

TASK ORDER NO. 07
Design Services for the 6th Ave. South Circuits 0601, 0602 & 0604
Storm Hardening & Voltage Conversion

THIS TASK ORDER ("Task Order") is made on _____, between the **City of Lake Worth**, a Florida municipal corporation located at 7 North Dixie Highway, Lake Worth, Florida 33460 ("City") and **E.C. Fennell, PA**, a Florida corporation ("Consultant").

1.0 Project Description:

The City desires the Consultant to provide those services as identified herein and generally described as: **6th Ave. South Circuits 0601, 0602, & 0604 Storm Hardening & Voltage Conversion** (the "Project"). The Project is described in the consultant's proposal, dated 3/16/2021, and is attached hereto as Exhibit "1" and incorporated herein.

2.0 Scope

Under this Task Order, the Consultant will provide professional services to the City as detailed in the **Consultant's proposal attached hereto and incorporated herein as Exhibit "1"**.

3.0 Schedule

The services to be provided under this Task Order shall be completed within **214** calendar days from the City's approval of this Task Order or the issuance of a Notice to Proceed.

4.0 Compensation

This Task Order is issued for a lump sum, not to exceed amount of, **\$611,419**. The attached proposal identifies all costs and expenses anticipated in the lump sum, not to exceed amount.

5.0 Project Manager

The Project Manager for the Consultant is; Jolie Gonzalez, phone: 561-508-9189; email: JGonzalez@ecfconsultants.com ; and, the Project Manager for the City is Robert Pirson, phone: 561-586-7437; email: rpirson@lakeworthbeachfl.gov

6.0 Progress Meetings

The Consultant shall schedule periodic progress review meetings with the City Project Manager as necessary but every 30 days as a minimum.

7.0 Authorization

This Task Order is issued in compliance with the Consultants' Competition Negotiation Act, section 287.055, Florida Statutes, and pursuant to the Agreement for Professional Services between the City of Lake Worth and the Consultant, dated **March 16th, 2018** ("Agreement" hereafter). If there are any conflicts between the terms and conditions of this Task Order and the Agreement, the terms and conditions of the Agreement shall prevail; however, the specific scope of services set forth in this Task Order shall take precedence over any other more general description of services.

IN WITNESS WHEREOF the parties hereto have made and executed this Task Order on the day and year first above written.

CITY OF LAKE WORTH BEACH, FLORIDA

By: _____
Betty Resch, Mayor

ATTEST:

By: _____
Deborah M. Andrea, City Clerk

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

By: _____
Glen J. Torcivia, City Attorney

APPROVED FOR FINANCIAL
SUFFICIENCY

By: _____
Bruce T. Miller, Financial Services Director

CONTRACTOR: E.C. Fennell, PA

[Corporate Seal]

By: Jolenny
Print Name: Jolie Gonzalez
Title: Manager

STATE OF _____)
COUNTY OF _____)

The foregoing instrument was acknowledged before me this 19 day of March, 2021, by Jolie Gonzalez who was physically present, as Manager (title), of E.C. Fennell, PA, a Florida Corporation, which is authorized to do business in the State of Florida, and who is personally known to me or who has produced the following personally as identification.

Notary Public

Ruth Esther Abily
Print Name: Ruth Esther Abily
My commission expires: 10/13/2023

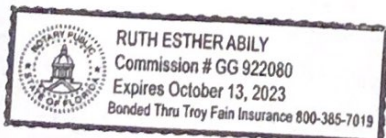


EXHIBIT "1"

(Consultant's Proposal)



City of Lake Worth Beach 6th Ave South Circuits 0601, 0602 & 0604 Storm Hardening & Voltage Conversion Design

Project Description

This project includes providing engineering services to storm harden three circuits and convert them from 4kV to 26kV. ECF will also provide planning services to model four circuits of 6th Ave South Substation for the City of Lake Worth Beach. ECF will also be identifying improvement possibilities for connections between circuits for reliability and constructability improvement.

Scope of Work

This project will include the project management and design for storm hardening to 145 mph criteria for the following circuits: 0601, 0602, and 0604. ECF will ensure that construction standards that are provided by the City of Lake Worth Beach will be applied during the design of this project and will meet NESC guidelines. All circuits will be designed to meet 26kV ratings. ECF will provide construction sequencing plans to be utilized during the construction phase of the voltage conversion. ECF will provide engineering support during construction. ECF to complete system modeling to support construction sequencing and circuit loading during the voltage conversion. CLWB will coordinate conversion of circuits during the construction phase.

