

ARCHITECT-ENGINEER SCOPE OF WORK

OPA SECURITY ENHANCEMENTS PROJECT NO. 575-13-805

GENERAL:

The Architect/Engineer (A/E) to provide the services for preparation of Construction documents, cost estimates and other items indicated for "OPA SECURITY ENHANCEMENTS."

The design must, as a minimum, be in accordance with all applicable codes, (NFPA, JCAHO, UPC, UMC, ASHRAE, EPA) and Department of Veterans Affairs (VA) publications, (Master Construction Specifications, Construction Standards, Physical Security Design Manual, etc..

SCOPE OF PROJECT:

This contract will provide for a design of resistive barriers for the entrances of the Out Patient Addition of Building 1 of the Grand Junction VA Medical Center. The new design will meet the required standards for anti-ram resistance as referenced in the VA Physical Security Design Manual (7.4). The contractor shall conduct an on-site survey of the entrance areas. The survey and investigation shall include vehicular and pedestrian traffic flow patterns, site structure conditions, landscape (concrete flatwork) and esthetic impression. The scope and survey shall also include condition of pedestrian walkways within the immediate area of barrier as well as adjacent areas of pedestrian flow. The results of the survey and investigation shall provide a design consisting of drawings and specifications for the construction of anti-ram barriers. The contractor shall provide the following:

1. Provide an on-site survey of the east entrance and the adjacent driveway and parking areas. The survey shall determine pedestrian flow patterns, pedestrian walk surfaces, vehicular traffic flow patterns, trajectories, impact zones and other issues that could result from intentional forced impact to Medical Center personnel and structures. The survey may utilize record drawings as furnished by the VA.
2. Provide an on-site survey of the west entrance and the adjacent driveway and parking areas. The survey shall determine pedestrian flow patterns, pedestrian walk surfaces, vehicular traffic flow patterns, trajectories, impact zones and other issues that could result from intentional forced impact to Medical Center personnel and structures. The survey may utilize record drawings as furnished by the VA.

3. Provide an on-site survey of the east and west entrances of the existing illumination system.
4. Utilize survey results to provide no less than three (3) design options for passive and/or active impact resistant barriers, pedestrian walkway upgrades and illumination at the east and west entrances of OPA Building 1.
5. Upon determination by the VA of a design option, develop and provide the calculations and design parameters substantiating compliance with the Physical Security Design Manual, 7.4 Anti-Ram Resistance resulting in a design for construction.
6. Provide contract drawings in both hard copy and electronic form.
7. Provide contract specifications in both hard copy and electronic form.
8. Provide a cost estimate based on anticipated construction bid date.
9. Provide a construction work completion schedule.
10. Provide bid alternates if the estimated construction costs exceed the project budget.

Upon approval by Medical Center's review and approval of the 100% drawings and specifications, the contractor shall provide to the Contracting Officer publishable construction drawings and specifications.

Delivery date: **90 days** from Notice to Proceed.

Reference Specifications: <http://www.cfm.va.gov/TIL/spec.as>

All design and work will conform to the current edition of the VA Master Specifications and VA Design Standards as published at the following site: www.cfm.va.gov; ASME, ASHRAE, OSHA, IBC 2009, IPC 2009, IMC 2009, NFPA and NEC building codes and standards.

A/E SUBMISSION OF MATERIAL FOR FIRST, SECOND AND THIRD REVIEWS:

GENERAL:

A. The A/E shall prepare all working architectural and engineering plans on AUTOCAD 2011 format in accordance with AIA CAD Layering Guidelines. There will be one submission of design options. There will be three submissions for working drawings, specifications and cost estimates.

B. Plans for the architectural, HVAC, plumbing and electrical drawings shall be at the same scale to facilitate checking.

C. A/E discussions with the medical center personnel concerning requirements will be arranged by the VA Project Manager. Discussions with the Medical Center Staff occurring without the Project Manager presence will not be incorporated into the design without the approval of the Project Manager.

D. At each submission, all drawings shall be dated and appropriately labeled, "PRELIMINARY SUBMISSION," "FIRST WORKING DRAWINGS SUBMISSION," etc., in large block letters above or next to the title block.

E. In each submission the A/E shall incorporate the material specified in the prior submission, revised according to the comments made by the VA at the prior review.

