Thursday, December 03, 2020

City of Marshall

Proposal for Audio-Visual Service
RE: City of Marshall - City Hall
Opportunity Number: 21874 R3

Scope of Integration Services

Summary of Work to be completed by Tierney at **344 W. Main St. Marshall, MN 56258**.
(Please initial if address is correct or provide correct address. _____)

Executive Summary:
System Objective and Overview
Tierney is pleased to present the City of Marshall (the Client) with the following scope of work for upgrading their current AV Capabilities.

General Notes on Video conferencing/Web conferencing:
1. Tierney has designed some of these spaces to include the ability to have video/web conferencing, which will ONLY allow web conferencing from the in-room PC. This is to reduce the cost of USB Host switching for cameras.

2. It is Tierney's recommendation that lighting be considered and measured for any space receiving video conferencing equipment. Any overhead lighting should allow for a dimmable zone at the front of the room in both spaces, and direct lighting of 55 fc on the presenter, measured at 45 degrees up and pointing to camera, is a nominal recommended value for video lighting.

NOTE: **Quotes A, B, K, and L have been fully removed from this scope of work. Rooms, 320, 349 and Open Office areas 240 and 333, and any/all office display equipment have been removed from their respective quotes and are no longer receiving AV attention.**

Quote: (C – Rm 326 (formerly Rm 222) – Conference Room)

Where You See It
Video Display Solution
An 75" interactive display will be wall mounted to the project-east wall of the room, centered on the U-shaped table cluster.

What You Will See
Video Source Solution
Sources that will be available to show on the display will be the following:
- One (1) Client provided dedicated PC
- One (1) HDMI connection located at a floor box

This design specifies that the touch capabilities ONLY be provided for the Client Dedicated PC or integrated OPS PC.

USB touch can be extended to the laptop connection if the Client requests, but that is currently not part of this scope.

One (1) USB PTZ camera will be provided, wall mounted to one-side of the interactive touch screen. This will be extended back to the dedicated PC for video during web-conferencing.

What You Will Hear
Audio Source Equipment
Audio will be heard through low-profile, in-ceiling speakers. These will be white in color, and have an easy to remove grill.

One (1) low-profile ceiling mounted microphones will be provided for audio conferencing. These will be run back to AV rack within the room. Microphones will be plugged directly into the dedicated PC and will be visible for web-conferencing.

How You Will Use the System
Control Solution
System control will be performed using a table-top Button Panel controller. This will be connected to a CAT6 port in the same floor box as the HDMI connection, and will be able to be unplugged if necessary (although system control would be lost until it is re-plugged) in order to accommodate the movement of the tables in the room. System will have the following functionality:
- Power control (system on/off)
- Source selection (Laptop vs PC)
- Volume control for in-room audio
- Mic mute for ceiling microphones
- Four (4) camera presets

Note: for full PTZ control, users will either need to use the supplied manufacture's remote control, or additional equipment and programming will be required.

Where Is It Being Put?
Furniture/Rack Solution
Button panel will be mounted in 2-gang table-top box, which not be bolted down to anything, and will be able to be disconnect from the floor box in order to move the table. With the controller removed, the room will not function until plugged back in. With the requirement of mobile tables, a tabletop controller will need to be able to be disconnected in order to provide easy movement of the tables. Camera will be mounted to the size of the interactive display (mounting below the monitor would require lifting the monitor up to an untenable height for interactivity).

What You Need to Provide
Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Verify a minimum of a Duplex 120V/15A electrical receptacle, on a separate circuit for AV, mounted at each display location. This will include one (1) wall-mounted receptacle inside an in-wall box, and at least one (1) floor-mounted receptacle inside the provided AV floor boxes.
- Verify a minimum of one free duplex 120V/15A electrical receptacle, on a separate circuit for AV, mounted at the Rack location.
- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill from the rack wall, to the accessible ceiling, and then from accessible ceiling, down underneath the raise dais floor to the AV Floor boxes. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and each wall-mounted touch screen to an accessible ceiling.
- Provide four (4) new Client network drops at the rack conferencing PC, processor, audio DSP, and one (1) for any additional expansion that might be needed.
- Provide at least two (2) Client network drops at the display for display control and camera.
- Other trades to Install electrical items including in-wall AV box, Floor boxes, hardwired electrical receptacles at AV floor and wall boxes, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney, if not included in this Scope of work.
- All furniture cuts not included in this SOW will the responsibility of the client and/or other trades, with coordination, placement, and schematics to be provided by Tierney. If Client prefers to use furniture vendor for Tierney specified cuts, this can be arranged.
- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required.
- Working with Tierney Project management, fill out any required networking coordination worksheets for VOIP switch config, or other items.
- Verify is SIP/VOIP configuration is needed, or if RingCentral through Zoom will be utilized.
- Verifying configuration of the network connection prior to Tierney installation date.
- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Verify with Tierney project management requirements for output on PC/laptop.
- Client will need to set up and configure any computing resources. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.
- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Quote: (D – Rm 231)

