**TASK ORDER No. 1**

**Dated this day of ,**

**FORT LAUDERDALE PUBLIC WORKS DEPARTMENT**

**COCONUT ISLE DRIVE BRIDGE RELACEMENT**

## PROFESSIONAL SERVICES

This Task Order between the City of Fort Lauderdale, a Florida municipal corporation ("CITY") and Hardesty & Hanover, LLC, a Delaware limited liability company authorized to transact business in Florida, ("CONSULTANT") is pursuant to the Bridge Engineering Consulting Services Agreement dated November 18, 2014 and expiring on November 17, 2016 ("MASTER AGREEMENT").

## PROJECT BACKGROUND

The Project is generally described as follows: The Coconut Isle Drive Bridge will be replaced with a new bridge. The CONSULTANT services shall include design development services, construction/bid documentation services and contract administration.

The CONSULTANT is responsible for working in cooperation with officials of the CITY, or their designees, and with the CITY'S project managers in administering the design and construction of this project. The CONSULTANT will be responsible for the preparation of all construction documents and will coordinate all required permit applications.

## 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.

### Quality Control

The CONSULTANT is solely responsible for quality control of the work. The Consultant shall provide a list of sub-consultants for the project, which will not be changed without the approval of the City's Project Manager.

### Project Design Schedule

The CONSULTANT shall develop a design schedule with the City's Project Manager within 10 business days after the Notice-to-Proceed and prior to the CONSULTANT beginning work. The design schedule shall include at a minimum the dates for the various design development phases and submittals, design review timeframes, and permitting. The schedule shall be prepared in Microsoft Project.

Submit monthly status reports indicating progress of the design and conformance with the project design schedule. It is understood that the schedule is a dynamic tool and maybe adjusted as required, due to outside agency input.

**Coordination and Permits**

The CONSULTANT shall conduct all the necessary coordination with various City departments and other regulatory agencies that have an interest, jurisdiction over and may require permits for this project. During the cost estimation preparation, the Consultant shall provide an estimated for approvals/permits from all the City and non- City departments/agencies, having an interest or jurisdiction over this project which include, but are not limited to:

- SFWMD
- USACE
- USCG
- Broward County EPGMD

## SPECIFIC SCOPE OF SERVICES

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

**Task 1.1 - Bridge Alternative Study and 30% Design Submission**

**Task 1.1.1 – Bridge Component Alternatives Study (BAS)** – CONSULTANT shall investigate listed components and solicit City approval of recommended alternative prior to proceeding to design development. The components to be investigated are:

1. **Bridge Geometry:** The bridge length, height and pier locations are subject to vertical and horizontal design clearance requirements such as those for clear zone, navigation and hydrology. After these considerations are met, span lengths are governed by economics and aesthetic considerations. Superstructure depths (grade separation structures in particular) shall be kept to the minimum that is consistent with good engineering practice. Vertical clearances shall accommodate a 1 foot of sea level rise.
2. **Superstructure:** FIB Beam, inverted-tee sections, reinforced or prestressed concrete slabs.
3. **Substructures:** Substructure types that could be considered are pile bents or spread footings.
4. **Temporary Traffic Control:** Show how traffic will be maintained during construction for each of the bridge alternates considered. Assess the impacts of the traffic carried on the structures as well as under the structures being constructed. Consider all major overhead work items such as bridge demolition and girder placement. Show phased construction sequences, girder splice locations, etc., for each alternate being considered. Compare traffic user impacts for each of the alternates
5. **Quantity estimates:** For minor bridges rough quantities (such as reinforcing steel based on weight per volume of concrete) may be sufficient, keeping in mind that the intent is to establish relative and equitable costs between alternates and not necessarily to require the accuracy of the Final Estimate. For projects involving the demolition of bridges, debris volume quantities must be calculated.
6. Develop cost comparisons based on relevant FDOT unit prices and consultation with industry. Report the estimated total direct costs and estimated total indirect costs, as well as the sum of both, for each alternate as three separate dollar amounts in a summary table.

7. Retaining Wall Comparison
8. **Bicycle and Pedestrian Facilities**: The report shall describe the facilities to be provided and the means to be used to comply with ADA requirements

**Task 1.1.2 - 30% Design Submission** – The 30% submission shall include, at a minimum, the following information:

1. General Notes Sheets
2. Plan and Elevation Sheets
3. Typical section
4. Substructure elements and sizes
5. Preliminary Wall Control Drawings
6. Topographic Survey and property corner location

**30% Design Documents** – The CITY shall inform the CONSULTANT within 14 days of receiving the submittal on how to proceed with the proposed design. The CONSULTANT shall attend one coordination meeting with the CITY to address review comments. The CONSULTANT shall also obtain all necessary approvals from the CITY prior to proceeding with further design. CONSULTANT shall prepare the agenda and submit meeting minutes.

**Opinion of Probable Cost** – The CONSULTANT shall prepare an opinion of probable cost at the 30% Design Documents and make the changes to the design if needed to have it within the proposed budget.

**Project Schedule at 30% Design** – The CONSULTANT shall deliver an updated schedule in Microsoft Project of the work break down as part of this submittal package for City review and approval. Schedule shall include at a minimum deliverables dates, milestones, QA/QC time, and permitting timeframes. CITY review time frame shall be not less than seven (7) business days per submittal.

CONSULTANT shall provide three (3) original sets of the 30% design package (11” x 17” plan sheets), together with an electronic copy for review and comment by the City.

**Task 1.2 - Design Development Services** – CONSULTANT shall provide engineering services to design and produce plans for the following components of the project:

**Task 1.2.1 – 60% Design Submission** – At this submittal, all comments from earlier reviews shall have been resolved. The 60% design submission shall include, at a minimum, the following:

- Permitting
- Public Involvement Support – Electronic exhibits for Public Meeting.
- Single Span Concrete Bridge
    - Superstructure Design
    - Substructure Design
    - Foundation Design
- Single Span Concrete Bridge Load Rating
- Bridge bulkhead wall design
- Temporary bridge
- Maintenance of traffic

- Roadway (Including Vertical Profile)
- Signing and Pavement Marking
- Drainage
- Utility coordination
- Geotechnical Investigation

**60% Design Documents** – The CITY shall inform the CONSULTANT within 14 days of receiving the submittal on how to proceed with the proposed design. The CONSULTANT shall attend one coordination meeting with the CITY to address review comments. The CONSULTANT shall also obtain all necessary approvals from the CITY prior to proceeding with further design. CONSULTANT shall prepare the agenda and submit meeting minutes.

**Project Schedule at 60% Design** – The CONSULTANT shall deliver an updated schedule in Microsoft Project of the work break down as part of this submittal package for City review and approval. Schedule shall include at a minimum deliverables dates, milestones, QA/QC time, and permitting timeframes. CITY review time frame shall be not less than seven (7) business days per submittal.

CONSULTANT shall provide three (3) original sets of the 60% design package (11" x 17"" plan sheets), together with an electronic copy for review and comment by the City.

**Task 1.2.2 – 90% Design Submission** – At this submittal, all comments from previous reviews shall have been resolved. The 90% design submission shall include, at a minimum, the following:

- Permitting
- Public Involvement Support – Electronic exhibits for Public Meeting.
- Single Span Concrete Bridge
    - Superstructure Design
    - Substructure Design
    - Foundation Design
    - Load Rating
- Single Span Concrete Bridge Load Rating
- Bridge bulkhead wall design
- Temporary bridge
- Maintenance of traffic
- Roadway
- Signing and Pavement Marking
- Drainage
- Utility coordination
- Technical Specifications

**90% Design Documents** – The CITY shall inform the CONSULTANT within 14 days of receiving the submittal on how to proceed with the proposed design. The CONSULTANT shall attend one coordination meeting with the CITY to address review comments. The CONSULTANT shall also obtain all necessary approvals from the CITY prior to proceeding with further design. CONSULTANT shall prepare the agenda and submit meeting minutes.

**Cost Estimate** – The CONSULTANT shall prepare a cost estimate at the 90% Design Documents and make the changes to the design if needed to have it within the proposed budget.

**Project Schedule at 90% Design** – The CONSULTANT shall deliver an updated schedule in Microsoft Project of the work break down as part of this submittal package for City review and approval. Schedule shall include at a minimum deliverables dates, milestones, QA/QC time, and permitting timeframes. CITY review time frame shall be not less than seven (7) business days per submittal.

CONSULTANT shall provide three (3) original sets of the 90% design package (11" x 17" plan sheets), together with an electronic copy for review and comment by the City.

**Task 1.2.3 – 100% Design Submission** – At this submittal, all comments from previous reviews shall have been resolved. The 100% design submission shall include complete plans and specifications.

**100% Design Documents** – The CITY shall inform the CONSULTANT within 14 days of receiving the submittal on how to proceed with the proposed design. The CONSULTANT shall attend one coordination meeting with the CITY to address review comments. The CONSULTANT shall also obtain all necessary approvals from the CITY prior to producing final plans. CONSULTANT shall prepare the agenda and submit meeting minutes.

**Cost Estimate** – The CONSULTANT shall prepare a cost estimate at the 100% Design Documents.

**Project Schedule at 100% Design** – The CONSULTANT shall deliver an updated schedule in Microsoft Project of the work break down as part of this submittal package for City review and approval. Schedule shall include at a minimum deliverables dates, milestones, QA/QC time, and permitting timeframes. CITY review time frame shall be not less than seven (7) business days per submittal.

CONSULTANT shall provide three (3) original signed and sealed sets of the 100% design package (11" x 17" plan sheets), together with an electronic copy for review and comment by the City.

Once all changes are made, or if no changes or corrections are necessary after City review, the CONSULTANT shall submit the Final Plans and Specifications, and any other document required 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.

**Task 1.3 - Bidding Services -** CONSULTANT shall provide services during the bidding phase.

- Bid Support
  - Review bids
  - Respond to bid questions (25 assumed)
  - Issuing the clarification or drawings/addendums as needed
  - Participate in pre-bid conference.

**Task 1.4 - Post Design Services -** CONSULTANT shall provide services during the construction phase.

- CONSULTANT shall attend and record minutes of the pre-construction meeting as scheduled by the CITY.

- CONSULTANT shall review all shop drawings and submittals within 10 business days of receipt of the item to determine compliance with the drawings and specifications. Assume 10 shop drawings packages.
- CONSULTANT shall provide a written response to all requests for information (RFIs) within seven business days. Assume 50 RFI's.
- CONSULTANT shall review the contractor's request for payments.
- CONSULTANT shall review and respond to request for changes and claims and forward recommendations and cost evaluations to the CITY.
- CONSULTANT shall make periodic site visits for the purpose of determining general compliance with the approved project drawings, plans, and specifications.
- CONSULTANT shall attend periodic on-site project meetings.
- CONSULTANT shall review as-built drawings provided by the contractor and provide written comments to the City.

**Deliverables**:

Deliverables for this project shall consist of the following:

- Bridge Alternative Study and Design development drawings @ 30%.
- Design development drawings and calculations @ 60%.
- Design development drawings and calculations, if required by earlier comment, @ 90% including specifications.
- 100% Complete drawings, calculations, if required by earlier comment, and specifications
- Final Construction documents
- Each submission will include appropriately detailed construction cost estimates.
- Bid package, responses to the questions if required.
- Schedule for design phase deliverables (Microsoft Project)

The deliverables need to include DWG, PDF, WORD, and Excel files as required. The drawings need to comply with CITY CAD Standards.

## PROJECT ASSUMPTIONS

- CITY shall provide access to site.
- City shall provide any existing electronic CAD files. City cannot be responsible for accuracy.
- Existing geometry assumed to be acceptable to all permitting agencies.

## PERFORMANCE SCHEDULE

The CONSULTANT shall perform the services identified in Tasks 1.1 and 1.2 within 270 days of Notice To Proceed. Task 1.3 and 1.4 schedules shall be determined based on the bid dates and construction award period. CONSULTANT shall provide a schedule for all design deliverables and milestone. CONSULTANT shall prepare design schedule in Microsoft Project form.

## 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 3 attached hereto and made a part hereof. Pay applications shall be detailed and submitted monthly.

## TERMS OF COMPENSATION

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

| | |
|---|---|
| Task 1.1.1 - Bridge Alternative Study | $12,877 |
| Task 1.1.2 - 30% Submission | $42,719 |
| Task 1.2.1 - 60% Submission | $40,280 |
| Task 1.2.2 - 90% Submission | $57,217 |
| Task 1.2.3 - 100% and Final Submission | $10,848 |
| | |
| Task 1.3 – Bidding Services | $6,062 |
| Task 1.4 -Post Design Services | $23,844 |
| | |
| Permit Allowance | $8,000 |
| | |
| Geotechnical Field Investigation | $7,400 |
| Expenses | $4,000 |
| Grand Total | $213,247 |

## CITY CONTACTS

Requests for payments should be directed to City of Fort Lauderdale Accounts Payable via e-mail to AcctsPayable@FortLauderdale.gov. All other correspondence and submittals should be directed to the attention of Raymond Nazaire, 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.**

City of Fort Lauderdale
City Hall, 4th Floor Engineering
100 North Andrews Avenue
Fort Lauderdale, FL 33301

## CONSULTANT CONTACTS

Ronald Sanchez, P.E.
1000 Sawgrass Corporate Parkway Suite 544
Sunrise, FL 33323
Hardesty & Hanover, LLC
Email: rsanchez@hardesty-hanover.com
Phone: 954-368-6366
Fax: 954-835-9130

**CITY**

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

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

By _____
LEE R. FELDMAN, City Manager

(CORPORATE SEAL)

ATTEST:

_____
JONDA K. JOSEPH, City Clerk

Approved as to Legal Form:

_____
RHONDA MONTOYA HASAN
Assistant City Attorney

**CONSULTANT**

WITNESSES

Sabrina Sanchez

SABRINA SANCHEZ
Print Name

Ronald Sanchez

Ronald Sanchez
Print Name

Hardesty & Hanover, LLC, a Delaware limited liability company authorized to transact business in Florida.

