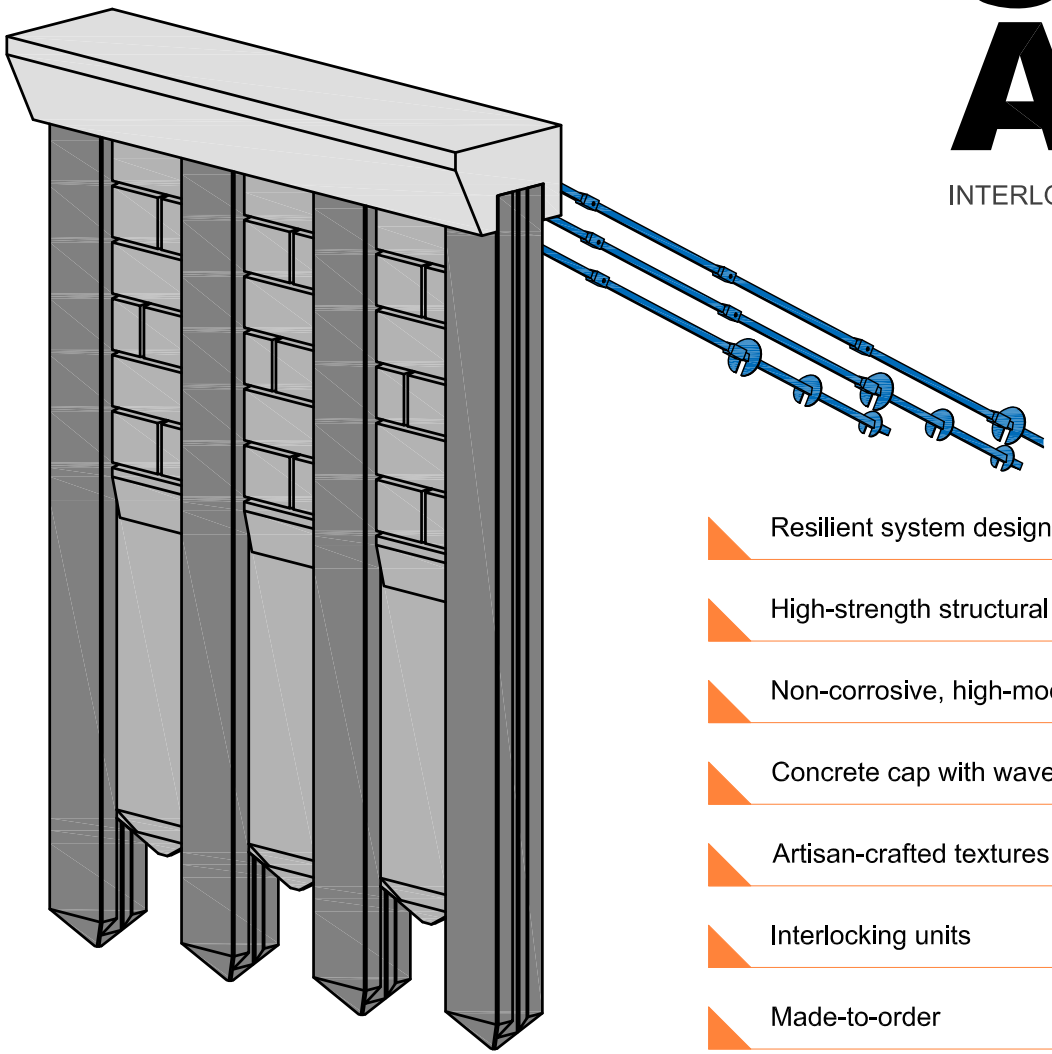
COAST ARMOR

INTERLOCKING CONCRETE PILE SYSTEM



- Resilient system designed for extreme weather events
- High-strength structural concrete
- Non-corrosive, high-modulus reinforcement
- Concrete cap with wave-deflecting re-curve shape
- Artisan-crafted textures
- Interlocking units
- Made-to-order

