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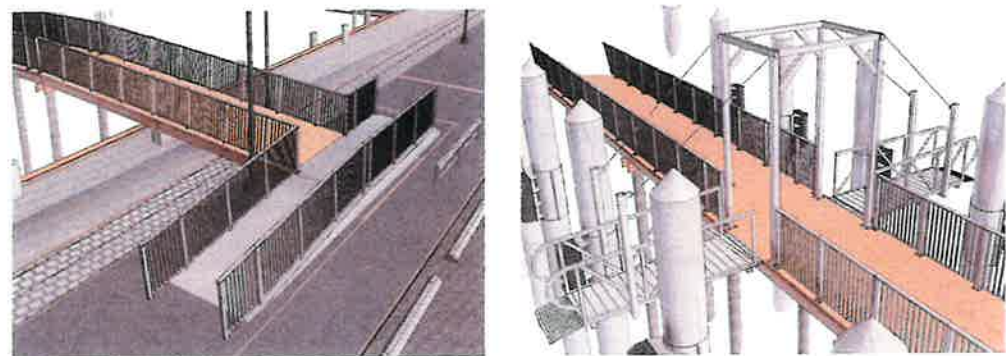
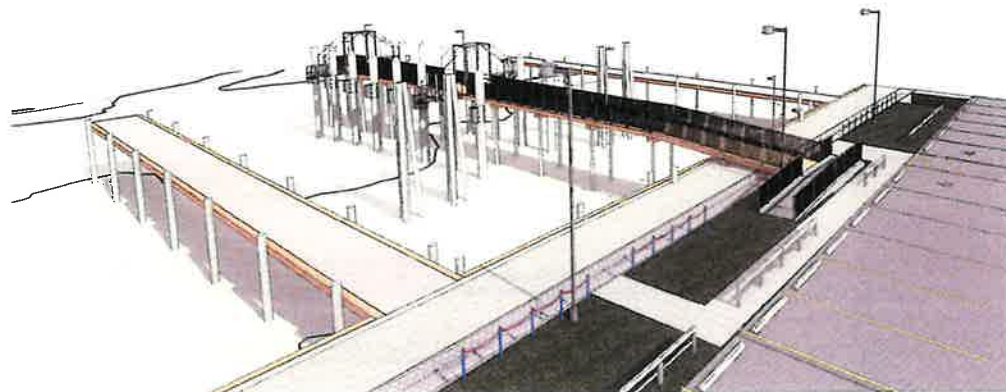
# NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND

LOCATION: Ocracoke Island, North Carolina

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
		1	22
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
50801.1,2	5080111	PE	
50801.3,2	5080111	CON	

TIP PROJECT: FF-0001A

CONTRACT: DA-00645



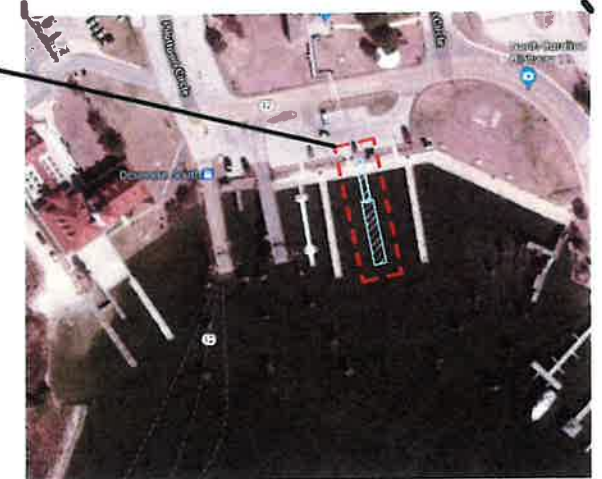
3D VIEWS

Ocracoke Ferry Terminal Project



LOCATION MAP

Ocracoke Ferry Terminal Project



VICINITY MAP

MARINE DISCIPLINE		
1	G-001	COVER SHEET
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4	D-101	EXISTING CONDITIONS AND DEMOLITION PLAN
5	M-101	MARINE OVERALL SITE PLAN
6	M-102	FOUNDATION AND PILE LAYOUT PLAN
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9	M-302	TRANSVERSE SECTION
10	M-401	HOIST FRAME DETAILS
11	M-501	MISCELLANEOUS DETAILS (1 OF 5)
12	M-502	MISCELLANEOUS DETAILS (2 OF 5)
13	M-503	MISCELLANEOUS DETAILS (3 OF 5)
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ELECTRICAL DISCIPLINE		
17	E-001	ELECTRICAL LEGEND AND NOTES 1
18	E-002	ELECTRICAL LEGEND AND NOTES 2
19	E-003	ELECTRICAL DIAGRAMS AND SCHEDULES
20	E-100	ELECTRICAL SITE PLAN
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22	E-900	ELECTRICAL LIGHTING DETAILS

CIVIL DISCIPLINE		
16	C-101	EROSION CONTROL DETAILS

Digitally signed by Kristopher P Pagan-Cruz  
Date: 2025.02.17 10:28:16-05'00'

SHEET 1 OF 22

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GRAPHIC SCALE



Designed By	JAMER QUIROS	County	HYDE COUNTY
Engineer By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-25
Project Manager	ALISON THORBURN		
Rev.	Date	Drawn	Description

NCDOT PASSENGER FERRY DOCK REPLACEMENT -  
OCRACOKE ISLAND

G-001 COVER SHEET

**GENERAL NOTES:**

**GENERAL CONSTRUCTION**

- CONTRACTOR SHALL VERIFY ALL INFORMATION PROVIDED HEREIN WITH TECHNICAL SPECIFICATIONS AND OTHER DOCUMENTS AND SHALL NOTIFY ENGINEER, OF ANY CONFLICTS, IN WRITING, BEFORE WORK IS INITIATED.
- ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF OSHA AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.
- THE CONTRACTOR SHALL MAINTAIN MARINE AND LAND TRAFFIC IN ACCORDANCE WITH AND SUBJECT TO ALL MARINE, COAST GUARD, AND NCDOT REQUIREMENTS DURING THE ENTIRETY OF PROJECT. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO ENGINEER, NCDOT FERRIES, AND COAST GUARD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INCLUDE IN THE BID AND ALL COSTS ASSOCIATED WITH TRAFFIC MAINTENANCE INCLUDING BUT NOT LIMITED TO DAILY COMMUNICATIONS WITH COAST GUARD, ISSUANCE OF ADVISORIES OF LANE CLOSURES, AND MOVING IN AND OUT OF NAVIGATION CHANNELS AS REQUIRED TO ALLOW PASSAGE OF MARINE VESSELS.
- CONSTRUCTION ACTIVITIES SHALL BE PLANNED AND COORDINATED FREQUENTLY WITH NCDOT AND THE EOR TO ALLOW FERRY TERMINAL OPERATIONS TO CONTINUE DURING CONSTRUCTION, ANY CONSTRUCTION ACTIVITY THAT MAY PREVENT FERRY TERMINAL OPERATIONS FROM BEING PERFORMED SHALL BE NOTIFIED WITH AMPLE ADVANCE NOTICE TO NCDOT AND THE EOR FOR COORDINATION WITH THE FERRIES.
- THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES, AND UTILITY LINES FROM ALL DAMAGE. THE CONTRACTOR SHALL ALSO PROTECT HIS WORK, ADJACENT PROPERTY, AND THE PUBLIC. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE OR INJURY DUE TO HIS ACT OR NEGLIGENCE.
- THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE LOCAL ENVIRONMENTAL PROTECTION STANDARDS, PERMITTING LAWS, AND REGULATIONS.
- ALL APPLICABLE SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED. METHODS OF DEMOLITION, CONSTRUCTION, AND INSTALLATION OF STRUCTURAL MATERIAL ARE THE CONTRACTOR'S RESPONSIBILITY.
- LIMITED STAGING AREA WILL BE PROVIDED ON-SITE FOR CONTRACTOR'S USE. CONTRACTOR SHALL CONFIRM THE EXTENT AND LOCATION OF STAGING AREAS WITH NCDOT, PRIOR TO MOBILIZATION EXCEPT THAT WHICH SHALL BE PERFORMED OFF SHORE, SHALL BE CONDUCTED FROM BARGES, WORK BOATS, OR OTHER TEMPORARY PLATFORMS PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL RESPECT THE LIMITATIONS OF THE PROJECT SITE FOR STORING MATERIAL. CONTRACTOR SHALL COORDINATE WORK IN SUCH A WAY AS TO LIMIT THE NEED FOR STORED MATERIALS OR SHALL BE RESPONSIBLE FOR ALL ARRANGEMENTS AND COSTS FOR OBTAINING LAYDOWN AREA OR BARGES AS MAY BE REQUIRED.
- UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE DISTURBING ACTIVITIES. ANY UTILITY LINES LOCATED IN THE PROJECT AREA SHALL BE PROTECTED UNLESS SPECIFICALLY CALLED OUT TO BE DEMOLISHED.
- CONTRACTOR IS RESPONSIBLE TO REVIEW SITE CONDITIONS TO DEVELOP AN APPROPRIATE WORK PLAN FOR MOBILIZING AND CONDUCTING WORK AT THE SITE.
- CONTRACTOR SHALL VERIFY LAYOUT AND DIMENSIONS OF THE EXISTING PIERS PRIOR TO COMMENCING THE CONSTRUCTION. CARE MUST BE TAKEN SO AS TO NOT DAMAGE THE EXISTING PIERS AND OTHER STRUCTURES, FROM CONSTRUCTION.
- LOADING OR OTHERWISE. IF ANY DAMAGE IS OBSERVED ON THE EXISTING STRUCTURES DURING THE EXECUTION OF CONSTRUCTION WORK, ALL WORK AT SUCH LOCATION SHALL CEASE AND THE NCDOT SHALL BE CONTACTED TO REVIEW SUCH DAMAGES PRIOR TO WORK RESUMPTION.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO EXISTING STRUCTURES THAT RESULT FROM CONSTRUCTION ACTIVITIES AT NO COST TO THE COUNTY AND STATE.

**SUBMITTALS**

- CONTRACTOR SHALL PROVIDE TO THE ENGINEER ALL SUBMITTALS (SHOP DRAWINGS, SAMPLES, MATERIAL CERTIFICATIONS, ETC) REQUIRED BY THE TECHNICAL SPECIFICATIONS FOR REVIEW PRIOR TO PURCHASE OR FABRICATION.

**ENVIRONMENTAL PERMITS**

- CONTRACTOR SHALL IMPLEMENT AND ABIDE BY ALL REGULATORY ENVIRONMENTAL REQUIREMENTS AS SPECIFIED IN THE ENVIRONMENTAL PERMITS SECURED BY NCDOT FOR THE PROJECT. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLY WITH ALL REGULATORY PERMIT REQUIREMENTS.
- CONTRACTOR SHALL ENSURE THAT TEMPORARY MEASURES AND REGULATORY MITIGATION REQUIREMENTS ARE IMPLEMENTED PRIOR TO INITIATING ANY CONSTRUCTION.

**CONSTRUCTION LOADS**

- CONTRACTOR IS RESPONSIBLE FOR ADEQUATE SHORING, BRACING, AND GUYING OF ALL COMPONENTS AS REQUIRED FOR SAFETY AND STRUCTURAL INTEGRITY THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH SOUND PRACTICE.

**CODES AND STANDARDS**

- ALL METHODS AND MATERIALS SHALL CONFORM TO LOCAL BUILDING CODES AS AMENDED AND ADOPTED BY THE LOCAL COUNTY AND STATE AUTHORITIES.
- REFERENCE TO ASTM AND OTHER STANDARDS SHALL MEAN THE LATEST EDITION IN EFFECT ON THE BID DATE, UNLESS NOTED OTHERWISE IN THESE DOCUMENTS.
- AMERICANS WITH DISABILITIES ACT, ADA STANDARDS FOR ACCESSIBLE DESIGN, 2010
- AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE /SEI 7-16, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"
- ALL WORK SHALL CONFORM TO THE NCDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES.

**WATER LEVELS**

WATER LEVELS DEFINED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY AND DO NOT INDICATE CONDITIONS DURING CONSTRUCTION. WATER LEVELS LISTED BELOW ARE REFERENCED TO NAVD88 DATUM AND WERE SOURCED FROM NOAA'S TIDE STATION 8654467, USCG HATTERAS, NC.

DATUM	NAVD88
MEAN HIGHER HIGH WATER (MHHW)	+0.26'
MEAN TIDE LEVEL	+0.53'
MEAN LOWER LOW WATER (MLLW)	-0.39'

**SURVEY INFORMATION**

- TOPOGRAPHIC AND BATHYMETRIC SURVEY WAS PROVIDED BY NCDOT, FILE NAME Silver Lake Passenger\_LS\_SSG\_210628\_dtl.dgn
- THE ELEVATIONS SHOWN ON THIS MAP ARE ACCURATE FOR THE DATE OF THAT SURVEY ONLY AND SHOULD NOT BE DEPENDED ON FOR ACCURACY AFTER THE DATE.

**GEOTECHNICAL**

- GEOTECHNICAL RECOMMENDATIONS WERE DEVELOPED BASED STRUCTURE SUBSURFACE INVESTIGATION CONDUCTED BY CATLIN ENGINEERS AND SCIENTISTS AND DATED SEPTEMBER 2017 AND THE TECHNICAL MEMORANDUM PREPARED BY THE EASTERN REGIONAL OFFICE GEOTECHNICAL ENGINEERING UNIT DATED FEBRUARY 13, 2018.

**DESIGN CRITERIA:**

- DEAD LOAD CONSISTS OF THE SELF-WEIGHT OF THE STRUCTURE AND ALL PERMANENT ATTACHMENTS, INCLUDING MARINA ACCESSORIES (CLEATS, DOCK BOXES, LIGHTS, ETC.), UTILITIES (POTABLE WATER, FIREWATER, AND ELECTRIC/COMMUNICATIONS) AND FENDERING SYSTEMS.

MATERIAL WEIGHTS	
MATERIAL	UNIT WEIGHT
SELF-WEIGHT OF NORMAL WEIGHT CONCRETE	150 LB/FT <sup>3</sup>
SELF-WEIGHT OF STRUCTURAL STEEL	490 LB/FT <sup>3</sup>
TIMBER (TREATED)	60 LB/FT <sup>3</sup>
ALUMINUM ALLOYS	175 LB/FT <sup>3</sup>
DD300 FENDERS	60 LB/ALF
COMPOSITE WOOD DECK	28 LB/FT <sup>3</sup>

**FIXED LANDING AREAS (LIVE LOAD)**

- CONCENTRATED: 650 LBS
- UNIFORM: 100 PSF

**WALKWAY/GANGWAY (LIVE LOAD)**

- UNIFORM: 100 PSF
- DEFLECTION: MAXIMUM L/240 (DEAD + LIVE)

**SAFETY LADDERS**

- THE MINIMUM DESIGN LIVE LOAD ON A FIXED LADDER WITH RUNGS SHALL BE A SINGLE CONCENTRATED LOAD OF 300 LB AT ANY POINT TO PRODUCE THE MAXIMUM LOAD EFFECT ON THE ELEMENT BEING CONSIDERED. THE NUMBER AND POSITION OF ADDITIONAL CONCENTRATED LIVE LOAD UNITS SHALL BE A MINIMUM OF 1 UNIT OF 300 LB FOR EVERY 10 FT OF LADDER HEIGHT, WHERE RAILS OF FIXED LADDERS EXTEND ABOVE PLATFORM AT THE TOP OF THE LADDER, EACH SIDE RAIL EXTENSION SHALL BE DESIGNED TO RESIST A SINGLE CONCENTRATED LIVE LOAD OF 100 LBS IN ANY DIRECTION AT ANY HEIGHT UP TO THE TOP OF THE SIDE RAIL EXTENSION.

**FERRY DOCK OPERATION PARTICULARS:**

**DESIGN VESSEL**

VESSEL TYPE	FERRY
CAPACITY:	125 PASSENGERS
LOA:	92 FEET
BEAM:	27 FEET
IMPACT SPEED:	0.6 KNOTS
FREEBOARD (LADEN)	7.0 FEET
FREEBOARD (LIGHT)	7.5 FEET
MIN. DRAFT:	4.0 FEET
MAX. DRAFT:	4.5 FEET

**DESIGN COASTAL CONDITIONS:**

THE FOLLOWING COASTAL CONDITIONALS HAVE BEEN USED TO DETERMINE THE WAVE LOADS USED IN THE DESIGN OF THE FIXED DOCK AND FENDER PILES, DESIGN STORM EVENT FOR VACANT CONDITION - NO VESSEL MOORED

WIND SPEED:	85 KNOTS (98 MPH)
SIGNIFICANT WAVE HEIGHT:	4.32 FEET
CURRENT:	<2.0 KNOTS
WATER SURFACE ELEVATION	3.1 FEET (NAVD88)
Tp	2.7 SEC

DESIGN STORM EVENT FOR OPERATIONAL LIMITS - MOORING (5-YR TROPICAL STORM EVENT)

WIND SPEED:	35 KNOTS (40 MPH)
SIGNIFICANT WAVE HEIGHT:	2.15 FEET
CURRENT:	<2.0 KNOTS
Tp	4.0 SEC

THE FOLLOWING PARAMETERS WERE USED IN THE DESIGN OF THE FENDER SYSTEM, BERTHING ANALYSIS AND DESIGN PARAMETERS

MAXIMUM BERTHING VELOCITY:	1 FT/S
MAXIMUM BERTHING ANGLE:	10 DEGREES
DISPLACEMENT ESTIMATED:	201.9 TONNES
ECCENTRICITY FACTOR (CE) % POINT:	0.40
VIRTUAL MASS FACTOR:	1.50
NORMAL BERTHING HULL PRESSURE	<4.2 KSF

**WIND LOADS (ON STRUCTURE)**

- WIND LOADS ARE IN ACCORDANCE WITH ASCE 7-16.
- BASIC WIND SPEED IS 140 MPH FOR DESIGN CATEGORY II.

**MATERIALS:**

**STRUCTURAL AND MISCELLANEOUS STEEL:**

- ALL MISCELLANEOUS STEEL SHAPES AND PLATES SHALL CONFORM TO STAINLESS STEEL TYPE 316 ASTM A36.
- ALL FASTENERS AND CONNECTORS INCLUDING BOLTS, NUTS, WASHERS, LAG SCREWS, SCREWS PLATES, AND ANGLES SHALL BE TYPE 316 STAINLESS STEEL.
- ALL MISCELLANEOUS STEEL SHALL RECEIVE A PROTECTIVE PAINT COATING EQUAL TO THE COATING SPECIFIED FOR THE STEEL FENDER PILES.

**ALUMINUM BOARDING RAMPS**

- THE ENGINEER OF RECORD DELEGATES THE RESPONSIBILITY FOR THE DESIGN OF THE ALUMINUM BOARDING RAMPS TO A SPECIALTY ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. ALL BOARDING RAMPS SUBMITTALS INCLUDING BUT NOT LIMITED TO DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER OR RECORD FOR REVIEW. ALL SHOP DRAWING SUBMITTALS SHALL BE SIGNED, SEALED AND DATED BY THE SPECIALTY ENGINEER.
- ALUMINUM BOARDING RAMPS SHALL BE PREFABRICATED FROM ALUMINUM MEETING THE FOLLOWING REQUIREMENTS:
  - THE DESIGN SHALL CONFORM TO IBC CODE AND ALUMINUM DESIGN MANUAL REQUIREMENTS AND TECHNICAL SPECIFICATION SECTION 05 51 36.
  - THE ALUMINUM BOARDING RAMP FABRICATION SHALL CONFORM TO ALUMINUM ALLOY 6061-T6 OR 6063-T6 AND WELDING SHALL BE IN ACCORDANCE WITH AWS D1.2.
  - GRATING, HANDRAILS, AND TRANSITION PLATES SHALL BE ADA COMPLIANT.
  - LOCATIONS, LENGTHS, AND CLEARANCES INDICATED IN THE DRAWINGS ARE APPROXIMATE.
  - FINAL BOARDING RAMP LENGTHS, CLEARANCES, AND CONNECTIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE DESIGN AND FABRICATION.

**WOOD FIXED DOCK:**

- ALL LUMBER SHALL BE MANUFACTURED AND GRADED IN ACCORDANCE WITH THE CURRENT EDITION OF THE STANDARD GRADING RULES FOR SOUTHERN PINE TIMBER, OF THE SOUTHERN PINE INSPECTION BUREAU. THE REQUIREMENTS OF NO. 1 DENSE SHALL APPLY. ALL LUMBER AND TIMBER SHALL CONFORM TO GRADE NO. 1 DENSE OR SELECT STRUCTURAL (SEL STR.) AS APPLICABLE AND SHALL BEAR THE GRADE MARK OF AN ALS-C ACCREDITED AGENCY.
- TIMBER AND LUMBER SHALL BE SOUTHERN PINE AND SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
  - PILES - ROUND TIMBER WITH A MINIMUM TIP CIRCUMFERENCE OF 38" IN ACCORDANCE WITH ASTM D25. PILES SHALL BE SOUTHERN PINE, GRADED IN ACCORDANCE WITH SPIB RULES AS NO. 1 DENSE OR SEL STR, AND KILN-DRIED TO MC-19 OR LESS. LENGTH SHALL BE IN ACCORDANCE WITH THE PILE SCHEDULE.
  - DIAGONAL BRACING - MARINE GRADE NO. 1, BRACING SHALL BE SOUTHERN PINE, GRADED IN ACCORDANCE WITH SPIB RULES AND KILN-DRIED TO MC19 OR LESS.
  - SPLIT PILE CAPS, JOISTS AND HAND RAILS - NO. 1 DENSE SOUTHERN PINE. MATERIAL SHALL BE GRADED IN ACCORDANCE WITH SPIB RULES AND KILN-DRIED TO MC-19 OR LESS.
  - DECKING - 2"x6" COMPOSITE WOOD DECK EQUAL OR SIMILAR TO WEARDECK COMPOSITE DECKING.

