

Scope of Work

NRM Project No. 512A5-16-301

Upgrade Fire Alarm System Campus Wide - Design

1. OVERVIEW —

1.1 Government Agency Department and Address:

VA Maryland HealthCare System – VISN5 – [Perry Point](#)

1.2 Project Title, Number and Location:

Project Title: [Upgrade Fire Alarm System Campus Wide](#)

Project Number: [NRM No. 512A5-16-301](#)

1.3 Scope of Work

Provide all professional architectural and engineering (A/E) services necessary to develop complete drawings, specifications, cost estimates, project phasing site visits and construction period administration associated with Upgrading the Fire Alarm System at the Perry Point Veterans Affairs Medical Center, within the constraints of the construction budget consistent with the Veterans Affairs (VA's) project team goals as prioritized during project meetings and field surveys. Conduct preliminary project scope meetings and site survey investigations to develop the necessary elements for conceptual layout schemes with proposed alternatives consistent with the VA's project team goals as prioritized during preliminary project meetings, field surveys and studies.

The scope of this project shall consist of, but not limited to, surveying the proposed site, existing conditions, verifying record drawings, verifying and analyzing utility systems within the Perry Point VA Medical Center in conjunction with preparation of schematic design and design development. This project consists of preparing complete construction and demolition drawings with specifications for bid purposes. The drawings shall meet all applicable federal, state and local governing codes. Drawings shall be stamped by disciplines by registered architects and engineers.

The Architect/Engineer performing the work shall perform an investigative study on the current campus wide fire alarm system which is installed in 46 buildings at the Perry Point VA campus. The A/E shall check system integration and determine the effectiveness of the existing Fire Alarm System in those buildings and the current fire monitoring system installed at the fire house and redundant fire monitoring system at the boiler plant. The A/E shall provide recommendations for Upgrade based on findings of the investigative study.

The Architect/Engineer's recommendations shall meet below requirements for this system:

- System shall be capable of Station wide fire monitoring with redundant monitoring. Primary monitoring at the fire station and redundant monitoring at the boiler plant.
- System shall be installed parallel to the current system until fully tested and certified
- Fully addressable fire alarm system capable of transmitting data which will provide the exact location and device type back to fire control monitoring panels in the fire house and boiler plant.
- Continuous software and hardware self-checks, including 'watchdog' circuit to ensure proper functioning.
- New system shall meet the most recent VA FIRE PROTECTION DESIGN MANUAL and NFPA 72, Proprietary, UL 1076, & NFPA 13 and 17 and all other local and national fire protection codes.

The A/E shall provide meeting notes / minutes for meetings and conference calls.

The A/E shall obtain all permits and FCC application for equipment frequency allocation.

The A/E shall obtain all environmental and other necessary permits that would be required prior to construction commencing – including but not limited to:

- Maryland Historic Trust
- Section 106 for Historic Preservation
- Maryland Dept. of the Environment (MDE)
- Maryland Dept. of Natural Resources (DNR)

The A/E shall base their design to meet the following sustainable energy requirements:

- USGBC LEED: Design elements to qualify for LEED Silver, with no formal certification required.
- Executive Order 13514
- EPACT 2005
- EISA 2007
- VA HVAC Design Manual
- VA Sustainable Design & Energy Reduction Manual (April 2010 or later)

The A/E shall hire an IH Consultant. The IH prepares the asbestos survey inspection drawings and the abatement design field drawings. The A/E prepares the asbestos drawings based on the IH findings.

Scope of Work for Industrial Hygiene Consultant Hired directly by the A/E

1. CRITERIA UNIQUE TO VA:

1.1.1 These instructions and documents constitute the "Asbestos Abatement Design and Project Monitorin Guidance/Requirements". The intention of this SOW is to establish an Agency-wide policy on the removal and management of asbestos containing materials (ACM), and to set standards to protect the health of Department of Veterans Affairs (VA) employees, patients and visitors in all facilities under its jurisdiction. Industrial hygienist is identified as IH.

1.1.2 Department of Veterans Affairs (VA) Directive 7700, Occupational Safety and Health, sets forth the policies and responsibilities for managing and implementing the VA occupational safety and health program (OSH).

1.1.3 Guidelines to the A/E and IH Consultants for Development of Bids and Qualifications Proposal for Asbestos Abatement: This document explains how to develop the asbestos abatement project scope of work and related costs. See Article 6.

1.1.4 Selection Guidelines and Ranking Criteria for IH Contractor/Consultant: Criteria on how to screen and select a qualified IH consultant for the project. See Article 7.

1.1.5 Cover Statement for Asbestos Abatement Work: This document is required at the beginning of the Asbestos Abatement Report. See Article 8.

1.1.6 Certification on Asbestos Abatement for the Department of Veterans Affairs Construction Projects: This document is required at the completion of the asbestos abatement project. See Article 9.

X.X.X GLOSSARY

Abatement - Procedures to control fiber release from asbestos-containing materials. Includes removal, encapsulation, enclosure, demolition, and renovation activities related to asbestos containing materials (ACM).

Aggressive method - Removal or disturbance of building material by sanding, abrading, grinding, or other method that breaks, crumbles, or disintegrates intact ACM.

Aggressive sampling - EPA AHERA defined clearance sampling method using air moving equipment such as fans and leaf blowers to aggressively disturb and maintain in the air residual fibers after abatement.

AHERA - Asbestos Hazard Emergency Response Act. Asbestos regulations for schools issued in 1987.

Air monitoring - The process of measuring the fiber content of a known volume of air collected over a specified period of time. The NIOSH 7400 Method, Issue 2 is used to determine the fiber levels in air. For personal samples and clearance air testing using Phase Contrast Microscopy (PCM) analysis. NIOSH Method 7402 can be used when it is necessary to confirm fibers counted by PCM as being asbestos. The AHERA TEM analysis may be used for background, area samples and clearance samples when required by this specification, or at the discretion of the VPIH/CIH as appropriate.

Air sample filter - The filter used to collect fibers which are then counted. The filter is made of mixed cellulose ester membrane for PCM (Phase Contrast Microscopy) and polycarbonate for TEM (Transmission Electron Microscopy)

Asbestos - Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated or altered. Asbestos also includes PACM, as defined below.

Asbestos-containing material (ACM) - Any material containing more than one percent of asbestos.

Authorized person - Any person authorized by the VA, the Contractor, or government agency and required by work duties to be present in regulated areas.

Authorized visitor - Any person approved by the VA; the contractor; or any government agency representative having jurisdiction over the regulated area (e.g., OSHA, Federal and State EPA).

Building/facility owner - The legal entity, including a lessee, which exercises control over management and recordkeeping functions relating to a building and/or facility in which asbestos activities take place.

Bulk testing - The collection and analysis of suspect asbestos containing materials.

Certified Industrial Hygienist (CIH) - A person certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene.

Clearance sample - The final air sample taken after all asbestos work has been done and visually inspected. Performed AGGRESSIVELY by the VA's professional industrial hygiene consultant/Certified Industrial Hygienist (VPIH/CIH).

Competent person - In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f); in addition, for Class I and II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor.

Contractor's Professional Industrial Hygienist (CPIH/CIH) - The asbestos abatement contractor's industrial hygienist. The industrial hygienist must meet the qualification requirements of a PIH and may be a certified industrial hygienist (CIH).

Count - Refers to the fiber count or the average number of fibers greater than five microns in length with a length-to-width (aspect) ratio of at least 3 to 1, per cubic centimeter of air.

Demolition - The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

VA Total - means a building or substantial part of the building is completely removed, torn or knocked down, bulldozed, flattened, or razed, including removal of building debris.

Employee exposure - The exposure to airborne asbestos that would occur if the employee were not wearing respiratory protection equipment.

Fiber - A particulate form of asbestos, 5 microns or longer, with a length to width (aspect) ratio of at least 3 to 1.

Fibers per cubic centimeter (f/cc) - Abbreviation for fibers per cubic centimeter, used to describe the level of asbestos fibers in air.

Industrial hygienist (IH) - A professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards. Meets definition requirements of the American Industrial Hygiene Association (AIHA).

Industrial hygienist technician (IH Technician) - A person working under the direction of an IH or CIH who has special training, experience, certifications and licenses required for the industrial hygiene work assigned. Some states require that an industrial hygienist technician conducting asbestos abatement clearance inspection and clearance air sampling be licensed as an asbestos project monitor.

National Emission Standards for Hazardous Air Pollutants (NESHAP) - EPA's rule to control emissions of asbestos to the environment (40 CFR part 61, Subpart M).

Negative initial exposure assessment - A demonstration by the employer which complies with the criteria in 29 CFR 1926.1101 (f)(2)(iii), that employee exposure during an operation is expected to be consistently below the PEL.

Outside air - The air outside the regulated area during an asbestos abatement project.

Owner/operator - Any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Personal sampling/monitoring - Representative air samples obtained in the breathing zone for one or workers within the regulated area using a filter cassette and a calibrated air sampling pump to determine asbestos exposure.

Permissible exposure limit (PEL) - The level of exposure OSHA allows for an 8 hour time weighted average. For asbestos fibers, the eight (8) hour time weighted average PEL is 0.1 fibers per cubic centimeter (0.1 f/cc) of air and the 30-minute Excursion Limit is 1.0 fibers per cubic centimeter (1 f/cc).

Polarized light microscopy (PLM) - Light microscopy using dispersion staining techniques and refractive indices to identify and quantify the type(s) of asbestos present in a bulk sample.

Presumed ACM (PACM) - Thermal system insulation, surfacing, and flooring material installed in buildings prior to 1981. If the building owner has actual knowledge, or should have known through the exercise of due diligence that other materials are ACM, they too must be treated as PACM. The designation of PACM may be rebutted pursuant to 29 CFR 1926.1101 (b).

Professional IH (PIH)- An IH who meets the definition requirements of AIHA; meets the definition requirements of OSHA as a "Competent Person" at 29 CFR 1926.1101 (b); has completed two specialized EPA approved courses on management and supervision of asbestos abatement projects; has formal training in respiratory protection and waste disposal; and has a minimum of four projects of similar complexity with this project of which at least three projects serving as the supervisory IH. The PIH may be either the VA's PIH (VPIH) or Contractor's PIH (CPIH/CIH).

Project designer - A person who has successfully completed the training requirements for an asbestos abatement project designer as required by 40 CFR 763 Appendix C, Part I; (B)(5).

Regulated area - An area established by the employer to demarcate where Class I, II, III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work may accumulate; and a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed the PEL.

Regulated ACM (RACM) - Friable ACM; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading or; Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of the demolition or renovation operation.

Transmission electron microscopy (TEM) - A microscopy method that can identify and count asbestos fibers.

VA Professional Industrial Hygienist (VPIH/CIH) – The Department of Veterans Affairs Professional Industrial Hygienist must meet the qualifications of a PIH, and may be a Certified Industrial Hygienist (CIH).

VA Representative - The VA official responsible for on-going project work. In most cases the Contracting Officer representative (COR).

Waste shipment record (Waste Manifest)- The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

X.X.X REFERENCED STANDARDS ORGANIZATIONS

The following acronyms or abbreviations as referenced in contract/specification documents are defined to mean the associated names. Names and addresses may be subject to change.

- A. VA Department of Veterans Affairs
810 Vermont Avenue, NW
Washington, DC 20420
- B. AIHA American Industrial Hygiene Association
2700 Prosperity Avenue, Suite 250

- Fairfax, VA 22031
703-849-8888
- C. ANSI American National Standards Institute
1430 New York, NY Broadway
212-354-3300 10018
- D. ASTM American Society for Testing and Materials
1916 Philadelphia, PA St.
215-299-5400 19103
- E. CFR Code of Federal Regulations
Government Printing Office
Washington, DC 20420
- F. CGA Compressed Gas Association
1235 Jefferson Davis Highway
Arlington, VA 22202
703-979-0900
- G. CS Commercial Standard of the National Institute of Standards and Technology (NIST)
U. S. Department of Commerce
Government Printing Office
Washington, DC 20420
- H. EPA Environmental Protection Agency
401 M St., SW
Washington, DC 20460
202-382-3949
- I. MIL-STD Military Standards/Standardization Division
Office of the Assistant Secretary of Defense
Washington, DC 20420
- J. NIST National Institute for Standards and Technology
U. S. Department of Commerce
Gaithersburg, MD 20234
301-921-1000
- K. NEC National Electrical Code (by NFPA)
- L. NEMA National Electrical Manufacturer's Association
2101 L Street, N.W.
Washington, DC 20037
- M. NFPA National Fire Protection Association
1 Battery Park
P.O. Box 9101
Quincy, MA 02269-9101
800-344-3555
- N. NIOSH National Institutes for Occupational Safety and Health
4676 Columbia Parkway

Cincinnati,
513-533-8236

OH

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O. OSHA Occupational Safety and Health Administration
U.S. Department of Labor
Government Printing Office
Washington, DC 20402

P. UL Underwriters Laboratory
333 Pflingsten Rd.
Northbrook, IL 60062
312-272-8800

2. GENERAL:

2.2.1 Refer to and use OPTION A:

- A. OPTION A: IH Consultant is hired directly by the A/E. The IH prepares the asbestos survey inspection drawings and the abatement design field drawings. The A/E prepares the asbestos drawings based on the IH findings.

2.2. Option A above is preferred by VA because it involves less contracting work from VA and better coordination between the parties involved.

2.3. Before selecting and negotiating a contract the VA shall verify the attached documents are current. The documentation (Options A) submitted by the parties involved should match the scope of work and the responsibilities stated in the contract.

2.4. The minimum qualifications criteria required for an IH consultant, for the assigned key employees, and for laboratory services are as follows:

- A. The IH consultant has an established office for at least two years in a location within a day's response from the project site and the office is staffed with at least one qualified professional certified industrial hygienist; two qualified industrial hygiene technicians (IHT); and other support staff.
- B. The CIH is certified by the American Board of Industrial Hygiene in comprehensive practice, a) meets OSHA/EPA's definition of "Supervisor/Competent Person" under 29 CFR 1926.1101.(o); b) has extensive experience with abatements involving service maintenance personnel; c) has completed formal training in respiratory protection, waste disposal, asbestos abatement/management, and performing visual asbestos assessments/inspections and is accredited as an asbestos Building Inspector/Management Planner; d) has performed as the Senior IH on five (5) assessment/abatement of projects of similar size and complexity; e) is an EPA/State accredited Project Designer and has participated in the abatement project design of five (5) projects of similar size and complexity as a Senior IH member of A/E or VA teams; f) has been in charge of abatement project monitoring/management for at least five (5) of similar size and complexity and has all required federal state and local licenses and accreditations.
- C. A Professional IH, a) meets OSHA/EPA's definition of a "Supervisor/Competent Person" under 29 CFR 1926.1101(o); b) meets the American Industrial Hygiene Association's definition of a

"Professional" IH; c) has experience with abatements involving service maintenance personnel; d) has completed formal training in respiratory protection, waste disposal, asbestos abatement/management, and performing visual asbestos assessments/inspections; e) has performed as the Senior IH, three (3) survey and assessment of projects of similar size and complexity; f) has participated in the abatement project design of three (3) of similar size and complexity as a Senior IH member of A/E or VA teams; g) has been in charge of abatement project monitoring/management for at least three (3) of similar size and complexity projects and has all required federal state and local licenses and accreditations.

- D. The qualified IHT has: 1) specialized training and expertise in asbestos abatement management, monitoring, inspection, sampling and analysis on other similar asbestos abatement projects; 2) certificates of training and proficiency in these areas; 3) all federal, state and local licenses and accreditations when required; 4) performed as principal assistant to a professional IH in at least three projects of similar size and complexity to this project; 5) and participated in final clearance inspections and provided testing assistance to the Professional IH/CIH.