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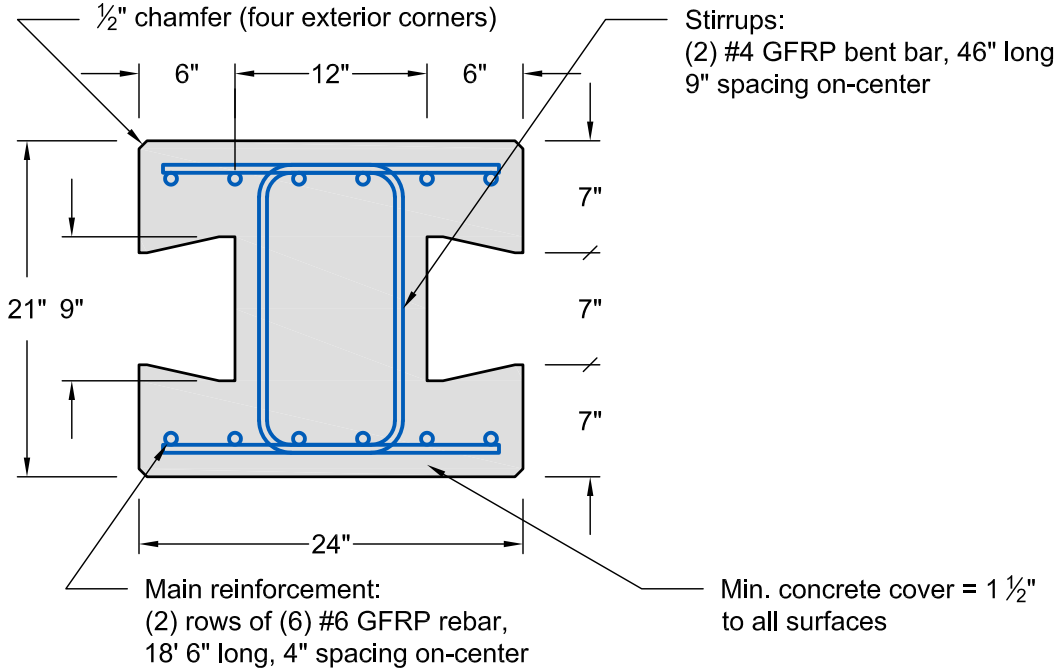
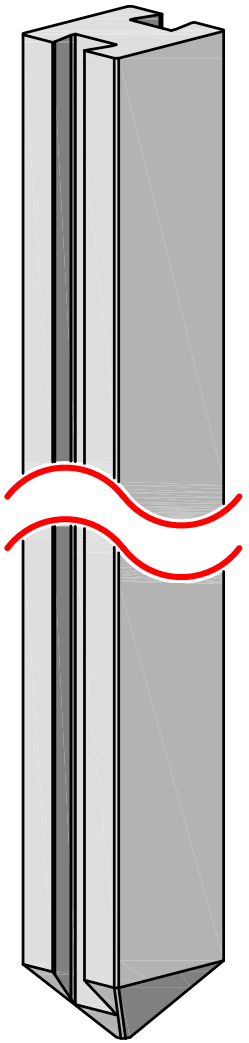
MAIN PILE

