

August 21, 2023

Brent McClanahan  
Engineer II  
City of Corpus Christi  
Engineering Services Department  
1201 Leopard St.  
Corpus Christi, TX 78401

RE: Professional Services Fee Proposal- Amendment 1- Revision 2  
Project 22405- ONSWTP Navigation Pump Station Improvements- Design and  
Construction Phase and Hydraulic Model Upgrades and Support

Mr. McClanahan,

Per the City of Corpus Christi's request CP&Y will provide professional services for the design and construction phases for the ONSWTP Navigation Pump Station Improvements located at 302 North Navigation Blvd. The Improvements will include:

- Approximately 6,000 linear feet of 36-inch diameter potable water transmission line supplying the Navigation Pump Station.
- Approximately 1,000 linear feet of 36-inch diameter potable water transmission line discharge from the Navigation Pump Station.
- Replacement of three (3) flow control valves with check valves and electric actuated isolation valves.
- Replacement of three (3) 350 horsepower variable frequency drives.
- Replacement of eleven (11) butterfly valves and four (4) electric actuators.
- Replacement of the existing HVAC system.
- Installation of disinfection boosting system including a prefabricated fiberglass reinforced plastic building and liquid sodium hypochlorite and liquid ammonium sulfate storage and pumping facilities.
- Hydraulic Modeling Updates and Calibration, Revised ACR, and On-Call Modeling Support.

#### **A. SCOPE OF WORK**

CP&Y, Inc. will provide the following professional services:



## **BASE SERVICES**

### **Task 1: Project Management**

1. Hold monthly meetings with the owner to establish status of the project, plan future activities, and discuss design issues. Meetings will be conducted using Microsoft Teams or telephone.
2. Perform project administrative duties to include progress monitoring, scheduling, correspondence, and office administration.
3. Submit monthly invoices with project status reports outlining the activities during that billing period to the City.
4. Deliverables:
  - a. Meeting agenda and meeting minutes with action/decision items.
  - b. Monthly invoices.

### **Task 2: Design Coordination and Field Investigation**

1. Project Kickoff Meeting (Virtual):
  - a. Conduct a kick-off meeting with the City and the Design Team to review the scope and goals of the project. Prepare meeting agenda and meeting minutes with action/decision items.
2. Record Research and Gathering Information:
  - a. Collect data required to evaluate the station and pipeline network.
  - b. Evaluate potential utility conflicts, coordinate with the affected utility owner, and develop an executable and agreeable plan to mitigate.
3. Site Visit (Initial): Conduct a site visit to compare field conditions with as-built drawings and evaluate condition of existing pumps, valves and actuators. Conduct a site walk of the proposed alignment to identify potential constraints and develop an executable and agreeable plan to mitigate.
4. Site Visit (Survey Verification): Conduct a site visit at the Navigation Pump Station and along the project alignment to compare field conditions with the topographic survey.

### **Task 3: 60% Design Milestone Submittal**

1. Consultant will conduct weekly progress meetings with the Consultant's internal design team and subconsultants as required to maintain project schedule and milestones.
2. Develop the 60% Design Milestone submittal as defined in the following subsections.
  - a. Develop plan and profile sheets (scale of 1"=40') of the project pipeline alignment and identify any temporary, permanent, and/or access easements required for the recommended project alignment, if any.



- b. Identify necessary fittings needed for the horizontal and vertical alignment.
  - c. Develop the layout of the isolation valving.
  - d. Determine the locations of air release and drain valve assemblies.
  - e. Call out and estimate quantities for surface restoration.
  - f. Prepare a Thrust Restraint Design Report for all necessary pipeline restraint requirements.
  - g. Provide recommendations for segments of trenchless construction by boring of a steel encasement pipe.
  - h. Develop the disinfection system criteria, sizes, layout, and control narrative. City will provide to Consultant the desired chloramine residual and boosting capabilities of the disinfection system.
  - i. Develop structural foundation design for disinfection facility.
  - j. Review available record drawings and field findings to develop the electrical design criteria, sizing requirements, one-line diagrams, and power and lighting requirements.
  - k. Develop existing and proposed civil, mechanical, structural, electrical, and instrumentation drawings of the Navigation Pump Station
  - l. Develop summary tables for pay quantities.
  - m. Evaluate potential utility conflicts, coordinate with the affected utility owner, and develop an executable and agreeable plan to mitigate.
  - n. Develop the technical specifications “front end” contract document and special provisions.
  - o. Develop the 60% Design Milestone Engineer’s Opinion of Probable Construction Costs (EOPCC). The 60% EOPCC will conform to the Association for the Advancement of Cost Engineering (AACE) Class 2 Cost Estimate Classification System.
3. Internal Quality Assurance / Quality Control (QA/QC): Consultant will perform internal QA/QC review of the 60% Design Milestone submittal and incorporate comments prior to submission of the 60% Design Milestone to the City.
  4. Consultant will prepare and submit to the City the 60% Design Milestone submittal a minimum of two (2) weeks prior to the 60% Design Review Workshop. The 60% Design Review Milestone submittal will include:
    - a. 60% Design Plans in electronic (.pdf) format
    - b. 60% Design technical specifications “front end” documents and special provisions in electronic (.pdf) format
    - c. 60% Design EOPCC (AACE Class 2) in electronic (.pdf) format
  5. Conduct a 60% Design Review Workshop (Virtual) with the City and the Design Team to review the project design and City comments. Prepare meeting agenda and meeting minutes with action/decision items.
  6. Review City comments and prepare responses to comments within two (2) weeks of receipt of City comments.



**Task 4: 90% Design Milestone Submittal**

1. Consultant will conduct weekly progress meetings with the Consultant’s internal design team and subconsultants as required to maintain project schedule and milestones.
2. Based on review comments received at the 60% Design Review Workshop, the Consultant shall conduct final designs to prepare construction plans and specifications, for one construction contract, including final construction details and quantities, special provisions, and opinion of probable construction cost. The Consultant shall also make final field inspection with the City, make any needed plan changes as a result of the final field inspection and/or special easement acquisition considerations, and prepare construction documents as required to obtain construction permits.
3. As part of the 90% design, the Consultant shall develop a comprehensive list of anticipated contractor submittals, including preliminary and final operation and maintenance manuals submittals for all major equipment.
4. Internal Quality Assurance / Quality Control (QA/QC): Consultant will perform internal QA/QC review of the 90% Design Milestone submittal and incorporate comments prior to submission of the 90% Design Milestone to the City.
5. Consultant will prepare and submit to the City the 90% Design Milestone submittal a minimum of two (2) weeks prior to the 90% Design Review Workshop. The 90% Design Review Milestone submittal will include:
  - a. 90% Design Plans in electronic (.pdf) format
  - b. 90% Design technical specifications “front end” documents and special provisions in electronic (.pdf) format
  - c. 90% Design EOPCC (ACE Class 2) in electronic (.pdf) format
  - d. 90% Preliminary Construction Schedule in electronic (.pdf) format
6. Conduct a 90% Design Review Workshop (Virtual) with the City and the Design Team to review the project design and City comments. Prepare meeting agenda and meeting minutes with action/decision items.
7. Review City comments and prepare responses to comments within two (2) weeks of receipt of City comments.

