



**VETERANS ADMINISTRATION
MEDICAL CENTER
CONFERENCE CENTER
VA BROOKLYN CAMPUS
NEW YORK, NY**

Audiovisual Program Report
SM&W project # 12285

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INTRODUCTION

This program report describes operational requirements, overall system design issues, and estimated costs for the infrastructure necessary for multimedia and audiovisual capabilities recommended for the Brooklyn Veterans Administration Medical Center Conference Center.

This report is not a technical specification and does not provide details such as manufacturer or model number. The information supplied herein is at the conceptual design level of analysis, and will be combined with budget estimates, in order to facilitate decisions about audiovisual capabilities. These decisions will help finalize architectural and infrastructure decisions, as well as validate current assumptions about cost planning.

For readers unfamiliar with Shen Milsom & Wilke, we are "pure" consultants, providing systems design and the related architectural expertise to the project team. We do not furnish equipment in any manner, and therefore have no vested interest in the amount of equipment that will eventually be purchased. Our only objective is to meet the client's needs and ensure a sensible, competent approach to audiovisual planning.

1.1. Information Gathering

The recommendations presented on the pages that follow are based primarily on requirements identified during our meetings with Perkins Eastman Architects and the Brooklyn VAMC staff, as well as our experience in planning and designing similar facilities. In particular, information for this report was gathered at meetings at Brooklyn Veterans Administration Medical Center on July 10, 2012. Attendees at that meeting included the following:

Brooklyn VAMC

Staff of Brooklyn VAMC

Shen Milsom & Wilke, LLC.

Alejandro Wong
Alexander Mayo

Perkins Eastman Architects

Joe Shein
Stephen Miller
Danny Chen

1.2. The Process

For those who are unfamiliar with the process, the next steps should follow the issue of this Report.

- Brooklyn VAMC should review this report and subsequently meet with SM&W to discuss our recommendations.
- The architect will proceed to finalize room sizes and shapes with input from SM&W.
- SM&W will design the required infrastructure to support the audiovisual and multimedia systems.
- SM&W will coordinate the various infrastructure issues with Brooklyn VAMC and Perkins Eastman Architects.

1.3. Infrastructure vs. Equipment

Brooklyn VAMC should be clear about the difference between providing infrastructure and purchasing equipment. If proper infrastructure provisions have been made, equipment can be added later as funds become available without jeopardizing the integrity of the overall audiovisual systems design.

Infrastructure can be thought of as part of the overall building design. What can be assumed is that at some point in the future, the wiring installed on day one will be replaced by something else. Pathways that afford the maximum flexibility for this wiring will pay large returns in the long run.

Equipment refers to particular devices that are connected by the infrastructure. *Equipment* can be thought of as furniture, various choices can be made about its quality and quantity. *Equipment* can be swapped out as it becomes obsolete given proper infrastructure design.

Infrastructure must be planned and included for initial occupancy, whether the audiovisual equipment is purchased or not. Some equipment can be purchased for initial occupancy, while other equipment purchases can be deferred.

We suggest that Brooklyn VAMC review the information presented on two separate but related levels: the general intent to provide infrastructure that will support audiovisual capabilities and the specific level of initial equipment purchase or fit-up.

1.4. Equipment Installation Designations

This is not a technical specification and does not provide details such as manufacturer or model number. The information supplied is a summation to be combined with the budget material in order to make financial project and audiovisual capabilities decisions.

We refer to the equipment as having one of the following installation designations: dedicated, portable or future provisions.

"Dedicated," indicates that the equipment will likely be used frequently and is permanently dedicated or installed in a specific room. Items with this designation appear in the budget of that space.

"Portable" indicates that the equipment is needed less frequently and can be shared with other meeting rooms and stored in a central Equipment Pool. Only a few items with this designation appear in the budget.

"Future Provisions" indicates that the capability may not be required initially, but infrastructure and systems design provisions should be made to adapt to equipment at some time in the future. Items with this designation do not appear in the budget, as we do not anticipate their immediate purchase.

1.5. Roles of the Three Contractors

Typically there are three types of contractors that have a role in the completion of the audiovisual portion of a project: the general contractor, the electrical contractor and the audiovisual contractor.

The general contractor provides all required structural work, wall openings, platforms, railings, stairs, fire prevention, safety devices, rough and finished trim, painting, plastering, patching, carpets, floor covering, front and rear projection screens, acoustical treatment, heating, ventilating and air-conditioning. The general contractor builds from documentation produced by the architect.

