

Department of
Veterans Affairs

National Cemetery Administration

A/E Submission Instructions for National Cemetery Projects:

- Master Plan
- Schematics
- Design Development
- Construction Documents
- As-Built Drawings

FOREWORD

This document states the minimum requirements for each submission in the production of VA Master Plans, Schematics, Design Development, Construction Documents, and As-Built Drawings for National Cemetery Administration Projects. It will give VA reviewers and the A/E a clear understanding of the minimum requirement 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, for the successful completion of a project with minimal or no change orders.

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A/E SUBMISSION INSTRUCTIONS FOR NATIONAL CEMETERY PROJECTS

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I. GENERAL

A. INTRODUCTION

1. This document contains information and minimum submission requirements for the preparation of contract documents required in the A/E contract.

2. The Department of Veterans Affairs (VA) may contract with an Architect/Engineer (A/E) for any portion of national cemetery design: Master Plan, Schematics, Design Development, Construction Documents, As-Built Drawings, or a combination of these. For cemetery projects where VA is contracting with the A/E for Design Development and/or Construction Documents only, VA will provide the Master Plan, a Concept Plan, or Schematics to accompany the Scope of Work for the project.

B. A/E RESPONSIBILITIES

1. The A/E is responsible for the quality, accuracy and completeness of the contract documents that shall meet or exceed the requirements of this document.

2. The A/E is responsible for coordinating the various documents to eliminate errors and omissions and for producing a complete set of drawings and specifications in accordance with standard professional practices and VA criteria. The drawings and specifications shall be complete, clear, and complementary. The A/E must use identical terms on drawings and specifications to avoid conflicts over ambiguous terms and statements. A "built-up roof" on the drawings shall not be referred to as "roofing system" in the specifications. Each A/E discipline shall receive a copy of the NCA Facilities Design Guide, VA standard details, and construction standards.

3. The A/E is responsible to visit the site and verify all conditions. VA will provide current "as-built" documents, if available. Where components indicated on existing drawings are not correct, the A/E is to make whatever changes are necessary to show the actual existing conditions.

C. REVIEWS

1. Specific intervals are designated for review of the project work. These reviews are joint consultations to exchange information, reconcile differing views on meeting the objectives, judge the quality and completeness at each stage, ensure that previously noted changes have been incorporated, and warn of unacceptable departures from criteria or standards during the development of design.

2. There are Five Master Plan submission milestones (MP 1 - MP 5), two Schematics (S1 & S2), two Design Development (DD 1 & DD 2), and one

Construction Document (CD 1) indicated in this handbook. The A/E shall date and label the material submitted, "SCHEMATIC- S1 SUBMISSION", "SCHEMATIC - S2 SUBMISSION", etc., 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. All review submissions shall include a temporary index to the drawings, except the final, which will have the index to drawings as a permanent part of the contract documents.

D. SUMMARY OF SUBMISSIONS

MASTER PLAN

SUBMISSION MILESTONE:	COMPONENTS OF SUBMISSION:	REVIEW FORMAT:
MP 1	Meeting Agenda Topo, Utility & Landscape Survey Site Characteristics Report Geotechnical Soil Survey Presentation of Master Plan Alternatives (minimum 3) Design Charette for Landscape Architectural Concept Discussion of Architectural Concept Discussion of Irrigation Concept Cost Estimate Selection of one Master Plan Concept	On-site Meeting of VA team with A/E team; Presentations by A/E; group discussions
MP 2	Record of Team Meeting including: Alternatives as presented at meeting Selected MP Concept, as modified at meeting Cost Estimate	NCA/OFM briefing for management at VACO; Written comments to A/E one week after briefing.
MP 3	Draft Master Plan and Schematic Block Plans [Development of Selected Alternative] Mock-up of Cemetery Pamphlet, Draft copy and proposed graphics Cost Estimate	Internal VA review; A/E meeting with OFM tech services and NCA at VACO; Written comments to A/E one week after mtg.
MP 4	Final Master Plan and Schematic One-lines with all comments incorporated Blue-line of Cemetery Pamphlet Cost Estimate	Internal VA review; A/E presentation to management; A/E meeting with tech services at VACO; Written comments to A/E one week after mtg.
MP 5	Final (100%) Master Plan with all comments incorporated - Mylar Originals Camera-ready copy of Cemetery Pamphlet CADD tapes	Record Submission only; No Comments

SCHEMATICS

SUBMISSION MILESTONE:	COMPONENTS OF SUBMISSION:	REVIEW FORMAT:
S 1	Concept Plan Alternatives if not previously developed Schematic Site Development and Analysis Schematic Block Plans and Narratives Other specified requirements for interior design, engineering cost estimate and CPM	Internal VA review; A/E meeting at VACO; Written comments to A/E one week after mtg.
S 2	Schematic Site Development with all comments incorporated Schematic Architectural Layout with all comments incorporated Other specified requirements for interior design, engineering, cost estimate and CPM	Internal VA review; A/E meeting at VACO; Written comments to A/E one week after mtg.

DESIGN DEVELOPMENT

SUBMISSION MILESTONE:	COMPONENTS OF SUBMISSION:	REVIEW FORMAT:
DD 1	Design Development drawings based on approved Schematic Design or Master Plan	Internal VA review; A/E meeting at VACO; Written comments to A/E one week after mtg.
DD 2	Final Design Development drawings, specifications and cost estimate with all comments incorporated	Internal VA review; A/E meeting at VACO; Written comments to A/E one week after mtg.

CONSTRUCTION DOCUMENTS

SUBMISSION MILESTONE:	COMPONENTS OF SUBMISSION:	REVIEW FORMAT:
CD	100% Construction Documents CADD tapes	Internal VA review; A/E meeting at VACO; Written comments to A/E one week after mtg.

AS-BUILT DRAWINGS

SUBMISSION MILESTONE:	COMPONENTS OF SUBMISSION:	REVIEW FORMAT:
AB	100% As-Built Documents CADD tapes	Written comments to A/E.

E. COMPUTER AIDED DESIGN AND DRAFTING (CADD) REQUIREMENTS

The A/E shall supply all CADD data in the latest version of Intergraph Corp., MicroStation CADD software, in accordance with the NCA CADD Standards Manual and the Tri-Service AEC Computer Aided Design and Drafting (CADD) Standard, Part 2, dated April 1995.

F. ADDITIONAL SERVICES

If any additional services are necessary (i.e., surveys, soil borings, water availability, water quality tests, or asbestos surveys), submit criteria for the work to be performed to the VA Project Manager 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. The A/E shall recommend which firm is considered to be the most qualified to do the work.

Master Plan

II. MASTER PLAN

A. GENERAL

1. The goal of the Master Plan is to present a comprehensive, long-range development plan for the national cemetery.
2. The objective of the Master Plan is to provide an orderly, professional, and aesthetic development plan, with associated cost estimates, for the entire cemetery site.
3. The Master Plan shall be detailed enough to enable VA to proceed directly into preparation of Design Development for each phase of cemetery development.

B. PLANNING APPROACH

1. The development of the Master Plan is an interactive process between VA and the A/E. The Master Plan shall incorporate the elements listed in the Scope of Work for the project.
2. The site analysis process shall evaluate all man-made and natural site features. The A/E will document findings of the analysis in the Site Characteristics Report.
3. Relationships between structures, circulation, and site features shall be combined to produce both a functional and aesthetic plan. The plan shall reflect the history of the region, the culture of the people and veterans of the area. Materials used shall convey strength, permanence, and reflect the regional design vernacular.
4. Agency consulting/review/approval services include: agency consultations, research of critical applicable regulations, appearance at agency and community meetings/hearings as requested by the VA.

C. SUBMISSIONS

1. GENERAL

In addition to the on-site Master Plan 1 workshop and the Master Plan reviews at VA in Washington, DC, informal meetings at the site, the A/E's office, or other locations may be held upon mutual consent of the VA Project Manager and the A/E to discuss the Master Plan and related issues.

2. MASTER PLAN 1 [MP 1]

a. The A/E shall initiate development studies of the site and prepare them according to the schedule established in the contract. The A/E, after having prepared the studies, will meet with a VA team at the site. The purpose of the meeting is to select the preferred development concept. Several design alternatives (minimum of three) shall be discussed at this meeting and one alternative will be selected. No advance submittal of material is required.

b. Provide the following:

(1) Topographic, Utility, and Landscape Surveys: The A/E shall obtain professional surveying services from licensed surveyors to provide a topographic, utility, and landscape survey of the entire site. Specific survey requirements are detailed in the Site Development Design Manual. General requirements for the survey are provided here. All elevations will be based on U.S.C.&G. Survey benchmarks. A permanent U.S.C.&G. Benchmark shall be established on the cemetery site if none exists, as well as permanent property corner monuments. The topographic survey shall include all features affecting site development, such as contours at an appropriate interval approved by VA (approximate interval is 150 mm (.5 feet) to 1500 mm (5 feet)). Significant stands and prominent trees/plant materials will be shown with size and specie identification. All property lines, building line setbacks, and any leases, rights-of-way or easements within the limits of this survey shall be located and shown. Surrounding land uses and property owners by name, historic/archaeological sites, and natural features (lakes, rivers, flood plains, wetlands, etc.) shall be identified on the survey drawings. The locations and sizes of any utilities will be shown. The survey plans shall be made part of the Master Plan drawing set.