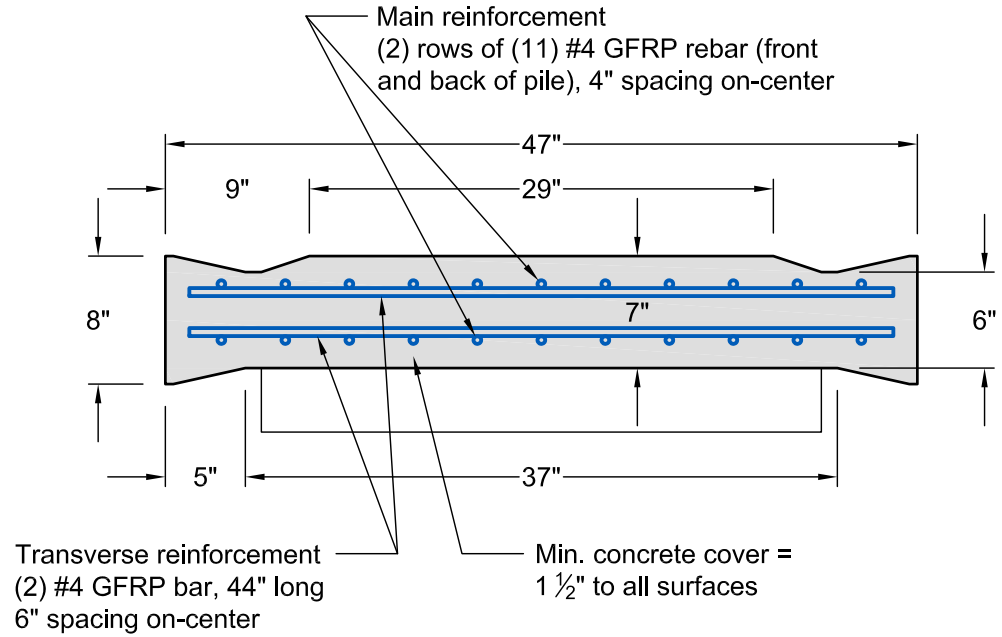


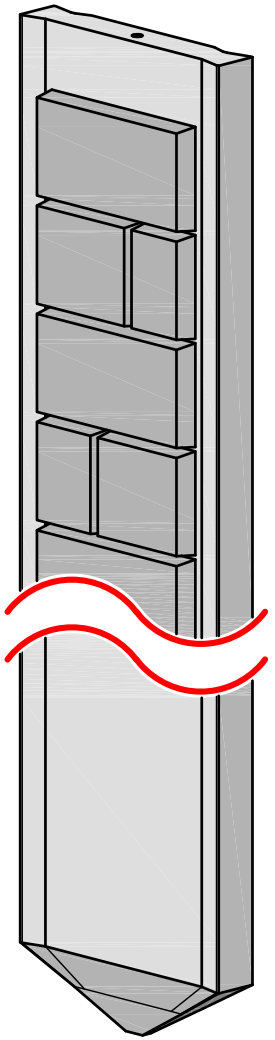


Length	As specified
Volume	0.104 cyd / ft
Weight	410 lb / ft
Maximum Bending Moment Capacity, ϕM_n *	230,000 lb * ft
Maximum Shear Capacity, ϕV_n *	36,000 lb

* Reported capacity is calculated for standard reinforcement layout shown. Coast Armor piles are made-to-order. The actual capacity of piles will be based on the reinforcement specified by the design engineer of record to meet the requirements of the project.

