

# SAN JUAN UNIFIED SCHOOL DISTRICT



## Mesa Verde High School Performing Arts Audio-Visual upgrade SJUSD Project #210-9311-21DM

Sacramento County

### ADDENDUM NO. 1

December 9, 2020

for

Bid Package # 21-104

#### Owner

San Juan Unified School District  
3738 Walnut Avenue  
Carmichael, CA 95609

#### Designer

KMM Services, Inc.  
5433 El Camino Ave., Suite 5  
Carmichael, CA 95608

This Addendum has been prepared to clarify, modify, delete, or add to the drawings and/or specifications for the above referenced project, and revisions to items listed here shall supersede description thereof prior to the above stated date. All conditions not specifically referenced here shall remain the same. It is the obligation of the Prime Contractor to make subcontractors, materials suppliers, etc. aware of any items herein that may affect submitted bids.

Acknowledge receipt of this addendum by inserting its number and date in the bidding documents. Failure to do so may subject bidder to disqualification.

All addenda items refer to the plans and specifications unless specifically noted otherwise. Any addenda items related to the Bid/Proposal must be used when submitting a bid. Non-use of these revised forms will constitute a bid being considered non-responsive.

#### **PART A – BIDDING AND CONTRACT REQUIREMENTS**

##### **A1.01** Questions received:

<b>QUESTIONS:</b>	<b>ANSWERS:</b>
Q1) BID ALTERNATE-1 equipment table 1-1 lists (2) SHURE SMX24/SM58 do you mean SLX24/SM58?	A1) Provide Shure SLX24/SM58 wireless microphone system
Q2) Is an alternate brand or series of wireless microphone system acceptable?	A2) Alternate wireless microphone is acceptable is suggested system is equal or better than specified.
Q3) Must the finished dual-bay rack conform to the T211 rack elevation, and if so, who will supply the items depicted (drawer, power distros, network switches, vent panels) which are not on the equipment list?	A3) Dual-bay rack equipment not identified on T211 is existing and not included in scope. Contractor to furnish and install replacement microphones and theater communications system components only

San Juan Unified School District – KMM Services, Inc.

Q4) If the Electronics Diversified rack and dimmers are removed as described in the RFP, what will control the twelve channels of House Lighting? House lighting is not shown on any drawings, and there are no dimmers in the equipment list. Please provide clarification	A4) House lighting is controlled by a separate Leviton lighting control panel installed in the Performing Arts building.
Q5) Does the DMX universe setup need 5 universes or will 2 suffice	A5) The DMX universe requirements may be utilized on 2-universes, total of 1024 channels
Q6) Can the contractor use the district's manlift / scissor lift to perform the work?	A6) No. The contractor must furnish all labor, material, and equipment to perform the work.

**PART B – TECHNICAL REQUIREMENTS**

**B1.01** Add specification 27 41 00 Audio-Visual to BP21-104\_Book1of1.

**PART C – DRAWINGS**

**C1.01** N/A

END OF ADDENDUM No. 1

## SECTION 27 41 00

AUDIO VISUAL SYSTEMPART 1 – GENERAL

## 1.01 SUMMARY

- A. Provide multi-media presentation capabilities as indicated on the “T” drawings.
- B. Quality workmanship is a high priority for the District and the Contractor shall be held to a high-level of professional workmanship. Contractors unfamiliar with the District’s standards shall familiarize themselves with the District’s standards and requirements prior to beginning work.
- C. For new construction – provide and install all components and accessories as outlined in the design documents for a complete and operable system.
- D. For existing construction – provide and install all components and accessories as outlined in the design documents to modify the existing system while maintaining code compliance and to seamlessly integrate the new components into the existing campus’ system. Prior to beginning any work, the Contractor is responsible for identifying any existing system errors or faults and bring these issues to the attention of the Project Manager.
- E. Labor and Materials: The Contractor shall provide and pay for all labor, materials, equipment, tools, utilities, construction equipment and machinery, transportation and other facilities and services necessary for the proper execution, operation and completion of the Work.
- F. The Contractor shall furnish and install all new conduit/raceway and wire as indicated on the project drawings and/or as required to provide a turn-key system.
- G. The Contractor shall install wire and cable that is appropriate for the installed environment (i.e. non-plenum, plenum, underground & etc.)
- H. The Contractor shall be responsible for programming the Audio-Visual System.
- I. The Contractor shall review the proposed final system programming, functionality and expectations with the project manager, Architect/Engineer/Designer and District prior to final programming.
- J. After completion of the installation and pretest of the system a satisfactory final test of the entire system
- K. Project Management
  - 1. The Supplier/Installation Contractor will provide the following Project Management:
    - a. Attend meetings with the client’s technical and contract representative, providing status reports and resolution of questions or issues outstanding.
    - b. Develop project schedule and oversight of the installation team.
    - c. Stage equipment and materials at supplier’s shop.
    - d. Facilitate completion of final punch-list items.
    - e. Assure that the finished system meets the design criteria and functions per the developed

concept.

