



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

May 28, 2015

Addendum No. 1

Contract No.: DA00249

WBS Element: 45448.3.1

*Partial Removal of Existing Timber Fender System, Installation of Vinyl Sheet Piles
and Installation of Timber Fender System in Dare County*

To Whom It May Concern:

Reference is made to the proposal and plans previously furnished for this project.

The following revision has been made to the proposal and plans:

Page No. 68, "Structure Special Provision ST-12" has been revised to remove the use of sealant on sheet piles for this project. Please void existing Page No.68 and staple revised Page No.68 thereto.

Page No. 82, "Bid Form" has been revised to include a line item for "Floating Turbidity Curtain". Please void existing Page No. 82 and staple revised Page No.82 thereto.

Plan Sheet S-2, has been revised to show the elevation of the dock. Please void existing Plan Sheet S-2 and staple revised Plan Sheet S-2 thereto.

Plan Sheet S-8, has been revised to include 114 pieces of vinyl sheeting. Please void existing Plan Sheet S-8 and staple revised Plan Sheet S-8 thereto.

Plan Sheet "Shipyard Syncrolift Dock Plan" has been included to provide dimensions of the basin. Please include the attached Plan Sheet with the previous plans provided.

Plan Sheet "Typical Cross-Section of Syncrolift" has been included to provide dimensions of the existing Syncrolift and Dock Area. Please include the attached Plan Sheet with the previous plans provided.

Plan Sheet "Fender Detail" has been included to provide details of the existing fender system. Please include the attached Plan Sheet with the previous plans provided.

If you elect to prepare your bid electronically, place file DA00249.001 in the same folder with DA00249.EBS, so that Expedite Bid will properly apply the addendum.

Please acknowledge receipt of Addendum #1 in the space provided on the Addendum Acknowledgement Form.

Sincerely,

DocuSigned by:



99A5A272ED6A447...

W. B. Hobbs, PE
Division Project Manager

WBH/ces

cc: S. D. Baker, PE
C. S. Mebane, PE
J. S. Abel, Jr.
L. D. Winslow

ST-12

Dare County

Impact Resistance, drop dart, Procedure B (in-lb/mil)	ASTM D4226	3.0
Tensile Strength (psi)	ASTM D638	6,500
Tensile Elastic Modulus (psi)	ASTM D38	377,000
Deflection Temperature under Load of 264 psi (°F)	ASTM D648	177
Coefficient of Linear Expansion (in/in/°F)	ASTM D696	8 x 10 ⁻⁵
Specific Gravity	ASTM D792	1.35

VINYL SHEET PILE SECTION PROPERTIES	MINIMUM REQUIREMENT OR RANGE
Profile Width (in)	12-24
Thickness (in)	0.35
Moment of Inertia (in ⁴ /ft)	90
Impact Strength (in-lbs/in ²)	13,750

Sealant

~~Sealant used to seal the interlocking edge between adjacent sheets shall be Adeka A-30 or P-201 or an equivalent approved by the Engineer.~~

Submittals

The Contractor shall submit certifications and test reports for the vinyl sheet pile ~~and sealant~~. Sheet piling ~~and sealant~~ shall meet all material and section properties as outlined above. The test method used shall be noted on all test reports. These shall be received prior to delivery and installation of any sheet piling. Materials not meeting the specified requirements will be rejected at no cost to the Department. The Contractor shall submit a sample showing the color of the sheet pile for approval prior to construction. Additionally, the Contractor shall submit a plan for handling and installation of sheet piles in accordance with the special provision, *Submittal of Working Drawings*.

