DESIGN CRITERIA

SERVICE CONDITIONS DENOTES THE MAXIMUM ALLOWABLE ENVIRONMENTAL AND BERTHING CONDITIONS WITHIN WHICH THE STRUCTURE IS DESIGNED TO OPERATE. FACTOR OR SAFETY IS IN ACCORDANCE WITH CODE.

EXTREME CONDITION DENOTES THE MAXIMUM ALLOWABLE ENVIRONMENTAL AND IMPACT CONDITIONS WITHIN WHICH THE STRUCTURE IS DESIGNED TO MAINTAIN ITS STRUCTURAL INTEGRITY.

1. DESIGN LOADS –
   A. LIVE LOAD:
      LIVE LOAD ON PEDESTRIAN PLATFORMS, DECKING AND MARINE STRUCTURES = 100psf
      SNOW LOAD = 30psf (NON–CONCURRENT)
   B. WIND LOAD:
      WIND SPEED = 110mph

GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH ALL FEDERAL, STATE, COUNTY OR LOCAL CODES HAVING JURISDICTION OVER SUCH WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.
2. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, AND SAFETY OF WORK.
3. DIMENSIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM LIMITED FIELD SURVEY AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS, ACCORDINGLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURES IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED CONSTRUCTION PLANS; THAT IS THE CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS, DIMENSIONS, CLEARANCES, ELEVATIONS, AND OTHER INFORMATION INDICATED IN THE DOCUMENTS PRIOR TO ORDERING ANY MATERIALS, COMMENCING AND ANY FABRICATIONS, OR PERFORMING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF ANY FIELD CONDITIONS WHICH MAY DIFFER FROM THE REPRESENTED PRIOR TO COMMENCING WORK.
4. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL VISIT THE SITE AND SHALL IDENTIFY ANY UTILITIES, STRUCTURES, OR ANY OTHER ELEMENTS WHICH MAY IMPEDE WORK. UTILITY AND/OR STRUCTURE RELOCATIONS, IF NECESSARY, SHALL BE COORDINATED THROUGH THE OWNERS REPRESENTATIVE AT NO ADDITION COST.
5. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL VISIT THE SITE AND SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND ANY OTHER OCCUPYING TENANT WHO WILL BE AFFECTED BY REPAIR OPERATIONS.
6. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL WORK THROUGH THE OWNER'S REPRESENTATIVE AND ANY OTHER OCCUPYING TENANT WHO WILL BE AFFECTED BY REPAIR OPERATIONS.
7. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND SAFETY PROCEDURES TO ENSURE PERSONNEL HEALTH AND SAFETY. THE CONTRACTOR MUST MAINTAIN A SAFE AND CLEAN WORKING ENVIRONMENT AND SHALL ASSURE PROPER FUNCTIONING PERSONNEL EQUIPMENT AT ALL TIMES. IN AREAS WHERE PEDESTRIAN AND/OR VEHICULAR TRAFFIC MAY BE AFFECTED BY THE WORK, THE CONTRACTOR SHALL CORDON OFF THE WORK AREA.
8. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO PREVENT DAMAGE TO EXISTING STRUCTURES BY OR AS A RESULT OF HIS OPERATIONS. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST. THE CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING OUTFALLS WITHIN THE PROJECT WORK LIMITS.
9. ALL DEBRIS AS A RESULT OF, OR IN THE IMMEDIATE VICINITY OF THE WORK SHALL BE RECOVERED AND PROPERLY DISPOSED OF BY THE CONTRACTORS AT NO ADDITIONAL COST.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY CONSTRUCTION DEBRIS OR WASTE FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE RECOVERED AND PROPERLY DISPOSED OF.
11. CONTRACTOR'S STORAGE AREA: DUE TO THE SITE'S WATERFRONT LOCATIONS, ALL NECESSARY MEASURES SHALL BE TAKEN TO PREVENT BY ANY METHOD, OIL, CONSTRUCTION DEBRIS, STOCKPILED MATERIALS, AND OTHER MATERIALS ON THE SITE, FROM ENTERING THE WATERWAY. STAGING/LAY DOWN AREAS, AS APPROVED BY THE OWNER;S REPRESENTATIVE, SHALL BE RESTORED BY THE CONTRACTOR TO THE EXISTING CONDITION. IN ADDITION, THE CONTRACTOR SHALL REPLACE ALL DAMAGED MATERIALS AS A RESULT OF HIS OPERATIONS, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
12. CONTRACTOR SHALL IMPLEMENT THOSE DIMENSIONS IDENTIFIED AS "MINIMUM" OR "MAXIMUM" AS INDICATED.
13. ALL REFERENCES IN THESE NOTES TO "ENGINEER" INDICATES THE ENGINEER OR RECORD HOUSE ENGINEERING, PC. ALL REFERENCES TO "OWNER" INDICATES THE COUNTY OF CURRITUCK. ALL REFERENCE TO TO "OWNER'S REPRESENTATIVE" INDICATE ANY DESIGNATED ENTITY AUTHORIZED TO ACT ON THE OWNER'S BEHALF.
14. SITE ACCESS AND STAGING ON LAND IS LIMITED. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ANY AND ALL CONTRACTORS TO AVOID CONFLICTS. CONFLICTS WILL BE RESOLVED WITH THE OWNER'S REPRESENTATIVE.
15. SHEET PILE EMBEDMENT DEPTH IN EXCESS OF 16' SHALL BE DETERMINED BY EVALUATION BY ENGINEER OF RECORD.