The electrical contractor provides all conduit, wireways and permanently installed junction boxes and devices in floors, walls, and ceilings; power wiring and breaker panels. Typically the electrical contractor also provides wiring of electrical projection screens, and room lighting fixtures and controls. The electrical contractor builds from documentation produced by the architect/electrical engineer.

The audiovisual contractor provides a turnkey audiovisual system to the Owner. They acquire and furnish all new audiovisual equipment, material and cables to ensure the installation of a complete and operating system. They provide, or sub-contract for, pre-installation, on-site installation and wiring required for the audiovisual system and systems documentation manuals for the owner. The audiovisual contractor puts together systems from documentation produced by the audiovisual consultant.

2. CONFERENCE CENTER

The Conference Center will be located on the Basement Level in Building 15. This room will be primarily used by the staff and physicians at Brooklyn VAMC. This room is a divisible space and typically it will be subdivided into three separate rooms (1 medium sized room in the center with 2 smaller rooms on each side) so that three independent events can be held. When the Skyfold Doors are raised the space can be transformed into one large room and accommodate as many as 172 people for a single large presentation.

It is envisioned that the Conference Center will be a multi-purpose type space where a variety of events from multimedia presentations, training sessions, lectures, meetings, etc. will be held.

The following are the audiovisual systems recommendations for the Conference Center:

2.1. Projection Systems

2.1.1. Projection Sources

- LCD or DLP data video projectors for each divisible room section, ceiling mounted, dedicated. The projectors should be a 16:10 format WUXGA resolution (1920x1200 pixels) and should be bright enough to fill a large screen and overcome any ambient light in the room.
- LCD or DLP data video projector, portable. A portable projector mounted on a castered AV cart may be used to share between the two side room sections.
- 55" Flat Panel Monitors, portable. These monitors will be mounted on mobile carts and used for supplemental viewing for the left and right sides of the audience during a large presentation when the room is fully open.

2.1.2. Projection Screens

- Front projection screens; dedicated. The screens should be motorized electrical roll down, concealed in the ceiling, and tab-tensioned to ensure a flat surface for projection. These screens should be 16:10 format and sized appropriately for each divisible room section to accommodate the most viewers for each space.

2.1.3. Projection Systems Fit-Out Summary

Minimum Fit-Out

- A single dedicated ceiling mounted projector for the main middle room section.
- A portable projector mounted on a castered cart that can be moved and shared between the smaller left and right room sections.

Base Fit-Out

- Dedicated ceiling mounted projectors for all three room sections.

Preferred Fit-Out

- Dedicated ceiling mounted projectors for all three room sections
- Supplemental portable flat panel monitors.

2.2. Video Systems

The following video sources are recommended for the Conference Center audiovisual system:

- Laptop computer connections, dedicated. Provisions for laptop PC connectivity should be made available at the presenter floorbox locations.
- Desktop computer connections, dedicated. Brooklyn VAMC will need to determine if there will be a desktop computer available for the Conference Center that the presenters may use in lieu of a laptop PC. The locations for these desktop PCs will also need to be determined. A wireless keyboard/mouse can be utilized to control the computer from the lectern/presenter positions.
- Blu-Ray DVD player, dedicated.
- Document camera, portable. The document camera is a device can allow the viewing of transparencies, handwritten notes from the presenter, or even small 3D objects onto the projection screen. The document camera has a small camera attached to an arm. The object to be viewed is then placed underneath the camera, and then displayed onto the screen as seen through this camera. The document camera can be part of the building audiovisual equipment pool.
- HD Cable TV and/or Satellite DSS Tuners, dedicated. If cable/satellite service is available, tuners will be recommended for viewing of high definition cable or satellite TV programming.
- Auxiliary audio and video input panels at the presenter floorbox locations and AV equipment rack, dedicated. External AV sources, such as an owner furnished video camera, iPod, or a source of different media such as a MiniDV tape player, can utilize the auxiliary inputs and played through the AV system.
- HD video teleconferencing, dedicated. Brooklyn VAMC stated that it would like to have the capability to do video teleconferencing and distance learning. The larger center section of the room will be set up for the VTC.
- Wall mounted HD video cameras, dedicated. The cameras will be used to support the video teleconferencing systems.

2.2.1.Video Systems Fit-Out Summary

Minimum Fit-Out

- Dedicated Laptop PC, desktop PC, Blu-Ray DVD player, and auxiliary audio and video inputs for the main section.
- Direct laptop PC and video connectivity to the portable video projector for the left and right side sections.