G. Symbol identification of working drawings shall be per VHA guidelines.

1. Building Number shall precede the classification identification (building No. 148 for example) 148-A1, 148-P1, 148-E1.
2. Drawings shall be numbered in sequence within each classification, for example 148-A1, 148-A2, etc., referring to Building No. 148-first architectural sheet; Building No. 148-second architectural sheet, etc. Directly below the drawing number, the position within the series that each drawing occupies shall be shown, for example, sheet 1 of 30 (Plumbing Sheets), Sheet 2 of 30 (Plumbing Sheets), etc.
3. Drawings for each new project shall begin with number one. The drawings will be distinguished by their project titles and dates.
4. When more than one classification of work, for example, architectural and electrical is involved in a single drawing, the drawing number shall show the symbol for the major work classification, the indication that other work is shown on the same drawing shall be noted above the title block.
5. Drawing shall be prepared using ACAD 2007 and printed on standard size sheet for review.
6. Equipment capacities shall be listed on working drawings.
7. All drawings shall be carefully delineated to distinguish between new, existing, and replacement work.

H. The A/E shall pay particular attention to the fact that during the working drawing development stage approved preliminary plans are not subject to change at the request of the medical center staff without proper justification and approval of the Project Manager and/or Contracting Officer.

A/E shall provide the following quantities of review materials at review indicated:

REVIEW	DRAWINGS	SPECIFICATIONS	COST ESTIMATES
1 ST	3 sets		3
2 nd	3 sets	2	3
3 rd	3 sets	2	3

I. The A/E shall include metric equivalents to all measurements on drawings and specifications.

FIRST REVIEW SUBMISSION (35% REVIEW):

A. SPECIFICATIONS:

1. Submit an index of all current VA Master Construction Specification sections intended for use. Include a brief description of any A/E originated sections to be used.
2. Submit a list of all the submittals that the Contractor will be required to provide. Update for each of the following reviews. The submittal list will be in a format that will be used during submittal review to indicate, at a minimum, date of receipt, date of acceptance, date of return to contractor of the submittal.
3. A/E shall obtain the current VA Master Construction Specifications and any other VA Technical Documents at <http://www.cfm.va.gov/TIL>. The documents and specifications can be found under the technical library at the referenced website.

B. Architectural:

1. Submit as a minimum, a double line layout for each project. Include all plumbing fixtures and fixed equipment at a scale not less than 1/8" = 1' 0". Submit 1/4" = 1' 0" scale floor plans of special rooms such as the Compounding Room, etc., to show layout and identification of equipment. Include elevation views as necessary.

2. Show legends that as a minimum reflect all items denoted on drawing at this submission.

C. Structural:

1. Show the selected structural system, if required. Show beam depths slab thickness, column sizes and expansion joints.
2. Submit calculations and computations for resistance.

D. Heating, Ventilation, and Air Conditioning: **NA**

E. Plumbing and Sanitary:

1. Submit, as a minimum, outline plan drawings showing sizes of main lines and points of connection to existing.

F. Asbestos Abatement: **NA**

G. Electrical:

1. Submit, as a minimum, area plan showing new and existing electrical work. Indicate point of connection to existing distribution centers, junction boxes, etc.

H. Cost Estimates:

1. A/E shall submit a construction cost estimate simultaneously with the drawings for this project at each project submission.
2. This estimate shall show the cost of construction which would be expected to be reflected by the Construction Contractor's bids, if the bids were submitted on the same date as the estimate. The level of detail for this estimate shall be consistent with the degree of completeness of the drawings being submitted. Simply stated, this means that if a construction element is shown, it must be priced; if it is shown in detail, it must be priced in detail. For detailed elements, "lump sum" or "allowance" figures will not be acceptable.
3. The detailed estimate will contain unit cost, quantity, and total cost for both materials and labor. Each division (architectural, electrical, mechanical, etc.) will be broken down in the above manner.

4. All costs shown shall include all labor insurance and taxes, sales taxes on material, and applicable upper and lower tier Contractor and Sub-Contractor markup.
5. For the First Review only include a contingency allowance of 15%.
6. When Davis-Bacon wage rates are used in the cost estimate, the A/E shall include welfare and pension fund costs in labor units as appropriate.
7. Show a sub-total of Labor and Material for each sub-heading

SECOND REVIEW SUBMISSION (75% REVIEW):

A. Specifications:

1. Submit bound and edited VA Master Specifications of each discipline for review. Include a brief description of any A/E originated sections to be used.
2. Submit an updated list of all the submittals that the contractor will be required to provide.