2.5. Qualification Criteria: (See document titled "Selection Guidelines and Ranking Criteria for the IH Consultant.")

3. OPTION "A", A/E HIRES CONSULTANT - ASBESTOS ABATEMENT PROJECT DESIGN SCOPE OF WORK FOR A/E - IH TEAM.

3.1. GENERAL:

- A. **OPTION A** is applicable for renovation/remodeling projects with asbestos containing materials (ACM) that is designed by an A/E and in which the IH is a consultant to the A/E.
- B. These special instructions cover the A/E - IH services associated with asbestos for the Schematics, Design Development and the Construction Documents stages of the VA design process and the construction period services of a project. The successful design of a renovation/remodeling project with asbestos requires the close interaction of the IH Consultant with several other disciplines in the A/E team. The IH consultant is not only required to meet the qualifications at 2.4 but also have experience working as a member of an A/E design team.
- C. A/E - Architect and Engineer firm - shall be responsible for providing all design documents for the project. The IH consultant shall coordinate with A/E to ensure that fully coordinated drawings are provided for all asbestos abatement and related restoration work.

3.2 SCOPE OF WORK FOR SCHEMATIC DESIGN:

A. A/E Team:

1. **TASK 1.** Definition of Impacted Areas:

- a. At the first schematic design submission, provide a set of architectural drawings to the IH consultant showing the areas of the facility that will be impacted by the abatement project plus any additional areas specifically identified by the VA to be decontaminated with this project. Solicit the input of the VA Medical Center (VAMC) for the identification of these

additional areas to be decontaminated. The plans shall be 1/8" reproducible sepias suitable for marking up information on them. A/E to provide a detailed description of the contemplated work in each impacted area and participate with the IH in a thorough walk through of all impacted spaces.

- b. Identify and incorporate phasing requirements, dictated by asbestos abatement work, into a phasing plan for entire asbestos abatement project.
2. **TASK 2.** Review and Coordination of Schematic Abatement Design:
 - a. Review for accuracy of impacted areas and for impact on other trades the preliminary draft of asbestos assessment/scope of work and abatement problems and solutions, developed by the IH consultant, prior to its submittal to the VA.
- B. I. H. Consultant:
1. **TASK 1:** Development of Sample Plan:
 - a. If necessary, develop an asbestos sampling plan showing the location of all proposed samples, showing existing information such as old samples and areas that have been decontaminated by previous abatement projects and providing the rationale of the plan showing how the new samples in combination with the existing asbestos survey/inspection required by the VA will enable the IH consultant to identify with a high degree of confidence the location, quantity, type of, and condition of all asbestos containing materials (ACM) and the location and quantity of all asbestos contaminated elements (ACE) in the abatement areas.
 - b. The minimum work required for the development of the sampling plan will consist of the following, if necessary:
 - 1) Request from A/E reproducible 1/8" architectural plans of all impacted areas to be used for identifying the exact location of the proposed new samples and other necessary information.
 - 2) Compile and review as-built drawings, inspections and specifications for existing impacted facilities for identification of ACM used in the construction of these facilities.
 - 3) Review previous and current abatement projects and note information that may relate to any ACM/ACE for this project. Mark locations of those projects on plans. Review previous inspection/sampling results and assessment reports related to the existing impacted facilities and plot those results on plans.
 - 5) Walk through and visually inspect all accessible impacted areas, especially spaces above ceilings, chases, tunnels, mechanical rooms, sub-basements, etc. Review the A/E Quality Alert, Asbestos Abatement, dated 10/95 for a check list of items where asbestos abatement reports often fail to identify asbestos in the area. Spot check accuracy of b.1), b.2), b.3), and b.4) and determine where suspect/known ACM and ACE exist. In demolitions, invasive inspection may be needed.
 - 6) As required, develop a sampling plan correlating b.1), b.2), b.3), b.4) and b.5). Each impacted area with suspected ACM and ACE shall be covered in the sampling plan by appropriate bulk samples, direct visual observations or if inaccessible, by

deduction. Mark on drawings the location of the proposed samples, the location of the existing samples, the areas that have been decontaminated by previous abatement projects, the impacted areas proposed to be covered by direct visual observations and survey, and the inaccessible impacted areas proposed to be assessed by deduction or by invasive inspection. Assign to each new sample a unique identification number as per AHERA requirements. Provide a rationale for the proposed sampling plan showing how the results of the proposed new samples combined with the other information; old samples, survey information, etc.) will yield statistically viable information on the location, quantity, type of, and condition of all ACM and the location and quantity of all ACE in the impacted areas.

7) Present the sampling plan to VA for review/approval at the second schematic design submission.

2. **TASK 2.** Develop Preliminary Asbestos Assessment:

- a. Submit a preliminary description of asbestos assessment and abatement problems and solutions. This preliminary report shall include the following:
 - 1) Summary results of review of building asbestos inspection records/documentation.
 - 2) Summary results of interviews with VA personnel.
 - 3) Determination of whether any materials used in the building construction are known to contain asbestos. Some trade name materials may have been specified and are known to contain asbestos and should be identified.
 - 4) Results of the visual inspection of the building to determine location and condition of asbestos materials.
 - 5) Presentation of Sampling Plan outlined in Task 1.
- b. Provide name and location of EPA NIST/NVLAP and AIHA qualified laboratory for bulk and air sample analysis which I.H. consultant intends to utilize.

3.3 SCOPE OF WORK FOR PROJECT DESIGN DEVELOPMENT:

A. A/E Team :

1. **TASK 1.** The Impact of Asbestos Abatement on Building Sub-Systems.
 - a. Review Asbestos Exposure/Inspection Assessment Report and outline the impact of this work on all building sub-systems such as ceilings, lights, walls, carpets, pipes, equipment, etc. Include costs in project estimate to cover the impact of asbestos abatement on all sub-systems costs.
 - b. The PIH shall contact, if needed, EPA/OSHA, state, county, and city officials to determine their policy on the removal and acceptance by landfills of non-friable asbestos containing materials (ACM) e.g., floor tile, tile mastic, and roofing materials. The EPA NESHAP's and VA's position is that undamaged non-friable ACM does not pose a health hazard and consequently does not have to be removed under negative air containment conditions during a demolition/renovation project, except for chipping of floor tile, nor disposed of in an asbestos approved landfill, providing that removal or demolition procedures do not

make the ACM become friable. Obtain the position of the above officials, in writing, on these issues. If the above officials disagree with the VA's position, the PIH shall provide written recommendations as well as the above official's position, in writing, to the VA's Project Manager. Additionally, the PIH shall include copies of the relevant regulations cited by the above officials.

- c. Review phasing plan and incorporate and coordinate any new information. Submit coordinated plan including costs as part of overall phasing submission.

B. I. H. Consultant:

1. **TASK 1.** Sampling, Survey and Assessment Report:

- a. The objective of this task is to execute the approved sampling plan; to evaluate analytical results; to perform a detailed survey of the areas with ACM and ACE for determination of quantities and to prepare a Scope of Work reflecting the results of the sampling and inspection and provide information on removal and decontamination of the impacted area(s).
- b. The minimum work required for this task is as follows:
 - 1) Execute the sampling plan under the personal direction of the assigned PIH/CIH and in accordance with EPA/VA AHERA regulations for occupied areas.
 - 2) Perform sampling and analysis in accordance with EPA/VA Asbestos Management Policy. Analyze sampling data and correlate with other data to determine location, amounts, and composition of ACM and location of ACE.
 - 3) Review existing inspection and perform, if needed, additional inspection/sampling of all areas with ACM and ACE to determine quantities. Evaluation of quantities of ACE's and ACM's for spaces that are not accessible should be conservative.
 - 4) Identify the appropriate abatement method(s) in compliance with VA Asbestos Management Policy and all OSHA, EPA and state/local requirements.
 - 5) Prepare a project specific Exposure Assessment Report to include:
 - a) The information described in paragraphs b.1), b.2), b.3) and b.4).
 - b) "Cover Statement-Assessment Report" up front, signed by the PIH/CIH and the Project Manager of the A/E firm.
 - c) Executive summary of the findings of the report.
 - d) Summary of estimated project abatement cost and duration.
 - e) For each building, the square feet of the impacted spaces, the quantity of ACM in linear feet/diameter of pipe insulation and in square feet of ceilings, walls and fireproofing, the quantity of ACE in square feet of plaster ceilings and walls, the square feet of contamination of suspended ceiling, the cubic feet and square feet of contaminated soil, and the number of contaminated lights, as applicable.
 - f) For each building/project, the estimated cost of abatement and the duration of abatement. State clearly for each building/project the floors and areas impacted and whether the building will be partially occupied or totally evacuated during abatement.

- g) Description of the impacted areas by drawings, floor plans, sketches, room names or other means. Show or describe the location of each sample taken, its composition and identification number.
- h) Classify each impacted space as to the OSHA Class of Work and the work requirements, i.e., Negative Pressure Enclosure or Glove Bag work. Areas which require no abatement shall be indicated, as well.
- i) For each abatement area, provide quantity and cost estimates of all asbestos within the limits of the area. Quantities are to be indicated in linear feet of pipe and square feet of ceilings and walls. The cost is to be derived from the quantities multiplied by a unit price for that application.
- j) Summary of the square feet of floor space for all abatement areas, the total linear and square feet of asbestos to be abated, the total cost of abatement and a preliminary schedule of completion. Include in the cost estimate any cost for decontamination of equipment and fixtures.
- l) Assessment of the impact of abatement on building sub-systems such as ceilings, lights, walls, carpets, pipes and equipment. Provide room by room description and estimated quantities of impacted items to be replaced (number of lighting fixtures, square feet of ceiling, etc.) and a summary of these quantities. Provide a cost estimate for all impacted items.
- m) All pertinent information on impacted areas (description of location, function, extent of renovation) plan, sampling analysis, existing data (previous samples, inspections/assessments, abatement projects, as-built data, inspection reports and any other information supportive of the findings and recommendations of the report. Arrange the main body of the report on a building by building basis. Provide all other relevant information so that the reader of the report will be able to follow the rationale of the author for ACM and ACE identification and estimates. Provide in the appendix any supportive data such as analytical results, sketches, notes, pictures, etc.
- 6) Coordinate with other trades of the A/E team, especially architectural, mechanical and electrical to ensure that all ACE related work is properly accounted in the design and cost estimates of these trades.
- 7) Submit the complete, signed and coordinated report for review at the first design development review submittal.

3.4 SCOPE OF WORK FOR CONSTRUCTION DOCUMENTS ABATEMENT DESIGN

A. A/E Team Other Than I.H. Consultant:

1. **TASK 1:** Develop Construction Documents Drawings for Abatement Design:
 - a. ACM shall be shown in the architectural drawings where general demolition is required prior to abatement. Review HVAC and electrical designs to ensure coordination of all work including phasing schedules for ACM and ACE removal, re-insulation or installation of material removed during asbestos abatement, etc. Coordinate with VAMC and other trades of A/E to determine ingress and egress routes and waste transport routes for each

regulated area in partially occupied buildings. In the same way, develop emergency action plan procedures. Evaluate impact of abatement on critical support systems such as local exhausts, compressors, vacuum lines, fire and smoke systems, etc. Coordinate with VA personnel to determine locations and routings of temporary utilities for each work area.

B. I.H. Consultant:

1. **TASK 1.** Develop Construction Documents for Abatement Design:

- a. At the first construction documents submission. Provide separate asbestos removal 1/8" scale drawings labeled AR. Drawings shall show the location and quantity of all ACM and ACE in the regulated areas and how they will be removed/abated. The AR design shall reflect the findings and recommendation of the survey/inspection and assessment report and shall clearly show the regulated area(s) for each workspace, the location and configuration of the personnel decontamination facilities; the location and configuration of the equipment decontamination facilities; the number, size and location of HEPA units for each regulated area; the path of material transportation to the loading platform; and any other information required for a complete and adequate project design. In addition, show the exact location and size/configuration of the pipe elements to be decontaminated using the glove bag procedure. Show the exact design for all dirt floor abatement. Show all piping/fittings that are 4" diameter and smaller as one size. Show all piping/fittings over 4" diameter. In addition, differentiate among steam and water piping. Show contamination related to ceiling and wall demolitions in order to gain access to ACM above and beyond uncontaminated ceilings and walls that must be removed in order to have access. Review HVAC and electrical designs to develop isolation techniques and schedules for ACM and ACE removal. Coordinate with VA personnel and other trades of A/E to determine ingress and egress routes and waste transport routes for each regulated area in partially occupied buildings. In the same way, develop emergency action plan procedures. Evaluate impact of abatement on critical support systems such as local exhausts, compressors, vacuum lines, fire and smoke systems, etc. Coordinate with VA personnel to determine locations and routings of temporary utilities for each regulated area. Prepare detailed abatement cost estimates and coordinate with other trades. Prepare project specifications by marking up the VA Asbestos Abatement Specification Sections 01569/01570/01571/01572, as needed. Participate with A/E and VA representatives to determine appropriate phasing and scheduling of the work. Provide updated abatement cost estimates and coordinate with overall project estimate. Participate in reviews of the abatement design with VA.

3.5 SCOPE OF WORK FOR ABATEMENT CONSTRUCTION PERIOD SERVICES:

A. A/E Team Other Than I.H. Consultant:

Coordinate abatement construction monitoring and other services with the IH/CIH consultant.

B. IH/CIH Consultant:

1. Evaluate qualifications of abatement contractor: Perform a thorough evaluation of the proposed abatement sub-contractor by reviewing submitted information against qualification criteria specified. Perform additional investigative work to determine accuracy of claimed qualifications. Advise the Contracting Officer on qualifications and experience of company and qualifications, experience and adequacy of assigned personnel and overall conformance with project specifications.
2. Oversee the asbestos abatement to assure quality, resolve problems, and prevent the spread of contamination beyond the regulated area(s) during abatement work. All air monitoring is to be done utilizing PCM during the abatement with an option to utilize TEM after approval from the VA representative. TEM shall be used for clearance of abatement in excess of NESHAP's notification amounts for renovation.
3. The IH/CIH consultant will perform the following tasks:
 - a. **TASK 1:** Establish background levels prior to the beginning of abatement work. This will include taking background samples and retaining samples for possible TEM analysis.
 - b. **TASK 2:** Provide continuous project monitoring duties throughout abatement including: perform daily continuous air monitoring, inspection and testing outside the regulated area(s) during actual abatement work to detect any faults in the regulated area(s) isolation and any adverse impact of surroundings from regulated area activities. VPIH/CIH must be present during all abatement activities including containment area set up and tear down.

VA STAFF NOTE: Buildings which will be totally demolished after abatement may not require Task 1 and Task 2 above by the IH/CIH consultant.
 - c. **TASK 3:** Perform unannounced site visits to spot check overall compliance of asbestos abatement work with project design/contract documents. These visits may include any inspection, monitoring and testing inside and outside the regulated area(s) and all aspects of the abatement project except personnel monitoring.
 - d. **TASK 4:** Provide support to the VA representative such as evaluation of submittals from the abatement contractor, resolution of unforeseen developments in abatement work, etc.
 - e. **TASK 5:** Perform, in the presence of the VA representative, final clearance/inspection and testing of a decontaminated regulated area or building at the conclusion of the abatement and clean-up work to certify compliance with VA project design clearance/decontamination standards.
 - f. **TASK 6:** Issue certificate of clearance/decontamination for each regulated area or building and project report. At the completion of the abatement project the IH/CIH shall submit to the VA a project report consisting of the daily log book requirements and documentation of events during the abatement project including Waste Shipment Records signed by the landfill's agent. It will also include information on the containment and transportation of waste from the containment with applicable Chain of Custody forms. The report shall include a certificate of completion, signed and

dated by the CPIH/CIH, in accordance with Attachment #1. Attachments #1 through #4 will be used to for documentation and reporting during the abatement process. All clearance and perimeter area samples must be submitted. The VA Representative will retain the abatement report after completion of the project and provide copies of the abatement report to VAMC Office of Engineering and the Safety Office. The report shall include:

- Project log notes
- Project Design & Drawings
- EPA/MDE Notification
- Entry logs
- Preexisting Conditions Agreement
- Pre Abatement Inspection Documentation
- Worker Abatement Licenses and Fit Test Affidavit
- Summary of Abated Materials, Location and Quantities.
- Detail any remaining asbestos in the project area.
- Worker acknowledgment Forms
- Visual Inspection Forms
- Negative Pressure Differential Records
- Drawing of containment, area location, personal decontamination chamber

location, differential air filtration location, waste decontamination unit, and filtered air exhaust locations.