PANEL PILE



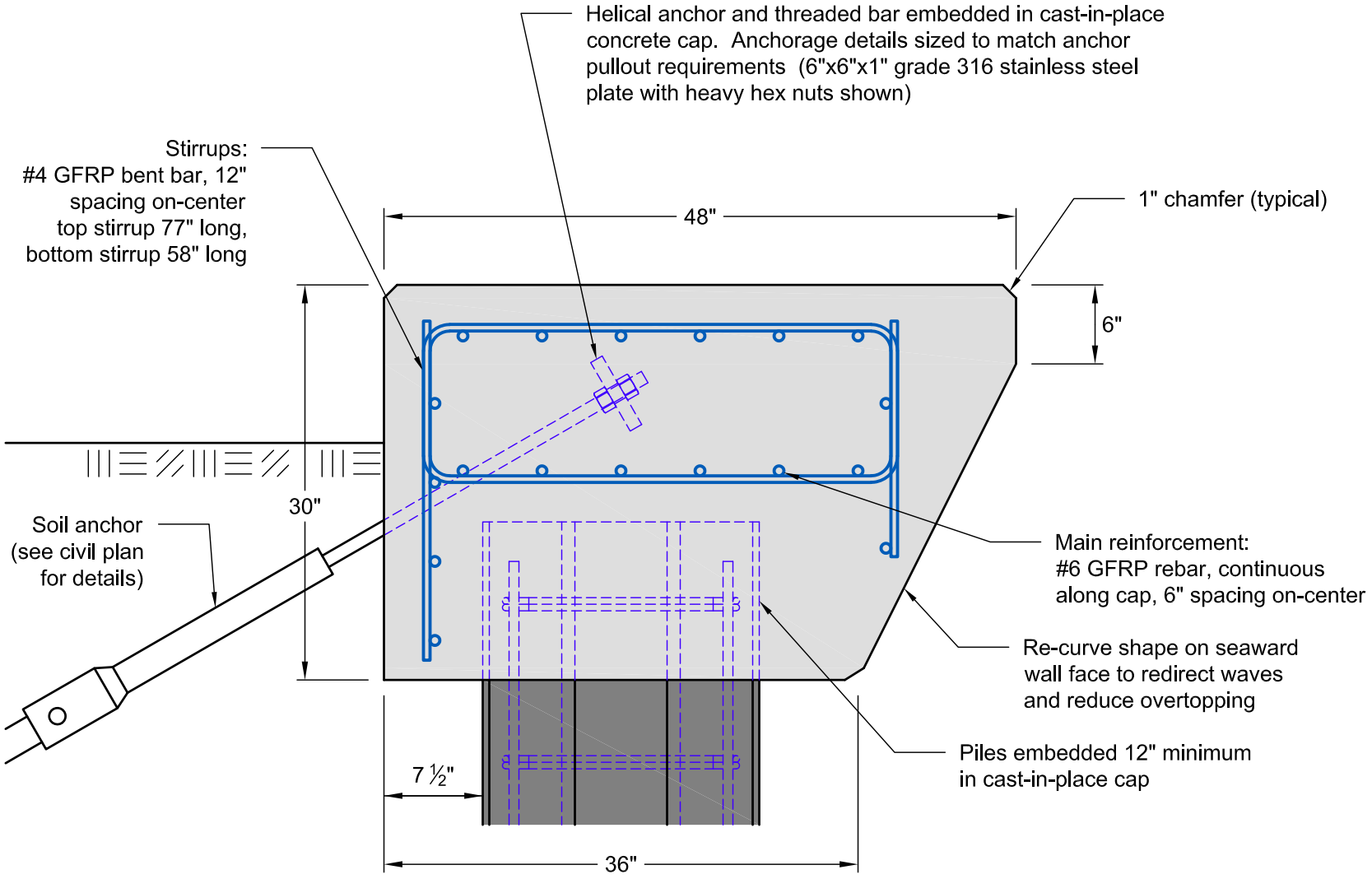


Length	As specified
Volume *	0.097 cyd / ft
Weight *	380 lb / ft
Maximum Bending Moment Capacity, ϕM_n **	8,700 lb * ft