<u>Where You See It</u>
Video Display Solution
This room will receive a new non-interactive 55" display, which will be wall mounted on the specified display walls (see construction drawings for reference AVE.001 item 1).

What You Will See
Video Source Solution
This room will have a Sources that will be available to show on the display will be the following:
- One (1) Client provided dedicated PC
- One (1) HDMI connection located in a cable cubby within each table.

What You Will Hear
Audio Source Equipment
Audio will be heard the integrated speakers on the Display. NO CONFERENCING WILL BE PROVIDED IN THIS ROOM!

How You Will Use the System
Control Solution
System control will be performed using the OEM remote control.

Where Is It Being Put?
Furniture/Rack Solution
Displays will be mounted to verified display walls. OFE PC will be mounted behind the display. HDMI Extender equipment will be provided at the table, which is currently shown in the center of the room.

What You Need to Provide
Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Verify a minimum of a Duplex electrical receptacle, on a separate circuit for AV, mounted at each display location, table core hole, and lectern.
- Verify a minimum of a Quadplex electrical receptacle, on a separate circuit for AV, mounted at the Rack location.
- Client PC should be of the
- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and touch screen to an accessible ceiling.
- Provide at least five (5) Client network drops at the rack for Room PC, Mersive Solstice, one (1) for the AV controller, and two (2) for any future added OFE equipment that might need to utilize the network. Exact location to be coordinated with Tierney project management prior to installation.
- Provide at least two (2) Client network drops at the display for one (1) for the Display control/RS232, and one (1) for any future added OFE equipment that might need to utilize the network. Exact location to be coordinated with Tierney project management prior to installation.
- Other trades to Install electrical items including hardwired whip of table box, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney.
- All furniture cuts will the responsibility of the client and/or other trades, with coordination, placement, and schematics to be provided by Tierney.

- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required. Zoom Room PC with appropriate licensing – either Intel NUC, Lenovo or HP. Tierney can help facilitate engagement with Zoom Room purchasing.
- Working with Tierney Project management, fill out any required networking coordination worksheets for VOIP switch config, or other items.
- Verifying configuration of the network connection prior to Tierney installation date.
- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Verify with Tierney project management requirements for output on PC/laptop.
- Client will need to set up and configure any computing resources. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.
- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Quote: (E – RM 212 – Lobby Signage)

Where You See It
Video Display Solution
Two (2) new 75" UHD displays will be provided, and wall mounted to the specified display wall (see construction drawings for reference – AVE.001 items 2 and 3)

What You Will See
Video Source Solution
Each display will have a BrightSign player installed on a pull-out sliding shelf behind the display.
An additional overflow feed from the council chamber will be provided in order to allow members to view council events even if there is no space in either the council chamber, or overflow area.

What You Will Hear
Audio Source Equipment
Audio has been removed from this scope of work. This means that no audio will be provided as part of this SOW. No background music or other audio will be provided in this SOW as per the last Client meeting.

How You Will Use the System
Control Solution
Display will be set to a schedule that will turn on and off at times specified by the Client. Display can be set to power on and set volume to specific levels as well, if audio noise would be an issue. Additional control functionality will be provided via a touch screen mounted to a table top gang-box at the reception desk. This will include functions for the following:
- Discrete display power control
- Discrete display source selection (e.g. Signage vs Council Chamber overflow).
- Audio control (volume, mute)
- Lobby sound masking on/off control (for council overflow or music).

