

**Request for Proposals to Provide:
Student Union Governance Room Audio/Visual Refresh**

**Northern Kentucky University
RFP # NKU-03-19**

Student Union Governance Room AV Refresh



**Issue Date: July 27, 2018
Due Date: August 24, 2018**

Health Innovation Center and Founders Hall Renovation RFP Summary Sheet

Northern Kentucky University
Highland Heights, Kentucky
RFP # NKU-03-19

Professional Services: Student Union Governance Room Audio/Visual System
Replacement

Project Name and Location: NKU Student Union
Northern Kentucky University
Kenton Drive
Highland Heights, Kentucky 41099

Response Deadline (Proposals Due): August 24, 2018 2:00pm

Selection Committee Members for this project:

- Brad Lehman
- Bert Brown
- Christopher Bowling
- Tracy Insko
- Sarah Aikman

Do **NOT** contact the Committee members listed above about this project. For project-specific or general procurement information, **ONLY** contact the Northern Kentucky University personnel listed below:

Ryan Straus
Northern Kentucky University
(859) 572-6605
strausr2@nku.edu

NOTE: Northern Kentucky University, as an Agency of the Commonwealth of Kentucky, is subject to Kentucky's Open Records Laws (KRS 61.870-61.884). As such, a bidder's entire offer and resulting contract cannot be deemed "confidential".

Proposals submitted in response to an RFP will remain confidential throughout the evaluation process, however, after negotiations are concluded and a contract has been entered into, all proposals become a matter of public record. Bidders may mark sections of their responses as confidential if the information provided would be considered financially sensitive or trade secrets. The university will make every effort to honor such requests, but may conduct discussions with the bidders concerning the release of said information.

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1.0 DEFINITIONS

The term "addenda" means written or graphic instructions issued by Northern Kentucky University prior to the receipt of Proposals that modify or interpret the Request for Proposal documents by addition, deletions, clarification, or corrections.

The term "competitive negotiations" means the method authorized in the Kentucky Revised Statutes, Chapter 45A.085.

The terms "offer" or "proposal" means the Offeror(s) response to this Request for Proposal.

The term "Offeror" or "Proposer" means the entity of Audio Visual Equipment submitting a proposal in response to this RFP.

The term "Construction Manager" or "Construction Manager at Risk" (CM) means the person or entity who will or has entered into a contract with the Owner that assumes the risk for construction of the Project at a contracted guaranteed maximum price as the general contractor, and who will provide consultation and collaboration regarding the construction during and after design of the Project. The CM shall execute and hold all construction Trade Contracts and Purchase Orders for the Project.

The term "Purchasing Agency" or "Owner" means Northern Kentucky University, Nunn Drive, Highland Heights, Kentucky 41099

The term "Purchasing Official" or "Purchasing Officer" means the contracting representative appointed by the university.

The term "Responsible Offeror" means a person, company, or corporation who has the capability in all respects to perform fully the contract requirements and the integrity and reliability that will assure good faith performance.

The term "solicitation" means Request for Proposal (RFP).

The term "University" means Northern Kentucky University, a statutory body corporate existing pursuant to Sections 164.100 et seq. of the Kentucky Revised Statutes.

2.0 GENERAL OVERVIEW

2.1 Intent and Scope

Northern Kentucky University (Owner) requests written proposals and qualifications for an Audio Visual Equipment Package that includes equipment and installation contract in the Student Union Governance Room. This project does have a minimal electrical portion that may need to be sub-contracted out by the winning proposer. Please note that NKU reserves the right to provide owner furnished equipment based on the best interest of the University.

2.2 Project Description & Design Schedule

The intent for this project is to modernize the audio/visual system for this room which is utilized for campus meetings and presentations including Board of Regents meetings.

The schedule for this project is for shop drawings / ordering / contracting to begin upon award, installation to begin last week of November, and have all work within the room completed before December 21st, 2018.

2.3 **Design Team**

The engineering for this project has been performed by CMTA Engineers, Lexington, KY.

3.0 **PROPOSAL REQUIREMENTS**

3.1 **Key Event Dates**

Release of RFP	July 27, 2018
Pre-Proposal Conference	August 9, 2018 10:00 am
Deadline for Written Questions	August 15, 2018 @ noon
Final Date for issuance of Addenda	August 17, 2018
RFP Proposals Due Date	August 24, 2018 2:00pm

3.2 **Offeror Communication**

To ensure RFP documentation and any necessary subsequent information (modifications, clarifications, addendum, etc.) are directed to the appropriate persons within the Offeror's firm, each Offeror who intends to participate in this RFP process is required to immediately provide the following information to NKU Procurement Services:

- Name of primary contact
- Mailing address, email address, and telephone number for primary contact
- Firms may name additional contact persons (provide contact information)

This information shall be transmitted via e-mail to NKU Procurement Services at the email address listed on the RFP Summary Sheet (Page 2):

Restrictions on Communications with University Staff, Selection Committee Members, and the Project Design Team

From the issue date of this RFP and a contract award is made, Offerors shall not communicate about the subject of this RFP with any University administrator or faculty, staff, or members of the Board of Regents, nor any voting member of the Selection Committee. Communication is strongly discouraged with any members of the project design team as well. All communications regarding this RFP shall be directed **only** to the individual(s) within the university that are listed on the RFP Summary Sheet (Page 2). If violation of this provision occurs, the university reserves the right to reject the proposal.

3.3 **Pre-Proposal Conference**

A Pre-Proposal Conference will be held at Northern Kentucky University, Highland Heights, Kentucky on **August 9, 2018 at 10:00 a.m.** in the Student Union Room 104 to allow the opportunity to ask questions and clarify the expectations and requirements of the university. Paid visitor parking is available in the nearby Kenton Garage.

The following items should be noted in reference to the Pre-Proposal Conference:

- Attendance at the Pre-Proposal Conference is **optional**, but all interested offerors are strongly encouraged to attend. At this conference, the scope of services will be reviewed and discussed, and a brief tour of the existing building will be provided.
- All questions shall be submitted in writing to NKU Procurement Services. The university will prepare written responses to all submitted questions and release as an addendum. All written questions and answers will be made part of the RFP and may become part of the contract with the successful team. Verbal answers given at the conference and not memorialized in written form are not binding.

3.4 Offeror Presentations

In-person interviews and presentations will **NOT** be conducted for the review, evaluation, and award process for this RFP solicitation, unless deemed necessary by the selection committee during their initial review and evaluation.

3.5 Preparation of Offers

Offeror is expected to follow all specifications, terms, conditions, and instructions in this Request for Proposals. Offeror will furnish all information required by this solicitation. The Offeror will sign and return the proposal cover sheet and print or type her/his name, firm, address, telephone number and date. The person signing the offer must initial erasures or other changes. The signer shall further certify that the proposal is made without collusion with any other person, persons, company or parties submitting a proposal; that it is in all respects fair and in good faith without collusion or fraud, and that the signer is authorized to bind the principal Offeror.

3.6 Proposed Deviations from the Request for Proposal

The stated requirements appearing elsewhere in this RFP shall become a part of the terms and conditions of any resulting contract. Any deviations therefrom must be specifically defined in accordance with the Transmittal Letter, Section 4.3 (d). If accepted by the Owner, the deviations shall become part of the contract, but such deviations must not be in conflict with the basic nature of this RFP.

Note: Offerors shall not submit their standard terms and conditions as exceptions to the RFP Terms and Conditions. Each exception to an Owner term and condition shall be individually addressed.

