

STATEMENT OF WORK
Department of Veterans Affairs
Spark M. Matsunaga Medical Center
459 Patterson Road,
E-wing, Engineering Department,
Honolulu, HI 96819
Transaction Number: 459-18-2-092-0136

Attachment 1 Statement of Work (SOW)

Title of Project: Conference Room 3B06, 3B08, 3B09 – Audio/Visual Equipment Upgrade and Installation

Scope of Work: The Vendor shall provide all resources necessary to accomplish the installation and deliverables described in this statement of work (SOW), except as may otherwise be specified. Contractor shall coordinate with the design/build team to provide and install audio and visual equipment as requested and according to the renovation timeline. There will be no remote computer access to the system, all necessary maintenance and/or updates will need to be provided on site.

Background:

The Pacific Islands Health Care System has a need to replace the existing and failing audio and visual equipment located in Spark M. Matsunaga Medical Center, Conference Rooms 3B06, 3B08, 3B09.

Performance Period: The removal of the existing items and delivery/installation of the replacement items shall be completed no later than 30 days after award.

General Requirement:

The Pacific Islands Health Care System is currently renovating the Spark M. Matsunaga Medical Center, Conference Rooms 3B06, 3B08, 3B09 and has a need to replace the existing and failing audio and visual equipment. The contractor shall coordinate with the design/build team to provide and install audio and visual equipment as requested and according to the renovation timeline.

SCOPE OF WORK (Room B306)

- Install two (2) 60" LED display monitors
 - The first 60" LED display monitor will be mounted at the front of the room in an alcove area
 - The Department of Veterans Affairs will be responsible to remove all objects and obstructions that may hinder the installation of the display monitor prior to Vendor's installation
 - Vendor will use a tilt wall mount for the display monitor
 - Vendor will coordinate with the Department of Veterans Affairs to set the angle of the tilt

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- If the Department of Veterans Affairs or representative is not present during the installation Vendor will set the angle of tilt
- 60" display monitor will be mounted at an optimal height for ease of viewing
 - Display monitor will be centered within the alcove area
- The second 60" LED display monitor will be mounted at the rear of the room in front of existing windows
 - The Department of Veterans Affairs will be responsible to remove all objects and obstructions that may hinder the installation of the display monitor prior to Vendor's installation
- Vendor will use a ceiling mount for the display monitor
 - Vendor will drop the display monitor at an optimal height for ease of viewing and to clear any obstructions
 - Display monitor will be centered to the room
- Electrical is required for both 60" display monitors
 - All electrical requirements for the display monitors will be provided by and be the responsibility of others prior to Vendor's installation
 - Vendor can provide electrical information once a formal notice to proceed and/or award has been issued to Vendor
- Rack mount and integrate new and Government Furnished Equipment (GFE)
 - Vendor will remove equipment from an existing GFE rack enclosure
 - All equipment that will not be used in the upgrade will be placed in the responsibility of the Department of Veterans Affairs
 - Equipment that will be used in the upgrade will be placed on the side for Vendor to integrate
 - Vendor will rack mount new equipment and GFE within the rack enclosure onsite
 - A 10x8 twisted pair matrix switcher will be mounted within the rack enclosure
 - Sources that will connect to the matrix switcher will include:
 - GFE Host PC
 - GFE DVD/Bluray player
 - GFE Tandberg 550MXP
 - GFE Host PC and the GFE DVD/Bluray player will be located within the rack enclosure
 - Both sources will connect to the matrix switcher via HDMI cable
 - Vendor will provide the HDMI connection cables

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- GFE Tandberg 550MXP will be mounted on top of the 80" display monitor located at the rear of the room
 - GFE Tandberg 550MXP will be mounted to the top of the display monitor using a shelf bracket mounted to the display monitor ceiling bracket
 - Video output of the Tandberg 550MXP will route to a twisted pair scaler
 - Twisted pair scaler will be mounted to the rear of the display monitor
 - Vendor will run shielded CAT6 cable from the scaler to the matrix switcher located within the rack enclosure
 - CAT6S cable will be run in the ceiling and within walls if possible
 - Department of Veterans Affairs will be responsible for all Video Teleconferencing (VTC) network requirements prior to Vendor installation
 - This includes but is not limited to network drops, ISDN connections, bandwidth and security requirements, etc.
- Install twisted pair wall interface plate at the front of the room
 - Interface plate will be located under the display monitor
 - Exact location will be determined by the Department of Veterans Affairs at the time of installation
 - Vendor will run shielded CAT6 cable from the wall interface to the matrix switcher located within the rack enclosure
 - CAT6S cable will be run in the ceiling and within walls if possible
 - Wall interface plate connections will include:
 - One (1) HDMI
 - One (1) VGA
 - Two (2) 3.5mm audio
- Matrix switcher will take a feed from Rooms B308 and B309
 - Vendor will run shielded CAT6 cable from a twisted pair HDMI transmitter from rooms B308 and B309 respectively to twisted pair HDMI receivers located within the rack enclosure
 - This will allow for the room combination scenario
- HDMI outputs from each receiver will route directly to the matrix switcher
 - Vendor will provide the HDMI connection cables
- Integrate display monitors and outputs of the matrix switcher
 - Two (2) twisted pair outputs of the matrix switcher will route to the respective 60" display monitor