By Timothy J. Noles
Timothy J. Noles, PE
Managing Member

STATE OF FLORIDA:
COUNTY OF BROWARD:

The foregoing instrument was acknowledged before me this 1st day of July, 2015 by Timothy J. Noles as Managing Member of Hardesty & Hanover, LLC, a Delaware limited liability company authorized to transact business in the State of Florida..

(SEAL)

SABRINA SANCHEZ
MY COMMISSION # FF234536
EXPIRES June 22, 2019
FloridaNotaryService.com

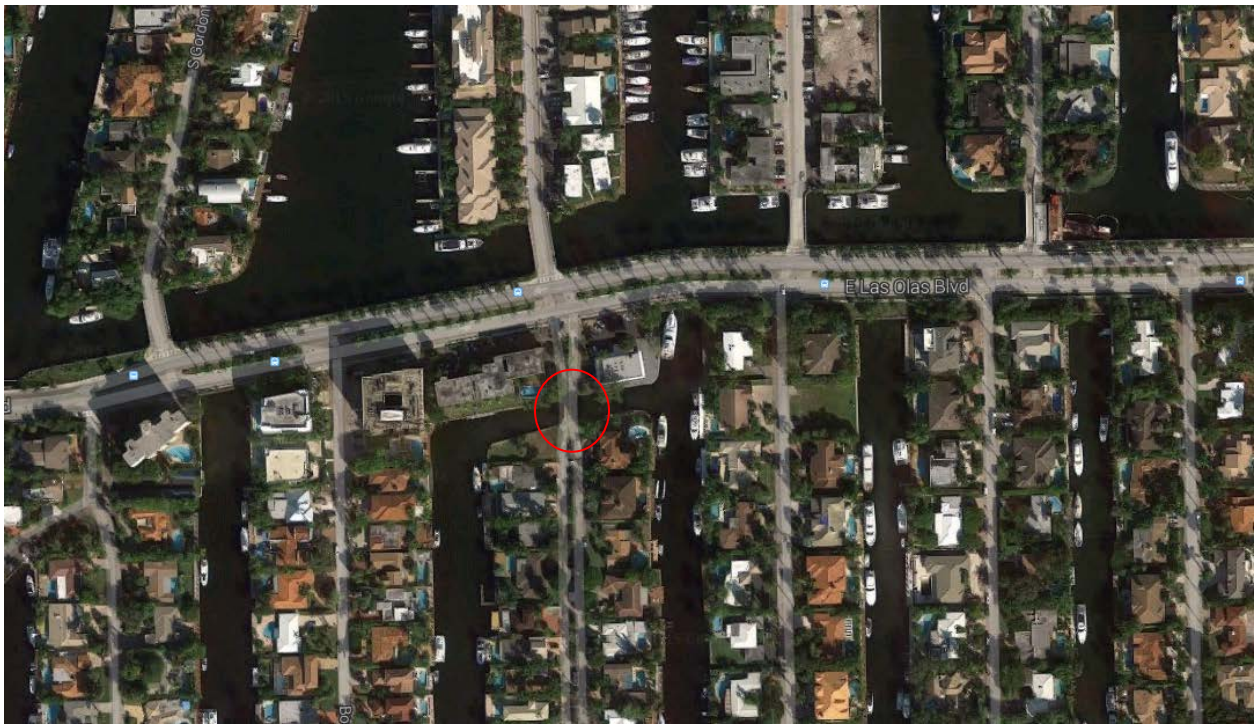
Sabrina Sanchez
Notary Public, State of Florida
(Signature of Notary taking Acknowledgment)

SABRINA SANCHEZ
Name of Notary Typed, Printed or Stamped

Personally known ✓ or Produced identification ____

Type of Identification _____

# Exhibit 1 – Location Map



## Exhibit 2 – Project Tentative Schedule

See table below for reference purposes only!!

| Event | Start Date | End Date | Duration (Days) |
|---|---|---|---|
| NTP | July 13, 2015 | July 13, 2015 | 0 |
| Survey | August 10, 2015 | August 17, 2015 | 7 |
| Bridge Alternative Study | July 13, 2015 | August 10, 2015 | 28 |
| 30% Design Submittal | August 10, 2015 | September 14, 2015 | 35 |
| 30% City Review | September 14, 2015 | September 29, 2015 | 15 |
| Geotechnical Site Investigation | October 7, 2015 | October 14, 2015 | 7 |
| 60% Design Submittal | September 29, 2015 | November 24, 2015 | 56 |
| 60% City Review | November 24, 2015 | December 1, 2015 | 7 |
| 90% Design Submittal | December 1, 2015 | January 12, 2016 | 42 |
| 90% City Review | January 12, 2016 | February 16, 2016 | 35 |
| 100% Design Submittal | February 16, 2016 | March 8, 2016 | 21 |
| 100% City Review | March 8, 2016 | March 22, 2016 | 14 |
| Final Submittal | March 22, 2016 | March 22, 2016 | 0 |
| **Total** | **July 13, 2015** | **March 22, 2016** | **267** |

# Exhibit 3 – Work Break Down Fee Schedule

## ESTIMATE OF WORK EFFORT AND COST

| | | | Hardesty & Hanover, LLC | | | | | CECOS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Staff Classification** | **Staff Classification** | Prime consultant hours | **Project Manager** | **Senior Engineer** | **Senior Designer** | **Engineering Intern** | **Cadd** | **Environmental Principal** | **Environmental Manager** | **Senior Scientist** | **Environmental Scientist** | **GIS Analyst** | **Admin** |
| | | | $160.00 | $160.00 | $126.27 | $80.00 | $75.00 | $200.00 | $145.00 | $125.00 | $98.00 | $73.00 | $60.00 |
| Task 1.1.1 - Bridge Alternative Studi | 10. Structures - Bridge Development Report | 113 | 6 | 17 | 45 | 28 | 17 | | | | | | |
| Task 1.1.2 - 30% Submission | 3. Project General and Project Common Tasks | 15 | 6 | 4 | 3 | 0 | 2 | | | | | | |
| | 4. Roadway Analysis | 24 | 2 | 4 | 6 | 5 | 7 | | | | | | |
| | 5. Roadway Plans | 25 | 1 | 1 | 10 | 8 | 5 | | | | | | |
| | 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| | 7. Utilities | 31 | 3 | 3 | 9 | 11 | 5 | | | | | | |
| | 9. Structures - Summary | 38 | 2 | 6 | 15 | 9 | 6 | | | | | | |
| | 11. Structures - Temporary Bridge | 13 | 1 | 2 | 5 | 3 | 2 | | | | | | |
| | 12. Structures - Short Span Concrete Bridge | 104 | 5 | 16 | 21 | 36 | 26 | | | | | | |
| | 17. Structures - Retaining Walls | 44 | 2 | 7 | 9 | 15 | 11 | | | | | | |
| | 19. Signing & Pavement Marking Analysis | 1 | 0 | 0 | 0 | 1 | 0 | | | | | | |
| | 20. Signing & Pavement Marking Plans | 2 | 0 | 0 | 0 | 2 | 0 | | | | | | |
| | Georechnical Investigation | | | | | | | | | | | | |
| Task 1.2.1 - 60% Submission | 3. Project General and Project Common Tasks | 15 | 6 | 4 | 3 | 0 | 2 | | | | | | |
| | 4. Roadway Analysis | 24 | 2 | 4 | 6 | 5 | 7 | | | | | | |
| | 5. Roadway Plans | 25 | 1 | 1 | 10 | 8 | 5 | | | | | | |
| | 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| | 7. Utilities | 31 | 3 | 3 | 9 | 11 | 5 | | | | | | |
| | 9. Structures - Summary | 38 | 2 | 6 | 15 | 9 | 6 | | | | | | |
| | 11. Structures - Temporary Bridge | 13 | 1 | 2 | 5 | 3 | 2 | | | | | | |
| | 12. Structures - Short Span Concrete Bridge | 104 | 5 | 16 | 21 | 36 | 26 | | | | | | |
| | 17. Structures - Retaining Walls | 44 | 2 | 7 | 9 | 15 | 11 | | | | | | |
| | 19. Signing & Pavement Marking Analysis | 1 | 0 | 0 | 0 | 1 | 0 | | | | | | |
| | 20. Signing & Pavement Marking Plans | 2 | 0 | 0 | 0 | 2 | 0 | | | | | | |
| | Survey | | | | | | | | | | | | |

## ESTIMATE OF WORK EFFORT AND COST

| | | | Hardesty & Hanover, LLC | | | | | CECOS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Staff Classification** | **Staff Classification** | Prime consultant hours | **Project Manager** | **Senior Engineer** | **Senior Designer** | **Engineering Intern** | **Cadd** | **Environmental Principal** | **Environmental Manager** | **Senior Scientist** | **Environmental Scientist** | **GIS Analyst** | **Admin** |
| | | | $160.00 | $160.00 | $126.27 | $80.00 | $75.00 | $200.00 | $145.00 | $125.00 | $98.00 | $73.00 | $60.00 |
| Task 1.2.2 - 90% Submission | 3. Project General and Project Common Tasks | 15 | 6 | 4 | 3 | 0 | 2 | | | | | | |
| | 4. Roadway Analysis | 24 | 2 | 4 | 6 | 5 | 7 | | | | | | |
| | 5. Roadway Plans | 25 | 1 | 1 | 10 | 8 | 5 | | | | | | |
| | 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| | 7. Utilities | 31 | 3 | 3 | 9 | 11 | 5 | | | | | | |
| | 9. Structures - Summary | 38 | 2 | 6 | 15 | 9 | 6 | | | | | | |
| | 11. Structures - Temporary Bridge | 13 | 1 | 2 | 5 | 3 | 2 | | | | | | |
| | 12. Structures - Short Span Concrete Bridge | 104 | 5 | 16 | 21 | 36 | 26 | | | | | | |
| | 17. Structures - Retaining Walls | 44 | 2 | 7 | 9 | 15 | 11 | | | | | | |
| | 19. Signing & Pavement Marking Analysis | 1 | 0 | 0 | 0 | 1 | 0 | | | | | | |
| | 20. Signing & Pavement Marking Plans | 2 | 0 | 0 | 0 | 2 | 0 | | | | | | |
| | Environmental Permitting | | | | | | | 6 | 16 | 120 | 46 | 20 | 8 |
| Task 1.2.3 - 100% and Final Submission | 3. Project General and Project Common Tasks | 5 | 2 | 1 | 1 | 0 | 1 | | | | | | |
| | 4. Roadway Analysis | 8 | 1 | 1 | 2 | 2 | 2 | | | | | | |
| | 5. Roadway Plans | 8 | 0 | 0 | 3 | 3 | 2 | | | | | | |
| | 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| | 7. Utilities | 11 | 1 | 1 | 3 | 4 | 2 | | | | | | |
| | 9. Structures - Summary | 13 | 1 | 2 | 5 | 3 | 2 | | | | | | |
| | 11. Structures - Temporary Bridge | 5 | 0 | 1 | 2 | 1 | 1 | | | | | | |
| | 12. Structures - Short Span Concrete Bridge | 35 | 2 | 5 | 7 | 12 | 9 | | | | | | |
| | 17. Structures - Retaining Walls | 15 | 1 | 2 | 3 | 5 | 4 | | | | | | |
| | 19. Signing & Pavement Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| | 20. Signing & Pavement Marking Plans | 1 | 0 | 0 | 0 | 1 | 0 | | | | | | |
| Task 1.3 – Bidding Services | 3b. Brebid Support | 56 | 8 | 3 | 17 | 11 | 17 | | | | | | |
| Task 1.4 -Post Design Services | 3a. Post Design Services | 220 | 33 | 11 | 66 | 44 | 66 | | | | | | |
| **Total Staff Hours** | **Total Staff Hours** | 1,381 | 121 | 173 | 388 | 384 | 315 | 6 | 16 | 120 | 46 | 20 | 8 |
| **Total Staff Cost** | **Total Staff Cost** | | $19,360.00 | $27,680.00 | $48,992.76 | $30,720.00 | $23,625.00 | $1,200.00 | $2,320.00 | $15,000.00 | $4,508.00 | $1,460.00 | $480.00 |

