

# Northwestern Michigan College Business Office

REQUEST FOR PROPOSAL For Hagerty AV System

RELEASE DATE
June 9, 2025

DUE DATE AND TIME
July 9, 2026

# PROJECT CONTACT

Kyle Morrison NMC Educational Technology 1701 East Front Street Traverse City, Michigan 49686 Phone: (231) 995-1078 Email: av@nmc.edu

# **NOTICE!**

**RIGHT TO REJECT:** Northwestern Michigan College ("NMC") reserves the right to accept or reject any and all proposals, to negotiate terms of proposal(s) with successful vendor(s), to accept a proposal that is not the lowest cost, and to accept the proposal(s) that is in the best interest of NMC.

**WITHDRAWAL OF ANY PROPOSALS** is prohibited for ninety (90) days after the proposal due date.

LATE, INCOMPLETE, AND NON-CONFORMING PROPOSALS: NMC reserves the right to reject without evaluation late, incomplete, or otherwise non-conforming proposals.

**COMPLETE PROPOSALS:** All proposals must contain terms of purchase and delivery in writing. NMC will negotiate the actual delivery terms and timetable with the successful vendor(s), but each proposal must include the anticipated time frame during which NMC may reasonably expect materials and equipment to be delivered. NMC will not be responsible for any ancillary charges, costs, and/or fees not expressly delineated in the terms of the proposal.

QUESTIONS: Prospective bidders are solely responsible for understanding the requirements of this RFP. Questions regarding any part of this proposal should be submitted in writing to the Project Contact. All questions and answers will be made available to all prospective bidders. Prospective bidders who direct questions and inquiries about this RFP to persons at NMC other than the Project Contact may be subject to disqualification of their proposals.

#### INTRODUCTION

This Request for Proposal is released by the Northwestern Michigan College Purchasing Department on behalf of Northwestern Michigan College for a **new AV System** for the Hagerty Center as set forth herein.

# SECTION 1 GENERAL INFORMATION

Northwestern Michigan College ("NMC") intends to purchase a new AV System for the Hagerty Center as set forth herein. If the premium is deemed excessive by NMC, we reserve the right to re-issue the request for additional competitive proposals.

The requirements included in this proposal are complete. The representations made by NMC herein are accurate, true, and complete to the best of our knowledge. NMC prefers to work with only one (1) contact person throughout the proposal process. Please appoint one (1) representative for your firm as your contact for NMC. This person will be responsible for all communications with NMC that relate to this Request for Proposal. Additionally, please note that all contact between your firm and NMC must be handled between your representative and the Project Contact. This requirement will be strictly enforced.

Your final proposal must be complete and presented in its entirety. All conditions, terms, costs, charges, and fees must be included in the proposal. Should NMC accept your proposal, any terms, conditions, costs, charges, and/ or fees excluded from your proposal at the time of submission shall remain excluded and will become the responsibility of the winning bidder.

All proposals must be submitted in writing and must be signed by a representative who is duly authorized to make such representations to NMC on behalf of your firm. Your proposal will form the basis of a purchase contract with NMC and should include all equipment and materials that, in your judgment, are necessary to meet the requirements of this proposal.

The requirements of this proposal are non-severable. In other words, they may not be separated for bidding on a single part of the established requirements. NMC has a strong preference for purchasing a single-vendor solution. If, in your judgment, NMC would be better served by a multi-vendor solution, you may offer that as an alternate proposal; however, you must certify that all equipment in your proposal will meet all other specifications in this Request for Proposal. Your proposal should include a single-vendor approach.

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Northwestern Michigan College is a Michigan Constitutional corporation located in Traverse City, Michigan, in Grand Traverse County, and is subject to the laws of the State of Michigan. Our official address and principal place of business is 1701 East Front Street, Traverse City, Michigan 49686.

Northwestern Michigan College is a tax-exempt institution, granted this status by the State of Michigan. Likewise, NMC is exempt from Federal Excise Tax (tax-free registry number 38-6027348) and Michigan General Sales Tax, pursuant to Public Act 167 of 1933, § 4, as amended. **DO NOT INCLUDE MICHIGAN SALES TAX OR ANY FEDERAL EXCISE TAXES IN YOUR OUOTATION.** 

