



## INDIAN CREEK DRIVE – SEA WALL SCOPE OF SERVICES

Contract Number: 16-29456  
Project Description: Indian Creek Drive – Sea Wall  
Project Location: Indian Creek Drive from 26 Street to 41 Street  
Project Manager: Giancarlo Pena, P.E.  
Ribbeck Project Manager: Maher Maliki, P.E.

### **Background:**

This project consists of providing sea wall plans, calculation, inspections, utility coordination and management for a new seawall along Indian Creek Drive from 26 Street to 41 Street.

### **Scope of Work:**

#### Miscellaneous Structures

The structure scope is defined under a subconsultant's scope of services. Please refer to Chrome Engineering's scope of services.

#### Utilities

The Utility scope will include the following elements:

- Contact all Utility Owners
- Send plans for markups/request as-builts
- Prepare Utility File
- Coordinate any required relocations

#### Survey/SUE

Not included as part of this contract

#### Management

Provide project management to the City for the life of the project (12 months):

- Oversee utility coordination
- Coordinate with Structural Engineer certain design elements (utilities)
- Attend 12 meetings with City of Miami Beach
- Attend site visits where needed.

### **Deliverables:**

The utility file will be provided to the structural engineer after coordinating with utility owners.



**Schedule:**

**The expected schedule of the project is 12 month long. At this time the schedule is not defined.**

Services may begin immediately after this change order is executed.

**Project Information Sheet**

|                                                                |                                         |                                                                        |       |
|----------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------|-------|
| Financial Project Identification Number: <u>439228-2-58-01</u> |                                         | Federal Aid Project Identification Number: <u>54321</u>                |       |
| Name of Prime / Subconsultant: <u>Ribbeck Engineering Inc.</u> |                                         | County: <u>enter name of county</u>                                    |       |
| Project Description: <u>Indian Creek Drive Sea Wall</u>        |                                         |                                                                        |       |
| Begin Milepost: _____                                          | End Milepost: _____                     | Project Length: _____                                                  | Miles |
| Number of Lanes: _____                                         | Typical Section: _____                  | (Urban / Rural / Int.) Lane Configuration: _____ (Divided / Undivided) |       |
| Project Type: _____ (Minor / Major)                            | Access Management Classification: _____ | Roadway Classification: _____ (NHS/FIHS/Off Sys.)                      |       |
| CAP Level: _____                                               | TTCP Level: _____                       | Survey Level: _____                                                    |       |
| Design Variations: 1. _____                                    |                                         | Design Exceptions: 1. _____                                            |       |
| 2. _____                                                       |                                         | 2. _____                                                               |       |
| 3. _____                                                       |                                         | 3. _____                                                               |       |
| 4. _____                                                       |                                         | 4. _____                                                               |       |
| 5. _____                                                       |                                         | 5. _____                                                               |       |
| Proposed Design Contract Time: _____ months/days               |                                         | Date of Negotiation: _____                                             |       |
|                                                                |                                         | Context Classification: _____                                          |       |

| Project Activity:                               | Estimated By:     |                     | Negotiated By: (name - firm) |                     |
|-------------------------------------------------|-------------------|---------------------|------------------------------|---------------------|
|                                                 | Consultant        | FDOT                | Consultant                   | FDOT                |
| 3. Project Common & Project General Tasks       | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 4. Roadway Analysis                             | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 5. Roadway Plans                                | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 6a. Drainage Analysis                           | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 6b. Drainage Plans                              | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 7. Utilities                                    | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 8. Environmental Permits and Env. Clearances    | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 9. Structures Summary                           | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 10. Structures - Bridge Development Report      | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 11. Structures - Temporary Bridge               | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 12. Structures - Short Span Concrete            | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 13. Structures - Medium Span Concrete           | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 14. Structures - Structural Steel               | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 15. Structures - Segmental Concrete             | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 16. Structures - Movable Span                   | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 17. Structures - Retaining Walls                | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 18. Structures - Miscellaneous                  | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 19. Signing and Pavement Marking Analysis       | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 20. Signing and Pavement Marking Plans          | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 21. Signalization Analysis                      | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 22. Signalization Plans                         | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 23. Lighting Analysis                           | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 24. Lighting Plans                              | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 25. Landscape Analysis                          | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 26. Landscape Plans                             | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 27. Survey                                      | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 28. Photogrammetry                              | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 29. Mapping                                     | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 30. Terrestrial Mobile LIDAR                    | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 31. Architecture Development                    | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 32. Noise Barriers Impact Design Assessment     | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 33. Intelligent Transportation Systems Analysis | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 34. Intelligent Transportation Systems Plans    | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 35. Geotechnical                                | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |
| 36. 3D Modeling                                 | Enter name & firm | Enter name & office | Enter name & firm            | Enter name & office |

# ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: 439228-2-58-01

Project Name: Indian Creek Drive Sea Wall

FAP Number: 54321

Date: 7/15/2021

Name of Consultant: Ribbeck Engineering Inc.

| WORK<br>ACTIVITY                                | Hours from<br>"Summary"<br>sheet | EMPLOYEE CLASSIFICATION |                    |                             |                             |                             |                             |                             |                             |                             |                              |                              |                              |       | TOTAL<br>STAFF HOURS |         | ON CADD |
|-------------------------------------------------|----------------------------------|-------------------------|--------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-------|----------------------|---------|---------|
|                                                 | Firm    Total                    | Project<br>Manager      | Engineer<br>Intern | Staff Classi-<br>fication 3 | Staff Classi-<br>fication 4 | Staff Classi-<br>fication 5 | Staff Classi-<br>fication 6 | Staff Classi-<br>fication 7 | Staff Classi-<br>fication 8 | Staff Classi-<br>fication 9 | Staff Classi-<br>fication 10 | Staff Classi-<br>fication 11 | Staff Classi-<br>fication 12 | RANGE |                      | PERCENT |         |
|                                                 | Hours                            | Hours                   | Hours              | Hours                       | Hours                       | Hours                       | Hours                       | Hours                       | Hours                       | Hours                       | Hours                        | Hours                        | Hours                        |       |                      |         |         |
| 3. Project General and Project Common Tasks     | 132                              | 106                     | 26                 | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 132   | 145                  |         |         |
| 4. Roadway Analysis                             | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 5. Roadway Plans                                | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 6a. Drainage Analysis                           | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 6b. Drainage Plans                              | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 7. Utilities                                    | 56                               | 28                      | 28                 | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 56    | 62                   |         |         |
| 8. Environmental Permits, and Env. Clearances   | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tech.    | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 10. Structures - Bridge Development Report      | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 11. Structures - Temporary Bridge               | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 12. Structures - Short Span Concrete Bridge     | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 13. Structures - Medium Span Concrete Bridge    | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 14. Structures - Structural Steel Bridge        | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 15. Structures - Segmental Concrete Bridge      | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 16. Structures - Movable Span                   | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 17. Structures - Retaining Walls                | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 18. Structures - Miscellaneous                  | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 19. Signing & Pavement Marking Analysis         | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 20. Signing & Pavement Marking Plans            | 0                                | 0                       | 0                  | 2                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 2     | 2                    |         |         |
| 21. Signalization Analysis                      | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 22. Signalization Plans                         | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 23. Lighting Analysis                           | 0                                | 0                       | 0                  | 2                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 2     | 2                    |         |         |
| 24. Lighting Plans                              | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 25. Landscape Analysis                          | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 26. Landscape Plans                             | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 27. Survey (Field & Office Support)             | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 28. Photogrammetry                              | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 29. Mapping                                     | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 30. Terrestrial Mobile LiDAR                    | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 31. Architecture Development                    | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 32. Noise Barriers Impact Design Assessment     | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 33. Intelligent Transportation Systems Analysis | 0                                | 0                       | 0                  | 1                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 1     | 1                    |         |         |
| 34. Intelligent Transportation Systems Plans    | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 35. Geotechnical                                | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| 36. 3D Modeling                                 | 0                                | 0                       | 0                  | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 0     | 0                    |         |         |
| TOTALS                                          | 188                              | 134                     | 54                 | 5                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                           | 0                            | 0                            | 0                            | 193   | 212                  |         |         |

## Notes:

1. This worksheet provides the distribution of a firm's total staff hours for a project.
2. Percentages for staff hour distribution by classification are entered below in rows 64 to 98 of this sheet.
3. Total Staff Hours (column O) may not match staff hours from Summary worksheet (column B) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns B and O match.
4. Formulas under "Total Staff Hours Range" (columns O & P) may be adjusted to provide desired range.