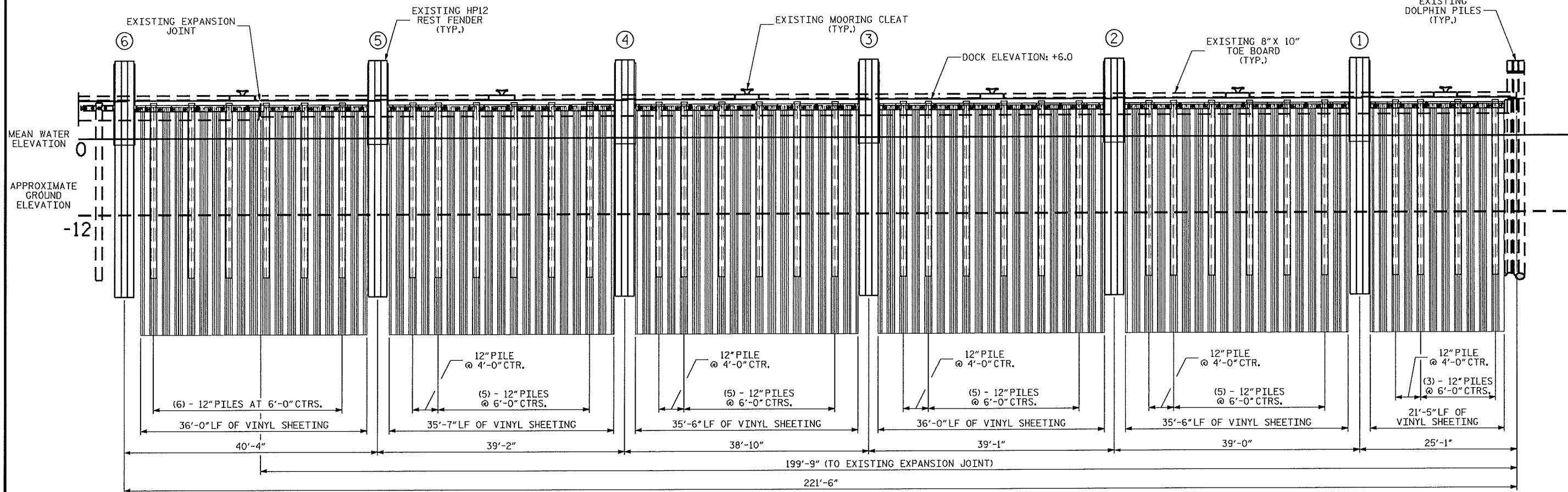
3.0 CONSTRUCTION METHODS

Vinyl sheet piles shall be handled, transported and stored so piles are kept clean and undamaged. Cribbing and rigging shall be provided to prevent deflection and distortion that exceed acceptable limits recommended by the manufacturer. Store piles above ground upon platform skids, or other supports, and keep free from dirt, grease, vegetation and other

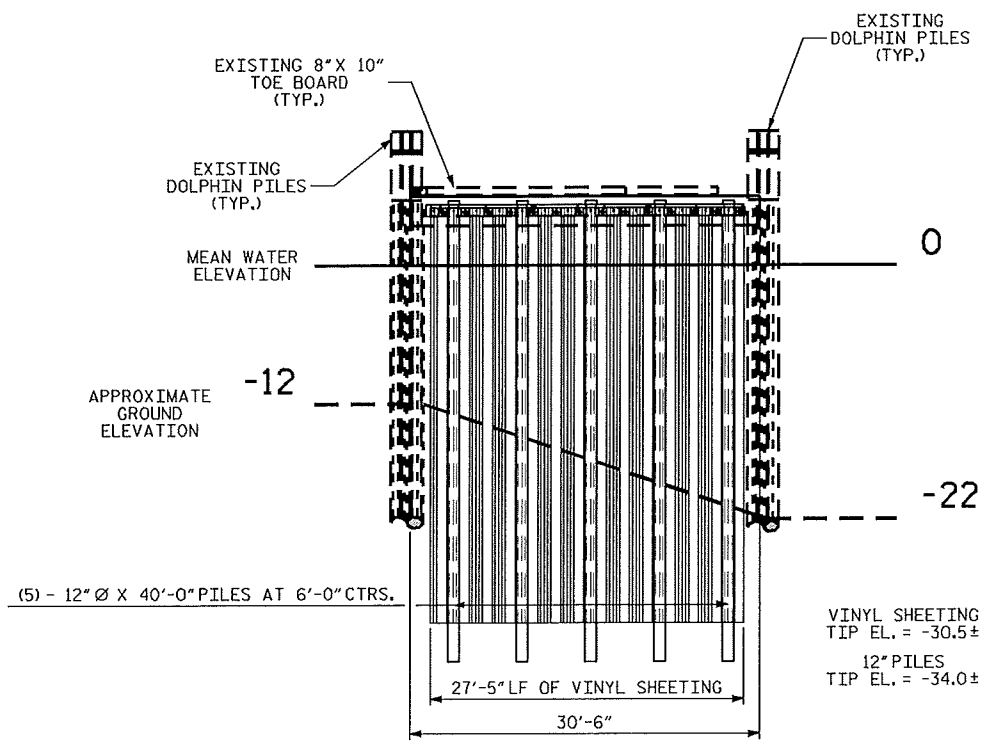
County : Dare

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
STRUCTURE ITEMS						
0001	6048000000-E	SP	FLOATING TURBIDITY CURTAIN	120 SY		
0002	8000000000-N	800	MOBILIZATION (STRUCTURES)	Lump Sum	L.S.	
0003	8028000000-N	SP	REMOVAL OF EXISTING STRUCTURES AT STATION ***** (PARTIAL REMOVAL OF EXISTING F ENDER SYSTEM)	Lump Sum	L.S.	
0004	8867000000-E	SP	GENERIC STRUCTURE ITEM (12" TREATED TIMBER PILE)	1,152 LF		
0005	8869000000-E	SP	GENERIC STRUCTURE ITEM (12" X 12" TREATED LUMBER)	2,344 MBF		
0006	8869000000-E	SP	GENERIC STRUCTURE ITEM (4" X 12" TREATED LUMBER)	1,657 MBF		
0007	8869000000-E	SP	GENERIC STRUCTURE ITEM (8" X 8" TREATED LUMBER)	0,614 MBF		
0008	8889000000-E	SP	GENERIC STRUCTURE ITEM (HARDWARE)	1,835 LB		
0009	8892000000-E	SP	GENERIC STRUCTURE ITEM (VINYL SHEET PILE)	8,187 SF		
1020/May27/Q11300.615/D75331000000/E9			Total Amount Of Bid For Entire Project :			

REVISED 5/28/2015



ELEVATION
(WEST FACE SYNCNOLIFT DOCK)



ELEVATION
(SOUTH FACE SYNCNOLIFT DOCK)

PROJECT NO. 16SP.29161.1
DARE COUNTY
BRIDGE NO. -

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ELEVATION

REVISIONS						SHEET NO.
No.	By:	DATE:	No.	By:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			9

W. Matthew Clarke
5-26-15

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 40257 W. MATTHEW CLARKE

DRAWN BY: R.PUTEK DATE: 01/15
CHECKED BY: W.M.CLARKE DATE: 03/15

NOTES:

ALL OVAL HEADS SHALL BE LOCATED AT THE FRONT FACE OF FENDER SYSTEM.

