

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF GENERAL SERVICES



Statement of Work
For
Youth Service Center Emergency Power System Upgrades

1 BACKGROUND

The District of Columbia, Department of General Services (DGS) on behalf of Department of Youth Rehabilitation Services (DYRS) is soliciting services from a professional Architect – Engineer (A/E) is required to provide a comprehensive design (Title I services) and construction administration (Title II services) for the Emergency Power System Upgrades at the Youth Services Center (YSC) for the Department of Youth Rehabilitation (DYRS) located at 1000 Mount Olivet Road, N.E. Washington DC.20002.

The Department of Youth Rehabilitation Services (DYRS) is the District of Columbia’s cabinet level juvenile agency. It administers detention, commitment, and aftercare services for youth held under the care in its facility, Youth Services Center at 1000 Mt. Olivet Road, N.E. Washington DC 20002. DYRS provides a wide range of programs emphasizing individual strengths, skill development, person accountability, family empowerment, community engagement and public safety. The services provided by YSC include: diagnostic assessments and placement services, behavioral and physical health care, educational services, and security.

The Youth Services Center is an 88-bed secure residential facility for detained male and female youth awaiting adjudication and/or disposition by the courts. YSC is a 55426 sf facility with three above ground floors and one level below ground with an average of 100-125 employees present on a daily basis. In addition to the employees, YSC experiences an average of 75 to 125 daily visitors and has a community center that hosts several special events throughout the year. The Youth Services Center has a 24-hour supervision and comprehensive social services, including a variety of academic and experimental programs. Youth attend school five hours a day, five days per week. The YSC has a level IV Facility Security Level (FSL) based on agency mission, function, and tenant population, and degree of public access. The security level needed for this facility warrants a 24/7 access control screening post and a central control that is staffed to operate the Supervisory Control and Data Acquisition system, provide continuous monitoring of the 120 live-feed camera systems, and provide 360 degree security over watch of the main lobby and secure areas.

The primary functions of the access and egress control posts for YSC is the regulation of all

movement (personnel and deliveries) into, out of, and within the designated building or area. Security personnel stand post at the entry/exit point (s) to verify all individual's identification and conduct inquiries and surveillance of suspicious items, packages, and people. The purpose of this post provides protection for all personnel and property within, and the facility itself. With effective access and egress control, this can be accomplished daily. Central control room is heart of security. It serves as a central space where physical and electronic security can be monitored and controlled by security professionals.

The facility electrical system consists of incoming utility feed fed from utility transformer, one generator (diesel) connected to automatic transfer switch. Life safety and critical building loads are connected to both the utility and generator power via automatic transfer switch. The existing 600kW emergency generator distribution system failed recently. In addition, the fuel oil system has failed recently. The fuel oil system consists of a 5,000 gallon tank and a day tank. The existing generator is a Katolite generator. The manufacturer is no longer making this generator type.

2 SCOPE OF WORK (SOW)

The District of Columbia is seeking Architectural Engineer (A/E) Services including, but not limited to, those required to meet the objectives of the projects. These services shall be provided via Title I (Design) Services and Title II (Services during Construction). The A/E shall provide the following:

1. Review existing record set documents provided by the end user.
2. Perform site survey to verify existing conditions
3. Meet with end user to determine additional loads to be added to the emergency generator.
4. Evaluate existing normal power and emergency power distribution systems.
5. Perform a design analysis to establish the new generator size and the best method of adapting the new generator to the building emergency power system.
6. Analyze two locations for the placement of the new generator, in place of the existing generator or in close proximity to the existing fuel oil tank.
7. Provide a report with findings and recommendations.
8. On board review meeting to discuss the report.
9. Based on the outcome of the report and on board review and approval proceed into the design phase.
10. Prepare design drawings and specifications that will be used as construction documents in a solicitation to be issued to prospective construction contractors and provide Title II services described herein.

The condition and maintenance of the power distribution system for the facility is to be determined as part of the survey and report. The incoming utility switchgear condition also needs to be determined as part of the survey and report.

The survey and report shall provide recommendations on what actions are supported regarding replacing the existing emergency generator with a larger generator and either in the same location or by the existing fuel tank. In addition, the end user has requested a load bank with monitoring be included in the design and that shall also be addressed in the report. The controls

for the operation of the generator shall be reviewed and included in the report as currently the ATS initiates a generator start signal to the generator. The generator should be sized so that generator could handle the entire building load should a utility power failure malfunction occur. The report shall also assess whether generator would maintain the existing fuel oil supply arrangement. The report shall also include recommendations on improving the existing fuel oil supply system. Diesel fuel is considered uninterruptible however, it must be properly maintained periodically and treated. Arrangements must be also be made for additional supply delivery if the power outage extends beyond the capacity of the tanks. The report also shall assess whether the new generator will be installed in the same location as the existing.