Base Fit-Out

- Dedicated Laptop PC, desktop PC for all three room sections.
- Blu-Ray DVD player, CATV/Satellite (if available), shared among all three room sections.

Preferred Fit-Out

- Dedicated Laptop PC, desktop PC, Blu-Ray DVD player, CATV/Satellite (if available), and auxiliary audio and video inputs for all three room sections.
- HD video teleconferencing system complete with wall mounted HD video cameras.
- Portable document camera shared between all three room sections.

2.3. Audio Systems

The following are audio recommendations for the Divisible Conference Room audiovisual system:

- Flush mounted ceiling speakers shall be utilized for program audio and voice reinforcement in the Conference Center, dedicated. These speakers shall be zoned for each section so that each room will have independent audio.
- Lectern gooseneck microphone at the podium for voice reinforcement for the presenter, dedicated.
- Wired handheld microphones, portable. These may also be used with or as an alternate to the wireless microphones. Plug-in locations for the wired microphones should be made available at the presenter floorbox connection panels.
- Wireless handheld microphones, portable. The wireless microphones may be used for voice reinforcement for the presenter or may be passed around to allow audience participation.
- Wireless table microphones, portable. When the room sections are set up in a meeting mode these can be placed on the tables and used for voice reinforcement for audio teleconferencing.
- A portable assistive listening system is recommended. For ADA compliance, public facilities must offer 9% of seating or people capacity accessible to hard of hearing people. This system can be brought into the Conference Center to enable people that are hearing impaired to hear the room's audio. The audio will be transmitted through headsets using an RF or IR based system.
- Audio Teleconference Hybrid, dedicated. The presenters and audience can call in and the audience can participate and interact with the presenter via the wired and wireless microphones.
- Table top audio teleconferencing units with extension microphones; portable. These can be quickly set up and used in the smaller Conference Center sections for meetings.

2.3.1. Audio Systems Fit-Out Summary

Minimum Fit-Out

- Independent zoned audio for all three sections from the ceiling speakers.
- Single portable tabletop audio teleconferencing unit shared amongst all three sections.
- Wired handheld and lectern microphones for presenter voice reinforcement.

Base Fit-Out

- Independent zoned audio for all three sections from the ceiling speakers.
- Portable tabletop audio teleconferencing units for all three room sections.
- Wireless handheld and wired handheld and lectern microphones for presenter voice reinforcement.

Preferred Fit-Out

- Independent zoned audio for all three sections from the ceiling speakers.
- Wireless handheld microphones for presenter voice reinforcement.
- Wired handheld and lectern microphones for presenter voice reinforcement.
- Wireless table microphones for audio and video teleconferencing voice reinforcement.
- Dedicated audio teleconferencing hybrid for use from all three room sections.

- Portable assistive listening system.

2.4.Control

A wired touch panel controller to control source selection, volume, and transport control; dedicated. This touch panel can be plugged into any of the presenter floorboxes and control the Conference Center's AV system from that position.

Small wall mounted touch panels can be utilized in the smaller Conference Center sections to independently control the AV system for that particular room section. These can be located on one side of the projection screen for easy access from the presenter. A password will be required to use the wall mounted touchpanel to prevent unauthorized use.

The following capabilities for each Conference Center audiovisual system should be independently controlled:

- Video projectors
- Audiovisual source selection and transport functions
- HD Video Teleconferencing CODEC
- HD Video Cameras
- Audio DSP and Distribution System
- Audio Teleconference Hybrid
- Program audio volume levels
- Voice volume levels
- Motorized Projection Screens, Raise/Lower
- Motorized Skyfold Divisible Doors, Raise/Lower
- Lighting presets

2.4.1. Control Systems Fit-Out Summary

Minimum Fit-Out

- Single small wired touch panel for audiovisual system control for the main section.
- Use of the handheld remote controls for the AV equipment's operation for the left and right room sections.

Base Fit-Out

- Single small wired touch panel for audiovisual system control for the main room.
- Small wall mounted touch panels for audiovisual system control for the left and right room sections.

Preferred Fit-Out

- Single large wired touch panel for audiovisual system control for the main room.
- Medium sized wall mounted touch panels for audiovisual system control for the left and right room sections

2.5. Non Audio/Visual Considerations

2.5.1. Lighting

The Conference Center's lighting system and layout should provide optimum lighting for presentation by utilizing a combination of fixture types to allow for dimming and control. It is important that the lighting system be zoned in such a way as to allow the lights near the projection screen be zoned independently from the rest of the room. Lighting will need to be specially designed for lighting of the presenter at the podium locations without spilling light onto the projection screen. The lighting should also be zoned so that all three Conference Center sections can be lighted and dimmed independently to suit their event.