4. All data, inspection and testing results generated by the IH consultant will be available to the abatement contractor for information and consideration. The Asbestos Abatement Contractor shall provide cooperation and support to the IH/CIH consultant for efficient and smooth performance of their work.
5. Monitoring and inspection results of the IH/CIH consultant will be used by the VA to issue any STOP REMOVAL orders to the abatement contractor during abatement work and to accept or reject regulated area(s) or a building as decontaminated. The IH/CIH consultant will make available to the abatement contractor the plan for sample collection and analysis for continuous monitoring outside the regulated area(s) and the plan of final clearance inspection and testing for each regulated area or building prior to executing each plan. Plan will include location for samples, name and qualification of person taking samples, whether on-site analysis and/or off-site analysis will be utilized, methodology of analysis, lab information and qualifications of on-site analyst.

5. GUIDELINES TO A/E AND I.H. CONSULTANTS FOR DEVELOPMENT OF FEE AND QUALIFICATION PROPOSAL FOR ASBESTOS ABATEMENT:

5.1 The proposal shall consist of a technical section and a bid section. The technical section shall include the scope of work for the project and a project design/plan of action. The plan shall address each task specifically including approach, estimated effort in man days, schedule of completion and key personnel. The plan shall reflect project specifics such as past abatement work in the project area. The A/E-IH/CIH team is required to become familiar with the project specific information included in the A/E package and especially the "Scope of Work" and then visit the project site to assess the project in order to prepare their proposal. The proposal describes the work of the A/E - IH team for project //schematic //design developing //,construction documents //and construction period services. Repetition of statements borrowed from the VA guide "Scope of Work" is unacceptable as the technical plan of action.

5.2 The bid proposal shall be coordinated with the technical proposal showing cost per task and overall cost for work covered. This part shall include information on unit cost for personnel, lab services and other fee information which can be used to correlate the fee proposal to the technical proposal.

5.3 The following example is an indication of the specificity and detail required in the technical plan of action of the proposal:

A. Task: Existing Conditions and Data:

1. Compile and review pertinent "as built" drawings and specifications of buildings #1, #2, and #4 for identification of ACM used in the construction of these buildings. "As-Built" will be secured from _____ (Name and Title of Source) By _____(Date).
2. Review and plot previous and current abatement projects and note relevant information relating to ACM and ACE in the project areas. Information on previous abatement projects will be secured from _____ by _____.
3. Review and plot previous VA sampling results and assessments in project areas information on previous VA sampling results will be secured from _____ by _____. This task will be completed by _____ (Date), will be performed by _____, _____ and _____(Names and Titles of Individuals) and will be under the direction and direct supervision of _____(Name and Title). The estimated effort is _____ (Number of Man-days).

6. SELECTION GUIDELINES AND RANKING CRITERIA FOR IH CONTRACTOR/CONSULTANT:

6.1 It is the responsibility of the A/E/to apply these criteria to screen IH/CIH consultants.

6.2 Bids should be solicited only from qualified candidates. One source for these consultants may be in the latest "Consultant's Listing" of American Industrial Hygiene Association (AIHA), 2700 Prosperity Ave., Fairfax, VA 22031 Telephone (703) 849-8888

6.3 Minimum Qualifications Criteria for the IH Consultant and the key personnel proposed for the project are listed at 2.4. They shall be used to determine which of the respondents is qualified for consideration for further evaluation and ranking.

A. Laboratory Services:

1. Bulk samples shall be analyzed at an EPA NIST/NVLAP/AIHA accredited laboratory. Polarized light microscopy (PLM) shall be used to analyze bulk samples. Bulk samples exhibiting Occluded matrices during analysis, and Non-organic binders, shall be analyzed by TEM.
2. Air samples shall be analyzed by an individual meeting the requirements of OSHA 29 CFR 1926.1101 Appendix A. PCM air samples must be analyzed onsite by professional industrial hygienist currently ranked as proficient through the American Industrial Hygiene Association (AIHA) PAT programs; and employed by an AIHA laboratory accredited for fiber counting. TEM air clearance samples must be sent to an EPA NIST/NVLAP accredited laboratory for analysis.
3. Accredited laboratories must be able to provide twenty-four hour turn-a-round time for air and/or bulk sample results.

6.6 The ranking criteria listed below can be used to evaluate IH/CIH consultants that meet the minimum qualifications criteria. The ranking criteria consider experience, quality, reputation and other capabilities of an IH/CIH Consultant beyond the minimum levels.

- | | |
|--|----|
| A. Proximity of IH office to project location and A/E office | 10 |
| B. Capacity of IH office to support size and complexities of this project. | 20 |
| C. Experience of collaboration between the A/E and IH Consultant. | 5 |
| D. Experience of IH office with asbestos abatement work. | 20 |
| E. Experience of IH Consultant with VA abatement work. | 20 |
| F. Expertise and experience of Qualified IH as consultant to A/E's. | 5 |
| G. Competitive unit prices for rates of key persons and lab services. | 20 |
| H. Quality of response (Brief, concise, complete, easy to follow). | 5 |
| I. Capability of firm to provide completed asbestos abatement design documents | 10 |
| J. Industrial Hygiene on site PCM air sample analysis | 50 |

6.7 The proposal from each respondent IH/CIH Consultant should be brief and concise and address the minimum qualifications criteria separately from the ranking criteria. Each criteria should be addressed distinctly and compliance should be backed up with proofs and references that can be easily and conveniently checked and verified. Omission of any item or incomplete back-up materials should be construed as non-compliance.

Attached is an example of a portion of a screening questionnaire for your information.

7. SAMPLE SCREENING QUESTIONNAIRE FOR QUALIFYING THE INDUSTRIAL HYGIENIST

INDUSTRIAL HYGIENIST QUALIFICATION QUESTIONNAIRE

1. Will the Project Manager be an Industrial Hygienist who is certified by the American Board of Industrial Hygiene or EPA-AHERA? _____.

2. What percentage of the project tasks will be done by various personnel?

PERSONNEL (%TIME)

	Project	Project Supervisor Air Sampling	Other
Project Mgmt.	_____	_____	_____
Bldg. Survey and Assessment	_____	_____	_____
Spec. Dev. and Review	_____	_____	_____
Contractor Qualification	_____	_____	_____
Abate Monitor	_____	_____	_____
Pre-	_____	_____	_____
During-	_____	_____	_____
Post-	_____	_____	_____
Final Rep. Review	_____	_____	_____

3. What specific experience in asbestos does the consultant have?

	1.	2.	3.	4.
Client Name	_____	_____	_____	_____
Phone Number	_____	_____	_____	_____
Date	_____	_____	_____	_____
Duration	_____	_____	_____	_____
Involvement	_____	_____	_____	_____
Personnel	_____	_____	_____	_____

4. What formal asbestos abatement training programs have been attended by the persons assigned to the project? (OSHA/EPA/NIOSH, Seminars, etc.)
What were the dates of attendance?

5. Is the consultant accredited/certified by the state or other jurisdiction for asbestos work (where required): Dates of certification and number?

6. Are all personnel assigned to the project on the staff of the consultant or will subcontractors be used? Explain:

7. Is the laboratory to be used for analysis of air samples accredited by the American Industrial Hygiene Association? What is the lab accreditation number?
8. Is the laboratory to be used for bulk samples a participant in the EPA NIST/NVLAP? Participant number?
 - a. What are the laboratory results in the last several rounds of asbestos test samples in the Quality Assurance program? Were there any asbestos outliers (results that were outside the allowable limits)?
 - b. What analytical methods will be used for bulk and airborne asbestos samples? What are the NIOSH or EPA method numbers that will be followed?
9. What air sampling and testing equipment is to be used? Does the consultant currently have the equipment? Are records of calibration available?
10. Does the consultant have a written Quality Assurance and Quality Control program?
 - a. What is the frequency of calibration of equipment?
 - b. Are all reports reviewed and signed by a CIH?
 - c. Are there Standard Operating Procedures for performing field surveys? For bulk samples? For air samples?
11. Does the consultant have sufficient Workers' Compensation, and other insurance? Define Limits of Coverage, Policy Exclusions, General Liability and Errors and Omissions Professional Liability. Submit a copy of the certificates.
12. To which professional organizations does the consultant belong? American Industrial Hygiene Association (AIHA), American Conference of Governmental Industrial Hygienists (ACGIH), etc.
13. Is the IH/CIH Consultant willing/able to serve as an expert witness if required as a result of the project? What experience does the consultant have as an expert witness?
14. Does the IH/CIH Consultant have experience and ability to provide complete asbestos abatement contract documents?

8. SAMPLE COVER STATEMENT FOR ASBESTOS ABATEMENT PROJECT WORK:

CERTIFICATION OF ASBESTOS ABATEMENT REPORT

1. The enclosed asbestos assessment report for _____ has been prepared as part of Project No. _____ and covers the following buildings: _____. I certify that I have surveyed each of the buildings in my contract, have interviewed station personnel and have supervised technicians for the examination of available records related to the buildings/areas covered by this contract..
2. Based on the information gathered through the above activities and on the expected extent of renovation as explained to me by _____ of the A/E on this project, I have devised a sampling plan and I have supervised the trained industrial hygiene technicians during the collection of the samples.
3. I have selected a qualified analytical laboratory for the analysis of the samples and I have evaluated the sampling results to ensure that statistically viable results on asbestos hazards were generated for all buildings/areas involved.
4. Based on the above information, I have prepared the attached asbestos hazard assessment report. This report reflects the best known abatement technology, the Asbestos Management Policy for Department of Veterans Affairs Construction Projects and all applicable regulations. An abatement project design will be prepared on the basis of this report, and asbestos abatement will be executed by a qualified abatement contractor will achieve the desired decontamination of the impacted areas and minimize/eliminate exposure of people and the environment.

PIH/CIH NAME & CERTIFICATION NO. (if applicable)

9. CONSTRUCTION CONTRACTOR CERTIFICATION:

**CERTIFICATION ON ASBESTOS ABATEMENT
FOR
THE DEPARTMENT OF VETERANS AFFAIRS
CONSTRUCTION PROJECTS**

1. I certify that the asbestos abatement of buildings _____ which are renovated under Project No. _____ located at VAMC, _____ has been successfully completed in accordance with the drawings and specifications. These documents were prepared under my supervision (which were reviewed and approved by me prior to construction).

2. I certify that all impacted spaces have achieved the decontamination levels required by the Project Specifications.

3. I certify that during the entire abatement process and for all impacted areas, the maximum protection of people and the environment that known technology can provide, has been achieved.

4. I further certify that during the abatement process all the applicable regulations and the provisions of the Veterans Administration Asbestos Policy have been observed.

5. The specific results of my final clearance testing and inspection for each regulated area are attached. The final clearance testing and inspection was performed under my supervision prior to turning each space over to the VAMC for further remodeling work.

PIH/CIH NAME & CERTIFICATION NO. (If applicable)

10. APPLICABLE DESIGN AND CONSTRUCTION PROCEDURES INDEX:

The following should be used as a checklist to assure that you have been furnished with the current VA Design and Construction Procedures.

<u>CATEGORY</u>	<u>DESCRIPTION</u>
Topic 1	Drawings

11. ASBESTOS ABATEMENT STANDARD DETAILS INDEX

There are no standard details for asbestos abatement.

12. APPLICABLE ASBESTOS ABATEMENT MASTER SPECIFICATIONS INDEX:

<u>SECTION</u>	<u>DATE</u>	<u>TITLE</u>
01569/01570/01571/01572	09/05	Asbestos Abatement

13. APPLICABLE DIRECTIVES

VA Directive 7700, July 1998, Occupational Safety and Health

ATTACHMENT #1 –TO BE USED IN THE ABATEMENT FINAL REPORT

CERTIFICATE OF COMPLETION

DATE: _____ VA Project #: _____

PROJECT NAME: _____ Abatement Contractor: _____

VAMC/ADDRESS: _____

1. I certify that I have personally inspected, monitored and supervised the abatement work of (specify regulated area or Building):
which took place from / / to / /
2. That throughout the work all applicable requirements/regulations and the VA's specifications were met.
3. That any person who entered the regulated area was protected with the appropriate personal protective equipment and respirator and that they followed the proper entry and exit procedures and the proper operating procedures for the duration of the work.
4. That all employees of the Abatement Contractor engaged in this work were trained in respiratory protection, were experienced with abatement work, had proper medical surveillance documentation, were fit-tested for their respirator, and were not exposed at any time during the work to asbestos without the benefit of appropriate respiratory protection.
5. That I performed and supervised all inspection and testing specified and required by applicable regulations and VA specifications.
6. That the conditions inside the regulated area were always maintained in a safe and healthy condition and the maximum fiber count never exceeded 0.5 f/cc, except as described below.
7. That all abatement work was done in accordance with OSHA requirements and the manufacturer's recommendations.

CPIH/CIH Signature/Date: _____

CPIH/CIH Print Name: _____

Abatement Contractor Signature/Date: _____

Abatement Contractor Print Name: _____

ATTACHMENT #2 – TO BE USED IN THE ABATEMENT FINAL REPORT

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME: _____ DATE: _____

PROJECT ADDRESS: _____

ABATEMENT CONTRACTOR'S NAME: _____

WORKING WITH ASBESTOS CAN BE HAZARDOUS TO YOUR HEALTH. INHALING ASBESTOS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCERS. IF YOU SMOKE AND INHALE ASBESTOS FIBERS, YOUR CHANCES OF DEVELOPING LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC.

Your employer's contract with the owner for the above project requires that: You must be supplied with the proper personal protective equipment including an adequate respirator and be trained in its use. You must be trained in safe and healthy work practices and in the use of the equipment found at an asbestos abatement project. You must receive/have a current medical examination for working with asbestos. These things shall be provided at no cost to you. By signing this certificate you are indicating to the owner that your employer has met these obligations.

RESPIRATORY PROTECTION: I have been trained in the proper use of respirators and have been informed of the type of respirator to be used on the above indicated project. I have a copy of the written Respiratory Protection Program issued by my employer. I have been provided for my exclusive use, at no cost, with a respirator to be used on the above indicated project.

TRAINING COURSE: I have been trained by a third party, State/EPA accredited trainer in the requirements for an AHERA/OSHA Asbestos Abatement Worker training course, 32 hours minimum duration. I currently have a valid State accreditation certificate. The topics covered in the course include, as a minimum, the following:

- Physical Characteristics and Background Information on Asbestos
- Potential Health Effects Related to Exposure to Asbestos
- Employee Personal Protective Equipment
- Establishment of a Respiratory Protection Program
- State of the Art Work Practices
- Personal Hygiene
- Additional Safety Hazards
- Medical Monitoring
- Air Monitoring
- Relevant Federal, State and Local Regulatory Requirements, Procedures, and Standards
- Asbestos Waste Disposal

MEDICAL EXAMINATION: I have had a medical examination within the past 12 months which was paid for by my employer. This examination included: health history, occupational history, pulmonary function test, and may have included a chest x-ray evaluation. The physician issued a positive written opinion after the examination.

Signature: _____

Printed Name: _____

Social Security Number: _____

Witness: _____

ATTACHMENT #3 – To Be Used in the Abatement Final report

AFFIDAVIT OF MEDICAL SURVEILLANCE, RESPIRATORY PROTECTION AND TRAINING/ACCREDITATION

VA PROJECT NAME AND NUMBER: _____

VA MEDICAL FACILITY: _____

ABATEMENT CONTRACTOR'S NAME AND ADDRESS: _____

1. I verify that the following individual

Name: _____ Social Security Number: _____

who is proposed to be employed in asbestos abatement work associated with the above project by the named Abatement Contractor, is included in a medical surveillance program in accordance with 29 CFR 1926.1101(m), and that complete records of the medical surveillance program as required by 29 CFR 1926.1101(m)(n) and 29 CFR 1910.20 are kept at the offices of the Abatement Contractor at the following address.

Address: _____

2. I verify that this individual has been trained, fit-tested and instructed in the use of all appropriate respiratory protection systems and that the person is capable of working in safe and healthy manner as expected and required in the expected work environment of this project.

3. I verify that this individual has been trained as required by 29 CFR 1926.1101(k). This individual has also obtained a valid State accreditation certificate. Documentation will be kept on-site.