3.7 Addenda

Any addenda or instructions issued by the University prior to the time for receiving proposals shall become a part of this RFP. Such addenda shall be acknowledged in the proposal. No instructions or changes shall be binding unless documented by a proper and duly issued addendum. No addendum will be issued less than 7 days prior to proposal due date without providing an extension to the due date.

3.8 Offeror Response and Proprietary Information

The Request for Proposals specifies the format, required information, and general content of proposals to be submitted in response to this RFP. The university or the members of the appointed selection committee will not disclose any portions of the proposals prior to contract award to anyone outside the University's administrative staff, and the members of, and advisors to, the Committee evaluating the proposals. After a contract is awarded in whole or in part, the Owner shall have the right to duplicate, use, or disclose all Proposal data submitted by Offerors in response to this RFP as a matter of public record.

Any submitted proposal shall remain a valid proposal for 90 calendar days after the proposal due date.

Northern Kentucky University shall have the right to use all systems or ideas or adaptations of those systems or ideas contained in any proposal received in response to this RFP. Selection or rejection of the proposal will not affect this right.

3.9 Cost of Preparing Proposal

Costs for developing the proposals and any subsequent activities prior to contract award are solely the responsibility of the Offerors. The university will not provide reimbursement for such costs in any amount.

3.10 Disposition of Proposals

All proposals become the property of Northern Kentucky University. The successful proposal will be incorporated into the resulting contract by reference.

3.11 Alternate Proposals

Offerors may only submit one proposal. Alternate proposals will not be accepted.

3.12 Questions

All questions should be submitted in writing to Ryan Straus, NKU Procurement Services, no later than the deadline specified herein.

3.13 Section Titles in the RFP

Titles of paragraphs used herein are for the purpose of facilitating ease of reference only and shall not be construed to infer a contractual construction of language.

3.14 No Contingent Fees

No person or selling agency shall be employed or retained or given anything of monetary value to solicit or secure this contract, except bona fide employees of the Offeror or bona fide established commercial or selling agencies maintained by the Offeror for the purpose of securing business. For breach or violation of this provision, the University shall have the right to reject the proposal, annul the contract without liability, or, at its discretion, deduct from the contract price or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee or other benefit.

3.15 Proposal Addenda and Rules for Withdrawal

Prior to the date specified for receipt of offers, a submitted proposal may be withdrawn by submitting a written request for its withdrawal to the Purchasing Officer, signed by the Offeror. Unless requested by the university, no revisions or alterations to proposals after the proposal due date will accepted or considered.

4.0 PROPOSAL FORMAT AND CONTENT

4.1 Proposal & Qualification Submittal Information and Criteria

The following section specifies the items to be addressed in your proposal. Please read this section thoroughly, prepare your submission carefully to facilitate the university's review of your proposal.

Proposals should be prepared simply and economically, providing a description of the Offeror's capabilities to satisfy the requirements of the solicitation. The proposal shall be prepared on 8 ½" x 11" recycled paper, with all text clear of binding. Text type size shall be a minimum of 10 point font. The proposals must be indexed and all pages sequentially numbered throughout or by section. Binders and covers will be at the respondent's discretion, however, elaborate graphics and expensive paper and binding are not necessary, nor encouraged. All text and exhibits should be succinct and relevant to the RFP requirements. Emphasis should be on completeness and clarity of content. Each copy of the proposal shall be bound in a single volume.

Proposals shall be organized into the section tabs identified below.

- A. Signed Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest Form
- B. Qualifications – Firm/Entity
- C. Qualifications of Vendor
- D. Services Defined
- E. Proposed Project Cost Structure
- F. References (list a maximum of five)
- G. Other Additional Information, as necessary (Five page Maximum)

RFP Evaluation Criteria:

The Owner's staff selection committee will review all proposals to rank the most qualified vendors based on the content of the Proposal & Qualification Submittal. All submitted proposals will be reviewed by the Selection Committee specifically established for this project, and all proposals will be evaluated based on the following, weighted criteria:

- Company's Approach to providing equipment and services 15 pts
- Specific Project Team Experience with similar projects 15 pts
- Specific Project Team Experience at NKU/other universities 30 pts
- Proposed Cost & Fee Structure 40 pts

The Selection Committee will select the highest evaluated vendor and the University will enter into final negotiations to finalize a contract for providing audio visual equipment and services services. The consultant is encouraged to clearly define what is included and what would be considered additional costs when listing proposed fees and fee structure.

Other Pertinent Information & Suggestions for Proposal Submittal:

1. Provide a **brief** firm profile indicating location, years in business, and firm's expertise in providing audio visual equipment and services.
2. Provide relevant experience in providing audio visual equipment and services in an educational environment, and specific NKU and/or other university project experience. Include **only** projects completed by the **actual team** that would perform the work for this project.

4.2 Proposal Submission Deadline

The offeror shall submit, via US Postal Service, courier or other delivery service, five (5) bound and one (1) unbound original of its proposal and one version on a USB drive in a sealed package addressed to:

Mr. Blaine Gilmore
Director of Procurement Services
621 Lucas Administrative Center
Northern Kentucky University
Highland Heights, KY 41099

Bearing respondent's name and address, and clearly marked as follows:

RFP NKU-03-19
Student Union Governance Room Audio/Visual Refresh

Note: Proposals received after the closing date and time will not be considered. In accordance with the Kentucky Revised Statute 45A.085, there will be no public opening.

4.3 Transmittal Letter

The Transmittal Letter accompanying the RFP shall be in the form of a standard business letter and shall be signed by an individual authorized to legally bind the Offeror. The signer shall further certify that the proposal is made without collusion with any other person, persons, company or parties submitting a proposal; that it is in all respects fair and in good faith without collusion or fraud, and that the signer is authorized to bind the principal Offeror. It shall be limited to a maximum of two pages and shall include:

- a) A statement referencing all addenda to this RFP issued by the University and received by the Offeror. If no addenda have been received, a statement to that effect should be included.
- b) A statement that the Offeror's proposal shall remain valid for three (3) months after the closing date of the receipt of the proposals.
- c) A statement that the Offeror will accept financial responsibility for all travel expenses incurred for oral presentations (if necessary/required) and interviews (if necessary/required).
- d) A statement that summarizes any deviations or exceptions to the RFP requirements and includes a detailed justification for the deviation or exception.

Note: Do not submit your standard Terms and Conditions as exceptions to the RFP Terms and Conditions. Each exception to a university specified term or condition shall be individually addressed.

4.4 Executive Summary and Proposal Overview

The Executive Summary and Proposal Overview shall condense and highlight the contents of the technical proposal in such a way as to provide the Selection Committee with a broad understanding of the entire proposal.

4.5 Offeror Qualifications & Services Defined

The purpose of the Offeror Qualifications section is to allow the evaluator to assess the ability of the Offeror to respond to this Request for Proposals. Offerors have the flexibility to be creative in describing and providing evidence of their ability to meet the qualification needs of this project.

4.6 Proposed Project Cost & Fee Structure

Provide anticipated cost information broken down and itemized for each piece of equipment and service agreement. An overall fee total shall then be provided as a bottom line, lump sum fee.

5.0 Scope of Work for Audio Visual Equipment and Services:

5.1 Objectives and Requirements:

The primary objective of this RFP is to acquire the equipment listed in the project drawings and specifications for the Student Union Governance Room. The current A/V system for the space was installed during construction in 2008.

5.1.1 The Work detailed within the Contract Documents has been specified to meet certain requirements for performance, appearance, and costs. It shall be the responsibility of the Contractor to implement the guidelines and requirements contained in the Contract Documents and translate them into a complete design package containing all elements necessary for a complete, operational, and functionally integrated Audiovisual System(s).

5.1.2 Provide all work as detailed in the Contract Documents as a turnkey installation including all material, 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.

