Proposal Prepared For

City of Key West City of Key West - 2023 Chambers Upgrade





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Prepared by: Martin Lois Martin.Lois@avispl.com Proposal no: 408782-8



Investment Summary

Prepared For:	Jason Hoegle	Prepared By:	Martin Lois		
	City of Key West 1300 White Street Key West, FL 33040-4854	Date Prepared:	10/24/2023		
		Proposal #:	: 408782-8		
Key West, 12 55040 4654		Valid Until:	11/24/2023		
Total Equipme	ent Cost			\$67,866.74	
Includes cable, co operational syste	onnectors, hardware, switches, relays, terminal blocks, panels m	, etc., to ensure cor	nplete and		
Professional I	ntegration Services			\$44,374.00	
Includes engineering, project management, CAD, on-site installation and wiring, coordination and supervision, testing, checkout, owner training, etc. performed on the Owner's premises. Also includes all fabrication, modification, assembly, rack wiring, programming, warranties, etc., some performed at AVI-SPL					
Direct Costs				\$4,169.41	
Includes non equ	ipment or labor costs, such as travel expenses, per diem, lift a	and vehicle rentals			
General & Ad	ministrative			\$2,587.29	
Includes all G & A	expenses: vehicle mileage, shipping and insurance, as applic	able			
Services - Roo	m Support and Maintenance			\$14,972.80	
Includes post-ins	tallation support and maintenance options selected for instal	led rooms			
		Subtotal		\$133,970.24	
		Тах		Exempt (*)	
		Total		\$133,970.24	

* Exemption from sales tax will be recognized only after a valid sales tax exemption certificate or other appropriate documentation of exemption has been provided to and approved by AVI-SPL; otherwise all applicable sales taxes will apply.

Purchase orders should be addressed to AVI-SPL LLC

Due to global semiconductor ("chip") shortages and supply chain disruptions pricing quoted in this proposal may change. Installation schedules are subject to current (daily) product availability and may be delayed or postponed.



Terms and Conditions

This Proposal together with AVI-SPL's General Terms and Conditions and the applicable Addendum(a) located here and incorporated herein by this reference (collectively the "Agreement") constitutes the entire agreement between AVI-SPL LLC ("Seller", "AVI-SPL", "we", "us", "our") and the buyer/customer identified in the Proposal ("Buyer", "Customer", "Client", "you", "your") with respect to its subject matter and supersedes all prior and contemporaneous agreements, representations and understandings of the Parties, written or oral. By signing below, issuing a valid purchase order for the Services and/or Products specified herein or receiving the Products and/or Services specified herein, whichever occurs first, Buyer acknowledges it has read and agrees to the terms of this Agreement. This Agreement shall not be binding upon Seller until accepted by Buyer as set forth in this Agreement and the earlier of Seller's confirmation in writing of Buyer's order and Seller's performance under the applicable Proposal. Any terms and conditions contained in Buyer's purchase order or any other Buyer-provided documents related to this transaction shall have no effect and are hereby rejected. Notwithstanding anything herein to the contrary, if a master services agreement signed by both Parties is in effect covering the sale of the Services and/or Products that are the subject of this Proposal, the terms and conditions of said agreement shall prevail to the extent they conflict or are inconsistent with this Agreement.

Billing and Payment Terms

Unless otherwise agreed in writing by Buyer and Seller in the Proposal, the total Proposal price, excluding the price for Stand-alone Services (as defined in this section), shall be billed as follows, subject to continuing credit approval: 50% down payment at time of order, 40% upon delivery at Seller; 10% upon project completion and Buyer sign-off or first beneficial use, whichever occurs first, payable net 30 from Buyer's receipt of invoice. For purposes of this Agreement, "Stand-alone Services" means any Services not attached to an installation project. Billing and payment terms for Stand-alone Services are set forth in the applicable Service Addendum(a). Unless otherwise specified in the Proposal, Products are sold F.O.B. origin-Buyer to pay all shipping charges. If this Proposal covers Products or Services for more than one system, room, suite, or location, for purposes of payment made accordingly. Unless otherwise specified in the Proposal, all pricing and amounts are in US Dollars and all billing and payment shall be made in US Dollars.

