

**Maine Maritime Academy
Castine, Maine**

**Pier Upgrades and Waterfront Improvements Project
March 8, 2024
ADDENDUM NO. 4**

Prospective bidders and all concerned are hereby advised of the following changes/modifications in the Maine Maritime Academy Waterfront Campus Pier Upgrades and Waterfront Improvements Issued-for-Bidding Drawings and Project Manual dated January 26, 2024 and are hereby requested to change their copies accordingly.

Addendum No. 4 consists of 8 pages of Response to Questions and 12 re-issued IFB Drawing Sheets for a total of 20 pages. Addendum No 4 addresses some of the bidder questions received. Subsequent addendum will address the outstanding bidder questions and revisions to the IFB Drawing Set and the IFB Project Manual.

Submit written questions during the bid phase via email to Jake Jacobs with cc to Cheryl Coviello.

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Cheryl.Coviello@gza.com

Make the following changes to the Bidding Documents, Project Manual and Specifications:

REVISION TO ADDENDUM NO. 1

Response to Addendum No. 1, Item 2:

REPLACE the response with: "Images and/or videos of the January 2024 storm impacts at Castine's waterfront are publicly available on-line via a search with key words such as, but not limited to, Dennett's Wharf, Castine flooding, and January 2024 storms."

RESPONSE TO GENERAL QUESTIONS

1. Is a MDOT, BGS, or any other prequalification required by both general contractor and subcontractors? Project manual states "quality w/ Bureau of General services or prove "evidently qualified".

Response 1: Pre-qualification by BGS or MaineDOT is not required. The contractor, by submitting a bid, is indicating that they are a "Responsible Bidder" in accordance with Specification Section 00 21 13 Instruction to Bidders. Also see Specification Section 00 71 00 Definitions for "Bidder" and "Responsive and Responsible Bidder."

2. After creating and assessing a construction schedule, taking into account the linear nature of the work required to complete phase 1 of the project (precast caps resting on completed edge beams as one example), the August 31, 2025 completion date for phase 1 is not feasible, regardless of assets and resources devoted to the project. We respectfully request that one year be added to the project schedule for Phase 1, making the completion date for Phase 1 August 31st, 2026.

Response 2: The request has been taken under advisement. Unless noted otherwise in future addendum, completion of Phase 1 shall be August 31, 2025.

3. Please provide connection and blocking details from precast caps to the cast in place edge beams and the precast panels to the pile bent caps

Response 3: Connection details will be provided in forthcoming addendum.

4. Do we need to dredge under travellift pier piles?

Response 4: Yes, per the dredge limits shown on IFB Drawing C-101.

5. Are we responsible for anything other than dumping dredged material on MMA dump site? Please provide location of dump site.

Response 5: At this time, pending issuance of Maine DEP's permit, the dredged materials will require disposal at a licensed landfill. Revisions to the maintenance dredge requirements will be issued in a subsequent addendum.

6. If divers are in the water when the NMSV is in dock, what coordination will be required with the Academy to avoid exposure to the cooling water intake for the vessel.

Response 6: The Safety Management Manual for MMA's NSMV is not available yet. A commercial dive plan for any dive work conducted by the contractor or subcontractor shall be submitted to MMA. Dive operations shall not commence until lockout is completed and dive flags are posted. MMA will provide the contractor with lockout procedures and checklist for the NSMV when available. Dive operations are subject to the Utility Interruptions requirement of IFB Specification Section 01 05 00, Part 6.1.

A commercial dive plan is required regardless of whether NSMV is in port or not.

RESPONSE TO IFB DRAWINGS QUESTIONS

7. IFB Drawing G-004: Pile Note 3 states, "Provide Steel Piles with Factory Applied Coatings to the Limits Indicated. Refer to Specification Section 09 97 13.26." Neither the drawings provided, nor the specification referenced appear to define the pile coating limits. Please provide the pile coating limits.

Response 7: IFB Drawing G-004, Pile Note 3:
REPLACE "to the limits indicated" with "from the top of pile to 10 feet below mudline".

Revision to IFB Drawing G-004 will be issued in a subsequent addendum.

3. PROVIDE STEEL PILES WITH A FACTORY APPLIED COATING ~~TO THE LIMITS INDICATED~~. REFER TO SPECIFICATION SECTION 09 97 13.26.

from the top of pile to 10 feet below mudline.

8. IFB Drawing G-102: Will the contractor be allowed the use the existing and new pier for personnel access to the water during construction?

Response 8: The contractor may use the existing pier during Phase 1 and the completed Phase 1 pier extension and pierhead during Phases 2 and 3 for personnel to access the construction work area. Equipment, tools and materials shall not be stored on the existing pier during Phase 1 or on the completed Phase 1 pier extension or pierhead during Phases 2 and 3. The contractor shall coordinate with MMA to identify the path for the contractor's personnel access. The contractor shall erect and maintain safeguards, in accordance with the project requirements, to define the path and demark it from MMA's operations, activities, personal and students.

9. IFB Drawing G-102: Note 8b states, "DURING PHASE 2, MAINE MARITIME ACADEMY WILL RELOCATE WATER-DEPENDENT OPERATIONS TO THE STRUCTURES COMPLETED DURING PHASE 1. THE CONTRACTOR SHALL PROVIDE PROVISIONS FOR ACCESS TO THE COMPLETED PHASE 1 STRUCTURES THROUGHOUT THE DURATION OF PHASE 2." Please clarify what type(s) of access will be required and the frequency of access required during Phase Two. Will Utilities need to be temporarily connected to supply the new vessel during Phase Two?

Response 9: See Addendum No. 1, Response 13 regarding access to completed Phase 1 structures.
See Addendum No. 1, Response 10 regarding temporary utility services.

10. IFB Drawing G-102: Note 8c states, "DURING PHASE 3, MAINE MARITIME ACADEMY SHALL HAVE USE OF THE WORK COMPLETED DURING PHASE 1 AND PHASE 2." Will there be any work hour or access restrictions during the construction of Phase 3? More specifically, how will the contractors work and working hours during the installation of dock guide piles, docks, utilities, and appurtenances be impacted by Maine Maritime Academy operations.

Response 10: There are no changes to the construction work hours or requirements for Phase 3 work. The contractor may have use of the pier for personnel access, as described in Response 8.

The Contractor shall coordinate the Contractor's access needs for utility connections for Phase 3 with MMA. Provide MMA with a minimum two-week advance notice for MMA operational adjustments. During Phase 3 construction, MMA's operations will occur generally along the pier stem, pier head, small boat basin and the floating dock along the Phase 1 pierhead. MMA will not have operations on the "L" leg of the reconstructed pier or the existing west breasting platform during Phase 3 construction work.

11. IFB Drawing C-001: Please confirm the note on C-001 saying, "All truck deliveries shall be restricted to the hours between 4 AM and 6AM." is applicable to all truck traffic on the project site.

Response 11: Vehicle Deliveries to the MMA Waterfront are permitted between 0600 and 0900 (Local Time), 7 days per week. Special deliveries may be considered after advanced coordination between the Contractor and MMA, per Specification Section 01 05 00 Supplemental Conditions, Part 3.4.

On IFB Drawing C-001, General Note 1:
REPLACE "4 AM and 6 AM" with "6 AM and 9 AM".

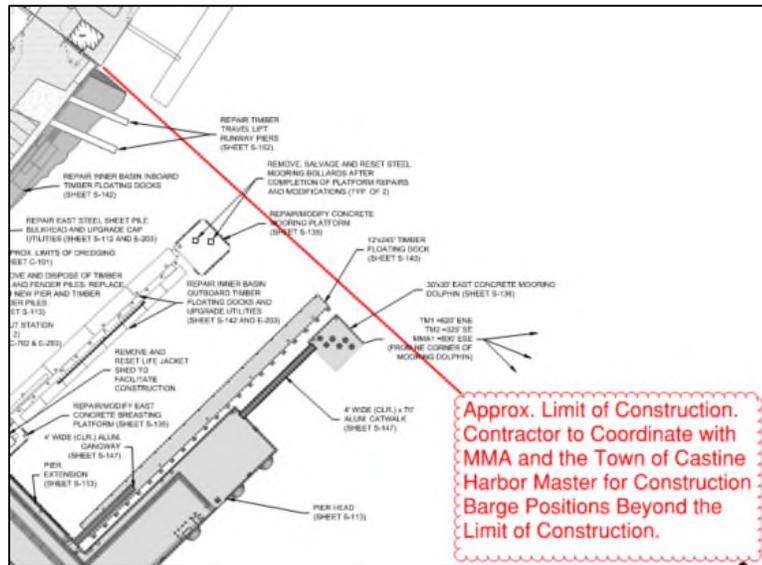
In IFB Specification Section 01 05 00 Supplemental Conditions, Part 3.4:
REPLACE the second sentence with "Deliveries to the MMA Waterfront Campus are permitted between 0600 dan 0900 (local time), seven days a week."