Field Survey Estimate:

0 4-person crew days

FIRM TOTAL

193

212

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

Financial Project Number: 439228-2-58-01

Project Name Indian Creek Drive Sea Wall

FAP Number: 54321

Date: 7/15/2021

Name of Consultant: Ribbeck Engineering Inc.

## Staff Hour Distribution Percentages - Firm Total

|                                                 | Hours from<br>"Summary"<br>sheet<br>Firm Total | Project<br>Manager | Engineer<br>Intern | Staff Classi-<br>fication 3 | Staff Classi-<br>fication 4 | Staff Classi-<br>fication 5 | Staff Classi-<br>fication 6 | Staff Classi-<br>fication 7 | Staff Classi-<br>fication 8 | Staff Classi-<br>fication 9 | Staff Classi-<br>fication 10 | Staff Classi-<br>fication 11 | Staff Classi-<br>fication 12 | Total   |
|-------------------------------------------------|------------------------------------------------|--------------------|--------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|---------|
| 3. Project General and Project Common Tasks     | 132                                            | 80.0%              | 20.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 100.00% |
| 4. Roadway Analysis                             | 0                                              | 60.0%              | 40.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 100.00% |
| 5. Roadway Plans                                | 0                                              | 60.0%              | 40.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 100.00% |
| 6a. Drainage Analysis                           | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 6b. Drainage Plans                              | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 7. Utilities                                    | 56                                             | 50.0%              | 50.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 100.00% |
| 8. Environmental Permits and Env. Clearances    | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 9. Structures - Misc. Tasks, Dwg, Non-Tech.     | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 10. Structures - Bridge Development Report      | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 11. Structures - Temporary Bridge               | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 12. Structures - Short Span Concrete Bridge     | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 13. Structures - Medium Span Concrete Bridge    | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 14. Structures - Structural Steel Bridge        | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 15. Structures - Segmental Concrete Bridge      | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 16. Structures - Movable Span                   | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 17. Structures - Retaining Walls                | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 18. Structures - Miscellaneous                  | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 19. Signing & Pavement Marking Analysis         | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 20. Signing & Pavement Marking Plans            | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 21. Signalization Analysis                      | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 22. Signalization Plans                         | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 23. Lighting Analysis                           | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 24. Lighting Plans                              | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 25. Landscape Analysis                          | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 26. Landscape Plans                             | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 27. Survey (Field & Office Support)             | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 28. Photogrammetry                              | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 29. Mapping                                     | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 30. Terrestrial Mobile LiDAR                    | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 31. Architecture Development                    | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 32. Noise Barriers Impact Design Assessment     | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 33. Intelligent Transportation Systems Analysis | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 34. Intelligent Transportation Systems Plans    | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 35. Geotechnical                                | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 36. 3D Modeling                                 | 0                                              | 0.0%               | 0.0%               | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |

## ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Indian Creek Drive Sea Wall  
 County: enter name of county  
 FPN: 439228-2-58-01  
 FAP No.: 54321

Consultant Name: Ribbeck Engineering Inc.  
 Consultant No.: enter consultants proj. number  
 Date: 7/15/2021  
 Estimator: insert name

| Staff Classification                            | Hours From "SH Summary - Firm" | Project Manager | Engineer Intern | Staff Classification 3 | Staff Classification 4 | Staff Classification 5 | Staff Classification 6 | Staff Classification 7 | Staff Classification 8 | Staff Classification 9 | Staff Classification 10 | Staff Classification 11 | Staff Classification 12 | SH By Activity | Salary Cost By Activity | Average Rate Per Task |
|-------------------------------------------------|--------------------------------|-----------------|-----------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|----------------|-------------------------|-----------------------|
|                                                 |                                | \$65.00         | \$31.00         | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                  | \$0.00                  | \$0.00                  |                |                         |                       |
| 3. Project General and Project Common Tasks     | 132                            | 106             | 26              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 132            | \$7,696                 | \$58.30               |
| 4. Roadway Analysis                             | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 5. Roadway Plans                                | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 6a. Drainage Analysis                           | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 6b. Drainage Plans                              | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 7. Utilities                                    | 56                             | 28              | 28              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 56             | \$2,688                 | \$48.00               |
| 8. Environmental Permits, and Env. Clearances   | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tech.    | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 10. Structures - Bridge Development Report      | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 11. Structures - Temporary Bridge               | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 12. Structures - Short Span Concrete Bridge     | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 13. Structures - Medium Span Concrete Bridge    | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 14. Structures - Structural Steel Bridge        | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 15. Structures - Segmental Concrete Bridge      | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 16. Structures - Movable Span                   | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 17. Structures - Retaining Walls                | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 18. Structures - Miscellaneous                  | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 19. Signing & Pavement Marking Analysis         | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 20. Signing & Pavement Marking Plans            | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 21. Signalization Analysis                      | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 22. Signalization Plans                         | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 23. Lighting Analysis                           | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 24. Lighting Plans                              | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 25. Landscape Analysis                          | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 26. Landscape Plans                             | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 27. Survey (Field & Office Support)             | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 28. Photogrammetry                              | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 29. Mapping                                     | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 30. Terrestrial Mobile LIDAR                    | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 31. Architecture Development                    | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 32. Noise Barriers Impact Design Assessment     | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 33. Intelligent Transportation Systems Analysis | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 34. Intelligent Transportation Systems Plans    | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 35. Geotechnical                                | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 36. 3D Modeling                                 | 0                              | 0               | 0               | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| <b>Total Staff Hours</b>                        | 188                            | 134             | 54              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 188            |                         |                       |
| <b>Total Staff Cost</b>                         |                                | \$8,710.00      | \$1,674.00      | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                  | \$0.00                  | \$0.00                  |                | <b>\$10,384.00</b>      | <b>\$55.23</b>        |

Survey Field Days by Subconsultant  
 4 - Person Crew:

## Notes:

- This sheet to be used by Prime Consultant to calculate the Grand Total fee.
- Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

|                                       |   |                                 |                     |
|---------------------------------------|---|---------------------------------|---------------------|
| Check = \$10,384.00                   |   |                                 |                     |
| SALARY RELATED COSTS:                 |   |                                 | \$10,384.00         |
| OVERHEAD:                             |   | 163.75%                         | \$17,003.80         |
| OPERATING MARGIN:                     |   | 38.50%                          | \$3,997.84          |
| FCCM (Facilities Capital Cost Money): |   | 0.767%                          | \$79.65             |
| EXPENSES:                             |   | 0.00%                           | \$0.00              |
| Survey (Field - If by Prime)          | 0 | 4-person crew days @ \$ - / day | \$0.00              |
| <b>SUBTOTAL ESTIMATED FEE:</b>        |   |                                 | <b>\$31,465.29</b>  |
| Subconsultant: Chrome                 |   |                                 | \$94,075.90         |
| Subconsultant: Sub 2                  |   |                                 | \$0.00              |
| Subconsultant: Sub 3                  |   |                                 | \$0.00              |
| Subconsultant: Sub 4                  |   |                                 | \$0.00              |
| Subconsultant: Sub 5                  |   |                                 | \$0.00              |
| Subconsultant: Sub 6                  |   |                                 | \$0.00              |
| Subconsultant: Sub 7                  |   |                                 | \$0.00              |
| Subconsultant: Sub 8                  |   |                                 | \$0.00              |
| Subconsultant: Sub 9                  |   |                                 | \$0.00              |
| Subconsultant: Sub 10                 |   |                                 | \$0.00              |
| Subconsultant: Sub 11                 |   |                                 | \$0.00              |
| Subconsultant: Sub 12                 |   |                                 | \$0.00              |
| <b>SUBTOTAL ESTIMATED FEE:</b>        |   |                                 | <b>\$125,541.19</b> |
| Geotechnical Field and Lab Testing    |   |                                 | \$0.00              |
| <b>SUBTOTAL ESTIMATED FEE:</b>        |   |                                 | <b>\$125,541.19</b> |
| Optional Services                     |   |                                 | \$0.00              |
| <b>GRAND TOTAL ESTIMATED FEE:</b>     |   |                                 | <b>\$125,541.19</b> |