Link to AVI-SPL Terms and Conditions: https://avispl.com/terms-of-use/

Buyer Acceptance

Buyer Legal Entity

Buyer Authorized Signature

Buyer Authorized Signatory Title

Buyer Authorized Signatory Name

Date



Room Summary - Commissioners Chambers

Equipment List

Mfg	Model	Description	Qty	Unit Price	Extended Price
		DISPLAY EQUIPMENT			
OWNER FURNISHED	OFE	LCD DISPLAYS W/ HDMI INPUT (Owner Furnished Equipment)	8	OFE	OFE
		SOURCE EQUIPMENT			
OWNER FURNISHED	OFE	AV WALL PLATES (Owner Furnished Equipment)	1	OFE	OFE
OWNER FURNISHED	OFE	AV FLOORBOXES (Owner Furnished Equipment)	3	OFE	OFE
OWNER FURNISHED	OFE	PRODUCTION SWITCHER (Owner Furnished Equipment)	1	OFE	OFE
OWNER FURNISHED	OFE	HDSDI ROUTER (Owner Furnished Equipment)	1	OFE	OFE
		SIGNAL TRANSPORT			
BLACK MAGIC DESIGN USA	BLACONVCMICSH12GW PSU	MICRO CONVERTER SDI TO HDMI 12G PSU TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	2	\$143.10	\$286.20
BLACK MAGIC DESIGN USA	BLACONVCMICHS12GW PSU	MICRO CONVERTER HDMI TO SDI 12G PSU TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	2	\$121.50	\$243.00
CRESTRON	CREDMNVX363	ENCODER/DECODER, DM 4K60 4:4:4 HDR NETWORK AV W/DOWNMIXING &	10	\$1,630.59	\$16,305.90
CRESTRON	CREHDTX101C1GEWT	TRANSMITER, DM LITE -HDMI OVER CATX, WALL PLATE, WHITE TEXTU TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$245.88	\$245.88
CRESTRON	CREDMNVXE760C	ENCODER CARD, DM 4K60 4:4:4 HDR NETWORK AV W/DM INPUT	1	\$1,229.41	\$1,229.41
CRESTRON	CREDMNVX363C	ENCODER/DECODER CARD, DM 4K60 4:4:4 HDR NETWORK AV W/DOWNMIX TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	4	\$1,552.94	\$6,211.76
CRESTRON	CREDMNVXD30C	DECODER CARD, DM 4K60 4:4:4 HDR NETWORK AV TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	4	\$841.18	\$3,364.72
CRESTRON	CREDMFCI8	CARD CHASSIS, DM FOR DM-NVX-C & DMCF, 8 SLOTS TIPS Contract 200904	2	\$1,294.12	\$2,588.24



Mfg	Model	Description	Qty	Unit Price	Extended Price
		Bid Term 12/31/2020 - 11/30/2023			
CRESTRON	CREDMNVXD30	DECODER, DM 4K60 4:4:4 HDR NETWORK AV TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	16	\$841.18	\$13,458.88
CRESTRON	CREDMNVXDIR80	SWITCH, DM NVX DIRECTOR VIRTUAL FOR 80 ENDPOINTS	1	\$3,721.18	\$3,721.18
CRESTRON	CREHDDA24KZE	DISTRIBUTION AMP, 1:2 HDMI W/4K60 4:4:4 & HDR SUPPORT TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	2	\$297.65	\$595.30
AJA VIDEO SYSTEMS	AJARMBRO	RACK MOUNT BRACKET FOR MINI CONVERTERS TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$13.24	\$13.24
AJA VIDEO SYSTEMS	AJAUTAPHDMIRO	CAPTURE DEVICE HD/SD USB 3.0 FOR MAC/WINDOWS/LINUX W/HDMI IN TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$387.35	\$387.35
TRIPPLITE	TRIU360004IND	USB HUB, 4-PORT INDUSTRIAL 3.0 SUPERSPEED 15KV ESD IMMUNITY TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$109.90	\$109.90
MEANWELL	MEAGST60A12P1J	POWER SUPPLY, 60W 12V/5A LEVEL VI DESKTOP EXTERNAL ADAPTOR TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$23.65	\$23.65
CABLES TO GO	CABC2G54279	EXTENDER, 1-PORT USB-C 3.1, PLENUM TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$931.80	\$931.80
		CONTROL EQUIPMENT			
NETGEAR	NETMSM4352100NES	SWITCH, 52PT M4350-44M4X4V MANAGED TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$4,940.26	\$4,940.26
CRESTRON	CRETST1080	TOUCH SCREEN, 10.1" WIRELESS TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$2,235.29	\$2,235.29
CRESTRON	CRETST1080DS	TABLE DOCK FOR TST-1080 TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$117.65	\$117.65
CRESTRON	CRETSW1070BS	TOUCH SCREEN, 10.1" WALL MOUNT, BLACK SMOOTH TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$1,992.94	\$1,992.94
CRESTRON	CRETSW1070RMK2	RACK MOUNT KIT FOR TSW-1070 SERIESK TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$129.41	\$129.41



