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June 22, 2017

Mr. Chuck Sears
Transmission Engineering Division Manager
Denton Municipal Electric
City of Denton
1659 Spencer Rd.
Denton, Texas 76205

Re: Professional Services
Hickory Substation Screen Wall
Hickory Substation Gas Insulated Substation (GIS) Equipment Building
Eagle Substation GIS Equipment Building

Dear Mr. Sears:

It is a pleasure to again offer services to the City of Denton.

Project Understanding

Based on meetings from 2015, and subsequent meetings on January 6th and 23rd, we understand Denton Municipal Electric (DME) requires architectural and design services for three separate and independent project components. These components are:

1. Hickory Substation Screen Wall
2. Hickory Substation Gas Insulated Substation (GIS) Equipment Building
3. Eagle Substation GIS Equipment Building

The Hickory Substation Screen Wall is to be a perimeter security wall for the substation. Kirkpatrick participated in development of a concept plan for this wall in the early part of 2015. The design will be generally based on the information prepared in that effort.

The Hickory Substation GIS Equipment Building and the Eagle Substation GIS Equipment Building will be of similar designs with variations to allow for site differences and amounts of equipment enclosed. Exterior treatments and are generally described in succeeding sections of this proposal. The designs for the two buildings will be completed in two phases each and will be a collaborative effort between Kirkpatrick, DME, and a GIS vendor selected in an RFP process by the City of Denton. Initial designs will be prepared based on concept plans and information provided by DME. These initial designs will be used as input for the RFP to purchase the GIS equipment. Once the equipment purchase is completed, all parties will work together to refine the design to accommodate floor loadings, exact equipment locations, equipment features, floor features required to secure the equipment, floor loading requirements, and other items that cannot be known without the equipment supplier's input and specific design information.

Preliminary site plans suggest that the GIS facilities will fit on the sites. We have predicated our services on developing one basic type of building design that will be used on two sites with adjustments for size and site arrangements.

100 West Mulberry
Denton.Texas
7 6 2 0 1

940/387 .8182tel
940/383.0262fax
www.k-a-studio.com

1. Hickory Substation Screen Wall

    a. DME (Owner), seeks to enclose the proposed GIS and other equipment in the Hickory Substation with a screen wall featuring mock storefronts. The project involves the creation of a screen wall which will hide the service yard of a new electrical substation in Denton. The screen wall will run the entire perimeter of the site and will be approximately 20'-0" in height. A series of community meetings has led to the conceptual design of storefronts in lieu of a single screen wall, based on some existing buildings within Denton. The intent is to provide a variety of modules each with their own material, fenestration, and articulation. KAS will develop a façade design corresponding to the fours sides of the site. The design will be presented to the Owner's representative who will provide feedback and approval. Feedback will be incorporated into a second, final design which will be presented to the Owner's representative for approval. Documentation and circuiting of exterior lighting designed by others is included in MD Engineering Basic Services.

2. Hickory Substation Gas Insulated Substation (GIS) Equipment Building

    a. DME (Owner) seeks to construct a new Gas Insulated Substation along Bonnie Brae Street bounded on the north and south by Hickory and Oak streets. KAS will be involved in the design and engineering of the new facility for housing Owner's equipment.

    b. The building is assumed to be approximately 60' by 80' (4,800 square feet).

    c. Pre-cast concrete or steel framed with concrete infill to comply with code and best practices.

    d. The building will be temperature controlled to meet equipment manufacturer's requirements. Mechanical work will include a heating, ventilation and air conditioning (HVAC) system.

    e. Plumbing, if required, might be placed in a separate outbuilding.

    f. Electrical work will include normal and emergency power distribution (if required), lighting, exterior lighting for building elements and parking areas, lightning protection system, fire detection and fire alarm system. The Fire Protection and Fire Alarm Systems are performance specification items.

    g. Based on our initial, limited understanding, each 138kV circuit breaker is approximately 440 kg (1,200 lbs), there will be 6 to 8 depending on the site and they are approximately 10'-0" tall, will require interior crane access of approximately 10'-0" high, plus approximately 5'-0" clearance for the hook assembly and 5'-0" for the railing mechanism. This adds up to a building approximately 30-35 feet tall.

    h. The floor will have multiple trenches or duct banks that the Owner and their vendor will locate.

3. Eagle Substation GIS Equipment Building

    a. DME (Owner) seeks to construct a new Gas Insulated Substation (GIS) in the vicinity of Eagle Drive and Bernard Street. The scope outlined above is similar to this facility, with the exception of size and the facades of this facility may involve additional architectural detailing to address context concerns.

KAS is not involved in perimeter fencing or screen walls at this facility.

Scope of Basic Services

KAS' services include those necessary for the design and preparation of documents for the referenced Project. We envision the process as collaborative and as such, the scope may change slightly as the design is developed.

In the description of work in each phase, AIA documents are referenced. In the event that there is conflict between these documents and *City of Denton General Conditions for Building Construction* and *City of Denton General Conditions to Agreement for Architectural or Engineering Services*, the City of Denton documents shall dictate.