DEMOLITION

1. TIMBER PILES COMPRISING EXISTING "DOLPHINS" ADJACENT TO EXISTING PAVILION TO BE REMOVED AND DISPOSED FULL LENGTH OF PILES. EXISTING PAVILION TO BE DISMANTLED AND REMOVED. ALSO REMOVE DECK, DECK PILES AND EXISTING BULKHEAD. ALL COSTS AND LOCATION OF SITE FOR DISPOSAL SHALL BE PROVIDED BY THE CONTRACTOR.
2. CONTRACTOR SHALL REMOVE, STOCK PILE AND REPLACE RIPRAP AS NECESSARY TO INSTALL TIMBER PILES. SPECIAL CARE SHALL BE EXCISED TO PREVENT DAMAGE TO THE BEDDING AND FILER LAYERS.
3. CONTAINMENT CURTAIN TO BE PROVIDED BY CONTRACTOR TO CONTAIN SEDIMENTATION OF WATERWAY IN ACCORDANCE WITH INDUSTRY STANDARDS.

EXCAVATION AND BACKFILL

1. THE CONTRACTOR SHALL SUBMIT TO THE OWNER'S REPRESENTATIVE, A REMOVAL SCHEDULE, AND A TEMPORARY SHORING PLAN AS MAY BE REQUIRED FOR DEMOLITION AND REMOVALS. THE TEMPORARY SHORING PLAN SHALL BE DESIGNED AND PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. THE CONTRACTOR SHALL NOT COMMENCE WORK WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE OF THE DEMOLITION AND REMOVAL SCHEDULE AND THE TEMPORARY SHORING PLAN. THE CONTRACTOR MUST PROVIDE THE ENGINEER AS PART OF THESE SERVICES.
2. WHENEVER ITEMS IN THE CONTRACT REQUIRE MATERIALS TO BE REMOVED AND DISPOSED, THE COST OF SUPPLYING A DISPOSAL AREA AND TRANSPORTATION TO THAT AREA SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THOSE ITEMS.
3. EXCAVATION SHALL INCLUDE REMOVAL OF PAVEMENTS, FOUNDATIONS, AND ALL OTHER MATERIALS INCLUDING ROCK, IF ENCOUNTERED.
4. ELEVATIONS SHALL BE TO ELEVATIONS REQUIRED FOR INSTALLATION OF PERMANENT CONSTRUCTION WITHOUT DISTURBANCE TO SUBGRADE BELOW SUCH ELEVATIONS.
5. BACKFILLING SHALL INCLUDE FILLING OF EXCAVATIONS MADE FOR CONSTRUCTION PURPOSED, EXTENDING TO EXISTING OR DESIGN GRADE.
6. BACKFILL SHALL BE PLACED IN EIGHT INCHES MAXIMUM LOOSE LIFTS AND COMPACTED TO PROVIDE 95% OF MAXIMUM DRY DENSITY PER ASTM–D–1556.

TIMBER

1. ALL TIMBER SHALL BE SOUTHERN PINE. ALL TIMBER SHALL BE No. 2 OR BETTER.
2. ALL TIMBER DECKING SHALL BE ACQ TYPE B TREATED AT A RETENTION RATE OF 0.6 lb/ft^3 PER AWPA–P5.
3. ALL TIMBER BLOCKING JOISTS, PILE CAPS AND PILES SHALL BE ACQ TYPE B TREATED AT A RETENTION RATE OF 2.5 lb./cu.ft PER AWPA–P5.
4. ALL FABRICATED TIMBER SHALL BE TREATED AFTER FABRICATION, PRIOR TO INSTALLATION. ANY CUSTS MADE AFTER INSTALLATION SHALL BE RE–TREATED IN ACCORDANCE WITH AWPA STANDARDS 2005, 63.1.

FASTENERS

1. LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1–1981.
2. LEAD HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS:
   A. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF THE UNTHREADED SHANK.
   B. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 70% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
3. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER.
4. ALL DECK SCREWS SHALL BE #10x4 STAINLESS STEEL.
5. ALL MARINE TIMBER BOLTS TO BE 5/8" HDG.
6. ALL TIEBACKS TO BE 1"dia. HDG. ROD w/ OGEE DOCK WASHER.

TIMBER PILES

1. ALL TIMBER PILES SHALL BE 10" dia. (BUTT) SOUTHERN YELLOW PINE SUITABLE FOR A DESIGN STRESS OF 1,200psi. IAW ASTM D2899–70 T.
2. TIMBER PILES SHALL CONFORM TO REQUIREMENTS OF ASTM–D25–1999 (2005) AND SHALL BE DRIVEN TO A MINIMUM EMBEDMENT OF 30 FEET AND ACHIEVE A MINIMUM CAPACITY OF 10 TONS.
3. TIMBER PILES SHALL BE CCA TREATED AT A RETENTION RATE OF 2.5 lb/cu.ft. PER AWPA–P5.
4. MAXIMUM ALLOWABLE HORIZONTAL DEVIATION FOR PILES IS 3 INCHES MAXIMUM ALLOWABLE VERTICAL DEVIATION FOR PILES IS 1 INCH IN 10 FEET.