2.5.2. Equipment Rack Locations

There will be audiovisual closets located in each Conference Center section. These closets will be used for AV equipment storage and can house the equipment rack for the AV systems for each section. Empty conduit linking all three closets will need to be provided so each section's AV systems can be combined/linked when the room layout changes. Provisions for the appropriate power and cooling requirements for the AV racks will need to be considered for each closet.

2.5.3. Infrastructure

Floor boxes will be utilized for power, data, and audiovisual connectivity at the presenter positions. The presenter positions will be at the left and right sides of each projection screen at in the Conference Center. Additional floorboxes should be placed in the middle of each section to accommodate tables for meeting room layouts. Careful planning of the placement of these floorboxes will be necessary to find the best locations to handle the different furniture layouts.

Data network connectivity is recommended at the floorboxes, ceiling projector locations, and AV closets. Wireless network connectivity for portable laptop PCs and other OFE wireless devices is recommended as well.

3. PLANNING BUDGET SUMMARY

This section of the report presents a Planning Budget Matrix, which grossly summarizes our estimates for the audiovisual related equipment, installation and base building costs for the various rooms. This Planning Budget Matrix and support spreadsheets attached to this report are intended as an order-of-magnitude or "ball park" estimate and are to be used for planning purposes only.

It may be that some equipment, which Brooklyn VAMC already owns, can be reused. However, our budget assumes that all new equipment will be purchased. Later in the process, once a complete inventory of equipment has been developed, we can determine the extent to which existing equipment can be re-used.

In order for the Audiovisual Planning Budget to be meaningful, some further explanation is needed. Each fit-out for the Conference Center is represented with a separate budget. The entries under "Projection", "Video", "Audio", and "Control" are room total cost estimates for each group of audiovisual systems equipment.

"Equipment Sub-Total" is the total cost of all of the above systems equipment.

"Non-Equipment Estimate" is the fee the Audiovisual Contractor will charge to install the equipment. These fees include the following: all required engineering shop drawings, wiring run sheets, and instruction manuals; fabrication, assembly, rack wiring, etc., performed on the Contractor's premises; on-site installation, cable pulling, and wiring; coordination and supervision of others involved in the installation; testing, check-out, and owner training; and general and administrative expenses, shipping costs, insurance, taxes, guarantees, and profit.

"AV System Contractor Total" is the total of "Equipment Sub-Total" and "Non-Equipment Estimate".

"Base Build Cost" is the cost of base building items, like projection screens, etc., that are audiovisually related but will be installed by the General Contractor. It must also be noted that this item DOES NOT include conduit or power required for the AV system.

"Room Total" is the total of "AV System Contractor Total" and "Basebuild Cost".

Generally speaking, we have assumed a Non-Equipment Factor of 40% of the total Equipment Sub-Total. It should be noted that it is the estimation of this Non-Equipment Cost that is most susceptible to error, since it deals with such variables as fabrication and installation labor, union requirements, job loads of a particular contractor, profit margin criteria, discount percentages on the materials and equipment, etc.

Lastly, please note that these cost estimates do not include sales tax.

VETERANS ADMINISTRATION MEDICAL CENTER CONFERENCE CENTER

AV PROGRAM BUDGET 7/27/13

ROOM	DISPLAY SYSTEMS	AUDIO SYSTEMS	VIDEO SYSTEMS	CONTROL SYSTEMS	MISCELLANEOUS EQUIPMENT AND SYSTEMS	BASERUILDING COMPONENTS	TOTAL EQUIPMENT COSTS	TOTAL NON-EQUIPMENT COSTS	TOTAL AV SYSTEM & BSEBUILDING COSTS	ROOM COUNT	GRAND TOTAL
North Conference Room	\$ 27,330	\$ 27,805	\$ 31,190	\$ 14,700	\$ 8,390	\$ 16,470	\$ 109,415	\$ 43,766	\$ 169,651	1	\$ 169,651
South Conference Room	\$ 35,750	\$ 37,730	\$ 55,270	\$ 17,200	\$ 12,486	\$ 16,470	\$ 158,436	\$ 53,274	\$ 238,280	1	\$ 238,280
Control Room	\$ 43,950	\$ 50,085	\$ 193,690	\$ 23,950	\$ 17,486	\$ 16,470	\$ 213,151	\$ 93,260	\$ 347,881	1	\$ 347,881