4. I verify that I meet the minimum qualifications criteria of the VA specifications for a CPIH.

Signature of CPIH/CIH: _____ Date: _____

Printed Name of CPIH/CIH: _____

Signature of Contractor: _____ Date: _____

Printed Name of Contractor: _____

ATTACHMENT #4 – TO BE USED IN THE ABATEMENT FINAL REPORT

ABATEMENT CONTRACTOR/COMPETENT PERSON(S) REVIEW AND ACCEPTANCE OF THE VA'S ASBESTOS SPECIFICATIONS

VA Project Location: _____

VA Project #: _____

VA Project Description: _____

This form shall be signed by the Asbestos Abatement Contractor Owner and the Asbestos Abatement Contractor's Competent Person(s) prior to any start of work at the VA related to this Specification. If the Asbestos Abatement Contractor's/Competent Person(s) has not signed this form, they shall not be allowed to work on-site.

I, the undersigned, have read VA's Asbestos Specification regarding the asbestos abatement requirements. I understand the requirements of the VA's Asbestos Specification and agree to follow these requirements as well as all required rules and regulations of OSHA/EPA/DOT and State/Local requirements. I have been given ample opportunity to read the VA's Asbestos Specification and have been given an opportunity to ask any questions regarding the content and have received a response related to those questions. I do not have any further questions regarding the content, intent and requirements of the VA's Asbestos Specification.

At the conclusion of the asbestos abatement, I will certify that all asbestos abatement work was done in accordance with the VA's Asbestos Specification and all ACM was removed properly and no fibrous residue remains on any abated surfaces.

Abatement Contractor Owner's Signature _____ Date _____

Abatement Contractor Competent Person(s) _____ Date _____

-- END- - - -

REFERENCES:

The architects and engineers are responsible for the collection of any existing drawings and site data required to develop drawings. All information gathered solely from the VA staff is not considered accurate and should not be used as a basis for and design work. The A/E is expected to investigate all information provide to them for accuracy. The A/E shall incorporate all applicable VA governing design guidelines, which can be found online at the following site: <http://www.cfm.va.gov/til/spec.asp>

2. DESCRIPTION OF WORK —

2.1 General: Conduct preliminary meetings and site survey investigations to define the necessary elements of the project scope of work fulfilling the goals of the VA's project team (Engineering Svc), and presentation of preliminary layout plans with proposed alternatives to the User Group. Based on User Group meetings and site surveys, prepare a detailed project plan description report pertinent to the project requirements within the constraints of the construction budget consistent with the VA's project team goals. Through the course of the design phase, it will be necessary to interface with Medical Center staff to ascertain the details of the scope through a series of meetings and periodic submissions of documents. All design submission requirements shall be in accordance to A/E Contract and conform to all VA criteria and standards, in addition to Code of Maryland Regulations (COMAR).

The A/E shall use VA Program Guides, Design Manuals and Master Specifications in preparing the Construction Documents for the project. However, should the A/E determine that deviation from such standards and specifications is necessary or beneficial to the Government; he shall promptly submit a request in writing to the Contracting Officer for permission to make the deviation. The request shall include an explanation of the specific reasons for the desired change and benefits expected.

2.2 Implementation: Engage the services of all consultants in each discipline deemed to be necessary to fulfill the requirements of the project plan. Each discipline shall document and investigate the relevant existing conditions, review the building available information, and verify all essential elements pertinent to their discipline. Site investigations shall measure, photograph, video tape, and document the conditions of areas to be renovated and/or impacted.

The A/E shall visit the project site to investigate the information shown on the Government Furnished drawings, record (as-built) drawings and other planning documents which are part of this contract. This information is the best available, but the Government does not guarantee its accuracy or completeness. The A/E's investigation of field conditions shall be performed in a competent professional manner in accordance with the Architectural Design Manual PG18-10. It is the A/E's responsibility to research the existing Government documents, determine those that are applicable to the project and request copies from the Government; the Government will not perform a search of Government documents to determine the information that the A/E may need during design.

2.3 Project Development: The A/E shall provide all services required to prepare documents and reports for the subject project consistent with the VA's project team goals as prioritized during preliminary project meetings, field surveys and studies. The A/E shall determine existing conditions, severity of deficiencies, if any previous deficiencies have been corrected and to identify any conditions which may have previously been unreported. Cost estimates shall be

prepared to reflect the cost of replacing the component in a stand alone project (i.e., not as part of another project) and all cost for this replacement including but not limited to asbestos removal, required phasing, special field conditions and/or temporary equipment needed during the construction. The completed report shall then be submitted for approval to the Project Engineer.

2.4 Project Design: Based on the approved design development the A/E shall provide all services required to prepare plans, specifications, and other supporting documents necessary to correct the identified deficiencies in priority order. The approved cost estimate and available project funding will be used to determine the amount of deficiencies which will be correct under this project. A complete design including but not limited to determination and evaluation of existing conditions, necessary engineering calculation, necessary design work, independent fire safety/life safety review, IH Services, quantity and cost estimates, bid schedule, construction cost estimates, a proposed construction schedule, design analyses and calculations, a design documentation report, engineering considerations and options report shall be developed for this project.

2.5 Asbestos: The proper identification Asbestos to determine construction costs associated with Comprehensive Strategy & Report phase of this project are considered part of this project. To extent possible existing Asbestos Assessment of the facility will be made available to the A/E. Additionally proper asbestos abatement design and IH monitoring services required during construction to correct the deficiencies selected for the construction design portion of this project shall also be provided by the A/E. See Scope of Work above

3. GENERAL DESCRIPTION of SERVICES —

A/E shall provide the services indicated in this Overview, Supplement A, Supplement B and Supplement C. These services will be provided in distinct phases:

Conceptual – Preliminary User Group Meetings & Field Surveys

30% Submittal – Schematics

60% Submittal – “DD” Design Development


90% Submittal – “CD” Construction Documents

100% Submittal – Bid [Final] Documents

Construction Period Services

Project Close Out Submittal – “As-Built” Construction Documents

3.1 Drawings: The drawings, specifications, and all other submittal items will be prepared using English units of measure.

3.1.1 General: The A/E shall prepare drawings in a manner that clearly and adequately delineates the work to be accomplished by the construction contractor. Design documents will be sufficiently detailed to permit construction contractors to submit responsive bids without visiting the project site. The cover sheet will be signed and stamped by principal of the firm who is a registered Architect or Professional Engineer. All drawings will be created using AutoCAD and National CAD standards. These CAD standards are available on the Internet at <http://www.cfm.va.gov/til/projReq.asp> and click on the [VA National CAD Standard Application Guide](#)  link.

3.1.2 CAD Files: One CAD (*.DWG) file shall be used per drawing (sheet) applying the VA's CAD layering and disk labeling protocols. All files shall be IBM compatible and furnished on high quality CD-R disks. Provide in accordance with Supplement "B" sets of drawings (AutoCAD). The computerized version, format and media of the computer disks and files shall be specified and verified by the VA Project Engineer at the time each submission is due (XRF, DXF and ZIP files are not acceptable). Provide durable high quality plastic storage boxes at each submission for long term archiving of the disks.

3.1.3 Format: All drawings and sketches will be provided in both hard copy and electronic file format. Full-sized drawings shall be developed 30"x42" sized sheets (30 inches by 42 inches at the trim line) and shall utilize the standard VA title block. Fonts shall be standard AutoCAD, and drawings must be fully compatible with AutoCAD 2009. Drawing file names must relate to the VA project name, discipline and subject as approved by the VA Project Engineer. Drawings shall utilize world coordinate system with standard cross hairs. Adobe Acrobat PDF files for each AutoCAD file shall be provided.

3.1.4 An independent fire safety and life safety review shall be accomplished at each design submission. Include the cost and coordination for a fire/safety review.

3.2 Specifications ...

3.2.1 General: The A/E shall utilize the latest edition of VA Master Specifications as revised and provided by the facility supplemented by the VA Office of Construction and Facilities Management Master Specifications as needed. The VA retains no responsibility for the development or preparation of any specification. While it is recognized that certain Divisions and/or Sections will require significant input from the VA, the A/E retains overall responsibility for these Sections.

3.2.2 Electronic Files: All files shall be IBM compatible and furnished on high quality CD-R disks. Provide in accordance with Supplement "B" sets of specifications (MS Word). The computerized version, format and media of the computer disks and files shall be specified and verified by the VA Project Engineer at the time each submission is due (ZIP files are not acceptable). Provide durable high quality plastic storage boxes at each submission for long term archiving of the disks.

3.2.3 Outline Specifications: The A/E shall develop an outline specification listing the proposed guide specifications and the A/E prepared sections that will be used for the project. The outline specification will list the guide specification number and title for each proposed section. Sections shall be arranged within their respective divisions, in numerical order. New specification sections, developed by the A/E, will be numbered to fall in their respective division at a logical location.

3.2.4 Editing Specifications: The A/E must thoroughly edit and adapt the Specifications to satisfy the project requirements and provide a complete set of construction specifications. The A/E shall notify the VA in writing should there be instances where there are no appropriate Master Specifications available for use. At the VA's direction the required specifications will be prepared by the A/E. These specifications shall list the essential features, functions, and other factors to clearly indicate the type and quantity of items/work required. All specifications will be prepared by listing parameters and requirements that can be met by several manufacturers.

3.2.5 Construction Contractor Submittal Register: The specifications require the construction contractor to submit shop drawings, samples, manufacturer's data, certificates, test reports, and other items to the Government. The A/E shall prepare a complete listing of construction contractor submittal requirements on an Excel Spreadsheet. The spreadsheet shall have a separate line for each required submittal and separate columns for Division, Section, and type of submittal (catalog cut, sample, etc).

3.3 Quantity and Cost Estimates ...

3.3.1 Format: The A/E shall prepare quantity computations, cost estimates, and construction cost estimates for this project. All construction cost estimates shall conform to the requirements contained in VA Manual for Preparation of Cost Estimates (latest edition). Manual is available on the internet at <http://www.cfm.va.gov/cost/>.

3.3.2 Cost Estimate Submittal: Cost estimates shall be submitted in 2 hard copies and in electronic form. THE A/E IS RESPONSIBLE FOR ESTABLISHING INTERNAL CONTROLS FOR KEEPING THE PRJOJECT DESIGN WITHIN PROJECTED CONSTRUCTION FUNDING. THE A/E WILL BE REQUIRED TO REVISE DESIGN AND RESUBMIT COST ESTIMATES AS NECESSARY (AT NO COST TO THE VA) SHOULD COST ESTIMATES EXCEED CONSTRUCTION FUNDING.

3.3.3. Proposed Phasing and Construction Schedule: The A/E shall prepare a proposed schedule for construction that is consistent with the project construction cost estimate. During development of this schedule, due consideration will be given to standard construction practices, durations of tasks, the sequence of construction, procurement of materials, climatic conditions, etc. **It is planned that areas in and adjacent to the proposed construction area shall be occupied during construction.** The A/E shall develop a phasing plan that addresses this fact and assures smooth implementation of required construction.

3.4 Design Analysis (DA): The A/E shall develop a DA that addresses general project parameters, functional and technical requirements, design objectives, design assumptions and calculations applicable to the project's design. Design/Construction Alternatives, existing physical limitation and their impact shall also be included in the DA.

3.5 Quality Control ...

3.5.1. Quality Control Plan: The A/E shall prepare a Quality Control Plan (QCP) which includes the following as a minimum:

- Identification and discussion of all organizational and technical interfaces
- Design team members and their areas of responsibility
- Team members responsible for checking the design
- Team members responsible for checking the electronic files
- Team members responsible for reviewing and submitting the required VA Design Alerts and Quality Alerts
- Project Schedule showing key milestones and review periods

3.5.1.1. VA Design Alerts and VA Quality Alerts can be found on the internet at <http://www.cfm.va.gov/TIL/>.

3.5.2. **Quality Assurance:** The A/E is responsible for developing and performing quality assurance reviews of all work to confirm that proper criteria, regulations, laws, codes, principles and professional procedures have been used. This includes work performed by subcontractors. The VA shall review all project submissions but this review is general in nature and should not be considered as part of the A/E's Quality Control Plan and/or Quality Assurance.

3.5.3 **Quality Certification:** The A/E shall certify at each submission in writing that he/she has performed quality assurance reviews of that submission.

3.6 Site Visits, Meetings/Conferences, and Discussions ...

3.6.1. **Site Visits:** The A/E shall perform design site visits as required to accomplish the scope of this project. The purpose of these visits is to further define project requirements, observe and evaluate existing field conditions, review any existing documentation, conduct required design meetings, and to gather supplemental site data necessary for performing the design. Reports summarizing the conditions observed, personnel contacted, and data gathered during the visits shall be prepared and included in the Design Development Documentation.

3.6.2. **Design Review Conferences:** Design review conferences shall conduct shortly following the issuance of each review Submission. Refer to Supplement B for the proposed schedule, but will typically take place two weeks after the submission date. Design review conferences for the Schematics, Design Development and Construction Document Development phase shall include the A/E Project Manager/Senior Designer. These conferences shall take place at the facilities where the work is being performed.

3.6.3 **Site Visit and Meeting Minutes:** The A/E shall take notes and prepare minutes for all site visits, meetings and conferences attended during design. Minutes will be prepared in typed form, signed by the A/E Project Manager, and furnished to project engineer within seven calendar days after the meeting/conference for concurrence and distribution to attendees. Copies of all meeting/conference minutes will be included in each Submission.

3.7 Responsibility after Design Completion: The A/E is required to support the VA should errors or omissions in the documents create problems in bidding or administering the contract for construction. As needed, the A/E will clarify the design intent and correct any errors or omissions in the original documents. The corrections shall be done in a timely manner at no additional cost to the Government. The A/E shall incorporate amendment changes on the original drawings and/or CAD drawings when requested to do so after the bidding process at no extra cost to the Government. In addition, the A/E shall incorporate amendment changes on the submittal registers and submit on a CD labeled with the project title, location, and construction contract number. Also, during the bidding period, the A/E is required to assist in answering all bidders' inquiries pertaining to the design. If clarifications are required, the A/E will prepare the required amendment. The A/E, however, shall not receive or respond to any direct inquiries from contractors.

3.8 A/E Services during Construction – Construction Period Administration (CPA): CPA Services shall include, but are not limited to, review and approval of construction submittals covering products that have been listed within the contract documents and contractor substitutions, manufacturer's data/performance sheets, samples, shop drawings, schedules, phasing plans. Compatibility analyses of different materials and recommendations associated with acceptance or rejection of alternate materials and products. Responses to Request for

Information (RFI); change order review and recommendations; preparation of cost estimates to Request for Proposal (RFP); cost/time/impact estimates and recommendations relevant to design omissions and construction plan deviations.

Site visits (**6 minimum**) as required and/or requested by the VA Project Engineer for inspection of ongoing construction including final tests and inspections; documentation of all necessary site visits to the VA Project Engineer within one (1) week after the visit; verification of as-built conditions from contractor supplied marked up prints, and preparation of as-built documents in accordance with Supplement “B” which the VA will retain permanently. IH services associated with any asbestos abatement identified in the project.

The Government may issue a change order for the A/E to provide additional services to such as review of value engineering change proposals, preparation of design modifications, or other similar services during construction.

4. INCORPORATED REFERENCES — The following documents form a part of this contract to the extent referenced are included in the A/E Scope of Work. Design requirements identified in these documents are part of the A/E Required Services. National Codes, Standards and other requirements referenced in these documents also become part of the A/E Required Services. Design Copies of these may be found on internet at <http://www.cfm.va.gov/TIL/> .