**Project Activity 3: General Tasks**

Estimator:

Indian Creek Drive Sea Wall

439228-2-58-01

| Representing    | Print Name | Signature / Date |
|-----------------|------------|------------------|
| FDOT District   |            |                  |
| Consultant Name |            |                  |

**NOTE: Signature Block is optional, per District preference**

| 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                                  | Preparing 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           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| 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           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| 3.1.11                                 | Other Agency Meetings                            | LS    | 1           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| 3.1.12                                 | Web Site                                         | LS    | 1           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| <b>3.1 Public Involvement Subtotal</b> |                                                  |       |             |             | <b>0</b>    |                                                                                                                                                                                                                                                                                      |
| 3.2                                    | Joint Project Agreements                         | EA    | 0           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| 3.3                                    | Specifications & Estimates                       |       |             |             |             |                                                                                                                                                                                                                                                                                      |
| 3.3.1                                  | Specifications Package Preparation               | LS    | 1           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| 3.3.2                                  | Estimated Quantities Report Preparation          | LS    | 1           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| 3.4                                    | Contract Maintenance and Project Documentation   | LS    | 1           | 64          | 64          | Includes project management efforts for complete setup and maintenance of files, electronic folders and documents developing progress reports, respond to (calls) and compilation and submittal of project documentation.<br>Base + update/maintenance per month = 16+ 4 x 12 months |
| 3.5                                    | Value Engineering (Multi-Discipline Team) Review | LS    | 1           | 0           | 0           |                                                                                                                                                                                                                                                                                      |
| 3.6                                    | Prime Consultant Project Manager Meetings        | LS    | 1           | 2           | 2           | See listing below                                                                                                                                                                                                                                                                    |

**Project Activity 3: General Tasks**

| Task No. | Task         | Units | No of Units | Hours/ Unit | Total Hours | Comments |
|----------|--------------|-------|-------------|-------------|-------------|----------|
| 3.7      | Plans Update | LS    | 1           | 0           | 0           |          |

**Project Activity 3: General Tasks**

| Task No.                                                 | Task                                           | Units | No of Units | Hours/ Unit | Total Hours | Comments                                                                                                             |
|----------------------------------------------------------|------------------------------------------------|-------|-------------|-------------|-------------|----------------------------------------------------------------------------------------------------------------------|
| 3.8                                                      | Post Design Services                           | LS    | 1           | 0           | 0           |                                                                                                                      |
| 3.9                                                      | Digital Delivery                               | LS    | 1           | 2           | 2           |                                                                                                                      |
| 3.10                                                     | Risk Assessment Workshop                       | LS    | 1           | 0           | 0           |                                                                                                                      |
| 3.11                                                     | Railroad, Transit, and/or Airport Coordination | LS    | 1           | 0           | 0           |                                                                                                                      |
| 3.11.1                                                   | Aeronautical Evaluation                        | LS    | 1           | 0           | 0           |                                                                                                                      |
| 3.12                                                     | Landscape and Existing Vegetation Coordination | LS    | 1           | 0           | 0           |                                                                                                                      |
| 3.13                                                     | Other Project General Tasks                    | LS    | 1           | 64          | 64          | Coordination with Chrome Engineering. Assume 8 hrs @ 4 months design and 4 hrs @8 months during construction. =32+32 |
| <b>3. Project Common and Project General Tasks Total</b> |                                                |       |             |             | <b>132</b>  |                                                                                                                      |

| 3.6 - List of Project Manager Meetings | Units | No of Units | Hours/ Unit | Total Hours | Comments                                                                                                  |
|----------------------------------------|-------|-------------|-------------|-------------|-----------------------------------------------------------------------------------------------------------|
| Post Design Services                   | EA    | 12          | 1           | 12          | monthly meetings (at public Works)                                                                        |
| Drainage                               | EA    | 0           | 0           | 0           |                                                                                                           |
| Utilities                              | EA    | 0           | 0           | 0           |                                                                                                           |
| Environmental                          | EA    | 0           | 0           | 0           |                                                                                                           |
| Structures                             | EA    | 0           | 0           | 0           | Included in 3.13                                                                                          |
| Signing & Pavement Marking             | EA    | 0           | 0           | 0           |                                                                                                           |
| Signalization                          | EA    | 0           | 0           | 0           |                                                                                                           |
| Lighting                               | EA    | 0           | 0           | 0           |                                                                                                           |
| Landscape Architecture                 | EA    | 0           | 0           | 0           |                                                                                                           |
| Survey                                 | EA    | 0           | 0           | 0           |                                                                                                           |
| Photogrammetry                         | EA    | 0           | 0           | 0           |                                                                                                           |
| ROW & Mapping                          | EA    | 0           | 0           | 0           |                                                                                                           |
| Terrestrial Mobile LiDAR               | EA    | 0           | 0           | 0           |                                                                                                           |
| Architecture                           | EA    | 5           | 1           | 5           | Meeting with City (public works) and building permit                                                      |
| Noise Barriers                         | EA    | 0           | 0           | 0           |                                                                                                           |
| ITS Analysis                           | EA    | 0           | 0           | 0           |                                                                                                           |
| Geotechnical                           | EA    | 0           | 0           | 0           |                                                                                                           |
| Progress Meetings                      | EA    | 0           | 0           | 0           |                                                                                                           |
| Phase Reviews                          | EA    | 0           | 0           | 0           |                                                                                                           |
| Field Reviews                          | EA    | 12          | 2           | 24          | Field verification on wall and depth of water body at 100' intervals and other meetings with FPL and City |
| <b>Total Project Manager Meetings</b>  |       | 29          |             | 41          | Total PM Meeting Hours carries to Task 3.6 above                                                          |

**Project Activity 3: General Tasks**

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

**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.

**Project Activity 7: Utilities**

Estimator:

Indian Creek Drive Sea Wall  
439228-2-58-01

| Representing    | Print Name | Signature / Date |
|-----------------|------------|------------------|
| FDOT District   |            |                  |
| Consultant Name |            |                  |

