11-19-19
CP-3
Additional
Information

TASK ORDER No. 2

Dated this day of , 2019

FORT LAUDERDALE PUBLIC WORKS DEPARTMENT

REPAIR AND REHABILITATION
WEST LAKE DRIVE BRIDGE OVER THE ESTELLE RIVER - BRIDGE NO. 865771

PROFESSIONAL SERVICES

This Task Order between the City of Fort Lauderdale, a Florida municipal corporation ("CITY") and BCC Engineering, Inc., a Florida profit corporation authorized to transact business in Florida, ("CONSULTANT") is pursuant to the Structural Engineering Consulting Services, Continuing Contract, RFQ 456-11637-1, Agreement dated July 12, 2016.

PROJECT BACKGROUND

Bridge No. 865771 is a reinforced concrete double tee-beam superstructure bridge supported by prestressed pile bents. The bridge consists of five 20 foot long spans. The bridge carries West Lake Drive over Estelle River in Broward County, Florida. The bridge was constructed in 1956 and serves as the sole vehicular access into approximately 85 local residences north of the structure. Beam and pile deficiencies identified in the 12/1/16 "Special-Other Bridge Inspection Report" resulted in a Prompt Corrective Action – Critical Bridge Deficiency letter being sent to the City by the *Florida Department of Transportation District 4 (FDOT). A* 10-ton weight restriction was placed on the bridge and a Load Rating performed by FDOT on 12/27/16.

Project Objective: Restore safe access to the island by performing bridge repairs that improve the Load Rating and restore structural capacity as follows:

•Improve Load Rating – Superstructure
The current Load Rating assumes that the tee-beams function independently, resulting in a higher load distribution factor for each tee-beam. This increases the load on each tee-beam, resulting in an insufficient Load Rating. This project will implement a shear lock plate system to restore group action of the tee-beams and yield an acceptable Load Rating. According to the Load Rating, shear locks have previously been installed at this location but were not considered in the Load Rating due to lack of information.

•Improve Load Rating – Substructure
The current Load Rating recognizes fractures in abutment Piles 6-1 and 6-4 by assuming they are unable to support load, thereby redistributing the load to the remaining piles. This project will repair and strengthen the existing abutment piles to restore their ability to support load and yield an acceptable Load Rating. Repairing the abutment Pile 6-1 and 6-4 fractures will require repairs below the water line.

•Restoration of Capacity
Repairs will be "in-kind" in nature, i.e. repairs will restore the original concrete section and steel reinforcing. In this way, the visual appearance of the bridge will not be significantly altered. The existing traffic railing will also be repaired and not replaced as part of this project. The Load Rating will be updated.

•Deficiencies at Critical Locations
Bents 1, 4, and 6 exhibit concrete delaminations and spalls with exposed reinforcing steel in the bent caps below beam bearing points. There are also delamination and spalls in beam flanges at beam ends/beam bearing locations. These deficiencies require sequencing the repairs and temporary supports in order to complete repairs. To minimize disruption and construction cost, a temporary support/jacking system using temporary piling located outside of the bridge footprint will be designed. To minimize disruption, temporary support operation durations will be controlled using plan notes.

•Access
The bridge serves as the sole vehicular access to approximately 85 residences north of the bridge. Maintaining safe access to these residences at all times during construction is a priority. This will be accomplished by performing “in-place” repairs to the greatest extent practical. Where more extensive repairs are required, repair work will be sequenced to maintain structural integrity/repair quality, and provide one dual-direction lane for traffic at all times. MOT and repairs will be designed to accommodate oversize emergency (fire/rescue) vehicle access so the residences maintain the existing level of access and emergency services at all times during construction.

•Existing Information
There are no existing plans. As a result, previous inspections/evaluations, load ratings, “Unknown Foundation Bridge” information, and the Phase 1, 2, and 3 Scour Evaluations will be used as the basis for structural analysis. A comprehensive field investigation will also be required to document conditions and support the contract documents and project permits. Structural inspections will be by land, boat, and subaqueous. Field Survey will include Topographic and Bridge. The bridge will be tested for Asbestos Containing Material (ACM). The Phase 3 Scour Evaluation indicates that the bridge is not scour critical, is low risk, is stable at the 100 year scour elevation, and a Phase 4 Analysis is not required. Since this project will involve in-kind repairs to the Abutment 6 piling and not effect overall hydraulics, a hydraulic/scour analysis in not included in the scope.

•Service Life
Extended Service Life depends on factors such as quality of repair construction, bridge use, and other factors such as natural causes or materials/workmanship of the original bridge. For planning purposes, should the construction budget enable adequately addressing all deficiencies, the City may expect to revisit this location for repair/replacement in as many as 10-15 years. The issue of Extended Service Life will be revisited after repairs are completed and inspected, after materials testing is performed, and monitored annually.

•FDOT
As a key stakeholder, FDOT will be involved in the project design (phase reviews). Therefore the bridge repair plans, specifications, and Load Ratings will follow FDOT criteria, and the bridge repair plans will provide the additional level of detail, content, and completeness indicative of a FDOT bridge repair project and additional coordination with FDOT will be provided to assure meeting the project schedule.

GENERAL REQUIREMENTS

Design Standards

The CONSULTANT shall be solely responsible for determining the standards the work shall meet and obtain all the requisite regulatory approvals. The design shall include, but is not limited to, the plans and specifications, which describe all systems, elements, details, components, materials, equipment, and any other information necessary for construction. The design shall be accurate, coordinated between disciplines, and in all respects, adequate for construction, and shall be in conformity, and compliance, with all applicable laws, codes, permits, and regulations.

Quality Control

The CONSULTANT is responsible for the quality control (QC) of their work and of its sub-consultants. The CONSUTLANT shall provide to the City the list of sub-consultants which shall be used for this project. This list shall not be changed without prior approval of the CITY. All sub-consultant documents and submittals shall be submitted directly to the CONSULTANT for their independent QC review. The City shall only accept submittals for review and action from the CONSULTANT.

The CONSULTANT shall be responsible for the professional quality, technical accuracy, and coordination of all pre-design services, designs, drawings, specifications, and other services furnished by the CONSULTANT and their sub-consultant(s). It is the CONSULTANT's responsibility to independently and continually QC their plans, specifications, reports, electronic files, progress payment applications, schedules, and all project deliverables required by this task order. The CONSULTANT shall provide the CITY with a marked up set of plans and/or specifications showing the CONSULTANT’s QC review. Such mark-ups shall accompany the CONSULTANT’s scheduled deliverables. The submittal shall include the names of the CONSULTANT’s staff that performed the QC review for each component (structures, roadway, drainage, etc.).

Project Schedule

The CONSULTANT shall submit a preliminary project schedule as an exhibit of this task order. The schedule shall be prepared in Microsoft Project, and shall utilize an estimated Notice-to-Proceed (NTP), based on best available information.

The CONSULTANT shall submit a final project schedule to the CITY, for approval, within 10 business days after receiving the NTP and prior to beginning work. No work shall commence without an approved schedule. The final schedule shall include design, permitting activities, submittal review timeframes, and other project activities as required to complete the work. The CONSULTANT shall submit updated project schedules as required in the specific scope of services.

Permitting

The CONSULTANT shall coordinate with the CITY, regulatory agencies, and any other government entity having an interest or jurisdiction, which may require permits for this project. The CONSULTANT shall provide an estimate of fees and duration associated with the

permitting process. Some of the regulatory or permitting agencies associated with this project include, but are not limited to:

- South Florida Water Management District (SFWMD)
- U.S. Army Corps of Engineers (USACE)
- U.S. Coast Guard (USCG)
- Broward County Environmental Protection and Growth Management Department (BCEPGMD)
- Broward County Environmental Licensing and Building Permitting
- CITY' s Department of Sustainable Development (DSD)
-

SPECIFIC SCOPE OF SERVICES

The Scope of Services to be provided by CONSULTANT shall be as follows:

Task 1 – Bridge Evaluation and Field Investigation

- The CONSULTANT shall review the Load Rating provided by the FDOT.
- The CONSULTANT shall review the current Bridge Inspection Report provided by the FDOT.
- The CONSULTANT shall review the existing bridge plan information provided by the FDOT
- The CONSULTANT shall review the existing "Unknown Foundations" and scour information provided by the FDOT.
- The CONSULTANT shall perform an above-water field inspection of the bridge (from boat and from land) to map and delineate deficiencies.
- The CONSULTANT shall perform an underwater inspection of the bridge to identify deficiencies.
- The CONSULTANT shall perform materials testing on the existing T-beams (concret and reinforcing steel) required to support the Load Rating analysis.
- The CONSULTANT shall perform a Topographic and bridge survey to locate all above ground features, and any additional data required for the completion of the design, permitting, and construction of the project. The Topographic survey shall extend approximately 200 feet north and south of the bridge as measured from the end of the bridge, or to the nearest intersection. Survey shall extend 10 feet beyond the existing right-of-way lines, where accessible. Topographic survey shall show all surface improvements including the roadway, striping, surface utilities, overhead lines, trees, etc. Ground elevations will be observed at 50-ft intervals, including any intermediate changes in grade. The published MHW and MLW will be researched and noted on the survey. Elevations will be referenced to the North American Vertical Datum of 1988 (NAVD88). Survey shall also show detailed measurements of the bridge elements such as the deck, approach slabs, walls, bents and pilings as measured by traditional and laser scanning methods. The project does not involve dredge and fill, therefore no hydrographic survey/channel sections will be performed.
- The CONSULTANT shall perform Geotechnical and Materials Testing services required to support the required work. Geotechnical Services shall include field exploration (borings), soil tests/classifications, environmental classification, and recommendations to support the bridge repairs. Materials Testing Services include concrete cores and reinforcing steel samples.

