

CITY OF KEY WEST
TASK ORDER No. 2 - DESIGN SERVICES – PHASE II
DENNIS STREET STORM WATER IMPROVEMENTS
PUMP STATION

BACKGROUND

The City of Key West (CITY) is actively working to improve their existing storm water system. Currently, the storm water system consists of approximately 63 permitted outfalls and related storm water collection systems, 54 vertical exfiltration drains, 5 pressurized wells, approximately 121 storm water gravity recharge wells, and associated collection and treatment systems.

The storm water improvements are required in sub-basin 3340 near the Key West High School, which currently has consistent standing water issues. There is an existing gravity well at Dennis Street that is too low to be effective. This new project will achieve the goal of lifting water to the existing outfall discharging to the salt ponds on the south side of the High School property, in order to reduce the duration of standing water in the area.

INTRODUCTION

Black & Veatch (CONSULTANT) was requested by the CITY to provide design services for a new nutrient separating baffle box, submersible pump station, valve box, discharge piping to connect to the existing outfall and associated supporting infrastructure (electrical, instrumentation and controls). The new pump station will be located on Venetia Street west of the intersection with Dennis Street. The backup generator will be located in the south-east corner of the intersection of Venetia Street and Dennis Street.

The pump station project was previously identified in the City Storm Water Master Plan (2012, CH2M Hill) as an “Alternative 2” project. An Alternative 2 project is one that is located in an area of low elevation and experiences chronic problems with localized flooding. Many of the Alternative 2 projects did not yield significant changes in peak flood elevation based on computer modeling, but were recommended to address areas where localized flooding was reported.

Previous computer modeling efforts using ICPR for the 2012 Storm water Master Plan conducted for the City, indicated that a pump station capacity of 18.5 cubic feet per second (cfs) would be able to handle the peak flow of the 100-year 72-hour storm with acceptable levels of flooding. During the preliminary design reviews and discussions with the City related to the level of service requirements for this location; it was agreed that a smaller design storm with a higher frequency could be used as the basis for the pump station capacity. As a result, the design storm utilized for the design is the 25-year 72-hour storm with a pump station capacity of 11-cfs.

SCOPE OF SERVICES

TASK SERIES 100 – DETAILED DESIGN AND CONSTRUCTION CONTRACT DOCUMENTS

Task 101 – Project Coordination

Project coordination will encompass efforts required for project set-up, resource management, scheduling, invoicing, trend management, and other requirements needed to effectively and efficiently complete the tasks described in this scope of services.

Task 102 - Detailed Design - Construction Documents Level 3

A. Level 3 progress activities are as follows:

1. Final review set of CAD drawings
2. Final review set of specifications and construction contract documents
3. Opinion of probable construction cost update
4. Internal quality control review and refinement before delivery to the CITY
5. Quality assurance and quality control plan and log update
6. Project schedule update
7. Project trend register update

B. CONSULTANT will provide two (2) hard copy sets and one (1) electronic copy of the Level 3 documents to the CITY for review.

C. CONSULTANT will conduct a project review workshop with the CITY to review the Level 3 documents. Based on discussions during the workshop, CONSULTANT will refine the documents, if necessary.

D. CONSULTANT will revise the documents as necessary to reflect any decisions taken at this level and provide the CITY with two (2) hard copy sets and one (1) electronic copy.

Task 103 - Permitting

A. CONSULTANT will meet with the CITY's personnel and representatives of affected agencies such as SFWMD, Monroe County, Keys Energy and the school district as appropriate to discuss the impact of the project on their facilities and obtain requirements for public protection to be included in contract documents. A level of effort of two (2) meetings, two (2) trips to the CITY's location are included for the affected agencies program. Additional effort will be addressed as supplemental services.