Format: Use two scales: 1:400 (approximately 1" = 30'), and the largest conventional engineering scale (i.e., 1:1200 (1" = 100') or 1:2400 (1" = 200'), etc.) that allows the entire cemetery site to fit on a single sheet. Show survey information compositely on a single sheet, hard-line finish, on an Ortho Photo Base Topo Map. Also provide survey information compositely at a scale of 1:400 (approximately 1" = 30') Use match lines for orientation and alignment. Provide survey drawings in an Intergraph computer-aided design/drafting system (CADD) format in accordance with the NCA CADD Standards Manual. All drawings that are part of the final Master Plan drawing set will be hard line finish on standard VA mylar drawing sheets.

(2) Site Characteristics Report: The A/E shall prepare a report of site characteristics from an analysis of the Environmental Impact Statement (EIS), data gathered from personal site visits and the topographic, utility, and landscape surveys. The site analysis process should reflect an understanding of all natural systems of the site. The report shall document the analysis process and shall contain:

(a) Graphic and narrative description of the cemetery site.

(b) Graphic and narrative description of the vicinity relationships with the cemetery site. The resulting vicinity map will also be used in the set of Master Plan drawings.

(c) Site Analysis Plans that illustrate:

[1] Significant constraints for construction and burials that must be considered during the planning of the site. Include site and utility constraints in adjacent off-site areas (steep grades [15% slope is maximum for interment areas], flood plains, rock outcroppings, etc.).

[2] Potential entrances - public and maintenance. Plans must show the primary access routes to and around the property with notations of any traffic control signals and future plans for adjacent development and roadway improvements that might affect the site and proposed cemetery.

[3] Potential site organization - burial, maintenance and staff. Public traffic includes funeral attendees and cemetery visitors. Maintenance traffic includes headstone delivery, soil spoils, grounds maintenance supplies and equipment and casketed remains, after the committal service.

(d) On-site utility service studies consisting of establishing requirements and preparing initial designs for: Electrical service and distribution, natural gas service and distribution, water supply and distribution, potable/non-potable irrigation, site drainage, sanitary sewer system and disposal, process waste water treatment for irrigation, storm water collection and disposal, security, pollution control, site illumination, and communications systems.

(e) Off-site utility studies including: Location, size and adequacy of utilities serving the site, the requirements for connections to the utilities, planning for off-site utility extensions, and design of off-site utility extensions.

(f) Photographs of four views that characterize the site. These photos should be 130 mm x 180 mm (5" x 7") prints, landscape format, black and white. One aerial photograph, 200 mm x 250 mm (8" x 10"), black and white, depicting the cemetery site and immediate surroundings shall also be provided. Provide negatives for all the above photographs to VA.

Format: 210 mm x 297 mm*(8-1/2" x 11") narrative report with 297 mm x 420 mm*(11" x 17") fold-out graphics, as needed. Provide a large format drawing that summarizes the site analysis as part of the Master Plan drawing set. Large format drawings will meet the same requirements as topographic, utility and landscape survey drawings.

(3) Geotechnical Soil Survey for Burials: The A/E will receive a detailed specification for this survey in the Site Development Design Manual issued by VA Office of Facilities Management. General requirements for the survey are provided here. The A/E shall obtain a report of subsurface investigations to include seismic data and geologic formations, analysis of soil fertility, organic content, and pH measurement. Depths to rock, ground water, and the existence of aquifers and perched water tables or springs and percolation locations will be identified. Soil pits and borings shall be accomplished to a depth of 8 feet below existing grade or to bedrock. Soil pits and/or borings shall be made in as many areas as the A/E considers necessary and as VA approves in order to obtain a good understanding of the soil and rock conditions of the site for double- or single-depth burial. Identify rock strata and prepare a profile illustrating their depth below surface. Study the depth of ground water during wet and dry periods.

Format: 210 mm x 297 mm*(8-1/2" x 11") narrative report with 297 mm x 420 mm*(11" x 17") fold out graphics, as needed. Drawings indicating locations of borings and soil analysis shall be made part of the MP set. Large format drawings will meet the same requirements as topographic, utility and landscape survey drawings.

(4) The A/E shall prepare distinct, viable, alternative development studies prior to this on-site workshop. The A/E should be prepared to discuss the design process used in developing the various studies. For each study show the location of proposed structures, interment areas, and design elements. Study subsurface conditions for the suitability of burials in 1500 mm (five feet) single depth and 2100 mm (seven feet) double-depth gravesites. Show spot grades for critical areas, proposed on-site roadways, parking areas, primary entrances and exits, and any other site/building features. Indicate the primary access routes to and around the site along with notations of any proposed future plans for roadway improvements, traffic control signals, or other traffic circulation changes that might affect the existing site and proposed planning. Indicate proposed land utilization for the entire site, pedestrian and vehicular circulation, utility systems, ecological requirements, planting concepts, grading, phasing with narrative, and estimates.

Format: A/E choice of sketch-type materials and size.

c. The A/E shall develop a draft agenda for the on-site team meeting subject to the approval of the VA Project Manager.

d. The A/E shall facilitate the on-site meeting of the VA - A/E team. The A/E shall present and discuss the findings of the site studies and survey information,

as well as present each of the alternative development studies. The A/E shall lead a discussion and design workshop to explore the architectural concept for proposed structures.

e. Submit a construction cost estimate in compliance with the Manual for Preparation of Estimates for each of these alternatives. These estimates shall include but not be limited to:

(1) Master Plan Cost Estimate Summary Sheet.

(2) Level "A" Summary Sheets: For all buildings and sitework.

f. The VA team will select a preferred alternative site development plan or combination from those developed before the close of this workshop. This will be the basis for further conceptual development.

3. MASTER PLAN 2 [MP 2]

a. The A/E shall submit the preferred site development alternative and the other developed alternatives to VA in Washington, DC. A review meeting will not be held. The presentation material for the selected alternative shall be presentation quality, the other alternatives may be in rough form, for instance, prints of sketches done on tracing paper. Drawings produced for this submittal shall be refined and included in the final drawing set of the Master Plan in their final presentation form, rather than rough sketches.

b. Provide sketches of proposed architectural alternatives. Label sketches with proposed materials or present a separate narrative/matrix of proposed materials. Sketches may be in rough form on tracing paper.

c. Provide interior architecture sketches to indicate the design direction.

d. The purpose of this submission is to obtain VA final approval for the selected Master Plan alternative and to select a preferred architectural style.

e. Submit a construction cost estimate in compliance with the Manual for Preparation Of Estimates. This estimate shall include but not be limited to:

(1) Master Plan Cost Estimate Summary Sheet.

(2) Level "A" Summary Sheets: For all buildings and sitework.

(3) Supplement A to SF 252: For gross building area take-off for each occupiable building.

f. Begin phasing meetings, if required, for Phase I development as indicated in Article III, CPM PHASING MEETINGS.

4. MASTER PLAN 3 [MP 3]

a. The A/E shall participate in a review at VA in Washington, DC. Plans may be in any format, however, all drawings/studies to be included in Master Plan 5 shall be executed on standard VA sheets.

b. Submit the approved Master Plan alternative from the previous submission. This review will concentrate on refinements in the following areas:

(1) Overall site development plans including narrative.

(2) A phasing plan for the entire site, illustrating the distinct phases and their priority, based on demographic projections provided by NCA.

(3) Refinement of the selected architectural concept with floor plans and elevations. Draw all floor plans at an appropriate scale which will permit an entire floor plan to fit on a standard VA sheet, normally 1:100 (1/8" = 1'-0") or 1:50 (1/4" = 1'-0"), one building per sheet. Indicate on the drawings the size of all spaces listed in the Square Footage Requirements of the Scope of Work. Show on the floor plan the net program area required for each area and the actual designed area. Indicate the total gross area of each building. Floor plans will be reviewed for accessibility to disabled persons and adaptability to furnishings.

(4) Describe the interior design scheme and submit a floor plan indicating generic furniture placement.

(5) Describe natural gas and water sources, disposal methods of sewage and storm water, and proposed natural gas, domestic water, irrigation, storm drainage, and sanitary sewage systems. Indicate if on-site water or sewage treatment is necessary. Describe gasoline and fuel oil facilities. Indicate if existing utilities and equipment can be used.

(6) Provide letters (Memoranda of Understanding) from all affected utilities stating availability and connection potential.

(7) If wells are required for water source, install test well and obtain water analysis and expected yield in gallons per minute. Cost of test well will be a reimbursable to the A/E contract.