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- Vendor will run shielded CAT6 cable from the matrix switcher to the respective twisted pair HDMI receiver
 - Each receiver will be mounted to the rear of the display monitor
- HDMI output of the receivers will connect directly to the display monitor
 - Vendor will provide the HDMI connection cable
- Two (2) HDMI outputs of the matrix switcher will connection to a respective twisted pair HDMI transmitter
 - HDMI transmitters will be located within the rack enclosure
 - Vendor will provide the HDMI connection cables
 - Vendor will run shielded CAT6 cable from the HDMI transmitters to the respective HDMI receiver in Room B308 and Room B309
 - This will allow for the room combination scenario
- Install and integrate audio system
 - Vendor will rack mount an audio Digital Signal Processor (DSP) with VoIP capability within the rack enclosure
 - Audio output from the matrix switcher will route directly to the audio DSP
 - Install two (2) ceiling microphones
 - Vendor will mount the microphones at strategic locations for optimal audio pick up
 - Microphones will route directly to the audio DSP
 - Ceiling microphones will only be used for VTC and audio conferencing
 - Ceiling microphones will not be used for voice reinforcement
 - Integrate two (2) wireless microphone systems
 - Two (2) wireless microphone receivers will be mounted within the rack enclosure
 - Microphone receivers will route directly to the audio DSP
 - One (1) wireless handheld microphone and one (1) wireless bodypack transmitter with wired lavalier microphone will be provided
 - Audio DSP will take a feed from the respective audio DSP of rooms B308 and B309
 - This will allow for the room combination scenario
 - VoIP network will connect to the audio DSP
 - A VoIP network drop is required at the rack enclosure
 - All VoIP requirements will be provided by and be the responsibility of the Department of Veterans Affairs prior to Vendor's installation
 - This includes but is not limited to bandwidth and security
 - Outputs from the audio DSP will route to the respective audio DSP of rooms B308 and B309
 - This will allow for the room combination scenario

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- Output from the audio DSP will route to an audio power amplifier
 - Audio power amplifier will be located within the rack enclosure
- Audio power amplifier will drive a total of two (2) ceiling recessed loudspeakers
 - Vendor will remove existing ceiling speakers
 - Once old speakers have been removed it will be placed in the responsibility of the Department of Veterans Affairs
 - Vendor will install new speakers in optimal locations within the room for best audio coverage
- Program audio DSP
 - Vendor will program the audio DSP based on the functionality of the system
 - Ceiling microphones levels will be set for optimal voice pick up during VTC and audio conferencing calls
 - **NOTE: ceiling microphones will not be used for any voice reinforcement**
 - Wireless microphones levels will be set for optimal voice reinforcement
 - **NOTE: wireless microphones gain levels cannot exceed a certain decibel level due to audio loops and feedback that may occur during VTC and audio conferencing calls when using the wireless microphones**
 - Wireless microphones will only be used for voice reinforcement
 - Vendor will set the microphone levels to optimal settings
 - Microphone decibel levels may not be sufficient for the Department of Veterans Affairs's requirements
 - Configure audio DSP for audio conferencing
 - A user will be able to place and receive an audio call using the touchscreen controller
 - Configure audio DSP for room combine
 - Audio DSP will be able to send and receive audio from rooms B308 and B309 for room combination scenarios
- Integrate control system equipment
 - Control system processor will be located within the rack enclosure
 - Equipment that will be controlled by the control system will connect to the control system processor
 - Equipment that will be controlled will include:
 - Matrix switcher
 - Two (2) 60" display monitors
 - Audio DSP
 - GFE Tandberg 550MXP