BrightSign will be controlled via the BrightSign network, which is a web-based UI available for log in from any computer or device. This will allow loading of videos, video scheduling, setting audio playback, etc. if video selection is wanted from a local interface, Tierney recommends a iPad with the BrightSign app. This would be an additional template set up, which the Client would be able to do themselves, or for an additional allotment of Tierney digital signage services time.

In order to provide the best available options, Tierney would like to set up a meeting with our digital signage specialist, Kyleen.

Where Is It Being Put?
Furniture/Rack Solution
Displays will be mounted to verified display walls, at an elevated height for better viewing. BrightSign players will be mounted behind each display. Additional components for council overflow will be mounted behind the display. Touch control will be mounted on the table surface of the reception desk. Speakers will be ceiling mounted, and configured as per an EASE model which will be provided to the client after signoff.

What You Need to Provide
Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Client will need verify availability on a duplex 120V/15A electrical receptacle, on a separate circuit for AV, mounted at each display location, table core hole, and lectern. If no electrical existing, working with Tierney engineer (engr.) and Tierney project manager (PM) to determine placement and type.
- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and touch screen to an accessible ceiling.
- Verify at least two (2) Client network drops at each display wall will be available for the TV and the BrightSign player.
- Other trades to Install electrical items including hardwired whip of table box, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney.
- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required.
- Verifying configuration of the network connection prior to Tierney installation date.
- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Client will need to set up and configure any computing resources, such as PC or iPad/Tablets. Tierney will configure the appropriate applications and software, but purchase and installation of apps and software will need to be by the Client directly. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.

- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Quote: (F – 217 – Conference Room + Overflow)

Where You See It
Video Display Solution
A new 86" UHD display will be provided mounted to the plan-west wall in room 217. This will provide video for both room 217 when separate, and for the Council Chamber overflow when combined.

What You Will See
Video Source Solution
This room will have a Sources that will be available to show on the display will be the following:
- One (1) Client provided dedicated PC
- One (1) HDMI connection located in a cable cubby within each table.

One (1) wall-mounted PTZ camera will be provided in order to pick up audience during web conferencing calls. This will be placed and verified in the field w/ the Client for preferred Client view.

What You Will Hear
Audio Source Equipment
Audio will be through in-ceiling speakers that will provide audio for both conferencing, and program audio.

An in-ceiling beamforming microphone system will be provided for conferencing when the room is used in a stand-alone system.

How You Will Use the System
Control Solution
System control will be performed using a wall-mounted touch screen controller. Wall mounting the controller will be best practice in order to accommodate the movement of the tables in the room, without requiring an unplugging of the control interface. System will have the following functionality:
- Power control (system on/off)
- Source selection and routing (Including Council Chamber overflow for video and audio)
- Selection for web conferencing (this will bring up the Room PC with PTZ camera controls)
- Volume control for in-room audio
- Mic mute for ceiling microphones

Where Is It Being Put?
Furniture/Rack Solution
Displays will be mounted to verified display walls. OFE PC, wireless presentation, and video switching equipment will mounted behind the display on pull-out shelving components. Video transmitter will be mounted in the floor in 217, so that the mobile tables can change positions. A single receiver, with CAT6 cabling originating in the 218 Council Chamber's rack room, will be mounted behind the display and plugged into a side-input for the display. This will act as Council Chamber's Overflow. Microphones will be lay-in-tile style beamforming ceiling mics. DSP equipment will reside in the shared 218 rack.

What You Need to Provide

Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Verify a minimum of a Duplex electrical receptacle, on a separate circuit for AV, mounted at each display location, table core hole, and lectern.
- Verify a minimum of a Quadplex electrical receptacle, on a separate circuit for AV, mounted at the Rack location.
- Client PC should be of the
- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and touch screen to an accessible ceiling.
- Provide at least five (5) Client network drops at the rack for Room PC, Mersive Solstice, one (1) for the AV controller, and two (2) for any future added OFE equipment that might need to utilize the network. Exact location to be coordinated with Tierney project management prior to installation.
- Provide at least three (3) Client network drops at the display for one (1) for the Display control/RS232, and one (1) for OFE PC, one for wireless presentation. It would also be beneficial to provide in-place spare for any future OFE equipment that might need to utilize the network. Exact location to be coordinated with Tierney project management prior to installation.
- Other trades to Install electrical items including hardwired whip of table box, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney.
- All furniture cuts will the responsibility of the client and/or other trades, with coordination, placement, and schematics to be provided by Tierney.
- ¾" Plywood backerboard will be required at the display wall @ height provided on AV elevations.
- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required. Zoom Room PC with appropriate licensing – either Intel NUC, Lenovo or HP. Tierney can help facilitate engagement with Zoom Room purchasing.
- Working with Tierney Project management, fill out any required networking coordination worksheets for VOIP switch config, or other items.
- Verifying configuration of the network connection prior to Tierney installation date.
- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Verify with Tierney project management requirements for output on PC/laptop.
- Client will need to set up and configure any computing resources. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.
- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Quote: (G – 218 – Council Chamber)