- The CONSULTANT shall perform a construction cost estimate and if necessary for construction budget purposes evaluate the minimum repair scope required to restore an acceptable Load Rating.

Deliverables: The following deliverables shall be provided under Task 1:

- Bridge inspection field notes and photographs (pdf's and jpg)
- Underwater inspection report (pdf).
- Draft Geotechnical Report
- Draft Materials Testing Report
- Construction Cost Estimate

Task 2 - 30% Design Submission

- The CONSULTANT shall identify key constructability issues.
- The CONSULTANT shall provide a Topographic and bridge survey by a Florida Registered Surveyor to locate all above ground features, and any additional data required for the completion of the design, permitting, and construction of the project.The CONSULTANT shall submit the plans, and specifications, for CITY review. The design drawings shall be submitted in 11" x 17" plan sheets. The CITY shall provide comments to the CONSULTANT within 14 days of receiving the submittal.
- The CONSULTANT shall provide a draft Geotechnical Report to the CITY's Project Manager. This draft report shall contain, at a minimum, project vicinity map, plan view showing the location of borings, basis and results of tests performed, detailed description of findings, recommendations regarding the bridge temporary supports and 30% plans, and an executive summary.
- The CONSULTANT shall attend one (1) coordination meeting with the CITY to address review comments. CONSULTANT shall prepare the agenda, record, and submit meeting minutes to the CITY.
- The CONSULTANT shall prepare a construction cost estimate and make the changes to the design if needed to have it within the proposed budget.
- The CONSULTANT shall submit an updated project schedule in Microsoft Project as part of this submittal package.

Deliverables: The following deliverables shall be provided under Task 2:

- Three (3) original sets of the 30% design package (11" x 17" plan sheets) together with one (1) electronic copy.
- One (1) copy of the meeting minutes.
- One (1) copy of the construction cost estimate.
- One (1) copy of updated project schedule.
- One (1) hard copy of the Asbestos Report.
- One (1) hard copy and one (1) CD of the draft Geotechnical Report.
- Three (3) signed and sealed hard copies of the Topographic and Bridge Survey.
- One (1) CD/DVD of the electronic files to include survey AutoCAD, point cloud, and digitally signed PDF survey files, PDF Asbestos Report.

Task 3 - 60% Design Submission

- The CONSULTANT shall incorporate the review comments (City and FDOT) from the 30% design submission in the 60% plans submission. The 60% design submission shall include, at a minimum, the following:
    - Plans
    - Specifications
- The CONSULTANT shall submit plans, and specifications for CITY review. The design drawings shall be submitted in 11" x 17" plan sheets. The CITY shall provide comments to the CONSULTANT within 14 days of receiving the submittal.
- The CONSULTANT shall provide a final Geotechnical Report to the CITY's Project Manager.
- The CONSULTANT shall attend one (1) coordination meeting with the CITY to address review comments. CONSULTANT shall prepare the agenda, record and submit meeting minutes.
- The CONSULTANT shall provide an updated schedule in Microsoft Project as part of this submittal package for City review and approval.
- The CONSULTANT shall prepare a construction cost estimate and make the changes to the design if needed to have it within the proposed budget.

Deliverables: The following deliverables shall be provided under Task 3:

- Three (3) original sets of the 60% design package (11" x 17" plan sheets), together with one (1) electronic copy.
- One (1) hard copy and one (1) CD of the final Geotechnical Report.
- One (1) copy of the meeting minutes.
- One (1) copy of updated project schedule.
- One (1) copy of the construction cost estimate.

Task 4 – 100% Design Submission

- The CONSULTANT shall incorporate the review comments (City and FDOT) from 60% design submission in the 100% design submission. The 100% design submission shall be complete.
- The CONSULTANT shall submit the 100% design submission for CITY review. The design drawings shall be submitted in 11" x 17" plan sheets. The CITY shall provide comments to the CONSULTANT within 10 business days of receiving the submittal.
- The CONSULTANT shall provide the Bridge Load Rating.
- The CONSULTANT shall attend one (1) coordination meeting with the CITY to address review comments. CONSULTANT shall prepare the agenda, record and submit meeting minutes.
- The CONSULTANT shall provide an updated schedule in Microsoft Project as part of this submittal package for City review and approval.
- The CONSULTANT shall prepare a construction cost estimate, and make the changes to the design if needed to have it within the proposed budget.
- Once all comments are addressed, or if no comments or corrections are necessary, the CONSULTANT shall submit the Final Plans and Specifications, and any other documents required for a complete design.by the City. CONSULTANT shall provide

three (3) original signed and sealed sets of the Final Design Package (24" x 36" plan sheets), together with an electronic copy.

Deliverables: The following deliverables shall be provided under Task 4:

- Three (3) original sets of the 100% design package (11" x 17" plan sheets), together with an electronic copy.
- Three (3) original sets, digitally signed and sealed of the Final Plans and Specifications 100% design package (24" x 36" plan sheets), together with one (1) electronic copy.
- One (1) copy of the meeting minutes.
- One (1) copy of updated project schedule.
- One (1) copy of the construction cost estimate.

Task 5 - Permitting

- The CONSULTANT shall obtain all required permits from the CITY, regulatory agencies, and authorities having jurisdiction, for this project.
- The CONSULTANT shall respond to all permit comments from the CITY, regulatory agencies, or authorities having jurisdiction.
- The CONSULTANT shall attend permit meetings with CITY, regulatory agencies, and authorities having jurisdiction, record and prepare meeting minutes, and provide documentation to the CITY.
- The CONSULTANT is responsible for determining which permits are required and which agencies are applicable to the project.
- Permit Fees are not included in Task 5, rather in a "Permit Application Allowance" included in the Terms of Compensation.

Task 6 – Utility Coordination

- The CONSULTANT shall provide Utility Coordination services to include:
  -Kickoff Meeting
  -Identify existing UAO's
  -Make utility contacts
  -Field Meetings
  -Utility Design Meeting
  -Distribute Plans
  -Review utility markups, work schedules, and process work schedules and agreements
  -Coordination and follow up
  -Utility Constructability Review
  -Construction Certification Package and close out

Task 7 - Bidding Services

- The CONSULTANT shall assist the CITY in preparing the bid documents, including incorporating the CITY's front-end documents.
- The CONSULTANT shall attend the pre-bid meeting. The CONSULTANT shall respond to questions from prospective bidders.
- The CONSULTANT shall provide supplemental information to prospective bidders as required during the bidding process through the issuance of addenda.

- The CONSULTANT shall review all bids to determine the most responsible and responsive bidder and provide the CITY with a recommendation for award of the construction contract.

Task 8 - Post Design Services – The following scope is based on 9 months of construction/contract time and on the total hours specified within.

- The CONSULTANT shall attend, record, and prepare minutes of the pre-construction meeting, and submit to the CITY for approval.
- The CONSULTANT shall periodically observe the progress of the construction as requested and authorized in writing by the CITY and submit report of findings to the CITY.
- The CONSULTANT shall attend up to six (6) construction progress meetings.
- The CONSULTANT shall review all shop drawings, product data, cut sheets, and submittals within seven (7) business days of receipt of the submittal to determine compliance with the drawings and specifications, and recommend submittal action to the CITY. Assume 4 shop drawing/product packages (pile jacket shop drawings, temporary support system shop drawings, fiber reinforced polymer product sheets, concrete repair product sheets).
- The CONSULTANT shall provide written responses to all RFIs within seven (7) business days to the CITY. Assume 10 RFI's.
- The CONSULTANT shall assist the CITY with review of the Contractor's request for payments, and provide recommendation of percent of work completed, as well as review test reports, and provide comments and/or recommendations.
- The CONSULTANT shall assist the CITY with the review and technical evaluation of Contractor's request for change orders, and claims, and provide recommendations and cost evaluations to the CITY.
- The CONSULTANT shall make periodic site visits for the purpose of determining general compliance with the approved project drawings, plans, and specifications. Such site visits are estimated at six (6) hours per week for a construction period of 36 weeks (9 months)..
- The CONSULTANT shall review, evaluate, and determine the acceptability of substitute materials and equipment proposed by the Contractor. Assume 6 substitute materials/equipment submittals.
- The CONSULTANT shall provide the "As Built Load Rating."

The CONSULTANT shall review as-built drawings provided by the Contractor, provide written comments, and recommend submittal action to the CITY.
The deliverables need to include DWG, PDF, WORD, and Excel files as required. The drawings shall comply with CITY CAD Standards.

PROJECT ASSUMPTIONS

- CITY shall provide access to site.
- CITY shall provide existing electronic CAD files, if available. It is the CONSULTANTS responsibility to verify accuracy.
- It is the CONSULTANT's responsibility to verify existing geometry is acceptable to all permitting agencies.

ADDITIONAL SERVICES

If authorized in writing by the CITY, as an amendment to this Task Order, the CONSULTANT shall furnish, or obtain, Additional Services of the types listed in the MASTER AGREEMENT. The CITY, as indicated in the MASTER AGREEMENT, will pay for these services.

PERFORMANCE SCHEDULE

The CONSULTANT shall perform the services identified in Tasks 1 - 6 within 232 days of the written Notice to Proceed. Tasks 7 and 8 schedules shall be determined based on the bid dates and construction award period.

PROJECT FUNDING

Performance of this project is at the CITY's discretion and may be contingent upon the CITY receiving funding and work shall not begin until the CITY provides a Notice to Proceed to CONSULTANT.

METHOD OF COMPENSATION

The services performed will be accomplished using the Not-to-Exceed method of compensation. The total hourly rates payable by the CITY for each of CONSULTANT's employee categories, reimbursable expenses, if any, and sub-consultant fees, if any, are shown on **Exhibit A** attached hereto and made a part hereof. Pay application requests shall be prepared on the CITY's approved pay application request form. The CONSULTANT shall submit the pay application request to the CITY's Project Manager for review and approval. Once the CITY's Project Manager approves the CONSULTANT's pay application request, the CONSULTANT may submit it to the CITY's account payable department via email (AcctsPayable@fortlauderdale.gov). Pay application requests shall be submitted monthly.

