

TASK ORDER-No. 16
WWTRC Generator Addition

This Task Order pertains to an Agreement by and between The City of Boerne, ("CITY/OWNER"), and HDR Engineering, Inc. ("ENGINEER/HDR"), dated January 30th, 2017, ("the Agreement"). ENGINEER shall perform services on the project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the project described below.

TASK ORDER NUMBER: 16

PROJECT NAME: WWTRC Generator Addition

PART 1.0 PROJECT DESCRIPTION:

The CITY has requested HDR provide professional services for the following:

- The addition of a generator with an automatic transfer switch at the WWTRC headworks building, and
- The addition of an automatic transfer switch at the generator that was added to the Blower Building in late 2015. The automatic transfer switch was removed when the generator was added due to budget constraints.

PART 2.0 SCOPE OF SERVICES TO BE PERFORMED BY ENGINEER ON THE PROJECT:

Task 1 – WWTRC Headworks Generator Design

The purpose of this task is to design and prepare project exhibits, details, bid documents and specifications for the proposed WWTRC Headworks generator addition.

One (1) new generator at the Headworks Building of the WWTRC will provide backup power to screening and grit removal processes and systems. Power to these systems is supplied through the electrical room located in the Headworks building. Incoming power to the building comes from an overhead utility power pole to a main circuit breaker disconnect, then to an automatic transfer switch with the output of the transfer switch going to a switchboard.

Discussions with the CITY will be required to determine the correct size of generator and transfer switch. Field investigation will be required to verify equipment ratings and space available. HDR's Scope of Work is based on the following assumptions:

- The generator will be located outside and the transfer switch located inside the electrical room.
- With all loads on the generator, interrupting the original power circuit from the existing main circuit breaker to the existing switchboard will be feasible. The automatic transfer switch will be inserted between the main circuit breaker and the switchboard. If due to

budget considerations HDR is asked to reduce the size of the generator from powering the entire building to a selected set of loads, then other design considerations will come into play. This redesign effort is not included in this proposal.

- The generator will be added to the existing plant SCADA system and so field investigation, along with previous documentation review, will be required to add the desired generator inputs/outputs to the local PLC cabinet.

ENGINEER Activities:

1. Hold in person kickoff meeting with the CITY to discuss communication protocol, project schedule, bid document development, bidding, validate design requirements for the generators, routing of duct backs, determine location of generator pads and automatic transfer switches.
2. Provide design documents including project exhibits, details, bid documents and specifications for the generator addition.
3. Provide CITY with three (3) half-size (11"x17") copies of the 90 percent Bid Documents and Engineer's Opinion of Probable Project Cost (EOPPC) for review.
4. Respond to and incorporate the CITY's comments on the 90 percent Bid Documents.
5. Provide in-house QC review of 90 percent and Final Bid Documents.
6. Provide the CITY with three (3) half-size copies of the Final Bid Documents and EOPPC.

ENGINEER Deliverables:

- Three (3) half-size printed copies of the 90 percent Bid Documents, Draft EOPPC,
- Three (3) half-size printed copies of the Final Bid Documents, and Final EOPPC.

Meetings/Travel: One (1) on site meeting at Boerne Public Work office followed by a WWTRC site visit. Two electrical engineers will attend this meeting and site visit.

Assumptions:

- The CITY is to provide record drawings for the construction of the WWTRC for use by HDR.
- No survey or geotechnical investigations are required. ENGINEER will use the Geotechnical Report originally prepared for the WWTRC project.
- No real estate, ROW, or temporary construction easements are required.
- No Texas Commission on Environmental Quality submittal or storm water pollution prevention plan is required.

Task 2 – Blower Building Transfer Switch

The purpose of this task is as follows:

- Prepare a technical memorandum to provide an evaluation and recommendation(s) and EOPCC associated with the options that are available in order to install the requested transfer switch.
- Design and prepare project exhibits, details, bid documents and specifications for the proposed addition of a transfer switch to the existing generator at the blower building.