**TIMBER TREATMENT:**

- ALL LUMBER AND TIMBER MATERIALS SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AASHTO M 133, AND AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD U1 AND THE FOLLOWING USE CATEGORIES DESIGNATIONS.
  - PROVIDE A MINIMUM RETENTION OF 2.5 POUNDS PER CUBIC FOOT.
  - PILES - USE CATEGORY 5B, PRESSURE TREATED USING CHROMATED COPPER ARSENATE (CCA) WITH A MINIMUM RETENTION REQUIREMENT OF 2.5 POUNDS PER CUBIC FEET.
  - DIAGONAL BRACING - USE CATEGORY 5B, PRESSURE TREATED USING CHROMATED COPPER ARSENATE (CCA) WITH A MINIMUM RETENTION REQUIREMENT OF 2.5 POUNDS PER CUBIC FEET.
  - SPLIT PILE CAPS AND JOISTS - USE CATEGORY 4B, PRESSURE TREATED USING CHROMATED COPPER ARSENATE (CCA) WITH A MINIMUM RETENTION REQUIREMENT OF 0.65 POUNDS PER CUBIC FEET.
- INSPECTION OF PRESERVATIVE-TREATED MATERIAL SHALL BE PERFORMED IN ACCORDANCE WITH AWPA M2 BY AN INSPECTION AGENCY LISTED ON THE DEPARTMENT'S PRE-APPROVED PRODUCER/SUPPLIER LIST. EACH PIECE SHALL BEAR THE QUALITY MARK OF AN ALS-C ACCREDITED AGENCY IN ACCORDANCE WITH AWPA M6.
- PROVIDE TYPE 4 CERTIFIED TEST REPORTS AND TYPE 6 SUPPLIER CERTIFICATIONS IN ACCORDANCE WITH ARTICLE 106-3, INCLUDING CHAIN-OF-CUSTODY DOCUMENTATION.

**STEEL PILES**

- STEEL PILES SHALL CONFORM TO ASTM A252 GRADE 3, WITH MINIMUM YIELD STRENGTH OF 50 KSI.
- PIPE PILING SPLICES SHALL BE FABRICATED WITH FULL PENETRATION WELDS ACCORDING TO DETAIL ON DRAWINGS.
- PILES SHALL MEET THE MARINE COATING REQUIREMENTS LISTED IN TECHNICAL SPECIFICATION SECTION 31 62 16.

**TREATED TIMBER PILES**

- ALL TIMBER PILES SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES SECTION 1084 AS MODIFIED BY SP10 R82.
- TIMBER PILES SHALL CONFORM TO ASTM D25. TIMBER PILES SHALL BE SOUTHERN PINE, GRADED IN ACCORDANCE WITH SPIB RULES AS NO. 1 DENSE OR SEL STR, AND SHALL MEET SUMMERWOOD REQUIREMENTS OF SP10 R82.
- THE TREATING OF SOUTHERN YELLOW PINE SHALL BE IN CONFORMANCE WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES SPECIFICATION SECTION 1082 STRUCTURAL TIMBER AND LUMBER AND SECTION 1084 PILES.
- TIMBER SHALL BE NO. 1 DENSE OR SELECT STRUCTURAL AND SHALL BEAR THE MARK OF AN ALS-C ACCREDITED AGENCY.

**FENDERS**

- FENDERS SHALL BE EXTRUSION TYPE DD300 SECTION FENDERS BY TRELLEBORG OR APPROVED EQUAL, WITH A MINIMUM ENERGY ABSORPTION CAPACITY OF 12.9 kNm/m AND MAXIMUM REACTION OF 230 kNm. COMPLETE WITH ANCHORING MECHANISM TO INSTALL ON THE FENDER PILES AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL SUBMIT MANUFACTURER'S PRODUCT LITERATURES AND SHOP DRAWINGS TO THE COUNTY FOR REVIEW AND APPROVAL.

**MOORING**

- CLEATS: ALL CLEATS SHALL BE CONNECTED TO THE FENDER PILES TO MOOR THE VESSEL WITHIN OPERATIONAL WIND SPEED LIMITS AS SPECIFIED IN THE FERRY DOCK OPERATIONS PARTICULARS.

**PILE INSTALLATION**

- PILES SHALL BE INSTALLED TO ACHIEVE THE SPECIFIED PILE TIP ELEVATIONS. CONTRACTOR IS RESPONSIBLE FOR THE SELECTION OF THE APPROPRIATE PILE HAMMER OR DRILL TO ACHIEVE THE PILE TIP ELEVATION. CONTRACTOR SHALL BE FAMILIAR WITH THE PROJECT SITE CONDITIONS AND SHALL REVIEW THE SUPPLIED GEOTECHNICAL DATA.
- PILES HITTING OBSTACLES, MISALIGNED PILES AND PILES THAT HAVE NOT ACHIEVED MINIMUM PENETRATION SHALL BE PULLED BY THE CONTRACTOR AND REINSTALLED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL BE RESPONSIBLE OF MONITORING ADJACENT STRUCTURES FOR VIBRATION, MOVEMENT, OR DAMAGES DURING THE PILE INSTALLATION OPERATIONS. IF MOVEMENT OR DAMAGES TO THE STRUCTURES ARE DETECTED, THE PILE INSTALLATION SHALL BE HALTED IMMEDIATELY, PHOTOS OF THE STRUCTURES SHALL BE TAKEN BEFORE AND AFTER THE PILE DRIVING OPERATION BY CONTRACTOR.

**CONCRETE**

- CONCRETE SHALL BE CLASS AA WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI AND A MAXIMUM WATER CEMENT RATIO OF 0.426.
- ALL CONCRETE WORK SHALL CONFORM TO ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND COMMENTARY".
- PROVIDE 3/4" CHAMFERS ON ALL EXPOSED EDGES AND CORNERS UNLESS OTHERWISE NOTED.
- REINFORCING BARS SHALL CONFORM TO ASTM 615, GRADE 60, UNLESS OTHERWISE NOTED.
- CONCRETE COVER OVER REINFORCEMENT AND TIES, UNLESS OTHERWISE NOTED, SHALL BE AS FOLLOWS:
  - CAST AGAINST EARTH 3"
  - EXPOSED TO WEATHER 2"
- DEVELOPMENT AND SPLICE LENGTH FOR REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI AND THE "REINFORCEMENT SPLICE AND DEVELOPMENT LENGTH" TABLE INCLUDED IN THIS SET OF DRAWINGS.
- ALL DEVELOPMENT AND SPLICE LENGTHS SHALL BE CATEGORY 1 UNLESS OTHERWISE NOTED ON DRAWINGS.
- ALL REINFORCING BARS WITH HOOKS SHALL BE PROVIDED WITH ACI STANDARD HOOKS UNLESS OTHERWISE NOTED. STANDARD HOOKS SHALL BE IN ACCORDANCE WITH "STANDARD HOOK FOR DEVELOPMENT TABLE" INCLUDED IN THIS SET OF DRAWINGS.
- BENDING OF REBAR SHALL BE IN ACCORDANCE WITH ACI AND "MINIMUM INSIDE BEND DIAMETERS AND STANDARD HOOK GEOMETRY FOR STIRRUPS, TIES AND HOOKS TABLE" INCLUDED IN THIS SET OF DRAWINGS.
- ALL FORMWORK, FINISHES AND CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 03 30 00

**STANDARD ABBREVIATIONS:**

BOT	BOTTOM
T.O	TOP OF
B.O	BOTTOM OF
M.L.L.W	MEAN LOWER LOW WATER
M.H.H.W	MEAN HIGHER HIGH WATER
EL	ELEVATION
CL	CENTER LINE
PL	PLATE
EA	EACH
TYP	TYPICAL
'	FEET
"	INCHES
STA	STATION
PSF	POUNDS PER SQUARE FOOT
Ø	DIAMETER
MIN	MINIMUM
MAX	MAXIMUM
DL	DEAD LOAD
LL	LIVE LOAD
ULL	UNIFORM LIVE LOAD
CLL	CONCENTRATED LIVE LOAD

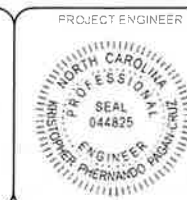
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SHEET 2 OF 22

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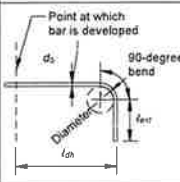
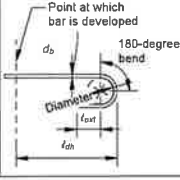
GRAPHIC SCALE



Rev.	Date	Drawn	Description	Ch'kd	App'd

**NCDOT PASSENGER FERRY  
DOCK REPLACEMENT -  
OCRACOKE ISLAND**

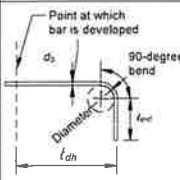
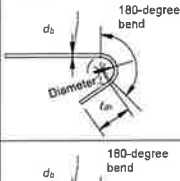
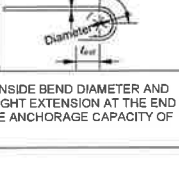
**G-002 MARINE GENERAL NOTES  
(1 OF 2)**

STANDARD HOOK FOR DEVELOPMENT TABLE				
Type of standard hook	Bar size	Minimum inside bend diameter, in.	Straight extension <sup>(1)</sup> $\ell_{ext}$ , in.	Type of standard hook
90-degree hook	No. 3 through No. 8	$6d_b$	$12d_b$	
	No. 9 through No. 11	$8d_b$		
	No. 14 and No. 18	$10d_b$		
180-degree hook	No. 3 through No. 8	$6d_b$	Greater of $4d_b$ and 2.5 in.	
	No. 9 through No. 11	$8d_b$		
	No. 14 and No. 18	$10d_b$		

<sup>(1)</sup>A STANDARD HOOK FOR DEFORMED BARS IN TENSION INCLUDES THE SPECIFIC INSIDE BEND DIAMETER AND STRAIGHT EXTENSION LENGTH. IT SHALL BE PERMITTED TO USE A LONGER STRAIGHT EXTENSION AT THE END OF A HOOK. A LONGER EXTENSION SHALL NOT BE CONSIDERED TO INCREASE THE ANCHORAGE CAPACITY OF THE HOOK.

REINFORCEMENT SPLICE AND DEVELOPMENT LENGTH (INCHES) TABLE (FOR 4000 PSI CONCRETE) (IN)											
CATEGORY			#3	#4	#5	#6	#7	#8	#9	#10	#11
			1	L <sub>d</sub>	TOP	18	25	31	37	54	62
BOT	14	19			24	28	42	47	53	59	65
2	L <sub>st</sub>	SPLICE	24	32	40	48	70	80	90	100	110
		TOP	28	37	46	55	81	92	104	116	127
	BOT	21	28	36	43	62	71	80	89	98	
	SPLICE	36	48	60	72	105	120	135	150	165	
	L <sub>dh</sub>	HOOK	7	11	15	19	24	30	36	42	48

NOTES:  
A. DEVELOPMENT AND SPLICE LENGTHS SHOWN IN TABLE ARE CALCULATED IN ACCORDANCE WITH ACI 318-19  
B. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE BAR.  
C.  $d_b$  STANDS FOR NOMINAL BAR DIAMETER.  
L<sub>d</sub> STANDS FOR DEVELOPMENT LENGTH  
L<sub>st</sub> STANDS FOR SPLICE LENGTH  
L<sub>dh</sub> STANDS FOR DEVELOPMENT LENGTH OF BAR WITH STANDARD HOOK  
D. CATEGORIES DEFINITIONS:  
CATEGORY 1: CLEAR SPACING OF BARS OR WIRES BEING DEVELOPED OR LAP SPLICED NOT LESS THAN  $d_b$ , CLEAR COVER AT LEAST  $d_b$ , AND STIRRUPS OR TIES THROUGHOUT L<sub>d</sub> NOT LESS THAN THE CODE MIN OR CLEAR SPACING OF BARS OR WIRES BEING DEVELOPED OR LAP SPLICED AT LEAST 2  $d_b$  AND CLEAR COVER AT LEAST  $d_b$ .  
CATEGORY 2: ALL OTHERS


MIN. INSIDE BEND DIAMETERS AND STANDARD HOOK GEOMETRY FOR STIRRUPS, TIES AND HOOPS TABLE				
Type of standard hook	Bar size	Minimum inside bend diameter, in.	Straight extension <sup>(1)</sup> $\ell_{ext}$ , in.	Type of standard hook
90-degree hook	No. 3 through No. 8	$6d_b$	$12d_b$	
	No. 9 through No. 11	$8d_b$		
	No. 14 and No. 18	$10d_b$		
135-degree hook	No. 3 through No. 5	$4d_b$	Greater of $5d_b$ and 3 in.	
	No. 6 through No. 8	$6d_b$		
180-degree hook	No. 3 through No. 5	$6d_b$	Greater of $4d_b$ and 2.5 in.	
	No. 6 through No. 8	$8d_b$		

<sup>(1)</sup>A STANDARD HOOK FOR STIRRUPS, TIES, AND HOOPS INCLUDES THE SPECIFIC INSIDE BEND DIAMETER AND STRAIGHT EXTENSION LENGTH. IT SHALL BE PERMITTED TO USE A LONGER STRAIGHT EXTENSION AT THE END OF A HOOK. A LONGER EXTENSION SHALL NOT BE CONSIDERED TO INCREASE THE ANCHORAGE CAPACITY OF THE HOOK.

Digitally signed by Kristopher P Pagan-Cruz  
Date: 2025.02.17 10:28:55-05'00'

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GRAPHIC SCALE

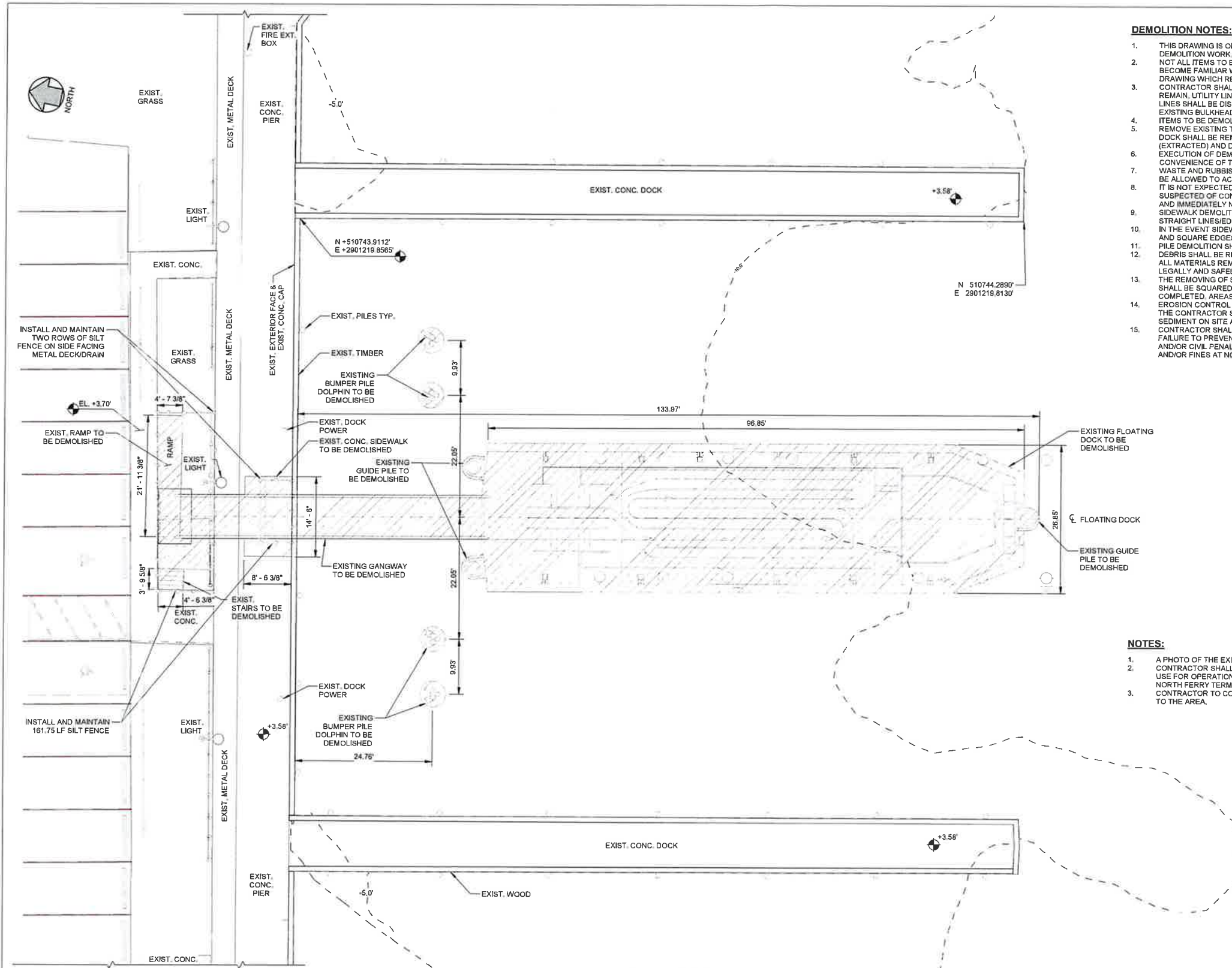
PROJECT ENGINEER  


Designed By	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	01/14/26
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

G-003 MARINE GENERAL NOTES  
(2 OF 2)

ANSI D 649227



**DEMOLITION NOTES:**

1. THIS DRAWING IS ONLY TO ASSIST IN DEFINING THE SCOPE OF DEMOLITION WORK AND IS NOT INTENDED TO INDICATE ALL DEMOLITION WORK. CONTRACTOR SHALL REMOVE ALL EXISTING ITEMS AS REQUIRED TO COMPLETE THE WORK.
2. NOT ALL ITEMS TO BE REMOVED ARE SHOWN ON THE PLAN. CONTRACTOR SHALL PERFORM A WALK-THRU OF THE SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND IDENTIFYING POTENTIAL CRITICAL ITEMS NOT ADDRESSED IN THE DRAWING WHICH REQUIRE REMOVAL/DEMOLITION.
3. CONTRACTOR SHALL IDENTIFY ALL EXISTING WATER, SANITARY AND ELECTRIC LINES WHICH ARE TO BE REMOVED OR TO REMAIN. UTILITY LINES RUNNING FROM SHORE TO THE EXISTING FLOATING DOCK SHALL BE DEMOLISHED. EXISTING UTILITY LINES SHALL BE DISCONNECTED AND CAPPED PRIOR TO DEMOLITION OF THE LINE SECTION LOCATED WATERWARD OF THE EXISTING BULKHEAD.
4. ITEMS TO BE DEMOLISHED ARE NOTED IN DEMOLITION DRAWINGS IN DASHED LINES AND HATCHED.
5. REMOVE EXISTING TEMPORARY FLOATING FERRY DOCK INCLUDING GUIDE PILES. EXISTING TEMPORARY FLOATING FERRY DOCK SHALL BE REMOVED AND DELIVERED TO NCDOT AT ITS MANN HARBOR FACILITY. GUIDE PILES ARE TO BE REMOVED (EXTRACTED) AND DISPOSED OF BY THE CONTRACTOR.
6. EXECUTION OF DEMOLITION WORK SHALL PROGRESS IN SUCH A MANNER AS NOT TO INTERFERE WITH THE SAFETY AND CONVENIENCE OF THE PUBLIC AND PERSONNEL AT THE SITE.
7. WASTE AND RUBBISH FROM DEMOLITION WORK SHALL BE REMOVED FROM THE SITE AS RAPIDLY AS POSSIBLE AND SHALL NOT BE ALLOWED TO ACCUMULATE ON PREMISES.
8. IT IS NOT EXPECTED THAT HAZARDOUS MATERIAL WILL BE ENCOUNTERED DURING DEMOLITION WORK. IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE IDENTIFIED OR ENCOUNTERED, STOP WORK AND DO NOT DISTURB, AND IMMEDIATELY NOTIFY IN WRITING THE OWNER AND ENGINEER.
9. SIDEWALK DEMOLITION SHALL BE CONDUCTED BY SAWCUTTING FULL DEPTH EXISTING SIDEWALK AREA TO BE REMOVED AT STRAIGHT LINES/EDGES. CONCRETE CUTTING SHALL BE ACCOMPLISHED IN A NEAT WORKMANLIKE MANNER.
10. IN THE EVENT SIDEWALK IS NOT CUT AT STRAIGHT LINES, THE CONTRACTOR SHALL PATCH AS NEEDED TO PROVIDE STRAIGHT AND SQUARE EDGES.
11. PILE DEMOLITION SHALL CONSIST OF PULLING (EXTRACTION) OF THE PILES FROM THE GROUND.
12. DEBRIS SHALL BE REMOVED FROM THE WORK AREA ON A DAILY BASIS TO ENSURE NO ENVIRONMENTAL IMPACT. DISPOSAL OF ALL MATERIALS REMOVED AND/OR DEMOLISHED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND BE PERFORMED LEGALLY AND SAFELY AT AN APPROVED DISPOSAL FACILITY.
13. THE REMOVING OF SIDEWALK, SLAB ON GRADE OR ASPHALT PAVEMENT REQUIRES SAWCUTTING. AREAS TO BE DEMOLISHED SHALL BE SQUARED OFF AND SHALL CONSIDER REPATCHING WORK AFTER THE DEMO AND CONSTRUCTION WORK IS COMPLETED. AREAS TO REMAIN SHALL BE PROTECTED.
14. EROSION CONTROL MEASURES SHOWN SHALL BE CONSIDERED TO BE THE MINIMUM INSTALLATION REQUIREMENT. THE CONTRACTOR SHALL PROVIDE ANY MATERIAL ITEM OR WORK EFFORT NECESSARY TO PREVENT EROSION AND MAINTAIN SEDIMENT ON SITE AT ALL TIMES DURING CONSTRUCTION.
15. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTROLLING EROSION AND SEDIMENTATION WITHIN ITS WORK AREAS. FAILURE TO PREVENT EROSION AND MAINTAIN SEDIMENT ON SITE MAY RESULT IN REGULATORY ENFORCEMENT ACTIONS AND/OR CIVIL PENALTIES/FINES. THE CONTRACTOR SHALL BEAR THE COSTS OF ANY ENFORCEMENT ACTION, PENALTIES, AND/OR FINES AT NO ADDITIONAL COST TO THE OWNER.



