

**"This is only the scope of work for the project. For more information, interested parties should contact Procurement at [purchasing@stpgov.org](mailto:purchasing@stpgov.org) to ensure receipt of a full bid package, to be listed as a plan holder and to ensure any addenda to the bid package are received."**

## **SCOPE**

St. Tammany Parish Coastal Protection Study (PO-167)

The Northshore Hurricane and Flood Protection Study for St. Tammany and Tangipahoa Parishes was published December 2012 (hereinafter sometimes 2012 Study). The 2012 Study was prepared by Gulf Engineers & Consultants, Inc. (GEC) on behalf of St. Tammany and Tangipahoa Parishes utilizing Coastal Protection and Restoration Authority (CPRA) funds. The 2012 Study provides a listing of all known flood protection, drainage and marsh creation projects at the time of publishing.

The Parish, in consultation with the St. Tammany Levee, Drainage and Conservation District (STLDCD), desires to engage the services of a qualified respondent(s) for the tasks outlined below. Minimum qualifications shall include a licensed Professional Engineer to stamp and sign plans, studies, and to certify levees. Other required qualifications include experience with ADCIRC, WHAFIS, and other models used in determining project alternative design elevations.

Initially, this project will involve updating the 2012 Study with newly completed and proposed projects in the St. Tammany Parish Coastal Zone. A gap analysis will then be performed to identify new projects to further protect vulnerable areas. A benefit/ cost analysis of projects proposed shall be undertaken to determine project priority and viability.

### **TASK I – Collection and Organization of Existing Flood Control Assets and Project Data**

1. Provider shall compile a comprehensive list of existing major flood control assets in the St Tammany Parish Coastal Zone and define the jurisdictional authority of each asset and/or area. A map of the Parish Coastal Zone is attached for ease of reference.
2. Provider shall compile a consolidated list of completed (past 5-yrs), current, and future projects from all jurisdictional entities (local, state and federal) within the St Tammany Parish Coastal Zone, including all structural and non-structural projects such as the following:
  - Coastal and Wetland Restoration Projects
  - Drainage Conveyance Improvements
  - Retention/Detention Ponds
  - Levee and Shoreline Protection, including but not limited to: STLDCD- Southeast Coastal Zone- Project 1.0 and South Slidell Ring Levee Project
  - Structure Elevation Programs
  - Flood Protection/Drainage Pump Stations
  - Drainage Flood Protection Studies
3. For each project identified, the following will be provided:

- Jurisdictional Authority/Owner
  - Scope of Work
  - Identify if Completed (if so, date), Current or Planned Future
  - Project Benefits based on historical events (structure flooding, infrastructure damage, historical wetland loss, etc.)
  - Estimated or Actual Cost
  - Funded or Unfunded
  - Estimated Funded Date if Unfunded
  - Funding Sources
  - Design documentation, if available
4. The final deliverable shall present all information collated above in a concise, comprehensive, and easily readable report with maps and tables showing basins, jurisdictions, and past and future project locations and details listed above. A GIS database with integrated project attributes will also be provided.

### **TASK II – Gap Analysis**

1. Perform a Gap Analysis to identify areas that were not included in Task 1 and are vulnerable to tidal surge, flooding due to inadequate conveyance, and/ or wetland loss/reduction.
2. Identify historical losses from structure flooding, infrastructure damage, and wetland loss in the gap areas.
3. Review current models (ADCIRC, and WHAFIS) to determine data gaps, including but not limited to geographical area, data, cross-sections, and model runs.
4. The Provider shall work with the Parish in selecting the gap areas that require further feasibility analyses. The deliverable shall be a report describing the overall gap analysis process, culminating with why the areas selected were chosen, and any recommendations for further study/actions to address gap areas.

### **TASK III – Project Feasibility Analyses and Engineering Design**

1. Develop conceptual project alternatives, including estimated costs for areas defined in the Task II report.
2. After joint approval by the Parish and STLDCD of conceptual project alternatives, perform benefit/cost analysis for each proposed project. This will include engineering analyses, evaluation of existing flood control assets, impact of existing flood control structures on surrounding areas, engineering design, cost estimates, and other information as necessary to provide an acceptable BCA.

Project Alternatives Analyses must include, but not necessarily be limited to:

- Review of all existing available data, including currently funded hurricane risk reduction and coastal restoration projects within the Coastal Zone;

- Identify improvements needed such as repairs to existing drainage infrastructure, control structures, and pump stations;
  - Determine impacts to adjacent areas, comparing before and after project water surface elevations for 10, 25, 50, 100 and 500 year storms;
  - Perform benefit cost analyses for proposed structural and non-structural strategies; and
  - Identify any other investigation and/or analyses necessary for the evaluation of proposed projects.
  - With respect to planned and existing levee segments, perform a feasibility study to determine the best levee system alignment, then perform any tasks in accordance with 44CFR65.10.
3. Prepare a feasibility report of recommended project alternatives for each project identified above, including a prioritization of projects based on Benefit/Cost ratio, Need, and Community Input.
  4. Engineering and Design of prioritized alternatives.