2 LOC; EA; AT PREVIOUS REPAIR; S FACE	1/S7.1
037	PILE							✓					12	1/32			2 LOC; EA; AT PREVIOUS REPAIR; W FACE	1/S7.1
038	PILE CAP							✓					420	1/4			2 LOC; EA; AT UNDERSIDE	1/S7.1
039	PILE CAP							✓					300	1/8			VERT & HORZ	1/S7.1
040	PILE CAP							✓					68	1/16				1/S7.1
041	DECK		✓										12	6			AT UNDERSIDE	2/S7.0
042	BEAM		✓										72	12	5		2 LOC; TOTAL	2/S7.0
043	PILE							✓					8	1/32			VERT; CS; N FACE	1/S7.1
044	PILE CAP							✓					14	1/32			DIAG; N FACE	1/S7.1
045	PILE CAP							✓					33	3/16			EXTENTS TO UNDERSIDE	1/S7.1
046	PILE							✓					8	1/32			VERT; CS; E FACE	1/S7.1
047	PILE CAP							✓					300	1/4			AT UNDERSIDE	1/S7.1
048	PILE CAP		✓						✓				270			30		2/S7.0
049	PILE CAP							✓					201	3/16			T/ OF CAP	1/S7.1
050	PILE CAP							✓					40	3/16			VERT; CS	1/S7.1
051	PILE CAP		✓						✓				120			30		2/S7.0
052	PILE CAP							✓					180	1/32				1/S7.1
053	PILE CAP							✓					180	1/8				1/S7.1
054	PILE CAP		✓						✓				180			15		2/S7.0
055	PILE							✓					18	1/16			VERT; CS; E FACE	1/S7.1
056	PILE CAP							✓					60	1/16			VERT & HORZ; E FACE	1/S7.1



ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK

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

1
S4.5



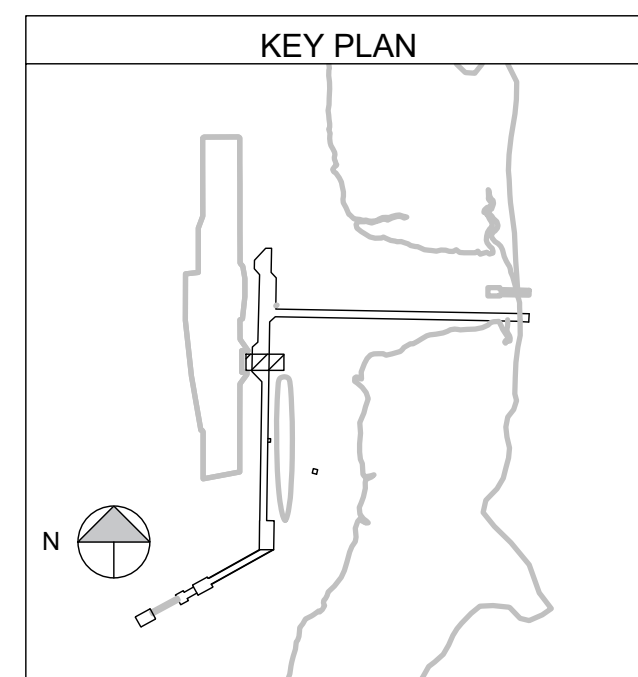
ORIGINAL PIER HEAD PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE

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

2
S4.5

SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.



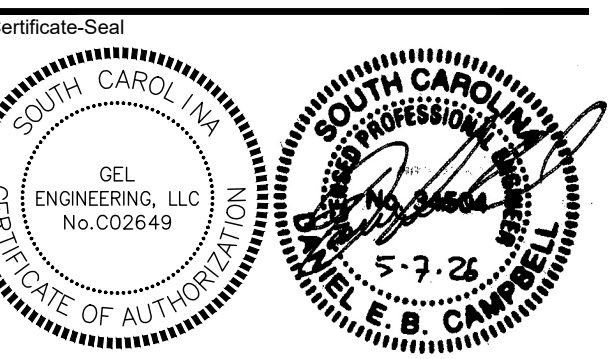
m:\clients\ppdp\patriots point development authority\2024\projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00124 - base.dwg - S4.5 (Plotted: 5/7/2026 10:02:14 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
Existing Conditions at Pier Head Extension II

Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN
S5.1

RELEASED FOR CONSTRUCTION

NOTE	ELEMENT	CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION	REPAIR
		SPALL IMPENDING	SPALL EXPOSED	REINFC	# OF BARS	SHALLOW REINFC	CRACK HOLLOW	CORR. DETERIORATION	MISSING	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)		
001	TOP OF DECK									432	1/16			TRANSVERSE CRACKS ABOVE BENT; TOTAL	3/S7.1
002	TOP OF DECK									1440	1/16			REFLECTIVE CRACKS ABOVE DOUBLE TEES	3/S7.1
003	JT MATL													ARMORED JT MISSING 3 FASTENERS	RIK
004	DOUBLE TEE									24	1/64			BOTH STEMS; EA	1/S7.1
005	DOUBLE TEE	✓	✓		2					3	3	1/4		BOTH STEMS; EA W/ 1 ERB (PHOTO 1)	1/S7.2
006	DOUBLE TEE									24	1/64			2 LOC PER STEM; EA	1/S7.1
007	DOUBLE TEE									24	1/64			1 LOC PER STEM; EA	1/S7.1
008	DOUBLE TEE				4	✓				36	1/8			TOTAL	3/S7.2
009	PILE									16	1/16			CS; N FACE (PHOTO 2)	1/S7.1
010	PILE		✓		1	✓				3	1/4			NW CORNER	3/S7.2
011	DOUBLE TEE	✓	✓		1					2	2	1/4		W STEM	1/S7.2
012	DOUBLE TEE	✓	✓		2					2	2	1/4		2 LOC EA W/ 1 ERB; E STEM	1/S7.2
013	DOUBLE TEE	✓	✓		1					4	4	1/4		E STEM	1/S7.2
014	DOUBLE TEE	✓	✓		1					5	5	3/4		AT UNDERSIDE	1/S7.2
015	DOUBLE TEE									72	1/16			W/ EFFLO	1/S7.1

NOT INCLUDED IN PROJECT SCOPE

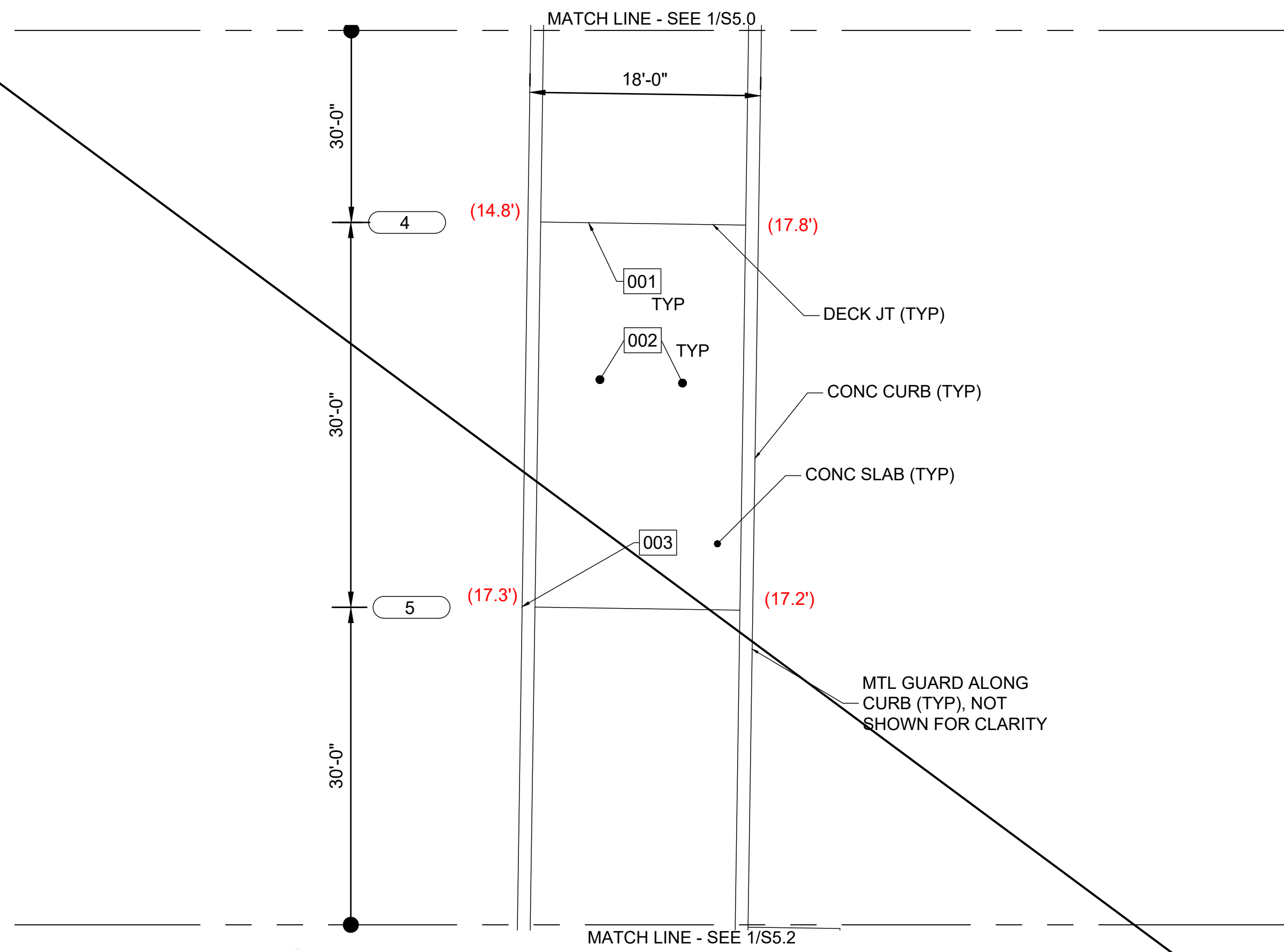
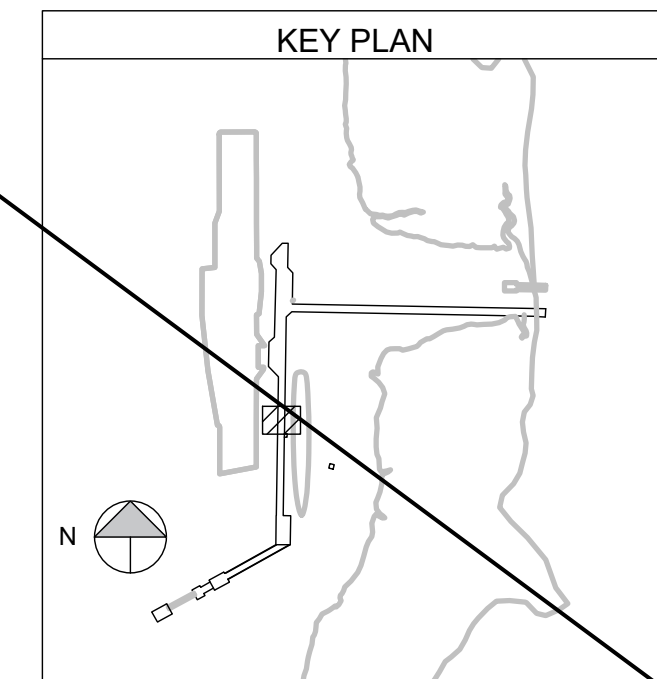


PHOTOGRAPH 1



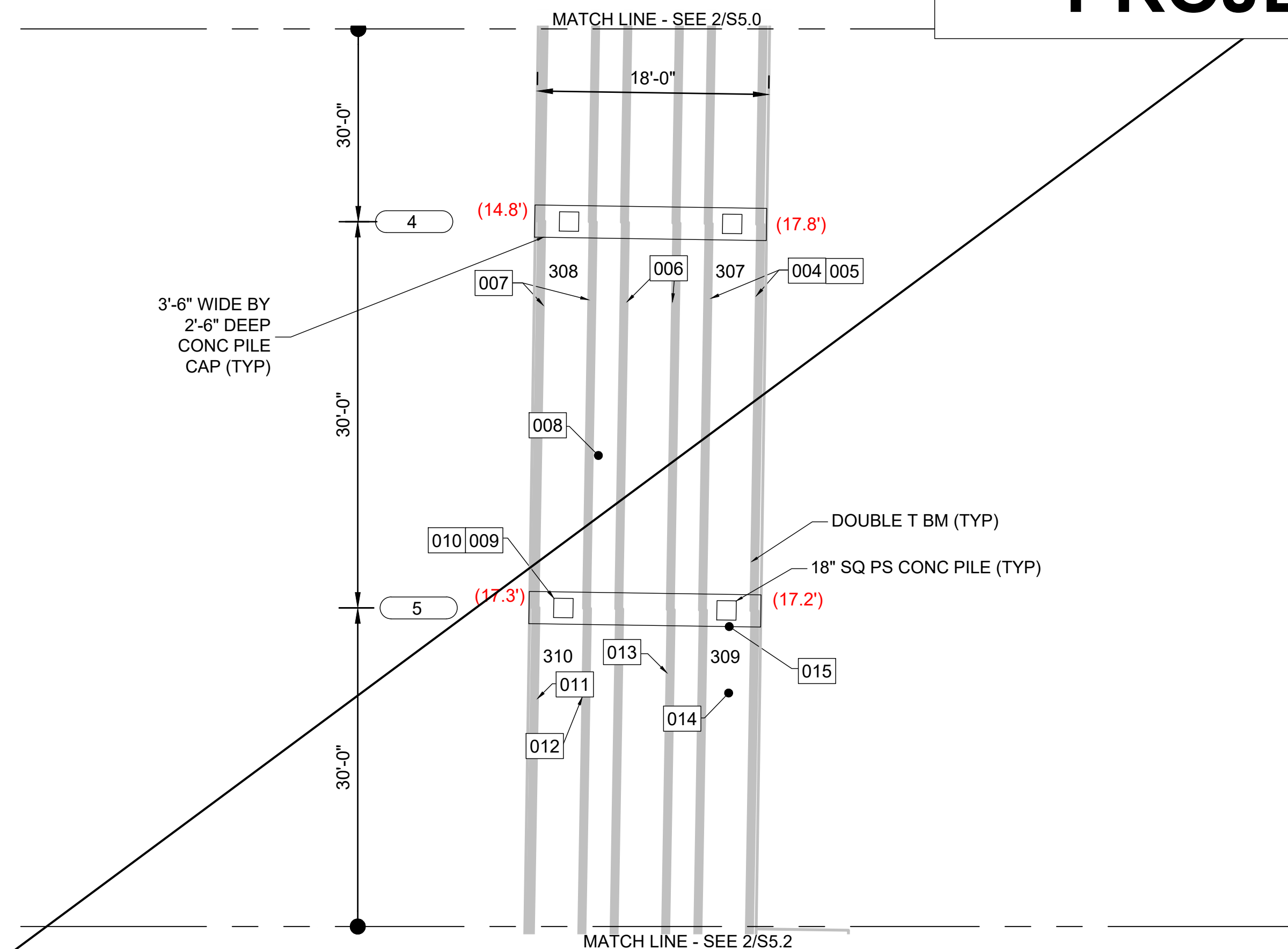
PHOTOGRAPH 2

- SHEET NOTES**
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
 - PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
 - 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
 - (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
 - PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.



PIER HEAD EXTENSION PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK

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



PIER HEAD EXTENSION PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE

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

2
S5.1

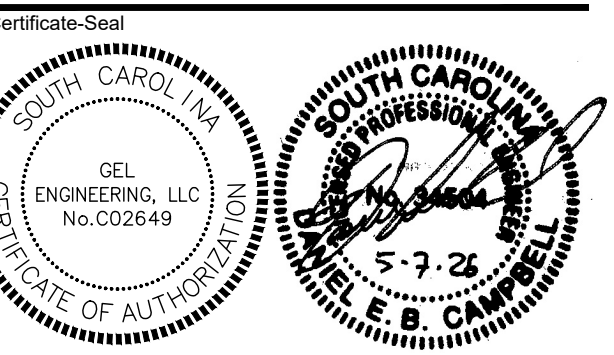
m:\client\patriots-point-development\autocad\2024-projects\ppda\0124 - USS Yorktown pier assessment\2024-05-07\2026_PPS_S5.dwg - SS1.dwg (5/7/2026, 10:45:35 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

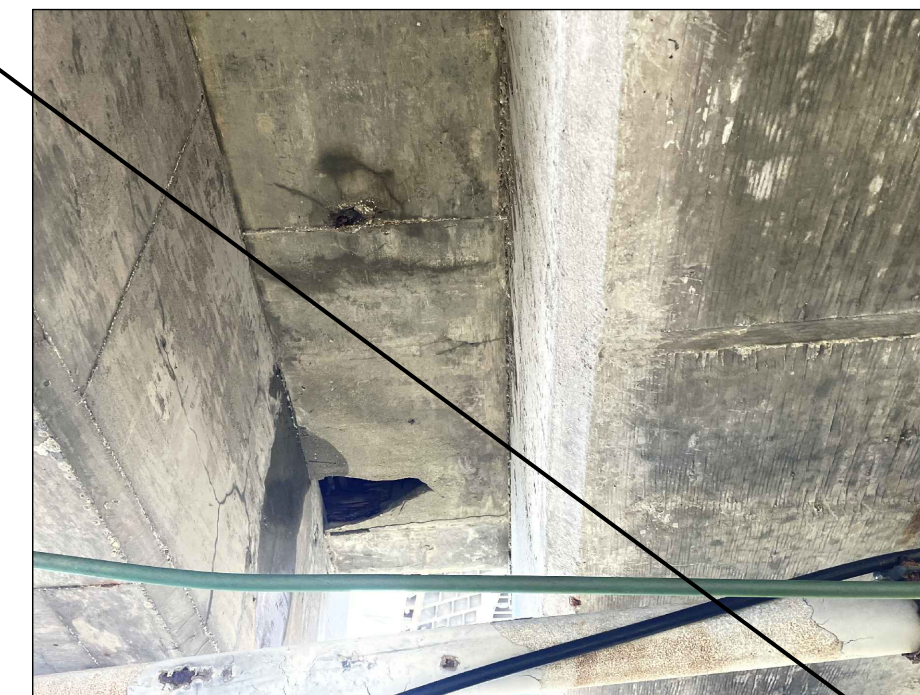
Sheet Title
Existing Conditions at Pier Head Extension VI

Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN
S5.3

RELEASED FOR CONSTRUCTION

NOTE	ELEMENT	CONC DEFECTS							OTHER DEFECTS		APPROX EXTENTS				DESCRIPTION	REPAIR		
		SPALL IMPENDING	SPALL EXPOSED	REINF # OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR. DETERIORATION	MISSING	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)					
001	CURB												60	1/16			AT CURB	3/S7.1
002	JT MATL																ARMORED JT MISSING 1 FASTENER	RIK
003	CURB	✓											24	9	12			2/S7.0
004	TOP OF DECK												312	1/16			TRANSVERSE	3/S7.1
005	TOP OF DECK												648	1/16			TRANSVERSE CRACKS ABOVE BENT	3/S7.1
006	TOP OF DECK												1440	1/16			REFLECTIVE CRACKS ABOVE DOUBLE TEES	3/S7.1
007	DOUBLE TEE	✓	✓										12	10	3		DIAPHRAGM (PHOTO 1)	2/S7.0
008	PILE CAP	✓											8	8	3/4		AT UNDERSIDE W/ CS	2/S7.0
009	PILE CAP	✓											24		3	6	S FACE	2/S7.0
010	PILE	✓											14	10			W FACE (PHOTO 2)	2/S7.0
011	DOUBLE TEE	✓	✓		1								6	6	4		2 LOC; EA	1/S7.2
012	DOUBLE TEE	✓	✓										12	3	1/2		W FLANGE	2/S7.0
013	DOUBLE TEE	✓	✓	10									6	1/2	1/8		10 LOC; EA W/ 1 ERB	1/S7.2
014	PILE CAP	✓	✓	4									216	42		8	UP TO 50% LOS	2/S7.2
015	DOUBLE TEE												52	1/4			4 LOC; EA	1/S7.1
016	DOUBLE TEE		✓	6									360	8	1/2		UP TO 50% LOS	3/S7.2
017	DOUBLE TEE		✓	1									3				E FLANGE	3/S7.2