GALVANIZING

1. UNCOATED CARBON–STEEL HARDWARE, FASTENERS, AND MISCELLANEOUS STEEL SHALL BE HOT–DIP GALVANIZED PER ASTM A153/ A153M.
2. DAMAGED OR MISSING COATINGS SHALL BE REPAIED PER ASTM–01.
3. MINIMUM HOT–DIP GALVANIZING THICKNESS SHALL BE GRADE 100, 2 $oz./ft.^2$

COMMERCIAL/MANUFACTURER COMPONENTS

1. THESE COMPONENTS WHERE SPECIFIED SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, UNLESS OTHERWISE NOTED.
2. CONTRACTOR MUST SUBMIT SHOP DRAWINGS, MANUFACTURER'S SPECIFICATIONS AND NORTH CAROLINA STATE SIGNED AND SEALED CALCULATIONS FOR APPROVAL BY ENGINEER FOR ALL COMMERCIAL/MANUFACTURER'S COMPONENTS.

RECYCLED PLASTIC LUMBER (OPTIONAL)

1. ALL RPL COMPOSITE DECKING SHALL CONFORM TO REQUIREMENTS STATEDS IN THE TECHNICAL SPECIFICATION 067300.
2. ALL RPL COMPOSITE MATERIALS COLOR AND TEXTURE TO MATCH NATURAL WOOD.

PROPOSED SEEDING SPECIFICATIONS

SEEDING DATES: APRIL 1– AUG. 31

SEED MIXTURE	APPLICATION RATES/ACRE
COMMON BERMUDA (HULLED)	150 LBS.
REBEL FESCUE	250 LBS.

FERTILIZER
10–10–10 @ 1,000 LB/ACRE
LIME @ 3,000 LB/ACRE

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

SEEDING DATES: SEPT. 1 – MARCH 31

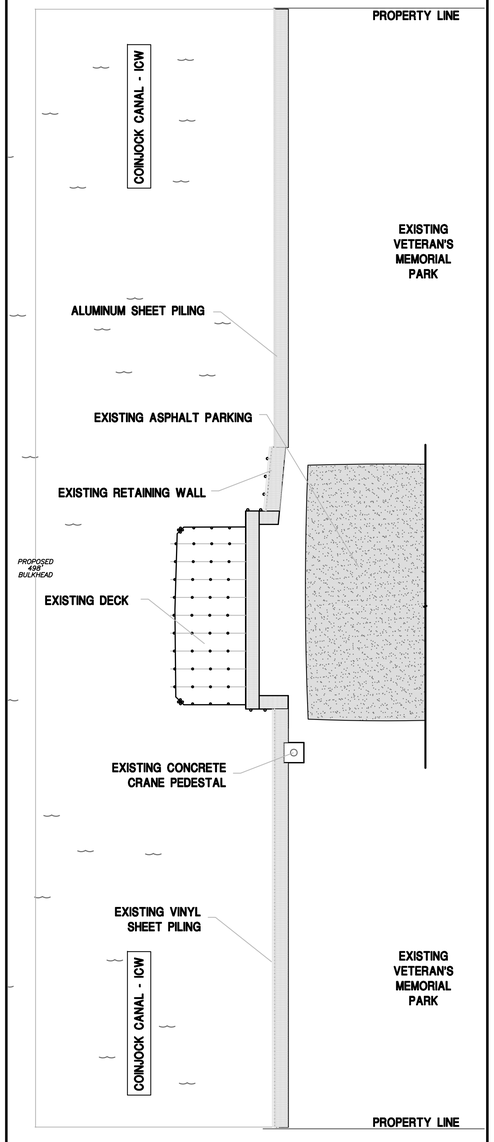
SEED MIXTURE	APPLICATION RATES/ACRE
COMMON BERMUDA (UNHULLED)	250 LBS.
REBEL FESCUE	250 LBS.