Phasing of the gear replacement must be carefully considered as this building must be called upon to fully function at any time. Each component should be replaced only when there is a functioning back up. Depending on the component, outages will occur, however, they can be minimized if properly scheduled and phased. Ideally a sequence similar to below would optimize reliability and minimize downtime:

- Provide a temporary emergency generator that will interface with the existing power distribution system.
- Replace the existing generator and commission.

Title I Services shall be comprised of the services listed in Section 3.0, Design Analysis Report with recommendations, Conceptual Design (including existing conditions and program), Schematic Design (including construction budget, preliminary project schedule, cost estimate and design alternatives that are fully consistent with the program and with code), Design Development (including construction cost estimate, full delineation of design decisions, including type of products and equipment) and Construction Contract Documents (including acquiring permits from DCRA, full specifications and bid documents sufficient to obtain General Contractor Services).

The A/E shall be responsible for review of all existing documents, conduct necessary and adequate site visits to the Youth Services Center, conduct field surveys, assessments, evaluations, and review all current documents related to the YSC as required for preparing all necessary construction documents.

3.0 Title I services

The A/E shall design and provide all construction documents including design analysis report for the upgrades including acquiring building permits. The design analysis report and the construction documents must be reviewed and approved by DGS and DYRS. The design must follow industry best practices and meet all applicable local codes and regulations and all other codes that have jurisdiction.

The A/E shall perform the following tasks:

- 3.1 The A/E shall perform a building survey and verify the existing conditions to develop construction documents for the design upgrades.
- 3.2 DGS shall provide existing CADD and as built drawings, if available, from which basis of the survey/verification shall be performed.

3.3 The A/E shall develop a design analysis report with recommendations

3.4 The A/E shall develop construction documents (Drawings and Specifications) for items of work as noted below.

3.4.1 **Civil:** In support of the location of the new generator in a location other than the existing.

3.4.2 **Structural:** None required

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3.4.3 **Architectural:** Construction documents developed to support the new electrical design limited to and repair of interior finishes, building wall penetrations and other miscellaneous work required to accommodate the installation of the upgraded emergency power system.

3.4.4 **Electrical:** Electrical design shall be developed to support the emergency power system upgrades of the following:

- Existing 600kW emergency generator will be demolished. In its place will be installed one standby diesel generator. The new generator will be able to provide the building power upon a loss of prime utility power.
- Each diesel generator will be provided fuel from existing 5,000 gallon fuel tank. Fuel system will be renovated to insure operation with the new generator.
- Emergency power must be available at all times to the facility. Phasing plan will be required in order to indicate how emergency power will be available 24/7 during construction and installation of the new generators.
- The generator switchgear will need a space for a temporary generator terminal cabinet, a load bank and one space for a future load.
- Survey of the site to determine the accuracy of the riser diagram and verify the loads on the generator and switchgear.
- Arc-flash hazardous study and labeling shall be performed.
- Calculations for short circuit study, time current coordination study, and voltage drop calculations will be provided.
- Verify if existing ductbank system can be reused for routing power from the new generators to the new generator switchgear.
- Provide design specifications for all new equipment and components.

3.4.5 **Plumbing:** Plumbing design services are included in this Scope of Work with regard to the fuel system.

3.4.6 **Fire Protection;** No fire protection design services are included in this Scope of Work.

3.4.7 **Fire Alarm:** Fire alarm services are included in the scope of work to connect the new generator enclosure to the existing fire alarm control panel.

3.4.8 **Construction Phasing:** Prepare construction phasing so as to allow the facility to remain in operation during construction.

3.4.9 **LEED:** No LEED certification is required for this project.

3.5 **Permits:** On behalf of, and as an agent for the District, apply for a Building Permit from DC Department of Consumer and Regulatory Affairs (DCRA)

3.5.1 A permit application shall be filed with DCRA and other applicable agencies to obtain a building permit. All costs associated with filing fees or building permits are not included in this scope of work, and shall be handled through MOU by DGS.

3.6 Attend one (1) pre-bid conference

3.7 Provide A/E Services during the bidding process by responding to RFI's and design questions.

3.8 **Title II services:** Provide Title II services for construction administration services:

3.8.1 Review shop drawings submittals.

3.8.2 Attend (1) preconstruction conference

3.8.3 Respond to RFIs

3.8.4 Prepare AS-built CADD drawings based on the Red Line drawings provided by the contractor.

3.8.5 Attend one (1) pre-final and one (1) final punch list site visit for project Close-out, including the preparation of itemized punch list for construction contractor work

4. DELIVERABLES

4.1 Design analysis report – Submit three (3) hard copies of report providing options and recommendation for DGS/DYRS review. Upon review by DGS/OUC, incorporate any DGS PM requested changes within the scope of work of the design documents.

4.2 Concept Submission (35%) – Submit three (3) full size hard copies of report and drawings. Upon review by DGS/OUC, incorporate any DGS PM requested changes within the scope of work of the design documents.