PHOTO 1 - RAMP AT SOUTHDOCK

**NOTES:**

1. A PHOTO OF THE EXISTING RAMP TO BE DISPOSED OF IS INCLUDED IN THIS SHEET FOR REFERENCE, AS PHOTO 1.
2. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING RAMP LOCATED AT SOUTH DOCK. THE RAMP IS NOT CURRENTLY USE FOR OPERATIONS AND HAS BEEN REMOVED AND STORED AT A TEMPORARY STORAGE AREA AT THE NCDOT OCRACOKE NORTH FERRY TERMINAL (SOUTH DOCK).
3. CONTRACTOR TO COORDINATE WITH NCDOT IN ADVANCE DETAILS OF REMOVAL INCLUDING EXACT LOCATION AND ACCESS TO THE AREA.



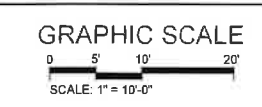
2 SOUTH DOCK VICINITY MAP  
1/32" = 1'-0"

1 EXISTING CONDITIONS & PLAN  
1" = 10'-0"

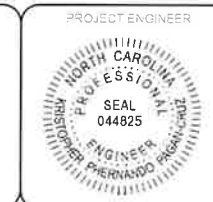
**DEMOLITION LEGEND:**

	EXISTING TO REMAIN
	EXISTING TO BE DEMOLISHED
	NEW SILT FENCE

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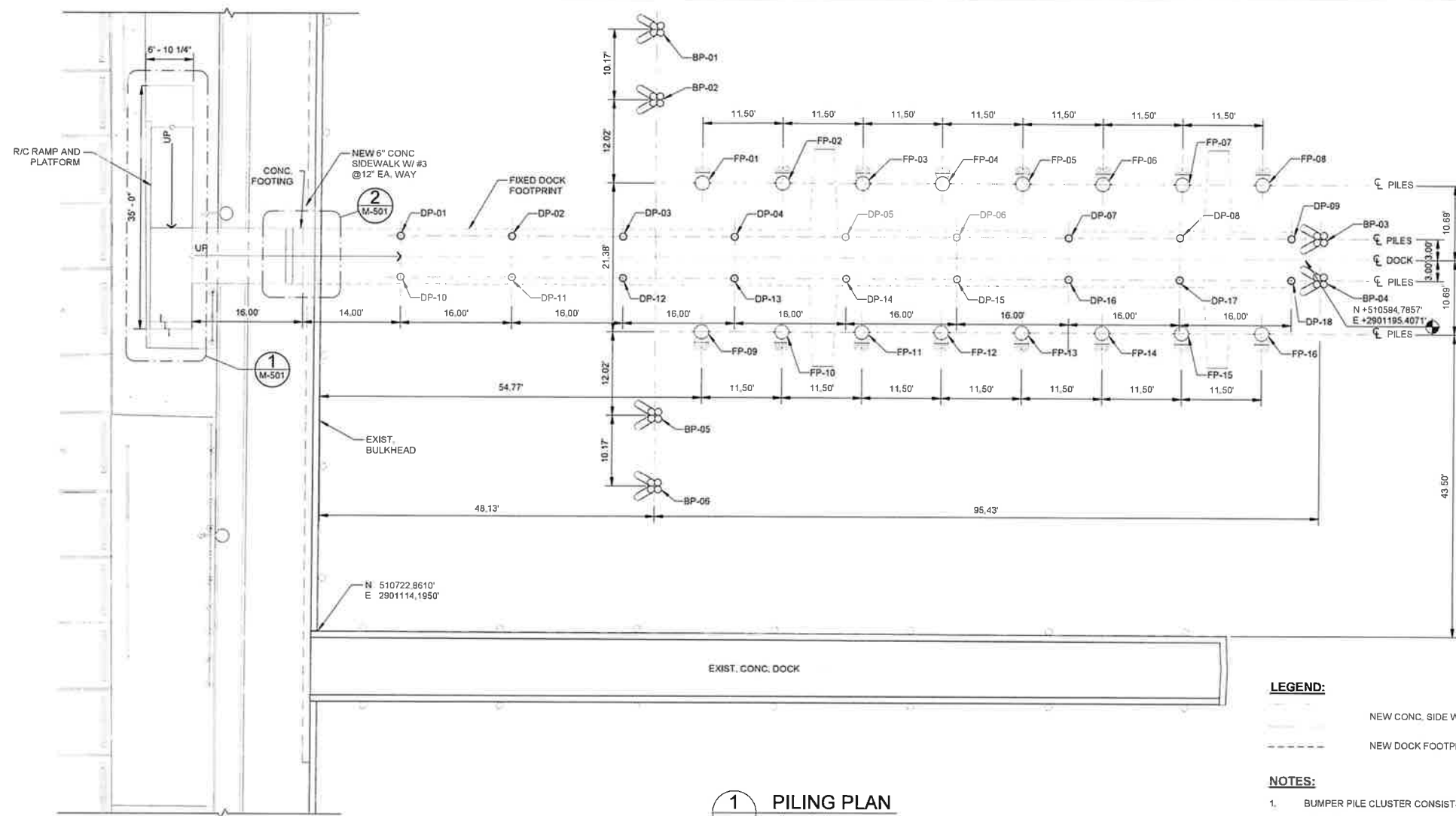
Rev.	Date	Drawn	Description	Ch'kd	App'd

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**D-101 EXISTING CONDITIONS AND DEMOLITION PLAN**

ANSI D (24x27)





**LEGEND:**

- NEW CONC. SIDE WALK
- NEW DOCK FOOTPRINT

**NOTES:**

1. BUMPER PILE CLUSTER CONSISTS OF 2 PLUMB PILES AND 2 BATTER PILES. SEE DETAIL IN SHEET M-504.
2. LENGTH OF PILES FOR BUMPER PILES IS 61.50' FOR PLUMB PILES AND 61.71' FOR BATTER PILES.

**1 PILING PLAN**  
1" = 10'-0"

**PILE SCHEDULE (ELEVATIONS REFERENCED TO NAVD88)**

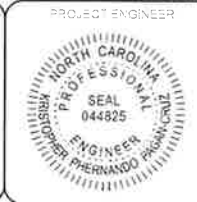
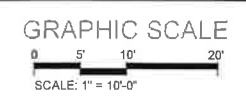
PILE ID	DESCRIPTION	TYPE	DIA (in.)	TIP EL. (ft.)	CUTOFF EL. (ft.)	LENGTH (ft.)	NORTHING	EASTING
FP-01	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,681.8434	2,901,188.5100
FP-09	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,677.5522	2,901,167.5447
FP-10	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,666.2875	2,901,169.8583
FP-11	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,655.0171	2,901,172.1459
FP-12	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,643.7521	2,901,174.4588
FP-13	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,632.4846	2,901,176.7666
FP-14	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,621.2212	2,901,179.0800
FP-15	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,609.9547	2,901,181.3860
FP-16	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,598.6860	2,901,183.6870
FP-02	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,670.5756	2,901,190.8084
FP-03	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,659.3127	2,901,193.1329
FP-04	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,648.0449	2,901,195.4320
FP-05	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,636.7767	2,901,197.7368
FP-06	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,625.5102	2,901,200.0348
FP-07	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,614.2437	2,901,202.3408
FP-08	FENDER PILE	STEEL PIPE PILE	24	-71.50'	+15.00'	86.50'	510,602.9772	2,901,204.6523
DP-01	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,722.7469	2,901,172.2784
DP-02	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,707.0719	2,901,175.4867
DP-03	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,691.3968	2,901,178.6951
DP-04	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,675.7218	2,901,181.9035

**PILE SCHEDULE (ELEVATIONS REFERENCED TO NAVD88)**

PILE ID	DESCRIPTION	TYPE	DIA (in.)	TIP EL. (ft.)	CUTOFF EL. (ft.)	LENGTH (ft.)	NORTHING	EASTING
DP-05	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,660.0469	2,901,185.1126
DP-06	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,644.3732	2,901,188.3272
DP-07	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,628.6966	2,901,191.5278
DP-08	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,613.0216	2,901,194.7361
DP-09	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,597.3465	2,901,197.9445
DP-10	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,721.5440	2,901,166.4014
DP-11	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,705.8690	2,901,169.6098
DP-12	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,690.1939	2,901,172.8181
DP-13	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,674.5189	2,901,176.0265
DP-14	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,658.8440	2,901,179.2356
DP-15	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,643.1687	2,901,182.4423
DP-16	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,627.4944	2,901,185.6544
DP-17	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,611.8194	2,901,188.8627
DP-18	FIXED DOCK PILE	TIMBER PILE	12	-49.00'	+6.02'	55.02'	510,596.1444	2,901,192.0711
BP-01	BUMPER PILE	(4) - 12" DIA TIMBER PILE <sup>1</sup>	12	-49.00'	+15.00'	61.50 <sup>2</sup>	510,692.7991	2,901,208.9042
BP-02	BUMPER PILE	(4) - 12" DIA TIMBER PILE <sup>1</sup>	12	-49.00'	+15.00'	61.50 <sup>2</sup>	510,690.7598	2,901,198.9407
BP-03	BUMPER PILE	(4) - 12" DIA TIMBER PILE <sup>1</sup>	12	-49.00'	+15.00'	61.50 <sup>2</sup>	510,593.3124	2,901,198.7671
BP-05	BUMPER PILE	(4) - 12" DIA TIMBER PILE <sup>1</sup>	12	-49.00'	+15.00'	61.50 <sup>2</sup>	510,681.6534	2,901,154.4496
BP-06	BUMPER PILE	(4) - 12" DIA TIMBER PILE <sup>1</sup>	12	-49.00'	+15.00'	61.50 <sup>2</sup>	510,679.6141	2,901,144.4861
BP-04	BUMPER PILE	(4) - 12" DIA TIMBER PILE <sup>1</sup>	12	-49.00'	+15.00'	61.50 <sup>2</sup>	510,592.1108	2,901,192.8966

Digitally signed by Kristopher P Pagan-Cruz  
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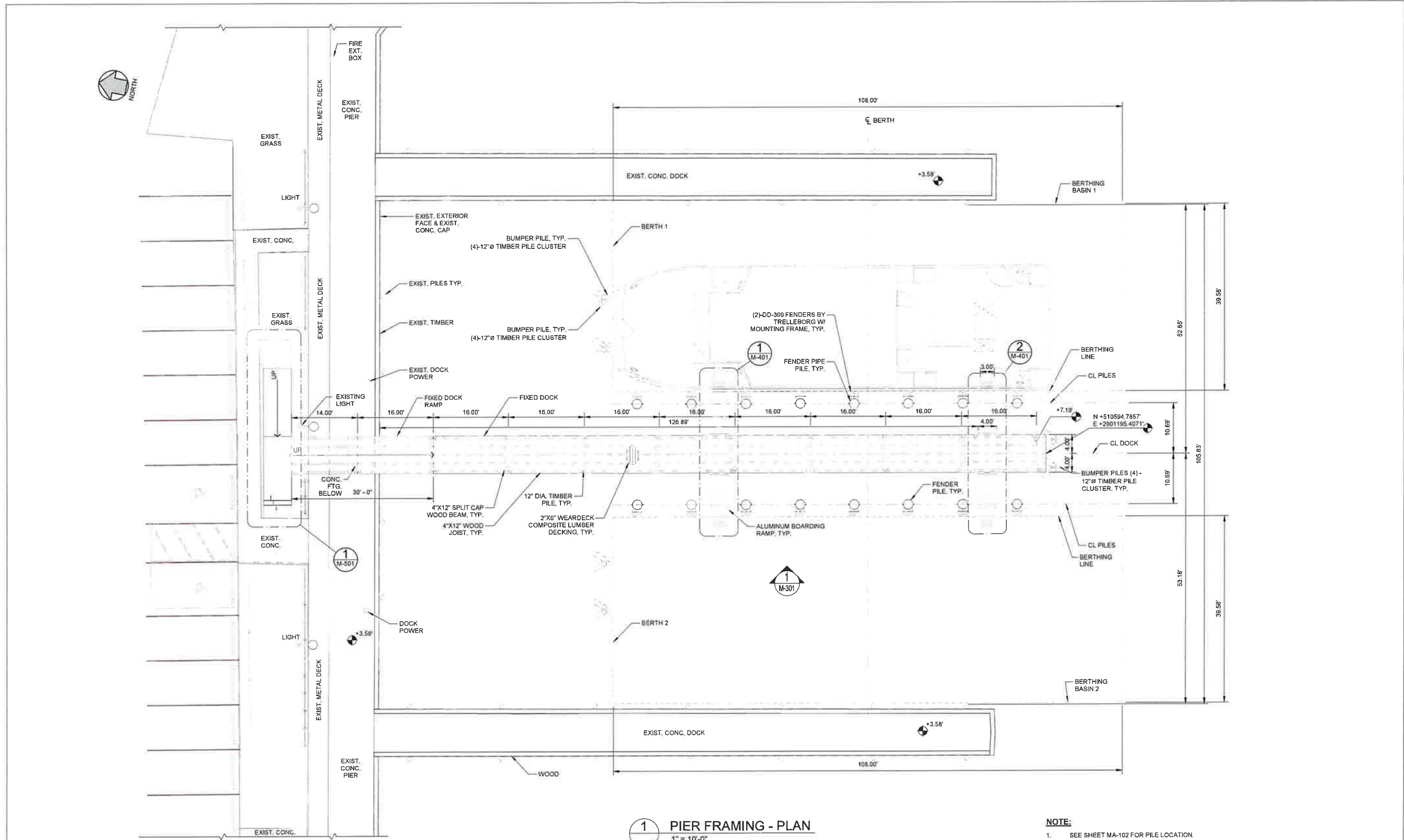


Rev.	Date	Drawn	Description	Chk'd	App'd

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**M-102 FOUNDATION AND PILE LAYOUT PLAN**

ANSI D 04-227



**NOTES:**  
1. CONTOURS SHOWN ARE FOR EXISTING MUDLINE DEPTHS.

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**GRAPHIC SCALE**  
0 5' 10' 20'  
SCALE: 1" = 10'-0"

Digitally signed by Kristopher P Pagan-Cruz  
Date: 2026.02.17 10:32:23-05'00'

PROJECT ENGINEER  
K. Pagan-Cruz  
SEAL  
044825

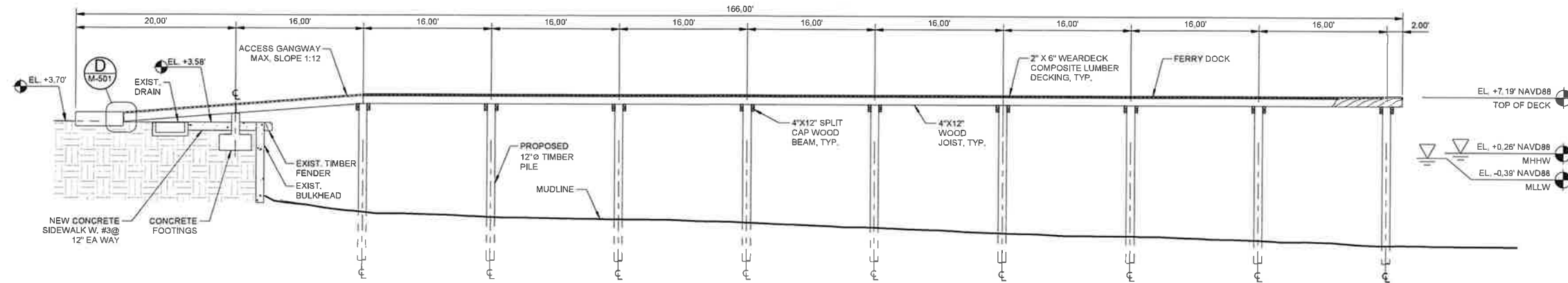
Designed By	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

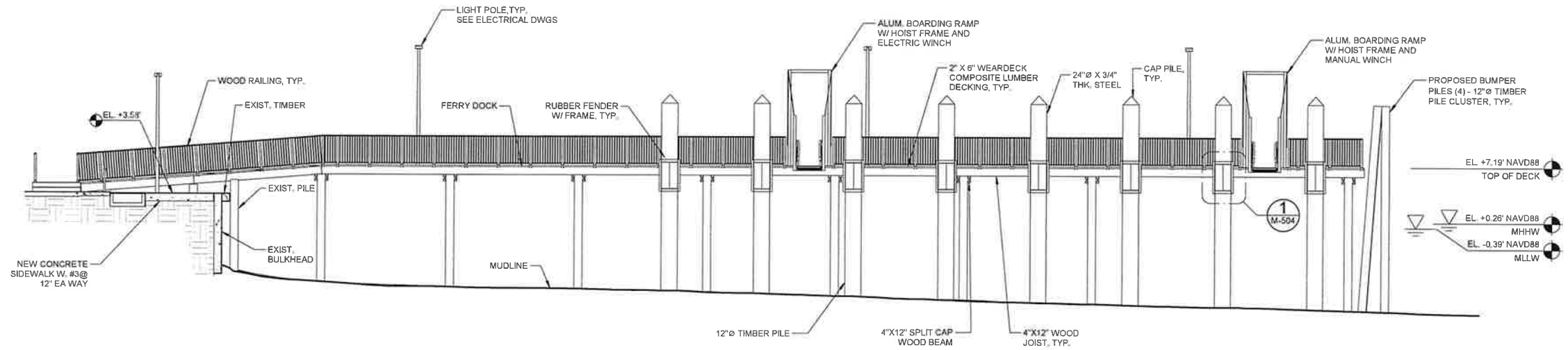
**M-103 PIER FRAMING PLAN**

SHEET 7 OF 22

ANSI D (8/1/22)





**A** LONGITUDINAL - SECTION  
E-901 1" = 8'-0"



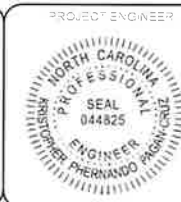
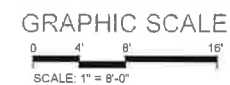
**1** ELEVATION  
E-901 1" = 8'-0"

**LEGEND**

-  INDICATES EXISTING CONCRETE
-  INDICATES NEW CONCRETE

Digitally signed by Kristopher P Pagan-Cruz  
Date: 2026.02.17 10:32:53-05'00'

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Rev.	Date	Drawn	Description	Ch'kd	App'd

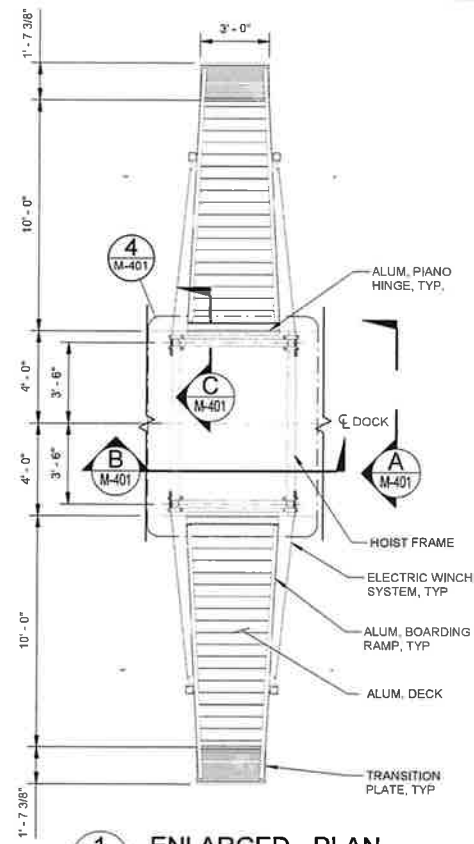
**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**M-301 LONGITUDINAL SECTION & ELEVATION**

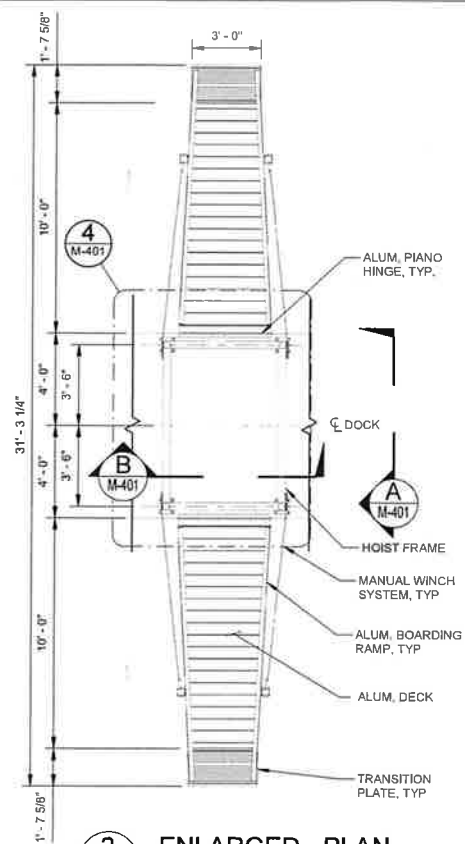
Designed by	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26
Project Manager	ALLISON THORBURN		

ANSI D (3/4"x27)

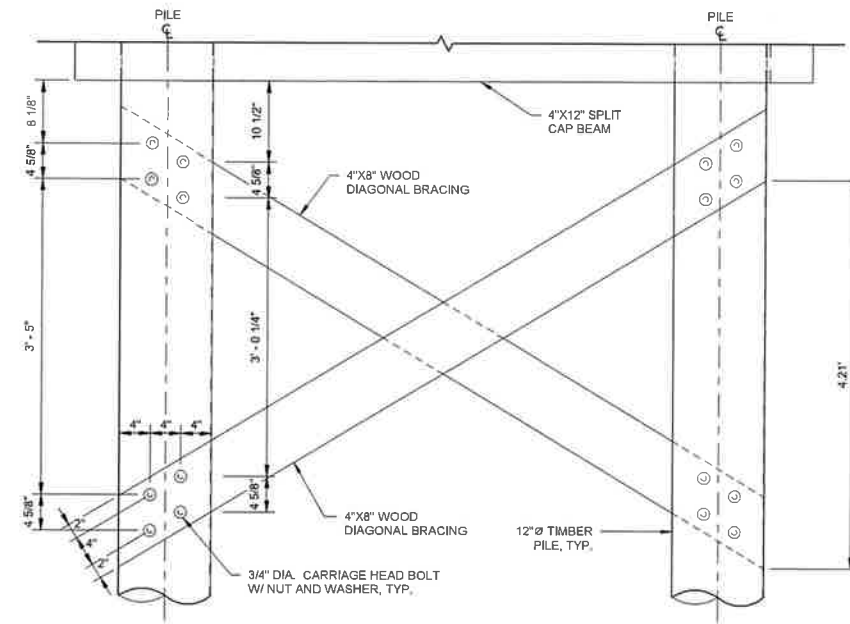




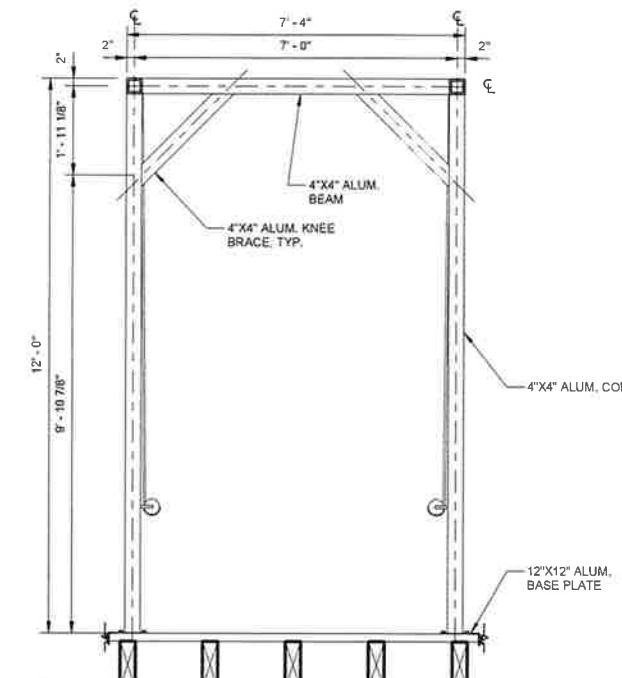
**1 ENLARGED - PLAN**  
M-101 1" = 4'-0"