- f. Remote Control Programming
  - g. Contractor Qualification and Training
2. The Contractor shall be fully conversant and capable in the cabling of low voltage applications such as, but not limited to audio-visual, data, voice and imaging network systems. The Contractor shall at a minimum possess the following qualifications:
- a. Possess those licenses/permits required to perform telecommunications installations in the specified jurisdiction.
  - b. Personnel trained and certified in the design of the approved manufacturer's products.
  - c. Personnel trained and certified to install the approved manufacturer's products.
  - d. The Contractor shall show proof of current certification of the approved manufacturer's products.
  - e. Provide references of the type of installation provide in this specification.
  - f. Personnel trained in the installation of pathways and support for housing horizontal and backbone cabling.
  - g. Personnel knowledgeable in local, state, province and national codes, and regulations. All work shall comply with the latest revision of the codes or regulations. When conflict exists between local or national codes or regulations, the most stringent codes or regulations shall be followed.
  - h. Be in business a minimum of Three (5) years.
  - i. Must have personnel fluent in the use of Computer Aided Design and possess and operate Autodesk AutoCAD or Autodesk Revit BIM software using .DWG, .RVT, or .DXF format for required shop and record as-build documents.
  - j. Must possess current liability insurance certificates.

## 1.02 QUALITY ASSURANCE

### A. Conformance:

- 1. All work shall conform to the applicable requirements of this project. A C-7 licensed Contractor in the State of California shall perform all low voltage work.
- 2. The A/V contractor shall be a factory direct dealer for, or establish an equivalent relationship with, the major equipment specified herein, suitable to carry out warranty administration and post warranty repair, and provide documentation of same
- 3. The Contractor shall notify the Owner, prior to submission of bid, about any part of the design, which fails to comply with abovementioned requirements.
- 4. If after contract is awarded, minor changes and additions are required by the mentioned authorities, even though such work is not shown on drawings or covered in the specifications, they shall be

included at Contractor's expense.

5. The A/V contractor shall have been actively engaged in the installation of projects similar in scope and size for a minimum period of 5 years.
6. The A/V contractor shall be an active registered member of ICIA, NSCA, NAB, BICSI, CTS and/or other similar industry recognized organizations, and provide documentation of same.
7. Any subcontractors to the A/V contractor will be allowed provided they comprise no more than 20% of the on-site work force and are under the direct supervision of the Project Manager or Installation Supervisor.

B. Coordination:

1. The Contractor shall become familiar with the existing conditions at the job site if applicable, and with the drawings and specifications and plan the installation of the audiovisual work to conform to the existing conditions to provide the best possible assembly of the combined work of all trades.
2. The Contractor shall work out in advance all "tight" conditions, involving all trades and if found necessary, supplementary drawings shall be prepared by this Contractor, for the Architect's approval, before work proceeds in these areas.
3. No additional cost will be considered for work, which must be relocated due to conflicts with the work of other trades.

1.03 SYSTEM REQUIREMENTS

1. Audio-visual contractor shall remove all theater lighting futures, cabling, and power distribution equipment installed in the performing arts building. Theater lighting is located at accessible room catwalk, side spot rooms, and three light bar locations at the stage.
2. Contractor shall provide scissor lift to access all lights a the stage area. Contractor shall provide cardboard underlay and plywood topping for all scissor lift locations to protect the stage floor. Contractor shall take photographs of existing stage floor condition prior to scissor lift use. Any and all scuffs, mar, damage caused by not utilizing protective stage methods listed above shall be repaired and no cost to the district by the contractor.
3. Install new power distribution system for theater lighting. Utilize existing 120vac/225amp service at existing mezzanine amplifier room. Install new power distribution 19" wall mounted rack and install power distribution rack modules as shown on drawings for theater lighting fixtures. Install all required conduit and back boxes for power distribution.
4. Install new theater lighting DMX console at existing mezzanine control room.
5. Install new theater lighting fixtures as shown on drawings.
6. Install new DMX / RDM control cabling as required from head end equipment to new theater lighting fixtures.

7. Configure all theater lighting fixtures to new theater DMX lighting console. Console shall be contractor commissioned to adjust light intensity dimming off/variable/on, full color spectrum color mixing, chase and base scenes as defined by site theater program at time of acceptance/punch.

Bid alternates

A. Bid Alternate-1:

- a. Remove existing wireless microphones from existing rack located at control room.
- b. Install new wireless microphones at existing rack located at control room. Re-terminate base stations to existing xlr microphone cabling.
- c. Provide dynamic microphones, cables, and stands as turn over items.