NOT INCLUDED IN PROJECT SCOPE



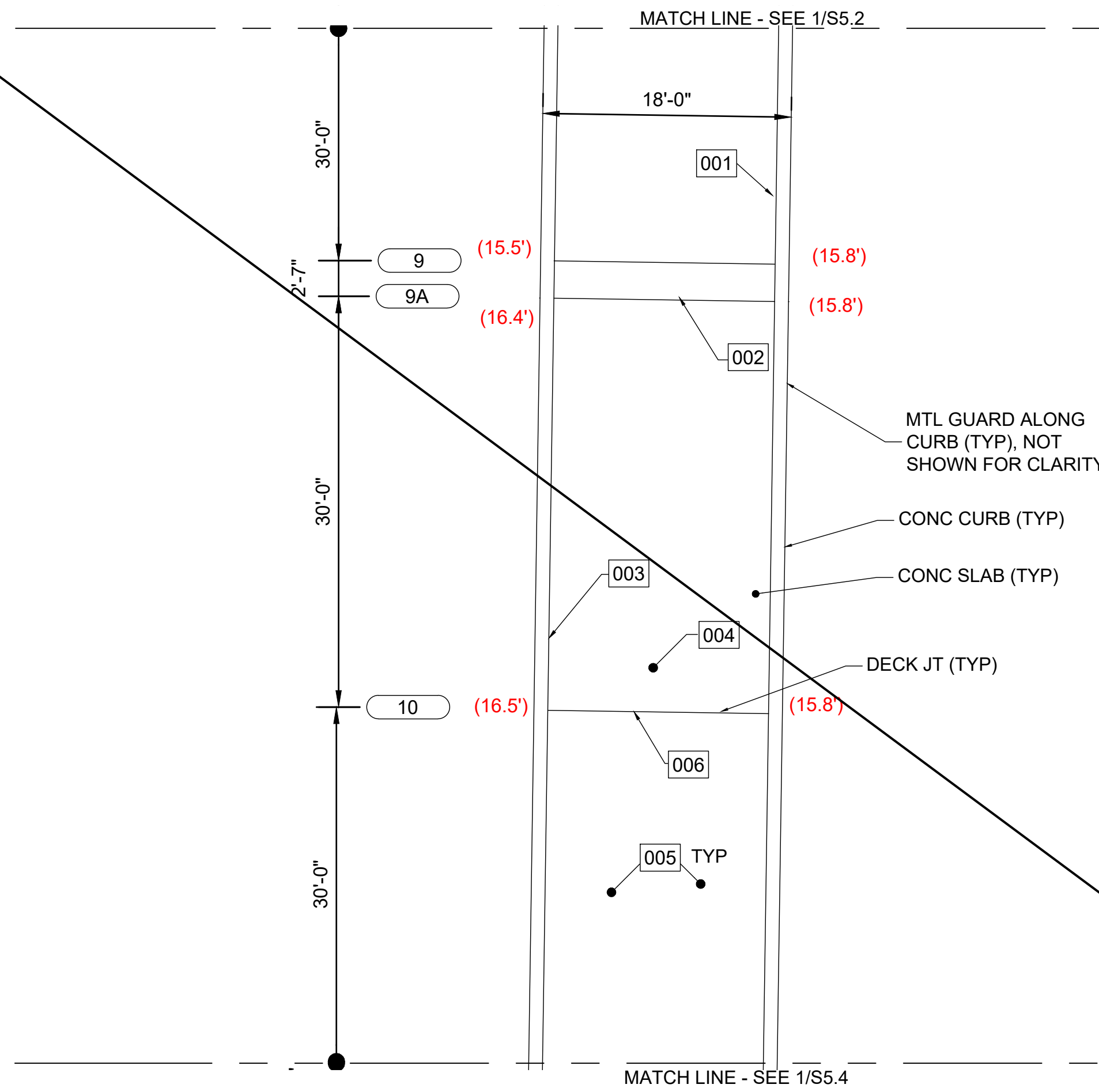
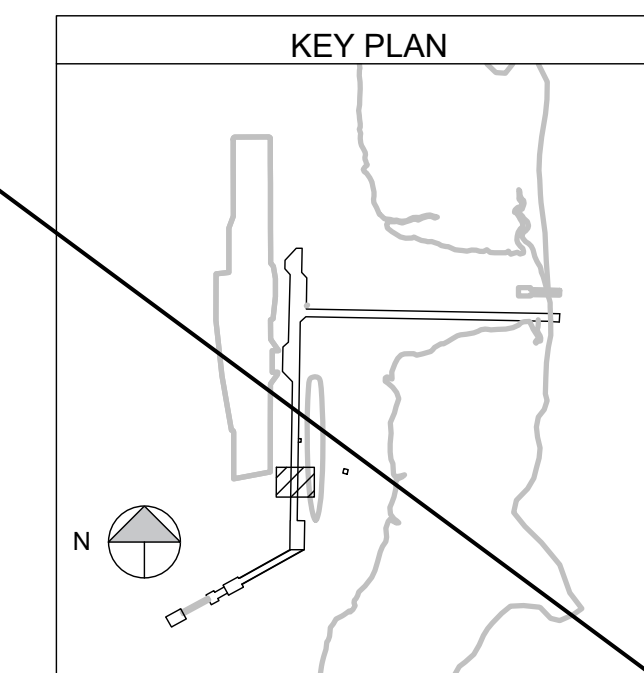
PHOTOGRAPH 1



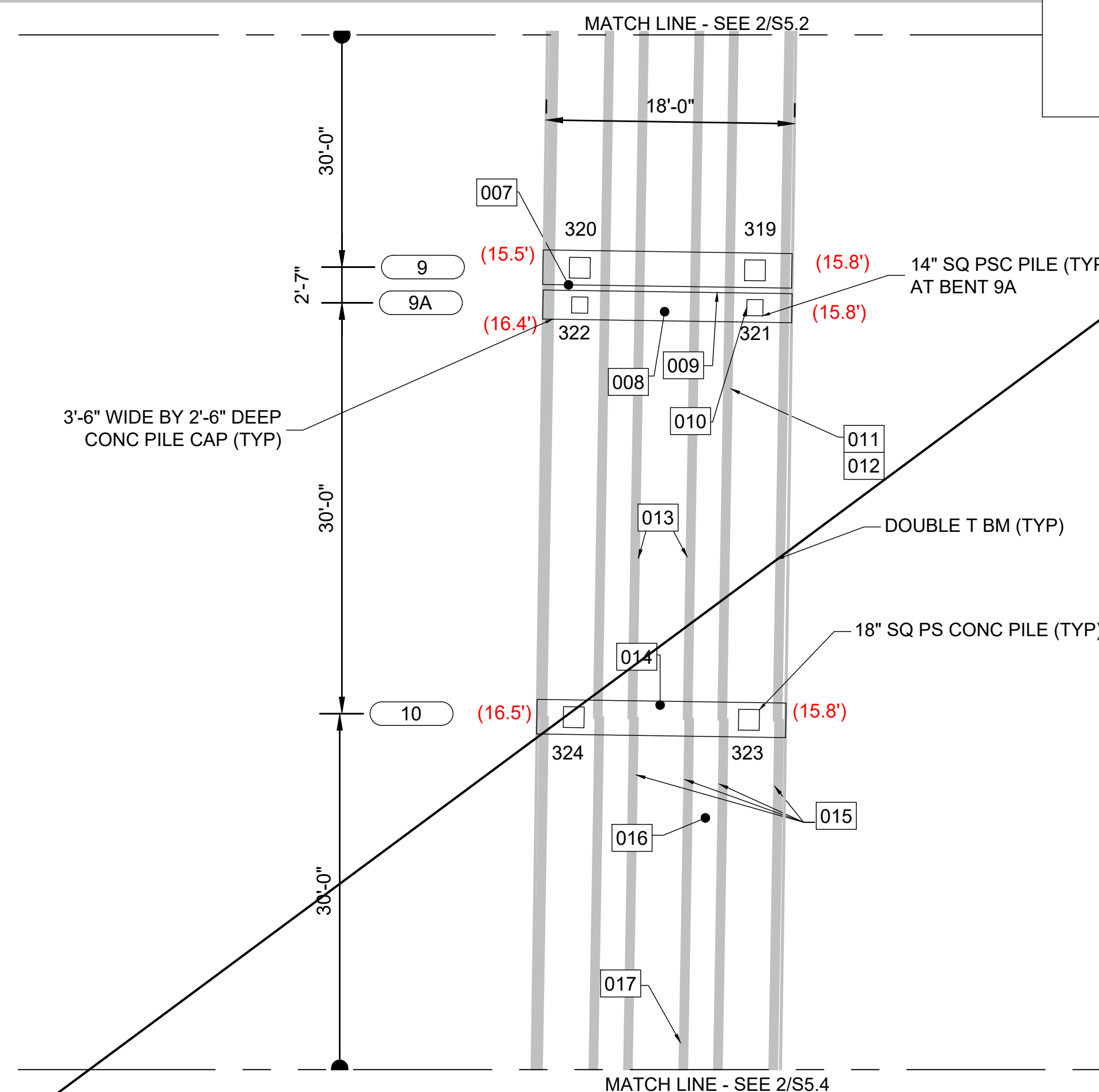
PHOTOGRAPH 2

SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.



PIER HEAD EXTENSION PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK
 SCALE: 1/8" = 1'-0"



PIER HEAD EXTENSION PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE
 SCALE: 1/8" = 1'-0"

2
 S5.3



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
Existing Conditions at Pier Head Extension V

Project No. _____ Drawing No. _____
 PPD000124
 Date: 05.07.26
 Scale: AS SHOWN
S5.4

NOTE	ELEMENT	CONC DEFECTS							OTHER DEFECTS			APPROX EXTENTS				DESCRIPTION	REPAIR	
		SPALL IMPENDING	SPALL EXPOSED	REINF # OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR.	DETERIOR-ATION	MISSING	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)				
001	TOP OF DECK												648	1/16			TRANSVERSE REFLECTIVE CRACK ABOVE BENTS; TOTAL	3/S7.1
002	TOP OF DECK												1344	1/16			REFLECTIVE CRACKS ABOVE DOUBLE TEES	3/S7.1
003	TOP OF DECK												78	1/16			TRANSVERSE	3/S7.1
004	TOP OF DECK	✓											96	12				2/S7.0
005	PILE CAP	✓											60	6	8		3 LOC; TOTAL; N FACE	2/S7.0
006	PILE	✓											24	18	5		W FACE	2/S7.0
007	DOUBLE TEE	✓	✓	1									30	6	8		EXPOSED PRE-STRESSING; W FACE (PHOTO 1)	1/S7.2
008	DOUBLE TEE		✓	4	✓								3	3	1/2		AT UNDERSIDE; 4 LOC; EA W/ 1 ERB	3/S7.2
009	PILE CAP	✓											216	30	8		N FACE	2/S7.0
010	DOUBLE TEE	✓	✓	2									6	6	1		W FLANGE	1/S7.2
011	DOUBLE TEE	✓											72		12		PREVIOUS REPAIR; W FLANGE	2/S7.0
012	DOUBLE TEE	✓		1	✓								8	3	3		W FLANGE	1/S7.2
013	PILE	✓											40	12	3		W FLANGE	2/S7.0
014	PILE CAP							✓					84	3/16			N FACE	1/S7.1
015	PILE	✓	✓	1									30	12	8		NW CORNER	3/S7.0
016	DOUBLE TEE	✓											16	6	10		FAILED PATCH; W FLANGE	2/S7.0
017	DOUBLE TEE	✓	✓	2									8		10		W FLANGE	1/S7.2
018	PILE CAP							✓					24	3/16			S FACE	1/S7.1
019	PILE	✓	✓	1				✓					36	48	2		N,W & S FACES (PHOTO 1)	3/S7.0
020	PILE	✓	✓	1									24	10	5		UP TO 25% LOS; NW CORNER	3/S7.0
021	PILE							✓					24	1/8			NW CORNER	1/S7.1
022	PILE							✓					36	1/16			SW CORNER; CS	1/S7.1
023	PILE CAP							✓					24	1/16			S FACE	1/S7.1
024	PILE CAP							✓					180	1/4			S FACE; CS	1/S7.1
025	PILE	✓						✓					5	10	24		NW CORNER	2/S7.0
026	PILE							✓					3	12	24		SW CORNER	2/S7.0

NOT INCLUDED IN PROJECT SCOPE



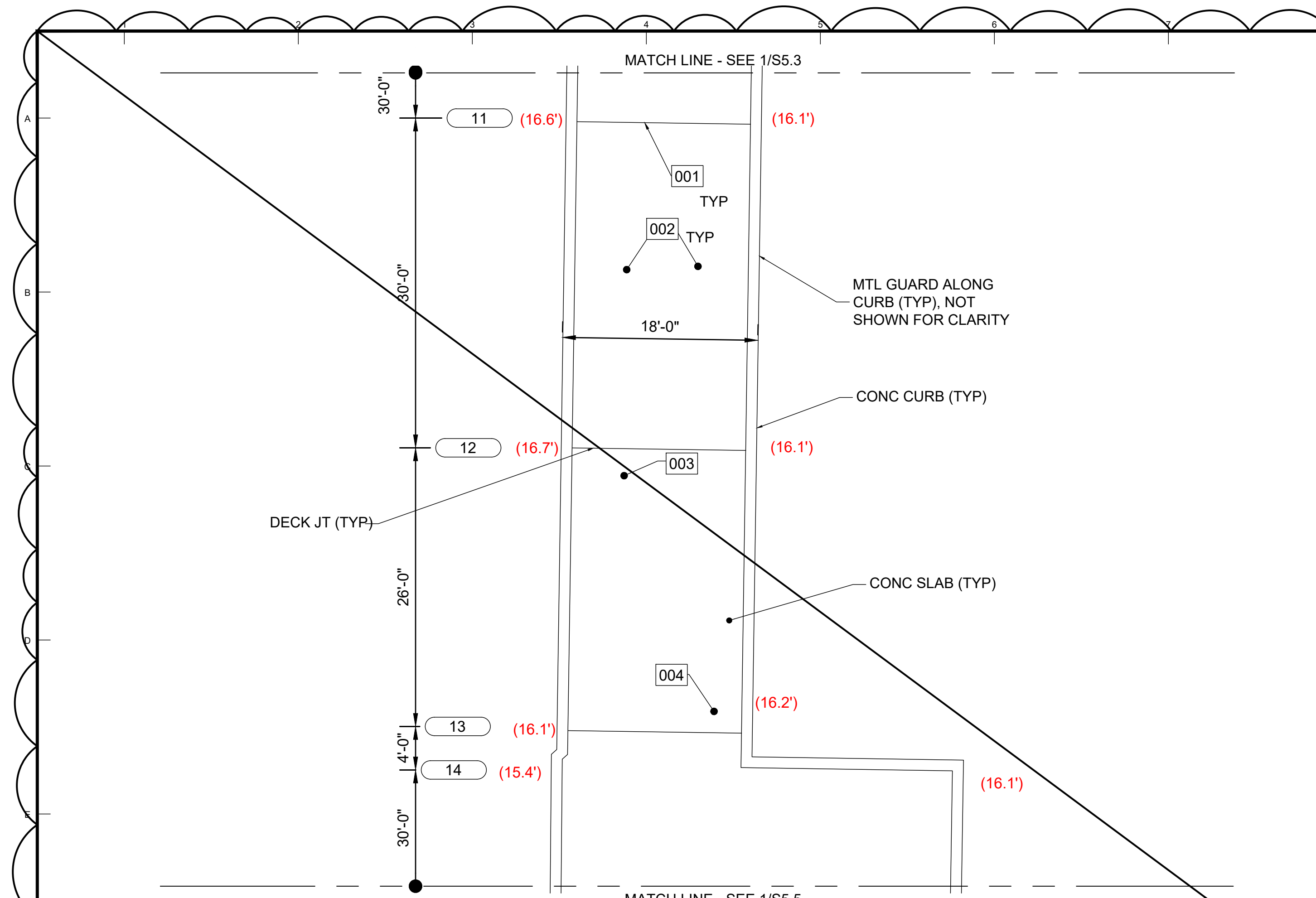
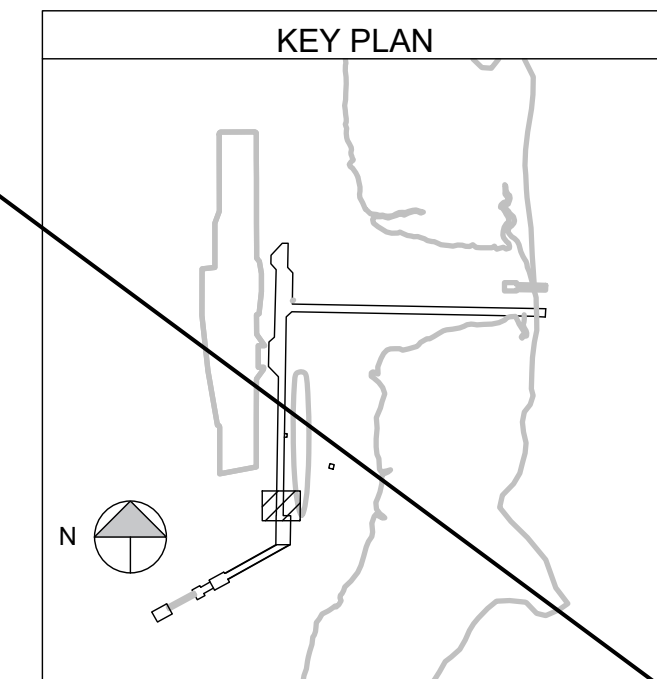
PHOTOGRAPH 1



PHOTOGRAPH 2

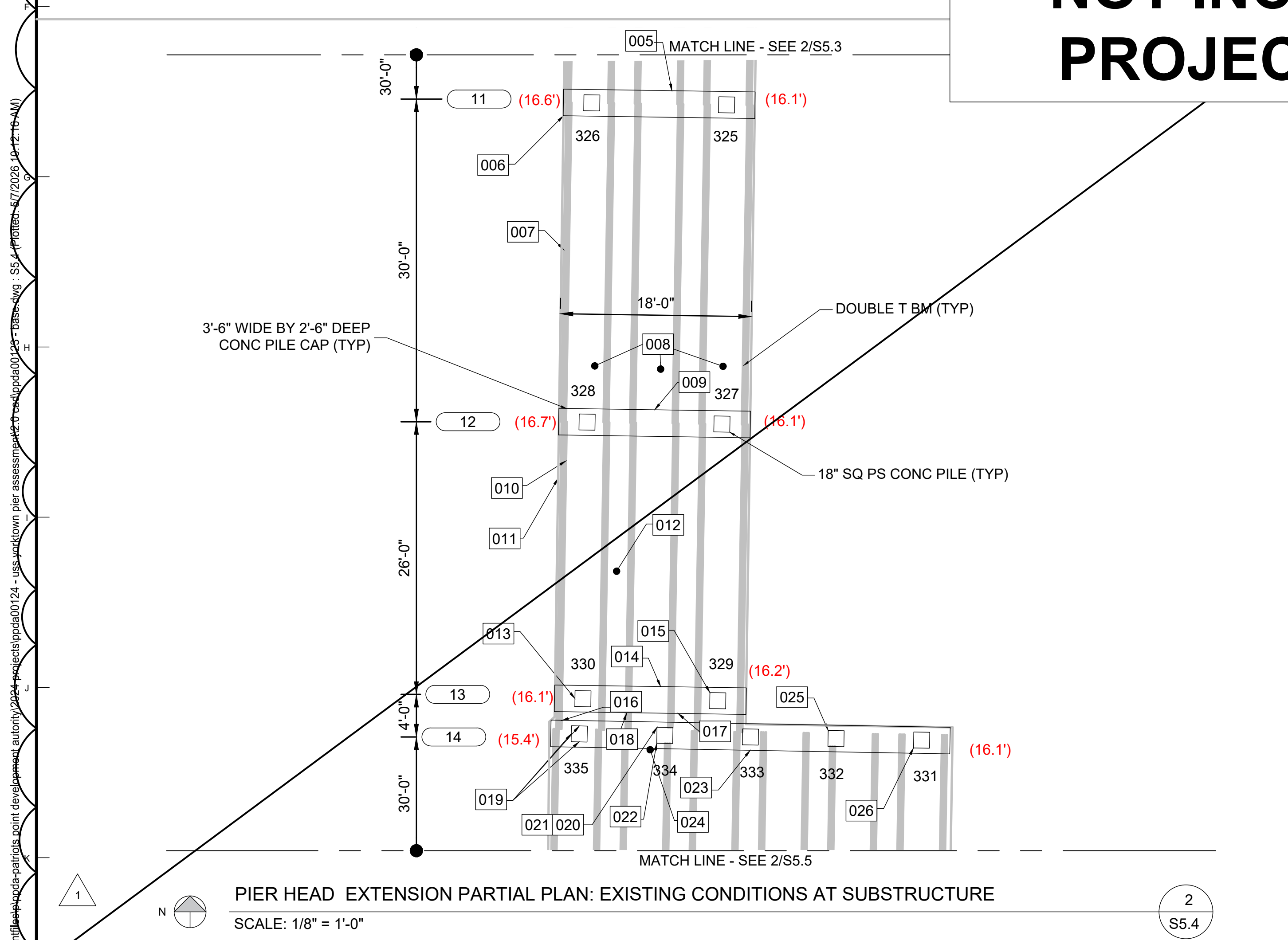
SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY, INC. DATED MARCH 1980 THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- PILES TYPICALLY COVERED WITH OYSTERS FROM WATERLINE TO MUDLINE.