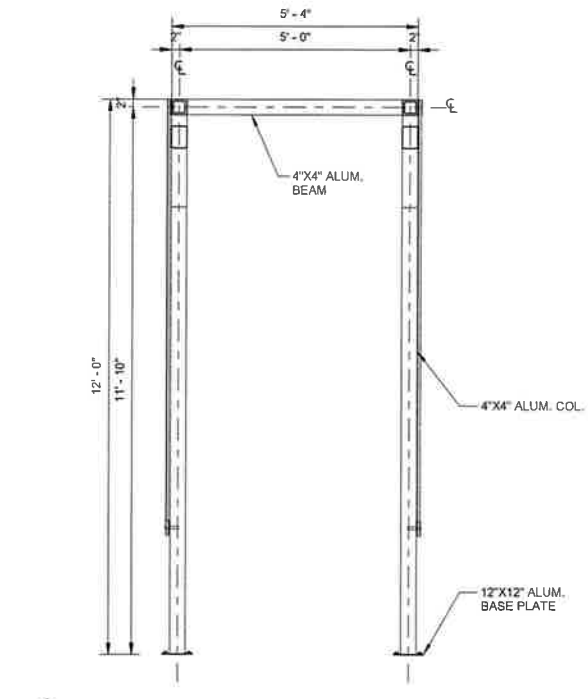
**2 ENLARGED - PLAN**  
M-101 1" = 4'-0"



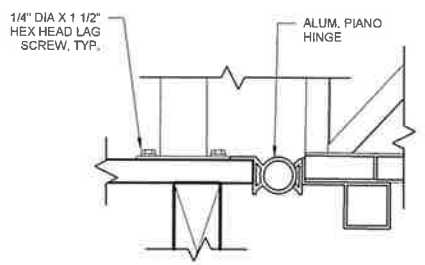
**3 LATERAL BRACING - DETAIL**  
M-302 1" = 1'-0"



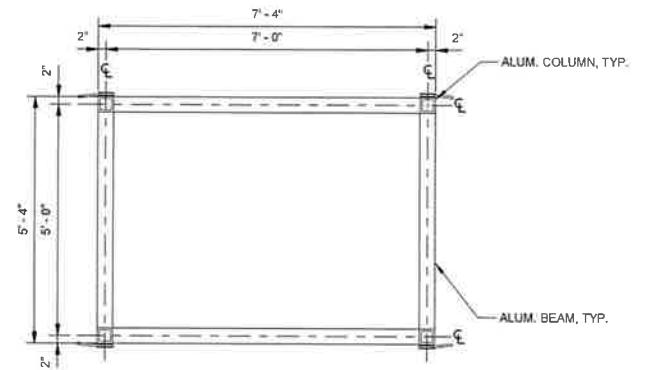
**A ENLARGED HOIST FRAME - ELEVATION**  
M-401 1" = 2'-0"



**B ENLARGED HOIST FRAME - SECTION**  
M-401 1" = 2'-0"



**C SECTION**  
M-401 1" = 0'-8"



**4 ENLARGED HOIST FRAME - PLAN**  
M-401 1" = 2'-0"

Digitally signed by Kristopher P Pagan-Cruz  
Date: 2026.02.17 11:09:41-05'00'

**M M**  
**MOTT MACDONALD**  
930 Main Campus Drive,  
Suite 200  
Raleigh, NC 27606  
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T +1 (919) 552 2253  
F +1 (919) 552 2254  
www.mottmacamericas.com

**GRAPHIC SCALE**  
0 1' 1' 2'  
SCALE: 1" = 1'-0"  
0 1' 2' 4'  
SCALE: 1" = 2'-0"  
0 2' 4' 8'  
SCALE: 1" = 4'-0"

PROJECT ENGINEER  
SEAL  
044825  
K. P. Pagan-Cruz  
REGISTERED PROFESSIONAL ENGINEER  
EXPIRES 12/31/2026

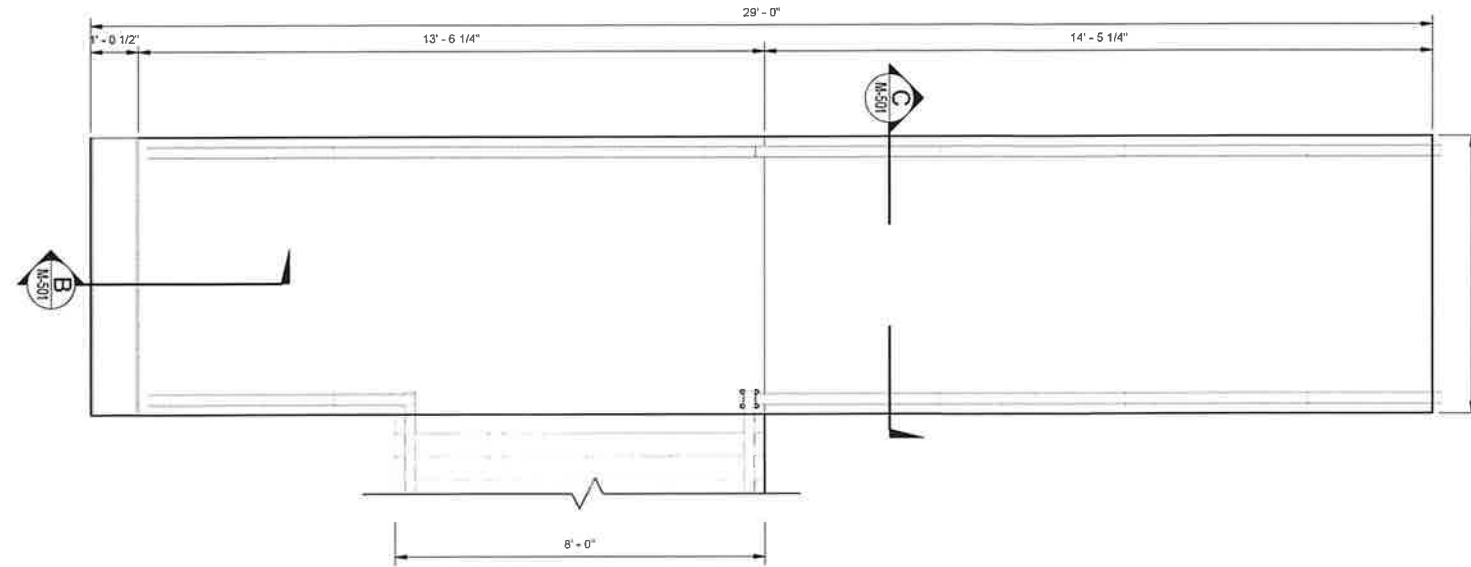
Designed By	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description
			Ch'kd
			App'd

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

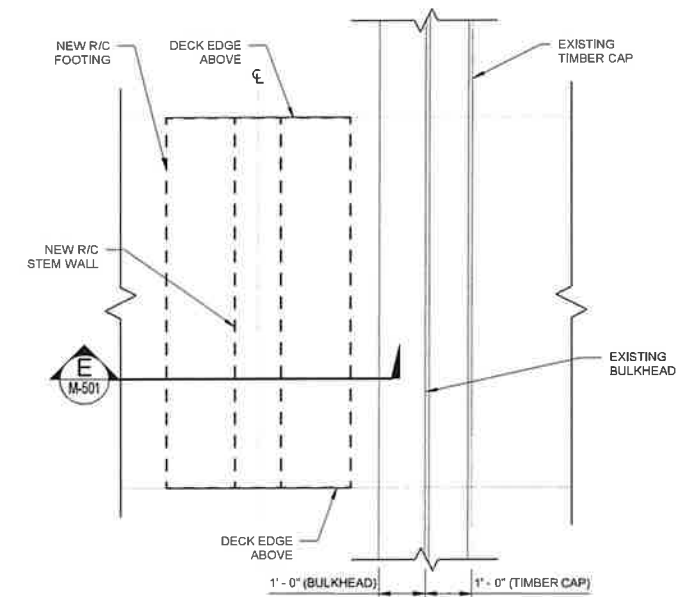
**M-401 HOIST FRAME DETAILS**

SHEET 10 OF 22

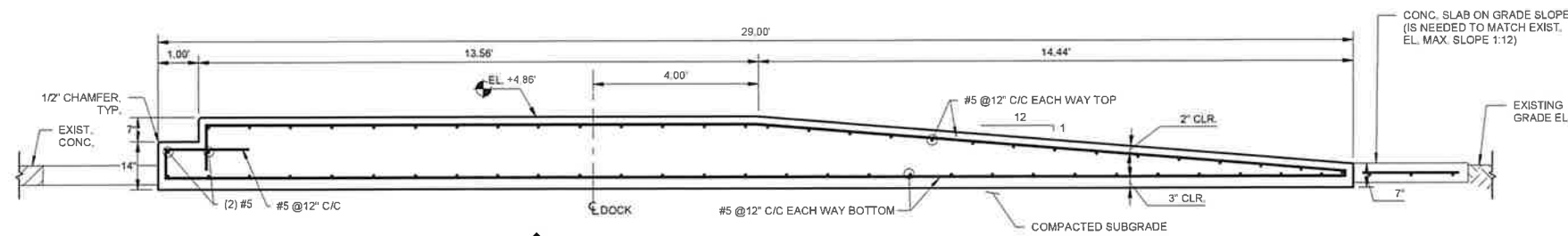
ANSI D 69'x27'



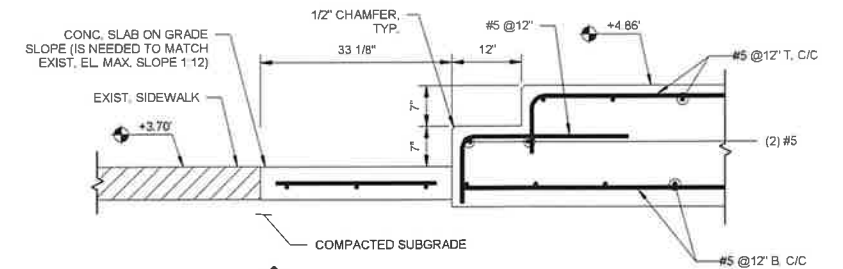
**1 ENLARGED FOUNDATION - PLAN**  
1" = 2'-0"



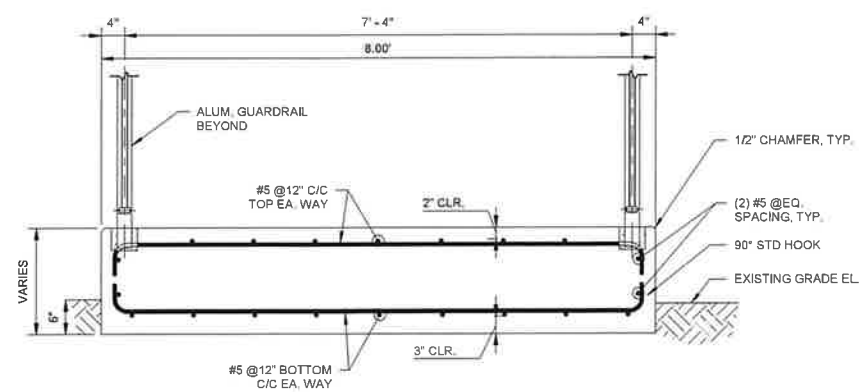
**2 ENLARGED - PLAN**  
1" = 2'-0"



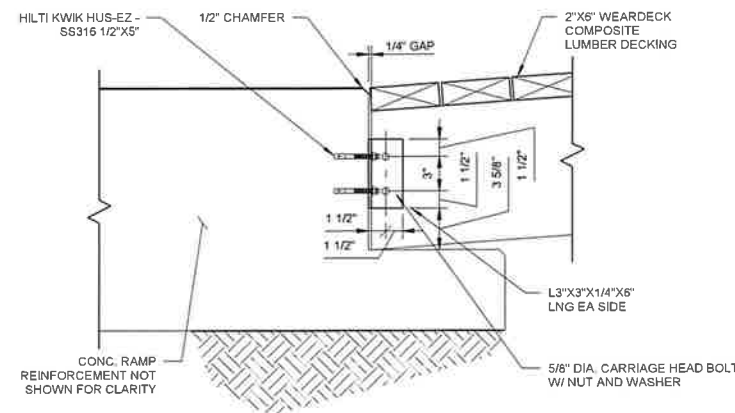
**A CONC. RAMP LONGITUDINAL - SECTION**  
1" = 2'-0"



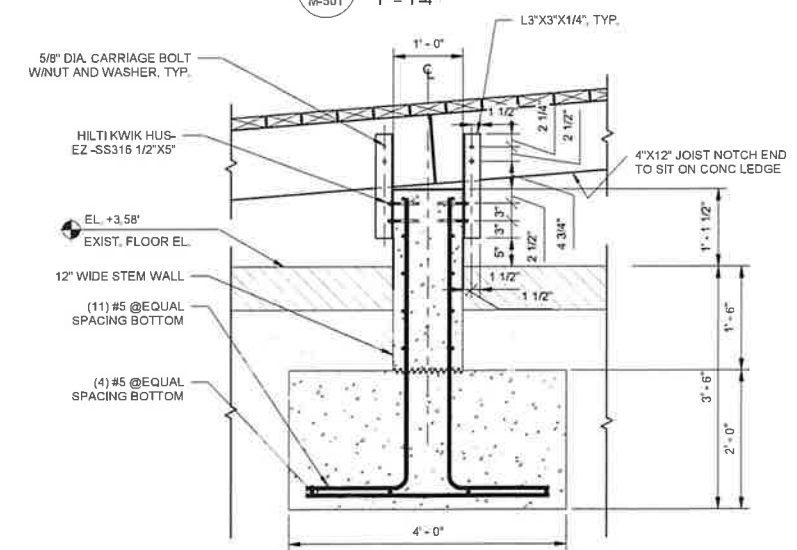
**B CONC. STAIR - SECTION**  
1" = 1'-4"



**C CONC. RAMP TRANSVERSE - SECTION**  
1" = 1'-4"



**D CONC. RAMP JOIST CONNECTION - SECTION**  
1" = 0'-8"



**E CONCRETE FOOTING - SECTION**  
1" = 1'-4"

ANSI D 047221

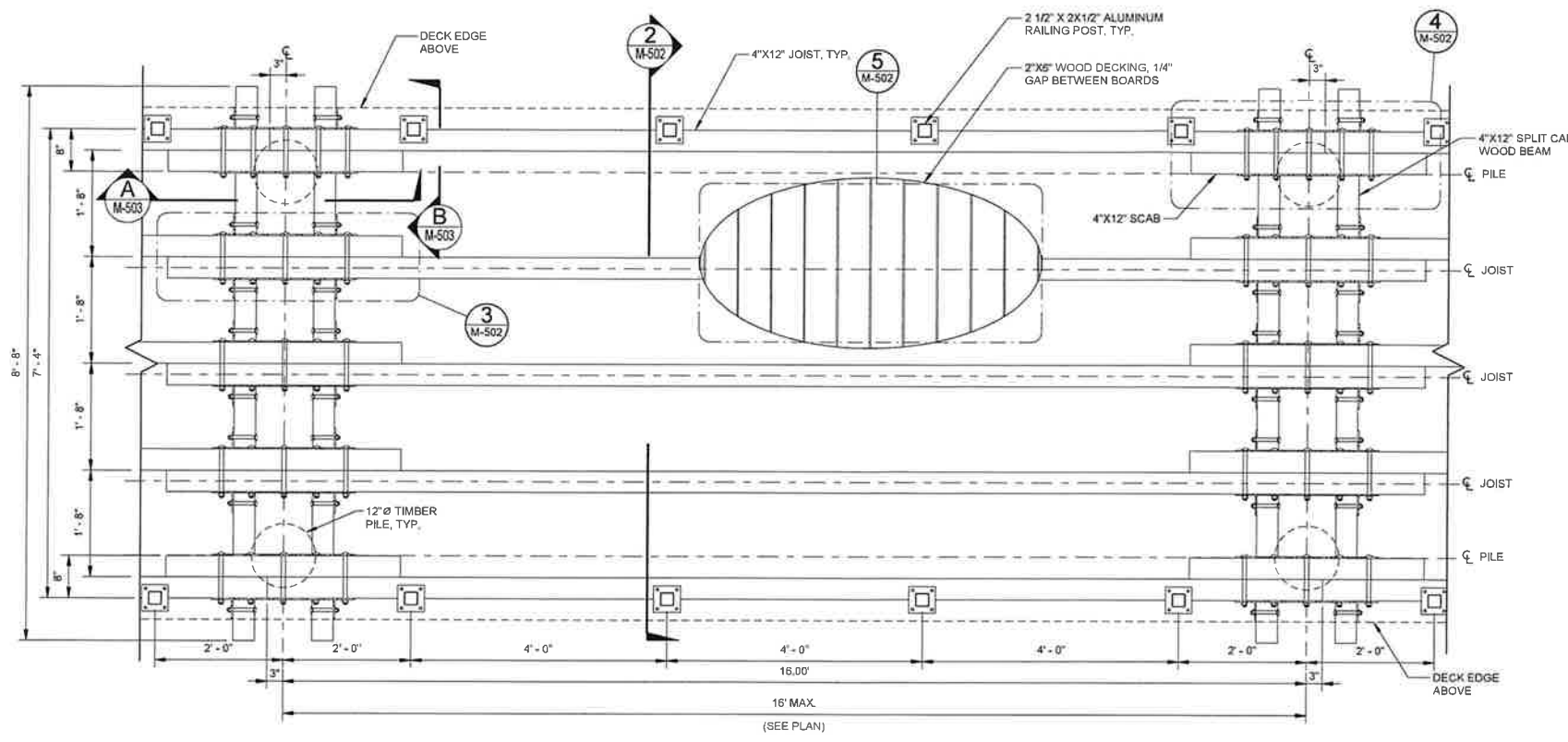
**M M**  
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www.mottmac.com

**GRAPHIC SCALE**  
0 1' 1'  
SCALE: 1" = 0'-8"  
0 1' 1' 3'  
SCALE: 1" = 1'-4"  
0 1' 2' 4'  
SCALE: 1" = 2'-0"

PROJECT ENGINEER  
NORTH CAROLINA  
P. OF ESSIONAL  
SEAL  
044825  
ENGINEER  
KRISTOPHER P. PAPAN

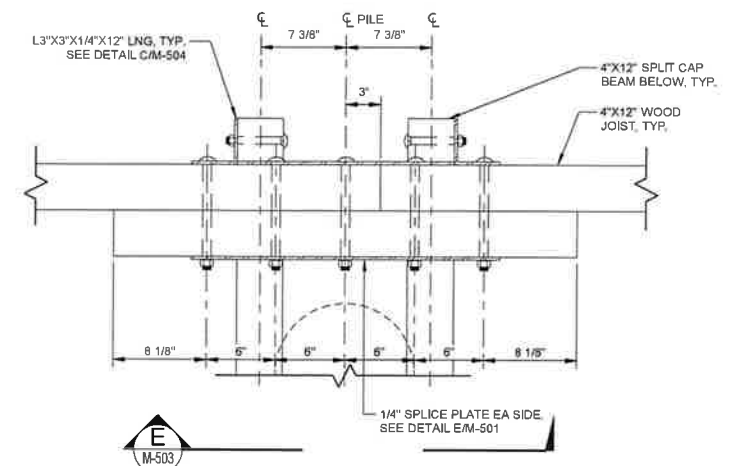
Designed By	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAPAN	Plan Date	1-14-26
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description
			Ch'kd
			App'd

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**  
**M-501 MISCELLANEOUS DETAILS (1 OF 5)**

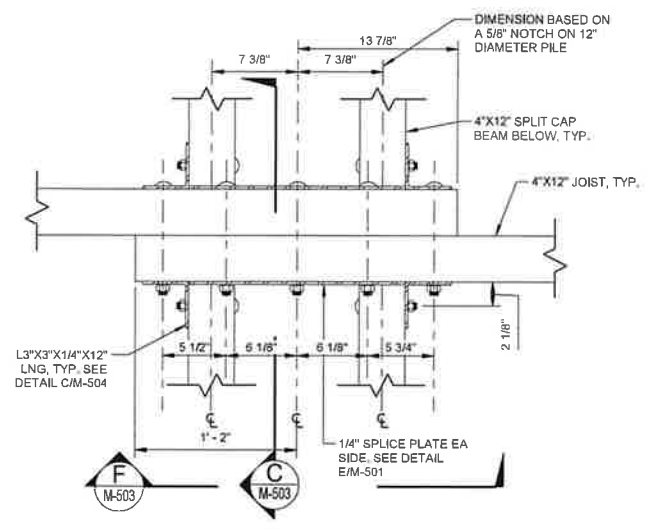


1 TYPICAL PIER PARTIAL FRAMING - PLAN  
1" = 1'-4"

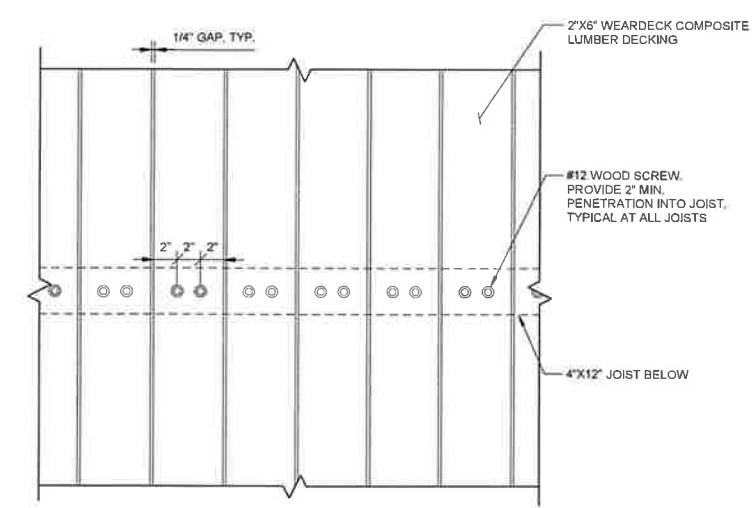
**NOTE:**  
1. CAP GIRDER SPACING DIMENSION BASED ON A 5/8" NOTCH ON 12" DIAMETER PILE



