



Hazen and Sawyer
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November 01, 2016

Monica Jarrett, EI
Utility Design Engineer, Department of Water Resources
City of Greensboro
2602 S. Elm-Eugene St.
Greensboro, NC 27406

Re: Scope and Fee Proposal for RPR and CM Services

Dear Ms. Jarrett:

Hazen and Sawyer is pleased to submit the enclosed proposal to provide Construction Management and Resident Project Representative Services as described below for the TZ Osborne WRF NPW Pump Station and Electrical Upgrades (COG 2015-007A).

TZ Osborne WRF NPW Pump Station and Electrical Upgrades (COG 2015-007A)

Hazen and Sawyer is looking forward to providing construction phase services on the NPW Pump Station and associated Electrical Upgrades project. The NPW Pump Station and Electrical Upgrades project includes the installation of two pre-purchased vertical turbine pumps and associated force main, flow meters, strainers, valves and enclosed meter room. All aforementioned equipment was designed by Chester Engineers and is included in Volume I of the contract documents. Also included in the project, designed by Hazen and Sawyer and included in Volume II is the installation of two (2) new transformers, associated ductbank and replacement of two (2) motor control centers in the Chlorination Building and the Solids Handling Building.

Construction Phase services will include both Office and Field services as described below.

Construction Clarification, Work Changes and Claims: Hazen and Sawyer (Hazen) will review, in partnership with the City of Greensboro and Chester Engineers, all questions requested by the Contractor (RFI's) and all construction related claims resulting from the work. Hazen will prepare Work Change Directives and Change Orders documentation when necessary. For budgetary purposes, the following assumptions were made:

- Review of 30 clarification requests resulting in 10 RFPs/WCDs prepared at 4 hours/clarification and WCD.

Shop Drawings and Submittals: Hazen expects to review administrative submittals including the baseline progress schedule, shop drawing schedule, schedule of values, monthly progress schedule updates, and monthly progress payment requests at a minimum. Hazen expects limited shop drawing review on this project but will include the review of all equipment such as transformers, MCCs, 5kV and 600V cable and will provide coordination review for shop drawings reviewed by Chester Engineers. For budgetary purposes, the assumption of 40 submittals at 4 hrs per review was made.



Meetings: Hazen will organize, prepare agendas, record meeting minutes and conduct progress meetings from the pre-construction meeting to the end of the 12 month project. Meetings will also include onsite Contractor coordination meetings and operations meetings as required by the City. For budgetary purposes 24 meetings are anticipated.

Construction/Contractor's Mentor-Protégé Program: Hazen will oversee the construction Mentor-Protégé program including reporting back to the M/WBE office on monthly basis. At the conclusion of the project Hazen will prepare a memo to the Owner to report on the experience, including lessons learned, etc. This work is expected to include an effort of approximately 4 hours per month and 16 hours at the conclusion of the project.

Inspection Services: Hazen will provide part-time inspection services for both the Chester Engineers and Hazen scopes of design work. Hazen inspection services is expected to be an average level of effort of 20 total man hours per week resulting in a total expected effort of 1,040 man hours at an average cost of \$150/hour for a not to exceed cost ceiling of \$156,000 billed based on actual hours spent at fixed categorical billing rates provided in Table 2 below.

Construction Materials Testing: Hazen excludes all third party construction materials testing required from this contract but is expected to work with the City's selected testing agency for coordination when needed. Hazen will aide in selection and review of scope for this contract if desired by the City.

Startup and Testing: Hazen will provide technical support during startup and testing of all equipment associated with the project. Hazen will also provide support and coordination with CITI to program and commission all SCADA required and will review new screens for the proposed pump station. This cost will be included in shop drawing review and Inspection Services.

Operation Training: Hazen will coordinate with manufacturers and provide operational training on the new pump station at substantial completion of the project.

Record Drawings: Hazen will prepare record drawings for Hazen's design scope and coordinate with Chester Engineers to provide a comprehensive document for overall record drawings for the project. Hazen anticipates the level of effort to be approximately 120 man hours total to prepare, review and issue these documents. Hazen excludes the responsibility to sign and seal Chester's drawings to certify their portion of the project as the Engineer of Record and will expect with their involvement as a subcontractor they will certify their designs.

Hazen and Sawyer is pleased to partner with Chester Engineers as a subcontractor for the construction phase services for the above referenced project. Chester Engineers is a City approved M/WBE consultant and we look forward to the opportunity of working with them on this project. Chester Engineers provided a scope and fee as attached for office services of \$105,000. Chester Engineers have also provided a cost to include an optional field representative at \$45/hr to provide field inspection services for Chester Engineers related design work. The total scope of this service is estimated for 1,040 hours for a period of 12 months for a not to exceed cost of \$46,800. Hazen will include a 5% cost to Chester's proposal to account for administrative management of the subcontract.

Please find Table 1 below summarizing the total effort for this project. Lump Sum and Not to Exceed items have been noted.

Table 1 - Summarized Fee for Construction Services for the NPW Pump Station and Electrical Upgrades Projects

Task	Fee	Type
NPW Pump Station and Electrical Upgrades Project (COG 2015-007A)		
Office Services	\$140,000.00	Lump Sum
RPR Services	\$156,000.00	Cost Ceiling - Not to Exceed; Billed by fixed categorical rates per Table 2.
Chester Engineers Proposal	\$105,000.00	Lump Sum
Chester Engineers Field Services (\$45/hr; full time 4 months)	\$46,800.00	Cost Ceiling - Not to Exceed; Billed by fixed categorical rates per Table 2.
Subcontractor Administrative Markup (5%)	\$7,590.00	
Total Contract Value	\$455,480.00	

Table 2 – Categorical Billing Rates

Task	Fee per hour
Senior Resident Project Representative	\$160
Resident Project Representative	\$100
Technician/Intern	\$45



Please feel free to contact me at any time if you have any questions or would like to meet to discuss the items enclosed. Thank you again for the opportunity and we look forward to continuing to work for the City of Greensboro.

Very truly yours,

A handwritten signature in blue ink, appearing to read "A. Babson", written over a horizontal line.

Aaron D. Babson, PE
Associate

Enclosure: Chester Engineers Proposal

cc: Alan Stone, PE