

LOCHNER

HW Lochner, Inc.

WORK ORDER INITIATION FORM for the CITY OF CLEARWATER

Date: _____

Consultant Project Number: _____

City Project Number: 19-0040-EN

City Plan Set Number: _____

1. PROJECT TITLE:

Memorial Causeway Dynamic LED Lighting

2. SCOPE OF SERVICES:

Lochner will provide coordination to obtain as-builts and permitting requirements from FDOT and the USCG Waterways to design dynamic LED color aesthetic lighting to the bridge columns 4, 5, 6, 7 and over the trail between land column 3 and water column 4. This type of lighting will require Lochner to coordinate with City Staff, permit agencies, manufacturers of dynamic lighting systems and utility owners. Design plans will be developed utilizing existing as-builts and aerials from concept drawings provided by a lighting manufacturer that provides the best alternative for the Memorial Causeway Bridge. Plans will detail the design and implementation of power and digital control wiring for the dynamic lighting that can be controlled remotely by the City staff. Lochner will also provide support through pre-bid and bid tabulation for a qualified contractor to be selected. If it is determined that doing so is necessary, Lochner will provide a rationale to define a sole source for any lighting system or product. Lochner will also provide cost estimates at each phase of their design work (i.e. each deliverable).

I. PRE-DESIGN PHASE

Coordinate the requirements to design and install dynamic color aesthetic bridge lighting with the asset managing agency.

Document needed permits and maintenance requirements with the Florida Department of Transportation (FDOT) and United States Coast Guard (USCG) Waterways.

Provide dynamic color aesthetic lighting concepts, video/images and manufacturer details to obtain City approval.

Coordinate a Maintenance of Agreement (MOA) through permitting with FDOT, to be administered between FDOT/City, for the City to maintain the dynamic bridge lighting.

Provide an environmental assessment memo documenting no -impacts to marine wildlife.

Obtain existing as built plans to determine the current electrical system in place.

II. DESIGN PHASE

Design plans for dynamic LED color aesthetic lighting detailing up lighting to illuminate the Memorial Causeway Bridge - water columns 4, 5, 6, 7 and over the trail between land column 3 and water column 4. This design will be using the dynamic LED color lighting selected by the City Council/City Staff. The intent of the design will be to use the latest proven technology from manufacturers that have provided their product to other Cities on bridges. Lochner will utilize existing load centers installed for the existing roadway bridge deck lighting, column and navigation lighting. Lochner will also add additional conduit for control cables to the dynamic lighting positions for control operations to each light and for remote operation. Structural Analysis and Design Details will be included with the lighting design. FDOT Permitting will require Structural Analysis and Details for the mounting of any lights and cabling on the bridge. This project will be required to meet the same criteria as provided on the Skyway Bridge Lighting Plans being constructed currently. Design plans will contain the dynamic LED lighting design, wiring, cabling, notes, any specifications, load centers, remote operation control for a complete dynamic lighting system.

Provide design of a remote off-site system control of the dynamic color aesthetic lighting that shall operate the lights from a City computer terminal or wireless device in close proximity of the bridge where the lights can be viewed and programmed for color or operational changes.

Submit plans to be reviewed and obtain permits from the FDOT online site permitting and the City of Clearwater Engineering, City of Clearwater Environmental Office and the United States Coast Guard (USCG) for a waterway access permit.

III. FINAL DESIGN PHASE

Lochner will finalize the lighting design plans detailing any structural details needed for mounting dynamic LED lighting at various locations under the bridge and conduit for lighting control/power operations. Comments and responses to the FDOT online site permitting and any City comments will be implemented into the plans. Lochner will obtain a USCG waterway permit, and access permit for the bridge lighting and finalize once the City completes the MOA.

IV. BIDDING AND CONSTRUCTION PHASE

It shall be the responsibility of Lochner to aid the City with the procurement/bidding tabulation of a qualified responsive contractor. Review contractor's Baseline Schedule and provide recommendation to the City for approval. Lochner will also attend a Pre-Bid and

Preconstruction Conference to support the Design Project. Lochner will also review the necessary shop drawings and respond to RFI's from the awarded contractor.

V. CONSTRUCTION ENGINEERING INSPECTION PHASE – N/A

3. PROJECT GOALS:

Lochner will provide signed and sealed design plans of the dynamic LED bridge lighting system that can be operated remotely, maintainable by the City of Clearwater, permits from USCG and FDOT for work within their right-of-way, any necessary specifications, site visits of existing infrastructure, lighting/load calculations, lighting documentation, submittals of plans in PDF and paper copies of design plans as needed by the City:

4. BUDGET

See attachment B.

This price includes all labor and expenses anticipated to be incurred by HW Lochner, Inc. for the completion of these tasks in accordance with Professional Services Method "B" – Lump Sum – Percentage of Completion by Task, **for a fee not to exceed One Hundred Sixty-Six Thousand Six Hundred Fifty-Six Dollars (\$166,656.00)**.

Permit fees are not anticipated from FDOT or the USCG.