Mfg	Model	Description	Qty	Unit Price	Extended Price
CRESTRON	CRECP4N	CONTROL SYSTEM, 4 SERIES	1	\$1,811.76	\$1,811.76
		AUDIO EQUIPMENT			
OWNER FURNISHED	OFE	WIRELESS MICROPHONE SYSTEM (Owner Furnished Equipment)	1	OFE	OFE
QSC	QSCCORE110FV2	SYSTEM, UNIFIED SERIES CORE W/ 24 LOCAL I/O CHANNELS, 1RU TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$2,971.77	\$2,971.77
QSC	QSCSLDAN32P	SOFTWARE LICENSE, Q-SYS DANTE 32x32 CHANNEL, PERPETUAL TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$649.41	\$649.41
QSC	QSCQIOL40	NETWORK AUDIO EXPANDER, 4 LINE OUTPUTS	1	\$395.29	\$395.29
OWNER FURNISHED	OFE	ASSISTIVE LISTENING SYSTEM (Owner Furnished Equipment)	1	OFE	OFE
OWNER FURNISHED	OFE	AUDIO D/A (Owner Furnished Equipment)	1	OFE	OFE
OWNER FURNISHED	OFE	AUDIO AMPLIFIER (Owner Furnished Equipment)	4	OFE	OFE
OWNER FURNISHED	OFE	CEILING SPEAKERS (Owner Furnished Equipment)	28	OFE	OFE
		EQUIPMENT RACK ACCESSORIES			
MIDDLE ATLANTIC	MIDACC	RACK ACCESSORIES AND COMPONENTS TIPS Contract 200904 Bid Term 12/31/2020 - 11/30/2023	1	\$611.76	\$611.76
			· · · · ·	Subtotal	\$65,571.95

Room Support and Maintenance

Elite Maintenance Services - Room; 36-months

\$14,972.80



Equipment Total	\$65,571.95
Installation Materials	\$2,294.79
Professional Services	\$44,374.00
Direct Costs	\$4,169.41
General & Administrative	\$2,587.29
Services - Room Support and Maintenance	\$14,972.80
Subtotal	\$133,970.24

For informational purposes only – all Purchase Orders must match Investment Summary details.



CITY OF KEY WEST – CHAMBER BUILDING AV SYSTEM UPGRADES

AVI-SPL Solution Scope of Work

After careful and deliberate consideration of your requirements, we are pleased to provide the following audiovisual solutions scope of work. Every attempt has been made to keep project expenses as low as possible without compromising the delivery of high-quality video, enhanced audio, and a reliable control system implementation. The scope of work noted below is based on sound engineering principles, reliable technology, and have been formulated specifically to meet your requirements.

Project Overview

AVI-SPL is offering a solutions package designed to maximize City of Key West's investment in meeting and collaboration technology. To achieve this goal, AVI-SPL is utilizing industry best practices for system design and is deploying proven and reliable devices and services.