3.4	Construction Deliveries to the MMA Waterfront Campus shall be kept to the minimum necessary. Between September and May, deliveries are prohibited on Tuesdays and Thursdays through the Town Dock area. On other weekdays, deliveries are only allowed between 0700 and 0800. Deliveries to the MMA Waterfront Campus are permitted between 0600 dan 0900 (local time), seven days a week. Other times may be accommodated with at least one-week prior notice to, and coordinate with, the Owner's Representative. Use of watercraft for deliveries is highly preferred.
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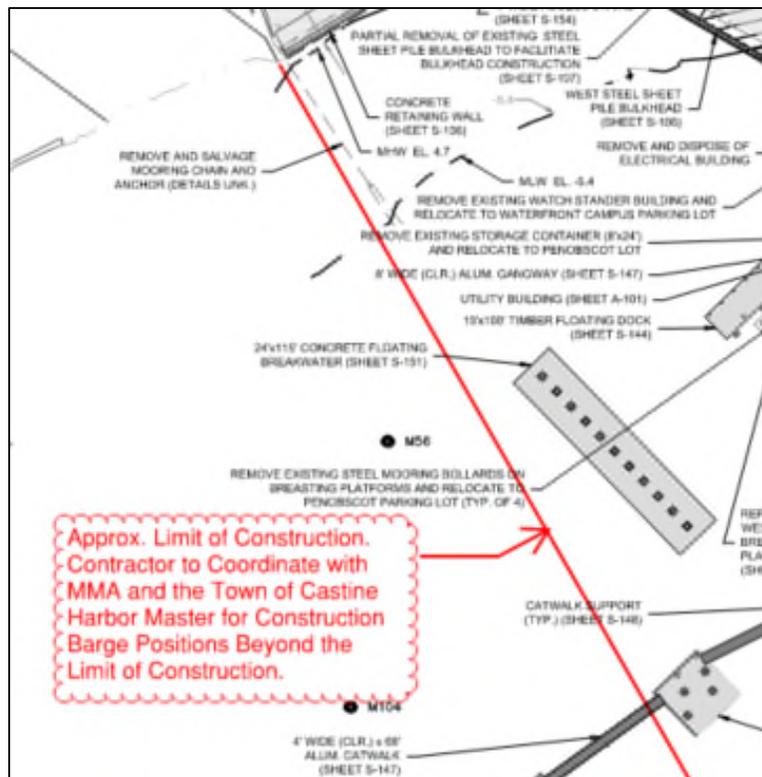
12. IFB Drawing C-001: General Note 4 on C-001 states, "BARGE ACCESS TO THE SITE IS UNRESTRICTED PROVIDED BARGE BERTHING IS MAINTAINED WITHIN THE LIMITS OF CONSTRUCTION." Please provide a drawing showing the Limits of Construction for the project.

Response 12: The easterly and westerly limits of construction are bounded by MMA's property. See IFB Drawing G-101. The Contractor shall coordinate with the Town of Castine's harbor master for construction limits into the harbor. The Contractor shall coordinate with MMA's Owner's Representative and the Town of Castine's harbor master for construction activity that requires the barge be located beyond the easterly and westerly limits of construction.

Graphical representations are shown below.
Revision to IFB Drawing G-101 will be included in a subsequent addendum.



Approx. Easterly Limit of Construction



Approx. Westerly Limit of Construction

13. IFB Drawing C-001: General Note 1 on C-001 restricts truck deliveries to 4am-6am. Is this limited to the summer months? Will transit mix concrete be limited to this window? Doing so will significantly restrict concrete placements and may impact the project schedule.

Response 13: See Response 11.

14. IFB Drawing C-301: The Turbidity Curtain notes on Sheet C-301 discuss using turbidity curtains to contain turbidity created by ongoing work. For bidding purposes, should pile extraction/installation be considered turbidity creating work?

Response 14: Yes.

15. IFB Drawing S-107: removable rail. Maximum length per removable railing section? Provide plan?

Response 15: 8-foot maximum.
See IFB Drawings S-105 and S-109. The removable rail is along the curb for the bulkhead and retaining wall.

16. IFB Drawing S-169: A note on the Floating Dock Repairs Plan calls for 12ea depleted anodes to be replaced. Please provide the size and specifications of the anode required.

Response 16: See IFB Specification Section 26 42 13 Galvanic (Sacrificial) Anode Cathodic Protection for anode requirements. See Reference Drawings for anode size.

17. IFB Drawing Sheet S-171: Note 3 on Sheet S-171 states, "Layout and quantity of float cleats shall be coordinated with MMA prior to float fabrication." Please provide cleat spacing or quantity for bidding purposes.

Response 17: **DELETE** Note 3.
REPLACE "@ 8" O.C." with "@ 8' O.C." in the cleat callout at Float B. Provide the same cleat size and spacing at Floats A, C and D.
Revision to IFB Drawing S-171 will be issued in a subsequent addendum.

18. IFB Drawing S-176: A Daddi Long Legs bird deterrent system is specified. Can Bird-X Daddi Long Legs be approved as an equal and used to bid this scope?

Response 18: Not at this time. Substitutions shall be submitted for review by the Contractor after contract award.

19. IFB Drawing S-176: Plan S-176 and Fig Plan 14A specify a Daddi Long Legs bird deterrent system. Can Bird-X Daddi Long Legs be approved as an equal and used to bid this scope? Please see product spec sheet attached for review.

Response 19: Not at this time. Substitutions shall be submitted for review by the Contractor after contract award.

RESPONSE TO IFB PROJECT MANUAL QUESTIONS

20. IFB Specification Section 00 84 00: ME DEP NRPA Permit Condition F states, "No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high-water line unless otherwise specified by this permit." As equipment will be used below high water for pile installation, pile repairs, and other work associated with the project, please clarify the meaning of and restrictions associated with this condition.

Response 20: The issued permit includes a summary of the work and description that construction will occur both from shore and from barge. (See page 8 of 19 of the issued permit.) The issued permit also summarizes that project requirements will prohibit construction barges, vessels, and work platforms from contacting the mudflats and that work will be completed during tidal periods that provide adequate water depth and/or use other construction methods. (See page 10 of 19 of the issued permit.) Because these descriptions are included in the issued permit, in-water construction barges, vessels and work platforms are allowed with the requirement that they do not contact the river/harbor bottom. Therefore, NRPA Standard Condition F is superseded by the issued permit for the project. General Notes on IFB Drawing Sheet G-004 incorporate the requirements and the conditions of the issued permits.

21. IFB Specification Section 01 05 00: 2.3 states that no construction laydown is provided, except for backland work. Will site trailer/bathroom areas be provided on land for all three work phases?

Response 21: MMA will provide space at the waterfront site for a mobile contractor site trailer. Temporary Electrical and Internet connections may be available. A porta potty supplied and maintained by contractor can be placed on MMA property in the waterfront area.

22. IFB Specification Section 02 21 00: Specifications (i.e. 022100 section 1.5A) require qualifications statement with bid. Can these be provided after award?

Response 22: Surveyor qualifications shall be provided after contract award.
In Specification 02 21 00, Part 1.5.A.2.a:
DELETE "With bid"

2. Qualifications Statement: a. With bid, Contractor shall provide the name, address, and a summary of qualifications of the proposed Registered Surveyor and a copy of the license for the Surveyor that will certify the Work.
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23. IFB Specification Section 03 31 30: states galvanized rebar. Drawing G-004 call for epoxy coated. Please clarify.

Response 23: Reinforcing steel shall be epoxy coated.
Revision to IFB Specification Section 03 31 30 will be issued in a subsequent addendum.

24. IFB Specification Section 03 31 30: Sheet G-004 Concrete Notes state that Reinforcing Steel shall be ASTM A615, grade 60 and shall be epoxy coated. Specification 03 31 30 part 2.6 Steel Reinforcement states that reinforcing bars shall be ASTM A615, grade 60 and shall be zinc-coated (galvanized). Please Clarify which is required.

Response 24: Reinforcing steel shall be epoxy coated.
Revision to IFB Specification Section 03 31 30 will be issued in a subsequent addendum.

25. IFB Specification Section 09 97 13.26: Pile Note 3 states, "Provide Steel Piles with Factory Applied Coatings to the Limits Indicated. Refer to Specification Section 09 97 13.26." Neither the drawings provided, nor the specification referenced appear to define the pile coating limits. Please provide the pile coating limits.

Response 25: See Response 7.

26. IFB Specification Section 23 05 19 (IFB Drawings M-201 and M-501): With regards to the steam flowmeter (FM-1) do you know what KEP Flow Computer was specified, and/or the communication output desired?

Response 26: Design Basis: KEP ES762
Output communication: BACnet IP

27. IFB Specification Section 31 62 23.13 and Section 31 41 16: Please provide pile coating lengths for pipe pile and sheet pile.

Response 27: See Response 7.

28. IFB Specification Section 35 20 23: The dredging specification calls out upland disposal of dredged material at 557 Dunbar Rd, Penobscot, ME. At the prebid site visit it was discussed that this disposal site may change. Please advise.

Response 28: See Response 5.

OTHER REVISIONS TO IFB DRAWINGS

REPLACE the following IFB Drawing Sheets with the attached. A general description is provided for MEP revisions. See each re-issued drawing sheet for revisions.

1. G-002 Drawing Sheet Index
2. C-001 Site Notes, Symbols and Abbreviations
3. S-116 Pier Pre-Cast Plank Plan
4. S-120 Pier Sections – 1 Section A – Type 1 Cap
5. S-121 Pier Sections – 2 Section B – Type 2 Cap
6. S-122 Pier Sections – 3 Section C – Type 5 Cap
7. S-126 Pier Sections – 7 Section G – Type 4A/4B @ E Trench
8. S-127 Pier Sections – 8 Section H – Type 5A Cap
9. S-128 Pier Sections – 9 Section I – Type 5B Cap
10. S-129 Pier Sections – 10 Section J – Type 5A/5B @ M Trench
11. S-132 Pier Pile Details
12. S-154 Pre-Cast Utility Trench Details

EROSION AND SEDIMENT CONTROL NOTES

PRE-CONSTRUCTION PHASE
 A PERSON WHO CONDUCTS, OR CAUSES TO BE CONDUCTED, AN ACTIVITY THAT INVOLVES FILLING, DISPLACING OR EXPOSING SOIL OR OTHER EARTHEN MATERIALS SHALL TAKE MEASURES TO PREVENT UNREASONABLE EROSION OF SOIL OR SEDIMENT BEYOND THE PROJECT SITE OR INTO A PROTECTED NATURAL RESOURCE AS DEFINED IN 38 MRS.A & 489-B. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE THE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED. ADEQUATE AND TIMELY TEMPORARY AND PERMANENT STABILIZATION MEASURES MUST BE TAKEN. THE SITE MUST BE MAINTAINED TO PREVENT UNREASONABLE EROSION AND SEDIMENTATION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADE BUFFER AREAS TO THE EXTENT PRACTICABLE.