Supplement “A” - Scope of Work (attached)

Supplement “B” - A/E Submissions of Design Review Materials (attached)

Supplement “C” - A/E Minimum Submission Requirements (attached)

Supplement “D” - A/E Asbestos Requirements (*by referenced*)

Asbestos Abatement Design Manual (*by referenced*)

Construction Standards (H-18-3); latest revision (*by reference*)

Master Specifications (PG-18-1); as revised by facility supplemented with PG-18-1 as needed (*by reference*)

DVA National CAD Standard Application Guide (*by reference*)

DVA National CAD Standards & Detail (PG-18-4); latest revision (*by reference*)

Volume 1 Architectural; latest revision

Volume 2 Site Engineering & Landscaping; latest revision

Volume 3 Mechanical Engineering; latest revision

Section 1 Plumbing & Sanitary

Section 2 HVAC

Section 3 Steam Generation & Distribution

Volume 4 Electrical; latest revision

DVA Special Design Criteria; HVAC, Mechanical, Plumbing, Electrical, Structural, et al (*by reference*)

National Standard Plumbing Code (NAPHCC) (*by reference*)

National Electrical Code; latest revision (*by reference*)

Handicapped Standards; latest revision (*by reference*)

NFPA; latest revision (*by reference*)

Applicable VA Design Guides (*by reference*)

Applicable VA Design Alerts (*by reference*)

Applicable VA Design Manuals (*by reference*)
Applicable VA Quality Alerts (*by reference*)
Applicable VA Equipment Guide Lists (*by referenced*)
VA Equipment Reference Manual PG-18-6 (*by referenced*)
A/E Representations and Certifications (attached)
A/E General Provisions (attached)
A/E Special Provisions (attached)
A/E Contract Procedures (attached)
A/E Architectural Review Checklist (attached)
A/E HVAC Review Checklist (attached)
A/E Plumbing Review Checklist (attached)
A/E Electrical Review Checklist (attached)
A/E Coordination Drawing Checklist (attached)
Manual for Preparation of Cost Estimates (*by reference*)
Applicable VA Energy Conservation & Sustainability Program requirements (*by reference*)
Preparation and Issuance of Construction Solicitation Contract Documents Manual (*by reference*)
A/E Submission Instructions for Minor and NRM Construction Program (PG-18-15) (*by reference*)

5. DESIGN BUDGET —

5.1 A/E is responsible to develop a design that can be built within budget and function as intended without change orders. The design must be based on the reality of existing site conditions and not solely on “As-Built” drawings. The A/E as part of their site investigation is responsible for confirming all existing conditions that may affect the project construction.

5.2 Cost Estimating: A/E shall be responsible, as part of the Quality Assurance Plan, to develop procedures for tracking estimated construction costs throughout the project design. Cost estimates submitted as part of the submission requirements shall not be used as the sole method of meeting this requirement. The A/E shall notify the Project Engineer when estimated construction costs exceed the construction budget. The A/E shall be responsible for proposing alternates to bring the project cost estimate within the construction budget. A/E shall modify design elements as necessary to keep the project cost estimate within the construction funding level. These changes shall be made at no additional cost to the Government.

5.3 Construction Budget: Refer to Supplement A

5.4 Deduct Alternates: Shall be utilized in the best interest of the Government for market condition variations to maximize the use of available Government funds. The Government shall select the proposed alternates from the A/E recommendations. Deduct Alternates shall not be used to bring the projected project costs within construction funding. These alternates are designed to assure a contract award and are in addition to the requirement to have a project design and estimate at or below construction funding.

5.5 Add Alternates: Shall not be used.

6. DESIGN PHASES —

6.1 CONCEPTUAL with ALTERNATIVES: Refer to Supplement A and B. Working with the VA Medical Center's project team (Project Engineer and User Group) the A/E shall propose conceptual needs and requirements with proposed alternatives for the planned scope of work. This task is an iterative process requiring multiple proposals and revisions developed during site meetings.

6.2 SCHEMATICS: Refer to Supplement C. A/E shall develop specific design needs and requirements with proposed alternatives. These documents are to be developed from the documents, meeting minutes and recommendations made during the conceptual phase. Any existing utilities and/or equipment which are to be incorporated into the project design shall be reviewed and evaluated to assure that they are indeed there and are in sufficient quantity and condition to do so. Documents for this task define project requirements based on the planned scope of work. All required functional requirements shall be identified and incorporated into the project. All Architectural and Engineering requirements shall be identified and incorporated into the project. A/E shall provide an evaluation of the coordination of the drawings between disciplines; identification of errors, omissions or conflicts found within or between drawings and specifications.

6.3 DESIGN DEVELOPMENT: Refer to Supplement C. Any existing utilities and/or equipment which are to be incorporated into the project design shall be further reviewed and evaluated to assure that they are indeed there and are in sufficient quantity and condition to do so. Documents for this task define project requirements based on the approved scope of work. These documents are to be developed from the documents, meeting minutes and recommendations made during the schematics phase. All required functional requirements shall be identified and incorporated into the project. All Architectural and Engineering requirements shall be identified and incorporated into the project. A/E shall provide an evaluation of the coordination of the drawings between disciplines; identification of errors, omissions or conflicts found within or between drawings and specifications. A/E shall provide an evaluation of schedule to meet operating plan, project phasing and market conditions which may affect bidding. It is expected that at the completion of this phase marks the completion of the data gathering portion of the project. The A/E shall have obtained all information required (including site visits) to proceed directly the preparation of Construction Documents.

6.4 CONSTRUCTION DOCUMENTS: Refer to Supplement C. The A/E shall develop complete drawings and specifications and other documents necessary for the bidding and construction of this project. These documents are to be developed from the documents, meeting minutes and recommendations made during the design development phase. A/E shall perform an evaluation of the coordination of the drawings between disciplines; identification of errors, omissions or conflicts found within or between drawings and specifications. A/E shall provide an evaluation of schedule to meet operating plan Invitation for Bids and Award dates, project phasing, and market conditions which may affect bidding.

6.5 Special Remarks: Cost estimates shall incorporate construction related issues which include but are not limited to materials, systems and construction techniques. Design documents review, analyses and recommendation of cost estimates covering labor, materials, equipment,

general conditions and requirements developed for the project. Estimates shall allow for incorporation of review comments, which are within the SOW.

7. SUBMITTALS AND PERFORMANCE SCHEDULE —

7.1 Deliver Submission Documents to the VA Maryland Healthcare Project Engineer. The performance period will be project specific and will be specified with each scope of work. Review of material with the VA will take place approximately 14 days after submission.

7.2 Submission Materials and Schedules: Refer to Supplement B. Reproduction, mailing and delivery time is inclusive to the stated durations.

7.3 Government Review and Comment Resolution: The VA will review all submittals identified under this contract for functional and aesthetic relationship. VA review of the A/E's work shall not be construed by either party to relieve the A/E from any requirements of this scope of work. The A/E will be responsible for taking minutes from submission review meetings and submitting them to the project engineer for concurrence within 7 days of the meeting. Both parties will discuss these comments, if necessary, and attempt to resolve any unsettled issues that may arise from the review.

7.4 The A/E may choose to perform work, at its own risk, during the Government review and comment resolution period, however, comments resulting from that review must be incorporated into the design prior to the next submittal. In the event a subsequent design phase is not authorized, the A-E shall incorporate all available review comments into the design to complete the current phase.

7.5 Construction Execution:

Construction Documents to Bidders Date: TBD

Bid Opening Date: TBD

Actual Construction Contract Award: TBD

Anticipated Construction Duration: TBD

Construction Completion Date: TBD

8. AUTHORIZED CHANGES — The A/E shall only accept instructions and/or directions from the assigned Project Engineer. Changes in the project scope of work must be authorized by the VA.

9. Timely Response - As time is of the essence, particularly during the construction phase, the A/E shall promptly review and approve, disapprove or take other appropriate action upon all the VA requests. The A/E shall submit recommendations on all shop drawings and other submittals and other requests within fifteen (15) calendar days after receipt.

---END---

SUPPLEMENT “A”

General Scope of Work (SOW):

Provide all professional architectural and engineering (A/E) services necessary to develop complete drawings, specifications, cost estimates, project phasing site visits and construction period administration associated with renovating and modernizing Building 20H which houses Medical Media and the Information Resource Management Service (IRMS) computer servers, at the Perry Point Veterans Affairs Medical Center, within the constraints of the construction budget consistent with the Veterans Affairs (VA’s) project team goals as prioritized during project meetings and field surveys. Conduct preliminary project scope meetings and site survey investigations to develop the necessary elements for conceptual layout schemes with proposed alternatives consistent with the VA’s project team goals as prioritized during preliminary project meetings, field surveys and studies.

Task Order: [#512A5-16-301 Upgrade Fire Alarm System Campus Wide Phase 1 Patient Buildings](#)

Task Order Construction Budget: [To be provided to successful Offeror](#)

Deduct Alternates } Shall be part of the design requirements to be utilized in case of market condition variations in order to maximize the use of available Government funds. The VA shall select the proposed alternates from the A/E recommendations. Deduct Alternates shall not be used to bring the projected project costs within construction funding; these alternates are designed to assure a contract award and to have a project design and estimate at or below construction funding.

General Statement of Task } Provide services for the preparation of drawings, specifications, estimates, phasing schedules, and construction administration including all applicable engineering and design details for architectural, interior finishes, mechanical (plumbing, fire protection and HVAC), electrical, structural, asbestos abatement, and other specialty consultant elements required consistent with the VA’s project team goals as prioritized during preliminary project meetings and field surveys.

General Description of Requirements } Design shall comply with the latest editions of all applicable DVA guidelines (e.g., Construction Standards, Master Specifications, Standard Details, Special Design Criteria), NFPA, JC, Federal and State codes pertinent to the project scope within the constraints of the construction budget.

Services shall also include, but are not limited to the following:

- 1) On site visits to define the details of the project scope of work meeting the goals of the Veterans Affairs' (VA) project team, and presentation of preliminary layout plans with proposed alternatives.

- 2) Engage the services of all consultants in each discipline deemed to be necessary to fulfill the requirements of the project plan. Site investigations shall measure, and record the conditions of the area to be renovated and/or impacted by the project. Each discipline shall document and investigate the relevant existing conditions found, review the availability of existing building information, and field verify all essential elements pertinent to their trade.
- 3) Based on meetings and site field surveys, prepare a proposed detailed project scope description report within the limits of the project construction budget consistent with the VA goals.
- 4) Representation during all design review and field survey meetings. Architect/Engineer (A/E) shall document the results of each meeting and provide the conclusions to the Contracting Officer and VA Project Engineer within one (1) week following each meeting.
- 5) Based on meetings and investigations prepare preliminary, schematic, working, and construction documents with the necessary engineering and design details for all architectural, mechanical (plumbing, fire protection and HVAC), electrical, structural, civil, and other specialty consultants elements within the limits of the project goals established.
- 6) Electronic drawings shall be developed utilizing AutoCAD 2009. Electronic drawing files shall be identified with the drawing number and drawing title.
- 7) Specifications shall be developed utilizing MS Word 2007. Electronic Specification files shall be identified with the specification number and specification section title.
- 8) Cost Estimates shall be developed utilizing MS Excel 2007.
- 9) All computer-generated files shall be IBM compatible and furnished on high quality CD-R disks. Provide in accordance with Supplement "B" sets of drawings (AutoCAD) and specifications (MS Word) and cost estimates (MS Excel). The computerized version, format and media of the computer disks and files shall be specified and verified by the VA Project Engineer at the time each submission is due (XRF and ZIP files are not acceptable). Provide durable high quality plastic storage boxes at each submission for long term archiving of the disks by the VA.
- 10) 90% Design Submission: The 90% design submission shall be a complete 100% design. All plans, sections, details, etc. shall be complete at this time. The A/E shall ensure that the 90% design submittal is in fact his/her 100% product, and that it represents a total biddable package. An incomplete 90% design submittal may be rejected by the VA; a rejection will require the A/E to resubmit a 90% design at no additional cost.
- 11) VA Design Review Comments: The A/E shall submit written responses to the VA's oral and written design review comments. These written responses shall be within seven (7) calendar days of the VA's comments; and these responses shall explain the action the A/E will take for each comment.
- 12) Verification and preparation of as-built drawings which the VA shall retain.

- 13) The design consultant must have a PDF writer program to electronically sign material submittals; all Material Submittal Forms will be processed via electronic format with digital signature which utilizes a PDF Writer Program such as Adobe Reader/Writer or Pro V Nuance.
- 14) Site visits (6 design and 6 construction) as required and/or requested by the VA Contracting Officer and Project Engineer for review and inspection of progress including final tests and inspections.
- 15) Documentation of all site visits shall be submitted in writing to the VA Contracting Officer and Project Engineer within one (1) week after each visit.

SUPPLEMENT “B”

A/E SUBMISSIONS OF DESIGN REVIEW MATERIAL

FIRST REVIEW (Conceptual – Preliminary User Group Meetings & Field Surveys) (per meeting)

- 3 Set of AutoCAD and PDF conceptual/preliminary drawings in electronic format in accordance with Supplement “A”
- 3 Sets of full size conceptual/preliminary layout plans/details - 30 inches by 42 inches
- 3 Sets of reduced size conceptual/preliminary layout plans
- 3 Sets of Preliminary Investigation Report with Recommendations
- 3 Set of Preliminary Investigation Report with Recommendations in PDF electronic format in accordance with Supplement “A”
- 3 Sets of conceptual/preliminary estimates
- 3 Set of MS Excel conceptual estimates in electronic format in accordance with Supplement “A”

SECOND REVIEW (30% Submittal – Schematics)

- 3 Sets of AutoCAD & PDF schematic drawings with phasing plans in electronic format in accordance with Supplement “A”
- 3 Sets of full size bound schematic layout plans/details with phasing plans– 30 inches by 42 inches
- 3 Sets of reduced size bound schematic layout plans/details with phasing plans
- 3 Sets of design analysis
- 3 Set of design analysis in electronic format in accordance with Supplement "A"
- 3 Sets of spiral bound draft specifications with Mylar front and back cover sheets
- 3 Set of MS Word draft specifications in electronic format in accordance with Supplement “A”
- 3 Sets of schematic estimates with proposed alternate
- 3 Set of MS Excel schematic estimates with proposed alternate in electronic format per Supplement “A”

THIRD REVIEW (60% Submittal – “DD” Design Development)

- 3 Sets of AutoCAD & PDF design drawings in electronic format in accordance with Supplement “A”
- 3 Sets of full size bound design development layout plans/details with phasing plans– 30 inches by 42 inches
- 3 Sets of reduced size bound design development layout plans/details with phasing plans
- 3 Sets of design analysis
- 3 Set of design analysis in electronic format in accordance with Supplement "A"
- 3 Sets of spiral bound design development specifications with Mylar front and back cover sheets
- 3 Set of MS Word design development specifications in accordance with Supplement “A”
- 3 Sets of design development estimates
- 3 Set of MS Excel design development estimates in electronic format in accordance with Supplement “A”

FOURTH REVIEW (90% Submittal – “CD” Construction Documents)

- 3 Sets of AutoCAD & PDF construction drawings in electronic format in accordance with Supplement “A”
- 3 Sets of full size bound construction documents plans/details with phasing plans– 30 inches by 42 inches
- 3 Sets of reduced size bound construction documents plans/details with phasing plans
- 3 Sets of design analysis
- 3 Set of design analysis in electronic format per Supplement "A"
- 3 Sets of spiral bound construction documents specifications with Mylar front and back cover sheets
- 3 Sets of MS Word construction documents specifications in accordance with Supplement “A”
- 3 Set of MS Excel construction documents estimates in electronic format in accordance with Supplement “A”
- 3 Sets of construction documents estimates

FIFTH REVIEW (100% Submittal – Bid [Final] Documents)

- 3 Sets of AutoCAD & PDF bid drawings in accordance with Supplement “A”
- 3 Set of approved full size bid documents Mylar drawings with Registered Architect (RA) and Professional Engineer (PE) stamps - 30 inches by 42 inches
- 3 Sets of approved reduced size bound bid plans/details with RA and PE stamps
- 0 Sets of full size Mylar bid plans/details with RA and PE stamps rolled in individual mailing tubes
- 3 Sets of MS Word final specification sections in accordance with Supplement “A”
- 3 Sets of MS Word final specification sections merged in accordance with Supplement “A”
- 3 Sets of final specifications boxed on single sided sheets
- 3 Sets of 3-ring bound final specifications paginated front to back with Mylar front/back cover
- 3 Sets of final estimates
- 3 Set of MS Excel final estimates in electronic format in accordance with Supplement “A”
- 3 Sets of final phasing schedules

SIXTH REVIEW (Project Close Out Submittal – “As-Built” Construction Documents)

- 3 Sets of AutoCAD & PDF As-Built drawings in accordance with Supplement “A”
- 3 Set of approved full size As-Built Mylar drawings with RA and PE stamps
- 3 Sets of approved reduced size As-Built plans/details with RA and PE stamps

ID	Milestone Task Description	Duration	Schedule Date	Actual Date
1	User Group Preliminary Mtg (Review Scope, Site Survey Investigation)	1 Day	NTP + 14	
2	Preliminary Investigation of Existing Conditions	As Needed		
3	Submit Conceptual Layout Schemes with Proposed Alternates	---		
4	User Group Mtg (Review Proposed Schemes)	1 Day	NTP + 45	
5	Prepare 30% Schematic Design Submissions	---		
6	Survey Existing Conditions, Coordinate Design with Consultants & VA Comments	As Needed		
7	Submit 30% Schematic Design Package	---		
8	VA Engineering 30% Review	7 Days (Min)		
9	User Group 30% Schematic Design Review Meeting	1 Day	NTP + 90	
10	Prepare 60% "DD" Design Development Submissions	---		
	Confirm Existing Conditions, Coordinate Design with Consultants & VA Comments	As Needed		
11	Submit 60% "DD" Design Development Package	---		
	VA Engineering 60% Review	14 Days (Min)		
12	User Group 60% "DD" Review Meeting	1 Day	NTP + 135	
13	Prepare 90% "CD" Construction Document Submissions	---		
	Coordinate Design with Consultants, Existing Conditions & VA Comments	As Needed		
14	Submit 90% "CD" Construction Documents Package	---		
	VA Engineering 90% Review	14 Days (Min)		
15	User Group 90% "CD" Review Meeting	1 Day	NTP + 190	
16	Prepare 100% Bid Final Documents	---		
	Finalize Coordination with Consultants, Existing Conditions & VA Comments	As Needed		
17	Submit 100% Bid Final Documents with PE Stamps	---	NTP + 210	

SUPPLEMENT “C”

**Department of
Veterans Affairs**

VA Medical Center Projects

A/E Submission Instructions for Minor and NRM Construction Program:

- **Schematics**
- **Design Development**
- **Construction Documents**

Department of Veterans Affairs
Washington, DC 20420

FOREWORD

This document states the minimum requirements for each submission in the production of VA Schematics, Design Development, and Construction Documents for Minor and NRM Construction Program for Medical Center Projects. It will give VA reviewers and the A/E a clear understanding of what is required of the A/E at each stage of design.