**Task 5: 100% Design (Regulatory Review) Milestone Submittal**

1. Incorporate City comments from the 90% Design Milestone submittal and prepare final signed and sealed plans and pertinent documentation for submittal to local, state, and federal agencies as well as other entities necessary to secure needed permits for construction. Anticipated permits needed prior to construction may consist of the following:
  - a. TCEQ Permit to Construct
  - b. TXDOT Utility Permit
  - c. County Utility Permit
  - d. USACE Section 404 Permit



- e. Electric Utility Permit
  - f. Underground Pipeline Utility Permit
  - g. Railroad Encroachment and Crossing Permits
  - h. City of Corpus Christi Permits
2. Incorporate comments received from the regulatory review submittal and sign and seal the final Bid Document Package. The Bid Document Package shall be prepared in the format prescribed by the City that contains the following, including Bidding and Contracting Documents, Technical Specifications, Details, and Plans.

### **Task 6: Bid Phase Services**

1. Conduct bidding services as defined in the following subsections.
  - a. Prepare and submit Advertisement for Bids for publication as directed by the City. City will pay advertising costs outside of this contract.
  - b. Construction Contract Documents will be distributed by the City of Corpus Christi Contracts and Procurement department utilizing Civ-Cast.
  - c. Participate in a pre-bid meeting.
  - d. Prepare an Addenda to respond to RFI's from bidders.
  - e. Attend the bid opening.
  - f. City of Corpus Christi Contracts and Procurement department will prepare the bid tabulation.
  - g. Evaluate bids and prepare the Engineer's letter of recommendation for the low responsible bidder.
  - h. Incorporate the addenda into conformed documents.

### **Task 7: Construction Phase Services (This Task will be performed on a Time and Material Basis)**

1. Attend preconstruction meeting conducted by City of Corpus Christi construction team.
2. Conduct up to six (6) periodic construction site visits.
3. Conduct up to twelve (12) construction progress meetings (virtual) and prepare meeting agenda, minutes, and action/decision items. Construction progress meetings are anticipated to be held on a once-per-month basis starting with mobilization by the contractor.
4. Review and provide comments on up to twelve (12) monthly progress payment requests and updated construction schedules submitted to the City by the Contractor. Review the Contractor's progress payment requests based on the actual quantities of contract items completed and accepted and make a recommendation to the City regarding payment.



5. Provide responses to up to twenty (20) requests for information (RFIs) by the Contractor regarding the construction contract documents.
6. Review and respond to up to fifty (50) construction material submittals and shop drawings.
7. Provide support for up to five (5) Change Orders during construction. Prepare plan revisions as needed to assist with change orders for changes in the work from that originally provided in the construction contract documents.
8. Observe and assist in performance tests and initial start-up operations.
9. Participate in final Project inspection, prepare punch list, review final Project closing documents, and submit final pay request.
10. Prepare and furnish record drawings based on working drawings provided by the Contractor. Record drawings will be provided in pdf, Autocad, and City of Corpus Christi Utility Schema formats.

### **ADDITIONAL SERVICES**

The following tasks are additional services required to complete the project:

#### **Pump Station and Water Lines**

1. Environmental Services: Conduct desktop studies, field investigations of entire alignment, and prepare reports necessary to meet clearance requirements for due diligence review including:
  - a. Permitting Memorandum documenting compliance with Section 404 of the Clean Water Act, the Endangered Species Act, Texas Antiquities Act, and the National Historic Preservation Act, as necessary. Details of how each federal requirement is applicable would be detailed along with likely permits needed for construction of the project.
  - b. Phase 1 Environmental Site Assessment (ESA)
  - c. Prepare a desktop cultural review letter for coordination with Texas Historical Commission (THC).
  - d. Develop recommendations for Archaeological Survey or Monitoring effort, if required.
2. Right of Entry Support: Develop right of entry documents for field investigation services including engineer's investigation, surveying services, and subsurface ground exploration as necessary. Identify and coordinate with property owners to obtain necessary rights of entry for design phase services.



3. Topographic Survey: Conduct field surveys, utilizing radial tomography methods, at intervals and for distances and/or along the Project site as appropriate for modeling the existing ground, including locations of pertinent features or improvements. Locate buildings and other structures, streets, drainage features, trees over eight inches in diameter, visible utilities as well as those underground utilities marked by their owner's and/or representatives, and any other pertinent topographic features that may be present at and/or along the Project site. Establish control points for use during construction. Field survey data will be tied to the City's control network or other acceptable benchmarks. The extent of the survey will be sufficient for the proper design of the Project.
4. Geotechnical Analysis:
  - a. Provide the necessary geotechnical analysis as needed to perform the design of the Project. Interpret the geotechnical data and provide the necessary engineering needed to inform potential bidders of trenching conditions, design thrust restraint, and develop trenchless applications in addition to other needs identified by the Consultant.
  - b. Subsurface Exploration: Investigate subsurface conditions and characterize soil at the project area including up to ten (10) test borings to a depth of twenty (20) feet deep, for total drilling footage of 300 feet. The borings will be completed with a truck-mounted rig, equipped with flight augers and sampling tools. Soil samples in particular will be collected using Shelby tubes and/or split-spoon samplers. Field-testing of soil samples will include pocket penetrometer readings in the cohesive soils and Standard Penetration Tests (SPT) in cohesionless soils.
  - c. Laboratory Tests: Laboratory index tests will be performed on select soil samples recovered from the test borings. The index tests will include Atterberg limits, percent passing the number 200 sieve, moisture content, and unconfined compression tests.
  - d. Results of field data and laboratory data will be used to develop design and construction recommendations for the proposed waterlines and structural foundation for the new prefabricated disinfection building at the Navigation Pump Station. In general, the following items will be included in the report: site vicinity map, geology map, plan of borings, boring logs, field and laboratory test results summary, recommendations for open-cut installation of utility lines, pipe bedding and backfill recommendations, and general earthwork and select fill recommendations.
  - e. This task assumes no site clearing will be required to access the borehole locations, street cut permits will not be required for drilling, and no work will be performed in the railroad.
5. SCADA Integration and Coordination: Coordinate with the City and manufacturer for SCADA integration.