BMP CONSTRUCTION PHASE
A. SEDIMENT BARRIERS. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE EDGE OF ANY DOWNGRADE DISTURBED AREA AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE PROPOSED DISTURBED AREA. MAINTAIN THE SEDIMENT BARRIERS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

B. CONSTRUCTION ENTRANCE: PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT THE INTERSECTION WITH THE PROPOSED ACCESS DRIVE AND THE EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

C. RIPRAP: SINCE RIPRAP IS USED WHERE EROSION POTENTIAL IS HIGH, CONSTRUCTION MUST BE SEQUENCED SO THAT THE RIPRAP IS PUT IN PLACE WITH THE MINIMUM DELAY. DISTURBANCE OF AREAS WHERE RIPRAP IS TO BE PLACED SHOULD BE UNDERTAKEN ONLY WHEN FINAL PREPARATION AND PLACEMENT OF THE RIPRAP CAN FOLLOW IMMEDIATELY BEHIND THE INITIAL DISTURBANCE. WHERE RIPRAP IS USED FOR OUTLET PROTECTION, THE RIPRAP SHOULD BE PLACED BEFORE OR IN CONJUNCTION WITH THE CONSTRUCTION OF THE PIPE OR CHANNEL SO THAT IT IS IN PLACE WHEN THE PIPE OR CHANNEL BEGINS TO OPERATE. MAINTAIN TEMPORARY RIPRAP, SUCH AS TEMPORARY CHECK DAMS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

D. TEMPORARY STABILIZATION. STABILIZE WITH TEMPORARY SEEDING, MULCH, OR OTHER NON-ERODABLE COVER ANY EXPOSED SOILS THAT WILL REMAIN UNWORKED FOR MORE THAN 14 DAYS EXCEPT, STABILIZE AREAS WITHIN 100 FEET OF A WETLAND OR WATERBODY WITHIN 7 DAYS OR PRIOR TO A PREDICTED STORM EVENT, WHICHEVER COMES FIRST. IF HAY OR STRAW MULCH IS USED, THE APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SF OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE. HAY MULCH MUST BE KEPT MOIST OR ANCHORED TO PREVENT WIND BLOWING. AN EROSION CONTROL BLANKET OR MAT SHALL BE USED AT THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER) AND ON ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS AND WETLANDS. GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE SECOND PHASE, AND SO ON.

E. VEGETATED WATERWAY. UPON FINAL GRADING, THE DISTURBED AREAS SHALL BE IMMEDIATELY SEEDDED TO PERMANENT VEGETATION AND MULCHED AND WILL NOT BE USED AS OUTLETS UNTIL A DENSE, VIGOROUS VEGETATIVE COVER HAS BEEN OBTAINED. ONCE SOIL IS EXPOSED FOR WATERWAY CONSTRUCTION, IT SHOULD BE IMMEDIATELY SHAPED, GRADED AND STABILIZED. VEGETATED WATERWAYS NEED TO BE STABILIZED EARLY DURING THE GROWING SEASON (PRIOR TO SEPTEMBER 15). IF FINAL SEEDING OF WATERWAYS IS DELAYED PAST SEPTEMBER 15, EMERGENCY PROVISIONS SUCH AS SOD OR RIPRAP MAY BE REQUIRED TO STABILIZE THE CHANNEL. WATERWAYS SHOULD BE FULLY STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.

PERMANENT STABILIZATION DEFINED
 A. SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS AN 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR KILLING OF THE TOPSOIL.

B. SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.

D. RIPRAP. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.

E. AGRICULTURAL USE. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES (E.G., PIPELINES ACROSS CROP LAND), PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO AGRICULTURAL USE.

F. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

G. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIPRAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING FLOOD VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN-CUTTING OF THE CHANNEL.

GENERAL CONSTRUCTION PHASE
 THE FOLLOWING EROSION CONTROL MEASURES SHALL BE FOLLOWED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION OF THIS PROJECT:

A. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDDED WITH RYE AT 3 POUNDS/1,000 SF AND MULCHED, AND REUSED AS REQUIRED. SILT FENCING SHALL BE PLACED DOWN GRADIENT FROM THE STOCKPILED LOAM. STOCKPILE TO BE LOCATED BY DESIGNATION OF THE OWNER AND INSPECTING ENGINEER.

B. THE INSPECTING ENGINEER AT HIS/HER DISCRETION, MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES AND/OR SUPPLEMENTAL VEGETATIVE PROVISIONS TO MAINTAIN STABILITY OF EARTHWORKS AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY SUPPLEMENTAL MEASURES AS DIRECTED BY THE INSPECTING ENGINEER. FAILURE TO COMPLY WITH THE ENGINEER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.

C. EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISH SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.

D. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE ADEQUATELY STABILIZED.

E. ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

F. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS.

G. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.

H. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

I. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS.

J. EXCEPT FOR APPROVED LANDFILLS OR NON-STRUCTURAL FILLS, FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.

K. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS.

L. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION.

M. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY.

N. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

O. REMOVE ANY TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

PERMANENT VEGETATION
 PERMANENT VEGETATIVE COVER SHOULD BE ESTABLISHED ON DISTURBED AREAS WHERE PERMANENT, LONG LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL, TO REDUCE DAMAGES FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE ENVIRONMENT.

SEEDBED PREPARATION
A. GRADE AS FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS SUCH AS THOSE OFFERED BY THE UNIVERSITY OF MAINE SOIL TESTING LABORATORY. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE OFFICE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 15.4 POUNDS PER 1,000 SQUARE FEET USING 19-20-20 (IN NPK20-K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQ. FT.).

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE. D. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.

D. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE TILLED AND FIRMED AS ABOVE.

E. PERMANENT SEEDING SHOULD BE MADE 45 DAYS PRIOR TO THE FIRST KILLING FROST OR AS A DORMANT SEEDING WITH MULCH AFTER THE FIRST KILLING FROST AND BEFORE SNOWFALL. WHEN CROWN VETCH IS SEEDDED IN LATER SUMMER, AT LEAST 30% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SEEDING DATES, MULCH ACCORDING TO THE TEMPORARY MULCHING BMP AND OVER WINTER STABILIZATION AND CONSTRUCTION TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

F. FOLLOWING SEED BED PREPARATION, SWALE AREAS, FILL AREAS AND BACK SLOPES SHALL BE SEEDDED AT A RATE OF 3 LBS./1,000 S.F. WITH A MIXTURE OF 35% CREEPING RED FESCUE, 6% RED TOP, 24% KENTUCKY BLUEGRASS, 10% PERENNIAL RYEGRASS, 20% ANNUAL RYEGRASS AND 5% WHITE DUTCH CLOVER.

G. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDDED SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING.

H. AREAS WHICH CANNOT BE SEEDDED WITHIN THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION AND THE AREA SHOULD BE SEEDDED AT THE BEGINNING OF THE GROWING SEASON.

WINTER CONSTRUCTION PHASE
 IF AN AREA IS NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES BY NOVEMBER 15, THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES.

A. PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.

B. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.

C. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.

D. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR ALL SLOPES GREATER THAN 8 % OR OTHER AREAS EXPOSED TO DIRECT WIND.

E. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGEWAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3 %.

F. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

G. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SO THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

H. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.

I. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.

J. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THAT SAME DAY.

K. IF SNOWFALL IS GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDDED AND MULCHED.

L. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.

M. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.

MAINTENANCE AND INSPECTION PHASE
A. CONTRACTOR SHALL INSPECT DISTURBED AND IMPERVIOUS AREAS, AND EROSION AND STORMWATER CONTROL MEASURES. AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE PARCEL AT LEAST ONCE A WEEK, AND BEFORE AND AFTER A STORM EVENT, PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IF EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

B. A LOG (REPORT) MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPs THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.

2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.

4. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.

6. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.

7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.

8. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.

9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2004 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.

10. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.

11. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.

12. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRS.A 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.

13. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.

14. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

15. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.

16. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A MAINEDOT PERMIT AS WELL AS PERMITS FROM THE MUNICIPALITY AS APPLICABLE.

17. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.

18. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

19. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.

20. WHERE THE TERMS "APPROVED EQUAL," "OTHER APPROVED," "EQUAL TO," "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF THE OWNER AND/OR OWNER'S ENGINEER.

21. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.

22. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.

23. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.

24. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.

25. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.

EXISTING CONDITIONS NOTES

1. THERE MAY BE ADDITIONAL UNDERGROUND WIRES, CABLES, UTILITIES, AND/OR STRUCTURES NOT SHOWN ON THIS PLAN. THE LOCATIONS SHOWN HEREON ARE BASED UPON SURFACE FEATURES VISIBLE AT THE TIME OF THE SURVEY AND FROM PLAN REFERENCE #2. NO EXCAVATIONS WERE MADE DURING THE COURSE OF THIS SURVEY TO VERIFY AND/OR LOCATE ANY UNDERGROUND STRUCTURES.

2. VERTICAL DATUM: ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88).

3. HORIZONTAL DATUM: MAIN STATE PLANE, EAST ZONE, NAD83, US FEET.

4. SITE BENCHMARKS CONSIST OF MAG NAILS SET IN THE PAVEMENT. BENCHMARKS WERE LOCATED USING A LEICA VIVA SMARTWORX REAL-TIME KINEMATIC (RTK) DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) UNIT.