# SECTION 2 TERMS AND CONDITIONS

- 2.01. Your complete and entire response to this RFP must be received by NMC in writing on or before 5:00 PM on **July 7, 2025**. Return one (1) original and two (2) copies of your response to this RFP via US Postal mail or other suitable delivery service. Your response should include all requested and required information, as well as any supporting data needed to complete your response. Late responses and responses received by facsimile will not be considered. Bidders are solely responsible for confirming that their responses were received in a timely way. NMC will not pay for, reimburse, or otherwise accept any delivery charges incurred by bidders in connection with the RFP.
- 2.02. Questions, uncertainties, noted discrepancies, and omissions regarding this RFP shall be reported immediately in writing to the Project Contact by **June 23, 2025**. Should any reported issues require clarification, written instructions or an addendum to the RFP will be distributed to all potential bidders. NMC will not accept any responsibility for any oral interpretation of the requirements. Bidders should rely only on the written responses of NMC. Questions submitted less than 48 hours before the proposal due date cannot be responded to.
- 2.03. NMC reserves the right to solicit additional information from bidders to assist in determining the bid that best meets NMC's needs. If our request for additional information on a proposal is not met in a timely way, NMC reserves the right to reject the proposal as non-conforming.
- 2.04. NMC reserves the right to reject or accept any bids, in whole or in part; select bidders whose proposals best meet the needs of NMC, regardless of the

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lowest cost proposal; and negotiate the terms of the proposal to ensure the best interests of NMC are met. NMC does not assume any contractual obligations or duties as a result of issuing the RFP. No employment relationship will be assumed between NMC and the successful bidder.

- 2.05. Bidders are not entitled to use NMC's name, service mark(s), trademarks, or trade names without the express written permission of NMC.
- 2.06. By submitting a response to this RFP, bidders certify that no actual or potential conflicts of interest exist between the bidder and NMC under this agreement. Each bidder agrees to inform NMC immediately if a change in conditions occurs that would create an actual conflict of interest or the appearance of a conflict of interest. Further, by submitting a response, bidder certifies that the bidder has neither provided any private inducements or consideration to any NMC trustee, officer, employee, or agent in return for favorable treatment concerning the award of this proposal, nor accepted any private inducements or consideration from any College trustee, officer, employee or agent in connection with this RFP. Should any unauthorized transactions be discovered, the bidder will be considered to be in breach of its agreement with NMC, and the agreement between the bidder and NMC will be immediately void. Under these circumstances, NMC will cooperate fully with law enforcement to determine whether such a breach has violated any laws of the State of Michigan or the United States. This clause will survive the termination and/ or expiration of this agreement without respect to the cause or reason for a breach of this type.
- 2.07. NMC expressly states that the bidder is a supplier or independent contractor of NMC and is neither an agent, partner, nor an employee of NMC. The bidder is not entitled to wages, tax withholding, Workers' Compensation, unemployment compensation, or any benefits of employment extended to regular employees of NMC. The bidder is not an agent of NMC, and may not bind NMC to any contracts or represent to anyone that the bidder has any such authority.
- 2.08. The laws of the State of Michigan shall govern the interpretation and performance of this agreement. Any action brought to enforce any provision of this agreement shall be brought in the appropriate court in the State of Michigan. All bidders, their successors or assigns, expressly agree to bring any claims, demands, or actions asserted against the Board of Trustees of Northwestern Michigan College, its trustees, officers, employees, or agents only to the Michigan Court of Claims. The bidder, its successors or assigns, consent to the jurisdiction of the Grand Traverse Circuit County Court for the State of Michigan concerning any claims arising under this agreement against Northwestern Michigan College.
- 2.09. The bidder must comply with all applicable State and Federal OSHA laws, standards, and regulations concerning the performance of this agreement.

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- 2.10. NMC will evaluate each bid received using the following criteria, listed here in no particular order of importance:
  - a. The bidder's ability to satisfy each term and condition fully.
  - b. Compliance with the specifications stated herein.
  - c. Experience with delivering the requirements of the specification.
  - d. Cost (including pricing and price protection).
  - e. Ability to provide service for those items in the specification that require an ongoing service contract of technical expertise, demonstrated or demonstrable with respect to the specification.
  - f. References from previous customers for work of similar scope.
  - g. Other factors not specifically expressed here that are relevant to determining which proposal will succeed.
- 2.11. Proposals may not be withdrawn for ninety (90) days from the time of issue. After ninety (90) days, proposals may be withdrawn by submitting a written request to the Project Contact. Successor proposals may not be substituted for a withdrawn proposal. Withdrawal of a proposal constitutes disqualification from the bid process if NMC does not render a decision within ninety (90) days of the response due date.
- 2.12. Once the successful proposal has been determined and awarded, either party may withdraw from this agreement by giving the other party at least thirty (30) days' prior written notice of the termination date. Termination or cancellation of this agreement does not affect the collection, enforcement or validity of any accrued obligations between the bidder and NMC.
- 2.13. Once the successful proposal has been determined and awarded, modifications deemed necessary to correct errors found to be the sole fault of the bidder and to ensure the agreement's performance shall be made promptly and at no additional cost to NMC. This clause will survive the termination and/ or expiration of this agreement without respect to the cause or reason for the error.