TERMS OF COMPENSATION

Services will be provided for the following Not-to-Exceed amounts:

Task 1 – Bridge Evaluation and Field Investigation	$49,305.00
Task 2 - 30% Submission	$45,350.00
Task 3 - 60% Submission	$45,350.00
Task 4 - 100% and Final Submission	$72,735.00
Task 5 - Permitting	$31,708.00
Task 6 – Utility Coordination	$21,470.00
Task 7 – Bidding Services	$6,840.00
Task 8 -Post Design Services	$55,195.00
Permit Application Fee Allowance	4,770.00
Reimbursable Expenses	3,800.00
Grand Total	**$336,523.00**

CITY CONTACTS

Requests for payments should be directed to City of Fort Lauderdale Accounts Payable via e-mail to AcctsPayable@FortLauderdale.gov after getting approval from the CITY's Project Manager. All other correspondence and submittals should be directed to the attention of Name of *PM*, Project Manager II, at the address shown below. **Please be sure that all correspondence refers to the CITY project number and title as stated above.**

Raymond Nazaire, P.E., CGC.
Project Manager II
Public Works
City of Fort Lauderdale
City Hall, 5th Floor Engineering
100 North Andrews Avenue
Fort Lauderdale, FL 33301
(954) 828-8954
rnazaire@fortlauderdale.gov

Marlon Lobban, P.E.
Senior Project Manager
Public Works
City of Fort Lauderdale
City Hall, 4th Floor Engineering
100 N. Andrews Ave.
Fort Lauderdale, FL 33301
(954) 828-4355
mlobban@fortlauderdale.gov

CONSULTANT CONTACTS

Bob Forand, PE
Structures Division Manager
BCC Engineering, Inc.
4901 NW 17th Way Suite 506
Email: bforand@bcceng.com
Phone: (954) 928-1828
Fax: (954) 928-1551

CITY

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first written above.

CITY OF FORT LAUDERDALE, a municipal corporation of the State of Florida.

_____
Jodi S. Hart, CPPO, CPPB, MBA
Chief Procurement Officer

_____
Date
Pursuant to Section 2-179 Code of Ordinances of the City of Fort Lauderdale, Florida

CONSULTANT

WITNESSES

_____

_____
Print Name

_____

_____
Print Name

(CORPORATE SEAL)

BCC Engineering, Inc., a Florida profit corporation authorized to transact business in Florida.

By_____
Daniel J. Raymat
Vice-President

☐ President ☒ Vice President
☐ Authorized Signatory (Please provide corporate authorization)

ATTEST:

_____
Secretary

_____
Print Name

STATE OF FLORIDA:
COUNTY OF BROWARD:

The foregoing instrument was acknowledged before me this __ day of ____, 2019 by Daniel Raymat as Vice-President of BCC Engineering, Inc., a Florida profit corporation authorized to transact business in the State of Florida who is ☐ personally known to me or ☐ has produced _____ as identification.

(SEAL)

_____
Notary Public, State of Florida
(Signature of Notary taking Acknowledgment)

_____
Name of Notary Typed, Printed or Stamped

My Commission Expires: _____

Commission Number: _____

Exhibit A – Work Break Down Fee Schedule

FEE SUMMARY

Project Fee Summary

Name of Consultant: **BCC Engineering, Inc.**

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
City of Fort Lauderdale Project No. 12299

	Project Fee Summary												
Task No. and Description	**BCC Engineering, Inc.**	**Keith and Associates, Inc.**	**Professional Service Industries, Inc.**	**Diversified Diving Services, Inc.**	**AirQuest Environmental, Inc.**	**ESciences, Inc.**	**Sub 7**	**Sub 8**	**Sub 9**	**Sub 10**	**Sub 11**	**Sub 12**	**Subtotal Fees**
1. Bridge Evaluation and Field Investigation	$14,440.00	$11,530.00	$19,640.00	$1,880.00	$1,815.00	$0.00							$49,305.00
2. 30% Design Submission	$45,350.00	$0.00	$0.00	$0.00	$0.00	$0.00							$45,350.00
3. 60% Design Submission	$45,350.00	$0.00	$0.00	$0.00	$0.00	$0.00							$45,350.00
4. 100% Design Submission	$72,735.00	$0.00	$0.00	$0.00	$0.00	$0.00							$72,735.00
5. Permitting	$4,840.00	$0.00	$0.00	$0.00	$0.00	$26,868.00							$31,708.00
6. Utility Coordination	$21,470.00	$0.00	$0.00	$0.00	$0.00	$0.00							$21,470.00
7. Bidding Services	$6,840.00	$0.00	$0.00	$0.00	$0.00	$0.00							$6,840.00
8. Post Design Services	$46,170.00	$0.00	$9,025.00	$0.00	$0.00	$0.00							$55,195.00
Task Order Total	**$257,195.00**	**$11,530.00**	**$28,665.00**	**$1,880.00**	**$1,815.00**	**$26,868.00**							**$327,953.00**

SUBTOTAL ESTIMATED FEE:	$327,953.00
REIMBURSABLE EXPENSES:	$3,800.00
PERMIT ALLOWANCE:	$4,770.00
GRAND TOTAL:	$336,523.00

FEES BY FIRM

Fee Sheet - BCC Engineering, Inc.

Name of Project: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
County: Broward
Project No. City of Fort Lauderdale Project No. 12299

Consultant Name: BCC Engineering, Inc.
Date: 7/17/2019
Estimator: Bob Forand, PE

Staff Classification	Hours From "SH Summary - Firm"	Principal Engineer	Chief Engineer	Project Manager	Senior Engineer	Senior Designer	Project Engineer	Structures CADD Tech	Designer	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Staff Hours By Activity	Cost By Activity
		$240.00	$190.00	$190.00	$160.00	$135.00	$115.00	$75.00	$88.00	$0.00	$0.00	$0.00	$0.00		
1. Bridge Evaluation and Field Investigation	76	0	4	72	0	0	0	0	0	0	0	0	0	76	$14,440.00
2. 30% Design Submission	375	0	19	19	0	113	150	75	0	0	0	0	0	376	$45,350.00
3. 60% Design Submission	375	0	19	19	0	113	150	75	0	0	0	0	0	376	$45,350.00
4. 100% Design Submission	501	0	24	195	0	150	30	99	0	0	0	0	0	498	$72,735.00
5. Permitting	40	0	0	16	0	0	0	24	0	0	0	0	0	40	$4,840.00
6. Utility Coordination	113	0	0	113	0	0	0	0	0	0	0	0	0	113	$21,470.00
7. Bidding Services	36	0	0	36	0	0	0	0	0	0	0	0	0	36	$6,840.00
8. Post Design Services	243	0	0	243	0	0	0	0	0	0	0	0	0	243	$46,170.00
Total Staff Hours	2,808	0	66	713	0	376	330	273	0	0	0	0	0	1,758	
Total Staff Cost		$0.00	$12,540.00	$135,470.00	$0.00	$50,760.00	$37,950.00	$20,475.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$257,195.00**

Check = $257,195.00

Expenses:

Task 1 Bridge Evaluation and Field Investigation:
Captained Boat Rental*

Cost per day:	$650.00	
No. days:	2	(Assume 1 for inspection, 1 for follow up with City staff)
Subtotal =:	$1,300.00	
Subtotal - Boat Rental	$1,300.00	

*Receipts must be provided in order to be reimbursed.

Subtotal Permit Fees: $4,770.00

SUBTOTAL ESTIMATED FEE (BCC) (not including expenses):	**$257,195.00**
Subconsultant: Keith and Associates, Inc.	$11,530.00
Subconsultant: Diversified Diving Services, Inc.	$1,880.00
Subconsultant: Professional Service Industries, Inc.	$28,665.00
Subconsultant: AirQuest Environmental, Inc.	$1,815.00
Subconsultant: ESciences, Inc.	$26,868.00
GRAND TOTAL ESTIMATED FEE:	**$327,953.00**

Fee Sheet - Keith and Associates, Inc.

Name of Project: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
County: Broward
Project No. City of Fort Lauderdale Project No. 12299

Consultant Name: Keith and Associates, Inc.

