

Architect/Engineer (A/E) Statement of Work
Project 596-19-101 Renovate Building 27 for Domiciliary
Lexington Veterans Affairs Health Care System
Lexington, Kentucky
Sousley Campus

This document includes technical and administrative requirements for completion of the design work at the Lexington Veterans Affairs Health Care System (VAHCS). This document identifies requirements for various stages of technical design.

The following is contained within this document:

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2. Design Analysis (Basis of Design)

Part 2 – Design Period

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Part 3 – Design and Construction Standards

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PART 1 – PROJECT DESCRIPTION

This project will renovate approximately 16,000 GSF of space on the second floor of Building 27 to relocate private bedrooms and nurse's station for moving PR RTP/RRTP from Building 29 to Building 27. The project will also replace the heating, ventilation, and air-conditioning (HVAC) systems in the building (described in more detail below).

The Architect/Engineer (A/E) firm is to provide site investigation, schematic design, design development, construction documents, and bid documents for Project No. 596-19-101 Renovate Building 27 for Domiciliary. Design disciplines anticipated include architectural, civil, structural, asbestos and lead paint testing analysis and abatement specifications, industrial hygiene, mechanical, electrical, plumbing, fire protection, and physical security.

The project will include the following:

The A/E Firm shall meet the following requirements for the design of this project:

- HVAC system design shall be a building solution incorporating:
 - Demolition of outside air ventilation units (2 each) located in Building 27 attic (supply, exhaust, and heat recovery from building 2-pipe fan-coil HVAC system);
 - Demolition of fan-coil system on Building 27, second floor;
 - Installation of variable air volume (VAV) air handlers in Building 27 attic sized to serve entire Building 27;
 - Use of one or more new VAV air handlers to provide HVAC system to Building 27 second floor via terminal units (cold air deck VAV with hydronic reheat loop);
 - Use of one or more new VAV air handlers to provide ventilation air on Building 27 first floor and Ground floor until the 2-pipe fan-coil systems on these floors are replaced; and
 - Ensuring continued seasonal operation of the 2-pipe fan-coil system on Building 27 first floor and Ground floor until the 2-pipe fan-coil systems on these floors are replaced.
 - Replacing and moving two existing 3,000,000 BTU/HR condensing boilers that are located subgrade to above grade or provide two new condensing boilers above grade for Building 27 renovation while existing condensing boilers can remain subgrade for ground floor of Building 27.
- Normal power main distribution system shall be replaced and relocated to above grade in Building 27. This is currently located subgrade in the neighboring building.
- Design must comply with the new Physical Security Directive issued on July 28, 2015, regarding Physical Security Design Manual for Mission Critical Buildings
- An independent cost estimate by a local, Lexington KY third-party firm hired by the A/E design team. This cost estimator shall have extensive experience in the local Lexington KY bidding climate and construction market by providing a market survey and provide a cost estimate for all submissions in accordance with the CFM Manual for Preparation of Cost Estimates and Related Documents for VA Facilities.

- All windows on the second floor shall be replaced with a complete renovation back to the exterior wall. New windows shall comply with the Physical Security Design Manual for Mission Critical Buildings.
- Provide a detailed submittal register encompassing all required submittals and necessary permits/permit modifications needed for this project.
- The utilization of SEPS as required by VA standards.
- A three-dimensional rendering in color of the renovation as part of the design development final submission and the construction document final submission.
- Coordinate design work with VA Medical Center Engineering Service Contracting Officer Representative (COR) and with Lexington VAHCS Activation Committee representatives.
- The Soursley Campus is a historic district. The A/E shall provide all necessary drawings/information to the VA so that the VA can coordinate with SHPO. The A/E is to assist the VA with all needs to ensure compliance with Section 106 and the building renovation is compliant with the Veterans Affairs Medical Center Historic Preservation Plan.
- Provide a design that meets VA requirements for Sustainability including:
 - Compliance with VA Sustainable Design Manual (Rev1, August 18, 2017) for Non-Recurring Maintenance (NRM) Program Projects AND including the following: Section 2.4 'GUIDING PRINCIPLES' COMPLIANCE AND VALIDATION; Section 2.5 COMMISSIONING; and Section 4.1 ENERGY CONSERVATION.
 - Building 27 has building level advanced meters for electric, domestic water, and chilled water; Building 27 has an advanced submeter for condensing boiler system make-up water; Building 27 has a building level standard meter for natural gas. A new building level advanced meter for natural gas shall be included in the design. Existing advanced meters may remain in place if existing utility service does not change outside of the measuring parameters of the existing advanced meters.
 - Provide a completed VA Checklist for Validating Compliance with the 2016 Guiding Principles for New Construction and Modernization; link: <https://www.cfm.va.gov/til/sustain.asp>
 - Provide a completed COMCheck output for all buildings/entire project; link: <https://www.energycodes.gov/comcheck/>