General Notes

- 1. Work shall be done during regular business hours.
- 2. City of Key West (City of Key West, in further text referred to as "Client"), shall be responsible for all of the high voltage electrical connections, LAN drops, millwork, wall repairs including patching, painting and any required structural support for the new AV equipment being installed.
- 3. Client shall provide free parking near the facility for all AVI-SPL vehicles.
- 4. AVI-SPL shall inspect and clean the existing AV equipment that is being repurposed during the installation.
- 5. All Owner Furnished Equipment (OFE) is assumed to be functional and in good working order. Any OFE equipment found to be nonfunctional during integration will require a change order for replacement. Any required labor associated with missing or nonfunctional Owner Furnished Equipment will be included on a change order and submitted to the client for approval in order to complete the project.
- 6. Standard ground freight is included. Any requests by Client to expedite delivery of the AV equipment shall result in change order form at AVI-SPL's discretion.
- 7. Permitting and logistics fees and any project management hours associated with the low voltage permits with the local municipality are not included in this proposal and shall result in a change order prior to execution.
- 8. Client is responsible for providing a dust free environment prior to the installation of all technology equipment. Proper schedule coordination is required between the client and the project manager to ensure this is the case.
- 9. Any equipment requiring deinstallation, as determined by this SoW, shall be deinstalled by AVI-SPL and stored by the client.
- 10. Wherever possible, existing wiring shall be repurposed (microphones, speakers, twisted pair and control wire).
- 11. All wires and cables, existing and new, shall be clearly labeled with new self-adhesive printed labels in accordance with provided cable pull schedule and labeling legend as referenced in the drawings.
- 12. Client shall allow AVI-SPL crew members easy uninterrupted access to the jobsite. Job site shall not be usable for the duration of the new audio-visual system integration, testing, and commissioning.
- 13. AVI-SPL shall supply a network sheet with MAC addresses of all the equipment on the client network so that said equipment can be white-listed on the Client LAN.
- 14. Upon project completion, AVI-SPL shall provide 2-hour training to Client's AV/IT staff as well as full project folder containing "as-build" drawings, rack elevations, warranty statement, wire and cable labeling legend, all relevant project documents and equipment manuals, Help Desk information and uncompiled Crestron/QSC source codes, in electronic format via download.

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Supply Chain

Due to global supply chain conditions, please note pricing is only valid for 30 days and due to extended equipment lead-times, you may experience delays in project execution. We will also update and refresh the pricing prior to award. If you wish to protect current pricing, we can purchase the equipment ahead of schedule but will need your written approval to order long lead-time equipment. This equipment is also subject to storage fees beyond 90 days, and we will work with manufacturers to extend warranties in these situations.

Commissioners Chambers

Design Narrative

The Commission Chamber of the City of Key West is set to upgrade its existing audio-visual system. A thorough evaluation of the current system will be performed to ensure the new components integrate seamlessly.

The existing components, such as the discussion panel audio subsystem, PTZ cameras, document camera, HD-SDI router, and production switcher will remain in place. All SDI field connections and field destinations will also be preserved.

A key part of this upgrade is the introduction of the Crestron DM-NVX system, a video over IP solution. With the Crestron XIO Director managing video signal routes, the system will have NVX encoders at each input for content ingest. NVX decoders will be installed at four desk outputs, one booth output, and at each of the eight existing LCD displays. Additional encoder and decoder cards will be installed in the existing equipment rack to support the existing interconnectivity between the production and video transport systems.

Conferencing functionality will be provided by converting the existing production system's program output to USB for connectivity to an owner furnished and managed PC. This conferencing functionality will be managed by the client.

The control system will see the addition of a Crestron CP4N control processor. Users will have a wired touch panel at the equipment rack and a wireless touch panel at the dais, allowing them to control video routing, adjust audio volume, and manage microphone levels.

The audio will be enhanced with the integration of the Digital Signal Processor with Dante Digital Audio Transport, ensuring compatibility with existing audio components, and providing the ability for future system upgradability.