Refer to drawings and specifications attached for scope requirement and systems description.

6.0 SUPPLEMENTAL CONDITIONS

6.1 Compliance with State Laws

Any contract resulting from this solicitation shall be governed under, and the rights and obligations of the parties hereto, shall be determined in accordance with the laws of the Commonwealth of Kentucky. The firm selected shall provide equal job opportunity and prohibit discrimination based on race, creed, color, sex, age, religion or national origin as required by Kentucky Revised Statutes 45:550 through 45:640. All contractors and subcontractors are required to comply with Federal Executive Order 11246 entitled "Equal Employment Opportunity" as amended by the Department of Labor regulations (41CFR, Part 60). The successful firm will be required to provide certificates of insurance showing proof of general, vehicle liability and Worker's Compensation insurance.

6.2 Competitive Negotiation

It is the intent of the Request for Proposal (RFP) to enter into competitive negotiation as authorized by KRS 45A.085. The Owner will review all proposals properly submitted. However, the Owner reserves the right to request necessary amendments, reject all proposals, reject any proposal that does not meet mandatory requirement(s) or cancel this RFP, according to the best interests of the University.

The Owner also reserves the right to waive minor technicalities or irregularities in proposals providing such action is in the best interest of the University. Such waiver shall in no way modify the RFP

requirements or excuse the Offeror from full compliance with the RFP specifications and other contract requirements if the Offeror is awarded the contract.

6.3 Appearance before Committee (if necessary)

Any, all or no Offerors may be requested to appear before the Selection Committee to explain their proposal and/or to respond to questions from the committee concerning the proposal. Offeror(s) are prohibited from electronically recording these meetings. The committee reserves the right to request additional information.

6.4 Acceptance or Rejection and Award of Proposal

Northern Kentucky University reserves the right to accept or reject any or all proposals, or part of proposals, to waive any informalities, technicalities, clarify any ambiguities in proposals, and unless otherwise specified to accept any item in the proposal. In case of error in extension of prices or other errors in calculation, the unit price shall govern.

6.5 Cooperation in Related Efforts

The University reserves the right to undertake or award other contracts for additional or related work. The audio visual equipment vendor shall fully cooperate with such other Consultants, Contractors and/or University employees and carefully fit their work to such additional work. The audio visual equipment vendor shall not commit or permit any act, which will interfere with the performance of work by any other Contractor(s) or by University employees.

6.6 Modification or Withdrawal of Offer

An offer and/or modification of offer received at the office designated in the solicitation after the exact hour and date specified for receipt will not be considered.

An offer may be modified or withdrawn by written notice before the exact hour and date specified for receipt of offers. An offer also may be withdrawn in person by an Offeror or his authorized representative, provided his identity is made known and he signs a receipt for the offer, but only if the withdrawal is made prior to the exact hour and date set for receipt of offers.

6.7 Rejection

Grounds for the rejection of proposals include, but shall not be limited to:

- Failure of a proposal to conform to the essential requirements of the Request for Proposal.
- An offer imposing conditions that would significantly modify the terms and conditions of the solicitation or limit the Offeror's liability to the University on the contract awarded on the basis of such solicitation.
- Failure of the Offeror to sign the Owner's Request for Proposal, as part of the proposal. This includes the Authentication of Proposal and Statement of Non-collusion and Non-conflict of Interest statements.
- Proposals received after the closing date and time specified in the RFP.

6.8 Responsibility

Any contract that may result from the RFP shall specify that the audio visual vendor is solely responsible for fulfillment of the contract with the university.

6.9 Attorneys' Fees

In the event that either party deems it necessary to take legal action to enforce any provision of the contract, and in the event and to the extent that the Owner prevails, the audio visual vendor agrees to pay all expenses of such action, including attorneys' fees and costs at all stages of litigation.

6.10 Patents, Copyrights and Trademark

Except as specified by the Contract Documents, the audio visual equipment vendor shall protect Northern Kentucky University from any and all damages or liability arising from alleged infringements of patents, copyrights or trademarks.

6.11 Method of Award

It is the intent of the University to award a contract to the qualified Offeror whose offer, conforming to the conditions and requirements of the RFP, is determined to be the most advantageous to the University, cost and other factors considered.

Notwithstanding the above, this RFP does not commit the University to contract for any requirements detailed in this document. The University reserves the right to reject any or all offers and to waive formalities and minor irregularities in the proposal received.

Proposal NO: NKU-03-19
Issue Date: July 27, 2018
Title: SU Governance Room A/V
System Refresh
Purchasing Officer: Blaine Gilmore
Phone: 859.572.6449

RETURN ORIGINAL COPY OF PROPOSAL TO:

**Northern Kentucky University
Procurement Services
1 Nunn Drive
617 Lucas Administrative Center
Highland Heights, KY 41099**

IMPORTANT: BIDS MUST BE RECEIVED BY: 8/24/2018 BEFORE 2:00 P.M. HIGHLAND HEIGHTS, KY time.

NOTICE OF REQUIREMENTS

1. The University's General Terms and Conditions and Instructions to Bidders, viewable at <http://procurement.nku.edu/policies/terms-and-conditions.html>, apply to this Request for Proposal.
2. Contracts resulting from this RFP must be governed by and in accordance with the laws of the Commonwealth of Kentucky.
3. Any agreement or collusion among Offerors or prospective Offerors, which restrains, tends to restrain, or is reasonably calculated to restrain competition by agreement to bid at a fixed price or to refrain from offering, or otherwise, is prohibited.
4. Any person who violates any provisions of KRS 45A.325 shall be guilty of a felony and shall be punished by a fine of not less than five thousand dollars nor more than ten thousand dollars, or be imprisoned not less than one year nor more than five years, or both such fine and imprisonment. Any firm, corporation, or association who violates any of the provisions of KRS 45A.325 shall, upon conviction, may be fined not less than ten thousand dollars or more than twenty thousand dollars.

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing as provided by KRS 523.040:

1. That I am the offeror (if the offeror is an individual), a partner, (if the offeror is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the offeror is a corporation);
2. That the attached proposal has been arrived at by the offeror independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other Contractor of materials, supplies, equipment or services described in the Request for Proposal, designed to limit independent bidding or competition;
3. That the contents of the proposal have not been communicated by the offeror or its employees or agents to any person not an employee or agent of the offeror or its surety on any bond furnished with the proposal and will not be communicated to any such person prior to the official closing of the RFP;
4. That the offeror is legally entitled to enter into contracts with the Northern Kentucky University and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 45A.330 to .340, 164.390, and
5. That the Offeror, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sale and use tax imposed by Chapter 139 to the extent required by Kentucky law and will remain registered for the duration of any contract award
6. That I have fully informed myself regarding the accuracy of the statement made above.

SWORN STATEMENT OF COMPLIANCE WITH FINANCE LAWS

In accordance with KRS45A.110 (2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to a bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

CONTRACTOR REPORT OF PRIOR VIOLATIONS OF KRS CHAPTERS 136, 139, 141, 337, 338, 341 & 342

The Contractor by signing and submitting a proposal agrees as required by 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 that have occurred in the previous five (5) years prior to the award of a contract and agrees to remain in continuous compliance with the provisions of the statutes during the duration of any contract that may be established. Final determinations of violations of these statutes must be provided to the University by the successful Contractor prior to the award of a contract.

CERTIFICATION OF NON-SEGREGATED FACILITIES

The Contractor, by submitting a proposal, certifies that he/she is in compliance with the Code of Federal Regulations, No. 41 CFR 60-1.8(b) that prohibits the maintaining of segregated facilities.