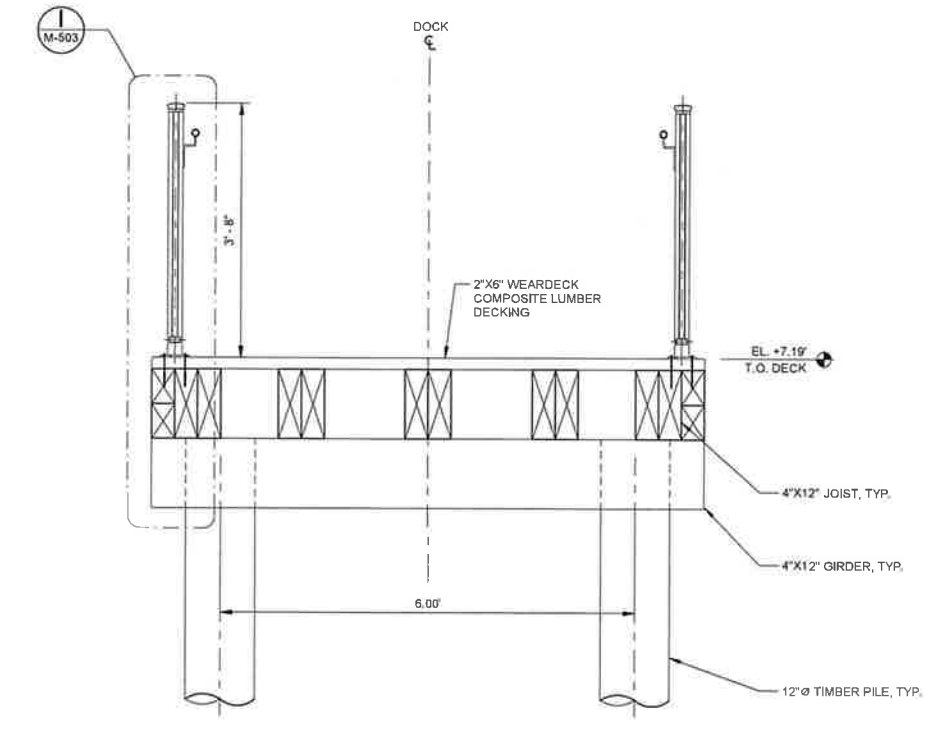
4 JOIST SCAB SPLICE - DETAIL  
1" = 0'-8"



3 JOIST LAP SPLICE - DETAIL  
1" = 0'-8"



5 TYPICAL WOOD DECK ANCHOR PATTERN - DETAIL  
1" = 0'-8"



2 TYPICAL PIER SECTION AT PILE BENT  
1" = 1'-4"

ANSI D 64x227

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F +1 (919) 552 2254  
www.mottmacamericas.com

**GRAPHIC SCALE**  
0 1' 1'  
SCALE: 1" = 0'-8"  
0 1' 1' 3'  
SCALE: 1" = 1'-4"

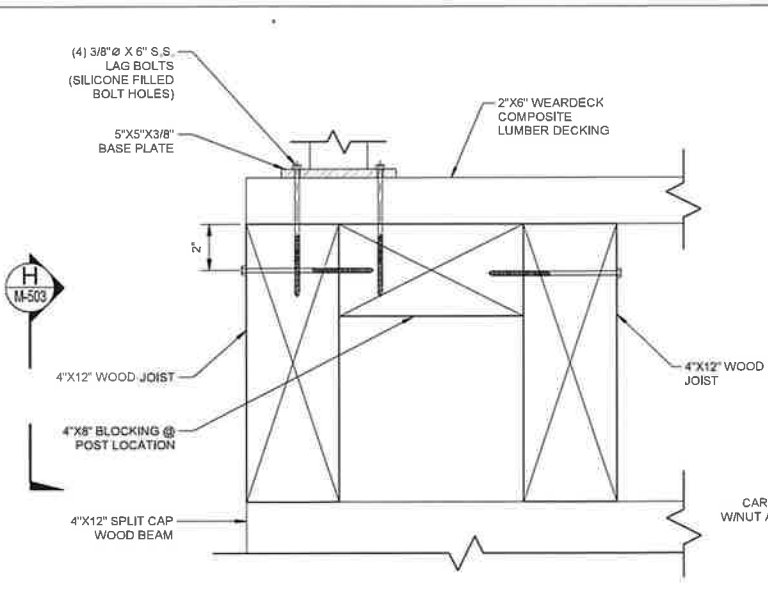
PROJECT ENGINEER  
NORTH CAROLINA PROFESSIONAL ENGINEER  
SEAL  
044825  
KRISTOPHER P. PAGAN-CRUZ

Designed By	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description

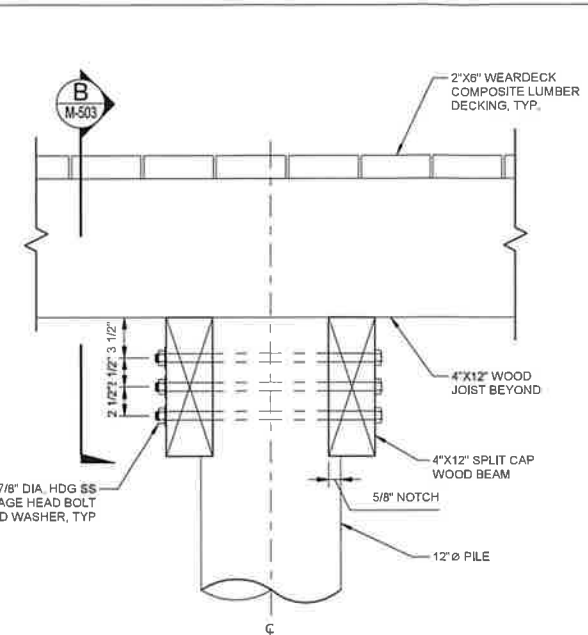
**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**M-502 MISCELLANEOUS DETAILS (2 OF 5)**

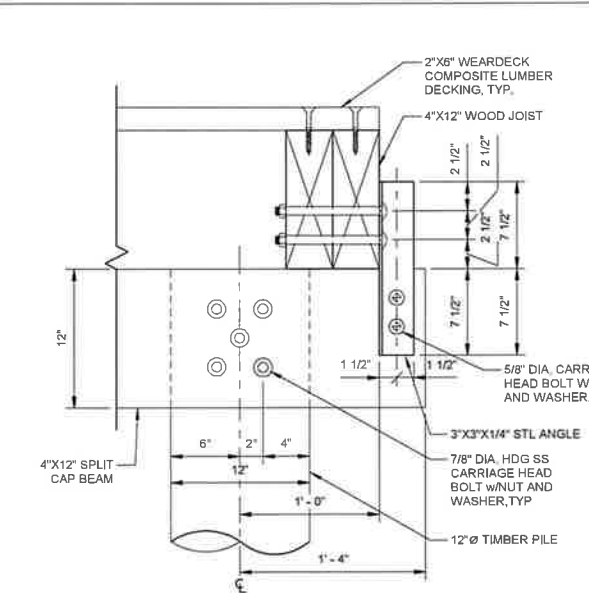
Digitally signed by Kristopher P Pagan-Cruz  
Date: 2026.02.17 11:10:10-05'00'



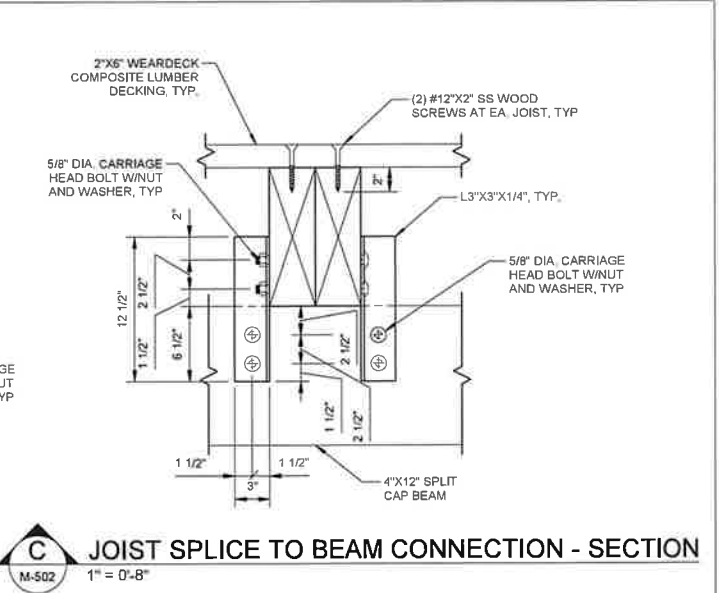
**1 TYPICAL - DETAIL**  
M-503 1" = 0'-4"



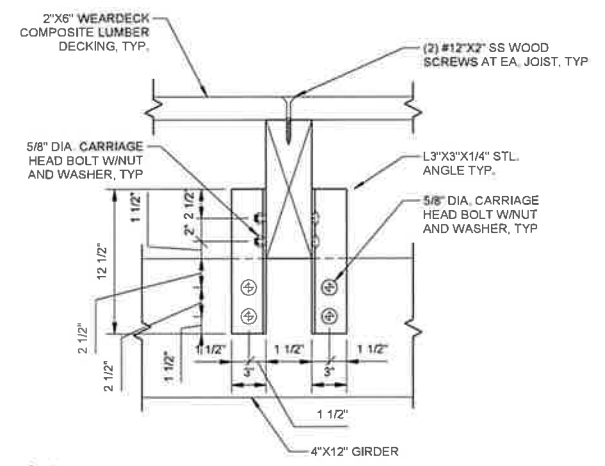
**A GIRDER CONNECTION - SECTION**  
M-502 1" = 0'-8"



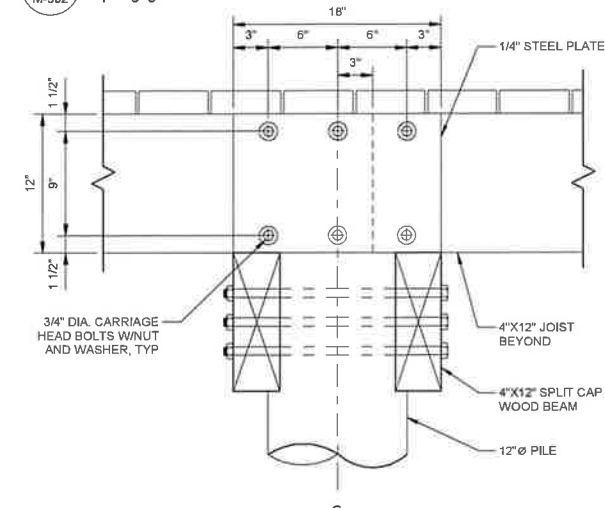
**B GIRDER CONNECTION SIDE - VIEW**  
M-502 1" = 0'-8"



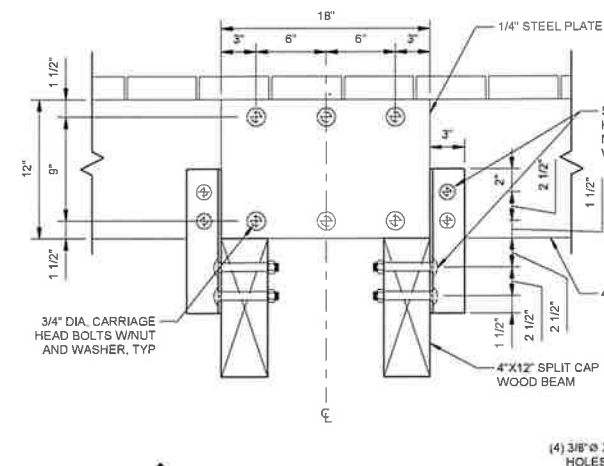
**C JOIST SPLICE TO BEAM CONNECTION - SECTION**  
M-502 1" = 0'-8"



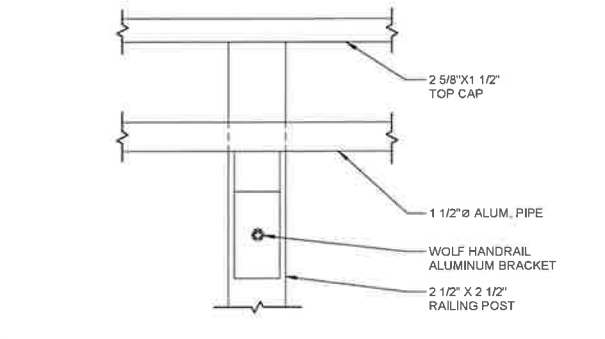
**D JOIST TO BEAM CONNECTION - SECTION**  
M-502 1" = 0'-8"



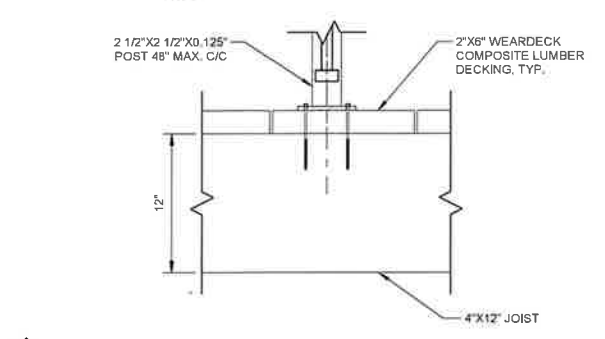
**E SCAB SPLICE - SECTION**  
M-502 1" = 0'-8"



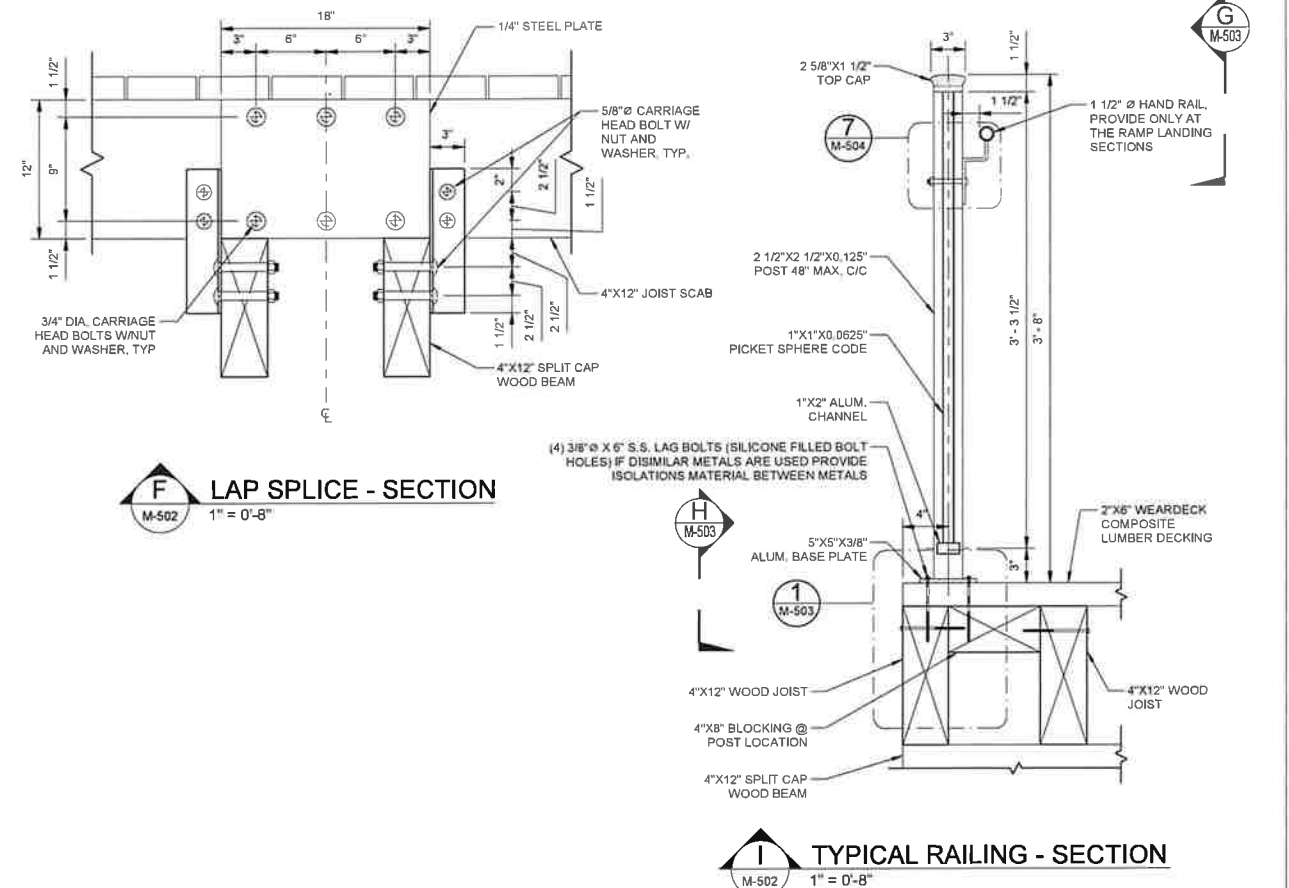
**F LAP SPLICE - SECTION**  
M-502 1" = 0'-8"



**G TYPICAL HANDRAIL CONNECTION - SECTION**  
M-503 1" = 0'-4"



**H GUARD RAILING POST CONNECTION - SECTION**  
M-503 1" = 0'-8"



**I TYPICAL RAILING - SECTION**  
M-502 1" = 0'-8"

ANSI D 04X227

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F +1 (919) 552 2254  
www.mottmac.com

**GRAPHIC SCALE**  
0 0' 0" 1'  
SCALE 1" = 0'-4"  
0 0' 1" 1'  
SCALE 1" = 0'-8"

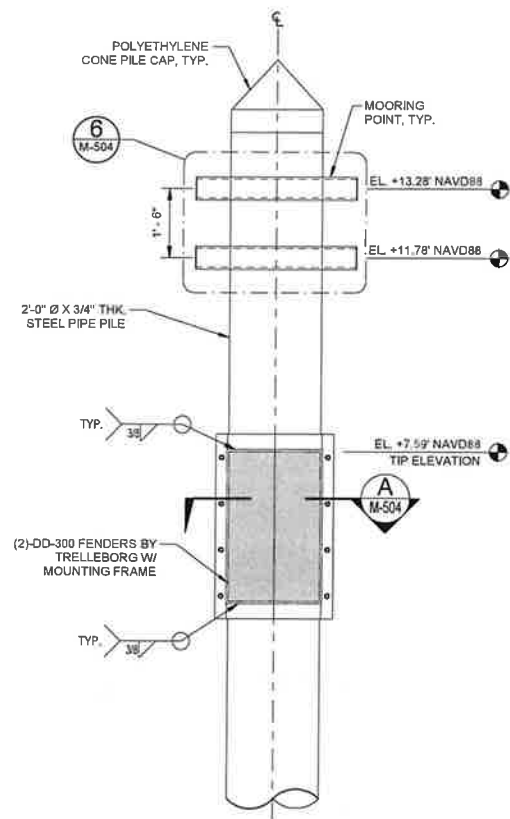
PROJECT ENGINEER  
NORTH CAROLINA PROFESSIONAL SEAL  
044825  
KRISTOPHER P. PAGAN

Designed By	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description

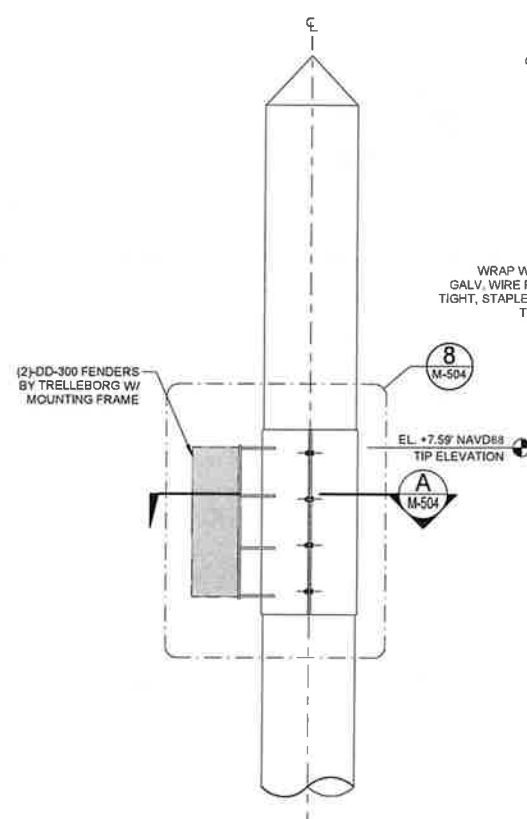
**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**M-503 MISCELLANEOUS DETAILS (3 OF 5)**