ALL CABLES SHALL BE SECURED WITH 3/4" X 4" GALVANIZED STAPLES AND TWO WIRE CLAMPS AT EACH END.

ANCHOR BOLTS SHALL BE ADHESIVELY ANCHORED; SEE STANDARD SPECIFICATIONS. ADHESIVE FOR ANCHOR BOLTS SHALL BE A NC DOT - APPROVED PRODUCT. FIELD TESTING WILL NOT BE REQUIRED FOR INSTALLATION OF ADHESIVELY ANCHORED BOLTS.

AFTER PARTIAL REMOVAL OF THE EXISTING FENDER SYSTEM, CUT EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE DOCK AND COAT WITH AN NC DOT - APPROVED EPOXY SEALANT.

BILL OF MATERIAL

TREATED LUMBER							TREATED TIMBER PILES					HARDWARE				
ITEM	NO.	THICKNESS (IN)	WIDTH (IN)	LENGTH (FT)	BOARD FT. (EA)	TOTAL BOARD FT.	ITEM	NO.	NOMINAL DIAMETER	LENGTH (FT)	TOTAL PILE LENGTH (LF)	ITEM	NO.	DIAMETER	LENGTH	WEIGHT
4" X 12" CAP	1	3 1/2"	11 1/2"	4'-6"	15.09	15.1	TREATED TIMBER PILES	34	12"	28'-0"	952.0	ANCHOR ROD	93	1"	28"	560.9
	1	3 1/2"	11 1/2"	7'-0"	23.48	23.5		5	12"	40'-0"	200.0	ANCHOR ROD	22	1"	32"	152.3
	5	3 1/2"	11 1/2"	8'-0"	26.83	134.2	TOTAL LENGTH TIMBER PILES = 1152.0 LF					O.H. BOLT	60	1"	20"	286.7
	1	3 1/2"	11 1/2"	8'-4"	27.95	28.0	VINYL SHEETING					O.H. BOLT	49	1"	22"	256.0
	2	3 1/2"	11 1/2"	8'-8"	29.07	58.1	ITEM	NO.	WIDTH (IN)	LENGTH (FT)	TOTAL (SF)	O.H. BOLT	11	1"	24"	62.4
	6	3 1/2"	11 1/2"	8'-10"	29.63	177.8	VINYL SHEETING	114	24"	36'-0"	8187.0	OGEE WASHERS	235	1"		442.4
	2	3 1/2"	11 1/2"	9'-0"	30.19	60.4	TOTAL VINYL SHEETING = 8,187.0 SF					LAG BOLTS	154	1/2"	6"	53.1
	1	3 1/2"	11 1/2"	9'-10"	32.98	33.0						3/4" CABLE CLAMPS	4			4.0
	7	3 1/2"	11 1/2"	10'-0"	33.54	234.8						WIRE ROPE	1	3/4"	12'-0"	12.0
4" X 12" WALE	7	3 1/2"	11 1/2"	3'-0"	10.06	70.4						3/4" X 4" STAPLES	4		4"	1.2
	11	3 1/2"	11 1/2"	3'-6"	11.74	129.1	TOTAL WEIGHT = 1,831.0 LB									
	1	3 1/2"	11 1/2"	5'-0"	16.77	16.8										
	1	3 1/2"	11 1/2"	7'-10"	26.27	26.3										
	2	3 1/2"	11 1/2"	7'-11"	26.55	53.1										
	20	3 1/2"	11 1/2"	8'-0"	26.83	536.7										
	1	3 1/2"	11 1/2"	8'-6"	28.51	28.5										
	1	3 1/2"	11 1/2"	9'-4"	31.31	31.3										
8" X 8" BACKER BLOCK	114	8"	8"	1'-0"	5.33	608.0										
	1	8"	8"	1'-0 3/8"	5.50	5.5										
12" X 12" FENDER	1	12"	12"	2'-0"	24.00	24.0										
	1	12"	12"	3'-0"	36.00	36.0										
	5	12"	12"	3'-2"	38.00	190.0										
	10	12"	12"	3'-6"	42.00	420.0										
	27	12"	12"	5'-2"	62.00	1674.0										
					TOTAL TREATED LUMBER =	4,614.5 BRD FT										

NOTE:

ALL TREATED LUMBER 4" X 12" WALES AND 12" X 12" FENDERS SHOWN ON PLANS UNDER THE LENGTH OF 3'-0" OR 3'-6" UNLESS OTHERWISE DESCRIBED, ARE TO BE CONSTRUCTED FROM THE 3'-0" OR 3'-6" PIECES SPECIFIED.