VETERANS ADMINISTRATION MEDICAL CENTER CONFERENCE CENTER AV PROGRAM BUDGET 7/27/12

ROOM: Divisible Conference Room-Minimum Fitout

ITEM #	DESCRIPTION	QTY	UNIT COST	COST
DISPLAY SYSTEMS				
	Data/Video WUXGA DLP Projector	1	\$ 18,750	\$ 18,750
	Ceiling Mount for Data/Video WUXGA DLP Projector	1	\$ 200	\$ 200
	Data/Video WUXGA DLP Projector	1	\$ 8,200	\$ 8,200
	Adjustable AV/Projector Cart w/ 6-Outlet Electrical	1	\$ 180	\$ 180
DISPLAY SYSTEMS TOTAL				\$ 27,330
AUDIO SYSTEMS				
	Microphone, Wireless Handheld		\$ 1,275	\$ -
	Microphone, handheld wired	1	\$ 150	\$ 150
	Microphone Floor Stand	1	\$ 100	\$ 100
	Microphone, Lectern Gooseneck Cardioid Condenser RF	1	\$ 350	\$ 350
	Shock Mount for Lectern Gooseneck Microphone	1	\$ 35	\$ 35
	Ceiling Speaker, 6.5" w/Transformer & backcan	24	\$ 200	\$ 4,800
	Program Audio Amplifier; 200 Watts per Channel, 70Volt	1	\$ 1,610	\$ 1,610
	Audio System - DSP, 8 channel AEC microphone mixer	2	\$ 5,450	\$ 10,900
	Audio Matrix Switcher Programming and Configuration	1	\$ 5,000	\$ 5,000
	Audio Teleconference Hybrid; Table top, with Extension Microphones	1	\$ 1,600	\$ 1,600
	HDMI Audio De-Embedder	4	\$ 790	\$ 3,160
	Audio Combiner/Divider	2	\$ 50	\$ 100
AUDIO SYSTEMS TOTAL				\$ 27,805
VIDEO SYSTEMS				
	Computer Interface Cable	6	\$ 20	\$ 120
	Blu-Ray DVD Player	2	\$ 500	\$ 1,000
	Rack Mount for Blu-Ray DVD Player	1	\$ 200	\$ 200
	Resident OFE PC	3	OFE	OFE
	16x16 DigitalMedia™ Switcher	1	\$ 6,450	\$ 6,450
	HDMI Input Card w/Down-mixing for DM Switchers	2	\$ 750	\$ 1,500
	DigitalMedia 8G™ STP Input Card w/Down-mixing for DM Switchers	4	\$ 1,300	\$ 5,200
	BNC Analog Video Input Card for DM Switchers	3	\$ 800	\$ 2,400
	4 DM 8G+ w/2 HDMI & 4 HDMI w/4 Stereo Analog Audio Output Card for DM-MD16X16	1	\$ 4,000	\$ 4,000
	Wall Plate DigitalMedia™ CAT Transmitter 200	4	\$ 1,400	\$ 5,600
	DigitalMedia 8G™ Shielded Twisted Pair Transmitter 20	2	\$ 1,300	\$ 2,600
	DigitalMedia 8G™ Shielded Twisted Pair Receiver & Room Controller 10	2	\$ 900	\$ 1,800
	Media Presentation Wall Plate - DigitalMedia 8G+™	4	\$ 80	\$ 320
VIDEO SYSTEMS TOTAL				\$ 31,190
CONTROL SYSTEMS				
	Control System Operations Interface, Table Mount; 5.7" Nominal	1	\$ 3,200	\$ 3,200
	Integrated Control System; Expandable	1	\$ 2,700	\$ 2,700
	Dual Port Ethernet Card	1	\$ 1,300	\$ 1,300
	Control System Programming	1	\$ 7,500	\$ 7,500
CONTROL SYSTEMS TOTAL				\$ 14,700
MISCELLANEOUS EQUIPMENT AND SYSTEMS				
	Surge Suppressor/Power Sequencer	1	\$ 1,040	\$ 1,040
	Uninterruptible Power Supply	1	\$ 1,100	\$ 1,100
	Equipment Rack	1	\$ 1,250	\$ 1,250
	Miscellaneous Wire, Cable, Connectors	1	\$ 5,000	\$ 5,000
MISCELLANEOUS EQUIPMENT AND SYSTEMS TOTAL				\$ 8,390
BASEBUILDING COMPONENTS				
	Front Projection Screen, with ceiling enclosure; 16:10 format, 50"x80", hi-contrast matte white	2	\$ 4,540	\$ 9,080
	Front Projection Screen, with ceiling enclosure; 16:10 format, 72.5"x116", hi-contrast matte white	1	\$ 5,690	\$ 5,690
	Floor Box, Audiovisual	10	\$ 170	\$ 1,700
BASEBUILDING COMPONENTS TOTAL				\$ 16,470
TOTAL EQUIPMENT COST				\$ 109,415
TOTAL BASEBUILDING COST				\$ 16,470
TOTAL NON-EQUIPMENT COST				\$ 43,766
TOTAL ROOM COST				\$ 169,651