Where You See It
Video Display Solution
One (1) new 7000 lumen projector will be installed, approximately 13' from a new 123" fixed-frame, wall-mounted, projection screen. Projector will be ceiling mounted, and will drop from the ceiling on a 1.5" white NTP column pipe.

One (1) 86" ceiling mounted 86" display will be mounted from the ceiling, and will be showing the program feed from a new NewTek TriCaster system. This display will be used to inform the council of what video is currently on screen (used as a monitor for video so they will know when they are on camera).

Discrete Monitors for Council members has been removed from Tierney SOW.

What You Will See
Video Source Solution
The Sources that will be available to show on the projector screen and council member displays will be the following:
- One (1) Client provided dedicated PC
- Three (3) HDMI connections:
    - One located in a cable cubby at the Department Head table
    - One input at the Presenter's lectern location
    - One in a cable cubby at the Dias location.
- One (1) In-ceiling Document camera, located above the presenter lectern for document viewing.

Three (3) PTZ NDI cameras, and a NewTek TriCaster Mini-HD4 w/ touch screen monitor and wireless mouse and keyboard will be installed in the room. The TriCaster mini-HD4 will switch NDI cameras, and provide the program feed back to the video switch where it will be sent to the appropriate display.

What You Will Hear
Audio Source Equipment
Audio will be through in-ceiling speakers that will provide audio for both conferencing, and program audio.

At each council member position, one of nine (9) mounted, gooseneck microphones and an individual, single-gang monitor speaker with volume control will be installed in a 3-gang box the left- or right-hand side of each council seat. The goosenecks, with a 15" reach, and a cardioid microphone capsule will allow for excellent pickup of each council member. The RDL volume controllable loudspeaker will allow the council members to have a direct method of listening to the program audio aside from the in-room speakers.

An assistive listening system will be provided to ensure ADA compliance for the meeting space.

How You Will Use the System
Control Solution
System control will be performed using two (2) touch screen control units. Each unit will be a table-top model with independent control of the system. System will have the following functionality:

- Power control (system on/off – user will have the ability to select the "type" of meeting on the touch panel – council meeting, general meeting, etc.). When Council Meeting vs. General Meeting (examples) is selected the system will automatically default to preset settings)
- Source selection and routing (Including Council Chamber overflow for video and audio)
- Selection for web conferencing (this will bring up the Room PC with a note of "Please use production control system for camera control" message)
- Volume control for in-room audio
- Mic mute for all mics

Where Is It Being Put
Furniture/Rack Solution

Displays will be mounted to verified display walls. OFE PC, wireless presentation, and video switching equipment will mounted behind the display on pull-out shelving components. Video transmitter will be mounted in the floor in 217, so that the mobile tables can change positions. A single receiver, with CAT6 cabling originating in the 218 Council Chamber's rack room, will be mounted behind the display and plugged into a side-input for the display. This will act as Council Chamber's Overflow. Microphones will be lay-in-tile style beamforming ceiling mics. DSP equipment will reside in the shared 218 rack. Document camera will be mounted within the ceiling tile above the presenter lectern. Lectern will be provided by Tierney and will be a Spectrum sit-to-stand in the color of Maple (color change can be accommodated depending upon Client request.

