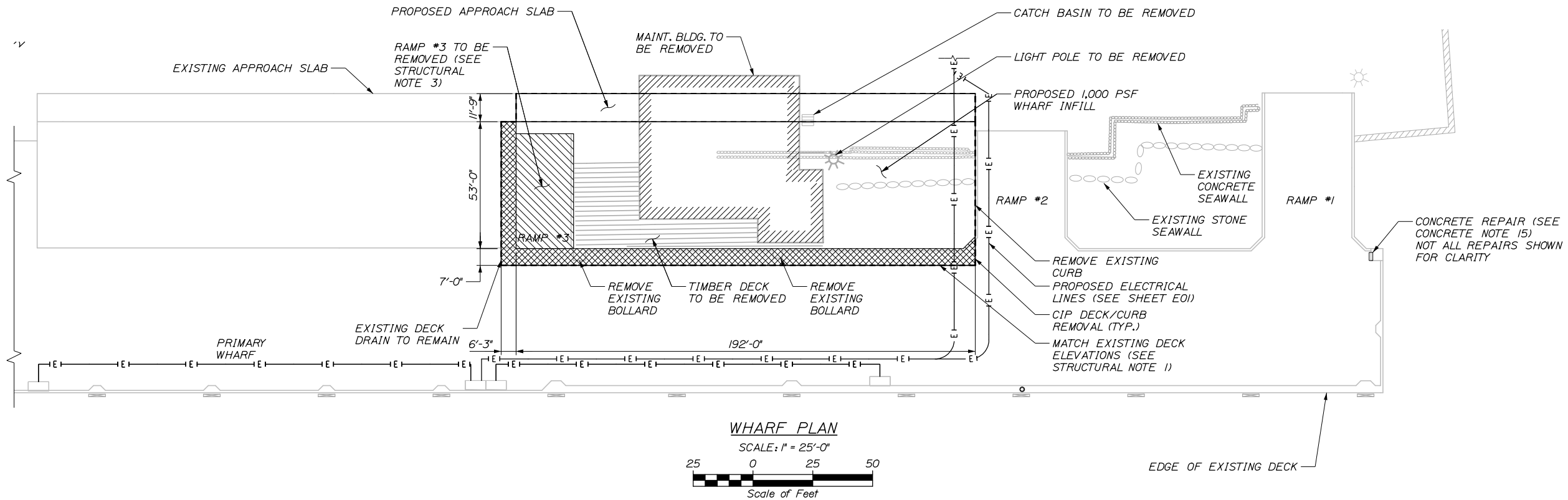


Date: 12/15/2017

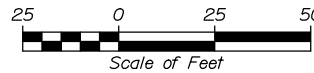
Username:

Filename: 014\_Pier Plan & General Notes (S01).dgn Division:



WHARF PLAN

SCALE: 1" = 25'-0"



**PILE NOTES:**

1. PILES SHALL BE 16" 1/2" WALL STEEL PIPE-PILES WITH CONCRETE FILL. PILES SHALL BE FITTED WITH A CLOSED-ENDED, CONICAL PIPE TIP THAT MEETS THE REQUIREMENTS OF SPECIAL PROVISION 501 AND MAINEDOT DETAIL 501(K). PILES SHALL BE FABRICATED OF SEAMLESS OR STRAIGHT-SEAMED MATERIAL. SPIRAL WELDED PIPE PILE IS NOT PERMITTED.
2. STEEL PIPE PILES SHALL BE IN ACCORDANCE WITH ASTM A252, GR3 MODIFIED WITH MINIMUM YIELD STRENGTH OF 45 KSI, PER STANDARD SPECIFICATION 711.01. CONCRETE FILL SHALL BE MAINEDOT CLASS "A".
3. PILES SHALL BE COATED WITH FUSION BONDED EPOXY IN ACCORDANCE WITH THE SPECIFICATIONS.
4. PILE SPLICES SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD.
5. ANY PORTION OF PILE CRACKED, DEFORMED, OR OTHERWISE DAMAGED BY PILE DRIVING SHALL BE REPLACED.
6. ULTIMATE CAPACITY OF PILES (AASHTO STANDARD SPEC DESIGN)
  - PILES SHALL BE DRIVEN TO A MINIMUM ULTIMATE CAPACITY OF 600 KIPS
  - THE DESIGN AXIAL PILE LOAD IS 300 KIPS
7. ESTIMATE OF PILES REQUIRED: 68 @ 102 FT
8. PILES SHALL NOT BE OUT OF POSITION SHOWN BY MORE THAN 6" LONGITUDINALLY ALONG THE PILE CAP, AND 2" TRANSVERSELY ACROSS THE WIDTH OF PILE CAP.
9. THE CONTRACTOR SHALL PERFORM AND SUBMIT WAVE EQUATION ANALYSES FOR REVIEW AND ACCEPTANCE BY THE ENGINEER. THE CONTRACTOR SHALL DETERMINE A STOPPING CRITERIA BASED ON THE WAVE EQUATION ANALYSIS, WHICH SHALL INCLUDE THE BLOWS PER INCH AND THE NUMBER OF ONE INCH INTERVALS AT WHICH PILE INSTALLATION MAY BE TERMINATED.
10. THE CONTRACTOR SHALL PERFORM A TOTAL OF FOUR (4) DYNAMIC PILE LOAD TESTS, WITH SUBSEQUENT 24-HOUR (MIN.) RESTRIKE TO EVALUATE THE PERFORMANCE OF THE HAMMER-PILE SYSTEM, CALCULATE STRESSES IN THE PILE DURING DRIVING, TO CONFIRM THE MINIMUM ULTIMATE CAPACITY FOR THE PILE. THE ULTIMATE CAPACITY OF THE PILES IS EQUAL TO THE DESIGN PILE LOAD MULTIPLIED BY 2.0 PER AASHTO STANDARD SPEC DESIGN. ONE (1) DYNAMIC PILE LOAD TEST SHALL OCCUR WITHIN EACH PILE ROW F-J.
11. DYNAMIC TESTING SHALL BE PERFORMED DURING THE INITIAL DRIVE AND DURING THE 24-HOUR (MIN.) RESTRIKE.
12. PILES SHALL BE DRIVEN FROM THE EXISTING WHARF, OR A MINIMUM DISTANCE OF 25 FT. FROM THE CONCRETE SEAWALL.
13. CONTRACTOR SHALL RELOCATE, AS DIRECTED BY THE RESIDENT, LARGE BOULDERS ON TOP OF THE STONE WALL THAT WOULD BE HAZARDOUS TO THE PILE IF IT FELL. WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 501.241.