PIER HEAD EXTENSION PARTIAL PLAN: EXISTING CONDITIONS AT TOP OF DECK

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



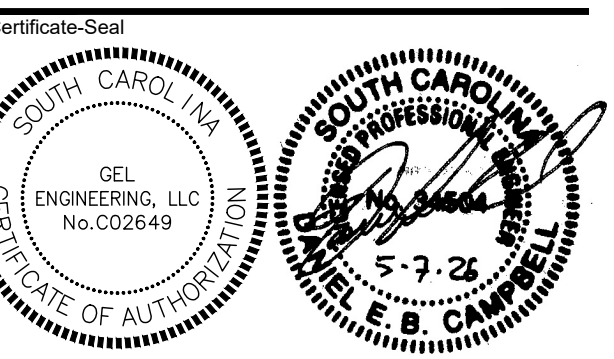
PIER HEAD EXTENSION PARTIAL PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE

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

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
Existing Conditions at Breasting Dolphin No. 2

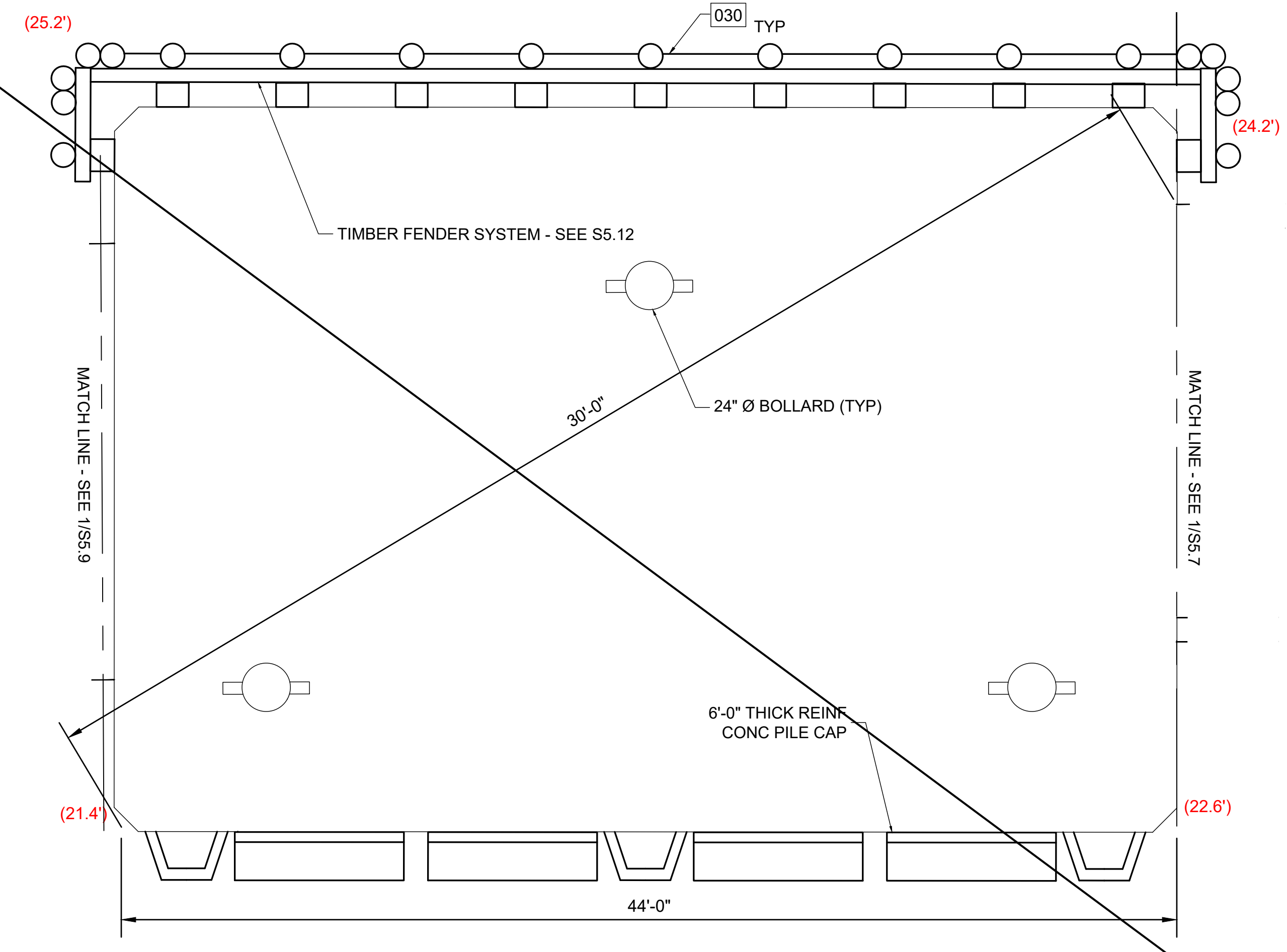
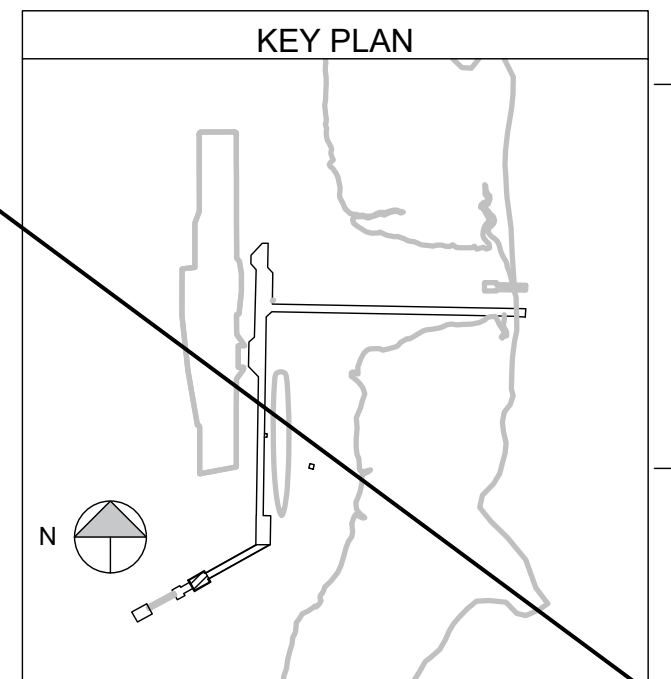
Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN **S5.8**

RELEASED FOR CONSTRUCTION

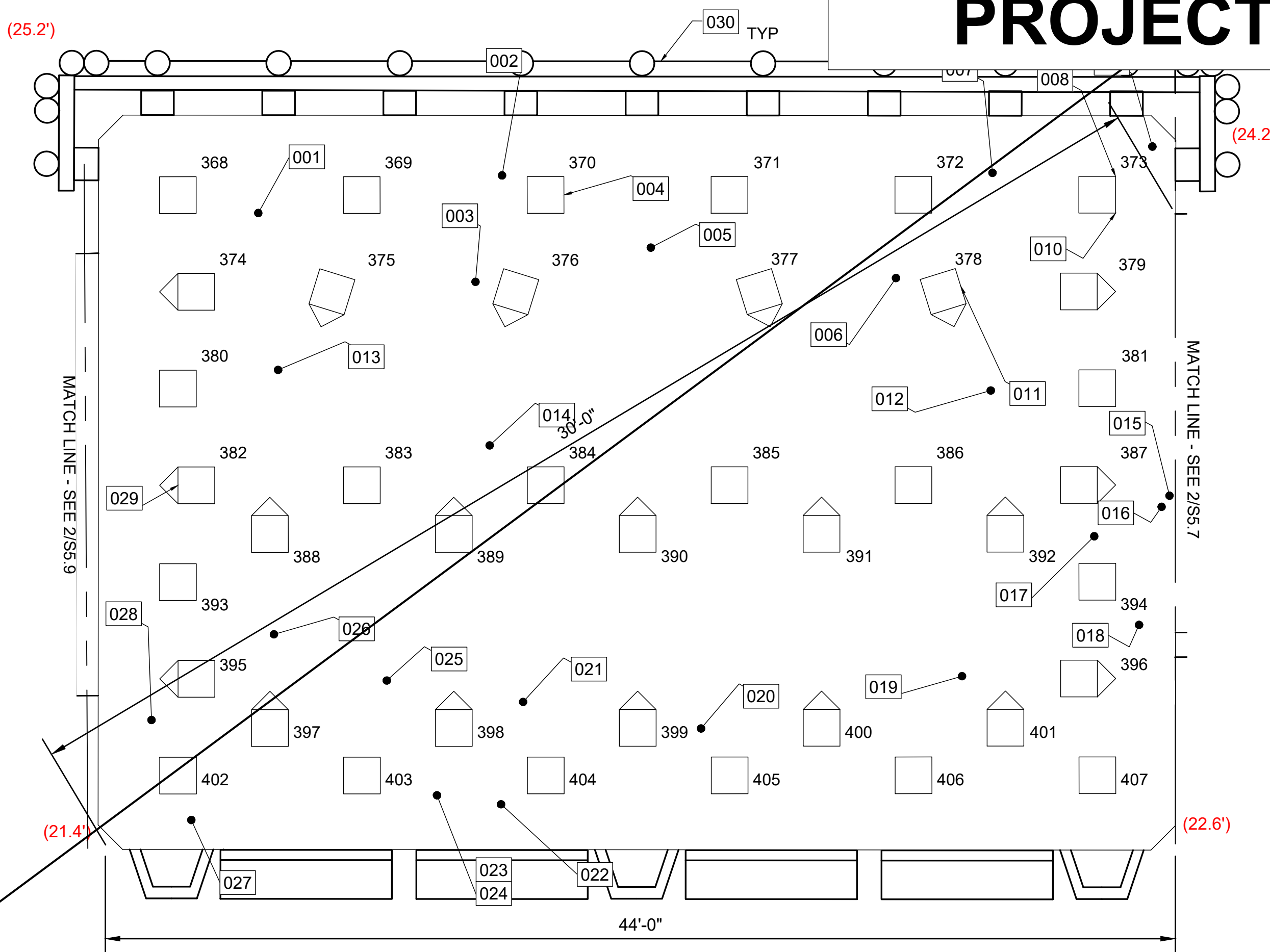
NOTE	ELEMENT	OBSERVATIONS										DESCRIPTION	REPAIR				
		CONC DEFECTS					OTHER DEFECTS			APPROX EXTENTS							
		SPALL	IMPENDING SPALL	EXPOSED REINF	# OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR.	DETERIORATION	MISSING			LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	HEIGHT (IN)
001	PILE CAP		✓									36	24				2/S7.0
002	PILE CAP		✓									24	24				2/S7.0
003	PILE CAP		✓									96	24				2/S7.0
004	PILE								✓			30	3/16			CS	1/S7.1
005	PILE CAP		✓									96	48				2/S7.0
006	PILE CAP		✓									18	36				2/S7.0
007	PILE CAP		✓									24	12				2/S7.0
008	PILE								✓			30	1/16			CS	1/S7.1
009	PILE CAP	✓		✓	2							24	18	4			3/S7.0
010	PILE	✓										4	4		36		2/S7.0
011	PILE								✓			24	1/16			CS	1/S7.1
012	PILE CAP	✓										24	24				2/S7.0
013	PILE CAP	✓										36	24				2/S7.0
014	PILE CAP	✓										72	36				2/S7.0
015	PILE CAP	✓										24	12				2/S7.0
016	PILE CAP								✓			48	1/64				1/S7.1
017	PILE CAP															PREVIOUS REPAIR FORM	NOTE 4/S7.0
018	PILE CAP			✓	5	✓						60	1	1/4		TOTAL	3/S7.2
019	PILE CAP	✓										72	36				2/S7.0
020	PILE CAP	✓										24	36				2/S7.0
021	PILE CAP	✓										36	36				2/S7.0
022	PILE CAP	✓										24	24				2/S7.0
023	PILE CAP	✓										24	24				2/S7.0
024	PILE CAP								✓			12	1/64				1/S7.1
025	PILE CAP	✓										38	38			5 LOC; TOTAL	2/S7.0
026	PILE CAP	✓										38	38			2 LOC; TOTAL	2/S7.0
027	PILE CAP								✓			30	1/64				1/S7.1
028	PILE CAP	✓							✓			60	16				2/S7.0
									✓			30	1/8			CS	1/S7.1
																	4/S5.12

NOT INCLUDED IN PROJECT SCOPE

- SHEET NOTES**
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRAID DATED MARCH 1980, THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
 - PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
 - 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
 - (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION
 - A MOORING ANALYSIS FOR THE MOORING DOLPHINS WAS OUTSIDE THE SCOPE OF GEL'S ASSESSMENT. A MOORING ANALYSIS MUST BE COMPLETED PRIOR TO THE DOLPHINS BEING USED FOR MOORING.



PLAN: EXISTING CONDITIONS AT TOP OF DECK AT BREASTING DOLPHIN No. 2
 SCALE: 1/4" = 1'-0"



PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE AT BREASTING DOLPHIN No. 2
 SCALE: 1/4" = 1'-0"

2
 S5.8

m:\client\patriots-point-development\autonomy\2024-projects\ppda\0124 - uss-yorktown pier assessment\2024-05-07\2026-ppda-25-AU

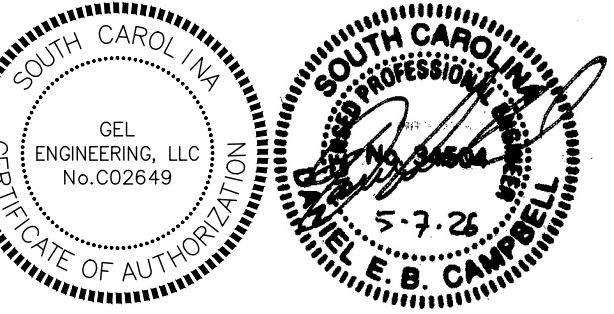
THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants

Certificate-Seal



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project

40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Existing Conditions at
 Breasting Dolphin No. 1

Project No.

PP0400124

Date

05.07.26

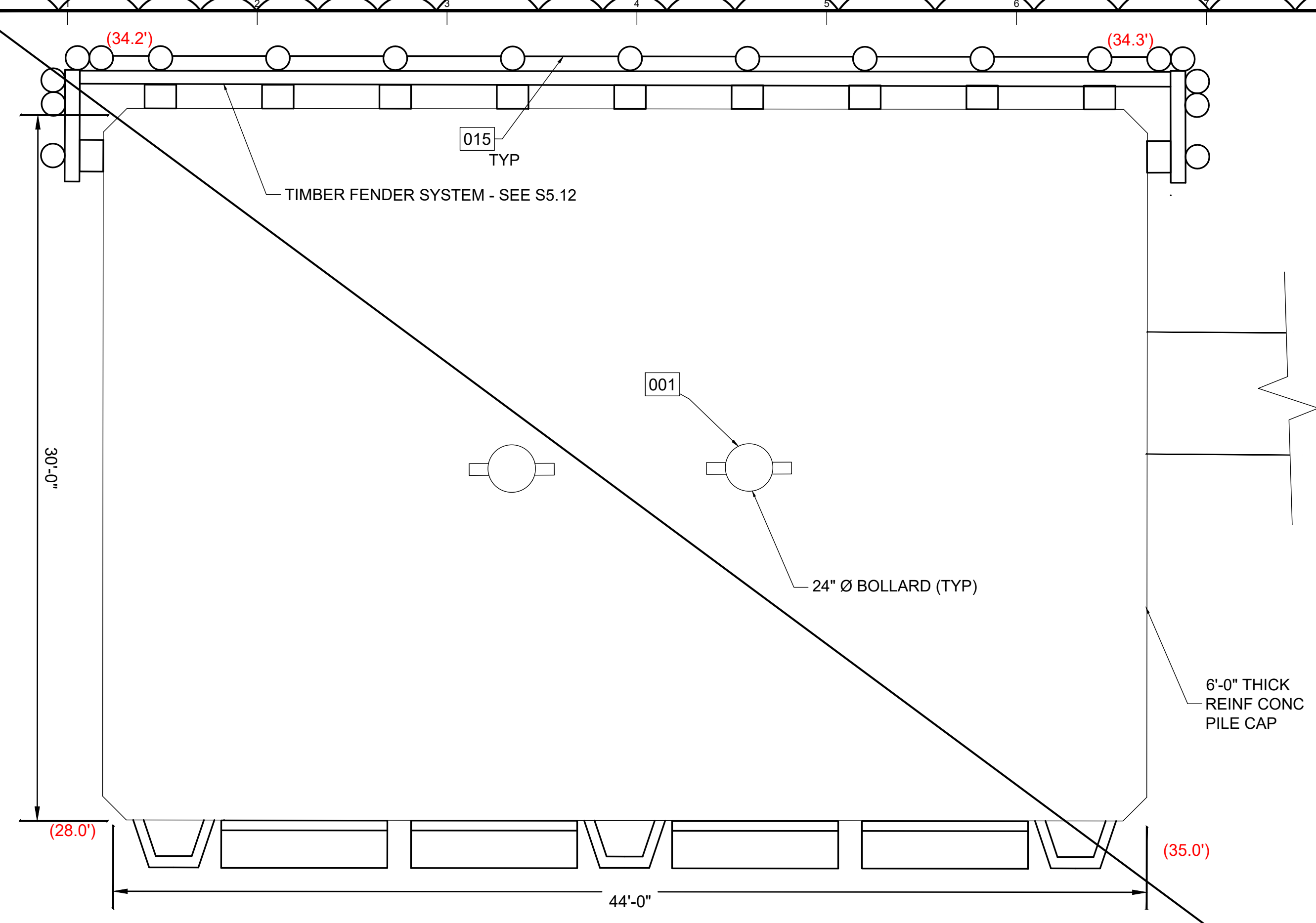
Scale

AS SHOWN

S5.10

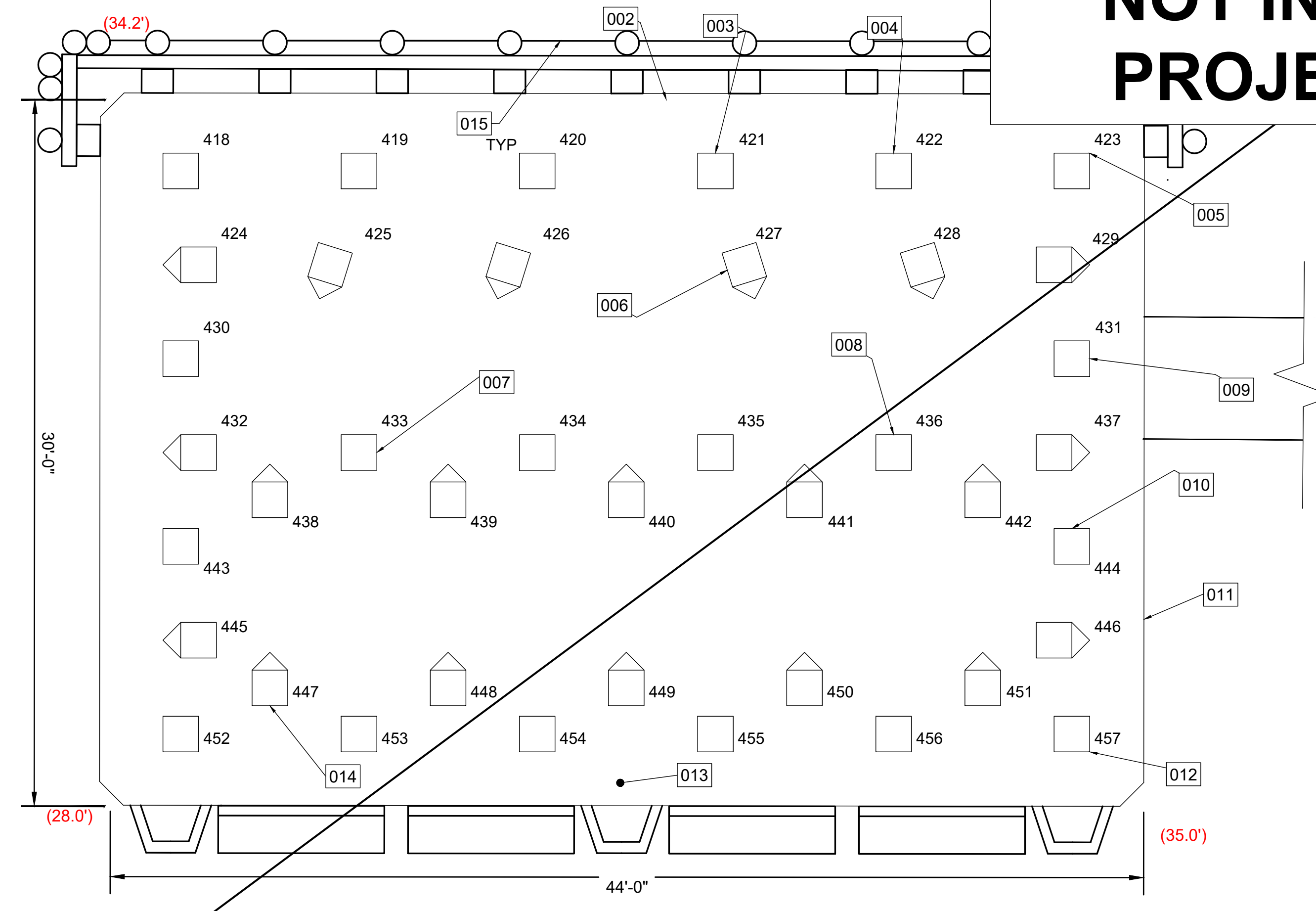
RELEASED FOR CONSTRUCTION

NOTE	ELEMENT	OBSERVATIONS											REPAIR					
		CONC DEFECTS						OTHER DEFECTS			APPROX EXTENTS				DESCRIPTION			
		SPALL IMPENDING	SPALL EXPOSED	REINF # OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR.	DETERIOR-ATION	MISSING	LENGTH (IN)	WIDTH (IN)		DEPTH (IN)		HEIGHT (IN)		
001	BOLLARD							✓									COATING FAILURE	5/S7.2
002	PILE CAP						✓					72	1/32				6 LOC; EA	1/S7.1
003	PILE	✓										12			24			2/S7.0
004	PILE						✓					16	1/16				CS	1/S7.1
005	PILE	✓										30	8	4				2/S7.0
006	PILE						✓					30	1/8					1/S7.1
007	PILE						✓					36	1/8					1/S7.1
008	PILE						✓					30	1/8					1/S7.1
009	PILE						✓					30	1/8				EA FACE	1/S7.1
010	PILE	✓	✓									12	12		16		PREVIOUS REPAIR	2/S7.0
011	PILE CAP						✓					72	1/32				3 LOC; EA	1/S7.1
012	PILE						✓					30	1/8				CS	1/S7.1
013	PILE CAP	✓	✓	✓								1056	720	12			AT UNDERSIDE	3/S7.0
014	PILE						✓					20	1/8				IN PREVIOUS REPAIR	1/S7.1
015	TIMBER FINDER																	4/S5.12