RECIPROCAL PREFERENCE

- (1) Prior to a contract being awarded to the lowest responsible and responsive bidder on a contract by a public agency, a resident bidder of the Commonwealth shall be given a preference against a nonresident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the nonresident bidder.
- (2) A resident bidder is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:
 - (a) Is authorized to transact business in the Commonwealth; and
 - (b) Has for one (1) year prior to and through the date of the advertisement, filed Kentucky corporate income taxes, made payments to the Kentucky unemployment insurance fund established in KRS 341.490, and maintained a Kentucky workers' compensation policy in effect.
- (3) A nonresident bidder is an individual, partnership, association, corporation, or other business entity that does not meet the requirements of subsection (2) of this section.
- (4) If a procurement determination results in a tie between a resident bidder and a nonresident bidder, preference shall be given to the resident bidder.
- (5) This section shall apply to all contracts funded or controlled in whole or in part by a public agency.
- (6) The Finance and Administration Cabinet shall maintain a list of states that give to or require a preference for their own resident bidders, including details of the preference given to such bidders, to be used by public agencies in determining resident bidder preferences. The cabinet shall also promulgate administrative regulations in accordance with KRS Chapter 13A establishing the procedure by which the preferences required by this section shall be given.
- (7) The preference for resident bidders shall not be given if the preference conflicts with federal law.
- (8) Any public agency soliciting or advertising for bids for contracts shall make KRS 45A.490 to 45A.494 part of the solicitation or advertisement for bids

DEFINITIONS

As used in KRS 45A.490 to 45A.494: (1) "Contract" means any agreement of a public agency, including grants and orders, for the purchase or disposal of supplies, services, construction, or any other item; and

(2) "Public agency" has the same meaning as in KRS 61.805.

SIGNATURE REQUIRED: This proposal cannot be considered valid unless signed and dated by an authorized agent of the offeror. Type or print the signatory's name, title, address, phone number and fax number in the spaces provided. Offers signed by an agent are to be accompanied by evidence of his/her authority unless such evidence has been previously furnished to the issuing office. Your signature is acceptance to the Terms and conditions above.

DELIVERY TIME:	NAME OF COMPANY:	DUNS #
PROPOSAL FIRM THROUGH:	ADDRESS:	Phone/Fax:
PAYMENT TERMS:	CITY, STATE & ZIP CODE:	E-MAIL:
SHIPPING TERMS: F.O.B. DESTINATION - PREPAID AND ALLOWED	TYPED OR PRINTED NAME:	WEB ADDRESS:
FEDERAL EMPLOYER ID NO.:	SIGNATURE:	DATE:

SECTION 27 24 23 – AUDIO VIDEO DEVICES

1. AUDIO-VISUAL INFRASTRUCTURE

a) SCOPE OF WORK

- i) The work described in this section includes the furnishing of all components, software licensing (for a full three (3) years), materials, equipment, installation and technical labor and the performance of all operations necessary for the complete installation of audio visual equipment in operating condition as indicated on the drawings and/or specifications.
- ii) In general, the conduit and/or cable tray, junction boxes, electrical power circuits and outlets have been installed as part of prior project. The entire responsibility for the system, its installation, operation and function shall be that of the Systems Contractor. Additional rough-ins, line voltage connections or pathways if needed, are the responsibility of the Contractor.
- iii) Contractor shall take full responsibility for communicating all necessary requirements from the Owner including but not limited to:
 - (1) Access to the building, this building is occupied – the room, however will be “un booked” during the working period for this scope of work. Coordinate all working times and building availability with the University prior to starting work.
 - (2) Following Information Technology space/infrastructure requirements shall be coordinated and agreed to by Owner’s IT staff:
 - (a) IP addresses
 - (b) Rack space
 - (c) Cable tray space
 - (d) Network electronic specifications

b) SECTION INCLUDES

- i) Work consists of new A/V equipment including:
 - (1) Data projectors complete with ceiling mounting hardware and connection to the local audio/video system as detailed on the drawings and as specified herein.
- ii) A/V Distribution Systems are required to be complete with sources, inputs, displays, distribution, controls and connection to the data network and video distribution system as detailed on the drawings and specified herein.
- iii) All material and/or equipment necessary for proper operation of the system(s), not specified or described herein, shall be deemed part of these specifications
- iv) All integrations with exiting hardware that is NOT marked for replacement.
- v) Contractor will be re-working existing to remain equipment and will be responsible for all equipment until the end of the install is complete and functionality is demonstrated.

c) QUALITY ASSURANCE

- i) All equipment shall be UL listed.
- ii) All equipment and Installation Practices shall comply with the latest ANSI/NFPA-70 National Electric Code.
- iii) All equipment Installation Practices shall comply with the Local Electric Code.
- iv) All equipment and installation practices shall comply with ANSI/INFOCOMM 2M-2010 Standard Guide for Audiovisual Systems Design and Coordination Processes
- v) All equipment and Installation Practices shall comply with the latest BICSI Telecommunications Distribution Methods Manual (TDMM).
- vi) All equipment shall comply with the latest ANSI TIA/EIA-568, 569, 606, 607, 862, standards as applicable.
- vii) Performance Verification: All digital video systems shall be pre-tested PRIOR to commissioning and performance testing begins to verify the complete compatibility of all sending, receiving and distribution components and the performance and integrity of the transmission media. The performance of each system shall be demonstrated, with all

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- proposed components, in the presence of the Design Engineer and/or Owner prior to approval and installation. Any system failing to meet the specified performance requirements shall be rejected and re-configured as required prior to re-testing.
- viii) All equipment described herein or otherwise required to perform the specified system functions shall be a regular product line, produced by the system manufacturer.
 - ix) All materials furnished under this contract shall be new, of highest quality and shall be of a regularly manufactured line, currently in production at the time of installation.
 - x) All cables shall be labeled per ANSI/InfoComm/Avixa Standard F501.01:2015.
- d) **CONTRACTOR QUALIFICATIONS**
- i) The A/V equipment package shall be furnished and installed by a contractor who meets all the requirements listed herein. It shall not be acceptable for the A/V contractor to utilize a Subcontractor for any portion of the work, unless the Subcontractor has been approved in writing by the Design Engineer or Owner based upon adherence to the qualifications listed herein.
 - ii) The Contractor shall have on staff an AVIXA certified CTS-I or CTS-D AV systems engineer or project manager responsible for overseeing the project. In addition, the lead technician on the project shall have a CTS certification.
 - iii) The Contractor shall be able to respond to warranty repair requests within 3 business days.
- e) **SHOP DRAWINGS**
- i) A complete and comprehensive list of materials with quantity, manufacturer, model and part number and reference to the Part 2 specification paragraph number for each item.
 - ii) Manufacturers Data Sheets of all products and cabling, specific to the project. Data sheets shall show the exact parts, with model numbers and options as required and clearly identified.
 - iii) Qualifications: A statement of contractor's qualifications to verify compliance with other provisions within the specifications, unless the contractor has been pre-approved.
 - iv) Job specific diagrams.
 - (1) This indicates a block schematic diagram that shows all major items of equipment required for the contract project and the actual interconnections that will be installed, including details of interconnection with other systems.
 - (2) Rack elevations showing the configuration of all rack mounted equipment.
 - (3) 30x42 floor plans at a scale of not less than 1/8" = 1'-0" showing the location of all items of equipment. Drawings shall also indicate each location where electrical power is required, and the specific configuration of that power connection (voltage, plug type, mounting height, etc.)
 - v) Software data – The data package shall consist of manufacturer's data sheets of all system and application software being provided with sufficient information to verify that all specified features and functions are being addressed.
 - vi) Submittals that do not contain all the required information will be REJECTED unless prior approval for partial submittals has been approved.
- f) **O & M MANUALS – FINAL DOCUMENTATION**
- i) Copies of all approved shop drawings with the project engineer's specific approval clearly indicated.
 - ii) Comprehensive Bill of Materials with manufacturers, model numbers, quantities and descriptions.
 - iii) Owner's manuals for every item of equipment, when available from the manufacturer.
 - (1) These shall be the technical manuals provided by the manufacturer and shall not consist of generic sales brochures. Technical manuals shall provide complete specifications for the equipment as well as complete operating, maintenance, troubleshooting and product repair/replacement information.
 - iv) Provide statement of warranty with O&M Manuals.