PROJECT NO. 16SP.29161.1

DARE COUNTY

BRIDGE NO. -

SHEET 2 OF 2

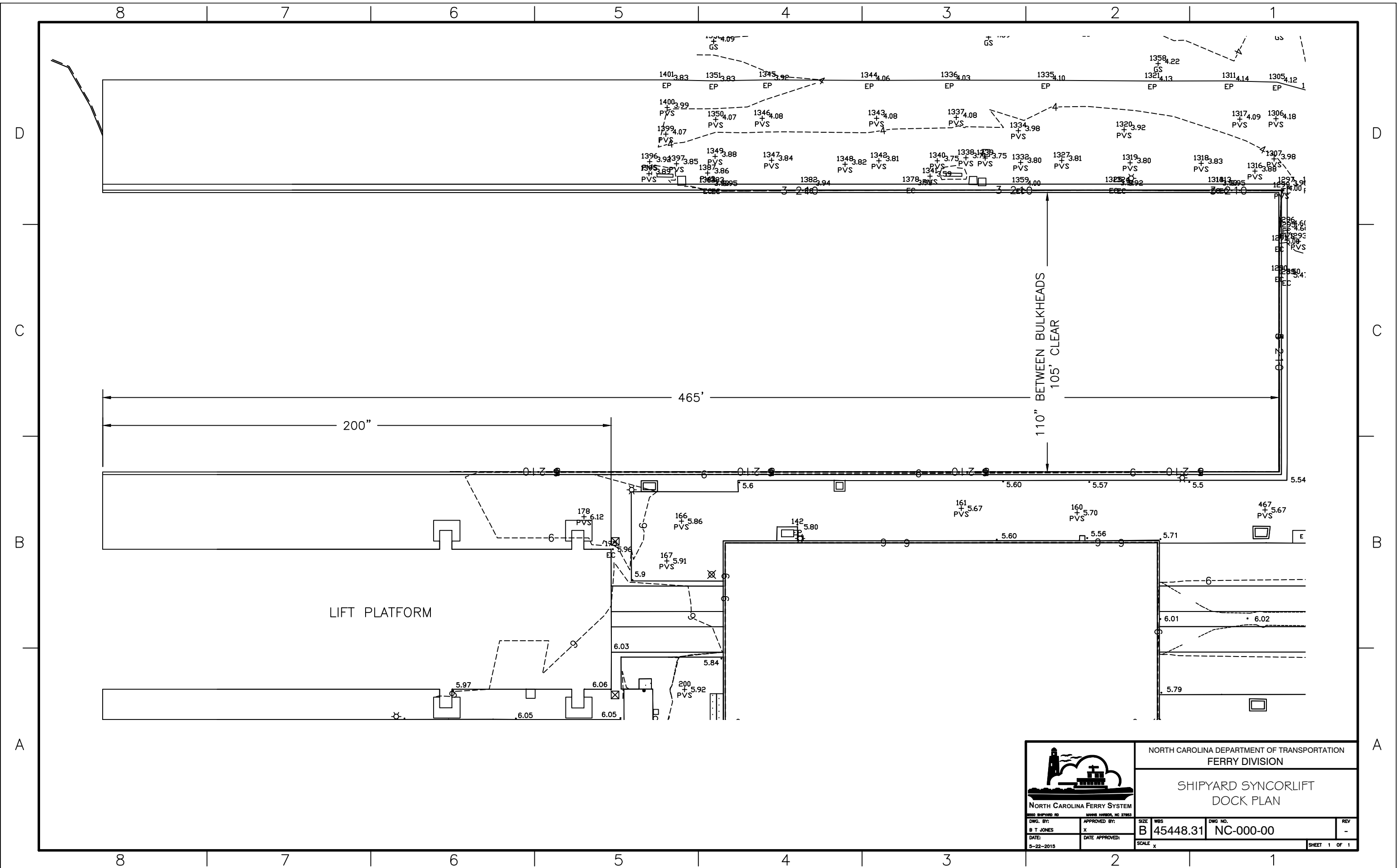
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DETAILS