Date: 7/17/2019
Estimator: Eric Wilhjelm

Staff Classification	Total Staff Hours From "SH Summary - Firm"	PSM	Senior Project Surveyor	Project Surveyor	Senior Technician	CADD Technician	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Staff Hours By Activity	Cost By Activity
		$120.00	$110.00	$95.00	$90.00	$80.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
1. Bridge Evaluation and Field Investigation	42	17	0	0	16	9	0	0	0	0	0	0	0	42	$4,200
Total Staff Hours	42	17	0	0	16	9	0	0	0	0	0	0	0	42	
Total Staff Cost		$2,040.00	$0.00	$0.00	$1,440.00	$720.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$4,200.00**

Check = $4,200.00

SUBTOTAL ESTIMATED FEE (Keith and Associates):					**$4,200.00**
Survey Party	34	2 person @	$ 95.00	/ Hour	$3,230.00
Survey Party	20	3 person @	$ 125.00	/ Hour	$2,500.00
Survey Party	10	W/ Watercraft	$ 160.00	/ Hour	$1,600.00
GRAND TOTAL ESTIMATED FEE:					**$11,530.00**

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Task Order No. 2 - West Lake Drive Bridge No. 865771 Repair and Rehabilitation
County: Broward
Project No. City of Fort Lauderdale Project No. 12010

Consultant Name: Professional Service Industries, Inc.
Date: 7/17/2019
Estimator: Paul Passe, Mauricio Rodriguez

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Principal Engineer	Registered Engineer	Staff Enginneer	Senior Engineering Technician	Engineering Technician	Secretary/ Clerical	CADD/ Computer Technician	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Staff Hours By Activity	Cost By Activity
		$140.00	$100.00	$85.00	$65.00	$45.00	$45.00	$70.00	$0.00	$0.00	$0.00	$0.00	$0.00		
1. Bridge Evaluation and Field Investigation	155	18	32	14	25	51	6	9	0	0	0	0	0	155	$11,730
8. Post Design Services	41	8	0	33	0	0	0	0	0	0	0	0	0	41	$3,925
Total Staff Hours	196	26	32	47	25	51	6	9	0	0	0	0	0	196	
Total Staff Cost		$3,640.00	$3,200.00	$3,995.00	$1,625.00	$2,295.00	$270.00	$630.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$15,655.00**

Check = $15,655.00

Expenses:

Task 1 Bridge Evaluation and Field Investigation:
Captained work platform/boat rental

Cost per day:	$2,500.00	Assume 2 John Boats/Platforms are needed.
No. days:	1	
Subtotal =:	$2,500.00	
Subtotal - Boat Rental	$2,500.00	

1. Bridge Evaluation and Field Investigation **$19,640.00**

Description	Unit	Quantity	Rate	Subtotal
Engineering Services	Hr	155	Varies	$11,730
Field Exploration				
Drill Rig & Crew Mob/Demob Truck Mounted Rig	Ea	1	$350.00	$350.00
SPT 0-50 Ft (without casing)	Ft	100	$12.00	$1,200.00
SPT 50-100 Ft (without casing)	Ft	50	$14.00	$700.00
Grout Seal Borehole	Ft	150	$5.00	$750.00
SUBTOTAL				$3,000.00
Laboratory Testing				
Orgainic Content Determination of Soils	Ea	2	$35.00	$70.00
Moisture Content Determination of Soils	Ea	2	$25.00	$50.00
SUBTOTAL				$120.00
Foundation Testing Services				
Pile Integrity Testing (PIT)	Hr	12	$100.00	$1,200.00
Mob of PIT Equipment, Personnel	Ea	1	$250.00	$250.00
SUBTOTAL				$1,450.00
Material Sampling/Testing Services				
Concrete Coring and Compressive Strength Determination (ASTM C42)	Ea	2	$125.00	$250.00
Compressive Strength Determination of in-place Concrete Using rebound hammer (ASTM C805)	Hr	6	$65.00	$390.00
Core Machine and Generator mobilization/ demobilization	Ea	2	$100.00	$200.00
GPR Ground Penetrating Radar (ASTM D6432)	Day	1	$2,500.00	$2,500.00
SUBTOTAL				$3,340.00

9. Post Design Services **$9,025.00**

Description	Unit	Quantity	Rate	Subtotal
Engineering Services	Hr	41	Varies	$3,925
Foundation Testing Services				
100% PDA Testing	Per Day	3	$1,200.00	$3,600.00
Mob of PDA Equipment, Personnel	Ea	3	$500.00	$1,500.00
SUBTOTAL				$5,100.00

GRAND TOTAL ESTIMATED FEE: **$28,665.00**

Fee Sheet - Diversified Diving Services, Inc.

Name of Project: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
County: Broward
Project No. City of Fort Lauderdale Project No. 12299

Consultant Name: Diversified Diving Services, Inc.
Date: 7/17/2019
Estimator: Steve Saunders

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Inspection Diver	Tender	Staff Classi-fication 3	Staff Classi-fication 4	Staff Classi-fication 5	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Staff Hours By Activity	Cost By Activity
		$130.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
1. Bridge Evaluation and Field Investigation	20	12	8	0	0	0	0	0	0	0	0	0	0	20	$1,880
Total Staff Cost		$1,560.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$1,880.00**

Check = $1,880.00

SUBTOTAL ESTIMATED FEE (Diversified Diving Services): $1,880.00

Fee Sheet - AirQuest Environmental, Inc.

Name of Project: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
County: Broward
Project No. City of Fort Lauderdale Project No. 12299

Consultant Name: AirQuest Environmental, Inc.
Date: 7/17/2019
Estimator: Teresa Thomas

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Senior Professional	Senior Project Manager	Field Technician	Administrative	Staff Classi-fication 5	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Staff Hours By Activity	Cost By Activity
		$135.00	$115.00	$65.00	$55.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
1. Bridge Evaluation and Field Investigation	17	1	2	12	2	0	0	0	0	0	0	0	0	17	$1,255
Total Staff Cost		$135.00	$230.00	$780.00	$110.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$1,255.00**

Check = $1,255.00

SUBTOTAL ESTIMATED FEE (AirQuest) (including Laboratory Analysis): $1,815.00

Laboratory Costs:

Task 1 Bridge Evaluation and Field Investigation:

PLM Laboratory Analysis:

Cost per Sample:	$20.00
No. Samples:	28
Subtotal Cost:	$560.00
Total Cost:	$560.00

Fee Sheet - ESciences, Inc.

Name of Project: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
County: Broward
Project No. City of Fort Lauderdale Project No. 12299

Consultant Name: ESciences, Inc.
Date: 7/17/2019
Estimator: Justin Freedman

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Principal	Senior Eng/Sci II	Senior Eng/Sci I	Project Eng/Sci I	Staff Eng/Sci II	Staff Eng/Sci I	Tech II	Senior GIS Analyst	CADD/GIS Analyst	Clerical	Staff Classi-fication 11	Staff Classi-fication 12	Staff Hours By Activity	Cost By Activity
		$196.00	$180.00	$149.00	$120.00	$98.00	$88.00	$77.00	$110.00	$82.00	$52.00	$0.00	$0.00		
5. Permitting	261	0	13	52	0	0	183	0	0	0	13	0	0	261	$26,868
Total Staff Cost		$0.00	$2,340.00	$7,748.00	$0.00	$0.00	$16,104.00	$0.00	$0.00	$0.00	$676.00	$0.00	$0.00		**$26,868.00**

Check = $26,868.00

SUBTOTAL ESTIMATED FEE (ESciences, Inc.): **$26,868.00**

STAFF HOURS BY FIRM

City of Fort Lauderdale Project Number: City of Fort Lauderdale Project No. 12299

Project Name: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

Date: 7/17/2019

Name of Consultant: BCC Engineering, Inc.

TASK NO. AND DESCRIPTION	Hours from Activity sheet	EMPLOYEE CLASSIFICATION - BCC ENGINEERING, INC.											
	Firm Total	Principal Engineer	Chief Engineer	Project Manager	Senior Engineer	Senior Designer	Project Engineer	Structures CADD Tech	Designer	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12
		$240.00	$190.00	$190.00	$160.00	$135.00	$115.00	$75.00	$88.00				
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
1. Bridge Evaluation and Field Investigation	76	0	4	72	0	0	0	0	0	0	0	0	0
2. 30% Design Submission	375	0	19	19	0	113	150	75	0	0	0	0	0
3. 60% Design Submission	375	0	19	19	0	113	150	75	0	0	0	0	0
4. 100% Design Submission	501	0	24	195	0	150	30	99	0	0	0	0	0
5. Permitting	40	0	0	16	0	0	0	24	0	0	0	0	0
6. Utility Coordination	113	0	0	113	0	0	0	0	0	0	0	0	0
7. Bidding Services	36	0	0	36	0	0	0	0	0	0	0	0	0
8. Post Design Services	243	0	0	243	0	0	0	0	0	0	0	0	0
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Structures - Short Span Concrete Bridge	1007	0	0	0	0	0	0	0	0	0	0	0	0
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0
27. Survey (Field & Office Support)	42	0	0	0	0	0	0	0	0	0	0	0	0
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	1759	0	66	713	0	376	330	273	0	0	0	0	0

Staff Hour Distribution Percentages - BCC Engineering, Inc.

TASK NO. AND DESCRIPTION	Hours from "Summary" sheet Firm Total	Principal Engineer	Chief Engineer	Project Manager	Senior Engineer	Senior Designer	Project Engineer	Structures CADD Tech	Designer	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	Total
		$240.00	$190.00	$190.00	$160.00	$135.00	$115.00	$75.00	$88.00					
1. Bridge Evaluation and Field Investigation	76	0.0%	5.0%	95.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
2. 30% Design Submission	375	0.0%	5.0%	5.0%	0.0%	30.0%	40.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
3. 60% Design Submission	375	0.0%	5.0%	5.0%	0.0%	30.0%	40.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
4. 100% Design Submission	501	0.0%	5.0%	39.0%	0.0%	30.0%	6.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
5. Permitting	40	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
6. Utility Coordination	113	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
7. Bidding Services	36	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
8. Post Design Services	243	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%

City of Fort Lauderdale Project Number: City of Fort Lauderdale Project No. 12299

Project Name: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

Date: 7/17/2019

Name of Consultant: Keith and Associates, Inc.

TASK NO. AND DESCRIPTION	Hours from Activity sheet	EMPLOYEE CLASSIFICATION - KEITH AND ASSOCIATES, INC.											
	Firm Total	PSM	Senior Project Surveyor	Project Surveyor	Senior Technician	CADD Technician	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12
		$240.00	$190.00	$190.00	$160.00	$135.00	$115.00	$75.00	$88.00				
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
1. Bridge Evaluation and Field Investigation	42	17	0	0	16	9	0	0	0	0	0	0	0
TOTALS	42	17	0	0	16	9	0	0	0	0	0	0	0

Staff Hour Distribution Percentages - Keith and Associates, Inc.