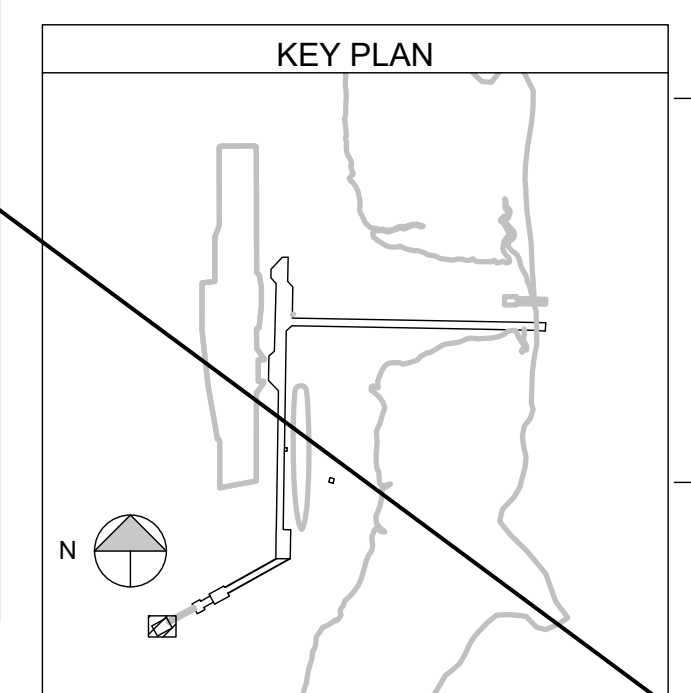
PLAN: EXISTING CONDITIONS AT TOP OF DECK AT BREASTING DOLPHIN No. 1
 SCALE: 1/8" = 1'-0"

NOT INCLUDED IN PROJECT SCOPE



PLAN: EXISTING CONDITIONS AT SUBSTRUCTURE AT BREASTING DOLPHIN No. 1
 SCALE: 1/8" = 1'-0"

- SHEET NOTES**
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRADY DATED MARCH 1980, THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
 - PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
 - 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
 - (X.X) DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION
 - A MOORING ANALYSIS FOR THE MOORING DOLPHINS WAS OUTSIDE THE SCOPE OF GEL'S ASSESSMENT. A MOORING ANALYSIS MUST BE COMPLETED PRIOR TO THE DOLPHINS BEING USED FOR MOORING.



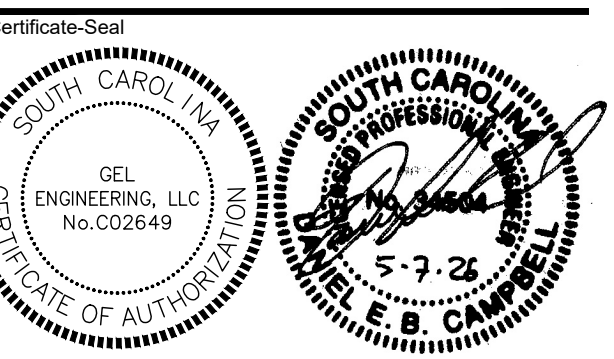
m:\client\patriots-point-development\autonv\2024-projects\ppda\0124 - USS Yorktown pier assessment\2024-05-07\2024-05-07-14-AM.dwg : SS-PP-17-26

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A RAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions

Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

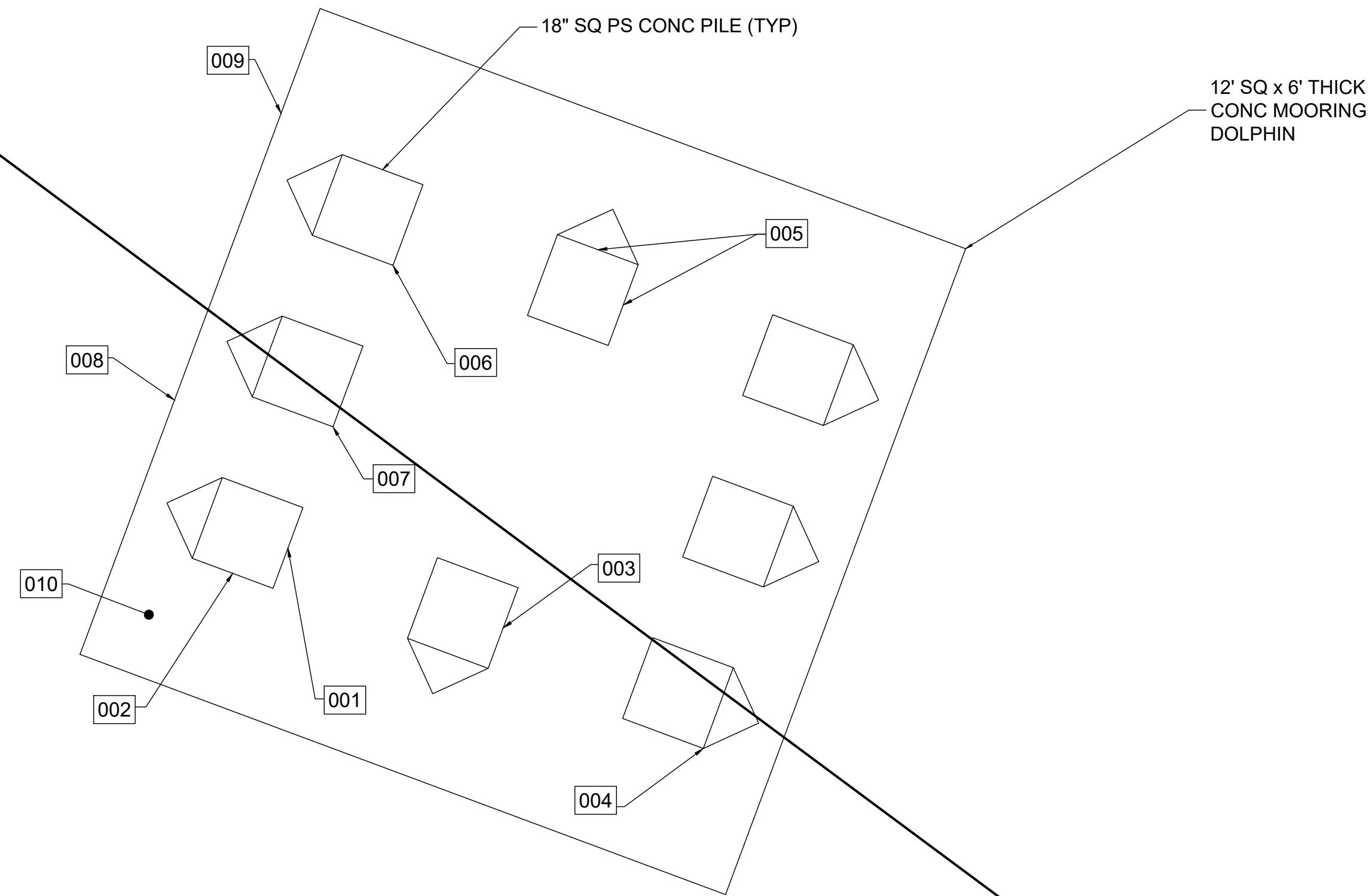
This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
Existing Conditions at Mooring Dolphins No. 1 and 2

Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN **S5.11**

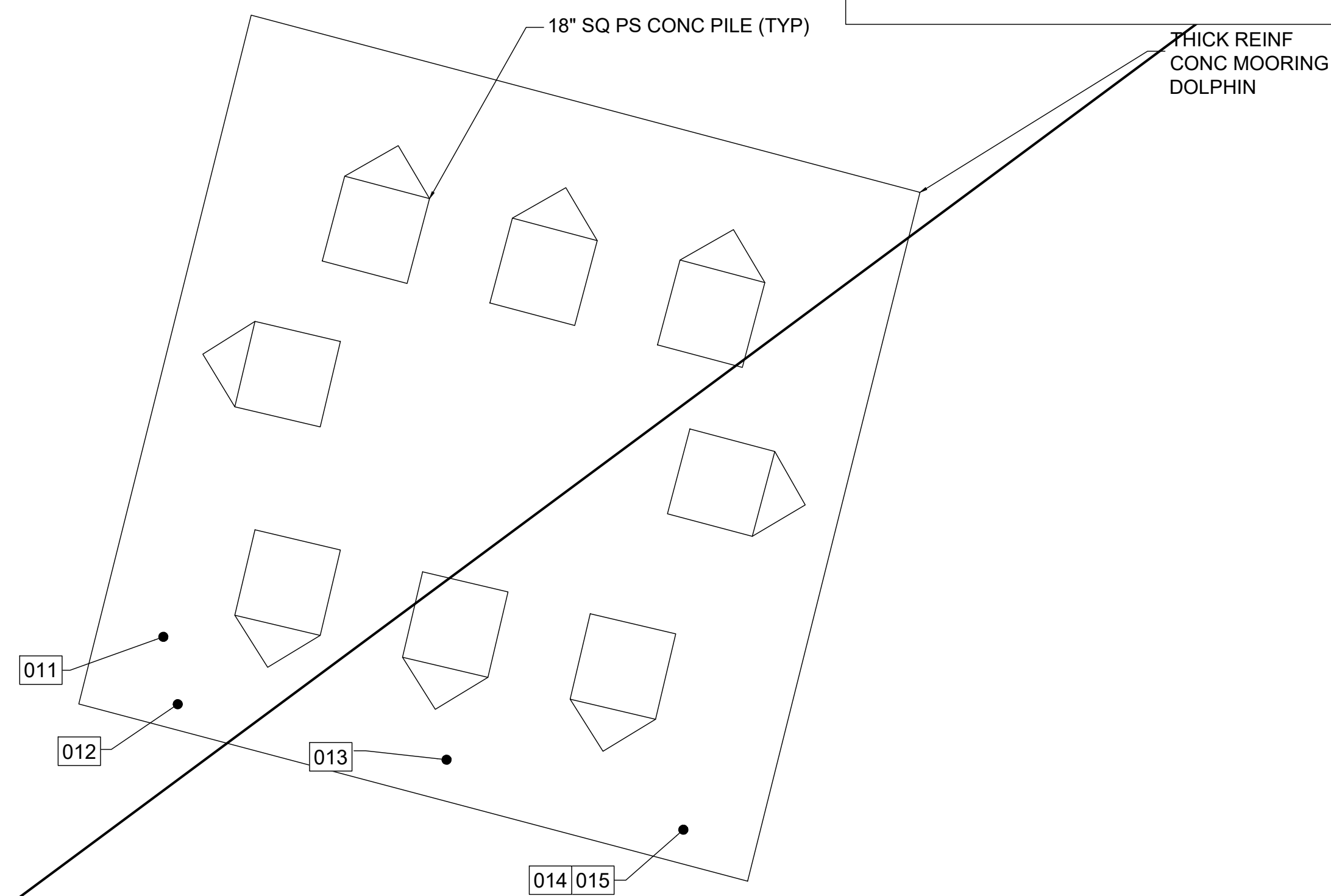
RELEASED FOR CONSTRUCTION

NOTE	ELEMENT	OBSERVATIONS										REPAIR				
		CONC DEFECTS						OTHER DEFECTS		APPROX EXTENTS			DESCRIPTION			
		SPALL IMPENDING	SPALL EXPOSED REINF	# OF BARS	SHALLOW REINF	CRACK	HOLLOW	CORR. DETERIORATION	MISSING	LENGTH (IN)	WIDTH (IN)			DEPTH (IN)	HEIGHT (IN)	
001	PILE	✓									6	18		36	VERT & HORZ; TOTAL	2/S7.0
002	PILE						✓				30	1/32				1/S7.1
003	PILE	✓	✓									18	8	30		2/S7.0
004	PILE		✓								30	8	4			2/S7.0
005	PILE						✓				36	1/64			TOTAL	1/S7.1
006	PILE		✓									10	10	30		2/S7.0
007	PILE	✓										18	6	30		2/S7.0
008	PILE CAP							✓			48	1/32				1/S7.1
009	PILE CAP							✓			48	1/32				1/S7.1
010	PILE CAP	✓	✓	✓	12						144	144	12		UP TO 75% LOS AT UNDERSIDE	2/S7.2
011	PILE CAP				1	✓					12	4	1/2		AT UNDERSIDE	3/S7.2
012	PILE CAP	✓			1	✓					7	7	1/2		AT UNDERSIDE	3/S7.2
013	PILE CAP	✓			1	✓					8	4	1/2		AT UNDERSIDE	3/S7.2
014	PILE CAP	✓			1	✓					12	4	1/2		AT UNDERSIDE	3/S7.2
015	PILE CAP	✓			1	✓					3	4	1/2		AT UNDERSIDE	3/S7.2



PLAN: EXISTING CONDITIONS AT MOORING DOLPHIN No. 1
 SCALE: 1/2" = 1'-0"

NOT INCLUDED IN PROJECT SCOPE

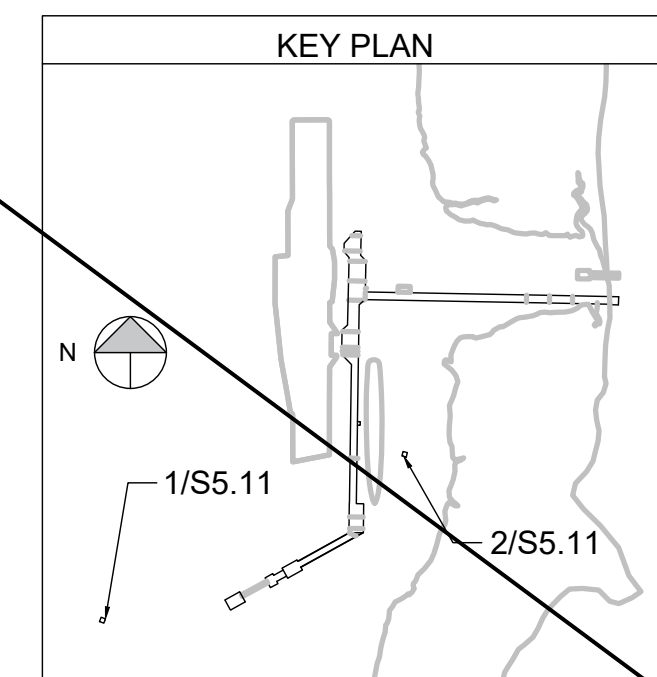


PLAN: EXISTING CONDITIONS AT MOORING DOLPHIN No. 2
 SCALE: 1/8" = 1'-0"

2
 S5.11

SHEET NOTES

- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY LBC&W DATED FEBRUARY 1975, CUMMINGS AND McCRAHY DATED MARCH 1980, THE SHERIDAN CORPORATION DATED APRIL 2009, AND FIELD OBSERVATIONS BY GEL ENGINEERING, LLC AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.
- PROVIDED EXTENTS ARE THE APPROXIMATE TOTAL OBSERVED AT EACH LOCATION AS OF THE DATE OF FIELD OBSERVATIONS.
- 000 OBSERVATION; SEE TABLE THIS SHEET FOR EXTENTS AND RECOMMENDED REPAIRS.
- (X.X') DENOTES APPROX VERTICAL DISTANCE FROM TOP OF DECK TO MUDLINE (FT) ON 12-13-24 AT 12:30 PM; DOES NOT DENOTE ELEVATION.
- A MOORING ANALYSIS FOR THE MOORING DOLPHINS WAS OUTSIDE THE SCOPE OF GEL'S ASSESSMENT. A MOORING ANALYSIS MUST BE COMPLETED PRIOR TO THE DOLPHINS BEING USED FOR MOORING.

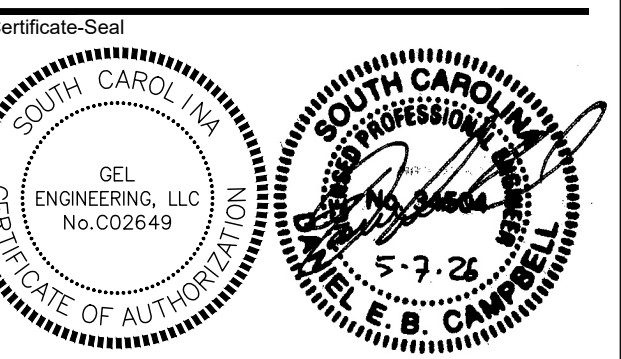


m:\client\uss-yorktown-pier-repairs\autocad\ppd00124 - uss-yorktown-pier-repairs\autocad\ppd00124 - uss-yorktown-pier-repairs.dwg : S5.11 (Printed: 5/17/2026 10:09:56 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

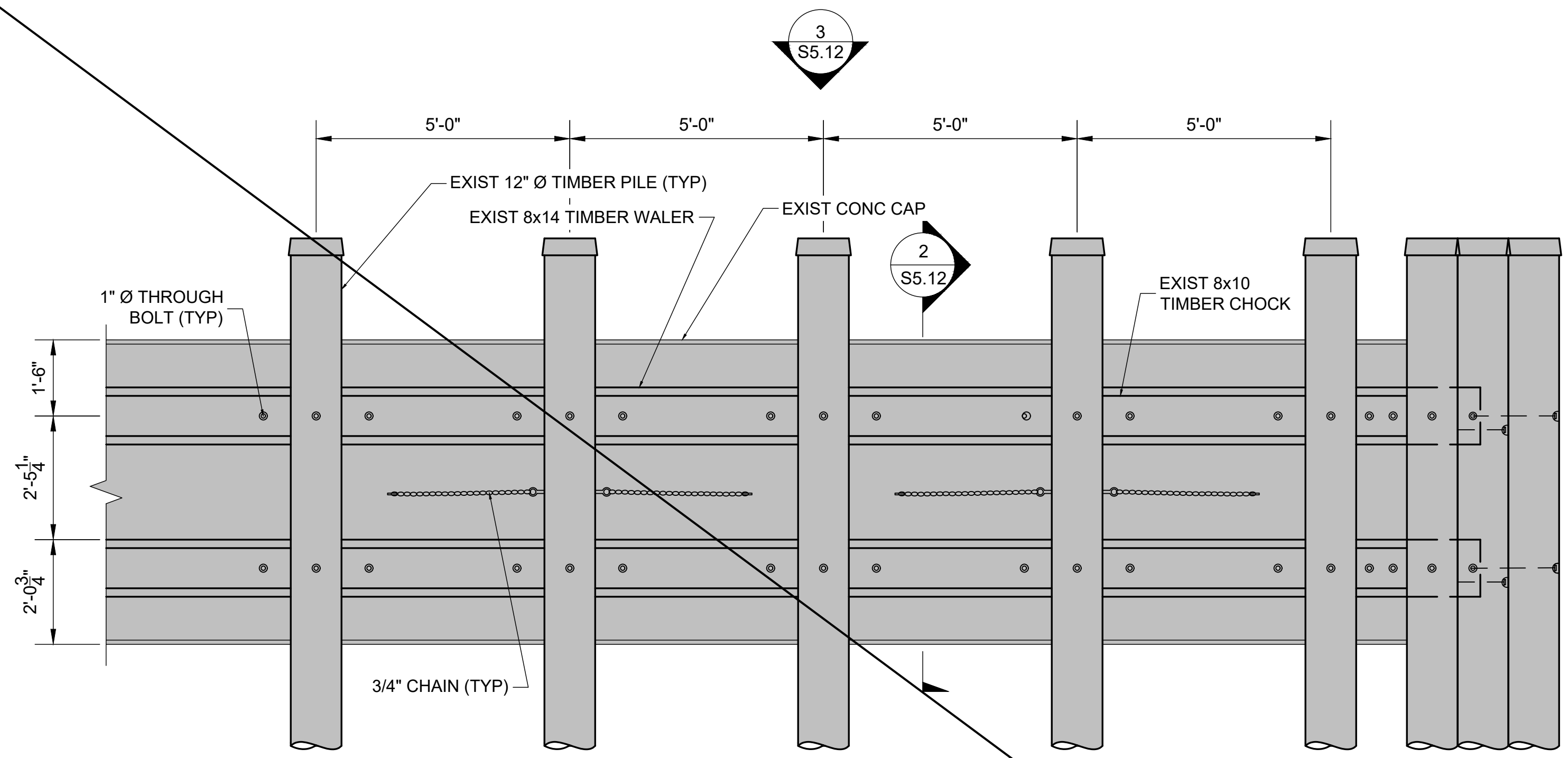
This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
Existing Timber Fender System