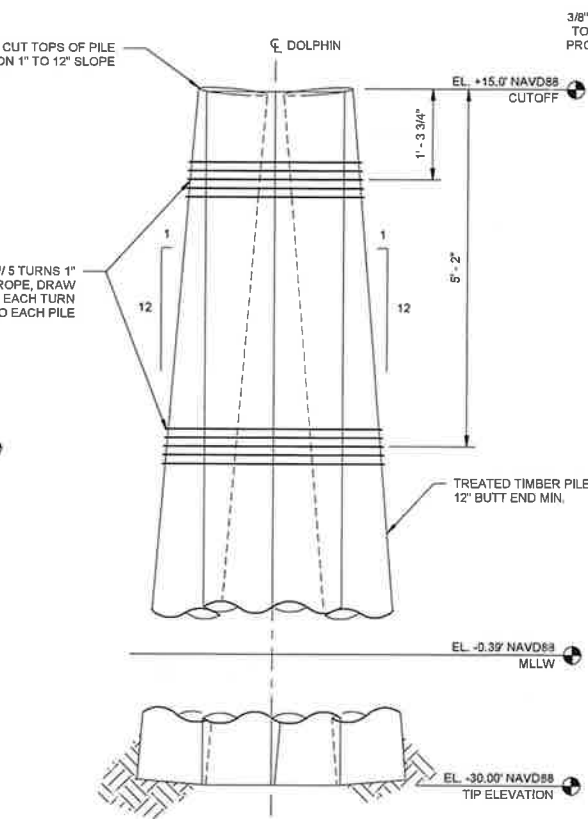
SHEET 13 OF 22



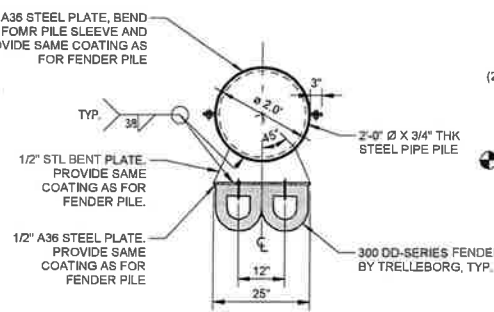
**1 FENDER PILE FRONT - VIEW**  
M-301 1" = 2'-0"



**2 FENDER PILE LATERAL - VIEW**  
1" = 2'-0"

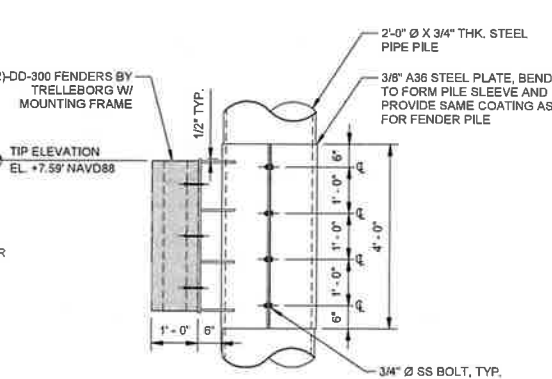


**3 4 PILES DOLPHIN - ELEVATION**  
1" = 1'-4"

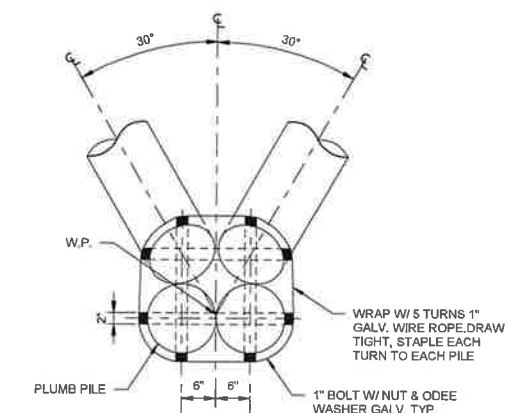


**NOTE:**  
FENDER FRAME SHALL BE COATED ON BOTH SIDES AND PRIOR TO INSTALLATION

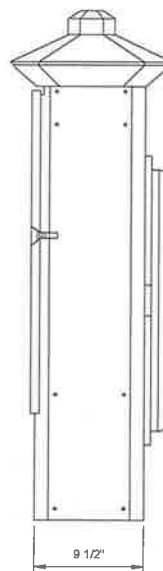
**A FENDER FRAME - SECTION**  
M-504 1" = 2'-0"



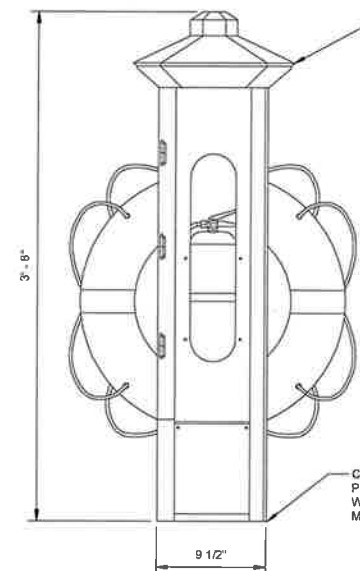
**8 FENDER FRAME - DETAIL**  
M-504 1/2" = 1'-0"



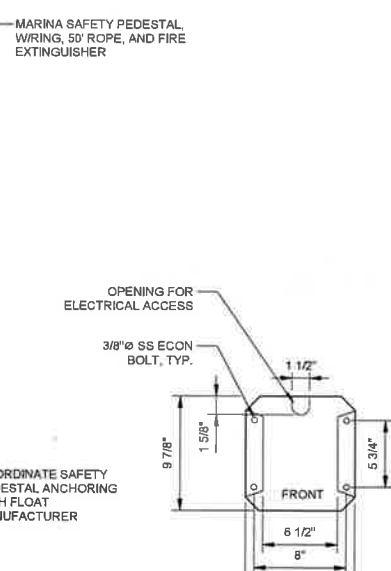
**4 4 PILES DOLPHIN - PLAN**  
1" = 1'-4"



**SIDE VIEW**

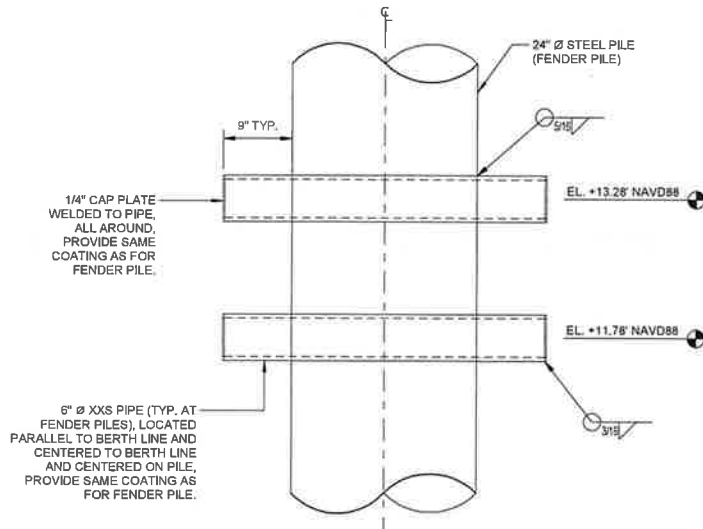


**FRONT VIEW**

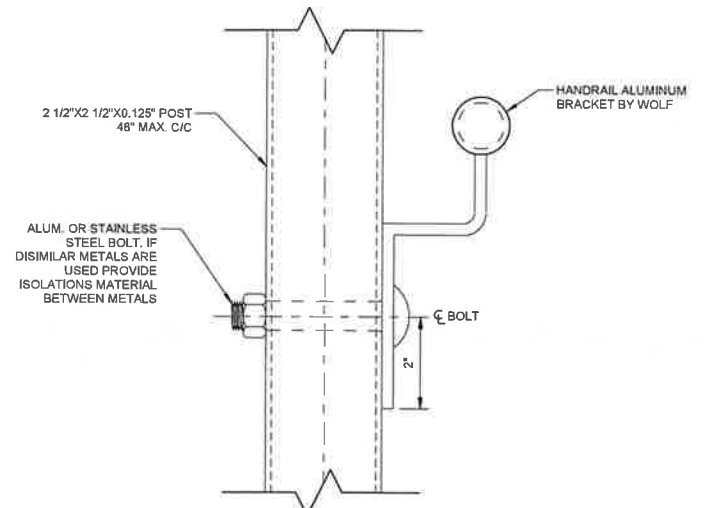


**BASE PLATE**

**5 SAFETY PEDESTAL - DETAIL**  
1" = 0'-8"



**6 FENDER PILE MOORING - DETAIL**  
M-504 1" = 1'-0"



**7 HAND RAIL - DETAIL**  
M-503 1" = 0'-2"

ANSI D 84°(227)

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F +1 (919) 552 2254  
www.mottmacamericas.com

**GRAPHIC SCALE**  
0 0' 1' 1'  
SCALE: 1" = 0'-8"  
0 1' 1' 2'  
SCALE: 1" = 1'-0"  
0 1' 1' 3'  
SCALE: 1" = 1'-4"

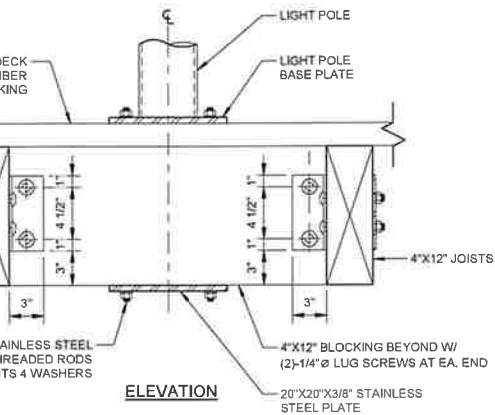
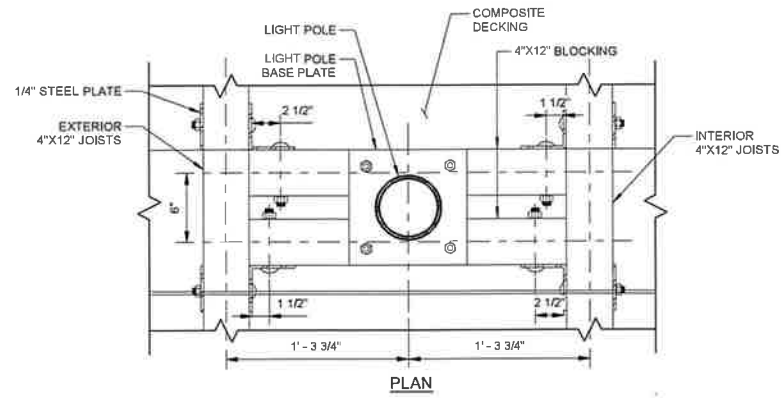
Digitally signed by Kristopher P Pagan-Cruz  
Date: 2026.02.17 11:10:38-0500  
PROJECT ENGINEER  
SEAL  
044825  
KRISTOPHER P. PAGAN-CRUZ  
PROFESSIONAL ENGINEER

Designed By	JAMER QUIROS	County	HYDE COUNTY
Entered By	VICTOR PADILLA	Division	FERRY DIVISION
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description
			Ch'kd / App'd

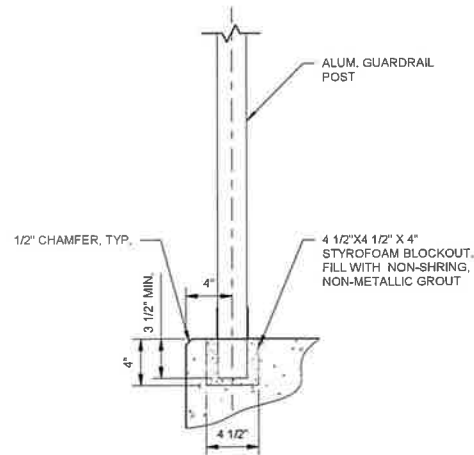
**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**M-504 MISCELLANEOUS DETAILS (4 OF 5)**

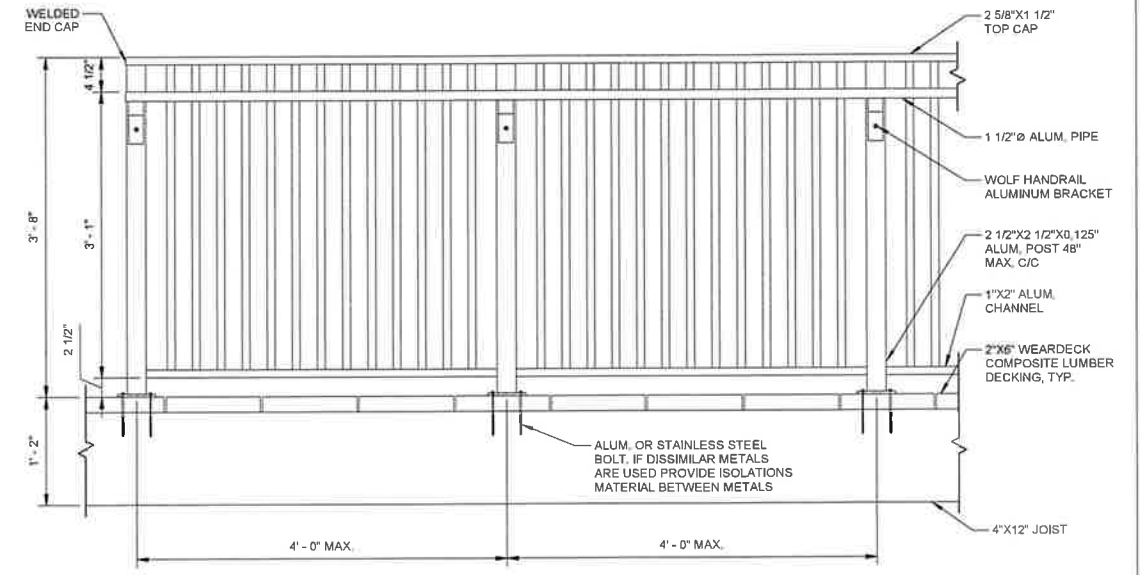
SHEET 14 OF 22



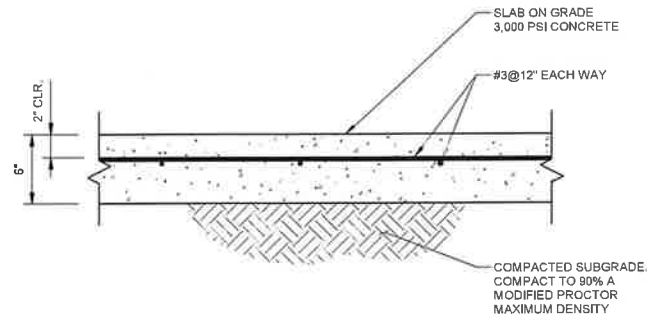
**1 LIGHT POLE DETAIL**  
1 1/2" = 1'-0"



**3 GUARDRAIL POST INSTALLATION IN CONCRETE**  
1 1/2" = 1'-0"



**2 PICKET RAIL ELEVATION**  
1" = 1'-0"

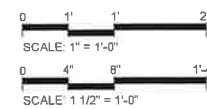


**4 SLAB ON GRADE TYPICAL DETAIL**  
1 1/2" = 1'-0"

ANSI D (8/17/27)

**M M**  
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F +1 (919) 552 2254  
www.mottmacamericas.com

**GRAPHIC SCALE**



Digitally signed by Kristopher P Pagan-Cruz  
Date: 2026.02.17 11:10:53-05'00'



Designed By	JAMER QUIROS	County	HYDE COUNTY		
Entered By	VICTOR PADILLA	Division	FERRY DIVISION		
Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26		
Project Manager	ALLISON THORBURN				
Rev.	Date	Drawn	Description	Ch'kd	App'd

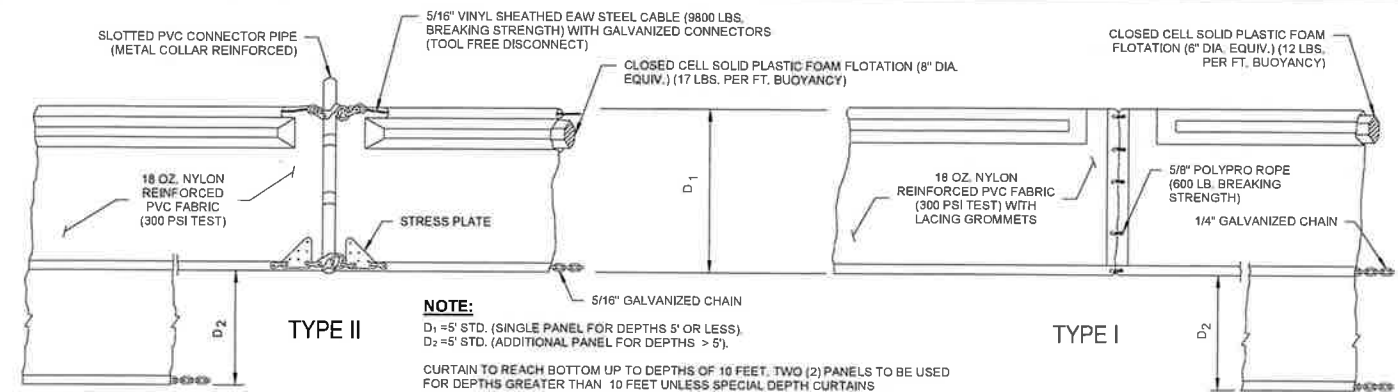
**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**M-505 MISCELLANEOUS DETAILS (5 OF 5)**

**GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL:**

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E. SLOPES GREATER THAN 3:1).
8. A CRUSHED LIMEROCK, VEHICLE WHEEL-CLEANING BLANKET SHALL BE INSTALLED AT THE CONTRACTOR'S STAGING YARD AND/OR STOCKPILE AREAS TO PREVENT OFF-SITE TRACKING OF SEDIMENT BY CONSTRUCTION VEHICLES ONTO PUBLIC ROADS. BLANKET SHALL BE 15FT. X 50FT. X 6IN. (MINIMUM), CRUSHED LIMEROCK 2 1/2 INCHES IN DIAMETER, SAID BLANKET SHALL BE UNDERLAIN WITH A FDOT CLASS 3 SYNTHETIC FILTER FABRIC AND MAINTAINED IN GOOD ORDER.
10. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
11. UNFILTERED DEWATERING IS NOT PERMITTED. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER.
12. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET.
13. ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY.
14. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
15. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE NUMBER 2 (ABOVE).
16. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORM WATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
17. ALL SEDIMENTATION STRUCTURES SHALL BE INSPECTED AND MAINTAINED REGULARLY.
18. ALL CATCH BASIN INLETS SHALL BE PROTECTED WITH HAY BALES AS SHOWN ON DETAIL.
20. ANY AREAS USED FOR THE CONTRACTOR'S STAGING, INCLUDING BUT NOT LIMITED TO, TEMPORARY STORAGE OF STOCKPILED MATERIALS (E.G. CRUSHED STONE, QUARRY PROCESS STONE, SELECT FILL, EXCAVATED MATERIALS, ETC.), SHALL BE ENTIRELY PROTECTED BY A SILT FENCE ALONG THE LOW ELEVATION SIDE TO CONTROL SEDIMENT RUNOFF.

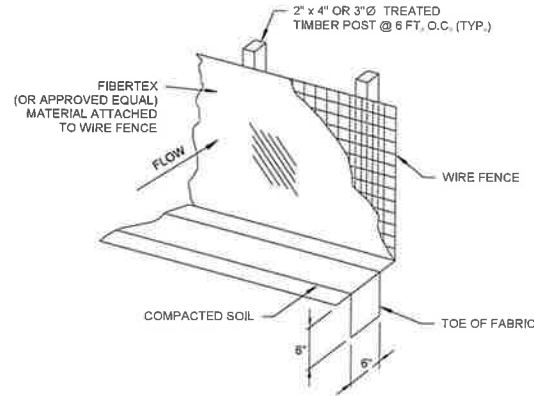
\* WHERE APPLICABLE



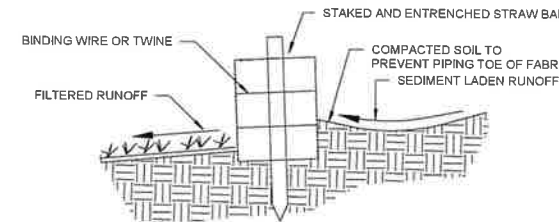
**NOTE:**  
 D1 = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS)  
 D2 = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5')  
 CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

**NOTICE:**  
 COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

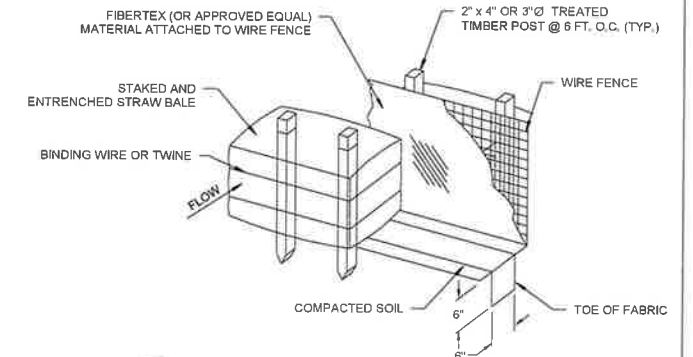
**1 FLOATING TURBIDITY BARRIERS**  
 N.T.S.



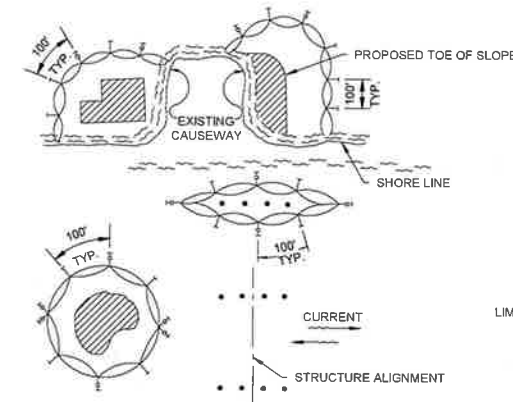
**2 SILT FENCE DETAIL**  
 N.T.S.



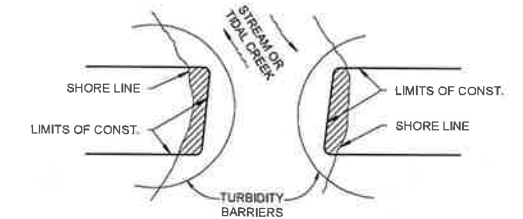
**3 DETAIL OF PROPERLY INSTALLED STRAW BALE**  
 N.T.S.