TASK NO. AND DESCRIPTION	Hours from "Summary" sheet Firm Total	PSM	Senior Project Surveyor	Project Surveyor	Senior Technician	CADD Technician	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Total
		$240.00	$190.00	$190.00	$160.00	$135.00	$115.00	$75.00	$88.00					
1. Bridge Evaluation and Field Investigation	42	41.1%	0.0%	0.0%	37.5%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - GRAND TOTAL

City of Fort Lauderdale Project Number: City of Fort Lauderdale Project No. 12010

Project Name: Task Order No. 2 - West Lake Drive Bridge No. 865771 Repair and Rehabilitation

Date: 7/17/2019

Name of Consultant: Professional Service Industries, Inc.

TASK NO. AND DESCRIPTION	Hours from Activity sheet	EMPLOYEE CLASSIFICATION - PROFESSIONAL SERVICE INDUSTRIES, INC.											
	Firm Total	Principal Engineer	Registered Engineer	Staff Enginneer	Senior Engineering Technician	Engineering Technician	Secretary/ Clerical	CADD/ Computer Technician	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12
		$140.00	$100.00	$85.00	$65.00	$45.00	$45.00	$70.00					
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
1. Bridge Evaluation and Field Investigation	155	18	32	14	25	51	6	9	0	0	0	0	0
8. Post Design Services	41	8	0	33	0	0	0	0	0	0	0	0	0
TOTALS	196	26	32	47	25	51	6	9	0	0	0	0	0

Staff Hour Distribution Percentages - Professional Service Industries, Inc.														
TASK NO. AND DESCRIPTION	Hours from "Summary" sheet Firm Total	Principal Engineer	Registered Engineer	Staff Enginneer	Senior Engineering Technician	Engineering Technician	Secretary/ Clerical	CADD/ Computer Technician	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Total
		$140.00	$100.00	$85.00	$65.00	$45.00	$45.00	$70.00	$0.00					
1. Bridge Evaluation and Field Investigation	0	11.6%	20.6%	9.0%	16.1%	32.9%	4.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
8. Post Design Services	0	19.5%	0.0%	80.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%

City of Fort Lauderdale Project Number: City of Fort Lauderdale Project No. 12299

Project Name: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

Date: 7/17/2019

Name of Consultant: Diversified Diving Services, Inc.

TASK NO. AND DESCRIPTION	Hours from Activity sheet	EMPLOYEE CLASSIFICATION - DIVERSIFIED DIVING SERVICES, INC.											
	Firm Total	Inspection Diver	Tender	Staff Classi-fication 3	Staff Classi-fication 4	Staff Classi-fication 5	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12
		$130.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
1. Bridge Evaluation and Field Investigation	20	12	8	0	0	0	0	0	0	0	0	0	0
TOTALS	20	12	8	0	0	0	0	0	0	0	0	0	0

Staff Hour Distribution Percentages - Diversified Diving Services, Inc.

TASK NO. AND DESCRIPTION	Hours from "Summary" sheet Firm Total	Inspection Diver	Tender	Staff Classi-fication 3	Staff Classi-fication 4	Staff Classi-fication 5	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Total
		$130.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00					
1. Bridge Evaluation and Field Investigation	20	60.0%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%

City of Fort Lauderdale Project Number: City of Fort Lauderdale Project No. 12299

Project Name: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

Date: 7/17/2019

Name of Consultant: AirQuest Environmental, Inc.

TASK NO. AND DESCRIPTION	Hours from Activity sheet	EMPLOYEE CLASSIFICATION - AIRQUEST ENVIRONMENTAL, INC.											
	Firm Total	Senior Professional	Senior Project Manager	Field Technician	Administrative	Staff Classi-fication 5	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12
		$135.00	$115.00	$65.00	$55.00								
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
1. Bridge Evaluation and Field Investigation	17	1	2	12	2	0	0	0	0	0	0	0	0
TOTALS	17	1	2	12	2	0	0	0	0	0	0	0	0

Staff Hour Distribution Percentages - AirQuest Environmental, Inc.

TASK NO. AND DESCRIPTION	Hours from "Summary" sheet Firm Total	Senior Professional	Senior Project Manager	Field Technician	Administrative	Staff Classi-fication 5	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	Total
		$135.00	$115.00	$65.00	$55.00									
1. Bridge Evaluation and Field Investigation	17	6.0%	12.0%	70.0%	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%

City of Fort Lauderdale Project Number: City of Fort Lauderdale Project No. 12299

Project Name: Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

Date: 7/17/2019

Name of Consultant: ESciences, Inc.

TASK NO. AND DESCRIPTION	Hours from Activity sheet Firm Total	EMPLOYEE CLASSIFICATION - ESCIENCES, INC											
		Principal	Senior Eng/Sci II	Senior Eng/Sci I	Project Eng/Sci I	Staff Eng/Sci II	Staff Eng/Sci I	Tech II	Senior GIS Analyst	CADD/GIS Analyst	Clerical	Staff Classi-fication 11	Staff Classi-fication 12
		$196.00	$180.00	$149.00	$120.00	$98.00	$88.00	$77.00	$110.00	$82.00	$52.00		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours
1. Bridge Evaluation and Field Investigation	0	0	0	0	0	0	0	0	0	0	0	0	0
2. 30% Design Submission	0	0	0	0	0	0	0	0	0	0	0	0	0
3. 60% Design Submission	0	0	0	0	0	0	0	0	0	0	0	0	0
#REF!	0	0	0	0	0	0	0	0	0	0	0	0	0
4. 100% Design Submission	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Permitting	261	0	13	52	0	0	183	0	0	0	13	0	0
7. Bidding Services	0	0	0	0	0	0	0	0	0	0	0	0	0
8. Post Design Services	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	261	0	13	52	0	0	183	0	0	0	13	0	0

Staff Hour Distribution Percentages - ESciences, Inc.

TASK NO. AND DESCRIPTION	Hours from "Summary" sheet Firm Total	Principal	Senior Eng/Sci II	Senior Eng/Sci I	Project Eng/Sci I	Staff Eng/Sci II	Staff Eng/Sci I	Tech II	Senior GIS Analyst	CADD/GIS Analyst	Clerical	Staff Classi-fication 11	Staff Classi-fication 12	Total
		$196.00	$180.00	$149.00	$120.00	$98.00	$88.00	$77.00	$110.00	$82.00	$52.00			
5. Permitting	261	0.0%	5.0%	20.0%	0.0%	0.0%	70.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	100.00%

TASK 1

BRIDGE EVALUATION AND FIELD INVESTIGATION

Task 1. Evaluation and Investigation - BCC Engineering, Inc.

Estimator: Bob Forand, PE

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	Design and Production Staffhours				Comments
			No. of Units	Hours per Unit	No. of Hours	Subtotal	
	1. Bridge Evaluation and Field Investigation						
	Review current Load Rating	LS	1	4	4	4	Review load rating and document areas to be addressed during the design.
	Review current Bridge Inspection Report	LS	1	4	4	4	Review report as basis for field reviews and underwater inspection.
	Review Unknown Foundations information	LS	1	4	4	4	Review informataion as basis for approach, analysis and evaluation.
	Review Phase 2 and 3 Scour Evaluation, assumptions	LS	1	4	4	4	Review informataion as basis for approach, analysis and evaluation.
	Comparison of field data	LS	1	4	4	4	Compare field measurments with Survey information and confirm cause for any discrepancies, document/justify information to be carried forward to final design.
	Cost Estimate	LS	1	16		16	High range due to various types of repairs (concrete, jackets, sealing, temporary support, FRP). Includes set up and updates.
	Evaluate Scope Reduction (Focus on Load Rating)	LS	1	8		8	Evaluate, present City Technical Memorandum with options and associated Construction Costs
	1. Evaluation Subtotal					44	
	Task No. and Description	**Units**	**No. of Units**	**Hours per Unit**	**Total**	**Comments**	
	1. Field Investigation						
	Field Reviews	LS	2	16	32	2 field reviews, 2 staff (1 PE, 1 EI) for a full day. 1 day by land, 1 day by water. As-Built the bridge. Complete dimensions and sounding to deliniate deficiencies.	
	1. Field Investigation Subtotal				32		
	1. Bridge Evaluation and Field Investigation Total				76		

Task 1. Evaluation and Investigation - Keith and Associates, Inc.

Estimator: Eric Wilhjelm

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
	1. Bridge Evaluation and Field Investigation									
	Horizontal Project Control (HPC)									Set horizontal control.
	2-Lane Roadway	Mile	1.00	0.50	0.50	0.50	0.25	3.00	1.50	
	Multi-lane Roadway	Mile			0.00		0.00		0.00	
	Interstate	Mile			0.00		0.00		0.00	
	Vertical PC / Bench Line									Elevate control points in NAVD 88. Use NGS benchmarks G 311 & 872 2939 B
	2-Lane Roadway	Mile			0.00		0.00		0.00	
	Multi-lane Roadway	Mile	2.60	0.75	1.95	0.50	0.98	2.00	3.90	
	Interstate	Mile			0.00		0.00		0.00	
	Topography/DTM (3D)									topo to next intersection north and south of the bridge. Approx 200 feet each direction
		Mile	0.10	12.00	1.20	0.50	0.60	8.00	9.60	
	Drainage Survey			Units/Day						obtain rim, invert and bottom of structure elevations including pipe size, direction and material.
		EA	8.00	16.00	0.50	0.50	0.25	3.00	1.50	
	Bridge Survey									perform a bridge survey of bridge surface and below the bridge deck by a mixture of traditional and scanning methods.
	Minor / Major	EA	1.00	2.00	2.00	0.50	1.00	6.00	12.00	
	Channel Survey									
		EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27.20	Subdivision Location									Survey property monuments to calculate centerline and right of way.
		Block	2	0.25	0.50	0.50	0.25	8.00	4.00	
	Survey Subtotal			**Crew Days**	**7**	**Field Support Hours**	**3**	**Office Support Hours**	**33**	
	Supplemental Surveys									
				7	0		0		0	
	Document Research	Units								Research including MHW and MLW
			2.00						2	
	Quality Assurance / Quality Control	LS								
								5%	2	
	Supervision	LS								
								5%	2	
	Coordination	LS								
								3%	1	
										TOTAL HOURS
	1. Bridge Evaluation and Field Investigation Total			**Crew Days**	**7**	**Field Support Hours**	**3**	**Office Support Hours**	**39**	**42**

SPLS =
PLS =
Office Support =
Total Hours = 42

Task 1. Evaluation and Investigation - AirQuest Environmental, Inc.