VETERANS ADMINISTRATION MEDICAL CENTER CONFERENCE CENTER		AV PROGRAM BUDGET 7/27/12		
ROOM: Divisible Conference Room-Base Fitout				
ITEM #	DESCRIPTION	QTY	UNIT COST	COST
DISPLAY SYSTEMS				
67	Data/Video WUXGA DLP Projector	1	\$ 18,750	\$ 18,750
	Ceiling Mount for Data/Video WUXGA DLP Projector	1	\$ 200	\$ 200
67	Data/Video WUXGA DLP Projector	2	\$ 8,200	\$ 16,400
	Ceiling Mount for Data/Video WUXGA DLP Projector	2	\$ 200	\$ 400
DISPLAY SYSTEMS TOTAL				\$ 35,750
AUDIO SYSTEMS				
81	Microphone, Wireless Handheld	1	\$ 1,275	\$ 1,275
81A	Microphone; handheld wired	1	\$ 150	\$ 150
81B	Microphone Floor Stand	1	\$ 100	\$ 100
81C	Microphone, Lectern Gooseneck Cardioid Condenser RF	1	\$ 350	\$ 350
	Shock Mount for Lectern Gooseneck Microphone	1	\$ 35	\$ 35
	Ceiling Speaker, 6.5" w/Transformer & backcan	24	\$ 200	\$ 4,800
82	Program Audio Amplifier; 200 Watts per Channel, 70Volt	1	\$ 1,610	\$ 1,610
82	Audio System - DSP, 8 channel AEC microphone mixer	3	\$ 5,450	\$ 16,350
82	Audio Matrix Switcher Programming and Configuration	1	\$ 5,000	\$ 5,000
83	Audio Teleconference Hybrid; Table top, with Extension Microphones	3	\$ 1,600	\$ 4,800
84	HDMI Audio De-Embedder	4	\$ 790	\$ 3,160
85	Audio Combiner/Divider	2	\$ 50	\$ 100
AUDIO SYSTEMS TOTAL				\$ 37,730
VIDEO SYSTEMS				
86	Computer Interface Cable	6	\$ 20	\$ 120
87	Blu-Ray DVD Player	1	\$ 500	\$ 500
87	Rack Mount for Blu-Ray DVD Player	1	\$ 200	\$ 200
88	HD CATV Tuner (OFE)	1	OFE	OFE
89	Resident OFE PC	3	OFE	OFE
89	6x4 DigitalMedia™ Switcher	2	\$ 3,800	\$ 7,600
89	16x16 DigitalMedia™ Switcher	1	\$ 6,450	\$ 6,450
89	HDMI Input Card w/Down-mixing for DM Switchers	4	\$ 750	\$ 3,000
89	DigitalMedia 8G™ STP Input Card w/Down-mixing for DM Switchers	4	\$ 1,300	\$ 5,200
89	BNC Analog Video Input Card for DM Switchers	3	\$ 800	\$ 2,400
89	4 DM 8G+ w/2 HDMI & 4 HDMI w/4 Stereo Analog Audio Output Card for DM-MD16X16	1	\$ 4,000	\$ 4,000
89	Wall Plate DigitalMedia™ CAT Transmitter 200	10	\$ 1,400	\$ 14,000
89	DigitalMedia 8G™ Shielded Twisted Pair Transmitter 20	5	\$ 1,300	\$ 6,500
89	DigitalMedia 8G™ Shielded Twisted Pair Receiver & Room Controller 10	5	\$ 900	\$ 4,500
89	Media Presentation Wall Plate - DigitalMedia 8G+™	10	\$ 80	\$ 800
VIDEO SYSTEMS TOTAL				\$ 55,270
CONTROL SYSTEMS				
100	Control System Operations Interface, Table Mount; 5.7" Nominal	1	\$ 3,200	\$ 3,200
101	Control System Operations Interface, Wall Mount; 3.6" Nominal	2	\$ 1,250	\$ 2,500
102	Integrated Control System; Expandable	1	\$ 2,700	\$ 2,700
103	Dual Port Ethernet Card	1	\$ 1,300	\$ 1,300
104	Control System Programming	1	\$ 7,500	\$ 7,500
CONTROL SYSTEMS TOTAL				\$ 17,200
MISCELLANEOUS EQUIPMENT AND SYSTEMS				
105	Surge Suppressor/Power Sequencer	1	\$ 1,040	\$ 1,040
106	Uninterruptible Power Supply	1	\$ 1,100	\$ 1,100
107	Equipment Rack	1	\$ 1,250	\$ 1,250
108	Surge Suppressor/Power Distribution	2	\$ 690	\$ 1,380
109	Equipment Rack	2	\$ 108	\$ 216
110	Miscellaneous Wire, Cable, Connectors	1	\$ 7,500	\$ 7,500
MISCELLANEOUS EQUIPMENT AND SYSTEMS TOTAL				\$ 12,486
BASEBUILDING COMPONENTS				
109A	Front Projection Screen, with ceiling enclosure; 16:10 format, 50"x80", hi-contrast matte white	2	\$ 4,540	\$ 9,080
109	Front Projection Screen, with ceiling enclosure; 16:10 format 72.5"x116", hi-contrast matte white	1	\$ 5,690	\$ 5,690
	Floor Box, Audiovisual	10	\$ 170	\$ 1,700
BASEBUILDING COMPONENTS TOTAL				\$ 16,470
TOTAL EQUIPMENT COST				\$ 158,436
TOTAL BASEBUILDING COST				\$ 16,470
TOTAL NON-EQUIPMENT COST				\$ 63,374
TOTAL ROOM COST				\$ 221,810