SITE DATA

APPLICANT: MAINE MARITIME ACADEMY
 ATTN: RICHARD ROSEN
 WATER STREET, CASTINE, MAINE

DEED REFERENCE: BOOK 692 PAGE 340

TAX MAP / LOT: 21 / 110

ZONING: COMMERCIAL

GENERAL NOTES

1. VEHICLE ACCESS TO PROJECT AREA IS THROUGH MAIN STREET. CONTRACTOR TO BE AWARE THAT THE GRADIENT IS STEEP AND PARKING AREAS ADJACENT TO THE SITE ALONG WITH THE SITE ENTRANCE AREA ARE VERY CONGESTED DURING THE SUMMER MONTHS. ALL TRUCK DELIVERIES SHALL BE RESTRICTED TO THE HOURS BETWEEN 6 AM AND 9 AM. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING TRUCKS HAVE ADEQUATE MANEUVERING ROOM IN COMPLIANCE WITH APPROVALS FROM THE TOWN OF CASTINE.

2. CONSTRUCTION VEHICLES SHALL NOT BE PARKED ON MAIN STREET OR IN TOWN PARKING LOT.

3. CONTRACTOR SHALL PROVIDE ADEQUATE PARKING WITHIN LAYDOWN AREA OR MAKE OTHER ARRANGEMENTS FOR NON-PUBLIC, OFF-SITE PARKING.

4. BARGE ACCESS TO THE SITE IS UNRESTRICTED PROVIDED BARGE BERTHING IS MAINTAINED WITHIN THE LIMITS OF CONSTRUCTION.

5. BARGE OR CONSTRUCTION VESSEL APPROACHES ARE SUBJECT TO THE ACCEPTED REQUIREMENTS FOR NAVIGATION AND SEAMANSHIP.

6. BARGE OR CONSTRUCTION VESSEL APPROACH TO THE SITE SHALL BE COORDINATED WITH THE HARBOR MASTER PRIOR TO EXECUTION TO AVOID CONFLICT WITH HARBOR RELATED ACTIVITIES.

7. DREDGING OPERATIONS SHALL CONFORM TO REQUIREMENTS AND REGULATIONS AS SPECIFIED IN PERMITS.

8. A CONSTRUCTION MANAGEMENT PLAN AND TRAFFIC CONTROL PLAN WILL BE REQUIRED TO BE PREPARED BY THE CONTRACTOR. DUE TO SPACE RESTRICTIONS, CONTRACTOR SHALL BE REQUIRED TO MAKE ARRANGEMENTS TO STORE MATERIALS OFF-SITE OR ON BARGES IN THE HARBOR.

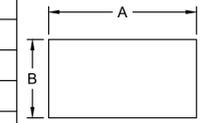
ABBREVIATIONS

@	AT	MAX.	MAXIMUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MDOT	MAINE DEPT. OF TRANSPORTATION
APPROX:±	APPROXIMATELY	MH	MANHOLE
		MIL	0.001 INCHES
BLOG	BUILDING	MIN	MINIMUM
CL	CENTERLINE	N	NORTHING
CB	CATCH BASIN	NE	NORTHEAST
CC	CENTER OF CURVE	N.T.S.	NOT TO SCALE
CLR	CLEAR	NWT	NON WOVEN GEOTEXTILE
CMP	CORRUGATED METAL PIPE		
CO	CLEANOUT	OD	OUTSIDE DIAMETER
CPE	CORRUGATED POLYETHYLENE	O.C.	ON CENTER
		OH	OVERHEAD
		OZ	OUNCES
DI	DUCTILE IRON		
DA	DIAMETER		
DSSG	DOUBLE SIDED GEOCOMPOSITE	PCMH	PRIMARY COLLECTION MANHOLE
SSGC	SINGLE SIDED GEOCOMPOSITE	PERF	PERFORATED
		PS1	PUMP STATION 1
E	EASTING	PSF	POUNDS PER SQUARE FOOT
EL	ELEVATION	PSI	POUNDS PER SQUARE INCH
EFM	EXISTING FORCE MAIN	PVC	POLYVINYL CHLORIDE
EPS	EXTRUDED POLYSTYRENE	PL	PROPERTY LINE
FLR'	FLOORING	POH	PROPOSED OVERHEAD ELECTRIC
FM	FORCEMAIN	PUGE	PROPOSED UNDERGROUND ELECTRIC
GAL	GALLON	R	RADIUS
GALV	GALVANIZED		
GCL	GEOSYNTHETIC CLAY LINER, TYPE A, TYPE B	S	SLOPE
SCMH	GALLONS PER HOUR	SCMH	SECONDARY COLLECTION MANHOLE
GPH	GALLONS PER MINUTE	SCL	STORMWATER COLLECTION LINE
SPM	GALLONS PER MINUTE	SCS	STORMWATER COLLECTION SYSTEM
GVS	GAS VENTING SAND	SDR	STANDARD DIMENSION RATIO
		SE	SOUTHEAST
		SHT	SHEET
HDPE	HIGH DENSITY POLYETHYLENE	SQ	SQUARE
		SS	STAINLESS STEEL
		SY	SQUARE YARD
IN.	INCHES		
INT.	INTERSECTION	TBM	TEMPORARY BENCH MARK
INV.	INVERT	TOC	TOP OF CONCRETE
		Typ	TYPICAL
LGR	LEACHATE COLLECTION & REMOVAL		
LOL	LIMIT OF LINER	USGS	UNITED STATES GEOLOGICAL SURVEY
LTP	LEACHATE TRANSPORT PIPE		
LCS	LEACHATE COLLECTION SYSTEM	VB	VAPOR BARRIER
LDS	LEAK DETECTION SYSTEM	W	WITH

LEGEND:



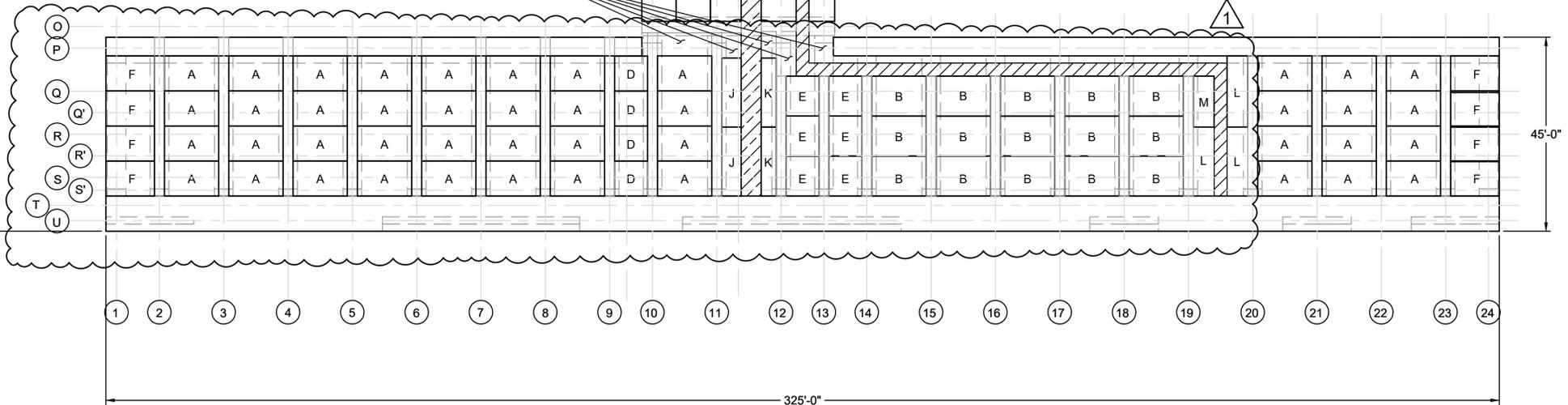
10" DECK PLANK INFORMATION			
PLANK TYPE*	LENGTH 'A' (FT)	WIDTH 'B' (FT)	QUANTITY
A	12'-2"	8'-1 1/2"	74
B	12'-2"	8'-11 3/4"	15
C	13'-7"	7'-6"	14
D	7'-2"	8'-1 1/2"	4
E	7'-2"	8'-11 3/4"	6
F	11'-1"	8'-1 1/2"	8
G	12'-2"	6'-0 1/4"	13
H	12'-2"	6'-4 1/2"	13
I	12'-2"	5'-1 1/4"	13
J	3'-4 1/4"	16'-3"	2
K	2'-4 1/4"	16'-3"	2
L	3'-8 1/4"	16'-3"	3
M	3'-8 1/4"	10'-8 1/4"	1
N	13'-7"	7'-6"	2



1
 * - PLANK TYPE ORIENTATION MAY CHANGE DUE TO LOCATION ON THE PIER
 ** - TYPE D/G LENGTH/WIDTH ACCOUNTS FOR NOTCH ON CORNER OF PANEL

LEGEND	
	PRE-CAST CONCRETE
	ELECTRICAL TRENCH
	MECHANICAL TRENCH

I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024



PIER DECK PLANK PLAN
 1/16" = 1'-0"