FERTILIZER
10–10–10 @ 1,000 LB/ACRE
LIME @ 3,000 LB/ACRE

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

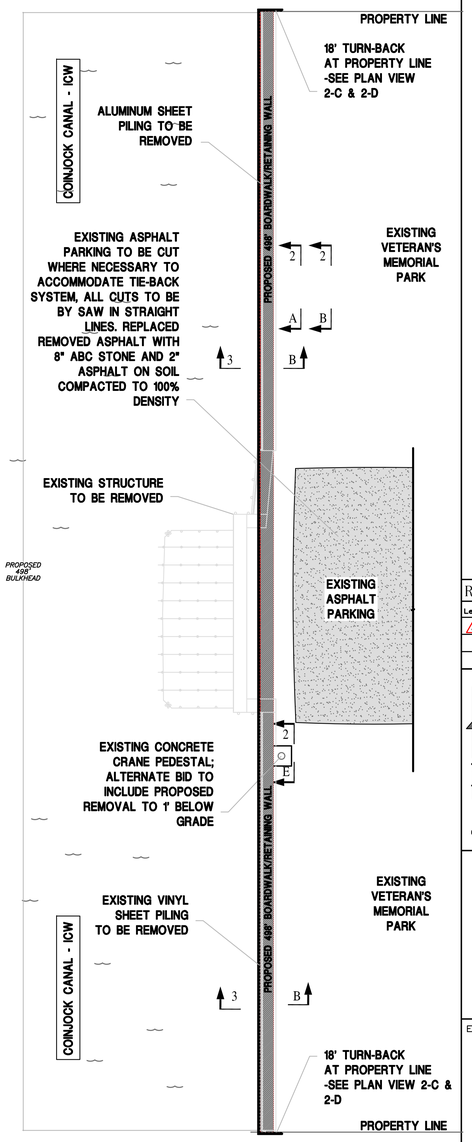
GENERAL:
– FERTILIZER RATES SHOWN ARE GENERAL RECOMMENDATIONS; FREQUENCY AND AMOUNT OF FERTILIZATION CAN BEST BE DETERMINED THROUGH SITE SPECIFIC SOIL TESTING.
– SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY IF LEFT UNATTENDED. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLES DEVELOP THEY MUST BE FILLED, RE–SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE
WEAK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED AND RE–SEEDED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.



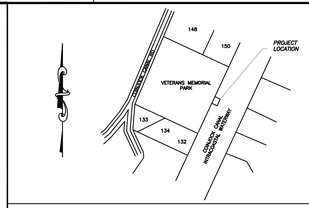
DEMO PLAN 1-A

SCALE: N.T.S.
PROPOSED BOARDWALK/PAVILION DEMO PLAN



KEY PLAN 1-B

SCALE: N.T.S.
PROPOSED BULKHEAD PLAN



VICINITY MAP–NTS

ABBREVIATIONS

ADD'L.	ADDITIONAL
ALT.	ALTERNATE
ARCH.	ARCHITECTURAL
BAL.	BALANCE
BM.	BEAM
BOT.	BOTTOM
BP.	BEARING PLATE
BS.	BOTTOM OF SLAB
CLR.	CLEAR
CL.	CENTERLINE
COL.	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
DIA. OR ø	DIAMETER
DWG.	DRAWING
DWL(S)	DOWEL(S)
EA.	EACH
EE.	EACH END
EF.	EACH FACE
EL. OR ELEV.	ELEVATION
EDS	EDGE OF SLAB
EQ.	EQUAL
EW.	EACH WAY
EXIST.	EXISTING
EXP. JT.	EXPANSION JOINT
FIN.	FINISH
FLR.	FLOOR
FLG.	FLANGE
FT. OR '	FEET OR FOOT
FTG.	FOOTING
F_y	YIELD STRESS
GALV.	GALVANIZED
GR.	GRADE
HOR.	HORIZONTAL
H.L.	HIGH STRENGTH
H.L.B.	HIGH STRENGTH BOLT
HT.	HEIGHT
IN. OR "	INCHES
IAW	IN ACCORDANCE WITH
KSI	KIPS PER SQUARE INCH
L	LONGITUDINAL
LLH.	LONG LEG HORIZONTAL
LLV.	LONG LEG VERTICAL
L.W.	LONG WAY
MAX.	MAXIMUM
MIN.	MINIMUM
MECH.	MECHANICAL
MISC.	MISCELLANEOUS
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPP.	OPPOSITE
PL.	PLATE
PCM.	POUNDS PER SQUARE INCH
PSF.	POUNDS PER SQUARE FOOT
R	RADIUS
REINF.	REINFORCING
REF.	REFERENCE
REQD.	REQUIRED
RPL.	RECYCLED PLASTIC LUMBER
SECT.	SECTION
SIM.	SIMILAR
SST.	STAINLESS STEEL
STIFF.	STIFFENER
STRUCT.	STRUCTURE
SYMM.	SYMMETRICAL
T	TOP
THK. OR THKNS.	THICK OR THICKNESS
T.C.	THROUGHOUT
T.C.S.	TOP OF STEEL
T.S.	TOP OF SLAB
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VA.	VARIES
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
W/	WITH
W.P.	WORK POINT
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH

Revisions

Letter	Description	Date
A	Revised design per bid comments	6/15/16

HOUSE ENGINEERING, P.C.
P.O. BOX 466
KITTY HAWK, NORTH CAROLINA 27949
OFFICE: (252) 261–8253 FAX: (252) 261–3283
e–mail: rick@houseengineering.net

Retaining Wall Plan for: Veterans Memorial Park Pier

Project Location:

Coinjock, Currituck County, North Carolina

ENGINEER SEAL

NORTH CAROLINA PROFESSIONAL SEAL 24740 ENGINEER FREDERICK A. HOUSE

6/24/16

COPYRIGHT © 2016
THIS DOCUMENT IS THE PROPERTY OF HOUSE ENGINEERING, P.C. AND MAY NOT BE USED MODIFIED OR ADAPTED WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER. COPIES MAY BE PRODUCED.