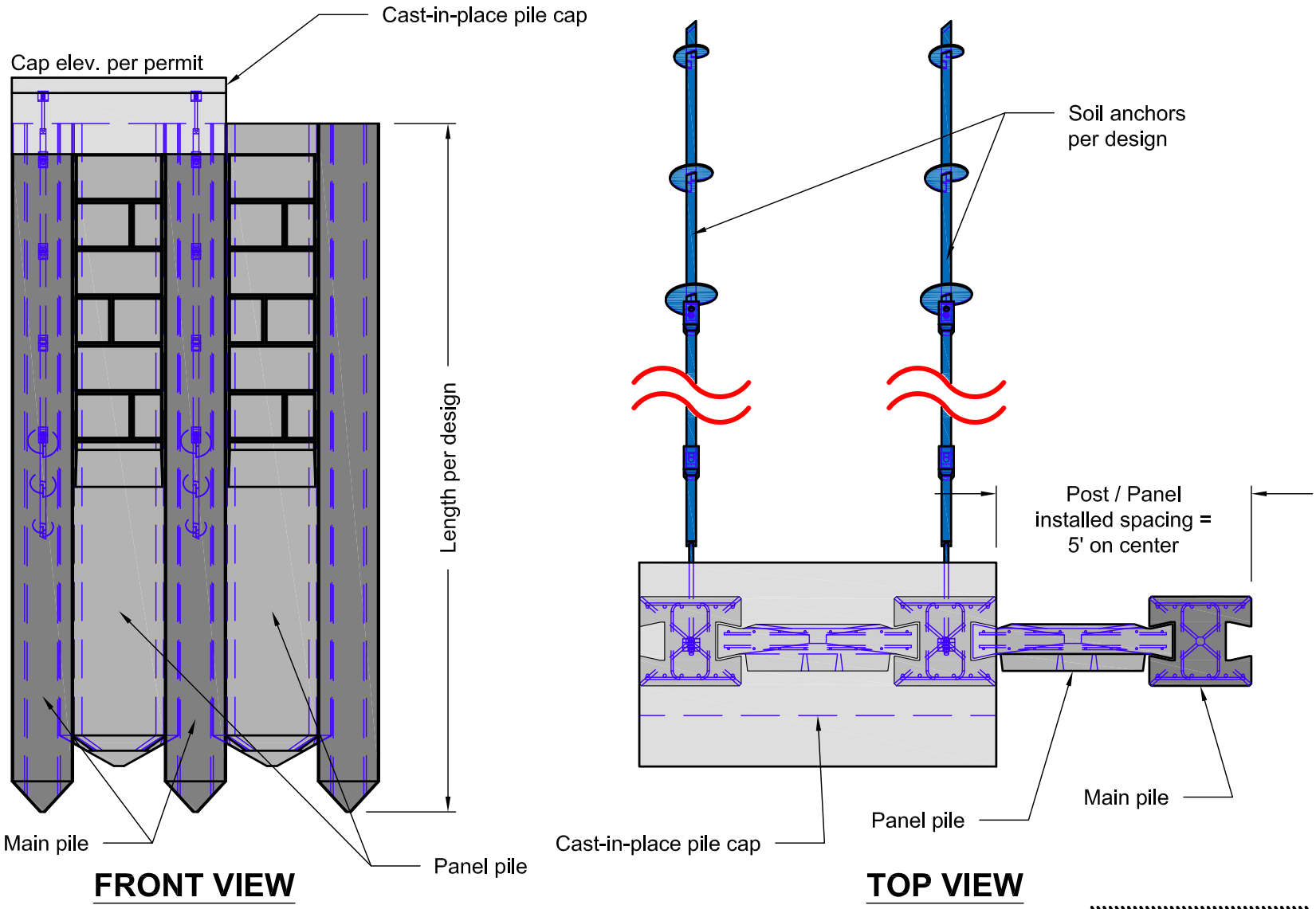
* Volume and weight will vary with texture options. These values are based on a 17 ft pile with 7.5 ft of Kingstone texture.

