
PROPOSAL FOR PROFESSIONAL SERVICES

Task Order 15-3
Architectural & Engineering Design Services
MLK Community Center
Roof Structure Analysis, Roof Replacement and Solar System Design
300 Catherine Street
Key West, Florida

Prepared for
City of Key West Engineering Services Department

February 8, 2016

William P Horn Architect, PA

915 Eaton Street
Key West, Florida 33040
305-296-8302

BACKGROUND AND OBJECTIVES

The existing structure of the MLK Community Center was constructed approximately in 1957 and is a two story CMU building with precast pre-stressed double tee floor and roof decks. The existing roof is experiencing significant leaks and water intrusion into the interior. The City is expressing interest in using the roof deck surface for solar swimming pool water heating needs or alternatively for solar PV array.

Before proceeding with possible solar system designs for the roof deck the City wants the existing roof deck to be evaluated for structural integrity. The intent of the evaluation is to provide a professional opinion of the overall structural adequacy and feasibility of additional loads from proposed mechanical and or electrical systems.

Once the structural evaluation of the existing roof deck is complete we will know if a solar pool hot water system is possible or not. Then we can proceed with whatever system is possible or is the best option. A new roofing system will be wanted in any case. Work will include the following tasked listed below.

SCOPE OF WORK

TASK 1 – STRUCTURAL REPORT OF THE EXISTING ROOF DECK.

- 1.1 Perform site visit and evaluation of the roof deck.**
- 1.2 Prepare preliminary report with findings and coordinate with the City.**
- 1.3 Incorporate any comments or changes.**
- 1.4 Review the final report with the City and provide final report.**

TASK 2 – PRELIMINARY DESIGN AND DEVELOPMENT OF NEW ROOFING AND SOLAR SYSTEMS - FUTURE TASK.

- 1.1 Perform site visit and evaluation of the existing roofing system. Inspect existing pool H2O circulation system & electrical service components and electric use records.**
- 1.2 Prepare preliminary new roofing system design and coordinate with the City. Size PV system to accommodate current electric service loads. Size solar water heating requirements. Prepare preliminary design of the water heating and PV solar panel system and coordinate with the city.**
- 1.3 Incorporate any comments or changes.**
- 1.4 Submit design to HARC for approval and attend HARC meeting.**

TASK 3- FINAL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS- FUTURE TASK.

- 1.1 Prepare final construction documents and specifications and coordinate with the city.**
- 1.2 Incorporate any comments or changes.**
- 1.3 Finalize documents and give city PDF files and five printed sets, signed and sealed for bidding and for obtaining building permits.**

TASK 4- BID PHASE SERVICES- FUTURE TASK.

- 1.1 Pre- bid meeting.**
- 1.2 Bidder questions and bid review.**
- 1.3 Written recommendation of best responsive bid proposal.**

TASK 6- CONSTRUCTION ADMINISTRATION PHASE- FUTURE TASK.

- 1.1 Pre-construction meeting.**
- 1.2 Shop drawing reviews.**
- 1.3 Site visits to review work.**
- 1.4 Certify substantial completion.**
- 1.5 Certify final completion.**
- 1.6 Prepare and sign & seal record drawings.**

DELIVERABLES

1. Site visit and roof deck and roofing system evaluation.
2. Preliminary and final structural report on roof deck.
3. Preliminary design of new roofing system and Solar pool water heating & PV system.
4. Final construction documents and specifications for a new roofing system and Solar PV system.
5. Substantial completion certification.
6. Final completion certification.
7. Signed and sealed record drawings.

ASSUMPTIONS

1. City will furnish all pertinent documents and site specific data in its possession regarding the project area in a timely matter.

2. City will provide access to the roof deck and interior.
3. It is understood that the work may be terminated at the end of any task, if the City deems the project has become infeasible or impractical.
4. The HARC submittals for the new roofing and the Solar PV system will be at the same time.

COMPENSATION

The proposed total lump sum fee compensation for this scope of work is **\$35,067.50**

Basic Services

Task 1 – Structural Report

Principal Architect: 5 hours x \$225/ hr = \$1,125.00
 Site visits, coordination and review.

Structural Engineer:
 Field Survey and Report \$3,900.00
 Total= \$5,025.00

Task 2- Preliminary Design of New Roofing System & Solar Systems

Principal Architect: 12 hours x \$225/hr= \$2,700.00
 Site visit, coordination, design, HARC application and meeting.

Draftsperson: 15 hours x \$95/hr= \$1,425.00

Structural Engineer:
 System design and drawings. \$2,560.00
 Total= \$6,685.00

Task 3- Construction Documents and Specifications

Principal Architect: 15 hours x \$225/hr= \$3,375.00
 Coordination, design, construction documents.

Draftsperson: 24 hours x \$95/hr= \$2,280.00

Structural Engineer:
 Construction documents \$4,120.00
 Total= \$9,775.00

Task 4- Bid Phase

Principal Architect: 6.5 hours x \$225/hr= \$1,462.50
Pre-bid meeting, bid questions and review and bidder recommendation.

Structural Engineer: 5 hours x \$160/hr= \$800.00
Pre-bid meeting bid questions and review.
Total= \$2,262.50

Task 5- Construction Administration Phase

Principal Architect: 22 hours x \$225/hr= \$4,950.00
Pre-construction meeting, site visits, questions and shop dwg. reviews, certifications and record drawings.