ECF will provide project management for the 0601, 0602, and 0604 circuit design and standards development with a team made up of representatives from each technical discipline contributing to the final output for the project.

Below is a breakdown of the tasks provided:

Project Work Plan

Provided is breakdown of the work plan being applied and curated for this specific project so that all teams stay on task and continuously updated throughout the process.

- Scope of work explaining what, when and how we will be moving forward and providing updates.
- Deliverables received provided.
- Providing and identifying proposed solutions for all project concerns.
- Established project control system
- This Work Plan creates a basis for project progress, reporting, scheduling and budgeting throughout life of project.

Project Reviews



We hope to review our work plan along with any additional questions at hand with you before and throughout this projects process. This review along with continuous open communication will help fortify our coordination throughout for all parties.

Content Outline

1- Project Management

- 1-A Project Schedule Coordination
- 1-B Project Updates
- 1-C Document Control
- 1-D Project Updates and Review Meetings

2- Planning

- 2-A Modeling *turn over milsoft model and it have everything with the circuit in the model, low voltage, cap banks, switches, fault current
- 2-B Arcflash studies
- 2-C Powerflow Analysis
- 2-D Fusing Coordination – trip savers coordinate with sub breaker

3- Design

- 3-A Drawing Draft
- 3-B Field Investigation Data
- 3-C Field Data Processing
- 3-D Conceptual Design
- 3-E Conceptual Design Approval
- 3-F Engineering Design Data
- 3-G Construction Framing Standard Modifications
- 3-H Data for Ductile Iron/Concrete pole bore sheets
- 3-I Construction Specifications
- 3-J Inventory/Material Data

4- Review for Finalizations

- 4-A Modification updates from CLBW
- 4-B Bid Package Finalizations

5- Construction & Permitting

- 5-A Project Review Meetings
- 5-B Engineering Support
- 5-C OH Construction Standards
- 5-D Permitting Activities
- 5-E Material Procurement
- 5-F Construction Drawings
- 5-G Assurance of Quality
- 5-H Design & Construction review
- 5-I Completed Construction Follow ups -asbuilts



6- Project Schedule

- 6-A Key Milestone Updates
- 6-B IFC Plans
- 6-C Construction Standards
- 6-D Completed Materials List

7- Cost Estimates

- 7-A Circuit 0601, 0602 & 0604
- 7-B 0601-61 Poles
- 7-C 0602-221 Poles
- 7-D 0604-85 Poles
- 7-E Design Totals

8- Deliverables

- 8-A Provided Documentation
- 8-B Progress Design Submittals
- 8-C Milsoft Model
- 8-D As-Built Plans
- 8-E Construction Standard Package Update
- 8-F Final Design
- 8-G Engineer Estimate of Probable Construction Cost

1 - Project Management

Target(s)

- Thorough and efficient management of all ECF deadlines and tasks.
- Open and continuous communication to fortify understanding throughout whole project life.
- Work Plan, Budget, and schedule management hitting all scheduled deadlines within approval times.

1-A Project Schedule Coordination

Projected Deliverables(s):

- Project coordination and open communication
- Projected project schedule & deadlines
- Monthly updates, internal meeting notes and consultations

Through communication between project teams on both ends we are able to create and fortify continuous success throughout project life and ability to submit all tasks in an efficient and timely manner. This will include ECF providing an initial schedule after circuit maps and loading information has been provided and that will be updated on a monthly basis with consultation with CLWB on any upcoming or needed updates or questions at hand. Which includes input from the City of Lake Worth Beach on all tasks at hand that have any affect on the Project along with ECF's performance.



Communicate openly and coordinate accordingly with all project teams to complete each task assigned as stated in project schedule and scope of work.

Project will align in correspondence with City of Lake Worth Beach's expectations for quality, schedule, technical, codes applicable, manual procedures and Project work plan along with ECF internal standards for drawing, documentation and code.

Expectations: CLWB to provide prompt communication as to due date and project completion estimates

1-B Project Updates/Control

Projected Deliverable(s):

- Project updates
- Schedule/ Work plan updates
- Projected output status updates and deadlines

Updated work plans, schedule deadlines, and budgets in accordance with City of Lake Worth Beach approval as required.

ECF will provide Project output log and progress updates continuously throughout each Key milestone along with consultation of all updates and expectations.

Data of all major project control activities and action items will be logged and submitted in a timely manner.

Expectations:

All logs and progress updates will be consistent and open for a strong project outcome.