B. Bid Alternate-2:

- a. Install new pan-tilt-zoom performance camera at the control room under the projector cabinet. Connect camera HDMI out to existing Creston DMPS switcher located at the control room.
- b. Install camera remote controller at control room for full functionality control over the performance camera.
- c. Install new led/tv monitors backstage for viewing of performance and playback content. Install new HDMI extender from existing Creston DMPS switcher at the control room for signal distribution to led/tv monitors. Program existing Creston touch panel to include all source selection outputs from existing Creston switcher.

C. Bid Alternate-3:

- a. Install new digital wireless theater communications system at control room.
- b. Install new wall stations w/ speaker and wall belt pack station inputs as shown on the drawings.
- c. Provide additional wireless headsets and belt pack / headphone as turn over items.
- d. Upon completion of new system install demo all unused cabling from legacy theater communications system.

1.04 Submittals

1. Pre-construction material submittals

A. Products Material Submittal:

1. See Division 27 05 00 for Contractor Product Submittal requirements

B. Contractor Installation Shop drawings

1. See Division 27 05 00 for Contractor Shop Drawing Installation requirements.

C. Post construction submittals

1. Provide as-build documentation in accordance with Section 3.

2. Submit owner's manual binders of all equipment documentation.
3. Provide a laminated simple operational sheet for end-users of system.
4. See section 27 05 00 for requirements.

## PART 2 – PRODUCTS

### 2.01 CONTRACTOR PROVIDED PRODUCTS

- A. As indicated on drawings to provide fully functional, integrated and operational Audio-Visual system.

### 2.02 OWNER PROVIDED EQUIPMENT/CONTRACTOR INSTALLED

- A. The District shall supply Apple TV (4<sup>th</sup> Generation or newer) devices for screen sharing. The Contractor shall supply required Apple TV display cable, mount, and remote holder. All other equipment shall be Contractor Furnished / Contractor Installed.

### 2.03 CABLE

- A. Contractor must provide all cables and connectors from the wall plate to the TVs, projectors, speakers, switchers, amplifiers and all other associated equipment to provide a fully functional, integrated and operational AV system.
- B. Speaker cable shall be minimum 14 awg, 2 conductor cable.

### 2.04 ENCLOSURES AND PATHWAYS

- A. The AV contractor shall install an equipment rack as required to house the equipment to be installed.
- B. Use mounting hardware and anchors recommended by the Engineer of any material that shall be mounted to the building or structure.
- C. The Contractor shall select the appropriate mounting bracket kits for existing and new construction installations.
  1. The Contractor will provide a cable conduit/pathway to accommodate the necessary connections as outlined in the drawings and details.

### 2.05 POWER

- A. The Contractor will provide electrical circuit(s), outlet and connections where necessary to install the AV system.
- B.

PART 3 – EXECUTION

## 3.01 CABLE ROUTING

- A. Cable shall be routed in appropriate conduit by system type as outlined in design details. Contractor is to contact Owner representative when this requirement cannot be met.
- B. Cable shall not be exposed at any point in the main cable path. Contractor is to use appropriate pathway for the situation (i.e. inside wall, conduit, or non-metallic surface raceway).
- C. Cables shall be protected and sleeved with a conduit in locations where cables need to pass through walls, floors, or hard ceilings. Contractor shall install threaded IMC or rigid conduit with large fender washers, lock rings, and screw on protective bushings on both ends.
- D. The fire rating of the wall must be maintained during and after installation.
- E. See Section 27 05 00 for additional requirements.

## 3.02 CABLE INSTALLATION PARAMETERS

- A. Cabling
  - 1. Cable shall be installed in a neat and orderly manner. Loose cable shall be bundled, and tie wrapped with Velcro Ties
  - 2. All cables shall be terminated per drawing details provided by manufacturer.
- B. Conduit and Raceway
  - 1. A maximum fill capacity of 40% will be deemed acceptable for conduits.
  - 2. Install or replace pull-string after installing cable in any EMT, IMC, Rigid, or PVC conduits.
- C. Cables shall be identified with a machine-printed tag identifying the system type, source or head end location, and destination location in all access points (i.e. junction boxes, ground boxes, MDF, IDF, etc.) and as they enter or exit and conduit pathway. Handwritten labels shall not be accepted.
- D. All cabling shall be installed with proper stress relief and tied down.
- E. Manufacturer's specification for pulling stress and minimum bend radius shall not be exceeded on any cable.
- F. See Section 27 05 00 for additional requirements.

## 3.03 SYSTEM IMPLEMENTATION

- A. The installation contractor will fine tune and test the systems for optimal audio and visual performance.
- B. Audio Signal:
  - 1. Signal-to-Noise ratio (including crosstalk): 70 dB minimum.
  - 2. Total Harmonic Distortion: 0.05% maximum from 20 Hz. To 20 kHz.