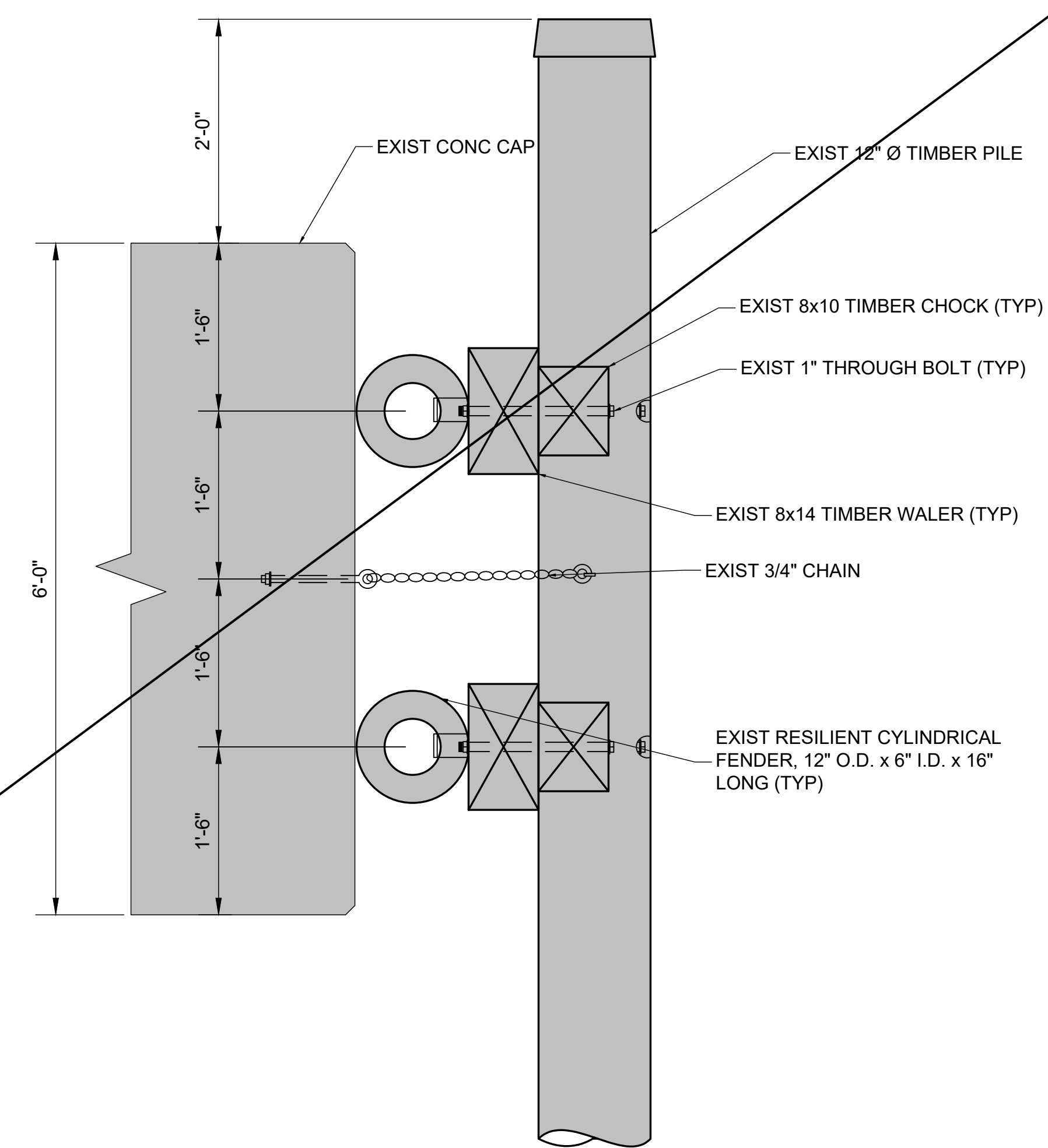
Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN

S5.12

RELEASED FOR CONSTRUCTION

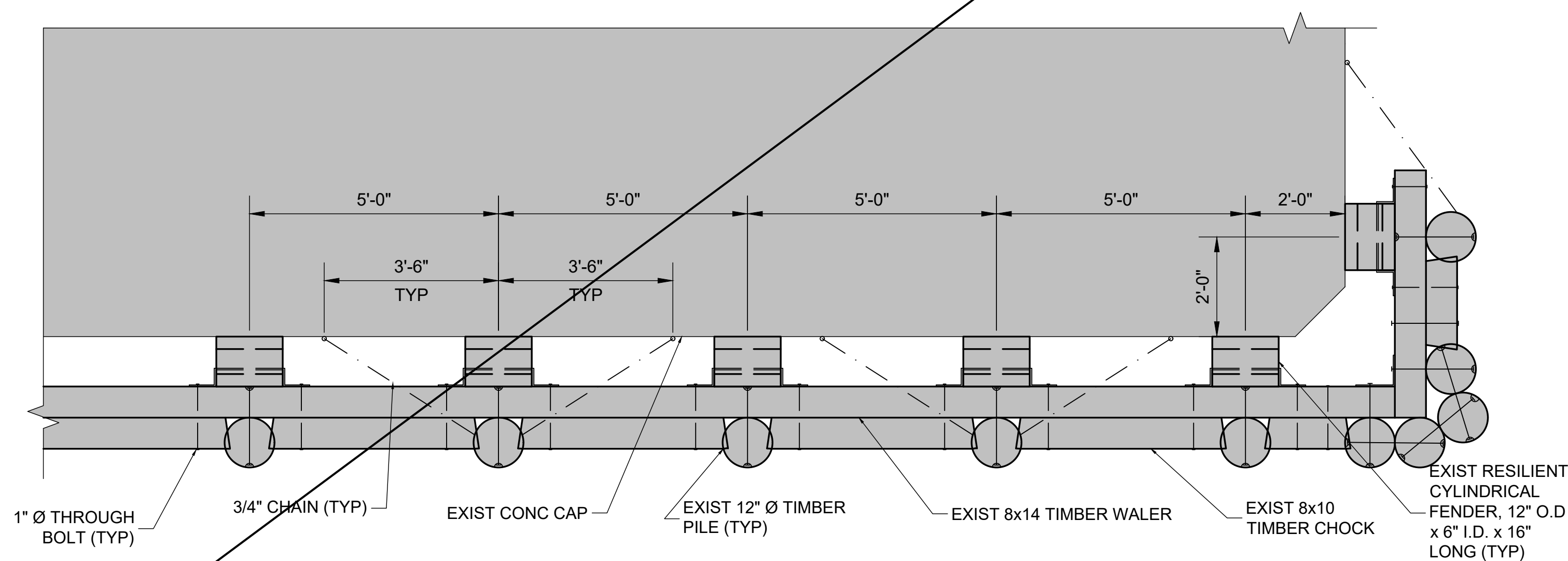


PARTIAL ELEVATION: TIMBER FENDER SYSTEM
 SCALE: 1/2" = 1'-0"



SECTION: TIMBER FENDER SYSTEM
 SCALE: 1" = 1'-0"

NOT INCLUDED IN PROJECT SCOPE



PARTIAL PLAN: TIMBER FENDER SYSTEM
 SCALE: 1/2" = 1'-0"

- REMOVE AND REPLACE ALL COMPONENTS OF THE TIMBER FENDER SYSTEM IN-KIND WITH STAINLESS STEEL HARDWARE.

TIMBER FENDER REPLACEMENT

SHEET NOTES

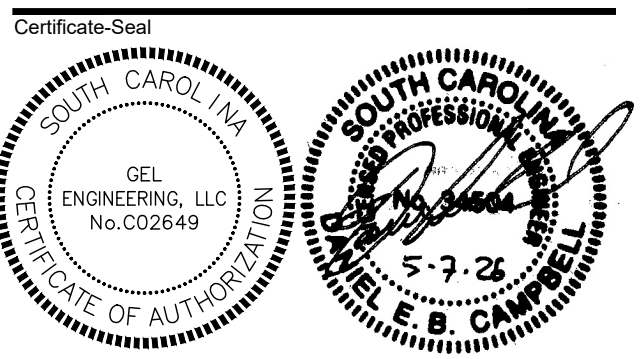
- PLANS AND EXISTING CONDITIONS GENERATED BASED ON PLANS PREPARED BY CUMMINGS AND McCRARY, INC., DATED MARCH 1980, AND ARE FOR REFERENCE ONLY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS.

m:\client\patriots-point-development-authority\2024-projects\ppda0124 - USS Yorktown pier assessment\2024-05-07\2024-05-07-17-56-AM.dwg : S5.12 (Patriots Point Development Authority) 5/7/2026 1:17:56 AM

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

**USS Yorktown
 Pier Repairs**

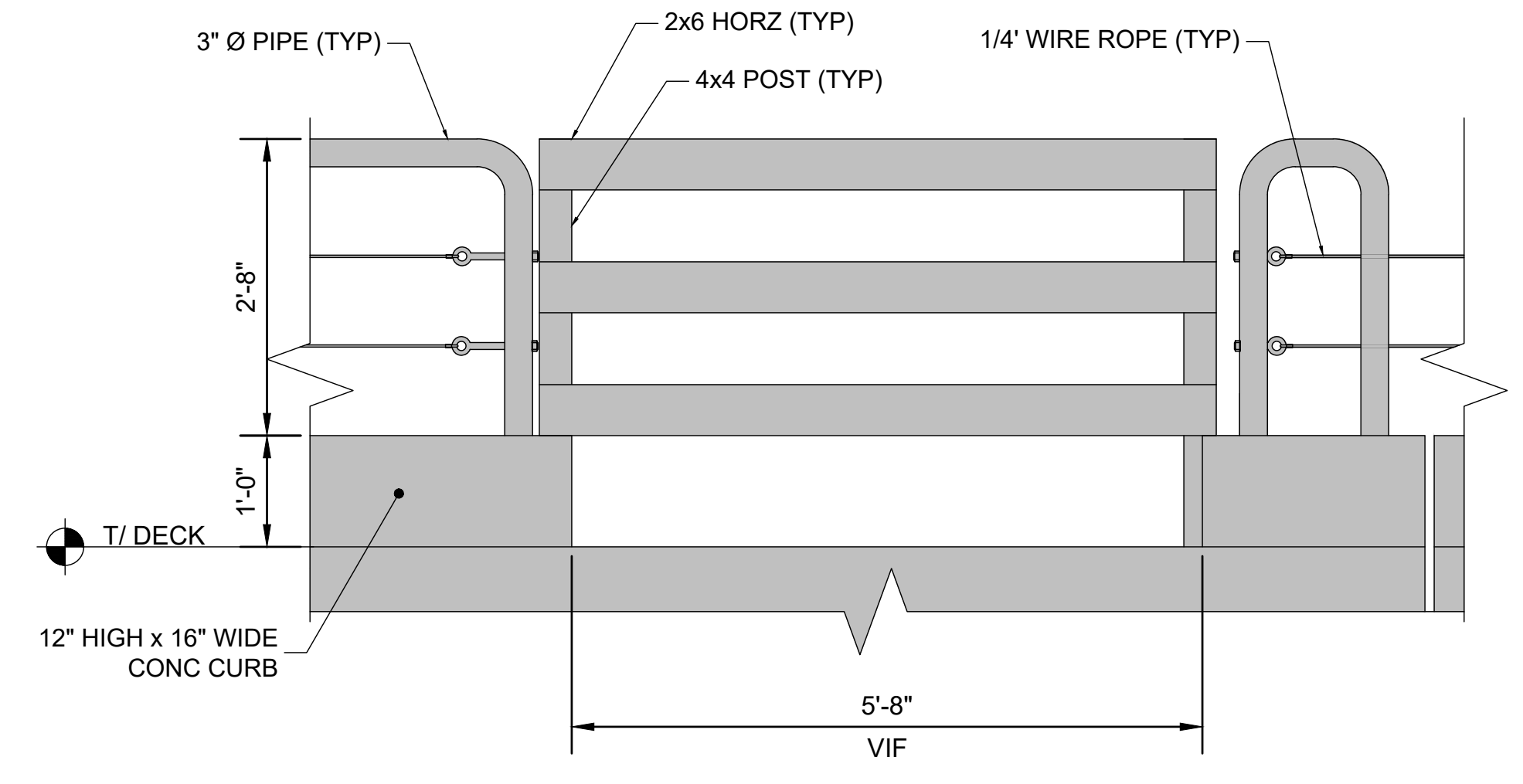
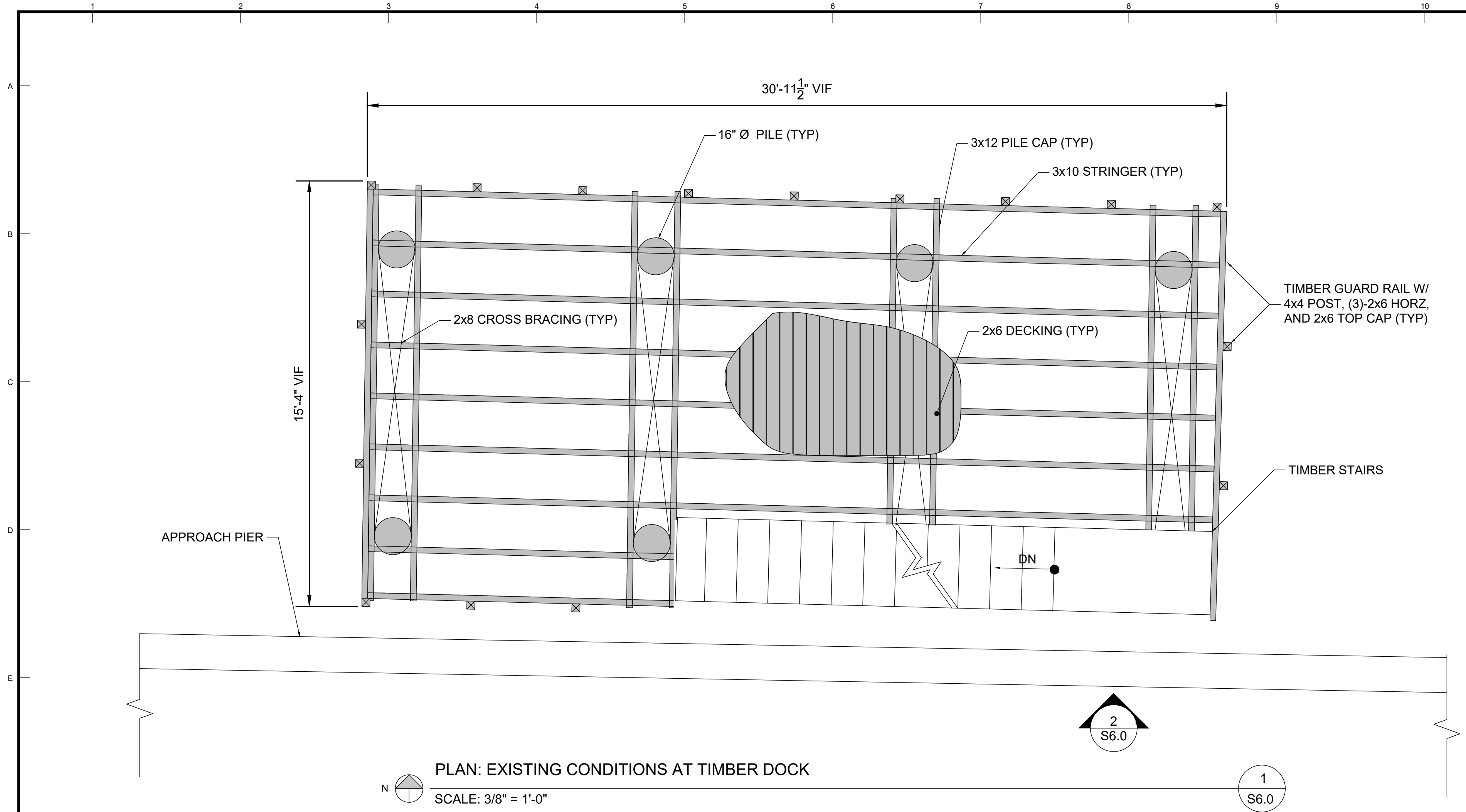
This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Timber Dock

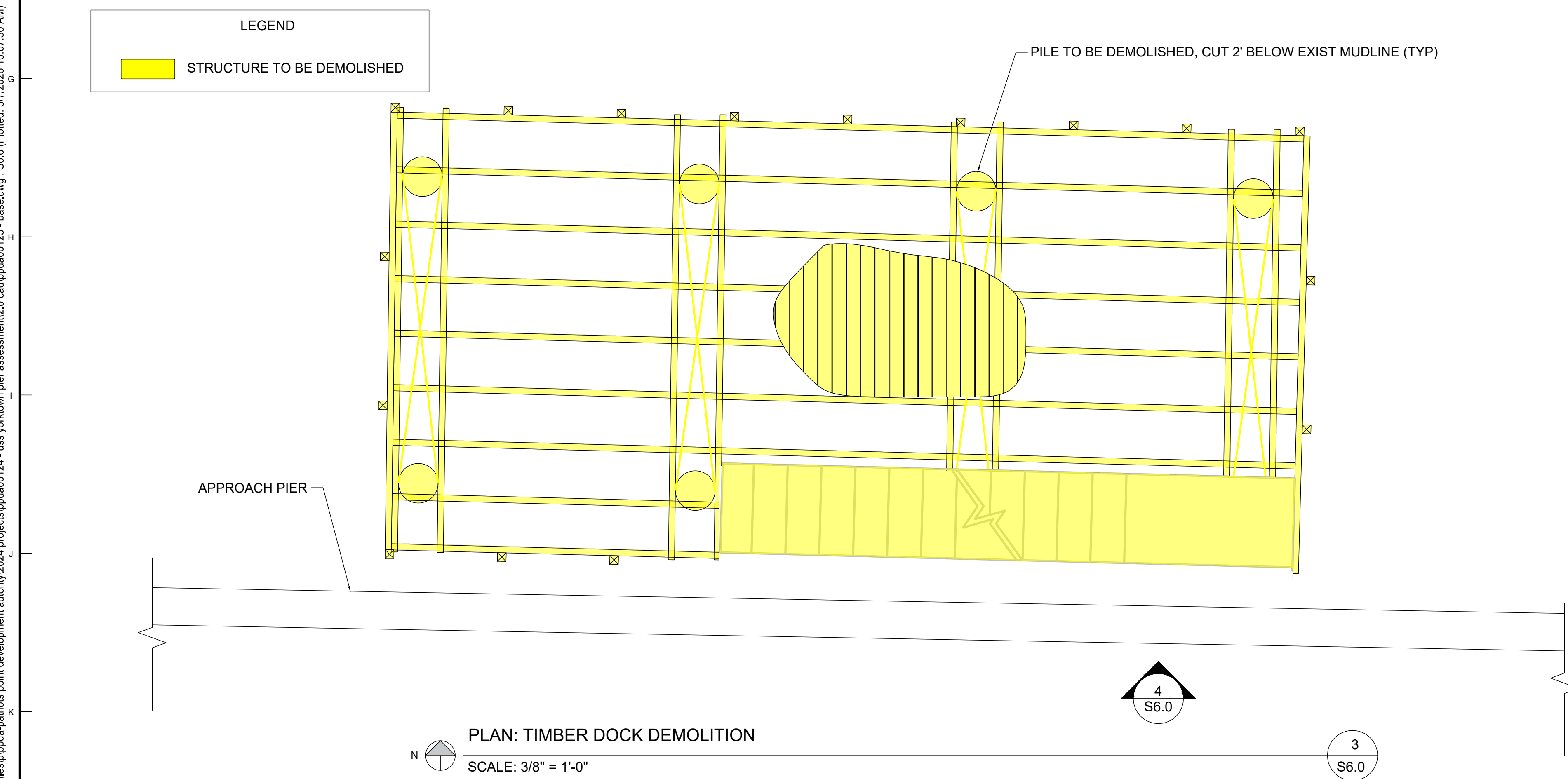
Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN **S6.0**

RELEASED FOR CONSTRUCTION



PARTIAL ELEVATION: EXISTING CONDITIONS AT TIMBER DOCK ACCESS

SCALE: 3/4" = 1'-0"