- 2.14. No information, report, etc. developed in connection with this RFP may be reproduced without NMC's prior written consent. No portion of this RFP may be reproduced without NMC's prior written consent.
- 2.15. The successful bidder must perform all work unless NMC specifically approves subcontracting in writing before the commencement of any work related to this RFP.
- 2.16. The successful bidder is an independent contractor, licensed and bonded as necessary, and is solely responsible for employment, acts, omissions, insurance, control, and direction of its employees. The bidder agrees to indemnify and hold harmless Northwestern Michigan College, its trustees, officers, employees and agents from any and all damages, injury, loss, claims, demands, or causes of action if the bidder fails or neglects to provide appropriate insurance coverage for its employees while working in performance of this contract at Northwestern Michigan College, including but not limited to payment of any claims.
- 2.17. Any personal injury to the bidder, its successors, assigns, employees, agents, subcontractors, or third parties or any property damage incurred in the performance of this agreement shall be the responsibility of the bidder. The bidder agrees to restore or make whole any loss of or damage to the property of Northwestern Michigan College incurred during the performance of this agreement.
- 2.18. Bidder warrants that all equipment offered for sale to NMC is all new materials, genuine products of the chosen manufacturer, delivered in original packaging with all parts and manuals, able to be registered for warranty purposes by NMC, eligible for the full manufacturer's warranty period, and warranted as described by the manufacturer. Materials that do not conform to this specification will be rejected by NMC, and the bidder will be required to replace them with conforming materials at no additional cost to NMC.
- 2.19. Bidder agrees to accept NMC's standard payment terms, which are Net 30. Prices quoted in the bidder's response shall be FOB Northwestern Michigan College unless otherwise specified. All items on the bidder's response will be itemized, and all charges and discounts shall be clearly shown.
- 2.20. All responses to this RFP become the sole property of NMC and are subject to Freedom of Information Act requests.
- 2.21. Company agrees to maintain comprehensive general liability insurance, including contractual liability, with limits not less than \$2 million per occurrence and \$3 million aggregate; professional liability (i.e., blanket crime, employee dishonesty, errors and omissions, etc...) insurance with minimum limits of \$1 million per occurrence and \$3 million aggregate; automobile liability for

owned, non-owned and hired vehicles with a combined single limit of \$500,000; and Workers' Compensation to statutory limits as required by the State of Michigan. The Company agrees to have the Board of Trustees of Northwestern Michigan College added as an additional insured concerning comprehensive general liability and provide the College with 30 days written notice of any material changes in the above insurance. The Company shall provide the College with a certificate of the above insurance coverage and amounts if awarded the contract.

# SECTION 3 SCOPE OF WORK

#### 1.1 RELATED DOCUMENTS

A. The AV Contractor shall coordinate with the General Contractor, Electrical Contractor, and all other Building Trades as needed for junction box locations, raceways, pull boxes, and other pathways related to the AV systems installation.

#### 1.2 SUMMARY

- A. This project is in direct connection to the project listed in the header of this document. Refer to the plans and specifications for further information.
- B. The audio-video systems reference the systems identified explicitly for the above-referenced project. These systems are identified as:
  - 1. Audio Systems, including but not limited to:
    - a. Input equipment
    - b. Distribution equipment
    - c. Mixing consoles and controllers
    - d. Power amplifiers
    - e. Digital Signal Processing
    - f. Loudspeakers
    - g. Recording Equipment
    - h. Production Intercom equipment
    - i. Wire and Cable

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- j. Rigging and Hardware
- 2. Displays, including but not limited to:
  - a. Flat Panel Displays
  - b. Video Projectors
  - c. Projection Screens
  - d. LED Video Walls
- 3. Video Systems, including but not limited to:
  - a. Input equipment
  - b. Distribution equipment
  - c. Audio and Video Conferencing Equipment
  - d. Wire and Cable
  - e. Rigging and Hardware
  - 4. Control Systems, including but not limited to:
  - a. Touchpanels
  - b. Button Panels
  - c. Virtual Panels
  - d. Control Processors
  - e. Control Programming
  - f. Wire and Cable
- 5. Miscellaneous
  - a. Equipment Racks
  - b. Wall plates and Rack Panels

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- c. Equipment Carts
- d. Power Distribution and Conditioning

#### 1.3 SUMMARY OF WORK

#### A. General:

- 1. Provide audio-video systems engineering and installation for the abovelisted Project. Systems are to include all devices, equipment, installation, programming, and commissioning, following the requirements of the contract documents and drawings.
- 2. The Work detailed within the Contract Documents has been specified to meet specific requirements for performance, appearance, and costs. It shall be the responsibility of the Contractor to implement the guidelines and requirements contained in the Contract Document and translate them into a comprehensive design package that includes all necessary elements for a complete, operational, and functionally integrated Audio Visual System(s).
- 3. Provide all work as detailed in the Contract Documents as a turnkey installation, including all materials, labor, engineering, warranties, taxes, freight, and permits. Only items and requirements specifically stated to be provided by others shall not be a requirement for this Section of the Work.