W. Matthew Clarke
5-26-15
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 40257 W. MATTHEW CLARKE

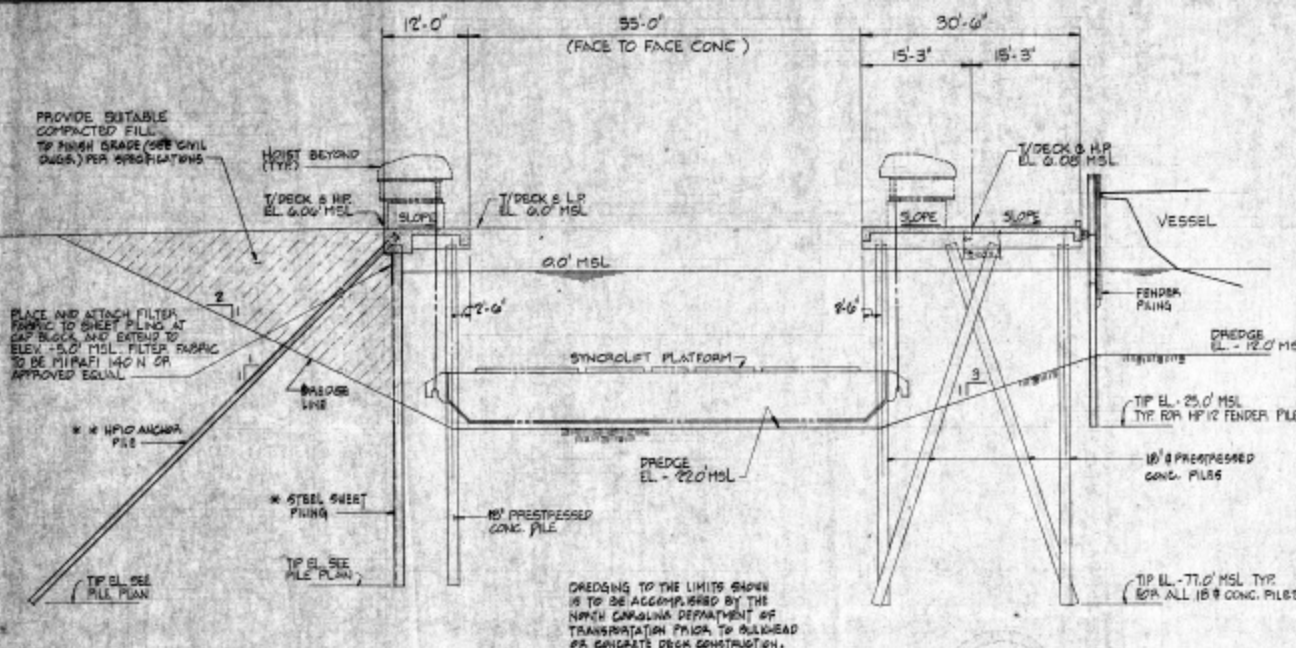
DRAWN BY : R.PUTEK DATE : 03/15
CHECKED BY : W.M.CLARKE DATE : 03/15

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			9



LIFT PLATFORM

		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FERRY DIVISION	
NORTH CAROLINA FERRY SYSTEM <small>1000 SHIPYARD RD WAREHOUSES, NC 27683</small>		SHIPYARD SYNCORLIFT DOCK PLAN	
DWG. BY: B T JONES	APPROVED BY: X	SIZE B	WBS 45448.31
DATE: 5-22-2015	DATE APPROVED: X	DWG. NO. NC-000-00	REV -
		SCALE X	SHEET 1 OF 1



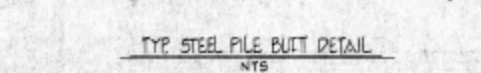
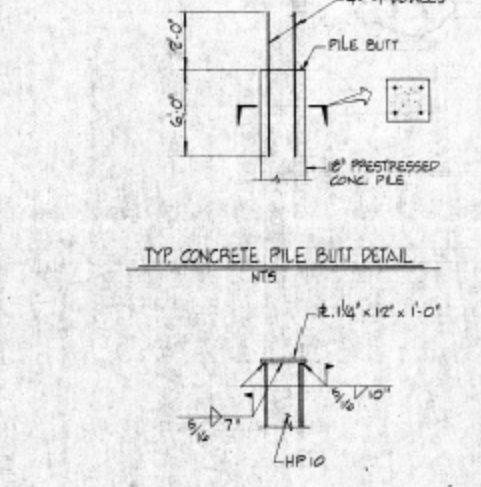
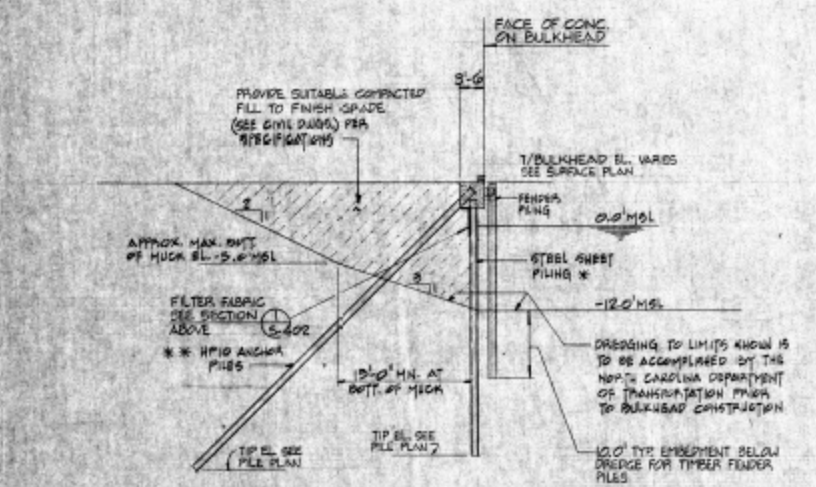
1. ALL ELEVATIONS GIVEN ARE BASED ON MSL +0.00'. ELEVATIONS BELOW MSL SHALL BE NOTED AS (-) ELEVATION.
2. ALL MISCELLANEOUS METALS INCLUDING BOLTS, WASHERS, NUTS, SLEEVES, ANGLES, INSERTS, WIRE ROPE, PLATES, ETC., EITHER ATTACHED TO OR EMBEDDED IN THE STRUCTURE, SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED.
3. ALL STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
4. ALL TIMBER SHALL BE SOUTHERN PINE NO. 1 SENSE OR, OR DOUGLAS FIR SELECT STRUCTURAL.
5. ALL TIMBER SHALL BE TREATED WITH CREOSOTE OR WHEN DONE PRESCRIPTIVE IN ACCORDANCE WITH AFA C2, MARINE BOSTER CREOSOLITE.
6. TIMBER FENDER PILES SHALL BE SOUND SOUTHERN YELLOW PINE OR DOUGLAS FIR CONFORMING TO THE REQUIREMENTS OF ASTM D25.
7. TIMBER FENDER PILES SHALL BE TREATED WITH CREOSOTE OR WATERBORNE PRESERVATIVE IN ACCORDANCE WITH AFA C5, MARINE PILES.
8. STEEL FENDER PILING AND STEEL SHEET PILING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572.
9. STEEL PILING SHALL BE COATED AS SHOWN FOR THE SPECIFICATIONS.
10. ITEMS OR DETAIL AREAS REFERENCED TO THIS NOTE SHALL BE INCLUDED IN THE WORK, BUT FABRICATION AND/OR CONSTRUCTION SHALL NOT PROCEED UNTIL THE REFERENCE TO THIS NOTE IS REMOVED.

