General Project Conditions

Project Success Criteria

Table 1. Project Success Critera

ID #	Weighted Value	Category	Description
1	1st Tier	Methodology	Design meets all requirements defined herein with additional Contractor value-added feedback
2	1 Tier	Technology	Improved Audio, Video, Presentation, and Recording capabilities
3	1st Tier	Technology/Functionality	Satisfied customers – internal, external and public pleased with overall design and functionality i.e. Systematically draw user experience expectations from the stakeholders, synthesize these across multiple generations and then make these perspectives the key "specifications" that influence adoption. Focus on workflows and try to eliminate places in the users' workflows, where they make decisions about using technology. Contractor communicates to the County their understanding of the workflow and tasks to operate and maintain the system which is the basis for their design. Contractor clearly communicates how requirements/requests impacts workflow of customers
4	1st Tier	Methodology	Knowledge transfer, trained staff, and documentation
5	1st Tier	Methodology	Project completed on-time and planned project tasks are completed during outage windows defined by the project schedule
6	1st Tier	Cost	Capital Expenditure (CapEx) Cost effectiveness – initial setup
7	1st Tier	Cost	Operational Expenditure (OpEx) Cost effectiveness - ongoing maintenance and support
8	1st Tier	Cost	Project completed within budget
9	1st Tier	Methodology	No unexpected outages during the project implementation
10	1st Tier	Technology/Functionality	Highly redundant and improved reliability
11	1st Tier	Methodology	Staff buy-in for project implementation approach and methods
12	1st Tier	Technology/Functionality	Sustainable technology and ease of overall maintenance

ID #	Weighted Value	Category	Description
13	2nd Tier	Technology/Functionality	Solution meets County Security standards for example: compliant with Microsoft security vulnerability patching, passes network security audits, network penetration test, and integration with Zoom or MS Teams
14	2nd Tier	Methodology	Transparency with IT groups and customers
15	2nd Tier	Methodology	Positive perception by County internal, external, and public: adoption requires a strong focus on the experience that is provided when the technology is consumed. That includes quantifying user expectations and then providing system designs that meet these expectations. Listen for more than specifications about "what" the user expects the system to do. Listen to the "why" and "how" they expect to accomplish tasks.

Project General Requirements

A. Contractor shall furnish all equipment, materials, labor, transportation, and storage facilities which are necessary to complete the specified work, and which are required for a fully functional audio visual and broadcast system meeting all requirements of this project, as described in this agreement and as represented in the Table 2 below:

Table 2. Scope Overview

	14-Dais Microphones	7-Dais Video Monitors	2-Handled Wireless Microphones	AV Controls Systems	Speech Reinforcement	Program Audio Reinforcement	Overflow Audio	Speaker timer	Assisted Listening Devices	Language Interpretation	Real-Time Transcription	Comm. Access Real Time Translation	Sound Masking System	5-HD PTZ Broadcast Cameras	1-HD Broadcast POE Camera (Dias View)	Automatic Multiple Camera PTZ Framing System	Video Display(s)	Audiovisual Distribution System	Audio Video Recording	AV Broadcast / Streaming with Controls	Remote Broadcasting and Programming Controls	Audio Teleconferencing	Videoconferencing	Integration with Zoom and other soft-codecs	Digital Signage	Kiosk - Digital Calender/Agenda/Signage	Remote Monitoring Capabilities of AV systems	Enviro Improvement - Accoustic	Enviro Improvement - Lighting
Board of Supervisors' (BOS) Chambers	X	X	X	X	X	X	-	X	X	X	F	F	O	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X
BOS Broadcast Control Room 1072	-	-	-	X	-	X	X	O	X	X	-	F	O	-	-	-	X	X	X	X	-	X	X	X	O	O	X	-	-
Monterey Conf Room 2092 (BOS Overflow)	-	-	-	-	-	T	X	O	X	X	F	F	O	-	O	-	T	T	X	X	O	T	T	-	X	X	-	-	O
BOS Closed Session Conf Room 1032	-	-	-	-	-	X	X	O	X	X	-	-	O	-	-	-	O	X	-	-	-	X	X	X	-	-	-	-	-
BOS Breakout Room 1034	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BOS Constituent Conf Room 1035	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interview Room 1036	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Breakout Room 1037	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clerk of the Board Open Offices 1069	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ITD Data Center	-	-	-	X	O	-	-	-	-	-	-	-	-	-	-	-	O	X	X	X	X	T	T	-	-	-	X	-	-
X = Minimum Requirement																													
I = Minimum Infrastructure Requirement	*(Includes conduit(s), pull-rope, rough-in, and ability to scale / provide future functionality)*																												
T = Integrate Existing Components Into New System	*(Includes integrating existing tv monitors, speakers, etc.. Into new system - does not include device/hardware replacement, but may require some minor recabling and termination)*																												
O = Optional Requirement																													
F= Desired Feature																													

B. Contractor shall plan, design, install, test, and provide training for all required equipment and parts required.

C. Contractor shall conduct and operate broadcast system during actual County meetings, while working alongside County vendors and staff for 2 months (8 meetings) after installation is completed

D. Contractor shall verify audio visual system connectivity, electrical requirements, conduits, heat load data, and interior design considerations unique to the audiovisual system which have been incorporated in the functional specification and equipment design.

E. Contractor shall conduct stakeholder interviews and preliminary design planning to consider, accommodate, and if necessary, modify existing workflow to function with new system features and functionality. Contractor shall confirm and evaluate current workflow and ensure that features and functionality of the new system that result in a change of workflow are clearly documented. Contractor shall advise/train staff (both technical and users) to become accustomed to new methods.

F. Contractor shall coordinate with the County to develop a phased rollout of new features, functionality, and align training of all impacted staff.

G. Contractor shall be responsible for providing the following project components:

- Complete system planning, engineering, design, and installation

- Equipment coordination and supply
- Construction coordination
- System production
- Control/Broadcast system configuration and programming
- Factory acceptance testing
- Complete system installation/integration
- Technical training
- Site acceptance testing
- User training
- Documentation
    - Technical Documentation and diagrams
    - Training material printed and digital
    - Operational Procedures and Documentation
    - Operational Code
    - System and component programming
    - Label cables, interfaces and technology
- Preventive maintenance and system warranty
- Reoccurring cost software, hardware, support, programming and any other features associated with overall solution

H. All work shall be planned, coordinated, and conducted with minimal interruption of service to existing mission critical systems. All required outages shall be scheduled one week in advance with the County.

I. All outages or system resource reduction from current system operations require a detailed plan of action with contingencies identified and approved by the County prior to implementation. 1 week in advance

Infrastructure Assumptions

A. All equipment proposed (i.e. speech reinforcement components, AV, broadcast equipment), controls, parts and accessories shall be new. Contractor will be required to identify existing equipment, parts, or accessories that can be reused.

B. Existing conduits are in place. If new conduits or pathways are needed, Contractor will be responsible for installing new pathways.

C. The County will provide AC power unless additional power is required. Contractor will be responsible for installing new power.

D. The County will provide sufficient heating, ventilating and air conditioning (HVAC) capacity to ensure that all equipment operates within the specified temperature range. Contractor is required to identify if existing plus additional loads will require additional HVAC work.

E. Contract shall inform County of intrusive work prior to commencing and adhere to minimizing operational impact

F. Contractor will provide photos of every fire rated wall penetration made. All penetration should be sealed in accordance with fire prevention

Existing Conditions

Following are existing conditions that Contractor will be responsible for upgrading, replacing, integrating, and/or migrating into the new systems. All existing AV equipment is expected to be replaced with the corresponding new elements and/or systems as included in Contractor provided Equipment List. Contractor will inventory all existing equipment and, if to be decommissioned, dispose of it through appropriate e-waste recycling processes or identify it as an item to be replaced/upgraded.