B. CONSULTANT will provide assistance to the CITY in obtaining the following permits from government agencies:

1. FDEP Permitting
2. SFWMD Permitting

C. Assistance for the above permits will include:

1. Preparation of applications, exhibits, drawings, and specifications as necessary for the CITY's execution and submittal.
2. Furnishing additional information about the project design.

Task Series 100 Deliverables

The following deliverables are included in Task Series 100:

- Level 3 Design Package (including drawings, specifications, and opinion of probable construction cost).
- Level 3 workshop meeting minutes.
- FDEP and SFWMD permitting package.

Task Series 200 - BID AND PREAWARD SERVICES

Task 201- Bid Services

A. Provide for CITY's use in reproducing bidding documents one electronic copy of:

1. Construction contract drawings
2. Technical specifications
3. Front end documents
4. Geotechnical report
5. Addenda

B. Provide up to two (2) sets of hard copies of construction contract documents and addenda and up to two (2) hard copies of the geotechnical report for prospective bidders. All hard copies will be signed and sealed by a Professional Engineer registered in the state of Florida.

C. Pre-bid Conference. Attend at a date and time selected and a place provided CITY, a pre-bid conference to:

1. Confirm the types of technical information required by the contract documents.
2. Review special project requirements.

3. Receive requests for interpretations that will be issued to plan holders.
- D. Interpret bidding documents. Prepare and issue addenda to the construction contract documents when required. Two (2) addenda packages are included in the fee estimate.

Task 202 - Pre-Award Services

- A. CONSULTANT will provide the following pre-award services:
1. As-Bid Construction Contract Documents. Refine construction contract documents according to addenda.
 2. Distribute two (2) sets of the construction contract documents to the successful bidder.

Task Series 200 Deliverables

The following deliverables are included in Task Series 200:

- Bid Package (including ready-to-advertise drawings, specifications, and opinion of probable construction cost).
- Conformed Documents (including drawings and specifications).

Task Series 300 – CONSTRUCTION PHASE SERVICES

CONSULTANT will perform services during the construction phase of the project. By performing these services, CONSULTANT shall not have authority or responsibility to supervise, direct, or control the CONTRACTOR's work or the CONTRACTOR's means, methods, techniques, sequences, or procedures of construction. CONSULTANT shall not have authority or responsibility for safety precautions and programs incident to the CONTRACTOR's work or for any failure of the CONTRACTOR to comply with laws, regulations, rules, ordinances, codes, or orders applicable to the CONTRACTOR furnishing and performing the work. It is anticipated that the construction period will be eight (8) months. Specific services to be performed by CONSULTANT are outlined below.

Task 301- Construction Administration Support Services

- A. CONTRACTOR's Schedule. Determine if CONTRACTOR's schedule is consistent with the construction contract documents with emphasis on milestone dates, construction sequencing, and operation of existing facilities during construction. CONSULTANT's review shall not include an analysis of CONTRACTOR's approach, means or methods of construction to perform the work specified in the construction contract documents.
1. Review and comment upon the CONTRACTOR's initial construction schedule.
 2. Review and comment upon updated schedules monthly.