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- g) WARRANTY
 - i) Warranty the entire system, including all equipment and wiring, to be free of mechanical and electrical defects for a period of three (3) year from the date of system completion and acceptance.
- 2. AUDIOVISUAL MOUNTS AND MOUNTING PRODUCTS
 - a) PRODUCT EQUIVALENCY
 - i) Where products are listed with multiple manufacturers, these manufacturers will be approved as equals if all specified features and performance targets are provided. Any equipment not specifically approved in writing prior to the bid date will not be considered, regardless of qualifications. Failure to provide the "precise functional equivalent" shall result in the removal of the alternate equipment at the Contractor's expense.
 - ii) Different manufacturers may require various options, accessories, converters, patch cables, etc. to perform the specified features and functions. Therefore, all material and/or equipment necessary for proper operation of the system shall be deemed part of these specifications.
 - b) CEILING PROJECTOR MOUNTS
 - i) Rated for commercial use and properly rated for the specified projector's size and weight.
 - ii) Manufacturer's mount load rating shall be a minimum of five times the actual weight of the projector
 - iii) Hardware used to attach wall mounts shall be ASTM and/or SAE hardware no less than Grade 5 or ISO-rated 8.8
 - (1) Threaded rod used for vertical mounts shall be a single pipe without couplings
 - (2) Threaded rod shall be black iron pipe material of schedule meeting the requirements of the authority having jurisdiction
 - iv) Mounts shall be installed in strict compliance with the manufacturer's instructions. Mounting configuration, method, and exact location of mounts to be approved prior to installation.
 - v) Manufacturers: Middle Atlantic, Chief, Peerless, or Premier.
- 3. AUDIOVISUAL IMAGE CONTRAST RATIO, DISPLAY SIZE AND DISPLAY ASPECT RATIO
 - a) THE FOLLOWING VIEWING REQUIREMENT CATEGORIES SHALL BE OBSERVED
 - i) Passive Viewing
 - (1) The viewer is able to recognize what the images are on a screen and can separate the text or main image from the background under typical lighting for the viewing environment. The content does not require assimilation and retention of detail, but the general intent is understood.
 - ii) Basic Decision Making
 - (1) The viewer can make basic decisions from the displayed image. The decisions are not dependent on critical details within the image, but there is assimilation and retention of information. The viewer is actively engaged with the content (e.g., information displays, presentations containing detailed images, classrooms, boardrooms multi-purpose rooms, product illustrations).
 - (2) The viewer should be able to understand what is being communicated. Graphic images and text are legible to the extent that the viewer can make basic decisions on the basis of what is being seen. Decisions made are based on comprehending the informational content itself and are not dependent on the resolution of every element of detail.
 - (3) Basic decision-making viewing applications include the presentation of photographs, detailed graphic images, product illustrations and information displays such as airline departures, sports score or stock quotes. In this scenario, the information obtained from the projected image informs a basic decision by a fully engaged viewer.
 - iii) Analytic Decision Making
 - (1) The viewer is fully engaged with minute detail present in the content and needs to be able to resolve every element of the projected image.

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- (2) Analytical decision-making environments support professional assessments, such as the examination of medical imaging, engineering or architectural drawings, electrical schematics, photographic image inspection, forensic evidence or failure analysis.
- b) DISPLAY SIZE, SIGHT LINES AND DISTANCES
 - i) Image sight lines shall be referenced 90-degrees perpendicular to the center-bottom of the screen.
 - ii) The closest viewer to the screen shall be no less than 1 times the screen's width away from the surface of the screen.
 - iii) The top of the screen will be no more than 30-degrees above the line of sight for the closest viewer.
 - iv) For installations identified to serve a Passive Viewing audience, the furthest viewer shall be no more than 8 times the image height from the surface of the screen.
 - v) For installations identified to serve a Basic Decision Making audience, the furthest viewer shall be no more than 6 times the image height from the surface of the screen.
 - vi) For installations identified to serve an Analytic Decision Making audience, the furthest viewer shall be no more than 4 times the image height from the surface of the screen.
- c) IMAGE CONTRAST RATIO SHALL BE INFORMED BY ANSI/INFOCOMM 3M-2011
- d) IMAGE ASPECT RATIO SHALL BE 16:10 UNLESS OTHERWISE SPECIFIED
- 4. AUDIOVISUAL SYSTEM CONNECTIVITY AND SIGNAL INFRASTRUCTURE
 - a) PRODUCT EQUIVALENCY
 - i) Where products are listed with multiple manufacturers, these manufacturers will be approved as equals if all specified features and performance targets are provided. Any equipment not specifically approved in writing prior to the bid date will not be considered, regardless of qualifications. Failure to provide the "precise functional equivalent" shall result in the removal of the alternate equipment at the Contractor's expense.
 - b) SIGNAL TRANSPORT FORMATS AND TRANSPORT DISTANCES
 - i) For installations where digital A/V signals must be transported to lengths of 10 meters or less, passive DisplayPort and HDMI connectivity may be used
 - (1) Passive copper DisplayPort and HDMI cables up to 3 meters in length shall feature UltraHD capability and a minimum wire gauge of 32AWG
 - (2) Passive copper DisplayPort and HDMI cables from 3 meters up to 10 meters in length shall be Hi Speed rated and feature HDMI(e) capability with operational audio return channel or high speed Ethernet extension (HEAC) feature set
 - (3) All passive copper cables shall support a minimum content demand of 2160p @ 60 fps
 - (4) For installations where HDMI signals must be transported more than 10 meters, but less than 20 meters, passive copper HDMI connectivity may be used. HDMI cables from 10 meters to 20 meters in length shall have a minimum of 23AWG copper conductors and must be minimally HDMI LLC Standard Speed Rated
 - (5) For installations where DisplayPort and HDMI signals must be transported more than 10 meters but less than 30 meters, hybrid Active-Optical cables may be used
 - (6) For installations where DisplayPort and HDMI signals must be transported more than 10 meters but less than 100 meters, HDBaseT solutions may be used
 - (a) ALL HDBaseT solutions, regardless of transport distance, must be installed using an HDBaseT.org certified fully shielded or non-continuous shielded F/UTP Cat6 cable
 - (7) For installations where DisplayPort and HDMI signals must be transported more than 100 meters but less than 300 meters, fully optical solutions that support UltraHD performance levels of 2160p may be used. Such fully optical solutions may be used for installations demanding transport lengths from 10 meters to 100 meters at the A/V design engineer's discretion
 - ii) Manufacturers: Crestron, Extron, Legrand, C2G, or equal
- 5. Universal Serial Bus (USB) and System Interactivity