A. Currently, the control room in the Board Chamber contains the racks, power, and some cabling necessary to support digital transmission.

B. It is anticipated that some carpentry or construction will be required to accommodate the new equipment which may be sized differently than the existing equipment.

C. Most of the AV, electrical, and low voltage data cabling will require replacement to support the new equipment and additional cabling may need to be installed where no cables currently exist. All cabling will be replaced with new cabling. Cables shall be terminated and certified to comply with proper technology or components

Project Management

Project Management Plan

A. Contractor shall follow PMP methodologies to facilitate this project, which includes the following sections:

1. Project scope, including a detailed work breakdown structure (WBS), or labor and deliverables

2. Schedule

3. Communications

4. Document Quality assurance (QA)/Quality control (QC)

5. QA/QC processes shall be defined that address all project stages, requirements, and deliverables

6. All Contractor deliverables shall go through an internal QA/QC process before being submitted to the County. Contractor shall not rely on the County to perform any QA/QC functions for the project.

7. Change management

8. Risk management

The Plan shall describe how Contractor intends to monitor and control the implemented systems and mitigate risk to ensure that the system meets the requirements of this SOW and is delivered on time.

Contractor shall develop and submit the PM Plan to the County within 30 days of contract award.

B. Contractor shall develop and maintain a project schedule using Microsoft Project, or any other application to reflect tasks, milestones, task durations, and start and end dates based on a County-approved WBS.

C. The schedule shall include all tasks required to complete all work identified in the WBS.

D. Contractor shall update the project schedule with actual dates as tasks are completed.

E. Contractor shall provide the updated schedule as an agenda item for all weekly status calls with the County.

Project Meetings

A. All project meetings shall be held at a County facility in Salinas, California, or virtually via video conference as coordinated.

B. Contractor is responsible for scheduling, agenda, and minutes for all calls and meetings. Contractor is responsible for providing minutes after each meeting and keeping an accurate account of all tasks, deliverables, dates, and resources

C. Contractor shall use a collaboration platform, Microsoft Teams to keep project files, schedule, invoices and contact list.

D. A project kickoff meeting shall take place prior to beginning project work that includes a project overview, and discussion of the PM Plan and schedule.

E. Weekly project status calls shall be scheduled following the Kickoff Meeting, to include:

- Schedule review
- Status of deliverables, project work and action items
- Issues for discussion
- Project risks
- Proposed changes if any
- Plans for the next period

F. An onsite meeting shall be held at a County facility once a month, instead of the weekly status call.

Action Item List

A. Contractor shall establish and maintain an action item list documenting items that require resolution.

B. The action item list shall be updated weekly and shall include the following items:

C. Sequential item number

D. Date identified

E. Item description

F. The party responsible for resolution

G. Status

H. Expected resolution date

I. Actual resolution date

J. Detail about how each item was resolved and tested

K. Notes

Project Staffing

A. Contractor shall manage project staffing based on workload and the required level of effort throughout the project; however, Contractor shall provide a full-time Project Manager and a full-time Project Engineer as staff for the entire duration of the project.

B. The County has the right to accept or reject any proposed staffing changes by Contractor, and to require Contractor to replace project staff.

C. The Contractor shall have on staff CTS: Certified Technology Specialist: General AV Certification, CTS-I: Installation specialist certification, CTS-D: Design Specialist certification.

Contractor's Project Manager shall:

A. Be the primary point of contact for the County

B. Be Project Management Professional (PMP) certified

C. Have managed and successfully completed (system was accepted) at least one audio visual and broadcast project

D. Have at least 10 years' experience managing technology projects

E. Have worked as a PM for Contractor for at least 1 year

F. Be authorized to make business decisions that are legally binding on Contractor; written documentation of the PM's authority shall be provided to County before project initiation

G. Bear full responsibility for supervising and coordinating the design, installation, and deployment of the audio visual and broadcast system

H. Manage the execution of the project against the PM Plan

I. Contractor's Project Engineer shall be responsible for implementation of the system design and ensuring that the installation is done in accordance with the approved system design. The Project Engineer shall have the following minimum qualifications:

J. 10 years' experience designing and implementing digital audio visual and broadcast systems

K. Employment as a lead engineer for Contractor for at least 3 years

System Engineering and Design

Contractor shall provide all detailed engineering of final systems configuration, calculations, and other supporting documentation. Contractor shall perform systems engineering and design to meet the general and functional criteria identified herein.

Product Information

Contractor shall submit specification sheets for all equipment and parts specified herein, that show standard and optional product features, as well as all performance data and specifications.

System Inventory List (Equipment List)

A. Contractor shall submit an inventory list for all equipment, parts, materials, software, documentation, spare parts, and test equipment. The inventory list shall include, but not be limited to, the following information:

B. Manufacturer's name, part number, and serial number

C. Quantity of units supplied

D. Network information, such as: IP address and MAC address of each component

E. Applicable site, cabinet, rack number or slot.

F. Software configuration such as DSP, audio and video settings

G. The inventory list shall be subdivided by site, hardware, software, test equipment, and spares, and by documentation and training courses. Each of these major divisions shall be further subdivided to the individual deliverable item.

H. A preliminary version of the System Inventory List that demonstrates the form and content to be provided shall be submitted for County review within 30 days of Contract Award.

I. A completed System Inventory list shall be submitted no later than 30 days prior to the start of the Factory Acceptance Test (FAT). The FAT shall not start until the System Inventory List has been approved by the County.

J. The final project documents shall include an updated System Inventory List, reflecting any additions or changes made during system installation.

Site Survey Reports

A. Contractor shall produce a report for the sites that have AV and broadcast equipment, including, at a minimum:

- Photographs (submitted in .jpeg format using the naming convention “site name photo description date.jpg”) of:
- Overall site / floor plans, showing location of all equipment
- Cable pathways
- Rack location and position(s) where new equipment will be installed
- Electrical power panel indicating breakers to be used if new are proposed
- Areas/items of concern
- Area/items of good condition that can possibly be salvaged and/or reused
- A description of the work to be completed for system implementation and the method to complete the work.
- Issues encountered or identified and a proposed solution.
- Potential obstructions
- Recommended site upgrades, including, but not limited to equipment room, equipment racks, power systems, site access and physical site security.
- A list of existing County equipment (i.e. equipment racks, cable trays, podiums, etc..) that can be reused for the new system.
- A list of systems, devices, functions, operations for existing systems that will be affected by the system upgrade.

Design Package

General

A. Contractor shall submit a Draft Design Package within 30 calendar days of Contract Award

B. The Design Package shall address all requirements of this SOW.

C. After receiving review comments from the County on the Draft Design Package, Contractor will have 90 days to complete the Final Design Package.

D. Contractor shall submit a soft copy (via County SharePoint, Microsoft Teams or Email in pdf format, MS Excel, etc..) of the Draft Design Packages.

E. Contractor shall provide soft copy (via County SharePoint or Email in pdf format, MS Excel, etc..) of the Final Design Packages. In addition, provide CAD, DWG files for County records

F. The Final Design Package must be approved by the County before Contractor can proceed with equipment orders and system implementation.

Design Documentation

The design package shall include the following documentation:

System Overview

A detailed description of the new audio visual and broadcast system, including the function of all equipment and how it interacts to meet the requirements of this SOW.

Migration Plan

A detailed description of the methodology that Contractor will use to migrate from the existing to a new system, while minimizing disruption of existing systems.

The Migration Plan shall:

A. Be logical and consider every facet of the existing and new systems

B. Identify temporary alternate routing of critical functionality

C. Identify fallback, recovery, and contingency plans to mitigate risk during migration

D. Maintain reliable and stable communications and functionality

E. Lead to the timely deployment of a complete and functional system

F. Identify physical and technical constraints that must be considered for successful implementation planning such as site ownership, spatial, site access/availability, electrical load limitations, etc.

