2.1 Scope of Work/Services

The contractor will be required to perform the following tasks listed below for the marsh creation project.

Preliminary Design:

The preliminary design shall include topographical surveys, geotechnical engineering analysis, and preliminary design recommendations for marsh creation in sufficient detail to move forward with final design. This project should propose to use soil excavated from the French Branch (W-15) Drainage Project, currently under design, to create marsh in degraded areas of the Fritchie Marsh.

The Parish requires that a topographic survey of the area in question be prepared to determine the existing conditions of the targeted area for the marsh creation site. The geotechnical engineering analysis will include soil borings, laboratory tests, and a report of findings and construction recommendations. The preliminary design will incorporate the evaluation of all necessary information and preparation of design drawings necessary for construction of the project. A hydraulic analysis will be performed to establish tidal datum. The consultant will be in contact with the Coastal Protection and Restoration Authority, Louisiana Office of Coastal Management, State Historic Preservation Office, United States Army Corp of Engineers and the United States Fish and Wildlife Services. All agencies will be kept updated on the progress of the project.

Final Design:

The final design of marsh creation project includes the preparation of drawings, specifications, and cost estimates developed in the preliminary design.

The 60 percent submittal will include all sheets necessary to depict the major elements of the work and a table of contents for the technical specifications. The 90 percent submittal will include all sheets and technical specifications with front end documents provided by the Parish. An opinion of probable construction costs will be provided with the 60 percent and 90 percent submittals.

Proposed Improvements:

1. Construct a soil re-handling site where spoil material will be dumped and a hydraulic dredge will suspend the soil in a water slurry and pump it to the designated marsh creation area.
2. Create a marsh creation area using earthen dikes constructed of in-situ material.
3. Develop a planting and monitoring plan that will meet the requirements of utilizing the land created for wetland mitigation for the French Branch (W-15) Drainage Project, currently under design.

Topographic & Boundary Survey:

1. Topographic Survey
2. Bathymetric Survey
3. Magnetometer Hazard Survey
4. Average Healthy Marsh Elevation Survey
Geotechnical Investigation:
1. Perform soil borings to collect soil samples for soil testing.
2. Develop soil profiles using results of soil testing.
3. Develop settlement curves for containment dikes and marsh creation settlement.
4. Estimate time rate of settlement of marsh foundation soils.

*Engineering and Design:*

Consultant will prepare construction documents for the proposed improvements. The plans will consist of plan, profile, sections, details and specifications for the proposed marsh creation area and re-handling site.

The engineering and design phase will require:

1. Hydraulic Analysis - Tidal Datum
2. Subsidence and Sea Level Rise
3. Re-handling Site Design
4. Pipeline Corridor Layout
5. Marsh Creation Design
   a. Containment Dike Design
   b. Marsh Creation Fill Elevation
   c. Dewatering Plan
6. Assist the Parish with permitting

*Bidding and Contracting:*

Consultant will prepare cost estimates and specifications and assist the Parish with contracting document preparation. Consultant will also respond to RFI’s and clarification of the plans.

*Construction Administration:*

Construction administration services will include the review of contractor submittals and shop drawings, 1-2 site visits per week during construction and review contractor pay requests and project close out.

The project design must be completed 90 calendar days from notice to proceed. The project construction must run concurrent with the Lower W-15 Drainage Improvements Project, currently under design.