* COAT BOTH SIDES OF SHEET PILING FROM -5.0' MSL TO TOP OF SHEET.

** COAT ALL ANCHOR PILES FROM -5.0' MSL TO BUTT.

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

- CONCRETE**
1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS, UNLESS OTHERWISE NOTED.
 2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS, CONFORMING TO ASTM A615, UNLESS OTHERWISE NOTED.
 3. ALL DETAILING, FABRICATION, AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE "PRACTICE OF CONSTRUCTION", ACI 308-08, UNLESS OTHERWISE NOTED.
 4. CHECK ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH A 45 DEGREE CHAMFER AS FOLLOWS, UNLESS OTHERWISE NOTED.
 - CONCRETE PILES: 1'-1/2"
 - PILE CAPS: 1"
 - BEAMS AND CURBS: 3/4"
 5. ALL BAR SPLICES SHALL BE CLASS "C" TENSION LAP SPLICES (20" MINIMUM LENGTH), UNLESS OTHERWISE NOTED.
 6. SPLICE TOP BARS AND SIDE BARS AT MIDSPAN, AND BOTTOM BARS AT THE SUPPORT, UNLESS OTHERWISE NOTED.
 7. STRAIGHT SPLICES OF ADJACENT BARS WHEN BAR SPACING IS LESS THAN 2'-1/2".
 8. ALL REINFORCING BAR WELDS SHOWN ON DRAWINGS SHALL BE SET STANDARD 90 DEGREE HOOKS, UNLESS OTHERWISE NOTED.
 9. PROVIDE 2" MINIMUM OF CONCRETE COVER FOR REINFORCING STEEL WHEN THE CONCRETE IS PLACED DIRECTLY AGAINST THE GROUND.
 10. REINFORCING BARS SUBJECT TO FORM SURFACES SHALL HAVE CURVE AS FOLLOWS, UNLESS OTHERWISE NOTED.
 - SLABS: TOP AND BOTTOM 2"
 - CURBS: TOP AND SIDES 2"
 - BEAMS AND PILE CAPS: 2-1/2"
 - IN CONTACT WITH GROUND: 2-1/2"
 11. CONCRETE KEYS SHALL BE 2" x 4", UNLESS OTHERWISE NOTED.
 12. ALL CONSTRUCTION JOINTS IN BEAMS, SLABS, GIRDERS, OR JOISTS SHALL BE MADE AT MID-SPAN, UNLESS OTHERWISE SHOWN ON THE DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH A KEPT VERTICAL FORM AND CONTINUOUS REINFORCING AS SHOWN.