(8) Determine presence of any existing electrical service and related major equipment, and ascertain its capacity to supply the new load. Show on an electrical site plan the location of major existing and proposed service equipment including power transformers, switches, etc.

c. Submit a construction cost estimate in compliance with the Manual for Preparation of Estimates. The estimate shall incorporate all of the review

comments from the previous review. This estimate should include but not be limited to:

- (1) Master Plan Cost Estimate Summary Sheet.
- (2) Level "B" Summary Sheets: For Phase 1 (buildings and sitework).
- (3) Level "A" Summary Sheets: For other Phases (buildings and sitework)
- (4) Supplement A to SF 252: For Phase 1 (gross building area take-off of each occupiable building).

d. At this review, a final decision should be reached between the A/E and the VA Project Manager on how many sketches/renderings/study model, if any, will be required and what is to be illustrated. An appropriate contract modification will be issued to cover the agreed upon submittal.

e. Schematics 1 (see Article IV. SCHEMATICS) shall be submitted for the Phase I development.

f. Submit a mock-up of the Cemetery Pamphlet, Draft copy, and proposed graphics.

5. MASTER PLAN 4 [MP 4]

a. The A/E shall participate in a review at VA in Washington, D. C.

b. Presentation:

(1) A presentation by the A/E of the Master Plan to the Director, National Cemetery Administration, the Associate Chief Medical Director (AsCMD) for Facilities Management, and possibly to the Secretary of Veterans Affairs is required. Generally, the presentation by the A/E will be approximately 20 minutes with additional time for a question and answer period. It is suggested that the presentation be in the form of color slides of the existing site conditions with colored plans, preferably mounted, and/or slides illustrating the Master Plan solution. Any relevant, incidental materials the A/E may have developed while designing the Master Plan may be used. Any sketches/renderings/study model etc. required for the Master Plan should be available for presentation at this time. It is not necessary to go into detail on such technical items as the utility distribution systems in this presentation, unless unique circumstances exist. The A/E should be prepared to present general cost estimates such as average gravesite cost, approximate individual building costs, approximate costs of the initial development phase and total build-out cost for the completed cemetery.

(2) The A/E shall consult with VA prior to this review to discuss the material to be presented. During this review and prior to the presentation to the

Directors listed previously, time will be allocated for a "dry run" of the proposed presentation. This presentation will be for Office of Facilities Management and National Cemetery Administration staffs.

(3) Equipment for the presentation, such as slide projectors, screens, etc., will be available from VA through advance arrangement with the VA Project Manager.

c. All drawings are to be VA standard size sheets and format, as shown in the VA provided standard size example sheet. The following are minimum requirements:

(1) Submit drawings with all revisions discussed at Master Plan 3 review.

(2) Overall site development plan illustrating all of the program elements including phase one development.

(3) Roadway system, including horizontal layout and cross sections.

(4) Burial sections, numbered and illustrating limits of gravesites, and approximate yield (number of gravesites per section).

(5) Planting plan indicating location of trees, shrubs and ground covers with a schedule of proposed species.

(6) Irrigation layout of main lines, submains, a typical lateral block layout, master valves and valve concept.

(7) Grading and drainage plan with rough grading of roads and interment areas, proposed first floor elevations of the architectural elements and special site features and other critical grades.

(8) Signage system including layout plan and sign design.

(9) Topographic, utility, boundary, and landscape surveys.

(10) Provide previous utility descriptions with updates. Provide description of plumbing systems. Indicate if existing plumbing equipment, fixtures, and piping are adequate for this project.

(11) Provide a description of the heating, ventilating and air conditioning (HVAC) systems and equipment in accordance with latest ASHRAE Standards and VA criteria. Investigate the availability of utilities (natural or propane gas, electricity, steam, or hot water) for the HVAC equipment and provide description of their status. Indicate the tentative locations of HVAC equipment, including any outdoor equipment.

(12) Asbestos Assessment: Where the project scope includes building renovation and known or suspected asbestos material is involved, a Professional Industrial Hygienist shall prepare required information for all design submissions in accordance with VA guidelines for asbestos abatement.

(13) Where buildings are involved, show location of mechanical and electrical equipment rooms and closets on the floor plans.

(14) Develop the interior design narrative, submitted at Master Plan 3 review, adding the proposed materials and finishes for the structures. Provide the furniture plan. Prepare a sample board illustrating the interior design scheme and specific types of furniture selections.

d. Schematics 2 (see Article IV. SCHEMATICS) shall be submitted for the Phase I development.

e. The A/E shall submit a construction cost estimate in compliance with the Manual for Preparation of Estimates. This estimate should include but not be limited to:

(1) Master Plan Cost Estimate Summary Sheet.

(2) Level "B" Summary Sheets: For Phase 1 (buildings and sitework).

(3) Level "A" Summary Sheets: For other phases (buildings and sitework).

(4) Supplement A to SF 252: For Phase 1 (gross building area take-off of each occupiable building).

f. Note that a modified master plan and estimate will be required at the Construction Document review for Phase 1 to reflect changes that may occur due to development of Phase 1 contract drawings.

g. Submit a Blue-line of the Cemetery Pamphlet.

6. MASTER PLAN 5 [MP 5]

a. A review meeting will not be held. Submit final master plan set that incorporates all VA comments from the review of Master Plan 4.

b. Submit a camera-ready copy of the Cemetery Pamphlet.

III. CRITICAL PATH METHOD (CPM) PHASING MEETINGS

A. If required, and prior to submission of Schematic 1 material, the A/E shall meet with the VA Project Manager and VA representatives of the Critical Path

Method Service (CPM) and the National Cemetery Administration 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. The A/E shall submit a phasing narrative and phasing plans (on reduced size plans) within two weeks after each phasing meeting to the VA Critical Path Method Service. The CPM staff 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.

Schematics

IV. SCHEMATICS

A. SCHEMATICS 1 [S 1]

1. **GENERAL:** If not developed during the Master Plan stage nor furnished by VA, provide a minimum of three alternate development plans. VA will review the alternate development plans and select one or a combination of several to be further developed for Schematics 2.

2. SITE DEVELOPMENT AND ENVIRONMENTAL

a. The A/E shall become thoroughly familiar with the cemetery site. The A/E is expected to provide the following in narrative and graphic form:

(1) An analysis of the site in relation to the surrounding community, mass transit routes, utilities, etc. Include restrictions, on and off site, zoning ordinances, easements, etc., that may impact the design and costs. Identify items of historical significance. Make contact with local jurisdictions over issues that may affect off-site roads and utilities.

(2) A circulation study to evaluate ingress/egress to the site by cars, trucks, mass transit traffic and pedestrians, including the physically disabled.

b. Using the site analysis data, provide several site development alternatives based on the requirements in the Scope of Work for the project.

c. Show on the development concept, proposed structures, interment areas, and the other scope requirements including site preparation and demolition. Show expansion potential.

d. Indicate finish floor elevations for each proposed structure and spot elevations at critical locations such as entrances, walks, intersections, etc.

e. While alternatives are being developed, proceed with acquiring topographic, utility, and landscape surveys at a scale of 1:400 (approximately 1" = 30'). Submit your survey specifications to the VA Project Manager for approval. Specific survey requirements are detailed in the Site Development Design Manual.

3. ARCHITECTURAL

- a. Provide schematic block plans (floor plans) and narratives.
- b. All floor plans are to be presented on VA standard mylar drawing sheets. A neat freehand presentation drawn to scale is acceptable.
- c. Every floor of the building shall be shown.
- d. The plans must show the overall exterior dimensions for determining the total building gross area.
- e. Drawings shall indicate size and shape of all functional areas in the space program (Square Footage Requirements) of the scope of work. The net program area is that area which is furnished in the program Net Report summary sheet. The gross area is that which must be constructed to provided the net program area.
- f. Primary horizontal and vertical circulation, entrances to buildings, and major mechanical spaces shall be shown on the drawings. New construction, renovation, and existing construction to remain as is, shall be clearly distinguished from each other. For renovation work, construction phasing should be considered to permit continuous operation of critical functions.
- g. Indicate all finish floor elevations. Show the relationship of the finish ground floor to finish grade at major entrances.
- h. Submit an architectural narrative for each schematic design.

4. INTERIOR DESIGN

- a. Finishes: Submit a written narrative to describe the interior design scheme and proposed finishes.
- b. Furnishings: Submit floor plans indicating generic furniture placement.

5. SANITARY

- a. Provide description of gas and water sources, disposal methods of sewage and storm water, and proposed gas, water, irrigation, sanitary sewage, and storm water systems. Indicate if water or sewage treatment, pumping, and storage are necessary. Describe gasoline and fuel oil facilities. Indicate if existing utilities and equipment can be used.
- b. Submit plans indicating existing and proposed utilities listed above. Provide approximate size of proposed utilities. Locate roughly where treatment facilities (if required) will be located and areas of lawn irrigation.

- c. Show rough limits of irrigation.

6. PLUMBING

- a. If renovation is involved, describe the existing facilities and make recommendations to replace or reuse fixtures and equipment.
- b. There are no submittal requirements for new construction at this stage.

7. HEATING, VENTILATING & AIR CONDITIONING

Investigate the availability of utilities (natural or propane gas, electricity, steam, or hot water) for the HVAC equipment and provide description of their status.

8. ELECTRICAL

- a. Determine presence of any existing service and related major equipment, and ascertain its capacity to supply the new load. Show on an electrical site plan the location of major existing and proposed service equipment including power transformers, switches, etc.
- b. Where buildings are involved, show location of electrical equipment rooms and closets on the floor plan.