Estimator: Teresa Thomas

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	Design and Production Staffhours				Comments
			No. of Units	Hours per Unit	No. of Hours	Subtotal	
	1. Bridge Evaluation and Field Investigation						
	Asbestos Testing and Report	LS	1	28	28	28	Perform Asbestos Survey, collect samples, analyze samples, provide report summarizing survey, laboratory process, findings/results, and recommendations.
	1. Bridge Evaluation and Field Investigation Total				28		

Task 1. Evaluation and Investigation - Diversified Diving Services, Inc.

Estimator: Steve Saunders

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	Design and Production Staffhours				Comments
			No. of Units	Hours per Unit	No. of Hours	Subtotal	
	1. Bridge Evaluation and Field Investigation						
	Underwater Inspection and Compile Inspection Report	LS	1	20	20		1 8 hour Field Review (dive) with inspector and tender = 16 hrs. 4 hrs (inspector) to compile inspection report. Total 20 hrs.
	1. Field Investigation Subtotal				20		
	1. Bridge Evaluation and Field Investigation Total				20		

1. Eval. and Invest. - PSI

Estimator: Paul Passe, PE (Geotechnical Engineering Services)
Mauricio Rodriguez (Materials Sampling/Testing Services)

Task Order No. 2 - West Lake Drive Bridge No. 865771 Repair and Rehabilitation
City of Fort Lauderdale Project No. 12010

	Task No. and Description	Units	No of Units	Hours/ Unit	Total Hours	Comments
	1. Bridge Evaluation and Field Investigation					
Geotechnical Engineering Services		LS	1	97	97	Subtotal. Breakdown shown below.
	Principal Engineer	LS	1	14	14	
	Registered Engineer	LS	1	32	32	
	Staff Engineer	LS	1	14	14	
	Engineering Technician	LS	1	26	26	
	Secretary/Clerical	LS	1	2	2	
	CADD/Computer Technician	LS	1	9	9	
Material Sampling/Testing Services		LS	1	58	58	Subtotal. Breakdown shown below.
	Principal Engineer	LS	1	4	4	
	Senior Engineering Technician	LS	1	25	25	
	Engineering Technician	LS	1	25	25	
	Secretary/Clerical	LS	1	4	4	
Geotechnical Technical Subtotal					**155**	

TASKS 2-4

DESIGN SUBMISSIONS

Tasks 2 thru 4. Design Submittals

Estimator: Bob Forand, PE

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	Design and Production Staffhours				Comments
			No. of Units	Hours per Unit	No. of Sheets	Total	
	2 thru 4 (30%, 60%, 100% Submissions) General Drawings						
	Key Sheet and Index of Drawings	Sheet	1	2	1	2	Single bridge = low range (4-16) of staff hours.
	General Notes and Bid Item Notes	Sheet	4	6	4	24	Use below low range (16-24) due to repair project. Repair notes. Claim avoidance. Utilities. Navigation. Environmental. Concrete Repairs. Pay Item Notes. Temporary support (shop drawing requirements, support materials, methods), FRP requirments, specifications.
	Incorporate Report of Core Borings	Sheet	2	1	2	2	
	Assemble Plan Summary Boxes and Quantities	LS	1	6		6	Low range (8-16)
	Contract Maintenance	LS	12	1.67		20	Setup and maintenance of files. Monthly progress reports, schedule updates, invoicing. Develop and execute sub agreements. Initial setup 8 hrs then 1 hrs per month for 12 month design schedule.
	Cost Estimate	LS	1	0		0	N/A, included in "Evaluation and Investigation" Phase
	Digital Delivery	LS	1	4		4	
	Specifications Package	LS	1	12		12	Specifications Package Preparation
	Technical Special Provisions	LS	3	10		30	1) TSP for concrete restoration (coastal location). 2) TSP for Bridge Support System. 3) TSP for Fiber Reinforced Polymer pile wraps
	2 thru 4 (30%, 60%, 100% Submissions) General Drawings Subtotal				7	100	

	Task No. and Description	Units	No. of Units	Hours per Unit	Total	Comments
	Technical Meetings	LS	1	26	26	Meetings are listed on next page. Note phase review meetings include only 60% and 100%.
	Quality Assurance/Quality Control	LS	%	7%	77	
	Supervision	LS	%	3%	33	Reduced from 5% to 3% (23 hrs) to account for increased PM role and elimination of 90% Submittal.
	2 thru 4 (30% - 100% Submissions) Non Technical Subtotal				136	
9.15	Coordination	LS	1	8	8	Bridge repair project. Utilities. Roadway (MOT, pavement markings). FDOT. Permits. Geotechnical. Survey. Subtract 4 hours for removal of 90% Submittal.
	2 thru 4 (30% - 100% Submissions) Subtotal				244	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	Comments
60/100% Comment Review (City = 2 total meetings)	EA	2	2	4	
Regulatory Agency	EA	2	2	4	
City	EA	1	2	2	
Other Meetings (City Maintenance, FDOT Maintenance)	EA	2	2	4	
Subtotal Technical Meetings				**14**	
Progress Meetings	EA	6	2	12	*Monthly teleconference*
Total Meetings				**26**	

Carries to 9.11

Carries to Tab 3

Tasks 2 thru 4. Design Submittals

Estimator: Bob Forand, PE

Bridge Identifier (Number or Name): 865771

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	2 thru 4 (30%, 60%, 100% Submissions) Design Drawings						
	Overall Bridge Final Geometry	LS	1	6		6	Limited existing plan information will increase effort however use low range due to simple geometry.
	Expansion/Contraction Analysis	EA Unit	1	2		2	Confirm joint movement for governing span
	General Plan and Elevation	Sheet	2	20	2	40	2 sheets. 1 sheet Plan. 1 sheet Elevation. No existing plans = develop based on field notes/dimensions and survey. Use of PM is more efficient than Senior PE, = 20 hrs per sheet.
	Standard Plans	Sheet	1	4	1	4	Incorporate FDOT Standard Plans
	Construction Staging/MOT	Sheet	5	10	5	50	2 sheets to address general sequence and restrictions during repairs (1 plan sheet, 1 notes). 1 sheet sequencing of pile repairs below water line. 2 sheets bridge sections restricting traffic off of areas being repaired (1 dual direction lane, include temporary support considerations). Use 10 hrs per sheet (use of PM more efficient than Senior PE).
	Miscellaneous Details	Sheet	19	22	19	418	6 sheets (temporary support system/structure - free standing crutch bents for end bent and intermediate bents, steel beam supported on steel H piles). 2 sheets structural pile jacket (no cathodic protection) (1 sheet details/sections, 1 sheet notes). 2 sheets fiber reinforced polymer (pile wrap) option. 1 sheet concrete repairs and notes. 1 sheet bridge joints and epoxy crack injection. 1 sheet surface finish and asphalt overlay details. 2 sheets repair quantity tables. 1 sheet pavement markings. 3 sheets MOT (Notes, Plan, Special Details). Total = 19 sheets, use 24 hrs. average per sheet although most of the sheets will require more. Assume use of PM vs. Senior PE is more efficient, 22 hrs per sheet.
	End Bents						
	End Bent Geometry	EA End Bent	4	6		24	Permanent Bents: Similar but not identical. 2 @ 6 hrs = permanent end bents = 12 hrs subtotal. Crutch Bents: 2 @ 6 hrs = temporary supports = 12 hrs subtotal. Total = 24 hrs.
	End Bent Stability Analysis	EA Design	2	32.5		65	Permanent Bents: Confirm capacity of bent to support Load Rating calculations. Use previous load rating and Phase 2/3 scour as basis. 1 analysis @ 12 hrs. Crutch Bents: Design of temporary support (crutch bent). Steel beam on steel H-piles. Design Beam(s), piles, connections. Use 1 design @ 60 hrs. Total: 72 hrs. Assume use of PM vs. Senior PE captures some efficiency. 65 hrs.
	End Bent Plan and Elevation	Sheet	1	18	1	18	Permanent Bent: Similar but not identical. Provide dimensions, pile naming/numbering convention, map repairs. Use table of variables when different. 1 sheet @ 11 hrs. Crutch Bents: 1 sheet @ 11 hrs. Total: 22 hrs. Use of PE vs. Senior PE = 18 hrs.
	End Bent Details	Sheet	1	10	1	10	Permanent Bent: Sections. 1 sheet @ 12 hrs. Crutch Bent. Included in Misc. Details above. Use of PE vs. Senior PE captures efficiency = 10 hrs.
	Intermediate Bents						
	Intermediate Bent Geometry	EA Bent	5	5.6		28	Permanent Bents: Similar but not identical 4 @ 6 hrs each = 24 hrs Subtotal. Crutch Bents: Dimension the same. 1 @ 8 hrs = 8 hrs Subtotal. Total: 32 hrs. Use of PE vs. Senior PE captures some efficiency. Use 28 hrs.
	Intermediate Bent Stability Analysis	EA Analysis	1	60		60	Permanent Bents: N/A. End Bents control Load Rating. Crutch Bents: Design of temporary support (crutch bent). Steel beam on steel H-piles. Design Beam(s), piles, connections. Use 1 design @ 60 hrs. Total: 60 hrs.
	Intermediate Temporary Support System Structural Design	EA Design	3	24		72	Design for 1) support adjacent to end bent, 2) support adjacent to intermediate bent, 3) system that utilizes the existing bridge bent for support. Confirm support locations along existing cap and beams.
	Intermediate Bent Plan and Elevation	Sheet	1	20	1	20	Permanent Bent: Similar but not identical. Provide dimensions, pile naming/numbering convention, map repairs. Use table of variables when different. 1 sheet @ 12 hrs. Crutch Bents: 1 sheet @ 12 hrs. Total: 24 hrs. Use of PM vs. Senior PE captures some efficiency. 20 hrs.
	Intermediate Bent Details	Sheet	1	10	1	10	Permanent Bent: Sections. 1 sheet @ 12 hrs. Crutch Bent. Included in Misc. Details above. Use of PE vs. Senior PE captures efficiency = 10 hrs.