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

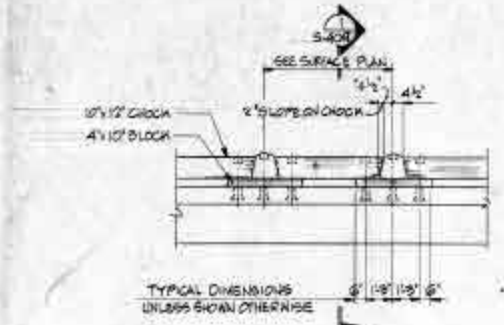
DESIGN CRITERIA

1. CODE: NORTH CAROLINA STATE BUILDING CODE.
2. VESSELS -
 - A.

NAME	LENGTH	BEAM	DISPLACEMENT LIGHT SHIP & PLEAS. STE	DISPLACEMENT FULL LOAD
FERRISER HULL	161'	48"	875 L.T.	550 L.T.
PARLISS/SILVER HULL	161'	48"	337 L.T.	456 L.T.
SEA LEVEL	128'	40"	283 L.T.	360 L.T.
MATERIALS CLASS	122"	40"	130 L.T.	210 L.T.
(FUTURE)	200"	50"	-	-
 - B. BRACING VELOCITY: 3 KNOTS AT AN ANGLE OF APPROACH WITH RESPECT TO FACE OF BIRTH EQUAL TO 10° (30 FT/SEC. NORMAL TO FACE OF BIRTH).
 - C. CRANE OUTRIGGER LOAD: 37 KIPS WITH 25 PERCENT IMPACT (IMPACT NOT TO PILES).
 - D. 10 TON FORK TRUCK.
 - E. SYNCROLIFT HOIST LOADS.

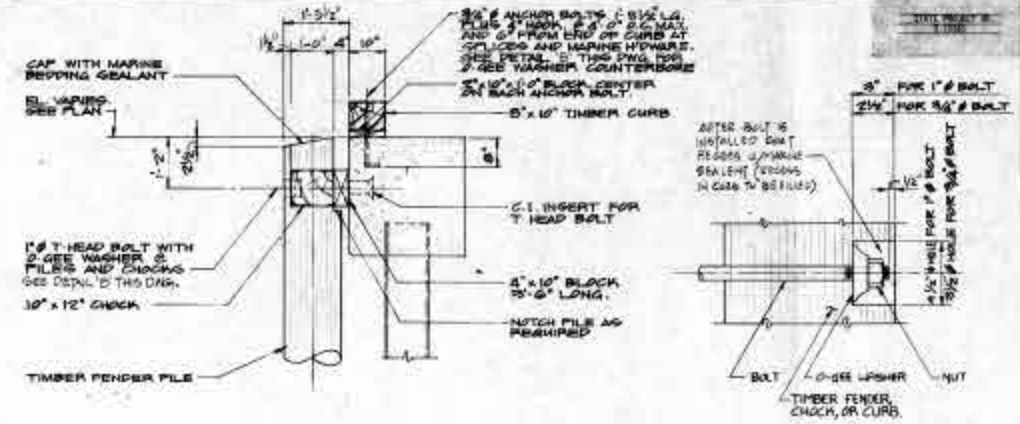
LOAD	HEIGHT
7.4 LT.	4.3'
123.4 LT.	1.5'
7.6 LT.	1.5'
125.2 LT.	3.0'
3. HORIZONTAL LEADS -
 - A. WIND 130 MPH.
 - B. LONGITUDINAL DOCK LOADS 0.25 K/FT.
 - C. LATERAL DOCK LEADS 1.00 K/FT. (ON ONE SIDE ONLY OF PIER).
4. SITE CONDITIONS -
 - A. DREDGE DEPTHS (ADD 2' FOR OVERHEADS).
 - 22' MSL AT SYNCROLIFT
 - 21' MSL INSIDE SLIP
 - B. TIDE ELEVATIONS -
 - STORM HIGH TIDE +1.0' MSL
 - MEAN SEA LEVEL (MSL) 0.0'
 - MEAN LOW WATER -0.5' MSL
 - STORM LOW TIDE -2.0' MSL
 - C. FOUNDATIONS DESIGN CAPACITIES -
 - SOIL BEARING CAPACITY
 - 18" MSL PRESTRESSED PILE - 80 TONS COMP. AND 90 TONS TENSION
 - HP10 PILE - 50 TONS COMP. (TRANSITION SLAB)
 - 80 TONS TENSION (BULKHEAD TIE-BACKS)





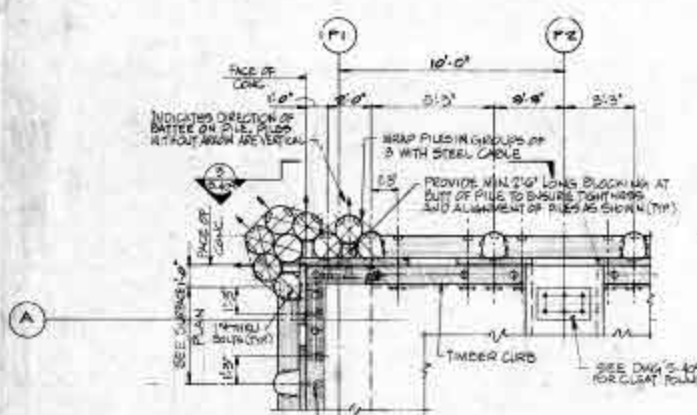
TYPICAL DIMENSIONS UNLESS SHOWN OTHERWISE