#### 1.4 GENERAL CONDITIONS

A. The General Conditions of the above-referenced project shall be considered part of this specification. Unless this Section contains statements which are more definitive or more restrictive than those contained in the Owner's General Conditions, this Specification shall not be interpreted as waiving or overruling any requirements expressed in the General Conditions.

# B. Work Experience

- 1. Contractor agrees that they are familiar with the and have significant work experience in projects of this nature and scope. The Contractor agrees to provide all necessary materials, products, and work to ensure a complete and functional system is delivered to the Owner.
- 2. The contractor must state if they intend to utilize a subcontractor for any portion of the work on this project. Contractor shall be liable for all work

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performed by any subcontractor. The Owner reserves the right to approve or disapprove any subcontractors.

- 3. Contractor shall comply with all local and state regulations covering this work. Contractor shall rectify any work found not to comply with any local or state regulatory agency.
- 4. All permits and any required certifications shall be obtained and paid for by the Contractor. The contractor will forward evidence of any such items needed to the owner.

#### 1.5 DEFINITIONS

- A. The following shall be used as general identifiers as specified herein:
  - 1. Owner Organization or person who has undertaken the above-referenced project.
  - 2. Construction Manager The contractor hired by the owner to coordinate and facilitate the project's construction.
  - 3. Contractor The company awarded the work of this section by the Construction Manager.
  - 4. Consultant Company hired by the Owner or Architect to design the Audio-Video Systems.
  - 5. Electrical Contractor The company awarded the work for the electrical and raceway portions of the project, typically, but not limited to, Division 26.
  - 6. Subcontractor -- Company or organization contracted by the Contractor to perform or supply any portion of this specification.
  - 7. Work The term "Work" means all construction and services specified within this document. The Work includes all related labor, materials, equipment, and services provided, or to be provided, by the Contractor to fulfill the specification's obligations.
  - 8. Drawings The term "Drawings" refers to all Audio-Video Systems Drawings and associated sketches, details, riser diagrams, and other related documents.

- 9. As used in the Drawings and Specifications for the Work, certain nontechnical words and phrases shall be understood to have specific meanings as follows, regardless of indications to the contrary in the General Conditions or other documents governing the work.
  - a. "Furnish" Purchase and deliver to the project site complete with all necessary parts, pieces, and accessories. Where required, purchasing shall include payment of all applicable sales taxes as necessary.
  - b. "Install" Unload new equipment or take an item furnished by others and place or mount at the location indicated by the project drawings or specifications.
  - c. "New" Manufacturer's current and most recent model, manufactured within the past year and not previously used.
  - d. "Provide" Furnish and Install.
- 10. Where the word "conduit" is used without specific reference to type, it shall be understood to mean "raceway".
- 11. Reference to "U.L. (Materials Construction) Standards" shall mean the "Standards for Safety" published by Underwriters Laboratories, Inc. Standards published by other certification agencies, such as CSA and ETL, may also be used.

#### 1.6 DIVISION OF LABOR

- A. Electrical Contractor shall furnish and install all conduit and boxes associated with the AV Systems as specified, as shown on the drawings, and as required by the Contractor.
- B. Electrical Contractor shall supply a pull string in all conduits for the Contractor.
- C. All Audio-Video wiring shall be supplied and installed by the Contractor.
- D. All electrical connections carrying line voltage (above 100 volts) shall be connected and terminated by the Electrical Contractor. All line voltage wire and cable for the audio and video systems shall be provided by the Electrical Contractor.

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E. All electrical connections carrying low voltage (below 100 volts) shall be connected and terminated by the Installing Contractor. All low-voltage wire and cable for the audio and video systems shall be provided by the Installing Contractor.

# 1.7 QUALITY ASSURANCE

- A. All electrical installations shall comply with the N.E.C. and shall be inspected by the Local or State Electrical Inspection Authority. All installations shall be subject to inspection by the Local Authority Having Jurisdiction. All installations shall follow the AHJ. Any installation methods found not to comply with the Authority Having Jurisdiction (AHJ) shall be rectified by the contractor without claim for additional payment.
- B. Bidders for this section are expected to be an authorized dealer for all significant pieces of equipment or to purchase them through an authorized dealer. Documentation of dealer status may be requested from bidders. Failure to provide adequate documentation may be grounds for disqualification from the bidding process.
- C. The master/lead technician working on site shall have a minimum certification of CTS, with CTS-I highly preferred. The primary project engineer shall have a minimum certification of CTS, with CTS-D is highly preferred. Failure to provide proper qualifications, if requested, shall be grounds for disqualification from the bidding process.
- D. Any AV work found by the Architect, Construction Manager, Owner, or Consultant to not be acceptable or in compliance with the specifications and drawings will be rectified by the Contractor with no additional claim for compensation.
- E. Any expense incurred by the Owner to correct or rectify unsatisfactory work of the Contractor shall be borne by the Contractor. The Owner may withhold any money due to the contractor or recover any money already paid to the contractor to cover any such expenses.