PARTIAL ELEVATION: TIMBER DOCK ACCESS DEMOLITION

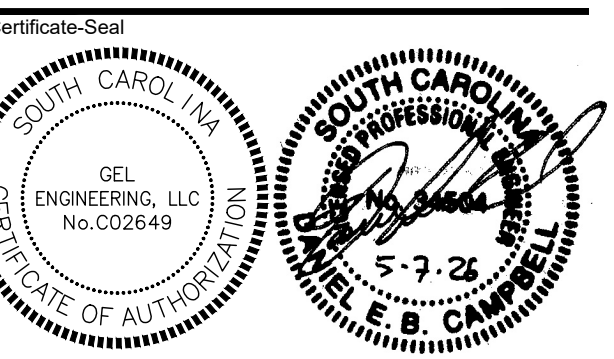
SCALE: 3/4" = 1'-0"

m:\clients\ppde-patriots point development authority\2024_projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00123 - base.dwg - S6.0 (Plotted: 5/7/2026 10:07:30 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A RAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

USS Yorktown
 Pier Repairs

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Details I

Project No. _____ Drawing No. _____
 PPD000124
 Date 05.07.26
 Scale AS SHOWN **S7.0**

RELEASED FOR CONSTRUCTION

CONCRETE REPAIR NOTES

1. REPAIR MATERIALS:

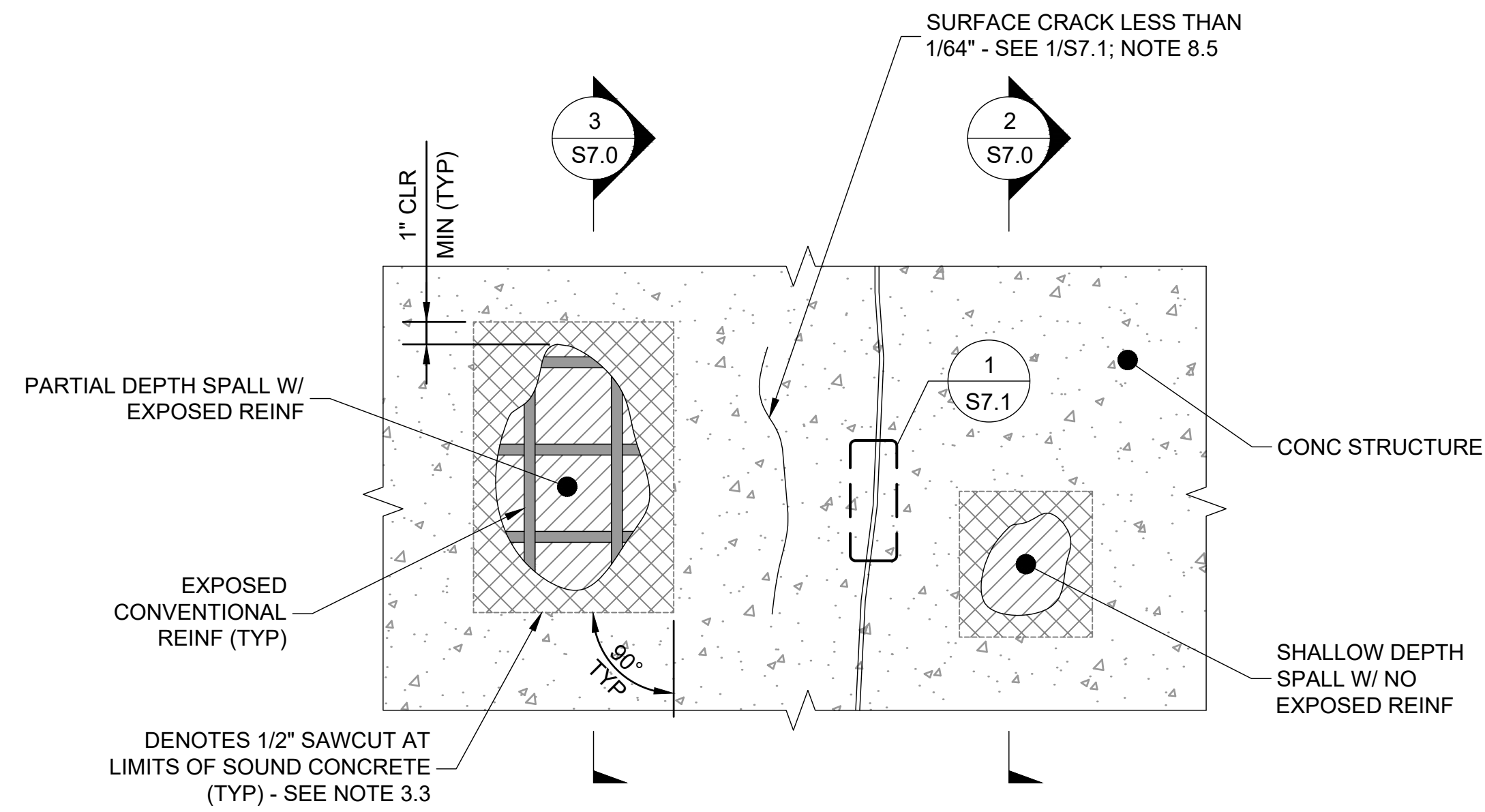
- 1.1. BONDING PRIMER.....SIKA ARMATEC-110 EPOCEM
- 1.2. CORROSION INHIBITIVE PRIMER.....SIKA ARMATEC-110 EPOCEM
- 1.3. SHALLOW AND PARTIAL DEPTH CONCRETE REPAIR:
 - 1.3.1. REPAIR MORTAR (HORIZ).....SIKATOP-122 PLUS
 - 1.3.2. REPAIR MORTAR (VERT AND OH).....SIKATOP-123 PLUS
- 1.4. CONCRETE REPAIR DUE TO SHALLOW COVER
 - 1.4.1. SIKAQUICK VOH
 - 1.4.2. SIKADUR-32 HI-MOD LV
 - 1.4.3. SIKAQUICK-1000
- 1.5. PATCH PIN.....HELIFIX PATCH PIN

THE CONTRACTOR MAY SUBMIT ALTERNATE REPAIR MATERIALS TO THE ENGINEER OF RECORD FOR REVIEW. THE ALTERNATE MATERIALS MUST MEET OR EXCEED THE PROPERTIES OF THE MATERIALS PROVIDED ABOVE.

2. THE CONTRACTOR MUST INSTALL REPAIR MATERIALS PER THE MANUFACTURER'S SPECIFICATIONS.

3. CONVENTIONALLY REINFORCED CONCRETE REPAIR:

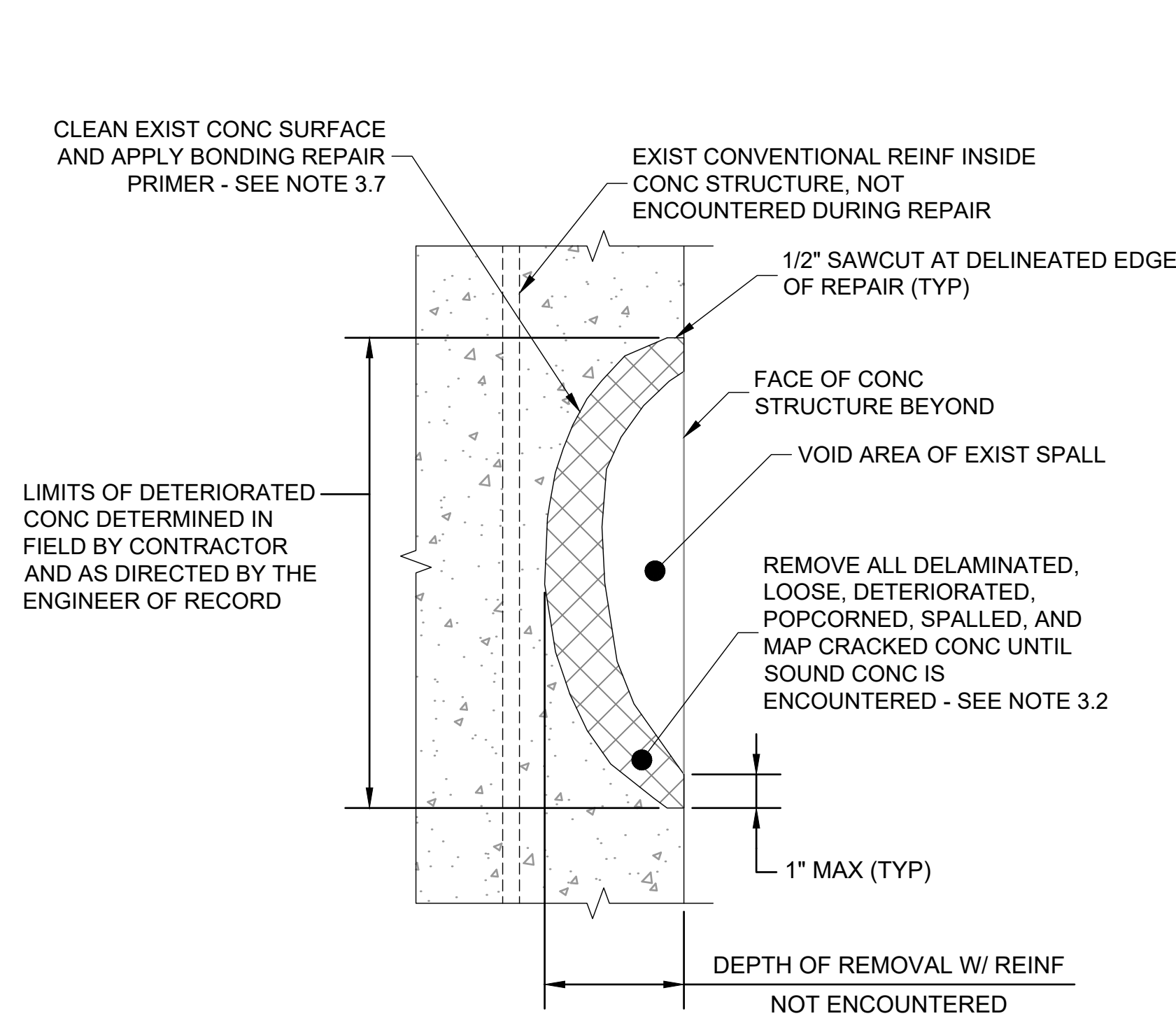
- 3.1. THE ACTUAL LOCATIONS, EXTENTS, AND TYPES OF CONCRETE REPAIR WILL BE DETERMINED IN THE FIELD. THE CONTRACTOR MUST REPAIR ALL AREAS DETERMINED NECESSARY AS DIRECTED BY THE ENGINEER OF RECORD AFTER THE CONTRACTOR HAS SOUNDED AND MARKED ALL REPAIR AREAS.
 - 3.2. CONCRETE REPAIR WORK INCLUDES REMOVING ALL DELAMINATED, LOOSE, DETERIORATED, POPCORNERED, SPALLED, AND MAP CRACKED CONCRETE. TO LOOSEN AND REMOVE THE CONCRETE, THE CONTRACTOR MUST NOT USE ANY PNEUMATIC OR POWER HAMMER WEIGHT IN EXCESS OF 30 POUNDS, UNLESS OTHERWISE NOTED BELOW. CONCRETE MUST BE REMOVED 3" BEYOND UNSOUND EDGE OF CONCRETE.
 - 3.3. ALL REPAIR AREAS MUST BE DELINEATED BY A 1/2" DEEP SAWCUT CUT PERPENDICULAR TO THE CONCRETE SURFACE; THE SAWCUTS MUST BE MADE ORTHOGONAL TO EACH OTHER, RESULTING IN A SQUARE OR RECTANGULAR DELINEATION AROUND THE REPAIR AREA. THE SAWCUTS SHOULD BE PLACED AT LEAST 1" AWAY FROM THE SOUND EDGE OF THE SPALLED AREA. THE CONTRACTOR MUST AVOID DAMAGING EXISTING REINFORCEMENT WHEN PERFORMING SAWCUTS.
 - 3.4. ALL REINFORCING STEEL EXPOSED DURING REMOVAL OF UNSOUND MATERIAL MUST BE UNDERCUT, ENSURING A MINIMUM CLEARANCE OF 3/4" BETWEEN THE REINFORCING STEEL AND SURROUNDING CONCRETE. THE CONTRACTOR MUST NOT USE ANY PNEUMATIC OR POWER HAMMER WEIGHT IN EXCESS OF 15 POUNDS. CONCRETE REMOVAL MUST EXTEND ALONG THE EXPOSED BAR UNTIL THERE IS NO FURTHER DELAMINATION, UNSOUND CONCRETE, OR SIGNIFICANT CORROSION UNTIL THE BAR IS WELL BONDED TO THE SURROUNDING CONCRETE. NOTIFY THE ENGINEER OF RECORD IMMEDIATELY IF CONCRETE REMOVAL MUST EXTEND BEYOND THE DELINEATED REPAIR AREA.
 - 3.5. ALL REINFORCING STEEL EXPOSED DURING REMOVAL OF UNSOUND MATERIAL MUST BE THOROUGHLY BLAST CLEANED TO A WHITE METAL FINISH AND COATED WITH A CORROSION INHIBITIVE PRIMER. ALLOW TO FULLY CURE PRIOR TO INSTALLING CONCRETE REPAIR MATERIAL.
 - 3.6. ALL SURFACES WHICH WILL HAVE REPAIR MATERIAL PLACED AGAINST IT MUST BE ROUGHENED TO A MINIMUM AMPLITUDE OF 1/4" USING A MAXIMUM 15 POUND CHIPPING HAMMER OR OTHER APPROVED EQUIPMENT/METHODS.
 - 3.7. IMMEDIATELY PRIOR TO PLACING REPAIR MATERIAL AGAINST EXISTING CONCRETE, CLEAN EXISTING SURFACES BY ABRASIVE BLASTING OR HIGH PRESSURE WATER BLASTING WITH WATER CONTAINING NO DETERGENTS OR BOND INHIBITING CHEMICALS. APPLY BONDING PRIMER IMMEDIATELY PRIOR TO PLACING REPAIR MATERIAL.
 - 3.8. FOR SPALLS WITH 1 1/2" DEPTH OR GREATER, PROVIDE STAINLESS STEEL HELIFIX PATCH PINS OR APPROVED EQUAL. INSTALL PER MANUFACTURER RECOMMENDATIONS.
 - 3.9. ALL SURFACES MUST BE RUBBED TO PRODUCE A SMOOTH FINISH.
4. LOCATIONS OF PREVIOUS REPAIRS MUST BE ASSESSED FOR SOUNDNESS BY THE CONTRACTOR. IF UNSOUND, REPAIR PER PROCEDURE ABOVE.



ELEVATION: CONVENTIONALLY REINFORCED CONCRETE STRUCTURE

SCALE: NOTE TO SCALE

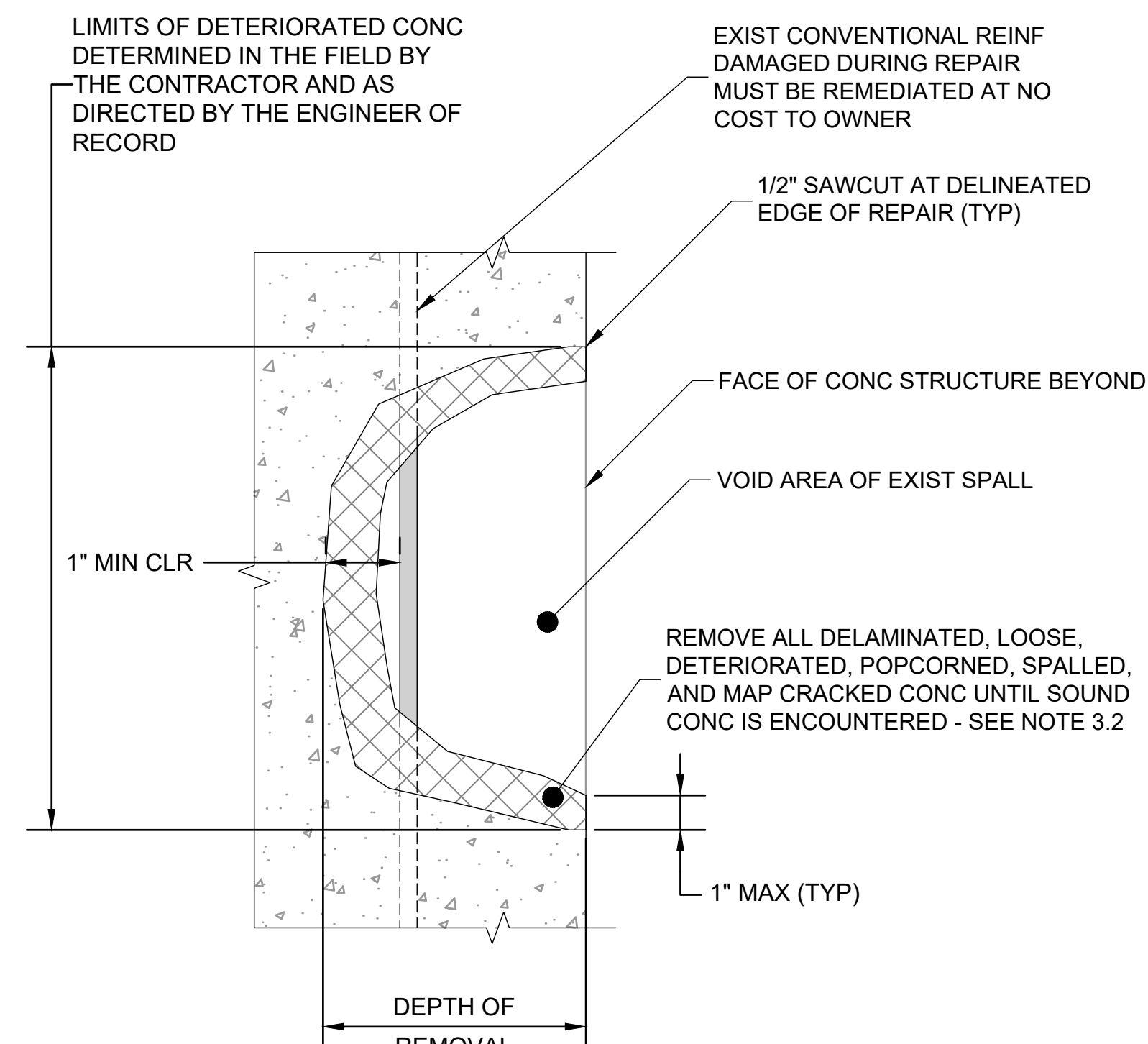
1
S7.0



SECTION: PARTIAL DEPTH SPALL REPAIR (REPAIR TYPE I)

SCALE: NOT TO SCALE

2
S7.0



SECTION: PARTIAL DEPTH SPALL REPAIR (REPAIR TYPE II)

SCALE: NOT TO SCALE

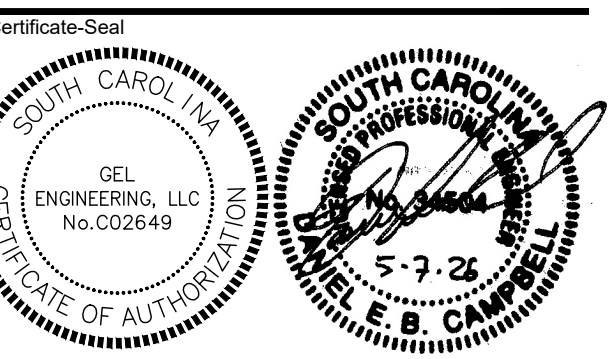
3
S7.0

m:\clients\ppd-patriots point development authority\2024_ppd\ppd00124 - uss yorktown pier assessment\2.0 cad\ppd00124 - base.dwg - S7.0 (Plotted: 5/7/2026 10:13:46 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A RAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