Tasks 2 thru 4. Design Submittals

	Task No. and Description	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Foundations						
	Foundation Layout	Sheet	0	0	0	0	N/A
	Superstructure						
	Superstructure Plan	Sheet	1	14	1	14	1 sheet plan with repairs mapped. Use of PM vs. Senior PE captures some efficiency = 14 hrs per.
	Superstructure Sections and Details	Sheet	2	14	2	28	2 sheets. 1 sheet superstructure section. 1 sheet Beam repair sequence, notes, beam details. Use of PM vs. Senior PE captures some efficiency = 14 hrs per.
	Shear Lock Design	EA Design	1	14		14	Provide shear lock design for governing condition. Use of PM vs. Senior PE captures some efficiency = 14 hrs per.
	Shear Lock Layout	Sheet	1	14	1	14	Layout of shear locks and notes. Use of PM vs. Senior PE captures some efficiency = 14 hrs per.
	Superstructure Sections and Details	Sheet	1	14	1	14	1 sheet Typical Section with shear locks and Shear Lock Details. Use of PM vs. Senior PE captures some efficiency = 14 hrs per.
	Load Rating						
	Load Ratings	EA Unit	2	48	1	96	Load rate governing unit. Provide complete Load Rating Report per the 2019 Bridge Load Rating Manual. Complete FDOT Load Rating Summary Form. Complete Load Rating Chart plan sheet. Includes superstructure and substructure (Abutment 6 piles).
	2 thru 4 (30%, 60%, 100% Submissions) Design Drawings Subtotal				**36**	**1007**	

2 thru 4 (30%, 60%, 100% Submissions) Breakdown	Total Hours
2 thru 4 (30%, 60%, 100% Submissions) General Subtotal	**244**
2 thru 4 (30%, 60%, 100% Submissions) Design Drawings Subtotal	**1007**
2 thru 4 (30%, 60%, 100% Submissions) Total	**1251**
30% Submission	**375**
60% Submission	**375**
100% Submission	**501**

TASK 5

PERMITTING

Task 5. Permitting - BCC Engineering, Inc.

Estimator: Bob Forand, PE

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	No. of Units	Hours/ Units	Total Hours	Comments
	5. Permitting					
	Permits					
	Complete And Submit All Required Permit Applications					
	Prepare Sketches (as needed)	LS	10	3.40	34	Sketches include: 1 Plan/Elevation view of existing bridge depicting scope of work.
	Breakdown of sketches and effort:		1	2	2	SFWMD ROW Occupancy Permit Sketches cover sheet (map and project info)
			1	2	2	SFWMD ROW Occupancy Permit Sketches Index of Sheets
			1	2	2	SFWMD ROW Occupancy Permit Sketches Bridge Section (simplify design Section, show scour protection)
			1	2	2	SFWMD ROW Occupancy Permit Sketches Plan View (simplify design Plan view, show scour protection)
			1	2	2	SFWMD ROW Occupancy Permit Sketches Elevation View (simplify design Elevation view, show scour protection)
			1	4	4	SFWMD ROW Occupancy Permit Sketches Foundation Layout (crutch bents)
			2	4	8	SFWMD ROW Occupancy Permit Sketches Canal Sections.
			2	6	12	Debris Containment (overhead work, turbidity barrier)
				6. Permitting Subtotal	**34**	
	Quality Assurance/Quality Control	LS	%	7%	2	
	Supervision	LS	%	5%	2	
				6. Permitting Subtotal	**4**	
	Coordination	LS	%	5%	2	Internal (coordination with ESciences)
				6. Permitting Total	**40**	

Permit Application Fee Allowance:			
	USACE NWP:	$100.00	
	SFWMD ERP:	$3,500.00	($250 if qualifies for GP, $3500 conservative estimate for individual permit)
	Broward County ERL:	$900.00	
	Fort Lauderdale Tree Removal:	$270.00	
	Total:	$4,770.00	

Task 5. Permitting - ESciences, Inc.

Estimator: Justin Freedman

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	No. of Units	Hours/ Units	Total Hours	Comments
	5. Permitting					
	Preliminary Project Research	LS	1	16	16	Search and review for existing permits or studies. Confirm required plan Environmental notes.
	Permits					
	Field Work					
	Establish Wetland Jurisdictional Lines and Assessments	LS	1	18	18	Three scientists (two in the water), four hours plus prep
	Agency Verification of Wetland Data	LS	1	6	6	Includes time to go in field with agency staff
	Complete And Submit All Required Permit Applications					
	Complete and Submit All Required Wetland Permit Applications	LS	1	100	100	Broward, SFWMD, USACE
	Prepare Dredge and Fill Sketches (as needed)	LS	1	6	6	Includes time to work with BCC when BCC is developing the sketches. N/A
	Prepare Tree Permit Information	LS	1	32	32	Likely need to remove or trim large seagrape trees
	Mitigation Design	LS	1	24	24	If resources are identified
	Mitigation Coordination and Meetings	LS	1	6	6	If resources are identified
				6. Permitting Subtotal	**208**	
	Technical Meetings	LS	1	16	16	Meetings are listed below
	Quality Assurance/Quality Control	LS	%	7%	15	
	Supervision	LS	%	5%	10	
				6. Permitting Subtotal	**41**	
	Coordination	LS	%	5%	12	
				6. Permitting Total	**261**	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
WMD	EA	1	2	2		0
NMFS	EA	1	2	2		0
USACE	EA	1	2	2		0
Subtotal Technical Meetings				**6**	**Subtotal Project Manager Meetings**	0
Progress Meetings	EA	10	1	10		
Total Meetings				**16**		**0**

Carries to 8.18

Carries to Tab 3

TASK 6

UTILITY COORDINATION

Task 6. Utility Coordination

Estimator: Rick Duran

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771
City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	No of Units	Hours/ Unit	Total Hours	Comments
	6. Utility Coordination					
	Utility Kickoff Meeting	LS	1	4	4	Kickoff Meeting with PM including meeting attendance, minutes, and follow up
	Identify Existing Utility Agency Owners (UAO(s))	LS	1	1	1	Update Design Ticket, utility contact list.
	Make Utility Contacts	LS	4	6	24	AT&T, City of Fort Lauderdale Utilities, Comcast, FPL - Four (4) UAOs x 2 contacts x 1hr per contact
	Exception Processing	LS	1	0	0	No Utility Exception anticipated
	Preliminary Utility Meeting	LS	1	0	0	None anticipated
	Individual/Field Meetings	LS	1	12	12	Meeting w/ UAOs in field to confirm issues/conflict resolutions during design. 1 Meeting (assumes UAO's can meet on same day - full day, includes preparing for meeting, meeting, documentation/minutes, and follow up on action items.
	Collect and Review Plans and Data from UAO(s)	LS	4	4	16	Collect & review marked plans, record dwgs. & as-builts from UAOs 4hrs (4 UAO)
	Subordination of Easements Coordination	LS	1	0	0	No easement subordination anticipated
	Utility Design Meeting	LS	1	16	16	Participate in design meeting with EOR & Utility Coordination meeting. Includes preparation, meeting, & follow up on action items
	Review Utility Markups & Work Schedules, and Processing of Schedules & Agreements	LS	4	4	16	Collect final marked plans, clear letter or UWS from UAO. Include review, comments and final. Cost of relocation work is reimbursable. 4 UAOs x 4 hrs each
	Utility Coordination/Followup	LS	1	8	8	Coordination with non-responsive UAOs, assist UAOs with plans clarificaiton, prep. Of UWS, etc. 2hr per UAO, 4 UAO's.
	Utility Constructability Review	LS	4	1	4	Review all plan components including structures, drainage, ITS, lighting & signalization for potential conflicts with existing UAOs facilties. Provide comments & follow up. 4 UAO's, 1 hr per UAO.
	Additional Utility Services	LS	1	0	0	None anticipated
	Processing Utility Work by Highway Contractor (UWHC)	LS	1	0	0	No UWHC agreement anticipated
	Contract Plans to UAO(s)	LS	4	1	4	RFC plans to UAOs.
	Certification/Close-Out	LS	1	8	8	Certification Package to construction for reivew and final approval of Final package. Lump sum include any follow up on review from contruction
	Other Utilities	LS	1	0	0	None anticipated
				7. Utility Coordination Total	**113**	

TASK 7

BIDDING SERVICES

Task 7. Bidding Services

Estimator: Bob Forand, PE

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	No. of Units	Hours/ Units	Total Hours	Comments
	7. Bidding Services					
	Provide Bidding Services as follows	LS	6	6.00	36	
	Breakdown of services:		1	2	2	Prepare bid documents
			1	2	2	Attend Pre Bid Meeting
			1	8	8	Respond to questions from prospective bidders
			1	8	8	Provide supplemental information to prospective bidders
			1	8	8	Review bids, determine most responsible bidder
			1	8	8	Follow up coordination, clarification requests of potential successful bidder
	7. Bidding Services Subtotal				**36**	
	7. Bidding Services Total				**36**	