Structural Engineer: 22 hours x \$160/hr= \$3,520.00
Pre-construction meeting, site visits, questions and shop dwg. reviews, certifications and record drawings.

Draftsperson: 30 hours x \$95/hr= \$2,850.00

Total= \$11,320.00

Hourly Rates as per Annual Contract:

Principal Architect: \$225.00/HR
Architect: \$150.00/HR
Intern Architect: \$125.00/HR
Drafting: \$95.00/HR
MEP Engineer: \$150.00/HR

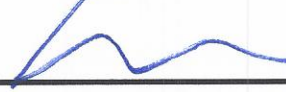
Structural Engineers Hourly Rates in excess of lump sum fees. (Artibus Design Engineering and Planning)

Engineer \$160.00/HR
Project Manager \$130.00/HR
Engineer/Structural Designer \$90.00/HR
CADD/BIM Technician \$ 85.00/HR
Administrative \$ 65.00/HR

Task Order 15-3 MLK Community Center

James K. Scholl
City Manager

Date



2/8/16

William P Horn, RA
Principal

Date



ARTIBUS DESIGN

ENGINEERING AND PLANNING

February 6, 2016

Attn: William P. Horn P.A.
915 Eaton Street,
Key West, FL 33040
Phone: 305-296-8302

Subject: **Structural Engineering Services Proposal**
For the structural evaluation of the existing concrete roof deck.
Design of Photo Voltaic solar array system and associated structural and electrical components.

Project Location:
MLK Community Pool & Community Center
300 Catherine St,
Key West, FL 33040

Dear Mr. Horn,

Artibus Design LLC is pleased to present this engineering services proposal for the evaluation of structural adequacy of the existing pre-cast concrete roof deck assembly located at the address above.

Our project understanding is as follows:

The existing structure of the MLK Community Center constructed approximately in 1957, two story CMU building with precast pre-stressed double tee floor and roof decks. The existing roof is experiencing significant leaks and water intrusion into interior.

Client is expressing interest of using roof deck surface for solar water heating needs or alternatively for Solar PV array.

The intent of the evaluation is to provide a professional opinion of the overall structural adequacy and feasibility of additional loads from proposed mechanical/electrical systems.

Design of a Solar PV or Solar water heating system and associated electrical, plumbing and structural components. If PV selected - the system shall be grid connected and will partially offset the electricity used for pool heating, pumping etc.

Scope of work:

We are proposing the following tasks:

Item A: Structural Engineering Services.

1. Perform site visit and evaluation of the roof deck.
2. Prepare preliminary report with findings and coordinate with the Architect.
3. Incorporate any comments or changes.
4. Review the final report with the Owner and Architect and provide 3 sets of certified report.

Item B: Solar PV or Solar water heating system Engineering Services.

1. Perform site visit and inspect existing electrical service components. Review electric use records.
2. Prepare preliminary design for solar water heating system and preliminary design for solar PV system. Provide commendations for system selection by the owner.
3. Prepare final design of the selected system and associated structural and electrical or plumbing components using selected basis of design equipment.

3706 N. ROOSEVELT BLVD,
SUITE I-208
KEY WEST, FL 33040

(305) 304-3512
INFO@ARTIBUSDESIGN.COM
WWW.ARTIBUSDESIGN.COM



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ENGINEERING AND PLANNING

4. Review final drawings with the Owner and Architect and provide 5 sets of certified drawings for bidding and construction.

Items provided by the owner: Full and unrestricted access to the roof deck and interior. Records of electricity use.

Cost of Work:

Item A: Structural Engineering Services.

Cost of Work this item (Lump-sum-basis): **\$3,900.00**
This phase will take approximately 4-6 weeks to complete.
Final timing is based on owners review and approval of preliminary reports.

Item B: Solar water heating or PV System Engineering Services.

Cost of Work this item (Lump-sum-basis): **\$6,680.00**
This phase will take approximately 5-7 weeks to complete.
Final timing is based on owners review and approval of preliminary reports.

Total Estimated Cost of Work Items A-B: \$ 10,580.00

Cost is on a lump sum basis. Any additional work and fees only with the authorization of the client.

Final timeline depends on the owners review and approval of preliminary designs and permitting agencies responsiveness.

Retainer: N/A. The retainer is not refundable if the work on the project started (Site visit performed, preliminary drawings created, etc.) The work will start within 7 days from the availability of executed proposal and retainer. Partial payments are due upon the completion of individual tasks and on monthly basis as a percentage of completion of individual tasks.

Deliverables: All drafts and preliminary plans or drawings will be delivered to the client in the electronic format via e-mail or other type of electronic sharing.

We will provide five (5) sets of final certified construction documents to the Client for bidding, permitting and construction purposes.

Any additional prints and all large format prints shall be billed based on the rates provided in the schedule of reimbursable expenses.

This proposal does not include any environmental studies, benthic or bathymetric surveys, permitting fees, landscaping plans, mitigation documents and fees, hydrographic surveys or studies, local agencies building permitting nor any other services not specifically described in the proposal but could be requested by the permitting agencies.

Sincerely,
Artibus Design LLC
Serge Mashtakov, P.E.
President

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