1-C Document Control

Projected Deliverable(s):

- Data system and control documents
- Consistent updates on project status and files
- Record retention

All support needed for data control and documentation will be provided to support, organize and document project throughout its life period.

ECF shall provide progress meeting agenda, minutes and action items for each monthly progress meeting. ECF shall also submit invoices monthly and shall include progress report of work completed, invoice and copy of staff and hours worked on each phase of the project.



Consistent updates will be provided using set systems that will archive and collect data associated with project per procedures manual. Including Log and comments of incoming and outgoing documents from ECF servers and designated archived documents secured.

Expectations:

Document and data log will be standardized per ECF procedures and updated continuously.

1-D Project Updates and Review Meetings

Projected Deliverable(s):

- Meeting minute submittals and updates
- Monthly updates, internal meeting notes and consultations
- Task expectations and action items

ECF will provide with minutes/invites for 30 min on weekly project progress meetings with CLWB for all updates, approvals and comments along with once a month 1-hour calls to provide thorough updates along with provided comments and analysis input on data submittals and production reports.

Any and all task expectations will be discussed and adjusted if need be and in accordance to City of Lake Worth Beach and ECF guidelines.

A schedule will be provided once approved on both sides for scheduled teleconference meetings and discussions on designated dates along with compiled minutes of in conference discussions or additional informative team minutes.

Expectations:

- Weekly 30 min review minutes on project progress.
- Monthly 1-hour teleconference meeting discussion and approval updates.
- Updated and thorough meeting minutes provided continuously throughout project life.

2- Modeling and System Planning

Projected Deliverable(s):

- Milsoft Model
- Reports
- Scheduled project outputs

A site visit and meetings with the City of Lake Worth Beach discussing standards, timeline schedule and budget are discussed will be set up and curated to properly commence planning and standardized outputs. Following finalizations ECF will begin.

2-A Modeling of 0601, 0602, 0603, & 0604



2-B Performing short circuit and Arcflash studies through data analysis and site visits, required for construction according to ECF and CLWU standards.

2-C Conducting Powerflow analysis through data analysis and site visits to determine circuit/transformer capacity for redundancy and planned outage feeding.

2-D Fusing coordination-1st Stage, 2nd Stage – to be coordinated with 6th AVE sub design and breaker settings. CLWB can provide fusing guidelines.

Expectations: Load data to be provided by CLWB

3- Design

Projected Deliverable(s):

- Design Criteria
- Construction Drawing 60%, 90%, 100%, IFC
- Estimated hours (monthly breakdowns)
- Project construction Estimates (both materials and labor)

Information review from all standards and project meetings including all data analysis and site visit entries. Summation of project Design Criteria for City of Lake Worth review and approval. Proposed final design according to designated design standards and procedures.

Guarantee scope and Design Criteria is up to standard and properly approved by City of Lake Worth. Will provide detailed base design for engineering and ECF will provide continuous updates throughout life of the project.

Below is the summary of activities for the overhead Feeder Design

3-A Drafting department to create background drawing from GIS system or existing CAD drawings

3-B Field Investigator to gathering the following information

- Pole location
- Pole type
- Span distance
- Heights attachments when applicable
- Framing
- Equipment on pole -Including franchise utilities, quantity, estimated size and type
- Accessibility

3-C Consolidate and process Data-from field and CLWB

3-D Conceptual Design to show in construction drawing all below grade utilities show on the Sunshine design ticket within 10 ft radius of proposed pole location.



3-E Conceptual Design Approval/CLBW

3-F Engineering Design

- Calculate load
- Determine wind loading using Pole Foreman
- Research equipment to provide recommendations to CLBW
- CLWB will provide equipment list of pole line hardware and materials. ECF to supplement with any additional materials needed to complete the project.
- Research environmental restrictions as to location of cable and depth
- Review lightning protection (LA) and add where needed
- Apply applicable CLBW standards
- Inventory material
- Create construction drawing and notes

3-G Add/modify construction framing standards as required to complete the project. CLWB to provide current framing and UG standards in CADD for review/reference.

3-H Provide pole bore sheets for each Ductile Iron or Concrete pole required to complete the project.

3-I Provide specifications for construction

3-J ECF to provide complete inventory list of materials required to complete the project. CLWB to provide list of approved/stocked materials to be utilized during construction.