**CONCRETE NOTES:**

1. CONCRETE BASIC DESIGN STRESSES SHALL BE:
  - FILL FOR PIPE PILES: CLASS "A"
  - PRECAST: CLASS "P"
  - F'c = 6,500 PSI AT 28-DAYS
  - F'c = 4,500 PSI AT TRANSFER
  - CAST-IN-PLACE (UON): CLASS "LP"
2. MARINE CONCRETE SHALL CONTAIN 5.0 GAL/CY OF CALCIUM CORROSION INHIBITOR ADMIXTURE.
3. PRECAST CONCRETE SHALL HAVE A MAXIMUM PERMEABILITY OF 3,000 COULOMBS.
4. PRE-STRESSING STRAND: 270,000 PSI LOW-RELAX STRAND.
5. CLEARANCES FOR REINFORCEMENT SHALL BE 3" UNLESS OTHERWISE NOTED.
6. CHAMFER ALL CONCRETE EDGES 1" @ 45° UNLESS OTHERWISE NOTED
7. ALL REINFORCING SHALL BE FULLY SUPPORTED ON NON-METALLIC APPROVED CHAIRS. REINFORCING SHALL NOT BE SUPPORTED ON TIMBER BLOCKS, BRICKS, CONCRETE BLOCKS, ETC.
8. CONSTRUCTION JOINTS SHALL BE MADE ONLY AS SHOWN UNLESS APPROVED OTHERWISE.
9. ALL EXISTING CONCRETE SURFACES TO RECEIVE CONCRETE SHALL BE ROUGHENED TO A MINIMUM AMPLITUDE OF 1/4" AND COATED WITH A PRODUCT LISTED ON MAINEDOT PRE-QUALIFIED LIST OF CONCRETE BONDING AGENTS.
10. WET CURING OF CONCRETE IS TO BEGIN WITHIN 30 MINUTES AFTER CONCRETE FINISHING, OR AS SOON AS POSSIBLE WITHOUT DAMAGING FINISHED SURFACE.
11. ALL FORMWORK FOR CONCRETE SHALL BE LEFT IN PLACE AND CONCRETE SURFACES SHALL BE COVERED AND KEPT MOIST FOR A PERIOD OF NOT LESS THAN TWO (2) FULL DAYS AFTER CONCRETE PLACEMENTS.
12. CONTRACTOR SHALL SUBMIT DETAILED REINFORCING DRAWINGS INCLUDING BAR AND BENDING SCHEDULES TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DELIVERY OF ANY REINFORCING STEEL.
13. PROVIDE FULL WIDTH STRUCTURAL BEARING PADS AT ALL PRECAST CONCRETE DECK PLANK TO PILE CAP BEARING LOCATIONS. PADS TO BE 0.125 INCH THICK PLAIN ELASTOMERIC BEARING PADS WITH DUREMETER HARDNESS OF 60 PER AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
14. ALL FERROUS METAL HANDLING/LIFTING DEVICES AND EXISTING EMBEDDED METALS/ANCHORS NO LONGER IN USE SHALL BE RECESSED OR REMOVED TO A DEPTH OF ONE INCH BELOW THE SURFACE OF THE CONCRETE AND PATCHED WITH AN APPROVED POLYMER-MODIFIED CEMENTITIOUS MORTAR. DEVICES LOCATED IN AREAS TO BE TOTALLY ENCASED IN CAST-IN-PLACE CONCRETE SHALL BE GALVANIZED. DEVICES LOCATED IN AREAS NOT TO BE ENCASED IN CAST-IN-PLACE CONCRETE SHALL BE STAINLESS STEEL, UNLESS OTHERWISE NOTED.
15. CONCRETE SURFACES SHALL BE REPAIRED AS DIRECTED BY THE RESIDENT ENGINEER UNDER THEIR RESPECTIVE 518 PAY ITEMS. RESIDENT ENGINEER MAY CONSULT ENGINEER OF RECORD FOR LOCATIONS AND QUANTITIES. PRIOR TO THE START OF THE CONCRETE REPAIRS, THE RESIDENT AND THE CONTRACTOR SHALL SOUND THE CONCRETE AND AGREE ON THE REPAIR LIMITS. SHOULD THE REPAIR AREA LIMITS APPEAR TO CHANGE DURING THE DEMOLITION PROCESS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND THE CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING THE DEMOLITION. PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REPAIR. CHIP CONCRETE TO SOUND MATERIAL. PREPARE AND PATCH REPAIR AREAS PER STANDARD SPECIFICATIONS.