This document does not relieve the A/E firms of their professional responsibility to produce a correct, complete, and fully coordinated set of construction documents.

Lloyd H. Siegel
Director, Facilities Quality Office

William W. Graham
(Acting) Director,
Engineering Management and
Field Support Office

**A/E SUBMISSION INSTRUCTIONS FOR
MINOR AND NRM CONSTRUCTION PROGRAM
MEDICAL CENTER PROJECTS**

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A/E SUBMISSION INSTRUCTIONS FOR MINOR AND NRM CONSTRUCTION PROGRAM MEDICAL CENTER PROJECTS

I. GENERAL

A. INTRODUCTION

1. This document contains information and minimal submission requirements for contract documents specified in the A/E contract.

2. The Department of Veterans Affairs (VA) may contract with an Architect/Engineer (A/E) for any portion of a design: Schematics, Design Development, Construction Documents, or a combination of these.

a. For projects where the VA is contracting for Schematics Documents only, Schematics and Design Development Documents only, or Schematics, Design Development, and Construction Documents, the VA will provide the Design Program (if available), Facility Development Plans (if available), and VA design standards to accompany the Scope of Work for the project.

b. For projects where the VA is contracting for Design Development and Construction Documents only, the VA will provide the Schematics Plans and VA design standards to accompany the Scope of Work for the project.

c. For projects where the VA is contracting for Construction Documents only, the VA will provide the Design Development Plans and VA design standards to accompany the Scope of Work for the project.

3. Coordinate all activities with the VA Medical Center (VAMC). Hold informal meetings (upon mutual consent of the VA and the A/E) at the VAMC to discuss the design and related issues. Continue to expand contacts by telephone, rough sketch studies and other means of communication with the purpose of finalizing a general design approach to be followed.

4. Final approved Schematic documents shall be the basis for the development of the Design Development phase. Likewise, final approved Design Development documents shall be the basis for the development of the Construction Documents phase. The VAMC must approve any changes from each set of documents before the A/E proceeds to the next phase.

5. VA will review all submittals for functional and aesthetic relationships. However, no further functional decisions are anticipated after the Design Development phase.

6. Provide a design narrative/analysis for each technical discipline (e.g., architectural, mechanical, fire protection, etc.) which describes the intent of each discipline with schematic and/or design development submission.

7. Provide computations and sizing calculations for electrical, mechanical (HVAC, plumbing, and steam), sanitary, structural and fire protection designs. For computerized calculations, submit complete and clear documentation of computer programs, interpretation of input/output, and description of program procedures.

8. Provide individually packaged drawings for each submission to each unit specified in the "Distribution of A/E Materials" section.

9. Submit a complete set of final approved drawings incorporating all revisions, within 30 days after completion of the Schematics and Design Development stages.

10. At each review stage, the VA's technical reviewer, a value-engineering consultant, or a construction manager will perform a value engineering review.

11. Submit final drawings (Bid Documents) in 3 1/2" floppy disks to be used with the AutoCAD version at the VAMC. Submit instructions on the use of the disks along with a complete listing of all layers that are used.

B. A/E RESPONSIBILITIES:

1. Contract documents shall meet or exceed the requirements of this document.

2. The A/E is responsible for producing a complete set of drawings, design narrative/analysis, calculations, sample boards, and specifications in accordance with professional standard practices and VA criteria. Each A/E discipline shall receive a copy of their respective VA design manuals, standard details, construction standards, and VA National CAD Standard Application Guide. The AE is responsible for obtaining the NCS.

3. A/E shall conduct coordination meetings between A/E technical disciplines before submitting material for each VA review and provide minutes of the meetings to VAMC.

4. A/E shall adhere to the approved Memorandum of Agreement (MOA).

5. A/E shall provide a checklist of all submittals, certifications, tests, and inspections required per drawing and specification section.

6. In addition, the A/E shall conduct interim fire protection installation inspections and witness final fire protection equipment testing.

C. SUBMISSION POLICY:

1. There is a Schematic* submission, a Design Development (DD**) submission, and a Construction Document (CD***) submission indicated in this guide. The VAMC may alter the submission requirements depending upon the complexity of the project by adding or deleting certain reviews. Where additional reviews might be required, the VAMC will issue, at their discretion, a detailed "Statement of Task" or supplemental instructions to the A/E, which would be provided at the time of solicitation for a fee proposal.

2. At each submission, the A/E shall date all material and present the designs on VA standard size drawings that are appropriately labeled, "SCHEMATIC SUBMISSION", "DESIGN DEVELOPMENT SUBMISSION", OR "CONSTRUCTION DOCUMENT SUBMISSION", in large block letters above or beside the VA standard drawing title block. In each submission, the A/E shall incorporate the corrections, adjustments, and changes made by VA at the previous review.

D. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC):

In an effort to reduce construction change orders due to design errors and omissions, the Office of Facilities Management has initiated a Quality Assurance/Quality Control program. The A/E shall develop, execute, and demonstrate that the project plans and specifications have gone through a rigorous review and coordination effort. The requirements are as follows:

1. Fee Proposal: Provide an outline of the actions that your firm will take during the design process along with an associated fee.
2. Two Weeks after Receipt of the Notice To Proceed: Submit a detailed QA/QC Plan describing each step that will be taken during the development of the various phases of design. Each step should have an appropriate space where a senior member of the firm can initial and date when the action has been completed.
3. 100% Submittal: Submit the completed QA/QC Plan along with the latest marked-up documents (plans, specifications, etc.) necessary to ensure that a thorough review and coordination have been completed.

E. ADDITIONAL SERVICES:

If additional services (i.e. surveys, soil borings, asbestos surveys, water flow testing, or lead surveys), are necessary to be performed by consultants, submit criteria for the work to be performed to the VAMC Contracting Officer as soon as possible. Upon approval of the criteria, submit proposals and qualifications of at least three firms being considered for the work in accordance with the contract procedures (CP1) of the contract, together with a proposal from the recommended firm and a brief justification for its selection, for VA approval. A/E should submit survey information for the Schematic Review.

F. CRITICAL PATH METHOD PHASING MEETINGS

A. If required and prior to submission of Schematic material, the A/E shall meet with the VAMC's Project Manager to discuss and outline phasing requirements for the project. These phasing requirements shall describe the general sequence of the project work, estimated project duration, and what Government constraints will exist that will influence the Contractor's approach to the construction project. The A/E shall be responsible for recording the phasing requirements.

B. Submit a phasing narrative and phasing plans (on reduced size plans) within two weeks after each phasing meeting to the VAMC Project Manager. VA will review these submission(s) and return comments to the A/E within two weeks of receipt. The

A/E will then use this information in preparing their schematic, design development, and construction document submissions.

A. SITE DEVELOPMENT: Submit the following:

Site Development:	Schematics*	DD**	CD***
Narrative	✓		
Analysis of site	✓		
Circulation study	✓		
Phasing analysis	✓		
Parking analysis	✓		
Development concept showing proposed buildings and structures	✓		
Landscape drawings with plant groupings	✓		
Topographic, utility, and landscape survey		✓	✓
Demolition plan	✓	✓	✓
Layout plan showing location of:			
• Building and structures	✓	✓	✓
• Roads	✓	✓	✓
• Fire Access		✓	✓
• Parking	✓	✓	✓
• Accessible spaces		✓	✓
• Van spaces		✓	✓
• Mechanical and electrical equipment on grade	✓	✓	✓
• Future expansion	✓		
• Off-site roads	✓	✓	✓
• Off-site utilities	✓	✓	✓
• Service area(s)		✓	✓
• Entrances and exits		✓	✓
• Walks		✓	✓
• Inlets		✓	✓
• Contractor's staging area		✓	✓
• Vertical and horizontal road alignment		✓	✓
• Paving joint patterns		✓	✓
Grading plan showing:			
• Existing contours		✓	✓
• Proposed contours		✓	✓
• Spot elevations at structure corners, entrances, equipment pads, etc.		✓	✓
• First floor elevations		✓	✓
• Rim and invert elevations on storm drainage fixtures		✓	✓
• Erosion and sediment control		✓	✓
Rock excavation (quantity)		✓	✓

B. ARCHITECTURAL: Submit or show the following:

Architectural:	Schematics*	DD**	CD***
Location of:			
• Rooms ¹	✓	✓	✓
• Doors ²	✓	✓	✓
• Corridor(s) ³	✓	✓	✓
• Basic column grid/sizes	✓	✓	✓
• Expansion and seismic joints	✓	✓	✓
• Electrical closets	✓	✓	✓
• Equipment rooms	✓	✓	✓
• Signal and telephone closets	✓	✓	✓
• Mechanical shafts and space	✓	✓	✓
• Stair(s)		✓	✓
• Ramp(s)		✓	✓
• Elevator(s)	✓	✓	✓
• Automatic Conveyances	✓	✓	✓
Floor Plans/Drawings:			
• All floors (new and renovated)	✓	✓	✓
• Penthouse	✓	✓	✓
• Roof plan	✓	✓	✓
• Pipe basement	✓	✓	✓
• Pipe tunnel		✓	✓
• Reflected ceiling ⁴		✓	✓
• Equipment floor plans 1:50 (1/4 inch) scale ⁵		✓	✓
• Demolition plans ⁶		✓	✓
Room names and numbers ⁷		✓	✓
Program net/designed net	✓	✓	✓
Exterior dimensions/total building gross area	✓	✓	✓
Size and shape of all departmental functions and services ⁹	✓	✓	✓
Exterior building elevations ¹⁰	✓	✓	✓
Finish floor elevations ¹¹	✓	✓	✓
Door locations, sizes, and swings		✓	✓
Wall thickness and chase walls		✓	✓
Handrail location/dimensions		✓	✓
Fixed equipment		✓	✓
Equipment elevations and details			✓
Plumbing fixtures		✓	✓
Wheelchair accessible facilities		✓	✓
Wall sections ¹²		✓	✓
Building sections ¹³		✓	✓

Architectural:	Schematics*	DD**	CD***
Finish grades at corners, entrances, exits, platforms and ramps		✓	✓
Fire and smoke rated partitions ¹⁴	✓	✓	✓
Lead-lined and radio-frequency-shielded partitions ¹⁴		✓	✓
Fire extinguisher cabinets ¹⁴		✓	✓
Spray-on fire proofing (see fire protection)			
Construction details ¹⁵		✓	✓
Drafting symbols, abbreviations, and general notes		✓	✓
Door, window, and louver schedules			✓
Interior details, elevations, sections			✓
Finish schedule ¹⁶		✓	✓
Graphics and signage ¹⁷			✓
Color rendering			✓
Specifications		✓	✓
Lead abatement ¹⁸	✓		
Lead abatement specification ¹⁹			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). A scale of 1:200 (1/16 inch) is acceptable for architectural floor layout if an entire floor cannot be shown on one sheet. Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

B. NOTES:

1. Use lines between spaces to indicate the centerline of the partition (for schematics only).
2. Indicate doors with a slash mark.
3. Along the corridor, the line shall represent the corridor side of the partition.
4. Indicate ceiling mounted equipment, lighting fixtures, air diffusers, registers, tracks, and other significant elements.
5. Identify all equipment for each room. Indicate and coordinate all equipment with the Equipment Guide List (Program Guide 7610) and Activated Equipment List. Use VA standard symbols and notation to distinguish between contractor-furnished and installed

(CC), VA-furnished contractor-installed (VC), VA-furnished and installed (VV), VA-furnished with construction funds [VC(CF) and VV(CF)], and relocated (R) equipment. Equipment floor plans are not required for the offices, consultation rooms, classrooms, conference rooms, and waiting rooms within the above departments. Draw equipment details which are necessary for major decisions, though complete detailing is not required for this submittal.

6. Indicate existing finish schedule and notes on plan.
7. Label as required for schematic drawings. Coordinate new room numbering with medical center.
8. Use the same names on drawings as those used in the space program. Provide area figures in fractional form, e.g., 400/390. Indicate space provided, but not called for in the space program, as: -/390.
9. Label each service or activity listed in the Project Scope Data of the Design Program and indicate boundaries with a distinctive line. Include the activity code number (see Handbook 7610).
10. If the project requires exterior work, show all facades indicating massing, proposed fenestration and the building relationship to adjacent structures and the finish grade. Show all significant building materials, including their colors, any proposed roof top mechanical equipment, architectural screens, skylights, and stacks on the elevation drawings. If building is designed for future expansion (vertical and/or horizontal), delineate elevations with and without the future expansion. If project is an addition, show elevations of the existing building in sufficient detail to illustrate the relationship between the new and existing in terms of scale, material, and detail.
11. Define the relationship of the finish ground floor to finish grade at major entrances and docks.
12. Indicate construction including fire resistance rating, building materials and systems, and proposed sill and head heights of openings. Indicate both new and renovated areas on form provided by VA.
13. Define building configuration. Draw sections at the same scale as floor plans, normally 1:100 (1/8 inch). If the building abuts an existing structure, indicate in the section how the new floor elevations align with existing.
14. Identify psychiatric areas where special considerations are required to ensure the safety of patients (e.g. hard ceilings, safety glazing, etc.).
15. Indicate new building components and systems, such as window design, roofing system, special entryways, building "skin", and any special architectural elements for the project. Complete detailing of miscellaneous items is not required for this submission.
16. Indicate all building systems, materials, and future expansion, if applicable.
17. Submit a drawing for all which is part of the construction contract.

18. Provide square meters (feet) of lead paint and x-ray shielding to be removed.

19. Format provided in SPECIFICATIONS. If there is no VA master specification, develop contract specification that is in compliance with regulations of the Environmental Protection Agency.