G. Successfully integrate all legacy systems.

H. Minimize operational impact for user agencies during migration of interconnections

I. Clearly define roles and responsibilities between Contractor and the County

The Migration Plan shall demonstrate that it meets the following requirements:

- Supports the operational requirements of the County including but not limited to administrative use, day-to-day operations, emergency response and catastrophic incidents
- Ensures users and technical staff are prepared for the migration to the new system
- Mitigates risk
- Does not exceed outage thresholds established by the County.
- Considers site access issues, such as sites that are inaccessible during “blackout” time frames

System Architecture

Contractor shall provide:

- A description of the recommended system architecture
- System Architecture Diagram – A drawing showing the physical relationship, interconnectivity, and all devices.
- Functional Block Diagrams
- Block diagrams for each site, showing the interconnection of major equipment at each site.

Drawings

Drawings shall be drafted in AutoCAD®. Both AutoCAD and PDF versions shall be furnished for reproduction. Drawings shall clearly show detailed system fabrication, interface details, rack elevations, and cabling drawings will be prepared in AutoCAD format. PDF files will also be provided of the overall design for ease of review.

Rack Layout Drawings

A. Contractor shall submit rack and cabinet layout drawings that shall show the physical arrangement and mounting of all components in or on communications racks and cabinets.

B. Rack layout drawings shall include a bill of materials, and front, back, and section views, with power and wire management. Drawing shall include dimensions and minimum clearances shall be shown for all equipment with the racks surroundings

C. The County must approve rack layout drawings before rack or cabinet fabrication begins.

Equipment Connection Diagrams

A. Contractor shall submit connection diagrams for all racks that show the wiring and cabling of components within equipment racks. Components shall be shown arranged in the physical layout (not necessarily to scale) as they would appear to a person servicing the equipment. Connection diagrams shall clearly show:

B. All field wiring termination points

C. Conductor labels and equipment and device ratings

D. Wires as a continuous line between their termination points

E. The direction of entry to a wire bundle

F. Each wire label designation and color. The wire label designations on each end of a single wire must be identical, and must clearly identify the connections to be made (e.g. power, control, video, audio, monitoring, etc.)

G. All wire termination point numbers

H. Signal polarities

I. All jumpers, shielding and grounding details

J. Wire pairs

K. Spare wires and termination points

L. The County must approve connection diagrams prior to the start of rack or cabinet assembly.

Site Interconnection Diagrams

A. Contractor shall submit site interconnection diagrams showing the interconnection of all site equipment, including all field interconnecting cable termination points,

and wiring terminal blocks of all communications and power distribution. Diagrams shall illustrate connectivity between BOS, ITD, and any other secondary broadcast sites.

B. Diagrams shall clearly depict all cable tags. Cable tagging shall conform to County standards.

C. The County must approve Interconnection diagrams before equipment installation.

Installation Drawings

A. Contractor shall submit installation drawings that show installation arrangements for all provided equipment, mounting and anchoring details, and location of conduit entries and access plates into cabinets. Method of anchoring for all equipment shall be shown, including anchoring hardware details.

B. Installation drawings shall be submitted for all equipment installed.

C. The County must approve the installation drawings before Contractor begins field installation.

As-Built Drawings

A. Throughout the project, Contractor shall maintain a set of redlined Contract drawings, indicating all drawing changes.

B. Prior to system acceptance, Contractor shall update all drawings to incorporate all changes made during implementation (“As-Built Drawings”).

C. Contractor shall assure the final installation agrees with the As-Built Drawings.

D. The County must approve all As-Built Drawings prior to final system acceptance.

Test Documentation

Test Plans

A. Contractor shall provide test plans for all acceptance testing specified herein: Factory Acceptance Test, Acceptance Testing, and 30-Day Operational Burn-in Test.

B. All Test Plans shall include:

- Make and model of all test equipment to be used

- A description of the tests to be performed
- A detailed procedure for each test activity, including identifying the ports utilized in each test
- Program compatibility, between all technology and components
- The expected results

- Contractor shall submit a Test Plan to the County for review and approval at least 2 weeks prior to the scheduled start date for each of the tests specified in this SOW.

- The County must approve Test Plans before Contractor begins testing. If necessary, Contractor shall reschedule the test, at no additional cost to the County.

Test Reports

A. Contractor shall provide test plans for all acceptance testing specified herein: Factory Acceptance Test, Acceptance Testing, and 30-Day Operational Burn-in Test

B. Each Test Report shall include:

- Test procedure
- Make and model of all test equipment used, including most recent calibration date
- Test results
- Conclusions or recommendations resulting from the tests performed

- Contractor shall submit a test report for approval within two weeks after the completion of each test.

- The County reserves the right to delay or suspend follow-on project activities pending its approval of each test report. The County will provide review status (approve or reject) within one week of receipt of the test report from Contractor.

Training Documents

Training Plan / Training Manuals

A. Contractor shall submit a complete description of all training classes, training outlines, a preliminary training schedule, a list of all proposed instructors and their resumes, examples of proposed training manuals, and a description of any special

training tools available (simulators, self-paced modules, personal computer-based training)

B. Contractor shall submit the Training Plan for County approval at least 90 days prior to the schedule start of the course

C. Contractor shall submit training manuals for each training course at least 60 days prior to the scheduled start of the course.

Equipment Manuals

General Requirements

A. Contractor shall supply application, provisioning, operation instruction, and maintenance (preventative and corrective) manuals for all the equipment and software provided.

B. The manuals shall be developed for personnel at the level of electronic technician.

C. Manuals shall be provided on USB flash drive in text-searchable PDF format.

Manual Delivery Requirements:

A. Contractor shall submit all manuals to the County for review at least 90 days prior to the start of the FAT.

B. The County must approve all manuals before the start of the FAT

Manual Sections

A. The Application section shall provide a detailed description of the proper applications for which the equipment is designed and how to properly install the equipment.

The Provisioning section shall describe how to provision the equipment to perform all the functions the equipment is designed to perform, including a full library of all commands and the command language syntax for each command.

The Operation Instruction section shall be written and illustrated in detail to the component level. It shall contain a detailed description of each major component so that maintenance personnel can effectively inspect, maintain, adjust, troubleshoot, and repair the equipment. This section shall include:

- Introduction – The purpose of the section, special tools and equipment required, and safety precautions
- General Information and Specifications – A general description of the equipment item, and specifications of its major components
- Theory of Operation – The relationship of subassemblies and components, and an explanation of their functions
- Software & Programming – Explanation of all software and firmware
- Operation Procedures

The Preventative Maintenance section shall include:

- All applicable visual examinations, periodic maintenance procedures, hardware testing, and diagnostic hardware/software routines
- Instructions on how to load and use any testing and diagnostic programs
- Any special or standard test equipment that is required to perform these procedures

The Corrective Maintenance section shall include:

- Guidelines for locating malfunctions down to card-replacement level
- Adequate detail for quickly locating the cause of an equipment malfunction
- The probable source(s) of trouble, the symptoms and probable cause
- Instructions for remedying the malfunction
- An explanation on how to use on-line testing and diagnostic programs for all devices and any special test equipment, if applicable
- A list of test equipment and special tools required
- A parts catalog enumerating every part of a piece of equipment to the lowest of card replaceable components

Functional System Specifications

This section describes the general, functional, and operational requirements of the desired system. While not a design, this section specifies requirements for system architecture and performance including redundancy, capacity, and operations.

Standards and Guidelines

A. If the requirements of these specifications conflict with those of the governing codes and regulations, then the more stringent of the two shall be applicable. If Contractor cannot meet any of the standards or guidelines listed here, Contractor shall document and submit all deviations for approval by the County.

B. Contractor shall comply with all environmental regulations established and imposed by federal, state, and local government agencies.