The Lexington VAHCS will be awarding a third-party commissioning contract for managing the commissioning process beginning with design start and awarding a third-party fire code review contract.

Project design shall clearly show work required, phasing of work required, and instructions to construction contractor regarding how to accomplish the necessary renovations in a 24/7 medical environment taking into consideration demolition, dust control, infection control, and specialized facility requirements as discussed with VA staff. Also included will be limitations, e.g. work required to be completed outside of standard administrative hours, work limited to periods shorter than a single shift, etc., for specific locations in the project. Bid deductions and/or add alternatives may be built into the scope of the project to allow for flexibility in the construction award.

The A/E shall apprise VA at first knowledge if estimated cost for construction work exceeds budget target of **\$8,800,000**.

1. SUBMISSION AND COMPLETION SCHEDULE

NOTICE TO PROCEED (NTP).....TO BE DETERMINED (TBD)

35% SCHEMATIC DESIGN (SD) SUBMISSION.....NTP + 105 Days
VA Design Review.....NTP +126 Days
65% DESIGN DEVELOPMENT (DD) SUBMISSION.....NTP + 203 Days
VA Design Review..... NTP + 224 Days
95% CONSTRUCTION DOCUMENT (CD) SUBMISSION.....NTP + 280 Days
VA Design Review..... NTP + 300 Days

100% BID DOCUMENT SUBMISSION.....NTP+344 DAYS
VA Design Review.....NTP+365 Days

2. DESIGN ANALYSIS (BASIS OF DESIGN):

Provide design analysis, in letter format, bound together, and divided into appropriate sections, to be submitted along with drawings, specifications, and cost estimate at each design review submission required by the contract. Each design analysis shall describe in detail all assumptions identified as follows:

1. Scope of work with specific objectives of the project.
2. Applicable federal, state, and local regulations, codes and standards, with distinction made as to which reviews, approvals, and permits are required during the design stage, and which are required before, during, and after the construction stage.
3. Design calculations for each discipline (architectural, structural, civil, mechanical, electrical, fire protection, etc.), and all other relevant data. ASHRAE calculations shall be submitted in detail. Computer simulations of HVAC system performance shall be accompanied by details showing inputs made, the basis of inputs – e.g. rule of thumb, assumptions, design data – and narrative analysis of the outcome.
4. Shall reflect the current state of design analysis at each stage of submission and reflect changes in the development of the scope of work due to review comments, formal changes to the contract, or any other communication (written or oral) between VA and AE;
5. Shall include earlier narrative(s) as an appendix/appendices and shall clearly show developmental changes to the narrative and design taking place between the submissions; Appendices of earlier narrative(s) having been updated shall be included as new with the new narrative; Appendices of earlier narrative(s) not requiring update shall be referenced and are not required to be included again.

PART 2 – DESIGN PERIOD

1. GENERAL

The A/E shall provide design period services to include drawings and specifications in accordance with this statement of work document and as identified during project design meetings. A/E shall provide competent design period services using staff and consultants adequately knowledgeable of the various

subordinate design disciplines including but not limited to: life safety and other building/utility systems as required for the project.