B. Architectural:

1. Submit near complete floor plans and half complete details, schedules, and large scale plans. The architectural working drawings should be 75% complete

C. Interior Design:

1. Furnish samples and interior design as selected by designer and coordinate with facility interior design team.

D. Structural:

1. Submit drawings to scale showing tentative sizes of columns, beams and slabs if structural reinforcing is required.
2. Show sections and details so that construction features can be defined.
3. Submit calculations and computations.

- E. Heating, Ventilating and Air Conditioning: NA
- F. Plumbing and Sanitation:
 - 1. Show and identify all plumbing fixtures on 1/8" = 1' 0" scale floor plans. Plumbing and sanitation plans shall be complete, including sizing. Submit calculations.
- G. Asbestos Abatement: **NA**
- H. Electrical:
 - 1. Provide sheet for symbols.
 - 2. Submit finalized one-line diagrams if required.
 - 3. Show locations and 75% complete details of essential electrical system changes and upgrading.
- I. Phasing: **NA**
- J. Cost Estimate:
 - 1. This submission shall include everything required by the First Submission. It differs from the First Submission Working Drawings only in the level of detail required. For this submission, a complete quantity survey estimate is required. No lump sums will be permitted without explanation.

THIRD AND FINAL REVIEW (100% REVIEW):

- A. General:
 - 1. Contract drawings and specifications and all related documents shall be completed, fully coordinated, bound and ready for reproduction for bidding and construction purposes at this review after acceptance and any changes required at this review has been incorporated into the documents.
 - 2. The A/E shall deliver the original working drawings to the Contracting Officer for signature after review and approval of the

review material. The working drawings shall bear the seal of the Registered Architect, Professional Engineers and Certified Industrial Hygienist (if required) responsible for the design.

3. Prior to reproduction for issue for construction bids, the A/E shall make any changes to the working drawings, calculations, and specifications identified as necessary during the Third Review.

B. Calculations:

1. Assemble completed computations and engineering data including basis of design and systems narratives. Provide a separate volume for each discipline with an index, numbered pages, and bound with removable metal fastenings or other approved method.

C. Specifications:

1. When the drawings and specifications are near completion, the A/E shall furnish the VA with a brief description of work for inclusion in the Invitation for Bids. The VA will prepare and type the Invitation for Bid Form and will forward original copy to the A/E for reproduction and binding in the project specifications.
2. Submit VA Master Specifications Sections marked up to suit the project requirements and, also, any sections originated by the A/E. Editing and marking up of Master Specifications shall easily identify modifications, deletions, and insertions. Specifications shall be completely edited.
3. Submit an updated list of all the submittals that the Contractor will be required to provide. This shall be in a format that will enable the Project Manager to track the status of submittals during construction.
4. Provide a list of submittals required by the contractor.

D. Architectural:

1. Submit completed plans, elevations, details, and schedules.

- E. Color Design: To be selected by facility Interior Design Team in coordination with interior designer.
- F. Structural:
 - 1. Include all structural plans, elevations and sections.
- G. Air Conditioning and Refrigeration: **NA**
- H. Plumbing and Sanitation:
 - 1. Submit completed drawings, specifications and equipment schedules. Include any rough-in drawings as required per project.
- I. Asbestos Abatement: **NA**
- J. Electrical:
 - 1. Submit all drawings including complete legend symbol list, details, and schedules.
 - 2. Indicate any recircuiting of systems on the drawings.
- K. Cost Estimate:
 - 1. The submission requirement shall be as required under the Second Submission. It differs only in the level of detail required.

MISCELLANEOUS:

- A. Following approval of the final (100%) review material, the A/E will provide the government with -5- electronic sets of the approved contract, drawings and specifications. Drawings shall be furnished in AutoCad® 2011 electronic format and one set of drawings in .pdf for distribution. The specifications shall include those sections prepared and edited by the Contracting Officer and shall be furnished in MS Word format.
- B. A/E will provide additional services as outlined in Special Provisions (Architect-Engineer Contract) including construction period services, site surveys, as-built drawings, etc.

9/16/2013

C. Design to be in accordance with applicable federal, state, and local codes (ASCE, ASHRAE, NFPA, JCAHO, OSHA, VA design guides and Master Specifications, Physical Security Design Manual, etc.).