## ESTIMATE OF WORK EFFORT AND COST

| Staff Classification | Staff Classification | Prime consultant hours | Marlin: Chief Engineer | Marlin: CBI | Marlin: Assistant Inspector | Marlin: Diver tender | Marlin: Video system tender | Tierra: Project Manager | Tierra: Principal Engineer | Tierra: Senior Engineer | Tierra: Project Engineer | Tierra: Senior Technician | Tierra: CADD | SH By Activity | Salary Cost By Activity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | $150.00 | $99.06 | $85.15 | $53.42 | $31.22 | $165.00 | $140.00 | $100.00 | $85.00 | $65.00 | $55.00 | | | |
| Task 1.1.1 - Bridge Alternative Studi | 10. Structures - Bridge Development Report | 113 | | | | | | | | | | | | 113 | $12,877 | $12,877 |
| Task 1.1.2 - 30% Submission | 3. Project General and Project Common Tasks | 15 | | | | | | | | | | | | 15 | $2,129 | |
| | 4. Roadway Analysis | 24 | | | | | | | | | | | | 24 | $2,643 | |
| | 5. Roadway Plans | 25 | | | | | | | | | | | | 25 | $2,598 | |
| | 6. Drainage Analysis | 0 | | | | | | | | | | | | 0 | $0 | |
| | 7. Utilities | 31 | | | | | | | | | | | | 31 | $3,351 | |
| | 9. Structures - Summary | 38 | | | | | | | | | | | | 38 | $4,344 | |
| | 11. Structures - Temporary Bridge | 13 | | | | | | | | | | | | 13 | $1,501 | |
| | 12. Structures - Short Span Concrete Bridge | 104 | | | | | | | | | | | | 104 | $10,842 | |
| | 17. Structures - Retaining Walls | 44 | | | | | | | | | | | | 44 | $4,601 | |
| | 19. Signing & Pavement Marking Analysis | 1 | | | | | | | | | | | | 1 | $80 | |
| | 20. Signing & Pavement Marking Plans | 2 | | | | | | | | | | | | 2 | $160 | |
| | Georechnical Investigation | | | | | | | 8 | 15 | 25 | 30 | 24 | 8 | 110 | $10,470 | $42,719 |
| Task 1.2.1 - 60% Submission | 3. Project General and Project Common Tasks | 15 | | | | | | | | | | | | 15 | $2,129 | |
| | 4. Roadway Analysis | 24 | | | | | | | | | | | | 24 | $2,643 | |
| | 5. Roadway Plans | 25 | | | | | | | | | | | | 25 | $2,598 | |
| | 6. Drainage Analysis | 0 | | | | | | | | | | | | 0 | $0 | |
| | 7. Utilities | 31 | | | | | | | | | | | | 31 | $3,351 | |
| | 9. Structures - Summary | 38 | | | | | | | | | | | | 38 | $4,344 | |
| | 11. Structures - Temporary Bridge | 13 | | | | | | | | | | | | 13 | $1,501 | |
| | 12. Structures - Short Span Concrete Bridge | 104 | | | | | | | | | | | | 104 | $10,842 | |
| | 17. Structures - Retaining Walls | 44 | | | | | | | | | | | | 44 | $4,601 | |
| | 19. Signing & Pavement Marking Analysis | 1 | | | | | | | | | | | | 1 | $80 | |
| | 20. Signing & Pavement Marking Plans | 2 | | | | | | | | | | | | 2 | $160 | |
| | Survey | | 6 | 8 | 18 | 66 | 41 | | | | | | | 139 | $8,031 | $40,280 |

## ESTIMATE OF WORK EFFORT AND COST

| Staff Classification | Staff Classification | Prime consultant hours | Marlin: Chief Engineer | Marlin: CBI | Marlin: Assistant Inspector | Marlin: Diver tender | Marlin: Video system tender | Tierra: Project Manager | Tierra: Principal Engineer | Tierra: Senior Engineer | Tierra: Project Engineer | Tierra: Senior Technician | Tierra: CADD | SH By Activity | Salary Cost By Activity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | $150.00 | $99.06 | $85.15 | $53.42 | $31.22 | $165.00 | $140.00 | $100.00 | $85.00 | $65.00 | $55.00 | | | |
| | 3. Project General and Project Common Tasks | 15 | | | | | | | | | | | | 15 | $2,129 | |
| Task 1.2.2 - 90% Submission | 4. Roadway Analysis | 24 | | | | | | | | | | | | 24 | $2,643 | |
| | 5. Roadway Plans | 25 | | | | | | | | | | | | 25 | $2,598 | |
| | 6. Drainage Analysis | 0 | | | | | | | | | | | | 0 | $0 | |
| | 7. Utilities | 31 | | | | | | | | | | | | 31 | $3,351 | |
| | 9. Structures - Summary | 38 | | | | | | | | | | | | 38 | $4,344 | |
| | 11. Structures - Temporary Bridge | 13 | | | | | | | | | | | | 13 | $1,501 | |
| | 12. Structures - Short Span Concrete Bridge | 104 | | | | | | | | | | | | 104 | $10,842 | |
| | 17. Structures - Retaining Walls | 44 | | | | | | | | | | | | 44 | $4,601 | |
| | 19. Signing & Pavement Marking Analysis | 1 | | | | | | | | | | | | 1 | $80 | |
| | 20. Signing & Pavement Marking Plans | 2 | | | | | | | | | | | | 2 | $160 | |
| | Environmental Permitting | | | | | | | | | | | | | 216 | $24,968 | $57,217 |
| Task 1.2.3 - 100% and Final Submission | 3. Project General and Project Common Tasks | 5 | | | | | | | | | | | | 5 | $681 | |
| | 4. Roadway Analysis | 8 | | | | | | | | | | | | 8 | $883 | |
| | 5. Roadway Plans | 8 | | | | | | | | | | | | 8 | $769 | |
| | 6. Drainage Analysis | 0 | | | | | | | | | | | | 0 | $0 | |
| | 7. Utilities | 11 | | | | | | | | | | | | 11 | $1,169 | |
| | 9. Structures - Summary | 13 | | | | | | | | | | | | 13 | $1,501 | |
| | 11. Structures - Temporary Bridge | 5 | | | | | | | | | | | | 5 | $568 | |
| | 12. Structures - Short Span Concrete Bridge | 35 | | | | | | | | | | | | 35 | $3,639 | |
| | 17. Structures - Retaining Walls | 15 | | | | | | | | | | | | 15 | $1,559 | |
| | 19. Signing & Pavement Marking Analysis | 0 | | | | | | | | | | | | 0 | $0 | |
| | 20. Signing & Pavement Marking Plans | 1 | | | | | | | | | | | | 1 | $80 | $10,848 |
| Task 1.3 – Bidding Services | 3b. Brebid Support | 56 | | | | | | | | | | | | 56 | $6,062 | $6,062 |
| Task 1.4 -Post Design Services | 3a. Post Design Services | 220 | | | | | | | | | | | | 220 | $23,844 | $23,844 |
| **Total Staff Hours** | **Total Staff Hours** | 1,381 | 6 | 8 | 18 | 66 | 41 | 8 | 15 | 25 | 30 | 24 | 8 | 1,846 | $193,847 | |
| **Total Staff Cost** | **Total Staff Cost** | | $900.00 | $792.48 | $1,532.70 | $3,525.72 | $1,280.02 | $1,320.00 | $2,100.00 | $2,500.00 | $2,550.00 | $1,560.00 | $440.00 | | **$193,846.68** | |

| | |
|---|---|
| **SUBTOTAL ESTIMATED FEE:** | **$193,846.68** |
| Subconsultant: Tierra | $7,400.00 |
| Expenses | $4,000.00 |
| **GRAND TOTAL ESTIMATED FEE:** | **$205,246.68** |

## ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Project Name: _____

Date: 5/29/2015 Name of Consultant: _____

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | TOTAL STAFF HOURS RANGE | | ON CADD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Firm Total Hours | Project Manager Hours | Senior Engineer Hours | Senior Designer Hours | Engineering Intern Hours | Cadd Hours | | | | | | | | | | PERCENT |
| 10. Structures - Bridge Development Report | 112 | 6 | 17 | 45 | 28 | 17 | | | | | | | | 113 | 124 | |
| 3. Project General and Project Common Tasks | 48 | 19 | 14 | 10 | 0 | 5 | | | | | | | | 48 | 53 | |
| 4. Roadway Analysis | 81 | 8 | 12 | 20 | 16 | 24 | | | | | | | | 80 | 88 | |
| 5. Roadway Plans | 82 | 4 | 4 | 33 | 25 | 16 | | | | | | | | 82 | 90 | |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | 0 | 0 | |
| 7. Utilities | 102 | 10 | 10 | 31 | 36 | 15 | | | | | | | | 102 | 112 | |
| 9. Structures - Summary | 123.5 | 6 | 19 | 49 | 31 | 19 | | | | | | | | 124 | 136 | |
| 11. Structures - Temporary Bridge | 44 | 2 | 7 | 18 | 11 | 7 | | | | | | | | 45 | 50 | |
| 12. Structures - Short Span Concrete Bridge | 347 | 17 | 52 | 69 | 121 | 87 | | | | | | | | 346 | 381 | |
| 17. Structures - Retaining Walls | 146 | 7 | 22 | 29 | 51 | 37 | | | | | | | | 146 | 161 | |
| 19. Signing & Pavement Marking Analysis | 2 | 0 | 0 | 0 | 2 | 0 | | | | | | | | 2 | 2 | |
| 20. Signing & Pavement Marking Plans | 6 | 0 | 0 | 0 | 6 | 0 | | | | | | | | 6 | 7 | |
| 3a. Post Design Services | 219 | 33 | 11 | 66 | 44 | 66 | | | | | | | | 220 | 242 | |
| 3b. Brebid Support | 55 | 8 | 3 | 17 | 11 | 17 | | | | | | | | 56 | 62 | |
| | | | | | | | | | | | | | **FIRM TOTAL** | **1,370** | **1,508** | |

## ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Project Name 0

Date: 5/29/2015 Name of Consultant: 0

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hours from "Summary" sheet Firm Total | Project Manager | Senior Engineer | Senior Designer | Engineering Intern | Cadd | | | | | | | | | Total |
| 3. Project General and Project Common Tasks | 48 | 40.0% | 30.0% | 20.0% | 0.0% | 10.0% | | | | | | | | | 100.00% |
| 3a Post Design | 219 | 15.0% | 5.0% | 30.0% | 20.0% | 30.0% | | | | | | | | | 100.00% |
| 3b Prebid Support | 55 | 15.0% | 5.0% | 30.0% | 20.0% | 30.0% | | | | | | | | | 100.00% |
| 4. Roadway Analysis | 81 | 10.0% | 15.0% | 25.0% | 20.0% | 30.0% | | | | | | | | | 100.00% |
| 5. Roadway Plans | 82 | 5.0% | 5.0% | 40.0% | 30.0% | 20.0% | | | | | | | | | 100.00% |
| 6. Drainage Analysis | 0 | 10.0% | 10.0% | 30.0% | 20.0% | 30.0% | | | | | | | | | 100.00% |
| 7. Utilities | 102 | 10.0% | 10.0% | 30.0% | 35.0% | 15.0% | | | | | | | | | 100.00% |
| 9. Structures - Summary | 123.5 | 5.0% | 15.0% | 40.0% | 25.0% | 15.0% | | | | | | | | | 100.00% |
| 10. Structures - Bridge Development Report | 112 | 5.0% | 15.0% | 40.0% | 25.0% | 15.0% | | | | | | | | | 100.00% |
| 11. Structures - Temporary Bridge | 44 | 5.0% | 15.0% | 40.0% | 25.0% | 15.0% | | | | | | | | | 100.00% |
| 12. Structures - Short Span Concrete Bridge | 347 | 5.0% | 15.0% | 20.0% | 35.0% | 25.0% | | | | | | | | | 100.00% |
| 17. Structures - Retaining Walls | 146 | 5.0% | 15.0% | 20.0% | 35.0% | 25.0% | | | | | | | | | 100.00% |
| 19. Signing & Pavement Marking Analysis | 2 | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | | | | | | | | | 100.00% |
| 20. Signing & Pavement Marking Plans | 6 | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | | | | | | | | | 100.00% |

Estimator:

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 3.1 | Public Involvement | | | | | |
| 3.1.1 | Community Awareness Plan | LS | 1 | 0 | 0 | |
| 3.1.2 | Notifications | LS | 1 | 0 | 0 | |
| 3.1.3 | Prepare Mailing Lists | LS | 1 | 0 | 0 | |
| 3.1.4 | Median Modification Letters | LS | 1 | 0 | 0 | |
| 3.1.5 | Driveway Modification Letters | LS | 1 | 0 | 0 | |
| 3.1.6 | Newsletters | LS | 1 | 0 | 0 | |
| 3.1.7 | Renderings and Fly Throughs | LS | 1 | 8 | 8 | Public Involvement Support – Basic sketch/diagrams for Public Meeting. |
| 3.1.8 | PowerPoint Presentation | LS | 1 | 0 | 0 | |
| 3.1.9 | Public Meeting Preparations | LS | 1 | 0 | 0 | |
| 3.1.10 | Public Meeting Attendance/Followup | LS | 1 | 4 | 4 | |
| 3.1.11 | Other Agency Meetings | LS | 1 | 0 | 0 | |
| 3.1.12 | Web Site | LS | 1 | 0 | 0 | |
| 3.1 Public Involvement Subtotal | | | | | 12 | |
| 3.2 | Joint Project Agreements | EA | 0 | 0 | 0 | |
| 3.3 | Specifications Package Preparation | LS | 1 | 8 | 8 | |
| 3.4 | Contract Maintenance and EDMS | LS | 1 | 8 | 8 | |
| 3.5 | Value Engineering (Multi-Discipline Team) Review | LS | 1 | 0 | 0 | |
| 3.6 | Prime Consultant Project Manager Meetings | LS | 1 | 20 | 20 | See listing below |
| 3.7 | Plans Update | LS | 1 | 0 | 0 | |