General System Requirements

A. The new audio visual and broadcast system shall:

- Consist of equipment in current production and be based on hardware and software platforms anticipated to be supported for a minimum of 5 to 7 years. Contractor shall not propose any equipment at or near end of life.
- Reduce overall system and configuration complexity. The video production system shall produce programming that is more user-friendly while being functional and meeting all requirements
- Ability to accommodate future technology development or being future proof
- Be standardized and scalable to support operations (additional broadcast locations) at multiple County conference room locations anywhere on the County network
- Allow for County Agents to remotely manage system from outside of Board Chambers

B. All components utilized in the solution shall be fully tested in the field, with a proven service history of over 3 years in audio visual and broadcast systems.

C. Manufacturers that supply components for the system must have a proven and known supply chain to serve the County for the anticipated ten (10) year lifecycle of the network.

D. Software and firmware updates must be thoroughly regression tested prior to release and implementation. Software updates must include release information identifying the changes made, either to repair a problem or to make enhancements.

E. The Board Chamber and related control systems will be upgraded to utilize current, reliable and supportable technology to allow the County to conduct Board and Committee meetings and other presentations requiring AV support.

F. The new Board Chamber AV system will include new auto tracking cameras that integrate microphone audio system, local sound reinforcement, audio and video recording, integration of multiple cameras and presentation distribution to cable broadcast and online streaming.

G. An integrated control system will be used to allow easy and intuitive user control of the system. The control system is to provide full system control, including selection and control of source devices, presentation switching, lighting and audio control. The control system should be managed onsite or remotely from a different County location

H. The overflow locations at Closed Session room and Monterey Room will support live audio and IP video feed

I. Facility electronics, electrical, millwork, structural and infrastructural design, engineering and modification are required to support the intended upgrade and are included as a part of this work.

J. All existing equipment and associated racks will be removed except where identified to be reused.

K. All wiring will be dressed and terminated properly. Cable wiring management will be put in place for easy access, testing and replacement of cables as needed.

L. All Cables/cords will be labeled as well as all outlets and connections.

Detailed System Requirements

The Board Chamber has a fourteen (14) positions dais at the front of the room. Each seated location will have a mounted gooseneck microphone, mute switch, speaker, and confidence monitor(s)/ display. The microphones will be used for local sound reinforcement, audio conferencing, recording, and distribution to broadcast and will have a LED color ring indicator of status (mute or unmute). The speakers at the dais will support mix-minus local reinforcement for greater intelligibility of speech and presentation audio. The display will support confidence monitoring of content that is being displayed on the

large format displays in the room. The mute switch will be used to mute and unmute the microphone and shall have a LED status indicator that mirrors the ring LED status indicator on the microphone. The Clerk of the Board's position will have two additional mute buttons, one for muting all microphones and the other for controlling the mute/unmute of the podium microphone. The Clerk's position will also have a touch panel capable of controlling all room functionality described below.

The existing panel, displays, microphones, speakers and toggle switches are to be removed, millwork modifications made, and new devices installed.

Monitors at the dais locations shall be touchscreen and be capable of toggling between agenda (Granicus) and presentation views as needed.

Microphones quantities and placement should be appropriate to the use and size of room. Wireless lapel and handheld microphones should be included in solution

Chamber's Staff Positions

The Board Chamber has staff positions located near the dais. The County Clerk to board position will have a microphone, speaker (optional), computer, PC Display, and mute switch. The County Clerk will have a single confidence monitor display if needed for a total of two displays. The County Clerk will have an Owner Furnished Equipment (OFE) PC that is not integrated into the AV system but must be installed in the dais.

Additionally, there will be a touch panel located at the County Clerk to board workstation. The touch panel will be the primary in-chamber presentation control point for use during meetings to control the AV presentation systems and will be used to select and control the presentation media to be displayed in the Chamber, audio volume, audio conferencing, microphone control, and video.

A redundant secondary fully functional County Clerk to board station shall be installed to facilitate joint meetings.

Chamber's Lectern (Public Podium)

The existing podium can be reused in place, but the design should not be restricted by the podium. An adjustable gooseneck microphone will replace the existing microphone The microphone should be placed in the proper location on the podium for speakers convenience. Control of the podium mute will be provided on any of the touch panels as well as from the Clerk's position via a button. Microphone should have the ability to extend.

A new speaker timing system shall be introduced. The display of the speaker timer can be creatively considered as part of the design of the podium display. The podium will have a small form factor desktop and monitor. A panel will be installed on the podium to provide a HDMI input to the system. Timer solution shall also be integrated virtual meetings, such as Zoom. Attendees via Zoom or other video conferencing solution, should be able to see the timer virtually

Presentation capabilities shall be IP based and support wireless / wired devices. The solution shall support Staff and Public bring your own device “BYOD”, flash drive, etc... and various forms of presentation using any software application. The presenter should be able to control their own presentation. The system shall support the existing podium document projector and County owned laptop for public use that is secured to the furniture.

Video Display

The presentation system video display should provide clear viewing from all areas of the Board Chambers. This will include the audience seating, dais positions, County Clerk workstation, and the directors seating areas.

The solution shall include high-definition video touch screen monitors to display presentation at the dais, staff locations, clerk of the board, interpreters, and security.

The solution shall support high-definition video inputs/outputs and shall be integrated with existing projector screen system

Camera system upgrade

The solution shall include an upgrade of all cameras (x5) to broadcast professional grade, high definition, and capable of pan, tilt, zoom systems. The solution shall include upgrade to all camera video processing and control devices.

Audio Reinforcement and Audio Conferencing

Gooseneck microphones, wireless microphones, and wireless handheld microphones will be used for voice reinforcement and presentation support. Refer to inventory for full quantity and existing conditions for placement.

Solution shall be a complete high-definition audio solution to include replacement, if necessary, addition as required, of all existing microphones, speakers, signal processors, amplifiers, controls/mixing console, and other ancillary equipment to distribute and optimize audio experience for users, staff, and public. Solution shall include the dais stations, podium, staff areas, clerk stations, media access, and interpreter locations.

Charging stations shall be provided and readily accessible for wireless microphones, lapels, as necessary. Clerk of the Board stations shall have full control of all microphones/speakers.

The video and computer sources are to provide media audio. A multi-zone distributed loudspeaker system will be employed for mixed media, audio conferencing, and voice audio reinforcement in the Board Chamber and the secondary Broadcast location. Volume level control for the Board Chamber will be available via the control system and is to be controlled remotely from any touch panel.

Assistive Listening

An assistive listening system is to be supplied to support additional audio reinforcement in the Chamber. The solution shall provide a new hearing system and interpreter devices. Contractor shall provide the appropriate assistive listening technology and devices per the specification of room size and use. System shall be compatible to integrate with interpreter and audio should flow to both the broadcasting and the interpreter systems quantity of). Close caption feature should be integrated with monitors to aide attendees with disabilities. The County is leaning on Contractor expertise to follow all applicable local and state laws that apply to listening, visual and audio aides for disabled participants

Audio Recording Redundancy

Contractors proposed solution must incorporate audio recording redundancy. The solution may be battery operated to meet the requirements Audio Gating with Manual Override for Broadcast

The solution shall be capable of audio gating with the ability to manually override controls for Broadcast purposes.

Audio Multi-Media Integration Box

Solution shall include implementation of integrated media multi-box to provide direct audio feed for media attendees in the Board Chambers at areas to be identified during site walk.

Audio Integration of Existing Conference Rooms

Integrate existing audio speakers, wires, and controls with upgraded system. Contractor shall verify existing speakers and cables to determine if existing infrastructure is useable. If existing infrastructure is not to standard or can support new system, Contractor shall replace existing cabling, speakers, volume controllers and other associated components with new See Table 2 above for reference.

Audio Visual Control System (Creston)

Touch Control Panels are to allow the operator to have access to Board Chamber presentation, system controls for system power, display source selection, and video preview of any source.