**NOTE: Signature Block is optional, per District preference**

| Task No. | Task                                                                              | Units | No of Units | Hours/ Unit | Total Hours |                                                                                                                                | Comments                                                                                              |
|----------|-----------------------------------------------------------------------------------|-------|-------------|-------------|-------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 7.1      | Utility Kickoff Meeting                                                           | LS    | 1           | 2           | 2           |                                                                                                                                | Meeting is listed below                                                                               |
| 7.2      | Identify Existing Utility Agency Owner(s)                                         | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.3      | Make Utility Contacts                                                             | LS    | 1           | 18          | 18          | 9 Utilities, 2 hours per utility contact; send plans to assure no crossings are encountered. FPL has utilities crossing creek. |                                                                                                       |
| 7.4      | Exception Processing                                                              | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.5      | Preliminary Utility Meeting                                                       | LS    | 1           | 0           | 0           |                                                                                                                                | Meeting is listed below                                                                               |
| 7.6      | Individual/Field Meetings                                                         | LS    | 1           | 6           | 6           |                                                                                                                                | Meetings are listed below                                                                             |
| 7.7      | Collect and Review Plans and Data from UAO(s)                                     | LS    | 1           | 4           | 4           |                                                                                                                                | Assume 4 utilities are crossing the creek (FPL, ATT, Sewer and one additional)                        |
| 7.8      | Subordination of Easements Coordination                                           | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.9      | Utility Design Meeting                                                            | LS    | 1           | 0           | 0           |                                                                                                                                | Meeting is listed below                                                                               |
| 7.10     | Review Utility Markups & Work Schedules, and Processing of Schedules & Agreements | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.11     | Utility Coordination/Followup                                                     | LS    | 1           | 9           | 9           | 9 Utilities; send plans to assure no crossings are encountered. FPL has utilities crossing creek.                              |                                                                                                       |
| 7.12     | Utility Constructability Review                                                   | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.13     | Additional Utility Services                                                       | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.14     | Processing Utility Work by Highway Contractor (UWHC)                              | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.15     | Contract Plans to UAO(s)                                                          | LS    | 1           | 9           | 9           |                                                                                                                                | 9 Utilities; send final plans                                                                         |
| 7.16     | Certification/Close-Out                                                           | LS    | 1           | 0           | 0           |                                                                                                                                |                                                                                                       |
| 7.17     | Other Utilities                                                                   | LS    | 1           | 8           | 8           |                                                                                                                                | Utility Work Schedule; Assume 4 utilities are crossing the creek (FPL, ATT, Sewer and one additional) |

**Project Activity 7: Utilities**

|                           |           |  |
|---------------------------|-----------|--|
| <b>7. Utilities Total</b> | <b>56</b> |  |
|---------------------------|-----------|--|

and maintenance of files, electronic folders and documents, developing progress reports, respond to (calls) and compilation and submittal of project documentation.

| Technical Meetings                                                                    | Units | No of Units | Hours/ Unit | Total Hours | Comments                                                 | PM Attendance at Meeting Required? | Number   |
|---------------------------------------------------------------------------------------|-------|-------------|-------------|-------------|----------------------------------------------------------|------------------------------------|----------|
| Kickoff (see 7.1)                                                                     | EA    | 1           | 2           | 2           |                                                          |                                    | 0        |
| Preliminary Meeting (see 7.5)                                                         | EA    | 0           | 0           | 0           |                                                          |                                    | 0        |
| Individual UAO Meetings (see 7.6)                                                     | EA    | 0           | 0           | 0           |                                                          |                                    | 0        |
| Field Meetings (see 7.6)                                                              | EA    | 3           | 2           | 6           | FPL, ATT and Public Works                                |                                    | 0        |
| Design Meeting (see 7.9)                                                              | EA    | 0           | 0           | 0           |                                                          |                                    | 0        |
| Other Meetings ( <i>this is automatically added into Utilities Total (cell F27)</i> ) | EA    | 0           | 0           | 0           |                                                          |                                    | 0        |
| <b>Total Meetings</b>                                                                 |       |             |             | <b>8</b>    | <b>Total Project Manager Meetings (carries to Tab 3)</b> |                                    | <b>0</b> |

Carries to Tab 3



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### SCOPE OF SERVICES

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**Date:** 06/15/2021

The work consists of developing contract documents for approximately 4,343 LF of a concrete pile and panel seawall, including the structural evaluation of 1,612 LF of existing seawall to remain. Approximately 653 LF of existing seawall will be removed and replaced with an 18" offset measured from the new seawall face to the wet face of the old seawall.

The contract drawings will consist of wall control drawings, notes and typical wall section depicting the City of Miami Beach pile and panel standard bulkhead wall details. The proposed seawall will be located along the front face of the existing seawall wall within the City owned parcels. Calculations following FDOT Structures Design Guidelines will be provided.

The work will be performed in accordance with FDOT design requirements, and includes the following tasks:

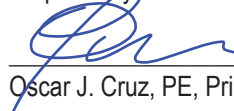
1. Develop horizontal and vertical wall layout geometry based on survey of the existing seawall depicting the location of the proposed wall and baseline geometry.
2. Develop plan and elevation views of approximately 4,343 LF of retaining walls.
3. Develop typical wall section based on City of Miami Beach standard bulkhead wall, including provisions for drainage and utility pipe crossings.
4. Provide reinforcing bar list for all concrete components.
5. Develop quantities and cost estimate.
6. Coordinate the work with the City of Miami Beach Engineer.
7. Review and incorporate existing available Geotechnical information for the project.
8. Provide visual structural inspections for existing sections of recently built seawall to remain. Provide certification letter with repair recommendations retrofit existing installations, if required, for final inspection acceptance. This evaluation includes the review of construction documentation (i.e. pile driving records, concrete tests, bill of reinforcing bar installations) to be provided by City of Miami Beach.
9. Construction will be in accordance with FDOT Specifications.
10. Post design services including responses RFI's and shop drawing reviews.
11. Site visits for coordination as required.

Additional scope of work includes Specialty Inspector services for the construction of the seawalls. The required inspections include, verification of prestressed pile installations, concrete panel installations, concrete cap installations including steel reinforcing configurations. The inspections will be provided for all new seawall construction as well as all existing construction to remain.

#### Fee Summary:

|                    |                    |
|--------------------|--------------------|
| Design and Plans:  | \$69,570.90        |
| Special Inspector: | <u>\$24,505.00</u> |
| Total:             | \$94,075.90        |

Prepared by:

  
Oscar J. Cruz, PE, Principal

**Project Information Sheet**

|                                                                |                                         |                                                                        |       |
|----------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------|-------|
| Financial Project Identification Number: _____                 |                                         | Federal Aid Project Identification Number: <b>54321</b>                |       |
| Name of Prime / Subconsultant: <b>Chrome Engineering, Inc.</b> |                                         | County: <b>Miami-Dade</b>                                              |       |
| Project Description: <b>Indian Creek Drive Seawall</b>         |                                         |                                                                        |       |
| Begin Milepost: _____                                          | End Milepost: _____                     | Project Length: _____                                                  | Miles |
| Number of Lanes: _____                                         | Typical Section: _____                  | (Urban / Rural / Int.) Lane Configuration: _____ (Divided / Undivided) |       |
| Project Type: _____ (Minor / Major)                            | Access Management Classification: _____ | Roadway Classification: _____ (NHS/FIHS/Off Sys.)                      |       |
| CAP Level: _____                                               | TTCP Level: _____                       | Survey Level: _____                                                    |       |
| Design Variations: 1. _____                                    |                                         | Design Exceptions: 1. _____                                            |       |
| 2. _____                                                       |                                         | 2. _____                                                               |       |
| 3. _____                                                       |                                         | 3. _____                                                               |       |
| 4. _____                                                       |                                         | 4. _____                                                               |       |
| 5. _____                                                       |                                         | 5. _____                                                               |       |
| Proposed Design Contract Time: _____ months/days               |                                         | Date of Negotiation: _____                                             |       |
|                                                                |                                         | Context Classification: _____                                          |       |