4.3 Design Development Submission (75%) – Submit three (3) full size hard copies of drawings and specifications. Upon review by DGS/OUC, incorporate any DGS PM requested changes within the scope of work to the design documents.

4.4 Final Submission (95%) – Submit three (3) full size hard copies of drawings and specifications. Upon review by DGS/OUC, incorporate any DGS PM requested changes within the scope of work to the design documents.

4.5 Compliance Submission (100%) – When design is finalized, submit an original soft copy (pdf) of all the Design Documents but not limited to the Design Analysis, Design Drawings, Design Specifications and the Construction Cost Estimate and original CADD file. Submit an additional two (2) full size hard copies of drawings and specifications and one CD.

4 ESTIMATED CONSTRUCTION COST – A/E shall also provide an estimated construction

cost with the final issued for bid drawings (100% Drawings and Specifications)

6. PERIOD OF PERFORMANCE

The AE shall commence the design work immediately upon the date of approval of the Task Order and Notice to Proceed (NTP). The Contractor shall continue working on the project until the project is fully (100%) completed. (It should be noted that any delay in receipt of review comments from the Client/User shall result in a corresponding delay to the final submission date, sliding accordingly relative to the delay)

- 5.1 NTP and kick-off meeting start of the building verification survey. Two (2) weeks
- 5.2 Design Analysis Report providing options with recommendations: Two (2) Weeks
- 5.3 DGS/OUS Review: One (1) week
- 5.3 Conceptual Design (35%): Two (2) weeks
- 5.3 Design Development Documents (75% Drawings and Specifications): Four (4) weeks
- 5.4 DGS/OUC Review: One (1) week
- 5.5 Final Documents (95%) Drawings and Specifications): Two (2) weeks
- 5.6 DGS/OUC Review: One (1) week
- 5.7 Compliance Bid Documents (100% Drawings and Specifications, Construction Cost Estimate): One (1) week

8.0 COORDINATION:

A/E shall coordinate the work in a professional manner and document the work and the information that contributes to project-related decisions fully.

9.0 DOCUMENTS, DATA AND SUBMITTALS:

The A/E shall visit the DYRS and ascertain the availability of any of the drawings related to existing conditions. Copies of the selected drawings, if needed, can be made by A/E for use in developing the needed drawings to comply with the scope of work. The A/E shall be responsible for verification of the data either provided by DGS or DYRS. The A/E shall perform any necessary site visits and be responsible for performing field investigations and verification of the actual existing conditions. Any documents provided by the District that indicates existing conditions shall be used for information purposes only.

- 9.1 The final submission of required drawings shall be on Auto CADD Release 14 or 2000 (dwg and xfer formats) or later including, schedules in Microsoft Project or primavera, and specifications shall be in Pdf format. In addition, the A/E shall submit all drawings with reproducible hard copy and PDF files of all submitted documents.
- 9.1.2 The specifications shall be based on the latest, 33-division AIA Master Spec and submitted with hard copies and electronic copies. The interested bidders (General Contractors) will be provided with electronic copies (original format and PDF) of bid documents.
- 9.1.3 Design and specification documents shall conform to all current governing codes of the

District of Columbia and the International Building Code required by the District as of the date of filing for permit with the DCRA.

10.0 GENERAL REQUIREMENTS:

The work under this contract shall be performed and documented in a professional manner.

10.1 The A/E shall coordinate all work through the Project Manager including but not limited to all site surveys and other field investigations germane to the work.

10.1.1 The A/E shall check architectural, civil, structural, mechanical, plumbing and electrical drawings and specifications for accuracy and detailed coordination. The A/E shall meet with all the appropriate regulatory agencies to discuss and review with them for compliance to their requirements. Upon complying with the aforementioned requirements the A/E shall submit the final construction documents to DGS

10.1.2 The A/E should use Project Teams converge as means to manage the project document control.

10.1.2 A/E shall apply and obtain the building permits from DCRA prior to releasing the documents for bids. All costs associated with the work of obtaining the permit shall be included in this proposal. The actual cost of the permit is not to be included in A/E proposal. The A/E shall respond to and correct deficiencies in construction documents to accommodate DCRA permit comments.

10.1.3 The A/E shall be held financially responsible for all errors and omissions resulting in a deficient design or changes including funds spent by the District to correct the documents or redesign and complete construction exercise.

11.0 MEETING MINUTES:

The A/E shall be responsible for acting as recorder for all meetings with the Government Agencies that he/she attends. The Minutes shall clearly indicate the meeting number and date, numbering of each issue raised, including description of the issue, who is responsible to address, by what date, and date completed. Minutes shall also record all open items, and will note the schedule of the contract, how far through that contract we are, including how far over schedule if applicable and the financial status of the contract and payments and a list of open Change Orders and Requests for Information. Memorandum for the Record of such meetings shall be typewritten and submitted to the Project Manager within five (5) calendar days from the date of the meeting, for review and approval and for such distribution as may be required. A/E compensation for performing these services shall be included as part of the Title I Services, as applicable.