The control system will sufficiently control all devices necessary to allow, upon source selection, seamless and automatic distribution of a selected Board Chamber presentation source device to the video displays and to the production system in hi-definition video. Additionally, audio from the selected source device shall be automatically selected and routed to the audio mixer while all unselected source devices are muted.

Control pages, panels or buttons will be laid out logically and symmetrically with a minimum of page flips, pop-ups or button changes for standard control functions. Background colors, button colors and layout shall be coordinated with the County and approved by County prior to site installation.

A. Mute Buttons - Muting of all microphones will be controlled by the mute button as described above. Additionally, control of all microphones shall be made available on all touch panels.

Solution shall include replacement/upgrade of the existing Creston system to a new future proof Creston control system. The new control center shall be capable of being mobile, (similar to an iPad) and move more seamlessly and efficiently between commands for AV equipment, projection screens, and microphones

Dais Millwork Modifications

The Board Chamber dais tabletop millwork is to be retrofitted, modified and updated to accommodate the new AV and control components as needed. Modifications are to be coordinated with County staff and detailed designs and specifications are to be documented and approved by the County.

Accommodations

Solution shall be fully ADA compliant (Hearing/Visual impaired). Contractor shall differentiate what is a legal requirement and an accommodation.

Closed Captioning

Solution shall support and include implementation of closed captioning.

Overflow – Monterey Conference Room 2092

Integrate broadcast system with existing video conferencing presentation devices.

Broadcast – Content Format

Solution shall be flexible and able to support multiple formats to enable current and future high-definition broadcast formats.

Broadcast Distribution at ITD Data Center

Solution shall include the upgrade and integration of audio visual and broadcast distribution equipment located at 1590 Moffett Street. Contractor shall ensure new system is compatible and cutover to existing broadcast carrier demarcation points (Network VBrick Encoder/Decoders). The Contractor will be responsible for replacing the existing VBricks which will support both existing standard definition and future high definition to the carriers. Contractor will be responsible for identifying broadcast performance characteristics/parameters for each carrier to ensure smooth transition.

Broadcast – Graphics Fonts Character Generator

Solution shall include the upgrade and replacement of the broadcast graphics system

Controls and Monitoring from Media Control Room

Upgrade AV and broadcast controls at broadcast operators' console station. Upgrade to include replacement of fixed Creston AV controls and to provide monitoring capabilities of what is being sent to the carriers for broadcast, to reduce troubleshooting. Additionally, operator shall be able to monitor what carriers are broadcasting. Currently, only Comcast is being monitored in media control room. Solution shall enable monitoring of AT&T, Charter, and Internet feeds. Solution shall include replacement of existing wall mount monitor with a screen capable of displaying all feeds simultaneously or one at a time.

Video Conferencing Compatibility

The system shall be capable of integration with the County's existing Zoom-based video conferencing solution that is running on Polycom hardware, to support remote attendance. County intends to adopt Teams as a video conferencing solution in the future.

Granicus Compatibility & Upgrades

Contractor to ensure new system is fully compatible with the existing Granicus broadcast services and system hardware. Contractor shall provide recommendations where existing

services/hardware can be optimized/upgraded to increase functionality and make user experience better with respect to the requirements herein. Solution shall include:

A. Implementation, training, and phased rollout of the ability to vote electronically via Granicus Votecast

B. Implementation of Granicus Speak-Up to support interactive meetings where the public can make comments via the internet. Contractor shall develop workflow and procedures in coordination with County project stakeholders to integrate this solution into proposed system

C. Implementation of a Staging/Development instance for training and testing, etc. prior to deploying changes to the production system

D. Provide Board Members training to use iLegislate/iPads and charging stations for iPads at the dais

E. Legistar Media / Archiving Workflow: Solution shall streamline operational workflow where possible. After reviewing process, Contractor proposed solution should reduce the number of steps for publishing archived videos for public consumption. Currently, the Clerk of the Board access several applications to accomplish this task. Contractor shall evaluate the current process and work with project stakeholders to accomplish a new streamline process with video archiving

F. Granicus Agenda/Meeting Minutes Workflow: Reduce duplicate efforts for developing agenda and meeting minutes. Enable electronic documents.

G. Training: Identification of user needs for training, using the Granicus product line. Set up training schedule and coordinate with Granicus account manager on behalf of the County to provide onsite training for County Staff users.

Digital Signatures

System shall support County Enterprise solution “DocuSign” for digital signatures and shall integrate these capabilities to the Granicus Legistar product to enable users to digitally sign documents where required.

Virtualization and Cloud Solutions

System shall support virtualization or in the "Cloud" solutions as much as possible and provide redundancy for critical components where possible.

- Remote Management
- System shall have the ability to be controlled and operated remotely from another County location, such the Information Technology department.
- Video Conferencing Integration
- Tracking Cameras

Digital Signage

Contractor shall install and integrate a digitized signage system that can be scaled to include additional locations. The system shall be easy to use, programmable, networkable and capable of integrating to the broadcast system to display agendas and announcements for public consumption in lieu of paper postings. Solution should be easy to manage, remotely from County network and workstations. Locations outside shall be weatherproof and hardened to prevent damage from vandalism. The following locations shall be equipped with digital signage:

A. Inside the BOS Chamber lobby

B. Schilling Place

C. Clerk Public Counter

1441 Schillings Place Public Kiosk

Contractor shall install and integrate a public kiosk system that can be scaled to include additional locations. The system shall be easy to use, programmable, equipped with touch screen, and capable of integrating to the broadcast system to display agendas and announcements for public consumption in lieu of paper. Kiosk shall be hardened to prevent damage from vandalism. Kiosk shall be used for checking in, electronic comment cards in lieu of paper, agenda viewing, and printing. The following locations shall be equipped with a Kiosk:

A) At public counter in front of Clerk of the Board's office with print capabilities. Kiosk shall be synced with printer located inside Clerk's office distribution (networked)

B) in the BOS chambers lobby for view only

Remote Broadcasts

A. Contractor should provide a solution for remote meetings. This solution will tie into the overall broadcasting system seamlessly and will allow County staff or its agents

to record video and audio from outside the board chambers in remote locations. The solution shall be mobile and easy to setup.

Board Chamber's Environmental Upgrades

Sound Intelligibility

A. Contractor shall provide a solution to enhance sound intelligibility to all seats in the board chambers. Contractor shall review and adjust board chamber acoustic if necessary.

Lighting Optimization

A. Room lighting, both natural and ambient, shall be optimized to reduced discoloring, glares, shadows, and other poor lighting conditions that may affect the visual of presentations with new solution.

B. Existing conditions include large windows along one side of the Board Chambers which present lighting challenges. On sunny days, board members nearest the windows can seem 'hot' on one side of their face or top of their heads. If light is strong from the windows, speakers at the public podium can seem a little dark. Optimize internal building lighting near/behind/on top of the projector screens which seem to washout the project screens.

System Monitoring

A. Solution shall be SNMP V2 compatible with remote monitoring capabilities or equipped with software systems that can provide monitoring capability for each component of the AV and Broadcast system where possible. Contractor shall provide a list of all hardware that is capable of being monitored.