- B. CONTRACTOR's Estimates of Monthly Payments. Review the CONTRACTOR's initial and updated schedule of estimated monthly payments and advise CITY as to acceptability.
- C. Shop Drawing Review. Review drawings and other data submitted by the CONTRACTOR as required by the construction contract documents. CONSULTANT's review shall be for general conformity to the construction contract documents and shall not relieve the CONTRACTOR of any contractual responsibilities. Such reviews shall not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Manufacturer's O&M manuals received in CONTRACTOR submittals will be passed on to CITY without review.
- D. Operation and Maintenance Data. Collect and organize two (2) sets of operation and maintenance data provided by the CONTRACTOR. Each set will be placed in separate binders, the binders indexed, and a table of contents provided. Binders will be submitted to CITY.
- E. Requests for Information, Change Orders, and Claims.
 - 1. Requests for Information. Interpret construction contract documents when requested by CITY or the CONTRACTOR. Requests for clarification or information shall be in writing and copies of CONSULTANT's response shall be distributed to CITY.
 - 2. Change Orders. Review CITY or CONTRACTOR requests for project changes.
 - a. Review documentation
 - b. Prepare any additional documentation required
 - c. Administer the processing of change orders
 - d. Review applications for extension of construction time
 - e. Evaluate the cost and scheduling
 - f. Submit recommendations to CITY
 - g. Assist CITY in negotiations with CONTRACTOR to obtain a fair price for the work.
 - 3. Claims. Act on claims of CITY and the CONTRACTOR relating to the acceptability of the work or the interpretation of the requirements of the construction contract documents.
 - 4. CONTRACTOR Pay Requests. Review and process the CONTRACTOR's monthly payment requests, and forward to CITY if appropriate. CONSULTANT's review shall be for the purpose of making a full independent mathematical check of the CONTRACTOR's payment request. Because CONSULTANT will not be providing a resident engineer, CITY is responsible for verifying the quantities of work which are the basis of the payment requests.

5. Drawings Conformed to Construction Records. Upon completion of the project; revise the construction contract drawings to conform to the construction records. Submit to the CITY two (2) hard copies and one (1) copy in electronic format.

Task 302 Field Support Services

- A. Preconstruction Conference. Conduct the preconstruction conference at a date and time selected by the CITY and at a facility provided by the CITY. Elements of the conference will include:
 1. Agenda prepared by CONSULTANT
 2. CONSULTANT prepare and distribute minutes
 3. Discussion of CONTRACTOR's tentative schedules
 4. Procedures for transmittal and review of CONTRACTOR's submittals
 5. Special Inspections Program
 6. Processing applications for payment
 7. Critical work sequencing
 8. Change orders
 9. Record documents
 10. CONTRACTOR's responsibilities for safety and first aid
- B. Construction Progress Review Meetings and Monthly Site Visit. Participate in the monthly progress construction meeting. Visit the construction site to observe progress of the work, and consult with the CITY and the CONTRACTOR. A total of eight (8) site visits (on the same day as the monthly meetings) are included.
- C. Punch List. Upon substantial completion, inspect the construction work and prepare a punch list of those items to be completed or corrected before final completion of the project. Submit results of the inspection to the CITY and the CONTRACTOR.
- D. Final Inspection. Upon completion or correction of the items of work on the punch list, conduct a final inspection to determine if the work is completed. Provide written recommendations to CITY concerning final payment, including a list of items, if any, to be completed prior to making such payment.

Task Series 300 Deliverables

The following deliverables are included in Task Series 300:

- Pre-construction meeting documents (agenda, attendance list, meeting minutes).

- Monthly progress construction meetings documents (agenda, attendance list, meeting minutes).
- Monthly site visit reports.
- Punch list.
- Certificate of final completion.
- Record Documents (including drawings and specifications).

ASSUMPTIONS

1. Total number of trips included for Task 100 is four (4) for the two design review workshops and two permitting agency meetings.
2. Total number of trips included for Task 200 is one (1) for the pre-bid conference.
3. Total number of trips included for Task 300 is eight (8) for the monthly inspections/progress meetings.
4. CITY will handle all aspects of distributing bidding documents to prospective bidders.
5. CITY will receive CONTRACTOR'S guarantees and bonds that are to be assembled by the CONTRACTOR. CITY will review for completeness in accordance with the construction contract documents.
6. Structural and soil tests can be performed as additional services.

BUDGET

Tasks 100 thru 300 as described in this scope of work document would have the following lump sum fees:

TASK SERIES	LUMP SUM FEES
Task 100 – Detailed Design and Construction Contract Documents	\$181,998
Task 200 – Bid and Pre-Award Services	\$23,672
Task 300 – Construction Phase Services	\$63,036
Direct Costs	\$6,192
LUMP SUM TOTAL	\$274,898