C. FIRE PROTECTION: Submit the following:

Fire Protection:	Schematics*	DD**	CD***
Fire protection narrative: ¹			
• Fire and smoke separation	✓		
• Fire sprinkler/standpipe system	✓		
• Size of fire pumps	✓		
• Water supply available/max. demand	✓		
• Water flow testing results	✓		
• Fire alarm systems ²	✓		
Existing to be modernized	✓		
Base loop system for interface of new construction	✓		
• Kitchen extinguishing systems	✓		
• Size of air handling unit	✓		
• Exit paths from each zone	✓		
• Distances to stairs	✓		
• Occupancy of each area	✓		
• Exit calculations for each floor	✓		
• Smoke control features	✓		
Floor Plans/Drawings: ^{3 & 4}			
• Sprinkler zones	✓		
• Fire alarm zones	✓		
• Smoke zones	✓		
• Building water supply	✓		
• Interior sprinkler supply lines	✓		
• Standpipes	✓		
• Fire extinguisher cabinets	✓	✓	✓
• Fireproofing of structural members	✓		
• Sprinkler/standpipe riser supply piping		✓	✓
• Termination of sprinkler main and inspector test drains		✓	✓
• Sprinkler alarm valves		✓	✓
• Waterflow and tamper switches		✓	✓
• Sprinkler system fire department connections		✓	✓
• Sprinkler design hazards per NFPA 13		✓	✓
• Exit signs and emergency lighting		✓	✓
• Occupied areas not protected by automatic sprinklers		✓	✓
Calculations	✓	✓	✓

Fire Protection:	Schematics*	DD**	CD***
Estimated capacities for proposed air handling units in cubic meters (cubic feet) per minute		✓	✓
Location of:			
• Fire alarm system		✓	✓
• Annunciator panels		✓	✓
• Pull stations		✓	✓
• Flow switches		✓	✓
• Audio-visual devices		✓	✓
• Smoke detectors		✓	✓
• Duct smoke detectors		✓	✓
• Smoke dampers		✓	✓
• Fire dampers		✓	✓
• Fire alarm risers ⁵		✓	✓
• Exit signs		✓	✓
• Emergency lighting		✓	✓
• Fire sprinklers		✓	✓
• Standpipes		✓	✓
• Fire hydrants		✓	✓
• Fire pumps		✓	✓
• Post indicator valves		✓	✓
• Sectional valves		✓	✓
• Fire extinguisher cabinets		✓	✓
• Electromagnetic door hold open devices		✓	✓
Wall sections indicating fire resistive ratings		✓	✓
Staff sleeping rooms		✓	✓
Excavation plan signage		✓	✓
Door and window schedule with fire rating or fire rated glazing			✓
Zoning of each fire alarm initiating device			✓
Details:			
• Fire pump system (capacity and pressure)			✓
• Elevation and isometric view of fire pump			✓
• Stairwell sign			✓
• Annunciator panel			✓
Interconnection of fire alarm system with:			
• Smoke dampers			✓
• Air handlers			✓
• Elevator controls			✓

Fire Protection:	Schematics*	DD**	CD***
• Kitchen fire extinguishing and fire pump system			✓
• HVAC system with smoke duct detectors			✓
Single line riser diagram for fire alarm system			✓
Height/configuration of storage racks and shelving			✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

C. NOTES:

1. Indicate NFPA 220 and UBC fire resistive rating of the building, NFPA 101 occupancy type, and fire protection code analysis to access compliance with NFPA 101.
2. Determine type, features, age, reliability, compliance with present day codes, capacity, zoning, supervision, control panel and power supplies, initiating devices and circuits, and auxiliary functions for existing fire alarm system. Indicate manufacturer, model number, voltage, and wiring style of existing alarm systems and devices. Provide recommendations for the proposed fire alarm work.
3. Provide information to meet JCAHO requirements; e.g. location of all fire rated barriers, smoke barriers, exit signs, fire extinguishers, manual pull stations, smoke detectors, and sprinkler flow switches. Show all interim life safety measures such as temporary systems Fire Alarm, Sprinkler, and Smoke.
4. At DD Submission, add room names, room numbers, door locations and swings, smoke and fire rated partitions, sprinkler/standpipe risers to floor plans. Identify psychiatric areas on drawings so areas for institutional type heads are identified. Add location of all valves (post indicator, sectional) and backflow preventer if provided.
5. Show new equipment and/or the necessary changes involved if modification to the existing system is required. Include any recommendations where certain requirements of VA criteria might be waived, in order to allow the existing equipment to be reused.

D. INTERIOR DESIGN: Submit the following:

Interior Design:	Schematics*	DD**	CD***
Written interior design concept ¹	✓		
Illustrate overall design solution ²	✓		
Material and finish samples	✓		
Sketches	✓		
Design solution for interior spaces:			
• Perspectives		✓	✓
• Plans		✓	✓
• Details		✓	✓
• Elevations		✓	✓
• Sections		✓	✓
• Wayfinding		✓	✓
• Floor patterns		✓	✓
• Wall patterns		✓	✓
• Lighting		✓	✓
• Signage		✓	✓
• Handrails		✓	✓
• Bumper guards		✓	✓
Specification section 09050		✓	✓
Finish schedule		✓	✓
Exterior colors and materials		✓	✓
Sample boards for interior and exterior materials, products, and finishes		✓	✓
Edited carpet and wallcovering specifications		✓	✓
Specifications			✓
Keyed Finnish plans			✓
Interior design details, elevations, and sections			✓

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** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

D. NOTES:

1. Provide a document of data collected in interior design programming. Include collection and analysis of data from the VAMC project coordinator and interior designer. Data includes, but is not limited to the following: existing interior and exterior design and

materials, light, safety, patient profile, customer's "vision" or desired image, public vs. private spaces, complete signage package, goals of customer, relationship to existing facilities, future expansion/renovation plans, regional influences, etc.

2. Discuss and illustrate the overall design solution for the primary areas of the project using marked-up floor plans, loose sketches, and material and finish samples. Use broad categories of materials, finishes, color palettes, patterns, textures, and scales. Separately group all major neutral background materials and finishes that will be used and discuss how they will be integrated with all other materials and finishes on the project. Include all primary and secondary corridors, typical patient and toilet rooms, lobbies, atriums, eating spaces, chapels, waiting rooms, and exam rooms. Show the relationship among departments and functions, and between public and private spaces.

E. STRUCTURAL: Submit the following:

Structural:	Schematics*	DD**	CD***
Three alternative structural systems for typical bays ¹	✓		
Supporting calculations ²	✓	✓	✓
Cost estimates for each system ³	✓		
Recommend preferred system	✓		
Column locations	✓		
Shear load resisting elements ⁴	✓		
Boring location plan ⁵	✓		
Structural plans ⁶		✓	✓
Sections		✓	✓
Details		✓	✓
Size/location of:			
• Columns		✓	✓
• Beams		✓	✓
Lateral load resisting elements		✓	✓
Load bearing walls		✓	✓
Slabs		✓	✓
Foundations		✓	✓
Elevations			✓
Schedules			✓
General notes			✓
Boring logs			✓
Subsurface investigation report			✓
Estimated quantity of rock			✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

E. NOTES:

1. When only one structural system is possible due to other project requirements, include an explanatory statement and submit only that structural system.
2. Include vertical and lateral load design for CD submission.
3. Include foundation and fireproofing.
4. Indicate existing utilities and structures within, adjacent, or contiguous to the new construction.
5. Upon approval of the subsurface investigation criteria, submit qualifications of at least three consultants being considered for the work together with the proposal of the consultant recommended as most qualified.
6. If there is only a CD submission, provide a Structural Engineering Analysis Submission within six weeks from the notice to proceed including sketches, calculations, and cost estimates of three alternative structural systems for typical bays, boring location plan for subsurface investigation, and consultant qualifications. For vertical expansion projects, analyze existing structure for structural feasibility.

F. PLUMBING: Submit the following:

Plumbing:	Schematics*	DD**	CD***
Narrative:			
• Existing plumbing systems to be used and necessary modifications	✓	✓	✓
• New plumbing systems	✓	✓	✓
• New or modified water treatment	✓	✓	✓
Floor Plans/Drawings:			
• Room names	✓	✓	✓
• Identify			
Existing plumbing fixtures w/VA numbering system	✓	✓	✓
New plumbing fixtures w/VA numbering system	✓	✓	✓
Existing equipment	✓	✓	✓
New equipment	✓	✓	✓
New medical gas outlets		✓	✓
New laboratory gas outlets		✓	✓
Plumbing piping	✓	✓	✓
• Size of pipe		✓	✓
• Equipment schedule		✓	✓
• Fire & smoke partitions	✓	✓	✓
• Demolition plans		✓	✓
• Riser diagrams			✓
• Legend, notes, and details			✓
Location and size of sprinkler riser, standpipes, and fire pumps (see fire protection)		✓	✓
Location of emergency eyewash and shower equipment		✓	✓
Calculations (equipment & piping)		✓	✓
List of Required Contract Specifications		✓	
Contract Specifications			✓

F. PLUMBING (cont.):

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch).

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics phase.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase. Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch).

G. SANITARY: Submit the following:

Sanitary:	Schematics*	DD**	CD***
Narrative:			
• Existing sanitary systems: underground water, sanitary sewers, storm sewers, & fuel gas with sources, disposal methods, storage pressures, condition, etc.		✓	✓
• New sanitary systems	✓	✓	✓
• Provide water analysis & expected yield if well required	✓	✓	✓
• Circulation study to assess emergency vehicle access	✓	✓	✓
Install test well, if well is required.	✓		
Utility Plans/Drawings showing existing and new sanitary systems:			
• Size of pipes	✓	✓	✓
• Invert elevations of sewers	✓	✓	✓
• Locate/size			
Pumps	✓	✓	✓
Storage facilities	✓	✓	✓
Treatment equipment	✓	✓	✓
Fire hydrants		✓	✓
Sectional and post indicator valves		✓	✓
Backflow preventer		✓	✓
• Areas of new irrigation system	✓		
• New irrigation system			✓
• Profiles of sanitary & storm sewers			✓
• Demolition Plans		✓	✓
• Legend, notes, and details			✓
Point of connection to sprinkler system	✓	✓	✓
Calculations		✓	✓
List of specifications		✓	
Contract Specifications			✓

G. SANITARY (cont.):

* Submit utility drawings at same scale as provided for Site Development drawings.

** Submit utility drawings at same scale as provided for Site Development drawings, incorporating all of the revisions required by comments from the schematics phase.

*** Submit utility drawings at same scale as provided for Site Development drawings, incorporating all of the revisions required by comments from the design development phase. Submit legend, notes, and details at a scale not less than 1:100 (1/8 inch).

H. HVAC: Submit the following:

HVAC:	Schematics*	DD**	CD***
Description of HVAC systems	✓		
Equipment for each functional space	✓		
Life cycle cost analysis ¹	✓		
Tentative location/sizes:			
• Mechanical equipment room	✓		
• Principal vertical shafts	✓		
Block layout of equipment	✓		
Louvers: ²			
• Outside air	✓	✓	✓
• Exhaust air	✓	✓	✓
• Relief air	✓	✓	✓
Engineering calculations ³	✓	✓	✓
Selection of HVAC equipment		✓	✓
Catalog cuts of equipment		✓	✓
Room by room heating and cooling loads		✓	✓
Zone by zone heating & cooling loads		✓	✓
Building block heating & cooling loads		✓	✓
Tabulation of steam consumption		✓	✓
Psychometric chart for air handling unit		✓	✓
Coil entering and leaving conditions		✓	✓
Fan motor heat gains		✓	✓
Consumption of humidification loads		✓	✓
Sound/acoustic analysis		✓	✓
Room-by-room air balance charts ⁴		✓	✓
Chilled water plant: ⁵			
• Quantity and type of chillers		✓	✓
• Capacity in tons of refrigeration		✓	✓
• Electrical equipment		✓	✓
Heating system:			
• Total heating load		✓	✓
• Domestic hot water load		✓	✓
• Humidification load		✓	✓
• Equipment steam demand		✓	✓
• Zoning of heating system		✓	✓
HVAC floor plan: ⁶			
• Main supply, return and exhaust ductwork		✓	✓
• Volume dampers		✓	✓

HVAC:	Schematics*	DD**	CD***
• Fire and smoke partitions		✓	✓
• Fire and smoke dampers		✓	✓
• Smoke detectors		✓	✓
• Automatic control dampers		✓	✓
• Air quantities for each room		✓	✓
• Air inlets/outlets		✓	✓
• Rises and drops in ductwork		✓	✓
• Expansion loops		✓	✓
• Anchors		✓	✓
• Vales		✓	✓
• Drip assemblies		✓	✓
• Balancing fittings		✓	✓
Interconnection of HVAC equipment with fire protection equipment (see fire protection)		✓	✓
Plan/section of mechanical equipment rooms		✓	✓
Schematic flow and riser diagrams ⁷		✓	✓
Schematic control diagrams ⁸		✓	✓
HVAC demolition drawings		✓	✓
Phasing plan		✓	✓
Equipment schedule		✓	✓
Seismic bracing		✓	✓
VA symbols and abbreviation		✓	✓
Selection of			
• Pumps			✓
• Fans			✓
Sizing and selection of			
• Expansion tanks			✓
• Steam to hot water convertor			✓
• Heat exchangers			
Sound analysis			✓
Complete selection data			✓
Outside chilled water and condenser water distribution ⁹			✓
Standard detail drawings			✓
Automatic temperature control drawings ¹⁰			✓
HVAC specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

H. NOTES:

1. Provide specific design recommendations and full back-up data. Include the heating and cooling capacities of each functional area and the block cooling and heating loads for each new and/or existing building.
2. The locations of these louvers must not allow short circuiting of air from emergency generator exhaust or truck waiting and loading dock areas into air intake etc. Consider factors affecting louver location such as visibility, historical considerations, wind direction, nuisance and health hazard odors (from emergency generator or truck exhausts).
3. Include room-by-room, peak zone-by-zone, and building block heating and cooling loads. Provide a tabulation of steam consumption based on data from all sources. Show correlation between each HVAC zone boundary and architectural floor area correlation between the architectural room numbers and abbreviated/coded room numbers used with computer input data sheets.
4. Show supply, return, exhaust, make-up, and transfer quantities with intended pressure relationships, i.e. positive, negative, or zero with respect to adjoining spaces.
5. Provide pertinent data on accessories such as pumps and cooling tower etc. Show the extent of the outside chilled water and condenser water piping. Clearly show how the piping will be laid in tunnels, trenches, or by direct burial.
6. Show ceiling clearances, at locations where ducts cross each other, by providing 1:50 (1/4 inch) scale local sections. Show all ductwork, and piping 150 mm (6 inch) and larger in double line. Show separate floor plans for air distribution and piping unless waived by VA. Show clearances required for access and maintenance with coil and tube pull.
7. Show typical air handling systems and all hydronic systems with existing capacities and new estimated loads. Verify actual operating conditions and capacities of HVAC systems prior to design.
8. Show control devices, such as, thermostats, humidistats, flow control valves, dampers, freezestats, operating and high limit sensors for all air systems and fluids, smoke dampers, duct detectors etc. Provide a written description of the sequence of operation on the floor plans. Detail the scope of work involved with the Central Engineering Center (ECC) and address if enough spare capacity is available or a new ECC is required. Show a point schedule for analog/digital input/output to be included in ECC.

9. Show pipe sizes and insulation with plans, profile, sections, details, and all accessories, such as, anchors, expansion loops/joints, valves, manholes, capped and flanged connections, interface between the new and existing work (if any). Clearly indicate interferences (if any) with the existing utilities and/or landscape elements on outside piping layout drawings. Show rerouting any utilities, cuttings of roads, pavements, trees, etc., and the extent of new and demolition work. Outside utility drawings shall be based on the study of the latest site drawings, discussions with engineering personnel, and actual site inspection of the existing utility.

10. Show all duct detectors, control valves/dampers static pressure sensors, differential pressure control assemblies, etc., whose actual physical location is critical for the intended sequence of operation on floor plans.