6. Coordinate with permitting and other regulatory agencies and incorporate agency comments into the design.
7. Prepare signed and sealed drawings and specifications to be submitted to TCEQ for review and approval.

The following services may be needed during the project. If required, CP&Y will obtain authorization from the City of Corpus Christi prior to the start of work on any supplemental work:

8. Environmental
  - a. Archaeological Survey
    - i. Once an Antiquities Permit has been obtained, archaeologist will conduct an archaeological field survey of the approximately 1.3-mile-long by 100-foot-wide corridor along Navigation Boulevard and Agnes Street, between TX-358 and Omaha Drive, Corpus Christi, Texas. The survey will be of sufficient intensity to determine the nature, extent, and, if possible, potential significance of any cultural resources located within the proposed project area. Subsurface explorations will be accomplished through shovel testing. The placement and quantity of these excavations will depend on the level of disturbance within the proposed project boundary and the nature of the soils, geology, and topography. Shovel tests will be excavated in 20-centimeter (cm) arbitrary levels to 80 cm in depth unless soil characteristics or bedrock preclude reaching that depth. The matrix will be screened through ¼-inch mesh. The location of each shovel test will be plotted using a sub-meter accurate GPS receiver, and each test will be recorded on appropriate project field forms. Areas with previously recorded sites or other cultural resources revealed in the archival research will require additional shovel testing to explore the nature of the cultural deposits. Conversely, heavily disturbed and modified areas in the proposed project area may not be shovel tested. According to THC linear survey standards, 16 shovel tests should be excavated for every linear mile of 100-foot-wide corridor being assessed; for a project area of this length and width to be systematically assessed, approximately 21 shovel tests would need to be excavated.

If an archaeological site is encountered, additional shovel tests will be excavated per site; based on a preliminary review of the Atlas data, there are no known archaeological sites identified within or immediately





adjacent to the project area. If new archaeological sites are discovered during the investigations, they will be explored as much as possible with consideration to land access constraints. All discovered sites will be assessed for their potential significance so that recommendations can be made for proper management (i.e., avoidance, non-avoidance, or further work). Additional subsurface investigations will be conducted per THC standards at discovered sites to define horizontal and vertical boundaries. Archaeologist anticipates that no more the one (1) archaeological site will be identified and require delineation (n=14 shovel tests).

Archaeologist will complete appropriate State of Texas Archeological Site Data Forms for each site discovered during the investigations. A detailed plan map of each site will be produced, and locations will be plotted on USGS 7.5-minute topographic quadrangle maps and relevant project maps for planning purposes. Archaeologist proposes a non-collection survey. Artifacts will be tabulated, analyzed, and documented in the field, but not collected. Temporally diagnostic artifacts will be described in detail and photographed in the field. This policy will reduce curation costs once the fieldwork is concluded; however, as per the stipulations of the Antiquities Permit, all paperwork and photographs generated during field investigations must be curated at an approved repository.

b. Archaeological Monitoring

- i. Once an Antiquities Permit has been obtained, Archaeologist will conduct cultural resources monitoring for ground disturbing activities within the project area. The monitoring will consist of a qualified Archaeologist monitoring the removal of sediment and examining the side walls of the excavation for evidence of cultural materials. The monitoring will also include periodic sampling of backhoe bucket excavations (i.e., screening of every fifth bucket). The archaeologist will coordinate all field activities with appropriate personnel and any on-site construction foreman regarding scheduling and safety. If necessary, the monitoring bioarchaeologist will attend a pre-construction meeting to ensure full coordination prior to construction. The bioarchaeologist will comply with all applicable Occupational Safety and Health Administration (OSHA) safety regulations and always wear a safety vest, hard hat, and safety glasses. Common historic-age artifacts (i.e., metal, ceramics, and glass) may be contained within the fill; these artifacts will not be collected, but generally quantified and assessed as to age and origin. Particular attention will be given to any possible artifacts and features associated with a prehistoric-age or historic-age occupation that may be revealed during construction. If intact cultural resources are revealed in the construction process, the



archaeologist will make a determination as to the potential significance of the observed resource. At this point, construction may be temporarily halted so that the archaeologist may better examine the cultural materials or features, take photographs, and document the findings. If the materials are assessed as non-significant (common historic materials or disturbed features, for instance) construction will quickly recommence and continue as planned.

If the materials are assessed as significant, construction in the immediate area will be halted. Materials that may be considered significant and require stoppage of the construction process could include burial features or hardware, intact commercial or residential features, older deposits/artifacts in good context dating to the Spanish Colonial period, or other exceptionally significant or diagnostic finds. If a work stoppage is required, the monitoring archaeologist will immediately call all involved parties (i.e., Prime & THC) to discuss the find and formulate a plan of action. Final determinations on a plan of action for such a find will only be made based on consultation with all involved parties.

In addition, should human remains be encountered during construction, work in the immediate area will cease and a qualified bioarchaeologist will evaluate the finding(s) and provide recommendations for how to manage the resource under Texas Health and Safety Code and Chapter 49 of the Texas Code of Criminal Procedure. All findings will be reported to, and activities coordinated with the appropriate interested parties mentioned above. In the event that human remains are encountered, all activity shall cease, and may not resume until authorized by appropriate law enforcement and the THC.

Archaeologist proposes to collect only diagnostic artifacts dating before 1870. Artifacts will be tabulated, analyzed, and documented in the San Antonio laboratory. Non-diagnostic artifacts will be described in detail and photographed in the field, then left in place. The field records, artifacts and data will be curated at the Center for Archaeological Research at The University of Texas at San Antonio per requirements of the ACT.

For the purposes of scoping and providing cost prior to design, 30 days of on-sight monitoring during construction has been included. Anything over 30 days would require additional fee at \$1,500 per day.



c. Report Preparation and Curation

- i. Archaeologist will prepare a single draft report of the investigations within four (4) weeks of completion of the field investigation. The cultural resources report will conform to THC and Council of Texas Archeologists (CTA) reporting standards. The report will document the general nature of the project area, the methodology used in the investigations, the presence and condition of any previously recorded sites revealed in the records review, the general nature and extent of cultural resources encountered during the archaeological and architectural history surveys, recommendations on the need for further work, and the potential significance of the cultural resources for NRHP and SAL status.

Archaeologist will submit a draft copy of the report to Engineer for review and comment. Once this has been accomplished, Archaeologist will incorporate any appropriate edits and will submit a revised draft report to the THC for their review and comment; the agency has up to 30 days to complete their reviews and provide commentary. Once the draft report has been reviewed and accepted by the THC, the report will be finalized and submitted to the THC. The THC has up to 90 days to complete their final review and provide concurrence. Field records and photographs will be curated at an approved curatorial facility, which in this case is the Center for Archaeological Research at The University of Texas at San Antonio; this curation process may take up to 60 days to complete once concurrence has been received from the agency.