Network Security

A. Any network port or device interface that is not used at the time of system implementation shall be software-configured to be disabled. A list of all disabled ports, by site, equipment designation, and port designation, shall be delivered to County as part of the system documentation package and will meet the following requirements:

    A. County may require all network connectivity to be configured and connected to County network standards configurations and hardware. Contractor should work with the County representatives in clearly outlining all network connections, software, and configurations such as VLANs and QoS

B. Once equipment is configured, Contractor will work wit County IT representatives to conduct device vulnerability security scans. To prevent system impacts in the future, these scans should take place during commissioning. Contractor will provide a detail report outlining each device's vulnerability and the effected service/application

C. The proposed system shall be designed for secure management of the devices and other required equipment as specified by the County of Monterey

D. The proposed network shall be compliant with ITU-T x.805 Security Architecture.

E. Network devices shall support the following security dimensions:

- Access control
- Authentication
- Non-repudiation
- Data confidentiality
- Communication security
- Data integrity
- Availability
- Privacy

F. The network architecture shall be designed to prevent the following security threats:

- Corruption or modification of data
- Destruction of data and network resources
- Disclosure of data
- Interruption of system services
- Removal or theft of data and network resources

Equipment Specifications

A. Contractor shall furnish and install all new equipment, as required to meet all requirements of this SOW.

Spares

A. Provide sufficient spares to resort system from critical or severe failures, using onsite spare components, as defined in Warranty Section of this agreement

Parts Availability

A. Contractor shall certify that replacement parts for all delivered equipment shall be available for a period of at least 10 years after the equipment is no longer in production.

B. In the event Contractor plans to discontinue the manufacture of any product line or stocking any part required for maintenance on the County system, Contractor shall send written notice to the County at least 24 months prior to the date of discontinuance to allow for last time buys and spares replenishment.

Additional Broadcast Room (Schilling Place)

A. Contractor shall provide an option for a turnkey solution, including design and integration (of technology only) and for the purpose of broadcasting

Video Wall

A. Contractor shall provide option to replace existing BOS Chamber projector system and screens with video wall that is appropriately sized to room and space. Options shall include pricing to retrofit the existing wall/cabinets to support new video wall system. All engineering, architectural, permitting considerations shall be included for turnkey delivery.

Management System

A. Management System equipped with alarm, control, and tracking capabilities for the proposed AV and Broadcast system. The system shall where possible:

- Be capable of remotely monitoring both Contractor furnished and other County equipment status and performance from all sites.
- Have sufficient alarm, control, and monitoring capabilities to allow technicians to identify failing or failed components, to initiate the repair of defective or failing components, and to remotely monitor system status and performance for all system devices.
- Be capable of monitoring, controlling, and tracking different alarm types (i.e., dry contact, sensor, environmental, etc.)

- Be configured to monitor all Contractor-furnished equipment.
- Support multiple levels of operator access allowing remote operation via secure VPN connection to laptop computer
- Be capable of replication, so that if the County installs primary and backup NMS', and if the primary server fails, the backup server will have the most up-to-date configuration data and can provide monitoring and diagnostic capabilities for the AV and Broadcast System.
- Perform automated backups of all device configurations and include a change log of all changes made to a device over time.
- Support a hierarchical user authorization mechanism allowing assignment of various roles to particular users and enabling those users to act on a specific subset of devices.
- Support a web-based interface and support Hypertext Transfer Protocol Secure (HTTPS) for access from any point on the IP network.
- Be capable of monitoring the proposed AV and Broadcast system and be capable of expanding to monitor future components of the system.
- Be capable of querying device status and performance information as well as receiving alarm/fault information from devices via SNMP and similar standards-based protocols.
- Provide a fault/alert list, performance graphs, and a topology map that indicates device status via color code. Access to the NMS shall be available via Web Browser from anywhere on the network.

The County will furnish the servers on which the management system will be hosted. Contractor shall provide the County with the hardware requirements for the management system with sufficient time for the County to make the equipment purchase and ship the servers to Contractor.

Monitoring System Manuals

A. Contractor shall furnish NMS Operator's Manuals that describe the configuration and all functions related to the systems and equipment provided

B. The manuals shall be organized for quick access to the description of each procedure.

C. The manuals shall describe:

- The operator interfaces and operator procedures

- Presentation of data on displays
- How the system and equipment react to situations such as heavy alarming, loss of communication links, heavy operator interaction, and loss of power and restoration of power
- How the systems and equipment react to system failures such as loss of CPU, loss of mass storage, loss of operator/machine display capabilities, and loss of communication
- The hardware configuration and device switching capabilities
- Every message and alarm that the system and equipment are capable of outputting and an explanation of what the message indicates and what action the system operator should take

Additional Spare Parts

A. Provide per unit pricing for each replaceable module furnished by Contractor. Modules include, but are not limited to, amplifiers, microphones, etc.

Engineering and Technician Services

A. Provide an hourly rate for each engineering and technician classification necessary to provide additional services that are beyond the length of this contract.

Test Equipment

A. Contractor shall make recommendation for a full set of test equipment, including make and model, which the County should possess to effectively monitor, diagnose, repair, and test the equipment furnished pursuant to this Scope of Work. Contractor shall also provide per unit pricing for the recommended test equipment, to allow the County to purchase as needed.

Post-Warranty Services

A. Hourly rate for each service tier for all supplied equipment, including top tier of 24 hours a day, 7 days a week, 365 days a year on-site support for annual increments following expiration of warranty.

Software Support and Upgrades

A. Software support and upgrades for all supplied equipment, assuming Contractor can accomplish this task remotely.

Extended Warranty

A. Extend the warranty for all supplied equipment for up to an additional 5 years, in 1-year increments.

Lifecycle Requirements

A. The expected lifecycle for the audio visual and broadcast system is 10 years.

B. Contractor shall not provide products that are scheduled for discontinuation without a replacement product from the same product platform or family scheduled for production.

C. Contractor shall certify that each product is a model currently in production and not scheduled for discontinuation of manufacture for a minimum of 7 years from the date of installation.

D. Contractor shall commit to support each product for a minimum of 15 years from final system acceptance.

Real Time Transcription

A. Contractor shall recommend an automated software solution that integrated with overall technology proposed technology specification for Real Time transcription for documentation of discussions verbatim

Back-up and Restoral

A. Solution shall include a secondary audio back-up recording in lieu of DVD recording by operator. Contractor shall confirm existing workflow and provide alternate automated options.

Message Board

A. Solution shall utilize new Board Chambers video displays to provide the public audience an introduction message to a board meeting in Spanish and English. An ongoing instructions/glossary terms shall be displayed in regard to upcoming agenda / meeting.

Communications Access Real Time Translation (CART)

A. Solution shall be capable to support and enable CART capabilities.

Additional Monitors in Chamber for Rear Sitting

A. Solution shall be capable to support additional monitors. Placement of monitors shall accommodate audience member sitting at the back half of the Chambers.

Implementation

A. Contractor shall be responsible for planning, coordinating, and implementing the system specified herein.

B. Contractor shall be responsible for ensuring that implementation of the new system will not cause major disruption to the operations of the existing system or the services it supports. Implementation of project should be done without

C. Site work shall be accomplished to minimize downtime of the existing system. All required network interruptions shall be coordinated and approved by the County.

D. Contractor shall complete the installation and testing of all equipment specified herein using qualified technicians. All equipment installers and technicians shall be thoroughly trained and experienced in the configuration, installation, testing and startup of all Contractor furnished equipment, as applicable to the work being performed.

E. Contractor shall utilize certified installers for all work. Certifications must be available at the site for verification.

F. For all low voltage work, contractor shall use County approved vendors

G. Contractor shall adhere to all state, local requirements for COVID 19

Infrastructure Construction and Coordination

A. Contractor will provide all supporting infrastructure and construction to interconnect and install the proposed equipment for use. County will be responsible for all LAN provisioning, network connectivity and supply of Cable TV devices and incoming building Cable TV signal.

B. Contractor will review the site and confirm completion of the construction site work by related trades managed by Contractor prior to the delivery of equipment. As much construction, configuration, and assembly of the proposed equipment will be completed prior to on-site installation. Prior to installation, in the timeframe when the Board Chambers is scheduled to be closed (if necessary), Contractor will complete all necessary demolition, structural construction, wet work, and leave an environment free of dust and debris before equipment is moved into place.