#### 1.8 PRE-INSTALLATION SUBMITTALS

A. Submittal document sheets are required for all specified equipment. All submittals and shop drawings must be submitted and approved by the Consultant before the commencement of installation. These submittals shall be provided within 5 weeks following the award of the contract.

- 1. If a control system is part of the project, the touch panel layouts and control system programming shall be submitted for approval before the start of installation. See specification section 27 41 25 for Control System requirements.
- 2. Contractor shall furnish an electronic PDF document for any equipment request that is not the specified product. This submittal for possible product substitution shall be transmitted in its correspondence, clearly noting that it is submitted as a substitution recommendation. Voluntary substitutions do not have to be accepted by the Consultant.
- 3. The Installing Contractor will submit a complete Bill of Materials (with associated cut sheets for each piece of equipment) showing all the equipment to be installed. Materials will be listed in the same order that the products are listed in Section 2 of the corresponding specification. Each subsystem will be shown with all of the products to be installed as part of that subsystem in the order listed in the specification. The Bill of Materials will indicate the quantity being supplied, the manufacturer, the model of the equipment, and a brief description of the equipment.
- 4. All product data sheet submittals shall be organized in the same order that products are listed in the appendix(s) of Specification 27 41 16. Each subsystem of the design shall contain a product data sheet for each piece of equipment within that subsystem, organized in the order listed in the specification. Under no circumstances shall the product data sheets be organized in alphabetical order. Any product data sheet submittals not conforming to this will be automatically rejected.
- 5. Contractor shall furnish an electronic PDF set of shop drawings detailing a complete installation plan. Shop drawings are expected to expand upon the construction documents and shall show all components and wires, complete with individual wires numbers, proposed rack layouts, riser diagrams, schematics for individual subsystems, calculations, and details of proposed rigging. Schematics shall include a separate designation for each device, and labeling shall correspond to the rack layouts. The Contractor shall confirm that the system is ready for installation as shown in the shop drawings and that any details not explicitly defined by this specification or on the drawings have been addressed by the Contractor. Submittal drawings should match the native size of drawings in the project documentation.
- 6. Scanned or copied versions of the construction documents will not be accepted and shall be automatically rejected.

- 7. Failure to furnish all information as noted above shall result in the rejection of submittals.
- 8. Some of the Consultant's floor plan drawings may be available for use by the Contractor in preparing shop drawings.

#### 1.9 ACTIVE-INSTALLATION SUBMITTALS & COMMUNICATION

- A. AV Contractors are to submit email updates to HAV Design, including photographs, during key stages of the installation process. These communications are to be made immediately upon task completion. The Contractor shall not proceed with the installation until approval is provided by HAV Design. The key stages shall be:
  - 1. Main speaker installation and rigging. Including a legible picture of the inclinometer to show the proper speaker angle.
  - 2. Projector installation and rigging.
  - 3. Motorized projection screen installation and rigging.
  - 4. Rear of installed equipment racks to show cleanliness and proper wire labeling.
  - 5. Control Booth wiring and cleanliness.
- B. If the AV Contractor fails to follow these steps, and HAV Design visits the job site during system checkout, and any of these items are an issue or impede the progress of the visit, HAV Design will back-charge the AV Contractor for the visit, \$1,500 plus expenses. HAV Design will not sign off on the release of any project monetary retainers until the payment is received.

# 1.10 STANDARDS

- A. All equipment and installation practices, where applicable standards have been established, shall be built and installed to the standards of the following institutions:
  - 1. Underwriters Laboratories, Inc. (UL): Comply with the requirements of UL-50
  - 2. NFPA 70, National Electric Code (NEC)
  - 3. InfoComm 2M-2010: AV Design and Coordination Processes

- 4. InfoComm F501.01:2015: Cable Labeling for Audiovisual Systems
- 5. InfoComm V202.01:2016: Display Image Size
- 6. ANSI/InfoComm 10:2013: Audiovisual Systems Performance Verification
- 7. ANSI/InfoComm 1M-2009: Audio Coverage Uniformity
- 8. ANSI-J-STD-710: Audio, Video, and Control Architectural Drawing Symbols
- 9. EIA Compliance: Comply with the following Electronics Industries Standards:
  - a. Sound Systems, EIA-160
  - b. Loudspeakers, Dynamic Magnetic Structures and Impedance, EIA-299-A
  - c. Racks, Panels, and associated equipment, EIA-310-A
  - d. Amplifiers for Sound Equipment, SE-101-A
  - e. Speakers for Sound Equipment, SE-103
- 10. TIA/EIA-607 Telecommunications Grounding
- 11. BICSI Telecommunications Distribution Methods Manual (Ninth Edition)
- 12. Federal Communications Commission Part 15
- 13. Audio Engineering Society (AES)

#### 1.11 DELIVERY, STORAGE, AND CONDITIONS

- A. Include delivery, storage, and handling of all products and materials to be delivered and installed.
- B. Contractor shall be responsible for providing on-site storage if necessary. The contractor may negotiate a storage facility with the Construction Manager, but shall still be responsible for their materials.

