

City of Fayetteville Staff Review Form

2021-0279

Legistar File ID

5/4/2021

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Wade Abernathy

4/15/2021

FACILITIES MANAGEMENT (140)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Approval of RFQ# 21-01 Contract with McClelland Consulting Engineers, Inc. for materials testing services for the Police Headquarters Facility in the amount of \$29,515.00 and a contingency of \$6,000 and approve a budget adjustment. This is a 2019 Police Headquarters Bond Project.

Budget Impact:

4609.860.7900-5860.02

4609 - Police Projects 2019 Bonds

Account Number

Fund

46090.7900.8315

Police Headquarters Building
Materials Testing / Survey / Geotechnical

Project Number

Project Title

Budgeted Item? Yes

Current Budget \$ 19,787.00

Funds Obligated \$ 17,787.00

Current Balance **\$ 2,000.00**

Does item have a cost? Yes

Item Cost \$ 35,515.00

Budget Adjustment Attached? Yes

Budget Adjustment \$ 35,515.00

Remaining Budget **\$ 2,000.00**

V20180321

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:



MEETING OF MAY 4, 2021

TO: Mayor and City Council

THRU: Susan Norton, Chief of Staff
Paul Becker, Chief Financial Officer
Mike Reynolds, Chief of Police

FROM: Wade Abernathy, Director Bond and Building Construction Projects

DATE: April 15, 2021

SUBJECT: RFQ# 21-01 Contract with McClelland Consultant Engineers, Inc. for Materials Testing for Police Headquarters Facilities Project.

RECOMMENDATION:

Staff recommend approval of RFQ# 21-01 Contract with McClelland Engineers, Inc. for the Materials testing at the Police Headquarters Facility in the amount of \$29,515.00, approve a project contingency in the amount of \$6,000 and a budget adjustment. This is a part of 2019 Police Headquarters Bond.

BACKGROUND:

In April of 2021, Resolution 116-21 authorized approval of Change Order #2 with Flintco LLC., for foundations, masonry, and structural steel.

DISCUSSION:

This contract will enable materials testing for the items approved in CO #2, in addition to testing of asphalt placement to ensure components are installed in accordance with Plans and Specifications.

BUDGET/STAFF IMPACT:

A budget adjustment is included. A contingency is requested in the amount of \$6,000.

Attachments:

Proposal Letter

March 19, 2021



113 West Mount Street
Fayetteville, AR 72701

ATTN: Mr. Wade Abernathy
Director of Bond Projects and Facilities

RE: Proposal for Construction Materials Testing and Special Inspections
PDHQ
Fayetteville, Arkansas

Dear Mr. Abernathy,

We are pleased to present a Proposal for the Construction Materials Testing and Special Inspections relevant to the planned new Police Department Headquarters (PDHQ) project to be located in Fayetteville, Arkansas.

The information on the following pages provides further detail regarding the anticipated testing scope on the project which includes several trips for each service, time spent on-site for each service, and other anticipations which were integral in arriving at the lump sum fee amount.

Project Description

The current project scope consists of the construction of a new PDHQ building at 2300 West Deane Street in Fayetteville, Arkansas. The proposed PDHQ structure has a footprint of approximately 35,000 square-feet (sf). The PDHQ building is a multi-level structure expected to include lobby/gathering areas, offices, conference rooms, and an additional 16,500 sf firing range to the south. Additional site improvements are expected to consist of paved access drives and parking areas as well as utility improvements across the site.

Scope of Work

It is anticipated that services for construction-materials testing and special inspections for the project will include coarse aggregate base density testing, reinforcing bar observations, cast-in-place concrete testing and continuous placement observations, grout and mortar testing, drill-and-epoxy observations, asphalt testing, and structural steel inspections.

It should be noted that at the time of preparing this proposal, proof roll/subgrade observations, select fill/soil density testing, and floor flatness and levelness inspections are not expected to be required. It is our understanding that observations during earthwork operations along with select fill/soil density testing (not including aggregate

base course) will be conducted by another Geotechnical/testing firm. MCE would be happy to provide these services should they be requested, with the understanding that inspection and documentation of these items would be in addition to the scope and fee services presented in this proposal, if requested.