Site Surveys

Contractor shall visit all sites to:

- Assess site, safety, and access conditions
- Verify work to be completed, including location of equipment and installation requirements
- Assess the condition of existing equipment, cabling, power systems, standby power systems, earthquake bracing, grounding, and all other installation practices, to assure that they adhere to industry standards and will support the installation of all equipment specified herein. Include recommended site upgrades in the Site Survey Report herein.
- Take photographs (at a minimum: overall site, equipment cabinets/racks, site grounding and lightning protection)

System Migration

A. Contractor shall follow the Migration Plan delivered as part of the design package, to ensure a smooth transition from the County's existing system to the new system specified in this SOW. Any modifications to the plan shall be proposed to and approved by the County at least 2 weeks prior to implementation.

B. Contractor shall have each path migrated within one day. It is Contractor's responsibility to notify the County prior to Contract Award if this is not achievable.

C. Contractor shall provide 7 days advance notice for required outages of the existing system during the migration. Planned outages require written approval of the County.

Factory Acceptance Testing (FAT)

A. Fourteen days prior to the FAT, Contractor shall submit a Test Plan to the County documenting all tests to be performed.

B. Contractor shall provide all necessary technical personnel and test equipment to conduct the FAT. Contractor shall resolve all deviations, anomalies, and test failures at Contractor's own expense.

C. Contractor shall perform a successful unwitnessed Pre-FAT, using the approved Test Plan, prior to the FAT.

D. Both Contractor and a County representative shall sign the FAT Test Plan following successful completion of all tests. All tests in the FAT Test Plan shall be marked as either pass or fail.

E. Documentation shall include identification of any equipment or component that failed the FAT. Contractor shall repair or replace and retest any such failed equipment or component. The County reserves the right to require repetition of all or any portion of the FAT after repair or replacement of any failed equipment or component.

F. The County will travel to Contractor's test facility (within the Continental United States) to witness and verify the operating parameters of the AV and Broadcast system. The County reserves the right to test at random various aspects of the AV and Broadcast system while staged on Contractor's factory floor.

G. Contractor may begin the installation phase after receiving approval from the County that the equipment meets the requirements set forth in this SOW. Approval to ship the equipment does not provide nor indicate final acceptance of the system in any manner.

H. Contractor shall bear the cost to replace any equipment or system that does not meet the requirements set forth in this SOW prior to starting the installation phase.

I. Each individual assembly or equipment unit shall undergo factory testing prior to shipment.

J. Contractor shall submit a FAT Test Report to the County for review and approval, documenting the test results and indicating successful completion of the tests.

Equipment Coordination and Supply

A. Supply of all required equipment to provide turnkey system, including all primary equipment components listed in the Primary Equipment List provided.

B. Supply of interface and mounting components - Contractor will supply interface and mounting components and cabling, connectors and installation materials.

C. Coordination and storage of procured equipment - Contractor will coordinate receipt and storage of all procured equipment at Contractor's facility for pre-assembly and fabrication prior to site installation.

D. Contractor shall ship and warehouse all equipment and materials at its own expense. The County will not store equipment.

E. Contractor maintains all liability and risk for all equipment until it has been installed at the site and accepted after commissioning by County

System Installation

A. All subcontractors shall be preapproved by the County. Any change in subcontractor or its staff shall be preapproved by the County.

B. Contractor shall be responsible for the configuration of all equipment.

C. Installation shall consist of a complete system to include placement of associated cabling, appropriate system layout, and terminal connections. Contractor shall provide associated power supplies and any other hardware, adapters and/or connections to deliver a complete operable system to the County at the time of field acceptance.

D. Contractor shall provide and pay for all materials necessary for the execution and completion of all work. Unless otherwise specified, all materials incorporated into the permanent work shall be new and shall meet the requirements of this SOW. All materials furnished, and work completed shall be subject to inspection by a County authorized representative.

E. All cables for rack-mounted and wall-mounted equipment shall be cut to length and include a 96-inch service loop neatly fastened to rack cable standoffs or ceiling trays as appropriate. Excess cabling is not acceptable.

F. Industry standard cable management shall be used for the installation of all cabling.

G. All cabling shall be labeled with an identifier on each end that clearly indicates where the cable is terminated at both ends.

H. All equipment and devices shall be clean internally and externally, and all damaged finishes repaired.

I. Workers shall leave worksites neat and broom swept upon completion of work each day. Prior to final field acceptance, all shelter floors shall be thoroughly cleaned, and all scuff marks and abrasions removed. All trash shall be removed daily.

J. Contractor shall install all equipment, antennas and associated materials described herein in strict conformance to the manufacturer’s recommendations and shall use good craftsmanship.

K. Contractor shall be responsible for preparing and submitting the necessary applications for site permissions/access to install equipment at non-County owned sites.

Equipment Racks

A. Earthquake bracing shall conform to Telcordia GR-63-CORE Network Equipment Building System (NEBS) requirements for installation in Monterey County, California.

B. Equipment positioning in racks or cabinets shall be in a manner that places heavier items lower in the racks and lighter items higher in the racks to minimize the effect of centrifugal forces.

C. Bracing shall also be applied to equipment during unattended periods of construction.

D. Prior to permanently bolting down racks, County must approval of final placement

Inspection

A. A County representative and Contractor's Project Engineer shall conduct an inspection of each site upon substantial completion of installation. This inspection shall document any deficiencies on a single punch list provided to Contractor for resolution.

B. Final field acceptance testing at any site shall not commence until all punch list items are resolved for that site and for any other site involved with the testing, unless otherwise approved by the County.

Acceptance Testing

A. After all AV systems are installed, final testing and adjustments will be made to ensure compliance with the established performance criteria. County will be present to observe and sign off on the testing completion.

Factory Acceptance Testing

A. After all systems are assembled and programming installed, pre-installation factory acceptance testing (FAT) will be performed in Contractor's facility and shall provide the County with the results.

System Installation

A. Once the site is verified as completely prepared and acceptable for receipt of the systems, the AV components and equipment will be transported to the site and installed. Complete system installation to supporting infrastructure (conduit, electrical, and cabling)will be performed by Contractor during the timeframe

designated for Board Chambers closure, recess and other days identified as open for such work to be performed. Contractor shall plan on working outside of normal business hours if needed to complete project deliverables in an effort to not interrupt or impact day to day operations.

System Production

A. Upon receipt of equipment, Contractor will provide the County with proof of delivery and begin the construction and assembly of approved systems. This work will be done in Contractor's facility. Systems will be fully assembled, wired, programmed and tested prior to delivery to the County's site.

Control System Configuration and Programming

A. Contractor will configure and develop control system programming code and touch panel graphical user interface (GUI) code and pages to provide efficient and intuitive system operation. The control system manufacturer's standard application development environment will be used for all programming and configuration. Complete operating code will be loaded and tested in Contractor's facility prior to system installation.

General Requirements

A. Prior to Acceptance Testing, Contractor shall:

- Verify and document that all equipment, hardware, and software are upgraded to the latest factory revision. Multiple revision levels among same equipment types are not acceptable.
- Provide 2 weeks written notice to the County that the system is ready
- Submit a Test Plan for review and approval by the County

B. Contractor shall provide all test equipment and miscellaneous cables, adapters and parts required to perform all testing specified in this SOW.

C. Contractor shall calibrate all test equipment prior to testing.

D. Performance of all tests must be in the presence of County or a County-approved representative.

E. Testing requires the utilization of quality instruments in proper condition for all testing. Calibration records for all instruments shall be available at the site during all testing.

F. Both a County representative and Contractor shall sign the Acceptance Testing Test Plan following successful completion of all tests. All tests in the Acceptance Testing Test Plan shall be marked as either pass or fail.

G. Contractor shall submit all test schedules to the County for pre-testing approval.

H. Contractor shall provide all necessary technical personnel and test equipment to conduct Acceptance Testing. All deviations, anomalies, and test failures shall be resolved at Contractor's expense.