**4 SILT FENCE W/ HAYBALES DETAIL**  
 N.T.S.

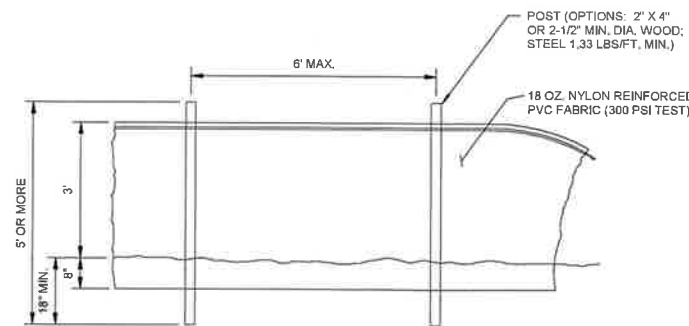


**LEGEND:**  
 \* PILE LOCATIONS  
 [Hatched Area] DREDGE OR FILL AREA  
 -o- MOORING BUOY W/ANCHOR  
 -| | ANCHOR  
 [Circle with Arrow] BARRIER MOVEMENT DUE TO CURRENT ACTION



1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
3. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
4. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
5. FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE STANDARD SPECIFICATIONS.

**NOTE:**  
 TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTOR'S OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIER AND/OR STAKED TURBIDITY BARRIER. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



**5 STAKED TURBIDITY BARRIER**  
 N.T.S.

Digitally signed by Kristopher P Pagan-Cruz  
 Date: 2026.02.17 11:11:17-05'00'

**6 TURBIDITY BARRIER APPLICATIONS**  
 N.T.S.

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GRAPHIC SCALE



PROJECT ENGINEER	Designed By	STEVEN WHITE	County	HYDE COUNTY
	Entered By	VICTOR PADILLA	Division	FERRY DIVISION
	Project Engineer	KRISTOPHER PAGAN	Plan Date	1-14-26
	Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description	Ch'kd   App'd

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**C-101 EROSION CONTROL DETAILS**

**GENERAL NOTES**

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, NATIONAL ELECTRIC SAFETY CODE, N.F.P.A., O.S.H.A. REGULATIONS AND ALL OTHER EXISTING CODES AND REGULATIONS OF AUTHORITIES WHICH HAVE JURISDICTION.
- THE CONTRACT DRAWINGS ARE DIAGRAMMATIC IN NATURE AND NOT EVERY DETAIL OR CONDUIT IS SHOWN. EXISTING CONDITIONS AND DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE COMMENCING ANY FABRICATION, ORDERING ANY MATERIAL, OR PERFORMING ANY WORK. ANY DEPARTURE FROM CONCEPT SHOWN ON THE CONTRACT DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND/OR REQUIRED FOR THE FULL INTEGRITY OF THE CONTRACT SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE CONTRACTOR, EXCEPT WHERE EQUIPMENT SHOWN IS IDENTIFIED AS "EXISTING" OR OTHERWISE NOTED ON THE DRAWINGS.
- UNLESS OTHERWISE NOTED, EQUIPMENT AND MATERIALS TO BE PROVIDED SHALL BEAR LISTING AND LABELING BY A NATIONALLY RECOGNIZED TESTING AGENCY WHERE SUCH STANDARD HAD BEEN ESTABLISHED FOR THAT TYPE OF EQUIPMENT/MATERIAL.
- THE CONTRACTOR SHALL SUBMIT DETAILED EQUIPMENT LAYOUT PLANS, SECTIONS, AND MOUNTING DETAILS SHOWING PROPOSED LOCATION OF ALL EQUIPMENT AND REQUIRED WORKING/SERVICE CLEARANCES PRIOR TO INSTALLATION.
- CONTRACTOR SHALL VISIT THE PROJECT SITE AND EXAMINE AND CONFIRM EXISTING CONDITIONS. ALL CHANGES SHALL BE PRESENTED DURING SHOP DRAWING SUBMITTALS FOR ENGINEER'S APPROVAL.
- CONDUITS SHALL CONTAIN AN INSULATED GROUND WIRE BONDED TO ENCLOSURES AND SIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC, IF SIZE IS NOT SHOWN ON THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE CONDUIT FITTINGS, CONNECTORS, CLAMPS, HARDWARE, HANGERS, AND SUPPORTS AS NECESSARY FOR A COMPLETE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE TAGS FOR EQUIPMENT, CONDUITS, AND CABLES THAT ARE INSTALLED UNDER THIS CONTRACT. TAG IDENTIFICATIONS SHALL BE IN ACCORDANCE WITH CONTRACT DRAWINGS. TAGS FOR CONDUITS SHALL BE AS DESCRIBED IN SPECIFICATIONS.
- UNUSED OPENINGS IN CONDUITS, BOXES, DISCONNECT SWITCHES, CABINETS, AND PANEL BOARDS SHALL BE CAPPED OR PLUGGED.
- UPDATE EXISTING PANELBOARD DIRECTORIES TO REFLECT THE CIRCUITING IN EXISTING PANELBOARDS AFFECTED BY THIS ALTERATION.
- CONTRACTOR SHALL PROVIDE THE NECESSARY MATERIALS, LABOR AND ATTENDANCE FOR THE OPERATION OF TEMPORARY LIGHT AND CONSTRUCTION POWER AS REQUIRED DURING WORKING HOURS FOR THE ENTIRE CONSTRUCTION PERIOD.
- CONTRACTOR SHALL MAINTAIN CONTINUITY OF ANY EXISTING CIRCUITS AFFECTED BY THIS ALTERATION. RECONNECT ALL ALTERED OR REROUTED WORK TO ITS FULLY FUNCTIONAL STATE PRIOR TO ALTERATION.
- PROVIDE ALL NECESSARY TEMPORARY WIRING TO MAINTAIN EXISTING INSTALLATIONS WHICH MUST REMAIN IN SERVICE DURING CONSTRUCTION PERIOD.
- ALL BRANCH CIRCUITS OVER 75 FEET IN LENGTH SHALL BE RUN WITH #10 CONDUCTOR, UNLESS OTHERWISE NOTED.
- SCHEDULE ALL DISCONNECTION AND INTERRUPTIONS OF ELECTRICAL SERVICE, COMMUNICATIONS AND SUPERVISORY SYSTEMS WITH THE OWNER AND ENGINEER.
- CONTRACTORS SHALL FOLLOW ALL OWNER SITE SAFETY WORK PROCESSES AND PROCEDURES, FOR EXAMPLE, WORK PERMITS, SAFETY TASK ANALYSES, LOCKOUT TAGOUT (LOTO), LOCK, TAG AND TRY, AND RED TAG, ETC.
- CONTRACTORS SHALL COORDINATE ALL WORK ACTIVITIES WITH OPERATIONS, MAINTENANCE, AND OTHER CONTRACTORS.
- UNLESS SPECIFICALLY NOTED, ALL ELECTRICAL EQUIPMENT (GENERATORS, AUTOMATIC TRANSFER SWITCHES, PANELBOARDS, MOTOR CONTROLLERS, WIRE, PANELBOARDS, SWITCHBOARDS, DISCONNECTS, LIGHTING, INSTRUMENTS, CONTROL PANELS, MOTOR, ETC.) THAT MAY BE SHOWN AS TO BE REMOVED ARE THE PROPERTY OF THE OWNER AND SHALL BE RETURNED TO THE OWNER.

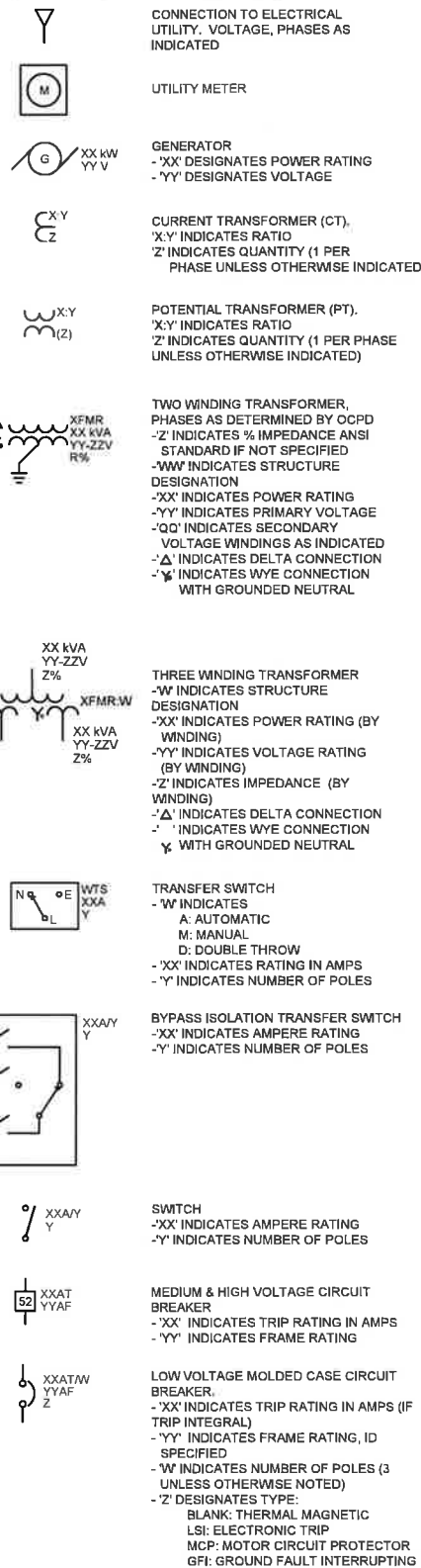
**ABBREVIATIONS**

A OR AMP	AMPERES
ACT	ABOVE COUNTER TOP (6")
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AM	AMMETER
APPROX	APPROXIMATELY
AS	AMMETER SELECTION SWITCH
ASYM	ASYMMETRICAL
AT	AMP TRIP
ATC	AUTOMATIC TRANSFER CONTROLLER
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BLDG	BUILDING
C	CONDUIT
C, CDT	CONDUIT
C, IC	CONDUCTOR
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CO	COMPANY
COL	COLUMN
CNTL	CONTROL
CSLD	CONTINUOUS STATISTICAL LEAK DETECTION
CT	CURRENT TRANSFORMER
Cu	CABLE
D	DEPTH
DIA	DIAMETER
DS OR DISC	DISCONNECT SWITCH
DWG(S)	DRAWING(S)
ELEC	ELECTRIC, ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ESTOP	EMERGENCY STOP
EX, EXIST.	EXISTING
EXP	EXPLOSION PROOF
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
EGC	EQUIPMENT GROUND CONDUCTOR
ETC	ET CETERA
EXIST	EXISTING
F	FUSE
FCR	FLOAT CONTROL RELAY
FL, FLR	FLOOR
FT	FEET
G OR GND	GROUND
GA	GAUGE
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	GENERATOR
GF	GROUND FAULT
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GFI	GROUND FAULT INTERRUPTING
H-O-A	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HVAC	HEATING, VENTILATION & AIR
IG	ISOLATED GROUND
ISBR	INTRINSICALLY SAFE BARRIER RELAY
IMC	INTERMEDIATE METAL CONDUIT
IN	INCH
IR	INFRARED
ISCA	INSTANTANEOUS SHORT CIRCUIT AVAILABLE
JB OR J	JUNCTION BOX
kVA	KILOVOLT - AMPS
kW	KILOWATTS
kWh	KILOWATT-HOUR
L	LENGTH
LA	LIGHTNING ARRESTOR
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LTG	LIGHTING
MAX	MAXIMUM
MCB OR MB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MH OR MTG	MOUNTING HEIGHT
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MFRS ASSOCIATION
NF	NON-FUSIBLE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
No.	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O.C.	ON CENTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OIF	OVERFILL
OHE	OVERHEAD ELECTRICAL
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
P	POLE
PERM	PERMANENT
PFC	POWER FACTOR CAPACITOR
PH, Ø	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PR	PAIR

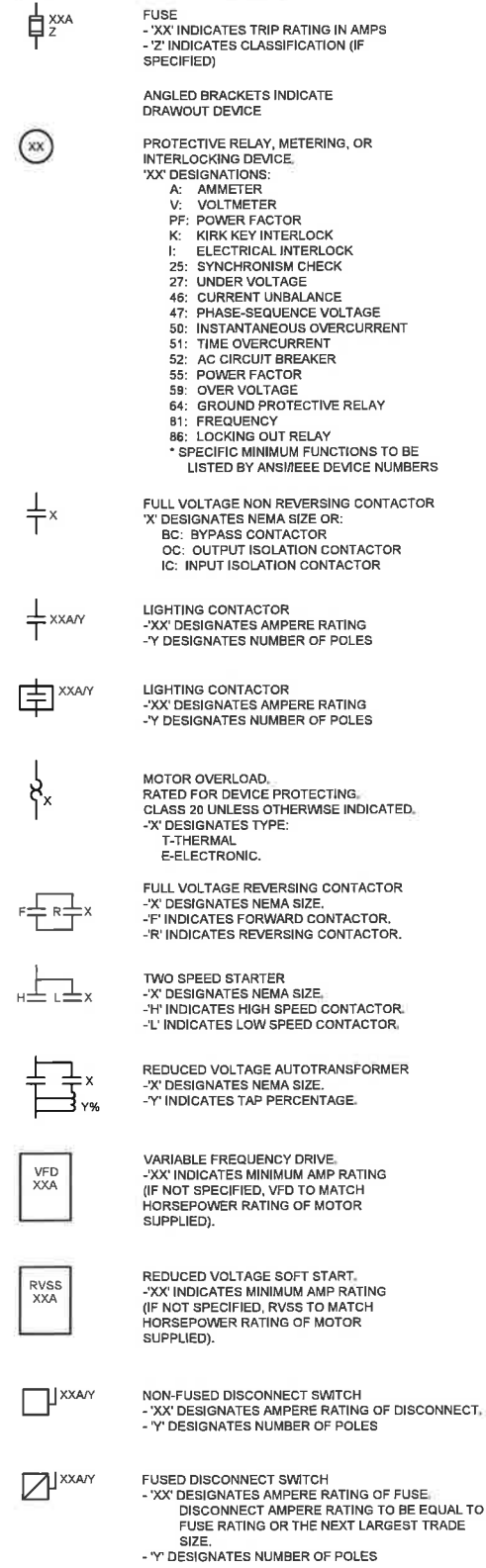
**ABBREVIATIONS**

PVC	POLYVINYLCHLORIDE CONDUIT
PWR	POWER
R&R	REMOVE AND RELOCATE
R	RELOCATE
RE	RELOCATED
RECEPT	RECEPTACLE
REF	REFERENCE
RGS	RIGID GALVANIZED STEEL
RMS	ROOT MEAN SQUARE
SE	SERVICE ENTRANCE
SF	SEAL FITTING
SH	SHIELDED
SS	STAINLESS STEEL
SPD	SURGE PROTECTION DEVICE
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TEL	TELEPHONE
TWIS	TWISTED INDIVIDUAL SHIELD
TWOS	TWISTED OUTER SHIELD
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITER'S LABORATORIES
UV	ULTRAVIOLET
V	VOLTS
VA	VOLT AMPS
VAC	VOLTS ALTERNATING CURRENT
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLTMETER
VMS	VOLTMETER SELECTOR SWITCH
W	WATT
W/	WITH
W/O	WITHOUT
WM	WATTMETER
WP	WEATHER PROOF
XFMR	TRANSFORMER

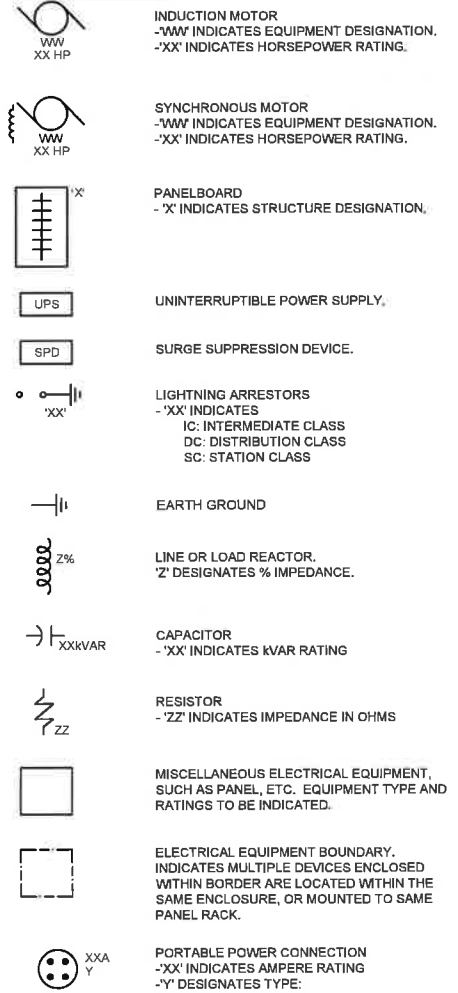
**ONE-LINE DIAGRAM**



**ONE-LINE DIAGRAM**



**ONE-LINE DIAGRAM**



ANSI D 642927

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**GRAPHIC SCALE**

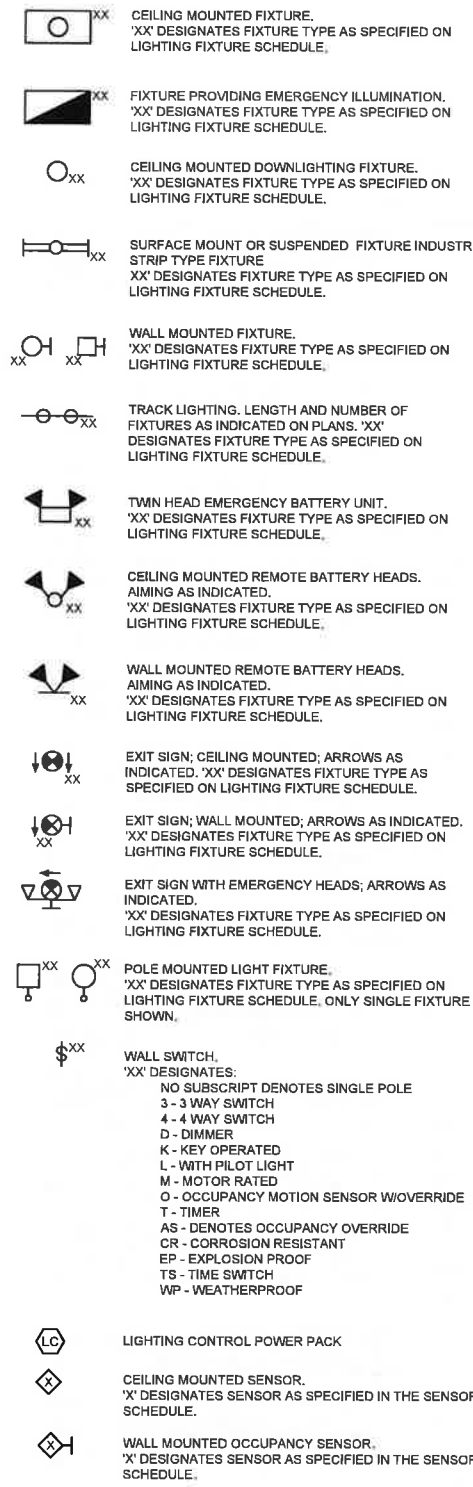
PROJECT ENGINEER  
ANDREW K. GIBBS, P.E.  
NC LICENSE: 041677

Designed By	RICHARD FERREIRA	County	HYDE COUNTY		
Entered By	RICHARD FERREIRA	Division	FERRY DIVISION		
Project Engineer	ANDREW GIBBS	Plan Date	1-14-2026		
Project Manager	ALLISON THORBURN				
Rev.	Date	Drawn	Description	Ch'kd	App'd

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

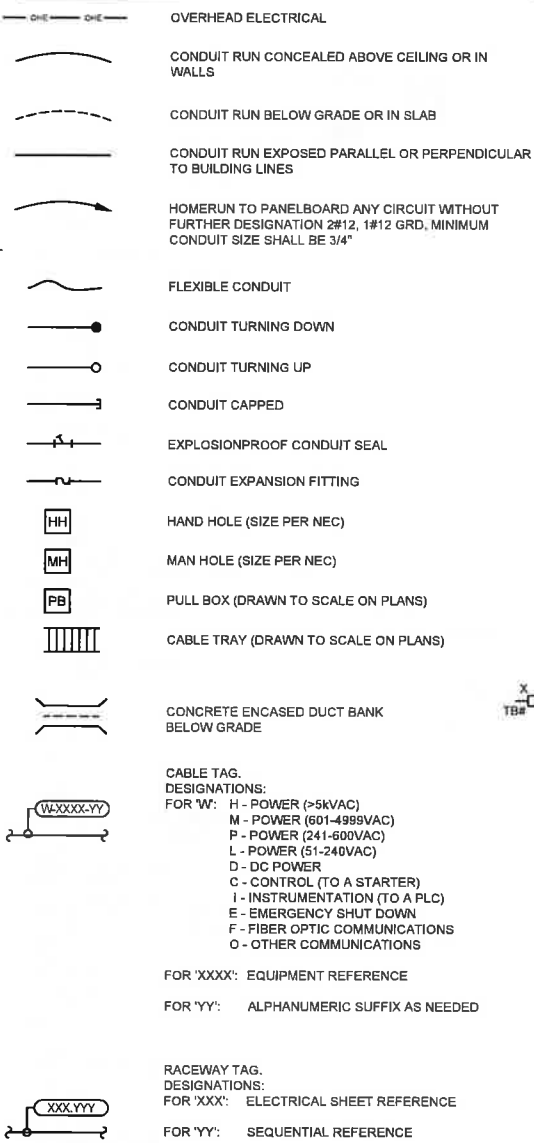
**E-001**  
**ELECTRICAL LEGEND AND NOTES 1**

**LIGHTING**

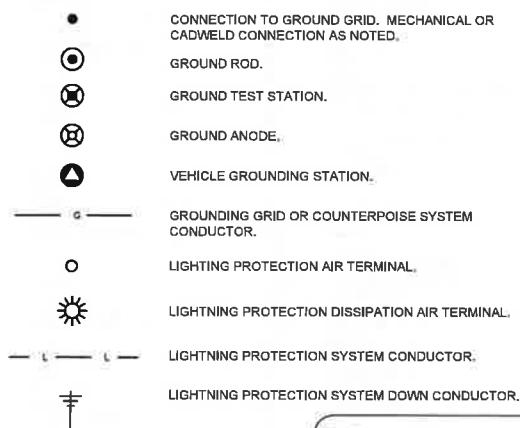


ALL DEVICES/PLATES TO BE IN OWNERS CHOICE OF COLORS.