Phase One – Information Gathering (Programming, Pre-Design and Schematic Design) 6 *Weeks*

Owing to the complexity and precision of an electrical substation, a more thorough and systematic approach is recommended. Specialized consultants are brought into the project early to assist you with decisions related to cost, constructability, and design. This allows you to identify, consider and prioritize key values of the project which will then guide decisions throughout the project.

1.1. **Zoning/Platting Research** – KAS will meet with the City of Denton to understand the constraints and parameters affecting the proposed sites.

1.1.1. The Owner will retain a civil engineer to provide a survey and civil engineering site drawings.
1.1.2. The Owner will retain engineering services to provide a Geotechnical Survey
1.1.3. The Owner will retain engineering services to provide environmental impact studies.

1.2. **Programming** – KAS will meet with all appropriate parties to determine a preliminary program. This information gathering is achieved in two ways, interviews during meetings and on site observation of existing facilities.

1.2.1. This program will be broad in nature and will include square footage of major areas and relationships of key components.

1.3. **Design Meeting** – Based on programming information and Owner supplied site plans, KAS will produce and present a preliminary floor plan, elevation and site plan. A meeting with the Owner will be held to review the preliminary plans and gather feedback.

1.4. **Pre-Application Submission** – Teague Nall & Perkins (TN&P) will submit a site plan. KAS will provide TN&P with a floor plan and questions for TN&P's use in submitting to the City of Denton per their requirements. These plans and questions will be reviewed by the City of Denton in advance of the Pre-Application Conference

Deliverables

D1. Schematic Design Package for Items 2 &3 above
   a. Written space needs summary (square footage)
   b. Graphic space needs (drawing showing adjacencies and infrastructure routes)
   c. Floor plan showing relative size of areas, circulation, fenestration, and arrangement of spaces.
   d. Exterior elevation of building façade.

D2. Pre-application Package for Items 2 & 3 above
   a. Zoning map provided by Owner's civil engineer consultant

b. Plat provided by Owner's civil engineer consultant
c. Site Plan provided by Owner's civil engineer consultant

D3. International Building Code (IBC2015) code review provided by KAS

D4. Pre-application Package for Item 1 above
a. Zoning map provided by Owner's civil engineer consultant
b. Plat provided by Owner's civil engineer consultant
c. Site Plan provided by Owner's civil engineer consultant
d. Drawings showing various elevations

D5. Seismic Research and probable impact to project

Phase Two – Refinement of Schematic Design (Design Development) *8 Weeks*

2.1. **Design Development –** During this phase the documents produced in the Schematic Design Phase are further developed. In this phase the mechanical, electrical, plumbing, and structural systems are identified, selected and integrated into the design. Additionally, architectural details such as for doors and windows are produced. KAS will produce a Design Development Package for the Owner's review and approval. After approval from the Owner, Construction Documents Phase will commence. Services in this phase are defined in *AIA Document B101, 3.3.1 and 3.3.3.*

2.2. **Construction Cost Estimate –** KAS will send the Design Development Package to a third-party cost estimator for a construction cost estimate.

Deliverables

D1. Design Development Package for Items 2 & 3 above
a. Floor plan with dimensions
b. Building section with dimensions and materials
c. Enlarged wall section with dimensions and materials
d. Building exterior elevations with dimensions and materials
e. Roof Plan
f. Construction Cost Estimate

D2. Design Development Package for Item 1 above
a. Small scale elevation of entire screen wall
b. Large scale elevations of each storefront
c. Construction Cost Estimate

Phase Three – Preparation of Construction Documents *14 Weeks*

3.1. **Contract Documents –** In this phase, construction documents and specifications are produced. Depending on timing and/or the Owner's wishes, separate Permit and Construction Sets can be produced.

3.2. **Construction Cost Estimate –** KAS will send the Design Development Package to a third-party cost estimator for a construction cost estimate.

Permit Application – KAS will submit the construction set for the following projects for securing regulatory permits:

- DME Substation – Hickory Substation Screen Wall
- DME Substation – Hickory Substation GIS Building (5'-0" MEP area boundary around building)
- DME Substation – Eagle Substation GIS Building (5'-0" MEP area boundary around building)

3.3. TN&P will secure regulatory permits for all other associated projects, including site permits.

Deliverables

D3. 50% Progress Set
D4. 95 % Progress Set
D5. Construction Cost Estimate
D6. Site Package by Owner's civil engineer consultant
D7. Compilation of Construction Documents
   a. Drawings
   b. Project manual (front end and specifications)
D8. KAS will issue documents to Owner for Owner's use in procuring electrical substation equipment and hardware.