3. Frequency Response: +/- 0.5 dB, 20 Hz to 20 kHz.
- C. Audio Reproduction:
1. Signal-to-Noise ratio (including crosstalk): 55 dB minimum.
  2. Total Harmonic Distortion: 0.05% maximum from 20 Hz. To 20 kHz.
  3. Frequency Response:
    - a. Speech reinforcement loudspeakers, 4" or 6" dia.: +/- 1 dB 100 Hz to 2.5 kHz rolling off at 6 dB/octave from 125 Hz to 80 Hz and at 2 dB/octave above 2.5 kHz as measured on axis of loudspeaker.
    - b. Speech reinforcement loudspeakers, 8" or 12" dia.: +/- 1.5 dB 125 Hz to 2.5 kHz rolling off at 6 dB/octave from 100 Hz to 63 Hz and at 2 dB/octave above 2.5 kHz as measured on axis of loudspeaker.
    - c. Program reproduction loudspeakers: +/- 2 dB, 63 Hz to 6kHz decreasing uniformly from a relative level of 0 dB at 6 Hz to a relative level -5 dB at 20 kHz as measured on axis of loudspeaker.
  4. Speech Reinforcement Sound Output Capability: Provide program levels of at least 96 dB and speech reinforcement levels of at least 85 dB everywhere in the seating area without objectionable distortion, rattles or buzzes. Use several different samples of recorded music as test signals.
  5. Test microphones at each input.
  6. Set master output limiting at -3dB with 10:1 ratio.
  7. Hum and Noise: Hum and noise shall be inaudible under normal conditions from anywhere in the seating area.
- D. Video Signal:
1. Signal-to-noise ratio (peak to RMS) unweighted DC to 5.5 MHz: 55 dB minimum.
  2. Crosstalk unweighted DC to 5.5 MHz: 45 dB minimum.
  3. Line and Field tilt: 2% maximum.
  4. Differential Gain: 3% maximum.
  5. Differential Phase: 2 degree maximum.
- D. Video Timing:
1. System Timing: Sync coincidence within 50 nanoseconds.
  2. Color Timing: Within 2 degrees at 3.58 MHz.
- E. Optical Performance:

1. The light fall-off from the center of the projected image to the four corners as measured at the projected image plane, shall not exceed 50%.
- F. The installation contractor will fine tune and test the systems for optimal performance.
  - G. An Owner representative will be present to confirm system operation and to sign off on the system being complete.
  - I. Provide a turnkey audiovisual system to include equipment and materials, submittals, testing, staff training and warranty.
  - J. Installation shall include, but is not limited to engineering, labor and hardware for display, audio, video, control systems and related equipment rack, equipment mounting, plates, panels, connectors, cables.

### 3.04 TESTING AND ACCEPTANCE

- A. Upon completion of installation, and prior to final acceptance by the Owner, the A/V Contractor shall demonstrate to the satisfaction of the Consultant and the Owner, the full operational functionality of all systems, all inputs/output stations, and sub-systems installed.
- B. Qualitative performance tests may include, but not be limited to, audio residual hum, noise & distortion; video signal hum, noise, sync quality and color fidelity.
- C. Test equipment required for these tests shall be supplied by the contractor and coordinated in advance with the Consultant.
- D. This shall not preclude the consultant from utilizing his own test equipment to confirm measurement results.
- E. Punch list items must be resolved prior to final acceptance.

### 3.05 TRAINING

- A. The Contractor shall provide 40 hours of training for all large performance venue (theater, broadcast, gymnasium, stadium) installations. The Contractor shall be present for the first two (2) performances at large performance venue installations. Training shall occur over 5-7 days.
- B. The contractor shall make a video recording of all training sessions and export to digital medium (USB Drive) for district archive.
- C. The Contractor shall create quick start guides customized to the specific system being installed at each location. Quick start guides shall be prepared in advance of all training sessions so they can be distributed and reviewed with staff at time of initial training. All quick start guides shall be laminated.

### 3.06 CLOSEOUT DOCUMENTATION AND DRAWINGS

- A. See section 27 05 00 for requirements.
- B. Warranty certificates and documentation
  1. Workmanship Warranty - The Supplier/Installation Contractor will concur that the Audio-Visual System furnished to be free from defects in workmanship (i.e., cables, connections, and structures)

failure for a period of Two (2) Years from the date of acceptance.

2. Equipment Manufacturer Warranty - The Supplier/Installation Contractor shall provide assistance to owner in utilizing the benefits of applicable Manufacturer's equipment warranties.
3. The Supplier/Installation Contractor shall broker or process this equipment for repair or replacement (no additional charge) to the applicable manufacturer for the term established by the manufacturer on a depot basis only.

[END OF 27 41 00]