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- GFE DVD/Bluray player
- Control system processor will route to a wireless router with Power Over Ethernet (PoE)
- Vendor will mount a 10" wired touchscreen controller within the room
 - Touchscreen will be mounted where existing light switches are located
 - Exact location will be determined by the Department of Veterans Affairs at the time of installation
 - Vendor will run CAT cable from the wireless router to the touchscreen controller
 - Cable will be run in wall and in the ceiling if possible
- Department of Veterans Affairs will provide a GFE iPad for the control system
 - iPad will act as a wireless controller for the system
 - iPad will have the same page layouts as the wired touchscreen
 - wireless router will communicate with the GFE iPad
- Program the control system
 - Prior to programming the control system Vendor will coordinate with the Department of Veterans Affairs to verify the control panel layout and verify control system functionality
 - Once Vendor and the Department of Veterans Affairs has verified the control system functionality and scope of work Vendor will start the control system programming
 - Control will include:
 - Display monitors power on/off
 - Overall volume control
 - Source Select
 - GFE DVD/Bluray player transport functions (play, stop, skip, etc.)
 - GFE Tandberg 550MXP functions (PTZ camera control, placing/receiving VTC calls)

Any changes to the functionality of the control system that goes beyond the scope of work will incur additional charges

- Test the system
 - Vendor will test the system to ensure functionality and operation as a standalone system

(Room B308)

- Install one (1) 80" LED display monitors
 - Prior to Vendor's installation the Department of Veterans Affairs will be responsible to remove an existing whiteboard located at the front of the room
 - Department of Veterans Affairs will be responsible to dispose of the whiteboard or have it remounted in another room

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- Vendor will not be responsible to patch, paint, repair, etc. the wall where the whiteboard has been removed
 - The Department of Veterans Affairs will be responsible to remove all objects and obstructions that may hinder the installation of the display monitors prior to Vendor's installation
- One (1) SMART 75" interactive flat panel (IFP) will be mounted at the front of the room where the existing whiteboard was located
 - Display monitor and SMART board will be mounted side-by-side
 - Display monitor and SMART board will be mounted at an optimal height for ease of viewing
- Vendor will use a tilt wall mounts for the display monitors at the front of the room
 - Vendor will coordinate with the Department of Veterans Affairs to set the angle of the tilt
 - If the Department of Veterans Affairs or representative is not present during the installation Vendor will set the angle of tilt
- One (1) 60" LED display monitor will be mounted at the rear of the room in front of existing windows
 - The Department of Veterans Affairs will be responsible to remove all objects and obstructions that may hinder the installation of the display monitor prior to Vendor's installation
- Vendor will use a ceiling mount for the display monitor
 - Vendor will drop the display monitor at an optimal height for ease of viewing and to clear any obstructions
 - Display monitor will be centered to the room
- Electrical is required for all 60" display monitors
 - All electrical requirements for the display monitors will be provided by and be the responsibility of others prior to Vendor's installation
 - Vendor can provide electrical information once a formal notice to proceed and/or award has been issued to Vendor
- Rack mount and integrate new and Government Furnished Equipment (GFE)
 - Vendor will remove equipment from an existing GFE rack enclosure
 - All equipment that will not be used in the upgrade will be placed in the responsibility of the Department of Veterans Affairs
 - Equipment that will be used in the upgrade will be placed on the side for Vendor to integrate
 - Vendor will rack mount new equipment and GFE within the rack enclosure onsite
 - A 10x8 twisted pair matrix switcher will be mounted within the rack enclosure
 - Sources that will connect to the matrix switcher will include:

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- GFE Host PC
 - GFE DVD/Bluray player
 - GFE Tandberg C40 VTC system
- GFE Host PC and the GFE DVD/Bluray player will be located within the rack enclosure
 - Both sources will connect to the matrix switcher via HDMI cable
- Vendor will provide the HDMI connection cables
 - GFE Tandberg C40 VTC codec will be located within the rack enclosure
 - GFE C40 codec video output will route directly to the matrix switcher
 - A VTC network drop is required at the rack location
 - All VTC network requirements will be provided by and be the responsibility of the Department of Veterans Affairs prior to Vendor's installation
 - This includes but is not limited to VTC bandwidth and security requirements
 - GFE Tandberg Precision HD Pan/Tilt/Zoom (PTZ) camera will be mounted on top of the 60" display monitor located at the rear of the room
 - GFE Tandberg PHD PTZ camera will be mounted to the top of the display monitor using a shelf bracket mounted to the display monitor ceiling bracket
 - PTZ camera will connect to a CAT cable extension transmitter located at the camera location
 - Vendor will run CAT cable from the transmitter to a receiver located at the rack enclosure
 - CAT cable will be run in the ceiling and within walls if possible
 - HDMI output from the receiver will connect directly to the GFE Tandberg C40 codec
 - Vendor will provide the HDMI connection cables
 - Install two (2) twisted pair wall interface plates within the room
 - 1st Interface plate will be located at the front of the room under the display monitor and SMART board
 - Exact location will be determined by the Department of Veterans Affairs at the time of installation
 - Vendor will run shielded CAT6 cable from the 1st wall interface to the matrix switcher located within the rack enclosure
 - CAT6S cable will be run in the ceiling and within walls if possible
 - 2nd interface plate will be located at the rear of the room
 - Exact location will be determined by the Department of Veterans Affairs at the time of installation

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- Vendor will run shielded CAT6 cable from the 2nd wall interface to the matrix switcher located within the rack enclosure
 - CAT6S cable will be run in the ceiling and within walls if possible
- Wall interface plates connections will include:
 - One (1) HDMI
 - One (1) VGA
 - Two (2) 3.5mm audio
- Install two (2) USB interface plates
 - Vendor will install first USB extender transmitter interface plate next to 1st interface plate under display monitor and SMART board
 - Vendor will run CAT6 from USB transmitter to USB receiver
 - Vendor will use USB to connect receiver to switcher
 - Vendor will mount 2nd USB extender interface plate next to 2nd twisted pair interface plate in the rear of the room
 - Vendor will run CAT6 from USB transmitter to USB receiver
 - Vendor will use USB to connect receiver to switcher
- Integrate switcher for touch capabilities when using SMART board
 - Vendor will use a USB cable to connect switcher to USB extender receiver
 - Vendor will run RS232 cable from switcher to control processor
 - Vendor will run CAT6 cable from USB receiver to USB transmitter
 - USB transmitter will be located inside of the rack
 - Vendor will run a USB cable from transmitter within the rack to GFE PC that will also be located within the rack
- Matrix switcher will take a feed from Rooms B306 and B309
 - Vendor will run shielded CAT6 cable from a twisted pair HDMI transmitter from rooms B306 and B309 respectively to twisted pair HDMI receivers located within the rack enclosure
 - This will allow for the room combination scenario
 - HDMI outputs from each receiver will route directly to the matrix switcher
 - Vendor will provide the HDMI connection cables
- Integrate display monitors and outputs of the matrix switcher
 - Three (3) twisted pair outputs of the matrix switcher will route to the respective display monitor and SMART board

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- Vendor will run shielded CAT6 cable from the matrix switcher to the respective twisted pair HDMI receiver
 - Each receiver will be mounted to the rear of the display monitor
- HDMI output of the receivers will connect directly to the display monitor
 - Vendor will provide the HDMI connection cable
- Two (2) HDMI outputs of the matrix switcher will connection to a respective twisted pair HDMI transmitter
 - HDMI transmitters will be located within the rack enclosure
 - Vendor will provide the HDMI connection cables
 - Vendor will run shielded CAT6 cable from the HDMI transmitters to the respective HDMI receiver in Room B306 and Room B309
 - This will allow for the room combination scenario
- Install and integrate audio system
 - Vendor will rack mount an audio Digital Signal Processor (DSP) with VoIP capability within the rack enclosure
 - Audio output from the matrix switcher will route directly to the audio DSP
 - Install four (4) ceiling microphones
 - Vendor will mount the microphones at strategic locations for optimal audio pick up
 - Microphones will route directly to the audio DSP
 - Ceiling microphones will only be used for VTC and audio conferencing
 - Ceiling microphones will not be used for voice reinforcement
 - Integrate two (2) wireless microphone systems
 - Two (2) wireless microphone receivers will be mounted within the rack enclosure
 - Microphone receivers will route directly to the audio DSP
 - One (1) wireless handheld microphone and one (1) wireless bodypack transmitter with wired lavalier microphone will be provided
 - Audio DSP will take a feed from the respective audio DSP of rooms B306 and B309
 - This will allow for the room combination scenario
 - VoIP network will connect to the audio DSP
 - A VoIP network drop is required at the rack enclosure
 - All VoIP requirements will be provided by and be the responsibility of the Department of Veterans Affairs prior to Vendor's installation
 - This includes but is not limited to bandwidth and security
 - Outputs from the audio DSP will route to the respective audio DSP of rooms B306 and B309
 - This will allow for the room combination scenario
 - Output from the audio DSP will route to an audio power amplifier
 - Audio power amplifier will be located within the rack enclosure