Phase Four – Bidding and Negotiations *6 Weeks*

4.1. **Pre-Bid Conference and Tour** – KAS will administer a conference and tour of the site for prospective bidders.
4.2. **Addenda** – KAS will respond to questions to potential bidders and provide clarification if necessary in the form of Addenda.
4.3. **Evaluation of Proposals -** Once bids are received and opened by the City, KAS will aid in the evaluation of the bidders.
4.4. **Revision -** KAS will revise Construction Documents based on Owner's selected electrical substation equipment provider's specific requirements.
   a. **Note:** if Owner's sequencing allows, KAS proposes to issue Design Development documents to Owner for their use in procuring electrical substation equipment provider.

Phase Five – Construction Administration

5.1. **Construction Administration** – KAS will attend weekly meetings during construction, produce Field Observation reports, review submittals, produce responses to Request for Information's, and respond in a professional manner as needed during the construction process. Services in this phase are defined in *AIA Document B101, 3.6* and in *AIA Document A201-2007.*

Scope of Work Provided by the Client

1. Civil Engineering
2. Topographical and Boundary surveys
3. Environmental survey for hazardous containing materials
4. Geotechnical Investigation and Report
5. FERC & NERC Consultation
6. Construction Observation and Materials Testing

Items Outside of Scope of Work or Requiring Additional Services

1. Pursuing LEED
2. Redesigns, new designs, meetings and other costs related to significant changes in scope of work or significant changes to approved designs. This includes work and meetings required to incorporate value engineering items.
3. Meetings with Jurisdictional authorities, community groups, or other stakeholders.
4. Easements by separate instrument.
5. Work in or adjacent to an existing FEMA flood plain, design services necessary to establish a base flood elevation (BFE), flood plain permitting or flood plain mapping
6. Non-gravity storm sewer or sanitary sewer systems (systems requiring pump design, i.e. lift stations)
7. Public water or sewer system improvements beyond service connections and any off-site work
8. Traffic Impact Studies
9. TxDOT Permits
10. Zoning change requests
11. Retaining wall design
12. Special systems such as communications; computer networks; telephone; and sound, including cabling, etc., will be designed by specialty consultants. Basic services include environmental, power and empty conduit/raceway requirements, based on the information provided. Power/Signal Outlet Plan(s) will indicate any special outlet/power requirements. This includes copiers, clean power, details for pre-wired furniture systems, etc. Outlets not so designated will be circuited as normal convenience outlets. Where special outlet locations are required, all necessary dimensioning will be shown by the Client on the Architectural documents.
13. Landscape irrigation and landscape lighting, if required, will be designed by a specialty consultant.
14. Site features and amenities outside of building footprint and not directly attached to the building that are not required by zoning or code or related to the building's mechanical, electrical, or plumbing systems.
15. The design of currently unidentified specialty electrical, lighting or communication systems, including voice/data, audio/visual, security, or other low voltage electronic systems. Junction boxes and conduit for the systems will be shown in the construction documents. Fire alarm and related devices are included.
16. Design of franchise utilities (gas, electric, telephone, and cable television)
17. Sub surface gas venting systems
18. Seismic structural engineering

Compensation

Compensation to KAS for Basic Services, including non-reimbursable expenses listed below, will be invoiced on an hourly basis. Consultants, under contract with KAS, will be invoiced on an hourly basis time 1.1%. See below for hourly rate details. Based on our current understanding of the project scope, we estimate that the project costs for the professional services described above will not exceed **$616,700.00**.

The following are the estimated amounts for each part of the services requested along with the contingency amounts:

Hickory Substation Screen Wall
Base Services $212,200.00

Hickory Substation Gas Insulated Substation (GIS) Equipment Building
Base Services $229,000.00

Eagle Substation GIS Equipment Building
Base Services $165,500.00

Reimbursable Expenses
$ 10,000.00

Non-reimbursable Expenses - KAS includes the following in our scope
1. In - house printing
2. Phone calls
3. Travel within north Texas

Consultants

To accomplish the Project, KAS has engaged the following consultants:

1. Structural Engineering	LA Fuess
2. Landscape Architecture	Russell, Landscape Architect
3. Mechanical/Electrical/Plumbing Engineering	MD Engineering
4. Historic Preservation	Architexas
5. Constructability	Tim Beatty Builders
6. Cost Estimation	Computerized Cost Estimating

Consultant's additional services shall be invoiced based on their published hourly rate structure at time of contract.

Hourly Rates

Services for Basic Services will be invoiced on the basis of personnel time and expenses. Additional required and authorized work beyond the scope of Basic Services will be billed as Additional Services.

James R. Kirkpatrick	$175/hour
David Robinson	$140/hour
Bill Morgan	$140/hour
Technical Staff II	$110/hour
Technical Staff I	$ 90/hour
Expenses	1.10 times the cost

Additional Reimbursable Expenses

The following are not included in Basic Services and shall be billed reimbursable expense and shall be provided to the Owner at the cost invoiced to KAS plus ten percent (10%). The total cost shall for printing shall not exceed $10,000 without the written permission of the owner.

1. Printing for presentations, Owner, meetings, and regulatory review.
2. Texas Accessibility Standard Plan Review and Post-Construction Inspection

Should you have any questions or require additional information, please contact me at your convenience.

Best Regards,

David M. Robinson, AIA