ADDENDUM #4		DDF	3/8/2024
NO.	ISSUE/DESCRIPTION	BY	DATE
1			

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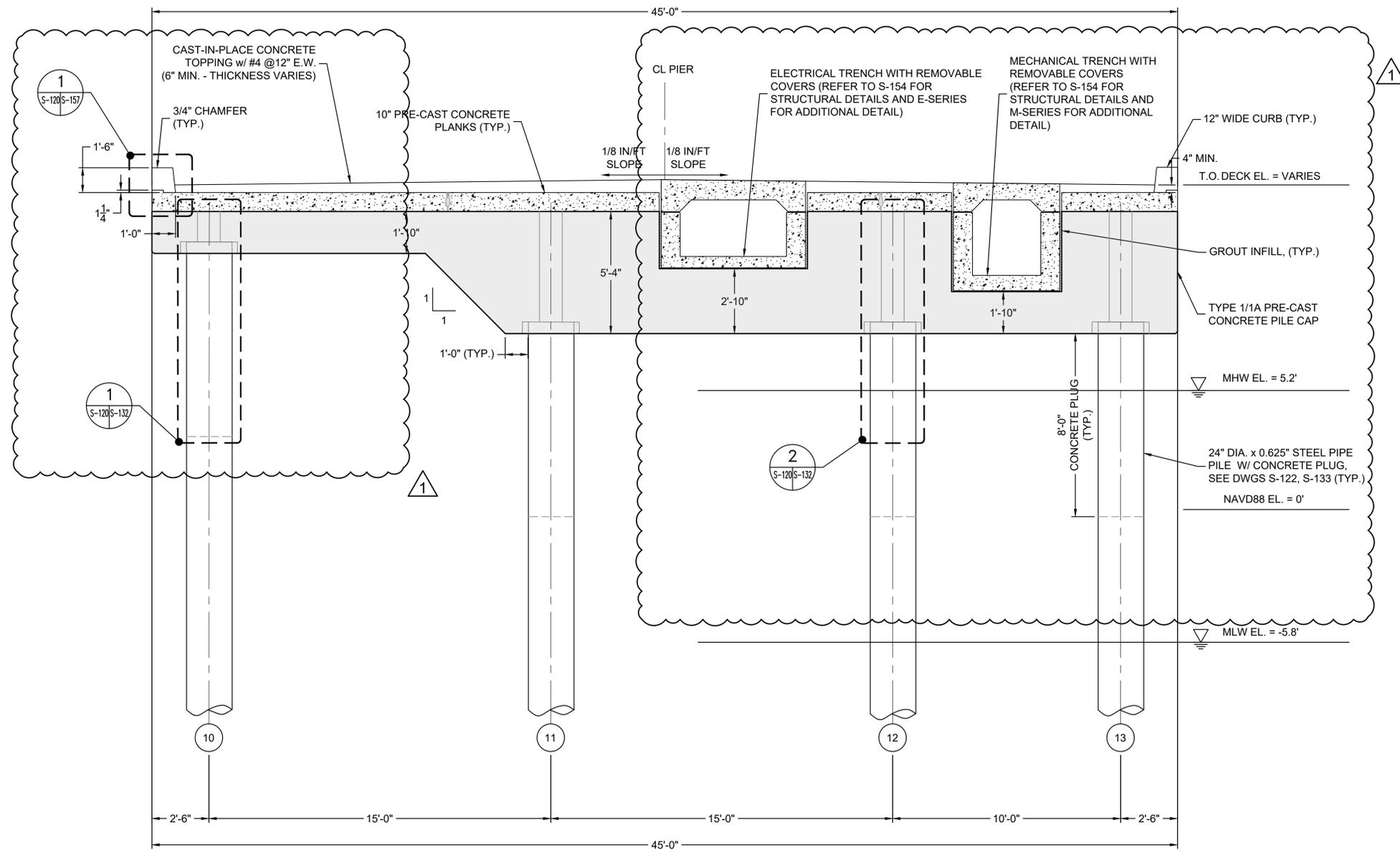
MAINE MARITIME ACADEMY WATERFRONT CAMPUS
PIER UPGRADES AND WATERFRONT IMPROVEMENTS
CASTINE, MAINE

PIER DECK PLANK PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: RKC DESIGNED BY: MAR	REVIEWED BY: CWC DRAWN BY: BDW
DATE: JANUARY 2024	CHECKED BY: DDF SCALE: AS NOTED REVISION NO.

DRAWING
S-116
 SHEET NO. 45 OF 142

© 2024 - GZA GeoEnvironmental, Inc. WATERFRONT IMPROVEMENTS_ADD_2024-02-29.DWG 5:116 PLANK PLAN, March 7, 2024, MICHAEL AJEEN

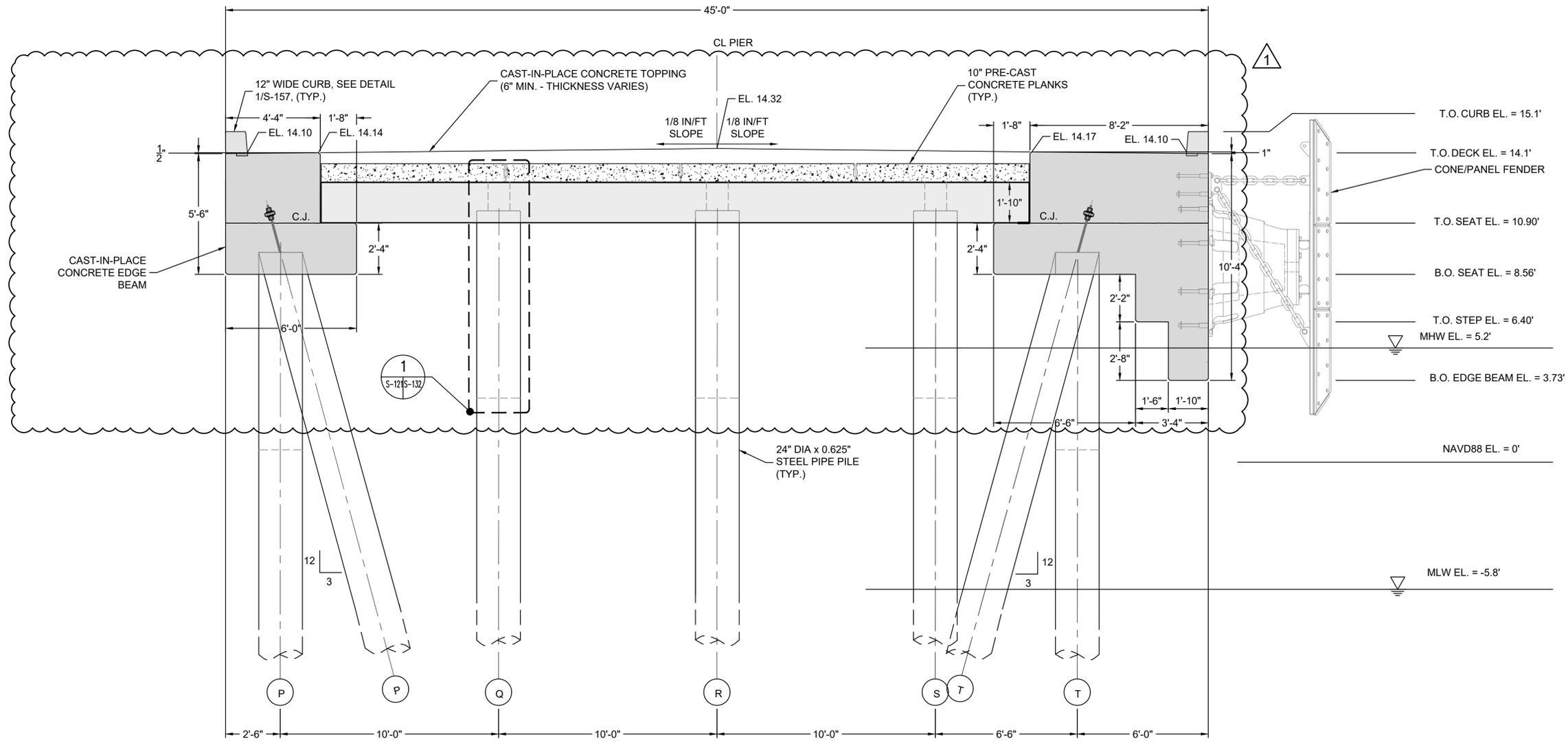


I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

A SECTION: TYPE 1 PILE CAP (PRE-CAST)
 S-113S-120 3/8" = 1'-0"

NO.	ADDENDUM #4 ISSUE/DESCRIPTION	DDF	3/8/2024
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
PIER SECTIONS - 1 SECTION A - TYPE 1 CAP			
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: DRAWN BY: BDW PROJECT NO. 03.0035109.00	CHECKED BY: SCALE: REVISION NO.	DRAWING S-120 SHEET NO. 49 OF 142