APPROVALS		DATE
DRAWN	M. ROBERTSON	5/24/2016
CHECKED	R. HOUSE	5/24/2016
ENGINEER	R. HOUSE	5/24/2016
SUBMITTED	R. HOUSE	
RECEIVED		

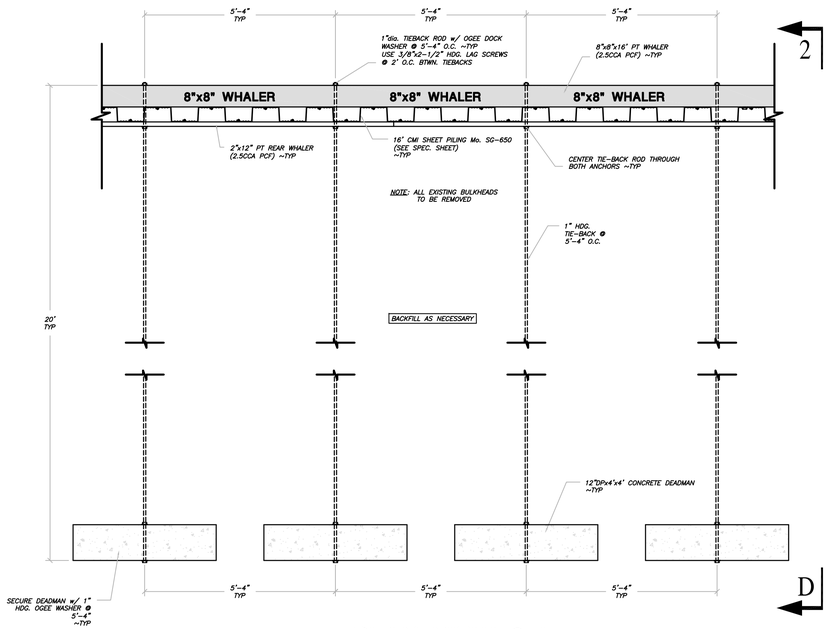
PROJECT NUMBER 113769

PROJECT CONTACTS: House Engineering, PO Box 466, Kitty Hawk, NC, 27949, (252) 261–8253