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 3.8 | Post Design Services | LS | 1 | 0 | 0 | |
| 3.9 | Electronic/Digital Delivery | LS | 1 | 0 | 0 | |
| 3.10 | Risk Assessment Workshop | LS | 1 | 0 | 0 | |
| 3.11 | Railroad, Transit, and/or Airport Coordination | LS | 1 | 0 | 0 | |
| 3.12 | Other Project General Tasks | LS | 1 | 0 | 0 | |
| **3. Project Common and Project General Tasks Total** | | | | | **48** | |

**3.6 - List of Project Manager Meetings**

| | | | | |
|---|---|---|---|---|
| Roadway Analysis | EA | 0 | 2 | 0 |
| Drainage | EA | 0 | 2 | 0 |
| Utilities | EA | 1 | 2 | 2 |
| Environmental | EA | 1 | 2 | 2 |
| Structures | EA | 2 | 2 | 4 |
| Signing & Pavement Marking | EA | 0 | 2 | 0 |
| Landscape Architecture | EA | 0 | 2 | 0 |
| Survey | EA | 0 | 2 | 0 |
| Geotechnical | EA | 0 | 2 | 0 |
| Progress Meetings | EA | 3 | 2 | 6 |
| Phase Reviews | EA | 0 | 0 | 0 |
| Field Reviews | EA | 3 | 2 | 6 |
| **Total Project Manager Meetings** | | 10 | | 20 |

Carries to 3.6

**Notes:**

1. **If the hours per meeting vary in length (hours) enter the average in the hour/unit column.**
2. **Do not double count agency meetings between permitting agencies.**
3. **Project manager meetings are calculated in each discipline sheet and brought forward to column D except for Photogrammetry.**

Estimator:

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 3a.1 | RFI | EA | 50 | 1 | 50 | |
| 3a.2 | Shop Drawing Review | LS | 8 | 8 | 64 | |
| 3a.3 | Project Management | LS | 1 | 60 | 60 | |
| 3a.4 | Meetings | LS | 1 | 0 | 0 | |
| 3a.5 | Meetings | LS | 1 | 45 | 45 | |
| **3. Project Common and Project General Tasks Total** | | | | | **219** | |

**3.6 - List of Project Manager Meetings**

| | | | | |
|---|---|---|---|---|
| Roadway Analysis | EA | 0 | 0 | 0 |
| Drainage | EA | 0 | 0 | 0 |
| Utilities | EA | 0 | 0 | 0 |
| Environmental | EA | 0 | 0 | 0 |
| Structures | EA | 0 | 0 | 0 |
| Signing & Pavement Marking | EA | 0 | 0 | 0 |
| Landscape Architecture | EA | 0 | 0 | 0 |
| Survey | EA | 0 | 0 | 0 |
| Geotechnical | EA | 0 | 0 | 0 |
| Progress Meetings | EA | 15 | 3 | 45 |
| Phase Reviews | EA | 0 | 0 | 0 |
| Field Reviews | EA | 0 | 0 | 0 |
| **Total Project Manager Meetings** | | 15 | | 45 |

Carries to 3.6

**Notes:**

1. **If the hours per meeting vary in length (hours) enter the average in the hour/unit column.**
2. **Do not double count agency meetings between permitting agencies.**
3. **Project manager meetings are calculated in each discipline sheet and brought forward to column D except for Photogrammetry.**

Estimator:

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 3b.1 | RFI | EA | 25 | 1 | 25 | |
| 3b.2 | Shop Drawing Review | LS | 0 | 0 | 0 | |
| 3b.3 | Project Management | LS | 1 | 24 | 24 | |
| 3b.4 | Meetings | LS | 1 | 0 | 0 | |
| 3b.5 | Meetings | LS | 1 | 6 | 6 | |
| **3. Project Common and Project General Tasks Total** | | | | | **55** | |

**3.6 - List of Project Manager Meetings**

| | | | | |
|---|---|---|---|---|
| Roadway Analysis | EA | 0 | 0 | 0 |
| Drainage | EA | 0 | 0 | 0 |
| Utilities | EA | 0 | 0 | 0 |
| Environmental | EA | 0 | 0 | 0 |
| Structures | EA | 0 | 0 | 0 |
| Signing & Pavement Marking | EA | 0 | 0 | 0 |
| Landscape Architecture | EA | 0 | 0 | 0 |
| Survey | EA | 0 | 0 | 0 |
| Geotechnical | EA | 0 | 0 | 0 |
| Progress Meetings | EA | 2 | 3 | 6 |

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| | Phase Reviews | EA | 0 | 0 | 0 | |
| | Field Reviews | EA | 0 | 0 | 0 | |
| | **Total Project Manager Meetings** | | 2 | | 6 | |

Carries to 3.6

Estimator:

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 4.1 | Typical Section Package | LS | 1 | 0 | 0 | Not required, bridge typical section will be shown in structures plans |
| 4.2 | Pavement Type Selection Report | LS | 1 | 0 | 0 | |
| 4.3 | Pavement Design Package | LS | 1 | 8 | 8 | Developing one pavement design for milling roadway approaches; one pavement design for shoulder/widening at approaches; 2 design x 4 hr/each = 8 hours |
| 4.4 | Cross-Slope Correction | LS | 1 | 0 | 0 | Assume none; milling and resurfacing only, no reconstruction |
| 4.5.1 | Horizontal /Vertical Master Design Files | LS | 1 | 20 | 20 | Plan view at bridge approaches; does not include developing geopak, driveway details, guardrail or other roadside safety devices |
| 4.5.2 | Horizontal /Vertical Master Design Files (skeletal plans) | LS | 1 | 0 | 0 | |
| 4.6 | Access Management | LS | 1 | 0 | 0 | |
| 4.7 | Cross Section Design Files | LS | 1 | 0 | 0 | |
| 4.8 | Traffic Control Analysis | LS | 1 | 2 | 2 | Will include notes in plans instructing contractor to develop an MOT plan in accordance with FDOT stds. |
| 4.9 | Master TCP Design Files | LS | 1 | 0 | 0 | Not required, MOT plan will be developed on contract plans |
| 4.10 | Design Variations and Exceptions | LS | 1 | 0 | 0 | |
| 4.11 | Design Report | LS | 1 | 0 | 0 | |
| 4.12 | Quantities | LS | 1 | 8 | 8 | |
| 4.13 | Cost Estimate | LS | 1 | 0 | 0 | |
| 4.14 | Technical Special Provisions | LS | 1 | 0 | 0 | |
| 4.15 | Other Roadway Analysis | LS | 1 | 8 | 8 | Checking all files for AutoCAD compliance |

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| **Roadway Analysis Technical Subtotal** | | | | | **46** | |
| 4.16 | Field Reviews | LS | 1 | 12 | 12 | Two field reviews, 2 attendees x (1 hr travel + 2 hr review) |
| 4.17 | Technical Meetings | LS | 1 | 12 | 18 | Meetings are listed below |
| 4.18 | Quality Assurance/Quality Control | LS | % | 5% | 2 | |
| 4.19 | Independent Peer Review | LS | % | 0% | 0 | |
| 4.20 | Supervision | LS | % | 5% | 1 | |
| **Roadway Analysis Nontechnical Subtotal** | | | | | **33** | |
| 4.21 | Coordination | LS | % | 2% | 2 | |
| **4. Roadway Analysis Total** | | | | | **81** | |

| **Technical Meetings** | | | | | |
|---|---|---|---|---|---|
| Typical Section | EA | 0 | 0 | 0 | |
| Pavement | EA | 0 | 0 | 0 | |
| Access Management | EA | 0 | 0 | 0 | |
| 15% Line and Grade | EA | 0 | 0 | 0 | |
| Driveways | EA | 0 | 0 | 0 | |
| Local Governments (cities, counties, MPO) | EA | 0 | 0 | 0 | |
| Work Zone Traffic Control | EA | 0 | 0 | 0 | N/A, MOT developed by contractor |
| 30/60/90/100% Comment Review Meetings | EA | 0 | 0 | 0 | |
| Other Meetings | EA | 0 | 0 | 0 | |
| **Subtotal Technical Meetings** | | | | **0** | |
| Progress Meetings (if required by FDOT) | EA | 0 | 0 | 0 | |
| Phase Review Meetings | EA | 3 | 4 | 12 | |

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| **Total Meetings** | | | | | **12** | |

Carries to 4.17

**Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3**

Estimator:

| Task No. | Task | Scale | Units | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|---|
| 5.1 | Key Sheet | | Sheet | 1 | 4 | 1 | 4 | Not require, will include any roadway sheets in bridge component. |
| 5.2 | Summary of Pay Items Including Quantity Input | | Sheet | 1 | 2 | 1 | 2 | |
| 5.3 | Drainage Map (Including Interchanges) | | Sheet | 0 | 0 | 0 | 0 | |
| 5.4 | Typical Section Sheets | | | | | | | |
| 5.4.1 | Typical Sections | | EA | 0 | 0 | | 0 | Bridge typical section included in structure plans, no roadway typicals (match existing) |
| 5.4.2 | Typical Section Details | | EA | 0 | 0 | | 0 | No feathering details, instead show on roadway plan sheets |
| 5.5 | General Notes/Pay Item Notes | | Sheet | 1 | 3 | 1 | 3 | Include notes in bridge plans |
| 5.6 | Summary of Quantities | | Sheet | 1 | 3 | 1 | 3 | Include quantities in bridge plans |
| 5.7 | Box Culvert Data Sheet | | Sheet | 0 | 0 | 0 | 0 | |
| 5.8 | Bridge Hydraulics Recommendation Sheets | | Sheet | 0 | 0 | 0 | 0 | |
| 5.9 | Summary of Drainage Structures | | Sheet | 0 | 0 | 0 | 0 | |
| 5.10 | Optional Pipe/Culvert Material | | Sheet | 0 | 0 | 0 | 0 | |
| 5.11 | Project Layout | | Sheet | 0 | 0 | 0 | 0 | |
| 5.12 | Plan/Profile Sheet | | Sheet | 0 | 0 | 0 | 0 | No geopak profile, only details in plan view and/or bridge plans |
| 5.13 | Profile Sheet | | Sheet | 0 | 0 | 0 | 0 | |
| 5.14 | Plan Sheet | | Sheet | 2 | 6 | 2 | 12 | Two 20'-scale plan sheets |
| 5.15 | Special Profile | | Sheet | 0 | 0 | 0 | 0 | |
| 5.16 | Back-of-Sidewalk Profile Sheet | | Sheet | 0 | 0 | 0 | 0 | |
| 5.17 | Interchange Layout Sheet | | Sheet | 0 | 0 | 0 | 0 | |

| Task No. | Task | Scale | Units | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|---|
| 5.18 | Ramp Terminal Details (Plan View) | | Sheet | 0 | 0 | 0 | 0 | |
| 5.19 | Intersection Layout Details | | Sheet | 0 | 0 | 0 | 0 | |
| 5.20 | Special Details | | EA | 1 | 4 | | 4 | Assume replace bridge in kind, no new guardrail/end anchorages details will be proposed bridge railing (existing railing has no protection for drop-off or collision) |
| 5.21 | Drainage Structure Sheet (Per Structure) | | EA | 0 | 0 | | 0 | Assume none, no reconstruction |
| 5.22 | Miscellaneous Drainage Detail Sheets | | Sheet | 0 | 0 | 0 | 0 | |
| 5.23 | Lateral Ditch Plan/Profile | | Sheet | 0 | 0 | 0 | 0 | |
| 5.24 | Lateral Ditch Cross Sections | | EA | 0 | 0 | | 0 | |
| 5.25 | Retention/Detention Ponds Detail Sheet | | Sheet | 0 | 0 | 0 | 0 | |
| 5.26 | Retention Pond Cross Sections | | EA | 0 | 0 | | 0 | |
| 5.27 | Cross-Section Pattern Sheet | | Sheet | 0 | 0 | 0 | 0 | |
| 5.28 | Roadway Soil Survey Sheet | | Sheet | 1 | 1 | 1 | 1 | from geotech firm |
| 5.29 | Cross Sections | | EA | 0 | 0 | | 0 | None, milling and resurfacing only |
| 5.30 | Temporary Traffic Control Plan Sheets | | Sheet | 6 | 4 | 6 | 24 | 2 phases x 3 plan sheets per phase = 6 sheets x 4 hr/sheet = 24 hours |
| 5.31 | Temporary Traffic Control Cross Section Sheets | | EA | 0 | 0 | | 0 | N/A |
| 5.32 | Temporary Traffic Control Detail Sheets | | Sheet | 3 | 4 | 3 | 12 | 1 General notes sheet with pay item table; 1 typical section sheet with phasing notes; 1 advanced signage sheet for approaches to Coconut Isle Dr along Las Olas Blvd; 3 sheets x 4 hr/sheet |
| 5.33 | Utility Adjustment Sheets | | Sheet | 2 | 4 | 2 | 8 | utility adjustments by others (ex. overhead facilities longitudinal to bridge) |
| 5.34 | Selective Clearing and Grubbing | | Sheet | 0 | 0 | 0 | 0 | |

| Task No. | Task | Scale | Units | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|---|
| 5.35 | Erosion Control Plan | | Sheet | 0 | 0 | 0 | 0 | |
| 5.36 | SWPPP | | Sheet | 0 | 0 | 0 | 0 | |
| 5.37 | Project Network Control Sheet | | Sheet | 1 | 1 | 1 | 1 | provided by surveyor |
| 5.38 | Environmental Detail Sheets | | LS | 0 | 0 | | 0 | |
| 5.39 | Utility Verification Sheet (SUE Data) | | Sheet | 0 | 0 | 0 | 0 | Assume none |
| **Roadway Plans Technical Subtotal** | | | | | | **19** | **74** | |
| 5.40 | Quality Assurance/Quality Control | | LS | % | 5% | | 4 | |
| 5.41 | Supervision | | LS | % | 5% | | 4 | |
| **5. Roadway Plans Total** | | | | | | **19** | **82** | |

