

**STATEMENT OF WORK**  
**Department of Veterans Affairs**  
**Cardiology Improvements**  
**Project # 626-17-101**

**I. GENERAL SCOPE OF WORK & PROJECT OBJECTIVES**

The A/E shall provide all necessary architectural and engineering services as required to prepare complete contract drawings, specifications, technical reports and cost estimates, including construction period services for "**Cardiology Improvements**" on the 2<sup>nd</sup> floor south at the Tennessee Valley Healthcare System (TVHS), Nashville Campus, 1310 24<sup>th</sup> Avenue South, Nashville, TN 37212. The work is primarily architectural, mechanical, electrical, plumbing and limited life safety, fire protection and industrial hygiene.

This project will partially renovate areas of the approximately 9000 square feet Cardiology Center to improve the functionality, flow and environment of care. The main focus of the project is to increase, reconfiguring and improve treatment rooms, testing rooms and staff work area. Through the modernization of this area, the clinical process will become more efficient and the patient experience will be improved.

**II. STATEMENT OF PROJECT OBJECTIVES**

It is the intent of the Department of Veterans Affairs to have the A/E fully survey, investigate and document the existing space and utility systems in order to gain the knowledge and insight necessary to prepare quality, accurate construction documents in a professional and competent manner. The project objectives are as follows:

- A. Increase the number of exam rooms, treatment rooms, testing rooms and staff work centers by reconfiguring larger spaces and renovating some spaces. Install additional utilities as required to meet design guide requirements.
- B. Improve the condition of the facility. The design shall address the deficiencies listed in the FCA report (Facility Condition Assessment). Refer to the FCA deficiencies listed in the Justification.
  - 1. Replace finishes in areas of work, including walls, floors and ceilings to create an aesthetically pleasing and cohesive space. Removal of non-mold resistant wall covering shall be a priority.
  - 2. Replace non energy efficient lights with energy efficient lights.
  - 3. Replace pneumatic HVAC controls with digital controls and integrate with existing TVHS system.
- C. Design shall include provisions to minimize disruptions to the cardiology area. Project shall be phased if necessary to maintain utility service during construction. Temporary measures to maintain clinical operations will also be planned and documented.

### **III. PROJECT JUSTIFICATION**

The TVHS Cardiology Center, the largest in the VA by number of patients seen, is drastically undersized and the existing finishes have reached the end of their life cycle. Functionality as well as code and regulatory compliance will be addressed in this project.

- A. The cardiology area will be evaluated and renovations will be made to increase the number of exam rooms by modifying and upgrading existing spaces for improved space utilization. The project will accommodate increased patient load by consolidating staff to make better use of exam space. It will create a more aesthetically pleasing environment of care and improve patient comfort and energy savings with modern HVAC controls. Finally the project will improve wayfinding for better patient experience
- B. Project partially corrects FCA D #290653 Mechanical Controls by upgrading pneumatic controls to DDC.
- C. Project partially corrects FCA D #289261 Architectural by removing wallpaper (VWC) that has the potential for mold on exterior walls.
- D. Project partially corrects FCA D #283004 Architectural by replacing ceiling tiles.

### **IV. STATEMENT OF A/E TASKS**

- A. The A/E shall furnish all services for a complete design including producing construction documents and construction period services as specified in the subject contract.
- B. A/E shall develop, submit for approval to the contracting officer (CO), and execute a Quality Assurance (QA) plan that demonstrates the team and method of review for the project plans and specifications. The QA plan shall be submitted to the VA along with the project schedule and shall describe each QA task that will be taken during the development of the various design submission packages and the name of the Contractor member responsible for QA. Upon its completion each task shall be initialed and dated by the responsible Contractor member. A 100% completed QA plan shall be submitted with the final construction document submission package.
- C. Site survey work such as verifying existing conditions, verifying record drawings and verifying and analyzing utility systems shall be accomplished in conjunction with preparation of Design Documents. A/E shall furnish documentation and drawings of these findings and address deficiencies in the existing conditions.
- D. The A/E shall meet with the user group and provide design concepts as required for an approved Schematic Design, Design Development and Construction Documents.
- E. The A/E shall provide cost estimation, project scheduling and phasing, bid period and construction period services as further described in the contract. The A/E design and estimate shall identify **20%** of the total construction budget as viable deductive construction alternates by areas of work and/or phases. This will require individual estimates by area/phase.
- F. The A/E shall provide design and construction period services utilizing individuals of the various design disciplines including but not limited to architectural, structural, mechanical and electrical as required by the project. Changes in personnel from those who are proposed must be approved in writing by the Contracting Officer. The services of an industrial