Inclusions:

- Evaluation of the current system.
- Introduction of the Crestron DM-NVX system and NVX encoders/decoders.
- New Crestron CP4N control processor and touch panels.
- Integration of Dante Digital Audio Transport.
- Training sessions for staff.
- User manuals and technical documentation.

Exclusions:

- Changes to existing equipment, including the production system, PTZ cameras, document camera, displays, panel discussion system, microphones, amplifiers, ceiling speakers.
- Structural modifications to the Commission Chamber.
- Maintenance of non-specified systems in the chamber.

All existing equipment provided by the owner is assumed to be in working order. If any equipment is found to be non-functional during the integration, it will be identified, and a change order will be provided to the client for review and approval.

** Please see the "Environmental Considerations" and "Customer Responsibilities" sections of this document for required room properties and deployment best practices. **



Scope of Work – Hardware Integration

This section describes hardware installation and general functionality or specifications. All equipment provided and installed by AVI-SPL unless otherwise specified.

<u>Displays</u>

Eight existing system displays in the Commission Chamber will continue to be used.

• A dedicated decoder will be provided and installed at eight display locations.

Source Equipment and Interfaces

The following connections will be provided:

- Two HDMI connections located at the dais for laptop input connectivity.
- Two HDMI connections located at the dais for output connectivity.
- Four HDMI connections located at the desks for laptop input connectivity.
- Four HDMI connections located at the desks for output connectivity.
- One HDMI connection located at the booth for laptop input connectivity.
- One HDMI connection located at the booth for output connectivity.
- One HDMI connection located at the rear wall for auxiliary device connectivity.

Under-table interface boxes will route compatible video signals into the system. Connectivity to these interfaces shall be made via existing table access panels.

Each table access panel assembly should include the following:

- A grommet or passthrough for the HDMI and USB-C cables.
- AC power receptacles
- Data via fixed length cable.

The following owner furnished source devices will be integrated into the system:

- The existing production switcher will continue to be used as is and will connect to the new signal transport equipment.
- Existing interconnectivity between the production system and the video distribution system will continue to be used with no change to the production workflow.

Routing and Switching

The following video routing and switching devices will be integrated into the system:

- An IP-based video distribution system that will route video sources throughout the system.
 - AVI-SPL will provide and install the network to handle all video routing and device communication.

<u>Audio</u>

The following audio devices will be integrated into the system:

• The existing conferencing microphone system will continue to be used and will be integrated with the new system components. No changes will be made to audio sources.

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- A digital signal processor (DSP) will support all existing audio sources. All microphones used for conferencing shall utilize a dedicated acoustical echo canceling (AEC) channel per microphone element in the DSP. See the <u>Conferencing</u> section for more detailed information regarding audio or video conferencing.
- The existing amplifiers and speakers will continue to be used and will be integrated into the new system.

Conferencing

The following conferencing devices will be integrated into the system:

- USB audio and video connections will facilitate Bring Your Own Device (BYOD) conferencing for user laptops. The signals for these devices will be connected to a USB hub that accepts both USB 2.0 and 3.0 to provide a single USB connection to the user.
- The existing production system and all cameras and sources will continue to be used and will be routed to an owner provided PC for UC conferencing.

Equipment Rack and Accessories

Equipment will be installed in the following locations:

- An existing, owner furnished, free-standing equipment rack will house all racked equipment. The rack will be located in the adjacent room. The equipment rack will be free-standing.
 - A power conditioner or surge protector will be installed in the A/V rack to protect all racked equipment.

Control System and Accessories

A control processor will be installed to enable various functions throughout the system. Please refer to the <u>Software Integration</u> section for more detailed information about system control.

- The control processor will be located in the equipment rack.
- A wireless touch screen interface with a 9" screen size will be located at the dais. The touch screen will be black in color.

Scope of Work – Software Integration

A control system will be provided to activate many necessary user needs. This greatly reduces the complexities of operating an integrated A/V system and facilitates greater system utilization and an enhanced meeting experience.