| Project Activity:                               | Estimated By:                 |                     | Negotiated By: (name - firm) |                     |
|-------------------------------------------------|-------------------------------|---------------------|------------------------------|---------------------|
|                                                 | Consultant                    | FDOT                | Consultant                   | FDOT                |
| 3. Project Common & Project General Tasks       | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 4. Roadway Analysis                             | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 5. Roadway Plans                                | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 6a. Drainage Analysis                           | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 6b. Drainage Plans                              | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 7. Utilities                                    | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 8. Environmental Permits and Env. Clearances    | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 9. Structures Summary                           | Oscar Cruz/Chrome Engineering | Enter name & office | Enter name & firm            | Enter name & office |
| 10. Structures - Bridge Development Report      | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 11. Structures - Temporary Bridge               | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 12. Structures - Short Span Concrete            | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 13. Structures - Medium Span Concrete           | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 14. Structures - Structural Steel               | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 15. Structures - Segmental Concrete             | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 16. Structures - Movable Span                   | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 17. Structures - Retaining Walls                | Oscar Cruz/Chrome Engineering | Enter name & office | Enter name & firm            | Enter name & office |
| 18. Structures - Miscellaneous                  | Oscar Cruz/Chrome Engineering | Enter name & office | Enter name & firm            | Enter name & office |
| 19. Signing and Pavement Marking Analysis       | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 20. Signing and Pavement Marking Plans          | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 21. Signalization Analysis                      | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 22. Signalization Plans                         | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 23. Lighting Analysis                           | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 24. Lighting Plans                              | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 25. Landscape Analysis                          | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 26. Landscape Plans                             | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 27. Survey                                      | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 28. Photogrammetry                              | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 29. Mapping                                     | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 30. Terrestrial Mobile LiDAR                    | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 31. Architecture Development                    | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 32. Noise Barriers Impact Design Assessment     | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 33. Intelligent Transportation Systems Analysis | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 34. Intelligent Transportation Systems Plans    | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 35. Geotechnical                                | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |
| 36. 3D Modeling                                 | Enter name & firm             | Enter name & office | Enter name & firm            | Enter name & office |

# ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: \_\_\_\_\_

Project Name: Indian Creek Drive Seawall

FAP Number: 54321

Date: 6/15/2021

Name of Consultant: Chrome Engineering, Inc.

| WORK<br>ACTIVITY                                | Hours from<br>"Summary" sheet | EMPLOYEE CLASSIFICATION       |                                 |                            |                                      |                                      |                                      |                                      |                                      |                                      |                                       |                                       |                                       |         | TOTAL<br>STAFF HOURS |     | ON CADD |
|-------------------------------------------------|-------------------------------|-------------------------------|---------------------------------|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------|----------------------|-----|---------|
|                                                 |                               | Project<br>Principal<br>Hours | Structural<br>Engineer<br>Hours | CADD<br>/Designer<br>Hours | Staff Classi-<br>fication 4<br>Hours | Staff Classi-<br>fication 5<br>Hours | Staff Classi-<br>fication 6<br>Hours | Staff Classi-<br>fication 7<br>Hours | Staff Classi-<br>fication 8<br>Hours | Staff Classi-<br>fication 9<br>Hours | Staff Classi-<br>fication 10<br>Hours | Staff Classi-<br>fication 11<br>Hours | Staff Classi-<br>fication 12<br>Hours | RANGE   |                      |     |         |
|                                                 |                               |                               |                                 |                            |                                      |                                      |                                      |                                      |                                      |                                      |                                       |                                       |                                       | PERCENT |                      |     |         |
| Firm Total<br>Hours                             | Hours                         | Hours                         | Hours                           | Hours                      | Hours                                | Hours                                | Hours                                | Hours                                | Hours                                | Hours                                | Hours                                 | Hours                                 | Hours                                 | Hours   | PERCENT              |     |         |
| 3. Project General and Project Common Tasks     | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 4. Roadway Analysis                             | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 5. Roadway Plans                                | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 6a. Drainage Analysis                           | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 6b. Drainage Plans                              | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 7. Utilities                                    | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 8. Environmental Permits, and Env. Clearances   | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tech.    | 166                           | 8                             | 75                              | 83                         | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 166                  | 183 |         |
| 10. Structures - Bridge Development Report      | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 11. Structures - Temporary Bridge               | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 12. Structures - Short Span Concrete Bridge     | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 13. Structures - Medium Span Concrete Bridge    | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 14. Structures - Structural Steel Bridge        | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 15. Structures - Segmental Concrete Bridge      | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 16. Structures - Movable Span                   | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 17. Structures - Retaining Walls                | 348                           | 17                            | 157                             | 174                        | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 348                  | 383 |         |
| 18. Structures - Miscellaneous                  | 48                            | 2                             | 22                              | 24                         | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 48                   | 53  |         |
| 19. Signing & Pavement Marking Analysis         | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 20. Signing & Pavement Marking Plans            | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 21. Signalization Analysis                      | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 22. Signalization Plans                         | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 23. Lighting Analysis                           | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 24. Lighting Plans                              | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 25. Landscape Analysis                          | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 26. Landscape Plans                             | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 27. Survey (Field & Office Support)             | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 28. Photogrammetry                              | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 29. Mapping                                     | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 30. Terrestrial Mobile LiDAR                    | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 31. Architecture Development                    | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 32. Noise Barriers Impact Design Assessment     | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 33. Intelligent Transportation Systems Analysis | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 34. Intelligent Transportation Systems Plans    | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 35. Geotechnical                                | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| 36. 3D Modeling                                 | 0                             | 0                             | 0                               | 0                          | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 0                    |     |         |
| TOTALS                                          | 562                           | 27                            | 254                             | 281                        | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                    | 0                                     | 0                                     | 0                                     | 0       | 562                  | 619 |         |
| Field Survey Estimate:                          |                               |                               |                                 |                            |                                      |                                      |                                      |                                      |                                      |                                      |                                       | FIRM TOTAL                            |                                       | 562     | 619                  |     |         |
| 0 4-person crew days                            |                               |                               |                                 |                            |                                      |                                      |                                      |                                      |                                      |                                      |                                       |                                       |                                       |         |                      |     |         |
| Notes:                                          |                               |                               |                                 |                            |                                      |                                      |                                      |                                      |                                      |                                      |                                       |                                       |                                       |         |                      |     |         |

Notes:

1. This worksheet provides the distribution of a firm's total staff hours for a project.
2. Percentages for staff hour distribution by classification are entered below in rows 64 to 98 of this sheet.
3. Total Staff Hours (column O) may not match staff hours from Summary worksheet (column B) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns B and O match.
4. Formulas under "Total Staff Hours Range" (columns O & P) may be adjusted to provide desired range.

# ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: 1/0/1900

Project Name Indian Creek Drive Seawall

FAP Number: 54321

Date: 6/15/2021

Name of Consultant: Chrome Engineering, Inc.

| Staff Hour Distribution Percentages - Firm Total |                                             |                      |                        |                   |                             |                             |                             |                             |                             |                             |                              |                              |                              |         |
|--------------------------------------------------|---------------------------------------------|----------------------|------------------------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|---------|
|                                                  | Hours from<br>"Summary" sheet<br>Firm Total | Project<br>Principal | Structural<br>Engineer | CADD<br>/Designer | Staff Classi-<br>fication 4 | Staff Classi-<br>fication 5 | Staff Classi-<br>fication 6 | Staff Classi-<br>fication 7 | Staff Classi-<br>fication 8 | Staff Classi-<br>fication 9 | Staff Classi-<br>fication 10 | Staff Classi-<br>fication 11 | Staff Classi-<br>fication 12 | Total   |
| 3. Project General and Project Common Tasks      | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 4. Roadway Analysis                              | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 5. Roadway Plans                                 | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 6a. Drainage Analysis                            | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 6b. Drainage Plans                               | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 7. Utilities                                     | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 8. Environmental Permits, and Env. Clearances    | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tech.     | 166                                         | 5.0%                 | 45.0%                  | 50.0%             | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 100.00% |
| 10. Structures - Bridge Development Report       | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 11. Structures - Temporary Bridge                | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 12. Structures - Short Span Concrete Bridge      | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 13. Structures - Medium Span Concrete Bridge     | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 14. Structures - Structural Steel Bridge         | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 15. Structures - Segmental Concrete Bridge       | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 16. Structures - Movable Span                    | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 17. Structures - Retaining Walls                 | 348                                         | 5.0%                 | 45.0%                  | 50.0%             | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 100.00% |
| 18. Structures - Miscellaneous                   | 48                                          | 5.0%                 | 45.0%                  | 50.0%             | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 100.00% |
| 19. Signing & Pavement Marking Analysis          | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 20. Signing & Pavement Marking Plans             | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 21. Signalization Analysis                       | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 22. Signalization Plans                          | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 23. Lighting Analysis                            | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 24. Lighting Plans                               | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 25. Landscape Analysis                           | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 26. Landscape Plans                              | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 27. Survey (Field & Office Support)              | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 28. Photogrammetry                               | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 29. Mapping                                      | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 30. Terrestrial Mobile LiDAR                     | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 31. Architecture Development                     | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 32. Noise Barriers Impact Design Assessment      | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 33. Intelligent Transportation Systems Analysis  | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 34. Intelligent Transportation Systems Plans     | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 35. Geotechnical                                 | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |
| 36. 3D Modeling                                  | 0                                           | 0.0%                 | 0.0%                   | 0.0%              | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                        | 0.0%                         | 0.0%                         | 0.0%                         | 0.00%   |

# ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: Indian Creek Drive Seawall  
 County: Miami-Dade  
 FPN: 0  
 FAP No.: 54321

Consultant Name: Chrome Engineering, Inc.  
 Consultant No.:  
 Date: 6/15/2021  
 Estimator: Oscar J. Cruz, P.E.

| Staff Classification                            | Total Staff Hours From "SH Summary Firm" | Project Principal | Structural Engineer | CADD /Designer | Staff Classification 4 | Staff Classification 5 | Staff Classification 6 | Staff Classification 7 | Staff Classification 8 | Staff Classification 9 | Staff Classification 10 | Staff Classification 11 | Staff Classification 12 | SH By Activity | Salary Cost By Activity | Average Rate Per Task |
|-------------------------------------------------|------------------------------------------|-------------------|---------------------|----------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|----------------|-------------------------|-----------------------|
|                                                 |                                          | \$190.96          | \$128.58            | \$113.00       | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                  | \$0.00                  | \$0.00                  |                |                         |                       |
| 3. Project General and Project Common Tasks     | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 4. Roadway Analysis                             | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 5. Roadway Plans                                | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 6a. Drainage Analysis                           | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 6b. Drainage Plans                              | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 7. Utilities                                    | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 8. Environmental Permits, and Env. Clearances   | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tech.    | 166                                      | 8                 | 75                  | 83             | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 166            | \$20,550                | \$123.80              |
| 10. Structures - Bridge Development Report      | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 11. Structures - Temporary Bridge               | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 12. Structures - Short Span Concrete Bridge     | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 13. Structures - Medium Span Concrete Bridge    | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 14. Structures - Structural Steel Bridge        | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 15. Structures - Segmental Concrete Bridge      | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 16. Structures - Movable Span                   | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 17. Structures - Retaining Walls                | 348                                      | 17                | 157                 | 174            | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 348            | \$43,095                | \$123.84              |
| 18. Structures - Miscellaneous                  | 48                                       | 2                 | 22                  | 24             | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 48             | \$5,923                 | \$123.39              |
| 19. Signing & Pavement Marking Analysis         | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 20. Signing & Pavement Marking Plans            | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 21. Signalization Analysis                      | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 22. Signalization Plans                         | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 23. Lighting Analysis                           | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 24. Lighting Plans                              | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 25. Landscape Analysis                          | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 26. Landscape Plans                             | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 27. Survey (Field & Office Support)             | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 28. Photogrammetry                              | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 29. Mapping                                     | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 30. Terrestrial Mobile LiDAR                    | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 31. Architecture Development                    | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 32. Noise Barriers Impact Design Assessment     | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 33. Intelligent Transportation Systems Analysis | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 34. Intelligent Transportation Systems Plans    | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 35. Geotechnical                                | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| 36. 3D Modeling                                 | 0                                        | 0                 | 0                   | 0              | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 0              | \$0                     | #DIV/0!               |
| <b>Total Staff Hours</b>                        | 562                                      | 27                | 254                 | 281            | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                       | 0                       | 0                       | 562            |                         |                       |
| <b>Total Staff Cost</b>                         |                                          | \$5,155.92        | \$32,659.32         | \$31,755.66    | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                 | \$0.00                  | \$0.00                  | \$0.00                  |                | \$69,570.90             | \$123.79              |

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

|                                       |   |               |      |       |         |             |
|---------------------------------------|---|---------------|------|-------|---------|-------------|
| SALARY RELATED COSTS:                 |   |               |      |       | Check = | \$69,568.24 |
| OVERHEAD:                             |   | 0.00%         |      |       |         | \$69,570.90 |
| OPERATING MARGIN:                     |   | 0.0%          |      |       |         | \$0.00      |
| FCCM (Facilities Capital Cost Money): |   | 0.00%         |      |       |         | \$0.00      |
| EXPENSES:                             |   | 0.00%         |      |       |         | \$0.00      |
| SUBTOTAL ESTIMATED FEE:               |   |               |      |       |         | \$69,570.90 |
| Survey (Field)                        | 0 | 4-person crew | \$ - | / day |         | \$0.00      |
| Geotechnical Field and Lab Testing    |   |               |      |       |         | \$0.00      |
| SUBTOTAL ESTIMATED FEE:               |   |               |      |       |         | \$69,570.90 |
| Optional Services                     |   |               |      |       |         | \$0.00      |
| GRAND TOTAL ESTIMATED FEE:            |   |               |      |       |         | \$69,570.90 |

**Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings**

Estimator: Oscar J. Cruz, P.E.

Indian Creek Drive Seawall

0

| Representing             | Print Name          | Signature / Date |
|--------------------------|---------------------|------------------|
| City of Miami Beach      |                     |                  |
| Chrome Engineering, Inc. | Oscar J. Cruz, P.E. |                  |

**NOTE: Signature Block is optional, per District preference**

| Task No. | Task                                            | Units | Design and Production Staffhours |                |               |       | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------|-------------------------------------------------|-------|----------------------------------|----------------|---------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                 |       | No. of Units                     | Hours per Unit | No. of Sheets | Total |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|          | <b>General Drawings</b>                         |       |                                  |                |               |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9.1      | Key Sheet and Index of Drawings                 | Sheet | 0                                | 0              | 0             | 0     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9.2      | Project Layout                                  | Sheet | 2                                | 12             | 2             | 24    | 2 500' scale sheets showing full length of Seawall including, new construction, existing to remain and existing to be reconstructed.                                                                                                                                                                                                                                                                                                            |
| 9.3      | General Notes and Bid Item Notes                | Sheet | 0                                | 0              | 0             | 0     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9.4      | Miscellaneous Common Details                    | Sheet | 0                                | 0              | 0             | 0     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9.5      | Incorporate Report of Core Borings              | Sheet | 1                                | 2              | 1             | 2     | Review and incorporation of existing geotechnical reports for the project                                                                                                                                                                                                                                                                                                                                                                       |
| 9.6      | Standard Plans- Bridges                         | LS    | 1                                | 0              |               | 0     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9.7      | Existing Bridge Plans                           | LS    | 1                                | 4              |               | 4     | Review Existing Seawall Plans                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 9.8      | Assemble Plan Summary Boxes and Quantities      | LS    | 1                                | 8              |               | 8     | Quantities for full length of seawall                                                                                                                                                                                                                                                                                                                                                                                                           |
| 9.9      | Cost Estimate                                   | LS    | 1                                | 0              |               | 0     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9.10'    | <b>Existing Seawall to Remain Certification</b> | LS    | 1                                | 60             |               | 60    | 1. Inspect Existing Seawall Sections to remain = 2 inspectors x 5 hrs x 2 people = 20 hrs<br>2. Review existing pile installation logs, bills of reinforcing, concrete mix test, etc, as required to certify the installation of existing seawall sections to remain = 10 hrs.<br>3. Prepare and Submit Seawall Certification Report for existing seawall sections to remain. Includes specifications for antipated repair procedures = 30 hrs. |

**Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings**

| Structures - Summary and Miscellaneous Tasks and Drawings    |                                   |       |              |                | 3       | 98                                              |         |         |         |         |         |
|--------------------------------------------------------------|-----------------------------------|-------|--------------|----------------|---------|-------------------------------------------------|---------|---------|---------|---------|---------|
| 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                          | 0     | 0            | 0              | 0       | 0                                               | 0       | 0       | 0       |         |         |
| 10-16                                                        | Bridge 2                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 3                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 4                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 5                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 6                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 7                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 8                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 9                          | 0     |              |                |         |                                                 |         |         |         |         |         |
| 10-16                                                        | Bridge 10                         | 0     |              |                |         |                                                 |         |         |         |         |         |
| 17                                                           | Retaining Walls                   | 348   |              |                |         |                                                 |         |         |         | 348     |         |
| 18                                                           | Miscellaneous Structures          | 48    |              |                |         |                                                 |         |         |         |         | 48      |
| Structures Technical Subtotal                                |                                   | 396   | 0            | 0              | 0       | 0                                               | 0       | 0       | 0       | 348     | 48      |
| Task No.                                                     | Task                              | Units | No. of Units | Hours per Unit | Total   | Comments                                        |         |         |         |         |         |
| 9.11                                                         | Field Reviews                     | LS    | 1            | 12             | 12      | 2 people x 3 hours x 2 visits                   |         |         |         |         |         |
| 9.12                                                         | Technical Meetings                | LS    | 0            | 13             | 0       |                                                 |         |         |         |         |         |
| 9.13                                                         | Quality Assurance/Quality Control | LS    | %            | 5%             | 25      |                                                 |         |         |         |         |         |
| 9.14                                                         | Independent Peer Review           | LS    | 1            | 0              | 0       |                                                 |         |         |         |         |         |
| 9.15                                                         | Supervision                       | LS    | %            | 5%             | 25      |                                                 |         |         |         |         |         |
| Structures Nontechnical Subtotal                             |                                   |       |              |                | 62      |                                                 |         |         |         |         |         |
| 9.16                                                         | Coordination                      | LS    | 1            | 6              | 6       | Roadway = 2 hrs, Geotech = 2 hrs, Utilities = 1 |         |         |         |         |         |
| 9. Structures - Summary and Miscellaneous Tasks and Drawings |                                   |       |              |                | 166     |                                                 |         |         |         |         |         |

| Technical Meetings                      | Units | No of Units | Hours/ Unit | Total Hours | Comments                                                                     | PM Attendance at Meeting Required? | Number |
|-----------------------------------------|-------|-------------|-------------|-------------|------------------------------------------------------------------------------|------------------------------------|--------|
| BDR Coordination/Review                 | EA    | 0           | 0           | 0           |                                                                              |                                    | 0      |
| 90/100% Comment Review                  | EA    | 0           | 0           | 0           |                                                                              |                                    | 0      |
| Aesthetics Coordination                 | EA    | 0           | 0           | 0           |                                                                              |                                    | 0      |
| Regulatory Agency                       | EA    | 2           | 2           | 4           |                                                                              |                                    | 0      |
| Local Governments (cities, counties)    | EA    | 0           | 0           | 0           |                                                                              |                                    | 0      |
| Utility Companies                       | EA    | 0           | 0           | 0           |                                                                              |                                    | 0      |
| Other Meetings                          | EA    | 0           | 0           | 0           |                                                                              |                                    | 0      |
| <b>Subtotal Technical Meetings</b>      |       |             |             | 4           |                                                                              |                                    | 0      |
| Progress Meetings (if required by FDOT) | EA    | 0           | 0           | 0           | PM attendance at Progress Meetings is manually entered on General Task 3     |                                    | --     |
| Phase Review Meetings                   | EA    | 3           | 3           | 9           | PM attendance at Phase Review Meetings is manually entered on General Task 3 |                                    | --     |
| <b>Total Meetings</b>                   |       |             |             | 13          | <b>Total Project Manager Meetings (carries to Tab 3)</b>                     |                                    | 0      |

Carries to 9.11

Carries to Tab 3

**Project Activity 17: Retaining Walls**

Estimator:

Indian Creek Drive Seawall

0

| Representing        | Print Name          | Signature / Date |
|---------------------|---------------------|------------------|
| City of Miami Beach |                     |                  |
| Consultant Name     | Oscar J. Cruz, P.E. |                  |

**NOTE: Signature Block is optional, per District preference**

| Task No.                             | Task                                        | Unit      | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments                                                                                |
|--------------------------------------|---------------------------------------------|-----------|--------------|-------------|---------------|-------------|-----------------------------------------------------------------------------------------|
| <b>General Requirements</b>          |                                             |           |              |             |               |             |                                                                                         |
| 17.1                                 | Key Sheet                                   | Sheet     | 1            | 16          | 1             | 16          | Seawall Key sheet and Index of drawings including overall length of 4,343 lf.           |
| 17.2                                 | Horizontal Wall Geometry                    | Per Wall  | 1            | 12          |               | 12          | Determine Wall limits for sections to remain, to be reconstructed and new construction. |
| <b>Permanent Proprietary Walls</b>   |                                             |           |              |             |               |             |                                                                                         |
| 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           |                                                                                         |
| <b>Temporary Proprietary Walls</b>   |                                             |           |              |             |               |             |                                                                                         |
| 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           |                                                                                         |
| <b>Cast-in-Place Retaining Walls</b> |                                             |           |              |             |               |             |                                                                                         |
| 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           |                                                                                         |

**Project Activity 17: Retaining Walls**

| Task No.                                      | Task                                    | Unit      | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------|-----------------------------------------|-----------|--------------|-------------|---------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Other Retaining Walls and Bulkheads</b>    |                                         |           |              |             |               |             |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 17.17                                         | Design                                  | EA Design | 1            | 32          |               | 32          | Includes the design of king piles = 8 hrs, vertical piles = 8 hrs, concrete cap 8 hrs, and concrete panels = 8 hrs. = 32 hrs.                                                                                                                                                                                                                                                                                           |
| 17.18                                         | Vertical Wall Geometry                  | EA Wall   | 2            | 16          |               | 32          | Determine Wall vertical geometry for sections to be reconstructed and new construction.                                                                                                                                                                                                                                                                                                                                 |
| 17.19                                         | General Notes, Tables and Misc. Details | Sheet     | 1            | 16          | 1             | 16          |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 17.20                                         | Wall Plan and Elevations                | Sheet     | 10           | 12          | 10            | 120         | Includes 4,343 lf / 450 lf/sheet = 10 sheets (40 Scale)                                                                                                                                                                                                                                                                                                                                                                 |
| 17.21                                         | Details                                 | Sheet     | 1            | 120         | 1             | 120         | Seawall Section for new construction = 20 hrs.<br>Seawall Section for existing condition missing panels and cap (retrofit) = 16 hrs.<br>Concrete Panel Details = 8 hrs.<br>Concrete Cap Details including open joints and expansion joints = 24 hrs.<br>Connection Details to existing Seawalls to remain = 12 hrs.<br>Special Details at Pump Station = 20 hrs.<br>Reinforcing Bar List = 2 sheets at 10 hrs = 20 hrs. |
| <b>17. Structures - Retaining Walls Total</b> |                                         |           |              |             | <b>13</b>     | <b>348</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Project Activity 18: Miscellaneous Structures**

Estimator: Oscar J. Cruz, P.E.