**REINFORCING STEEL NOTES:**

1. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 AND SHALL BE EPOXY COATED.
2. SPLICE REINFORCEMENT AS INDICATED:
  - CLASS "B" SPLICES FOR EPOXY COATED REINFORCEMENT:

BAR SIZE	5000 PSI
#4	2'-6"
#5	3'-1"
#6	3'-8"
#7	4'-4"
#8	4'-11"
#9	6'-11"
3. SPLICES SHALL BE LOCATED SUCH THAT NO MORE THAN 50 PERCENT OF THE REINFORCEMENT IS SPLICED AT ANY ONE LOCATION, UNLESS SHOWN OTHERWISE.
4. ALL HOOKS SHALL BE STANDARD ACI 90 OR 180 DEGREE END HOOKS, UNLESS SHOWN OTHERWISE.
5. SPLICE TOP BARS AT CENTER OF SPAN AND BOTTOM BARS AT THE SUPPORT, UNLESS DETAILED OTHERWISE.

**STRUCTURAL NOTES:**

1. CONTRACTOR SHALL FIELD VERIFY DECK ELEVATIONS ALONG EXISTING WHARF AND RAMP AT INTERFACE WITH PROPOSED WHARF AND SUBMIT THESE TO THE RESIDENT FOR REVIEW PRIOR TO DECK CONSTRUCTION.
2. ALL BOLTS EMBEDDED IN CONCRETE SHALL BE ASTM A193, TYPE 316 STAINLESS STEEL AND SHALL BE FITTED WITH NUTS AND WASHERS CONFORMING WITH ASTM A194.
3. REMOVAL OF RAMP 3, TIMBER DECK AND MAINTENANCE BUILDING SHALL INCLUDE ALL FOUNDATION ELEMENTS AS NOTED THROUGHOUT THE PLANS.
4. REMOVE SEAWALL WHERE A CONFLICT WITH THE PROPOSED PILE CAP WILL OCCUR. SEE SEAWALL NOTCHING DETAIL ON SHEET 506.

**CONCRETE REMOVAL NOTES:**

1. ALL EXISTING REINFORCING EXTENDING INTO THAT WHICH IS BEING REMOVED SHALL BE CUT FLUSH UNLESS OTHERWISE NOTED IN THE PLANS.
2. PRECAST DECK PANEL SHALL NOT BE DAMAGED DURING DECK REMOVAL. IF DAMAGED THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS WITHOUT ANY ADDITIONAL COMPENSATION.

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
STP 2194(206)  
WIN  
021942.06

DATE  
BY  
SIGNATURE  
P.E. NUMBER  
DATE

DATE	BY	REVISIONS
12/17	P. Bishop C. Marin	DESIGN-DETAILED CHECKED-REVIEWED DESIGNS-DETAILED DESIGNS-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES

PORTLAND INTERNATIONAL MARINE TERMINAL  
MAINE INTERMODAL PORT PRODUCTIVITY PROJECT  
WHARF INFILL & BUILDING REMOVAL  
CUMBERLAND COUNTY  
PORTLAND  
PIER PLAN & GENERAL NOTES

SHEET NUMBER

S01

14 OF 21

99% DESIGN  
December 15, 2017