Estimator:

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 6.1 | Determine Base Clearance Water Elevation | Per Basin | 0 | 0 | 0 | |
| 6.2 | Pond Siting Analysis and Report | Per Basin | 0 | 0 | 0 | |
| 6.3 | Design of Cross Drains | EA | 0 | 0 | 0 | |
| 6.4 | Design of Ditches | Per Ditch Mile | 0 | 0 | 0 | |
| 6.5 | Design of Stormwater Management Facility (Offsite or Infield Pond) | EA | 0 | 0 | 0 | |
| 6.6 | Design of Stormwater Management Facility (Roadside Ditch as Linear Pond) | Per Cell | 0 | 0 | 0 | |
| 6.7 | Design of Flood Plain Compensation | Per Flood-plain Basin | 0 | 0 | 0 | |
| 6.8 | Design of Storm Drains | EA | 0 | 0 | 0 | |
| 6.9 | Optional Culvert Material | LS | 0 | 0 | 0 | |
| 6.10 | French Drain Systems | Per Cell | 0 | 0 | 0 | |
| 6.11 | Drainage Wells | EA | 0 | 0 | 0 | |
| 6.12 | Drainage Design Documentation Report | LS | 1 | 0 | 0 | Not required, no additional impervious, maintain same drainage pattern |
| 6.13 | Bridge Hydraulic Report | EA | 0 | 0 | 0 | |
| 6.14 | Temporary Drainage Analysis | LS | 1 | 0 | 0 | |
| 6.15 | Cost Estimate | LS | 1 | 0 | 0 | |
| 6.16 | Technical Special Provisions | LS | 1 | 0 | 0 | |
| 6.17 | Other Drainage Analysis | LS | 1 | 0 | 0 | |

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| | | | **Drainage Analysis Technical Subtotal** | | **0** | |
| 6.18 | Field Reviews | LS | 1 | 0 | 0 | |
| 6.19 | Technical Meetings | LS | 1 | 0 | 0 | Meetings are listed below |
| 6.20 | Quality Assurance/Quality Control | LS | % | 5% | 0 | |
| 6.21 | Independent Peer Review | LS | % | 0% | 0 | |
| 6.22 | Supervision | LS | % | 5% | 0 | |
| | | | **Drainage Analysis Nontechnical Subtotal** | | **0** | |
| 6.23 | Coordination | LS | % | 2% | 0 | |
| | | | | **6. Drainage Analysis Total** | **0** | |

| **Technical Meetings** | | | | | |
|---|---|---|---|---|---|
| Base Clearance Water Elevation | EA | 0 | 0 | 0 | |
| Pond Siting | EA | 0 | 0 | 0 | |
| Agency | EA | 0 | 0 | 0 | N/A, no changes in drainage patterns |
| Local Governments (cities, counties) | EA | 0 | 0 | 0 | |
| FDOT Drainage | EA | 0 | 0 | 0 | |
| Other Meetings | EA | 0 | 0 | 0 | |
| **Subtotal Technical Meetings** | | | | **0** | |
| Progress Meetings (if required by FDOT) | EA | 0 | 0 | 0 | |
| Phase Review Meetings | EA | 0 | 0 | 0 | |
| **Total Meetings** | | | | **0** | |

Carries to 6.19

**Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3**

Estimator:

| Task No. | Task | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 7.1 | Kickoff Meeting | LS | 1 | 4 | 4 | Meeting with City after NTP re: anticipated utility coordination effort; 2 attendees x 1 meeting x (1 hr travel + 1 hr meeting) |
| 7.2 | Identify Existing UAO(s) | LS | 1 | 6 | 6 | Includes Research Time (office and field time) and travel time. Identify all utilities in the corridor; review prior utility permits, reports, existing plans and surveys provided. Identification shall include type, size, capacity (transmission or distribution for gas or power), Contact Sunshine 811 and perform a field visit. Design ticket indicates 6 UAOs, including Broward County OES (Water/Sewer), Comcast Cable, City of Ft. Lauderdale, FPL Distribution, TECO Peoples Gas, AT&T Florida (Dist) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7.3 | Make Utility Contacts | LS | 1 | 18 | 18 | 6 UAOs x 1 hour Per Utility Per Contact x 3 contacts = 18 hours ; (First Contact) Send letters and two sets of plans to each utility. Includes contact by phone for meeting coordination. Request type, size, location, easements, and cost for relocation if applicable. Send UAO claims for reimbursement to the City for an opinion on compensable property rights. Include the meeting schedule (if applicable) and the design schedule. Include a typical meeting agenda.....(Second Contact) At a minimum of 4 weeks prior to the meeting, the Consultant shall transmit two complete sets of Phase II plans and the utility conflict matrix (if applicable) to each UAO having facilities located within the project limits, and one set to the City.....(Third Contact) Identify agreements and assemble packages. Send agreements, letters, the Utility Conflict Matrix (when applicable), and two sets of plans to the UAOs including all component sets, one set for the City. Include the design schedule. |
| 7.4 | Exception Processing | LS | 1 | 0 | 0 | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7.5 | Preliminary Utility Meeting | LS | 1 | 10 | 10 | 2 hrs pre-meeting preparation time + 2 attendees x (1 hr travel time + 2 hr meeting duration) + 2 hr preparation of minutes. Schedule (time and place), notify participants, and conduct a preliminary utility meeting with all affected UAO(s) for the purpose of presenting the project, review the current design schedule, evaluate the utility information collected, provide follow-up information on compensable property rights, discuss the utility work by highway contractor option with each utility, and discuss any future design issues that may impact utilities. This is also an opportunity for the UAOs to present proposed facilities. Prepare accurate minutes and distribute a copy to all attendees. |
| 7.6 | Individual/Field Meetings | LS | 1 | 16 | 16 | 2 meetings with UAOs individually/in-field x [(2 attendees x (1 hr travel + 2 hr meeting)+ 2-hr followup] |
| 7.7 | Collect and Review Plans and Data from UAO(s) | LS | 1 | 12 | 12 | 6 UAOs x 2 hr/UAO = 12 hours; Review utility marked plans and data individually as they are received for content. Ensure information from the UAO (utility type, material and size) is included in the plans. Forward all requests for utility reimbursement and supporting documentation to the City |
| 7.8 | Subordination of Easements Coordination | LS | 1 | 0 | 0 | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7.9 | Utility Design Meeting | LS | 1 | 8 | 8 | 2 hours pre-meeting preparation time + 2 attendees x (1 hr travel time + 2 hr meeting duration) + 1 hr preparation of minutes. The Consultant shall schedule (time and place), notify participants, and conduct a Utility meeting with all affected UAOs. Discuss maintenance of traffic (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable property rights, discuss with each UAO the utility work by highway contractor option, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and maintenance of traffic with each UAO.<br>The intent of this meeting shall be to assist the UAOs in identifying and resolving conflicts between utilities and proposed construction prior to completion of the plans, including utility adjustment details. Also to work with the UAOs to recommend potential resolution between known utility conflicts with proposed construction plans as may be deemed practical by the UAO. Provide accurate minutes and distribute a copy to all attendees within 3 days. See Task 4.5.1 for utility conflict location identification and adjustments. |
| 7.10 | Review Utility Markups & Work Schedules, and Processing of Schedules & Agreements | LS | 1 | 12 | 12 | 2 hr per UAO document x 6 UAO x 1 doc per UAO (i.e. work schedule) = 12 hours; Review utility marked up plans and work schedules as they are received for content, and coordinate review with the design. Based on documentation received from the UAO, ensure resolution between UWS conflicts and the proposed construction plans/schedule. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7.11 | Utility Coordination/Followup | LS | 1 | 12 | 12 | 6 UAOs x 2 hr/UAO; This includes follow-up, interpreting plans, and assisting and the completion of the UAO's work schedule and agreements. Includes phone calls, face-to-face meetings, etc., to motivate and ensure the UAO(s) complete and return the required documents in accordance with the project schedule. Ensure the resolution of all known conflicts. This task can be applied to all phases of the project. The Consultant shall keep accurate minutes of all meetings and distribute a copy to all attendees. |
| 7.12 | Utility Constructability Review | LS | 1 | 0 | 0 | 6 UAOs x 1 hr each |
| 7.13 | Additional Utility Services | LS | 1 | 0 | 0 | N/A |
| 7.14 | Processing Utility Work by Highway Contractor (UWHC) | LS | 1 | 0 | 0 | Not anticipated |
| 7.15 | Contract Plans to UAO(s) | LS | 1 | 0 | 0 | N/A |
| 7.16 | Certification/Close-Out | LS | 1 | 4 | 4 | |
| 7.17 | Other Utilities | LS | 1 | 0 | 0 | N/A |
| **7. Utilities Total** | | | | | **102** | |

| Technical Meetings | | |
|---|---|---|
| Kickoff | EA | 1 |
| Preliminary Meeting | EA | 0 |
| Individual UAO Meetings | EA | 0 |
| Field Meetings | EA | 2 |
| Design Meeting | EA | 1 |
| Other Meetings | EA | 0 |
| **Total Technical Meetings** | | **4** |

Estimator:

| Task No. | Task | Units | Design and Production Staffhours | | | | Comments | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. of Units | Hours per Unit | No. of Sheets | Total | | | | | |
| | **General Drawings** | | | | | | | | | | |
| 9.1 | Key Sheet and Index of Drawings | Sheet | 1 | 8 | 1 | 8 | | | | | |
| 9.2 | Project Layout | Sheet | 1 | 8 | 1 | 8 | | | | | |
| 9.3 | General Notes and Bid Item Notes | Sheet | 1 | 8 | 1 | 8 | | | | | |
| 9.4 | Miscellaneous Common Details | Sheet | 1 | 0 | 1 | 0 | | | | | |
| 9.5 | Incorporate Report of Core Borings | Sheet | 1 | 0.5 | 1 | 0.5 | | | | | |
| 9.6 | Existing Bridge Plans | LS | 1 | 4 | | 4 | | | | | |
| 9.7 | Assemble Plan Summary Boxes and Quantities | LS | 0 | 0 | | 0 | | | | | |
| 9.8 | Cost Estimate | LS | 1 | 12 | | 12 | | | | | |
| 9.9 | Technical Special Provisions | LS | 1 | 0 | | 0 | | | | | |
| **Structures - Summary and Miscellaneous Tasks and Drawings Subtotal** | | | | | 5 | 40.5 | | | | | |
| **Task No.** | **Task** | **Total** | **Task 10** | **Task 11** | **Task 12** | **Task 13** | **Task 14** | **Task 15** | **Task 16** | **Task 17** | **Task 18** |
| 10-16 | Bridge 1 | 503 | 112 | 44 | 347 | | | | | | |
| 10-16 | Bridge 2 | 0 | | | | | | | | | |
| 10-16 | Bridge 3 | 0 | | | | | | | | | |
| 17 | Retaining Walls | 146 | | | | | | | | 146 | |
| 18 | Miscellaneous Structures | 0 | | | | | | | | | |
| **Structures Technical Subtotals** | | 649 | 112 | 44 | 347 | 0 | 0 | 0 | 0 | 146 | 0 |
| **Task No.** | **Task** | **Units** | **No. of Units** | **Hours per Unit** | **Total** | **Comments** | | | | | |
| 9.10 | Field Reviews | LS | 1 | 0 | 0 | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 9.11 | Technical Meetings | LS | 1 | 13 | 13 | Meetings are listed below |
| 9.12 | Quality Assurance/Quality Control | LS | % | 5% | 34 | |
| 9.13 | Independent Peer Review | LS | 1 | 0 | 0 | |
| 9.14 | Supervision | LS | % | 5% | 34 | |
| **Structures Nontechnical Subtotal** | | | | | 81 | |
| 9.15 | Coordination | LS | 1 | 2 | 2 | |
| **9. Structures - Summary and Miscellaneous Tasks and Drawings Nontechnical and Coordination Total** | | | | | 123.5 | |

| **Technical Meetings** | | | | |
|---|---|---|---|---|
| BDR Coordination/Review | EA | 1 | 1 | 1 |
| 90/100% Comment Review | EA | 3 | 2 | 6 |
| Aesthetics Coordination | EA | 3 | 2 | 6 |
| Regulatory Agency | EA | 0 | 0 | 0 |
| Local Governments (cities, counties) | EA | 0 | 0 | 0 |
| Utility Companies | EA | 0 | 0 | 0 |
| Other Meetings | EA | 0 | 0 | 0 |
| **Subtotal Technical Meetings** | | | | **13** |
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 0 | 0 | 0 |
| **Total Meetings** | | | | **13** |