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- a) Devices that feature interactive capability, or devices that operate to capture content such as lecture capture products, may demand USB as a connectivity channel. The following parameters shall be met when installing USB connectivity solutions.
 - i) Devices operating in class 01h (audio device), 03h (human interface device), 0Ah and 02h (communications and CDC control) will be compliant with a minimal level of USB 1.1 performance
 - ii) HID class devices used with interactive flat panel displays will be compliant with a minimal level of USB 2.0
 - iii) Devices operating in class 09h (USB hub) will be compliant with a minimal level of USB 3.0 or 3.1 Gen 1
 - iv) USB passive copper connections shall not exceed 5 meters in total link length
 - v) USB connections more than 5 meters but less than 12 meters in total length may be connected using USB Active Extender Cables or boosters
 - vi) USB connections more than 12 meters in total length shall be connected using USB "Super Boost" technology over Cat5e cabling for lengths up to 100 meters
 - vii) In all USB installations, not more than three (3) tiers of USB connectivity shall be allowed without inclusion of a powered hub to restore full USB bus (Vbus) power for proper operation of downstream devices and links
 - viii) All USB hubs used in A/V installations will be powered hubs that are capable of delivering a minimum of 500mA at 5 volts +/- 5% over the length of the link
 - ix) Manufacturers: Crestron, Extron, Legrand, C2G, Middle Atlantic, Superior Essex, Quiktron

6. Governance Room – Rm. 104

- a) Projector(s) to be installed, tested and operational to the following parameters
 - i) Appropriate to generate image contrast ratio appropriate to the image size and accounting for ambient light and mounting consideration as dictated by owner provided drop screen.
 - (1) Projected image minimum requirements from the projector include 16:10 aspect ratio, 1920 x 1080 pixel, minimum resolution, 60Hz minimum refresh rate, minimal 24-bit RGB video performance. Image size shall fill screen. Exact location of projector to be determined and field verified. Refer to screen section for more information.
 - (2) Projector shall be provided with appropriate zoom lens for application.
 - (3) Projector(s) shall feature minimum of two (2) HDMI inputs, at least one of which should be MHL compliant
 - (4) Projector(s) shall feature infra-red remote control and RS232 control capability
 - (5) Projector(s) may feature HDBaseT input port
 - (a) Such HDBaseT input port shall be compliant with generic industry HDBaseT transmitters, minimum performance example C2G 29224 or equivalent
 - (6) Mount shall be appropriate to projector(s) as identified in manufacturer's projector user and installation documentation and shall follow all other guidelines identified herein.
 - (7) Manufacturers: NEC, Digital Projection, Sony, Barco, Christie or equivalent
- b) Signal transport from wall-plate inputs shall be via matrix A/V switcher with integrated HDBaseT connectivity.
 - i) HDBaseT connectivity to follow all other guidelines identified herein.
 - ii) HDBaseT system shall support integrated distribution of signals from multiple inputs to multiple outputs
 - (1) Minimum input requirement shall be five (5) discrete feeds via industry compliant HDMI delivering minimal HDCP 1.4 compliance
 - (a) A discrete feed is identified as the output of a device or set of devices that may be routed to one or more display devices

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- (b) Each discrete feed shall support minimum performance of 2160p pixel resolution, 60Hz refresh rate, 24-bit video performance, with integrated (embedded) digital audio carried via the same pathway
 - (c) Inputs shall be as indicated on drawings – two (2) per event space and one (1) at rack location.
- (2) Minimum output requirements shall be five (5) discrete feeds via industry compliant HDMI delivering minimal HDCP 1.4 compliance
- (3) Each input shall be independently assignable to each output via the control system
- (4) Manufacturers: Crestron, Legrand, C2G, Crestron, Extron, Harmon Kardon AMX or equivalent
- iii) A/V system shall support wireless connectivity to system.
 - (1) Wireless connectivity shall support full HD at 60fps
 - (2) Integrator shall provide at least 2 hours owner training
 - (3) Provide four (4) dongles on dongle-based systems.
 - (4) Manufacturers: Actiontec, Barco ClickShare CSE-200, Kramer Via Connect PRO, Crestron Air Media or equivalent.
- c) Control System shall operate screen, projector, switcher, source devices, lighting and light control devices – existing lighting control system is Lutron Graphik Eye.
 - i) Control system shall be wall mounted or otherwise associated with this system in such a way as to not operate, be operable or interfere with the operation of any systems or devices not in the specific space(s) identified for the installation of this system.
 - ii) Control system shall feature easy operation
 - (1) Installing company will provide sufficient training of owner's personnel and stakeholders who shall regularly be tasked with system operation
 - (a) Specific team members or surrogates or approximate number of users to be trained shall be identified by owner prior to installation
 - (b) Control system shall feature password protection.
 - (2) Control system shall feature "macro" command capability to simplify system operation
 - (3) Control system shall NOT auto-install firmware updates.
 - (4) Control system shall fully integrate with motorized screen, all necessary controllers shall be provided and installed per this package.
 - (5) Control system shall fully integrate with lighting in the space, existing lighting control system is Lutron, provide interface modules as necessary to integrate.
 - (6) Control system programming shall be coordinated with NKU's standards and staff for various levels of authentication giving deeper levels of controls.
 - (a) Contractor shall include the appropriate hours in the scope of work to accommodate the following:
 - (i) Programming tweaks post-install after the room has been in use for 2 months.
 - (ii) 3 meetings during install to coordinate with NKU staff on programming needs.
 - (iii) 2 recorded training sessions with NKU staff.
 - (iv) NKU has multiple standard programming levels of touchpanels which shall be accommodated in this scope.
 - (7) Manufacturers: Crestron, Legrand, C2G, Crestron, Extron, Harmon Kardon AMX or equivalent
 - (a) Note: current NKU standards for control touch panels and control processing are centered around Crestron.
- d) Audio support for installation shall deliver program sound within the following parameters:
 - i) Installation or supplier shall determine the proper number and placement of speakers in order to realize the following performance:
 - (1) Maximum undistorted sound pressure level at any listener position shall meet or exceed 100 decibels

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- (2) All audio transport for new, non-preexisting equipment shall be via Dante protocol, unless otherwise noted.
- (3) Frequency response of the installed audio system, including amplification, speakers and connectivity shall meet or exceed 100Hz to 10KHz, +/- 6dB measured 1 meter from the speaker
- (4) Sound system may be equalized as appropriate
- (5) Speakers shall be installed in ceilings and individually routable
 - (a) Speakers shall be plenum space compliant
 - (b) Speakers shall be installed such that in-room sound pressure level does not vary more than 6dB from the average program listening level at any point in the identified listening area
- (6) Audio system shall come complete with (4) wireless handheld microphones.
 - (a) Microphones transmitters shall receive power from antenna unit (not require additional power supplies).
 - (b) Microphones shall all be Dante enabled.
 - (c) Manufacturers: Shure ULX, Sennheiser Evolution G4 (TX 500 series, with NT 3-1 US Power supply, SENT31US/NT3-1), or equal.
- (7) Digital Audio Network Server
 - (a) The server shall support use of one or two 32 x 32 channel CobraNet® digital networking cards and/or one or two 64 x 64 channel Dante™ digital networking cards, up to a maximum of three audio networking cards total per server.
 - (b) The server shall be factory configured with one DSP card and shall be capable of supporting a total of three cards.
 - (c) The server shall provide dual Ethernet ports for configuration and control connection.
 - (d) The server shall be configurable for up to 48 channels of local audio input and output, including mic and line level, VoIP, and standard telephone interface.
 - (e) The server shall also support modular I/O cards for acoustic echo cancellation and ambient noise compensation.
 - (f) The server shall provide front panel LED identification of server power, status, alarm, and activity as well as system-wide alarm.
 - (g) The server shall provide front panel OLED display for server and system information.
 - (h) The server shall be rack mountable (3RU) and feature software-configurable signal processing, including but not limited to: signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring, and diagnostic tools.
 - (i) The server shall be CE marked, UL listed and shall be compliant with the RoHS directive. Warranty shall be five years.
 - (j) Programming shall be by factory trained technicians.
 - (k) Commissioning of the system shall be per NKU standards.
 - (l) Training shall consist of 2 days with NKU staff.
 - (m) Manufacturers: Tesira SERVER-IO or equal.
- e) Large Venue Projection Screens
 - i) Screen shall be motorized with low voltage control fully integrated with AV control system.
 - (1) 120V, 1.2 amps with limit switches.
 - ii) Screen shall be 16:10
 - iii) Hold screen 3'-0" off floor, include appropriate blackdrop.
 - iv) Manufacturers: DaLite (Tensioned Deluxe HD Progressive 1.1), Screen Innovations (5 Motorized Slate 1.2) or equal.