To better your understanding of our associated fees, we presented an estimated per-trip price for the services we anticipate providing on this project. The provided per-trip prices assume the following factors:

- A certified technician spending 30 minutes onsite for each base density testing trip
 - Four (4) density tests being conducted per trip
 - Travel time, mileage, and report writing is factored into the unit trip price
- A Geotechnical Engineer or Engineering Technician spending one (1) hour onsite for the observation of reinforcing elements.
 - Travel time, mileage, and report writing is factored into the unit trip price
- A certified technician spending one (1) hour onsite for each cast-in-place concrete testing trip.
 - MCE assumes that one (1) set of five (5) lab-cured 4" x 8" cylinders being sampled for every 50 cubic yards of concrete will satisfy testing frequency for the project based on project specifications.
 - Additional cylinders and onsite technician time may be required for large monolithic concrete placements exceeding 50 yd³
 - Travel time, mileage, and reporting fees are included in the per-trip amount for this service
- A certified technician spending two (2) to six (6) hours performing continuous observations for the placement of concrete
- A certified technician spending 30 minutes on-site for each grout testing trip.
 - Four (4) 4"x8" grout samples being conducted each trip
 - Travel time, mileage, and reporting fees are included in the per-trip amount for this service
- A certified technician spending 30 minutes on-site for each mortar testing trip.
 - Three (3) 2"x2" mortar cube samples being conducted each trip
 - Travel time, mileage, and reporting fees are included in the per-trip amount for this service
- A Geotechnical Engineer or Engineering Technician spending two (2) hours onsite for the observation of drill-and-epoxy anchor bolt installation.
 - Travel time, mileage, and reporting fees are included in the per-trip amount for this service
- A certified technician spending one (1) hour on-site to assist with establishing a rolling pattern during the placement of asphalt in pavement improvement areas.
 - Additional time spent on-site may be required if asphalt placement operations require rolling patterns at intervals per the project specifications or if the contractor requests a technician remain on-site to assist until daily placement operations conclude

- Travel time, mileage, and reporting fees are included in the unit price
- A certified technician spending two (2) hours on-site coring asphalt samples for laboratory testing.
 - Travel time, mileage, and reporting fees are included in the per-trip amount for this service
- A Certified Welding Inspector (CWI) spending two (2) hours on-site for each periodic structural steel and/or welding inspection trip. Site visits relevant to continuous inspections, where applicable, may require up to eight (8) hours on-site.

We also expect that the project duration will be approximately nine (9) months. From the assumptions and project details referenced above, we estimated the following per-trip prices and subtotals for each service anticipated being required:

Base Course Density Testing	\$120.00 per trip
<ul style="list-style-type: none"> • PDHQ Pavement Improvements (Base Course) 5 trips • Utility Backfill and Additional Sitework (Base Course) 3 trips 	
Subtotal: \$960.00	

Reinforcing Bar Observations	\$155.00 per trip
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Police Department Headquarters

- West Perimeter Footings (Continuous and Spread) 3 trips
- West Interior Footings (Spread) 2 trips
- East Perimeter Footings (Continuous and Spread) 2 trips
- East Interior Footings (Spread) 1 trip
- Range Footings (Continuous and Spread) 2 trips
- West Wing Elevator Pit Foundations 2 trips
- West Wing Elevator Pit Walls 2 trips
- East Wing Elevator Pit Foundation 1 trip
- East Wing Elevator Pit Walls 1 trip
- West Wing Slab-on-Grade 1 trip
- East Wing Slab-on-Grade 1 trip
- Range Slab-on-Grade 2 trips
- West Wing CMU Walls, Stairwells, and Elevator Cores 5 trips
- East Wing CMU Walls, Stairwells, and Elevator Core 4 trips
- Range Ramp-Down and Perimeter CMU Walls 8 trips

- West Wing Level 2 Deck 1 trip
 - East Wing Level 2 Deck 1 trip
 - West Wing Roof Level Deck 1 trip
 - East Wing Roof Level Deck 1 trip
- Subtotal: \$6,355.00**

Cast-in-Place Concrete Testing **\$240.00 per trip**

Police Department Headquarters

- West Perimeter Footings (Continuous and Spread) 3 trips
 - West Interior Footings (Spread) 2 trips
 - East Perimeter Footings (Continuous and Spread) 2 trips
 - East Interior Footings (Spread) 1 trip
 - Range Footings (Continuous and Spread) 2 trips
 - West Wing Elevator Pit Foundations 2 trips
 - West Wing Elevator Pit Walls 2 trips
 - East Wing Elevator Pit Foundation 1 trip
 - East Wing Elevator Pit Walls 1 trip
 - West Wing Slab-on-Grade 1 trip
 - Additional fees applied for large monolithic pours of all project slabs
 - East Wing Slab-on-Grade 1 trip
 - Range Slab-on-Grade 2 trips
 - West Wing Level 2 Deck 1 trip
 - Additional fees applied for large monolithic pours of all project decks
 - East Wing Level 2 Deck 1 trip
 - West Wing Roof Level Deck 1 trip
 - East Wing Roof Level Deck 1 trip
- Subtotal: \$5,760.00**

Continuous Concrete Placement Observations

- The unit price will reflect an observer being onsite during all structural concrete placements to verify that concrete conveyance and depositing avoid segregation and contamination, as well as proper consolidation per IBC Table 1705.3 under special inspections. The subtotal presented below also includes report writing and administrative fees. The below subtotal estimates that project concrete placements will generally require between two (2) and six (6) hours on-site for this service, which is likely a conservative estimate.