9. Easement Acquisition Support: Provide mapping, conveyance instruments, and legal descriptions as required for preparing up to five (5) Right of Way/Easement acquisition documents for the City's use in acquiring easements on properties along the project alignment. Documentation will include an individual tract map with description of temporary and permanent acquisition for each property. The permanent water line easements, temporary construction easements, and access easements required will be acquired by the City under a separate contract.
10. Additional/Unspecified Engineering Services: Provide engineering services for additional scope items identified and defined by the City of Corpus Christi as the project progresses.



## **Hydraulic Model Updates and Long Range Planning**

1. The existing hydraulic model for the Corpus Christi water system is an all-pipes steady state and extended period hydraulic simulation model created in 2009, updated in 2011, with additional updates in years since 2011, by others and in 2020 and 2021 by CP&Y. In 2022 and 2023, CP&Y updated the model with current piping, demands, and pumping facilities and is now in the process of calibrating the model. Four subtasks for hydraulic modeling are included in this scope:
  - a. During the model update process, a version of the model was provided to the City's master planning consultants for use in updating the Water Master Plan. This model version included updated piping down to 12-inch diameters, water demands, and pumping facilities. Results of the master planning effort will need to be added to the calibrated model to reflect future improvement recommendations, future demands, and system expansions into new areas. Future scenarios for ADD, MDD and PHD for the years 2030 and 2040 are expected. Following the model calibration, CP&Y recommends adding future conditions and scenarios to the model. This will allow for analysis and verification of pumping capacities, EST capacities and performance, piping capacities, and system performance for projected future conditions. Task 3A provides for model updates for long range planning.
    - i. Adding system improvements for piping, pumping capacity, elevated and ground storage capacity for future years 2030 and 2040.
    - ii. Adding proposed increased water demands for future years 2030 and 2040.
    - iii. Developing model scenarios for projected ADD, MDD and PHF for both steady state and extended period simulations, for future years 2030 and 3040.
    - iv. Include scenarios for future higher system HGL.
  - b. During the calibration process of the updated model, CP&Y has found some inconsistencies in the SCADA pressure recording data that require investigation and adjustment before the calibration can be successfully completed. The Corpus Christi water system has 30 pressure recording stations connected to SCADA spread across all parts of the system. The data from these stations is key for calibration of the hydraulic model. During the calibration process, several of these stations had pressure data that was found to be inconsistent with the whole and either could not be calibrated or would have results that would lack confidence. Seven SCADA pressure recording stations were identified that require investigation. The time and effort to investigate, analyze, and resolve the pressure recording issues was not anticipated nor included in the project scope for the model update and calibration. Task 3B provides for amendment to the model update and calibration work.
    - i. Coordination of field pressure readings at fire hydrants near the identified areas.
    - ii. Analysis comparing field data collected with the SCADA data collected.
    - iii. Develop recommended solutions or adjustments to SCADA sites.



- iv. Move the calibration day from previous plans of utilizing historical data, to a new day in July 2023. Model will be calibrated using the latest data as of July 2023.
  - v. Up to 6 weekly call-in meetings to review and discuss progress on investigations and analysis.
  - c. Corpus Christi is not currently under an approved ACR plan for the total system elevated storage capacity. The current elevated storage available is below 100 gallons per connection, so the City is out of compliance. The previous ACR submitted in Feb 2021 was not approved due to inadequacies identified in the model's calibration. Submittal of a revised ACR has been on hold pending completion of the hydraulic model update and calibration. Upon completion of the model calibration, a revised ACR plan and report can be completed. The revised ACR will cover the period between the installation of a new Flour Bluff EST and the next major system update, which is expected to be the establishment of a new pressure plane for the Calallen area in the northwestern part of the city. Task 3C provides for revising and resubmitting the ACR Plan and Report.
    - i. Hydraulic Modeling of Required ACR Scenarios
    - ii. Develop ACR Implementation Plan and Report
    - iii. Coordination with TCEQ
  - d. The updated and calibrated hydraulic model is a valuable tool and resource for Corpus Christi Water and the City. Corpus Christi Water leadership and staff often have field conditions, events, or planning needs that could be assisted by use and output from the hydraulic model. Typical issues requiring modeling support may involve just a couple or a few hours to complete. CP&Y recommends that a budget be established for ongoing modeling support to assist Corpus Christi Water with model analysis whenever needed. With an on-call budget in place, modeling support can be provided quickly as needed. Task 3D provides ongoing modeling support services.
2. Conduct coordination meetings with Pape Dawson to ensure future demands and master plan information is inputted into the model. Two (2), one-hour long meetings are included; one to take place at the start of the project with one follow-up meeting during the project.

## **B. DELIVERABLES**

CP&Y will submit the following:

- Meeting Minutes.
  - Design Kickoff Meeting
  - Design Milestone Submittal Design Review Workshop Meetings
- 60% Design Milestone Submittal
  - 60% Design Plans in electronic (.pdf) format



- 60% Design technical specifications “front end” documents and special provisions in electronic (.pdf) format
- 60% Design EOPCC (AACE Class 2) in electronic (.pdf) format
- Environmental Permitting Memorandum
- Cultural Resources Desktop Review and Coordination letter with Texas Historical Commission (THC)
- 90% Design Milestone Submittal
  - 90% Design Plans in electronic (.pdf) format
  - 90% Design technical specifications “front end” documents and special provisions in electronic (.pdf) format
  - 90% Design EOPCC (AACE Class 2) in electronic (.pdf) format
  - 90% Preliminary Construction Schedule in electronic (.pdf) format
- 100% Design Milestone Submittal (For Regulatory Review and Bidding)
  - 100% Design Plans (Signed and Sealed) in electronic (.pdf) format
  - 100% Design technical specifications “front end” documents and special provisions in electronic (.pdf) format (Signed and Sealed)
  - 100% Design EOPCC (AACE Class 2) in electronic (.pdf) format
  - 100% Construction Schedule in electronic (.pdf) format
- Conformed Documents incorporating Addenda in electronic (.pdf) format
- Record drawings based on working drawings provided by the Contractor.
- Updated and Calibrated Hydraulic Model.
- Revised ACR Plan and Report

### **C. SCHEDULE**

Below is a preliminary schedule for the duration of each phase. The overall duration of the contract is approximately 24 months from notice to proceed (NTP).