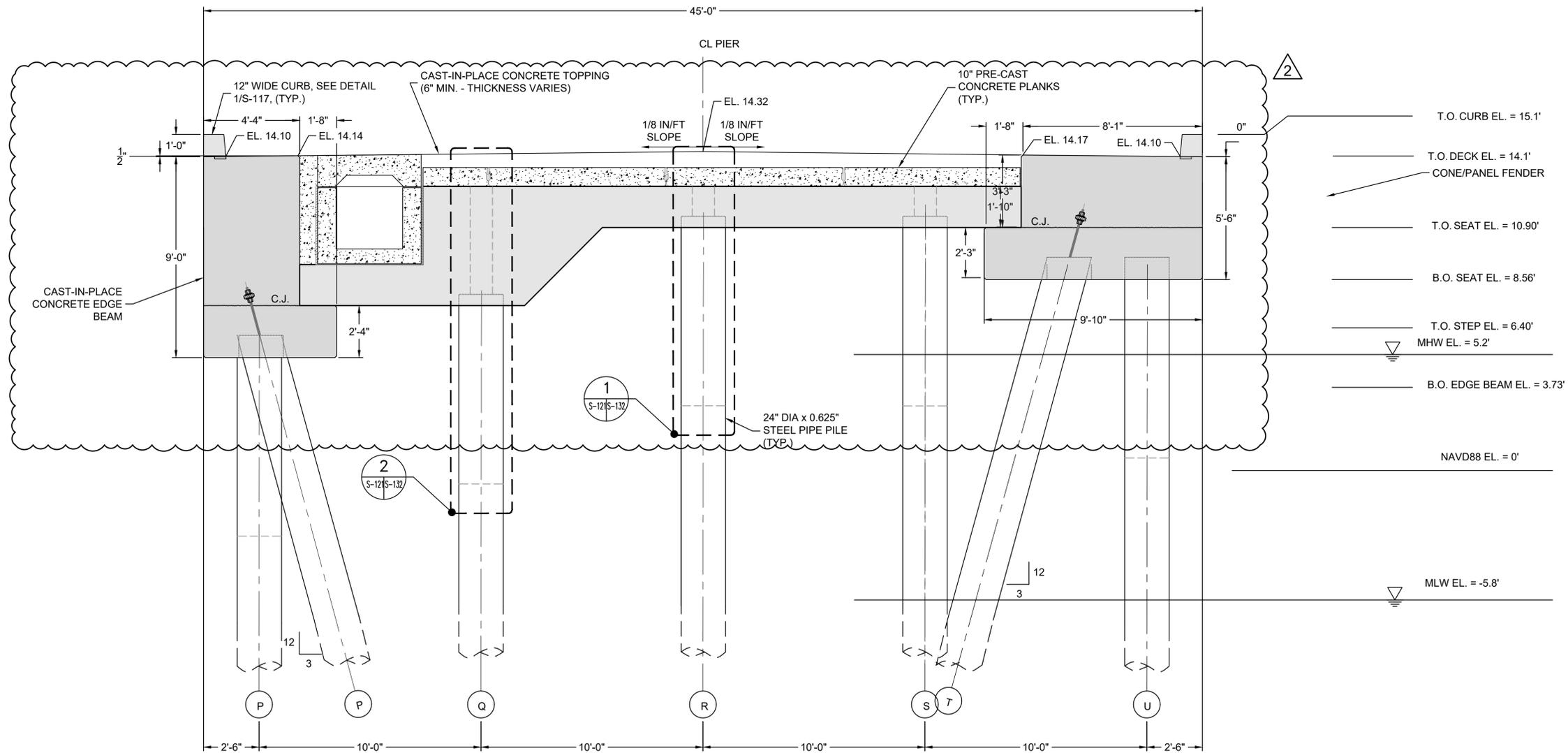
© 2024 - GZA GeoEnvironmental, Inc. WATERFRONT IMPROVEMENTS_ADD_2024-02-28.DWG S-121 SECT. B (TYPE 2) March 8, 2024 MICHAEL ABBIN



B SECTION: PILE CAP TYPE 2 (PRE-CAST)
 S-113 S-121 3/8" = 1'-0"

I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

NO.	ADDENDUM #4 ISSUE/DESCRIPTION	DDF	3/8/2024
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
PIER SECTIONS - 3 SECTION B - TYPE 2 CAP			
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR: RKC	DESIGNED BY: MAR	REVIEWED BY: BDW	CHECKED BY: S-121
DATE: JANUARY 2024	DRAWN BY: BDW	SCALE: PROJECT NO. 03.0035109.00	REVISION NO. SHEET NO. 50 OF 142



C SECTION: PILE CAP TYPE 5 (PRE-CAST)
 S-113/S-122 3/8" = 1'-0"

I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

NO.	ADDENDUM #4	ISSUE/DESCRIPTION	BY	DATE
2			DDF	3/8/2024

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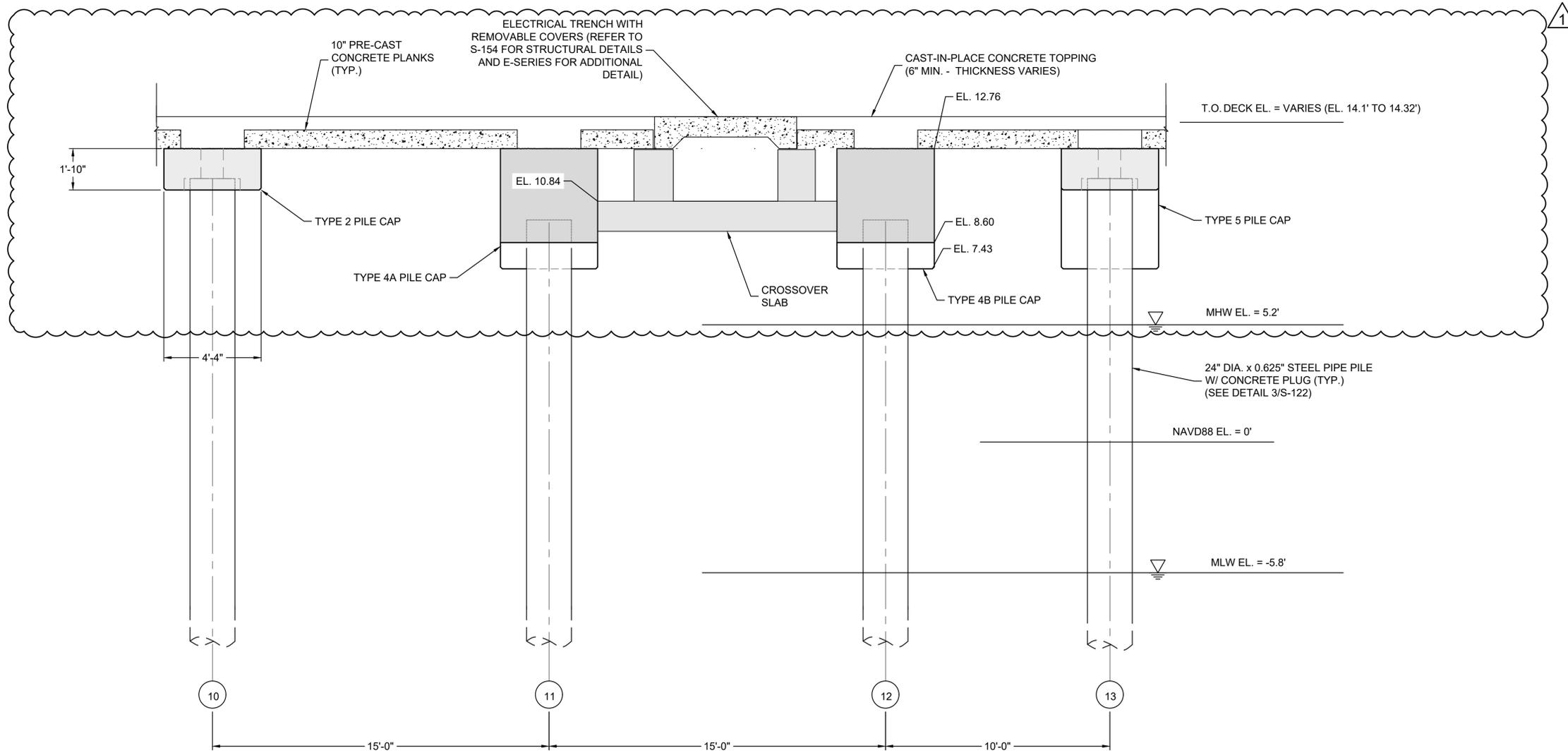
MAINE MARITIME ACADEMY WATERFRONT CAMPUS
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS
 CASTINE, MAINE

PIER SECTIONS - 3
 SECTION C - TYPE 5 CAP

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PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: DRAWN BY: BDW PROJECT NO. 03.0035109.00
CHECKED BY:	SCALE: REVISION NO.

S-122
 SHEET NO. 51 OF 142

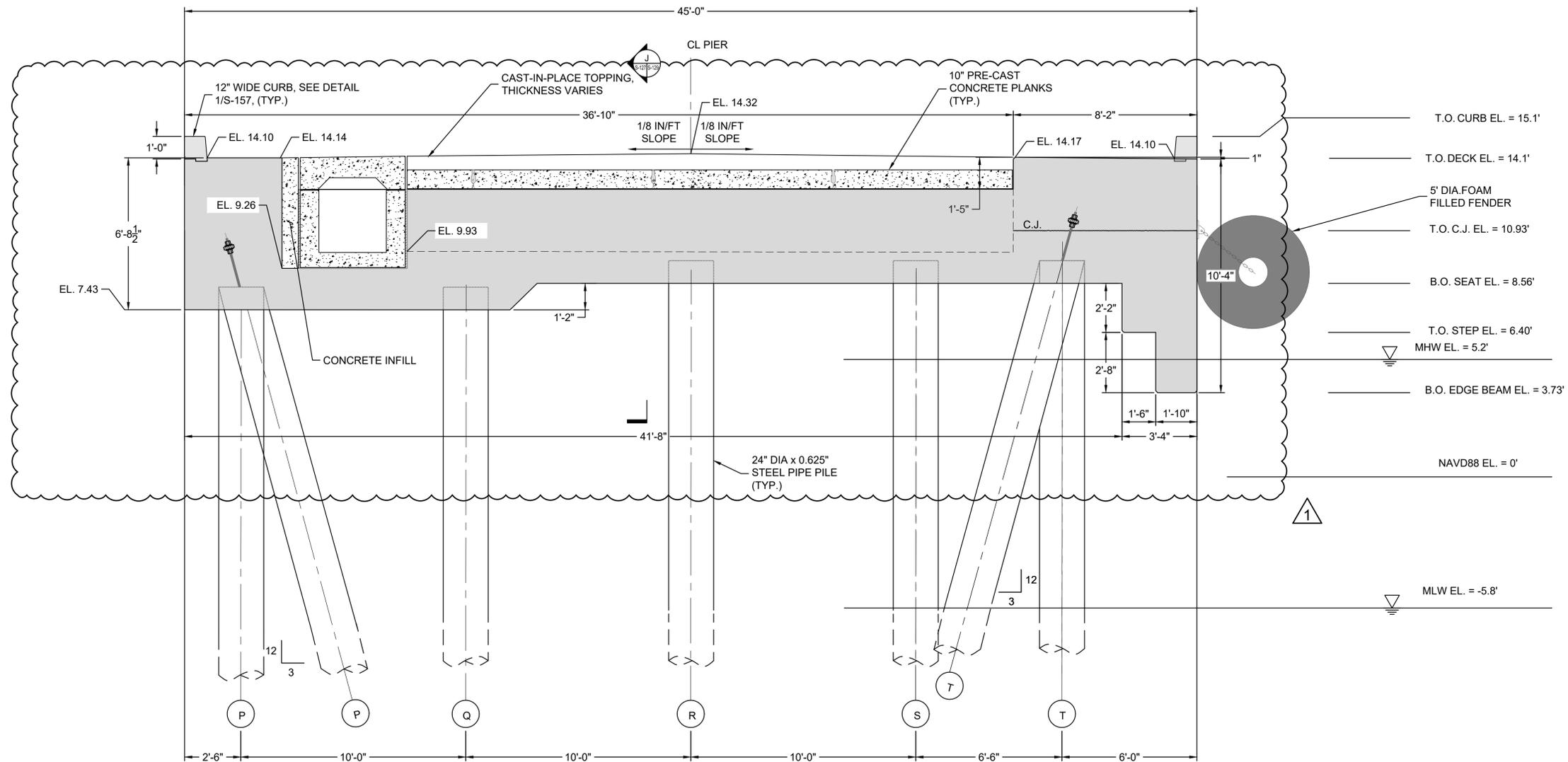
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 WATERFRONT IMPROVEMENTS_ADD_2024-02-28.DWG S-122 SECT. C (TYPE 5) March 8, 2024 MICHAEL AUBIN