I. ELECTRICAL: Submit the following:

Electrical:	Schematics*	DD**	CD***
Narratives:			
• Design ¹	✓		
• Life cycle analysis for electrical systems	✓		
Location and size of:			
• Electrical equipment ²	✓		
• Electric closets ³	✓		
• Telephone closets ³	✓		
• Signal closets ³	✓		
• Electrical distribution equipment			
Drawings showing:			
• Electrical plot plan of existing and proposed underground power (including manholes)	✓	✓	✓
• Telephone systems	✓	✓	✓
• Signal inter-building systems	✓	✓	✓
• Proposed electrical system ⁴	✓	✓	✓
• Electric symbols	✓	✓	✓
• Lighting fixture schedule	✓	✓	✓
• Emergency Life Safety Equipment (see fire protection)			
• Symbols, note, abbreviations		✓	✓
List of specialty areas	✓		
Method of short-circuit calculations	✓		
Method of voltage drop and demand calculations	✓		
Utility company correspondence	✓		
Utility company requirements		✓	✓
Load calculations for normal & emergency use	✓	✓	✓
Drawings:			
• Lighting layouts		✓	✓
• Power layouts		✓	✓
• Signal layouts		✓	✓
• Specialty area layouts		✓	✓
• Demolition plans		✓	✓
Riser diagrams		✓	✓
Branch circuit wiring (typ.)		✓	✓
Location and size of:			
• Primary distribution switchgear/switchboard		✓	✓

Electrical:	Schematics*	DD**	CD***
• Engine-generator sets		✓	✓
• Substation/padmouted transformer		✓	✓
• Manholes		✓	✓
Location of smoke dampers and duct smoke detectors			✓
Interconnection of electrical control equipment with HVAC equipment (see fire protection)			✓
Smoke partitions and fire alarm zones	✓	✓	✓
Fire alarm and signal riser diagrams (see fire protection)		✓	✓
Calculations for emergency generator(s)		✓	✓
Phasing scheme		✓	✓
Electrical details			✓
Specifications			✓

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

I. NOTES:

1. Include basic assumptions, points of interconnection, impact of new construction to existing electrical distribution system, current demand loading (high voltage switchgear and primary feeder), and projected load of new construction. Propose various feasible electrical systems for project and provide advantages/disadvantages.
2. Include means and clearances for installation, maintenance, and removal/replacement of equipment.
3. Electrical, signal and telephone closets must stack vertically.
4. Include high voltage and low voltage switchgear, transformers and low voltage main and/or distribution panels, branch panels and methods of feeding 277/480 volt and 120/208 volt normal and emergency panels.

J. EQUIPMENT: Submit the following:

Equipment:	Schematics*	DD**	CD***
Equipment (on architectural drawing)	✓	✓	✓
Activation Equipment List (Excel format)		✓	✓
Specifications			✓

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** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

K. STEAM GENERATION: Submit the following:

Steam Generation:	Schematics*	DD**	CD***
Report on new and existing steam loads ¹	✓		
Life-cycle cost analysis of steam supply alternatives	✓		
Analysis of alternate plant locations	✓		
Life-cycle cost analysis for alternative types of equipment	✓		
Life-cycle cost analysis for heat recovery alternatives	✓		
Data on emissions regulations	✓		
Data on methods of compliance	✓		
Selection of major equipment	✓		
Plot plan with new and existing plant locations	✓		
Fuel related storage and handling facilities	✓		
Alternate plan view layouts of new and existing plant	✓		
Plot plan of steam generating facility ²		✓	✓
Catalog cuts on equipment from two manufacturers		✓	✓
Plans/sections/locations of:			
• Equipment		✓	✓
• Major piping		✓	✓
• Pipe supports		✓	✓
Demolition		✓	✓
Schematic flow diagrams of all piping systems		✓	✓
Calculations:			
• Equipment sizing	✓	✓	✓
• Major piping systems		✓	✓
• Steam load		✓	✓
• Control and regulating valve		✓	✓
• Flowmeter systems		✓	✓
• Steam trap		✓	✓
• Heating and ventilating system		✓	✓
• Steam piping		✓	✓
Schedules		✓	✓
Equipment lists		✓	✓
Verification of emission regulations		✓	✓
List of standards and details		✓	
Specifications		✓	✓

Steam Generation:	Schematics*	DD**	CD***

* Submit, as a minimum, a single line layout for at a scale not less than 1:100 (1/8 inch). Submit a complete double line layout of areas of critical importance, at a scale of 1:50 (1/4 inch) including equipment.

** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

K. NOTES:

1. Include maximum and minimum summer and winter demands and total annual production. Provide break-down of new steam loads into categories of end use such as building heating, humidification, reheat, domestic hot water, sterilization, line losses, kitchen, and laundry.
2. Show boilers, pumps, heat recovery devices, tanks, and emission control devices.

L. STEAM DISTRIBUTION (OUTSIDE): Submit the following:

Steam Distribution (Outside):	Schematics*	DD**	CD***
Estimate steam and condensate loads	✓	✓	✓
Life-cycle cost analysis of steam distribution system	✓		
Calculations of pipe sizing	✓	✓	✓
Steam distribution plot plan	✓	✓	✓
Existing underground utilities			
Soil conditions report	✓	✓	✓
Performance requirements for steam traps		✓	✓
Calculate pipe stress		✓	✓
Select expansion facilities for piping		✓	✓
Location of:			
• Manholes		✓	✓
• Pipe expansion devices		✓	✓
Profile drawings including existing utilities		✓	✓
Plan views/sections/dimensions for major piping, pipe layout and pipe supports of:			
• Manholes		✓	✓
• Trenches		✓	✓
• Tunnels		✓	✓
Demolition Plans		✓	✓

* Submit outside steam generation plans at an appropriate scale to show all work involved.

** Submit outside steam generation plans at same scale as topographic/utility survey incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated outside steam generation plans incorporating all revisions required by comments from the design development phase.

M. SOLID WASTE DISPOSAL SYSTEM INCLUDING INCINERATION: Submit the following:

Solid Waste Disposal System Including Incineration:	Schematics*	DD**	CD***
Incineration report including: 1. amount and type of waste (new & existing) 2. emissions regulations and types of emissions controls required 3. life-cycle cost analysis on alternatives for waste disposal 4. calculations of equipment sizing and description of types of equipment 5. viable alternatives for waste disposal	✓		
Evaluation of capability of existing incinerator	✓		
Complete description of existing processing system	✓		
Tests to determine remaining service life and capacity of system	✓		
Plot plan with new plant location and location of existing plant	✓		
Plan view layout of new system or existing system showing new equipment location	✓		
Load calculations on amount and types of waste		✓	✓
Plot plan with location of new processing system		✓	✓
Plans/sections showing locations of:			
• Equipment			
• Major piping		✓	✓
Demolition		✓	✓
Catalog cuts (2 min.) of equipment selections		✓	✓
Emissions control devices		✓	✓
Schedules		✓	✓
Equipment lists		✓	✓
List of standards to be furnished later		✓	✓
List of special details to be furnished later		✓	✓
Verification of applicable emissions regulations affecting design or operation			✓

Solid Waste Disposal System Including Incineration:	Schematics*	DD**	CD***
Specifications			✓

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** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

N. AUTOMATIC TRANSPORT: Submit the following:

Automatic Transport:	Schematics*	DD*	CD*
Automatic transport systems (ATS):			
• Narrative w/ recommended improvements for exiting system	✓	✓	✓
• Traffic study including existing and proposed ATS w/ alternate methods of distribution	✓	✓	✓
Changes to existing systems (arch. dwgs.)		✓	✓
Hoistway (arch. dwg.)		✓	✓
Machine room vents (arch. dwg.)		✓	✓
Type of ventilation (mech. dwg.)		✓	✓
Electrical requirements (elect. dwg.)		✓	✓
Drawings: ^{1, 2, & 3}			
• Automatic Transport Systems		✓	✓
• Elevators		✓	✓
• Dumbwaiters		✓	✓
• Other ATS systems		✓	✓
Sizes/dimensions/details:			
• Hoistway enclosures		✓	✓
• Pits		✓	✓
• Pit ladders		✓	✓
• Machine area ladder and railings		✓	✓
• Entrances		✓	✓
• Machine rooms		✓	✓
Locations/dimensions:			
• Elevator cars		✓	✓
• Entrances		✓	✓
• Counterweights		✓	✓
• Trap doors		✓	✓
Location of hoistway vents		✓	✓
Location of steel hoisting beams		✓	✓
Size of machine beams		✓	✓
Size of end reactions		✓	✓
Location/detail of machine beam pockets		✓	✓
Rail loadings		✓	✓
Hydraulic elevator piston pit loads		✓	✓
Details			
• Hoistway entrances for elevators		✓	✓
• Carlifts		✓	✓

Automatic Transport:	Schematics*	DD*	CD*
• Dumbwaiters		✓	✓
• Trash chutes		✓	✓
• Linen chutes		✓	✓
• ETVS		✓	✓
Elevator machine room equipment layout		✓	✓
Interface with automatic recall and shutdown (see fire protection)			✓
Specifications		✓	✓

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** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

N. NOTES:

1. Include tracking, piping, battery charging areas, blower rooms, queuing areas, cart holding areas, cart washer, central control area, and floor or wall recessed transport control units. Indicate architectural features in areas to be utilized for these systems. Indicate on architectural drawings all the major equipment located in machine rooms, secondary levels, pits, and the areas pertaining to ATS, AGVS and ETVS.
2. Indicate changes required on the architectural drawings where existing transport systems are retained and modified to serve new and existing areas.
3. Provide all electrical criteria (per basic electrical notes and Automatic Transport Design Manual) on electrical drawings.

O. ASBESTOS ABATEMENT: Submit the following:

Asbestos Abatement:	Schematics*	DD**	CD***
Asbestos abatement report including: 1. Summary results of building records 2. Summary results of station personnel interview 3. determination of materials known to contain asbestos 4. visual inspection of building to determine location and condition of asbestos 5. sample strategy on the extent of asbestos present	✓		
Name and location of qualified laboratory for sample analysis	✓		
Asbestos abatement drawing		✓	
Major Decontamination Areas showing: 1. Limits of sealing off the location 2. Quantities of asbestos material 3. Arrangements for auxiliary rooms 4. Engineering of negative air systems 5. Path of asbestos to loading platform 6. Location and connection to required utilities		✓	
Minor Decontamination Areas showing: 1. location, type, and length of pipe element to be abated by "Glove and Bag" approach 2. Other abatement features		✓	
Summary of: ¹			
• Square meter (feet) of floor space for abatement		✓	✓
• Total linear and square meter (feet) of asbestos to be abated		✓	✓
• Total cost of abatement ²		✓	✓
Asbestos abatement drawings including: 1. restoration of impacted building sub-systems 2. integrated phasing on execution of abatement			✓

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** Submit minimum 1:100 (1/8 inch) scale floor plans, new and renovated, incorporating all of the revisions required by comments from schematics.

*** Submit fully dimensioned, complete, and coordinated 1:100 (1/8 inch) scale floor plans, incorporating all revisions required by comments from the design development phase.

O. NOTES:

1. Provide a copy of the summary to the construction cost estimator for inclusion as a separate bid item in the project estimate.
2. Include any cost for decontamination of equipment and fixtures.

P. SPACE PLANNING

	Schematics	DD	CD
Space-Accounting Summary Table	✓ ¹	✓ ²	✓ ³

P. NOTES:

1. Provide a tabular table with columns entitled Departmental Function, H-7610 Requirements, Approved Space Program [Net Square Meters (Net Square Feet)], Variance Between H-7610 and Approved Space Program, Departmental Conversion Factor, Planned Departmental Gross Square Meters (Feet); column totals; and a Total Project Net to Gross Factor. Also, list separately the area required for additions to the program, unassigned space, major circulation (inter-departmental corridors, stairs, elevators), major mechanical and electrical spaces, exterior walls, connecting corridors to other buildings, space for future mechanical system expansion, and similar special requirements.
2. Update table. Justify in writing substantial deviations from the approved space program.
3. Update table.

Q. CRITICAL PATH METHOD (CPM): Submit the following:

Critical Path Method (CPM)j:	Schematics	DD	CD
Phasing Narrative	✓	✓	✓
Phasing Plans (on reduced site plans)	✓		
Phasing Diagram	✓		
Phases (marked on full size drawing)	✓		
Written list of systems ¹	✓	✓	✓
Phasing Diagram (drawn on Phasing Plan) ¹		✓	✓
CPM Phasing Plans (full size contract drawings) ²		✓	✓

O. NOTES:

1. Include temporary system by phase, and separate by technical discipline.
2. One drawing may reflect several reduced site plans.

R. ESTIMATING: Submit the following:

Estimating:	Schematics	DD	CD
Cost estimate in compliance with Manual for Preparation of Estimates (separate estimates for new construction and alteration work)	✓	✓	✓
Level "A" Summary Sheets for building	✓	✓	
Level "A" Summary Sheets for sitework	✓	✓	
Building gross area computation (new)	✓	✓	
Building gross area computation (alteration work)	✓	✓	
Project Data Sheet 1	✓		
Project Data Sheet 1 and 2		✓	✓
Asbestos abatement		✓	✓
Detailed estimate take-off sheets			✓
Level "B" Summary Sheets for buildings			✓
Level "B" Summary Sheets for sitework			✓
Supplement A to SF 252			✓
Detail Market Analysis			✓

S. SPECIFICATIONS

	Schematics	DD	CD
Specifications (All Disciplines)		✓1, 2. & 3	✓4 & 5

1. Submit for all technical disciplines the original VA Master Specification section drafts marked-up with pencil showing the editing for the project. Clearly identify modifications, deletions and insertions. Assure the specification drafts have been edited and tailored in their application to represent accurate coordination between drawings and specifications.
2. When no VA Master Construction Specification exists for a "unit of work", prepare the specification section consistent with VA Master Construction Specifications format.
 - a. Use generic or non-proprietary specifications describing the minimal acceptable product criteria level where no "Standard" exists to define quality and workmanship levels.
 - b. Use applicable "Standards" to define quality and workmanship when these publications exist. List complete designation and title of each publication used in Part 1; follow format in VA Master Construction Specifications for Applicable Publications.
 - c. Do not use proprietary specifications or systems that restrict competition unless authorization in writing has been received from the VA Project Manager for such proprietary specification. See the Federal Acquisition Regulation (FAR) Part 10, Part 14, and Part 36.
 - d. Do not use trade names or manufacturers brand names, except as previously noted.
 - e. When a deviation is requested, define and specify the minimum acceptable levels of essential criteria in descriptive, physical, functional, or performance requirements.
4. Type specifications in final format and content including any desk copy changes made by the VAMC staff at the previous review. Submit a complete set of the typed specifications for review. Include one set of full size final drawings of all disciplines, fully coordinated.
5. Return all draft specifications reviewed at DD review to aid the final bid document review. These draft specifications will later be returned to the A/E.

T. FINAL BID DOCUMENTS

- a. Place the seal of the Registered Architect, Registered Landscape Architect, and Professional Engineer responsible for the design and the VAMC Project Director's signature on the Construction Documents. A stamp of the VAMC Project Director's signature will be furnished.
- b. Submit updated Department Ratio Chart of Final Bid stage to the VAMC Project Manager.

III. DISTRIBUTION OF A/E MATERIAL

A. SYMBOL IDENTIFICATION OF CONTRACT DRAWINGS

- AS** - Architectural Drawings (Numbered Only)
- HA** - Asbestos Removal Drawings
- BI** - Boring Log Drawings
- ES** - Electrical Drawings
- FA** - Fire Protection Drawings
- MH** - Heating, Ventilating, and Air Conditioning Drawings
- PL** - Plumbing Drawings
- GS** - Site Development and Environmental Drawings
- CU** - Sanitary and Irrigation Drawings
- MU** - Steam Distribution Drawings
- MP** - Steam Generation Drawings
- SS** - Structural Drawings

B. GENERAL NOTES

1. Bond prints shall be full-sized.
2. Bind all drawings into sets in the order of their above classification symbol.
3. All submitted specifications shall be original, unbound, and marked-up VA Master Specifications. Where no VA Master Specification is available, submit a developed specification.
4. Submit all materials, packaged and clearly marked by discipline, to the VA's Contracting Officer. However, where a small amount of material is submitted, the drawings may be packaged together for all disciplines as long as the drawings are separated and tagged with the discipline name. Other material may also be consolidated provided they are labeled and can easily be identified and separated.
5. Material provided unbound will be returned to the A/E. All resubmission costs will be the responsibility of the A/E

Distribution of A/E Material

Schematic Submission:

VA Medical Center (VAMC)	Appropriate Network Office*
3 complete sets	1 complete set

Design Development Submission:

VA Medical Center (VAMC)	Appropriate Network Office*
3 complete sets	1 complete set

Construction Documents Submission:

VA Medical Center (VAMC)	Appropriate Network Office*
3 complete sets	1 complete set

*Network Office will coordinate the necessary review with the responsible safety and fire protection person in their network.