- Project Kickoff Meeting and Initial Site Visit: 14 days
- Field Investigation: Survey and Geotechnical: 60 Days
- 60% Design Submittal Milestone: 90 days after completion of Field Investigation
- City Review of 60% Design Submittal Milestone: 14 days
- 60% Design Review Workshop and Interim Site Visit: 14 days
- 90% Design Submittal Milestone: 60 days after receipt of City comments to 60% Design Submittal and 60% Design Review Workshop
- City Review of 90% Design Submittal Milestone: 14 days
- 90% Design Review Workshop and Final Site Visit: 14 days
- 100% Design Submittal Milestone: 60 days after receipt of City comments to 90% Design Submittal Milestone and 90% Design Review Workshop
- Bidding Phase: 60 days after 100% Design Submittal Milestone
- Construction Phase: 16 months after Construction Notice to Proceed



#### D. FEE SUMMARY

The attached Design Fee Spreadsheet contains a detailed list of tasks along with hours and fees associated with each task. Table D-1 below provides a summary of the Base Services design fees for the project.

**Table D-1: Design Fee Summary**

<b>Task</b>	<b>Fee</b>
Task 1- Project Management	\$29,012.00
Task 2- Field Investigation	\$33,870.00
Task 3- 60% Design Phase	\$351,869.00
Task 4- 90% Design Phase	\$186,024.00
Task 5- 100% Design	\$20,646.00
Task 6- Bid Phase	\$37,192.00
Task 7- Construction Phase (Time and Material)	\$191,122.00

**Sub-Total Base Services: \$ 849,735.00**

<b>Task</b>	<b>Fee</b>
Task 9- Additional Services	\$400,817.00

**Sub-Total Additional Services: \$400,817.00**

**Total Base and Additional Services: \$1,250,552.00**

Respectfully Submitted,  
CP&Y Inc.



Ted Stawasz, PE  
Associate

Cc: Marisa Vergara, PE

Attachment: Fee Proposal  
Sub-Consultant Proposals



**Navigation Pump Station Improvements**  
**CITY PROJECT NO. 22405**  
**SUMMARY OF FEES**

	<b>Original Contract</b>	<b>Amendment No. 1</b>	<b>Amendment No. 2</b>	<b>Amendment No. 3</b>	<b>Total Contract</b>
<b>Basic Services:</b>					
Preliminary Phase	\$149,777.00	\$0.00			\$149,777.00
Design Phase	\$0.00	\$621,421.00			\$621,421.00
Bid Phase	\$0.00	\$37,192.00			\$37,192.00
Construction Admin Phase	\$0.00	\$191,122.00			\$191,122.00
<b>Subtotal Basic Services</b>	<b>\$149,777.00</b>	<b>\$849,735.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$999,512.00</b>
<b>Additional Services:</b>					
Updates to Water Dist Hyd Model	\$130,436.00	\$0.00			\$130,436.00
Hydraulic Modeling & ACR Report	\$0.00	\$144,816.00			\$144,816.00
Supplemental Services	\$0.00	\$20,000.00			\$20,000.00
Cultural Survey	\$0.00	\$63,800.00			\$63,800.00
Topographic Survey	\$0.00	\$40,444.00			\$40,444.00
Geotechnical Testing & Report	\$0.00	\$15,366.00			\$15,366.00
Permitting	\$0.00	\$27,680.00			\$27,680.00
Environmental Desktop Study	\$0.00	\$33,265.00			\$33,265.00
Right Of Entry Support	\$0.00	\$6,340.00			\$6,340.00
Easment Acquisition	\$0.00	\$9,256.00			\$9,256.00
SCADA Controls Coordination	\$0.00	\$23,980.00			\$23,980.00
TCEQ Plan Submission	\$0.00	\$15,870.00			\$15,870.00
					\$0.00
					\$0.00
<b>Subtotal Additional Services</b>	<b>\$130,436.00</b>	<b>\$400,817.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$531,253.00</b>
<b>Summary of Fees:</b>					
Basic Services Fees	\$149,777.00	\$849,735.00	\$0.00	\$0.00	\$999,512.00
Additional Services Fees	\$130,436.00	\$400,817.00	\$0.00	\$0.00	\$531,253.00
<b>Total Authorized Fees</b>	<b>\$280,213.00</b>	<b>\$1,250,552.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$1,530,765.00</b>



2023-Aug-11

Ted Stawasz  
Associate  
STV, Inc.  
13750 San Pedro Ave., Suite 300  
San Antonio, Texas 78232

RE: **AAACE Scope and Cost Proposal for Professional Mechanical/HVAC Engineering Services for the Navigation Pump Station Improvements (PROJECT) for the City of Corpus Christi Water Department (CCTX)**

Dear Ted:

AAACE is pleased to submit its Scope and Cost Proposal for providing Mechanical/HVAC Engineering Services for the Navigation Pump Station Improvements (PROJECT) for the City of Corpus Christi, TX (CCTX), the Owner. AAACE's role for the PROJECT shall be as a Sub-Consultant to STV, Inc. (STV), who is the Prime Engineering Consultant to CCTX. Attached please find our proposed Basic Services Scope, Additional Services, Compensation Fee and Schedule.

#### **I. PROJECT BACKGROUND INFORMATION**

- A. CCTX is planning add new VFDs to the existing electrical room, which measures approximately 25 feet by 15 feet. The existing HVAC for the electrical room is shared with the adjacent office and control room, which will have to be separated, and the electrical room provided with its own dedicated HVAC system due to the addition of the VFDs.

#### **II. BASIC PROFESSIONAL ENGINEERING SERVICES SCOPE:**

##### **A. GENERAL**

- 1) AAACE's scope for this phase of the PROJECT includes detailed **design, bid and construction** phase services consisting of the required Mechanical HVAC work.
- 2) The Project Delivery method shall be traditional Design-Bid-Build.

##### **B. PRELIMINARY ENGINEERING REPORT (PER) PHASE:**

- 1) Not in scope. Completed in a previous contract.