**USS Yorktown
 Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Details II

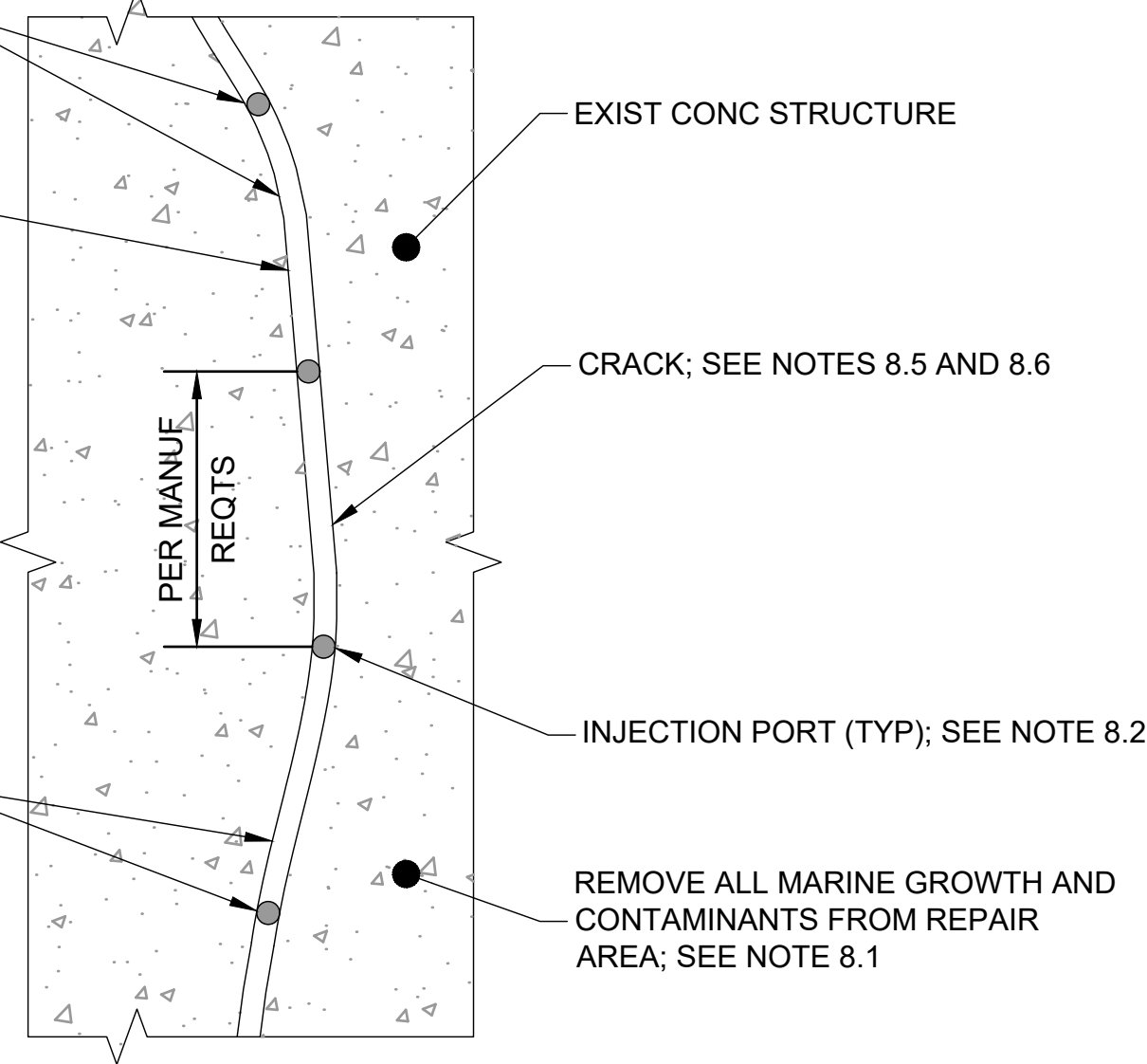
Project No. _____ Drawing No. _____
 PPD000124
 Date 05.07.26
 Scale AS SHOWN **S7.1**

RELEASED FOR CONSTRUCTION

ONCE THE INJECTION MATERIAL HAS FULLY CURED, GRIND OFF ALL INJECTION PORTS AND SEALER FLUSH WITH THE CONCRETE SURFACE; SEE NOTE 8.7

WHEN THE EPOXY ADHESIVE SEAL HAS FULLY CURED, PRESSURE INJECT THE CRACK USING A LOW VISCOSITY, HIGH STRENGTH EPOXY RESIN ADHESIVE; SEE NOTE 8.4

SEAL CRACK AND INJECTION PORTS WITH A STRUCTURAL GRADE, RAPID-CURING EPOXY, SMOOTH-PASTE ADHESIVE; SEE NOTE 8.3



DETAIL: PRESSURE INJECTION CRACK REPAIR (REPAIR TYPE III)

SCALE: NOT TO SCALE

1
S7.1

PRESSURE INJECTION CRACK REPAIR NOTES

1. REPAIR MATERIALS:

- 1.1. CRACK AND INJECTION PORT SEAL.....SIKADUR-33
- 1.2. CRACK INJECTION.....SIKADUR-35 HI-MOD LV

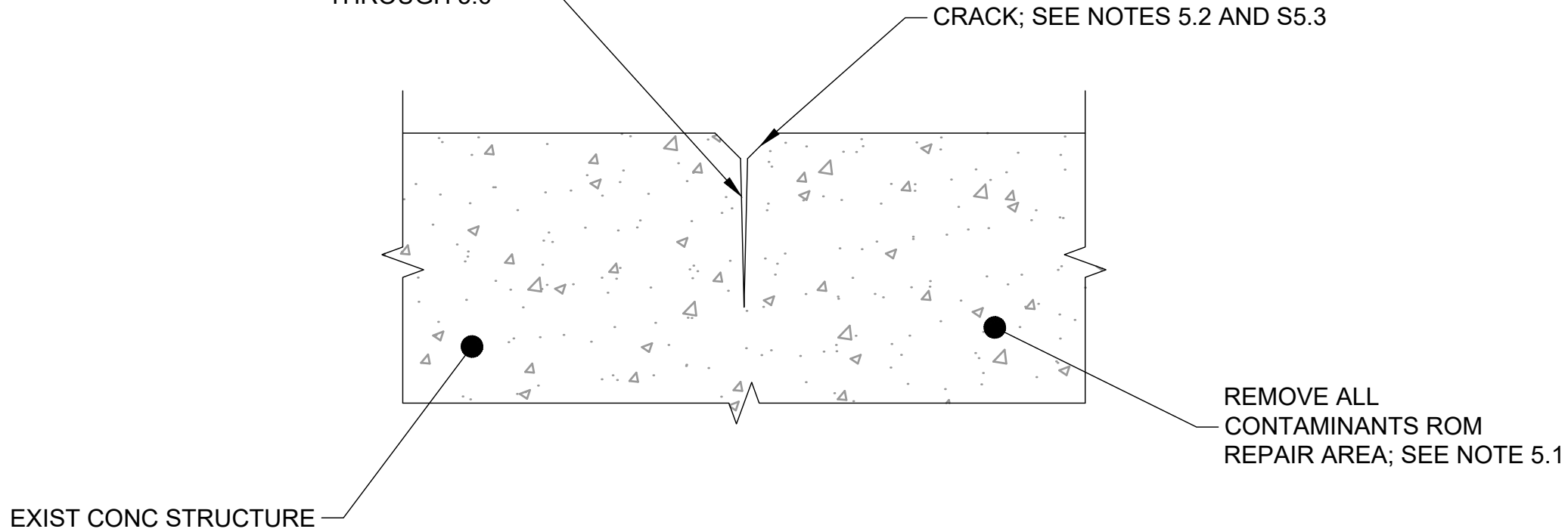
THE CONTRACTOR MAY SUBMIT ALTERNATE REPAIR MATERIALS TO THE ENGINEER OF RECORD FOR REVIEW. THE ALTERNATE MATERIALS MUST MEET OR EXCEED THE PROPERTIES OF THE MATERIALS PROVIDED ABOVE.

- 2. THE CONTRACTOR MUST PERFORM WORK FROM A STABLE SURFACE WHICH PROVIDES UNOBSTRUCTED ACCESS TO THE ENTIRE REPAIR AREA.
- 3. THE CONTRACTOR MUST INSTALL REPAIR MATERIALS PER THE MANUFACTURER'S SPECIFICATIONS.
- 4. ONLY CONTRACTORS CERTIFIED BY THE REPAIR MATERIAL MANUFACTURER MAY PERFORM THE REPAIR WORK.
- 5. CRACKS WHICH EXHIBIT CORROSION STAINING SHOULD BE SOUNDED BY THE CONTRACTOR ALONG THEIR LENGTH. IF NO UNSOUND CONCRETE IS ENCOUNTERED, PERFORM EPOXY INJECTION PER THE SEQUENCE BELOW. IF UNSOUND OR DELAMINATED CONCRETE IS ENCOUNTERED, PERFORM CONCRETE REPAIR PER 1/S7.0.
- 6. WHERE CONCRETE REPAIR AND CRACK INJECTION WORK ARE ADJACENT, THE CONTRACTOR MUST PERFORM THE CRACK INJECTION WORK PRIOR TO PERFORMING CONCRETE REPAIRS.
- 7. REFER TO THE REPAIR PLANS AND OBSERVATION TABLES FOR THE CRACK REPAIR LOCATIONS AND EXTENTS.

8. REPAIR SEQUENCE:

- 8.1. THE REPAIR AREA MUST BE SOUND AND CLEAN; ALL MARINE GROWTH, GREASE, DUST, WAXES, CURING COMPOUNDS, OR OTHER CONTAMINANTS MUST BE REMOVED ALONG THE FULL LENGTH OF THE CRACK REPAIR AREA. THE CLEANED AREA MUST PROVIDE A CONTAMINANT FREE, OPEN TEXTURED SURFACE. THE CONTRACTOR MAY CLEAN USING MECHANICAL OR BLAST CLEANING MEANS.
- 8.2. INSTALL INJECTION PORTS PER REPAIR MATERIAL MANUFACTURER'S RECOMMENDATIONS.
- 8.3. SEAL CRACK AND INJECTION PORTS WITH A STRUCTURAL GRADE, RAPID-CURING EPOXY, SMOOTH-PASTE ADHESIVE SUCH AS SIKADUR-33 OR ENGINEER APPROVED EQUIVALENT.
- 8.4. WHEN THE EPOXY ADHESIVE SEAL HAS FULLY CURED, PRESSURE INJECT THE CRACK USING A LOW VISCOSITY, HIGH STRENGTH EPOXY RESIN ADHESIVE SUCH AS SIKADUR 55SLV (1/64" THROUGH LESS THAN 1/16") OR SIKADUR-35 HI-MOD LV (1/16" THROUGH 1/4") OR ENGINEER APPROVED EQUIVALENT.
- 8.5. CRACKS THAT ARE LESS THAN 1/64" WIDE DO NOT REQUIRE REPAIR UNLESS DIRECTED BY THE ENGINEER OF RECORD.
- 8.6. CRACKS THAT ARE 1/64" WIDE OR GREATER MUST BE REPAIRED BY EPOXY INJECTION.
- 8.7. ONCE THE INJECTION MATERIAL HAS FULLY CURED, GRIND OFF ALL INJECTION PORTS AND SEALER FLUSH WITH THE CONCRETE SURFACE.
- 9. IF CRACK TO BE INJECTED IS AT A PREVIOUS CONCRETE REPAIR THAT IS UNSOUND, THE CONTRACTOR MUST REMOVE UNSOUND MATERIAL AND REPAIR PER 2/S7.0 OR 3/S7.0 AS REQUIRED.

SEAL CRACK WITH LOW VISCOSITY, HIGH STRENGTH EPOXY RESIN ADHESIVE; SEE NOTES 5.4 THROUGH 5.6



DETAIL: GRAVITY FEED HORIZONTAL CRACK REPAIR (REPAIR TYPE IV)

SCALE: NOTE TO SCALE

2
S7.1

GRAVITY FEED CRACK REPAIR NOTES

1. REPAIR MATERIALS:

- 1.1. GRAVITY FEED CRACK REPAIR.....SIKADUR-35 HI-MOD LV

THE CONTRACTOR MAY SUBMIT ALTERNATE REPAIR MATERIALS TO THE ENGINEER OF RECORD FOR REVIEW. THE ALTERNATE MATERIALS MUST MEET OR EXCEED THE PROPERTIES OF THE MATERIALS PROVIDED ABOVE.

- 2. THE CONTRACTOR MUST INSTALL REPAIR MATERIALS PER THE MANUFACTURER'S SPECIFICATIONS.
- 3. ONLY CONTRACTORS CERTIFIED BY THE REPAIR MATERIAL MANUFACTURER MAY PERFORM THE REPAIR WORK.
- 4. REFER TO THE REPAIR PLANS AND OBSERVATION TABLES FOR THE CRACK REPAIR LOCATIONS AND EXTENTS.
- 5. REPAIR SEQUENCE:
 - 5.1. THE REPAIR AREA MUST BE SOUND AND CLEAN; ALL GREASE, DUST, WAXES, CURING COMPOUNDS, OR OTHER CONTAMINANTS MUST BE REMOVED ALONG THE FULL LENGTH OF THE CRACK REPAIR AREA. THE CLEANED AREA MUST PROVIDE A CONTAMINANT FREE, OPEN TEXTURED SURFACE.
 - 5.2. USE A GRINDING OR ROTARY TOOL WITH A DIAMOND BLADE TO CREATE A "V" SHAPED GROOVE ALONG THE FULL LENGTH OF THE CRACK. ENSURE THAT THE "V" SHAPED GROOVE IS CREATED WITH A CONSISTENT DEPTH AND IS WIDE ENOUGH TO ACCOMMODATE THE CRACK REPAIR MATERIAL.
 - 5.3. BLOW THE "V" NOTCHED CRACK CLEAN WITH OIL-FREE COMPRESSED AIR.
 - 5.4. POUR A LOW VISCOSITY, HIGH STRENGTH EPOXY RESIN ADHESIVE SUCH AS SIKADUR-35 HI-MOD LV OR ENGINEER APPROVED EQUIVALENT INTO THE "V" NOTCHED CRACK. CONTINUE PLACEMENT UNTIL COMPLETELY FILLED. IF THE CRACK APPEARS TO BE FULL DEPTH OR REFLECTIVE, SEAL UNDERSIDE OF SLAB PRIOR TO INSTALLING THE REPAIR MATERIAL.
 - 5.5. REMOVE ALL EXCESS OR OVER-POUR MATERIAL IMMEDIATELY.
 - 5.6. THE FINAL APPEARANCE OF THE CRACK REPAIR MUST BE CLEAN, WITH THE CURED REPAIR MATERIAL VISIBLE ALONG THE FULL LENGTH OF THE CRACK FLUSH WITH THE CONCRETE SURFACE. REMNANT, EXCESS, OR OVER-POUR MATERIAL WILL NOT BE ACCEPTED AND MUST BE REMOVED AT NO COST TO THE OWNER.

- 1. PREPARE CRACK FOR REPAIR MATERIAL SIMILAR TO NOTES 5.1 THROUGH 5.3 IN DETAIL 2/S7.1.
- 2. INSTALL A NON-SAG ELASTIC SEALANT SUCH AS SIKAFLEX CONCRETE FIX OR ENGINEER APPROVED EQUIVALENT INTO THE "V" NOTCHED CRACK.
- 3. REMOVE ALL EXCESS OR OVER-POUR MATERIAL IMMEDIATELY.
- 4. THE FINAL APPEARANCE OF THE CRACK REPAIR MUST BE CLEAN, WITH THE CURED REPAIR MATERIAL VISIBLE ALONG THE FULL LENGTH OF THE CRACK FLUSH WITH BE REMOVED AT NO COST TO THE OWNER.

DETAIL: CRACK REPAIR AT CURBS

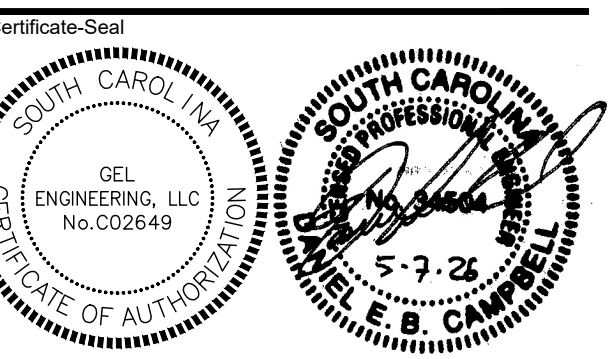
3
S7.1

m:\clients\ppde-patriots point development authority\2024_projects\ppda0124 - uss yorktown pier assessment\2.0 cad\ppda0123 - base.dwg - S7.1 (Plotted: 5/7/2026 10:10:04 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Appr	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

**USS Yorktown
 Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title

Details III

Project No. _____ Drawing No. _____

PPDA00124

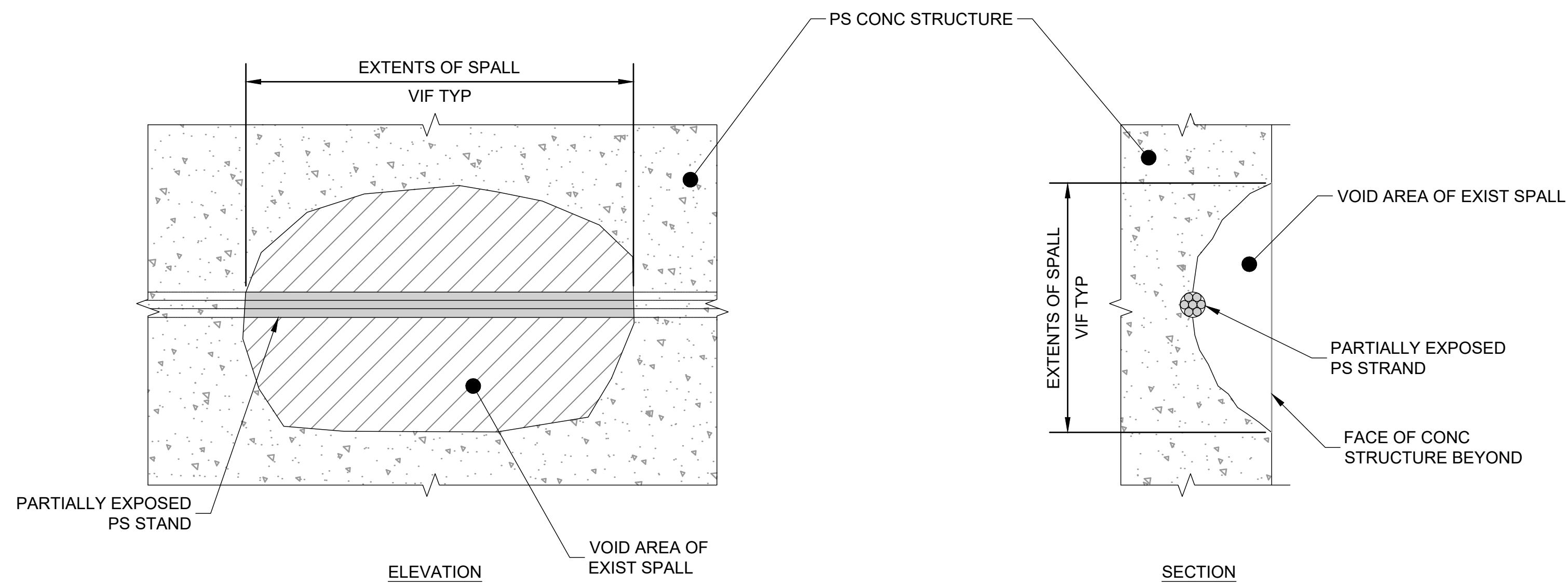
Date

05.07.26

Scale AS SHOWN

S7.2

RELEASED FOR CONSTRUCTION



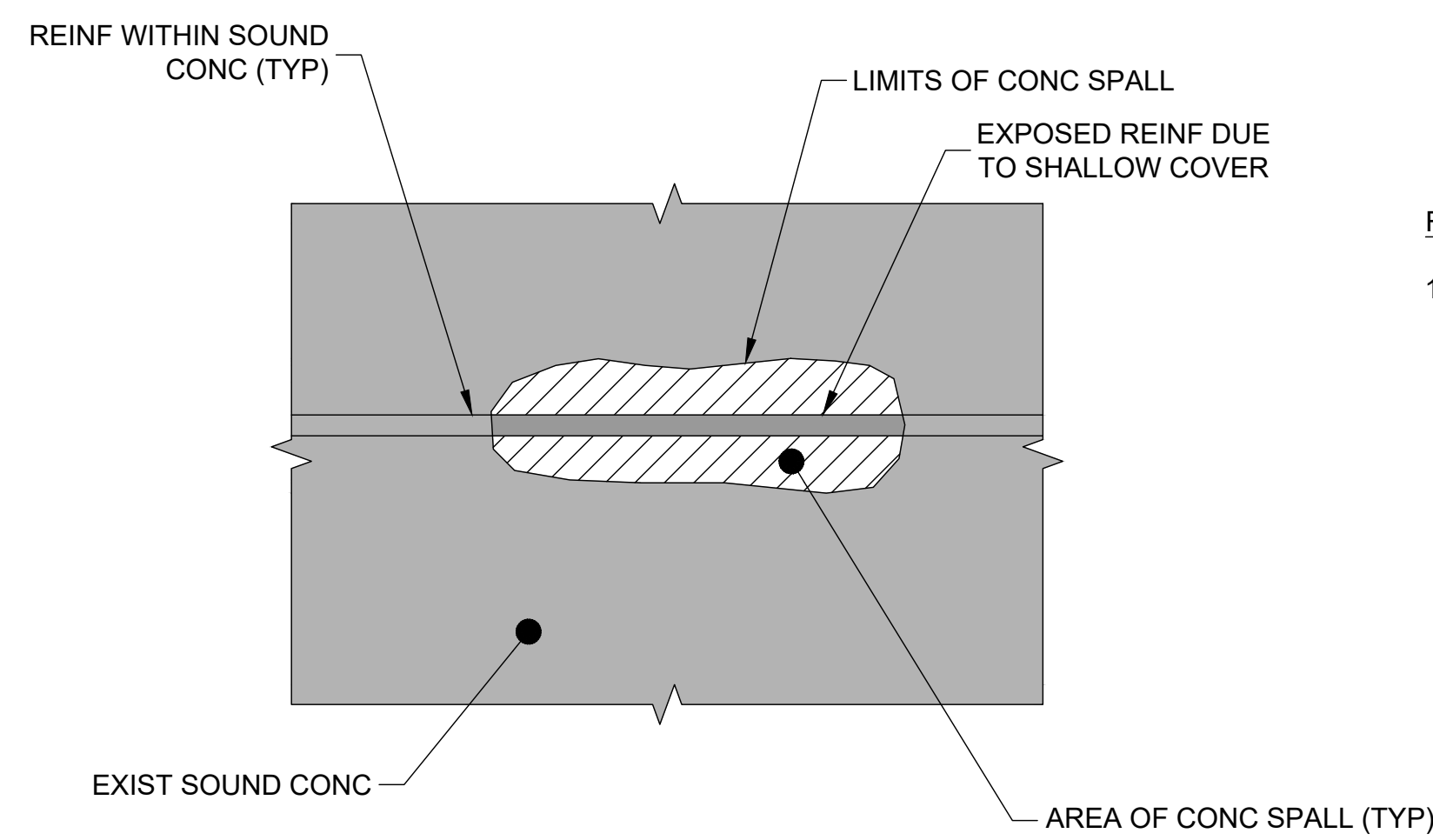
PRE-STRESSED CONCRETE REPAIR (REPAIR TYPE V)

SCALE: NOT TO SCALE

1
S7.2

REPAIR NOTES:

- REMOVE ALL DELAMINATED, LOOSE, DETERIORATED, AND SPALLED CONCRETE FROM THE REPAIR AREA WITH THE USE OF HAND TOOLS; USE OF PNEUMATIC OR POWER TOOLS IS PROHIBITED. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION TO NOT DAMAGE THE EXPOSED PRE-STRESSING STRAND(S).
- THE EXPOSED PRE-STRESSING STRAND(S) MUST BE THOROUGHLY CLEANED WITH A WIRE BRUSH; CAREFULLY REMOVE CORROSION BUILDUP OR LOOSE MATERIAL FROM THE STRAND. FOLLOWING CLEANING, THE CONTRACTOR MUST VERIFY THAT THE STRAND DOES NOT EXHIBIT GREATER THAN 10% SECTION LOSS. NOTIFY THE ENGINEER OF RECORD IMMEDIATELY IF MORE THAN 10% SECTION LOSS IS OBSERVED.
- CLEAN EXISTING SURFACES WITHIN REPAIR AREA BY ABRASIVE BLASTING OR HIGH PRESSURE WATER BLASTING WITH WATER CONTAINING NO DETERGENTS OR BOND INHIBITING CHEMICALS. APPLY BONDING PRIMER AND CORROSION INHIBITIVE PRIMER TO REPAIR AREA AND EXPOSED STRAND(S); ALLOW TO FULLY CURE BEFORE PLACING REPAIR MATERIAL.
- INSTALL REPAIR MORTAR PER MANUFACTURER'S REQUIREMENTS.
- ALL SURFACES MUST BE RUBBED TO PRODUCE A SMOOTH FINISH.