TYPICAL FENDERING AT BULKHEAD DETAIL
 SCALE: 3/8" = 1'-0"
 A 5-409

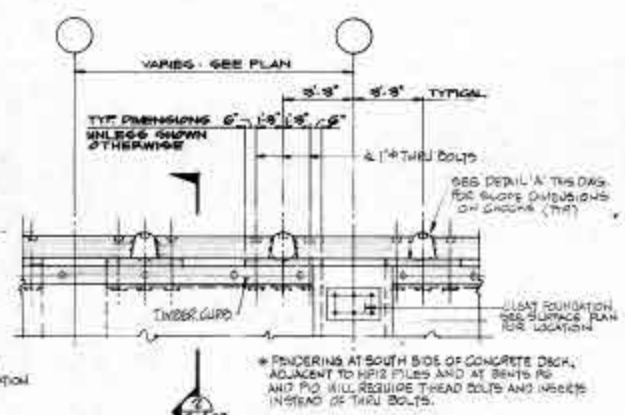


SECTION
 SCALE: 3/4" = 1'-0"
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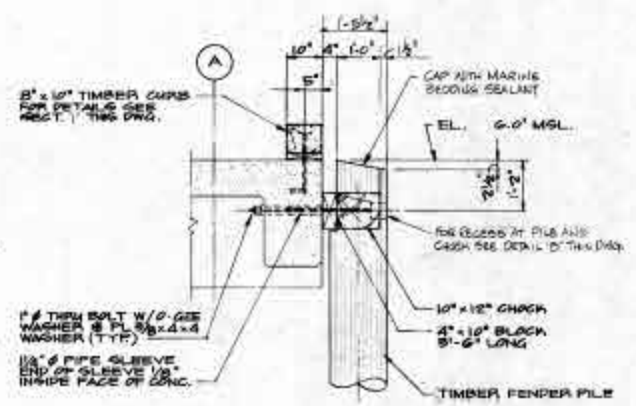
DETAIL
 SCALE: 3" = 1'-0"
 B 5-409



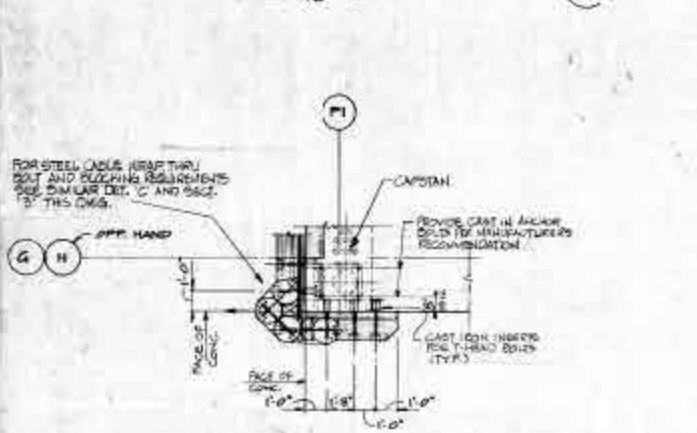
DETAIL
 SCALE: 3/8" = 1'-0"
 C 5-409



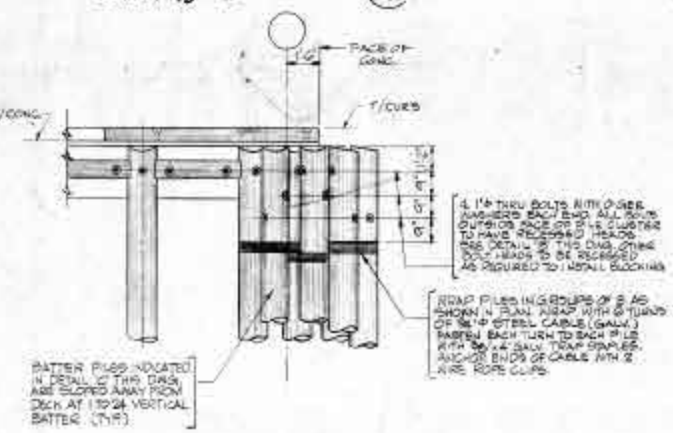
TYPICAL FENDERING AT CONC. DECK DETAIL
 SCALE: 3/8" = 1'-0"
 D 5-409



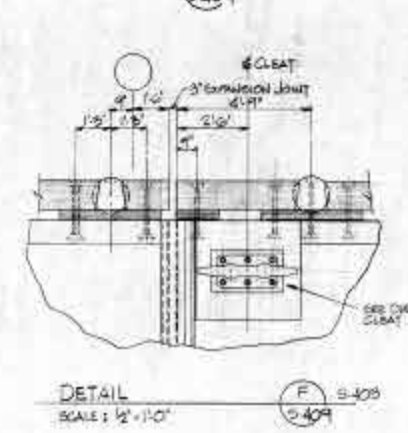
SECTION
 SCALE: 3/8" = 1'-0"
 2 5-409



DETAIL
 SCALE: 3/8" = 1'-0"
 E 5-409



SECTION
 SCALE: 3/4" = 1'-0"
 3 5-409



DETAIL
 SCALE: 1/2" = 1'-0"
 F 5-409

REVISED 5/28/2015

LOCKWOOD GREENE ARCHITECTS - ENGINEERS CHARLOTTE, N.C.		PHASE II MARINE MAINTENANCE FACILITY NORTH CAROLINA DEPARTMENT OF TRANSPORTATION HARRIS HARBOR, N.C.	
DRAWN BY: [Name] CHECKED BY: [Name] DATE: [Date]	DATE: 5-409 7/25/11 AS NOTED 3-13-04		