I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

G SECTION: PILE CAP 4A & 4B @ TRENCH (C.I.P.)
 S-113S-126 3/8" = 1'-0"

NO.	ADDENDUM #4 ISSUE/DESCRIPTION	DDF	3/8/2024
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
PIER SECTIONS - 7 SECTION G - PILE CAPS 4A/4B @ TRENCH			
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: DRAWN BY: BDW PROJECT NO. 03.0035109.00	CHECKED BY: SCALE: REVISION NO.	DRAWING S-126 SHEET NO. 55 OF 142



H SECTION: PILE CAP TYPE 5A (C.I.P.)
 3/8" = 1'-0"

I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

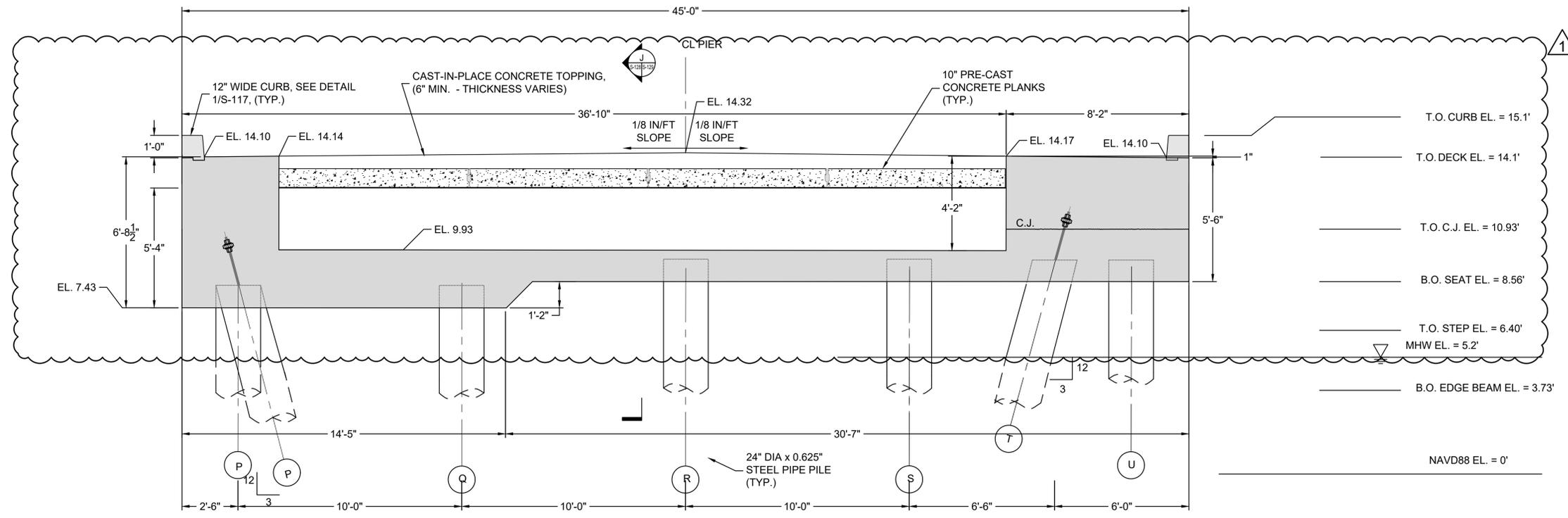
NO.	ADDENDUM #4	ISSUE/DESCRIPTION	BY	DATE
1			DDF	3/8/2024

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MAINE MARITIME ACADEMY WATERFRONT CAMPUS
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS
 CASTINE, MAINE

PIER SECTIONS - 8
 SECTION H - PILE CAP TYPE 5A

PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: DRAWN BY: BDW PROJECT NO. 03.0035109.00 REVISION NO.
CHECKED BY:	DRAWING SCALE: S-127 SHEET NO. 56 OF 142

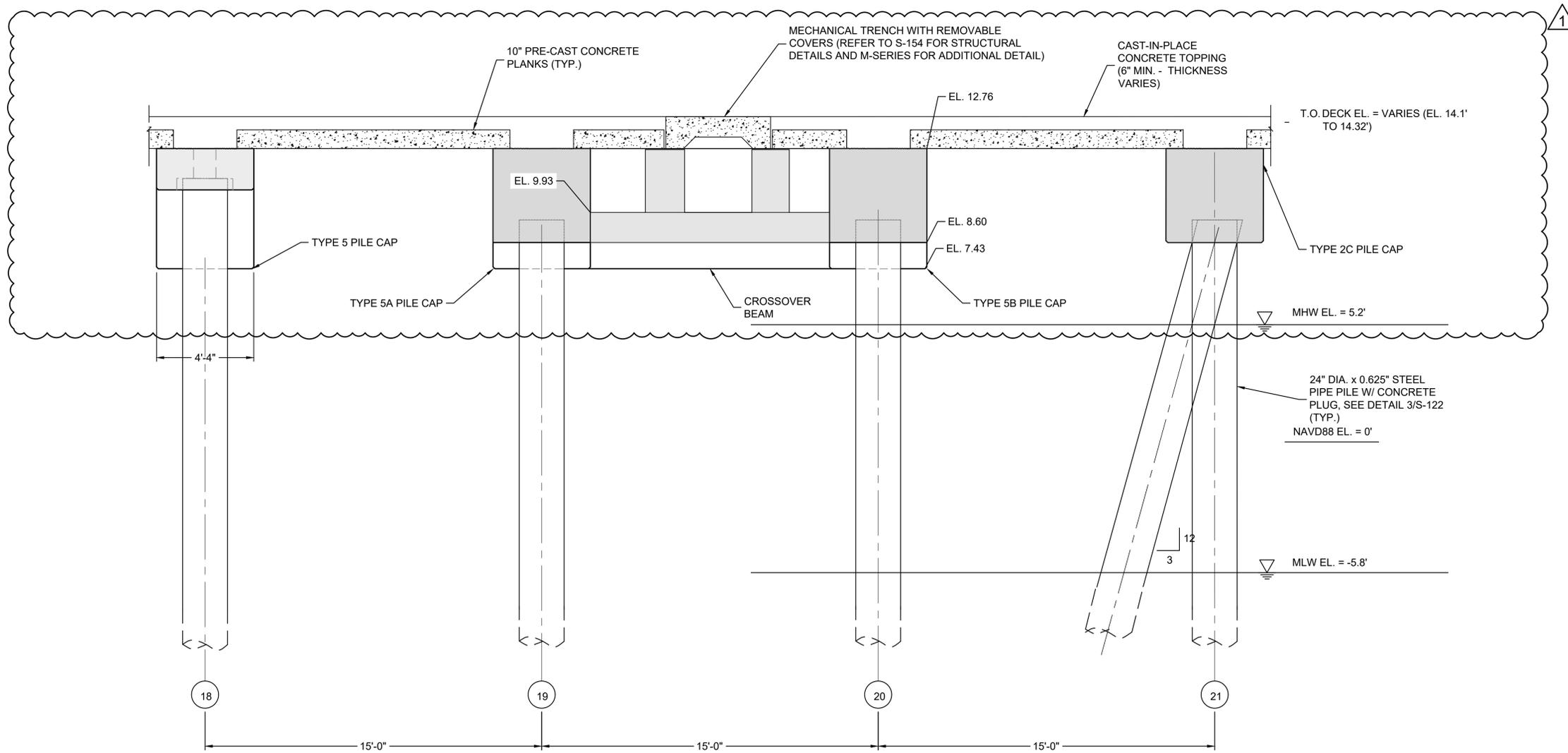


I SECTION: PILE CAP TYPE 5B (C.I.P)
 5-1135-128 3/8" = 1'-0"

I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

NO.	ADDENDUM #4 ISSUE/DESCRIPTION	DDF BY	3/8/2024 DATE
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
PIER SECTIONS - 8 SECTION H - PILE CAP TYPE 5B			
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: DRAWN BY: BDW PROJECT NO. 03.0035109.00	CHECKED BY: SCALE: REVISION NO.	DRAWING S-128 SHEET NO. 57 OF 142