Indian Creek Drive Seawall

0

| Representing             | Print Name          | Signature / Date |
|--------------------------|---------------------|------------------|
| City of Miami Beach      |                     |                  |
| Chrome Engineering, Inc. | Oscar J. Cruz, P.E. |                  |

**NOTE: Signature Block is optional, per District preference**

| Task No.                                   | Task                                                                | Unit            | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|--------------------------------------------|---------------------------------------------------------------------|-----------------|--------------|-------------|---------------|-------------|----------|
| <b>Concrete Box Culvert</b>                |                                                                     |                 |              |             |               |             |          |
| 18.1                                       | Concrete Box Culverts                                               | EA              | 0            | 0           |               | 0           |          |
| 18.2                                       | Concrete Box Culverts Extensions                                    | EA Extension    | 0            | 0           |               | 0           |          |
| 18.3                                       | Concrete Box Culvert Data Table Plan Sheets                         | Sheet           | 0            | 0           | 0             | 0           |          |
| 18.4                                       | Concrete Box Culvert Special Details Plan Sheets                    | Sheet           | 0            | 0           | 0             | 0           |          |
| <b>Strain Poles</b>                        |                                                                     |                 |              |             |               |             |          |
| 18.5                                       | Steel Strain Poles                                                  | Initial Config  | 0            | 0           |               | 0           |          |
|                                            |                                                                     | EA Add'l Config | 0            | 0           |               | 0           |          |
| 18.6                                       | Concrete Strain Poles                                               | Initial Config  | 0            | 0           |               | 0           |          |
|                                            |                                                                     | EA Add'l Config | 0            | 0           |               | 0           |          |
| 18.7                                       | Strain Pole Data Table Plan Sheets                                  | Sheet           | 0            | 0           | 0             | 0           |          |
| 18.8                                       | Strain Pole Special Details Plan Sheets                             | Sheet           | 0            | 0           | 0             | 0           |          |
| <b>Mast Arms</b>                           |                                                                     |                 |              |             |               |             |          |
| 18.9                                       | Mast Arms                                                           | EA Design       | 0            | 0           |               | 0           |          |
| 18.10                                      | Mast Arms Data Table Plan Sheets                                    | Sheet           | 0            | 0           | 0             | 0           |          |
| 18.11                                      | Mast Arm Special Details Plan Sheets                                | Sheet           | 0            | 0           | 0             | 0           |          |
| <b>Overhead/Cantilever Sign Structures</b> |                                                                     |                 |              |             |               |             |          |
| 18.12                                      | Cantilever Sign Structures                                          | EA Design       | 0            | 0           |               | 0           |          |
| 18.13                                      | Overhead Span Sign Structures                                       | EA Design       | 0            | 0           |               | 0           |          |
| 18.14                                      | Special (Long Span) Overhead Span Sign Structures                   | EA Design       | 0            | 0           |               | 0           |          |
| 18.15                                      | Monotube Overhead Sign Structure                                    | EA Design       | 0            | 0           |               | 0           |          |
| 18.16                                      | Bridge Mounted Signs (Attached to Superstr.)                        | EA Design       | 0            | 0           |               | 0           |          |
| 18.17                                      | Overhead and Cantilever Sign Structures Data Table Plan Sheets      | Sheet           | 0            | 0           | 0             | 0           |          |
| 18.18                                      | Overhead and Cantilever Sign Structures Special Details Plan Sheets | Sheet           | 0            | 0           | 0             | 0           |          |
| <b>High Mast Lighting</b>                  |                                                                     |                 |              |             |               |             |          |
| 18.19                                      | Non-Standard High Mast Lighting Structures                          | EA Design       | 0            | 0           |               | 0           |          |
| 18.20                                      | High Mast Lighting Special Details Plan Sheets                      | Sheet           | 0            | 0           | 0             | 0           |          |
| <b>Noise Barrier Walls (Ground Mount)</b>  |                                                                     |                 |              |             |               |             |          |
| 18.21                                      | Horizontal Wall Geometry                                            | EA Wall         | 0            | 0           |               | 0           |          |
| 18.22                                      | Vertical Wall Geometry                                              | EA Wall         | 0            | 0           |               | 0           |          |
| 18.23                                      | Summary of Quantities - Aesthetic Requirements                      | Sheet           | 0            | 0           | 0             | 0           |          |
| 18.24                                      | Control Drawings                                                    | Sheet           | 0            | 0           | 0             | 0           |          |
| 18.25                                      | Design of Noise Barrier Walls Covered by Standards                  | EA Design       | 0            | 0           |               | 0           |          |
| 18.26                                      | Design of Noise Barrier Walls Not Covered by Standards              | EA Design       | 0            | 0           |               | 0           |          |
| 18.27                                      | Aesthetic Details                                                   | LS              | 1            | 0           |               | 0           |          |

**Project Activity 18: Miscellaneous Structures**

| <b>Special Structures</b>                   |                                                                                                                       |              |   |    |          |           |                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------|---|----|----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 18.28                                       | Fender System                                                                                                         | LS           | 1 | 0  |          | 0         |                                                                                                                                                                                                                                                                                                                                |
| 18.29                                       | Fender System Access                                                                                                  | LS           | 1 | 0  |          | 0         |                                                                                                                                                                                                                                                                                                                                |
| 18.30                                       | Special Structures                                                                                                    | LS           | 1 | 0  |          | 0         |                                                                                                                                                                                                                                                                                                                                |
| 18.31                                       | Other Structures                                                                                                      | LS           | 1 | 48 |          | 48        | Post Design Services:<br>1. 1 meeting/month x 12 months x 2 hrs = 24 hrs.<br>2. Responses to RFI's, Assume 4 RFI's at 2 hours = 8 hrs.<br>3. Shop Drawing Reviews: Total = 16 hrs.<br>3a. Prestressed Piles = 4 hrs.<br>3b. Prestressed King Piles = 4 hrs.<br>3c. Concrete Panels = 4 hrs.<br>3d. Aluminum Hand Rail = 4 hrs. |
| <b>Ancillary Structures Report</b>          |                                                                                                                       |              |   |    |          |           |                                                                                                                                                                                                                                                                                                                                |
| 18.32                                       | Condition Evaluation of Signal and Sign Structures, and High Mast Light Poles                                         | EA structure |   | 0  | 0        | 0         |                                                                                                                                                                                                                                                                                                                                |
| 18.33                                       | Condition Evaluation of Signal and Sign Structures, and High Mast Light Poles (No As built or Design Plans Available) | EA structure |   | 0  | 0        | 0         |                                                                                                                                                                                                                                                                                                                                |
| 18.34                                       | Analytical Evaluation of Signal and Sign Structures, and High Mast Light Poles                                        | EA structure |   | 0  | 0        | 0         |                                                                                                                                                                                                                                                                                                                                |
| 18.35                                       | Ancillary Structures Report                                                                                           | LS           | 1 | 0  |          | 0         |                                                                                                                                                                                                                                                                                                                                |
| <b>18. Structures - Miscellaneous Total</b> |                                                                                                                       |              |   |    | <b>0</b> | <b>48</b> |                                                                                                                                                                                                                                                                                                                                |

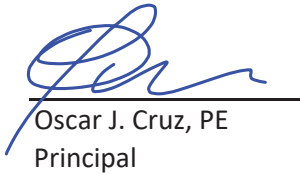
**Description:** Specialty Inspector Services  
**Client:** City of Miami Beach  
**Consultant:** Chrome Engineering, Inc.  
**Project:** Seawall at Indian Creek Drive from 25th St. to 41st. (Concrete Pile and Panel System)

**Date:** 6/15/2021

| Item | Wall No. | Special Inspection Description | LF/Day | Wall Length (ft) | Inspections Required |
|------|----------|--------------------------------|--------|------------------|----------------------|
| 1    | 1        | New Seawall Construction       | 75     | 2732             | 37                   |
| 2    | 1        | Existing Seawall to remain     | 110    | 1612             | 15                   |
|      |          |                                |        | Subtotal         | 52                   |

| Special Inspector Name: | Rate   | Inspection Duration (hrs) | Fee \$   | Total Inspections | Total Fee (\$) |
|-------------------------|--------|---------------------------|----------|-------------------|----------------|
| Morgan Villanueva, P.E  | 120.94 | 3.90                      | \$471.25 | 52                | \$24,505.00    |

Prepared By:  
Position:

  
Oscar J. Cruz, PE  
Principal