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- C. Contractor shall provide all necessary means to protect and safeguard their work from damage by other contractors and trades up to the date of final acceptance by the Owner. Contractor shall be responsible for all costs to clean and repair any damage to installed systems unless the contractor proves to the Owner's satisfaction that the damage was caused by other contractors.
- D. Installing Contractor bears the responsibility to verify all site conditions and coordinate with the Electrical Contractor to ensure a complete and functional system is supplied to the Owner.
- E. Verify the dimensions of principal components to check for clearance through doors, ceiling height, and column interference before installing the equipment.
- F. Installing Contractor shall stay aware of all project time schedules and shall coordinate with all other trades for all aspects of the work.
- G. Installing Contractor shall include provisions in the bid to make at least one (1) visit to the site before the beginning of site work to verify site conditions, coordinate with other trades, meet with representatives of the Owner, or deal with other issues that may arise in the course of the project.
- H. In addition to the site visits, the Installing Contractor shall attend progress meetings and foreman meetings if required by the Construction Manager.

#### I. OWNER FURNISHED EQUIPMENT

- 1. The Owner reserves the right to furnish any materials necessary for the Project.
- 2. For items of equipment which are to be installed but not purchased as part of the Work, the Work shall include:
  - a. Coordination of any necessary delivery.
  - b. Unloading equipment and boxes from delivery trucks.
  - c. Safe handling of the equipment until final installation.
  - d. Inspection of all items and testing as necessary to verify the proper operation of the equipment.

- e. Immediately notify the Owner of any non-functional items. Any damaged item not brought to the owner's attention within 1 week will be considered damaged by the Contractor.
- f. Install all owner-furnished items as noted in the project specifications and drawings.

#### 1.12 WARRANTY

- A. The Installing Contractor shall provide timely maintenance of any malfunctions of the installed systems, at no additional cost to the owner, for twelve (12) months from the date of acceptance by the owner unless damage or failure of the system is caused by misuse, abuse, neglect, or accident.
- B. The Installing Contractor shall guarantee availability of local service by factory-trained personnel from an authorized distributor of the equipment manufacturer. The distributor shall have available a stock of the manufacturer's standard parts.

#### PART 2 - PRODUCTS

#### 2.1 MATERIALS

A. Refer to sections in General Conditions Document (274100) under section 27 41 16 -- for all Equipment Specifications listed by space and type.

#### 2.2 REQUESTS FOR ALTERNATES

- A. Requests for equipment to be considered as alternates shall be considered under the following circumstances:
  - 1. Alternate requests shall be submitted to the consultant.
  - 2. Show the original item specified and the proposed alternate.
  - 3. Provide a shop drawing showing how the equipment integrates with the rest of the system.
  - 4. Provide speaker mapping data (if an alternate requested is a loudspeaker).
  - 5. Provide a demo piece of equipment for testing by the consultant (if requested).
  - 6. Install the specified equipment if the request is denied.

#### **PART 3 - EXECUTION**

#### 3.1 GENERAL INSTALLATION (MATERIAL AND WORKMANSHIP)

- A. Non-compliance with any of the following, as deemed by the Owner or Consultant, shall be cause for rejection of Work by the Owner, and replacement by the Contractor to the Owner's satisfaction, and at no added cost to the Owner.
  - 1. All materials, methods, and workmanship shall be performed as specified.
  - 2. If an installation practice contrary to these specifications and drawings is desired by the contractor, then the Contractor shall make a written request to that effect. Modifications shall not be implemented without the written approval of the Consultant and/or the Owner.
  - 3. If a circumstance arises where the specified item is no longer available, the Contractor shall supply the manufacturer's current model and verify that the product is compatible with the other system components. Contractor shall bear all costs associated with this verification and testing. Failure to properly verify compatibility shall not be grounds for any additional payment.
  - 4. All installations shall follow generally accepted broadcast, video, and audio engineering practices.
  - 5. The Contractor shall work closely with all other trades on the project to meet the appropriate deadlines and complete the work promptly. Should the Contractor fail to meet such deadlines, appropriate compensation for lost usage of the systems and space shall be withheld from any fees the Contractor is due or has already received.
  - 6. Contractor is responsible for verifying all site conditions and coordinating with other trades to ensure that a complete and functional system is provided to the Owner. Verify all dimensions of equipment for clearance through doors and other potential obstructions.
  - 7. Contractor shall be liable to protect their work from damage up to the date of final acceptance by the owner.
  - 8. All permanently installed equipment will be secured in place with a minimum safety factor of 5.