9. COST ESTIMATING

- a. The A/E shall submit a construction cost estimate in compliance with the Manual for Preparation of Estimates. This estimate shall include but not be limited to:
 - (1) Level "A" Summary Sheets: For all buildings and sitework.
 - (2) Supplement A to SF 252: For gross building area take-off of each occupiable building.

10. CRITICAL PATH METHOD (CPM)

- a. If required, submit the following including VA comments from previous phasing meetings:
 - (1) Phasing Narrative.
 - (2) Phasing Plans (on reduced site plans).
 - (3) Phasing Diagram.

(4) Phases marked on all full size drawings submitted for VA review.

(5) Written list of systems, including temporary system by phase, and separated by technical discipline.

B. SCHEMATICS 2 [S 2]

1. SITE DEVELOPMENT AND ENVIRONMENTAL

a. The VA-selected alternative from Schematics 1 or the VA provided concept plan will be the basis for further development for this submission. The A/E may deviate slightly from the selected alternative only after receiving approval of the VA Project Manager.

b. Drawings for this submission will depict site features with more detail than the previous submission.

c. Submit a narrative concerning the project development since the previous submission. Include a phasing analysis, if required, of sequencing construction activities to avoid conflicts with the routine cemetery operation.

d. Submit the topographic, utility, boundary, and landscape surveys.

e. With these surveys as a base, submit proposed building locations, demolition, proposed roads, parking, interment areas, entrances and exits, and all mechanical and electrical components on grade. Consider function, aesthetics, and preservation of natural features and topography when locating all elements/features.

f. Submit grading plans of all proposed construction. Show spot grades at structure corners, entrances, intersections, etc. Provide first floor elevations for structures and equipment pads.

g. Show erosion and sedimentation control, storm water management, drainage, staging areas, construction access and parking, and stockpile areas for earth and materials.

h. Submit landscape drawings showing plant groupings and a list of proposed plant materials.

2. ARCHITECTURAL

a. Delineate the approved architectural concept from Schematics 1. Submit, as a minimum, a single line layout for all floors, penthouses, and roof areas with double line exterior walls at a scale not less than 1:100 (1/8" = 1'-0"). Incorporate all revisions from comments on the previous submittal. Show all rooms, doors, corridors, basic column grid, assumed column sizes, expansion

and seismic joint locations, electrical closets and equipment rooms, signal and telephone closets, mechanical shafts and space, and all vertical circulation, e.g., stairs, conveyers, and elevators, and automatic conveyances. Doors may be indicated with a slash mark. In schematics, lines between spaces shall indicate the centerline of the partition. Along a corridor, the line shall represent the corridor side of the partition. Net areas should be clear space and should not include partitions.

b. Label each room or space with its name and the required program net area over the designed net area. Names on drawings shall be the same as those used in the Square Footage Requirements Worksheets. The area figures shall appear in fractional form, e.g., 400/390. Space provided but not called for in the Square Footage Requirements Worksheets shall be indicated as -/390. The designed net area shall exclude such circulation space within the room as is permitted by the space planning criteria.

c. Show the overall exterior dimensions for determining the total building gross area.

d. Show preliminary building sections, as needed, to define building configuration, area and volume. All floor to floor heights shall be indicated. Draw typical wall sections showing proposed building systems and materials. Neat, freehand drawings are acceptable.

e. Space Program Accounting Summary shall be submitted, tabulating program net areas, design net areas, and building gross areas for all structures.

f. Note on the drawing if the building is fully sprinklered

g. Submit preliminary elevations of all facades showing massing, proposed fenestration, the relationship of the building to adjacent structures and the finish grade. The elevations should show all significant building materials, any proposed roof top mechanical equipment and architectural screens. Indicate all vertical dimensions.

h. Submit written descriptions and elevations of each side of all buildings in sufficient detail for the Exterior Design Review.

3. INTERIOR DESIGN

a. Finishes: Submit a written narrative of the interior design scheme and proposed finishes that builds on the previous submission. Provide a sample board to illustrate the concept.

b. Furnishings: Submit a floor plan indicating furniture placement with specific type of furniture selections.

4. STRUCTURAL

a. Submit drawings showing selected framing system, with reason for the selection.

b. Submit supporting calculations.

c. Submit criteria for a subsurface investigation program, along with qualifications of at least three consultants being considered for the task. Submit the proposal of the consultant the A/E considers most qualified.

5. SANITARY

a. Provide any revisions to the descriptions and plans of utility systems indicated in Schematics 1.

b. If wells are required for water source, install test well and obtain water analysis and expected yield in gallons per minute.

6. PLUMBING

a. Submit design narrative that reflects comments from the Schematics 1 Review.

b. Provide minimum 1:100 (1/8-inch) scale sepias indicating room names and numbers, locations of existing and new equipment requiring connections to the plumbing system, and identification of fixtures using VA fixture numbers. Do not use the designation N.I.C. on the drawings.

7. HEATING, VENTILATING & AIR CONDITIONING

Provide a description of the heating, ventilating and air conditioning (HVAC) systems and equipment in accordance with latest ASHRAE Standards and VA criteria.

8. ASBESTOS ABATEMENT

Where project scope involves known or suspected asbestos material, submit an asbestos assessment report in accordance with VA guidelines for asbestos abatement.

9. ELECTRICAL

a. Submit a preliminary basis for design including basic factors and formulas which will be used in subsequent computation. Furnish a written description of the proposed electrical systems, including basic assumptions and points of interconnection with any existing electrical systems and proposed high and low voltage or emergency systems. Provide preliminary load calculations broken down into lighting, receptacles, and power to equipment. Submit complete short-circuit calculations for all new device locations.

b. On the electrical site plan, show all existing exterior electrical equipment (power and signal). Determine and indicate the locations, exact voltage, size, and type (overhead or underground) transformers, and services. Show the proposed new service point and any new electrical facilities. Show the new location of any electrical items that will be relocated.

c. Provide an elementary one-line power diagram indicating all major pieces of equipment. Provide sizes for any existing equipment to be re-used.

d. Submit floor plans and reflected ceiling plans showing lighting layout, power receptacles, exit lights, fire alarm, any relocated equipment, and any other special features. Show typical circuitry or branch circuits. Submit fixture cut sheets.

10. COST ESTIMATING

a. Submit a construction cost estimate in compliance with the Manual for Preparation of Estimates. The estimate shall incorporate all of the review comments from the previous review. This estimate shall include but not be limited to:

(1) Level "B" Summary Sheets: For all buildings and sitework.

(2) Supplement A to SF 252: For gross building area take-off of each occupiable building.

11. CRITICAL PATH METHOD (CPM)

a. If required, submit the following including VA comments from previous phasing meetings and Schematics 1 review:

- (1) Phasing Narrative.
- (2) Phasing Plans (on reduced site plans).
- (3) Phasing Diagram.
- (4) Phases marked on all full size drawings submitted for VA review.
- (5) Written list of systems, including temporary system by phase, and separated by technical discipline.

Design Development

V. DESIGN DEVELOPMENT

A. DESIGN DEVELOPMENT 1 [DD 1]

1. SPECIFICATIONS

a. The A/E should be thoroughly familiar with the requirements of the VA Manual for Preparation and Issuance Construction Solicitation and Contract Documents. This publication describes the format and rationale of the Project Manual for VA construction projects.

b. Obtain Master Construction Specifications from VA as explained in the Manual described above.

2. SITE DEVELOPMENT AND ENVIRONMENTAL

a. Submit site plans including locations of structures, demolition, parking, roads, service areas, walks, plazas, memorial path, other paved areas, buffers/tree groupings, landscape screening, interment areas (including quantity of gravesites in each area), site features, etc.

b. Submit a grading plan including existing and proposed contours at 1 ft. intervals of the entire area affected by the site work. Show spot elevations at structure corners, entrances, equipment pads, other critical areas, and all first floor elevations.

c. Submit a planting plan with list of suggested plant materials for various landscaping needs. For example, the entry planting treatment may vary from screening between burial sections.

d. Submit completed subsurface investigation report for road, parking and gravesite design purposes.

e. Submit topographic, utility and landscape survey drawings prepared during the master plan or schematic design phase.

f. Develop a phasing analysis, if required, of construction impacts on existing cemetery operation, traffic, and the environment to reduce conflicts.