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I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

J SECTION: PILE CAP 5A & 5B @ TRENCH (C.I.P.)
 S-127 S-128 $\frac{5-113 \text{ S-128}}{3/8"} = 1'-0"$

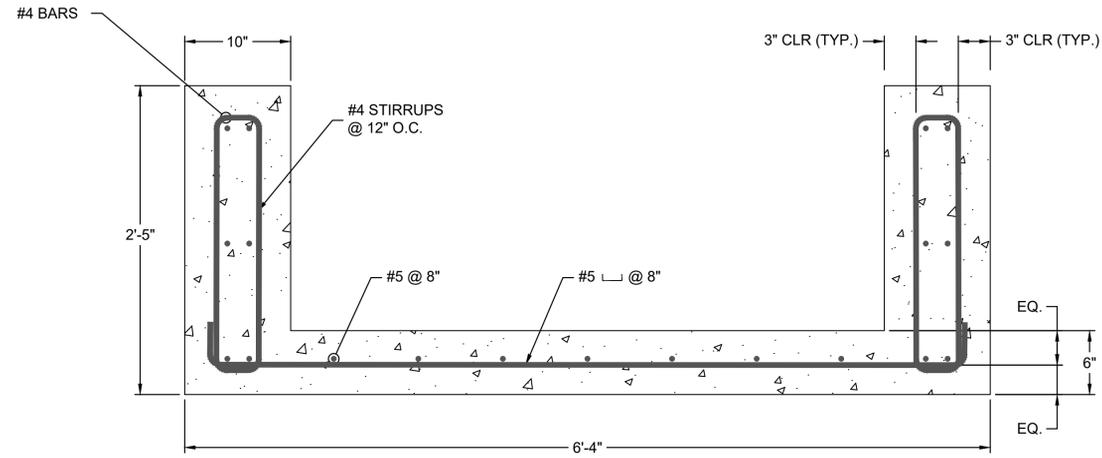
NO.	ADDENDUM #4 ISSUE/DESCRIPTION	DDF	BY	DATE
1				3/8/2024

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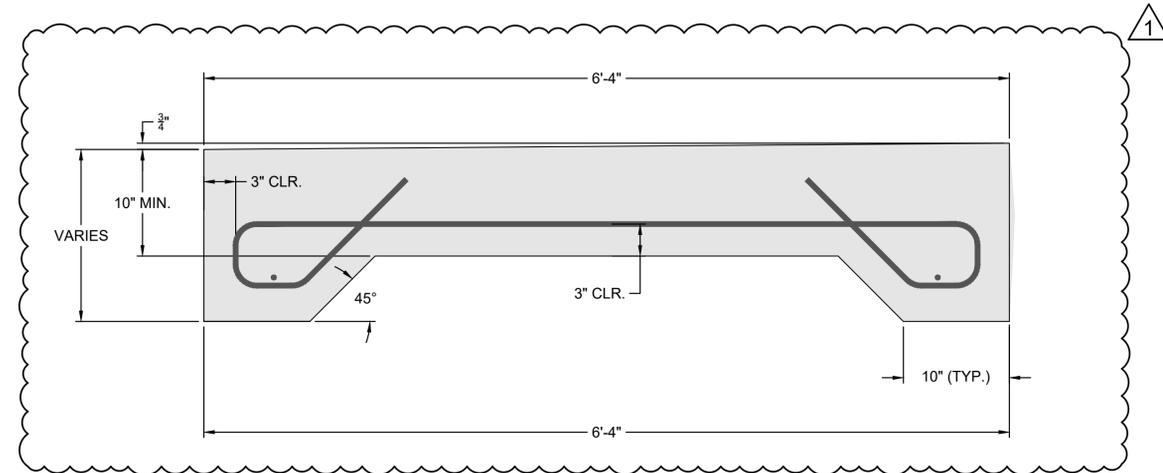
**MAINE MARITIME ACADEMY WATERFRONT CAMPUS
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS
 CASTINE, MAINE**

**PIER SECTIONS - 10
 SECTION G - PILE CAPS 5A/5B @ TRENCH**

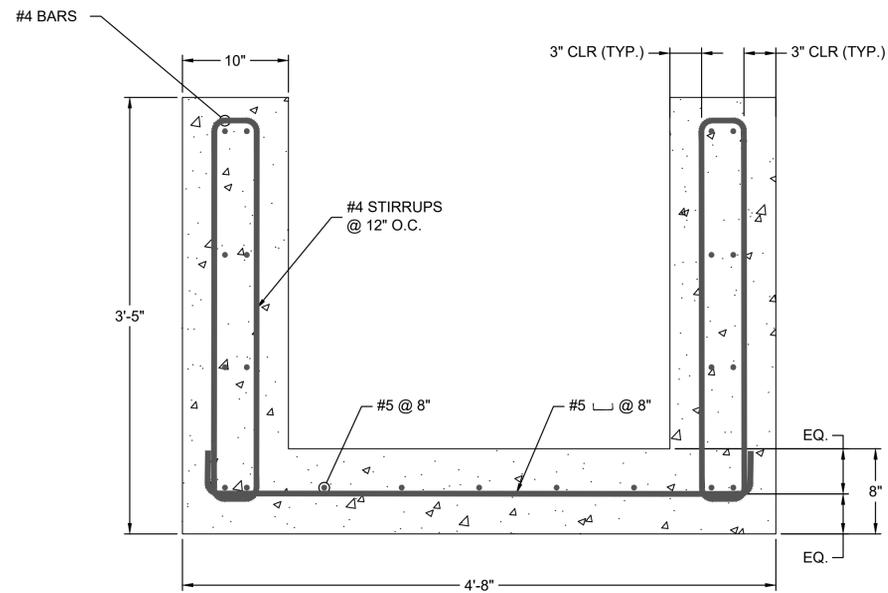
PREPARED BY:		GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR:		MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR:	RKC	REVIEWED BY:	BDW	CHECKED BY:		DRAWING S-129 <small>SHEET NO. 58 OF 142</small>	
DESIGNED BY:	MAR	DRAWN BY:	BDW	SCALE:			
DATE:	JANUARY 2024	PROJECT NO.:	03.0035109.00	REVISION NO.:			



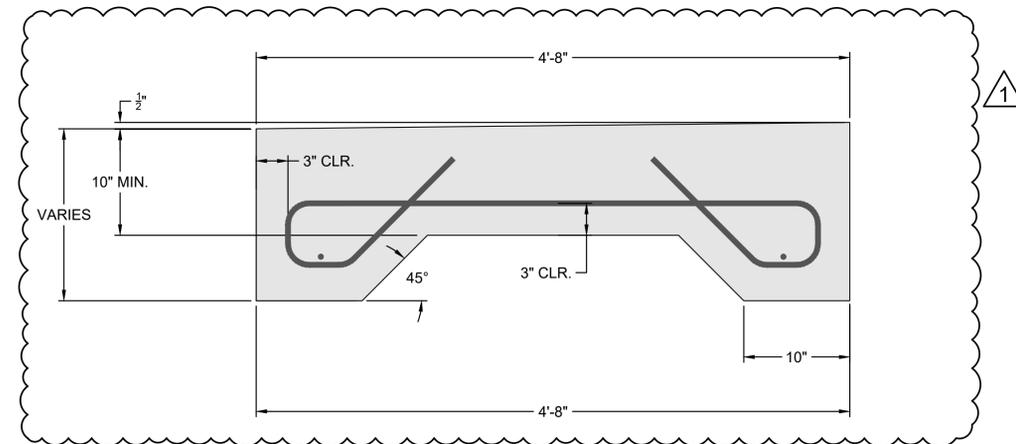
1 TYP. PRE-CAST CONCRETE PLANK WITH ELECTRICAL TRENCH SECTION
 S-120/S-153 1/2" = 1'-0"



2 TYP. PRE-CAST CONCRETE COVER FOR ELECTRICAL TRENCH SECTION
 S-120/S-153 1/2" = 1'-0"



3 TYP. PRE-CAST CONCRETE PLANK WITH MECHANICAL TRENCH SECTION
 S-121/S-153 1/2" = 1'-0"



4 TYP. PRE-CAST CONCRETE COVER FOR MECHANICAL TRENCH SECTION
 S-121/S-153 1/2" = 1'-0"

I.F.B.
 NOT FOR CONSTRUCTION
 JANUARY 26, 2024

UTILITY TRENCH NOTES:

1. ALL EXPOSED CONCRETE TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER AT ALL LOCATIONS. ALL CONCRETE NOT TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER AT ALL LOCATIONS.
2. SEE UTILITY DRAWINGS FOR ADDITIONAL INFORMATION.
3. GROUT FILL SIDES OF TRENCHES BETWEEN TRENCH AND PILE CAPS.

ADDENDUM #4		DDF	3/8/2024
NO.	ISSUE/DESCRIPTION	BY	DATE
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
PRE-CAST UTILITY TRENCH DETAILS			
<small>PREPARED BY:</small> GZA GeoEnvironmental, Inc. www.gza.com		<small>PREPARED FOR:</small> MAINE MARITIME ACADEMY CASTINE, ME	
<small>PROJ MGR:</small> RKC <small>DESIGNED BY:</small> MAR <small>DATE:</small> JANUARY 2024	<small>REVIEWED BY:</small> <small>DRAWN BY:</small> BDW <small>PROJECT NO.:</small> 03.0035109.00	<small>CHECKED BY:</small> <small>SCALE:</small> <small>REVISION NO.:</small>	<small>DRAWING</small> S-154 <small>SHEET NO. 83 OF 142</small>