APPLICABLE DRAWING TOLERANCES

SIZE	DRAWING NUMBER	REV	SHEET NO.
D	113769	A	S1

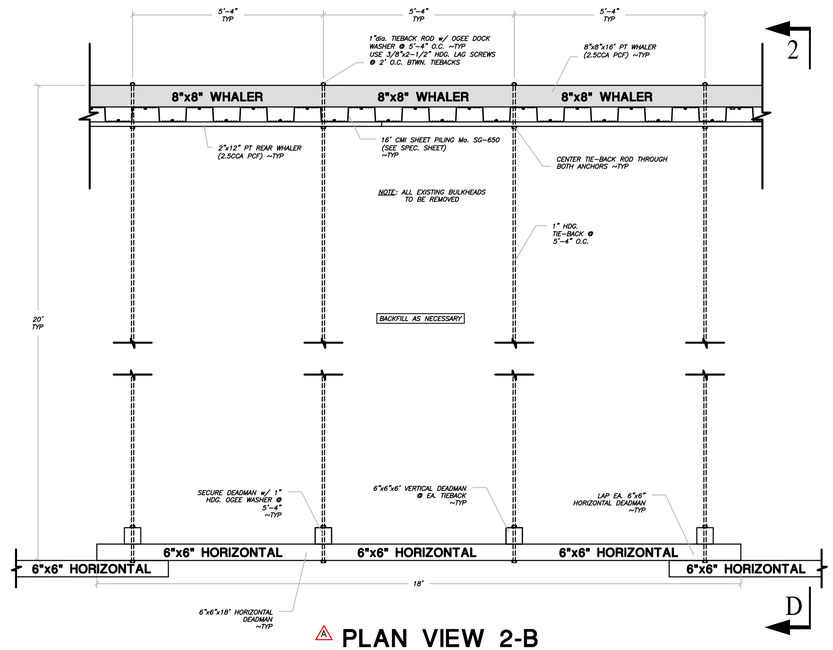
CAD FILENAME: 113769 SCALE: AS NOTED



PLAN VIEW 2-A

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

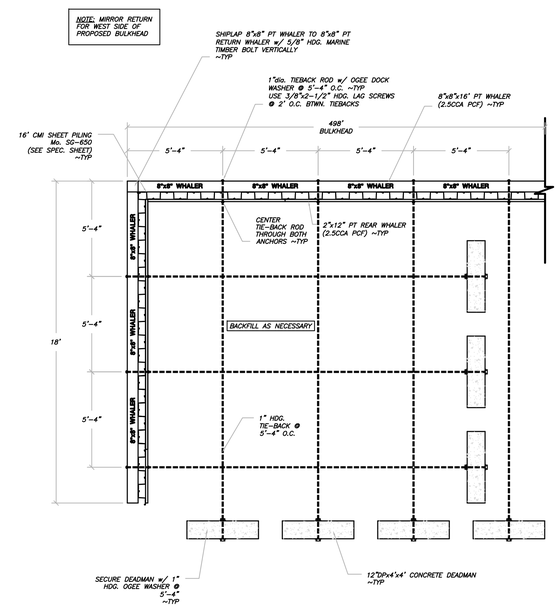
OPTIONAL RETAINING WALL CONSTRUCTION



A PLAN VIEW 2-B

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

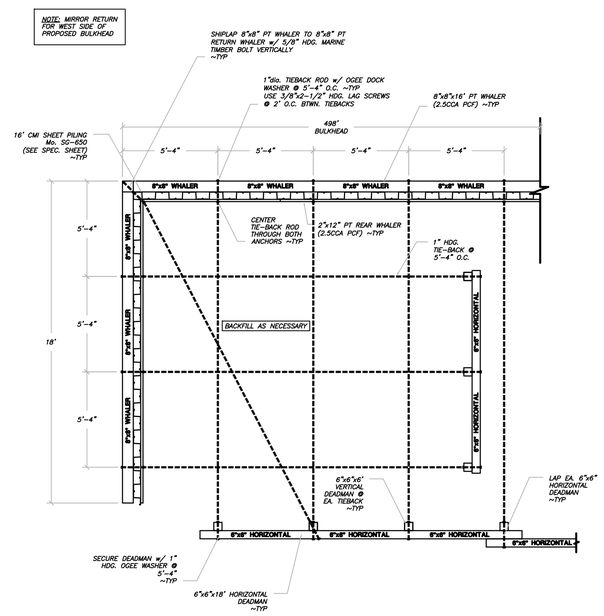
OPTIONAL RETAINING WALL CONSTRUCTION



A PLAN VIEW 2-C

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

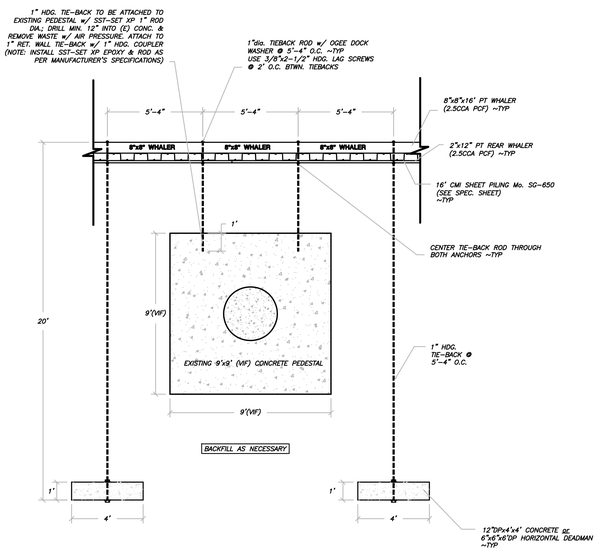
OPTIONAL RETURN CONSTRUCTION



A PLAN VIEW 2-D

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

OPTIONAL RETURN CONSTRUCTION



PLAN VIEW 2-E

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

PROPOSED TIEBACK TO EXISTING PEDESTAL CONSTRUCTION

Revisions

Letter	Description	Date
A	Revised design per bid comments	6/15/16

HOUSE ENGINEERING, P.C.
P.O. BOX 466
KITTY HAWK, NORTH CAROLINA 27949
OFFICE: (252) 261-8253 FAX: (252) 261-3283
e-mail: rick@houseengineering.net

Retaining Wall Plan for:
for
Veterans Memorial Park Pier

Project Location:

Coinjock, Currituck County, North Carolina

ENGINEER SEAL

NORTH CAROLINA PROFESSIONAL SEAL 24740 ENGINEER FREDERICK A. HOUSE 6/24/16

COPYRIGHT © 2016
THIS DOCUMENT IS THE PROPERTY OF HOUSE ENGINEERING, P.C. AND MAY NOT BE USED MODIFIED OR ADAPTED WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER. COPIES MAY BE PRODUCED.

APPROVALS		DATE
DRAWN	M. ROBERTSON	5/24/2016
CHECKED	R. HOUSE	5/24/2016
ENGINEER	R. HOUSE	5/24/2016
SUBMITTED	R. HOUSE	
RECEIVED		

APPLICABLE DRAWING TOLERANCES

PROJECT NUMBER 113769

PROJECT CONTACTS: House Engineering, PO Box 466, Kitty Hawk, NC, 27949, (252) 261-8253

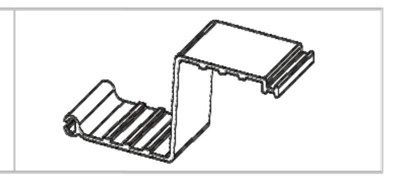
SIZE	DRAWING NUMBER	REV	SHEET NO.
D	113769	A	S2

CAD FILENAME: 113769 SCALE: AS NOTED

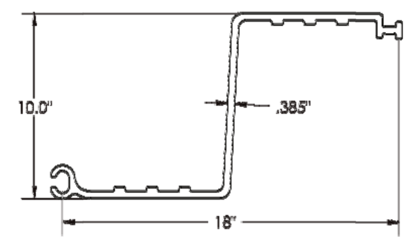
CMI Crane Materials International — ShoreGuard Synthetic Sheet Piling