3. ARCHITECTURAL

a. Submit minimum 1:100 (1/8 inch) scale floor plans, with all of the revisions required from schematics reviews for each floor, new as well as renovated. Show all plumbing fixtures (but not designations), room names, room numbers, door locations and swings, smoke and fire rated partitions, fire extinguisher cabinets, and the net program area over the designed net area. Justify deviations to the approved space greater than 10% in writing. Show wall thickness and chase walls. Show column grid, with columns indicated, and expansion and seismic joints on all plans.

b. Submit roof plan.

c. Submit elevations indicating all significant materials and their colors. This includes roof top mechanical equipment and any architectural screens. If the project is an addition, then elevations must show the existing building in sufficient detail to illustrate the relationship between the new and existing in terms of scale, material, and detail. If a primary exterior material is proposed which differs from the primary material of existing buildings, submit studies and sketches of exterior elevations with recommendations and cost of both the proposed material and existing materials for an Exterior Design Review. Submit 35mm color slides of any adjacent buildings which are to remain. If the building is designed for future expansion, the elevations should be delineated with and without the future expansion.

d. Show building sections, as needed, to define building configuration. All finish floor elevations should be indicated. The sections should be drawn at the same scale as floor plans, normally 1:100 or 1:50 (1/8" or 1/4" = 1'-0"). The relationship of the finish ground floor to the finish grade at major entrances should be defined. If the building abuts an existing structure, the section should indicate how the new floor elevations align with existing.

e. Submit typical wall sections showing construction, building materials and systems, and proposed sill and head heights of openings.

f. Submit three-dimensional sketch(es) and study model(s) in sufficient detail for Exterior Design Review. The sketch(es) should show significant views and the new building's relationship with adjacent structures and the site.

g. Submit sample of filled out finish schedule for both new and renovated areas on form provided by VA.

h. Submit an architectural narrative.

4. INTERIOR DESIGN

a. Finishes:

(1) Provide sample boards showing building interior and exterior colors and materials.

(2) Provide a finish schedule on the architectural drawings for each building.

(3) Submit a draft copy of specification 09050

b. Furniture Package:

(1) Provide a furniture presentation including "cut sheets" of furniture selected and samples of all fabrics and finishes/colors.

(2) Cost estimate for furnishings: Submit a preliminary cost estimate of furnishings with the interior design submission. Do not include the furnishings cost estimate in the construction project cost estimate.

5. STRUCTURAL

a. Submit drawings showing the selected structural system for typical bays. Show beam depths, slab thickness, column sizes, foundation sizes, and expansion joints.

b. Show typical details correlating architectural and mechanical features.

c. Submit supporting calculations.

d. Show method used to resist lateral loads.

6. SANITARY

a. Incorporate all comments from the last review and submit current design narrative.

b. Add building service piping to sepias of Master Plan drawings. Include approximate size of all pipe and invert elevations of trunk sewers. Add new equipment.

7. PLUMBING

a. Incorporate all comments from the last review and submit current design narrative.

b. Submit 1:100 (1/8-inch) scale floor plans (P-Series) that will be construction drawings. Indicate exceptions at a scale of 1:50 (1/4 inch). Identify new plumbing fixtures and existing plumbing fixtures that will be affected by new construction. Use VA fixture numbering system. Add new equipment.

8. HEATING, VENTILATING & AIR CONDITIONING

a. Provide a single-line preliminary layout of the HVAC ductwork and piping. HVAC equipment can be designated with a block layout. Indicate approximate sizes and establish ceiling clearances.

b. Provide preliminary support calculations.

9. ASBESTOS ABATEMENT

Where asbestos abatement is required, submit asbestos abatement drawings and substantially complete assessment report in accordance with VA guidelines for asbestos abatement.

10. ELECTRICAL

a. Contact the electrical utility that will supply electrical power to the cemetery. Modify the previous submission documents to meet the utility company's requirements. Submit a written summary of any conversations with the electrical utility.

b. Show preliminary sizes of major electrical components on the one-line diagram of the proposed high voltage system, low voltage system, and emergency system (if required) insufficient detail to allow a review discussion.

c. Provide preliminary updated load calculations.

d. Show tentative locations of the components of the high voltage system, engine-generator sets, transformers, switchboards, and other major electrical items that may be critically influenced by space or locations considerations.

e. Show existing or demolition work by dashed lines.

11. COST ESTIMATING

a. The A/E shall submit a construction cost estimate in compliance with the Manual for Preparation of Estimates. The estimate should incorporate all of the review comments from the previous review. This estimate should include but not be limited to:

(1) Level "B" Summary Sheets: For all buildings and sitework.

(2) Supplement A to SF 252: For gross building area take-off of all occupied buildings.

(3) Project Data Sheets 1 and 2.

12. CRITICAL PATH METHOD (CPM)

a. If required, submit the following including VA comments from previous phasing meetings and Schematics 2 review:

(1) Phasing Narrative.

(2) Phasing Plans (on reduced site plans).

(3) Phasing Diagram.

(4) Phases marked on all full size drawings submitted for VA review.

(5) Written list of systems, including temporary system by phase, and separated by technical discipline.

B. DESIGN DEVELOPMENT 2 [DD 2]

1. SITE DEVELOPMENT AND ENVIRONMENTAL

a. Complete grading plans of the entire project including large scale drawings of major site elements. Include spot elevations at structure corners, entrances, other critical areas, and all first floor elevations. Show rim and invert elevations on all storm drainage fixtures. Show demolition, erosion and sediment control.

b. Show vertical profile and horizontal alignment for roads. Indicate all traversed utilities.

c. Provide large-scale plans, where necessary, of concrete or other paving joint patterns.

d. Layout plan, substantially complete, showing locations of buildings, landscape features, inlets, and equipment at grade. Include dimensioning of parking lots, service courts and other major elements of the site design. Indicate gravesite monumentation grid and the outline of all burial sections with gravesite yield.

e. Completed subsurface investigation report for road design.

f. Substantially completed details for all construction. Show construction staging and phasing.

g. Signage layout plan, signage schedule, construction details and sign face graphics, substantially complete.

h. Planting plan, substantially complete, with symbols showing location of all trees, shrubs, planting beds and lawns. A complete planting list and planting details should be provided with common name, genus and species, size/caliper and special comments at a minimum. The plants shall have been checked for suitability to the micro-climate and availability.

i. Submit topographic, utility, and landscape survey drawings as submitted for Design Development 1 (DD 1).

2. ARCHITECTURAL

a. Submit floor plans at 1:100 (1/8 inch) or 1:50 (1/4 inch) scale that show partition thickness, chase walls, room titles, door size and swings. The plans are to be revised per comments from previous submittal and further developed. Dimension corridors and stairs. Indicate and identify plumbing fixtures and fixed equipment, shelving, casework etc.

b. Show all floor drains and indicate the pitch of floor to drains on the 1:100 (1/8") architectural plans only.

c. Indicate all fire partitions, smoke partitions; safety and protective elements.

d. Submit reflected ceiling plans at 1:100 (1/8 inch) for entire building indicating ceiling mounted equipment, lighting fixtures, air diffusers, registers, return air grilles, acoustical tile grids, etc. Show ceiling heights on these drawings.

e. Submit exterior elevations that have been further developed and revised per comments from previous submittal. Show story height, penetrations, materials, architectural screens, roof enclosures, skylights, stacks and breechings on elevations as applicable. Show finish grades and relevant existing grades at corners, entrances, platforms and ramps.

f. Submit 1:50 (1/4 inch) scale equipment floor plans with revisions per comments from previous submittal. All equipment should be identified and coordinated with VA's Equipment Guide List, Program Guide 7610 (Chapters 701 and 703). Draw equipment details that are necessary for major decisions, though complete detailing is not required for this submittal.

g. Show all major wall sections in outline form.

h. Provide draft contract documents for each required millwork item.

i. Submit construction details for major building components and systems, such as window design, roofing system, special entryways, building "skin", architectural construction requirements for the project. Complete detailing of miscellaneous items is not required for this submission.

j. Show drafting symbols and abbreviations per VA Standards, general notes, and begin drawings for door, window and louver schedules.

k. If applicable, submit demolition plans, existing finish schedule and notes on demolition plan.

l. Submit fire protection plans with revisions require from comments on previous submittal.

m. Submit an architectural narrative.

n. Submit revised three-dimensional sketch(es) and study model(s).

3. INTERIOR DESIGN

a. Finishes:

(1) Provide completed finish schedule on the architectural drawings.

(2) Provide an 80% complete section 09050 specification. The specification shall include manufacturer's names, numbers and patterns.

(3) Submit finishes sample boards, which will not be returned. Keep a duplicate set of boards.

b. Furniture and Furnishings Package: The VA Project Manager must confirm the inclusion of furniture and furnishings in the project prior to proceeding. The A/E shall select all furnishings from the Federal Supply Schedule (FSS). If required, provide the following.

(1) Provide furnishings plans, include separate plans with codes for furniture, window treatments, accessories, art and plants. Submit cut sheets of all furniture, accessories, art, and planters. Submit samples of all fabrics and furnishing finishes.

(2) Submit interior wall elevations with exact locations of art where more than one piece of art is on one wall. Where only one piece of art is on a wall, note on plan the height to top of frame and horizontal distance from a given point (an elevation is not required).

(3) Provide a draft furnishing specifications (on form provided by VA). Each different item of furniture, art, planter, etc. shall be on a separate specification form. All similar accessories may be on one form. Provide

manufacturer description, color/finish/fabric, unit cost breakdown, quantity, total cost, Federal Supply Schedule information (FSC Group, Contract No., Special Item No.), ordering address, payment address, room location of item, and code number. VA will provide code numbers.

(4) Provide cost summary of all furnishings, window treatments, art, accessories and plants.