The A/E shall develop plans and system schematics for actual in-place components from VA-provided drawings and from field verification on site. Verify existing conditions affecting design. Information provided by VA on record drawings shall be verified for critical dimensions and critical components that may affect the design. A/E shall consider adjacent systems and components (architectural as well as utility systems) as to avoid unforeseen site condition change orders to the construction contract. The A/E shall verify necessary building architectural and utility system components to provide for a full and complete design of replacement architectural elements and utility system components. Field verification is to be conducted in the presence of VA COR/Engineering Service Design and Construction Section Personnel.

During the project, the A/E shall be required to attend all project meetings. The A/E shall record meeting minutes and furnish meeting minutes and sketches as required to reach concurrence and approval by the design team members. The A/E shall assemble the meeting minutes and forward to all attendees within 36 hours of the meeting for review and comment. The A/E shall incorporate appropriate comments, finalize the meeting minutes and send out the final meeting minutes within one week of the meeting.

VA is contracting design period services to include Schematic Design (SD), Design Development (DD), Construction Documents (CD), and Bid Documents (BD). All submissions and related work for each design phase shall conform to the requirements in this document and Program Guide (PG) 18-15, Volume C, A/E Submission Instructions, except as modified in this document.

2. SCHEMATIC DESIGN (SD)

Schematic design reflects the basic work required to define the design scope of the project; includes options and what-if scenarios to allow VA to consider potential options for final design and ensures arrangement of space complements the design scope as opposes to contradicting the design scope.

Schematic designs vary to meet the specific design scope of the project. For instance, an architectural renovation may have a few potential designs represented schematically as concepts of patient/staff flow of people, materials, etc. being considered, but may not provide alternatives for utility systems until later discussions, whereas an infrastructure project renovating and/or replacing utility systems may have a few potential schematic designs representing the types of systems available and their application towards the specific project. The A/E shall submit the following in a single package and at one time per date identified in contract Special Provisions:

- ☐ SD submittal package – Three unique design options (PG 18-15, Volume C requirements except as modified by this document)
- ☐ Assembled minutes of meetings for work up to SD submission
- ☐ Completed A/E Review Checklists for each applicable design discipline
- ☐ Electronic version of narrative in Adobe PDF
- ☐ Electronic version of drawings in Revit 2019 and Adobe PDF
- ☐ Electronic version of red lined specifications Table of Contents in searchable Adobe PDF and Microsoft Word
- ☐ Two full size sets of hard copy drawings, four half size sets of hard copy drawings, and two hard copy sets of red lined table of contents of the specifications

Schematic comments returned by VA to A/E with:

- ☐ General Comments
- ☐ Drawing Comments
- ☐ Specification Comments

3. DESIGN DEVELOPMENT (DD)

Design development includes initial work of the A/E required to represent the project as a set of drawings conveying the major intent of the project work. At this stage of project design, the physical layout of the new work should be shown. The A/E shall submit the following in a single package and at one time per date identified in contract Special Provisions:

- ☐ DD submittal package (PG 18-15, Volume C requirements except as modified by this document)
- ☐ Assembled minutes of meetings for work up to DD submission
- ☐ Completed A/E Review Checklists for each applicable design discipline
- ☐ A three-dimensional rendering submitted on 30" X 42" presentation board and electronic file for the VA to print future copies
- ☐ Electronic version of narrative in Adobe PDF
- ☐ Electronic version of drawings in Revit 2019 and Adobe PDF
- ☐ Electronic version of red lined specifications in searchable Adobe PDF and Microsoft Word
- ☐ Two full size sets of hard copy drawings, four half size sets of hard copy drawings, and two hard copy sets of red lined specifications.

