

A.B.0 Geotechnical Section

Included in the Addendum are changes from what was included in the Final PIR. Seepage analyses have not changed and can still be referenced in the Final PIR.

A.B.1 Interior Slope Protection

Based on design guidance found in Design Criteria Memorandum 4 (Minimum Dimensions of Dams and Embankments), slope protection will be required for the interior slopes of the Site 1 embankment. Three different types of armoring were considered to satisfy this requirement – riprap, gabions, and soil cement. Of these three, a combination of soil cement plate and steps was determined to be the lowest cost alternative. Based on design guidance found in Engineering Manual 1110-2-1913 (Design and Construction of Levees), Appendix G, 8-inch thick soil cement plate below the wave impact area and 12-inch thick soil cement steps in the wave impact area is recommended. If the plating method is selected for the wave impact area, as is being considered for the interior slope of the L-40 Levee, the required thickness of the soil cement section (measured normal to the slope) would be 16 inches. Where 8-inch plating is used, weep holes will be required to relieve any potential buildup of pore water pressure behind the protection. These holes would be drilled through the finished soil cement section and backfilled with a suitable filter material.

With proper mixing and placement, the soil cement armoring should provide a relatively impermeable barrier on the slope face. However, in order to prevent the loss of embankment material through cracks in the soil cement should they develop, a geotextile filter fabric is recommended between the embankment fill and the soil cement plate/steps. It is anticipated that the in-situ sands (encountered within the project limits) will be utilized for the production of the soil cement armoring. Prior to construction, chemical tests will be performed to determine the suitability of using these materials.

A.B.2 Foundation Preparation

D-1 Embankment. Along the proposed alignment for the D-1 Embankment, isolated areas of peat exist to a depth of 4 feet (measured from the ground surface). In these areas, estimated to be approximately 1000 feet in length along the eastern border and 4000 in total length along the southern border, it is recommended that this material be removed and replaced with suitable embankment material within the limits of the embankment footprint.

L-40 Levee. Beneath the L-40 Levee embankment, a layer of peat was encountered by 12 of 15 borings performed along the existing embankment. Where encountered, this layer varied in thickness from 1.5 feet to 6.5 feet. Based on these borings, it is recommended that where the interior run-out section for the soil cement plate will rest, suitable fill material be placed and compacted to displace/consolidate the underlying organic material.

This page intentionally left blank.