### C. DETAIL DESIGN PHASE SERVICES:

- 1) Start and complete the Engineering Drawings and Specifications (herein after referred to as Contract Documents) up to the 100% design level showing the necessary information for construction of the HVAC improvements work based on the CCTX approved PER.
- 2) Design and drafting services for completing the Contract Drawings shall be based on AutoCAD format consistent with STV's criteria.
- 3) Attend the Project Kickoff Meeting virtually via MS Teams.
- 4) Produce work in accordance with the most current building codes adopted in the PROJECT area.
- 5) One site visit to the PROJECT SITE as required to collect the necessary information so AACE can complete its design work scope.
- 6) Participate in bi-weekly or monthly coordination meetings via telephone conference calls, only as required.
- 7) Issue the Contract Documents to STV and CCTX for review and comment at multiple milestones, specifically at the 60%, 90% and 100% Design phases. Electronic delivery to STV of the interim review sets of the Contract Documents shall be 11x17 size Drawings in Adobe Acrobat and specifications (8-1/2 x 11) in Adobe Acrobat format.
- 8) Internal QAQC by an experienced/senior Engineer of the Contract Documents at each Project milestone indicated above.
- 9) Participate in Design Review Meetings with STV and CCTX virtually via MS Teams to review and exchange comments for each of the Design Submittal Milestones indicated above.
- 10) Respond to and incorporate STV and CCTX review comments from each project review milestone listed above into the Contract Document set.
- 11) Provide one (1) Final 'Issued for Bid' set of Contract Documents. Issued for Bid submittal shall consist of one (1) set of reproducible, signed and sealed, full-size Drawings and (1) set of Specifications in Microsoft Word format.
- 12) The 'Issued for Bid' set of Contract Documents shall be issued as one contract, and not split into separate 'Issued for Bid' packages.
- 13) Prepare, and submit to CCTX, AACE's Opinion of Probable Construction Cost for the PROJECT scope at each project milestone listed above.

#### **Preliminary HVAC Drawing List**

1. *SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES - HVAC*
2. *CC PS ELECTRICAL ROOM - PLAN & PHOTOS - HVAC DEMOLITION*
3. *CC PS ELECTRICAL ROOM - PLANS & SECTIONS - HVAC*
4. *CC PS ELECTRICAL ROOM - SCHEDULES & DETAILS - HVAC*

### D. BID PHASE SERVICES:

- 1) Issue Addenda information, including drawings, drawing exhibits and specifications, as necessary.
- 2) Issue necessary interpretations and clarifications of the Contract Documents related to AACE's work.
- 3) Provide STV an electronic copy of the signed and sealed 'Conformed' Contract Documents (Drawings in PDF and/or AutoCAD format, and specifications in PDF and/or MS Word format) at the conclusion of the bid phase, incorporating all Clarifications and Addendums issued during the Bidding period.

### E. CONSTRUCTION PHASE SERVICES:

- 1) Provide general assistance and technical review construction support services to STV and CCTX. All of AACE's instructions and support services will be issued through STV.
- 2) AACE shall issue interpretations and clarifications, as necessary, of AACE's Contract Documents.
- 3) Review and answer Contractor and CCTX questions, issue clarifications and respond to Requests For Information (RFI) related to AACE's Contract Documents.
- 4) Review and approve (or take other appropriate action in respect of) Shop Drawings, samples and other data which Contractor is required to submit, but only for general conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Review comments by AACE shall be electronically submitted to STV. Review of shop drawings shall be limited to a maximum of (2) reviews per Submittal. Reviews in excess of this limit shall be considered an Additional Service.
- 5) Conduct (1) interim progress construction site visit during the course of the construction phase to observe and confirm the progress and quality of the various aspects of Contractor's work related to AACE's Contract Documents. AACE shall submit a written site Observation Progress Report to STV.
- 6) Conduct, one (1) final construction field observation site visit to observe and confirm that the Contractor's completed work is in general accordance with the Contract Documents and that all previously issued site observations and punchlist items have been addressed by the contractor to the satisfaction of the STV and CCTX. AACE shall submit a written punchlist to CCTX.
- 7) Prepare one (1) Record Drawing Set of AACE's design showing the changes made during the construction process based on construction records and site observations of AACE, CCTX, and on the marked-up prints, drawings, and other data furnished by Contractor to CCTX and AACE. Record Drawings shall be prepared and submitted.
- 8) Review Operations and Maintenance (O&M) Manuals with warranties, certificates of inspection, tests and approvals based on information provided by the Contractor.

**F. SERVICES NOT INCLUDED IN AACE'S SCOPE:**

- 1) HVAC associated with areas outside of the electrical room, except modifying existing HVAC serving office and control room so it no longer serves the electrical room.
- 2) As-building existing conditions.
- 3) Attending monthly project progress meetings with CCTX. AACE designated staff will be made available to participate via teleconference as required.
- 4) Detailed studies or analyses.
- 5) Plumbing.
- 6) Fire Protection.
- 7) Leadership in Energy and Environmental Design (LEED) services.
- 8) Generation of three-dimensional (3-D) drawings.
- 9) Attend Pre-Bid Conference Meeting.
- 10) Attend Preconstruction Conference Meeting.

**G. ASSUMPTIONS/CLARIFICATIONS:**

- 1) STV shall provide all criteria and full information as to its requirements for the Services, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and copies of all design and construction standards which STV and/or CCTX will require to be included in AACE's drawings and specifications.
- 2) STV or CCTX will provide scanned electronic images (.pdf format) or AutoCAD files of CCTX's existing drawings for AACE to utilize in the development of its HVAC Drawings.

- 
- 3) CCTX will make available plant personnel at the pump station to assist AACE during its site data collection efforts.
  - 4) Existing work that is non-compliant to current codes, functional or adequately serving the CCTX's current needs, and that is not explicitly included in the Scope of Work above, shall not be AACE's responsibility to discover, report or remedy. If during the course of the project, CCTX directs AACE to remedy existing work that was not included in AACE's original Scope of Work, AACE shall be entitled to Extra Compensation.
  - 5) Major design changes generated by CCTX or STV after the 60% Design Phase Milestone shall be considered an Additional Service. Major design changes are considered to be, but not limited to, addition of building structures; addition of square footage to project; addition of or major modifications to mechanical and electrical design preferences; changes in design concepts and methods; and major changes in equipment types.
  - 6) AACE's site visits, if any, are not intended to be an exhaustive check or a detailed inspection but rather are for observation only and to allow AACE to become familiar with the work in progress and to determine, in general, if the work is proceeding in accordance with AACE's design contract documents. Based on this general observation, AACE shall keep STV and CCTX informed about the progress of the Work and shall advise STV and CCTX about observed deficiencies in the Work.
  - 7) AACE's OPCC construction cost estimates are engineering estimates and are not warranted.

### III. COMPENSATION FOR BASIC SERVICES

- A. Compensation for labor of AACE Basic Services shall be on a Lump Sum basis and shall not exceed **\$47,590** without STV's prior written approval. AACE's fee for each customary phase is broken out as follows:

<b>AACE Fee Breakdown</b>	
1. Design Phase:	\$25,826
2. Bid Phase:	\$1,962
3. Construction Phase:	\$19,802
<i>Construction Phase Breakdown:</i>	
General/Submittals/RFIs:	\$7,282
Site Visit 1:	\$3,800
Site visit 2:	\$3,800
Site Visit 3:	\$3,800
Record Drawings:	\$1,120

AACE Fee above includes overhead, communication charges (i.e. fax, telephone, email, and cell phone), travel to the project site for the number of site visits indicated herein, expedited shipping and courier services.