4. STRUCTURAL

a. Submit drawings to scale showing tentative sizes of structural elements including columns, beams, foundations, and slabs in major areas. The structural drawings shall be complete enough to correlate with architectural and mechanical features. Submit computations developed to date.

b. Show sections and details so that construction features can be defined.

c. Submit completed subsurface investigation report.

5. SANITARY

a. Incorporate all comments from the previous review and submit current design narrative.

b. Submit contract utility drawings (W-Series) at the same scale as required for SITE DEVELOPMENT (L-Series) drawings. An exception is storm drainage may be shown on grading and drainage drawings (L-Series). Utilities include water (domestic, irrigation mains, and fire), fuel gas, gasoline, fuel oil, storm drainage and sanitary sewage systems.

(1) Size water, fuel gas and fuel oil piping.

(2) Locate and size pumps, storage facilities, and treatment equipment.

(3) Show irrigation mains, submains, atypical lateral block layout, master valves and valve concept. Indicate irrigation system zones. Describe system design (automatic, manual, or quick coupler, and the proposed control system). Do not use brand names on the drawings or specify a proprietary system.

c. Submit calculations.

6. PLUMBING

a. Incorporate all comments from the previous review and submit current design narrative.

b. Submit 1:100 (1/8-inch) or 1:50 (1/4 inch) scale floor plans (P-Series) indicating plumbing requirements of previous review. Add plumbing piping. Pipe

sizes are not required. Locate and size new equipment. Provide schedule for equipment on drawings.

- c. Provide equipment calculations.

7. HEATING, VENTILATING & AIR CONDITIONING

- a. Provide substantially complete 1:100 (1/8" inch) scale HVAC floor plans showing all equipment in scale, all ductwork double line, and all piping smaller than 150 mm (6 inches) as single line. Show sizes.

- b. Provide 1:50 (1/4-inch) scale sections through tight spots, sections through equipment rooms and other areas as necessary to clarify interaction of HVAC components with each other and with other elements of the building.

- c. Submit substantially complete calculations for heating and cooling loads, equipment sizing, ductwork, and piping sizes.

- d. Submit substantially complete supportive data and catalog cuts from manufacturers.

- e. Provide schedules of typical HVAC equipment reflecting sizing calculations. Include existing air handling units, fans, pumps, etc., that will require alteration and re-balancing.

- f. Provide Flow Diagrams for Air Supply, Return and Exhaust for all HVAC systems. Provide Temperature Control Diagrams and Sequence of Operation for all HVAC systems. Show sequence of operation on the drawings alongside the control diagrams.

- g. Coordinate HVAC drawings with other trades.

- h. Show outside HVAC equipment on both H and L drawings.

- i. Provide VA Standard Details and other necessary details.

- j. Provide general notes, symbols and abbreviations

- k. Provide room names and numbers on HVAC plans at every review.

- l. Show demolition of existing HVAC work, if applicable. Minor demolition may be shown on new construction drawings. Extensive demolition requires drawings for demolition only.

8. ASBESTOS ABATEMENT

Where asbestos abatement is required, submit substantially complete asbestos abatement drawings in accordance with VA guidelines for asbestos abatement.

9. ELECTRICAL

a. Provide drawing list of symbols and abbreviations.

b. Submit the electrical site plan showing all exterior electrical and telephone equipment. Detail all connections between new and existing electrical circuits including any interface with utility companies. Show all removal and relocations of existing electrical devices.

c. Submit floor plans for all building areas showing room titles and functions. For this submission, the majority of the lighting fixtures, receptacles, signal outlets, and special system devices shall be shown. Lighting fixture types must be described or detailed. Wiring and homeruns are usually not shown at this submission. All electrical closets, telephone closets, transformer vaults, electrical equipment rooms and transformers shall be located on floor plans and electrical site plans.

d. Submit a one-line diagram of the electrical power distribution system including the high voltage system and the emergency power system, if applicable. Identify all equipment with proposed sizes. Include substantiating load calculations.

e. Submit lighting calculations.

10. COST ESTIMATING

a. The A/E shall submit a construction cost estimate in compliance with the for Preparation of Estimates. The estimate should incorporate all of the review comments from the previous review. This estimate should include but not be limited to:

- (1) Detailed estimate take-off worksheets.
- (2) Level "B" Summary Sheets: For all buildings and sitework.
- (3) Supplement A to SF 252: For gross building area take-off.
- (4) Project Data Sheets 1 and 2.

11. CRITICAL PATH METHOD (CPM)

a. If required, submit the following including VA comments from previous phasing meetings and Design Development 1 review:

(1) Phasing Narrative.

(2) Phasing Diagram drawn on the Phasing Plan.

(3) Full size contract drawings for the CPM Phasing Plans (one drawing may reflect several reduced site plans)

(4) Written list of systems, including temporary system by phase, and separated by technical discipline.

Construction Documents

VI. CONSTRUCTION DOCUMENTS

A. CONSTRUCTION DOCUMENTS [CD]

Submit 100% complete and coordinated set of construction documents for all disciplines.

1. SPECIFICATIONS

a. Submit 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.

b. When no VA Master Construction Specification exists for a "unit of work", prepare the specification section in the three part section format.

(1) Use generic or non-proprietary specifications describing the minimal acceptable product criteria level where no "Standard" exists to define quality and workmanship levels.

(2) 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.

(3) Do not use proprietary specifications or systems that restrict competition unless authorization in writing has been received from the VA Contracting Officer for such proprietary specification. See the Federal Acquisition Regulation (FAR) Part 10, Part 14, and Part 36.

(4) Do not use trade names or manufacturers brand names except as previously noted.

(5) When a new product or system is used, define and specify the minimum acceptable levels of essential criteria in descriptive, physical, functional, or performance requirements.

2. SITE DEVELOPMENT AND ENVIRONMENTAL

a. The construction document phase involves the preparation of complete site and landscape contract documents. The approved design development drawings are expanded to the level of detail necessary for construction. The VA project manager must approve any deviation from the drawings at this point.

b. Make any changes identified during this review to the documents prior to bid document reproduction.

3. ARCHITECTURAL

a. Submit demolition plans, existing finish schedule and notes on demolition plans if applicable.

b. Submit fully dimensioned, 1:100 (1/8 inch) or 1:50 (1/4 inch) scale floor plans showing all revisions required by comments from the design development phase.

c. Submit interior details, elevations and sections.

d. Provide contract documents for each required millwork item.

e. Submit drafting symbols, and abbreviations, general notes and schedules that are complete and coordinated with all contract documents.

f. Submit a complete and coordinated finish schedule, incorporating revisions from previous submittal, on form provided by VA.

g. Submit completed building sections, wall sections and exterior elevations that show finish floor elevations and indicate all building systems, materials, and future expansion, if applicable.

h. Submit fire protection plans.

i. Submit completed reflected ceiling plans for entire building, indicating all ceiling mounted equipment, lighting fixtures, air diffusers, registers, etc.

j. Submit 1:50 (1/4-inch) scale equipment plans and details with all necessary and coordinated details.

k. Submit all necessary and coordinated details.

l. Submit a drawing for graphics/signage per NCA standard.

- m. Submit a color rendering if required by the contract.

4. INTERIOR DESIGN

- a. Provide a completed finish schedule on the architectural drawings.
- b. Provide specification section 09050 showing the editing for the project from the last review.
- c. Submit finishes sample boards (3). Show all materials labeled by codes indicated in section 09050. Identify the boards with the project name, number and location.
- d. Furniture and Furnishing Package: If furnishings are included in the contract:
 - (1) Provide revised, 100% complete furnishings layout plans. Include separate plans with codes for furniture, window treatments, art, accessories and plants.
 - (2) Submit final, typed furnishings specifications with all necessary information required on the specification form. A separate form shall be used for each different item, except similar accessories that may be grouped on one form. The furnishing specifications shall be submitted to the Interior Design office, and shall not be included in the project specifications.
 - (3) Submit furnishings (2) sample boards showing all furnishings, fabrics, and frame finishes. Identify boards by project number, title and location.
 - (4) Submit cost summary sheet of all final costs for furnishings. The furnishings cost estimate should not be included in the project cost estimate.

5. STRUCTURAL

- a. Submit all structural drawings including 1:100 (1/8 inch) or 1:50 (1/4 inch) scale plans, elevations, sections, details, schedules, boring logs, and general notes necessary to complete the drawings. All drawings shall be checked and coordinated with other disciplines.
- b. Prior to reproduction for bid purposes, the original contract document drawings shall bear the seal and signature of the registered Structural Engineer responsible for the structural design.

6. SANITARY

- a. Submit drawings to include the following:

the (1) Previously submitted drawings that have incorporated comments of last review.

(2) Irrigation system at the same scale as storm sewer drawings.

(3) Size and invert elevations of storm and sanitary sewage systems.

(4) Profiles of storm and sanitary sewers.

(5) Legend, notes and details.

b. Submit final calculations and narrative.

7. PLUMBING

a. Submit drawings to include the following:

the (1) Previously submitted drawings that have incorporated comments of last review.

(2) All piping sized.

(3) Demolition plumbing floor plans (P-Series) at 1:100 (1/8-inch) scale.