Updated November 1, 2014

SG-650

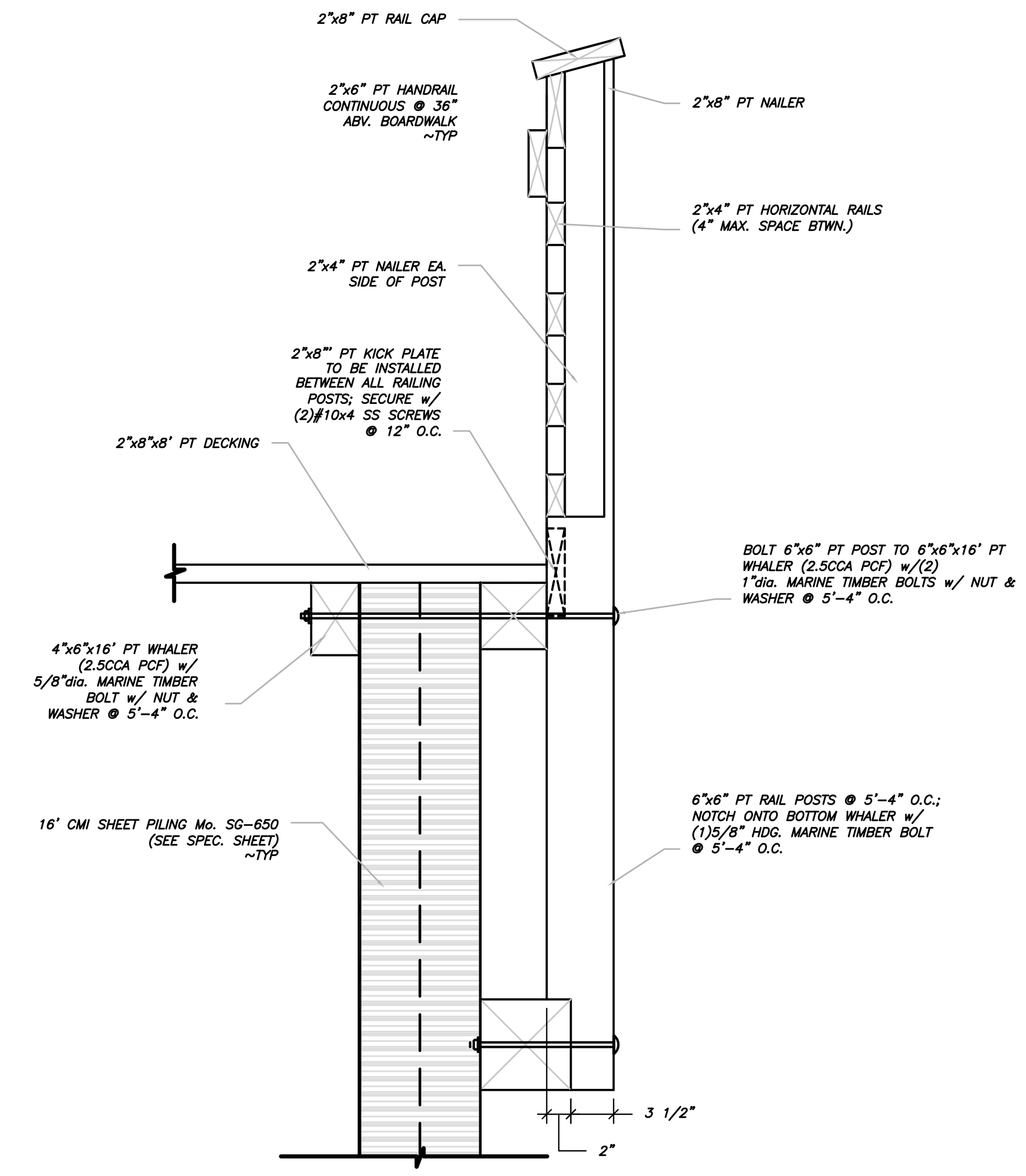


Allowable Moment (M)	7,893 ft-lb/ft	35.11 kN-m/m
Section Modulus (Z)	29.6 in^3/ft	1,591 cm^3/m
Moment of Inertia (I)	148 in^4/ft	20,212 cm^4/m
Impact Strength	15,000 in-lbs/in^2	2,625 N-mm/mm^2
Thickness (t)	0.385 in	9.8 mm
Section Depth	10.0 in	254 mm
Section Width	18 in	457 mm
Material	Weatherable Rigid Vinyl	
Standard Colors	Grey, Clay	
Technology	Z Profile, I-Beam Lock, XCR™	
Standard Packaging	12 sheets/bundle	