### IV. COMPENSATION FOR ADDITIONAL SERVICES

- A. ENGINEER shall provide AACE with a written request for the Special Services, if such services become necessary. Written authorization must be obtained from ENGINEER prior to proceeding with Special Services required to support the activities in Basic Services.

### V. TIME SCHEDULE

The time periods and rates for the performance of this work shall be valid from September 2023 to December 2026.

We appreciate you considering AACE for the opportunity to support you and the rest of the ENGINEER Team on this project. If you find this proposal acceptable to you, please indicate your approval by signing two copies of this proposal and returning one copy to my attention for my records. If you have any questions or comments, feel free to contact me.

Regards,

**Ricardo J. Azcarate, P.E.**  
 President  
 AACE, LLC



A UES Company

- GEOTECHNICAL ENGINEERING
- CONSTRUCTION MATERIALS ENGINEERING & TESTING
- SOILS □ ASPHALT □ CONCRETE

July 11, 2023

1 Countryside Place  
12500 San Pedro, Ste 450  
San Antonio, Texas 78216

Attention: Mr. Ted Stawasz

**SUBJECT: GEOTECHNICAL SERVICES PROPOSAL  
NAVIGATION BOULEVARD PUMP STATION  
Navigation Boulevard, Corpus Christi, Texas  
Rock Engineering Proposal Number: CGP062723A (Revision 1)**

Dear Mr. Stawasz,

Rock Engineering and Testing Laboratory, LLC. (TBPE Firm No. 2101) is pleased to submit the following proposal to provide Geotechnical Services for the proposed Navigation Boulevard Pump Station to be constructed off Navigation Boulevard in Corpus Christi, Texas. On July 3, 2023 A Rock Engineering representative met on site with the client to discuss, boring location access and alternative boring locations in the event utilities are located within the immediate area.

Based on information provided to Rock Engineering, the project will include the construction of a pump station with associated discharge and supply lines. The discharge line has an alignment on the order of approximately 1,300 linear feet between Ohama Drive and the pump station site, while the supply line has an alignment on the order of approximately 5,900 linear feet along the north side of Agnes Street.

It should be noted that other design details have not been provided. If additional information becomes available, it should be forwarded to Rock Engineering, so we can review the information and refine the scope of work if appropriate.

Based on the clients request, Rock Engineering proposes performing three (3) borings to termination depth of 20 feet and three (3) borings to a termination depth of 25 feet for the proposed 36-inch supply line to be installed on the north side of Agnes Street, one (1) boring to a termination depth of 20 feet within the alignment of the 36 inch discharge line, and one (1) boring to a termination depth of 20 feet at the location of the new pump station . (Total Number of Borings: 8; Total Linear Feet of Drilling: 175 LF).

The scope of work is outlined below.

**ROCK ENGINEERING & TESTING LABORATORY, LLC.**

**Corpus Christi**

Office: 361.883.4555  
Fax: 361.883.4711  
6817 Leopard St.  
Corpus Christi, TX 78409

**San Antonio**

Office: 210.495.8000  
Fax: 210.495.8015  
10856 Vandale  
San Antonio, TX 78216

**Round Rock**

Office: 512.284.8022  
Fax: 512.284.7764  
7 Roundville Ln.  
Round Rock, TX 78664

### **Scope of the Proposed Subsurface Investigation**

- Rock Engineering will stake the boring locations in the field prior to the field investigation.
- Coordination with the Texas 811 System will be performed by Rock Engineering to identify underground utilities in the proximity of the boring locations. The borings will be relocated if necessary.
- A truck mounted drilling rig will be utilized to access the boring locations.
- An experienced soil technician will log the borings in the field full-time during the drilling operations.
- The borings will be sampled every 2.5 feet to a depth of 25 feet, the termination depth of the deepest borings.
- Disturbed soil samples will be obtained employing split-barrel sampling procedures in general accordance with the procedures for "*Penetration Test and Split-Barrel Sampling of Soils*, (ASTM D1586)."
- Relatively undisturbed soil samples will be obtained using thin-wall tube sampling procedures in accordance with "*Thin Walled Tube Sampling of Soils*, (ASTM D1587)" where applicable.
- The shear strength of cohesive soils, if present, when sampled using a Shelby tube, will be estimated using a hand penetrometer.
- Standard penetration tests (SPT) will be recorded in granular soils where applicable.
- The borings will be advanced to the depths and locations specified above.
- Groundwater readings will be obtained during drilling and immediately upon completion of the drilling operations.
- After obtaining the groundwater readings, the open boreholes will be backfilled with excess soils obtained during the drilling operations.

### **Scope of Laboratory Testing Program**

All of the samples obtained from the borings will be transported to our testing laboratory and each sample will undergo the following tests.

- Supplementary Visual Classification (ASTM D2487)
- Water Content Tests (ASTM D2216)

Depending upon the actual subsurface conditions encountered, Rock Engineering engineers will assign some or all of the following tests on selected samples, as necessary to properly classify the soils and determine overall strength and index properties of the soil profile at the site.

- Atterberg Limits Tests (ASTM D4318)
- Percent Material Finer Than The #200 Sieve Tests (ASTM D1140)
- Unconfined Compressive Strength Tests (ASTM D2166)

All phases of the laboratory testing program will be performed in general accordance with applicable ASTM Specifications. All field and laboratory test results will be provided on the boring logs or in the report.

### **Projected Schedule**

After authorization, it is estimated that the drilling operations can begin within 5 to 15 business days. We anticipate that the field exploration will be completed in approximately 1 to 2 days. The final report will be submitted within two to three weeks of the completed fieldwork. Rock Engineering will provide a preliminary summary of our findings within a couple days following the field exploration. If adjustments to the proposed timeline are required to meet the existing project schedule, please contact Rock Engineering so that we can accommodate your needs.

**Geotechnical Engineering Report**

In addition to the field and laboratory testing, a geotechnical engineering report will be prepared that include the following:

- Site and project description,
- Description of the field exploration and laboratory testing,
- Discussion of the engineering properties of the subsurface materials encountered,
- Discussion of ground water conditions, and dewatering if applicable,
- Discussion of the OSHA Soil classifications and trench excavation,
- Discussion of the Potential Vertical Rise (PVR) of the subsurface soils,
- Shallow foundation recommendations,
- Below-grade wall discussion and backfill recommendations, and
- Construction Considerations including bedding and backfill materials.