** Reported capacity has been determined for lateral bending of the panel between main structural piles (produced by the pressure from the supported soil) and is for the standard reinforcement layout shown. Coast Armor piles are made-to-order. The actual capacity of piles will be based on the reinforcement specified by the design engineer of record to meet the requirements of the project.

PILE CAP


Helical anchor and threaded bar embedded in cast-in-place concrete cap. Anchorage details sized to match anchor pullout requirements (6"x6"x1" grade 316 stainless steel plate with heavy hex nuts shown)
Stirrups: #4 GFRP bent bar, 12" spacing on-center top stirrup 77" long, bottom stirrup 58" long
48"
1" chamfer (typical)
6"
30"
Soil anchor (see civil plan for details)
Main reinforcement: #6 GFRP rebar, continuous along cap, 6" spacing on-center
Re-curve shape on seaward wall face to redirect waves and reduce overtopping
Piles embedded 12" minimum in cast-in-place cap
7 ½"
36"

WALL VIEWS



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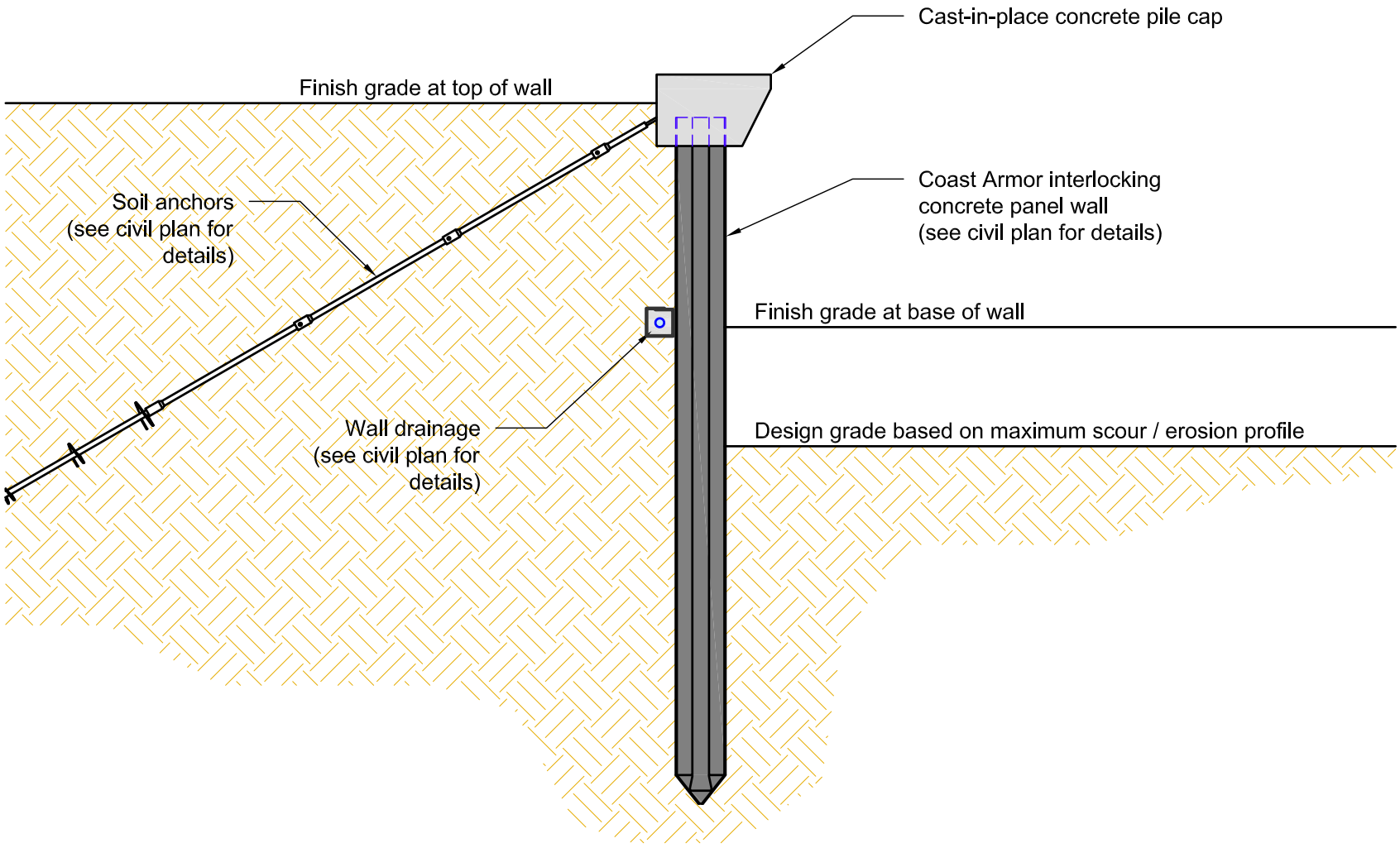
WALL SECTION



CROSS-SECTION

NOTES

1. Projects subject to all local permitting requirements.

2. Site civil drawings, specifications, and permit requirements supersede any details shown in these drawings.

3. Piles are custom manufactured to project specific requirements. Pile length and reinforcement details including number, size, spacing, and bend details shown in these drawings are for reference only. Final design based on detailed site requirements, soil and water conditions, and planned construction methods and equipment is required. Final approved shop drawings based on final design will control.

4. Concrete shall have a minimum 28 day compressive strength, f_c' = 6,000 psi.

5. Reinforcement shall be high-modulus Glass Fiber Reinforced Polymer (GFRP) Rebar (ASTM D8505).

6. Minimum concrete cover on GFRP reinforcement shall be 1 ½" to all surfaces.

7. Water-jet installation conduit location, size, and materials shall be coordinated with the installation contractor and shall conform to final approved shop drawings.

8. Lifting anchor locations per final approved shop drawings. Contractor shall be responsible for rigging design and handling.

9. Soil anchors and cast-in-place wall cap shall be per detailed site civil engineering drawings.

10. Panel texture shall be per final approved shop drawings.

11. Pile and panel color shall be per final approved shop drawings. Standard is uncolored concrete.

12. Product acceptance criteria: Bug holes, chips, cracks, spalling, water marks, and color variations are largely cosmetic and do not impact the performance of the piles. Bug holes less than 2" in the largest dimension on exposed surfaces (larger bug holes that do not impact performance allowed inside the pile keyway), chips smaller than 3" in the largest dimension, cracks not wider than 1/16", spalling that does not expose GFRP reinforcement, water marks, or color variations shall not be cause for rejection of the units.

13. Pile and panel units shall be installed plumb. Installation tolerance shall be ±0.2 degrees from vertical.

14. Main pile and lagging panel shall have a combined installation length of 5' on center. Maximum installation tolerance shall be ± 1".

15. Ordering information:

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