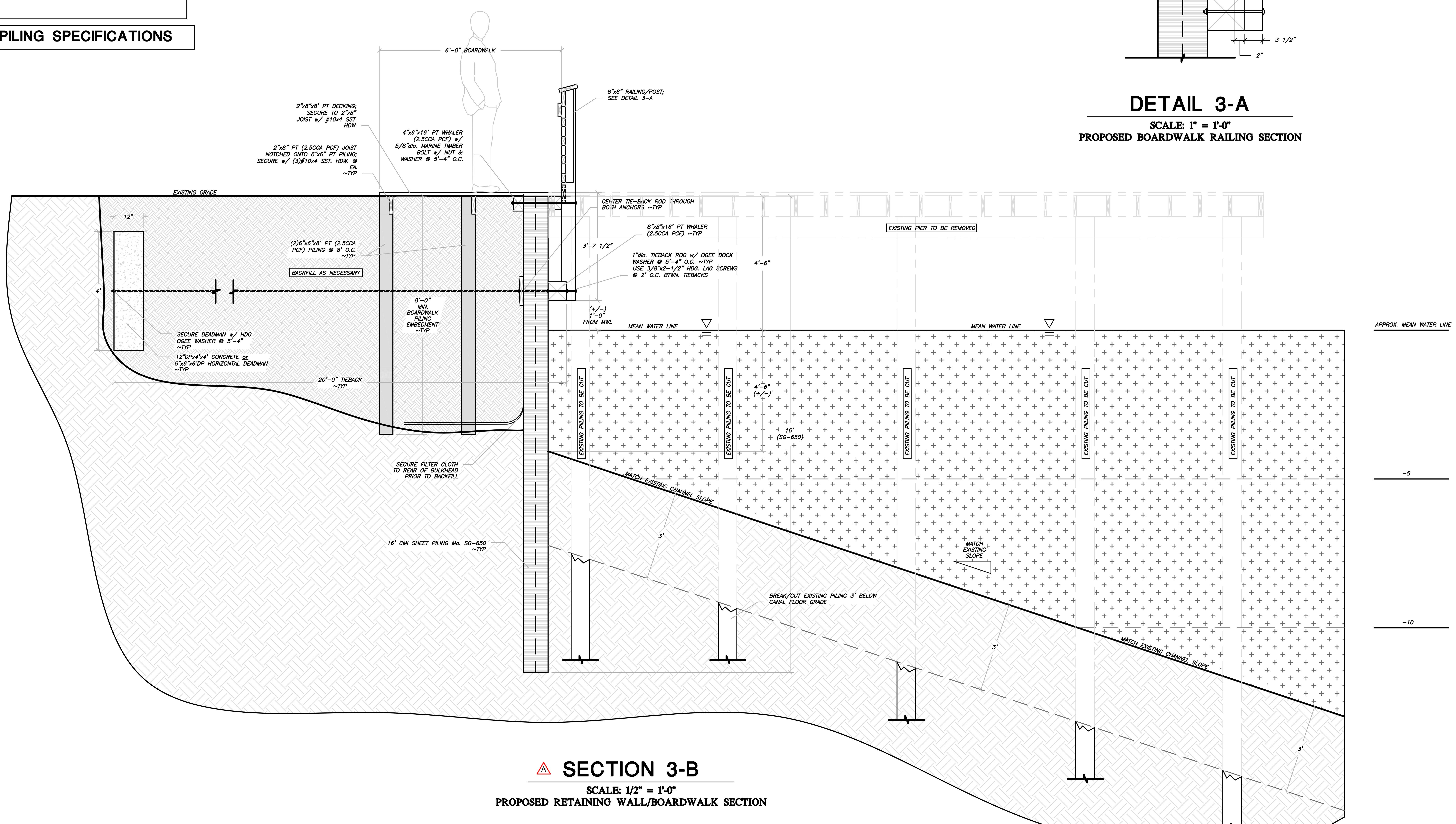
cmilc.com

PROPOSED SHEET PILING SPECIFICATIONS



DETAIL 3-A

SCALE: 1" = 1'-0"
PROPOSED BOARDWALK RAILING SECTION



SECTION 3-B

SCALE: 1/2" = 1'-0"
PROPOSED RETAINING WALL/BOARDWALK SECTION

Revisions		
Letter	Description	Date
A	Revised design per bid comments	6/15/16

HOUSE ENGINEERING, P.C.
P.O. BOX 466
KITTY HAWK, NORTH CAROLINA 27949
OFFICE: (252) 261-8253 FAX: (252) 261-3283
e-mail: rick@houseengineering.net

Retaining Wall Plan for:
for
Veterans Memorial Park Pier

Project Location:

Coinjock, Currituck County, North Carolina

ENGINEER SEAL

NORTH CAROLINA PROFESSIONAL SEAL 24740 ENGINEER FREDERICK A. HOUSE 5/24/16

COPYRIGHT © 2016
THIS DOCUMENT IS THE PROPERTY OF HOUSE ENGINEERING, P.C. AND MAY NOT BE USED MODIFIED OR ADAPTED WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER. COPIES MAY BE PRODUCED.

APPROVALS		DATE
DRAWN	M. ROBERTSON	5/24/2016
CHECKED	R. HOUSE	5/24/2016
ENGINEER	R. HOUSE	5/24/2016
SUBMITTED	R. HOUSE	
RECEIVED		

APPLICABLE DRAWING TOLERANCES

PROJECT NUMBER 113769

PROJECT CONTACTS: House Engineering, PO Box 466, Kitty Hawk, NC. 27949, (252) 261-8253

SIZE	DRAWING NUMBER	REV	SHEET NO.
D	113769	A	S3

CAD FILENAME: 113769 SCALE: AS NOTED