5. SCHEDULE:

The project is to be completed **190 days** from issuance of notice-to-proceed. Cost estimates will be provided at each phase of the design work (i.e. each deliverable). The project deliverables are to be phased as follows:

Pre-Design Phase	5 calendar days
60% Construction Plans and Permit Applications	60 calendar days
Permit Review (FDOT & USCG)	30 calendar days
90% Construction Plans	45 calendar days
Permit Review (FDOT & USCG)	30 calendar days
Final Construction Documents	20 calendar days

6. STAFF ASSIGNMENT (Consultant):

PM/EOR; Rob R Swann, PE

Electrical Engineer and Lighting Design; Alex Gari PE, Bruce Miller

Designer; Glen Won.

Structural Engineer; Doug Hershey, PE, Jose Hernandez, PE

Planner; Lee Beasley, AICP.

City PM; Catherine Corcoran, Engineering Project Manager

7. CORRESPONDENCE/REPORTING PROCEDURES:

ENGINEER's project correspondence shall be directed to:

Rob R Swann, PE

All City project correspondence shall be directed to:

Catherine Corcoran, Project Manager with copies to others as may be appropriate.

8. INVOICING/FUNDING PROCEDURES:

For work performed, invoices shall be submitted monthly to the:

**City of Clearwater, Engineering Department
Attn. Veronica Josef, Senior Staff Assistant
PO Box 4748
Clearwater, Florida 33758-4748.**

City Invoicing Code: ENGF200002-DSGN-SVC

9. INVOICING PROCEEDURES

At a minimum, in addition to the invoice amount(s) the following information shall be provided on all invoices submitted on the Work Order:

- A. Purchase Order, Project and Invoice Numbers and Contract Amount.
- B. The time period (begin and end date) covered by the invoice.
- C. A short narrative summary of activities completed in the time period
- D. Contract billing method – Lump Sum or Cost Times Multiplier
- E. If Lump Sum, the percent completion, amount due, previous amount earned and total earned to date for all tasks (direct costs, if any, shall be included in lump sum amount).
- F. If Cost Times Multiplier, hours, hourly rates, names of individuals being billed, amount due, previous amount earned, total earned to date for each task and other direct costs (receipts will be required for any single item with a cost of \$50 or greater or cumulative monthly expenses greater than \$100).
- G. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. SPECIAL CONSIDERATIONS:

The consultant named above is required to comply with Section 119.0701, Florida Statutes (2013) where applicable.

N/A

PREPARED BY:

**Bill Howell, PE
Vice President
H.W. Lochner, Inc.**

Date

APPROVED BY:

**Tara Kivett, PE
City Engineer
City of Clearwater**

Date



CITY OF CLEARWATER ENGINEERING DEPARTMENT

WORK ORDER INITIATION FORM CITY DELIVERABLES

1. **FORMAT**

The design plans shall be compiled utilizing the following methods:

1. City of Clearwater CAD standards.
2. Datum: Horizontal and Vertical datum shall be referenced to North American Vertical Datum of 1988 (vertical) and North American Datum of 1983/90 (horizontal). The unit of measurement shall be the United States Foot. Any deviation from this datum will not be accepted unless reviewed by City of Clearwater Engineering/Geographic Technology Division.

2. **DELIVERABLES**

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20' unless approved otherwise. Upon completion the consultant shall deliver all drawing files in digital format with all project data in Autodesk Civil 3D file format. If not available Land Desktop files are still acceptable, however the City or Clearwater is currently phasing out Land Desktop.

NOTE: If approved deviation from Clearwater CAD standards are used the Consultant shall include all necessary information to aid in manipulating the drawings including either PCP, CTB file or pen schedule for plotting. The drawing file shall include only authorized fonts, shapes, line types or other attributes contained in the standard release of Autodesk, Inc. software. All block references and references contained within the drawing file shall be included. Please address any questions regarding format to Mr. Tom Mahony, at (727) 562 4762 or email address Tom.Mahony@myClearwater.com.

All electronic files (CAD and Specification files) must be delivered upon completion of project or with 100% plan submittal to City of Clearwater.

MEMORIAL CAUSEWAY DYNAMIC LED LIGHTING

HW Lochner, Inc.

WORK ORDER INITIATION FORM PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
1.0	Pre- Design			
1.1	Coordinate with maintaining agency		\$1,000.00	
1.2	Permit requirements		\$1,000.00	
1.3	Dynamic LED Color Concepts		\$7,000.00	
1.4	Environmental Assessment Memo		\$2,000.00	
				\$11,000.00
2.0	Design – Plans Layout			
2.1	Scalable Aerial for plan view	\$0	\$1,000.000	
2.2	Incorporate sections of original plans – traced	\$0	\$15,000.00	
				\$16,000.00
3.0	Design Plans and Specifications			
3.1	90% Submittal		\$88,000.00	
3.2	100% Submittal		\$28,656.00	
3.3	Final Construction Documents		\$0	
3.4	Task Allowance (10%)		\$0	
				\$116,656.00
4.0	Permitting Services			
4.1	FDOT Permit and MOA with City		\$8,000.000	
4.2	US Coast Guard		\$4,000.00	
				\$12,000.00
5.0	Bidding and Construction Phase Services			
5.1	Preconstruction Conference		\$2,500.00	
5.2	Contractors RFI's		\$4,000.00	
5.3	Shop Drawing Review		\$4,500.00	
				\$11,000.00
Grand Total				\$166,656.00