- hygienist familiar with asbestos abatement will be utilized in the event that asbestos is found present and would impact the work. The registered individuals who will stamp the completed documents shall accomplish engineering design work.
- G. The A/E shall provide a Code Analysis which will be clearly defined on the Index Sheet of the Construction Documents.
  - H. Waiting areas and corridors in project area will be addressed by project 626-15-102 "Upgrade Public Corridors and Waiting Rooms". Coordinate the two jobs to avoid unnecessary overlap and provide a cohesive space.
  - I. Room finishes in renovated spaces will be replaced to match TVHS Facility Standards and coordinated with project 626-15-102 "Upgrade Public Corridors and Waiting Rooms".
  - J. In renovated spaces use non-priority native BACnet controls. Integrate new Direct Digital Controls (DDC) with existing Alerton or Honeywell DDC frontend systems. Include DDC Raiser Diagrams, points matrix/listing and project specific sequence of operations based on TVHS standard sequence of operations.
  - K. If needed, add/replace VAV boxes with properly sized boxes. Upgrade existing pneumatic controlled to new DDC controls in project related spaces. Implement HVAC energy optimization controls, to include reset of discharge air temperature and air flow, unoccupied setbacks, use of occupancy sensors for terminal units in spaces with limited occupancy (such as conference rooms, storage rooms, etc.).
  - L. Energy efficiency and cost savings shall be considered in all design decisions. Comply with all federal mandates for sustainability, energy reduction and in accordance with VA design criteria. Design to applicable sections of the TVHS Energy Requirements and Design Guide for specific energy guidance.
  - M. When observed, include design for replacement or repair of duct work/duct access doors/access panels that are leaking air/energy. Duct work leakage objective is to obtain ASHRAE Standard 90.1, Seal Class A on major supply lines and Seal Class B on return and exhaust lines.
  - N. The A/E will coordinate with leading industry equipment, furniture and equipment manufacturers/vendor(s) to ensure proper layout and support of equipment according to manufacturer's requirements. However, design drawings and specifications shall be generic in order to promote fair and open competition.

## **V. BASIS FOR DESIGN**

- A. Department of VA standards may be obtained from the internet at <http://www.cfm.va.gov/TIL/>
- B. Design shall comply with the VA-PG-18-9 Space Planning Criteria. <http://www.cfm.va.gov/TIL/planning.asp>
- C. Compliance with VA HVAC Design Guidelines. <http://www.cfm.va.gov/til/dManual.asp>

- D. Compliance with the Physical Security Design Manuals for VA facilities.  
<http://www.cfm.va.gov/til/criteria.asp>
- E. Compliance with ADA, ABA and the VA PG-18-13 Barrier Free Design Guide.  
<http://www.cfm.va.gov/til/accessibility.asp>
- F. Compliance with VA TIL, PG-18-3 Design and Construction Procedures.  
<http://www.cfm.va.gov/TIL/cPro.asp>
- G. Compliance with VA TIL, PG-18-15 A/E Design Submission and Review.  
<http://www.cfm.va.gov/til/aeDesSubReq.asp>
- H. New rooms and partitions shall be designed to 40STC. This includes in-wall components such as doors, frames, boxes and glazing.
- I. Energy efficiency and cost savings shall be considered in all design decisions. Comply with all federal mandates for sustainability, energy reduction and in accordance with VA design criteria. Design to applicable sections of the TVHS Energy Requirements and Design Guide for specific energy guidance.
- J. When series standards are not available or are incomplete for a specific function/space, AE shall apply the standards and guidelines of another series for that specific function or a similar function.
- K. Comply with current applicable state, local and federal building codes as well as codes from other recognized authoritative bodies; including but not limited to Associated Air Balance Council (AABC), Acoustical and Insulating Materials Association (AIMA), American National Standards Institute (ANSI), American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), American Society of Mechanical Engineers (ASME), American Society for Testing and Materials (ASTM), The Building Officials and Code Administrators International (BOCA), Gypsum Association (GA), International Building Code (IBC), NEC, NFPA, National Environmental Balancing Bureau (NEBB), National Standard Plumbing Code (NSPC), OSHA, Standard Building Code (SBC), Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), The Uniform Building Code (UBC), Uniform Federal Accessibility Standard (UFAS) and American Barriers Act (ABA) and other applicable codes. Comply with VA PG-18-13 design standards.

## **VI. DETAILED SUBMISSION REQUIREMENTS**

Program Guide PG-18-15, establishes the guidelines for the A/E submissions. Design shall be performed and submitted in accordance with VA A/E Submission Instructions for Minor and NRM Construction Program. Refer to <http://www.cfm.va.gov/til/aeDesSubReq.asp>, which may not be adequate for certain, types of design. In some instances in which critical decisions need to be made, sufficient and relevant information has to be provided timely in order for the design to progress to meet certain milestone dates. The level of applicability of the program guide depends upon the scope of work and the exclusions, which are herein specified. Questions in regards to the applicability of specific requirements shall be resolved with the COR prior to any submission deadline. Where “days” are stated, this refers to “calendar” not “work” days.