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- Audio power amplifier will drive a total of four (4) ceiling recessed loudspeakers
 - Vendor will remove existing ceiling speakers
 - Once old speakers have been removed it will be placed in the responsibility of the Department of Veterans Affairs
 - Vendor will install new speakers in optimal locations within the room for best audio coverage
- Program audio DSP
 - Vendor will program the audio DSP based on the functionality of the system
 - Ceiling microphones levels will be set for optimal voice pick up during VTC and audio conferencing calls
 - **NOTE: ceiling microphones will not be used for any voice reinforcement**
 - Wireless microphones levels will be set for optimal voice reinforcement
 - **NOTE: wireless microphones gain levels cannot exceed a certain decibel level due to audio loops and feedback that may occur during VTC and audio conferencing calls when using the wireless microphones**
 - Wireless microphones will only be used for voice reinforcement
 - Vendor will set the microphone levels to optimal settings
 - Microphone decibel levels may not be sufficient for the Department of Veterans Affairs' requirements
 - Configure audio DSP for audio conferencing
 - A user will be able to place and receive an audio call using the touchscreen controller
 - Configure audio DSP for room combine
 - Audio DSP will be able to send and receive audio from rooms B308 and B309 for room combination scenarios
- Integrate control system equipment
 - Control system processor will be located within the rack enclosure
 - Equipment that will be controlled by the control system will connect to the control system processor
 - Equipment that will be controlled will include:
 - Matrix switcher
 - One (1) 80" display monitor
 - One (1) 60" display monitor
 - One (1) SMART 75" IFP
 - Audio DSP
 - GFE Tandberg C40 VTC system
 - GFE DVD/Bluray player

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- Control system processor will route to a wireless router with Power Over Ethernet (PoE)
- Vendor will mount a 10" wired touchscreen controller within the room
 - Touchscreen will be mounted where existing light switches are located
 - Exact location will be determined by the Department of Veterans Affairs at the time of installation
 - Vendor will run CAT cable from the wireless router to the touchscreen controller
 - Cable will be run in wall and in the ceiling if possible
- Department of Veterans Affairs will provide a GFE iPad for the control system
 - iPad will act as a wireless controller for the system
 - iPad will have the same page layouts as the wired touchscreen
 - wireless router will communicate with the GFE iPad
- Program the control system
 - Prior to programming the control system Vendor will coordinate with the Department of Veterans Affairs to verify the control panel layout and verify control system functionality
 - Once Vendor and the Department of Veterans Affairs has verified the control system functionality and scope of work Vendor will start the control system programming
 - Control will include:
 - Display monitors power on/off
 - Overall volume control
 - Source Select
 - GFE DVD/Bluray player transport functions (play, stop, skip, etc.)
 - GFE Tandberg C40 functions (PTZ camera control, placing/receiving VTC calls)
 - Any changes to the functionality of the control system that goes beyond the scope of work will incur additional charges
 - Test the system
 - Vendor will test the system to ensure functionality and operation as a standalone system
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(Room B309)

- Install three (2) 60" LED display monitors, one (1) 80" display monitor, and one (1) 75" SMART IFP
 - The first 60" display monitor will be located at the front of the room
 - There is an existing whiteboard where the display monitor will be mounted