User Experience

Developing a unique system based upon the end users' needs and an understanding of how the space will be utilized has led AVI-SPL to identify three styles of user and room interactions: Autopilot, Co-Pilot, and Pilot. These styles range from the user who wants to use technology transparently, to the person who wants to control every aspect of collaboration. Based on the design requirements, AVI-SPL has selected the following user experience for this room:

Co-Pilot

This is a semi-automated room experience. User interaction is notification based to confirm actions, for example plugging in a laptop for presentation will prompt the user to confirm sharing that content. Use and function for this experience commonly includes spaces designed for general conferencing, schedule meetings, and presentation. A touch interface is required for some aspects of this experience, when one is present it will reflect the current state of the room.

The goal of this automation level is for end users to be able to begin their meeting with a few simple confirmation presses, quickly sharing content or placing an audio or video call.

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For more specific information about the chosen automation design and use cases, please refer to the User Experiences section of the AVI-SPL Programming Functionality Statements document.

User Interface

A user interface will facilitate advanced system operation. The following user interface(s) will be used for this system:

- A touch screen graphical user interface design will utilize the AVI-SPL provided layout and icon set. Major changes or customization to the AVI-SPL provided GUI may require an additional cost. Please reference the user experience document for an example layout of the selected theme.
 - AVI-SPL will provide the layout and the functionality of each button for each user page of the touch screen to the Customer prior to implementation for client input and final client approval.
- All specified equipment in the proposal will be incorporated into the control system.

As part of the programming process, AVI-SPL will provide the layout and the functionality of each button to the Customer prior to implementation for input and final approval.

System Events

As part of the control system programming, many system level events can be monitored and acted upon. The following system events will be included in this system:

Shure MXA LED Colors

The Shure MXA line of microphones provides feedback to the user with a multicolor programmable LED. The LED on the microphone(s) will behave in the following manner:

- o Off When the system is in standby.
- o Green When the mic is active.
- Red When the mic is muted.

No Environmental Controls

Additional environmental controls will not be provided by the control system. Control of lighting, shades, or HVAC will be provided by the original equipment manufacturer.

Network and Network Security

The integration of Audio-Visual hardware can consist of many different devices and systems, each with varying network requirements, impacts to traffic and routing, and unique management and security processes. AVI-SPL will work with City of Key West's identified stakeholders to properly assess network requirements and deployment considerations.

AVI-SPL will design the system to meet identified network requirements and will provide construction drawings and a list of devices before installation on site. At the time of installation, AVI-SPL will connect devices according to the documented system design and identified network requirements. The following network design is being followed for this project:

Hybrid AV/Client Network

Hardware that does not require integration to the client network can be completely isolated from the client network.

- The control system, touch panel, and audio video transport devices that carry Ethernet control reside in their own wired network.
- Hardware that requires integration with the owner network will be connected directly to the owner network. Examples: control system for monitoring, video conference codec, 3rd party SIP device.
- Systems for monitoring, control, scheduling, and other, is provided by services residing in the "Cloud", external to the owner's network. In this type of deployment data will need to traverse the owner network.



** Please see the "<u>Customer Responsibilities</u>" and "<u>Software Licenses and Service Accounts</u>" sections of this document for deployment best practices and installation requirements. Additional information regarding specific applicable processes and procedures can be referenced in the "<u>AVI-SPL Network and Security</u>" addendum to this document. **

Customer Responsibilities

These are items that AVI-SPL is dependent upon to complete the project scope of work on time, however, these requirements and responsibilities are not provided by AVI-SPL. For a complete list of exclusions, please refer to the Integration Inclusions and Exclusions section of this proposal.

These requirements must be provided by the owner or other 3rd parties and may fall under the responsibility of an Architect, General Contractor, Electrical Contractor, Data Contractor, Security Contractor, Furniture/Millwork Contractor, IT departments, Facilities or Real Estate groups.