Carries to 9.11

**Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3.**

Estimator:
Bridge Identifier (Number or Name):

| Task No. | Task | Units | No of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|
| | **General Requirement** | | | | | | |
| 10.1 | Bridge Geometry | LS | 1 | 16 | | 16 | |
| 10.2 | Ship Impact Data Collection | LS | 1 | 0 | | 0 | |
| 10.3 | Ship Impact Criteria | EA | 0 | 0 | | 0 | |
| | **Superstructure Alternatives** | | | | | | |
| 10.4 | Short Span Concrete Bridge | EA ALT | 1 | 8 | | 8 | |
| 10.5 | Medium Span Concrete Bridge | EA ALT | 0 | 0 | | 0 | |
| 10.6 | Long Span Concrete Bridge | EA ALT | 0 | 0 | | 0 | |
| 10.7 | Structural Steel Bridge | EA ALT | 0 | 0 | | 0 | |
| | **Foundation & Substructure Alternatives** | | | | | | |
| 10.8 | Pier/Bent | EA Type | 0 | 0 | | 0 | |
| 10.9 | Shallow Foundations / GRS Abutments | EA Type | 0 | 0 | | 0 | |
| 10.10 | Deep Foundations | EA Foundation Evaluated | 1 | 16 | | 16 | |
| | **Movable Span** | | | | | | |
| 10.11 | Data Collection and Design Criteria | LS | 1 | 0 | | 0 | |
| 10.12 | Movable Span Geometrics and Clearances | LS | 1 | 0 | | 0 | |
| 10.13 | Deck System Evaluation | LS | 1 | 0 | | 0 | |
| 10.14 | Framing Plan Development | LS | 1 | 0 | | 0 | |
| 10.15 | Main Girder Preliminary Design | LS | 1 | 0 | | 0 | |
| 10.16 | Conceptual Span Balance/Counterweight | LS | 1 | 0 | | 0 | |
| 10.17 | Support System Development | LS | 1 | 0 | | 0 | |
| 10.18 | Drive Power Calculations | LS | 1 | 0 | | 0 | |
| 10.19 | Drive System Development | LS | 1 | 0 | | 0 | |
| 10.20 | Power and Control Development | LS | 1 | 0 | | 0 | |
| 10.21 | Conceptual Pier Design | LS | 1 | 0 | | 0 | |

| Task No. | Task | Units | No of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|
| 10.22 | Foundation Analysis (FL PIER) | LS | 1 | 0 | | 0 | |
| 10.23 | Tender Visibility Study | LS | 1 | 0 | | 0 | |
| | **Other BDR Issues** | | | | | | |
| 10.24 | Aesthetics | LS | 1 | 8 | | 8 | |
| 10.25 | TCP/Staged Construction Requirements | LS | 1 | 16 | | 16 | |
| 10.26 | Constructibility Requirements | LS | 1 | 16 | | 16 | |
| 10.27 | Load Rating for damaged/widened structures | EA Unit | 1 | 0 | | 0 | |
| 10.28 | Quantity and Cost Estimates | EA ALT | 1 | 16 | | 16 | |
| 10.29 | Quantity and Cost Estimates - Movable Span | LS | 1 | 0 | | 0 | |
| 10.30 | Wall Type Justification | LS | 1 | 16 | | 16 | |
| | **Report Preparation** | | | | | | |
| 10.31 | Exhibits | EA SHT | 0 | 0 | | 0 | |
| 10.32 | Exhibits - Movable Span | EA SHT | 0 | 0 | | 0 | |
| 10.33 | Report Preparation | LS | 1 | 0 | | 0 | |
| 10.34 | Report Preparation - Movable Span | LS | 1 | 0 | | 0 | |
| 10.35 | BDR Submittal Package | LS | 1 | 0 | | 0 | |
| **10. Structures - Bridge Development Report Total** | | | | | | **112** | |
| | **When ONLY 30% plans are final deliverable, use Task Nos. as shown for applicable bridge types for project Activities 12 thru 16. Staffhours to be negotiated and scaled appropriately.** | | | | | | |

Estimator:
Bridge Identifier (Number or Name):

| Task No. | Task | Units | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|
| | **General Layout Design and Plans [Tasks under Activity 11 are for Prefabricated Temporary Bridges only]** | | | | | | |
| 11.1 | Overall Bridge Final Geometry | LS | 1 | 4 | | 4 | |
| 11.2 | General Plan and Elevation | Sheet | 1 | 16 | 1 | 16 | |
| 11.3 | Miscellaneous Details | Sheet | 1 | 16 | 1 | 16 | |
| | **End Bent Design and Plans** | | | | | | |
| 11.4 | End Bent Structural Design | EA Design | 0 | 8 | | 0 | |
| 11.5 | End Bent Details | Sheet | 1 | 8 | 1 | 8 | |
| | **Intermediate Bent Design and Plans** | | | | | | |
| 11.6 | Intermediate Bent Structural Design | EA Design | 0 | 0 | | 0 | |
| 11.7 | Intermediate Bent Details | Sheet | 0 | 0 | 0 | 0 | |
| | **Miscellaneous Substructure Design and Plans** | | | | | | |
| 11.8 | Foundation Layout | EA | 0 | 16 | | 0 | |
| | | | | **11. Temporary Bridge Total** | **3** | **44** | |

Estimator:
Bridge Identifier (Number or Name):

| Task No. | Task | Units | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|
| | **General Layout Design and Plans** | | | | | | |
| 12.1 | Overall Bridge Final Geometry | LS | 1 | 16 | | 16 | |
| 12.2 | Expansion/Contraction Analysis | EA Unit | 1 | 1 | | 1 | |
| 12.3 | General Plan and Elevation | Sheet | 1 | 30 | 1 | 30 | |
| 12.4 | Construction Staging | Sheet | 1 | 32 | 1 | 32 | Difficult MOT (1 lane with Flagman) |
| 12.5 | Approach Slab Plan and Details | Sheet | 1 | 8 | 1 | 8 | |
| 12.6 | Miscellaneous Details | Sheet | 1 | 12 | 1 | 12 | Utility attachment |
| | **End Bent Design and Plans** | | | | | | |
| 12.7 | End Bent Geometry | EA End Bent | 1 | 8 | | 8 | |
| 12.8 | End Bent Structural Design | EA Design | 1 | 24 | | 24 | |
| 12.9 | End Bent Plan and Elevation | Sheet | 2 | 16 | 2 | 32 | |
| 12.10 | End Bent Details | Sheet | 1 | 16 | 1 | 16 | |
| | **Intermediate Bent Design and Plans** | | | | | | |
| 12.11 | Bent Geometry | EA Bent | 0 | 0 | | 0 | |
| 12.12 | Bent Stability Analysis | EA Analysis | 0 | 0 | | 0 | |
| 12.13 | Bent Structural Design | EA Design | 0 | 0 | | 0 | |
| 12.14 | Bent Plan and Elevation | Sheet | 0 | 0 | 0 | 0 | |
| 12.15 | Bent Details | Sheet | 0 | 0 | 0 | 0 | |
| | **Miscellaneous Substructure Design and Plans** | | | | | | |
| 12.16 | Foundation Layout | Sheet | 1 | 24 | 1 | 24 | |
| | **Miscellaneous Superstructure Design and Plans** | | | | | | |
| 12.17 | Finish Grade Elevation Calculation | LS | 1 | 16 | | 16 | |
| 12.18 | Finish Grade Elevations | Sheet | 1 | 12 | 1 | 12 | |

| Task No. | Task | Units | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|
| | **Cast-in-Place Slab Bridges** | | | | | | |
| 12.19 | Bridge Deck Design | EA Unit | 0 | 0 | | 0 | |
| 12.20 | Superstructure Plan | Sheet | 0 | 0 | 0 | 0 | |
| 12.21 | | Sheet | 0 | 0 | 0 | 0 | |
| | **Prestressed Slab Unit Bridges** | | | | | | |
| 12.22 | Prestressed Slab Unit Design | EA Design | 1 | 16 | | 16 | |
| 12.23 | Prestressed Slab Unit Layout | Sheet | 1 | 16 | 1 | 16 | |
| 12.24 | Prestressed Slab Unit Details and Schedule | Sheet | 1 | 24 | 1 | 24 | |
| 12.25 | Deck Topping Reinforcing Layout | Sheet | 1 | 16 | 1 | 16 | |
| 12.26 | Superstructure Sections and Details | Sheet | 1 | 16 | 1 | 16 | |
| | **Reinforcing Bar List** | | | | | | |
| 12.27 | Preparation of Reinforcing Bar List | Sheet | 1 | 12 | 1 | 12 | |
| | | | | | | | |
| 12.28 | Load Ratings | EA Unit | 1 | 16 | | 16 | |
| | **12. Structures - Short Span Concrete Bridge Total** | | | | **14** | **347** | |

Estimator:

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|
| | **General Requirements** | | | | | | |
| 17.1 | Key Sheet | Sheet | 1 | 4 | 1 | 4 | |
| 17.2 | Horizontal Wall Geometry | Per Wall | 2 | 16 | | 32 | |
| | **Permanent Proprietary Walls** | | | | | | |
| 17.3 | Vertical Wall Geometry | Per Wall | 0 | 0 | | 0 | |
| 17.4 | Semi-Standard Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 17.5 | Wall Plan and Elevations (Control Drawings) | Sheet | 0 | 0 | 0 | 0 | |
| 17.6 | Details | Sheet | 0 | 0 | 0 | 0 | |
| | **Temporary Proprietary Walls** | | | | | | |
| 17.7 | Vertical Wall Geometry | Per Wall | 0 | 0 | | 0 | |
| 17.8 | Semi-Standard Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 17.9 | Wall Plan and Elevations (Control Drawings) | Sheet | 0 | 0 | 0 | 0 | |
| 17.10 | Details | Sheet | 0 | 0 | 0 | 0 | |
| | **Cast-in-Place Retaining Walls** | | | | | | |
| 17.11 | Design | EA Design | 0 | 0 | | 0 | |
| 17.12 | Vertical Wall Geometry | EA Wall | 0 | 0 | | 0 | |
| 17.13 | General Notes | Sheet | 0 | 0 | 0 | 0 | |
| 17.14 | Wall Plan and Elevations (Control Drawings) | Sheet | 0 | 0 | 0 | 0 | |
| 17.15 | Sections and Details | Sheet | 0 | 0 | 0 | 0 | |
| 17.16 | Reinforcing Bar List | Sheet | 0 | 0 | 0 | 0 | |

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|
| | **Other Retaining Walls and Bulkheads** | | | | | | |
| 17.17 | Design | EA Design | 1 | 32 | | 32 | |
| 17.18 | Vertical Wall Geometry | EA Wall | 2 | 16 | | 32 | |
| 17.19 | General Notes, Tables and Misc. Details | Sheet | 1 | 12 | 1 | 12 | |
| 17.20 | Wall Plan and Elevations | Sheet | 2 | 12 | 2 | 24 | |
| 17.21 | Details | Sheet | 1 | 10 | 1 | 10 | |
| | **17. Structures - Retaining Walls Total** | | | | **5** | **146** | |

Estimator:

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|---|---|---|---|---|---|---|
| 19.1 | Traffic Data Analysis | LS | 1 | 0 | 0 | N/A |
| 19.2 | No Passing Zone Study | LS | 1 | 0 | 0 | N/A |
| 19.3 | Reference and Master Design File | LS | 1 | 0 | 0 | No S&PM design, include notes only in plans to match existing striping |
| 19.4 | Multi-Post Sign Support Calculations | EA | 1 | 0 | 0 | N/A |
| 19.5 | Sign Panel Design Analysis | EA | 1 | 0 | 0 | N/A |
| 19.6 | Sign Lighting/Electrical Calculations | EA | 1 | 0 | 0 | N/A |
| 19.7 | Quantities | LS | 1 | 2 | 2 | |
| 19.8 | Cost Estimate | LS | 1 | 0 | 0 | |
| 19.9 | Technical Special Provisions | LS | 1 | 0 | 0 | |
| 19.10 | Other Signing and Pavement Marking | LS | 1 | 0 | 0 | |
| **Signing and Pavement Marking Analysis Technical Subtotal** | | | | | **2** | |
| 19.11 | Field Reviews | LS | 1 | 0 | 0 | Include in roadway reviews |
| 19.12 | Technical Meetings | LS | 1 | 0 | 0 | Meetings are listed below |
| 19.13 | Quality Assurance/Quality Control | LS | % | 5% | 0 | |
| 19.14 | Independent Peer Review | LS | % | 0% | 0 | |
| 19.15 | Supervision | LS | % | 5% | 0 | |
| **Signing and Pavement Marking Analysis Nontechnical Subtotal** | | | | | **0** | |
| 19.16 | Coordination | LS | % | 2% | 0 | |
| **19. Signing and Pavement Marking Analysis Total** | | | | | **2** | |