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CMTA PROJECT NO. XTNG18
END OF SECTION

AUDIOVISUAL

PROJECT #:	XTNG18
DATE:	07/24/18
DRAWN:	WJT
CHECKED:	MS

REVISIONS
5/7/18 - Review Set
5/15/18 - Bid Set
7/24/18 - Re-bid Set

TAG	DESCRIPTION	MOUNTING HEIGHT (TO CENTER OF BOX)	DRAWING SYMBOL		
PS-XXX	DISPLAY SYSTEMS				
	XXX" Projection Screen				
L-1	AUDIOVISUAL FURNITURE				
	Existing Lectern				
SPK-1	AUDIO SYSTEMS				
	Speaker: Wall Mounted				
	Speaker: Ceiling Mounted	CLG			
P-1	WALLPLATE				
	Wallplate (refer to details)				
	VIDEO SYSTEMS				
	Projector	CLG			

TAGGED NOTES	
V1	EXISTING AV RACK LOCATIONS: RACKS AVRC 05 AND AVRC 06 CONTAIN EXISTING GEAR. REFER TO AV1.1 FOR RACK ELEVATIONS AND MORE INFORMATION.
V2	REFER TO DETAIL 3 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V3	REFER TO DETAIL 4 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION. EXISTING SINGLE GANG BOX WITH 3/4" CONDUIT TO ABOVE CEILING SPACE WITH BLANK COVER EXISTS BEHIND CLOCK.
V4	REFER TO DETAIL 5 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V5	REFER TO DETAIL 6 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V6	REFER TO DETAIL 7 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V7	REFER TO DETAIL 8 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V8	REFER TO DETAIL 9 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V9	REFER TO DETAIL 10 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V10	REFER TO DETAIL 11 ON SHEET AV1.1 FOR ADDITIONAL INFORMATION.
V11	WALL MOUNTED 70W SPEAKERS ARE EXISTING TO REMAIN. PROVIDE NEW 4 CHANNEL AMPLIFIER AND RECONNECT THESE SPEAKERS FOR PRESENTATION AUDIO. REFER TO RACK AND FLOW DIAGRAM FOR MORE INFORMATION.
V12	PROVIDE NEW CONTROL PANEL IN EXISTING CONTROL PANEL LOCATION. PROVIDE NEW CUSTOM BOX COVER TO ACCOMMODATE NEW 10.1" TOUCHPANEL. REFER TO FLOW DIAGRAM FOR MORE INFORMATION.
V13	EXISTING LOCATION OF 3 GANG BOX WITH MOTORIZED SCREEN CONTROLS. REPLACE SCREEN CONTROLS WITH NEW CONTROLS FOR NEW SCREENS.
V14	EXISTING 3/4" CONDUIT TO RACK.
V15	TYPICAL: EACH CEILING SPEAKER SHALL BE INDIVIDUALLY ROUTABLE.
V16	PROVIDE UNIT PRICING FOR PROJECTOR AND SCREENS. BUDGET DEPENDING A THIRD PROJECTOR WILL BE INSTALLED AS SHOWN. IF ONLY TWO PROJECTORS ARE INSTALLED, CENTER PROJECTOR AND SCREEN ON THIS WALL.

AUDIO SYSTEMS SCHEDULE					
TAG	DESCRIPTION	BASIS OF DESIGN	MODEL	QUANTITY	
SPK-1	8" CEILING SPEAKER	JBL	CONTROL 18C/T	16	

DISPLAY SYSTEMS SCHEDULE					
TAG	DESCRIPTION	BASIS OF DESIGN	MODEL	QUANTITY	
PS-137	16:10 ASPECT RATIO. SCREEN HEIGHT IS 72", SCREEN WIDTH IS 115" AND SCREEN IS 137" DIAGONAL.	DA-LITE	TENSIONED ADVANTAGE DELUXE ELECTROL	3	

VIDEO SYSTEMS SCHEDULE					
TAG	DESCRIPTION	BASIS OF DESIGN	MODEL	QUANTITY	
P-1	6,500 LUMEN LASER PROJECTOR WITH 16:10 ASPECT RATIO	NEC	NP-PA653UL	3	

COLOR CODE GENERAL NOTES

(Provide color coded patch panels, jacks, plugs, and snake wrap on individual cables):

Ethercon color codes:

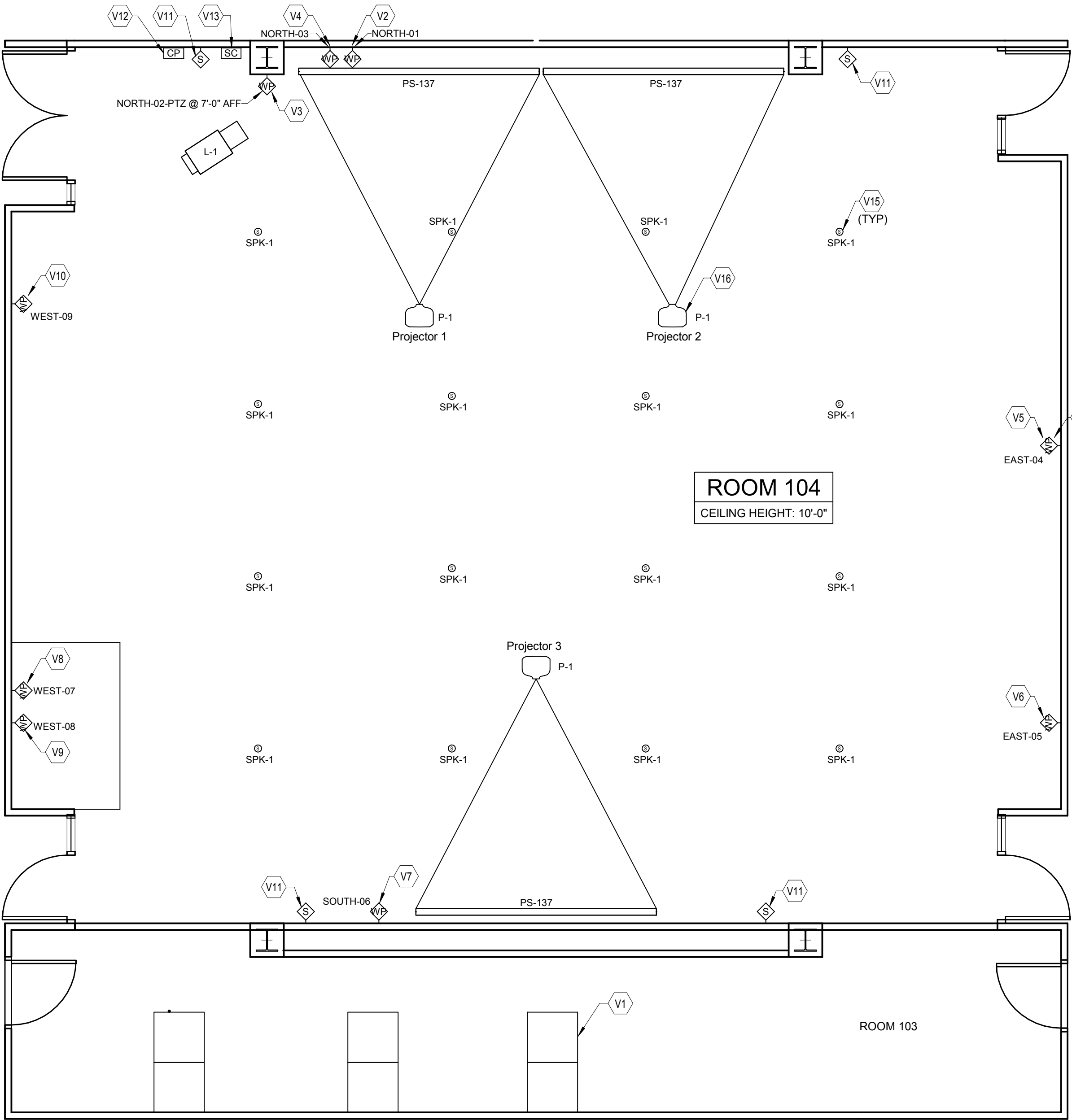
Red: From Matrix (receive)
Yellow:To Matrix (send)
Orange:Direct line dedicated (kinda like tie line, but not patchable)
Blue: Tie line (KVM)
Black: Tie line transmitter (networkable TCIP/ special vian)
Purple: Dante Audio connection
Brown:Tie line (non- network transmitter)