- All required backing and any other wall reinforcement required to safely accommodate displays. Any display wall shall be properly backed to withstand the weight of the display with a safety factor of at least 5:1.
- All AC power at the equipment locations, including hardwired power connections.
- All required conduit for low voltage cable paths to AV equipment.
- All ceiling work required to accommodate the projectors, projection screens, or other equipment.
- All required millwork modifications to tables or other millwork.
- Proper heat dissipation venting for the equipment in this system. Where convection cooling is not possible, a powered venting system with thermostatically controlled quiet fans.
- All required network configuration for any network connection to the client network.
- All software or hardware licenses not specifically provided in this scope of work or associated bill of materials.
- All software or hardware configuration for owner furnished equipment.
- Where VoIP is utilized, all required configuration information prior to installation.
- All cable/satellite/over-the-air TV connections and all associated hardware.

Site Readiness

The minimum acceptable site conditions of the project site for the installation of electronic equipment are as follows.

- The rooms and directly adjacent areas into which the equipment will be installed must be dust-free with floor, ceiling, and wall finishes to be completely installed in the rooms affected by the equipment.
- The rooms into which the equipment will be installed must be secure.
- All Electrical power, conduit systems, HVAC systems, IT requirements (wired or wireless services), communication circuits, and or other services required by the systems and equipment should be fully installed, energized, and configured for use.
- All furniture into which components of the equipment will be installed shall be present at the time of staging and/or installation.
- All telephone, POTS, VOIP, modem, PRI, data, LAN, and telecommunications connections are installed, fully tested, and active.
- Configuration of OFE networks, applications, servers, and services to provide interoperation with installed systems.
- Coordination and timely IT support and documentation (such as providing IP addresses or account credentials).
- All owner furnished equipment should be prepared and made available on day of installation.

Software Licenses and Service Accounts

Supervised or direct access to systems must be provided as needed for a properly provisioned and licensed account where appropriate. Examples include Zoom Rooms activation codes, Microsoft Teams accounts, calendar service account, and more.

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- The customer may decide not to provide credentials to AVI-SPL, and to provision the installed hardware themselves. In this case AVI-SPL will be unable to fully test the system before receiving sign-off for the installation. All system components will be tested individually to ensure proper stand-alone function, and project sign-off will be requested before technicians leave site.
- If AVI-SPL is unable to properly commission and test the system at the time of installation due to issues with access, an additional site visit may be required. Any additional visits will be billed at the standard contracted labor rate, provided Customer is at fault and approves additional cost in advanced and in writing, scheduling will be done on a best effort basis.

Room Environmental Considerations

To maximize the user experience in a conferencing room, the following parameters should be observed:

- The room should have a measured ambient noise level of no more than NC35. For new spaces, the design parameters for the mechanical engineering within the room should have a target NC of 35 or less. Ambient noise includes noise from the air handling systems, mechanical systems and noises outside the building. Noise levels above this specification adversely affects the meeting environment and may degrade the overall audio quality and intelligibility of a conference call. This is especially important when ceiling microphones are utilized. If a problem is identified with ambient noise levels, AVI-SPL can work with your mechanical engineer to identify possible solutions to lower the NC rating and improve the meeting experience.
- Reverberation time (T60) for typical conference rooms should be less than 0.6 seconds in the 125 4000 Hz octave bands to provide an optimum meeting experience and acceptable audio quality in a conference call. A significant number of hard surfaces in a room (glass, drywall or other surfaces) can adversely affect audio intelligibility and the meeting experience overall. Acoustic treatment is advised for rooms with higher T60 levels. If the room requires acoustically treatment, AVI-SPL can provide direction and solutions to overcome this issue and enhance the meeting experience for the participants.
- Evenly distributed lighting is important for videoconferencing applications. Lighting on the faces of the participants should be at least 40-foot candles and should be evenly distributed throughout the camera's field of view. Where the camera's field of view includes windows, recommended window treatment should be employed to provide an acceptable background for the camera to view the participants.
- When microphones are used for local voice reinforcement, the amount of available gain before feedback is dependent on the microphone's location within the room. Placement of the microphone immediately below a ceiling speaker may adversely affect the overall required audio level and cause feedback. Care should be taken to reduce the volume level of the microphone or locate the microphone(s) correctly to minimize the possibility of feedback.