Expectations:

- CLWB to provide load data and GIS information
- ECF will incorporate all City of Lake Worth's standards when possible and follow ECF protocol and standards at all times.
- CLWB to provide current construction standards

4- Review and finalization

- Update with recommendations from CLBW
- Finalize bid package

5- Construction & Permitting:

Projected Deliverable(s):

- ECF will meet all possible overhead/underground construction standards for City of Lake Worth and ECF guidelines.
- All standards will be up to date and reflect current systems.
- Will maintain an updated log of all key milestones and action items and answer all questions with pre-construction meetings.

5-A ECF will initiate and attend Pre-construction meeting to answer all questions and ensure all standards are being planned for and met.



5-B ECF to provide a 4 hours a week for the length of construction of each circuit to provide engineering support during construction. This will be answering engineering questions or RFIs.

5-C Review and update City of Lake Worth Beach's construction standards for overhead pole top, equipment construction, guying and anchoring construction, grounding and arresters construction, secondary and services construction as required.

5-D Review project permits and determine/crosscheck as needed. Identify additional agencies or utilities that require permits from other agencies during construction.

5-E Create list of items of material items projected to be required for each phase of project. Listed by structure type, description identification, manufacturer and catalog number or proper specifications required. Quantity estimates of all items required with appropriate projections applies to allow for any possible breakage or loss per classified material which will be up to standards and forwarded to City of Lake Worth accordingly.

5-F ECF will generate associated drawings required during the construction phase of project meeting CLWU and ECF standards as fit.

5-G All objectives established for project will be met to highest quality. ECF will assure this by collecting project-related data throughout the life of the project including, design and structure criteria, supporting calculations and equipment sizing. Which can and will be submitted to CLWU if asked or needed.

5-H Design and construction reviews will be compiled including preliminary plan drawings, design criteria and supporting data and calculations. All reviewed comments will be addressed and any changes needed will be incorporated.

5-I Completed Construction Follow ups of updated construction drawings with any additional changes that happened throughout life of project. Along with any additional assistance needed for close-out documentation of project with incorporated record drawings.

Expectations: CLWB will provide prompt communication regarding RFI's that come from the construction contractor

6- Project Schedule.

Projected Deliverable(s):

- Project schedule provided.
- IFC plans, construction standards, pole bores and complete materials list.

6-A ECF to provide a project schedule indicating key milestones, design submittal dates at 60/90/100%



throughout project life, including the schedule shall include an opportunity for review of draft documents, if necessary. The schedule should identify expectations of CLWB staff necessary to meet this deadline.

6-B All IFC plans and standards will be met to accordance.

6-C All construction standards will be pre-reviewed and met with CLWU.

6-D All material lists and pole bores will be pre-established and reviewed with CLWU.

Expectations: CLWB to provide prompy feedback regarding schedule dates

7- Cost Estimate

Task for Circuits 0601, 0602, & 0604	People	Hours	Total
Obtain data from CLWB			
Modeling of Circuits for 0601, 0602, 0603 & 0604	1	334.4	334.4
Modeling, Short Circuit, Arc Flash, Looping/redundancy/outage feeding, coordination		334.4	334.4
Total Planning Cost			\$ 89,034

Task 0601-161 poles	Total
Drafting Total	168
Design Total	724
Review Total	248
Construction Total	80
Total hour for task 0601	1220
Total Cost for task 0601	\$ 162,420

Task 0602 -221 poles	Total
Drafting Total	168
Design Total	1046
Review Total	248
Construction Total	88
Total hour for task 0602	1550
Total Cost for task 0602	\$203,670

Task 0604 -85 poles	Total
Drafting Total	128
Design Total	731
Review Total	248



Construction Total	64
Total hour for task 0604	1171
Total Cost for task 0604	\$ 156,295

Total NTE: \$611,419

8-Deliverables

8-A ECF to deliver the following documents as consistent deliverables.

- Project Schedule updated monthly
- Project Weekly Updates
- Autocad Drawings
- Permit drawings such as Plan & Profile drawings
- CLWB to apply for FDOT/PBC permits and provide ECF with the permitting guidelines
- Excel inventory sheet
- Pole boring sheets

8-B ECF to provide a project schedule indicating key milestones, progress of design submitted at 60%, 90%, 100% throughout project life and IFC Plans.

8-C Milsoft Model of 0601, 0602, & 0604 Circuits

8-D As-Built plans

8-E Any new, revised or updated construction standards required to complete the project shall be added to the Construction Standards package and open for any questions throughout all review meetings and will be updated according to standard and expectations.

8-F Final design needs to include, locations for reclosers, switch tie-points & open-points converting the radial system to a grid/mesh electrical distribution system when applicable.

Expectations: CLWB to return review comments promptly