Subtotal: \$4,500.00

Concrete Cylinder Pick-Up

\$105.00 per trip

- A charge for concrete cylinder pick-up will only be applied in the event that it is the sole reason for the site visit on days where no other testing is scheduled. We have assumed that this will be required for approximately one-half (0.5) of the total concrete placements.

Subtotal: \$1,260.00

Grout & Mortar

\$200.00 per trip

Police Department Headquarters

- West Wing CMU Walls, Stairwells, and Elevator Cores (Grout) 3 trips
- West Wing CMU Walls, Stairwells, and Elevator Cores (Mortar) 2 trips
- East Wing CMU Walls, Stairwells, and Elevator Core (Grout) 2 trips
- East Wing CMU Walls, Stairwells, and Elevator Core (Mortar) 1 trip
- Range Ramp-Down and Perimeter CMU Walls (Grout) 4 trips
- Range Ramp-Down and Perimeter CMU Walls (Mortar) 2 trips

Subtotal: \$2,800.00

Grout/Mortar Pick-Up

\$105.00 per trip

- A charge for grout/mortar sample pick-up will only be applied in the event that is the sole reason for the site visit on days where no other testing is scheduled. We have assumed that one-half (0.5) of the total grout/mortar testing trips will be needed for this service.

Subtotal: \$735.00

Drill-and-Epoxy

\$245.00 per trip

- Based on the provided project documents, we anticipate that a Geotechnical Engineer or Engineering Intern will be required to make approximately five (5) trips to observe the proper installation of 3/4-inch drilled-and-epoxied anchor bolts at roof-level angle connections within the planned PDHQ structure.

Subtotal: \$1,225.00

Asphalt Rolling Pattern

\$120.00 per trip

- A certified technician conducting asphalt rolling patterns during asphalt placement operations. It is anticipated that two (2) trips will be required for this service.

Subtotal: \$240.00

Asphalt Coring

\$680.00 per trip

- A certified technician coring asphalt samples for final laboratory acceptance testing. It is anticipated that up to six (6) cores will be required for laboratory testing. The cores will be tested for bulk-specific gravity and thickness verification. It is anticipated that one (1) trip will be conducted for this service.

Subtotal: \$680.00

Structural Steel & Welding Inspections

Based on current project documents and specifications, MCE can provide Structural Steel inspection services, with the following factors taken into account:

- The referenced project documents require special inspections per IBC Chapter 17 and AWS D1.1.
- We anticipate that approximately five (5) site visits will be necessary for the periodic inspection of embed plates, structural bolt-ups, and other structural steel connections relevant to the structures.
- We also anticipate that approximately three (3) site visits will be necessary for continuous observation of complete joint penetrations and fillet welds greater than 5/16" within the planned PDHQ structure.

Subtotal: \$5,000.00

Estimated Budget

Based on the assumptions detailed in the foregoing proposal, we can provide construction materials testing and special inspections on this project for a Not-To-Exceed Without Approval amount as detailed below:


- Base Course Density Testing \$960.00
- Reinforcing Observations \$6,355.00
- Cast-in-Place Concrete Testing \$5,760.00
- Continuous Concrete Placement Observation \$4,500.00
- Concrete Cylinder Pick-Up \$1,260.00
- Grout & Mortar Testing \$2,800.00
- Grout & Mortar Pick-Up \$735.00
- Drill-and-Epoxy Observations \$1,225.00
- Asphalt Rolling Pattern \$240.00
- Asphalt Coring \$680.00
- Structural Steel & Welding Inspections \$5,000.00


Total Lump Sum Fee: **\$29,515.00**

Our estimated number of trips for each testing service is based on our experience on projects in the area with similar scope and size. Our fees are directly related to the number of trips made for each service and time spent on site. If the project scope varies after the submittal of this document and prior to construction, please allow for the review/revision of this document.

We appreciate the opportunity to submit this proposal for construction materials testing relevant to the PDHQ project located in Fayetteville, Arkansas. If this Proposal is acceptable, please sign the Work Authorization Agreement at the end of this document and return a copy to our office. If there are any questions regarding this Proposal, please do not hesitate to contact us.

Sincerely,


Steven J. Head, P.E.
Principal | Geotechnical Department Head


Roger Bahena
Materials Testing Supervisor

Work Authorization Agreement

McClelland Consulting Engineers, Inc., is authorized to proceed in accordance with this Letter of Proposal, consisting of eight (8) pages.

Signature	Title	Date
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