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|---|---|---|---|---|---|---|
| **Technical Meetings** | | | | | | |
| | Sign Panel Design | EA | 0 | 0 | 0 | |
| | Queue Length Analysis | EA | 0 | 0 | 0 | |
| | Local Governments (cities, counties) | EA | 0 | 0 | 0 | |
| | Other Meetings | EA | 0 | 0 | 0 | |
| | **Subtotal Technical Meetings** | | | | **0** | |
| | Progress Meetings | EA | 0 | 0 | 0 | |
| | Phase Review Meetings | EA | 0 | 0 | 0 | |
| | **Total Meetings** | | | | **0** | |

Carries to 19.12

**Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3**

Estimator:

| Task No. | Task | Scale | Units | No of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|---|---|---|---|---|---|---|---|
| 20.1 | Key Sheet | | Sheet | 0 | 0 | 0 | 0 | No key sheet required, no S&PM plan component |
| 20.2 | Summary of Pay Items Including TRNS•Port Input | | LS | 1 | 0 | | 0 | |
| 20.3 | Tabulation of Quantities | | Sheet | 0 | 0 | 0 | 0 | |
| 20.4 | General Notes/Pay Item Notes | | Sheet | 1 | 2 | 1 | 2 | For providing notes to structural design for inclusion in bridge general notes |
| 20.5 | Project Layout | | Sheet | 0 | 0 | 0 | 0 | |
| 20.6 | Plan Sheet | | Sheet | 1 | 4 | 1 | 4 | For Providing layout for inclusion on General Plan and Elevation |
| 20.7 | Typical Details | | EA | 0 | 0 | | 0 | |
| 20.8 | Guide Sign Worksheet(s) | | EA | 0 | 0 | | 0 | |
| 20.9 | Traffic Monitoring Site | | EA | 0 | 0 | | 0 | |
| 20.10 | Cross Sections | | EA | 0 | 0 | | 0 | |
| 20.11 | Special Service Point Details | | EA | 0 | 0 | | 0 | |
| 20.12 | Special Details | | LS | 1 | 0 | | 0 | |
| 20.13 | Interim Standards | | LS | 1 | 0 | | 0 | |
| **Signing and Pavement Marking Plans Technical Subtotal** | | | | | | **2** | **6** | |
| 20.14 | Quality Assurance/Quality Control | | LS | % | 5% | | 0 | |
| 20.15 | Supervision | | LS | % | 5% | | 0 | |
| **20. Signing and Pavement Marking Plans Total** | | | | | | **2** | **6** | |

# Exhibit 4 – Sub-Consultant Fee Schedule

May 25, 2015 (Revised)

Mr. Ron Sanchez, PE
Hardesty & Hanover
1000 Sawgrass Corporate Parkway, Suite 544
Sunrise, FL 33323

Re: Coconut Isle Bridge Fee Proposal
Environmental Permitting Services
City of Fort Lauderdale

Dear Mr. Sanchez:

Cyriacks Environmental Consulting Services, Inc. (CECOS) is pleased to submit this proposal to provide environmental permitting services for the subject project. Our project understanding, scope of work, fee and schedule are provided below.

## Understanding of Project/Scope

The project involves replacement of the low level Coconut Isle Bridge in Fort Lauderdale with a similar structure. It is assumed that this structure is not considered eligible for listing on the National Register of Historic Places. The structure may be slightly wider to accommodate sidewalks and the seawalls will be replaced. A temporary (acrow) bridge is being considered. CECOS will be responsible for assisting in the environmental permitting effort for this bridge replacement project. Our scope of work is detailed below:

### 1.0 Data Collection & Benthic Survey

This task involves conducting basic data collection activities including literature review for listed species, permit file review, aerial and GIS map review. A field review of the project site will be conducted including a marine benthic survey. The marine benthic survey is required due to the potential for seagrass to be present including the federally listed species *Halophia johnsonii*. Utilizing SCUBA, we will survey the area under the bridge and 50 feet to either side. Seagrass will be delineated using a sub-meter GPS unit and other benthic resources will be noted if present (I.e., oysters). A seagrass map will be prepared on an aerial at sufficient scale for permitting. The GIS file will be provided to H&H for preparation of the permit sketches and impact calculations.

## 2.0 Prepare Permit Application

CECOS, in association with H&H, will prepare and track the required environmental permit applications. CECOS will prepare the application packages with input from H&H. Engineering information, including permit sketches and drainage detail will be prepared and provided by H&H. The following permits are anticipated:

| Agency | Permit | Purpose |
|---|---|---|
| SFWMD | Environmental Resource Permit/ | Required for the bridge replacement (Stormwater management system & impact to Waters of the State) |
| USACE | Nationwide permit | Required for the bridge replacement (impact to Waters of the US) |
| USCG | Advanced Approval | Required for the bridge replacement in navigable/tidal waters |
| BC EPGMD | Wetland License | Required for the bridge replacement (impact to resources of Broward County) |
| BC EPGMD | Stormwater License | Required for the bridge replacement (Stormwater management system) |

South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP)

This task involves preparing the SWERP application. CECOS will prepare the permit package including application forms, support documentation and maps. H&H will prepare permit sketches (CECOS will provide GIS files delineating benthic resources) and provide all engineering information. CECOS will package and submit application package via ePermitting. In association with H&H, we will respond to agency Request for Additional Information (RAI) (one RAI). CECOS will coordinate with agency reviewer(s) and track status of application.

No mitigation is contemplated as being required. If agencies request mitigation then this is considered optional services. Based on the location of the bridge, it is anticipated that the submerged lands are owned by the City of Fort Lauderdale, as such a Sovereign Submerged Lands (SSL) Easement from the State is not required. CECOS will coordinate with the City to obtain ownership information of the submerged lands. This fee does not include preparing sketches and documentation to obtain a Sovereign Submerged Lands (SSL) easement.

US Army Corps of Engineers (USACE) Section 404 Dredge-Fill Permit

It is anticipated that this project will qualify for a Nationwide Permit. We will submit the SWERP application and the USACE Environmental Impact Worksheets. We will prepare the USACE *Checklist of Information Needed to Complete Section 7 Consultations* and required EFH documentation. The permit application package will be submitted to the USACE Regulatory Office. CECOS will coordinate with USACE track status of application.

No mitigation is contemplated as being required. If agencies request mitigation then this is considered optional services. If Section 7 consultation with NMFS is required due to potential impacts to Johnson's seagrass or other federally listed species (swimming sea turtles, small toothed sawfish), optional services will be required to the address the additional ESA. If impacts to EFH occur optional services will be required to address impacts and develop mitigation plan.

US Coast Guard (USCG) Bridge Permit

It is anticipated that project will not require a bridge permit. In order to obtain this determination (Advanced Approval), CECOS will prepare a Bridge Project Questionnaire and submit to the USCG. This task includes the effort necessary to complete this package and to coordinate with the USCG. This task does not include preparing a Bridge application.

Broward County Environmental Protection & Growth Management Department (BC EPGMD) Wetland License

We will prepare the permit application along with all required support document in accordance with Broward County regulations. CECOS will prepare permit application, in conjunction with H&H, respond to one RAI, coordinate with permit reviewer and track permit status. H&H will prepare permit sketches, design plans and calculations. Additional RAIs will be optional services. No mitigation is contemplated as being required. If agencies request mitigation then this is considered Additional Services.

BC EPGMD Stormwater License

We will prepare the permit application along with all required support document in accordance with Broward County regulations. CECOS will prepare permit application, in conjunction with H&H, respond to one RAI, coordinate with permit reviewer and track permit status. H&H will prepare design plans, drainage and calculations. Additional RAIs will be Additional SServices.

## 3.0 Agency Coordination/Meetings

Pre-Application Meetings

This task includes scheduling, preparation and attendance at the pre-application meetings with the permitting agencies. This task also includes preparing meeting minutes from the pre-application meeting. Three pre-application meetings are proposed and will include: Meeting 1 - SFWMD, USACE and NMFS; Meeting 2 – BC EPGMD Wetlands and Stormwater Divisions; Meeting 3 – USCG.

No follow up meetings are anticipated with the agencies to discuss RAI responses. Additional meetings would be considered Additional services.

## 4.0 Project Coordination, Meetings, Scheduling

Includes attendance at one Team meeting and project coordination (up to 12 hours) including teleconferences to discuss permit status; schedule updates, internal coordination, invoicing, file management and organization, progress reports and general project management activities.

## Estimated Fee Summary

The lump sum (LS) fee to complete the identified scope of work is $25,712. This fee includes all labor and expenses (except permit fees). Permit fees are to be paid by others.

Additional Services

If not identified in our above scope of work additional services would be required for the following services but not limited to the services listed below. Many of these activities are dependent on the results of the marine benthic survey and the results of agency coordination.

- Development of a wetland mitigation plan. If wetlands (seagrass, mangroves, etc) are determined to be present and proposed to be impacted this will be considered a change to existing conditions and will require additional services.
- Conducting UMAM analysis (or similar) for impacts to seagrass and mitigation.
- Preparation of a State Sovereign Submerged Land (SSL) Easement.
- Detailed Barge Plan.
- Section 7 consultation for impact to Johnson's seagrass.
- Conduct a Cultural resources survey.
- Prepare ESBA & conduct formal Section 7 consultation with NMFS for impacts to Johnson's seagrass, swimming sea turtles, small toothed sawfish or other federally listed species.
- Prepare EFH & conduct consultation with NMFS.
- Additional meetings with agencies
- Prepare a USCG permit.
- Prepare a Dewatering permit.
- Permit Close-out services.
- Post Design services.

CECOS can provide these services for an additional fee. Please note these services are not included in the above LS fee and would be additional services. These additional services would be negotiated at the time requested.

We are very excited about the opportunity to work with you on this project. Please contact me if you have any questions or need additional information.

Very truly yours,
Cyriacks Environmental Consulting Services, Inc.

Wendy Cyriacks
Wendy Cyriacks

Revised March 23, 2015
March 4, 2015

Hardesty & Hanover
1000 Sawgrass Corporate Parkway, Suite 544
Sunrise, Florida 33323

Attn: Mr. Ron Sanchez, P.E., Project Manager

Re: **Proposal for Geotechnical Services**
**South Ocean Drive Bridge Replacement**
**Ft. Lauderdale, Florida**
**TSF Proposal No.: 1503-099**

Dear Ron:

As requested, **Tierra South Florida, Inc. (TSF)** is pleased to submit this proposal for the above-referenced project. The proposal is based on information provided by Hardesty & Hanover.

It is our understanding that the existing 40 foot span bridge will be replaced with a new bridge along with associated roadway approach improvements.

This proposal includes an outline of our proposed scope of work, an estimate of the total fees, and our anticipated schedule for completion of the work.

## PROPOSED SCOPE OF WORK

All work performed by TSF will be in general accordance with Broward County and FDOT standards. As requested, based on our understanding of the project, we propose perform the following:

**Bridge Replacement:**

- A total of 2 Standard Penetration Test (SPT) borings to a depth of 100 feet below existing grade. Perform SPT sampling at 2.5 feet interval (as required by FDOT guidelines). Lane closure will be required to perform the borings.

Boring locations will be approximately located in the field by our personnel by using hand held GPS and measuring distances with a tape from known reference points. We recommend as-drilled boring locations be survey located by others.

Prior to drilling at the project site, TSF will notify the local utility companies and request that underground utilities be marked. Our experience, however, is that the utility companies will not mark privately owned utilities. Our proposal assumes that private utility lines will be located in the field by others prior to mobilization of the drill rig.

Upon completion of the field exploration, laboratory testing will be performed on selected samples. The study will be summarized in accordance with the FDOT's Soils and Foundations handbook, 2014.

A geotechnical engineer will evaluate the results of all drilling and laboratory testing. A report will be issued that contains the exploration data, a discussion of the site and subsurface conditions, recommendations for foundation, and a discussion of some construction considerations.

## ESTIMATED FEES

It is proposed that the fee for the performance of the services outlined above be determined on a unit price basis in accordance with the attached Fee Schedule, and that the work be performed pursuant to TSF General Conditions enclosed herewith and incorporated into this proposal.

Our estimate covers the work needed to present our findings and recommendations in a formal report. Not included are reviews of drawings, preparation of construction specifications, special conferences and any other work requested after submittal of our report.

Boring, sampling, and testing requirements are a function of the subsurface conditions encountered. Therefore, the estimated fee previously indicated is approximate, and compensation for the exploration will be based on the actual work and tests performed. We will endeavor to keep the exploration cost at a minimum consisting with good engineering practice.