DD review comments returned by VA to A/E with:

- ☐ General Comments
- ☐ Drawing Comments
- ☐ Specifications Comments
- ☐ One Set of A/E DD drawings with using Service(s) approval signatures
- ☐ Estimate Comments

4. CONSTRUCTION DOCUMENTS (CD)

The construction documents submission shall combine updates of all earlier sets of specifications and drawings and any other relevant project information (meetings, other discussions, etc.) making up a complete set of project documents. The quality of, and level of detail of, the CD submission should be such that no further or minimal changes are needed. The CD submission shall incorporate all changes needed from earlier reviews and that a quick review shall show all information is presented in clear and concise format. Discussion of Contractor staging/parking/exterior space usage, management of phasing activities such as control of dust and debris (infection control), etc. shall occur during development of the CD submission. The A/E shall submit the following in a single package and at one time per date identified in contract Special Provisions:

- ☐ CD submittal package (PG 18-15, Volume C requirements except as modified by this document)
- ☐ Assembled minutes of meetings for work up to CD submission
- ☐ Completed A/E Review Checklist for each applicable design discipline
- ☐ Electronic version of narrative in Adobe PDF
- ☐ Electronic version of drawings in Revit 2019 and Adobe PDF
- ☐ Electronic version of red lined specifications in searchable Adobe PDF and Microsoft Word
- ☐ Include summary of staff participating in final drawing and specification quality review and date when check set review was completed.
- ☐ Two full size sets of hard copy drawings, four half size sets of hard copy drawings, and two hard copy sets of red lined specifications

CD review comments returned by VA to A/E with:

- ☐ General Comments
- ☐ Drawing Comments
- ☐ Specifications Comments
- ☐ One Set of A/E CD drawings with using Service(s) approval signatures
- ☐ Estimate Comments

5. BID DOCUMENTS (BD)

The bid documents (BD) submission shall combine all updates of all earlier sets of specifications and drawings and any other relevant project information (meeting, discussions, etc.) making up the entire set of project documents.

The drawings shall be stamped and signed by architects and engineers according to the drawing type. The A/E shall submit the following in a single package and at one time per date identified in contract Special Provisions:

- ❑ BD submittal package
- ❑ Assembled minutes of meetings for work up to BD submission
- ❑ Submittal register in Microsoft Excel
- ❑ Include summary of staff participating in final drawing and specification quality review and date when check set review was completed.
- ❑ Electronic version of narrative in Adobe PDF
- ❑ Electronic version of drawings in Revit 2019 and Adobe PDF
- ❑ Electronic version of specifications in searchable Adobe PDF and Microsoft Word
- ❑ A/E Provided Project Checklists: A/E shall provide a checklist of all submittals, certifications, tests, and inspections required per drawing and specification section. This checklist will show all products requiring submittals in the form of shop drawings, data sheets, manufacturer cut sheets, etc. as well as all other items shown as required submittal items including, but not limited to, reports, system evaluations, testing, operating and maintenance manuals, etc.
- ❑ Submission Requirements: The A/E shall date all material and present the designs on VA standard size drawings that are appropriately labeled, "BID DOCUMENTS", in large block letters above or beside the VA standard drawing title block.
- ❑ Two full size sets of hard copy drawings, four half size sets of hard copy drawings, and two hard copy sets of specifications

PART 3 – DESIGN AND CONSTRUCTION STANDARDS

1. GENERAL

In the development of submissions, the A/E firm shall utilize certain VA and other design and construction criteria, examples of which can be found below. The design is not limited to these items and should be the result of compliance with applicable codes and standards, the user requests, and A/E creativity:

- VA Design and Construction criteria in the Technical Information Library (TIL), including planning, design, and construction items such as: Design Alerts, Design and Construction Procedures, Design Guides, Design Manuals, Equipment Guide List, Master Construction Specifications, Room Finish and Door Hardware Schedule, Space Planning Criteria, etc.
- The Joint Commission (organization accrediting healthcare systems) requirements shall be considered.
- NFPA Codes including, but not limited to: NFPA 101, Life Safety Code; NFPA 99, Healthcare Facilities; NFPA 70, National Electrical Code (NEC)
- Compliance to all known applicable codes shall be reflected in the completed design and construction contract documents.

Conflicting criteria shall be brought to the attention of the VAMC Engineering Service Contracting Officer Representative for resolution.