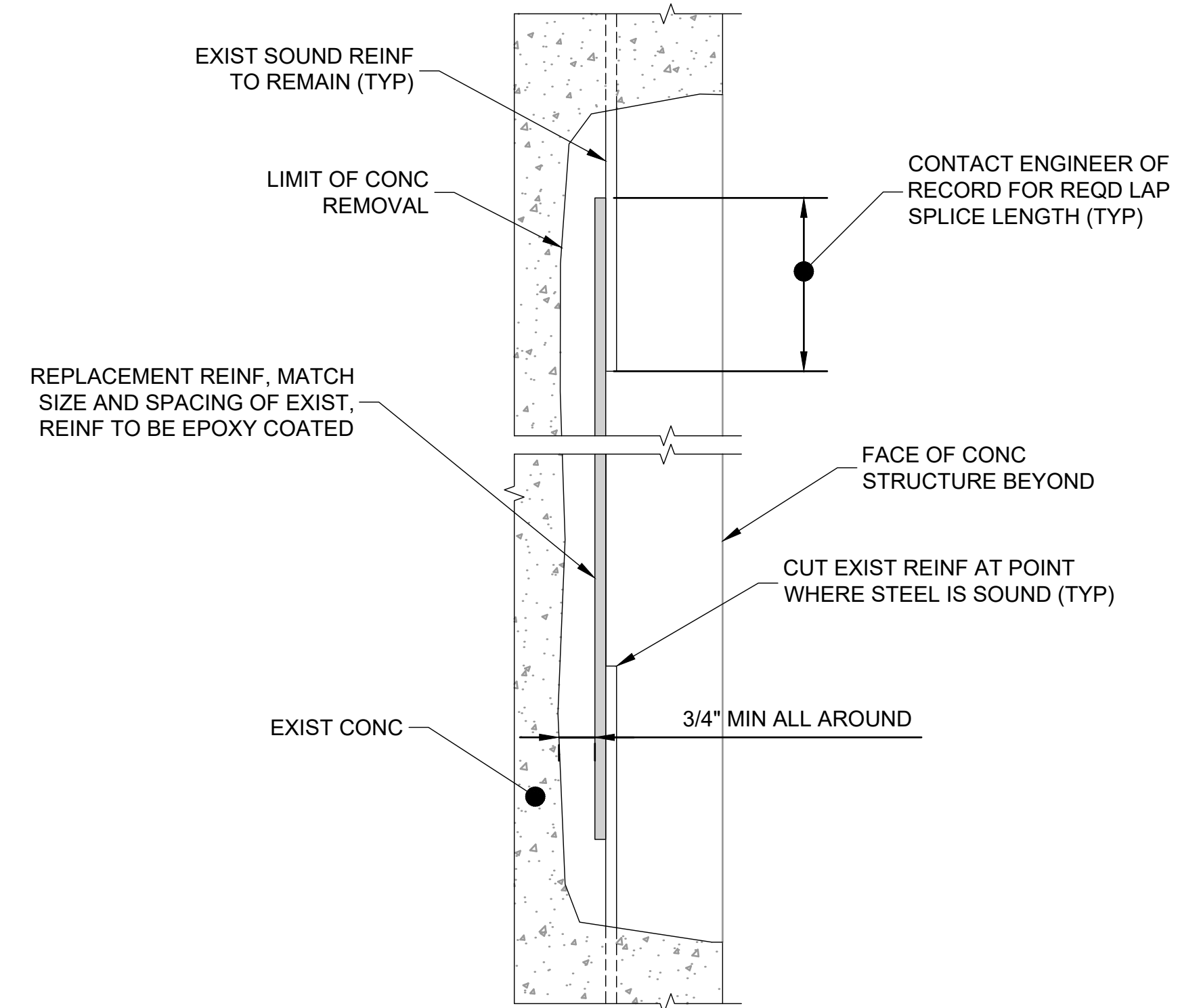
PARTIAL PLAN: EXPOSED REINFORCEMENT DUE TO SHALLOW COVER (REPAIR TYPE VII)

SCALE: NOT TO SCALE

3
S7.2

REPAIR NOTES

- EXPOSED REINFORCEMENT TO SHALLOW COVER:
 - HORIZONTAL SURFACE:
 - PREPARE REPAIR AREA PER NOTES ON S7.0.
 - INSTALL SIKADUR-32 HI-MOD LV EPOXY ON TO THE CLEANED STEEL AND PREPARED CONCRETE SURFACE. WHILE EPOXY IS WET, INSTALL SIKAQUICK 1000 (1/4" TO 2" NEAT CONCRETE REPAIR) REPAIR MATERIAL.
 - THE REPAIR AREA MUST FULLY CURE PRIOR TO RE-OPENING TO TRAFFIC.
 - VERTICAL SURFACE:
 - PREPARE REPAIR AREA PER NOTES ON S7.0.
 - INSTALL SIKADUR-32 HI-MOD LV EPOXY ON TO CLEANED STEEL AND PREPARED CONCRETE SURFACE. WHILE EPOXY IS WET, INSTALL SIKAQUICK VOH (1/8" TO 3" NEAT CONCRETE REPAIR) REPAIR MATERIAL.



DETAIL: REINFORCEMENT REPLACEMENT (REPAIR TYPE VI)

SCALE: NOT TO SCALE

2
S7.2

REPAIR NOTES

- THE CONTRACTOR MUST PREPARE THE REPAIR AREA PER PARTIAL DEPTH REPAIR REQUIREMENTS, SEE S7.0.
- THE DETAIL MUST ALSO BE USED IF THE CONTRACTOR DAMAGES EXISTING REINFORCEMENT TO THE EXTENT THAT THE REINFORCEMENT REQUIRES REPLACEMENT.
- THE CONTRACTOR MAY USE COUPLERS TO CONNECT REPLACEMENT AND EXISTING REINFORCING STEEL. THE CONTRACTOR MUST ENSURE THAT SUFFICIENT SPACE IS PROVIDED TO FACILITATE ENGAGEMENT ALONG THE FULL LENGTH OF THE COUPLER CONTACT LENGTH. THE CONTRACTOR MUST SUBMIT COUPLER TO ENGINEER OF RECORD FOR REVIEW PRIOR TO ORDERING MATERIAL.

DECK JOINT MATERIAL REPLACEMENT

- REMOVE EXISTING JOINT MATERIAL.
- INSTALL POURABLE COMPRESSIBLE BRIDGE JOINT MATERIAL SUCH AS DELASTIC-LS BY D.S. BROWN; INSTALL PER MANUFACTURERS RECOMMENDATIONS.

DETAIL: DECK JOINT MATERIAL

4
S7.2

- PREPARE EXISTING STRUCTURAL STEEL SURFACE PER SHERWIN WILLIAMS GUIDELINES ON MACROPOXY 646 DATA PAGES.
- APPLY MARINE GRADE SHERWIN WILLIAMS COATING PER MANUFACTURER GUIDELINES AND SPECIFICATIONS. FOR BIDDING PURPOSES, ASSUME THE FOLLOWING:
 - 1ST COAT - SW MACROPOXY 646 FAST CURE EPOXY, B58-600/B58V600
 - 2ND COAT - SW HI-SOLIDS POLYURETHANE GLOSS, B65-300/B60V30
 - 3RD COAT - SW HI-SOLIDS POLYURETHANE GLOSS, B65-300/B60V30
- FOR BIDDING PURPOSES, ASSUME PREPARATION AND RE-COATING OF ALL STRUCTURAL STEEL; SEE PLANS/NOTES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD DETERMINE THE EXACT QUANTITY OF RE-COATING REQUIRED.
- COLOR TO MATCH EXISTING, COORDINATE WITH OWNER.

DETAIL: STEEL COATING REPAIR

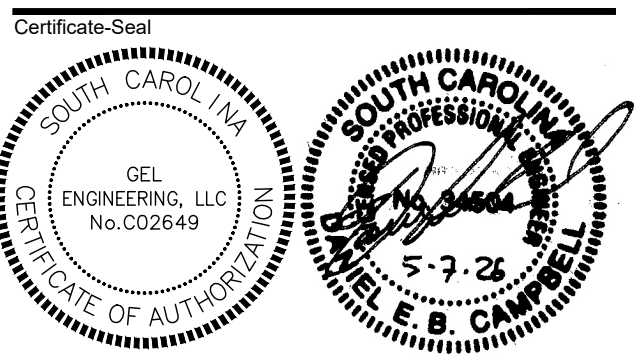
5
S7.2

m:\clients\ppda-patriots point development authority\2024_projects\ppda00124 - uss yorktown pier assessment\2.0 cad\ppda00123 - base.dwg - S7.2 (Plotted: 5/7/2026 10:05:03 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A FRAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.

Revisions			
Description	By	Apprv	Date
ISSUED FOR CONSTRUCTION	EL	DC	03.31.26
△ ADDENDUM 1	EL	DC	05.07.26

Consultants



Client



Patriots Point Development Authority
 40 Patriots Point Road
 Mount Pleasant, SC 29464

Project
 40 Patriots Point Road
 Mount Pleasant, SC 29464

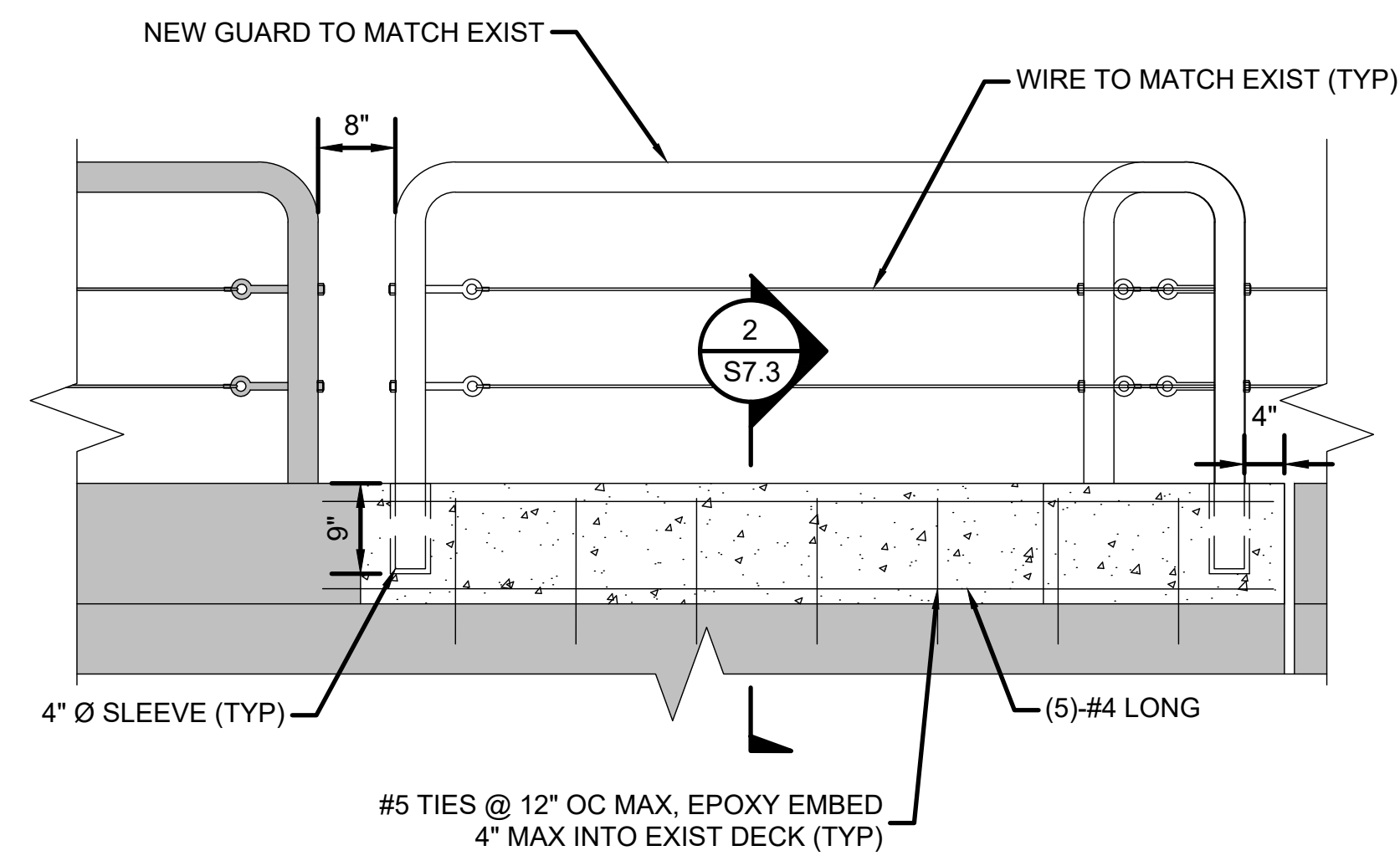
**USS Yorktown
 Pier Repairs**

This Document is the property of GEL Engineering, LLC and is to be used only in connection with the project named herein. Reproduction, in whole or in part, shall be allowed only expressly authorized. Drawing scales as shown are valid on the original size document being 24" by 36" ©GEL Engineering, LLC

Sheet Title
Details IV

Project No. _____ Drawing No. _____
 PPD00124
 Date 05.07.26
 Scale AS SHOWN **S7.3**

RELEASED FOR CONSTRUCTION



PARTIAL ELEVATION: CURB REPAIR AT TIMBER DOCK

SCALE: 3/4" = 1'-0"

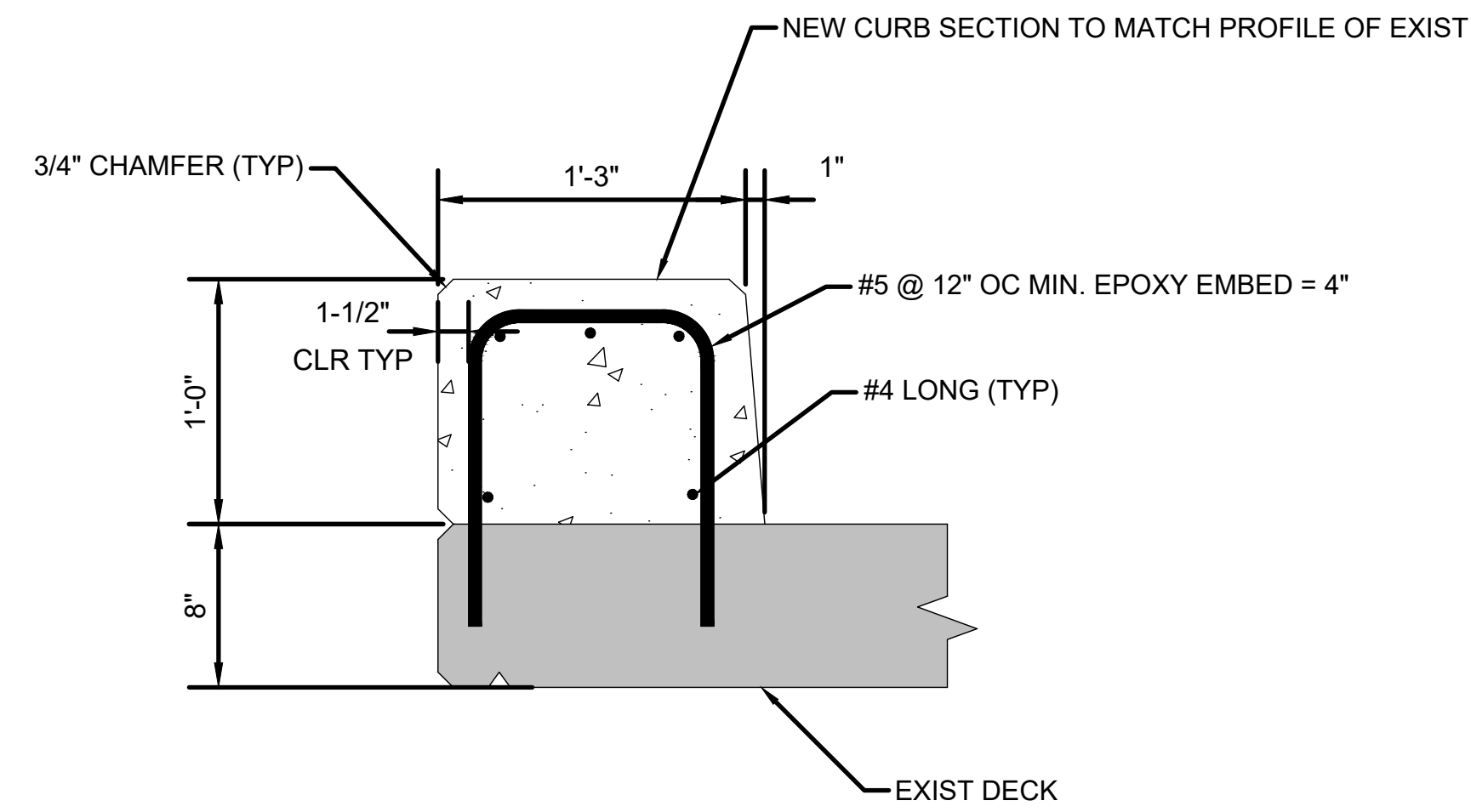
1
S7.3

STEEL CLEANING AND COLD-GALVANIZING

- CLEAN EXISTING CONNECTION HARDWARE WITH HAND TOOLS AND COAT WITH AN ACCEPTABLE COLD GALVANIZING COMPOUND; SEE SHEET S1.1 GALVANIZED COATING NOTE 5.

STEEL CLEANING AND COLD-GALVANIZING

3
S7.3



SECTION: CURB REPAIR

SCALE: 1-1/2" = 1'-0"

2
S7.3

m:\clients\ppde-patriots point development authority\2024_projects\ppda0124 - uss yorktown pier assessment\2.0 cad\ppda0124 - base.dwg - S7.3 (Plotted: 5/7/2026 10:10:54 AM)

THIS IS NOT A VALID, TRUE COPY OF THIS DOCUMENT UNLESS BEARING AN ORIGINAL SIGNATURE AND A RAISED, EMBOSSED SEAL OF THE ENGINEER OR SURVEYOR.