## SCHEDULE AND AUTHORIZATION

TSF will proceed with the work after receipt of a signed copy of this proposal. With our present schedule, we can commence work within several days of project approval (weather permitting and permit approval). The fieldwork will take about 3 to 4 days to complete. The written report can be submitted about 4 weeks after completion of the field exploration, depending on the extent of the laboratory-testing program. Verbal preliminary recommendations can be made to appropriate parties prior to submittal of the written report.

We at TSF appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you should have any questions concerning our proposal, please contact our office.

Respectfully submitted,

***TIERRA SOUTH FLORIDA, INC.***

Raj Krishnasamy, P.E.
President/Principal Engineer

Attachments: 1. Fee Estimate for Bridge Replacement

| **AUTHORIZED BY:** | **INVOICE TO:** |
|---|---|
| **Name:** | **Firm:** |
| **Title:** | **Name:** |
| **Date:** | **Address:** |

**Tierra South Florida's General Conditions**

1. **SCOPE OF WORK**: Work means the specific geotechnical, analytical, testing or other service to be performed by Tierra South Florida, Inc. (TSF) as set forth in TSF's proposal, Client's acceptance of the scope of work and these General Conditions. Additional work ordered by Client shall also be subject to these General Conditions. "Client" refers to the person or business entity ordering the work to be done by TSF. Client shall communicate these General Conditions to each and every third party to whom Client transmits any part of TSF's work. TSF shall have no duty or obligation to any third party greater than that set forth in TSF's proposal, Client's acceptance of TSF's proposal and these General Conditions. The ordering of work from TSF, or the reliance on any of TSF's work, shall represent acceptance of the terms of TSF's proposal and these General Conditions, regardless of the terms of any subsequently issued document.

2. **RIGHT-OF-ENTRY -**The client will provide right-of-entry for TSF and all necessary equipment in order to complete the work. While TSF will take all reasonable precautions to minimize any damage to the property, it is understood by Client that in the normal course of work some damage may occur; the correction of which is not part of this agreement.

3. **DAMAGE TO EXISTING MAN-MADE OBJECTS -**The Client, will provide the location of all underground utilities or obstructions to TSF who, in the prosecution of their work, will take all reasonable precautions to avoid damage or injury to any such subterranean structure or utility. The Owner agrees to hold TSF harmless for any damages to subterranean structures which are not called to TSF' attention and correctly shown on the plans furnished and will reimburse TSF for any expenses in connection with any claims or suits including reasonable attorney fees at the trial and appellate levels.

4. **IN-PLACE MATERIALS TESTING -**TSF will not be responsible for repair or damage to portions of structures designated for in-place materials testing. Repairs can be made for aesthetic reasons if requested in advance of the work to be performed. The cost for labor and materials would be charged.

5. **SAMPLE RETENTION -**TSF will retain all soil and rock samples obtained for geotechnical explorations for 30 days. Samples subjected to Construction Materials and Laboratory testing are disposed of subsequent to testing. Further storage or transfer of samples can be made at Client's expense upon written authorization**.**

6. **DEFINITION OF RESPONSIBILITY (OBSERVATION SERVICES) -** The presence of our field representative will be for the purpose of providing observation and field testing. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. The contractor for this project should be so advised.

   6.1. The Contractor should also be informed that neither the presence of our field representative or the observation and testing by our firm shall excuse him in any way for defects discovered in his work. It is understood that TSF will not be responsible for the Contractor's job or site safety on his project. That will be the sole responsibility of the contractor.

7. **STANDARD OF CARE -**Service performed by TSF under this Agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty, expressed or implied, is made.

   7.1. Client recognizes that subsurface conditions may vary from those encountered at the location where borings, surveys or explorations are made by TSF and that the data, interpretations and recommendations of TSF are based solely on the information available to it. TSF shall not be responsible for the interpretation by others of information developed.

8. **ORAL AGREEMENTS -**No oral agreement, guarantee, promise, representation or warranty shall be binding.

9. **OWNERSHIP OF DOCUMENTS -**All reports, boring logs, field data and notes, laboratory test data, calculations, estimates and other documents prepared by TSF, as instruments of service, shall remain the property of TSF until final payment is received and a letter of copyright transfer been executed.

10. **BASIS OF PAYMENT -**Payment is due within 30 days of date of invoice. Payments not made when due shall bear interest at eighteen (18) percent annum or at the maximum rate allowed by law from the date of the invoice until same is paid.

    10.1. If the Client fails to make any payment due to TSF for service and/or expenses within 60 days of date of invoice, TSF may, after giving seven days' written notice to Client, suspend services until all outstanding amounts have been paid to TSF in full. Further, TSF may, in addition to withholding services, or singularly, withhold reports, plans and other documents not paid in full by the Client. In the event that final payment for completed work is not made, TSF shall request that all copyrighted documents which were submitted to client be returned and all information used in project plans be removed from project documents.

    10.2. In the event it is necessary to take legal action to effect collection, whether or not litigation is commenced, the Client agrees to reimburse TSF for expenses in connection with any claims or suits, including reasonable attorney's fees, including but not limited to the trial and appellate levels.

    10.3. This contract shall be governed by the laws of the State of Florida.

11. **CONSTRUCTION REVIEW -** TSF cannot accept responsibility for any design work unless the work includes services for construction review to determine whether or not the work performed is in substantial compliance with TSF's conclusions and recommendations.

12. **INDEMNIFICATION -**TSF agrees to hold harmless and indemnify Client from and against liability arising out of TSF's negligent performance of the work. Client agrees to indemnify and hold TSF harmless from all liability including all costs, attorney's fees and expenses of defense for any claims by any other person or corporation which may arise out of the performance or breach of this contract for which TSF was not solely negligent.

13. **LIMITATION OF LIABILITY -**The Client/Owner agrees to limit TSF' liability for negligent professional acts, errors or omissions, such that the total aggregate liability of TSF shall not exceed $50,000 or the total fee for the services rendered on this project; whichever is greater. The Owner further agrees to require the contractor and his subcontractors a similar limitation of liability suffered by the contractor or the subcontractors arising from TSF' negligent professional acts, errors or omissions.

    13.1. If Client prefers to have higher limits on professional liability, TSF agrees to increase the limits up to a maximum of $1,000,000 upon Client's written request at the time of accepting our proposal provided that Client agrees to pay an additional consideration of 5 percent of our total fee. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional professional liability insurance.

14. **INSURANCE -**TSF represents and warrants that it and its agents, staff and consultants employed by it are protected by Worker's Compensation insurance and Employer's Liability Insurance in conformance with applicable state laws. TSF has such coverage under public liability and property damage insurance policies that TSF deems to be adequate. A Certificate of Insurance can be supplied evidencing such coverage upon request.

    14.1. Within the limits and conditions of such insurance, TSF agrees to indemnify and save client harmless from and against any loss, damage or liability arising from any negligent acts by TSF, its agents, staff and consultants employed by it. TSF shall not be responsible for any loss, damage or liability beyond the amounts, limits and considerations of such insurance. TSF shall not be responsible for any loss, damage or liability arising from any acts by clients, its agents, staff and other consultants employed by it.

    14.2. Cost of the above coverage is included in our quoted fees. If additional coverage or increased limits of liability are required, TSF will endeavor to obtain the requested insurance and charge separately for costs associated with additional coverage or increased limits.

15. **TERMINATION -**This agreement may be terminated by either party upon seven days written notice in the event of substantial failure by the other party to perform in accordance with the terms thereof. Such termination shall not be effective if the substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, TSF shall be paid for services performed to the termination notice date plus reasonable termination expenses.

    15.1. In the event of termination or suspension for more than three months, prior to completion of all reports contemplated by this Agreement, TSF may complete a report on the services performed to the date of notice of termination or suspension. The expenses of termination or suspension shall include all direct costs for TSF in completing such analyses, records and reports.

16. **CLIENT'S OBLIGATION TO NOTIFY TSF -** Client represents and warrants that it has advised TSF of any known or suspected hazardous materials or conditions, utility lines and pollutants at any site at which TSF is to do work hereunder, and unless TSF has assumed in writing the responsibility of locating subsurface objects, structures, lines or conduits, Client agrees to defend, indemnify and save TSF harmless from all claims, suits, losses, costs and expenses, including reasonable attorney's fees as a result of personal injury, death or property damage occurring with respect to TSF's performance of its work and resulting to or caused by contact with subsurface or latent objects, structures, lines or conduits where the actual or potential presence and location thereof were not revealed to TSF by Client.

17. **HAZARDOUS MATERIALS -**This agreement shall not be interpreted as requiring TSF to assume the status of an owner, operator, generator, storer, transporter, treater or disposal facility as those terms appear within RCRA or within any Federal or State statute or regulation governing the generation, transportation, treatment, storage and disposal of pollutants.

Initial _____

| Discipline | Rate/Hr /unit | Quantity | Total |
|---|---|---|---|
| ***Geotechnical Engineering/Inspections*** | | | |
| Project Manager | $165.00 | 8 | $1,320.00 |
| Principal Engineer | $140.00 | 15 | $2,100.00 |
| Senior Engineer | $100.00 | 25 | $2,500.00 |
| Project Engineer | $85.00 | 30 | $2,550.00 |
| Senior Technician | $65.00 | 24 | $1,560.00 |
| CADD | $55.00 | 8 | $440.00 |
| Asphalt Plant Inspection | $60.00 | | $0.00 |
| Asphalt Field Inspection | $60.00 | | $0.00 |
| Technician - Soil Densities | $50.00 | | $0.00 |
| Technican - Concrete Testing | $50.00 | | $0.00 |
| Technican - Pile Driving Inspection | $65.00 | | $0.00 |
| Technican - Pre-stress Yard Inspection | $65.00 | | $0.00 |
| | | | |
| ***Field Investigation*** | | | |
| Mobilization of Men and Equipment | | | |
| Truck-Mounted Equipment | $350.00 | 1 | $350.00 |
| Specialized ATV/Mudbug | $720.00 | | $0.00 |
| Support Vehicle | $150.00 | 1 | $150.00 |
| Barge-Mounted Equipment | $8,500.00 | | $0.00 |
| Crane Rental | $250.00 | | $0.00 |
| Support Boat | $500.00 | | $0.00 |
| Standard Penetration Test Borings | | | |
| (By Truck-Mounted Equipment) | | | |
| Land: 0 - 50 ft depth | $12.00 | 100 | $1,200.00 |
| 50 - 100 ft depth | $14.00 | 100 | $1,400.00 |
| Grout-Seal Boreholes | | | |
| (By Truck-Mounted Equipment) | | | |
| Land: 0 - 50 ft depth | $4.50 | 100 | $450.00 |
| 50 - 100 ft depth | $5.50 | 100 | $550.00 |
| Casing Allowance | | | |
| (By Truck-Mounted Equipment) | | | |
| Land: 0 - 50 ft depth | $8.00 | 100 | $800.00 |
| 50 - 100 ft depth | $10.00 | 100 | $1,000.00 |
| Standard Penetration Test Borings | | | |
| (By Barge-Mounted Equipment) | | | |
| Water: 0 - 50 ft depth | $20.00 | | $0.00 |
| 50 - 100 ft depth | $27.00 | | $0.00 |
| Grout-Seal Boreholes | | | |
| (By Barge-Mounted Equipment) | | | |
| Water: 0 - 50 ft depth | $9.00 | | $0.00 |
| 50 - 100 ft depth | $11.00 | | $0.00 |
| Casing Allowance | | | |
| (By Barge-Mounted Equipment) | | | |
| Water: 0 - 50 ft depth | $14.00 | | $0.00 |
| 50 - 100 ft depth | $17.00 | | $0.00 |
| Rock Coring (Truck) | $65.00 | | $0.00 |
| Rock Coring (Barge) | $80.00 | | $0.00 |
| Field Permeability Tests | $300.00 | | $0.00 |
| Pavement Cores, Asphalt | $95.00 | | $0.00 |
| Pavement Cores, Concrete | $125.00 | | $0.00 |
| MOT | $1,200.00 | 1 | $1,200.00 |
| | | | |
| ***Laboratory Testing*** | | | |
| Natural Moisture Content Tests | $10.00 | 4 | $40.00 |
| Grain-Size Analysis - Full Gradation | $65.00 | 4 | $260.00 |
| Grain-Size Analysis - Single Sieve | $35.00 | | $0.00 |
| Organic Content Tests | $35.00 | | $0.00 |
| Atterberg Limit Tests | $75.00 | | $0.00 |
| Field CBR | $600.00 | | $0.00 |
| Lab CBR | $300.00 | | $0.00 |
| LBR | $275.00 | | $0.00 |
| Rock compression test | $125.00 | | $0.00 |
| Split tension test | $150.00 | | $0.00 |
| Grain-Size with Hydrometer | $115.00 | | $0.00 |
| Proctor Test a) Modified | $100.00 | | $0.00 |
| b) Standard | $100.00 | | $0.00 |
| Bitumen Extraction | $150.00 | | $0.00 |
| Bitumen Gradation | $150.00 | | $0.00 |
| | | **TOTAL** | $17,870.00 |
| | | | |