107A
107B

VETERANS ADMINISTRATION MEDICAL CENTER CONFERENCE CENTER					AV PROGRAM BUDGET 7/27/12
ROOM: Divisible Conference Room-Preferred Fit-Out					
ITEM #	DESCRIPTION	QTY	UNIT COST	COST	
DISPLAY SYSTEMS					
	Data/Video WUXGA DLP Projector	1	\$ 18,750	\$ 18,750	
	Ceiling Mount for Data/Video WUXGA DLP Projector	1	\$ 200	\$ 200	
	Data/Video WUXGA DLP Projector	2	\$ 8,200	\$ 16,400	
	Ceiling Mount for Data/Video WUXGA DLP Projector	2	\$ 200	\$ 400	
	Data/Video Flat Panel LCD Monitor, 55", 1920x1080	2	\$ 3,200	\$ 6,400	
	Large Flat Panel Mobile Cart	2	\$ 900	\$ 1,800	
DISPLAY SYSTEMS TOTAL				\$ 43,950	
AUDIO SYSTEMS					
	Microphone, Wireless Handheld	2	\$ 1,275	\$ 2,550	
	Microphone, handheld wired	1	\$ 150	\$ 150	
	Microphone Floor Stand	1	\$ 100	\$ 100	
	Microphone, Lectern Gooseneck Cardiod Condenser RF	2	\$ 350	\$ 700	
	Shock Mount for Lectern Gooseneck Microphone	2	\$ 35	\$ 70	
	Wireless Table Microphone System-Rack Base, charger, power adapter,	1	\$ 5,205	\$ 5,205	
	Wireless Table Microphones, Uni-directional	8	\$ 350	\$ 2,800	
	Ceiling Speaker, 6.5" w/Transformer & backcan	24	\$ 200	\$ 4,800	
	Program Audio Amplifier, 200 Watts per Channel, 70Volt	1	\$ 1,610	\$ 1,610	
	Audio System - DSP, 8 channel AEC microphone mixer	3	\$ 5,450	\$ 16,350	
	Audio System - DSP telephone hybrid	1	\$ 1,200	\$ 1,200	
	Audio Matrix Switcher Programming and Configuration	1	\$ 5,000	\$ 5,000	
	Audio Teleconference Hybrid, Table top, with Extension Microphones	2	\$ 1,600	\$ 3,200	
	HDMI Audio De-Embedder	4	\$ 790	\$ 3,160	
	Audio Combiner/Divider	2	\$ 50	\$ 100	
	Assistive Listening System, Infra-Red Radiator, white	1	\$ 520	\$ 520	
	Assistive Listening System Transmitter	1	\$ 450	\$ 450	
	Rack Kit for Assistive Listening System Transmitter	1	\$ 40	\$ 40	
	Assistive Listening System IR Stethoscope 4 Channel Receiver	16	\$ 130	\$ 2,080	
AUDIO SYSTEMS TOTAL				\$ 50,085	
VIDEO SYSTEMS					
	Computer Interface Cable	6	\$ 20	\$ 120	
	Blu-Ray DVD Player	3	\$ 500	\$ 1,500	
	Rack Mount for Blu-Ray DVD Player	3	\$ 200	\$ 600	
	Digital Document Camera, Portable	1	\$ 2,610	\$ 2,610	
	HD CATV Tuner (OFE)	3	OFE	OFE	
	Resident OFE PC	3	OFE	OFE	