#### 3.2 FIRMWARE UPDATES

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- A. All audio and video equipment shall be updated with the latest firmware before installation in the field.
- B. Every piece of equipment must have the firmware verified before installation.
- C. All time required for firmware updates should be included as part of the Contractor's cost for the project.

#### 3.3 TRIM RINGS AND COVERS

- A. Contractor shall work with other trades to ensure that all boxes are mounted plumb, square, and do not have excessive gaps between the box and the surrounding wall.
- B. Contractor shall supply a suitable trim or extension for any panel that does not cover the gap between the wall and the edge of the panel.

#### 3.4 SUBCONTRACT

- A. The Installing Contractor shall be responsible for the complete and unconditional implementation of each system, even though he may have subcontracted a portion of the installation or had certain manufacturers install their equipment.
- B. Any delay in system commissioning caused by a Subcontractor shall be the responsibility of the Installing Contractor. If such delays cause significant disruption to the successful completion and usage of the project, the Installing Contractor shall be liable for reasonable compensation to the owner.

# 3.5 CONDUIT AND CABLE ROUTING

- A. Electrical Contractor shall furnish and install all conduit and boxes associated with the audio and video systems as shown on the drawings. Contractor shall coordinate with the Electrical Contractor for any additional conduits that may be required.
- B. Electrical Contractor shall provide all junction boxes for the audio and video systems with appropriate covers, unless noted otherwise.
- C. All conduits not specifically identified shall be 3/4".

- D. All conduits below grade shall be PVC or as required by code. All conduits above grade shall be EMT or as required by code. Refer to Division 26 documents for details on conduit specifications.
- E. There shall be no more than three (3) 90-degree bends in audio or video conduit between pull points. If a conduit run requires more than two bends or if the conduit run is over 150' in total length, insert a pull box. If it is not practical to install a pull box in the run due to field conditions, the conduit size shall be increased to the next trade size for each additional 90-degree bend. Offsets shall be considered equivalent to a 90-degree bend.
- F. All conduits are to be labeled at the source box with the destination box clearly and logically.
- G. Ends of all conduits are to be deburred and bushed.
- H. All conduits terminating inside of an audio/video enclosure (e.g., rack) or not terminating in a junction/pull box shall be provided with plastic insulated bushings.
- I. Electrical Contractor shall be responsible for providing a poly pull-line in each conduit.
- J. Line voltage conduits shall maintain a minimum of 24" separation from audio or video signal conduits except to cross at 90-degree angles when necessary.
- K. All metal Audio and Video equipment racks must be isolated or insulated from any metallic conduits. The final connection to these audio racks or panels shall be with PVC, non-metallic flex, or any other non-metallic conduit. Or, where appropriate and approved, the cables can enter the rack or panel in a bundle through a bushed opening.
- L. Junction boxes and pull boxes in the conduit system do not have to be isolated, except for racks or panels that contain electrical power and electronic audio devices.
- M. Electrical power feed to an audio rack or audio panel shall also be via PVC or non-metallic or insulated conduit.
- N. All cables shall be laced or tied securely to assure no malfunctions resulting from interference of other trades or routine future maintenance.

#### 3.6 CABLE INSTALLATION AND LABELLING:

A. All cables and wires throughout the installation will have a unique wire label at each termination and connection point. Labels shall use clear wrap-around number

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or letter cable markers. Any unlabeled cables found during system checkout shall be labeled immediately. Failure to label wires will be grounds for rejection of work.

- B. All wire markers in a given rack shall face a common direction for easy reading.
- C. Cable wire markers shall be approximately 1" from the shell of the connector and must be visible outside of any cable bundle or lacer bar.
- D. XLR connectors utilizing insulation displacement or solderless connections will not be acceptable.
- E. All cables used in plenum spaces or air ducts shall be plenum-rated or in conduit.
- F. Under no circumstances shall a wire splice be installed in conduit.
- G. No cable shall be installed with a bend radius less than what is recommended by the manufacturer.
- H. All cables shall be grouped according to the signal level type. Cabling should be separated into the following general categories:
  - 1. Power Cables
  - 2. Control Cables
  - 3. Video Cables
  - 4. Microphone-level audio cables
  - 5. Line-level audio cables
  - 6. Speaker-level audio cables
- I. Run power cables, control cables, and speaker-level cables on the left side of the rack. All other cables shall be run on the right side of the rack.
- J. All cables shall be secured in place utilizing Velcro wraps. Wire "zip ties" shall not be used to secure cables.
- K. All inter-rack cabling shall be neatly strapped, dressed, and supported as approved by the Owner or Consultant. Cabling within racks shall be contained in a Panduit finger tray and secured to lacer bars when appropriate.