What You Need to Provide
Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Verify a minimum of a Duplex electrical receptacle, on a separate circuit for AV, mounted at each display location, table core hole, and lectern.
- Verify a minimum of a Quadplex electrical receptacle, on a separate circuit for AV, mounted at the Rack location.
- Client PC should be of the
- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and touch screen to an accessible ceiling.
- Provide at least five (5) Client network drops at the rack for Room PC, Mersive Solstice, one (1) for the AV controller, and two (2) for any future added OFE equipment that might need to utilize the network. Exact location to be coordinated with Tierney project management prior to installation.
- Provide at least two (2) Client network drops at the Lectern, for Client data to laptop, and future, additional equipment.
- Provide thirteen (13) Client data at the Dais – nine (9) for the PCs for the Council members, two (2) cable cubby location and two (2) future use.
- Provide at least two (2) network connections at the Department Head tablet for the cable cubby.
- Provide at least three (3) Client network drops at projector and ceiling mounted display for one (1) for the Display control/RS232, and one (1) for OFE PC, one for wireless presentation. It would also be beneficial to provide in-place spare for any future OFE equipment that might need to

utilize the network. Exact location to be coordinated with Tierney project management prior to installation.

- Other trades to Install electrical items including hardwired whip of table box, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney.
- All furniture cuts will the responsibility of the client and/or other trades, with coordination, placement, and schematics to be provided by Tierney.
- ¾" Plywood backerboard will be required at the display wall @ height provided on AV elevations.
- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required. Zoom Room PC with appropriate licensing – either Intel NUC, Lenovo or HP. Tierney can help facilitate engagement with Zoom Room purchasing.
- Working with Tierney Project management, fill out any required networking coordination worksheets for VOIP switch config, or other items.
- Verifying configuration of the network connection prior to Tierney installation date.
- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Verify with Tierney project management requirements for output on PC/laptop.
- Client will need to set up and configure any computing resources. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.
- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Quote: (H – Rm 350 – Conference Room)

Where You See It
Video Display Solution
A new 65" non-interactive display will be wall mounted to the project-east wall of the room, centered on the U-shaped table cluster.

What You Will See
Video Source Solution
Sources that will be available to show on the display will be the following:
- One (1) Client provided dedicated PC
- One (1) HDMI connection located at a floor box

This design specifies that the touch capabilities ONLY be provided for the Client Dedicated PC or integrated OPS PC.

USB touch can be extended to the laptop connection if the Client requests, but that is currently not part of this scope.

One (1) USB PTZ camera will be provided, wall mounted to one-side of the interactive touch screen. This will be extended back to the dedicated PC for video during web-conferencing.

What You Will Hear
Audio Source Equipment
Audio will be heard through low-profile, in-ceiling speakers. These will be white in color, and have an easy to remove grill.

One (1) low-profile ceiling mounted microphones will be provided for audio conferencing. These will be run back to AV rack within the room. Microphones will be plugged directly into the dedicated PC and will be visible for web-conferencing.

How You Will Use the System
Control Solution
System control will be performed using a table-top Button Panel controller. This will be connected to a CAT6 port in the same floor box as the HDMI connection, and will be able to be unplugged if necessary (although system control would be lost until it is re-plugged) in order to accommodate the movement of the tables in the room. System will have the following functionality:
- Power control (system on/off)
- Source selection (Laptop vs PC)
- Volume control for in-room audio
- Mic mute for ceiling microphones
- Four (4) camera presets

Note: for full PTZ control, users will either need to use the supplied manufacture's remote control, or additional equipment and programming will be required.

Where Is It Being Put?
Furniture/Rack Solution
Button panel will be mounted in 2-gang in-wall electrical box, and will allow the room to be able to be controlled while allowing the tables to remain mobile.

One (1) new 12RU mobile/rolling rack will be provided in the corner of the room for housing audio processing equipment and Room PC.

Camera will be mounted to the size of the interactive display (mounting below the monitor would require lifting the monitor up to an untenable height for interactivity).

What You Need to Provide
Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Verify a minimum of a Duplex 120V/15A electrical receptacle, on a separate circuit for AV, mounted at each display location. This will include one (1) wall-mounted receptacle inside an in-wall box, and at least one (1) floor-mounted receptacle inside the provided AV floor boxes.
- Verify a minimum of one free duplex 120V/15A electrical receptacle, on a separate circuit for AV, mounted at the Rack location.

- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill from the rack wall, to the accessible ceiling, and then from accessible ceiling, down underneath the raise dais floor to the AV Floor boxes. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and each wall-mounted touch screen to an accessible ceiling.
- Provide four (4) new Client network drops at the rack conferencing PC, processor, audio DSP, and one (1) for any additional expansion that might be needed.
- Provide at least two (2) Client network drops at the display for display control and camera.
- Other trades to Install electrical items including in-wall AV box, Floor boxes, hardwired electrical receptacles at AV floor and wall boxes, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney, if not included in this Scope of work.
- All furniture cuts not included in this SOW will the responsibility of the client and/or other trades, with coordination, placement, and schematics to be provided by Tierney. If Client prefers to use furniture vendor for Tierney specified cuts, this can be arranged.
- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required.
- Working with Tierney Project management, fill out any required networking coordination worksheets for VOIP switch config, or other items.
- Verify is SIP/VOIP configuration is needed, or if RingCentral through Zoom will be utilized.
- Verifying configuration of the network connection prior to Tierney installation date.
- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Verify with Tierney project management requirements for output on PC/laptop.
- Client will need to set up and configure any computing resources. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.
- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Quote: (I – Rm 348)

Where You See It
Video Display Solution
This room will receive a new non-interactive 65" display, which will be wall mounted on the specified display walls (see construction drawings for reference).

What You Will See
Video Source Solution
This room will have a Sources that will be available to show on the display will be the following:
- One (1) Client provided dedicated PC
- One (1) HDMI connection located in a cable cubby within each table.

What You Will Hear
Audio Source Equipment
Audio will be heard the integrated speakers on the Display. NO CONFERENCING WILL BE PROVIDED IN THIS ROOM!

How You Will Use the System
Control Solution
System control will be performed using the OEM remote control.

Where Is It Being Put?
Furniture/Rack Solution
Displays will be mounted to verified display walls. OFE PC will be mounted behind the display. 12RU

What You Need to Provide
Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Verify a minimum of a Duplex electrical receptacle, on a separate circuit for AV, mounted at each display location, table core hole, and lectern.
- Verify a minimum of a Quadplex electrical receptacle, on a separate circuit for AV, mounted at the Rack location.
- Client PC should be of the
- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and touch screen to an accessible ceiling.
- Provide at least five (5) Client network drops at the rack for Room PC, Mersive Solstice, one (1) for the AV controller, and two (2) for any future added OFE equipment that might need to utilize the network. Exact location to be coordinated with Tierney project management prior to installation.
- Provide at least two (2) Client network drops at the display for one (1) for the Display control/RS232, and one (1) for any future added OFE equipment that might need to utilize the network. Exact location to be coordinated with Tierney project management prior to installation.
- Other trades to Install electrical items including hardwired whip of table box, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney.
- All furniture cuts will the responsibility of the client and/or other trades, with coordination, placement, and schematics to be provided by Tierney.
- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required. Zoom Room PC with appropriate licensing – either Intel NUC, Lenovo or HP. Tierney can help facilitate engagement with Zoom Room purchasing.
- Working with Tierney Project management, fill out any required networking coordination worksheets for VOIP switch config, or other items.
- Verifying configuration of the network connection prior to Tierney installation date.

- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Verify with Tierney project management requirements for output on PC/laptop.
- Client will need to set up and configure any computing resources. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.
- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Quote: (J – Open Office 312)

Where You See It
Video Display Solution
A new 65" non-interactive display will be wall mounted. This will be wall mounted so visible when a user is located at the office desk.

What You Will See
Video Source Solution
A BrightSign player will be installed on a pull-out sliding shelf behind the display. This will be the only source available, unless Client has additional source selections (e.g. Cable TV).

What You Will Hear
Audio Source Equipment
Audio will be heard through integrated speakers on the display.

How You Will Use the System
Control Solution
Display will be set to a schedule that will turn on and off at times specified by the Client. Additional control will be performed through the OEM remote control that is provided with the display. Display can be set to power on and set volume to specific levels as well, if audio noise would be an issue.

BrightSign will be controlled via the BrightSign network, which is a web-based UI available for log in from any computer or device. This will allow loading of videos, video scheduling, setting audio playback, etc.

In order to provide the best available options, Tierney would like to set up a meeting with our digital signage specialist, Kyleen.

Note: Additional control functionality can be provided (e.g. touch screen for power on/off/source selection/cable TV) but cost associated with changes would need to be discussed with Tierney Project management.