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- The Department of Veterans Affairs will be responsible to remove this whiteboard and any other object and/or obstruction that may hinder the installation prior to Vendor's arrival
 - Display monitor will be centered to the wall
 - Exact location will be determined at the time of installation
 - The 2nd 60" LED display monitor will be mounted at the rear of the room in front of existing windows
 - The Department of Veterans Affairs will be responsible to remove all objects and obstructions that may hinder the installation of the display monitor prior to Vendor's installation
 - Vendor will use a ceiling mount for the display monitor
 - Vendor will drop the display monitor at an optimal height for ease of viewing and to clear any obstructions
 - Display monitor will be centered to the room
 - 80" display monitor will be located on the side wall
 - There is an existing whiteboard where the display monitor will be mounted
 - The Department of Veterans Affairs will be responsible to remove this whiteboard and any other object and/or obstruction that may hinder the installation prior to Vendor's arrival
 - Display monitor will be centered to the wall
 - Exact location will be determined at the time of installation
 - Electrical is required for the all three (3) monitors and SMART board
 - All electrical requirements for the display monitors will be provided by and be the responsibility of others prior to Vendor's installation
 - Vendor can provide electrical information once a formal notice to proceed and/or award has been issued to Vendor
- Rack mount and integrate new and Government Furnished Equipment (GFE)
 - Vendor will rack mount all equipment within a new 30RU wood finish rack enclosure
 - Department of Veterans Affairs will be responsible to provide all GFE at the time of installation
 - Vendor will rack mount new equipment and GFE within the rack enclosure onsite
 - A 10x8 twisted pair matrix switcher will be mounted within the rack enclosure
 - Sources that will connect to the matrix switcher will include:
 - GFE Host PC
 - GFE DVD/Bluray player
 - GFE Cisco SX20 VTC system
 - GFE Host PC and the GFE DVD/Bluray player will be located within the rack enclosure

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- Both sources will connect to the matrix switcher via HDMI cable
 - Vendor will provide the HDMI connection cables
- GFE Cisco SX20 VTC codec will be located within the rack enclosure
 - GFE SX20 codec video output will route directly to the matrix switcher
 - A VTC network drop is required at the rack location
 - All VTC network requirements will be provided by and be the responsibility of the Department of Veterans Affairs prior to Vendor's installation
 - This includes but is not limited to VTC bandwidth and security requirements
- GFE Cisco Precision HD Pan/Tilt/Zoom (PTZ) camera will be mounted on top of the 60" display monitor located at the rear of the room
 - GFE Tandberg PHD PTZ camera will be mounted to the top of the display monitor using a shelf bracket mounted to the display monitor ceiling bracket
 - PTZ camera will connect to a CAT cable extension transmitter located at the camera location
 - Vendor will run CAT cable from the transmitter to a receiver located at the rack enclosure
 - CAT cable will be run in the ceiling and within walls if possible
 - HDMI output from the receiver will connect directly to the GFE Cisco SX20 codec
 - Vendor will provide the HDMI connection cables
- Install one (1) twisted pair wall interface plates within the room
 - Interface plate will be located at the front of the room under the display monitor
 - Exact location will be determined by the Department of Veterans Affairs at the time of installation
 - Vendor will run shielded CAT6 cable from the wall interface to the matrix switcher located within the rack enclosure
 - CAT6S cable will be run in the ceiling and within walls if possible
 - Wall interface plate connections will include:
 - One (1) HDMI
 - One (1) VGA
 - Two (2) 3.5mm audio
- Install two (2) USB interface plates
 - Vendor will install first USB extender transmitter interface plate next to 1st interface plate under display monitor and SMART board
 - Vendor will run CAT6 from USB transmitter to USB receiver

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- Vendor will use USB to connect receiver to switcher
- Vendor will mount 2nd USB extender interface plate next to 2nd twisted pair interface plate in the rear of the room
 - Vendor will run CAT6 from USB transmitter to USB receiver
 - Vendor will use USB to connect receiver to switcher
- Integrate switcher for touch capabilities when using SMART board
 - Vendor will use a USB cable to connect switcher to USB extender receiver
 - Vendor will run RS232 cable from switcher to control processor
 - Vendor will run CAT6 cable from USB receiver to USB transmitter
 - USB transmitter will be located inside of the rack
 - Vendor will run a USB cable from transmitter within the rack to GFE PC that will also be located within the rack
- Matrix switcher will take a feed from Rooms B306 and B308
 - Vendor will run shielded CAT6 cable from a twisted pair HDMI transmitter from rooms B306 and B308 respectively to twisted pair
 - HDMI receivers located within the rack enclosure
 - This will allow for the room combination scenario
 - HDMI outputs from each receiver will route directly to the matrix switcher
 - Vendor will provide the HDMI connection cables
- Integrate display monitors and SMART board and outputs of the matrix switcher
 - Four (4) twisted pair outputs of the matrix switcher will route to the respective 60" display monitors, 80" display monitors, and SMART board
 - Vendor will run shielded CAT6 cable from the matrix switcher to the respective twisted pair HDMI receiver
 - Each receiver will be mounted to the rear of the display monitor
 - HDMI output of the receivers will connect directly to the display monitor
 - Vendor will provide the HDMI connection cable
 - Two (2) HDMI outputs of the matrix switcher will connection to a respective twisted pair HDMI transmitter
 - HDMI transmitters will be located within the rack enclosure
 - Vendor will provide the HDMI connection cables
 - Vendor will run shielded CAT6 cable from the HDMI transmitters to the respective HDMI receiver in Room B308 and Room B306
 - This will allow for the room combination scenario
- Install and integrate audio system
 - Vendor will rack mount an audio Digital Signal Processor (DSP) with VoIP capability within the rack enclosure
 - Audio output from the matrix switcher will route directly to the audio DSP
 - Install two (2) ceiling microphones