**Fee and Limitations**

The total fee to perform the scope of work outlined above is depicted in the below table:

<b>Drilling Fees</b>				
Drilling Rig Mobilization/ Demobilization	each	1	\$365.00	\$365.00
Support Truck	per day	2	\$80.00	\$160.00
HAS and SS Drilling < 50'	per foot	175	\$24.00	\$4,200.00
Boring Location Marking (Program Manager)	per hour	2	\$115.00	\$230.00
One Call Submittal (Program Manager)	per hour	2	\$115.00	\$230.00
Coordination (Program Manager)	per hour	2	\$115.00	\$230.00
Drilling Logger	per hour	12	\$105.00	\$1,260.00
<b>Total Drilling Fees</b>				<b>\$6,675.00</b>
<b>Laboratory Fees</b>				
Description and Moisture	each	67	\$13.00	\$871.00
Percent Finer than No. 200 Sieve Tests	each	20	\$82.00	\$1,640.00
Atterberg Limits Test	each	20	\$72.00	\$1,440.00
Unconfined Compression Strength Tests	each	12	\$69.00	\$828.00
pH of Soil	each	2	\$34.00	\$68.00
Soil Resistivity	each	2	\$56.00	\$112.00
Sulfate and Chloride Content in Soil	each	2	\$150.00	\$300.00
<b>Total Laboratory Fees</b>				<b>\$5,259.00</b>
<b>Engineering and Report Fees</b>				
Senior Engineer	per hour	4	\$180.00	\$720.00
EIT	per hour	8	\$125.00	\$1,000.00
Boring Logs (admin)	per hour	4	\$52.00	\$208.00
Report Preparation (admin)	per hour	2	\$52.00	\$104.00
<b>Total Engineering and Report Fees</b>				<b>\$2,032.00</b>
<b>Project Grand Total</b>				<b>\$13,966.00</b>

The Total Project Fee includes the field investigation, laboratory testing, deep wall foundation recommendations, and report preparation. Please note that the total fee provided above will be honored for 90 days after the date of this proposal. After 90 days, Rock Engineering should be contacted to reevaluate the fees and revise the proposal as needed.



July 11, 2023  
Attn: Mr. Ted Stawasz  
STV Inc.

**NAVIGATION BOULEVARD PUMP STATION**  
Navigation Boulevard, Corpus Christi, Texas  
Rock Engineering Proposal No.: CGP011223A (Revision 1)

Services provided for any revisions after the submittal of the final report, approved by the client in a change order, will be invoiced at a rate of \$180.00 per hour.

Services provided by Rock Engineering under this Agreement will be performed in a manner consistent with the degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

**The Client and Rock Engineering will coordinate with the City of Corpus Christi Water Department to gain access to the boring locations.**

The Parties to this agreement agree that if any claim is made that Rock Engineering failed to comply with any term of this agreement or that it failed to perform its work and/or duties under this agreement properly, the client, upon proof that there was some failure to comply or some mistake in the performance of the work, shall not be entitled to recover any sum greater than the amount paid by the client to Rock Engineering for the service performed by Rock Engineering.

In addition, and notwithstanding any other provisions of this Agreement, the Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless Rock Engineering, his or her officers, directors, employees, agents and sub consultants from and against all damage, liability or cost, including reasonable attorneys' fees and defense costs, arising out of or in any way connected with this project or the performance by any of the above named parties of the services under this Agreement, excepting only those damages, liabilities or costs attributable to the sole negligence or willful misconduct of Rock Engineering.

Either the Client or Rock Engineering may terminate this Agreement at any time with or without cause upon giving the other party 10-calendar days prior written notice. The Client shall within 10 calendar days of termination pay Rock Engineering for all services rendered and all costs incurred up to the date of termination, in accordance with the compensation provisions of this contract.

**Closing**

If you are in agreement with our proposed scope of work, please authorize us to proceed by signing in the space below and returning one copy to us.

Thank you for your consideration of our firm to assist you with this project. If you have any questions, or comments, please call at (361) 883-4555.

Sincerely,



James P. Bauer, P.E.  
Branch Manager

**ACCEPTED AND APPROVED**

By \_\_\_\_\_

Print \_\_\_\_\_

Date \_\_\_\_\_

For payment of services, invoice to:

Firm: \_\_\_\_\_ Attn: \_\_\_\_\_

Address: \_\_\_\_\_ Title: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**\*\*Please remit to the above address and reference your invoice number on payment.**

July 14, 2023

STV, Inc  
Attn: Ted Stawasz  
Office: 210.494.8004

**Re: CC Navigation PS Improvements – Topo and Utility Survey**

Dear Mr. Stawasz,

In accordance with your request, International Consulting Engineers (ICE) is pleased to furnish the following proposal for assistance with topographical and utility survey for the new supply waterline, the Navigation PS Site, and a new discharge line. Following is the detailed scope of work proposed for this project.

**Surveying Services**

- Meetings and Coordination
- Topographic survey consisting of existing grade, ROW to ROW for proposed alignment, concrete curbs including gutter, top of pavement, and top of curb. Road centerlines and all pertinent improvements within the existing delineated area. Including north of the Railroad and survey at least 50ft beyond the plant property along Navigation Blvd.
- Pick up existing easements
- Note locations of existing monuments and benchmarks
- Pick up existing utilities including flowlines including hydrants, valves, and manholes
- Pick up existing buildings and structures at the pump station including SUE at several locations.
- Existing ROW and property lines for the proposed alignment, streets, railroad and irrigation lines.
  - **Proposed Fee: \$37,584.00**

**Additional Services**

- Prepare metes and bounds and exhibits for proposed easement purchases. Estimated three (3) easements.
  - **Proposed Fee: \$9,256.00**

ICE will provide the aforementioned scope of work for the amount of **\$46,840.00** (*Forty-Six Thousand Eight Hundred Forty Dollars and No Cents*). Refer to attachment A for a manhour estimate breakdown for this project.

*Exclusions, clarifications, and assumptions of service:*

- Client will provide ICE access to job site
- Proposed cost includes a \$5,000 allowance for Hydro-excavation if not utilized cost will be reimbursed to client.
- Construction services are not included in this proposal

Page 2 of 2

July 14, 2023


Attn: Ted Stawasz

**Re: CC Navigation PS Improvements – Topo and Utility Survey**

- Survey plat, construction inspections, or any other services not listed in proposal can be billed at an hourly rate or via separate contract
- No additional work will be performed unless approved by client

We appreciate the opportunity to be of service. Should you have any questions concerning this proposal, please do not hesitate to contact Jesus J. Jimenez at (361) 826-5805 at [JJ@icengineers.net](mailto:JJ@icengineers.net)

Sincerely,  
**International Consulting Engineers**



Jesus J. Jimenez, PE, CFM  
Project Manager

AGREED AND ACCEPTED:
<b>Name:</b> _____
<b>Title:</b> _____
<b>Signature:</b> _____