TASK 8

POST DESIGN SERVICES

Task 8. Post Design Services

Estimator: Bob Forand, PE

Task Order No. 2 - Repair and Rehabilitation West Lake Drive Bridge Over the Estelle River - Bridge No. 865771

City of Fort Lauderdale Project No. 12299

	Task No. and Description	Units	No. of Units	Hours/ Units	Total Hours	Comments
	8. Post Design Services					
	Provide Post Design Services as follows	LS	74	3.28	243	
	Breakdown of services:		1	3	3	Attend Pre Con. Prepare Minutes.
			6	4	24	Periodic construction observation, report findings to City
			6	2	12	Attend Construction Progress Meetings
			6	36	216	Periodic site visits to confirm compliance with plans, specifications. 6 hrs per week for 36 week (9 month) construction duration.
			10	3	30	Shop Drawing/Product Package (4 submittals) and Substitute Material review (6 submittals) = 10 total
			10	1	10	RFI responses
			41	4	164	Miscellaneous Review Activities. Contractor request for payments/change orders, claims (Assume 2 per month for 12 months = 24). Provide recommendation of % work complete (1 per month for 12 months). Review test reports and provide comments and/or recommendations (Assume 4). Review As-Builts (1 review). Total reviews: 41
	9. Post Design Services Subtotal				**243**	
	9. Post Design Services Total				**243**	

Task 8. Post Design Services

Estimator: Paul Passe, PE

Task Order No. 2 - West Lake Drive Bridge No. 865771 Repair and Rehabilitation

City of Fort Lauderdale Project No. 12010

	Task No. and Description	Units	No of Units	Hours/ Unit	Total Hours	Comments
	9. Post Design Services					
Geotechnical Engineering Services		LS	1	41	41	Total. Breakdown shown below.
	Principal Engineer	LS	1	8	8	
	Staff Engineer	LS	1	33	33	
				9. Post Design Services Total	**41**	

Exhibit B – Location Map

Bridge 865771 West Lake Drive over Estelle River

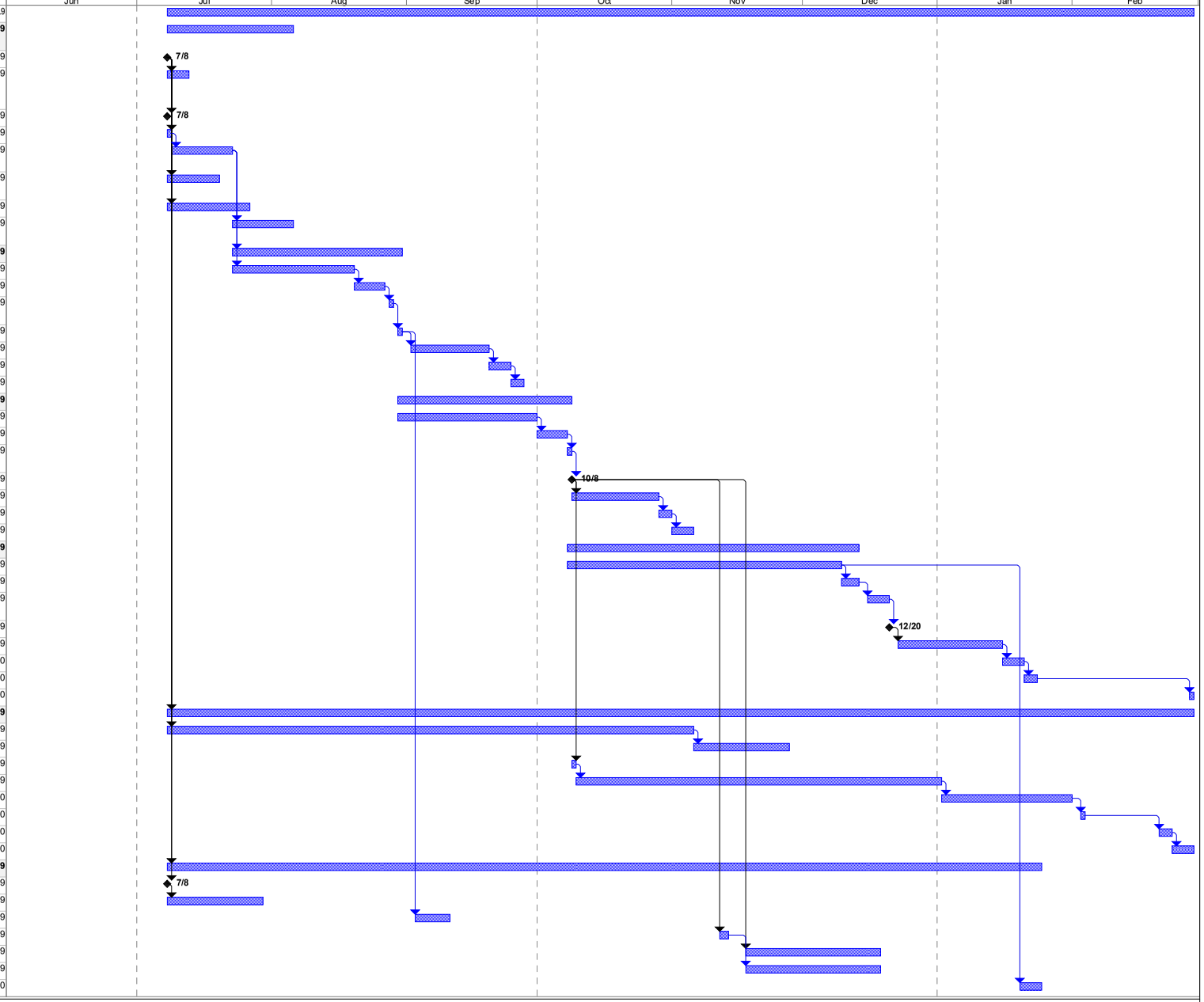
West side view

East side view

Exhibit C – Project Tentative Schedule

Repair West Lake Drive Bridge No. 865771 BCC Engineering, Inc.

ID	Task Name	Duration	Start
1	Repair West Lake Drive Bridge No. 865771	170 days	Mon 7/8/19
2	**Task 1 Bridge Evaluation and Field Investigation**	**21 days**	**Mon 7/8/19**
3	Notice to Proceed	0 days	Mon 7/8/19
4	Inspection Preparation (Internal Team meetings, sub assignment, review existing information, schedule boat)	5 days	Mon 7/8/19
5	Project Kickoff Meeting (R. Nazaire)	0 days	Mon 7/8/19
6	Asbestos Testing	1 day?	Mon 7/8/19
7	Bridge Structural Inspections (Land & Boat)	10 days	Tue 7/9/19
8	Survey (Topographic, Bridge, Hydrographic)	10 days	Mon 7/8/19
9	Geotechnical/Materials Investigation	15 days?	Mon 7/8/19
10	Bridge Structural Inspections (Below Water)	10 days	Tue 7/23/19
11	**Task 2 30% Design Submission**	**29 days**	**Tue 7/23/19**
12	Prepare 30% Plans Package	20 days	Tue 7/23/19
13	QC 30% Plans Package	5 days	Tue 8/20/19
14	Incorporate QC Comments and Backcheck	1 day?	Wed 8/28/19
15	Submit 30% Plans Package	1 day	Fri 8/30/19
16	City Review	14 days	Mon 9/2/19
17	City Review Meeting	3 days?	Fri 9/20/19
18	City Comment Incorporation	3 days	Wed 9/25/19
19	**Task 3 60% Design Submission**	**28 days**	**Fri 8/30/19**
20	Prepare 60% Plans Package	22 days	Fri 8/30/19
21	QC 60% Plans Package	5 days	Tue 10/1/19
22	Incorporate QC Comments and Backcheck	1 day?	Tue 10/8/19
23	Submit 60% Plans Package	0 days	Tue 10/8/19
24	City Review	14 days	Wed 10/9/19
25	City Review Meeting	3 days?	Tue 10/29/19
26	City Comment Incorporation	3 days	Fri 11/1/19
27	**Task 4 100% Design Submission**	**49 days**	**Tue 10/8/19**
28	Prepare 100% Plans Package	45 days	Tue 10/8/19
29	QC 100% Plans Package	4 days	Tue 12/10/19
30	Incorporate QC Comments and Backcheck	5 days?	Mon 12/16/19
31	Submit 100% Plans Package	0 days	Fri 12/20/19
32	City Review	18 days	Mon 12/23/19
33	City Review Meeting	3 days?	Thu 1/16/20
34	City Comment Incorporation	3 days	Tue 1/21/20
35	Submit Final Plans	1 day?	Fri 2/28/20
36	**Task 6 Environmental Permitting**	**170 days**	**Mon 7/8/19**
37	Assessments	87 days	Mon 7/8/19
38	Tree Permit	16 days	Wed 11/6/19
39	Submit to Agencies	1 day	Wed 10/9/19
40	Agency Review	60 days	Thu 10/10/19
41	Address RAI's	22 days	Thu 1/2/20
42	Submit Update to Agencies	1 day?	Mon 2/3/20
43	Agency Review	1 day?	Fri 2/21/20
44	Obtain Permits	5 days	Mon 2/24/20
45	**Task 7 Utility Coordination**	**145 days**	**Mon 7/8/19**
46	Kickoff Meeting	0 days	Mon 7/8/19
47	Make Utility Contacts	16 days	Mon 7/8/19
48	Utility Design Meeting	6 days	Tue 9/3/19
49	Distribute Plans	2 days	Tue 11/12/19
50	UAO Markups	23 days	Mon 11/18/19
51	Coordination and Follow Up	23 days?	Mon 11/18/19
52	Utility Constructability Review	5 days	Mon 1/20/20



Project: SR 5/Overseas Highway Over Channel 5

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Progress | Deadline