(4) Legend, notes and details.

b. Submit final calculations, riser diagrams, and narrative.

8. HEATING, VENTILATING & AIR CONDITIONING

Submit drawings and calculations in compliance with the following requirements:

(1) Complete all plans, sections, details, schedules, equipment rooms, flow diagrams, control diagrams, and other drawings for a complete design. Reflect all review comments. Coordinate with other trades.

(2) Provide final complete HVAC calculations and supportive data.

9. ASBESTOS ABATEMENT

Where asbestos abatement is required, submit 100% complete asbestos abatement drawings incorporating comments of the last review.

10. ELECTRICAL

a. Submit all drawings including complete legend symbol list, details, and schedules. VA Standard Detail sheets may be produced on the drawings.

b. Show all new services to buildings, all new high voltage cable installations, all manholes, ductlines, transformers, street lighting, grounds lighting, and the high voltage service point on the electrical plot plan. The utility company must accept the design of the electrical incoming service in writing. Furnish copies of pertinent correspondence.

c. Complete the one-line riser diagram including all conduit, cable, ground wire, and equipment sizes. Nominal transformer impedance shall be indicated. Show transformers, panelboards and feeders in relative positions. Tabulate all panelboards schedules. Provide signal, telephone, security, and fire alarm risers; identify all devices and locations.

d. Complete the building electrical floor plans. Indicate all lighting and power circuit systems. Show motor protective devices, controller and feeder sizes. Locate all panels, transformers, and other major electrical components.

11. COST ESTIMATING

a. The A/E shall submit a construction cost estimate in compliance with the Manual for Preparation of Estimates. The estimate should incorporate all of the review comments from the previous review. This estimate should include but not be limited to:

(1) Detailed estimate take-off worksheets

(2) Level "B" Summary Sheets: For all buildings and sitework

(3) Supplement A to SF 252: For gross building area take-off of all occupiable buildings.

(4) Project Data Sheets 1 and 2.

(5) Detailed Market analysis.

12. CRITICAL PATH METHOD (CPM)

a. If required, submit the following including VA comments from previous phasing meetings and Design Development 2 review:

(1) Phasing Narrative.

(2) Phasing Diagram drawn on the Phasing Plan.

(3) Full size contract drawings for the CPM Phasing Plans (1 drawing may reflect several reduced site plans)

(4) Written list of systems, including temporary system by phase, and separated by technical discipline.

B. FINAL CONSTRUCTION DOCUMENTS

- a. The A/E shall deliver the original Construction Documents to the Project Manager for signature, after the previous review comments are incorporated and the Construction Documents have been approved. The Construction Documents shall bear the seal of the Registered Architect, Registered Landscape Architect, and Professional Engineer responsible for the design.

- b. Submit one complete set of mylars and CADD tapes of the project.

As-Built Documents

VII. AS-BUILT DOCUMENTS

The A/E shall record actual construction on a set of construction during the construction process. Submit one complete set of mylars and CADD tapes of the project.

Distribution of A/E Material

VII. DISTRIBUTION OF A/E MATERIAL

A. SYMBOL IDENTIFICATION OF MASTER PLAN DRAWINGS

All drawings that form the Master Plan set will be identified with the symbol MP- followed by the number of the drawing.

B. SYMBOL IDENTIFICATION OF CONTRACT DRAWINGS

- X** - Cover Sheet (includes Index to drawings)
- B** - Sub-Surface Investigation Drawings (includes topographic survey drawings)
- L** - Site Development and Environment Drawings
- W** - Sanitary Drawings
- I** - Irrigation Drawings
- D** - Demolition Drawings
- ASB** - Asbestos Removal Drawings
- 1** - Architectural Drawings
- S** - Structural Drawings
- H** - Heating, Ventilating, and Air Conditioning Drawings
- P** - Plumbing Drawings
- E** - Electrical Drawings

C. GENERAL NOTES

1. SEPIA - Sepia prints shall be full size positive-type with lines printed on the face of print.
2. BLACK & WHITE PRINTS - Shall be full size or reduced to half size.
3. ALL DRAWINGS shall be bound into sets in the order of their above classification symbol and in accordance with VA Construction Standard CD-4.
4. All submitted SPECIFICATIONS shall be original, unbound and marked-up VA Master Specifications.

5. The A/E shall contact Project Manager for address of appropriate National Cemetery Area Office Director and Cemetery Director, if applicable.

6. All materials that are required to be delivered to the Project Manager shall be separated **by discipline**. It is preferred that all materials for each be packaged separately. The individual packages may be consolidated for shipping. The package for each discipline shall be clearly marked with the discipline name and mail stop.

7. 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 that it is labeled and can easily be identified and separated.

8. Material provided unbound and/or unseparated will be returned to the A/E. All resubmittal costs will be the responsibility of the A/E.

D. MASTER PLAN 1 SUBMISSION

1. Do not submit material to VA Central Office.

2. Bring the following items to the On-site workshop: meeting agenda, studies, surveys, reports, proposed schemes and estimates.

3. Sketches may be presented at this workshop as indicated in A/E SUBMISSION INSTRUCTIONS, Master Plan 2, paragraph 3.b.

E. MASTER PLAN 2 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set	
Site Development & Environmental	1 Complete Set			1 Geotechnical Soil Survey for Burials Report
Architectural	1 Complete Set			
Plumbing and Sanitary	1 Complete Set			
Electrical Engineering		1 Complete Set		
Estimating		1 Complete Sets	2 Sets	
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Geotechnical Soil Survey for Burials Report
National Cemetery Area Office		1 Complete Set		1 Geotechnical Soil Survey for Burials Report
TOTALS	4 Complete Sets	3 Complete Sets 1 Complete 1/2 Size Set	4 Sets	2 Geotechnical Soil Survey for Burials Reports

F. MASTER PLAN 3 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set	
Site Development & Environmental	1 Set L	1 Set W		
Architectural	1 Complete Set			
Interior Design		1 Set Arch.		1 Interior Design Narrative 1 Block Furniture Layout
Plumbing and Sanitary	1 Set W	1 Set Arch & L		1 Plumbing & Sanitary Report
Electrical Engineering	1 Set E			1 Electrical Report
Estimating		1 Complete Sets	2 Sets	
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Set of Everything 1 Brochure Mock-up
National Cemetery Area Office		1 Complete Set		1 Set of Everything 1 Brochure Mock-up
TOTALS	2 Complete Sets 1 Set E, 1 Set L 1 Set W	2 Complete Sets 1 Complete 1/2 Size Set 2 Sets Arch. 1 Set L 1 Set W	4 Sets	3 Interior Design Narratives 3 Block Furniture Layouts 3 Plumbing & Sanitary Rpts. 3 Elect. Rpts 2 Brochure Mock-up

G. MASTER PLAN 4 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set	
Site Development & Environmental	1 Set L	1 Set W	1 Set Site Only	
Architectural	1 Complete Set			
Interior Design		1 Set Arch.		1 Interior Design Narrative 1 Conceptual Sample Board 1 Furniture Layout Plan and 1 Furniture Type Sheets
Plumbing and Sanitary	1 Set W 1 Set I	1 Set Arch & L		1 Plumbing & Sanitary Report
Heating, Vent., & Air Conditioning		1 Complete Set		1 HVAC Report 1 Asbestos Report
Electrical Engineering	1 Set E			1 Electrical Report
Estimating		1 Complete Sets	2 Sets	
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Set of Everything 1 Blue-line Brochure
National Cemetery Area Office		1 Complete Set		1 Set of Everything 1 Blue-line Brochure
TOTALS	2 Complete Sets 1 Set E 1 Set I 1 Set L 1 Set W	3 Complete Sets 1 Complete 1/2 Size Set 2 Sets Arch. 1 Set L 1 Set W	4 Sets 1 Set Site Only	3 Plumbing & Sanitary Rpts. 3 HVAC Rpts. 3 Asbestos Rpts. 3 Elect. Rpts 3 Interior Design Narratives 3 Conceptual Sample Boards 3 Furniture Layout Plans 3 Furniture Cut Sheets 2 Blue-line Brochures

H. MASTER PLAN 5 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set	1 Set of All Reports
Site Development & Environmental		1 Complete Set	1 Set Site	1 Set Utility & Landscape Survey Mylars 1 Geotechnical Soil Survey for Burials Report 1 Site Characteristics Report
National Cemetery Administration (401B1)		1 Complete Set	1 Set	1 Complete Set Mylar Originals 1 Set of All Reports CADD tapes
National Cemetery Area Office		1 Complete Set	1 Set	1 Complete Set Mylar Originals 1 Set of All Reports
TOTALS		2 Complete Sets 1 Complete 1/2 Size Set	2 Sets 1 Set Site	2 Complete Sets of Reports 1 Complete Set of Mylar Dwgs. 1 Set Utility & Landscape Survey Mylars 1 Geotechnical Soil Survey for Burials Report 1 Site Characteristics Report CADD tapes

I. SCHEMATICS 1 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set	
Site Development & Environmental	1 Complete Set			
Architectural	1 Complete Set			
Interior Design		1 Set Arch.		1 Interior Design Narrative 1 Furniture Placement Plan
Plumbing and Sanitary	1 Set P & W 1 Set I	1 Set Arch		1 Plumbing & Sanitary Report
Heating, Vent., & Air Conditioning		1 Set Arch & L		
Electrical Engineering	1 Set E			1 Electrical Report
Estimating		1 Complete Set	2 Sets	
Critical Path Method		1 Complete Set	1 Set	
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Set of Everything
National Cemetery Area Office		1 Complete Set		
TOTALS	3 Complete Sets 1 Set E, 1 Set I 1 Set P 1 Set W	3 Complete Sets 1 Complete 1/2 Size Set 3 Sets Arch. 1 Sets L	5 Sets	2 Interior Design Narratives 2 Furniture Placement Plans 2 Plumbing & Sanitary Rpts. 2 Elect. Rpts.