- A. At each submission, all drawings and support material shall be dated and appropriately

labeled above the title block (the number of submission shall be adjusted according to the project size and scope):

Work Element	Copies	Duration
Design Kick-off Meeting		1 Calendar Days
Schematics	3	21 Calendar Days
Gov't Review		5 Calendar Days
Design Development	3	28 Calendar Days
Government Review		5 Calendar Days
Construction Documents 1	3	21 Calendar Days
Government Review		5 Calendar Days
Construction Documents 2	3	21 Calendar Days
Government Review		5 Calendar Days
Final 100% Bid Document	3	5 Calendar Days
Total		117 Calendar Days

- B. For each submission review comments may be verbal, noted directly on review sets, or written list. The A/E shall be responsible for compiling and addressing review comments. A/E shall produce and distribute meeting notes or minutes for VA review immediately after each submission review meeting.
- C. For each submission, furnish electronic files in Microsoft Office and/or AutoCAD 2016, A/E will demonstrate functionality and compatibility. Also submit 2 hardcopies of all drawings. Construction shop drawings are not required to be completed in AutoCAD. Also, submit one half size hard copies of AE DD and CD submittals for energy review.
- D. Project specifications shall include specifications for all products, materials, equipment, methods and systems shown on the construction drawings in accordance with standard professional practice and the resulting contract. The specification submitted for review shall include the name of the manufacturer, the product name, model number or other identification as appropriate to clearly identify the product that will be used in the construction of the project.
- E. Final bid documents shall be reproduced as part of the contract. Two (2) full sets and one (1) half set of the Construction Bid Documents are to be delivered to the COR along with electronic media. Specifications will be in Word 2010 and PDF while Drawings shall be in

PDF and AutoCAD 2016.

- F. Total time to accomplish Schematics, DDs and CDs through final reproduced bid documents shall be 117 calendar days from the issuance of the Notice to Proceed. Each submission will require maximum five (5) calendar days for VA review. A/E shall prepare a project schedule so that the timeframes in the above schedule are met.
- G. The required stamp of the licensed architect or engineer of record will be considered as certification of compliance with the contract requirements.

## **VII. CONSTRUCTION PERIOD SERVICE REQUIREMENTS**

- A. Review of Submittals: A/E shall review all material submittals, shop drawings, test reports (as applicable), etc. Reviews shall be completed and submittals returned to the COR within ten (10) calendar days from the A/E's receipt of the submittal.
- B. Review Analysis of Requests for Information, Change Orders and Costs: A/E shall provide prompt response when contacted by the Contracting Officer or COR to review and provide analysis of construction contractor requests for information or change orders.
- C. Site Visits: A/E shall provide **48** site visit "units" during the construction period when requested by the Contracting Officer. These visits shall be in addition to the pre-bid and final structural inspection. A site visit "unit" is defined as a visit to the site by one individual for 3 hours. On this job, a site visit may require the use of multiple "units" when more than one individual or an extended period of time is needed to inspect an area of work. The COR has the prerogative to determine the professional discipline(s) required for each site visit. The A/E shall notify the COR of their presence on site before any work is performed in order to document the number of individuals who are making the site visit. The A/E shall observe the construction, advise the COR of any deviations or deficiencies and recommend appropriate corrective actions.
- D. A/E shall respond to project RFIs within five (5) business days. If the RFI involves a stop work condition (validated by the COR) then the RFI response shall be completed within one (1) business day
- E. "Record Drawings" Requirement: Construction contractor shall provide marked up prints to the A/E, showing actual construction and any changes which occurred during construction. A/E shall revise the construction documents and provide a complete set of all drawings showing actual, completed construction and reflecting any changes incorporated in the work on reproducible, electronic media to the COR. A/E will update master site plan and master floor plans for all portions of TVHS campus altered by construction. Electronic media drawings shall be in latest version of AutoCAD in use at VA and in PDF format. Electronic media specifications shall be in the latest version of Microsoft Word in use at VA and in PDF format.

## **VIII. MATERIALS TO BE FURNISHED TO THE A/E BY THE VA**

The following items will be furnished to the A/E after selection:

- A. TVHS Energy Conservation Project Requirements and Design Guide Sept. 2014
- B. Drawing Files -- AutoCAD files of the campus site plan and architectural floor plans are available. Station utility drawing file hard copies will be made available for the AE to copy

and scan. The accuracy of drawings is not guaranteed and shall be used for general information only. Actual conditions shall be field verified by the A/E.

**IX. ADDITIONAL DELIVERABLES TO BE FURNISHED TO THE VA BY THE A/E**

In addition to the AE Design Submission Requirements for NRM and Minor Project in the VA Technical Information Library (refer to Basis for Design), the AE shall also provide the following:

- A. The A/E shall furnish with drawings, a separate stamped Life Safety Sheet.
- B. AE shall complete the AE design submission checklist (PG-18-15, Volume C) and include it with each submission.