What You Need to Provide
Client Responsibilities

The following responsibilities and items requested below are a requirement as per the project scope to be completed by the Client. If any of the below items cannot be completed prior to the dates coordinated with Tierney project management staff additional charges or project delays may occur.

- Client will need verify availability on a duplex 120V/15A electrical receptacle, on a separate circuit for AV, mounted at each display location, table core hole, and lectern. If no electrical existing, working with Tierney engineer (engr.) and Tierney project manager (PM) to determine placement and type.
- Provide accessible cable pathway, or a conduit of 1", with pull string and no more than 30% current fill. A 1" conduit should suffice from the rack wall to the accessible ceiling, each display to an accessible ceiling, from each table floor core to the accessible ceiling, and from each wall plate and touch screen to an accessible ceiling.
- Verify at least two (2) Client network drops at the display wall will be available for the TV and the BrightSign player.
- Other trades to Install electrical items including hardwired whip of table box, cubby systems, conduit, lighting, and any physical non-low voltage cabling, if needed.
- Verify table or wall cut locations, if required, with Tierney project management, other trades to perform cuts based on information provided by Tierney.
- Working with Tierney project management, determine network requirements and certification for the devices that will reside on Client network, as well as network constraints, or VLAN information that will be required.
- Verifying configuration of the network connection prior to Tierney installation date.
- Verify Firmware on reuse equipment is most up-to-date in order to function with control equipment.
- Client will need to set up and configure any computing resources, such as PC or iPad/Tablets. Tierney will configure the appropriate applications and software, but purchase and installation of apps and software will need to be by the Client directly. This includes: installing any Client software, UC or web conferencing software, hardware configurations internal to the computer, firmware and operating system updates, etc. Tierney will take computing resources and install them within the AV system, and will verify functionality of AV components.
- Provide a clear, clean, and accessible room for the installation.
- Coordination of parking and building access.
- Verify all existing equipment that will be reused is functional prior to install technicians on site, this includes Cable TV boxes.

Customer Expectations:
If multiple rooms were quoted, installation pricing for this proposal assumes that all quotes will be signed off on and installed at the same time. If one or more of the quotes in this proposal are not approved, existing quotes will need to be revised to reflect those changes and additional charges may apply.

Equipment locations such as closets, or cabinetry may require additional venting, or in some cases dedicated cooling units to keep equipment operating at standard temperatures.

We appreciate the opportunity to present this proposal. If you have any questions, please do not hesitate to contact us at your convenience at 612-331-5500.   Our fax number is 612-331-3424.

Proposal Prepared By:
Sales Representative -   Mike Chapley
Systems Engineer -   Nick Pooler
(Please initial to acknowledge and authorize the Scope of Integration Services presented here. _____)

City of Marshall
City of Marshall - City Hall
21874 R3

Proposal Summary

Please Check the Quotes Intended for Purchase Order

C - Rm 326 - Conference R3

State Contract Total:	$	20,404.16
Non Contract Total:	$	5,102.59
Proposal Total:	**$**	**25,506.75** ☐

D - Rm 231- Conference R3

State Contract Total:	$	8,157.62
Non Contract Total:	$	-
Proposal Total:	**$**	**8,157.62** ☐

E - Rm 212 - Lobby R3

State Contract Total:	$	17,742.03
Non Contract Total:	$	15.37
Proposal Total:	**$**	**17,757.40** ☐

F - Rm 217 - Conference R3

State Contract Total:	$	31,355.01
Non Contract Total:	$	36.92
Proposal Total:	**$**	**31,391.93** ☐

G - Rm 218 - Council Chambers R3

State Contract Total:	$	127,731.30
Non Contract Total:	$	850.49
Proposal Total:	**$**	**128,581.79** ☐

H - Rm 350 - Conference R3

State Contract Total:	$	26,334.41
Non Contract Total:	$	153.68
Proposal Total:	**$**	**26,488.09** ☐

I - Rm 348 - Conference R3

State Contract Total:	$	8,380.56
Non Contract Total:	$	29.69
Proposal Total:	**$**	**8,410.25** ☐

J - Open Office 312 R3

State Contract Total:	$	6,043.04
Non Contract Total:	$	22.42
Proposal Total:	**$**	**6,065.46** ☐

Project Total:	**$**	**252,359.29**