RJ45 Keystone color codes:

Blue:typical TCIP traffic network
White:Analog phoneline (Telco)
Purple: Special purpose (audio)
Brown:Building tie-line (i.e. different system, room/floor)
Black:Tie line lighting/video (i.e. same room/system)

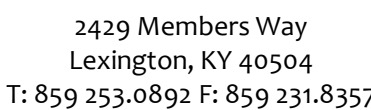
RG6Q BNC Jack codes:

Yellow:Composite video (or analog)
Green:SDI digital video (up to 2048 X 1080 2K)
Orange:Tricaster/external switcher video connections
Purple:Digital audio imbedded
Blue:3840 X2160 4K



1 GOVERNANCE ROOM A/V PLAN
SCALE: 1/8" = 1'-0"

SHEET LIST - AUDIO/VISUAL	
SHEET #	SHEET NAME
AV1.0	AV LEGEND AND PLAN
AV1.1	AV DETAILS
AV1.2	AV SCHEMATIC



WALL PLATE AND RACK GENERAL NOTES

2. ALL PLATE LABELS SHALL BE ENGRAVED AND MATCH EXISTING NKU STANDARDS FOR CUSTOM A/V PLATES.

3. INTEGRATOR SHALL FIELD VERIFY PLATES, SIZES, CONDUIT PATHWAY, ETC. PRIOR TO SUBMITTAL PHASE.

4. PROVIDE ETHERCON PATCH CABLES FOR 100% OF PATCH CONNECTIONS. AND 100% OF WALL PLATE CONNECTIONS. ALL CONNECTIONS SHALL BE PROVIDED WITH ASSOCIATED PATCH CABLES AT APPROPRIATE LENGTH FOR TIDY RACK PATCHES AND 16'-0" LENGTH FOR ALL WALL PLATE TERMINATIONS.



1 EXISTING RACKS



2 NEW RACKS
SCALE: NONE



Governance Room Audio/Visual Northern Kentucky University Nunn Drive, Highland Heights, KY 41099	AV DETAILS
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PROJECT #:	XTNG18
DATE:	07/24/18
DRAWN:	WJT
CHECKED:	MS

REVISIONS

5/7/18 - Review Set

5/15/18 - Bid Set

7/24/18 - Re-bid Set

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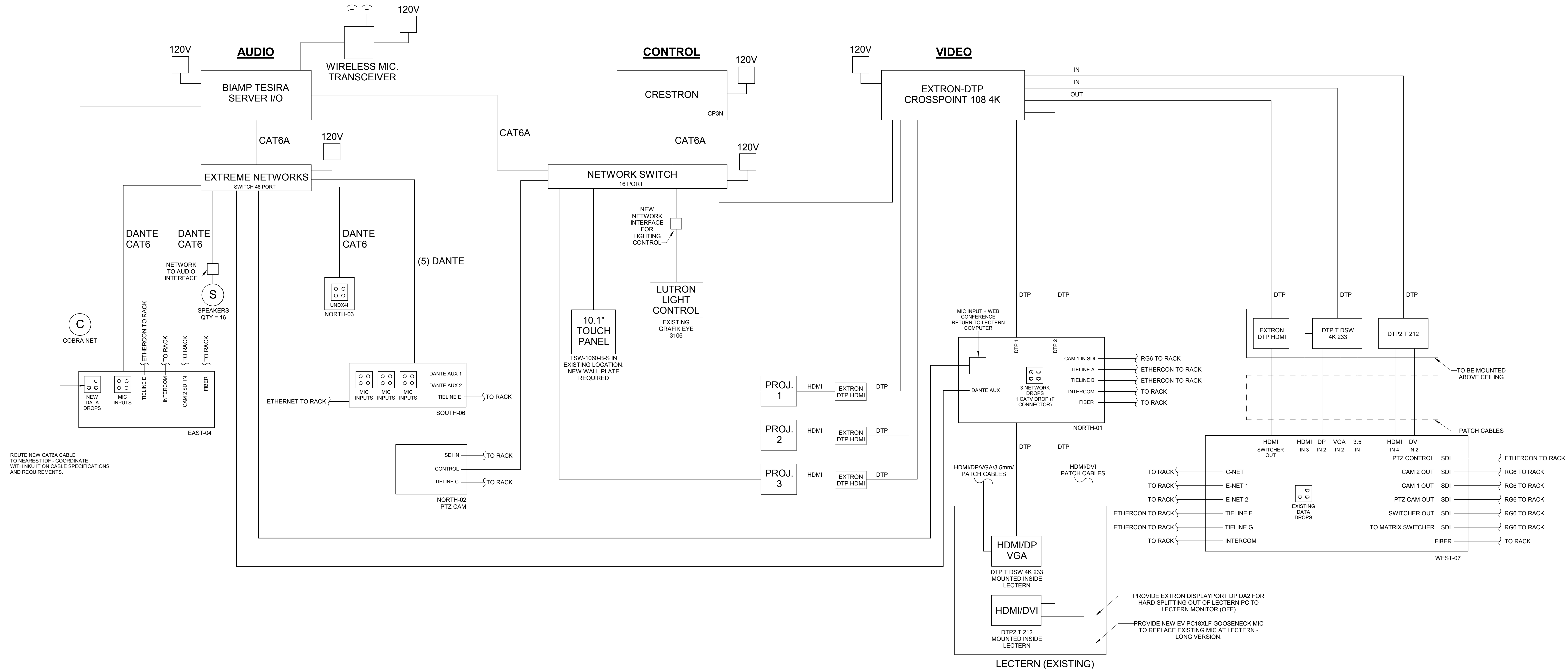
11

ΔV

11

100

AV1.1



1 SCHEMATIC
SCALE: NONE

Governance Room Audio/Visual
Northern Kentucky University
Nunn Drive, Highland Heights, KY 41099

AV SCHEMATIC

PROJECT #:	XTNG18
DATE:	07/24/18
DRAWN:	WJT
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REVISIONS
5/7/18 - Review Set
5/15/18 - Bid Set
7/24/18 - Re-bid Set