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Public Works

City Transit
263-8152

MEMORANDUM

Equipment Maintenance
Roadway Maintenance
Collection & Drainage
Building & Grounds
Engineering

To: Brian Stineman, Public Works Director
FROM: Jim Edgmond, City Engineer
DATE: August 1, 2016
RE: USACE Mandated repair to Mississippi River levee.

INTRODUCTION:

Earlier this year the City of Muscatine received the results of the Corps of Engineers (USACE) inspection of the Mississippi levee. One of the items identified as unacceptable is an approximately 400 foot long section of the levee that the toe on the river side has sloughed off and eroded away. The City as the sponsor of the levee is responsible to repair this defect. The City has two years to accomplish this work. It is Public Works plan to survey and design the solution this year prior to budget so the repair cost can be estimated and included in the budget for next year and this will still allow the repair to be done prior to the reinspection by the USACE. Because this defect was not known about prior to the budgeting process, this expense is not included in the current budget.

BACKGROUND:

The City requested a cost proposal from Martin and Whitacre and Shoemaker-Haaland to do this survey work and basic design and cost estimate. Martin and Whitacre responded with the proposal attached and Shoemaker-Haaland decided to not respond due to the problems with the water level survey portion of the project. Martin and Whitacre is equipped with a boat that is designed specifically to do this type of survey efficiently.

Award of Survey and Design work:

The total cost of the consultant's proposal is \$9,000. The proposal also allows for \$3,650.00 dollars in construction staking and Post Design Engineering. The decision to spend this \$3,650.00 will come as part of the budget process for next year. The Martin-Whitacre proposal has been reviewed by Public Works staff and is recommended to the City Council for approval for an amount not to exceed \$9,000.00.

The Public Works department will take the design information supplied by the consultant and work with the USACE to get the necessary permits. Once the extent of the project is known and the amount of fill that will need to go into the Mississippi is known, other cost are possible. Specifically, environmental work may be necessary depending on funding sources, and applicable state and federal laws.

**"I remember Muscatine for its sunsets. I have never seen any
on either side of the ocean that equaled them" — Mark Twain**

RECOMMENDATION/RATIONALE:

I recommend city council approve this proposal from Martin and Whitacre in the amount of \$9,000.00. This will be a not to exceed contract.

BACKUP INFORMATION:

1. Martin & Whitacre proposal.



**Martin & Whitacre
Surveyors & Engineers, Inc.**

Gary Whitacre, President
Matt Krause, Vice-President
Seth Whitacre, Secretary

July 15, 2016

Jim Edgmont, P.E.
City Engineer
City of Muscatine

Re: 2016 Levee Toe Repair Project

Dear Jim,

Based upon our conversation we understand the City is in need of repairs to the riverside levee slope. An approximately 300-foot section exhibits signs of slope deterioration. Our work will be to develop construction documents to address the issues in a manner approved by the City and US Army Corps of Engineers.

Based upon our communications and the expected scope of improvements, we propose to provide the following services:

Topographic Survey:

- Topographic survey of all grades, utilities and improvements between the west edge of the existing trail and the current Mississippi River water line
- Hydrographic survey of river bottom using bathymetric surveying equipment of an area approximately 75-feet beyond the existing toe of the bank line
- We understand the project area is to cover is approximately 400-feet between the existing trail toe of the river bottom

Existing Conditions Drawings:

- Develop a plan sheet identifying the existing surfacing, elevations and utilities affecting the site
- Development of 25-foot cross sections along the project alignment
- Identification of existing grades, slopes and deficiencies
- We will present existing conditions drawings to the City for review and discussions

Engineering Design:

- We will develop preliminary slopes to meet USACE guidelines
- We will develop construction plans addressing proposed work
- We will develop expected quantities

Deliverables:

- Existing conditions drawings
- 50% Design identifying proposed slopes
- 95% Plans for City/USACE review
- 100% Signed plans in PDF format

Clarifications:

- Our proposal assumes that all coordination and permitting will be handled by the City. Per our discussion, any additional work beyond plan production will be provided at our standard rates.
- Plans will include references to current City and SUDAS Standards Specifications with special provisions noted. The City will provide all “front end” and proposal information
- The City will solicit bids, conduct bid letting and provide all contractual work. Our work will include limited guidance and bidder clarifications
- The City will perform construction inspection, testing and guidance and will retain liability for all construction related issues
- We will provide quantities and an engineer’s estimate with submittal of final plans. The City shall provide its own estimate for notification purposes
- Our base plans will include benchmarks and coordinates needed for construction staking.
- We assume that no soil boring or geotechnical services will be required
- We assume that no street lighting or signage design will be required
- Our plans will address SWPPP issues, the City will provide NPDES documentation, inspections and reporting

In order to expedite our work, we request that the City make the following information available to us:

- Recent MAGIC aerial imagery
- City Base Mapping with streets and buildings
- MPW utility mapping

Fees:

Topographic & Bathymetric Survey:	\$3,000
Engineering Design:	\$6,000
Construction Staking:	\$1,650*
Post Design Engineering:	\$2,000**

We provide the preceding work scope at an hourly not-to-exceed basis

*Construction Staking assumes stakes at 50’ intervals along the 400’ +/- project length

** Optional services to attend post design meetings on-site or at City offices at the City’s request

We appreciate the opportunity to provide a proposal for this project. Please contact us with any questions or comments

Respectfully submitted;

MARTIN & WHITACRE SURVEYORS & ENGINEERS, INC.

A handwritten signature in black ink, appearing to read "Adam Shutt", with a long horizontal flourish extending to the right.

Adam Shutt, P.E., LEED AP BD+C
ashutt@martin-whitacre.com



**Martin & Whitacre
Surveyors & Engineers, Inc.**

Gary Whitacre, President
Matt Krause, Vice President
Seth Whitacre, Sec/Treas

Effective January 1, 2016

CURRENT RATE SCHEDULE

Senior Engineer	\$173/hr.
Engineer	\$143/hr.
Engineer Intern	\$112/hr.
Engineer - Expert Witness	\$235/hr.
Project Manager	\$150/hr.
Senior Land Surveyor	\$140/hr.
Licensed Land Surveyor	\$130/hr.
Land Surveyor Intern	\$107/hr.
Licensed Land Surveyor - Expert Witness	\$220/hr.
Tech III	\$100/hr.
Tech II	\$ 94/hr.
Tech I	\$ 90/hr.
One Man Field Crew	\$150/hr.
Two Man Field Crew	\$168/hr.
Three Man Field Crew	\$215/hr.
Clerical	\$ 84/hr.
ATV Usage	\$ 60/hr.
Boat Usage Single Beam	\$ 65/hr.
Boat Usage Multibeam	\$125/hr.
Scanner Usage	\$150/hr.

**These rates are subject to annual adjustment (on or about January 1)
and your contract will adjust accordingly.**

"M&WRATES2016"