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- Vendor will mount the microphones at strategic locations for optimal audio pick up
- Microphones will route directly to the audio DSP
- Ceiling microphones will only be used for VTC and audio conferencing
- Ceiling microphones will not be used for voice reinforcement
- Integrate two (2) wireless microphone systems
 - Two (2) wireless microphone receivers will be mounted within the rack enclosure
 - Microphone receivers will route directly to the audio DSP
 - One (1) wireless handheld microphone and one (1) wireless bodypack transmitter with wired lavalier microphone will be provided
- Audio DSP will take a feed from the respective audio DSP of rooms B308 and B306
 - This will allow for the room combination scenario
 - VoIP network will connect to the audio DSP
 - A VoIP network drop is required at the rack enclosure
 - All VoIP requirements will be provided by and be the responsibility of the Department of Veterans Affairs prior to Vendor's installation
 - This includes but is not limited to bandwidth and security
- Outputs from the audio DSP will route to the respective audio DSP of rooms B308 and B306
 - This will allow for the room combination scenario
- Output from the audio DSP will route to an audio power amplifier
 - Audio power amplifier will be located within the rack enclosure
- Audio power amplifier will drive a total of two (2) ceiling recessed loudspeakers
 - Vendor will remove existing ceiling speakers
 - Once old speakers have been removed it will be placed in the responsibility of the Department of Veterans Affairs
 - Vendor will install new speakers in optimal locations within the room for best audio coverage
- Program audio DSP
 - Vendor will program the audio DSP based on the functionality of the system
 - Ceiling microphones levels will be set for optimal voice pick up during VTC and audio conferencing calls
 - **NOTE: ceiling microphones will not be used for any voice reinforcement**
 - Wireless microphones levels will be set for optimal voice reinforcement
 - **NOTE: wireless microphones gain levels cannot exceed a certain decibel level due to audio loops and feedback that may**

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occur during VTC and audio conferencing calls when using the wireless microphones

- Wireless microphones will only be used for voice reinforcement
 - Vendor will set the microphone levels to optimal settings
 - Microphone decibel levels may not be sufficient for the Department of Veterans Affairs's requirements
 - Configure audio DSP for audio conferencing
 - A user will be able to place and receive an audio call using the touchscreen controller
 - Configure audio DSP for room combine
 - Audio DSP will be able to send and receive audio from rooms B308 and B306 for room combination scenarios
- Integrate control system equipment
 - Control system processor will be located within the rack enclosure
 - Equipment that will be controlled by the control system will connect to the control system processor
 - Equipment that will be controlled will include:
 - Matrix switcher
 - One (1) 80" display monitor
 - Two (2) 60" display monitors
 - One (1) 75" SMART board
 - Audio DSP
 - GFE Cisco SX20
 - GFE DVD/Bluray player
 - Control system processor will route to a wireless router with Power Over Ethernet (PoE)
 - Vendor will mount a 10" wired touchscreen controller within the room
 - Touchscreen will be mounted where existing light switches are located
 - Exact location will be determined by the Department of Veterans Affairs at the time of installation
 - Vendor will run CAT cable from the wireless router to the touchscreen controller
 - Cable will be run in wall and in the ceiling if possible
 - Vendor will provide a iPad for the control system
 - iPad will act as a wireless controller for the system
 - iPad will have the same page layouts as the wired touchscreen
 - wireless router will communicate with the iPad
- Program the control system

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- Prior to programming the control system Vendor will coordinate with the Department of Veterans Affairs to verify the control panel layout and verify control system functionality
 - Once Vendor and the Department of Veterans Affairs has verified the control system functionality and scope of work Vendor will start the control system programming
- Control will include:
 - Display monitors power on/off
 - Overall volume control
 - Source Select
 - GFE DVD/Bluray player transport functions (play, stop, skip, etc.)
 - GFE Cisco SX20 functions (PTZ camera control, placing/receiving VTC calls)
- Any changes to the functionality of the control system that goes beyond the scope of work will incur additional charges
- Test the system
 - Vendor will test the system to ensure functionality and operation as a standalone system