The CITY requested the addition of an automatic transfer switch to the Blower Building electrical system, which was eliminated when the generator was originally added in 2015 due

to budget constraints. Typical automatic transfer switch operation requires the normal (main) feed enter one side of the transfer switch and the generator feed enter the other side of the transfer switch. The resultant output goes to the main switchboard. To use a conventional transfer switch, the main feed into the switchboard's main breaker would have to be interrupted and re-terminated on the transfer switch's normal feed terminals. Therefore, the transfer switch would have to be rated same as the main breaker, which is now rated 1200 amps. Since this main feed is underground, it would be impractical to try to pull out the existing main conductors and re-terminate at the new transfer switch. HDR will investigate other options available in lieu of using an automatic transfer switch. Since the existing generator is already on the plant SCADA system, no work is anticipated on this part of the system.

ENGINEER Activities:

Alternative Analysis:

1. In conjunction with Task 1 on site meeting and site meeting, meet with the CITY to determine design requirements for transfer switches.
2. Evaluate the options that are available in order to install the transfer switch to the existing electrical system at the Blower Building.
3. Prepare a Technical Memorandum regarding the evaluation and recommendations, as well as an Engineer's Opinion of Probable Construction Cost (EOPCC) for review.
4. Respond to CITY comments on the Technical Memorandum. It is assumed that the CITY will provide comments within one (1) week of receiving the Technical Memorandum.
5. Provide the CITY with two copies of the Final Technical Memorandum.

ENGINEER Deliverables:

- Two (2) printed copies of the Draft Technical Memorandum and
- Two (2) printed copies of the Final Technical Memorandum.

Meetings/Travel: Participate in meeting and on site visit in conjunction with Task 1 kickoff meeting and site visit. The Site Visit will be attended by the two electrical engineers attending the meeting-site visit for Task 1.

Final Design:

1. Provide design documents based on the recommendation in the Technical Memorandum including project exhibits, details, bid documents and specifications for the generator addition.
2. Provide CITY with three (3) half-size (11"x17") copies of the 90 percent Bid Documents and EOPPC for review.
3. Respond to and incorporate the CITY's comments on the 90 percent Bid Documents.
4. Provide in-house QC review of 90 percent and Final Bid Documents.
5. Provide the CITY with three (3) half-size copies of the Final Bid Documents and EOPPC.

ENGINEER Deliverables:

- Three (3) half-size printed copies of the 90 percent Bid Documents and Draft EOPPC
- Three (3) half-size printed copies of the Final Bid Documents, and Final EOPPC.

Meetings/Travel: None required during Final Design.

Assumptions:

- The CITY is to provide record drawings for the construction of the WWTRC for use by HDR.
- No survey or geotechnical investigations are required.
- No real estate, ROW, or temporary construction easements are required.
- No TCEQ submittal or storm water pollution prevention plan is required.

Task 3 – Bidding Services for WWTRC Headworks Generator and Blower Building Transfer Switch

The purpose of this task is to provide Bid Phase services to the CITY including distribution of plans and addenda, maintaining a plan holders list, address comments and questions from plan holders, provide a bid evaluation, and provide a recommendation of award.

ENGINEER Activities:

1. Distribute half-size Bid Documents to the CITY, plan houses, and as requested to contractors and suppliers.
2. Address comments and questions from bidders or plan holders.
3. Prepare and distribute up to two (2) addenda containing clarifications and modifications to the Bid Documents.
4. Maintain a plan holders list of all distributed sets of Bid Documents.
5. Review bids received for inclusion of required information and correct bid price tabulation.
6. Review contractor qualifications for performing the required work. Evaluate the two apparent low bidders in accordance with the Bid Documents. Make written recommendation to the CITY for the award of the contract.

ENGINEER Deliverables:

- Half-size printed copies of the Bid Documents – maximum of 3
- A plan holders list of all distributed sets of Bid Documents.
- Issue addenda (Maximum of 2), if needed.
- A written recommendation for award of the contract.

Meetings/Travel: No meetings or travel are planned.

Assumptions:

- The addition of the generator at the WWTRC Headworks and of the transfer switch at the Blower Building will be jointly bid as one (1) project.
- Conformed documents are not included and will be considered additional services.