J. SCHEMATICS 2 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	CALCULAT'NS	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set		
Site Development & Environmental	1 Set L Dwgs.	1 Set W	1 Set Site		
Architectural	1 Complete Set				
Interior Design		1 Set Arch			1 Interior Design Narrative 1 Furniture Placement Plan 1 Sample Board
Structural Engineering	1 Set S	1 Set Arch		1 Set Struct.	1 Criteria for Subsurface Investigation Work Report
Plumbing and Sanitary	1 Set P & W 1 Set I	1 Set Arch & L		1 Set Plumbing & Sanitary	1 Plumbing & Sanitary Report
Heating, Vent., & Air Conditioning	1 Set H & AR	1 Set Arch		1 Set HVAC	1 HVAC Report 1 Asbestos Report
Electrical Engineering	1 Set E				1 Electrical Report
Estimating		1 Complete Set	2 Sets		
Critical Path Method		1 Complete Set	1 Set		
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Set of Everything	1 Set of Everything
National Cemetery Area Office		1 Complete Set	1 Set	1 Set of Everything	1 Set of Everything
TOTALS	2 Complete Sets 1 Set E 1 Set H 1 Set I 1 Set L 1 Set P 1 Set S 1 Set W 1 Set ASB	3 Complete Sets 1 Complete 1/2 Size Set 4 Sets Arch. 1 Set L 1 Set W	6 Sets 1 Set Site	3 Set Struct 3 Sets Plumbing & Sanitary 3 Sets HVAC	3 Interior Des. Narratives 3 Furniture Placement Plans 3 Sample Boards 3 Criteria for Subsurface Investigation Work Rpts 3 Plumbing & Sanitary Rpts. 3 HVAC Rpts. 3 Asbestos Rpts. 3 Elect. Rpts.

K. DESIGN DEVELOPMENT 1 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	CALCULAT'NS	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set		
Site Development & Environmental	1 Set L Dwgs.	1 Set W	1 Set Site		
Architectural	1 Complete Set				
Interior Design		1 Set Arch.			1 Spec 09050 1 Furniture Package 1 Set Sample Boards
Structural Engineering	1 Set B & S	1 Set Arch		1 Set Structural.	
Plumbing and Sanitary	1 Set P & W 1 Set I	1 Set Arch & L		1 Set Plumbing & Sanitary	1 Plumbing & Sanitary Report
Heating, Vent., & Air Conditioning	1 Set H & AR	1 Complete Set		1 Set HVAC	1 HVAC Report 1 Asbestos Report
Electrical Engineering	1 Set E			1 Set Elect.	1 Electrical Report
Estimating		1 Complete Set	2 Sets		
Critical Path Method		1 Complete Set	1 Set		
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Set of Everything	1 Set of Everything
National Cemetery Area Office		1 Complete Set	1 Set	1 Set of Everything	1 Set of Everything
TOTALS	2 Complete Sets 1 Set B 1 Set E 1 Set H 1 Set I 1 Set L 1 Set P 1 Set S 1 Set W 1 Set ASB	4 Complete Sets 1 Complete 1/2 Size Set 3 Sets Arch. 1 Set L 1 Set W	6 Sets 1 Set Site	3 Sets Structural. 3 Sets Plumbing & Sanitary 3 Sets HVAC 3 Sets Elect.	3 Sets Sample Boards 3 Furn. Pkgs. 3 Spec 09050 3 Plumbing & Sanitary Rpts. 3 HVAC Rpts. 3 Asbestos Rpts. 3 Elect. Rpts.

L. DESIGN DEVELOPMENT 2 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	CALCULAT'NS	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set		
Site Development & Environmental	1 Set L	1 Set W	1 Set Site		
Architectural	1 Complete Set				
Interior Design		1 Set Arch.			1 Spec 09050 1 Spec 09682 1 Set Finish Sch. Sheets 1 Set Furniture and Furnishing Package
Structural Engineering	1 Set B & S	1 Set Arch		1 Set Structural.	2 Subsurface Investigation. Rpt
Plumbing and Sanitary	1 Set P & W 1 Set I	1 Set Arch & L		1 Set Plumbing & Sanitary	1 Plumbing & Sanitary Report
Heating, Vent., & Air Conditioning	1 Set H & AR	1 Set Arch.		1 Set HVAC	1 HVAC Report 1 Asbestos Report
Electrical Engineering	1 Set E			1 Set Elect.	1 Electrical Report
Estimating		1 Complete Sets	2 Sets		
Critical Path Method		1 Complete Set	1 Set		
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Set of Everything	1 Set of Everything
National Cemetery Area Office		1 Complete Set	1 Set	1 Set of Everything	1 Set of Everything
TOTALS	2 Complete Sets 1 Set B 1 Set E 1 Set H 1 Set I 1 Set L 1 Set P 1 Set S 1 Set W 1 Set AR	3 Complete Sets 1 Complete 1/2 Size Set 4 Sets Arch. 1 Set L 1 Set W	6 Sets 1 Set Site	3 Sets Structural. 3 Sets Plumbing & Sanitary 3 Sets HVAC 3 Sets Elect.	3 Spec 09050 3 Spec 09682 3 Sets Finish Sch. Sheets 3 Sets Furniture & Furnishing Pkg 3 Plumbing & Sanitary Rpts. 3 HVAC Rpts. 3 Asbestos Rpt 3 Elect. Rpts. 4 Sub-Surface

					Investigation. Rpts.
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M. CONSTRUCTION DOCUMENT 1 SUBMISSION

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	CALC'NS	SPECS *	OTHER
Project Manager (186C)		1 Complete 1/2 Size Set	1 Set			
Site Development & Environmental	1 Set L	1 Set W	1 Set Site		1 Set Landscape, Earthwork, & Site	
Architectural	1 Complete Set					
Interior Design		1 Set Arch			1 Complete Set	1 Set of Furniture and Furnishing Package 1 Set Sample Boards
Specifications	1 Set Arch. Floor Plans	1 Complete Set			1 Set Architectural	
Structural Engineering	1 Set B & S	1 Set Arch	1 Set	1 Set Structural.	1 Set Structural.	
Plumbing and Sanitary	1 Set P & W 1 Set I	1 Set Arch & L		1 Set Plumbing & Sanitary	1 Set Plumbing & Sanitary	1 Plumbing & Sanitary Report
Heating, Vent., & Air Conditioning	1 Set H & AR	1 Complete Set.		1 Set HVAC	1 Set HVAC & Asbestos	1 HVAC Report 1 Asbestos Report
Electrical Engineering	1 Set E	1 Complete Set		1 Set Elect.	1 Set Elect.	1 Electrical Report
Estimating		1 Complete Sets	2 Sets		1 Complete Set	
Critical Path Method		1 Complete Set	1 Set		1 Copy NAS	
National Cemetery Administration (401B1)	1 Complete Set		1 Set	1 Set of Everything	1 Complete Set	1 Set of Everything; CADD tapes
National Cemetery Area Office		1 Complete Set	1 Set	1 Set of Everything	1 Complete Set	1 Set of Everything

CONSTRUCTION DOCUMENT 1 SUBMISSION (Continued)

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	CALC'NS	SPECS *	OTHER
TOTALS	2 Complete Sets 1 Set Arch. Floor Plans 1 Set B 1 Set E 1 Set H 1 Set I 1 Set L 1 Set P 1 Set S 1 Set W 1 Set ASB	6 Complete Sets 1 Complete 1/2 Size Set 2 Set Arch. 1 Set L 1 Set W	7 Sets 1 Set Site	3 Sets Structural 3 Sets Plumb. & Sanitary 3 Sets HVAC 3 Sets Elect.	4 Complete Sets 1 Set Landscape, Earth-Work, & Site 1 Set Architectural 1 Set Structural 1 Set Plumbing & Sanitary 1 Set HVAC & Asbestos 1 Set Elect. 1 Copy NAS	3 Sets of Furniture and Furnishing Package 4 Sets Sample Boards 3 Plumbing & Sanitary Rpts. 3 HVAC Rpts. 3 Asbestos Rpts. 3 Elect. Rpts. CADD tapes

N. AS BUILT DOCUMENTS

VA UNIT	SEPIA	BLACK & WHITE PRINTS	ESTIMATES	CALCULAT'NS	OTHER
National Cemetery Administration (401B1)					CADD tapes 1 Complete Set of mylars

- End -