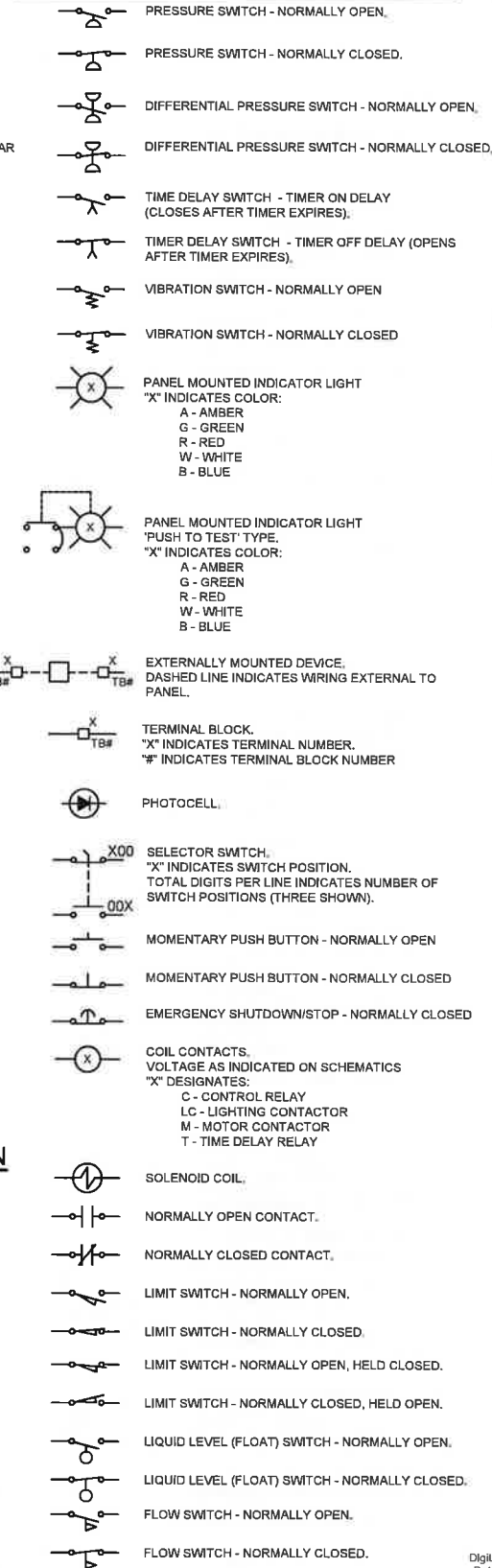
**RACEWAYS**



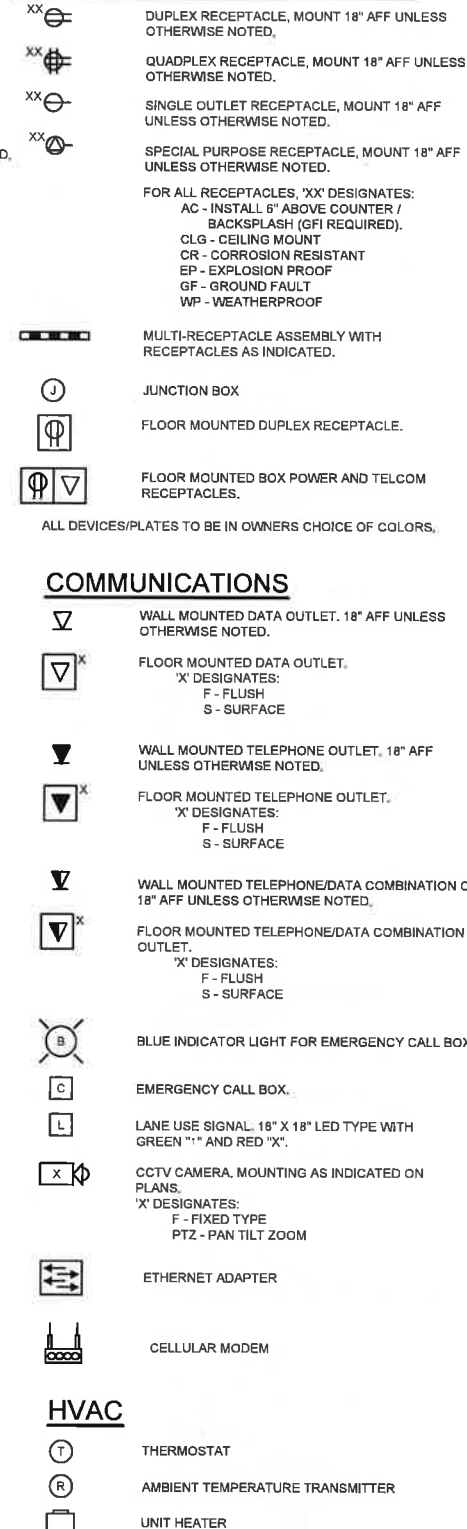
**GROUNDING & LIGHTNING PROTECTION**



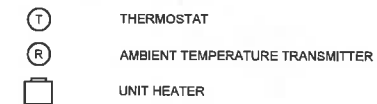
**ELEMENTARY WIRING SCHEMATICS**



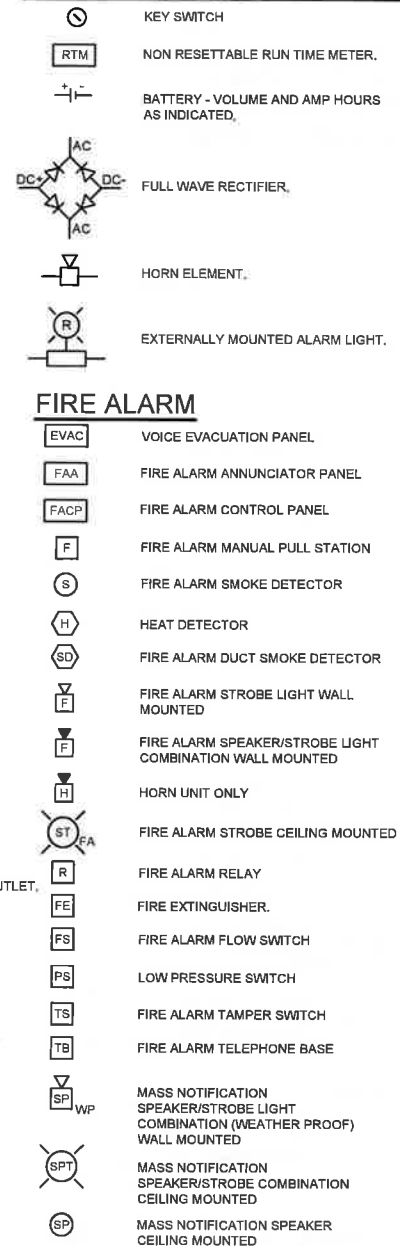
**OUTLETS AND RECEPTACLES**



**HVAC**



**ELEMENTARY WIRING SCHEMATICS**



Digitally signed by Andrew K Gibbs  
Date: 2026.02.17 07:33:54-06'00'

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**GRAPHIC SCALE**

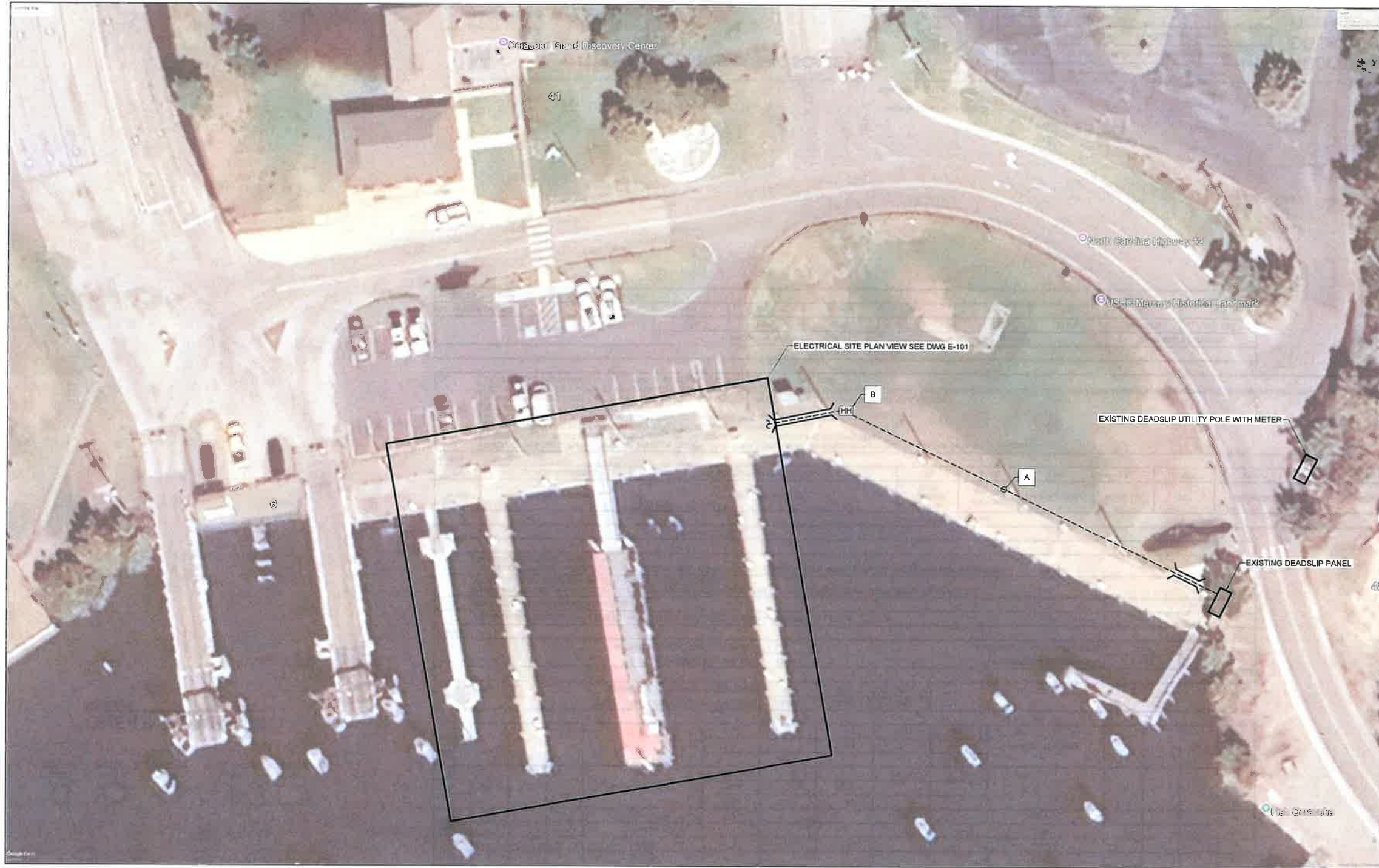
PROJECT ENGINEER  
ANDREW K. GIBBS, P.E.  
NC LICENSE: 041677

Designed By	RICHARD FERREIRA	County	HYDE COUNTY
Entered By	RICHARD FERREIRA	Division	FERRY DIVISION
Project Engineer	ANDREW GIBBS	Plan Date	1-14-2026
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description
			Ch'kd
			App'd

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOE ISLAND**

E-002  
ELECTRICAL LEGEND AND NOTES 2





**GENERAL NOTES**

1. A SINGLE CIRCUIT WITH THE HIGHEST RATED CABLE SHALL CARRY GROUND. GROUND SHALL BE ESTABLISHED AND PULLED FROM CLOSEST JUNCTION BOX TO EACH PIECE OF EQUIPMENT RECEIVING POWER.

**KEY NOTES**

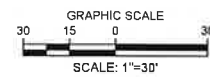
- A. ONE 1-1/2" CONDUIT, RECEPTACLES, LIGHTS, AND MOTOR CIRCUITS SHALL BE COMBINED.
- B. 12"X12"X12" (INSIDE DIMENSIONS) ELECTRIC, HEAVY DUTY, GASKETED, AND ANSI TIER 15 HAND HOLE.

**ELECTRICAL SITE PLAN**  
SCALE: 1"=30'-0"

Digitally signed by Andrew K Gibbs  
Date: 2025.02.17 07:33:56-05'00'

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**GRAPHIC SCALE**



**PROJECT ENGINEER**

ANDREW K. GIBBS, P.E.  
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Designed By	RICHARD FERREIRA	County	HYDE COUNTY
Entered By	RICHARD FERREIRA	Division	FERRY DIVISION
Project Engineer	ANDREW GIBBS	Plan Date	1-14-2025
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description

**NCDOT PASSENGER FERRY  
DOCK REPLACEMENT -  
OCRACOKE ISLAND**

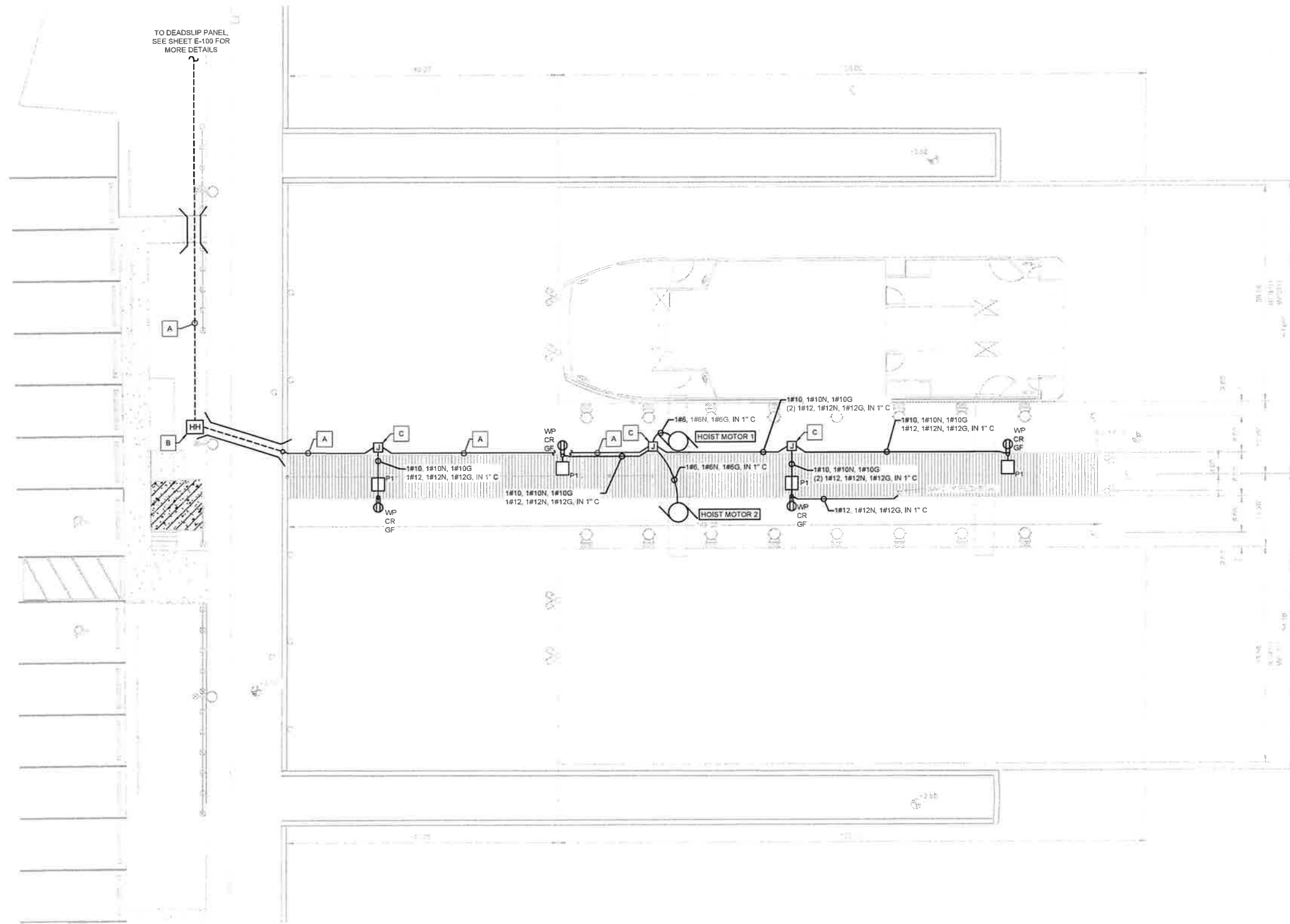
**E-100  
ELECTRICAL SITE PLAN**

**GENERAL NOTES**

1. A SINGLE CIRCUIT WITH THE HIGHEST RATED CABLE SHALL CARRY GROUND. GROUND SHALL BE ESTABLISHED AND PULLED FROM CLOSEST JUNCTION BOX TO EACH PIECE OF EQUIPMENT RECEIVING POWER.

**KEY NOTES**

- A. ONE 1-1/2" CONDUIT, RECEPTACLES, SAFETY PEDESTAL, LIGHTS, AND MOTOR CIRCUITS SHALL BE COMBINED.
- B. 12"X12"X12" (INSIDE DIMENSIONS) ELECTRIC, HEAVY DUTY, GASKETED, AND ANSI TIER 15 HAND HOLE.
- C. 12"X12"X6" JUNCTION BOX, NEMA 4X, SS.



TO DEADSLIP PANEL,  
SEE SHEET E-100 FOR  
MORE DETAILS



**ENLARGED ELECTRICAL SITE PLAN**

SCALE: 1"=10'-0"

Digitally signed by Andrew K Gibbs  
Date: 2026.02.17 07:33:58-06'00'

SHEET 21 OF 22

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**GRAPHIC SCALE**

GRAPHIC SCALE  
10 5 0 10  
SCALE: 1"=10'

PROJECT ENGINEER

ANDREW K. GIBBS, P.E.  
NC LICENSE: 041677

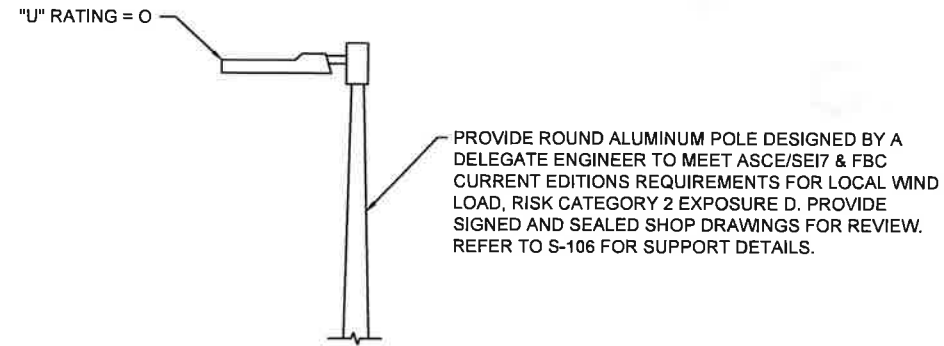
Designed By	RICHARD FERREIRA	County	HYDE COUNTY
Entered By	RICHARD FERREIRA	Division	FERRY DIVISION
Project Engineer	ANDREW GIBBS	Plan Date	1-14-2026
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description

**NCDOT PASSENGER FERRY  
DOCK REPLACEMENT -  
OCRACOKE ISLAND**

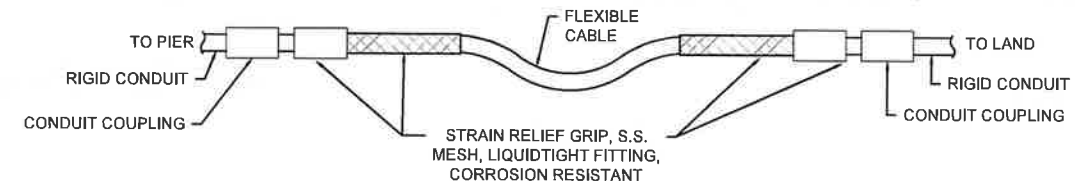
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**E-101  
ENLARGED ELECTRICAL SITE PLAN**

ANSI D (9/19/27)

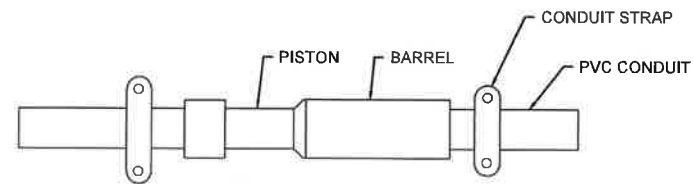


**TYPICAL FIXTURE ELEVATION**  
NO SCALE



**NOTE:**  
FLEXIBLE CABLE TO ALLOW FOR LOCAL TIDAL VARIATIONS (APPROX. 8'). COORDINATE WITH FLOATING PIER REQUIREMENTS.

**CABLE SUPPORT DETAIL**  
NO SCALE



**NOTES:**

1. THE EXPANSION FITTING SHOULD BE MOUNTED SO THAT THE PISTON CAN TRAVEL IN A STRAIGHT LINE WITHIN THE BARREL. IF ALIGNMENT IS NOT STRAIGHT, THE PISTON WILL BIND AND PREVENT THE FITTING FROM WORKING PROPERLY.
2. THE EXPANSION FITTING BARREL MUST BE CLAMPED SECURELY WHEREAS THE CONDUIT IS MOUNTED LOOSELY SO THAT IT CAN SLIDE FREELY DURING EXPANSION AND CONTRACTION.
3. NONMETALLIC CONDUIT STRAPS SUITABLE FOR THIS PURPOSE, MUST BE USED TO ALLOW THE CONDUIT TO MOVE FREELY DURING EXPANSION AND CONTRACTION WHILE PROPERLY SECURING IT.

**EXPANSION FITTING DETAIL**  
NO SCALE

ANSI D 1474221

Digitally signed by Andrew K Gibbs  
Date: 2026.02.17 07:33:59-06'00'

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**GRAPHIC SCALE**

**PROJECT ENGINEER**

ANDREW K. GIBBS, P.E.  
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Designed By	RICHARD FERREIRA	County	HYDE COUNTY
Entered By	RICHARD FERREIRA	Division	FERRY DIVISION
Project Engineer	ANDREW GIBBS	Plan Date	1-14-2026
Project Manager	ALLISON THORBURN		
Rev.	Date	Drawn	Description

**NCDOT PASSENGER FERRY DOCK REPLACEMENT - OCRACOKE ISLAND**

**E-900 ELECTRICAL LIGHTING DETAILS**