(Room Combine)

- Each room can be used independently in a “Standalone Mode”
- The control system will be programmed so that the rooms can be combined in any combination as well as a “total room combine”
 - One room will be designated the “master” room while the other rooms will be designated the secondary rooms
 - The sources from the “master” room will be viewed on the display monitors of the secondary rooms
 - The secondary rooms sources will not be able to be sent through the system while in combined mode
- A user will be able to use the touchscreen controller to choose how the rooms will be combined
 - “master” room control will be accomplished through the touchscreen controller of the master room that is chosen
- A user will be able to un-combine the rooms via the touchscreen controller
- Provide training on the system
 - Vendor will provide a total of two (2) hours of verbal onsite training on the system
 - Vendor can provide a quote for additional training upon request
 - Vendor will provide a custom operation manual

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1. Places of Performance Timeline

a. Phase I

b. Conference Room 3-B06 07/09/18 – 07/13/18

c. Phase II

d. Conference Room 3-B08 07/16/18 – 07/20/18

e. Phase III

f. Conference Room 3-B09 07/23/18 – 07/27/18

2. Hours of Operation

- a. All work shall be performed normal operating hours. Monday through Friday, not to include Federal Holidays. The contractor must be badged and escorted by VA employees always.

3. Federal Holidays:

Date	Holiday
Wednesday, July 4	Independence Day
Monday, September 3	Labor Day
Monday, October 8	Columbus Day
Monday, November 12	Veterans Day
Thursday, November 22	Thanksgiving Day
Tuesday, December 25	Christmas Day

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4. Veterans Affairs Furnished Items

The Department of Veterans Affairs, IT Department and Logistics will not furnish any new equipment. Only equipment to be furnished will be existing GFE stated in this PWS.

5. Contractor Furnished Items and Responsibilities

The Contractor shall furnish all supplies, equipment and services required to perform work under this contract.

6. Performance Service Summary

7. Requirement	8. Standard	9. Acceptance Level
1. Schedule a kick off meeting working with the COR and create an overall project plan and schedule for performing the tasks and deliverables.	Five (5) days after contract award.	100%
2. Weekly status reports throughout period of performance to include: documentation of issues/risks/mitigation strategies and communication plan, documentation of tasks performed, and the identification of performers according to the layout of the project schedule/contract deliverables.	Every Friday by COB at the end of the work week.	Not more than 3 instances of being untimely.
3. Create technical specifications and design documents including design drawings	In accordance with project schedule	Not more than 10 calendar days deviation from project schedule.
4. Provide software and hardware for installation and implementation in accordance with PWS	In accordance with project schedule.	Not more than 10 calendar days deviation from project schedule.

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5. Perform system testing, interface testing, and support testing of hardware and software. The contractor shall set up and configure test environment, verify setup and documentation and support the project team to perform functional and integration tests. The contractor will support the validation of the installation of the production environment; and support the stabilization period after the go-live.	In accordance with the project schedule.	Not more than 5 calendar days deviation from project schedule.
6. Perform acceptance testing. The VAPIHCS and COR shall test and verify all deliverables for successful completion.	In accordance with project schedule.	Not more than 10 calendar days deviation from project schedule.
7. Perform implementation in production.	In accordance with project schedule.	Not more than 5 calendar days deviation from project schedule.
8. Prepare and deliver training for all relevant solution features, including content management. The contractor shall develop and deliver class(es) on-site, and deliver instructional materials including documentation.	In accordance with project schedule.	Not more than 20 calendar days deviation from project schedule.
9. Prepare and deliver documentation. The contractor shall deliver VAPIHCS specific user and system administrator guides.	In accordance with project schedule.	Not more than 20 calendar days deviation from project schedule.

7. Completion/Installation:

Contractor shall coordinate with Logistics to provide delivery and installation of the audio and visual equipment according to the renovation timeline at the Spark M. Matsunaga VA Medical Center located at 459 Patterson Road, Honolulu, HI 96819

Security/National Agency Requirements

Not applicable.

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The Contracting Officer's Representative (COR) is:

- a. Robert A. Duarte
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Email: Robert.Duarte@va.gov