- L. All cabling installed outside of racks shall be dressed in a suitable harness or loom to keep cables clean, neat, and tidy.
- M. All cables shall be cut to the length dictated by the run. All equipment installed in racks shall have a service loop of appropriate length.
  - 1. For equipment mounted in racks accessible from both the front and back, provide a service loop length sufficient to plug and unplug the cable from the unit, allowing for troubleshooting and servicing of the equipment.
  - 2. For equipment mounted in racks accessible from the front only, provide a service loop length sufficient to remove the unit from the rack and easily plug and unplug all connectors.

#### 3.7 IDENTIFICATION

- A. All labels on panels or plates shall be white lettering on a black background. All lettering on panels and plates shall be engraved. Panels and plates shall have a minimum thickness of .125". All labels shall correspond to the drawings. Any labels found unacceptable shall be remedied by the Contractor without claim for additional payment.
- B. Every piece of rack-mounted equipment should have a label on the back showing the following:
  - 1. Schematic drawing designation

#### 3.8 TESTING AND ADJUSTMENTS

- A. Acceptance Testing: Before Acceptance Tests are scheduled, the Installing Contractor shall perform their own system's checkout. Installing Contractor shall furnish all required test equipment and shall perform all work necessary to determine and/or modify the performance of the system to meet the requirements of these specifications and drawings. This work shall include the following:
  - 1. Testing of all inputs, outputs, and tie lines.
  - 2. Testing of all display devices, equipment configurations, speakers, and jacks.
  - 3. Testing of any other wires or components.

- 4. Test all audio for compliance with the Performance Standards.
- 5. Check all control functions, from all controlling points to all controlled devices, for specified operation.
- B. Testing Personnel: The Installing Contractor shall have a minimum of two persons knowledgeable as to the systems as installed, available for testing and adjustment with the Consultant.
  - 1. All costs to the Installing Contractor for testing personnel shall be included in the bid.
  - 2. Installing Contractor shall allow for up to eight (8) hours of testing and adjustments with the Consultant.
  - 3. Failure of the Installing Contractor to provide adequate personnel or testing equipment, causing lost time to the Consultant, shall result in the Installing Contractor paying the Consultant's standard hourly rate for additional time and expenses as necessary.
- C. Test Equipment: Contractor shall have the following available for testing and commissioning of the system:
  - 1. All test equipment shall be furnished by the Contractor
  - 2. Computer measurements shall be performed using SMAART or EASERA
  - 3. High-quality multimeter: Fluke or Similar
  - 4. Sweepable tone generator
  - 5. Impedance meter
  - 6. RF scanner (100 MHz up to 5 MHz)
  - 7. Noise, rattle, or buzz
  - 8. Run the system in each specified mode of operation
  - 9. Ensure the system is free from any hum, noise, rattles, or other distortions.

- 10. Use both speech and high-quality music to test the system
- 11. Apply swept sine waves to the system to listen for any anomalies
- 12. Correct any issues revealed by the above tests
- 13. Provide a written report documenting the system testing performed, if requested by the Owner.
- 14. Consultant.

#### 3.9 FINAL ACCEPTANCE

- A. After approval of the Contractor's test report, the Contractor shall demonstrate the basic operation of the system and each significant component of the system.
- B. A printed "quick start" guide will be provided to each training participant. Additionally, the quick start guide will be posted at the tech desk and on the equipment rack. Guides should be laminated.
- C. The Contractor shall provide a copy of the software for every component that utilizes an outboard computer for setup and configuration. The Installing Contractor shall demonstrate the usage of each configuration software to the Owner's Representative.
- D. All final "As-Built" drawings, manuals, and any other required documents shall be submitted to the Consultant and the Owner upon project completion.
- E. Any additional time incurred by the Consultant required to oversee system testing due to improper system installation shall be charged directly to the Contractor.

#### END OF SECTION

# SECTION 4 VENDOR QUALIFICATION CRITERIA

#### 4.01. Firm Overview

A. Provide an organizational chart or narrative of your firm's structure and ownership. Include the number of years the company has operated.

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- B. List, by professional discipline, the total number of full-time employees. Include a brief job resume of the employees involved in the purchase negotiations.
- C. Describe the current financial position of your company as it pertains to the requirements of completing the requirements of this RFP.

# 4.02. Experience

- A. List 3-6 similar projects completed within the last five (5) years.
- B. Provide 3 references; include the company name, address, a contact, and their phone number.

# SECTION 5 FORM OF PROPOSAL

All responses to this RFP shall contain the bid proposal form (attached pdf.), the complete and entire proposal, and any necessary documentation to support your proposal. Staple or otherwise bind each copy of your proposal and return it to NMC by the due date and time listed on Page One of this Request for Proposal.