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Integration Inclusions and Exclusions

Inclusions

The following items are **included** in this proposal unless **specifically noted otherwise** within this proposal document or scope of work statement:

- All equipment, wire, and accessories required for a fully functional audio/visual system per the agreed upon scope of work.
- Non-union labor associated with audio/visual system engineering, installation, programming, and testing.
- Documentation package including complete as-built AV system diagrams, and manufacturer's operation manuals.
- Coordination and cooperation with the construction team in regard to installing the system.
- User demonstration of full AV system operation for final sign-off.





Any additional trips, labor, or materials due to failure of the other workforces to have the audiovisual system rough-in work completed as anticipated and previously confirmed, will be added to the project billing as required.

Unless otherwise agreed in writing by AVI-SPL, all work performed by AVI-SPL will take place between the hours of 8:00 a.m. and 6:00 p.m. local time, Monday through Friday, excluding public and bank holidays. If AVI-SPL is required to perform work outside of these hours, customer will be charged AVI-SPL's standard overtime rates. Any changes in the hours or days of performance must be agreed to in writing by AVI-SPL.

Where applicable, the owner's architect will provide AVI-SPL's engineering department with all required architectural floor, reflected ceiling, building elevation, and section plans in AutoCAD[®] format at no charge to AVI-SPL.



Exclusions

The following items are **excluded** from this proposal **unless specifically identified otherwise** within this proposal document or scope of work statement.

- All conduits, high voltage wiring panels, breakers, relays, boxes, receptacles, etc. Any related electrical work including, but not limited to, 110VAC, conduit, core drilling, raceway, and boxes.
- Voice/data cabling, IE analogue phone lines, ISDN lines, network ports, etc.
- Network connectivity, routing, switching, and port configuration necessary to support audiovisual equipment.
- Concrete saw cutting and/or core drilling.
- Fire wall, ceiling, roof and floor penetration, patching, removal, or fire stopping.
- Necessary sheet rock replacement, ceiling tile, T-bar replacement, and/or wall/ceiling repair.
- Any and all millwork (moldings, trim, etc.). All millwork or modifications to project millwork/furniture to accommodate the AV equipment is to be provided by others.
- Painting, patching, or finishing, of architectural surfaces.
- Permits (unless specifically provided for elsewhere in this proposal document or scope of work statement).
- Engineered (P.E.) seals and/or stamped structural/system details.
- HVAC and plumbing relocation.
- Rough-in, bracing, framing. or finish trim carpentry for installation.
- Cutting, structural welding, or reinforcement of structural steel members required for support of assemblies, if required.
- Owner furnished equipment or equipment furnished by others that is integrated into the systems (as described above) is assumed to be current, industry acceptable, and in good working order. If it is determined that this equipment is faulty upon installation, additional project charges may be incurred.
- Additional or specific manufacturer's "User Adoption" training.
- Additional costs for union labor.





Addendum to General Terms and Conditions – Equipment Ordering

Due to global supply chain constraints, Seller is experiencing longer than normal lead times on equipment. As a result, Seller cannot guarantee lead times on equipment and will not be liable for any delays in equipment delivery to the extent caused by such constraints. However, as the supply chain continues to improve, we will not be ordering equipment for jobs that start more than 120 days from when the contracted site is ready unless lead times are greater than 90 days.

In order for Seller to appropriately plan and coordinate its resources, Buyer must commit to a **site readiness for installation date**, (subject to timely delivery of equipment) on or about ______, 20____.

Should Buyer elect to purchase equipment immediately upon placement of order or greater than 120 days prior to the above readiness date, to mitigate delays, Buyer agrees to receive the equipment at their designated location and Seller will immediately bill Buyer upon placement of such order. Buyer shall pay for such equipment within the payment terms (e.g. net 30) specified herein, regardless of any other agreed upon billing terms or billing terms specified herein. Warranty on such equipment shall commence upon delivery of the equipment to Buyer's designated location, notwithstanding any other agreed upon warranty terms or warranty terms specified herein.

By initialing next to this sentence, Buyer elects to purchase equipment immediately upon placement of order in accordance with the terms of this Addendum.

 Buyer Acceptance

 Signed Name
 Company Name

 Printed Name, Title
 Date