Task 4 – Construction Phase Services WWTRC Headworks Generator and Blower Building Transfer Switch

ENGINEER will provide Construction Phase services to the OWNER, including:

- Attendance at pre-construction meeting. Meeting will be attended by two electrical engineers.
- Prepare pre-construction meeting agenda and meeting minutes.

- Review of up to four (4) submittals
- Review and respond to up to eight (8) RFI
- Perform substantial complete walk through and prepare punch list
- Perform final completion walk through.

ENGINEER Deliverables:

- Pre-construction meeting agenda and meeting minutes.
- Submittal review (Maximum of 4)
- RFI Response (Maximum of 8)
- Substantial Completion Punch List
- Final Completion letter

Assumptions:

- Pre-construction meeting will be held at the WWTRC facility in Boerne, Texas.
- The OWNER will provide all construction observation services, unless noted otherwise in this Task Order.
- ENGINEER will not perform any site observation unless requested by the OWNER. Site observation will be considered additional services.

Meetings/Travel:

- Attend the pre-construction meeting at Boerne Public Work office. Two electrical engineers will attend this pre-construction meeting.
- Conduct substantial completion walk-thru. One (1) electrical engineer will conduct this walk-thru.
- Conduct final walk-thru. One (1) electrical engineer will conduct this walk-thru.

PART 3.0 OWNER'S RESPONSIBILITIES:

The OWNER shall be responsible for the following:

- Provide data pertinent to the project.
- Participate in teleconferences and meeting.
- Review and approve ENGINEER'S invoices.

PART 4.0 PERIODS OF SERVICE:

ENGINEER is authorized to begin rendering services as of the date of Notice to Proceed (NTP). ENGINEER shall complete its obligations per the following schedule:

Task 1	45 calendar days after NTP
Task 2	45 calendar days after NTP
Task 3	Dependent on bid phase duration (anticipated to be approximately one [1] month)
Task 4	Dependent on Construction Duration (anticipated to be three [3] months)

Unless otherwise stated in this Agreement, the rates of compensation for ENGINEER'S services have been agreed to in anticipation of the orderly and continuous progress of the project through completion. If any specified dates for the completion of ENGINEER'S services are exceeded through no fault of the ENGINEER, the time for performance of those services shall be automatically extended for a period which may be reasonably required for their completion and all rates, measures and amounts of ENGINEER'S compensation shall be equitably adjusted.

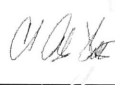
PART 5.0 ENGINEER'S FEE:

Compensation shall be a lump sum basis as follows:

TASK No.	FEE
Task 1: WWTRC Headworks Generator Design	\$25,050.00
Task 2: Blower Building Automatic Transfer Switch	\$16,880.00
Task 3: Bid Phase Services	\$5,230.00
Task 4: Construction Phase Services	\$12,880.00
Total Professional Services	\$60,040.00

ENGINEER will submit monthly invoices listing the amount of work completed to date as a percentage of the Lump Sum fee.

This Task Order is executed this _____ day of _____, 2018. Execution of this Task Order shall serve as ENGINEER'S Notice to Proceed.

<p><u>CITY OF BOERNE</u> "OWNER"</p> <p>BY: _____</p> <p>NAME: <u>Ronald C. Bowman</u></p> <p>TITLE: <u>City Manager</u></p> <p>ADDRESS: <u>402 E. Blanco Road</u> <u>Boerne, TX 78006</u></p>	<p><u>HDR ENGINEERING, INC.</u> "ENGINEER"</p> <p>BY:  _____ <small>Digitally signed by Carmen B. Abad-Fitts DN: cn=Carmen B. Abad-Fitts, o=HDR, email=cfitts@satx.hdr.com, c=US Date: 2018.08.07 07:26:55 -0500</small></p> <p>NAME: <u>Carmen B. Abad-Fitts, P.E.</u></p> <p>TITLE: <u>Vice President</u></p> <p>ADDRESS: <u>613 NW Loop 410, Suite 700</u> <u>San Antonio, TX 78216</u></p>
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