I. Contractor shall document, repair, replace and retest any equipment that fails any test. Contractor shall replace and retest all defective components.

J. The County reserves the right to require retesting of any equipment that fails any test, after repair or replacement.

System Acceptance

A. The integrated operation of the network shall be demonstrated.

B. The test shall demonstrate the reliability, long-term stability, and maintainability of the system including all components implemented at that point.

C. System Acceptance will occur after successful completion and approval of the following:

- Final Detailed Design
- Factory Acceptance Test
- System installation and testing
- Final inspection and punch list resolution
- As-built documentation

D. System Acceptance shall not occur based on any other factor, including the assertion of beneficial use.

Decommissioning, Removal and Disposal of Existing Equipment

A. After acceptance of the new system by the County, Contractor shall remove existing AV and Broadcast system equipment that is not being reused in the new system and transport it to a location specified by the County.

B. Contractor shall create a detailed inventory of the removed equipment, listing the following, at a minimum:

- The owning agency
- Model numbers
- Serial numbers
- Asset numbers
- Former Location

C. Unless otherwise agreed to by Contractor and the County, disposal of equipment will be the responsibility of the County. Contractor may offer to dispose of equipment.

Cutover of Existing Devices

A. Contractor shall identify all existing devices to be migrated / integrated into the new system and coordinate and supply a plan to the County.

Training

A. Once all systems are installed and final testing and adjustments have been completed, County staff operational training will be performed and provided by Contractor.

B. Following the User Training, County will perform a complete mock meeting run-through. If successful, a System Acceptance Certificate will be executed.

C. Failure of any component during the System Acceptance will result in withholding of payment and may invoke Liquidated Damages if the system cannot be used for the next scheduled public

Technical Training & User Training

A. The County's technical support staff will be trained both as the system is being installed and in a dedicated training/overview session on site.

General Requirements

A. All training sessions shall be conducted at a County-approved facility in Monterey County, California.

B. Contractor shall submit a Training Plan and Training Manuals for review and approval by the County, as described under Design Submittals herein.

C. Contractor shall provide all instructional material required to conduct each training session, including, but not limited to, test equipment, training manuals, video projectors, interactive self-paced personal computer programs, and complete equipment operating instructions.

D. All training sessions shall utilize County spare equipment for training purposes.

E. Contractor shall provide two training sessions for each type of training. Each session shall support eight individuals.

F. Contractor shall coordinate with the County to schedule each session.

G. Contractor shall have at least one representative at all training classes to answer County questions.

Training Courses

Contractor shall provide training for all new equipment, including, but not limited to, the speech reinforcement system, broadcast graphics and broadcast systems and all associated equipment. Contractors produce all training material in softcopy Contractor shall provide training onsite and in person. Training session must be coordinated in advance to ensure all stakeholders participate and attend. Contract must hold several training sessions to meet participants schedules. Training shall include:

- Basic theory
- System maintenance, configuration, and troubleshooting
- Monitoring system, maintenance, configuration, troubleshooting and report generation
- Basic users training and functionality
- Written training materials

System Warranty, Maintenance, and Support

All equipment provided shall be new and covered by a full manufacturer's warranty for 1 year, commencing with the County's final acceptance of the system.

During the warranty period, service and repair shall be performed 24 hours a day, 7 days a week, 365 days a year. There shall be no additional charges for work outside of normal Contractor business hours.

System performance, installation, and all hardware, parts, software, and materials (including third-party equipment) shall be warranted for a period of 1 year.

Warranty coverage shall include all related return and delivery fees.

Contractor shall provide a service telephone number for standard business hours, holidays excluded.

Contractor shall provide a separate service support quote with a complete and comprehensive program of preventive maintenance, service and warranty support for a period of five years from the date of acceptance of each project phase. Response is expected within four hours of service request during normal business hours. Requests received after hours will be responded to next business day.

Contractor shall provide remote diagnostic and technical support. After hours support must also be provided at a specified hourly rate. The support shall cover removal, reinstallation, configuration, testing and alignment of repaired equipment, and shall include four (4) preventive maintenance visits per year per room on a quarterly basis.

Contractor shall cover all required parts and repair costs for equipment breakdown. Such support will be billed on an annual basis subject to cancellation without reason.

All System Source Code, millwork shop drawings and inventory of any old equipment in use at the close of the project with an inspection status from Contractor which shall be used as an attachment to the "Preventative Maintenance and System Warranty" contract.

The County shall have the right to perform any maintenance and/or repairs required during the warranty period without voiding or affecting Contractor's warranty.

Day One Support

Contractor will provide one system engineer on-site for the first live County Board meeting that will utilize the new system.

1. Contractor shall contact the County within 30 minutes of telephone notification of an issue

2. Contractor’s qualified service representative and the County's representative shall attempt to resolve the issue over the phone or via remote network management

3. If Contractor's qualified service representative and the County's representative cannot resolve the issue remotely or over the phone, then the County will determine the criticality of the service issue, as follows:
    - Critical – a system failure or outage that creates total system unavailability of one or more sites
    - Severe - a system failure or outage that affects or reduces system availability by 50% or more to one or more sites
    - Minor - a system failure or outage that affects or reduces the full operational availability of one or more sites but does not affect overall system availability

4. Contractor shall provide on-site repair for the following outage classification levels as follows:
    - Critical – onsite within 24 hours, with a maximum restoration time after arrival onsite of 4 hours
    - Severe - onsite within 48 hours, with a maximum restoration time after arrival onsite of 4 hours
    - Minor - onsite within 72 hours, with a maximum restoration time after arrival onsite of 4 hours

Contractor shall repair all equipment, hardware, and software throughout the implementation and warranty periods.

A. Contractor shall provide the County with written documentation indicating:
    - The cause of the service outage
    - The resolution
    - All post-repair testing procedures to ensure proper operation

If Contractor uses County-owned spares to complete a repair, the documentation shall include the model and serial number of both the defective unit and the spare.

Hardware:

- For all equipment needing factory or depot repairs, Contractor shall maintain a comprehensive tracking system to track units enroute to and from the factory/depot
- Replacement parts shall be new or original repaired parts only
- Fixed equipment mail-in board repair shall be completed within seven calendar days of receipt
- Equipment must be returned to the County via second-day shipping, with tracking number provided to the County
- Serialized units sent in for depot repair must not be exchanged unless specifically authorized by the County
- The original unit must be repaired and returned unless specifically authorized by the County

Software and Firmware:

- Contractor shall warranty all software and firmware.
- During the installation, warranty, and extended warranty periods (if applicable), Contractor shall provide, at no additional cost, commercially available upgrades of all software and firmware originally sold to the County.
- The frequency and timing of installation of upgrades during this period shall be at the sole discretion of the County based on availability as provided by Contractor.
- Contractor shall provide all back-up media and revised software manuals to the County at the time of any software revisions at no cost.
- Contractor shall update all devices to the same and latest release level prior to the conclusion of the warranty period at no additional cost to the County.

Recurring Failures and Manufacturer Defects:

- Any fixed equipment or fixed equipment module that fails twice during the acceptance test or twice during the first 12 months after System Acceptance shall be indicative of a recurring or systemic failure or defect that warrants further investigation by Contractor and County
- If the County deems the defect to be systemic after the investigation is completed, Contractor shall then be responsible for replacing at no

additional cost to the County all equipment and/or equipment modules related to the recurring or systemic failure, not only the specific equipment affected.

- Contractor, at no additional cost to the County, shall correct latent design defects or recurring problems relating to software, firmware, hardware, or overall system design, during the warranty period.
- During the warranty period, Contractor shall correct all system malfunctions due to software at no additional cost to the County.
- If, during the first 5 years after System Acceptance, 25% of any type of Contractor-supplied equipment or material fails, Contractor shall replace this equipment or material at no additional cost to the County.