VA continually updates information in the Technical Information Library (TIL) used in project design. The A/E will be responsible for reviewing the guidelines in the TIL and incorporating the applicable criteria

into the design and construction documents. The following section, Access to VA Standards, provides World Wide Web addresses for the TIL and commonly used VA standards and references.

2. ACCESS TO VA STANDARDS

The following are World Wide Web addresses to commonly used VA standards and references:

Technical Information Library (TIL) home page	http://www.cfm.va.gov/TIL/
Accessibility information (PG-18-13)	http://www.cfm.va.gov/TIL/accessibility.asp
A/E Design Submission Requirements (PG-18-15)	http://www.cfm.va.gov/contract/aeDesSubReq.asp
A/E Project Documents Requirements & Checklists	http://www.cfm.va.gov/til/projReq.asp
Alerts – A/E Quality, Designs and Standards.....	http://www.cfm.va.gov/til/alert.asp
Design & Construction (PG-18-3).....	http://www.cfm.va.gov/TIL/cPro.asp
Design Criteria	http://www.cfm.va.gov/til/criteria.asp
Design Guides (PG-18-12)	http://www.cfm.va.gov/til/dGuide.asp
Design Manuals (PG-18-10)	http://www.cfm.va.gov/til/dManual.asp
Equipment Guide program (PG-18-5).....	http://www.cfm.va.gov/TIL/equip.asp
Master Specifications Index (PG-18-1)	http://www.cfm.va.gov/TIL/spec.asp
National CAD Standards and Details (PG-18-4)	http://www.cfm.va.gov/TIL/sDetail.asp
Room Finishes, Door and Hardware Schedule.....	http://www.cfm.va.gov/til/room/RoomFinishes.pdf
Space & Facility Planning (PG-18-9).....	http://www.cfm.va.gov/TIL/planning.asp
Special Requirements	http://www.cfm.va.gov/til/spclRqmts.asp
Technical Summaries.....	http://www.cfm.va.gov/til/techSumm.asp

PART 4 – CONSTRUCTION CONTRACT AWARD PERIOD

The A/E shall provide VA with technical design services during the period of Construction Contract award. These services shall include, but is not limited to:

1. Attendance at pre-bid meetings
2. Review of construction contractor's price proposal
3. Providing technical information needed to answer questions
4. Providing technical information needed to issue amendments

PART 5 – CONSTRUCTION PERIOD

The A/E shall provide competent construction period services using staff and consultants adequately knowledgeable of the various subordinate design disciplines included in development of the project. Construction period services shall include:

1. Review of shop drawings and submittals
2. Review of change order proposals
3. On-site construction inspection visits and progress meetings including A/E's written report of visit or meeting
4. Pre-final and final inspections and preparation of itemized punch-list for project completion requirements

PART 6 – A/E CONTRACT CLOSE-OUT

The construction contractor shall keep a set of hard copy drawings updated to reflect all changes in the field from the bid documents. These hard copy drawings are turned over to VA at the conclusion of the construction contract. VA will provide these drawings to the A/E in order for the A/E to update the Bid Documents to reflect actual completed project conditions.

The A/E shall submit the record drawings showing any changes or modifications to the Bid Documents reflected on the hard-copy set of “as-builts” provided by VA; Drawings shall be individually marked “Record Drawing” and submitted in a single package as follows;

- ❑ Drawings in AutoCAD 2019 (DWG) and Revit 2019 (RVT) format of the entire project.
 - 1. All drawing objects shall be removed. (e.g. Revit, Desktop, etc.)
 - 2. All drawings must plot properly using the NCS.ctb plot file.
 - 3. Provide a copy of the A/E firms typical CTB file and user information.
 - 4. Drawings shall represent final project with all demolished and/or removed items deleted from the .dwg files
 - 5. Provide to VA on CD/DVD
 - 6. All drawings must be on the VA Cad Standard Layering convention.
- ❑ Drawings in an Adobe Reader (PDF) format of the entire project.
- ❑ Printed Copies of the drawing set as follows;
 - 1. 2 sets (Full Size)
 - 2. 2 sets (Half Size)