	HD P/T/Z Video Camera, 1.3MP, 1/3" CCD; with CCU; white	3	\$ 5,500	\$ 16,500	
	Video Teleconferencing Codec; IP, Multisite	1	\$ 21,900	\$ 21,900	
	6x4 DigitalMedia™ Switcher	2	\$ 3,800	\$ 7,600	
	16x16 DigitalMedia™ Switcher	1	\$ 6,450	\$ 6,450	
	HDMI Input Card w/Down-mixing for DM Switchers	4	\$ 750	\$ 3,000	
	DigitalMedia 8G™ STP Input Card w/Down-mixing for DM Switchers	4	\$ 1,300	\$ 5,200	
	BNC Analog Video Input Card for DM Switchers	3	\$ 800	\$ 2,400	
	4 DM 8G+ w/2 HDMI & 4 HDMI w/4 Stereo Analog Audio Output Card for DM-MD16X16	1	\$ 4,000	\$ 4,000	
	Wall Plate DigitalMedia™ CAT Transmitter 200	10	\$ 1,400	\$ 14,000	
	DigitalMedia 8G™ Shielded Twisted Pair Transmitter 20	5	\$ 1,300	\$ 6,500	
	DigitalMedia 8G™ Shielded Twisted Pair Receiver & Room Controller 100	5	\$ 900	\$ 4,500	
	Media Presentation Wall Plate - DigitalMedia 8G+™	10	\$ 80	\$ 800	
	Digital Graphics Engine	1	\$ 6,000	\$ 6,000	
VIDEO SYSTEMS TOTAL				\$ 103,680	
CONTROL SYSTEMS					
	V-Panel Interface Module, DM CAT	1	\$ 250	\$ 250	
	12" HD Touch Screen Display	1	\$ 3,600	\$ 3,600	
	9" Wall Mount Touch Screen	2	\$ 3,900	\$ 7,800	
	Integrated Control System; Expandable	1	\$ 2,700	\$ 2,700	
	Dual Port Ethernet Card	1	\$ 1,300	\$ 1,300	
	Control System Programming	1	\$ 7,900	\$ 7,900	
CONTROL SYSTEMS TOTAL				\$ 22,950	
MISCELLANEOUS EQUIPMENT AND SYSTEMS					
	Surge Suppressor/Power Sequencer	1	\$ 1,040	\$ 1,040	
	Uninterruptible Power Supply	1	\$ 1,100	\$ 1,100	
	Equipment Rack	1	\$ 1,250	\$ 1,250	
	Surge Suppressor/Power Distribution	2	\$ 690	\$ 1,380	
	Equipment Rack	2	\$ 108	\$ 216	
	Miscellaneous Wire, Cable, Connectors	1	\$ 7,500	\$ 7,500	
MISCELLANEOUS EQUIPMENT AND SYSTEMS TOTAL				\$ 12,486	
BASEBUILDING COMPONENTS					
	Front Projection Screen, with ceiling enclosure; 16:10 format, 50"x80", hi-contrast matte white	2	\$ 4,540	\$ 9,080	
	Front Projection Screen, with ceiling enclosure; 16:10 format, 72.5"x116", hi-contrast matte white	1	\$ 5,690	\$ 5,690	
	Floor Box, Audiovisual	10	\$ 170	\$ 1,700	
BASEBUILDING COMPONENTS TOTAL				\$ 16,470	
TOTAL EQUIPMENT COST				\$ 233,151	
TOTAL BASEBUILDING COST				\$ 16,470	
TOTAL NON-EQUIPMENT COST				\$ 93,260	
TOTAL ROOM COST				\$ 326,411	

